



## INVITATION FOR BID

City of Suffolk  
IFB # 15081-AT  
April 30, 2015

Purchasing Division  
442 W. Washington Street, Room 1086  
Suffolk, VA 23434  
Phone: (757) 514-7520 Fax: (757) 514-7524  
<http://www.suffolkva.us/purchasing>

### Storm Pipe Rehabilitation & Repair

**Scope of Work:** The intent of this Invitation for Bid (IFB) is to hire one contractor to provide all labor, equipment, vehicles/transportation, permits and fees, and associated insurance required to provide storm pipe rehabilitation and repair services on an as needed basis for all City agencies/departments in accordance with all specifications, terms and conditions herein.

**Bid Due: 3:00 p.m., May 13, 2015**

**Contract Officer:**           Amy Trahan            
Amy Trahan, Buyer I, [atraham@suffolkva.us](mailto:atraham@suffolkva.us)

*The Buyer I, Amy Trahan is the Contract Officer for the City of Suffolk with respect to this IFB. All questions and/or comments should be directed to her at this email address: [atraham@suffolkva.us](mailto:atraham@suffolkva.us). The respondents to this IFB shall not contact, either directly or indirectly, any other employee or agent of the City regarding this IFB. This prohibition shall also extend to the Suffolk City Council and other elected City officials. Any such unauthorized contact may disqualify the bidder from the procurement. All questions concerning bid must be in writing and received five (5) business days prior to the bid opening.*

Sealed bids subject to the conditions and instructions contained herein, will be received at the office of the Purchasing Agent listed above, until the time and date shown above (local prevailing time), for furnishing the items or services described in the bid.

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City / State / Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-mail: \_\_\_\_\_

Print Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

In compliance with this invitation for bids, and subject to all the conditions thereof, the signatory offers, if this bid is accepted within ninety (90) calendar days from the date of the opening, to furnish any or all of the items and/or services upon which prices are quoted, at the price set opposite each item, to be delivered at the time and place specified herein. The above signature certifies he has read, understands, and agrees to all terms, conditions, and requirements of this bid, and is authorized to contract on behalf of firm named above.

# INVITATION FOR BID

## Storm Pipe Rehabilitation & Repair

**SECTION/TITLE**

PURPOSE ..... - 4 -

COMPETITION INTENDED ..... - 4 -

CONTRACT PERIOD ..... - 4 -

GENERAL SPECIFICATIONS ..... - 4 -

CONDITIONS AND INSTRUCTIONS ..... - 7 -

BID FORM ..... - 20 -

REFERENCES ..... - 21 -

ANTICOLLUSION/NONDISCRIMINATION/DRUG FREE WORKPLACE CLAUSES ..... - 23 -

PROOF OF AUTHORITY TO TRANSACT BUSINESS IN VIRGINIA ..... - 24 -

EXCEPTION PAGE ..... - 25 -

INSURANCE REQUIREMENTS ..... - 26 -

APPENDIX 1 ..... - 28 -

## **PURPOSE**

The intent of this Invitation for Bid (IFB) is to hire one contractor to provide all labor, equipment, vehicles/transportation, permits and fees, and associated insurance required to provide storm pipe rehabilitation and repair services on an as needed basis for all City agencies/departments in accordance with all specifications, terms and conditions herein.

The work shall consist of the rehabilitation of existing storm water, surface water pipe culverts by the methods specified in accordance with the requirement of this provision and as directed by City personnel.

## **COMPETITION INTENDED**

It is the City's intent that this Invitation for Bid (IFB) permits competition. It shall be the bidder's responsibility to advise the Purchasing Agent in writing if any language requirement, specification, etc., or any combination thereof, inadvertently restricts or limits the requirements stated in this IFB to a single source. Such notification must be received by the Purchasing Agent not later than five (5) days prior to the date set for bids to close.

## **CONTRACT PERIOD**

The contract shall cover the period from date of award through May 31, 2016.

This contract may be renewed based on the terms and conditions at the expiration of its term by mutual agreement of the contractor and the City. The City reserves the option to renew this agreement for two (2) additional one-year periods.

Initial rates and subsequent renewal rates must be guaranteed for a minimum of twelve (12) months. Any increase in rates shall be limited to the lesser of the Consumer Price Index for all Urban Consumers (CPI-U) – Other Goods and Services (unadjusted for the current 12 month period) or 3%. The City does not guarantee any rate increase.

## **GENERAL SPECIFICATIONS**

### General

Services under the annual contract shall be provided on an "as needed" basis and shall include all labor, equipment, materials, supplies, travel time and any other costs necessary to perform the work.

The Contractor shall secure all necessary permits for the proper execution and completion of work.

The Contractor shall ensure that its employees will observe and exercise all necessary caution and discretion so as to avoid injury to persons or damage to property of any and all kinds.

The City reserves the right to inspect work in progress as well as make final inspection to approve complete work.

### Damages

All buildings, grounds, appurtenances and furnishings shall be protected by the Contractor from damage which might be done or caused by work performed under this contract. Any damages caused directly or indirectly by the Contractor or his agents or employees shall be repaired and/or replaced at the expense of the Contractor by methods approved by the City to restore the damaged areas(s) to its original condition.

The Contractor shall be held responsible for any acts of his/her employees. All damages, if any, shall be repaired to the complete satisfaction of the City.

Upon occurrence, the Contractor must immediately notify the owner of any damage made by his work force or any damage that may be discovered as the work progresses. Any damage not properly identified to the City shall be assessed to the Contractor.

The Contractor, along with a City representative, shall assess any damages that may have occurred to the pipe structure during the process of the repairs within 48 hours after the completion of the repairs. Assessment of damage must occur within one week from time of complaint by the City. Repairs to damaged pipe or infrastructure shall be completed to the City's sole satisfaction within ten (10) working days after identification of the damage.

### Cost of Materials

The City of Suffolk reserves the right to furnish materials, equipment, parts, etc. to be used by the Contractor.

Materials, equipment, parts, etc. furnished by the Contractor **shall be billed at the actual invoice cost.** Copies of all invoices for materials, equipment, parts or additional charges shall be provided with the Contractor's invoice for labor.

## **SPECIFICATIONS**

**SEE APPENDIX 1**

### Bid Evaluation and Award

If awarded, the bid shall be awarded to the lowest responsive and responsible bidder. In determining the lowest bidder, the following factors shall be considered:

- Price: as outlined on the BID FORM.
- Ability, capability, and skill of the bidder to perform the contract within the time frame(s) specified.
- The character, integrity, reputation, judgment, experience and efficiency of the bidder.
- The quality of performance of previous contracts.
- The financial resources and ability of the bidder to perform the contract.

## CONDITIONS AND INSTRUCTIONS

Rev: 1/16/2014

1. **Use of Form:** All bids shall be submitted on and in accordance with this form. If more space is required to furnish a description of the goods and/or services bid, or delivery terms, the bidder may attach a letter hereto that will be made a part of the bid. In case of a conflict with published requirements, the bid may be considered non-responsive. The City's published specifications shall supersede any additional writings submitted with the bid. Such additional writings shall be clearly marked and noted as an exception.
2. **Submittals:** All bids shall be submitted sealed, plainly marked showing the bid number, date and time. The entire solicitation document is to be returned when submitting a bid unless otherwise directed by the bid document. Failure to return all required pages may result in a determination that the submittal is non-responsive.
3. **Late Bids:** Bids and amendments thereto, if received by Purchasing after the date and time specified for bid opening, will not be considered. It will be the responsibility of the bidder to see that their bid is received by Purchasing as specified. There will be no exceptions. Date of postmark will not be considered. Telephone, facsimile, electronic and verbal bids will not be accepted. Prices or changes shown on the outside of an envelope will not be considered in determination of low bid.
4. **City Hall Closure:** If City Hall is closed for business at the time scheduled for the bid opening, for whatever reasons, sealed bids will be accepted and opened on the next business day of the City, at the original scheduled hour.
5. **Acceptance of Bid:** Receipt of the bid by the City is not to be construed as an award or an order to ship.
6. **Offer/Acceptance:** Each bid is received with the understanding that the acceptance in writing by the City of the bidder to furnish any or all of the goods and/or services described therein, shall constitute a contract between the bidder and the City, which shall bind the bidder to furnish and deliver the goods and/or services quoted at the prices stated and in accordance with the conditions of the accepted bid; and the City on its part to order from such bidder, except for causes beyond reasonable control; and pay for, at the agreed prices, all goods and/or services specified and delivered.
7. **Withdrawal of Bids:** Bidder has the right to request withdrawal of their bids from consideration due to error by giving notice not later than two business days after the bids are publicly opened. Work papers showing evidence of error(s) may be required.

Bids may be withdrawn any time prior to the bid opening. Withdrawal of bids may be accomplished by submitting such request in writing on the issuing company's letterhead either in person, electronically, or by certified mail.

8. **Addenda**: If issued, addenda to this solicitation will be posted on the Purchasing website (<http://www.suffolkva.us/bids/index.jsp>). It is the bidder's responsibility to check the website or to contact the Purchasing division prior to the submittal deadline to ensure that the bidder has a complete, up-to-date package. Acknowledgement of all issued Addenda shall be indicated on the bid form in the appropriate spaces.
9. **Governing Document**: The solicitation document maintained by Purchasing in the bid file shall be considered the official copy. In the case of any inconsistency between bid documents submitted to the City, but not clearly listed as an exception, the language of the official copy shall prevail. Furthermore, any exception or change to the specifications made by the bidder may be cause to disqualify your bid.
10. **Award**: Award will be made to the lowest responsive and responsible bidder. The quality of the goods and/or services to be supplied, their conformity with the specifications, their suitability to the requirements, the delivery, qualifications and references will be taken into consideration in making the award. The City reserves the right to refuse all bids. Determination of low bid shall be determined by the audited figure shown on the pricing page titled 'Total Bid Amount.' In case of error in the extension of prices, the unit price shall govern.
11. **Negotiation**: Unless canceled or rejected, a responsive bid from the lowest responsible bidder shall be accepted as submitted; except that if the bid from the lowest responsible bidder exceeds available funds, the City may negotiate with the apparent low bidder to obtain a contract price within the available funds.
12. **Announcements**: Upon the award or the announcement of the decision to award a contract, the City will publicly post such notice on the electronic bulletin board located outside of the Purchasing Division and on the City's web site: ([http://www.suffolkva.us/bids/bid\\_search\\_awarded.jsp](http://www.suffolkva.us/bids/bid_search_awarded.jsp))
13. **City's Rights**: The City reserves the right to reject any and all bids, and to waive any informality if it is determined to be in the best interest of the City.
14. **Cooperative Agreements**: If authorized by the bidder(s), the resultant contract(s) may be extended to any jurisdiction within the Commonwealth of Virginia to purchase at the contract prices in accordance with the contract terms. Any jurisdiction using such contracts shall place its own order(s) directly with the successful contractor(s). The City of Suffolk acts only as the contracting agent and is not responsible for placement of orders, payment, or discrepancies of the participating jurisdictions. It is the contractor's responsibility to notify the jurisdictions of the availability of contract(s).
15. **Prices**: Prices shall be stated in units of quantity specified. No additional charges shall be passed on to the City, including any applicable taxes, delivery, or surcharges. Prices quoted shall be the final cost to the City. In case of error in the extension of prices, the unit price shall govern.



16. **Corrections:** All prices and notations should be in ink or typewritten. Mistakes may be crossed out and corrections made in ink and must be initialed and dated by the person signing the bid.
17. **Delivery:** The time of delivery must be stated in definite terms. If time of delivery for different goods and/or services varies, the bidder shall so state.
18. **Samples:** Samples, when requested, must be furnished free of expense, and upon request, if not destroyed, will be returned at the bidder's risk and expense.
19. **Brand Names:** The use of the name of a manufacturer, brand, make or catalog designation in specifying an item shall restrict bidders to the manufacturer, brand, make or catalog designation identified, unless qualified by the provision "or approved equal". If qualified by the provision "or equal" the Brand Names are used simply to indicate the character, quality and/or performance equivalence of the goods and/or services desired. The goods and/or services on which bids are submitted must be of such character, quality and/or performance equivalence that it will serve as that specified. In submitting bids on goods and/or services other than as specified, bidder shall furnish complete data and identification with respect to the alternate goods and/or services that they propose to furnish. It shall be in the City's sole judgment if a substitute product offered is an approved equal and acceptable.
20. **Standard equipment:** Any equipment delivered must be standard, new and unused equipment, latest model, except as otherwise specifically stated in the bid. Where any part or the normal accessories of equipment is not described, it shall be understood that all the equipment and accessories that are usually provided in the manufacturer's stock model shall be furnished.
21. **Silence of Specifications:** The apparent silence of these specifications and any supplemental specifications as to any detail or the omission from the specifications of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and correct type, size and design are to be used. All interpretations of these specifications shall be made on the basis of this statement.
22. **Capacity of bidder:** All bids must be signed by a responsible officer or employee having the authority to bind the firm in contract. The bidder agrees that its contract performance shall be in strict conformance with the contract documents.
23. **Rights to Damages:** By signing this bid, the bidder assigns to the City any and all rights that it may have under the antitrust laws of the United States and the Commonwealth of Virginia in any way arising from or pertaining to this bid. This provision is remedial in nature and is to be liberally construed by any court in favor of the City.
24. **Anti-collusion:** The bidder certifies by signing this Invitation of Bid that this bid is made without prior understanding, agreement, or accord with any other

person or firm submitting a bid for the same goods and/or services and that this bid is in all respects bona fide, fair, and not the result of any act of fraud or collusion with another person or firm engaged in the same line of business or commerce. Any false statement hereunder may constitute a felony and can result in a fine and imprisonment, as well as civil damages.

25. **Indemnification:** The Contractor shall defend, indemnify and hold the City, and the City's employees, agents, and volunteers, harmless, from and against any and all damage claim, liability, cost, or expense (including, without limitation, attorney's fees and court costs) of every kind and nature (including, without limitation, those arising from any injury or damage to any person, property or business) incurred by or claimed against the contractor, its employees, agents, and volunteers, or incurred by or claimed against the City, the City's employees, agents, and volunteers, arising out of, or in connection with, the performance of all services hereunder by the contractor. This indemnification and hold harmless includes, but is not limited to, any financial or other loss including, but not limited to, any adverse regulatory, agency or administrative sanction or civil penalties, incurred by the City due to the negligent, fraudulent or criminal acts of the contractor or any of the Contractor's officers, shareholders, employees, agents, contractors, subcontractors, or any other person or entity acting on behalf of the Contractor. Unless otherwise provided by law, the Contractor indemnification obligations hereunder shall not be limited in any way by the amount or type of damages, compensation, or benefits payable by or for the Contractor under worker's compensation acts, disability benefit acts, other employee benefit acts, or benefits payable under any insurance policy. This paragraph shall survive the termination of the contract including any renewal or extension thereof.
26. **Copyright Protection:** The Contractor agrees to defend and save the City, its agents, officials, and employees, harmless from liability of any nature or kind, for use of any copyright, composition, secret process, patented or unpatented invention, articles or appliances furnished or used in the performance of the contract, or which the Contractor is not the patentee, assignee, or licensee, to the same extent as provided in the above paragraph.
27. **Laws, Regulations:** The Contractor shall keep fully informed of all federal, state, and local laws, ordinances and regulations that in any manner affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances and regulations.
28. **Alien employment:** The Contractor certifies that he does not and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ unauthorized aliens as defined in the federal Immigration Reform and Control Act of 1986, as amended.
29. **Contractor's License:** If any of the services promulgated under this solicitation consist of construction work, it is required under Title 54.1, Chapter 11, Code of Virginia, for a contractor who performs or manages

construction, removal, repair, or improvement when the total value referred to in a single contract or project is:

One hundred twenty thousand dollars (\$120,000) or more, or the total value of all such construction, removal, repair or improvements undertaken by such person within any twelve-month period is seven hundred fifty thousand dollars (\$ 750,000) or more shall show evidence of being licensed as a Class A Contractor.

Ten thousand dollars (\$10,000) or more, but less than one hundred twenty thousand dollars (\$120,000) or the total value of all such construction, removal, repair, or improvement undertaken by such person within any twelve-month period is one hundred and fifty thousand dollars (\$150,000) or more, but less than seven hundred fifty thousand dollars (\$750,000) shall show evidence of being licensed as a Class B Contractor.

Over one thousand (\$1,000) but less than ten thousand (\$10,000), or the total value of all such construction, removal, repair, or improvements undertaken by such person within any twelve-month period is one hundred and fifty thousand dollars (\$150,000) shall show evidence of being licensed as a Class C Contractor.

The City shall require master certification as a condition of licensure or certification of electrical, plumbing and heating, ventilation and air conditions contractors.

A valid business license from the City may be required. The bidder shall complete whichever of the following notations as appropriate:

“Licensed Class A Virginia Contractor Number \_\_\_\_\_

“Licensed Class B Virginia Contractor Number \_\_\_\_\_.”

“Licensed Class C Virginia Contractor Number \_\_\_\_\_.”

30. **Payment Terms:** Payment terms shall be 'Net 45 'days, from the date of Contractor invoice approval by the City.

Payment terms, if offered, shall not be considered in determining the low bidder.

Discount period, if offered, shall be computed from the date of proper receipt of the contractor's correct invoice, or from the date of acceptable receipt of the goods and/or services, whichever is latest.

The payment terms stated herein must appear on the contractor's invoice. Failure to comply with this requirement shall result in the invoice being returned to the contractor for correction.

Late payment charges shall not exceed the allowable rate specified by the Commonwealth of Virginia Prompt Payment Act. (1% per month)

Contractor shall submit invoices in duplicate, such statement to include detailed breakdown of all charges, and shall be based on completion of tasks or deliverables.

Individual Contractors shall provide their social security numbers, and proprietorships, partnerships, and corporations shall provide their federal employer identification number on their submittal.

The City prefers to make payment with the City's Purchasing Card. Typically this enables faster payments to the Contractor. Are you willing and able to accept this type of payment? Yes \_\_\_\_\_ No \_\_\_\_\_

31. **Default:** In event of default by the Contractor, the City reserves the right to procure the goods and/or services from other sources, and hold the Contractor liable for any excess cost occasioned thereby. Such actions taken by the City shall not release the contractor from additional remedies that may be allowed by law.
32. **Availability of Funds:** A contract shall be deemed in force only to the extent of appropriations available to each department for the purchase of such goods and/or services. The City's extended obligations on those contracts that envision extended funding through successive fiscal periods shall be contingent upon actual appropriations for the following years.
33. **Appeals Procedure:** Upon your request, administrative appeals information will be provided that shall be used for hearing protests of a decision to award, or an award, appeals from refusal to allow withdrawal of bids, appeals from disqualification, appeals for debarment or suspension, or determination of non-responsibility and appeals from decision or disputes arising during the performance of a contract. To be timely all appeals shall be made within the time periods set forth by the Virginia Public Procurement Act, §2.2-4357, et seq. Contact the buyer at once for assistance.
34. **Faith-based Organizations:** The City of Suffolk does not discriminate against faith-based organizations.
35. **Anti-Discrimination:** By submitting their bids, bidders certify to the City that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians with Disabilities Act, the Americans with Disabilities Act and 2.2-4311 of the Virginia Public Procurement Act (VPPA). If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit

by the public body. (Code of Virginia 2.2.4343.1E).

In every contract over \$10,000 shall include the following provisions:

1. During the performance of this contract, the Contractor agrees as follows:
  - a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, service disabled veterans or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
  - b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
  - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting these requirements.
2. The Contractor will include the provisions of Section a, b, and c above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
36. **Drug-Free Workplace:** During the performance of this contract, the Contractor agrees to (1) provide a drug-free workplace for the Contractor's employees; (2) post in conspicuous place, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (3) state in all solicitation or advertisement for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (4) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

37. **Assignment of Contract:** A contract shall not be assignable by the Contractor in whole or in part without the written consent of the City.
38. **Independent Contractor:** The Contractor and any employees, agents, or other persons or entities acting on behalf of the Contractor shall act in an independent capacity and not as officers, employees, or agents of the City.
39. **Scheduling and Delays:** The parties to any contract resultant of this solicitation acknowledge that all or part of the work to be performed hereunder may be delayed and extended at the option of the City. Such delays may be caused by delays, denials and modifications of the various state or federal permits, or for other reasons. The City shall not be required to pay any of the Contractor's direct or indirect costs, or claims for compensation, extended overhead, or other damage or consequential damages arising out of or related to any delays or interruptions required or ordered by the City. If the City delays the project for any reason for a continuous period of ninety (90) days or more, the City and Contractor will negotiate a mutually agreeable adjustment to the Contractor's award amount. Notwithstanding the above, in construction contracts, to the extent that an unreasonable delay is caused by the act or omissions of the City due to causes within the City's control, the above waiver or release shall not apply.
40. **Governing Law:** This Agreement is made, entered into, and shall be performed in the City of Suffolk, Virginia, and shall be governed by the applicable laws of the Commonwealth of Virginia without regard to its conflict of law rules. In the event of litigation concerning this Agreement, the parties agree to the exclusive jurisdiction and venue of the Circuit Court of the City of Suffolk, Virginia; however, in the event that the federal court has jurisdiction over the matter, then the parties agree to the exclusive jurisdiction and venue of the U.S. District Court for the Eastern District of Virginia, Norfolk Division.

The Contractor shall not cause a delay in services because of the pending or during litigation proceedings, except with the express, written consent of the City or written instruction/order from the Court.

41. **Severability:** If any provision of this contract or the application thereof to any person or circumstances shall to any extent be invalid or unenforceable, the remainder of this contract, or the application of such provision to persons or circumstances other than those which it is invalid or unenforceable, shall not be affected hereby, and each provision of this contract shall be valid and enforced to the full extent permitted by law.
42. **Termination for Convenience:** The City may at any time, and for any reason, terminate this Contract by written notice to Contractor specifying the termination date, which shall be not less than thirty (30) days from the date such notice is mailed.

Notice shall be given to Contractor by certified mail/return receipt requested at the address set forth in Contractor's Bid Proposal or as provided in this Contract. In the event of such termination, Contractor shall be paid such

amount as shall compensate Contractor for the work satisfactorily completed, and accepted by the City, at the time of termination. If the City terminates this Contract, Contractor shall withdraw its personnel and equipment, cease performance of any further work under this Contract, and turn over to the City any work completed or in process for which payment has been made.

43. **Termination for Cause:** In the event that Contractor shall for any reason or through any cause be in default of the terms of this Contract, the City may give Contractor written notice of such default by certified mail/return receipt requested at the address set forth in Contractor's Bid/Proposal or as provided in this Contract.

Unless otherwise provided, Contractor shall have ten (10) days from the date such notice is mailed in which to cure the default. Upon failure of Contractor to cure the default, the City may immediately cancel and terminate this Contract as of the mailing date of the default notice.

Upon termination, Contractor shall withdraw its personnel and equipment, cease performance of any further work under the Contract, and turn over to the City any work in process for which payment has been made. In the event of violations of law, safety or health standards and regulations, this Contract may be immediately cancelled and terminated by the City and provisions herein with respect to opportunity to cure default shall not be applicable.

44. **Contact Prohibition:** Direct contact with City departments other than Purchasing, on the subject of this bid is expressly forbidden except with the foreknowledge and permission of the Contract Officer. Violation may result in a determination that your firm is ineligible for an award.

All questions shall be in writing to the Contract Officer shown on the title page of the bid. The respondents to this IFB shall not contact, either directly or indirectly, any other employee or agent of the City regarding this IFB. This prohibition shall also extend to the Suffolk City Council and locally elected officials. Any such unauthorized contact may disqualify the bidder from this procurement.

45. **Additional Conditions:** The Conditions and Instructions in this solicitation are intended to apply to the resulting contract and shall supersede any conflicting terms offered. Any additional conditions a bidder intends be considered must be submitted with the bid and noted as an exception. Such exceptions may result in a finding that the submittal is 'non-responsive' to the bid, negating possibility of an award to that bidder. Contractual documents submitted by the successful firm after an award will not be accepted.

46. **Contractor Failure to Perform:** Failure of the Contractor to perform the contract by reason of the City's non-acceptance of additional conditions submitted after the award shall result in termination of the contract by the City, and may result in debarment of the Contractor for a period of up to three (3) years. Termination and /or debarment of the Contractor shall not

constitute a waiver by the City of any other rights or remedies available to the City by law or contract.

47. **Conflict**: In the event of a conflict between the contract documents, including these Conditions and Instructions, and the terms of a purchase order or related document issued by Purchasing, the contract documents shall control.
48. **Records and Inspection**: The Contractor shall maintain full and accurate records with respect to all matters covered under this contract, including, without limitation, accounting records, written policies, procedures, time records, telephone records, and any other supporting evidence used to memorialize, reflect, and substantiate charges or fees related to this contract. The Contractor's records shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by the City and its employees, agents or authorized representatives after giving at least three (3) days notice to the Contractor by the City. The City shall have access to such records from the effective date of this contract, for the duration of the contract, and for five (5) years after the date of final payment by the City to the Contractor pursuant to this contract or any renewal or extension of this contract. The City's employees, agents or authorized representatives shall have access to the Contractor's facilities, shall have access to all necessary records and shall be provided adequate and appropriate work space, in order to conduct audits.
49. **Rights and Remedies Not Waived**: In no event shall the making by the City of any payment to the Contractor, or the waiver by the City of any provision under this contract including any obligation of the Contractor, constitute or be construed as a waiver by the City of any other provision, obligation, breach of covenant, or any default which may exist under this contract on the part of the Contractor, and the making of any such payment by the City while any such breach or default exists shall not impair or prejudice any right or remedies available to the City.
50. **Entire Agreement**: This contract and any additional or supplementary documents incorporated herein by reference contain all the terms and conditions agreed upon by the parties hereto, and no other agreements, oral or otherwise, regarding the subject matter of this contract or any part thereof shall have any validity or bind any of the parties hereto. This contract shall not be modified, altered, changed or amended unless in writing and signed by the parties hereto.
51. **Conflicts of Interests**: Contractor shall not accept or receive commissions or other payments from third parties for soliciting, negotiating, procuring, or effecting insurance on behalf of the City.
52. **Responsibility of Contractor**: The Contractor shall, without additional costs or fee to the City, correct or revise any errors or deficiencies in his performance. Neither the City's review, approval or acceptance of, nor payment for any of the services required under this Agreement shall be deemed a waiver of rights by the City, and the Contractor shall remain liable to the City for all costs which are incurred by the City as a result of the



Contractor's negligent performance of any of the services furnished under this Agreement.

53. **Changes and Additions:** It shall be the responsibility of the Contractor to notify the City, in writing, of any necessary modifications or additions in the Scope of this Agreement. Compensation for changes or additions in the Scope of this Agreement will be negotiated and approved by the City, in writing.

It is understood and agreed to by both the City and the Contractor that such modifications or additions to this Agreement shall be made only by the full execution of the City's standard Agreement change order form. Furthermore, it is understood and agreed by both parties that any work done by the Contractor on such modification or addition to this Agreement prior to the City's execution of its standard Agreement change order form shall be at the total risk of the Contractor and said work may not be compensated by the City.

54. **Exemption from Taxes:** The City is exempt from State Sales Tax and Federal Excise Tax. Tax Exemption Certificate indicating the City's tax exempt status will be furnished by the City of Suffolk upon request.

55. **Debarment Status:** By submitting a bid, bidders certify that they are not currently debarred by the Commonwealth of Virginia from submitting bids or proposals on contracts for the type of goods and/or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.

56. **Safety:** All Contractors and subcontractors performing services for the City are required and shall comply with all Occupational Safety and Health Administration (OSHA), State and City Safety and Occupational Health Standards and any other applicable rules and regulations. Also all Contractors and subcontractors shall be held responsible for the safety of their employees and any unsafe acts or conditions that may cause injury or damage to any persons or property within and around the work site area under this contract.

57. **License Requirement:** All firms doing business in the City of Suffolk are required to be licensed in accordance with the City of Suffolk business license ordinance. Wholesale and retail merchants without a business location in the City of Suffolk are exempt from this requirement. Any questions concerning business licenses should be directed to the Commissioner of the Revenue's Office, telephone (757) 514-4260 or email [comrev@suffolkva.us](mailto:comrev@suffolkva.us).

58. **Contractor's Form:** In cases where the City may accept the Contractor's form agreement, whereas certain standard clauses that may appear in the Contractor's form agreement cannot be accepted by the City, and in consideration of the convenience of using that form, and this form, without the necessity of negotiating a separate contract document, the parties hereto specifically agree that, notwithstanding any provisions appearing in the

attached Contractor's form contract, the City's contract addendum shall prevail over the terms of the Contractor's agreement in the event of a conflict.

59. **Bidder Qualifications:** Only bids from established contractors for work similar in scope to work herein shall be considered; the City reserves the right to request specific reference information prior to award. Bidder shall demonstrate that he has adequate and appropriate manpower, tools and equipment to respond and perform in accordance with the provisions herein. The City may, at its option, disqualify a bidder and reject his bid for cause. Reasons deemed to be sufficient for this action shall include, but not be limited to, the following:
- Evidence of collusion among bidders.
  - Receipt of more than one bid on any project from an individual, or from a corporation. This restriction does not apply to subcontractors
  - Default on any previous contract.
  - For unreasonable failure to complete a previous contract within the specified time or for being in arrears on an existing contract without reasonable cause for being in arrears.
  - Inability to perform as revealed by an investigation of the Bidder's financial statement, experience and/or plant and equipment.
  - Contractor does not meet project-specific requirements, as identified in the Contract Documents
60. **Pricing to be F.O.B. Destination – Freight Allowed:** Pricing shall be F.O.B. destination-freight included for all competitive bids. F.O.B. Destination-Freight Included shall include all shipping costs to the City location(s) at the unit cost. No additional shipping charges shall be allowed.
61. **Contract Quantities:** The quantities specified in the Invitation for Bid are estimates only unless otherwise clearly noted, and are given for the information of bidders and for the purpose of bid evaluation. They do not indicate the actual quantity that will be required, since such volume will depend upon requirements that may develop during the contract period. Quantities shown shall not be construed to represent any amount which the City shall be obligated to purchase under the contract, or relieve the contractor of his obligation to fill all orders placed by the City, except as clearly noted.
62. **Competition Intended:** It is the City's intent that the Invitation for Bid (IFB) permits competition. It shall be the bidder's responsibility to advise the Buyer in writing if any language requirement, specification, etc., or any combination thereof, inadvertently restricts or limits the requirements stated in this IFB to a single source. Such notification must be received by the Contract Officer prior to the date set for bids to close.
63. **Default on Taxes:** No bid or proposal will be accepted from, or any Contract awarded to, any person, firm, or corporation that is in arrears, or in default to

the City upon any debt or Contract, or that is a defaulter as surety, or otherwise upon any obligation to the City.

64. **Ethics in Procurement: Bidders, offers, contractors or consultants must provide written disclosure with their bid or proposal if one of your officers, directors, trustees, partners, employees, or lenders is an employee or officer of the City of Suffolk or an immediate family member of the employee or officer (as defined by Section 2.2-4368 of the Virginia Public Procurement Act) who is involved personally or substantially participates in procurement transactions or owns or controls an interest of more than three percent (3%) of the company or receives more than \$5,000 annually from the bidder, offeror, contractor or consultant.**

# BID FORM

**TO:** City of Suffolk  
Purchasing Division  
P.O. Box 1858  
Suffolk, VA 23434

**BID:** Storm Pipe Rehabilitation & Repair  
**DUE:** May 13, 2015  
**TIME:** 3:00 p.m., Local

\_\_\_\_\_ **(Company)** offers to furnish all labor, equipment, vehicles/transportation, materials, permits and fees, and insurance required to provide annual storm pipe rehabilitation and repair services for the City of Suffolk in accordance with all specifications, terms, and conditions herein.

**TOTAL BID AMOUNT (ATTACHMENT A)**                      \$ \_\_\_\_\_

**REFERENCES**

Indicate below a listing of at least three (3) recent references for whom you have provided similar services. Include the date that services were furnished and the name, address, and phone number of the person we have your permission to contact.

<u>Client/Address</u>	<u>Date</u>	<u>Contact Person</u>	<u>Phone No.</u>
1) _____ _____ _____	_____	_____	_____
2) _____ _____ _____	_____	_____	_____
3) _____ _____ _____	_____	_____	_____

**Payment Terms/Discounts** \_\_\_\_\_ (Suffolk's payment schedule: items accepted and invoiced by 10th of month will be paid month end. Cash discounts offered for less than 30 days from receipt of proper invoice will not be considered in award.)

**Bidder has included the following with his BID FORM (please check ):**

- \_\_\_\_\_ "Anti-collusion/Nondiscrimination/Drug Free Workplace" clause
- \_\_\_\_\_ Proof of Authority to Transact Business in Virginia form
- \_\_\_\_\_ Bidder has acknowledged and complied with item #64 Ethics in Procurement, under the Conditions & Instructions Section.

**Bidder has examined copies of all the Bid Documents including the following Addenda:**

<u>Date</u>	<u>Number</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**I will accept payment by means of the City's Purchasing Card.** \_\_\_\_\_ Yes \_\_\_\_\_ No

**I will accept electronic transfer of funds as payment.** \_\_\_\_\_ Yes \_\_\_\_\_ No

Company Name \_\_\_\_\_

Address \_\_\_\_\_

Person Quoting \_\_\_\_\_

Title \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Fax: \_\_\_\_\_

Email Address: \_\_\_\_\_

Cell Phone # : \_\_\_\_\_

Social Security Number or FIN Number \_\_\_\_\_

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same equipment/materials/ service and is in all respects fair and without collusion or fraud. I understand that collusive bidding is a violation of State and Federal law and can result in fines, prison sentences and civil damage awards. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the bidder.

I certify by my signature below that I have received the documents associated with this bid and understand that the review for completeness of these bid documents and the understanding and comprehension of the bid specifications is solely my responsibility; based on this, by my signature below I waive all rights to further claims against the City of Suffolk that the document were incomplete or not understandable.

I certify that the bidder represented herein is eligible to bid with respect to all applicable sections of State and Local Government Conflict of Interest Act, Code of Virginia, Section 2.1-639.1 et. seq.

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

**ANTICOLLUSION/NONDISCRIMINATION/DRUG FREE WORKPLACE CLAUSES**

**ANTICOLLUSION CLAUSE:**

IN THE PREPARATION AND SUBMISSION OF THIS BID, SAID BIDDER DID NOT EITHER DIRECTLY OR INDIRECTLY ENTER INTO ANY COMBINATION OR ARRANGEMENT WITH ANY PERSON, FIRM OR CORPORATION, OR ENTER INTO ANY AGREEMENT, PARTICIPATE IN ANY COLLUSION, OR OTHERWISE TAKE ANY ACTION IN THE RESTRAINT OF FREE, COMPETITIVE BIDDING IN VIOLATION OF THE SHERMAN ACT (15 U.S.C. SECTION 1), SECTIONS 59.1-9.1 THROUGH 59.1-9.17 OR SECTIONS 59.1-68.6 THROUGH 59.1-68.8 OF THE CODE OF VIRGINIA.

THE UNDERSIGNED BIDDER HEREBY CERTIFIES THAT THIS AGREEMENT, OR ANY CLAIMS RESULTING THEREFROM, IS NOT THE RESULT OF, OR AFFECTED BY, ANY ACT OF COLLUSION WITH, OR ANY ACT OF, ANOTHER PERSON OR PERSONS, FIRM OR CORPORATION ENGAGED IN THE SAME LINE OF BUSINESS OR COMMERCE; AND, THAT NO PERSON ACTING FOR, OR EMPLOYED BY, THE CITY OF SUFFOLK HAS AN INTEREST IN, OR IS CONCERNED WITH, THIS BID; AND, THAT NO PERSON OR PERSONS, FIRM OR CORPORATION OTHER THAN THE UNDERSIGNED, HAVE, OR ARE, INTERESTED IN THIS BID.

**DRUG-FREE WORKPLACE:**

DURING THE PERFORMANCE OF THIS CONTRACT, THE CONTRACTOR AGREES TO (I) PROVIDE A DRUG-FREE WORKPLACE FOR THE CONTRACTOR'S EMPLOYEES; (II) POST IN CONSPICUOUS PLACES, AVAILABLE TO EMPLOYEES AND APPLICANTS FOR EMPLOYMENT, A STATEMENT NOTIFYING EMPLOYEES THAT THE UNLAWFUL MANUFACTURE, SALE, DISTRIBUTION, DISPENSATION, POSSESSION, OR USE OF A CONTROLLED SUBSTANCE OR MARIJUANA IS PROHIBITED IN THE CONTRACTOR'S WORKPLACE AND SPECIFYING THE ACTIONS THAT WILL BE TAKEN AGAINST EMPLOYEES FOR VIOLATIONS OF SUCH PROHIBITION; (III) STATE IN ALL SOLICITATIONS OR ADVERTISEMENTS FOR EMPLOYEES PLACED BY OR ON BEHALF OF THE CONTRACTOR THAT THE CONTRACTOR MAINTAINS A DRUG-FREE WORKPLACE; AND (IV) INCLUDE THE PROVISIONS OF THE FOREGOING SECTIONS I, II, AND III IN EVERY SUBCONTRACT OR PURCHASE ORDER OF OVER \$10,000, SO THAT THE PROVISIONS WILL BE BINDING UPON EACH SUBCONTRACTOR OR VENDOR.

FOR THE PURPOSE OF THIS SECTION, "DRUG-FREE WORKPLACE" MEANS A SITE FOR THE PERFORMANCE OR WORK DONE IN CONNECTION WITH A SPECIFIC CONTRACT AWARDED TO A CONTRACTOR IN ACCORDANCE WITH THIS CHAPTER, THE EMPLOYEES OF WHOM ARE PROHIBITED FROM ENGAGING IN THE UNLAWFUL MANUFACTURE, SALE, DISTRIBUTION, DISPENSATION, POSSESSION OR USE OF ANY CONTROLLED SUBSTANCE OR MARIJUANA DURING THE PERFORMANCE OF THE CONTRACT.

**NONDISCRIMINATION CLAUSE:**

1. EMPLOYMENT DISCRIMINATION BY BIDDER SHALL BE PROHIBITED.
2. DURING THE PERFORMANCE OF THIS CONTRACT, THE SUCCESSFUL BIDDER SHALL AGREE AS FOLLOWS:
  - A. THE BIDDER, WILL NOT DISCRIMINATE AGAINST ANY EMPLOYEE OR APPLICANT FOR EMPLOYMENT BECAUSE OF RACE, RELIGION, COLOR, SEX, NATIONAL ORIGIN, AGE, DISABILITY, OR ANY OTHER BASIS PROHIBITED BY STATE LAW RELATING TO DISCRIMINATION IN EMPLOYMENT, EXCEPT WHERE THERE IS A BONA FIDE OCCUPATIONAL QUALIFICATION/CONSIDERATION REASONABLY NECESSARY TO THE NORMAL OPERATION OF THE BIDDER. THE BIDDER AGREES TO POST IN CONSPICUOUS PLACES, AVAILABLE TO EMPLOYEES AND APPLICANTS FOR EMPLOYMENT, NOTICES SETTING FORTH THE PROVISIONS OF THIS NONDISCRIMINATION CLAUSE.
  - B. THE BIDDER, IN ALL SOLICITATIONS OR ADVERTISEMENTS FOR EMPLOYEES PLACED ON BEHALF OF THE BIDDER, WILL STATE THAT SUCH BIDDER IS AN EQUAL OPPORTUNITY EMPLOYER. NOTICES, ADVERTISEMENTS, AND SOLICITATIONS PLACED IN ACCORDANCE WITH FEDERAL LAW, RULE OR REGULATION SHALL BE DEEMED SUFFICIENT FOR THE PURPOSE OF MEETING THE REQUIREMENTS OF THIS SECTION.
  - C. BIDDER WILL INCLUDE THE PROVISIONS OF THE FOREGOING SECTIONS A, B, AND C IN EVERY SUBCONTRACT OR PURCHASE ORDER OF OVER \$10,000, SO THAT THE PROVISIONS WILL BE BINDING UPON EACH SUBCONTRACTOR OR VENDOR.

<b>Name and Address of Bidder:</b>	Date:
	By:
	Signature In Ink
	Printed Name
Telephone Number: (     )	
Fax Phone Number: (     )	Title
FIN/SSN#:	

Is your firm a "minority" business?  Yes  No      If yes, please indicate the "minority" classification below:  
 African American     Hispanic American     American Indian     Eskimo     Asian American     Aleut  
 Other; Please Explain: \_\_\_\_\_

Is your firm Woman Owned?  Yes  No      Is your firm a Small Business?  Yes  No

**PROOF OF AUTHORITY TO TRANSACT BUSINESS IN VIRGINIA**

THIS FORM MUST BE SUBMITTED WITH YOUR PROPOSAL/BID, FAILURE TO INCLUDE THIS FORM MAY RESULT IN REJECTION OF YOUR PROPOSAL/BID

Pursuant to Virginia Code §2.2-4311.2 an Offeror/Bidder organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 of the Code of Virginia shall include in its proposal/bid the identification number issued to it by the State Corporation Commission (“SCC”). Any Offeror/Bidder that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 of the Code of Virginia or as otherwise required by law shall include in its proposal/bid a statement describing why the Offeror/Bidder is not required to be so authorized. Any Offeror/Bidder described herein that fails to provide the required information shall not receive an award unless a waiver of this requirement and the administrative policies and procedures establish to implement this section is granted by the City Manager, as applicable.

If this quote for goods or services is accepted by the City of Suffolk, Virginia the undersigned agrees that the requirements of the Code of Virginia Section §2.2-4311.2 have been met.

Please complete the following by checking the appropriate line that applies and providing the requested information.

A. \_\_\_\_\_ Offeror/Bidder is a Virginia business entity organized and authorized to transact business in Virginia by the SCC and such vendor’s Identification Number issued to it by the SCC is \_\_\_\_\_.

B. \_\_\_\_\_ Offeror/Bidder is an out-of-state (foreign) business entity that is authorized to transact business in Virginia by the SCC and such vendor’s identification Number issued to it by the SCC is \_\_\_\_\_.

C. \_\_\_\_\_ Offeror/Bidder does not have an Identification Number issued to it by the SCC such vendor is not required to be authorized to transact business in Virginia by the SCC for the following reason(s):

**Please attach additional sheets if you need to explain why such Offeror/Bidder is not required to be authorized to transact business in Virginia.**

\_\_\_\_\_  
Legal Name of Company (as listed on W-9)

\_\_\_\_\_  
Legal Name of Offeror/Bidder

\_\_\_\_\_  
Date

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Print or Type Name and Title

**RETURN THIS PAGE WITH COPIES OF DOCUMENTATION**



## EXCEPTION PAGE

**EXCEPTIONS:**

Provider must sign the appropriate statement below, as applicable:

- ( ) Provider understands and agrees to all terms, conditions, requirements, and specifications stated herein.

Firm: \_\_\_\_\_

Date: \_\_\_\_\_

- ( ) Provider takes exception to terms, conditions, requirements, or specifications stated herein (Provider must itemize all exceptions below, and return with this bid):

Firm: \_\_\_\_\_

Date: \_\_\_\_\_

Exceptions: \_\_\_\_\_

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Providers should note that any exceptions taken from the stated terms and/or specifications may be cause for their submittal to be deemed "non-responsive", risking the rejection of their submittal.

**Bid Results**

For a complete written tally sheet, please go to our website:

[http://www.suffolkva.us/bids/bid\\_search\\_all.jsp](http://www.suffolkva.us/bids/bid_search_all.jsp)

## **INSURANCE REQUIREMENTS**

The successful bidder shall procure, maintain, and provide proof of, insurance coverage for injuries to persons and/or property damage as may arise from or in conjunction with, the work performed on behalf of the City by the bidder, his agents, representatives, employees or subcontractors. Proof of coverage as contained herein shall consist of all policies, endorsements, declaration pages, and certificates of insurance and shall be submitted fifteen (15) days prior to the commencement of work, and such coverage shall be maintained by the offeror for the duration of the contract period; for occurrence policies. Claims made policies must be in force or that coverage purchased for three (3) years after delivery date.

a. General Liability

Coverage shall be as broad as: Comprehensive General Liability endorsed to include Broad Form, Commercial General Liability form including Products/Completed Operations.

1. Minimum Limits, General Liability:

- \$2,000,000 General Aggregate Limit
- \$2,000,000 Products & Completed Operations
- \$1,000,000 Personal and Advertising Injury
- \$1,000,000 Each Occurrence Limit
- \$1,000,000 Fire Damage Limit
- \$ 5,000 Medical Expense Limit

b. Automobile Liability

Coverage sufficient to cover all vehicles owned, used, or hired by the offeror, his agents, representatives, employees or subcontractors.

1. Minimum Limits, Automobile Liability:

- \$1,000,000 Combined Single Limit
- \$ 5,000 Medical Expense Limit

c. Workers' Compensation

Limits as required by the Workers' Compensation Act of Virginia.  
Employers Liability, \$100,000/\$500,000/\$100,000

d. Umbrella/Excess Liability

\$2,000,000 umbrella/excess liability coverage

e. Coverage Provisions

1. All deductibles or self-insured retention shall appear on the declaration pages, endorsements, and/or policies provided.

2. The City of Suffolk, its' officers/officials, employees, agents and volunteers shall be added as "additional insured" as their interests may appear. A copy of all endorsements, declaration pages, and policies that address additional insured shall be provided. This provision does not apply to Professional Liability or Workers' Compensation/Employers' Liability.
3. The offeror's insurance shall be primary over any applicable insurance or self-insurance maintained by the City.
4. Shall provide thirty (30) days written notice to the City before any cancellation, suspension, or void of coverage in whole or part, where such provision is reasonable.
5. All coverage for subcontractors of the offeror shall be subject to all of the requirements stated herein.
6. Failure to comply with any reporting provisions of the policy(s) shall not affect coverage provided the City, its' officers/officials, agents, employees and volunteers.
7. The insurer shall agree to waive all rights of subrogation against the City, its' officers/officials, agents, employees or volunteers for any act, omission or condition of premises which the parties may be held liable by reason of negligence.
8. The offeror shall furnish the City with all certificates of insurance, endorsements, declaration pages, and policies affecting coverage. All documents are to be signed by a person authorized by the insurance company(s) to bind coverage on its' behalf, if executed by a broker, notarized copy of authorization to bind, or certify coverage must be attached.
9. All insurance shall be placed with insurers maintaining an A.M. Best rating of no less than an A:VII. If A.M. Best rating is less than A:VII, approval must be received from City's Risk Officer.

All coverage designated herein shall be as broad as the Insurance Services Office (ISO) forms filed for use with the Commonwealth of Virginia.

## APPENDIX 1

We will use the VIRGINIA DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION FOR PIPE REHABILITATION:

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**PIPE REHABILITATION**

August 7, 2014

### I. DESCRIPTION

This work shall consist of the rehabilitation of existing storm water, surface water pipe culverts and/or sanitary sewer lines by the method or methods specified at the designated locations described in the contract using various standard and non-standard methodologies/technologies in accordance with the requirements of this provision and as directed by the Engineer.

### II. MATERIALS

**Cement grout** shall conform to Section 218.03(b) or (d) of the Specifications.

**Corrugated steel pipe liner** used for Method C rehabilitation shall conform to Section 232.02 of the Specifications and shall be 10 gage with 3-inch by 1-inch angular corrugations. Corrugated steel pipe used as liners shall be manufactured by QC/QA producers on the VDOT Materials Division Approved Products List.

**Flexible pipe liner systems** used for Method D rehabilitation shall be from the VDOT Materials Division Approved Products List 38 and may be subject to limitations for use as specified herein, by site-specific limitations for those locations listed in the Contract, or as shown on the VDOT Materials Division Approved Products List 38 for the specific liner system. Where such is the case, the Contractor shall use only that type or those types that conform to the requirements for all pipe rehabilitation systems listed in List 38 and what the Department has specified for the specific location listed in the bid proposal documents. The Contractor shall furnish information, services, or other requirements as detailed on List 38 for all materials used for pipe rehabilitation system(s) specified in the Contract.

Flexible pipe liners shall be one or more of the following categories as designated in the Contract:

- \_ Category A - Cured-In-Place Pipe (CIPP)
- \_ Category B - Fold and Form flexible liners
- \_ Category C – High Density Polyethylene (HDPE), Polyvinylchloride (PVC), or Polypropylene (PP) slip liners
- \_ Category D - Spray-On liners

When **Category A - Cured-In-Place Pipe liners** are specified, the liner system supplied by the Contractor shall conform to the following requirements as supported by submitted design calculations:

- \_ Must meet Drainage Manual, Chapter 8, Section 8.3.6.7 - Table A, Flexible Liner (Method D) Type Selection Guidelines for Category A systems.
- \_ Must exactly follow ASTM F1216 Appendix X1.2.2 Fully Deteriorated Gravity pipe Conditions.

- \_ Provide groundwater table elevation at crown of pipe.
- \_ Traffic loading is HL-93, ignore after 8 ft. of cover except for multiple barrel rehabs, continue indefinitely.
- \_ Total wet unit weight of soil is 120 pcf, 135 pcf saturated.
- \_ Modulus of soil reaction (based on VDOT pipe installation standards):
  - \_ 0-5 ft. of cover = 1.8 ksi
  - \_ >5-10 ft of cover = 2 ksi
  - \_ >10-30 ft of cover = 2.2 ksi
  - \_ >30-60 ft of cover = 2.6 ksi
  - \_ >60 ft of cover = 2.8 ksi
- \_ Factor of safety N = 2.0.
- \_ Construction:
  - \_ Any voids around exterior of host pipe must be filled for design assumptions to be valid.
  - \_ Shall specify the following:
    - \_ Method for installation and curing.
    - \_ Individual components.
    - \_ Tube type (whether reinforced or non-reinforced).
    - \_ Manufacturer name and type of resin including catalyst.
    - \_ Volume of resin required to achieve proper impregnation and curing.
  - \_ Shall include lot numbers and expiration dates of all supplied components.
  - \_ Shall have an impermeable inner and outer plastic film or plastic pre-liner to promote complete polymerization, prevent resin migration and loss, and prevent contamination of the interior of the finished product.
  - \_ Shall conform to the following table:

**Property Test Procedures Physical Requirements**

Tensile strength at yield ASTM D-638 3,000 PSI  
 Modulus of elasticity ASTM D-790 200,000 PSI  
 Flexural strength ASTM D-790 4,000 PSI

When **Category B Fold and Form flexible liners** are specified, the liner system supplied by the Contractor shall conform to the following requirements as supported by submitted design calculations:

- \_ Must meet Drainage Manual, Chapter 8, Section 8.3.6.7 - Table A, Flexible Liner (Method D) Type Selection Guidelines for Category B systems.
- \_ Must exactly follow ASTM F1947 Appendix X1.2.2 Fully Deteriorated Design Condition or ASTM F1867 Appendix X1.2.3 Fully Deteriorated Design Condition.
- \_ Provide groundwater table elevation at crown of pipe.
- \_ Traffic loading is HL-93, ignore after 8 ft of cover except for multiple barrel rehabs, continue indefinitely.
- \_ Total wet unit weight of soil is 120 pcf, 135 pcf saturated.
- \_ Modulus of soil reaction (based on VDOT pipe installation standards):
  - \_ 0-5 ft of cover = 1.8 ksi
  - \_ >5-10 ft of cover = 2 ksi

- \_ >10-30 ft of cover = 2.2 ksi
- \_ >30-60 ft of cover = 2.6 ksi
- \_ >60 ft of cover = 2.8 ksi
- \_ Factor of safety N = 2.0.
- \_ Construction:
- \_ Any voids around exterior of host pipe must be filled for design assumptions to be valid.

When **Category C HDPE, PVC, or PP slip liners** are specified, the liner system supplied by the Contractor shall conform to the following requirements as supported by submitted design calculations:

- \_ Must meet Drainage Manual, Chapter 8, Section 8.3.6.7 - Table A, Flexible Liner (Method D) Type Selection Guidelines for Category C systems.
- \_ Must follow AASHTO LRFD Bridge Design Specifications, Section 12, version in use by VDOT Structure & Bridge Division at time of submittal.
- \_ Must provide SDR and outside diameter of pipe, for solid wall pipe.
- \_ Must provide outside diameter, inside diameter, diameter to centroid of wall, moment of inertia, gross and effective areas of wall, for corrugated or profile wall pipe.
- \_ Provide groundwater elevation at crown of pipe.
- \_ Traffic loading is HL-93, ignored after 8 ft of cover except for multiple barrel rehabs continue indefinitely.
- \_ Total wet unit weight of soil is 120 pcf, 135 pcf saturated.
- \_ Constrained soil modulus (based on VDOT pipe installation standards):
- \_ 0-5 ft of cover = 1.8 ksi
- \_ >5-10 ft of cover = 2 ksi
- \_ >10-30 ft of cover = 2.2 ksi
- \_ >30-60 ft of cover = 2.6 ksi
- \_ >60 ft of cover = 2.8 ksi
- \_ Shape factor shall be 3.0.
- \_ Long term modulus shall be used for stiffness computation.
- \_ Live Load Distribution Factor = 1.
- \_ Deflection Lag Factor = 1.5.
- \_ Bedding Factor = 0.1.
- \_ Installation Factor = 1.5.
- \_ Maximum deflection, deflection needed in any computations, and service long-term tension strain limit shall be 5 percent for PE, and either 5 percent or 3.5 percent for PVC depending on cell class as per AASHTO LRFD Bridge Design Specs Table 12.12.3.3.1, and 3.5 percent for PP.
- \_ Poisson's ratio of soil shall be 0.3.
- \_ Earth load modifier shall be 1.05 and live load modifier shall be 1.0.
- \_ Manning's N number for open channel flow n = 0.011 for smooth interior PVC and 0.012 for smooth interior HDPE and PP. (For hydraulic design.)
- \_ Construction:
- \_ Any voids around exterior of host pipe must be filled for design assumptions to be valid.
- \_ The annular space between host pipe and liner pipe must be fully grouted for design assumptions to be valid.

When **Category D Spray-on liners** are specified for structural rehabilitation, the liner system

supplied by the Contractor shall conform to the following requirements as supported by submitted design calculations:

\_ Must meet Drainage Manual, Chapter 8, Section 8.3.6.7 - Table A, Flexible Liner (Method D) Type Selection Guidelines for Category D systems.

\_ Because of the variety of spray-on liners available, several design options may be used. For cementitious liners, design shall be guided similarly to nonreinforced concrete pipe, or alternately, similar to fiberglass pipe (high modulus material). For other liners, polyurea for example, design shall be guided similarly to fiberglass pipe (high modulus material) or simply as plastic pipe if flexural modulus or ring bending strain results are not satisfactory.

\_ Cementitious liner treated similarly as fiberglass pipe (this method is based on the proposed AASHTO LRFD Bridge Design Specifications for fiberglass pipe):

\_ Articles referenced below are from AASHTO LRFD Bridge Design Specifications, Section 12, version in use by VDOT Structure & Bridge Division at time of submittal.

\_ The flexibility factor for fiberglass pipe shall be determined in accordance with Article 12.12.3.6, but with the modulus replaced by flexural modulus, and the flexibility factor shall be limited as specified in Article 12.5.6.3.

\_ Follow Section 12.12.2.2 for deflection, except replace modulus with flexural modulus (ksi) and drop the "escD" term.

\_ Factored long term strain due to flexure shall be less than or equal to  $0.9 \cdot S_b$  ( $S_b$  is ring bending strain).

\_ Factored buckling strain demand shall be less than or equal to  $0.7 \cdot$  nominal strain capacity for buckling demand, computed per Eqn. 12.12.3.10.1e-2, except replace modulus with flexural modulus and soil resistance factor shall be 1.0. Factored buckling strain shall be:

\_  $\frac{[(13.65 \cdot \text{Height of soil over crown (in feet)} + 1.75 \cdot \text{PL}) \cdot \text{radius of liner to centroid of wall in in.}]}{(\text{flexural modulus in ksi} \cdot \text{X-S area of liner in } \text{in}^2/\text{in})}$ , where PL is determined from Eqn. 12.12.3.9-1.

\_ Flexural modulus shall be determined from pipe stiffness tests and per Appendix 2 of ASTM D2412, and shall be at least 1,200 ksi.

\_ Long term ring bending strain,  $S_b$ , shall be determined in accordance with ASTM D5365 and results extrapolated to both 50 years and 75 years, and shall be at least 0.006.

\_ It is recognized that for a spray-on product, obtaining specimens for flexural modulus and ring bending strain tests would require special formwork at a fabrication facility, similarly as is done for watertight joint testing. These tests may be done and witnessed by a PE and a report submitted, which may then be used as proof of results without having to perform the tests for each future project, as long as materials and processes have not changed. Application thicknesses not tested may be interpolated by a satisfactory method. Extrapolation beyond thicknesses tested will not be permitted on the thin side, and will only be permitted for thicker applications by satisfactory statistical data.

- \_ GW table at crown of pipe.
- \_ Traffic loading is HL-93, ignored after 8 ft of cover except for multiple barrel rehabs continue indefinitely.
- \_ Unit weight of soil is 120 pcf, 135 pcf saturated.
- \_ Modulus of soil reaction (based on VDOT pipe installation standards):
- \_ 0-5 ft of cover = 1.8 ksi
- \_ >5-10 ft of cover = 2 ksi
- \_ >10-30 ft of cover = 2.2 ksi
- \_ >30-60 ft of cover = 2.6 ksi
- \_ >60 ft of cover = 2.8 ksi
- \_ Shape factor shall be 3.0.
- \_ Live Load Distribution Factor = 1.
- \_ Deflection Lag Factor = 1.5.
- \_ Bedding Factor = 0.1.
- \_ Installation Factor = 1.5.
- \_ Maximum deflection and deflections needed in any computations shall be 5 percent.
- \_ Poisson's ratio of soil shall be 0.3.
- \_ Earth load modifier shall be 1.05 and live load modifier shall be 1.0.
- \_ Other liner types treated similarly as fiberglass pipe:
- \_ Same as for cementitious liner treated similarly as fiberglass pipe above.
- \_ Other liner types treated same as plastic pipe:
- \_ Follow AASHTO LRFD Bridge Design Specifications, Section 12, for thermoplastic pipe, version in use by VDOT Structure & Bridge Division at time of submittal.
- \_ GW table at crown of pipe.
- \_ Traffic loading is HL-93, ignored after 8 ft of cover except for multiple barrel rehabs continue indefinitely.
- \_ Unit weight of soil is 120 pcf, 135 pcf saturated.
- \_ Modulus of soil reaction (based on VDOT pipe installation standards):
- \_ 0-5 ft of cover = 1.8 ksi
- \_ >5-10 ft of cover = 2 ksi
- \_ >10-30 ft of cover = 2.2 ksi
- \_ >30-60 ft of cover = 2.6 ksi
- \_ >60 ft of cover = 2.8 ksi
- \_ Shape factor shall be 3.0.
- \_ Live Load Distribution Factor = 1.
- \_ Deflection Lag Factor = 1.5.
- \_ Bedding Factor = 0.1.
- \_ Installation Factor = 1.5.
- \_ Maximum deflection and deflections needed in any computations shall be 5 percent.
- \_ Poisson's ratio of soil shall be 0.3.
- \_ Earth load modifier shall be 1.05 and live load modifier shall be 1.0.
- \_ Construction:
- \_ Any voids around exterior of host pipe must be filled for design assumptions to be valid.

**Smooth-wall steel pipe liner** used for Method E rehabilitation shall conform to Section 232.02(c)5 of the Specifications.



### III. GENERAL PROCEDURES

The Contractor shall submit site specific working drawings (and supportive calculations) to the Engineer according to the requirements herein and Section 105.10 of the Specifications for the rehabilitation method selected by the Contractor from the allowable methods per each location listed in the Contract prior to the start of pipe rehabilitation operations. The Contractor shall furnish to the Engineer a certification of the acceptability of the proposed rehabilitation system to provide the necessary hydraulic capacity and structural strength to support the anticipated total load and hydrology at the site of rehabilitation, as determined from a review that has been signed and sealed by a Professional Engineer holding a valid license to practice engineering in the Commonwealth of Virginia. Such certification shall cover all design data, supporting calculations and planned rehabilitation materials. All work and equipment shall be contained within the existing right-of-way. In the event a temporary construction easement is deemed necessary due to the selected method or product chosen by the Contractor, the Contractor shall obtain such additional easement for his convenience at no additional cost to the Department.

The Contractor shall maintain all lanes of traffic at all times in accordance with the Special Provision for **Section 512—Maintaining Traffic – Non-Schedules (Lump Sum)** unless otherwise directed by the Engineer. This maintenance of traffic shall include temporary detours if required by the Contractor's method of operations to facilitate construction and where permitted by the locality and the Department. When temporary detours are required, the Contractor shall design and construct temporary detours in accordance with Sections 105.14 and 512 of the Specifications and Standard GS-10 of the Road and Bridge Standards respectively. The cost for maintenance of traffic including temporary detours shall be bid as a lump sum amount for the specific location of each pipe rehabilitation as shown in the Contract in accordance with the Special Provision for **Section 512—Maintaining Traffic – Non-Schedules (Lump Sum)** unless otherwise specified in the Contract.

The Contractor shall contact Miss Utility prior to commencing any work that may conflict with existing utilities, and shall coordinate with the utility company(ies) and the Engineer for any adjustments deemed necessary to complete the work. The Contractor shall notify the VDOT Area Construction Engineer at least 48 hours prior to initiation of rehabilitation operations at the site. In the event the selected method of rehabilitation requires disturbing existing surfaces, these surfaces shall be restored in kind to original pre-construction conditions after rehabilitation operations have been completed and the cost thereof shall be included in the price bid for Pipe Rehabilitation for the specified location.

The Contractor shall obtain all required OSHA confined space entry permits where these are required by the Contractor's operations and the scope of work in the Contract. The Department has performed an inspection of the existing pipes in each location listed in the Contract to determine the extent and nature of each pipe's deterioration or damage so as to designate the allowable methods of rehabilitation of the pipe at that specific site. Using the information collected from this inspection, the Department has determined through its engineering analysis the best practical method(s) of rehabilitation for each respective site (location) taking into account site specific conditions such as installation working space for the various types of liners, hydraulic capacity before and after rehabilitation, height of cover, soil density, and loading conditions, among other criteria. The Contractor shall select from the allowable method(s)/category(ies) for each specified location or site indicated in the Contract, how the Contractor chooses to perform the work. Regardless of the final method selected, the Contractor shall provide the Engineer documentation of the proposed procedures, materials, equipment, incidentals and resources the Contractor shall use to ensure successful

rehabilitation of the existing pipe(s) to assist the Engineer in monitoring the Contractor's operations. The Contractor will not be permitted to substitute a different method(s) and category(ies), if designated, than that or those specified for the location described in the Contract.

The Contractor shall clear the existing pipe(s) designated for rehabilitation of any debris, protrusions greater than ½ inch in height and any other potential obstructions prior to the start of rehabilitation efforts. The Contractor shall then thoroughly clean and prepare the host pipe prior to the liner installation. Cleaning shall conform to the recommendations of the liner manufacturer/producer or supplier of the methodology to be used. In the absence of such recommendations, the Contractor shall submit his/her proposed method for cleaning and preparing the host pipe for the Engineer's review and acceptance. A copy of the cleaning methodology and materials shall be provided to the Engineer at least 2 working days prior to beginning the work at that location.

**Please note:** All specified time limits in these specifications refer to working days, not calendar days.

**Pre-Installation Inspection** – In addition to the inspection performed by the Department, and not later than 2 to 3 weeks after cleaning the host pipe at the specified location, the Contractor shall perform a pre-installation visual/video inspection at the designated location of the pipe shown in the Contract or where directed by the Engineer. This visual/video inspection shall be conducted in accordance with the requirements of this specification and VTM 123 to verify pre-construction conditions. The inspection shall be performed in the presence of the Engineer. Video inspections shall be clearly labeled on the media with the time, date, and location of the pipe inspected. A copy of the video inspection shall be furnished to the Engineer prior to the start of rehabilitative construction. The cost of pre-Installation Inspection will be considered incidental to the cost of the installation. In the event the Contractor's inspection shows the method of rehabilitation the Contractor has selected is no longer viable at that location as verified by the Engineer, the Contractor shall select another allowable method, if specified, from those designated in the Contract. If no other method is designated, or if other methods of rehabilitation also now are deemed impracticable at that location, further work will be determined in accordance with Section 104.03.

The following methods of pipe rehabilitation are approved by the Department; however, not all methods may be appropriate for each individual location. The Contractor shall consult the Contract to determine the method (and category if designated) or methods (and categories if designated) that are permitted per the location cited. Individual methods shall conform to the criteria specified.

#### **PIPE REHABILITATION BY LINER**

**Method C - Corrugated steel pipe liner** shall be rehabilitation by insertion of a rigid corrugated steel pipe liner through an existing host pipe (36" diameter or larger corrugated or concrete pipe). Where required, pipe shall be joined by the use of coupling bands of an internal expansion type that shall provide a leak-proof joint after grouting. Expansion devices shall be installed above the mid-point of the pipe. After the Engineer approves installation and alignment of the liner within the host pipe, the Contractor shall pressure grout the annular space between the existing pipe and the liner. Prior to grouting, the annular space shall be adequately sealed at each end. Plug holes required for injection of grout shall be satisfactorily plugged and sealed following the grouting operation.

**Method D - Flexible pipe liner** shall be rehabilitation by the use of a flexible pipe liner. Rehabilitation, as indicated in the Contract, shall be accomplished by the use of the following:

- \_ Category A - Cured-In-Place Pipe (CIPP)
- \_ Category B - Fold and Form flexible liners
- \_ Category C - HDPE, PVC, or PP slip liners
- \_ Category D - Spray-On liners

Installation and curing requirements of pipe sections for the various flexible pipe liners shall be according the manufacturer recommendations for the specific product as applicable. Joints shall meet the requirements of Section 30 of the AASHTO Bridge Construction Specifications and leak resistance as defined in AASHTO PP 63-09.

The Contractor shall furnish curing requirements for the various flexible liners to include as applicable individual components of the system, tube type (whether reinforced or non-reinforced), manufacturer name and type of resin including catalyst, volume of resin required to achieve proper impregnation and curing. All components of the systems shall be as recommended by the manufacturer for the specific system used, and all components shall include lot numbers and expiration dates. The Contractor shall submit documentation from the manufacturer to verify compliance with the requirements of this paragraph as well as installation recommendations to the Engineer at least 72 hours prior to the start of installation.

**Method D, Category A – Cured-In-Place Pipe liner method.** The Cured-In-Place Pipe liner system shall be designed, fabricated and installed in such a manner as to result in a maintained full contact tight fit to the internal circumference of the host pipe for its entire length. The installation shall adhere to the cure times and temperatures stipulated in the manufacturer's recommended installation and cure specifications and the finished product shall be free of delamination, bubbling, rippling or other signs of installation failure.

Pulled-in-place liner installation must be accomplished without significant liner twisting or stretching during installation. At no time shall the pulling force for liner installation exceed that established by the liner manufacturer. All Cured-In-Place Pipe installations shall be performed in the dry. The Contractor shall consider the cost to accommodate this requirement as incidental to the cost of the installation.

Curing for styrene-based, epoxy-based, and vinyl ester-based CIPP may be accomplished by water, steam or ultraviolet light and shall be in accordance with the liner manufacturer's recommendations.

The Contractor shall submit preconstruction installation and cure specifications (to include site specific cure time and temperature calculations) and design calculations (stamped by a licensed professional engineer) to the VDOT Engineer a minimum of 72 hours prior to initiation of installation.

The Contractor shall place an impermeable sheet immediately upstream and downstream of the host pipe prior to liner insertion to capture any possible raw resin spillage during installation and shall remove and properly dispose of any waste materials. Where the pulled-in-place method of installation is used, the Contractor shall install a semi-rigid plastic slip sheet over any interior portions of the host pipe that could tear the outer film or over any significant voids in the host pipe. The Contractor shall ensure there is no loss of impermeability of the inner and outer plastic films or pre-liner during installation. The Contractor shall promptly repair any pinholes or tears in the plastic films or pre-liner before proceeding with the installation. Where such damaged areas

cannot be repaired, the Contractor shall promptly replace the impermeable plastic films or pre-liner before proceeding with the installation.

The Contractor shall not perform work without oversight of the VDOT Engineer or Inspector for the duration of the installation.

The Contractor shall monitor temperature via a minimum of three thermocouples on the outer surface of the liner (one each at the upstream and downstream ends and one approximately mid-length of the host pipe) and automatically log cure time temperature data with a print-out from the data logger and provide such information to the VDOT Engineer.

The Contractor shall obtain and comply with all discharge-related permits, including air, water, and wastewater treatment (i.e. Publicly Owned Treatment Works or "POTW"). For any discharge to a Publicly Owned Treatment Works (POTW), the Contractor shall obtain advanced written approval from the receiving facility for acceptance of effluent waste before repair work can start and shall provide such documentation of the POTW discharge approval to the Engineer prior to the start of the installation.

The Contractor shall capture and properly dispose of all cure water and/or steam condensate and be responsible for the proper transportation and off-site disposal of process residuals. The Contractor shall provide disposal documentation from the receiving facility to the VDOT Engineer. For any discharge to a Publicly Owned Treatment Works (POTW), the Contractor shall comply with all the requirements of the POTW receiving the discharge.

The Contractor shall thoroughly rinse the cured lined pipe with clean water and capture and properly dispose of rinse water prior to re-introducing flow.

For styrene-based CIPP and vinyl ester-based CIPP, the Contractor shall employ the services of a qualified independent environmental services laboratory or environmental consultant to collect the following samples:

- \_ pre-rehabilitation soil and water samples within 3 feet of the pipe ends (or otherwise as close as possible) upstream and downstream of the pipe location; and
- \_ soil and water samples within 3 feet of the pipe ends (or otherwise as close as possible) upstream and downstream of the pipe location within one week after the pipe liner has cured

These samples shall be collected in accordance with applicable ASTM standard procedures. For styrene-based liners, samples shall be analyzed for styrene using USEPA SW 846 Method 8260. Styrene concentrations in water samples shall not exceed 2.5 mg/L. For vinyl ester-based liners, samples shall be analyzed for diallyl phthalate. Diallyl phthalate concentrations in water samples shall not exceed 0.4 mg/L. The Contractor shall report the results of all sampling to the Engineer within 4 weeks after completion of the rehabilitation. The following information shall also be supplied in the water or soil sampling reports:

**Location of pipe:**

- \_ County, VDOT Residency
- \_ Route number and distance to nearest intersection
- \_ Name of stream if applicable or known

**Description of pipe:**

- \_ Length, diameter, type i.e. concrete, corrugated steel
- \_ Conveyance conditions i.e. wet weather only, perennial, current conditions
- \_ General flow description i.e. high, medium, low
- \_ Site description i.e. stream bed, earthen ditch, concrete ditch, subsurface storm water drainage

It shall be the Contractor's responsibility to report and take appropriate corrective actions to contain and remediate any release of contaminants from cured-in-place process materials, effluent or condensate into the environment in accordance with applicable local, state or federal regulations and the Specifications. The cost for such remediation shall be at the Contractor's expense.

**Method D, Category B - Fold and form flexible liners** shall be installed in accordance with the requirements of ASTM F1216, ASTM F2019, ASTM F1743, or ASTM D5813 (as applicable) or as recommended by the liner manufacturer.

**Method D, Category C - HDPE, PVC, or PP slip liner** shall be installed in accordance with the requirements of AASHTO M326 or in accordance with ASTM F1698 as applicable or as recommended by the liner manufacturer.

**Method D, Category D - Spray-On cementitious and polyurea liners** shall be installed in accordance with the liner material manufacturer's recommendations. For spray-on cementitious or polyurea liner systems, the following requirements shall apply:

- \_ The Contractor shall perform all installations in the dry.
- \_ The Contractor shall thoroughly rinse the lined pipe with clean water.
- \_ The Contractor shall install a temporary curtain at the outlet and inlet to prevent overspray during installation;
- \_ The Contractor shall reinstate water flow no sooner than 24 hours following installation.

\_ **For cementitious spray-on liners**, the Contractor shall prevent the escape of any rinse water from the lined pipe or otherwise capture it until he/she can either (1) pump it to a container for proper transportation and off-site disposal; or (2) continuously monitor the pH of the rinse water until the pH is less than 9 whereupon he/she may release it.

\_ **For polyurea spray-on liners**, the Contractor shall capture and properly dispose of the rinse water prior to reinstating flow; and employ the services of a qualified independent environmental services laboratory or environmental consultant to collect the following samples:

\_ pre-rehabilitation water and soil samples within 3 feet of the pipe ends (or otherwise as close as possible) upstream and downstream of the pipe location; and

\_ soil and water samples within 3 feet of the pipe ends (or otherwise as close as possible) upstream and downstream of the pipe location within one week after the liner has cured.

Samples shall be collected in accordance with applicable ASTM standard procedures and analyzed for total methylene diphenyl diisocyanate (MDI), methylenedianiline (MDA), and total cyanide. Concentrations of methylene diphenyl diisocyanate (MDI) in water samples must not exceed 1,000 mg/L and concentrations of methylenedianiline (MDA) in water samples must not

exceed 39 mg/L. Water characterization for chemical oxygen demand (COD) and total nitrogen (TN) concentrations shall also be conducted. The Contractor shall report the results of all sampling to the Engineer within 4 weeks after completion of the rehabilitation. The following information shall also be supplied in the sampling reports:

**Location of pipe:**

- \_ County, VDOT Residency
- \_ Route number and distance to nearest intersection
- \_ Name of stream if applicable or known

**Description of pipe:**

- \_ Length, diameter, type i.e. concrete, corrugated steel
- \_ Conveyance conditions i.e. wet weather only, perennial, current conditions
- \_ General flow description i.e. high, medium, low
- \_ Site description i.e. stream bed, earthen ditch, concrete ditch, subsurface storm water drainage
- \_ It shall be the Contractor's responsibility to report and take appropriate corrective actions to remediate any water quality alteration resulting from the lining materials in accordance with applicable local, state or federal regulations. The cost for such remediation shall be at the Contractor's expense.

**Method E – Smooth wall steel pipe liner** shall be rehabilitation by the insertion of a smooth wall steel pipe into a host pipe. Where required, pipe shall be joined by butt welds in accordance with AWWA C-206.

The Contractor shall pressure inject a non-shrink grout into the annular space between the existing host pipe and the steel liner. The annular space between the existing pipe and the smooth wall steel liner shall not exceed 3 inches at any given point, unless otherwise approved by the Engineer. Prior to grouting, the annular space shall be sealed at each end. Holes required to facilitate injecting grout shall be plugged and sealed following grouting operations. In order to ensure stability during placement, the wall thickness of the liner shall not be less than ½”.

**Post Installation Inspection** – The Contractor shall perform a post-installation inspection on all flexible liners installations in accordance with Section 302.03(d) of the Specifications and Virginia Test Method (VTM) 123. The finished liner shall be continuous over its entire length and be free from visual defects such as foreign inclusions, dry spots, pinholes, and delamination. In the event a post inspection of the installation reveals a tight fit of the liner was not achieved in localized areas of the host pipe (comprising less than 20 percent of the pipe length) the annular space between the liner and the host pipe shall be filled with a resin mixture or a cementitious grout (at no cost to the Department) that is compatible with the liner system as specified by the manufacturer. Where a tight fit was not achieved on 25 percent or more of the pipe length the annular space shall be filled as designated herein, however, the Contractor will not be allowed to continue with his methodology of installation and/or the liner system used until he/she can demonstrate to the Engineer that he/she has remedied his/her operations so that it results in a snug tight fit between the installed liner and the host pipe. All such remedial efforts shall be at the Contractor's expense. Further failure(s) to perform a proper installation may result in the disallowance of the use that liner system and an adjustment in the cost or non-payment of the failed installations depending on the severity of the failure.

In the event the post installation inspection is not conducted until all or most of the locations in

the Contract permitting this methodology have been performed, and the inspection reveals a tight fit between host pipe and liner has not been achieved on 25 percent or more of the host pipe's length or the finished liner is not free from visual defects such as foreign inclusions, dry spots, pinholes, and delamination, then an adjustment in the cost or non-payment of the failed installations maybe made by the Engineer depending on the severity of the failure. The cost of post Installation Inspection will be considered incidental to the cost of the installation.

#### **IV. MEASUREMENT AND PAYMENT**

**Pipe rehabilitation (Method)** will be measured and paid for in units of linear feet of pipe for the Size, Method(s) and Category (if specified) as detailed in the Contract. Note: At locations shown in the Contract where multiple methods are permitted, the Contractor may select any of the methods specified, however, if only one method is specified, this will be the only method permitted at that location. This price shall include inspection, cleaning and preparation of the host pipe, furnishing and installing the liner, coupling and expansion devices, cement grout, design and shop drawing preparation, furnishing and installing liner and all components of the liner system, capturing any discharges or releases during installation or curing operations, obtaining any local, POWT, state or federal permits required to perform the work, furnishing any documentation or fees required for effluent or condensate disposal, all testing and sampling including furnishing reports and post installation video inspections for flexible liners, and waste disposal costs. Prices for pipe rehabilitation shall also include excavating when not designated as a separate pay item attributable to this specific work; sheeting; shoring; dewatering; disposing of surplus and unsuitable material; backfilling and backfill material; compaction, restoring existing surfaces; and clearing debris and obstructions.

Payment will be made under:

##### **Pay Item Pay Unit**

(Size) Pipe Rehabilitation (Method, Category-if specified)  
Linear Foot

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**PIPE REPLACEMENT**  
February 28, 2013

#### **I. DESCRIPTION**

This work shall consist of the replacement of existing storm water, surface water pipe culverts and/or sanitary sewer lines by the method or methods specified at the designated locations described in the Contract using various standard and non-standard methodologies/technologies in accordance with the requirements of this provision and as directed by the Engineer.

#### **II. MATERIALS**

**Cement grout** shall conform to Section 218 of the Specifications except the grout shall be a non-shrink mix design.

**Pipe** used in replacement operations shall conform to Section 232 of the Specifications.

### III. GENERAL PROCEDURES

All work shall be contained within the existing right-of-way. In the event a temporary construction easement is deemed necessary due to the selected method or product chosen by the Contractor, the Contractor shall obtain such additional easement for his convenience at no additional cost to the Department.

The Contractor shall maintain all lanes of traffic at all times in accordance with the Special Provision for **Section 512—Maintaining Traffic – Non-Schedules (Lump Sum)** unless otherwise directed by the Engineer. This maintenance of traffic shall include temporary detours if required by the Contractor's method of operations to facilitate construction and where permitted by the locality and the Department. When temporary detours are required the Contractor shall design and construct temporary detours in accordance with Sections 105.14 and 512 of the Specifications and Standard GS-10 of the Road and Bridge Standards respectively. The cost for maintenance of traffic including temporary detours shall be bid as a lump sum amount for the specific location of each pipe replacement as shown in the Contract in accordance with the Special Provision for **Section 512— Maintaining Traffic – Non-Schedules (Lump Sum)** unless otherwise specified in the Contract.

The Contractor shall contact Miss Utility prior to commencing any work that may conflict with existing utilities, and shall coordinate with the utility company(ies) and the Engineer for any adjustments deemed necessary to complete the work. The Contractor shall notify the VDOT Area Construction Engineer at least 48 hours prior to initiation of replacement operations at the site. In the event the selected method of replacement requires disturbing existing surfaces, these surfaces shall be restored in kind to original pre-construction conditions after replacement operations have been completed. The cost shall be included in the price bid for Pipe Replacement for the specified location. The Contractor shall obtain all required OSHA confined space entry permits where these are required by the Contractor's operations and the scope of work in the Contract. The Department has performed an inspection of the existing pipes in the Contract to determine the extent and nature of each pipe's deterioration or damage in each location so as to designate the allowable methods of replacement of the pipe at that specific site. Using the information collected from this inspection the Department has determined through its engineering analysis the best practical method(s) of replacement for each respective site (location) taking into account site specific conditions such as installation working space, hydraulic capacity before and after replacement, height of cover, soil density, and loading conditions, among other criteria. The Contractor shall select, according to the method or options of methods designated by the Department for each specified location or site indicated in the Contract, how he/she chooses to perform the work. Regardless of the final method selected, the Contractor shall provide the Engineer documentation of the procedures, materials, equipment, incidentals and resources he/she shall employ to ensure successful replacement of the existing culvert(s) and/or sewers to assist the Engineer in monitoring the Contractor's operations. The Contractor will not be permitted to substitute a different method(s), if designated, than that or those specified for the location described in the Contract.

Replacement procedures shall be performed according to the method specified in accordance with the requirements of Section 302.03 of the Specifications at the location shown or described in the Contract. Pipes shall be installed to the line and grade shown or derived from invert elevations specified in the plans. Unless otherwise specified, pipes abandoned in place shall be grouted to fill the entire inside void with flowable backfill conforming to the requirements of the Special Provision for Flowable Backfill.



The following methods of pipe replacement are approved by the Department; however, not all methods may be appropriate for each individual location. The Contractor shall consult the Contract to determine the method or methods that are permitted per the location cited. Individual methods shall conform to the criteria specified.

**Method A – Jacked pipe installation** shall be the jack and bore method in accordance with Section 302.03(a)1 of the Specifications.

**Method B - Open trench pipe installation** shall be the open trench method in accordance with Section 302.03(a)2 of the specifications.

**Post installation inspection** shall be performed in accordance with Section 302.03(d) of the specifications. The cost of such inspection will be considered incidental to the cost of the installation.

#### **IV. MEASUREMENT AND PAYMENT**

**Pipe Replacement (Method A)** will be measured and paid for in units of linear feet of “Jacked Pipe” in accordance with Section 302.04 of the Specifications.

**Pipe Replacement (Method B)** will be measured and paid for in units of linear feet of “Pipe” in accordance with Section 302.04 of the Specifications. These prices shall also include excavating when not designated as a separate pay item attributable to this specific work; sheeting; shoring; dewatering; disposing of surplus and unsuitable material; backfilling and backfill material; compaction; restoring existing surfaces; clearing obstructions, and flowable backfill when not designated as a separate pay item attributable to this specific work.

Payment will be made under:

##### **Pay Item Pay Unit**

(Size) Pipe Replacement (Method A)

(Size) Pipe Replacement (Method B)

Linear Foot

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**WORK ZONE TRAFFIC CONTROL MANAGEMENT**  
January 14, 2008

#### **I. GENERAL DESCRIPTION**

This work shall consist of providing work zone traffic control management in strict compliance with the contract, plans, specifications, the Virginia Work Area Protection Manual and the Manual on Uniform Traffic Control Devices (MUTCD), including supervision of personnel and the installation, inspection, and maintenance of all traffic control devices on the project.

#### **II. REQUIREMENTS**

The Contractor shall assign a traffic control supervisor (TCS) to provide work zone traffic control management for the project. If the Contractor assigns more than one TCS to provide work zone

traffic control management, a weekly schedule identifying who will be in charge of providing work zone traffic control management on a daily basis shall be submitted to the VDOT Area Construction Engineer by the Contractor.

The TCS shall have a set of traffic control plans and a copy of the edition of the Virginia Work Area Protection Manual specified on the plan sheet or in the contract readily available at all times.

#### **A. Certification**

Prior to commencing work requiring work zone traffic control management, the Contractor shall submit to the Area Construction Engineer a valid copy of the Traffic Control Supervisor certificate (wallet size card) issued by the American Traffic Safety Services Association (ATSSA), or another similarly accredited agency or firm approved by the Department.

The Department will accept the certification by ATSSA or any approved agency or firm only if all of the following minimum requirements are met:

1. Successful completion of an Intermediate or Advanced work zone traffic control training course approved by the Department.
2. Passing a written examination given by the agency or firm on the approved work zone traffic control training course.
3. A minimum of two years full-time field experience in work zone traffic control. The experience may be verified by the Department at its discretion. The TCS certification shall be renewed every four years by the TCS taking and passing a recertification test. The certification test shall be taken through ATSSA or an agency or firm approved by the Department. Recertification shall be done in the fourth year prior to the expiration date.

#### **B. Duties**

The TCS's main responsibility shall be work zone traffic control management. The TCS may have other assigned duties on the project as approved in writing by the Area Construction Engineer. The following is a listing of the TCS's primary duties:

1. The TCS(s) shall personally provide work zone traffic control management and supervision services at the project site.
2. The TCS(s) shall coordinate the training of flagging and signing personnel.
3. The TCS(s) shall supervise the flagging and signing personnel.
4. The TCS(s) shall coordinate all work zone traffic control operations for the duration of the contract, including those of subcontractors, utility companies, and suppliers, to ensure that all work zone traffic control is in place and fully operational prior to the commencement of any work. The Department recognizes that the Contractor does not have direct control over the work zone traffic control operations of the utility companies. The coordination provided by the TCS when dealing with utility companies is for the purpose of coordinating concurrent utility work zone traffic control with any other construction/maintenance work zone traffic control to avoid conflicts.

5. The TCS(s) shall perform daily reviews of work zone traffic control when work activities are underway and document in the work zone traffic control daily diary activities taking place and any deviation from the traffic control plan, length and timing and mitigation of excessive traffic queues, and instances or conflicts or problems with the work zone traffic control and corrective actions taken.

In addition, the TCS(s) shall perform weekly reviews of the work zone traffic control and document in detail using Forms TE-97001 and 97002. Every other detailed weekly review shall be performed during nighttime hours or as directed by the Area Construction Engineer.

The TCS shall inspect traffic control devices in use for compliance with the ATSSA Quality Standards for Work Zone Traffic Control Devices, the Road and Bridge Specifications, and the Virginia Work Area Protection Manual. The TCS shall provide for the immediate repair, cleaning, or replacement of traffic control devices not functioning as required to ensure the safety of the motorists and construction personnel.

The traffic control devices shall be inspected by the TCS during working and nonworking hours on a schedule approved in writing by the Area Construction Engineer, but as a minimum at the beginning and end of each work day or night and once during non-working weekends and holidays, and daily on restricted days due to inclement weather or during any work shutdown.

Traffic control devices in use longer than fourteen (14) days shall be inspected by the TCS at least once every other week during nighttime periods.

6. The TCS(s) shall prepare and submit statements concerning road closures, delays, and other project activities to the District Public Affairs office as required.

7. The TCS(s) shall be responsible for notifying the VDOT project Maintenance of Traffic (MOT) Coordinator or designee, of all accidents related to the project traffic control. The time and date of notification shall be documented in the daily diary.

8. The TCS(s) assigned to the project shall attend the preconstruction conference and any other meeting which involves traffic control.

9. The TCS(s) shall be responsible for the maintenance, cleanliness, and replacement of traffic control devices of the existing traffic control plan during working and non-working hours.

### **C. Documentation - Traffic Control Diary**

The TCS shall maintain a project work zone traffic control diary in a bound book. The Contractor shall provide a sufficient number of diaries for his or her use.

The TCS shall keep the work zone traffic control diary current on a daily basis, and shall sign each daily entry. Entries shall be made in ink in a format approved by the Area Construction Engineer, and there shall be no erasures or white-outs. Incorrect entries shall be struck out and then replaced with the correct entry. Photographs may be used to supplement the written text.

The work zone traffic control diary shall, at all times, be available for inspection by the VDOT Maintenance of Traffic Coordinator and a copy of the diary shall be submitted to the MOT Coordinator on a weekly basis.

The work zone traffic control diary(s) shall become the property of the Department at the completion of the project. Failure to submit the diary shall result in the withholding of final payment until the diary(s) is submitted.

#### **D. Availability of TCS**

Traffic control management shall be provided under the supervision and direction of the TCS on a 24-hour-per-day basis, throughout the duration of the project. The TCS shall be available on every working day—on call at all times—and available upon the Area Construction Engineer's request during normal working hours and during other than normal working hours in the case of emergency. The provisions for availability of the TCS shall also be met during times of partial or full project suspension. Contact telephone numbers for the TCS(s) shall be provided to Department project personnel, the Area Construction Engineer, the Residency Administrator, and the region Smart Traffic Center prior to the Contractor commencing work requiring work zone traffic control management.

#### **E. Failure to Comply**

The Area Construction Engineer may suspend all or part of the Contractor's operation(s) for failure to comply with the approved "Traffic Control Plan" or failure to correct unsafe traffic conditions within 24 hours for critical items and 72 hours for non-critical items after such notification is given to the Contractor in writing.

In the event that the Contractor does not take appropriate action to bring the deficient work zone traffic control into compliance with the approved traffic control plan or fails to correct the unsafe traffic conditions, the Department may proceed with the corrective action using its own forces, equipment, and material to maintain the project and such costs, plus 25 percent for supervisory and administrative personnel, will be deducted from the money owed to the Contractor for the project.

The Contractor shall not be relieved of the responsibility to provide work zone traffic control safety to the traveling public when a project is under full or partial suspension. When a project is under suspension due to the Contractor's failure to comply with this section, or when the contract is under liquidated damages, the Contractor shall continue to provide work zone traffic control management and no additional measurement or payment will be made. If suspensions or partial suspensions are requested by the Contractor, the additional work zone traffic control management costs will be at the Contractor's expense.

### **III. MEASUREMENT AND PAYMENT**

**Work Zone Traffic Control Management** will be paid for at the contract lump sum price. This price shall be full compensation for furnishing 24 hour services as specified, including preparing and furnishing Work Zone Traffic Control diaries. When work zone traffic control management is paid for by the lump sum, monthly partial payments for work zone traffic control management will be made on a pro rata basis for the estimate period being vouchered for payment.

In the event the contract time is authorized to be extended in accordance with the provisions of Section 108.04 of the Specifications, the provisions of Section 104.02 of the Specifications will not apply. The payment for this item will be compensated on a daily basis by dividing the original lump sum bid amount by the number of calendar days in the original contract time and

the resultant daily dollar value assigned to this item.

Payment will be made under:

**Pay Item**

**Pay Unit**

Work Zone Traffic Control Management Lump Sum