

REQUEST FOR PROPOSALS

RFB 15-09

Shotcrete Restoration Services for Public Works Stormwater Construction Projects Unit Price Contract

Request for Proposal (RFP) 15-09

Shotcrete Restoration Services for Public Works Stormwater Construction Projects

Unit Price Contract

Sealed Proposals for Purchasing RFP 15-09 Shotcrete Restoration Services for Public Works Stormwater Construction Projects Unit Price Contract will be received by the City of Dunwoody, hereinafter called "City." Service providers whose proposals meet the criteria established in the Request for Proposals, at the sole discretion of the City, may be considered for Contract award. The City may, by direct negotiation, finalize terms with the service provider who is selected for award based on proposals. The City reserves the right to reject any or all responses for any reason. Clarification of information may be requested by the City.

This contract shall be for a three year period with an optional one year extension beginning approximately October 1, 2015.

The City, at its sole discretion, may short-list firms that are deemed to best meet the City's requirements, taking into consideration all criteria listed in the RFP. Negotiations will be conducted and may take place in person or via telephone with the most qualified firm as identified by the City or, if short-listing occurs, with all of the short-listed proposers. Proposers that participate in the negotiations may be given an opportunity to submit their best and final offers. The City of Dunwoody requires pricing to remain firm for the duration of the contract. Failure to hold firm pricing for the duration of the contract will be sufficient cause for the City to declare a proposal non-responsive.

A proposal must be submitted in a sealed envelope which shall be clearly marked RFP 15-09 and your company name. One (1) printed and signed unbound original, three (3) bound hard copies, including a printed copy of the furnished spreadsheet of the Unit Price Schedule, (1) electronic copy in PDF of the proposal and a completed copy of the spreadsheet Unit Price Schedule. The **proposal shall be submitted no later than 2:00pm on July 31, 2015.** (Proposals will not be submitted by facsimile or e-mail). At which time noted, all proposals received will be publicly opened and read. Any proposal received after the time and date specified for the opening of the proposals will not be considered, but will be returned unopened.

A Pre-Proposal Conference will be held at 10:00am on July 16, 2015 at the City of Dunwoody Courtroom, 41 Perimeter Center East, First Floor, Dunwoody, GA 30346. The conference will include a review of the proposal documents, and a question and answer period. Proposers are expected to be familiar with the proposal documents and to provide the City with any questions regarding the proposal documents at the Pre-Proposal conference or by the deadline for questions to be submitted.

Questions regarding proposals should be directed to purchasing@dunwoodyga.gov no later than 2:00pm July 20, 2015. Proposals are legal and binding when submitted.

Proposal must be addressed as follows:

Purchasing Department
The City of Dunwoody
41 Perimeter Center East, Suite 250
Dunwoody, GA 30346

No Proposal may be withdrawn for a period of ninety (90) days after the time and date scheduled (or subsequently rescheduled) for proposal opening.

The City's staff will review all proposals submitted. After reviewing the proposals, staff may, at its discretion, request formal presentations from one or more of the proposers (at proposer's expense at the City's site) whose proposals appear to best meet the City's requirements.

The proposer awarded the Contract must provide proof of liability insurance in the amount of one million dollars (\$1,000,000.00), along with any other required insurance coverage and evidence of business or occupational license, as outlined in the Proposal Documents.

The City reserves the right to waive any informalities or irregularities of proposals, to request clarification or information submitted in any proposal, to request additional information from any proposer, or to reject any or all proposals, and to re-advertise for proposals. The City also reserves the right to extend the date or time scheduled for the opening of proposals.

Award, if made, will be to the responsible and responsive proposer submitting the proposal which is deemed by the City, in the sole discretion, to be the most advantageous to the City, price and other factors being considered.

To ensure the proper and fair evaluation of proposals, the City highly discourages any communication initiated by a proposer or its agent to an employee of the City evaluating or considering the proposal during the period of time following the issuance of the RFP, the opening of proposals and prior to the time a decision has been made with respect to the Contract award. An appropriate Purchasing employee of the City may initiate communication with a proposer in order to obtain information or clarification needed to develop a proper and accurate evaluation of the proposal. Any communication initiated by proposer during evaluation should be submitted in writing and delivered to the City of Dunwoody, Purchasing Office, 41 Perimeter Center East, Suite 250, Dunwoody, Georgia 30346, or by e-mail to purchasing@dunwoodyga.gov or facsimile to (678) 382-6750. Unauthorized communication by the proposer may disqualify the proposer from consideration.

Please note that Section 12 of the Instructions to Proposers describes irregularities in proposals that may cause them to be rejected by the City. Included in these irregularities are those such as conditions, limitations, or unauthorized alternative proposals which may require the City to reject a proposal. Please seek the City's written advice BEFORE you submit a proposal containing any of the irregularities described in Section 12 of the Instructions to Proposers.

PART ONE – SCOPE OF WORK
SECTION 1 GENERAL

1.1. SUMMARY:

- 1.1.1. This specification includes the requirements for construction, materials, dimensional tolerances, joints, testing, workmanship, and inspection of reinforced shotcrete linings for sewers. Shotcrete is to be provided inside the identified sewers. Unless noted otherwise, the shotcrete application is to be provided on the entire internal pipe circumference, manhole to manhole, manhole to structure, or structure to structure. Partial linear installations, unless directed by the City of Dunwoody, are not allowed.
- 1.1.2. Herein the general term “shotcrete” shall refer to the hand sprayed or centrifugally cast machine spray applied concrete or mortar sewer linings methods defined within this section.
- 1.1.3. Product: Contractor shall provide a sound, durable product, which is applied to the specified surfaces.
- 1.1.4. Water Source: Contractor shall be responsible for potable water to complete the work. Contact the DeKalb County Planning and Sustainability at 404-371-2167 for contractor water meter requirements and fees.
- 1.1.5. Site Utilities: Contractor shall furnish all site utilities and pay all utility bills during construction.
- 1.1.6. Schedules: Contractor shall furnish to the county engineer a construction schedule for each jobsite prior to beginning work. The City shall approve all construction schedules and liquidated damages shall apply to extended schedules without the county engineer’s approval.

1.2. REFERENCES: Codes and Standards: The following codes and standards are referred to in this Section:

1.2.1. American Society for Testing and Materials:

- 1.2.1.1. ASTM A185: Standard Specification for Welded Steel Wire Fabric for Concrete Reinforcement
- 1.2.1.2. ASTM C 33: Concrete Aggregates
- 1.2.1.3. ASTM C 42: Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
- 1.2.1.4. ASTM C 78: Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point loading)
- 1.2.1.5. ASTM C 94: Specification for Ready-Mixed Concrete
- 1.2.1.6. ASTM C 109: Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
- 1.2.1.7. ASTM C 150: Portland Cement
- 1.2.1.8. ASTM C 260: Air-Entraining Admixtures for Concrete
- 1.2.1.9. ASTM C 266: Standard Test Method for Time of Setting of Hydraulic-Cement Paste by Gillmore Needles
- 1.2.1.10. ASTM C 293: Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)
- 1.2.1.11. ASTM E 309: Specification for Liquid Membrane-Forming compounds for Curing Concrete\
- 1.2.1.12. ASTM C 494: Chemical Admixtures for Concrete

1.2.1.13. ASTM C 618: Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.

1.2.1.14. ASTM C 685: Specification for Concrete Made by Volumetric Batching and Continuous Mixing

1.2.1.15. ASTM C 1012: Sulfate Expansion

1.2.1.16. ASTM C 1116: Specification for Fiber-Reinforced Concrete

1.2.1.17. ASTM C 1140: : Standard Practice for Preparing and Testing Specimens from Shotcrete Test Panels

1.2.1.18. ASTM C 1399: Residual Strength

1.2.1.19. ASTM D 4783: Standard Test Methods for Resistance of Adhesive Preparations in Container to Attack by Bacteria, Yeast, and Fungi (Modified).

1.2.1.20. ASTM E 329: Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction

1.2.2. American Concrete Institute:

1.2.2.1. ACI 350-06: Code Requirements for Environmental Engineering Concrete Structures

1.2.2.2. ACI 506.2: Specifications for Materials, Proportioning, and Application of Shotcrete

1.2.3. American Association of State Highway and Transportation Officials:

1.2.3.1. AASHTO-SSHB: Standard Specification for Highway Bridges

1.2.4. Erosion and Sediment Act of 1987

1.2.5. Manual on Uniform Traffic Control Devices for Streets and Highways (hereinafter MUTCD)

1.3. DEFINITIONS:

1.3.1. Shotcrete: J) Concrete mix containing sand or other approved aggregate material and cement applied in dry or wet application, and pneumatically projected at high velocity or 2) premixed pipe lining mortar centrifugally cast onto surface to be rehabilitated. Reinforcing may be steel reinforcing or both steel reinforcing and fiber reinforcing.

1.3.2. Rebound: Aggregate and cement paste, which ricochets, off the surface during the application of shotcrete due to collision with the surface, reinforcement, or with the aggregate particles themselves.

1.3.3. Flashcoat: A ½-inch minimum thick coating of shotcrete without steel reinforcement

1.4. MINIMUM QUALIFICATIONS AND EXPERIENCE:

1.4.1. Personnel Experience:

1.4.1.1. Foremen shall have a minimum of five years of continuous experience including 3000 hours as a shotcrete nozzle operator.

1.4.1.2. Nozzle operators shall have ACI Shotcrete Nozzleman certification for the mix process being used.

1.4.1.3. Nozzle operators shall have a minimum of 5 years' experience including 3000 hours experience as nozzle operator in shotcrete application and construction within sewer systems and shall have successfully demonstrated all of the duties for which he/she shall be responsible on this project including, but not limited to the following:

- 1.4.1.3.1. Ensure that all surfaces to be shot are clean and free of laitance and loose material, using air and water to blast from the nozzle as required.
- 1.4.1.3.2. Regulate the water content so as to provide a mix that will be plastic enough to give good compaction and a low percentage of rebound without sagging.
- 1.4.1.3.3. Hold the nozzle at a proper distance and as nearly normal to the surface as the Workspace permits to secure maximum compaction and minimum rebound.
- 1.4.1.3.4. Follow a sequence routine that will fill coners with sound shotcrete and encase reinforcement without blocking porous material behind the reinforcing.
- 1.4.1.3.5. Determine necessary operating procedures for placement of shotcrete in confined areas, over extended distances, and/or around unusual obstructions where placement velocities and mix consistencies may require adjustment.
- 1.4.1.3.6. Direct the crew when to start and stop the flow of material and stop work if the material is not arriving uniformly at the nozzle.
- 1.4.1.3.7. Ensure sand or slough pockets are cut out for replacement.
- 1.4.1.3.8. Bring the shotcrete to finished lines in a neat and workmanlike manner.
- 1.4.1.3.9. Operating the special pneumatic mixer and directing the mixing crews. Utilizing their experience, they shall have successfully demonstrated all of the duties for which they shall be responsible on this project including, but not limited to, maintaining proper pressure on the cement gun to ensure the necessary nozzle velocity and ensuring that material fed to the nozzle is uniform.

1.5. TESTING AGENCY QUALIFICATIONS:

- 1.5.1. Testing: The owner shall pay the cost of the testing materials and select the testing firm. Certified test reports and certificates, when so directed shall be submitted to the owner and copies to such other agencies, contractors, or persons designated.
- 1.5.2. Testing Laboratory: Where reputable suppliers maintain regular recognized testing services, certified copies of such test will be accepted and/or adequacy of such tests, the owner may require that cement and aggregates be tested by a recognized commercial testing laboratory. The testing laboratory shall then test the cement and aggregates and prepare written reports showing results of such tests on each shipment. The laboratory shall also certify that the materials covered by the report comply in all respects with these specifications.
- 1.5.3. Approved Materials Only: No materials, which fail to meet the requirements of these specifications, shall be incorporated into the work.

1.6. SUBMITTALS:

- 1.6.1. General: Provide all submittals. Including the following in accordance with the requirements contained in the General Requirements.
- 1.6.2. Samples: Submit representative samples and related product literature of materials being used, including names, material characteristics, and physical and structural properties, sources, and descriptions.
- 1.6.3. Test Reports: Submit two copies of the compressive strength test results on the project shotcrete cores and test cylinders or cubes.
- 1.6.4. Certificates:

1.6.4.1. Submit certificates that personnel performing the work are qualified. List personnel by name with capabilities, projects, and duties performed on those projects. Provide written certification of compliance with the ASTM standards cited in this section.

1.6.4.2. Submit ACI Shotcrete nozzleman certificates for hand sprayed applications

1.6.5. Detailed plan for sewage diversion during shotcrete application, when applicable including traffic control methods and an inventory of the equipment proposed for this operation.

1.6.6. In the event a street or highway occupancy is required to perform the work, detailed traffic control plans shall be prepared and submitted to the City or applicable entity for approval prior to the commencement of the work.

1.6.7. At a minimum, maintain traffic flow in the construction area in compliance with MUTCD requirements. Provide and maintain all manpower warning devices, signs and barricades required by MUTCD specifications.

1.6.8. Contractor shall submit means to establish the thickness, surface planes, and finish lines of the shotcrete to The City of Dunwoody for approval.

1.7. QUALITY ASSURANCE:

1.7.1. Testing Agency: City to provide testing agency for material testing. Agency to meet requirements of ASTM E329.

1.7.2. Regulatory Requirements: Perform all work relating to shotcrete in accordance with ACI-350.06. The applicable code for shotcrete concrete construction lining shall conform to the latest edition of the ACI350-06 Environmental Structures. Mix designs submitted for review shall bear the seal of a Professional Engineer licensed in the state of Georgia.

1.7.3. Preconstruction Testing: Prepare specimens for examination and testing prior to construction.

1.7.3.1. The proposed nozzle operators are to provide demonstration and proficiency in creating the test panels in the presence of the City or its representatives.

1.7.3.2. Fabricate test specimens in the presence of The City of Dunwoody using the equipment, materials and mix proportions proposed for the project. Fabricate one specimen for each shooting position to be encountered (i.e. overhead, vertical and horizontal run sections). Job-moist cure the test specimens in the same manner as the work. Where practical cure specimens in sewer environment.

1.7.3.2.1. Fabricate test specimens as follows:

1.7.3.2.1.1. Make a test panel at least 24 inches square by shotcreting onto a backform of plywood one each for overhead, vertical and horizontal run sections. No steel reinforcement is to be in test cubes. Fabricate the test panel to the same thickness as required for the project, but not less than 2-2 ½ inches. Take at least a minimal 2 ½ " inch cube cores from the panel for testing.

1.7.3.2.1.2. Test panels and specimens shall be made periodically as directed by the City of Dunwoody during the progress of the work and/or consistent with section 1.7.4.

1.7.4. Construction and Product Testing:

1.7.4.1. Prepare and provide shotcrete cubes during the course of the work. Make one set of three shotcrete cubes for each 15 cubic yards of shotcrete placed not less than 9 cubes throughout the course of the work, per project.

- 1.7.4.2. Make and test cubes as specified. Test one cube at seven days, one at 28 days, and an additional cube for further testing. 5000 psi required for 28 days.
- 1.7.4.3. The City has the right to core pipe and test at any time after completion period. Contractor is responsible for any correction including complete replacement of pipe up to one year after completion of project.

1.7.5. Post Construction CCTV

- 1.7.5.1. Contractor shall televise the inside of the lined sewer segment after installation of the liner and reinstatement of lateral connections is completed. After all work is completed. Contractor shall provide the City of Dunwoody with a CCTV inspection showing both the post-installation conditions including the restored connections. Defects discovered during the post-installation television inspection shall be corrected by the Contractor at his expense before the work under the Contract will be considered acceptable. After the defects, if any, are corrected, the affected sewer segment(s) shall be CCTV inspected again. The post-installation CCTV inspection shall be submitted to the City of Dunwoody in sufficient time to allow the review of the video data prior to acceptance.

1.8. PROJECT REQUIREMENTS

1.8.1. Inspection of the Sewers:

- 1.8.1.1. Provide inspections in the presence of the City or its representatives.
- 1.8.1.2. Pre-Inspection will not be required unless specified by the City. If required by the City, additional cost to the contractor shall be paid by the City. If pre-inspection is required by the City, the contractor will use the following procedures:
 - 1.8.1.2.1. Inspect the interior of the sewer to be shotcreted using closed circuit color. The inspection shall locate breaks, obstacles, and service connections. The pipeline interior shall be inspected to determine the location of any conditions which may prevent proper application and Installation of the shotcrete it shall be noted so that these conditions can be corrected. Two copies of color video recordings and inspection logs shall be made and submitted to the City of Dunwoody.
- 1.8.1.3. Post-Installation Inspection: all costs associated with post-installation inspection shall be included in the cost of installation.
 - 1.8.1.3.1. Inspect the interior of the sewer upon completion of the shotcrete application, using closed circuit color. The inspection shall show that the application is to the depth, line and grade and that service connections have been restored. Two copies of color video recordings and inspection logs shall be made and submitted to the City of Dunwoody.
 - 1.8.1.3.2. In the event that repairs are required to the shotcrete application, for the City of Dunwoody to accept the installation, the contractor is responsible for providing inspection after the repairs are made. Two color video recordings and inspection loss shall be made and submitted to the City of Dunwoody, referencing the grand post-installation locations.

- 1.8.2. Debris Disposal: Dispose of material removed during cleaning and preparation of surface and rebound off the site in a legal manner. Disposal of debris by flushing through other sewer sections is not allowed.

- 1.8.3. Stormwater Diversion: Provide for the flow of stormwater around the section or sections of pipe designed for shotcreting in accordance with the approved plan as required by the Contract provisions. At a minimum, the diversion shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and diversion lines shall be of adequate capacity and size to handle the flow of the sewer.

1.8.4. All methods and routes of pumping shall be approved by the City of Dunwoody. The Contractor shall also maintain flows in all branch sewers intersecting the section of sewer being lined and service connections.

1.8.5. Environmental Requirements:

1.8.5.1. Do not apply shotcrete against surfaces where frost is present or when the air temperature is below 40 degrees Fahrenheit.

1.8.5.2. Suspend shotcreting if applied materials are observed to be separating at the application point or in the nozzle.

1.8.5.3. Suspend shotcreting if it rains hard enough to wash out the shotcrete.

1.8.5.4. Do not allow shotcrete or rebound to enter running water. Do not apply anywhere where running water exists.

1.8.6. Protection

1.8.6.1. Protect surfaces not to receive shotcrete.

1.8.6.2. Protect shotcrete from freezing during installation and during the curing period.

1.8.6.3. Protect in-place reinforcing from excessive construction traffic and other work.

1.8.7. Maintenance of Traffic: Maintain traffic now in the construction area in compliance with the approved plan.

1.8.7.1. Flow of traffic during and after working hours shall be in accordance with the MUTCD requirements.

SECTION 2 PRODUCTS

2.1 DELIVERY, STORAGE, AND HANDLING:

2.1.1 General: Deliver, store, and handle all products and materials as required in the General Requirements and as follows:

2.1.2 Storage of Material:

2.1.2.1 Store cement on skids or platforms and protect from elements. Cement which develops lumps because of improper storage is not acceptable.

2.1.2.2 Store reinforcing materials in a manner to prevent excessive rusting and fouling with direct, grease and other bond-breaking coatings.

2.1.2.3 Contractor shall be solely responsible for the proper delivery, storage, and handling of materials to prevent contamination, segregation, or damage.

2.1.2.4 Cement shall be stored in weather tight enclosures to protect against moisture and contamination.

2.1.2.5 Aggregate shall be properly arranged and stockpiled to prevent contamination, evaporation, freezing, and other damage.

2.1.2.6 Reinforcing steel and fibers shall be carefully bundled, tagged, and stored above ground.

2.1.2.7 Damaged or unsuitable products shall be promptly removed from the job site and shall be replaced with suitable materials.

2.2 MATERIALS:

2.2.1 Concrete Mix (for hand-sprayed, pneumatically projected Application)

2.2.1.1 Cement: Portland conforming to ASTM C150, Type 1

2.2.1.2 Aggregate:

2.2.1.2.1 Aggregate shall be naturally siliceous sand conforming to the requirements of ASTM C-33, unless otherwise designated.

2.2.1.2.2 Aggregate shall not contain less than 3% or more than 6% moisture.

2.2.1.2.3 The combined gradation of coarse and fine aggregates shall conform to the following unless otherwise designated:

SIEVE SIZE (US STANDARD) SQUARE MESH	PERCENT BY WEIGHT PASSING INDIVIDUAL SIEVE
1inch	—
3/4inch	—
1/2 inch	100
3/8inch	95-100
No.4	72-85
No.8	52-73
No.16	36-55
No.30	20-38
No.50	7-20
No.100	2-12
No.200	0-5

2.2.1.3 Admixtures:

2.2.1.3.1 Admixtures shall be subject to the approval of the City of Dunwoody. Admixtures containing calcium chloride or triethanolamine shall not be used. Admixtures used in combination shall be physically and chemically compatible and shall be so certified by the manufacturer. Admixtures shall be products of single manufacturer who shall provide, as necessary, assistance, and advice to the City of Dunwoody on the proper use of admixtures. Use of admixtures shall be at Contractor's expense and no separate payment will be made:

- 1) Chemical admixtures shall conform to ATSM C-494.
- 2) Air entrained admixtures shall conform to ATSM C-260.
- 3) Fly ash and pozzolanic materials shall conform to ASTM C-618.
- 4) Accelerating admixtures shall develop quick set and high-early strength characteristics as follows:

Time of Initial Set	3 minutes maximum
Time of Final Set	12 minutes maximum
8 Hour Compressive Strength	600 psi minimum

2.2.1.3.2 Time of setting shall be determined by contractor in accordance with ASTM C-266, except that the accelerator shall be added to 50 grams of cement, together with the water to produce a water to cement ratio of 0.40, in varying percentages expected to be used in the actual shotcrete installation. The minimum possible time interval shall be used to main the proper mixing without distributing the initial set of the paste.

2.2.1.3.3 The compressive strength shall be determined by contractor on accordance with ASTM C-109, expect that the accelerator in varying percentages expected to be used in the shotcrete mix design shall be added to the mortar prepared with a water cement ratio of 0.40. In order to accomplish the molding of the specimen without disturbing the initial setting of the mortar, the intervals of time in the above specification are hereby waived.

2.2.1.3.4 The shotcrete mix shall include a corrosion protection additive to prevent microbiologically induced corrosion (MIC).

2.2.1.4 Equipment

2.2.1.4.1 Placing equipment shall consist of a spray nozzle for ejection of dry materials and water in an intimate mixture, separate hoses to deliver dry materials and water to the nozzle, a suitable machine to introduce the dry materials to the delivery hose under air pressure, and air and water supply systems. The water supply system shall consist of a local reservoir and a positive displacement pump capable of supplying water through regulating valve, easily and accurately controllable by a nozzle, in sufficient amount and at a pressure slightly above the operating air pressure recommended by the manufacturer of the delivery machine.

2.2.1.5 The nozzle pressure shall be determined by the type of work involved and shall conform to the following:

- 1) 50 to 70 lbs.: For rough or heavy work
- 2) 70 to 75 lbs.: For high lifts or long hose to insure against clogging

2.2.1.6 Maximum length of hose for the application of shotcrete shall be approximately 100 feet Contractor may use as much as 500 feet of hose if the supply nozzle pressure increased to maintain proper velocity, upon approval from Engineer.

2.2.1.7 Air compressors shall have sufficient capacity to provide without interruption, the pressure, and volume of air necessary for the longest hose delivery. Capacity determinations shall include allowance made for the air consumed in blowing rebound, cleaning, reinforcing, and for incidental uses. Compressors and related appurtenances are to be of the silence-type, to minimize noise and vibration migration to adjoining and nearby residents, building owners and occupants, and vehicular and pedestrian traffic.

2.2.1.8 Compressor equipment shall be of such capacity to insure air pressure at the special mixer capable of producing the following material velocities:

- 1) 375 to 500 feet per second using 3/4 inch or one inch nozzles
- 2) 425 to 550 feet per second using 1-1/2 inch nozzle

2.2.1.9 Contractor shall maintain water pressure at approximately 10 pounds higher than the highest air pressure required for placing. The water pressure shall be uniformly steady (non-pulsating).

2.2.1.10 No air supply system shall be used that delivers air contaminated by oil, or that is incapable of maintaining constant pressure.

2.2.1.11 No hand-mixed materials shall be permitted.

2.2.1.12 When using fiber reinforcement, fibers shall be uniformly distributed throughout the mix. Each proportioning and the use of screens shall be required. Continuous proportioning shall be permitted only if the feeder is carefully synchronized with the mixer to collate the fibers.

2.2.2 Water:

2.2.2.1 Only fresh, clean, potable water shall be used in mixing.

2.2.3 Reinforcement:

2.2.3.1 Steel Reinforcement:

2.2.3.1.1 Reinforcing steel shall meet the requirements of ASTM A-61 5, Grade 60 unless otherwise designated.

2.2.3.1.2 Welded wire fabric or wire mesh shall conform to ASTM A-185. Unless otherwise specified. The wire mesh shall be 2 inches by 2 inches - 12/12 gauge galvanized welded wire fabric.

2.2.3.1.3 Metal accessories, including all spacers, ties, fasteners, and other devices shall be provided for properly spacing, placing, and supporting the reinforcement.

2.2.3.2 Fiber Reinforcement

2.2.3.2.1 Fiber reinforcement shall conform to the requirements of ASTM C-1116.

2.2.3.3 Structural Requirements:

2.2.3.3.1 Shotcrete design shall be for gravity sewer applications, and fully deteriorated pipe condition.

2.2.3.3.2 Shotcrete component materials shall be selected and proportioned based on structural design and shall produce a minimum of 28-day compress strength of 5000 psi and a minimum 28-day flexural strength of 800 psi.

2.2.3.3.3 Shotcrete material shall be suitable for pneumatic application and meeting the specified strength requirements herein set forth.

2.3 DESIGN PARAMETER:

2.3.1 Shotcrete lining system shall be designed in accordance with title procedures of the current version of the Water Research Center (WRC) Sewage Rehabilitation Design Manual and these specifications for the fully deteriorated condition. The liner shall be designed based on the following sewer conditions, service requirements and physical conditions.

2.3.1.1 Assume that groundwater surface is at ground surface.

2.3.1.2 Unit weight of = 125 pcf.

2.3.1.3 Modulus of soil reaction. E's = 700 psi.

2.3.1.4 Automotive vehicle loading of HS-20 as defined in AASHTO-SSHB, including impact factor shall be applied to all sites in the vicinity of roadways and vehicle storage of maintenance facilities shown on the Contract Drawings.

- 2.3.1.5 Railroad loading of Cooper E80 as defined in AASHTO-SSHB, including impact factor, shall be applied at all sites in the vicinity of railroads.
- 2.3.1.6 Maximum internal pressure head shall be 25 feet.
- 2.3.1.7 Short-term during grouting:
 - 2.3.1.7.1 Design Safety Factor for bending stresses shall not be less than 2.0.
 - 2.3.1.7.2 The shotcrete lining (including any internal bracing system, if used) shall be capable of withstanding a minimum of three (3) to five (5) psi grout pressure or higher if required by the installation.
- 2.3.1.8 Long-term check:
 - 2.3.1.8.1 Design Safety Factor shall not be less than 2.0.
 - 2.3.1.8.2 Maximum deflection shall be two percent (2%).
- 2.3.1.9 The shotcrete design shall include the use of steel reinforcing.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

3.1.1 Sewer Flow Control:

- 3.1.1.1 The Contractor shall be responsible for all flow control and bypass of sewer flow around their work in accordance with the requirements. During installation and testing of the liner system, the Contractor shall provide temporary bulkheads, plugs and/or other appurtenances as needed in the upstream sections to prevent flow from entering his work area. Flow from connecting services laterals or side sewers shall also be maintained. Remote monitoring of flow diversion systems is not allowed.

3.1.2 Cleaning:

- 3.1.2.1 Prior to the shotcrete lining, contractor shall thoroughly clean the sewer designated to receive the shotcrete. Cleaning shall constitute removal of all solids, roots, deposits, and other matter which would preclude the installation of the liner into the sewer line or prevent adhesion to the application surface.

3.1.3 Surface Preparation:

- 3.1.3.1 Contractor is to remove all unsound and loose material before applying shotcrete. Contractor shall chip or scarify any area to be repaired and remove offsets which would cause an abrupt change in thickness without suitable reinforcement. Edges shall be tapered so as to leave no square shoulders at the perimeter of a cavity. After all chipping work has been completed; the entire surface shall be thoroughly sandblasted and cleaned with a compressed air blast and jet water blast using a cement gun to remove all dirt, debris, and loose particles to permit satisfactory bond between the existing surface and the shotcrete. Air pressure in the cement gun shall not be less than 50 psi.
- 3.1.3.2 Concrete, mortar, stone or rock surfaces shall be thoroughly cleaned by water blasting or sand blasting to remove all dirt, laitance, weak or un-bonded mortar, loose material, grease or other deleterious substances.
- 3.1.3.3 Surfaces on which the shotcrete is to be place shall be sufficiently rough to insure the adherence of the shotcrete. Offsets which would cause an abrupt and substantial change in thickness of the shotcrete shall be removed or tapered.

- 3.1.3.4 Contractor shall sandblast existing surfaces that do not require chipping to remove paint, oil, grease, silt, slime, and other contaminants, and provide a roughened surface for proper bonding of the shotcrete.
- 3.1.3.5 Loose structural bricks, stone or rock in areas not specifically mentioned, shall be removed and the void filled with shotcrete. This shall apply only to isolated situations where only a few (one to ten) are loose.
- 3.1.3.6 Void areas that extend beyond the outside plane of the sewer or manhole into the surrounding soil shall be filled and stabilized using pressure injected grout to the outside plane of the sewer pipe barrel.
- 3.1.3.7 Contractor shall fill voids in the sewer and manhole barrel with shotcrete.
- 3.1.3.8 Contractor shall repair any damage to the existing structure resulting from his cleaning or void filling operations at no cost to the City of Dunwoody.
- 3.1.3.9 Contractor shall remove and properly dispose of, as approved by the City of Dunwoody, all debris and rebound from the sewer that results from his cleaning and shotcrete placement operations. No debris shall be permitted to wash down into the storm sewer system.
- 3.1.3.10 Contractor shall stop all active infiltration prior to shotcrete application

3.1.4 Concrete Batching and Mixing:

- 3.1.4.1 The moisture content of the combined aggregate at the time of mixing with cement shall be in the range of 3 percent to 6 percent of the oven-dry weight of the aggregate.
- 3.1.4.2 The shotcrete shall be thoroughly mixed by machine and then passed through a sieve to remove all large particles before placing in the hopper of the cement gun. The mixture shall not be permitted to become damp. Each batch should be entirely discharged before recharging has begun. The mixer shall be cleaned thoroughly enough to remove all adherent materials from the mixing vanes and from the drum at regular intervals.
- 3.1.4.3 Batches of mixed material shall be used within 90 minutes after adding cement, in normal weather, and within 45 minutes during hot weather. Hot weather defined as those site conditions where the placed shotcrete exceeds 85° F, at or during the first 24 hours of curing after placement Batches that exceed the holding times shall be disposed of at Contractor's expense. Rebound materials shall not be reused.
- 3.1.4.4 Water shall not be added to the mix before it enters the cement gun. Quantities of water shall be controlled by a valve at the nozzle of the gun. Water content shall be adjusted as required for proper placement, but shall in no case exceed four gallons per sack of cement, including the water contained in the aggregate. Contractor shall not add water other than at the nozzle.
- 3.1.4.5 The accelerating additive shall be added immediately prior to depositing the materials in the placing equipment, or if in liquid form may be accurately proportioned into the water supply at the application nozzle. Dry additives shall be accurately proportioned and thoroughly mixed with the other ingredients.
- 3.1.4.6 Remixing or tempering is not permitted.
- 3.1.4.7 Mix proportions shall be controlled by weight batching, or by volume batching meeting the requirements of ASTM C-685. Other volume batching procedures may be used, if approved by the City, provided a minimum of one weight batching is made every 4 hours for control purposes, to ensure that the specified mixture design is being achieved.

3.1.4.8 Batching and mixing equipment shall be used that is capable of proportioning and mixing all ingredients (except water in case of dry-mix equipment) at a rate that will provide adequate production, and with an accuracy that will ensure uniformity of batches. Weighing equipment shall be capable of batching with the accuracy specified in ASTM C-94. Volumetric equipment shall be capable of batching with the accuracy specified in ASTM C-685.

3.1.5 Ready-Mix Concrete:

3.1.5.1 Ready-mixed concrete shall comply with ASTM C-94, except that it may be delivered to the shotcrete equipment in the dry state if the equipment is capable of adding the water and mixing it satisfactorily with the dry ingredients, in which case it shall comply with ASTM C-685.

3.1.6 Pipe-Lining Mortar Mixing:

3.1.6.1 Combine recommended amount of packaged dry mix with the recommended amount of potable water and corrosion protection additive while mixing with a high-speed shear mixer until proper consistency is obtained. Continue to agitate the mortar to prevent thickening beyond the desired fluidity. The working time is approximately 30 minutes depending upon conditions.

3.1.7 Installation of Steel Reinforcement:

3.1.7.1 Unless otherwise specified, welded wire fabric shall be used as reinforcement. The option of using equivalent deformed bars is acceptable, if minimum depth of concrete over reinforcing can be demonstrated and obtained.

3.1.7.2 Reinforcement shall not be less than 1 inch from the surface on which the shotcrete is to be placed and there shall not be less than 1 inch between the reinforcement and the final surface of the shotcrete.

3.1.7.3 Wire fabric shall be rolled into cylinders and placed circumferentially on hook bolts or support anchors. Anchors shall be 24-inch centers each way.

3.1.7.4 Mesh or fabric shall be lapped at least one full mesh longitudinally and the same width in inches transversely.

3.1.7.5 Laps shall be tied with 16 gage wire at 12 inch spacing.

3.1.7.6 The full area of reinforcement shall be held finally in position by means of 16 gage wire ties in a rigid position to withstand impact of the shotcrete application without displacement.

3.1.7.7 Installation of reinforcement shall be inspected and approved by the City of Dunwoody prior to the commencement of any shotcrete placement operations. This shall not, however, release Contractor in any way from his responsibility for ensuring the proper performance of the Work.

3.1.7.8 Contractor shall provide ¼ inch by 3 inch hook bolt anchors, supports, and other accessories to hold welded wire fabric in proper position while shotcrete is being placed. Use steel, 16 gauge tie wire at laps and supports.

3.1.7.9 Contractor shall provide mechanical connections that develop at least 125 percent of the specified yield strength of the steel in tension.

3.1.7.10 Reinforcement shall be new and clean and free from loose mill scale, loose rust, oil or other coatings that interfere with bonding.

3.1.7.11 For installation of steel bar reinforcement, the City of Dunwoody shall specify the use of steel bars and steel placement on the project specific basis. The Contractor should submit their steel bar reinforcement design prior to beginning the work for approval.

3.1.8 Shotcrete Placement- Man-Entry Spray Application:

3.1.8.1 The Contractor shall have all equipment and materials required for curing available at the site and ready for use before placement of shotcrete begins. The Contractor shall give reasonable notice to the City of Dunwoody each time shotcrete placement is scheduled. Such notice shall be far enough in advance to give the City of Dunwoody adequate time to inspect the surfaces to which the shotcrete is to be applied, the forms, steel reinforcement, and other preparations for compliance with the specifications prior to the start of placement operations.

3.1.8.2 Contractor shall place shotcrete using suitable delivery equipment and procedures that will result in shotcrete in place with a minimum thickness per the approved design, but no less than 2-inches with an allowable variance of 15 percent unless otherwise shown.

3.1.8.3 Contractor may use either wet mix or dry mix method of applying shotcrete. Contractor shall control thickness, method of support, air pressure, and/or water content of shotcrete to preclude sagging or sloughing off. Contractor shall discontinue shotcreting or provide suitable means to screen the nozzle stream if wind or air currents cause separation of the nozzle stream during placement.

3.1.8.4 Contractor shall dampen absorbent substrate surfaces prior to placement of shotcrete to facilitate bond and to reduce the possibility of shrinkage cracking developing from premature loss of mixing water.

3.1.8.5 Contractor shall broom/brush or scarify the surface of freshly placed shotcrete to which, after hardening, additional layers of shotcrete are to be bonded. Contact surfaces shall be dampened just prior to application of succeeding layers.

3.1.8.6 Contractor shall fill with sound material all corners and any areas where rebound cannot escape or be blown free. Contractor shall complete the corners between the web and the flanges of structural steel before application to the flat areas.

3.1.8.7 Contractor shall provide a supply of clean, dry air adequate for maintaining sufficient nozzle velocity for all parts of the work and, if required, for simultaneous operation of a suitable flow pipe for cleaning away rebound.

3.1.8.8 Rebound losses shall not exceed an average of 15% by weight of the material passing through the nozzle. Rebound shall be removed and disposed of at Contractor's expense.

3.1.8.9 If the flow of material at the nozzle is not uniform and slugs, sand spots, or wet sloughs result, the nozzle man shall direct the nozzle away from the work until the faulty conditions are corrected. Such defects shall be replaced at Contractor's expense.

3.1.8.10 Shotcreting shall be suspended if air velocity separates the cement from the sand at the nozzle.

3.1.8.11 The nozzle shall be held at the proper distance (minimum of 3 feet except in close quarters) and at the proper angle to secure maximum compaction with minimum loss of material. This angle shall be as near perpendicular to the surface as work permits.

3.1.8.12 Construction joints shall be sloped off to a thin, clean, 45 degree slope. Before placing the adjoining work, clean the sloped portion and adjacent shotcrete and then moisten and scour with an air jet. Finished edges away from the new structures are to be feathered over no more than 4-inches from where the reinforcement ends.

3.1.9 Placement Around Reinforcement

3.1.9.1 Contractor shall not place shotcrete through more than one layer of reinforcing mesh in one application. Contractor shall test to ascertain if any voids or sand pockets have developed around or behind the reinforcement by probing with an awl or other pointed tool after the shotcrete has achieved its initial set: or by coring or other suitable means.

3.1.10 Line and Thickness Control:

3.1.10.1 Prior to the application of the first layer of shotcrete, Contractor shall furnish and install adequate ground wires, measuring pins or other approved means to establish the thickness, surface planes, and finish lines of the shotcrete. Contractor shall maintain specified tolerances by keeping ground wires secure and taut.

3.1.10.2 Pins shall be non-corrosive and so designed as not to cause infiltration of water through the shortcut: Pins shall be installed along full circumference in the application area, on 5-foot centers in each direction and at other locations as may be directed by the City of Dunwoody.

3.1.10.3 Contractor shall provide means for the City of Dunwoody to verify pins or other approved methods of ensuring thickness and final grade control.

3.1.11 Placement Precautions:

3.1.11.1 Contractor shall not place shotcrete if drying or stiffening of the mix takes place at any time prior to delivery to the nozzle. No rebound or previously expended material shall be used in the shotcrete mix.

3.1.11.2 Contractor shall remove all overspray or rebound prior to final set and before placement of shotcrete material on such adjacent surface.

3.1.11.3 Contractor shall not apply shotcrete against surfaces where frost is present or when the surface air temperature is below 40 degrees Fahrenheit. Contractor shall provide for measuring the air temperature within the sewer at no less than once every 30 minutes at nil locations where shotcrete is to be placed during freezing weather.

3.1.11.4 Contractor shall not apply shotcrete in areas where running water exists.

3.1.11.5 Contractor shall protect shotcrete from freezing during installation and during the curing period.

3.1.11.6 Contractor shall protect in-place reinforcing from excessive construction traffic and other work.

3.1.12 Surface Finish:

3.1.12.1 Contractor shall bring the shotcrete to an even plane and well-formed corners.

3.1.12.2 After the shotcrete has been placed to the depth required the surface shall be checked with a straightedge or template. Low spots shall be brought up to grade by placing additional shotcrete.

3.1.12.3 After the applied surface has been trued, the entire surface shall receive a smooth brush finish parallel to the direction of flow.

3.2 LATERAL REINSTATEMENT OR ABANDONMENT:

3.2.1 Contractor is responsible, prior to shotcrete application, for identifying all active and abandoned laterals and their locations. The Contractor shall submit a lateral abandonment plan prior to beginning the Work. The plan shall include the locations and sizes of all laterals and whether they are active or abandoned.

3.2.2 It shall be the Contractor's responsibility to determine and to assure that all live laterals are connected. Lateral reinstatement shall be completed from inside the pipe. Excavation for lateral re-installment without prior notification and approval is not permitted.

3.3 ACCEPTANCE:

3.3.1 When shotcrete lacks uniformity, results in unacceptable testing, exhibits segregation, honeycombing, or laminations, or contains dry patches, slugs, voids or sand pockets, the Contractor shall remove and replace the defective shotcrete. The City of Dunwoody's concurrence in the extent of removal and replacement is required.

3.3.2 Prior to starting removal and replacement of defective work the Contractor shall obtain the City of Dunwoody's approval of their plan for making the repair. Such approval shall not be considered a waiver of the City of Dunwoody's right to require complete removal of defective work if the completed repair does not produce shotcrete of the required quality and appearance.

3.3.3 Repair work shall be performed only when the City of Dunwoody or its representative is present.

3.3.4 Repair shall be made with shotcrete conforming to this specification. When removal of defective shotcrete is required, reinforcement damaged or destroyed shall be replaced prior to replacement of the shotcrete. At the edges of removed sections the sound shotcrete shall be carefully trimmed to the extent required to expose sufficient reinforcement for effecting competent splices. The sound shotcrete at the edges of removed sections shall be trimmed to a slope of approximately 45 degrees with the surface of the work and shall be thoroughly moistened prior to placement of the new shotcrete.

3.3.5 Portions of the work having thickness less than those specified may be repaired by the placement of additional layers of shotcrete, provided that such repair is expressly approved by the City of Dunwoody.

3.3.6 Surfaces of the work to which additional shotcrete is to be applied shall be prepared as required by this specification.

3.3.7 Curing compound as specified in this specification shall be applied to repaired areas immediately after the repairs are completed.

3.3.8 Contractor is responsible for providing internal CCTV inspection after the repairs are made, and submit video documentation to the City of Dunwoody.

PART TWO – GENERAL CONDITIONS

1.1 The Contractor shall perform all of its obligations and functions under the Contract in accordance with the Contract specifications, industry standards and any manufacturers' specifications. The Contractor shall adjust and coordinate its activities to the needs and requirements of the City and perform its activities so as not to disturb, endanger, unreasonably interfere with or delay the operations or activities of the City.

1.2 During the performance of this Contract, the Contractor shall keep current and, if requested by the City, provide copies of any and all licenses, registrations or permits required by applicable governing agencies. The Contractor shall keep a copy of any and all licenses, registrations and permits on the job site while performing the Contract work.

1.3 The Contractor shall provide 48-hour advance notification to any property owner or tenant whose driveway access will be impacted. Such notification shall provide contact information of the construction foreman and City representative and shall provide any special instructions to be followed and provide contact information.

1.4 The contractor will be responsible for protecting work from weather, traffic and vandalism during curing. Any defects or defacement resulting from failure to protect the shotcrete will be repaired at the contractor's expense.

1.5 Upon the completion of the project, any excess items which might be left over from the construction related work

shall be removed and disposed of properly by the contractor. The cost for such removal and disposal of such items will be included in other unit price bid. No claims will be considered for extra compensation.

- 1.6 Working hours are limited to Monday through Friday, 7:30 A.M. to 8:00 P.M. Lane closures are limited to the hours of 9:00 A.M to 4:00 P.M. unless prior permission is granted by the City. No work is permitted on city-observed holidays. In the event an emergency condition is declared by the City's Manager or his respective designee, the Contractor will perform work during such hours as requested by the City.
- 1.7 The Contractor shall give supervision to the work and have a responsible foreman continuously on the job. There shall be at least one person in a position of responsibility on the site at all times who is capable of communicating in English.
- 1.8 Contractor shall have all vehicles marked with their company name.
- 1.9 The Contractor shall perform project housekeeping/clean-up on a daily basis. A 24-hour contact must be provided to the City of Dunwoody Public Works for all issues as needed in regards to the project for any safety, signage, erosion control, or other emergency as needed.
- 1.10 Contractor shall adequately protect workers, land owners or tenants, adjacent property, and the public during construction operations. The contractor shall plan and conduct the construction of the sidewalk projects to comply with local, state, and federal laws, rules and regulations and to exercise the highest degree of care to safeguard persons and property from injury. Contractor will perform all services in compliance with applicable Federal Health and Safety laws currently in effect. Neither the giving of such special instructions by the City Representative nor the adherence thereto by contractor shall relieve contractor of the sole responsibility to maintain safe and efficient working conditions. Contractor shall require its employees to wear protective clothing, reflective vests, masks, eye protections, etc. during any operation as required or directed by applicable laws, regulations, ordinance, and/or direction by manufacturer of materials or equipment.
- 1.11 The Contractor shall be solely and completely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the work site and other persons including, but not limited to, the general public who may be affected thereby.
- 1.12 Contractor shall make every effort to ensure private property is not disturbed. Any disturbance of property outside right of way shall require the City of Dunwoody and the property owner's written approval by way of a signed temporary construction easement.

PART THREE – PROPOSAL CONTENTS

Four (4) copies of the proposal (one original and three copies) including a printed copy of the furnished excel spreadsheet of the Unit Price Schedule, should be submitted in a sealed envelope. Proposals must be submitted in a sealed envelope which shall be clearly marked Purchasing RFP 15-03. Additionally provide one (1) electronic copy in PDF of the proposal and return a completed copy of the excel spreadsheet Unit Price Schedule. To aid in thorough and consistent review, the proposal shall be submitted on one-sided 8½" x 11" pages in no smaller than 10-point font and shall be organized and numbered to correspond to Section I through Section IV, with particular emphasis given to Section II:

- 1.1 SECTION I – Each proposal shall include a Title Page and a Table of Contents. The Title Page should identify the project; the name of the firm, name of the firm's primary contact, address, telephone number, fax number and email address. The Table of Contents shall contain the sections and corresponding page number for the items listed below. All pages of the proposal must be clearly identified and consecutively numbered and correspond to the Table of Contents.
- 1.2 SECTION II – Each proposer shall document its staff, experience and qualifications by describing the contractors experience with similar projects and the manner in which it plans to manage and staff the awarded contract, including the resumes of key and critical personnel, to successfully complete the project objectives.

- 1.2.1 Qualifications, including experience in the proposed project methodology and public sector and/or municipal experience;
 - 1.2.2 Summary of experience, including the number of years of relevant experience and representative project experience with project name, client and date performed;
 - 1.2.3 Description of any specialty equipment or capabilities;
 - 1.2.4 Other supporting documentation which demonstrates the ability to successfully perform the work;
- 1.3 SECTION III – Unit Price Schedule.
- 1.4 SECTION IV – Each proposer is required to include three (3) verifiable references. Each proposer may, but is not required to include qualifications, resumes, and any other materials for similar contracts.
- 1.5 SECTION V – Required forms (acknowledgement of agenda, etc.).

PART FOUR - EVALUATION OF PROPOSALS

The City's staff will review all proposals submitted. After reviewing the proposals, staff may, at its discretion, invite to interview and demonstrate performance (at proposer's expense at the City's site) one or more of the proposers whose proposals appear to best meet the City's requirements. The purpose of such an interview would be for all proposers to elaborate upon their proposal before a recommendation for ranking of the proposals is made. Interview responses, and demonstration performance, along with the written proposal and samples (if any), will become part of proposer's submission to be evaluated pursuant to the evaluation criteria. The City reserves the right to short-list proposers for further consideration.

- 1.1 The City, in its discretion, may award the Contract(s) to the responsible and responsive proposer(s) submitting the proposal which is deemed to be the most advantageous to the City, price and other factors being considered. The following are the evaluation criteria the City will consider in determining which proposal is most advantageous to the City:
- 1.1.1 Copy of business license and proof of being in business at least seven (7) years. Provide copy of State Contractor's License with name and phone of the registered agent.
 - 1.1.2 Name and telephone number of the Contractor's designated contact.
 - 1.1.3 Project Personnel: Provide information on personnel to be assigned to this project. Personnel should have experience from similar projects and in fields necessary to complete this proposed work.
 - 1.1.4 Similar Experience: List and describe your firm's projects worked on in the past five years that best match the scope and intent of the various projects. Identify unique constraints or challenges associated with those projects and how you addressed those in order to deliver a successful project. The City may request samples of comparable work during the proposal review process.
 - 1.1.5 Verifiable references of similar projects.
 - 1.1.6 The Unit Price Schedule Cost Proposal.

COST PROPOSAL SECTION III

The undersigned, as Bidder, declares that he has carefully examined an annexed proposed form of Contract, the Specifications therein contained, and the Drawings therein referred to, and that he proposes and agrees that if his Proposal is accepted, to provide the necessary machinery, tools, apparatus, and other means of construction, and will furnish all materials and labor specified in the Contract, or called for by the Drawings, or necessary to complete the Work in the manner therein specified within the time specified, as

therein set forth for the following unit prices, to wit:

BID SCHEDULE:

Item No.	Description	Unit	Unit Price
1	48-inch arch pipe liner, 2 inch thick, includes wire mesh reinforcement	LF	
2	54-inch, arch pipe liner, 3inch thick, includes wire mesh reinforcement	LF	
3	60-inch arch pipe liner, 3inch thick, includes wire mesh reinforcement	LF	
4	42-inch, rnd. liner, 5000-psi, 2 inch thick, includes wire mesh reinforcement	LF	
5	48-inch, rnd. liner, 5000-psi, 2 inch thick, includes wire mesh reinforcement	LF	
6	54-inch, rnd. liner, 5000-psi, 2 inch thick, includes wire mesh reinforcement	LF	
7	60-inch, rnd. liner, 5000-psi, 2 inch thick, includes wire mesh reinforcement	LF	
8	66-incb, rnd. liner, 5000-psi, 3 inch thick, includes wire mesh reinforcement	LF	
9	72-incb, rnd. liner, 5000-psi, 4 inch thick, #4 rebars @ 1ft. oc/ew	LF	
10	78-inch, rnd. liner, 5000-psi, 4 inch thick, #4 rebars @ 1ft. oc/ew	LF	
11	84-inch, rnd. liner, 5000-psi, 4 inch thick, #4 rebars @ 1ft. oc/ew	LF	
12	90-inch, rnd. liner, 5000-psi, 4 inch thick, #4 rebars @ 1ft. oc/ew	LF	
13	96-inch, rnd. liner, 5000-psi, 4 inch thick, #4 rebars @ 1ft. oc/ew	LF	
14	3 ft dia. Box or manhole seal, 2 inch thick includes wire mesh and fiber reinforcement	VF	
15	4 ft dia. Box or manhole seal, 3 inch thick includes wire mesh and	VF	

	fiber reinforcement		
16	5 t dia. Box or manhole seal, 4 inch thick includes wire mesh and fiber reinforcement	VF	
17	6 ft dia. Box or manhole seal, 5000-psi liner, 4 inch thick includes #4 rebar @ 1ft.oc/ew	VF	
18	Pressure grout voids/3000 psi	CY	
19	New Retaining Walls, 5000-psi, 6 inch thick, includes #5hort. Rebar & #4 vert. Rebar@ 6-inch oc/ew	SY	
20	Aprons & Toe-Walls 5000-psi, 6 inch thick includes #4 rebar @ 1-ft. oc/ew	SF	
21	Seal End & Wing Wall, 2-inch thick, 5000-psi mix, includes coverage with wire mesh	SY	
22	Structural metal Plate Arch liner, 5000-psi, 4-inch thick, includes #5 rebar @ 1-ft, oc/ew	SY	
23	Clean all pipes & structures (solid debris removal only)	CY	
24	Ditch Liner, 4-inch thick, 5000-psi with wire mesh reinforcement	SY	
25	Masonry Box Culvert Liner- 3-inch thick with #4 rebars @ 12-inch oc/ew	SY	
26	Masonry Box Culvert Liner- 4-inch thick with #4 rebars @ 12-inch oc/ew	SY	

The items listed above are to be constructed in accordance with the Standard Specifications For Shotcrete, American Concrete Institute, ASI 506.295, 1995 editions and the contract documents. All Shotcrete for this project shall be 5000 psi with fiber or steel reinforcement.

ALL PRICES MUST BE TYPED INTO THE BID SCHEDULE PROVIDED IN EXCEL FORMAT. PLEASE PRINT THE BID SCHEDULE AND INCLUDE WITH BID.

LEGEND

dia. = diameter

psi = pounds per square inch

oc/ew= off center/each way

rnd. = round

3.2 The following are the evaluation criteria the City will consider in determining which proposal is most advantageous to the City:

Qualifications – 60%

Cost – 40%

* * * * * END OF SPECIFICATIONS * * * * *

CONTRACT REFERENCES

List below customers for whom you have provided similar services in the past or with whom you are presently contracting. Ensure references below have been contacted and agree to provide the City with a reference including answers to questions posed by the City. References should relate to services of a type similar to the obligations presented in this proposal.

1. COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____

PHONE NO.: _____

E-MAIL: _____

2. COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____

PHONE NO.: _____

E-MAIL: _____

3. COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____

PHONE NO.: _____

E-MAIL: _____

Company Name: _____

PROPOSAL FORM

RFP 2015–09 Shotcrete Restoration Services for PW Stormwater Construction Project Unit Price Contract

The undersigned, as Proposer, hereby declares that this Proposal is in all respects fair and submitted in good faith without collusion or fraud. Proposer represents and warrants to the City that: (i) except as may be disclosed in writing to the City with its Proposal, no officer, employee or agent of the City has any interest, either directly or indirectly, in the business of the Proposer, and that no such person shall have any such interest at any time during the term of the Contract should it be awarded the Contract; and (ii) no gift, gratuity, promise, favor or anything else of value has been given or will be given to any employee or official of the City in connection with the submission of this Proposal or the City's evaluation or consideration thereof.

The Proposer further represents that it has examined or investigated the site conditions if necessary, and informed itself fully in regard to all conditions pertaining to the place where the work is to be done; that it has examined the Contract Documents (available at http://dunwoodyga.gov/index.php?section=for_businesses_doing_business_with_the_city_procurement_opportunities) and has read all Addendum(s) furnished by the City prior to the opening of the Proposals, as acknowledged below, and that it has otherwise fully informed itself regarding the nature, extent, scope and details of the services to be furnished under the Contract.

The Proposer agrees, if this Proposal is accepted, to enter into the written Contract with the City in the form of Contract attached (properly completed in accordance with said Proposal Documents), and the Contract Documents for RFP 15-09 Shotcrete Restoration Services for PW Stormwater Construction Project Unit Price Contract, at the City of Dunwoody, and to furnish the prescribed evidence of a valid business license, insurance, and all other documents required by these Contract Documents. The Proposer further agrees to commence work and to perform the work specified herein within the time limits set forth in the Contract Documents, which time limits Proposer acknowledges are reasonable.

The undersigned further agrees that, in the case of failure or refusal on its part to execute the said contract, provide evidence of specified insurance, a copy of a valid business or occupational license and all other documents required by these Contract Documents within ten (10) business days after being provided with Notice of Intent to Award the contract (or such earlier time as may be stated elsewhere in these Proposal Documents), the Proposal award may be offered by the City to the next ranked Proposer, or the city may re-advertise for Proposals, and in either case the City shall have the right to recover from the Proposer the City's costs and damages including, without limitation, attorney's fees, to the same extent that the City could recover its costs and expenses from the Proposer under section 10 of the Instructions to Proposers if the Proposer withdrew or attempted to withdraw its Proposal.

The Proposer further agrees, if it fails to complete the work according to the Specification within the scheduled time or any authorized extension thereof, that damages may be deducted from the Contract price otherwise payable to the Proposer.

Acknowledgement is hereby made of the following Addendum(s) received since issuance of the Solicitation Documents (identified by number)

Addendum No.	Date	Addendum No.	Date	Addendum No.	Date
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

It shall be the responsibility of each Proposer to visit the City Purchasing Department's website to determine if addendum(s) were issued and, if so, to obtain such addendum(s). Failure to acknowledge an addendum above shall not relieve the Proposer from its obligation to comply with the provisions of the addendum(s) not acknowledged above.

Company

Name: _____

Work is to commence on or about October 1, 2015. This contract shall be for one year with a one year City option for extension.

The City of Dunwoody requires pricing to remain firm for the duration of the initial term of the contract. Failure to hold firm pricing for the initial term of the contract will be sufficient cause for the City to declare bid non-responsive.

Termination for Cause: The City may terminate this agreement for cause upon ten days prior written notice to the Consultant of the Consultant's default in the performance of any term of this agreement. Such termination shall be without prejudice to any of the City's rights or remedies by law.

Termination for Convenience: The City may terminate this agreement for its convenience at any time upon 30 days written notice to the Consultant. In the event of the City's termination of this agreement for convenience, the Consultant will be paid for those services actually performed. Partially completed performance of the agreement will be compensated based upon a signed statement of completion to be submitted by the Consultant, which shall itemize each element of performance.

Termination for fund appropriation: The City may unilaterally terminate this Agreement due to a lack of funding at any time by written notice to the Consultant. In the event of the City's termination of this Agreement for fund appropriation, the Consultant will be paid for those services actually performed. Partially completed performance of the Agreement will be compensated based upon a signed statement of completion to be submitted by the Service Provider which shall itemize each element of performance.

The Proposer agrees to provide all work described in this document.

Legal Business Name _____

Federal Tax ID _____

Address _____

Does your company currently have a location within the City of Dunwoody? Yes ____ No ____

Representative Signature _____

Printed Name _____

Telephone Number _____

Fax Number _____

Email Address _____