



# **P R O J E C T   M A N U A L**

**KIRK AVENUE COMPACTOR  
ROANOKE, VIRGINIA**

**Bid No. 13-08-02**

**Date: February 7, 2013**

**Office of the City Engineer  
215 Church Avenue, S.W., Room 350  
Roanoke, Virginia 24011  
(540) 853-2731  
Fax (540) 853-1364**

**PROJECT MANUAL FOR  
KIRK AVENUE COMPACTOR  
ROANOKE, VIRGINIA**

**BID NO. 13-08-02**

**DATE: February 7, 2013**

**Office of the City Engineer  
Roanoke, Virginia**

**Jason Thomas, P.E., Project Manager  
Philip C. Schirmer, P.E., L.S., City Engineer  
Office of the City Engineer  
215 Church Avenue, S.W., Room 350  
Roanoke, Virginia 24011  
(540) 853-2731**

**CITY OF ROANOKE, VIRGINIA**

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**CITY OF ROANOKE, VIRGINIA**

Sealed Bids for:

**KIRK AVENUE COMPACTOR  
ROANOKE, VIRGINIA**

**This project consists of the construction of a trash compactor enclosure, conduits, concrete slab, and associated work on the Kirk Alley side of 121 Campbell Ave, SE**

**BID NO. 13-08-02**

Sealed bids will be received by the City of Roanoke by Sharon T. Lewis, Manager, Purchasing Division, 215 Church Avenue, S.W., Room 202, Roanoke, Virginia 24011, at or before 2:00 p.m., local time, on February 27, 2013. Bids received after 2:00 p.m. will not be accepted or considered.

The Invitation to Bid, Instructions to Bidders, plans, specifications, the Contract, and other Contract Documents may be examined during business hours at the Office of the City Engineer, 215 Church Avenue, S.W., Room 350, Roanoke, Virginia 24011 (Phone: 540-853-2731); or in the City of Roanoke Purchasing Division office, 215 Church Avenue, S.W., Room 202, Roanoke, Virginia 24011 (Phone: 540-853-2871).

Documents may be viewed and/or downloaded from the City of Roanoke Purchasing Division's Vendor Self Service site at <https://vss.roanokeva.gov> or from the Purchasing Division's website at [www.roanokeva.gov/purchasing](http://www.roanokeva.gov/purchasing).

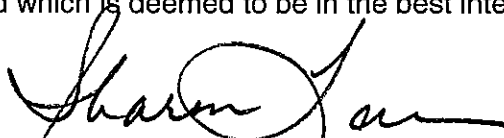
A non-mandatory pre-bid conference will be conducted on February 19, 2013, at 10:00 a.m., local time, at the Engineering Conference Room, 215 Church Ave. SE, room 350, Roanoke, Virginia.

Claims for withdrawal of bids shall only be made within two (2) business days after the opening of bids as set forth in part (i) of Section 2.2 - 4330 (A), Code of Virginia (1950), as amended.

The City expressly reserves the right to cancel this ITB and/or reject any or all bids, to waive any informality or irregularity in the bids received, and to accept a bid which is deemed to be in the best interest of the City.

2-6-13

Date



Sharon T. Lewis, Manager  
Purchasing Division  
City of Roanoke, Virginia

## **INVITATION TO BID**

### **CITY OF ROANOKE, VIRGINIA**

Sealed Bids for:

KIRK AVENUE COMPACTOR  
ROANOKE, VIRGINIA

**This project consists of the construction of a trash compactor enclosure, conduits, concrete slab, and associated work on the Kirk Alley side of 121 Campbell Ave, SE**

**BID NO. 13-08-02**

Sealed bids will be received by the City of Roanoke by Sharon T. Lewis, Manager, Purchasing Division, Noel C. Taylor Municipal Building, 215 Church Avenue, S.W., Room 202, Roanoke, Virginia 24011, at or before 2:00 p.m., local time, on February 27, 2013, at which time all bids received will be publicly opened and read. Bids received after 2:00 p.m. will not be accepted or considered. The time of receipt shall be determined by the time clock stamp in the Purchasing Office, or if it is not working, such time shall be determined by the Purchasing official who is to open the bids. This project is generally described as set forth above.

The Instructions to Bidders, plans, specifications, the Contract, and other Contract Documents are incorporated herein by reference. Copies of these items may be examined during business hours at the Office of the City Engineer, Noel C. Taylor Municipal Building, 215 Church Avenue, S.W., Room 350, Roanoke, Virginia 24011 (Phone: 540-853-2731); or in the City of Roanoke Purchasing Division office, 215 Church Avenue, S.W., Room 202, Roanoke, Virginia 24011 (Phone: 540-853-2871). Bidders are cautioned to review bid documents thoroughly before submitting a bid.

Copies of the documents may be viewed and/or downloaded from the City of Roanoke Purchasing Division's Vendor Self Service site at <https://vss.roanokeva.gov> or from the Purchasing Division's website at [www.roanokeva.gov/purchasing](http://www.roanokeva.gov/purchasing). If you have any problems accessing the documents, you may contact Purchasing at 853-2871 or [purchasing@roanokeva.gov](mailto:purchasing@roanokeva.gov). The City will not be responsible for documents obtained from any other source.

All Contract Documents prepared and/or furnished by the City Engineer shall be the exclusive property of the City of Roanoke, Virginia, and shall not be used for any other project(s).

Each bidder is solely responsible for ensuring that such bidder has the current complete version of the Bid Documents prepared for the project, including any addenda issued by the City, before submitting a bid.

A non-mandatory pre-bid conference will be conducted on February 19, 2013, at 10:00 a.m., local time, at the Engineering Conference Room, 215 Church Ave. SW, Room 350, Roanoke, Virginia. It is strongly recommended that all bidders attend this conference.

Bidders and all subcontractors are required to comply with all applicable city, state, and federal laws, ordinances, and regulations; and are required to be properly licensed under Sections 54.1-1100, et seq., Code of Virginia (1950), as amended. Bidders shall deposit with their bid a Bid Security executed in the amount and form stipulated in the Instructions to Bidders.

The City expressly reserves the right to cancel this ITB and/or reject any or all bids, to waive any informality or irregularity in the bids received, and to accept a bid from the lowest responsive and responsible bidder which is deemed to be in the best interest of the City.

Project: Kirk Avenue Compactor

Invitation to Bid  
Rev. 07/01/12

If an award of a contract is made, notice of the award, or the announcement of the decision to award, will be made by posting a notice of such award or announcement in the foyer area of the second floor of the Noel C. Taylor Municipal Building at 215 Church Avenue, S.W., Roanoke, Virginia 24011.

To determine the lowest responsive and responsible bidder who may be awarded a Contract for the Work, the criteria set forth in or requested pursuant to the Instructions to Bidders or in the Bid Documents may be considered.

By submitting a bid, each bidder agrees that this is a solicitation of bids and each bidder agrees to be solely responsible for the cost or expense of its bid and the City shall have no responsibility for such costs or expenses.

If a certain brand, make, item or manufacturer is specifically and exclusively required or called for in the plans, specifications, or other contract documents, then that brand, make, item, or manufacturer shall be used unless otherwise agreed to by the City, in its sole discretion.

If the bid by the lowest responsive and responsible bidder exceeds available funds, the City reserves the right to negotiate with the apparent low bidder pursuant to Section 2.2-4318 of the Code of Virginia. The conditions and procedures under which such negotiation may be undertaken are set forth in Section 2.2-4318, and Section 14.3 of Instructions to Bidders. Any such negotiated Contract shall be subject to final approval by the City in its sole discretion.

Bids may not be withdrawn for a period of sixty (60) calendar days after the opening of bids unless the bid is substantially lower than the other bids because of a clerical error as defined in Section 2.2 - 4330, of the Code of Virginia (1950), as amended. Pursuant to Section 2.2 - 4330 (A)(i), the bidder shall give notice in writing and shall submit the original work papers with such notice to the City of its claim of right to withdraw the bid within two (2) business days after the opening of bids.

The successful bidder shall comply with the Code of Virginia nondiscrimination provisions of Section 2.2-4311 and the Drug-free workplace provisions of Section 2.2-4312.

Pursuant to Code of Virginia, Section 2.2 - 4343.1, be advised that the City of Roanoke does not discriminate against faith-based organizations.

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**CITY OF ROANOKE, VIRGINIA**

**INSTRUCTIONS TO BIDDERS**

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## CITY OF ROANOKE, VIRGINIA

### INSTRUCTIONS TO BIDDERS

#### SECTION 1. DEFINITIONS

Definitions contained in Section 1 of the General Conditions are incorporated herein by reference. The bidder should refer to the General Conditions for definitions used in the Contract Documents. "Successful bidder" is defined as the bidder to whom the City makes an award.

#### SECTION 2. EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- 2.1** Each bidder is responsible for examining carefully the site of the Work and the Contract and Bid Documents relating to the Work. By submitting a bid, the bidder acknowledges and agrees that it has examined and considered the conditions to be encountered at and adjacent to the site, the character, quality, and quantities of work to be performed, the material to be furnished, other requirements of the Contract Documents, and to have waived any claim or objection based thereon. Claims as a result of failure to have done such examination will not be considered by the City. See Section 8 of the General Conditions entitled "Conditions at Site."
- 2.2** Each bidder shall promptly notify, in writing, the Purchasing Division and Engineering Division of any ambiguity, inconsistency, or error which may be discovered upon examination of the Invitation to Bid, any Bid Documents, and/or any related documents.

#### SECTION 3. CLARIFICATION AND ADDENDA

- 3.1 Questions on Contract Documents:** All questions about the meaning or intent of the Contract Documents shall be directed to the City Engineer. Questions received less than seven (7) calendar days prior to the date for opening bids may not be answered. Bidders may only rely upon written addenda issued by the City Engineer and no other communication or interpretation, whether oral or written, shall have any effect or efficacy.
- 3.2 Addenda:** Any changes, interpretations, or clarifications that may be made to the Contract Documents will be in the form of an addendum. Receipt by the bidder of such addendum shall be acknowledged on the Bid Form. **However, all bidders are solely responsible for making sure that they have received and reviewed any and all addenda that may have been issued for this ITB.**
- 3.3 Interpretation:** All decisions made in good faith by the City Engineer on the meaning or interpretation of the Contract Documents shall be final.



- 3.4 Bidders Responsibility:** All bidders are responsible for ensuring that they have received and examined all addenda that may have been issued before submitting their bid.

If you download this Invitation to Bid from the City website and intend to submit a bid, you should notify Purchasing. The City is not responsible for any Invitation to Bid obtained from any source other than the City. Contact Purchasing by telephone at (540) 853-2871, by fax at (540) 853-1513 or by email at [purchasing@roanokeva.gov](mailto:purchasing@roanokeva.gov).

- 3.5 Quantities:** Where the bid documents stipulate a unit price, the quantities of the work and material set forth in the proposal form or on the plans approximately represent the work to be performed and material to be furnished and are for the purpose of comparing the bids on a uniform basis. Payment shall be made to the Contractor only for the actual quantities of work performed or material furnished in accordance with the plans and specifications and it is understood that the quantities may be increased or decreased as provided in the General Conditions without in any way invalidating the bid prices.

#### **SECTION 4. TIME FOR COMPLETION**

- 4.1 Time for Completion:** Unless otherwise stated or a specific time period is set forth on the Bid Form, each bidder shall indicate in the appropriate blank the number of consecutive calendar days required by such bidder to substantially complete the specified Work, with Final Acceptance to be achieved within thirty (30) consecutive calendar days thereafter. However, no such time period may exceed the number of consecutive calendar days set forth in the Bid Form.
- 4.2 Weather:** The bidder, in preparing and submitting its bid, is required to take into consideration normal weather conditions. Normal weather means a range of weather conditions which might be anticipated, based on weather data for the past ten years. Unusual weather is weather which could not be anticipated based on such data. Normal weather conditions shall be determined from the public historical records available from the National Weather Service. The data sheets to be used shall be for the locality or localities closest to the site of the Work. No additional compensation will be paid to the Contractor because of unusual weather conditions; however, an extension of time for unusual weather may be considered by the City as indicated in the General Conditions.
- 4.3 Liquidated Damages:** The amounts indicated on the Bid Form as step one and step two liquidated damages as described in the General Conditions (Section 21) shall be due from and paid by the Contractor to the City for each consecutive calendar day of delay in excess of the stated time required to complete the Work, unless modified by Change Order.

## **SECTION 5. CONTRACTORS' LICENSES, PERMITS, FEES, AND TAXES**

- 5.1 State License:** Bidders and all subcontractors are required to comply with all applicable city, state, and federal laws, ordinances, and regulations, including, but not limited to, registration with the Virginia State Corporation Commission if required by law; and are required to be properly licensed in accordance with Sections 54.1-1100, et seq., of the Code of Virginia, which presently requires one to be licensed as a "Class A Contractor" before submitting a bid of One Hundred Twenty Thousand Dollars (\$120,000) or more; or to be licensed as a "Class B Contractor" before submitting a bid of Seven Thousand Five Hundred Dollars to One Hundred Twenty Thousand Dollars (\$7,500 to \$120,000); or to be licensed as a "Class C Contractor" before submitting a bid of One Thousand Dollars to Seven Thousand Five Hundred Dollars (\$1,000 to \$7,500). There are also cumulative total amounts which can require a certain class of license and bidders should check these requirements as well. Bidders shall show evidence of being properly licensed and supply the documents required in Section 14.4 of these Instructions to Bidders. (See also Section 7 of the General Conditions.)
- 5.2 Other Licenses, Permits, Fees, and Taxes:** Successful bidder is responsible for paying for all licenses, permits, fees, and taxes applicable to the project. Such charges and fees include, but are not limited to the applicable building permits, mechanical and electrical permits, hauling and dumping of material, and if work performed in the City of Roanoke during a calendar year exceeds Twenty-five Thousand Dollars (\$25,000), such bidder will have to possess a City business license and be responsible for paying City of Roanoke business license taxes. See Section 3 of the General Conditions.
- 5.3 Virginia State Corporation Commission:** Each Bidder/Offeror who is a stock or nonstock corporation, limited liability company, business trust, or a limited partnership or other business entity shall be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity if required by law. Each such Bidder/Offeror shall include in its bid response/proposal response the Identification Number issued to it by the Virginia State Corporation Commission (SCC) and should list its business entity name as it is listed with the SCC. Any Bidder/Offeror that is not required to be authorized to transact business in the Commonwealth as a domestic or foreign business entity as required by law shall include in its bid response/proposal response a statement describing why the Bidder/Offeror is not required to be so authorized. (See Va. Code Section 2.2-4311.2).

## **SECTION 6. PREPARATION AND SUBMISSION OF BIDS**

- 6.1 Bid Form:** Bids shall be submitted on the Bid Form furnished, or copy thereof, and shall be completed and signed in ink. A copy of the Bid Form is provided in these specifications for the information of bidders only. Except as may be otherwise stated, all blank spaces in the Bid Form should be filled in and under no conditions shall any changes be made in the phraseology of the Bid Form. Erasures or other changes in a bid amount must be explained or noted over the initials of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the bid documents, or irregularities of any kind, may be rejected by the City as being incomplete and/or non-responsive. NO CHANGES MADE TO THE BID FIGURES BY

NOTATIONS ON THE OUTSIDE OF THE ENVELOPE WILL BE CONSIDERED IN THE REVIEW AND TABULATION OF BIDS OR FOR ANY OTHER PURPOSE.

- 6.2 Escrow:** In accordance with Section 2.2 - 4334, of the Code of Virginia, for bids of \$200,000 or more for construction of highways, roads, streets, bridges, parking lots, demolition, clearing, grading, excavating, paving, pile driving, miscellaneous drainage structures, and the installation of water, gas, sewer lines and pumping stations, the Bid Form will include a space for the bidder to indicate an option to use the escrow account procedure in order to have retained funds paid to an escrow agent. Otherwise, unless stated in the Supplemental General Conditions, no escrow will be provided.
- 6.3 Signatures:** Each bid must give the full business address of the bidder and be signed by bidder with its usual signature. Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership or an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which they are incorporated and by the signature and designation of the president or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below each signature. A bid by a person who affixes to his signature the word "President," "Authorized Agent," or other designation without disclosing such principal firm or employer, may be held to be the bid of the individual signing. Satisfactory evidence of the authority of the president or authorized agent signing on behalf of the corporation shall be furnished upon request by the City.
- 6.4 Bid Amounts:** Bidders shall indicate in the appropriate blank spaces on the Bid Form the amounts for the base bid and any alternates, written with ink or typed, in both words and figures. In the event of a discrepancy between the words and figures expressed in the base bid or alternates, the word amount shall govern. Any unit prices for separate items as called for on the Bid Form shall be written with ink or typed in figures in the appropriate blanks.
- 6.5 Minority & Women-Owned Business Enterprise, Small Business and Veteran-Owned Business Participation:** The bidder shall complete and submit the "Minority & Women-Owned Business Enterprise, Small Business and Veteran-Owned Business Participation" form in the bid proposal. Failure to complete and sign this statement may result in rejection of the bid.
- 6.6 Bid Package Checklist:** Bidders shall deposit with their bid the documents or information set forth in the Bid Package Checklist. See Section 16.

## **SECTION 7. RECEIPT AND OPENING OF BIDS**

- 7.1 Delivery of Bid:** It is the responsibility of the bidder to assure that its bid is delivered to the place designated for receipt of bids and prior to the time set for receipt of bids. No bids received after the time designated for receipt of bids will be considered.

- 7.2 Receipt of Bid:** The Bid Form, the Bid Security, and all other documents required to be submitted with the bid shall be enclosed in a sealed opaque envelope and addressed as follows:

Sharon T. Lewis, Manager  
Purchasing Division  
Noel C. Taylor Municipal Building  
215 Church Avenue, S.W., Room 202  
Roanoke, Virginia 24011

Place in front lower left-hand corner of envelope the project title and bid number as indicated at the top of the Invitation to Bid. Place in the upper left-hand corner of the envelope the bidder's name, mailing address, and Virginia Contractor number.

- 7.3 Opening of Bid:** Bids will be opened and read at the time and place stated in the Invitation to Bid. The contents may be made public in accordance with Section 2.2-4342 of the Code of Virginia. The officer or agent of the City, whose duty it is to open them, will decide when the specified time has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid not properly addressed and identified.
- 7.4 Withdrawing Bid:** After the date of opening of bids, no bid may be withdrawn for at least sixty (60) calendar days after such opening date, except as provided in Section 12 of these Instructions to Bidders.

## **SECTION 8. BID SECURITY**

Each bid of \$100,000 or more must be accompanied by a Bid Security in an amount equal to five (5%) percent of the maximum possible bid price in accordance with Sections 2.2-4336 and 4338 of the Code of Virginia. The Bid Security shall be furnished in one of the following forms:

- a. Bid Bond, in a form substantially as provided in the Contract Documents, made payable to the City of Roanoke and properly executed by the bidder as Principal and a Corporate Surety authorized to transact business in the Commonwealth of Virginia. Attorneys-in-fact who execute Bid Bonds must file with the bond a certified copy of their Power of Attorney.
- b. Certified Check or cash deposited with the City of Roanoke Treasurer in the face amount required for the Bid Security and made payable to the City of Roanoke.
- c. Personal Bond or Letter of Credit issued by an authorized financial institution in the face amount required for the Bid Security, made payable to the City of Roanoke. These forms of security shall be submitted for review and must be approved by the City Attorney, in his sole discretion, at least three (3) working days prior to receipt of bids. Approval will be based upon a determination that the form of security offered will adequately protect the interests of the City as equivalent to a corporate surety's bond.
- d. For return of Bid Security, see Sections 13 and 14 of these Instructions to Bidders.

## **SECTION 9. INTENT**

- 9.1 Work Required:** The City requires that the successful bidder perform a complete and satisfactory job in accordance with the Contract Documents.
- 9.2 Conflicts in Contract Documents:** Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all Contract Documents. In the case of conflict between the Contract Documents, the Contract Documents shall take precedence in the following order: The Contract; addenda starting with the last issued addendum; the Supplemental General Conditions; the General Conditions; the Special Conditions; the specifications with attachments; and the drawings.
- 9.3 Work Not Described:** All work not specifically described in the Contract Documents, yet required to produce a fully functional and properly operating project shall be provided even though every item or minor detail for the proper installation or successful operation of the entire Work is not mentioned in the Contract Documents.
- 9.4 Completion of Work:** The successful bidder acknowledges and agrees that it has taken into account in its bid the requirements of the bid and Contract Documents, local conditions, availability of material, equipment, labor, and any other factors which may affect the performance of the Work. The successful bidder agrees and warrants that it will complete the Work not later than the time period or date indicated for completion.

## **SECTION 10. MATERIAL AND WORKMANSHIP**

- 10.1 "Or Equal" Clause:** The particular brand, make of material, device, or equipment described in the Contract Documents establishes a standard of required function, economy of operation, dimension, appearance, and quality to be met by any proposed substitution. No substitution will be considered unless a written request for approval has been submitted by the bidder and has been received by the City Engineer at least ten (10) calendar days prior to the date for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data, and any other information necessary or required by the City Engineer for an evaluation. A statement setting forth any changes in other material, equipment, or work that incorporation of the substitute would require shall be included. The burden of proof of merit of the proposed substitute is upon the bidder.
- 10.2 Approval of Substitution:** The City Engineer's decision of approval or disapproval of a proposed substitution shall be in his sole discretion and shall be final. If the City Engineer approves any proposed substitution, such approval will be set forth in an addendum issued to all recorded bidders. Bidders shall not rely on approvals made in any other manner.
- 10.3 Adaptation Due to Substitution:** The successful bidder shall be responsible for making all changes in the Work necessary to adapt and accommodate any equivalent product or item which it uses. The necessary changes shall be made at the successful bidder's sole expense.

## **SECTION 11. STATEMENT OF QUALIFICATIONS**

Each bidder shall be prepared to submit evidence of qualifications, experience, and financial ability to perform the Work set forth in the Contract Documents, should such be required by the Contract Documents or requested by the City Engineer. Furthermore, each bidder must notify the Purchasing Division and Engineering Division if bidder has been terminated from any contract or job in the last three (3) years and/or if bidder has been during the last three (3) years debarred from bidding on or performing any federal, state or local procurement or job. If so, bidder must supply details of such matters by separate written statements included with bidder's response. Any bidder who is currently debarred will not be eligible to bid on this project.

## **SECTION 12. ERRORS IN BIDS**

- 12.1 Withdrawal of Bid:** A bidder may withdraw its bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents, and material used in the preparation of the bid sought to be withdrawn.
- 12.2 Withdrawal Procedure:** The bidder shall give notice in writing and shall submit the original work papers with such notice to the City of its claim of right to withdraw its bid within two (2) business days after the conclusion of the opening of bids as set forth in part (i) of Section 2.2 - 4330 (A), of the Code of Virginia.
- 12.3 Withdrawal Requirements:** Other applicable provisions of Section 2.2 - 4330, of the Code of Virginia shall apply to any errors in bids or any requested withdrawal due to errors in bids.

## **SECTION 13. REJECTION OF BIDS**

- 13.1 Rejection of Bids:** The City reserves the right to cancel the Invitation to Bid, to reject any or all bids, to reject the bid of a bidder who is not in a position to perform the contract, or to waive any informalities in any bid.
- 13.2 Bid Security Return for Rejected Bids:** The Bid Security will be returned to all rejected bidders after the City and the successful bidder have executed the Contract.
- 13.3 Bid Security Return for Unsuccessful Bids:** Should a bid not be accepted by the City within sixty (60) consecutive calendar days after the opening of bids, or within such other time specified in the Bid Documents, each bidder may obtain its Bid Security from the City.

**SECTION 14. ACCEPTANCE OF BIDS, EVALUATION OF BIDS, AWARD OF CONTRACT, AND SECURITY REQUIREMENTS**

**14.1 Acceptance of Bids:** Each bidder should submit with its bid documentation of bidder's legal name and indicate the type of business entity bidder is operating under; i.e., if a corporation, bidder should enclose a copy of the Certificate of Incorporation issued by the State Corporation Commission; if a partnership, bidder should enclose a copy of the relevant portions of the Partnership Agreement; if a limited liability company, bidder should enclose a copy of the Certificate of Organization.

**14.2 Evaluation and Award to Lowest Responsive and Responsible Bidder:** To determine the lowest responsive and responsible bidder with respect to this bid, the following items may be considered so as to protect the interest of the City:

- a. The total base bid price plus the price of any alternates (aka- additive bid item) the City elects to accept, if any. (This is where a lump sum amount is required.) The City reserves the right to accept alternates in any order or combination.
- b. If a unit price contract is requested, the total amount based on the estimated quantities as set forth in the Bid Form will be considered. (The listed unit prices for each item will control and any multiplication errors may be adjusted by the Purchasing Division using the proper estimated quantities.)
- c. The ability, capacity and skill of the bidder to perform the contract or provide the services and/or items required.
- d. Whether the bidder can perform the contract promptly and within the time specified, without delay or interference.
- e. The character, integrity, reputation, judgment, experience and efficiency of the bidder.
- f. The quality of performance of previous contracts or services.
- g. The previous and existing compliance by the bidder with laws and ordinances relating to the contract, purchase or service.
- h. The equipment and facilities available to the bidder to perform the contract or provide the services and/or items.
- i. The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the services and/or items.
- j. The quality, availability and adaptability of the supplies, materials, equipment or services to the particular use required.

- k. The ability of the bidder to provide future maintenance, parts and service for the use of the subject of the purchase or contract, if required.
- l. Bids shall be evaluated based on the requirements set forth in this Invitation to Bid, and other criteria to determine acceptability such as inspection, testing, quality, workmanship, delivery, suitability for a particular purpose and life cycle cost. The City, in its sole discretion, may elect to waive an informality in any bid.

Should a Contract be awarded to a bidder, it will be awarded to the lowest responsive and responsible bidder. If an award of a contract is made, notice of the award, or the announcement of the decision to award, will be made by posting a notice of such award or announcement in the foyer area of the second floor of the Noel C. Taylor Municipal Building at 215 Church Avenue, S.W., Roanoke, Virginia 24011.

**14.3 Negotiation of Bid:** If the bid by the lowest responsive and responsible bidder exceeds available funds, the City reserves the right to negotiate with the apparent low bidder pursuant to Section 2.2-4318 of the Code of Virginia. The conditions and procedures under which such negotiation may be undertaken are that the appropriate City officials shall determine that the lowest responsive and responsible bid exceeds available funds and notify such bidder in writing of its desire to negotiate. Thereafter, negotiations with the apparent low bidder may be held to obtain a Contract within available funds involving discussions of reduction of quantity, quality, or other cost saving mechanisms. Any such negotiated Contract shall be subject to final approval of the City, in the sole discretion of the City.

**14.4 Contract Execution:** The successful bidder shall be required, within ten (10) consecutive calendar days after receipt of the Contract, to return the signed Contract, and furnish to the City all other documents as enumerated hereinafter:

- a. Performance Security (if applicable)
- b. Labor and Material Payment Security (if applicable)
- c. Certificate of Insurance
- d. Escrow Agreement (if applicable)
- e. Contractor's Certification as to Licensure of Subcontractors Form
- f. Employment Projection Form (if applicable):

The successful bidder for a project requiring at least thirty (30) calendar days work will be required to submit a completed Employment Projection Form along with the signed Contract. A copy of this form is included in these bid documents. Completion of the form does not create an obligation on the part of the bidder to hire any referred applicant.

**14.5 Security:** A Performance Security and a Labor and Material Payment Security each in the amount of one hundred percent (100%) of the contract amount for all contracts in excess of One Hundred Thousand Dollars (\$100,000) in accordance with Sections 2.2-



4337 and 4338 of the Code of Virginia, shall be furnished by the successful bidder in one of the following forms:

- a. A Performance Bond and a Labor and Material Payment Bond, on forms as provided in the Contract Documents, made payable to the City of Roanoke, properly executed by the successful bidder as Principal and a Corporate Surety authorized to transact business in the Commonwealth of Virginia. Attorneys-in-fact who execute the bonds must file with each bond a certified copy of their Power of Attorney.
- b. Certified Checks or Cash Escrow in the face amount required for the Performance Security and the Labor and Material Payment Security each made payable to the City of Roanoke.
- c. Personal Bond or Letter of Credit issued by an authorized financial institution in the face amount required for the Performance Security and the Labor and Material Payment Security, made payable to the City of Roanoke. These forms of security must be approved by the City Attorney, in his/her sole discretion. Approval will be based upon a determination that the form of security offered will adequately protect the interests of the City as equivalent to a corporate surety's bond.

**14.6 Escrow Agreement Form:** In the event the Contract meets the requirements as stipulated in Section 6.2 of these Instructions to Bidders and the successful bidder elects to use the escrow account procedure, the Escrow Agreement Form, as provided in the Contract Documents, shall be executed and submitted to the City within fifteen (15) calendar days after receipt of written notification of bid acceptance. If the executed Escrow Agreement Form is not submitted within the fifteen-day period, the successful bidder shall forfeit and waive the rights to the use of the escrow account procedure.

**14.7 Bid Security Return for Successful Bid:** Upon the execution of the Contract and approval of the Performance and Payment Securities, the Bid Security shall be returned to the successful bidder. Should the successful bidder fail or refuse to execute the Contract or furnish the required Performance and Payment Securities within the stipulated time, the Bid Security shall be due and paid to the City and the City shall be entitled to collect the Bid Security. In addition, the City may pursue any and all other remedies available to it at law or in equity against said bidder.

## **SECTION 15. ETHICS IN PUBLIC CONTRACTING**

The provisions, requirements, and prohibitions as contained in Sections 2.2 - 4367 through 2.2-4377, of the Code of Virginia, pertaining to bidders, offerors, contractors, and subcontractors are applicable to this project.

## **SECTION 16. BID PACKAGE CHECKLIST**

The following items must be completed and included in your bid package. Failure to include all required forms may result in rejection of the bid. If any of these documents were not included with your Project Manual, please contact the Office of the City Engineer at (540) 853-2731.

- a. Completed Bid Form (all pages)
- b. Minority & Women-Owned Business Enterprise, Small Business and Veteran-Owned Business Participation
- c. Properly Executed Bid Security (Bid Bond, Certified or Cashier's Check, etc., if applicable)
- d. In addition to the above items, bidder should submit documentation verifying bidder's proper legal name.

## **SECTION 17. PROTESTS**

Any bidder who wishes to protest or object to any award made or other decisions made pursuant to the Invitation to Bid may do so only in accordance with the provisions of Sections 2.2-4357, 4358, 4359, 4360, 4363, and 4364 of the Code of Virginia, and only if such is provided for in such Code section.

## **SECTION 18. MISCELLANEOUS**

- a. No bidder shall confer on any public employee having official responsibility for a purchasing transaction any payment, loan, subscription, advance, deposit or money, service, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is exchanged.
- b. The City may make investigations to determine the ability of the bidder to perform or supply the services or items as described in this Invitation to Bid. The City reserves the right to reject any bid if the bidder fails to satisfy the City that it is qualified to carry out the obligations of the proposed contract.
- c. The successful bidder must comply with the nondiscrimination provisions of Section 2.2-4311 of the Code of Virginia, which are incorporated herein by reference.
- d. The successful bidder must comply with the drug-free workplace provisions of Section 2.2-4312 of the Code of Virginia, which are incorporated herein by reference.
- e. It is the policy of the City of Roanoke to maximize participation by minority and women owned business enterprises, small businesses and veteran-owned businesses in all aspects of City contracting opportunities.

- f. The successful bidder shall comply with all applicable City, State, and Federal laws, codes, provisions, and regulations.
- g. Providers of any outside services shall be subject to the same conditions and requirements as the successful bidder in regards to law, code or regulation compliance. The City reserves the right of approval for any subcontract work, including costs thereof.
- h. This Invitation to Bid and all responses are subject to Section 2.2-4342 of the Code of Virginia regarding public inspection of records and the procedures a bidder must follow to protect trade secrets and proprietary information.
- i. Conflict of Interests Act. The provisions, requirements and prohibitions as contained in Sections 2.2-3100, et. seq. of the Code of Virginia are applicable to this Invitation to Bid.
- j. The procurement provisions of the Code of the City of Roanoke (1979), as amended, Sections 23.2-1, et. seq., as well as the City Procurement Manual, apply to this Invitation to Bid, unless specifically modified herein. The City's Procurement Manual can be reviewed at the Purchasing office.
- k. Insurance. Successful bidder, and any of its subcontractors, shall, at its or their sole expense, obtain and maintain during the life of the resulting contract the insurance policies and bonds required. Any required insurance policies and bonds shall be effective prior to the beginning of any work or other performance by successful bidder, or any of its subcontractors, under any resultant contract. The policies and coverages required are those as may be referred to in the sample contract and/or the general conditions or other documents of this Invitation to Bid.
- l. Each bidder is to notify the Purchasing Division if any of bidder's owners, officers, employees, or agents, or their immediate family members, is currently, or has been in the past year, an employee of the City of Roanoke or has any responsibility or authority with the City that might affect the procurement transaction or any claim resulting therefrom. If so, please provide the Purchasing Division with the complete name and address of each such person and their connection to the City of Roanoke. Each bidder is advised that the Ethics in Public Contracting and Conflict of Interests Act of the Code of Virginia, as set forth in this Invitation to Bid, apply to this Invitation to Bid. Such information should be provided in writing before the bid opening date or may also be provided with the bid response.

## **SECTION 19. SUPPLEMENTAL INSTRUCTIONS AND/OR ADDITIONAL INFORMATION FOR BIDDERS**

**1. Regardless of the amount of the Contract awarded for this Work, Contractor shall provide a Performance Security and a Labor and Material Payment Security as referred to in Section 14.5 of the Instructions to Bidders.**

**CITY OF ROANOKE, VIRGINIA**

**Plan for Participation in Procurement  
Transactions of Small Businesses and  
Businesses Owned by Women and Minorities**

**1. POLICY STATEMENT**

It is the policy of the City of Roanoke to encourage participation by small businesses and minority-owned and women-owned business enterprises in all aspects of City contracting opportunities. In order to demonstrate its commitment to this policy, the procedures set forth in this document shall be followed whenever possible.

**2. DEFINITIONS**

A minority business enterprise ("MBE" or "MBES" in the plural form) is a business that is both owned and controlled by minorities. This means that minorities must own fifty-one percent of the business, and that they must control the management and daily operations of the business.

A women business enterprise ("WBE" or "WBES" in the plural form) is a business that is both owned and controlled by women. This means that women must own fifty-one percent of the business, and that they must control the management and daily operations of the business.

A small business ("SB" or "SBS" in the plural form) is a United States business that does not exceed fifty employees, is independently owned and operated, and is not dominant in its field or operation or an affiliate or subsidiary of a business dominant in its field of operation.

A minority is an individual who is a citizen or lawful resident of the United States and is Black, Hispanic, Asian American, American Indian, Alaskan Native or a member of another group who the Small Business Administration has determined is economically and socially disadvantaged under Section 8 (a) of the Small Business Act.

**3. EMPLOYMENT DISCRIMINATION PROHIBITED**

Every contract of over ten thousand dollars (\$10,000.00) to which the City is a party shall contain the provisions in subparagraphs (a) and (b) herein:

(a) During the performance of this contract, the contractor agrees as follows:

1. The contractor 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 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.
  2. 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.
  3. Notices, advertisement 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.
- (b) The contractor will include the provisions of the foregoing subparagraphs (a)(1), (2) and (3) in every subcontract or purchase order of over ten thousand dollars (\$10,000), with regard to the contract with the City, so that the provisions will be binding upon each subcontractor or vendor.

#### 4. LIST OF MBES, WBEs AND SBs

The City's Purchasing Division will establish and maintain a list of minority-owned and women-owned business enterprises. As appropriate, this list may include vendors at regional, state and national levels. A separate list of local MBES and WBEs shall be established and, when established, be made available or the master list shall be searchable for local vendors. The local area shall consist of the Roanoke Valley, which shall include those areas included in the metropolitan statistical area as defined by the United States Office of Management and Budget for Census Bureau data purposes. The regional area shall include all cities, counties and towns, within the Commonwealth of Virginia, any part of which fall within a 50 mile radius of the City of Roanoke.

The City's Purchasing Division will establish and maintain a list of small businesses at the regional level.

The Purchasing Division shall serve as the primary contact for businesses to request to be added to the MBE/WBE list or the small business list and for businesses, organizations or individuals desiring access to the lists.

In maintaining these lists, the City's Purchasing Division will cooperate with the Virginia Department of Minority Business Enterprise, the United States Small Business Administration and other public or private agencies.

The Purchasing Division will maintain a list of agencies and organizations that provide assistance and/or education to MBES, WBEs and SBS and inform such

Project: Kirk Avenue Compactor

businesses of the resources available to them. The list will contain the types of services offered and contact information. The Purchasing Division will assist other organizations in publicizing training opportunities for MBES, WBES and SBS.

## 5. ALL CONTRACTS

In procuring goods and services for the City, all City employees shall follow the guidelines and mandates contained in the Purchasing Division's Procurement Manual with regard to solicitation of MBES and WBES.

When bids or proposals are solicited directly from potential contractors, solicitations shall include, when possible, appropriate businesses from the lists maintained by and/or available to the Purchasing Division, including but not limited to the list from the Virginia Department of Minority Business Enterprise.

All solicitation, addenda and award actions over \$30,000 shall be posted on the City of Roanoke's web site <http://www.roanokeva.gov>

Invitation to Bid solicitation notices over \$50,000 and Requests for Proposals estimated to be over \$30,000 shall be advertised in both The Roanoke Times and The Roanoke Tribune whenever possible. Such Invitation to Bid solicitation notices and Requests for Proposals shall also be advertised on RVTv.

## 6. CONSTRUCTION CONTRACTS

This paragraph shall apply to all construction contracts whenever advertising of the Invitation to Bid is required.

The bid documents will contain a list of, or a reference to a list of, MBES, WBES and SBS. The list will be provided to assist and encourage the general contractors' use of the listed businesses as subcontractors.

The City will provide a copy of the plans and specifications for all construction projects to the Southwest Virginia Community Development Fund, F. W. Dodge of Roanoke, and Valley Construction News plan room(s) so that MBES, WBES and SBS can review the documents. The documents will also be available for review, at no charge, at the Office of the City Engineer.

The City Engineer, the Purchasing Manager and the Project Engineer will require that general contractors make a "best or good faith effort" to seek the participation of and utilize MBES, WBES and SBS as suppliers and subcontractors. General contractors will be required to show that they have made efforts to recruit MBES, WBES and SBS by incorporating into the bid or proposal form:

- a. Statements indicating efforts to negotiate with MBES, WBES and SBS and the results of such efforts. Bidders will be required to list those MBES, WBES and SBS from whom quotations for labor, materials, and/or

services have been solicited, and state which MBES, WBES and SBS, if any, the contractor will use on the project if awarded the bid; and

- b. A certification that the contractor has made a good faith effort to utilize MBES, WBES and SBS whenever possible.

A bid response that does not contain such statements and certification will be deemed non-responsive and will be rejected.

If the contractor listed MBES, WBES and/or SBS that it would use on the project if awarded the bid and the contractor is awarded the bid, the contractor will be required to use his or her best efforts to utilize the MBES, WBES and SBS identified by the contractor unless the contractor can demonstrate a nondiscriminatory, sound, business reason for not using the MBE, WBE or SB. The City Engineer, in his or her sole discretion, will determine whether or not the contractor has demonstrated a nondiscriminatory, sound, business reason.

The contractor, in every monthly request for payment, shall submit a status report of MBE, WBE, and SB participation in the project to date. Payment shall not be issued to the contractor until such status report is submitted.

The Purchasing Manager will closely monitor the requirements of this section.

#### 7. RACIAL DISCRIMINATION IN CONSTRUCTION CONTRACT BONDING AND INSURANCE

In construction contracting, if any person is found by the City Manager or a designee to have engaged in discrimination on the basis of race or gender in the granting of bonds or insurance to persons who contract with or desire to contract with the City, or to persons who receive subcontracts or desire to receive a subcontract in connection with a City contract, the person shall be deemed unqualified to submit a bond or insurance for any City construction contract unless and until the City Manager or designee determines that the discrimination has been purged and that adequate assurances have been made that it will not recur. Any determination by the City Manager of a violation of this section shall be reported in writing to City Council.

#### 8. FEDERAL, STATE OR OTHER GRANT REQUIREMENTS

In addition to the provisions of this Plan, when the City is using funds subject to federal, state or other grant requirements with regard to MBES, WBES and/or SBS, the City's Department managing the specific solicitation will take all necessary affirmative steps to assure that the requirements of the grant or program are met.

#### 9. ECONOMIC DEVELOPMENT

The Department of Economic Development will assist the Purchasing Division by providing MBES, WBES and SBS with information regarding the resources available

Project: Kirk Avenue Compactor

to them and by referring such businesses to the Purchasing Division for additional information.

The Department of Economic Development will also include MBES, WBES and SBS in any programs it has to introduce and familiarize businesses with opportunities in the City.

#### 10. DEBARMENT

Any offeror or bidder, or any principal thereof or person associated therewith, found to have engaged in substantial and intentional misrepresentation concerning either good faith MBE, WBE and/or SB participation efforts or its status as a minority owned, women owned or small business shall be debarred from any City contracting for a period of two (2) years. This debarment shall also extend to any successor firm substantially controlled or managed, whether directly or indirectly, by any debarred individual. This determination shall be made by the City Manager or a designee; and any debarment shall be reported in writing to Council.

#### 11. REPORTING

The Purchasing Manager shall, at the conclusion of each fiscal year, report to the City Manager for report to City Council on the Purchasing Division's compliance with this Plan and efforts made pursuant to the Plan. The report shall also include the level of participation by MBES, WBES and SBS in contracts that have been awarded by the City through formal solicitations during that fiscal year.

**REMAINDER OF PAGE INTENTIONALLY LEFT BLANK**



**CITY OF ROANOKE, VIRGINIA**

**BID FORM**

DATE: \_\_\_\_\_

SUBMITTED BY: \_\_\_\_\_  
(Exact Legal Name of Bidder)

**NOTE: ALL PAGES OF THE BID FORM ARE TO BE INCLUDED IN THE COMPLETED BID. ALSO, BIDS CONTAINING ANY CONDITIONS, OMISSIONS, UNEXPLAINED ERASURES, ALTERATIONS OR ITEMS NOT CALLED FOR IN THE BID, OR IRREGULARITIES OF ANY KIND, MAY BE REJECTED BY THE CITY AS BEING NON-RESPONSIVE. NO CHANGES ARE TO BE MADE TO THE BID FORM. ANY CHANGES TO A BID AMOUNT MUST BE INITIALED BY THE AUTHORIZED PERSON SIGNING THE BID FORM.**

The undersigned hereby proposes and agrees, if this bid is accepted by the City of Roanoke, to enter into a Contract with the City of Roanoke, Virginia, (hereafter - City or Owner) to furnish all equipment, materials, labor, and services necessary to construct a trash compactor enclosure, conduits, concrete slab, and associated work on the Kirk Alley side of 121 Campbell Ave., SE, Bid No.13-08-02, in accordance with the Contract Documents as prepared by or for the Office of the City Engineer, Roanoke, Virginia.

The quantities of work to be done at the unit prices indicated are approximate only and are intended principally to serve as a guide in evaluating bids. Subject to the constraints of the General Conditions and other Contract Documents, the quantities of work to be done and material furnished at the unit prices bid may be increased or decreased as considered necessary by the City Engineer to fully complete the Work as planned.

### BASE BID PRICE SCHEDULE

ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
Construction Stakeout Survey	1	LS		
Mobilization	1	LS		
Maintenance of Traffic and Work Area Protection	1	LS		
Demolition	1	LS		
Utility Relocations / Adjustments / Coordination	1	LS		
Rock Excavation	10	CY		
Geogrid Subgrade Stabilization	146	SY		
Light/Gate Post Foundation	1	LS		
Gate Post Foundation	1	LS		
Light Fixture and Wiring	1	LS		
Electrical Trench	65	LF		
Electrical Service Extension Duct	224	LF		
Reinforced Concrete Slab	1313	SF		
Fence Enclosure	1	LS		
Flange-mounted Bollards	3	EA		
Handicap Ramp	1	EA		
Unistrut Post and Frame System	1	LS		
		<b>TOTAL</b>		<b>\$</b>

The undersigned hereby acknowledges the receipt of the following addenda to the Contract Documents:

Addendum Number \_\_\_\_\_  
 Addendum Number \_\_\_\_\_  
 Addendum Number \_\_\_\_\_

Dated \_\_\_\_\_  
 Dated \_\_\_\_\_  
 Dated \_\_\_\_\_

The undersigned hereby agrees, if this bid is accepted by the City, to commence work with an adequate force and equipment on the date stipulated in the written "Notice to Proceed" from the Office of the City Engineer and to substantially complete the work within Sixty (60) consecutive

calendar days from the date stipulated in the written "Notice to Proceed", and to achieve Final Acceptance within thirty (30) consecutive calendar days thereafter, and to pay as liquidated damages the sum of Five Hundred Dollars (\$500) per day as step one liquidated damages and the sum of Two Hundred, Fifty Dollars (\$250) per day as step two liquidated damages to the City of Roanoke for each consecutive calendar day in excess of the time indicated to fully and satisfactorily complete the Work. (See Section 21 of the General Conditions.)

By submitting a bid, the undersigned agrees it will not withdraw its bid during the time period provided for in the Invitation to Bid, except as provided for therein.

The undersigned agrees that if this bid is accepted by the City, the failure or refusal of the undersigned to execute the Contract with the City and furnish to the City the required bonds and certificates of insurance within ten (10) consecutive calendar days from receipt of the Contract Documents may result in a payment of the Bid Security to the City as liquidated damages.

The attention of each bidder is directed to Code of Virginia, Sections 54.1-1100, et. seq., which requires certain licenses for contractors, tradesmen, and others. Each bidder is required to determine which license, if any, it is required to have under such sections. Complete the following:

Bidder \_\_\_\_\_ does have \_\_\_\_\_ does not have a Virginia Contractor's License. (Check appropriate blank.)

If bidder has a Virginia Contractor's License, circle the class bidder has and list the number.

Licensed "Class A", "Class B", or "Class C" Virginia Contractor Number \_\_\_\_\_

Identify Specialty \_\_\_\_\_

If bidder has another type of Virginia License, please list the type and number:

Type of license: \_\_\_\_\_ Number: \_\_\_\_\_

Bidder is a \_\_\_ resident or \_\_\_ nonresident of Virginia. (Check appropriate blank. See Code of Virginia, Sections 54.1-1100, et. seq.)

The attention of each Bidder/Offeror is directed to Virginia Code Section 2.2-4311.2 (effective July 1, 2010) which requires a bidder or offeror organized or authorized to transact business in the Commonwealth of Virginia pursuant to Title 13.1 or Title 50 of the Code of Virginia, as amended, or as otherwise required by law, shall include in its bid or proposal the Identification Number issued to such bidder or offeror by the Virginia State Corporation Commission (SCC). Furthermore, any bidder or offeror that is not required to be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. Please complete the following by checking the appropriate line that applies and providing the requested information:

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

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

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

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Please attach additional sheets of paper if you need more space to explain why such bidder/offeror is not required to be authorized to transact business in Virginia.

The undersigned states and certifies that it has made a best or good faith effort to seek the participation of and utilize MBES, WBES, SBS and VBS as suppliers and subcontractors whenever possible for this Project. The Minority & Women Owned Enterprise, Small Business and Veteran-Owned Business Participation Form sets forth the efforts made by the undersigned and which MBES, WBES, SBS and VBS, if any, the undersigned will use on this Project if awarded the bid. (Note: Such completed participation form should be submitted with the undersigned's completed Bid Form.)

State the complete legal name of the bidder, exactly as it is recorded with the State Corporation Commission, if recorded there.

LEGAL NAME \_\_\_\_\_

BY \_\_\_\_\_ TITLE \_\_\_\_\_  
(TYPED NAME: \_\_\_\_\_ )

SIGNED NAME \_\_\_\_\_

DELIVERY ADDRESS \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

TELEPHONE \_\_\_\_\_ FAX \_\_\_\_\_

CONTACT EMAIL ADDRESS \_\_\_\_\_

ESCROW ACCOUNT REQUESTED (if applicable): YES \_\_\_\_\_ NO \_\_\_\_\_

DELIVERY OF BIDS: See Section 7.1 of the Instructions to Bidders.

Sharon T. Lewis, Manager  
Purchasing Division  
215 Church Avenue, S.W.  
Room 202, Noel C. Taylor Municipal Building  
Roanoke, Virginia 24011

Place in lower left-hand corner of envelope the project title as indicated at the top of the Invitation to Bid. Place in the upper left-hand corner of the envelope the bidder's name, mailing address, and Bid No.

KIRK AVENUE COMPACTOR  
ROANOKE, VIRGINIA  
BID NO. 13-08-02

**CITY OF ROANOKE, VIRGINIA**

**MINORITY & WOMEN-OWNED BUSINESS ENTERPRISE,  
SMALL BUSINESS & VETERAN-OWNED BUSINESS PARTICIPATION**

**\* SUBMIT WITH BID \***

The bidder (proposer) shall complete the following information:

Is bidder (proposer) a qualified minority or women-owned business enterprise, small business or veteran-owned business as defined in the City's policy (MBE/WBE/SB/VB)? Yes:\_\_\_\_ No:\_\_\_\_. Regardless of response to this question bidder shall complete the following:

Will bidder be using subcontractors? Yes:\_\_\_\_ No:\_\_\_\_

In conjunction with the City of Roanoke's policy to utilize minority and women-owned business enterprises, small businesses and veteran-owned businesses wherever possible, the bidder (proposer) has solicited quotations for labor, material, and/or services from the following MBE/WBE/SB/VB: (Attach additional sheet(s) if necessary.)

(Reference to Firm means a corporation, individual or other entity.)

A.	<u>Name of Firm</u>	<u>Person(s) Contacted</u>	<u>Type of Labor, Service or Material Quoted</u>	<u>Date</u>
	_____	_____	_____	_____
	_____	_____	_____	_____

B. Of those listed above, we intend to utilize the following MBE/WBE/SB/VB in completion of the work required by this contract: (Attach additional sheet(s) if necessary.)

<u>Name of Firm</u>	<u>Type of Labor, Service or Material Quoted</u>	<u>Amount of Contract Subcontract</u>
_____	_____	_____
_____	_____	_____

The bidder will utilize the indicated MBE/WBE/SB/VB firms in this project. If the bidder (proposer) determines not to use the indicated MBE/WBE/SB/VB, bidder must notify City and provide a valid non-discriminatory business reason for not employing the MBE/WBE/SB/VB.

C. If the MBES/WBES/SBS/VBS indicated in paragraph "A" will not be utilized, please state the reason for not using each firm.

<u>Name of Firm</u>	<u>Results of Contact</u>
_____	_____
_____	_____

D. If unable to contact MBES, WBES, SBS or VBS please indicate efforts made:

\_\_\_\_\_  
\_\_\_\_\_

The undersigned has made a best or good faith effort to utilize MBES/WBES/SBS/VBS whenever possible.

LEGAL NAME OF BIDDER: \_\_\_\_\_

BY: \_\_\_\_\_

TYPED NAME AND TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**CITY OF ROANOKE, VIRGINIA**

**EMPLOYMENT PROJECTION FORM**

(Please Print or Type)

**\* SUBMIT WITH SIGNED CONTRACT \***

EMPLOYER NAME \_\_\_\_\_ PROJECT \_\_\_\_\_

CONTACT PERSON \_\_\_\_\_ PHONE NUMBER \_\_\_\_\_

**EMPLOYMENT PROJECTIONS FOR PROJECT**

Completed form(s) must be submitted to City for projects lasting thirty (30) calendar days or longer.

**INSTRUCTIONS FOR COMPLETING FORM:** (Refer to Section 14.4 of Instructions to Bidders.) Please complete for each separate job title of all covered positions to be hired during the project. Covered positions include entry level jobs that are not managerial, highly technical, or professional. Completion of form does not create an obligation on the part of the bidder to hire any referred applicant.

Job Title					
# Openings					
Rate of Pay (Specify Hr./ Day/Wk./Mo.)					
# Hrs. Work per Week					
Working Hours					
Working Days					
Projected Start Date					

**SPECIAL REQUIREMENTS (If Any)**

License/Cert.					
VA Drivers License					
Tools (List)					
Transportation					
Physical Requirement					
Educational Requirement					
Other					

Project: Kirk Avenue Compactor

Employment Projection Form  
Rev. 3/31/2011

**CITY OF ROANOKE, VIRGINIA**

**BID BOND**

KNOW ALL MEN BY THESE PRESENTS, THAT WE, THE UNDERSIGNED, \_\_\_\_\_,  
\_\_\_\_\_, as Principal, and \_\_\_\_\_,  
\_\_\_\_\_, as Surety, are hereby held and firmly  
bound unto \_\_\_\_\_, as City or Owner, in the penal sum of \_\_\_\_\_  
\_\_\_\_\_ (\$\_\_\_\_\_) for the payment of which, well and truly to be  
made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators,  
successors and assigns. Signed, sealed, and delivered this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

The condition of the above obligation is such that whereas the Principal has submitted to  
the \_\_\_\_\_ a certain bid, attached hereto and hereby made a part  
hereof, to enter a contract in writing for the \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

NOW, THEREFORE, if the bid shall be rejected, or if the bid shall be accepted and the  
Principal shall execute and deliver to the City a Contract in the Form of Contract contained in  
the proposed Contract Documents, properly completed in accordance with the bid, and shall  
furnish bond for his faithful performance of the Contract and for the payment of all persons  
performing labor or furnishing materials in connection herewith within the specified time period,  
and shall in all other respects perform the agreement created by the acceptance of the bid, then  
this obligation shall be void, otherwise the same shall remain in force and effect; it being  
expressly understood and agreed that the liability of the Surety for any and all claims hereunder  
shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of the  
Surety and its bond shall be in no way impaired or affected by any extension of the time within  
which the City may accept such bid; and the Surety does hereby waive notice of any such  
extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunder set their hands  
and seals, and such of them as are corporations have caused their corporate seals to be hereto  
affixed and these presents to be signed by their proper officers, the day and year first set forth  
above.

Attest: \_\_\_\_\_ (SEAL)  
Principal

By \_\_\_\_\_  
Title

Witness to signature of  
Attorney-in-Fact: \_\_\_\_\_ (SEAL)  
Surety

\_\_\_\_\_ By \_\_\_\_\_  
Witness Attorney-in-Fact

(Attorneys-in-fact affix seal and attach current original or certified copy of power of attorney.)

Project: Kirk Avenue Compactor

Bid Bond  
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**CITY OF ROANOKE, VIRGINIA**

**ESCROW AGREEMENT**

**(ONLY IF APPLICABLE)**

THIS AGREEMENT ("Agreement"), made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by, between and among the City of Roanoke, Virginia ("City" or "Owner"), \_\_\_\_\_

\_\_\_\_\_, ("Contractor"),

\_\_\_\_\_  
(Name of Escrow Agent)

\_\_\_\_\_  
(Address of Escrow Agent)

a trust company, bank, or savings and loan institution (hereinafter referred to collectively as "Escrow Agent") with its principal office located in the Commonwealth of Virginia ("Commonwealth") and \_\_\_\_\_

\_\_\_\_\_  
("Surety") provides:

I.

The City and the Contractor have entered into a contract dated \_\_\_\_\_ with respect to City of Roanoke Bid No. \_\_\_\_\_, for \_\_\_\_\_

\_\_\_\_\_, ("the contract"). This Agreement is pursuant to, but in no way amends or modifies, the contract. Payments made hereunder or the release of funds from escrow shall not be deemed approval or acceptance of performance by the Contractor. Payments should be made to \_\_\_\_\_

\_\_\_\_\_ and mailed to \_\_\_\_\_

\_\_\_\_\_  
(Name and Address of Escrow Agent).

II.

In order to assure full and satisfactory performance by the Contractor of its obligations under the contract, the City is required thereby to retain certain amounts otherwise due the Contractor. The Contractor has, with the approval of the City, elected to have these retained amounts held in escrow by the Escrow Agent. This agreement sets forth the terms of the escrow. The Escrow Agent shall not be deemed a party to, bound by, or required to inquire into the terms of, the contract or any other instrument or agreement between the City and the Contractor.



### III.

The City shall from time to time pursuant to its contract pay to the Escrow Agent amounts retained by it under the contract. Except as to amounts actually withdrawn from escrow by the City, the Contractor shall look solely to the Escrow Agent for the payment of funds retained under the contract and paid by the City to the Escrow Agent.

The risk of loss by diminution of the principal of any funds invested under the terms of this contract shall be solely upon the Contractor.

Funds and securities held by the Escrow Agent pursuant to this Escrow Agreement shall not be subject to levy, garnishment, attachment, lien, or other process whatsoever. Contractor agrees not to assign, pledge, discount, sell or otherwise transfer or dispose of his interest in the escrow account or any part thereof, except to the Surety.

### IV.

Upon receipt of checks drawn by the City and made payable to it as escrow agent, the Escrow Agent shall promptly notify the Contractor, negotiate the same and deposit or invest and reinvest the proceeds in approved securities in accordance with the written instructions of the Contractor. In no event shall the Escrow Agent invest the escrowed funds in any security not approved, as set forth in Section V. below.

### V.

The following securities, and none other, are approved securities for all purposes of this Agreement:

- (1) United States Treasury Bonds, United States Treasury Notes, United States Treasury Certificates of Indebtedness or United States Treasury Bills,
- (2) Bonds, notes and other evidences of indebtedness unconditionally guaranteed as to the payment of principal and interest by the United States,
- (3) Bonds or notes of the Commonwealth of Virginia,
- (4) Bonds of the City of Roanoke, Virginia, if such bonds carried, at the time of purchase by the Escrow Agent or deposit by the Contractor, a Standard and Poor's or Moody's Investor Service rating of at least "A", and
- (5) Certificates of deposit issued by commercial Banks located within the Commonwealth, including, but not limited to, those insured by the Escrow Agent and its affiliates.

- (6) Any bonds, notes, or other evidences of indebtedness listed in Sections (1) through (3) may be purchased pursuant to a repurchase agreement with a bank, within or without the Commonwealth of Virginia having a combined capital, surplus and undivided profit of not less than \$25,000,000, provided the obligation of the Bank to repurchase is within the time limitations established for investments as set forth herein. The repurchase agreement shall be considered a purchase of such securities even if title, and/or possession of such securities is not transferred to the Escrow Agent, so long as the repurchase obligation of the Bank is collateralized by the securities themselves, and the securities have on the date of the repurchase agreement a fair market value equal to at least 100% of the amount of the repurchase obligation of the Bank, and the securities are held by a third party, and segregated from other securities owned by the Bank.

No security is approved hereunder which matures more than five years after the date of its purchase by the Escrow Agent or deposit by the Contractor.

## VI.

The Contractor may from time to time withdraw the whole or any portion of the escrowed funds by depositing with the Escrow Agent approved securities as set forth in Section V. above in an amount equal to, or in excess of, the amount so withdrawn. Any securities so deposited or withdrawn shall be valued at such time of deposit or withdrawal at the lower of par or market value, the latter as determined by the Escrow Agent. Any securities so deposited shall thereupon become a part of the escrowed fund.

Upon receipt of a direction signed by the City Manager or Assistant City Manager, the Escrow Agent shall pay the principal of the fund, or any specified amount thereof, to the City or the Contractor as the City may direct. If payment is to be made to the City, it shall be made in cash. However, if payment has been authorized to be made to the Contractor, the Contractor may specify to the Escrow Agent if payment is to be made in cash or in kind. Such payment and delivery shall be made as soon as is practicable after receipt of the direction.

## VII.

For its services hereunder the Escrow Agent shall be entitled to a reasonable fee in accordance with its published schedule of fees or as may be agreed upon by the Escrow Agent and the Contractor. Such fee and any other costs of administration of this Agreement shall be paid from the income earned upon the escrowed fund and, if such income is not sufficient to pay the same, by the Contractor.

## VIII.

The net income earned and received upon the principal of the escrowed fund shall be paid over to the Contractor in quarterly or more frequent installments. Until so paid or applied to pay the Escrow Agent's fee or any other costs of administration such income shall be deemed a part of the principal of the fund.

## IX.

The Surety undertakes no obligation hereby but joins in this Agreement for the sole purpose of acknowledging that its obligations as surety for the Contractor's performance of the contract are not affected hereby.

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WITNESS the following signatures, all as of the day and year first above written.

Attest: (if corporation)  
Witness: (if individual)

\_\_\_\_\_  
Typed Name of Contractor

\_\_\_\_\_  
President/Vice-President;  
Partner or Owner (Seal)

Attest:

\_\_\_\_\_  
Typed Name of Escrow Agent

\_\_\_\_\_  
Bank Officer

\_\_\_\_\_  
Vice President

Witness:

\_\_\_\_\_  
Typed Name of Surety Company

\_\_\_\_\_  
By: \_\_\_\_\_  
Attorney-In-Fact

Attest:

City of Roanoke, Virginia

\_\_\_\_\_  
City Clerk/Deputy City Clerk

\_\_\_\_\_  
City Manager

Approved as to form:

\_\_\_\_\_  
City Attorney/Assistant City Attorney

Approved as to execution:

\_\_\_\_\_  
City Attorney/Assistant City Attorney

Project: Kirk Avenue Compactor

Escrow Agreement  
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**CITY OF ROANOKE, VIRGINIA**

**CONTRACT**

THIS CONTRACT, is dated this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between \_\_\_\_\_, hereinafter referred to as the "Contractor", and the City of Roanoke, Virginia, a municipal corporation, chartered under the laws of the Commonwealth of Virginia, hereinafter referred to as the "City" or "Owner";

**WITNESSETH:**

THAT, WHEREAS, the Contractor has been awarded a contract by the City for \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_,  
all in a proper and timely manner and in accordance with the Contract Documents, hereinafter and in the Contract Documents referred to as the "Work"; [and]

[WHEREAS, the Contractor has entered into a performance and a payment bond, with surety, each in the penalty of One Hundred Percent (100%) of the Contract sum, payable to the City of Roanoke as required by the Contract Documents;]

NOW, THEREFORE, THIS AGREEMENT WITNESSETH:

**ARTICLE 1.** That, for and in consideration of the sums of money hereinafter specified to be paid by the City to the Contractor for the Work provided in the Contract Documents to be performed by the Contractor, the Contractor hereby covenants and agrees with the City to fully construct, perform, and complete the Work in a good and workmanlike manner in accordance with the Contract Documents to produce a fully functional and properly operating project within the time stipulated, time being made of the essence of this Contract; it being agreed by the parties hereto that the Contract Documents consist of this Contract and those items set forth in the definition of Contract Documents in Section 1 of the General Conditions and includes the following, all of which are and constitute a part of this Contract as if attached hereto or set out in full herein, viz:

Invitation to Bid contained in the Project Manual dated February 7, 2013

Instructions to Bidders dated March 31, 2011

General Conditions dated July 1, 2012

Supplemental General Conditions, if any, as contained in the Project Manual dated February 7, 2013

Addendum No. \_\_\_\_\_ dated \_\_\_\_\_

Plans and Drawings as contained or listed in the Project Manual dated February 7, 2013

Specifications as contained in the Project Manual dated February 7, 2013

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Special Conditions or similar documents, if any, as may be contained in the Project Manual dated February 7, 2013

Bid Form completed by Contractor for this project

Ordinance No. \_\_\_\_\_ adopted \_\_\_\_\_

Contractor's Performance Security

Contractor's Labor and Material Payment Security

Escrow Agreement, if any

**ARTICLE 2. CONTRACT SUM:** The City covenants and agrees to pay the Contractor for the Contractor's complete and satisfactory performance of the Work, in the manner and at the times set out in the Contract Documents, in current funds, the Contract Sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), as provided for in the Contract Documents and as the Contract Sum may be increased or decreased by additions and/or reductions in the Work or as the Contract Sum may be decreased by the City's assessment of liquidated damages against Contractor, or by setoff or as provided for in the Contract Documents or as allowed by law.

**ARTICLE 3. TIME OF COMMENCEMENT AND COMPLETION:** The Contractor shall commence the Work to be performed under this Contract on such date as is established and fixed for such commencement by written notice to proceed given by the City Engineer to the Contractor, and the Contractor covenants and agrees to properly construct, perform, and substantially complete the Work within \_\_\_\_\_ (\_\_\_\_\_) consecutive calendar days after the date of commencement fixed and established by such notice, and to achieve Final Acceptance within thirty (30) consecutive calendar days thereafter. The Contractor further agrees that the Work shall be started promptly upon receipt of such notice and shall be prosecuted regularly, diligently, and uninterruptedly at a rate of progress that will ensure full completion thereof in the shortest length of time consistent with the Contract Documents.

**ARTICLE 4. LIQUIDATED DAMAGES:** City and Contractor recognize that time is of the essence in the completion of the Work and that City will suffer loss or damages if the Work is not completed within the period of time stipulated above, plus any extensions thereof allowed in accordance with the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving the actual loss or damages suffered by City if the Work is not completed on time. Accordingly, if such Work is not fully and satisfactorily completed within the period of time set forth in Article 3, the Contractor agrees it shall owe to and pay to City as liquidated damages for loss of City's full use or occupancy of the Work, but not as a penalty, the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) as step one liquidated damages and the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) as step two liquidated damages for each consecutive calendar day during which full and satisfactory completion of the Work is delayed or exceeds the number of days provided for in this Contract to complete the Work. Steps one and two being defined in Section 21 of the General Conditions. Contractor further agrees that any liquidated damages City assesses against Contractor may also be withheld by City from any retainage or other sums City may otherwise owe to Contractor. Contractor hereby waives any defense as to the validity of any liquidated damages stated herein on the grounds such liquidated damages could be void as penalties or are not reasonably

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related to actual damages. All such liquidated damages are in addition to any other damages the City may be entitled to recover from Contractor.

**ARTICLE 5. PAYMENT FOR WORK:** Construction estimates for payment, including the final payment request, submitted by the Contractor shall be in accordance with the provisions of Sections 20, 21, and 22 of the General Conditions and such other provisions of the Contract Documents that may be applicable. Final payment will not be made until the Work has been fully and satisfactorily completed, the Contract duly performed, and Certificate of Final Acceptance has been issued by the City Engineer, all as provided for in the Contract Documents.

**ARTICLE 6. NONWAIVER:** Contractor agrees that the City's waiver or failure to enforce or require performance of any term or condition of this Contract or the City's waiver of any particular breach of this Contract by the Contractor extends to that instance only. Such waiver or failure is not and shall not be a waiver of any of the terms or conditions of this Contract or a waiver of any other breaches of the Contract by the Contractor and does not bar the City from requiring the Contractor to comply with all the terms and conditions of the Contract and does not bar the City from asserting any and all rights and/or remedies it has or might have against the Contractor under this Contract or by law.

**ARTICLE 7. FORUM SELECTION AND CHOICE OF LAW:** By virtue of entering into this Contract, the Contractor submits itself to a court of competent jurisdiction in the City of Roanoke, Virginia, and further agrees that this Contract is controlled by the laws of the Commonwealth of Virginia and that all claims, disputes, and other matters shall only be decided by such court according to the laws of the Commonwealth of Virginia.

**ARTICLE 8. SEVERABILITY:** If any provision of this Contract, or the application of any provision hereof to a particular entity or circumstance, shall be held to be invalid or unenforceable by a court of competent jurisdiction, the remaining provisions of the Contract shall not be affected and all other terms and conditions of the Contract shall be valid and enforceable to the fullest extent permitted by law.

**ARTICLE 9. NONDISCRIMINATION:**

- A. During the performance of this Contract, the Contractor agrees as follows:
1. The Contractor will not discriminate against any Subcontractor, 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 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.
  2. 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 employment opportunity employer.

3. 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.
- B. The Contractor will include the provisions of the foregoing Subsections A (1), (2), and (3) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

**ARTICLE 10.** Pursuant to the Code of Virginia, Section 2.2 - 4343.1, be advised that the City of Roanoke does not discriminate against faith-based organizations.

**ARTICLE 11. ENTIRE CONTRACT:** This Contract is an entire and integrated contract and is not severable, except as set forth in Article 8, and may be modified only by written agreement properly executed by the parties.

**ARTICLE 12. COMPLIANCE WITH FEDERAL IMMIGRATION LAW:** Contractor agrees that Contractor does not, and shall not during the performance of this Contract, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

**ARTICLE 13. COMPLIANCE WITH STATE LAW, FOREIGN AND DOMESTIC BUSINESSES AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA:** Contractor shall comply with the provisions of Virginia Code Section 2.2-4311.2, as amended, which provides that a contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 or as otherwise required by law. Contractor shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the Contract. The City may void the Contract if the Contractor fails to remain in compliance with the provisions of this section.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the parties hereto have signed this Contract by their authorized representatives.

Attest/Witness:

\_\_\_\_\_  
Typed Name of Contractor

\_\_\_\_\_

By \_\_\_\_\_  
President/Vice-President; Partner or Owner

\_\_\_\_\_  
Typed or Printed Name and Title

\_\_\_\_\_  
Typed or Printed Name and Title

(Contractor's Corporate Seal)

Attest/Witness:

CITY OF ROANOKE, VIRGINIA

\_\_\_\_\_

By \_\_\_\_\_

\_\_\_\_\_  
Typed or Printed Name and Title

\_\_\_\_\_  
Typed or Printed Name and Title

Appropriation and Funds Required  
for this Contract Certified

\_\_\_\_\_  
Director/Deputy Director of Finance

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

Account #: \_\_\_\_\_

Approved as to form:

\_\_\_\_\_  
City Attorney/Assistant City Attorney

Approved as to execution:

\_\_\_\_\_  
City Attorney/Assistant City Attorney

Project: Kirk Avenue Compactor

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**CITY OF ROANOKE, VIRGINIA**  
**CONTRACTOR'S PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS:

that \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Insert full name or legal title and address of Contractor)

as Principal, (hereinafter referred to as "Contractor"),

and \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Insert full name or legal title and address of Surety)

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

as Surety (hereinafter referred to as "Surety"), are held and firmly bound unto the City of Roanoke, Virginia, a municipal corporation, 215 Church Avenue, S.W., Noel C. Taylor Municipal Building, Room 350, Roanoke, Virginia 24011, as Obligee (hereinafter referred to as "City" or "Owner"), in the amount of \_\_\_\_\_

\_\_\_\_\_  
Dollars (\$ \_\_\_\_\_), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents to the terms of this bond.

WHEREAS, Contractor has entered into a Contract with the City dated \_\_\_\_\_, 20\_\_\_\_, incorporating certain specifications and drawings prepared by:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Insert full name or legal title and address)

(which Contract, specifications, drawings, and other Contract Documents are hereinafter referred to collectively as the "Contract") for a fully functional and properly operating project, namely \_\_\_\_\_

\_\_\_\_\_  
all in a proper and timely manner and in accordance with the Contract Documents, which Contract is expressly incorporated herein by reference and made a part of this bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Contractor shall promptly and faithfully perform the Contract, in strict conformity with each and every requirement of the Contract, then this obligation shall be null and void; otherwise, this Performance Bond shall remain in full force and effect and is subject to the following conditions:

Project: Kirk Avenue Compactor

Contractor's Performance Bond  
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- a. Any alteration which may be made in the terms of the Contract, including, without limitation, the amount to be paid or the work to be done under it, or the giving by the City of any extension of time for the performance of the Contract or any other forbearance of any nature whatsoever on the part of either the City or the Contractor to the other shall not in any way release the Contractor and the Surety, or either of them, their heirs, executors, administrators, successors, or assigns from their liability hereunder, and notice of such alteration, extension, or forbearance is hereby expressly waived by Surety.
- b. IT IS NOT INTENDED BY ANY OF THE PROVISIONS OF ANY PART OF THIS BOND TO CONFER A BENEFIT UPON ANY OTHER PERSON OR ENTITY NOT A PARTY TO THIS PERFORMANCE BOND OR TO AUTHORIZE ANY PERSON OR ENTITY NOT A PARTY TO THIS BOND TO MAINTAIN A SUIT PURSUANT TO THE TERMS OR PROVISIONS OF THIS BOND OTHER THAN THE CITY OR ITS SUCCESSORS OR ASSIGNS.
- c. The Surety hereby submits itself to a court of competent jurisdiction in Roanoke, Virginia, and agrees that any suit or action hereunder shall be brought only in a Virginia court of competent jurisdiction in the City of Roanoke or in the United States District Court for the Western District of Virginia, Roanoke Division, and not elsewhere.
- d. Any suit under this bond must be instituted within one (1) year after (i) completion of the Contract, including the expiration of all warranties and guarantees, or (ii) discovery of the defect or breach of warranty, if the action be for such, in all other cases.
- e. The provisions of this bond shall be governed by and interpreted to be consistent with the laws of the Commonwealth of Virginia.

SIGNED AND SEALED this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, in the presence of:

WITNESS:

\_\_\_\_\_  
CONTRACTOR

By: \_\_\_\_\_ (Seal)

\_\_\_\_\_  
(Type Name and Title)

WITNESS:

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_ (Seal)

Attorney-in-Fact

\_\_\_\_\_  
(Type Name and Title)

(Attorneys-in-fact affix seal and attach original or certified copy of current power of attorney.)

**CITY OF ROANOKE, VIRGINIA**

**CONTRACTOR'S LABOR AND MATERIAL PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS:

that \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Insert full name or legal title and address of Contractor)

as Principal, (hereinafter referred to as "Contractor"),

and \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Insert full name or legal title and address of Surety)

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

as Surety (hereinafter referred to as "Surety"), are held and firmly bound unto the City of Roanoke, Virginia, a municipal corporation, 215 Church Avenue, S.W., Noel C. Taylor Municipal Building, Room 350, Roanoke, Virginia 24011, as Obligee (hereinafter referred to as "City" or "Owner"), for the use and benefit of Claimants as herein below defined, in the amount of \_\_\_\_\_

Dollars (\$ \_\_\_\_\_), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents to the terms of this bond.

WHEREAS, Contractor has entered into a Contract with the City dated \_\_\_\_\_, 20\_\_\_\_, incorporating certain specifications and drawings prepared by:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Insert full name or legal title and address)

(which Contract, specifications, drawings, and other Contract Documents are hereinafter referred to collectively as the "Contract") for providing a fully functional and properly operating project, namely \_\_\_\_\_

\_\_\_\_\_  
all in a proper and timely manner and in accordance with the Contract Documents, which Contract is expressly incorporated herein by reference and made a part of this bond.

Project: Kirk Avenue Compactor

Contractor's Labor and  
Material Payment Bond  
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NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Contractor shall promptly make payment to all Claimants, as hereinafter defined, for all material furnished or labor supplied or performed in the prosecution of the work provided for in the Contract, then this obligation shall be void; otherwise this Labor and Material Payment Bond shall remain in full force and effect and is subject to the following conditions:

- a. Any alteration which may be made in the terms of the Contract, including, without limitation, the amount to be paid or the work to be done under it, or the giving by the City of any extension of time for the performance of the Contract or any other forbearance of any nature whatsoever on the part of either the City or the Contractor to the other shall not in any way release the Contractor and the Surety, or either of them, their heirs, executors, administrators, successors, or assigns from their liability hereunder, and notice of such alteration, extension, or forbearance is hereby expressly waived by Surety.
- b. A Claimant is defined as one who has and fulfills a contract to supply labor or materials, or both, to the Contractor or to any of the Contractor's subcontractors, in the prosecution of work provided for in the Contract, labor and material being construed to include, without limitation, public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the site, or who may otherwise be allowed by law to file a claim against the Contractor and/or Surety.
- c. The Contractor and Surety hereby jointly and severally agree with City that every Claimant, as defined in paragraph b, **who has a direct contractual relationship with the Contractor and** who has performed labor or furnished material in accordance with the Contract in the prosecution of the work provided for in the Contract and who has not been paid in full therefore before the expiration of ninety (90) days after the day on which such Claimant performed the last such labor or furnished the last of such materials for which Claimant claims payment, or as may otherwise be allowed by law, may bring an action on this payment bond to recover any amount due Claimant for such labor or material, and may prosecute such action to final judgment and have execution on the judgment. The Contractor and Surety expressly agree that City shall not be liable for the payment of any judgment, costs, or expenses resulting from any such suit and that neither Contractor nor Surety shall cause City to be named as a party in any such suit.
- d. The Contractor and Surety hereby jointly and severally agree with City that every Claimant, as defined in paragraph b, who has direct contractual relationship with any subcontractor, but who has no contractual relationship, express or implied, with such Contractor, may bring an action on this bond only if the Claimant has given written notice to the Contractor within **ninety (90)** days from the day on which the Claimant performed the last of the labor or furnished the last of the materials for which payment is claimed, stating with substantial accuracy the amount claimed and the name of the person for whom the work was performed or to whom the material was furnished, or as may otherwise be allowed by law. **Notice to the Contractor shall be given as set forth in Virginia Code §2.2-4341 and Claimants are advised to review such Code Section.** The Contractor and Surety expressly agree that City shall not be liable for the payment of any judgment, costs, or expenses resulting from any such suit and that neither Contractor nor Surety shall cause City to be named as a party in any such suit.

- e. The Surety hereby submits itself to a court of competent jurisdiction in Roanoke, Virginia, and agrees that any suit or action hereunder by any Claimant shall be brought only in a Virginia court of competent jurisdiction in and for the City of Roanoke, or in the United States District Court for the Western District of Virginia, Roanoke Division, and not elsewhere.
- f. Any suit or action hereunder shall be brought within one year after the day on which the person bringing such action last performed labor or last furnished or supplied materials.
- g. The provisions of this bond shall be governed by and interpreted to be consistent with the laws of the Commonwealth of Virginia.

SIGNED AND SEALED this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, in the presence of:

WITNESS:

\_\_\_\_\_  
CONTRACTOR

By: \_\_\_\_\_ (Seal)

\_\_\_\_\_  
(Type Name and Title)

WITNESS:

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_ (Seal)

Attorney-In-Fact

\_\_\_\_\_  
(Type Name and Title)

(Attorneys-in-fact affix seal and attach current original or certified copy of power of attorney.)

**CITY OF ROANOKE, VIRGINIA**

**CONTRACTOR'S CERTIFICATION AS TO LICENSURE OF SUBCONTRACTORS**

**KIRK AVENUE COMPACTOR  
ROANOKE, VIRGINIA**

**BID NO. 13-08-02**

Contractor agrees to comply with Title 54.1, Chapter 11, Code of Virginia (1950), as amended, with respect to licensure of subcontractors employed to work on the Project. Contractor represents that it has verified that all subcontractors, currently identified to work on the Project, hold all required State and local licenses, including State contractors license and City business license. Contractor agrees that it will verify that any additional subcontractors employed to work on the Project, subsequent to the date of this Certification, hold all required State and local licenses, including State contractors license and City business license. This Certification shall constitute a material part of the Contractor's contract with the City.

\_\_\_\_\_  
Contractor's Name

By \_\_\_\_\_

\_\_\_\_\_  
Printed or Typed Name and Title

COMMONWEALTH OF VIRGINIA

CITY/COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public in and for the Commonwealth of Virginia, do hereby certify that \_\_\_\_\_, whose name is signed to the foregoing, has subscribed, sworn to and acknowledged the same before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission expires: \_\_\_\_\_

Project: Kirk Avenue Compactor

Contractor's Certification as to  
Licensure of Subcontractors  
Rev. 3/31/2011

**CITY OF ROANOKE, VIRGINIA**

**CERTIFICATE OF SUBSTANTIAL COMPLETION**

The Date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Architect/Engineer and/or City Engineer when construction is sufficiently complete, in accordance with the Contract Documents, so the City of Roanoke, Virginia (City or Owner) can occupy or utilize the Work or designated portion thereof for the use for which it is intended, as expressed in the Contract Documents.

ARCHITECT/ENGINEER: \_\_\_\_\_

BID NUMBER: \_\_\_\_\_ DATE OF ISSUANCE: \_\_\_\_\_

PROJECT: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

PROJECT OR DESIGNATED PORTION SHALL INCLUDE: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_.

The Work or portion thereof designated above performed under this Contract has been reviewed and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby established as \_\_\_\_\_. The City will assume possession thereof at \_\_\_\_\_ a.m./p.m. on that date.

A list of items ("punch list"), prepared by the A/E and/or City Engineer, to be completed or corrected by the Contractor, is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. The Contractor will complete any portion of the Work that is not substantially complete and will complete or correct the work on the punch list in accordance with the Contract Documents.

The establishment of a date of substantial completion and/or the acceptance of the Work or designated portion thereof does not relieve the Contractor of any responsibility for any faulty materials or workmanship or operate to relieve the Contractor or its Surety from any obligation under the Contract with the City or the Performance Bond or Labor and Material Payment Bond.

This Certificate is subject to the terms and conditions of the Contract Documents, including but not limited to Section 20.8 of the General Conditions.

_____ Architect/Engineer	_____ By	_____ Date
_____ Contractor	_____ By	_____ Date
_____ City of Roanoke, Virginia City	_____ By	_____ Date

Project: Kirk Avenue Compactor

Certificate of  
Substantial Completion  
Rev. 3/31/2011

**CITY OF ROANOKE, VIRGINIA**  
**AFFIDAVIT OF PAYMENT OF CLAIMS**

By: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Insert Exact Name and Address of Firm)

This day \_\_\_\_\_ personally appeared before me,  
\_\_\_\_\_, a Notary Public in and for the City (County) of  
\_\_\_\_\_, and, being by me first duly sworn states that all subcontractors  
and suppliers of labor and materials have been paid all sums due them for work performed or  
materials furnished in the performance of the Contract between the City of Roanoke, Virginia,  
and \_\_\_\_\_, Contractor, dated \_\_\_\_\_, 20\_\_\_\_, for  
\_\_\_\_\_  
\_\_\_\_\_

or arrangements have been made by the Contractor satisfactory to such subcontractors and  
suppliers with respect to the payment of such sums as may be due from the Contractor to the  
subcontractors and suppliers.

CONTRACTOR: \_\_\_\_\_

BY: \_\_\_\_\_

PRINTED OR TYPED NAME AND TITLE: \_\_\_\_\_

Commonwealth of Virginia at Large:

Subscribed and sworn to before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Printed Name of Notary Public



**CITY OF ROANOKE, VIRGINIA**

**MBE/WBE/SB/VB USAGE STATUS FORM**

**UPDATED FORM TO BE SUBMITTED WITH EACH REQUEST FOR PAYMENT AND A  
FINAL SUMMARY FORM TO BE SUBMITTED WITH THE FINAL REQUEST FOR PAYMENT.**

**Section I:**

Bid No: \_\_\_\_\_ Date: \_\_\_\_\_

Project: \_\_\_\_\_

Prime Contractor: \_\_\_\_\_

List all MBE/WBE/SB/VB contractors or subcontractors and/or suppliers used to date and indicate what type of entity it is (i.e. MBE, WBE, SB or VB):

\_\_\_\_\_ Amount to Date: \_\_\_\_\_

\_\_\_\_\_ Amount to Date: \_\_\_\_\_

\_\_\_\_\_ Amount to Date: \_\_\_\_\_

Attach additional sheet if necessary.

**Section II:**

Total Project Value to Date: \_\_\_\_\_

Total MBE/WBE/SB/VB Value to Date: \_\_\_\_\_

Percent MBE/WBE/SB/VB Work to Date: \_\_\_\_\_

**Section III:**

I hereby certify that the above figures are true and reflective of the amount of MBE/WBE/SB/VB work used on this project to date.

\_\_\_\_\_  
Legal Name of Contractor

\_\_\_\_\_  
Typed or Printed Name and Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**CITY OF ROANOKE, VIRGINIA**

**CERTIFICATE OF FINAL ACCEPTANCE**

This Certificate is subject to the terms and conditions of the Contract Documents, including but not limited to Section 20.8 of the General Conditions. The City, Contractor, and A/E, if applicable, hereby agree that the date fixed for Final Acceptance of the Work by the City is \_\_\_\_\_.

The establishment of a date of Final Acceptance and/or the acceptance of the Work does not relieve the Contractor of any responsibility for any faulty materials or workmanship or operate to relieve the Contractor or its Surety from any obligation under the Contract with the City or the Performance Bond or Labor and Material Payment Bond.

ARCHITECT/ENGINEER: \_\_\_\_\_

PROJECT NUMBER: \_\_\_\_\_

PROJECT: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

_____ Architect/Engineer	_____ By	_____ Date
_____ Contractor	_____ By	_____ Date
_____ City of Roanoke, Virginia City	_____ By	_____ Date

**CITY OF ROANOKE, VIRGINIA**

**GENERAL CONDITIONS**

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## **CITY OF ROANOKE, VIRGINIA**

### **GENERAL CONDITIONS**

#### **SECTION 1. DEFINITIONS**

Whenever used in these General Conditions or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof, and where applicable to any other legal entity such as a corporation, partnership, limited liability company, etc.

The section and paragraph headings are inserted for convenience only.

**Architect, Engineer, Architect/Engineer or A/E:** The term used to designate the Architect and/or the Engineer who contracts with the City to provide the Architectural and Engineering services for the project. The Architect/Engineer is a separate Contractor and is referred to herein as the Architect/Engineer or abbreviated as A/E. The term includes any associates or consultants employed by the firm to assist in providing the A/E services.

**Bidder:** The person, firm, corporation, or other entity interested in submitting a bid for the Work to be performed.

**Change Order:** A document issued by the City Engineer on or after the effective date of the Contract which is agreed to by the Contractor and approved by the City, and which authorizes an addition, deletion, or revision in the Work, including any adjustment in the Contract Price and/or the Contract Time.

**City or Owner:** The City of Roanoke, Virginia, or its authorized representative.

**City Code:** Refers to the Code of the City of Roanoke (1979), as amended.

**City Engineer:** The City Engineer or his authorized representative.

**City Manager:** The City Manager or his authorized representative.

**Code of Virginia:** Refers to the Code of Virginia (1950), as amended. (Sometimes referred to as Va. Code or Virginia Code.)

**Contract Documents:** These documents include, but are not limited to, the Project Manual, Invitation to Bid, the Instructions to Bidders, the Bid Form, the Contract, the Bonds or other Bid Security, the Escrow Agreement, the General Conditions, Supplementary General Conditions, Special Conditions, the Specifications, Addenda or Change Orders, the Plans and Drawings, any Supplemental Drawings, and any additional documents incorporated by reference in the above.

**Contract:** The written agreement between the parties concerning the performance of the Work and consisting of the Contract Documents.

**Contractor:** The person, firm, corporation, or other entity entering into a contractual agreement with the City to perform the Work.

**Defect, Defective, or Deficient:** An adjective or noun which when modifying or referring to the word Work refers to Work or any part thereof that is unsatisfactory, faulty, or does not conform

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General Conditions  
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to the Contract Documents, or does not meet the requirements of any inspections, standards, tests, or approvals referred to in the Contract Documents.

**Document(s)**: This term includes, but is not limited to: writings, drawings, items on which words, symbols, or marks are recorded; electronic data of any type; videotapes, recordings, photographs and negatives, digital or otherwise; and any other form of data, writing, or information compilation, however recorded or stored, and regardless of physical form or characteristics.

**Field Order**: A written order issued by the City Engineer which clarifies the requirements of the Contract by giving a more complete expression of the drawings or specifications or other documents without any change in the design, the Contract price, or the Contract time.

**Final Acceptance**: The City's acceptance of the project from the Contractor upon confirmation from the City Engineer and the Contractor that the project is apparently complete in accordance with the Contract requirements.

**Notice**: All written notices, demands, instructions, claims, approvals, and disapprovals required to obtain compliance with the Contract requirements. Any written notice by either party to the Contract shall be sufficiently given if delivered to or at the last known business address of the person, firm, or corporation constituting the party to the Contract, or to his, her, their, or its authorized agent, representative, or officer.

**Notice to Proceed**: A written notice given by the City at the City's discretion to the Contractor fixing the date on which the Contract time will commence for the Contractor to begin the prosecution of the Work in accordance with the requirements of the Contract Documents.

**Project Inspector**: One or more individuals employed by the City to inspect the Work and/or to act as Resident Inspector to the extent required by the City. The City shall notify the Contractor of the appointment of such Project Inspector(s).

**Provide**: Shall mean to furnish and install ready for its intended use.

**Subcontractor**: A person, firm, partnership, corporation, or other entity having a direct contract with the Contractor or with any other Subcontractor for the performance of the Work. It includes one who provides on-site labor, but does not include one who only furnishes or supplies material for the project.

**Submittals**: All drawings, diagrams, illustrations, brochures, schedules, samples, electronic data and other data required by the Contract Documents which are specifically prepared by or for the Contractor, Subcontractor, or Supplier, and submitted by the Contractor to illustrate the material, equipment, or layouts, or some other portion of the Work.

**Substantial Completion**: The date certified by the City Engineer when construction is sufficiently complete, in accordance with the Contract Documents, so the City can occupy or utilize the Work or designated portion thereof for the purposes for which it is intended.

**Supplier**: A manufacturer, fabricator, distributor, materialman, or vendor who provides only material or supplies for the project, but does not provide on-site labor.

**Work or Project**: The entire completed construction or the various separately identifiable parts thereof as required by the Contract Documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating material and equipment into the construction.

## **SECTION 2. INDEMNITY PROVISION**

- 2.1 Indemnity:** Contractor shall indemnify and hold harmless City and its officers, agents, and employees against any and all liability, losses, damages, claims, causes of action, suits of any nature, costs, and expenses, including reasonable attorney's fees, resulting from or arising out of Contractor's or its employees, agents, or subcontractors actions, activities, or omissions, negligent or otherwise, on or near City's property or easement or arising in any way out of or resulting from any of the work to be provided under this Contract, and this includes, without limitation, any fines or penalties, violations of federal, state, or local laws or regulations, personal injury, wrongful death, or property damage claims or suits, breach of contract claims, indemnity claims, and any other damages, losses, and/or claims of any type.
- 2.2 Hazardous Material:** While on City's property or easement and in its performance of this Contract, Contractor shall not transport, dispose of or release any hazardous substance, material, or waste, except as necessary in performance of its Work under this Contract and in any event Contractor shall comply with all federal, state, and local laws, rules, regulations, and ordinances controlling air, water, noise, solid wastes, and other pollution, and relating to the storage, transport, release, or disposal of hazardous material, substances or waste. Regardless of City's acquiescence, Contractor shall indemnify and hold City, its officers, agents, and employees harmless from all costs, claims, damages, causes of action, liabilities, fines or penalties, including reasonable attorney's fees, resulting from Contractor's violation of this paragraph and agrees to reimburse City for all costs and expenses incurred by City in eliminating or remedying such violations. Contractor also agrees to reimburse City and hold City, its officers, agents, and employees harmless from any and all costs, expenses, attorney's fees and all penalties or civil judgments obtained against the City as a result of Contractor's use or release of any hazardous substance or waste onto the ground, or into the water or air from or upon City's premises. (See also Section 13.2 of these General Conditions.)
- 2.3 Patents:** The Contractor shall protect, indemnify, and hold harmless the City from any and all demands for fees, claims, suits, actions, causes of action, or judgments based on the alleged infringement or violation of any patent, invention, article, trademark, arrangement, or other apparatus that may be used in the performance of the Contract or the Work.

## **SECTION 3. LAWS, REGULATIONS, PERMITS, AND IMMIGRATION LAW**

- 3.1 Regulations:** The Contractor shall fully comply with all local, state, and federal ordinances, laws, and regulations, including without limitation all applicable building and fire code sections of the Occupational Safety and Health Act (OSHA), and the Virginia Uniform Statewide Building Code, and obtain all required licenses and permits, including business license, building permits, and pay all charges and expenses connected therewith. Contractor further agrees that Contractor does not, and shall not during the performance of this Contract, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- 3.2 Permits:** The Contractor shall, at its sole cost, obtain all required permits from the appropriate authorities, including the City of Roanoke. This includes, but is not limited to, all permits for any excavations in any public right-of-way. No delay or extension of time or any claim for additional compensation of any type shall be granted for failure to obtain any required permits.

- 3.3 Litter:** In accordance with the Virginia Anti-Litter Law, receptacles sufficient to contain workmen's litter and construction wastes capable of being spread by wind or water shall be located on the construction site. The number and size of receptacles required shall be determined by the Contractor.
- 3.4 Asbestos License:** The Contractor, if not licensed as an asbestos abatement contractor or a Roofing, Flooring, and Siding (RFS) contractor in accordance with Section 54.1-514, of the Code of Virginia, shall have all asbestos related work performed by subcontractors who are duly licensed as asbestos contractors or RFS contractors as appropriate for the work required.

#### **SECTION 4. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE**

Neither the Contractor nor any subcontractor shall commence work under this Contract until the Contractor has obtained and provided proof of the required insurance under this Section to the City. The Contractor confirms that all subcontractors have provided the Contractor with proof of insurance. Contractor further warrants that proof of coverage as provided to the City responds on a primary basis in the event of an uninsured or underinsured subcontractor. All such insurance shall be primary and non-contributory to any insurance or self-insurance the City may have in force.

**4.1 For All Contracts,** the following minimum insurance requirements apply:

**a. Workers' Compensation and Employers' Liability:**

The Contractor shall obtain and maintain the following limits:

Workers' Compensation: Statutory

Employers' Liability: \$100,000 bodily injury by accident each occurrence  
\$500,000 bodily injury by disease (policy limit)  
\$100,000 bodily injury by disease each employee

**b. Commercial General Liability:**

Coverage is to be written on an "occurrence" basis and such coverage shall include broad form extension endorsements for both liability and property damage.

Completed Operations coverage will be required to be maintained for the life of the Contract.

For Limits of Liability see Sections 4.2 and 4.3 of these General Conditions.

**c. Automobile Liability:**

Limits for vehicles owned, non-owned, hired or borrowed shall not be less than:

- \$1,000,000 Bodily Injury and Property Damage combined single limit per occurrence.



d. Additional Insurance Requirements:

Additional specific insurance coverage minimum requirements to be provided by Contractor may include the following as detailed in the Supplemental General Conditions:

- 1) Builders Risk: At the discretion of the City, the Contractor, at its cost, shall obtain and maintain in the names of the City and the Contractor "all-risk" builders risk insurance (if approved by the City) upon the entire structure or structures on which the Work of this Contract is to be done and upon all material in or adjacent thereto or those that are "off-site" but which are intended for use thereon, to one hundred percent (100%) of the completed value thereof.
- 2) Property Coverage: Installation Floater (and Rigger's Form, if applicable) will be required for the installation of contents or equipment, coverage will begin with supplier and continue until equipment/contents has been fully installed. Floater will be valued for the replacement cost value of equipment/contents including all costs. The Contractor shall provide coverage for portions of the work stored off-site after written approval of the City at the value established in the approval and for portions of the work in transit.
- 3) Special Hazards: In the event special hazards are evident in the work contemplated, or if required by the Contract Documents, the Contractor shall obtain and maintain during the life of the Contract a rider to the policy or policies required, in an amount not less than that stipulated under the above Paragraphs. Should any unexpected special hazards be encountered during the performance of this Contract, the Contractor shall, prior to performing any work involving the special hazard, immediately obtain this insurance as instructed by the City. In the event the special hazard requiring the additional coverage was not a part of the original bid, the expense of such insurance shall be reimbursed to the Contractor by the City, otherwise the Contractor shall assume full responsibility for the purchase with no charge back to the City.
- 4) Deductible: Deductible/self-insured retention amounts shall be reduced or eliminated upon written request from City. The insurer's cost of defense (and appeal), including attorney's fees, shall not be included within the coverages provided but shall remain the insurer's responsibility.
- 5) Term: Insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective work.
- 6) Limit of Liability: Nothing contained in these insurance requirements is to be construed as limiting the liability of Contractor or Contractor's insurance carriers. City does not in any way represent that the coverages or the limits of insurance specified is sufficient or adequate to protect Contractor's interests or liabilities, but are merely minimums. The obligation of the Contractor to purchase insurance herein shall not in any way limit the obligation of the Contractor in any event and/or in the event that the City should suffer an injury or loss in excess of the amount recoverable through insurance.

**4.2 Contracts of \$100,000 or More:** The following minimum insurance requirements apply in addition to the above requirements:

**a. Limits of Liability:** For the Commercial General Liability policy:

- \$2,000,000 general aggregate
- \$1,000,000 products/completed operations aggregate
- \$1,000,000 personal and advertising injury
- \$1,000,000 each occurrence

Coverage is to be written on an "occurrence" and "per project" basis and such coverage shall include:

**b. Umbrella Liability Insurance:**

This coverage shall be written for minimum limit of:

- \$5,000,000 each occurrence for Personal and Bodily Injury and Property Damage

This Policy shall apply in excess and follow form of employer's liability, commercial general liability, and auto liability.

**4.3 Contracts Less Than \$100,000:** The following minimum insurance limits apply unless specified otherwise in the Supplemental General Conditions:

**a. Limits of Liability:** For the Commercial General Liability policy:

- \$1,000,000 general aggregate
- \$1,000,000 products/completed operations aggregate
- \$1,000,000 personal and advertising injury
- \$1,000,000 each occurrence

**4.4 Proof of Insurance Coverage:** The policies of insurance required by Sections 4.1, 4.2, or 4.3 shall be purchased from a reputable insurer licensed to do business in Virginia and maintained for the life of the Contract by the Contractor. Other insurance requirements include the following:

- a.** The Contractor shall furnish the City with the required certificates of insurance showing the insurer, type of insurance, policy number, policy term, deductible, and the amount insured for property coverages and the limits for liability coverages.
- b.** The Contractor shall notify the City Engineer and Risk Manager in writing within five (5) consecutive calendar days if any of the insurance coverages or policies are cancelled or materially altered and Contractor shall immediately replace such policies and provide documentation of such to the City Engineer and Risk Manager.
- c.** The required insurance policies and coverages, excluding those for Workers Compensation and Professional Liability, shall name the City of Roanoke, its officers, agents, volunteers and employees as additional insureds, and the certificate of insurance shall show if the policies provide such coverage. Waiver of subrogation is required with respect to any policy of workers' compensation and employers' liability insurance required under this Section. The certificate of insurance shall show if the policies provide such waiver. Additional insured and

waiver endorsements shall be received by the City's Risk Manager from the insurer with the certificate of insurance unless the City's Risk Manager agrees to another process. The City's Risk Manager may approve other documentation of such insurance coverages.

- d. Insurance coverage shall be in a form and with an insurance company approved by the City which approval shall not be unreasonably withheld. Any insurance company providing coverage under this Contract shall be authorized to do business in the Commonwealth of Virginia.

## **SECTION 5. EMPLOYMENT AND CONDUCT OF PERSONNEL**

- 5.1 City Residents:** Pursuant to the provisions of Resolution Number 10610 of the Roanoke City Council it is required that in the employment of labor, on work performed for the City, that the Contractor shall give preference to residents of the City and give secondary preference to residents of the area within a radius of fifty (50) miles of the City, when such labor is available.
- 5.2 Employee Qualifications:** Only skilled and reliable workers shall be employed for the Work. Should any person employed on the Work by the Contractor appear to the City Engineer to be incompetent, unable to perform the Work, or disorderly, such person shall be removed from the Work immediately upon proper notice to the Contractor from the City Engineer and such person shall not again be used for this Contract.
- 5.3 Superintendence:** The Contractor shall have a competent foreman or superintendent, satisfactory to the City Engineer, on the jobsite at all times during the progress of the Work. The Contractor shall notify the City, in writing, of any proposed change in the foreman or superintendent including the reason therefore prior to making such change.
- 5.4 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 clauses in every subcontract or purchase order 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 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.

The Contractor shall post a copy of the policy in a conspicuous place at the jobsite and assure that all Contractor, subcontractor, and supplier personnel entering the jobsite are informed of the policy.

## **SECTION 6. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED**

Every Contract of over \$10,000 to which the City is a party shall contain the provisions in Sections 6.1 and 6.2 herein:

**6.1 Nondiscrimination:** During the performance of this Contract, the Contractor agrees as follows:

- a. The Contractor will not discriminate against any Subcontractor, 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 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 employment 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 the requirements of this section.

**6.2 Nondiscrimination by Subcontractor or Vendor:** The Contractor will include the provisions of the foregoing Subsections 6.1 (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.

## **SECTION 7. SUBCONTRACTORS**

**7.1 Licensure:** The Contractor shall comply with Title 54.1, Chapter 11, of the Code of Virginia, with respect to licensure of itself and all subcontractors employed to work on the project. The Contractor represents that it has verified that all subcontractors hold all required state and local licenses, including State Contractor's license and City business license. The Contractor shall verify that any additional subcontractors employed to work on the project, subsequent to the initial verification, hold all required state and local licenses, including State Contractor's license and City business license. The Contractor is required to submit the Contractor's Certification as to Licensure of Subcontractors Form to the City Engineer. This constitutes a material part of the Contractor's Contract with the City.

**7.2 Change of Subcontractors:** Subcontractors shall not be changed without the written approval of the City Engineer.

**7.3 Responsibility for Subcontractors:** The Contractor shall not employ for the project any subcontractor that the City may, within a reasonable time, object to as unsuitable. The Contractor further agrees that it is as fully responsible to the City for the acts and omissions of its subcontractors, suppliers, and invitees on the jobsite and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by it.

## **SECTION 8. CONDITIONS AT SITE**

- 8.1 Existing Conditions:** The Contractor shall have visited the site prior to bidding and is responsible for having ascertained pertinent local conditions such as location, accessibility, and general character of the site, and the character and extent of existing improvements and work within or adjacent to the site. Claims as a result of failure to have done so will not be considered by the City and will be the sole responsibility of the Contractor.
- 8.2 Hidden Conditions:** If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions than those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the site are found which are materially different from those frequently present in the locality, from those indicated in the Contract Documents, or from those inherent in work of the character required by the Contract, the Contractor must report such conditions to the City Engineer before the conditions are disturbed. Upon such notice, or upon his own observation of such conditions, the City Engineer will make such changes in the Contract Documents as he finds necessary to conform to the different conditions. Any change in the cost of the Work or the time needed for completion must be requested pursuant to Section 19 of these General Conditions.
- 8.3 Suspected Hazardous Material:** If the Contractor, during the course of the project, observes the existence of any material which it suspects or knows to be hazardous to human health or the environment, the Contractor shall promptly notify the City Engineer. The City Engineer will provide the Contractor with instructions regarding the situation. The Contractor shall not perform any work involving the material or any work causing the material to be less accessible prior to receipt of special instructions from the City Engineer.

## **SECTION 9. SURVEYS AND LAYOUT**

- 9.1 Surveying Services:** All necessary drawings showing the location of property lines, buildings, and other appropriate information shall be furnished to the Contractor through the drawings and specifications. The Contractor shall provide competent surveying and engineering services to verify the given information and to execute the Work in accordance with the Contract requirements and shall be responsible for the accuracy of Contractor's surveying and engineering services. The Contractor shall immediately notify the City Engineer of any discrepancies and confirm such notice in writing within five (5) calendar days.
- 9.2 Survey Control:** Such general reference points and bench marks on the building site as will enable the Contractor to proceed with the Work will be established in the drawings and specifications. If the Contractor finds that any previously established reference points have been lost or destroyed, Contractor shall promptly notify the City Engineer.
- 9.3 Damage to Survey Control:** The Contractor shall protect and preserve the established bench marks and monuments and shall make no changes in locations without written notice to and approval from the City Engineer. Any of these which may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall, subject to prior approval from the City Engineer, be replaced and accurately located by the Contractor.

## **SECTION 10. DRAWINGS AND SPECIFICATIONS**

- 10.1 Drawings and Specifications:** The general character and scope of the Work are illustrated by the drawings and specifications. Where on any of the drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall

apply also to all other like portions of the Work. If the Contractor deems additional detail or information to be needed, Contractor may request the same in writing from the City Engineer. The Contractor shall carry out the Work in accordance with the drawings and specifications and any additional detail drawings and instructions as issued by the City Engineer. However, Contractor shall immediately notify the City Engineer of any discrepancies in such drawings and/or specifications and confirm such notice in writing within five (5) calendar days.

**10.2 Discrepancies in Drawings:** In case of difference between small and large scale drawings, the large scale drawings shall govern, unless otherwise directed in writing by the City Engineer.

**10.3 "Similar":** Where the word "similar" appears on the drawings, it shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.

**10.4 Division of Specifications:** The specifications are divided into several parts for convenience only, since the entire specifications must be considered as a whole. The divisions of the specifications are not intended to control the Contractor in dividing the work among subcontractors or to limit the work performed by any trade. The Contractor shall be responsible for the coordination of the trades, subcontractors, and vendors engaged upon this Work.

**10.5 Dimension Accuracy:** Measurements or dimensions shown on the drawings for site features, utilities, and structures shall be verified at the site by the Contractor. The location of underground utilities indicated on the plans are diagrammatic and were plotted from available records and field survey information and shall be considered approximate only, and the City makes no representations with regard to their accuracy. The Contractor shall not scale measurements or dimensions from the drawings. Where there are discrepancies, the City Engineer shall be consulted. Where new work is to connect to, match with, or be provided for existing work, the Contractor shall verify the actual existing conditions and related dimensions prior to ordering or fabrication, so that such new work will properly fit with existing work.

**10.6 As-Built Drawings:** The Contractor shall maintain at the site for the City one copy of all drawings, specifications, addenda, approved shop or setting drawings, change orders, field deviations, and other documents or modifications (referred to herein as "As-Built Drawings") in good order and marked to record all changes as they occur during construction. These shall be available to the City Engineer, the Project Inspector, and the City's testing personnel. These "As-Built Drawings" shall be neatly and clearly marked in color during construction to record all variations from the drawings made during construction. The representation of such variations shall include such supplementary notes, symbols, legends, documents, and details as may be necessary to clearly show the as-built construction.

**10.7 Record Drawings:** Upon completion of the Work and prior to Final Acceptance, the Contractor shall deliver to the City Engineer, for preparation of the Record Drawings, one complete set of "As-Built Drawings" and documents referred to in Section 10.6.

## **SECTION 11. SCHEDULE OF THE WORK**

**11.1 Scheduling:** The Contractor is responsible for the sequencing, scheduling, and coordinating of the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor is responsible for coordinating Contractor's work on the Project with any other work being carried on by the City or by other City consultants or contractors at the site or for the Project. The Contractor shall prepare and submit to the City Engineer a schedule for accomplishing the Work based upon the completion time stated in the Contract and submit such to the City Engineer at the pre-construction conference. No progress payments will be made

to the Contractor until after Contractor has submitted a schedule which is acceptable to the City Engineer. All schedules under Section 11 shall be in both paper and electronic form unless otherwise directed by the City Engineer.

- 11.2 Progress:** The Contractor shall review the progress of the Work not less than each month, but as often as necessary to properly manage the project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the schedule monthly to finish within the contractually allowed time. The Contractor shall submit the updated schedule with each progress payment request. The scheduled completion date shall be within the period of time allowed by the Contract for completion of construction, except as amended by any Change Orders.
- 11.3 Delay and Recovery Schedule:** Should there be any delay, the City Engineer may require the Contractor to prepare, at no extra cost to the City, a plan of action and a recovery schedule for completing the Work by the contractual completion date. The plan of action and recovery schedule shall explain and display how the Contractor intends to regain compliance with the original schedule. The plan of action and recovery schedule, when required, shall be submitted and approved by the City Engineer prior to Contractor's submission of the next monthly construction estimate. The City may withhold progress payments until such schedule is submitted and approved.

## **SECTION 12. CONSTRUCTION SUPERVISION**

The Contractor shall be solely responsible to supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor is solely responsible to the City that the finished Work complies with the Contract Documents. The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the City, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or responsibility for health and safety programs and precautions.

## **SECTION 13. STANDARDS FOR MATERIAL INSTALLATION AND WORKMANSHIP**

- 13.1 Material and Equipment:** Unless otherwise specifically provided in this Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition. The Contractor shall furnish to the City Engineer for approval the name of the manufacturer, the model number, and other identifying data and information respecting the performance, capacity, nature, and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the Work. Machinery, equipment, material, and articles installed or used without required approval may be subject to subsequent rejection by the City.
- 13.2 Hazardous Substances:** Unless specifically approved by the City or required by the specifications, the Contractor shall not incorporate any material into the Work containing asbestos or any material known by the Contractor to contain a substance known to be hazardous to health when the building and/or site is occupied by the City. If the Contractor becomes aware that a material required by the specifications contain asbestos or other hazardous substances, it shall notify the City and the City Engineer immediately and shall take no further steps to acquire or install any such material without

first obtaining City approval. (See also Sections 2.2 and 8.3 of these General Conditions.)

- 13.3 Workmanship:** The workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by workmen skilled in the particular task to which they are assigned. In the acceptance or rejection of work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by the City Engineer, the City, or other inspecting authorities) shall be removed and replaced to conform to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the City Engineer, the City, or other inspecting authority all at the Contractor's sole expense.
- 13.4 Instructions for Installation:** Under the various sections of the specifications, where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions unless those instructions contradict the drawings or specifications, in which case the City Engineer will be notified by Contractor for an interpretation and decision.
- 13.5 Installation Procedures Without Instructions:** Where neither the manufacturer's printed instructions are available for installation of specific items, nor are specific code or standards given by reference to govern the installation of specific items; and where there is doubt concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult the City Engineer for approval of the installation procedures Contractor proposes to follow or the specific standards governing the quality of workmanship Contractor proposes to maintain during the installation of the items in question.
- 13.6 Codes and Standards:** Under the various sections of the specifications, where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where no reference is made to specific codes or standards, installation shall conform to the generally recognized applicable standards for first-class installation of the specific item to be installed. Contractors are expected to be proficient and skilled in their respective trades and knowledgeable of the National Fire Protection Association (NFPA), the current edition of the Virginia Uniform Statewide Building Code (USBC) and its referenced technical codes and standards, Occupational Safety and Health Act (OSHA) and other codes and standards applicable to installations and associated work by its trade and/or that are applicable to the Work.

## **SECTION 14. SUBMITTALS**

- 14.1 General:** The Contractor shall submit for the approval of the City Engineer all submittals required by the specifications or requested by the City Engineer. All such submissions shall be made with such promptness as to cause no delay in this or any other part of the project, and to allow reasonable time for checking, correcting, resubmitting, and recorrecting. No part of the Work dealt with by a submittal shall be fabricated by the Contractor, save at Contractor's own risk, until such approval has been given. The Contractor shall maintain one (1) set of approved submittals at the jobsite at all times.
- 14.2 Format:** Submittals shall be made in such number of copies that two (2) approved copies may be retained by the City Engineer. Each submission shall be accompanied by a letter of transmittal listing the contents of the submission and identifying each item by reference to specification section or drawings. All submittals shall be clearly labeled with the name of the project and other necessary information. Catalog plates and other similar material that cannot be so labeled conveniently, shall be bound in suitable covers bearing the identifying data.



- 14.3 Supporting Material:** Submittals shall be accompanied by all required certifications and other such supporting material and documents, and shall be submitted in such sequence or in such groups that all related items may be checked together. When submittals cannot be checked because the submission is not complete, or because submittals on related items have not been received, then such submittals will be returned without action or will be held, not checked, until the material which was lacking is received.
- 14.4 Coordination:** Submittals shall have been reviewed by the Contractor and coordinated with all other related or affected work before they are submitted for approval, and shall bear the Contractor's certification that it has checked and approved them as complying with the information given in the Contract Documents. Submittals made without such certification and coordination will be returned to the Contractor without action, and will not be considered a formal submission. The Contractor shall be responsible for checking all dimensions and coordinating all material and trades to ensure that the material proposed will fit in the space available and be compatible with other material provided.
- 14.5 Variations:** If the submittals show variations from the Contract Documents because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in Contractor's letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the Work in accordance with the Contract Documents even though such submittals have been approved.
- 14.6 "Or Equal":** The drawings and/or specifications may indicate that the City Engineer designed or detailed a portion of the plans around a particular product (most commonly a piece of equipment). Should a different product be proposed by the Contractor and accepted, all modifications, rerouting, relocations, and variations required for proper installation and coordination to comply with the design concept and requirements of the Contract Documents shall be the sole responsibility of the Contractor and shall be made at no extra cost to the City. This naming of a particular product, around which the plans were designed or detailed, is not intended to preclude the use of other products or favor the product named when a "brand name or equal" specification has been used. (See also Section 10 of Instructions to Bidders.) Rather it is only intended to acknowledge the reality that in many instances the City Engineer must design around the dimensions and characteristics of a particular product.
- 14.7 Review by City Engineer:** The City Engineer will review and respond to the submittals within fourteen (14) calendar days. Checking and/or approval of submittals will be for general conformance with the design concept of the project and compliance with the information given in the Contract Documents, and will not include verification of quantities, detailed dimensions, nor adjustments of dimensions to actual field conditions. Approval shall not be construed as permitting any departure from Contract requirements, authorizing any increase in price or time for completion or relieving the Contractor of the responsibility for any error in details, dimensions, or otherwise that may exist.
- 14.8** The Work shall be in accordance with approved submittals.

## **SECTION 15. INSPECTION AND INDEPENDENT TESTING**

**15.1 Inspection and Testing:** All material and workmanship shall be subject to inspection, examination, and testing by the City Engineer at any and all times during manufacture and/or construction. The City Engineer shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the rejected material from the premises. If the Contractor fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, the City may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, and/or may terminate the right of the Contractor to proceed as provided in Sections 26 or 27 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided for in those Sections.

### **15.2 Payment for Inspection, Testing, and Certification:**

- a. Jobsite inspections, tests conducted on site, or tests of material gathered on site which the Contract requires to be performed by independent testing entities shall be contracted and paid for by the City. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor, and material necessary for making such tests. Except as provided in Section 15.3 below, whenever such examination and testing finds defective material, equipment, or workmanship, the Contractor shall reimburse the City for the cost of reexamination and retesting.
- b. Although conducted by independent testing entities, the City will not contract and pay for tests or certifications of material, manufactured products or assemblies which the Contract, codes, standards, etc. require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or ASTM. If there are any fees to be paid for such tests and certifications, they shall be paid by the Contractor.
- c. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires it to perform or pay, together with any inspections and tests which it chooses to perform for its own quality control purposes.

**15.3 Examination of Completed Work:** Should it be considered necessary or advisable by City or the City Engineer at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary facilities, labor, and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or its Subcontractors, Contractor shall pay for all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing and Contractor's cost of material and labor necessary for replacement shall be paid to the Contractor and it shall, in addition, if completion of the Work has been delayed thereby, be granted a suitable extension of time.

**15.4 Suspension of Work:** The City may suspend the Work when in its judgment the drawings and specifications are not being followed. Any such suspension shall be issued in writing and continued only until the matter in question is resolved to the satisfaction of the City. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that no fault existed in the Contractor's Work.

**15.5 Project Inspector:** Failure of the Project Inspector to note or require correction of improper or defective work does not relieve the Contractor from its responsibility to correct such improper or defective work. The Project Inspector has no authority to and shall not:

- a. Enter into the area of responsibility of the Contractor's superintendent;
- b. Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;
- c. Authorize or suggest that the City occupy the project, in whole or in part; or
- d. Issue a certificate for payment.

## **SECTION 16. USE OF PREMISES AND REMOVAL OF DEBRIS**

**16.1 Jobsite Coordination:** The Contractor shall perform the Contract in such a manner as not to interrupt or interfere with the operation of any existing activity on the premises or with the work of any other contractor.

**16.2 Storage of Material:** The Contractor shall store apparatus, material, supplies, and equipment in such orderly fashion at the site of the Work as will not unduly interfere with the progress of its Work or the work of any other contractor.

**16.3 Jobsite Appearance:** The Contractor expressly undertakes, either directly or through its Subcontractor(s), to clean up frequently all refuse, rubbish, scrap material, and debris caused by his operations, to the end that at all times the jobsite shall present a neat, orderly, and workmanlike appearance. No such refuse, rubbish, scrap material, and debris shall be left within the completed Work nor buried on the building site, but shall be properly protected and removed from the site and properly disposed of in a licensed landfill or otherwise as required by law.

**16.4 Final Cleaning:** The Contractor expressly undertakes, either directly or through its Subcontractor(s), before final payment, to remove all surplus material, false work, temporary structures, including foundations thereof, and debris of every nature resulting from its operations and to put the site in a neat, orderly condition, to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to thoroughly clean all glass installed under the Contract including the removal of all paint and mortar splatter and other defacements. If a Contractor fails to clean up at the completion of the Work, the City may do so and charge for costs thereof to the Contractor in accordance with these General Conditions.

**16.5 Erosion Control:** During and at completion of the Work, the Contractor shall prevent site soil erosion, the runoff of silt and/or debris carried by water from the site, and the blowing of dust or debris off the site in accordance with the applicable requirements and standards of the Virginia Erosion and Sediment Control Handbook, latest edition, and of the Contract Documents.

## **SECTION 17. PROTECTING PERSONS AND PROPERTY**

- 17.1 Protection on Site:** The Contractor expressly undertakes, both directly and through its Subcontractor(s), to take every reasonable precaution at all times for the protection of all persons and property which may come on the jobsite or be affected by the Contractor's operation in connection with the Work.
- 17.2 Safety and Health Precautions:** The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety and health precautions and programs in connection with the Work, including but not limited to provision of appropriate sanitation facilities, if applicable.
- 17.3 Protecting the Public:** The Contractor shall in all cases protect the public and the Work, during its execution, by posting and maintaining, at its expense, appropriate signs, barricades, barriers, lights, flagmen, and other safety devices in accordance with the current edition of the "Virginia Work Area Protection Manual".
- 17.4 Protecting the Work and Adjacent Property:** The Contractor shall continuously maintain adequate protection of all the Work from damage and shall protect the City's property from injury or loss arising in connection with this Contract. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights, and other facilities for protection required by public authority, local conditions, any of the Contract Documents or erected for the fulfillment of its obligations for the protection of persons and property.
- 17.5 Emergencies:** In an emergency affecting the safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from the City Engineer, shall act, at Contractor's discretion, to prevent such threatened loss or injury. Also, should Contractor, to prevent threatened loss or injury, be instructed or authorized to act by the City Engineer, Contractor shall so act immediately, without appeal.

## **SECTION 18. DAMAGES TO THE WORK AREA**

- 18.1 Damage to the Work:** The Contractor shall have charge of and be solely responsible for the entire Work and be liable for all damages to the Work including, but not limited to any of the damages hereafter mentioned, and to any property in the vicinity of the Work, until its completion and acceptance by the City Engineer.
- a. Where the work involves alterations, renovations, or modifications to any existing building, the Contractor shall familiarize itself with the structural condition of such building before proceeding with any work. It shall be the Contractor's responsibility to take all necessary safeguards to protect and maintain all parts of the building in a safe condition at all times during the process of construction and to protect from damage those portions of the building that are to remain.
  - b. Under no condition shall any load be placed on any part of a building, whether new or existing, in excess of the load the structure will safely support, and no structural member(s) shall be cut or altered without the written consent of the City Engineer.
  - c. The Contractor shall conduct all operations in such a manner as to avoid damage to existing work and surfaces within any existing building that are to remain. Any

and all damaged work and surfaces shall be repaired, replaced, or restored to their original condition at the time when this work was started, and the expense of such work shall be borne by the Contractor.

- 18.2 Damage to Utilities:** The respective Utility Company shall be given a minimum of forty-eight (48) hours notice prior to any adjustment of utilities, and the Contractor shall comply with the provisions of the Virginia Underground Utilities Damage Prevention Act, Section 56-265.14 et seq., of the Code of Virginia. Damages that may occur to the utilities during the Work shall be the sole responsibility of the Contractor.
- 18.3 Relocation of Utilities:** Should any utilities require adjustment during the Work, it shall be the Contractor's responsibility to have such utilities relocated as a part of the Work and to contact and cooperate with the respective Utility Company in performance of such operations.
- 18.4 Damage to Other Work and Existing Structures:** The Contractor shall take into account all other work which shall be done by other parties on the jobsite, either now known or which may become necessary during the progress of the Work, and shall be responsible for any damage done to the other work. Damage to concrete curbs, gutters, sidewalks, or any existing facility that may occur during the construction shall be repaired or replaced by the Contractor, at its sole expense, as directed by and to the satisfaction of the City Engineer.
- 18.5 Weather Damage:** Damage with respect to the Work caused by the weather shall be the responsibility of the Contractor.
- 18.6 Blasting:** Any damage that may occur due to blasting shall be the sole responsibility of the Contractor.

## **SECTION 19. CHANGES IN THE WORK**

- 19.1 Changes in Drawings and Specifications:** The City reserves the right to make such changes in the drawings and specifications and in the character of the Work as may be necessary or desirable to ensure completion in the most satisfactory manner, provided such changes do not materially alter the original plans and specifications or change the general nature of the Work as a whole. Such changes shall not be considered as waiving or invalidating any condition or provision of the Contract and Bonds. Such changes shall be issued by the City Engineer to Contractor.
- 19.2 Changes in Quantities:** The City reserves the right to make changes in the quantities of the Work, as may be considered necessary or desirable, and such changes shall not be considered as waiving or invalidating any conditions or provisions of the Contract or Bonds. The Contractor shall perform the Work as altered, whether increased or decreased, and no allowances shall be made for anticipated profits. Payment to the Contractor for the changes in the quantities of work shall be made only for the actual quantities of work performed and material furnished at the unit prices set forth in the Contract, except as provided below.
- a. When the quantity of work to be done or of material to be furnished under any item of the Contract is more than 125 percent of the quantity stated in the Contract, then either party to the Contract, upon demand, shall be entitled to negotiate for revised consideration on the portion of work above 125 percent of the quantity stated in the Contract.
  - b. When the quantity of work to be done or of material to be furnished under any item of the Contract is less than 75 percent of the quantity stated in the Contract,

then either party to the Contract, upon demand, shall be entitled to negotiate for revised consideration on the Work performed.

- c. Any consideration after that as set forth above shall be paid for as is hereinafter provided under Section 19.7. The foregoing notwithstanding, the quantity of work to be done or of material to be furnished under any item of the Contract, or the total original Contract shall not be increased more than 25 percent or reduced by more than 25 percent without the written consent of the Contractor and City.

**19.3 Changes in the Work:** No change with respect to the Work, except in an emergency situation threatening life or property, shall be made by the Contractor without the prior written approval of the City. The Contractor shall deliver any request for a change in the Work, Contract price, and/or completion time in writing to the City Engineer within ten (10) calendar days of the occurrence requiring the change. The Contractor shall be required to certify the cause of the change order and, if appropriate, length of time involved. Payment for such changes approved by the City Engineer shall be as set forth in Section 19.7. This written request is a condition precedent to the consideration of any such request by the City.

**19.4 Delays:**

- a. In the event a delay is caused by the City, the City Engineer, any other separate contractor employed by the City, or any party for whom the Contractor deems the City responsible, or the agents and employees of any of them, the Contractor shall inform the City and the City Engineer immediately at the time of the occurrence by the fastest means available and shall give written notice within a reasonable time, not to exceed ten (10) calendar days. The Contractor's notice to the City Engineer shall specify the nature of the delay claimed by the Contractor, the cause of the delay, and the impact of the delay on the Contractor's work schedule to the fullest extent possible. The City will within a reasonable time, not to exceed ten (10) calendar days, respond to the Contractor's notice with a resolution, remedy, or direction to alleviate the delay or with a notice rejecting the claim for delay alleged to be caused by the City or parties for whom the City is responsible. If the delay is not then resolved, the Contractor may then submit a request for change order in accordance with Sections 19.3 and 19.5. In the event of other delays, the Contractor shall give the City and City Engineer written notice within ten (10) calendar days of the occurrence causing the delay.
- b. No extension of time or compensation shall be allowed for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsection 19.4 (a). Furthermore, no extension of time shall be given or additional compensation allowed for any delay unless a claim therefore is made in writing to the City, with a copy to the City Engineer, within ten (10) calendar days of the occurrence causing the delay. The claim shall state the cause of the delay, the number of days of extension requested, and any compensation requested by the Contractor. The Contractor shall report the termination of the delay to the City and City Engineer not less than ten (10) calendar days after such termination. Failure to give notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed are conditions precedent to the assertion of any such claims by Contractor and shall constitute a waiver by Contractor of any such claims for compensation or extension based upon that cause.
- c. Requests for compensation for delays must be substantiated by itemized data and records clearly showing that the work delayed was progressing according to the approved schedule and that the costs are directly attributable to the delay in

the Work claimed. The Contractor shall provide written schedules demonstrating how the Work being delayed affects the approved schedule.

- d. No extension of time, additional compensation, or change in the Contract price shall be allowed for any delays caused in whole or in part by the Contractor, any subcontractors, or any supplier. (For unavoidable justified delays, see Section 19.9 of these General Conditions.)

**19.5 Change Orders:** All change orders must indicate that the Contract Time for Completion is not changed or is either increased or decreased by a specific number of days. Any change or requested change in the Contract price shall also be included in the change order. The Contractor must provide written justification for an extension of the Time for Completion to the City Engineer and to the City. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a Critical Path Method (CPM) schedule is required by the Contract, or is used for the convenience of the Contractor, no increase to the Time for Completion shall be allowed unless, and then only to the extent that, the additional or changed Work increases the length of the critical path. Approved increases in time required to complete the Work shall be added to the Time for Completion. Decreases in time as a result of the change order shall be demonstrated by a decrease in the critical path of the work if CPM scheduling is properly used and updated by the Contractor. If not, the City shall determine the appropriate decrease by the best means possible. Approved decreases in the time needed to complete the Work shall be deducted from the Contract completion date. The change to time or Contract price allowed by each change order shall include all time and monetary impacts of the change, whether the change order is considered alone or with all other changes during the course of the project. Failure to include a change to time and/or Contract price in a change order shall waive any claims the Contractor may have for any change to the time and/or Contract price unless the parties mutually agree in writing to postpone a determination of the change to time and price resulting from the change order. Such a determination may be postponed not more than forty-five (45) calendar days to give the Contractor an opportunity to demonstrate a change in the time and/or price needed to complete the Work. However, the Contractor shall continue with the Work as may be directed by the City Engineer and shall not stop work on the Project unless directed to do so by the City Engineer.

**19.6 Extra Work:** The City reserves the right to make alterations or changes in the Work as the Work progresses. When any work is necessary to the proper completion of the project which was not provided for in the Contract, the Contractor shall do such work, but only when and as ordered in writing by the City Engineer. Payment for such extra work shall be made as hereinafter provided in Section 19.7.

**19.7 Payment Methods for Extra Work:** The extra work done by the Contractor as authorized and approved by the City Engineer shall be paid for in the manner hereinafter described; and the compensation thus provided shall be accepted by the Contractor as payment in full for all labor, material, tools, equipment, incidentals, all superintendents' and timekeepers' services, all insurance, bonds, and all other reasonable overhead expenses incurred in the performance of the extra work. Payment for extra work may be made by one of the following methods, as agreed on in writing by the City Engineer and the Contractor before said extra work is commenced, subject to all other conditions of the Contract:

- a. Unit prices; or
- b. Lump sum price; or

- c. The cost of change in work plus ten percent (10%) of allowable costs. Allowable costs for purposes of this paragraph shall only include labor, material, sales tax, the rental of power tools and equipment actually used, or a reasonable price for the use of power tools and equipment owned by the Contractor based upon their life expectancy and purchase price, utilities, pro rata charges for foremen, and all payroll charges such as employer's FICA contribution, Public Liability and Workers' Compensation Insurance, but only if all such costs are incurred as the direct result of the changes in the Work. The change in cost for labor and material bonds and for performance bonds relative to the value of the extra work shall be allowable cost but shall not be marked up. If any subcontractor at any tier does all or part of the Work, the subcontractor's markup on that Work shall be fixed at fifteen percent (15%) of the allowable cost as defined herein.

**19.8 Disputed Claims for Extra Work:** If one of the payment methods set forth in Section 19.7 is not agreed on by the City Engineer, the City may retain either an independent contractor to perform such extra work or use its own forces to perform such extra work and the Contractor shall cooperate fully with the independent contractor or City in its performance of the extra work. However, the City Engineer may also direct Contractor to perform such extra work and any dispute will be handled as set forth in Section 31 of these General Conditions.

**19.9 Change in Contract Time or Contract Price:** The Contractor may request an extension of time or change in the Contract price should the Work be obstructed or delayed by any justified unavoidable delays not caused in whole or in part by the Contractor, any subcontractor, or suppliers. However, delays caused by weather conditions will not be considered justified unavoidable delays unless they are caused by unusual weather as set forth in Section 4.2 of the Instructions to Bidders, in which case only an extension of time may be considered by City, but no additional compensation will be allowed for unusual weather. Furthermore, Contractor agrees that for any delays not caused by the City or any delays beyond the control of the City, no additional compensation will be due the Contractor and no change in the Contract price will be allowed by the City, only an extension of the Contract time will be considered by the City. The Contractor shall deliver requests for changes in the Contract price and/or completion time in writing to the City Engineer within ten (10) calendar days of the occurrence requiring the change. Approved changes that alter the time of the Contract shall extend the completion time by a period equivalent to the certified time lost by such occurrence. No change in Contract price and/or completion time shall be allowed if the above notice has not been properly given, such notice being a condition precedent to any such request by the Contractor. However, the Contractor shall continue with the Work as may be directed by the City Engineer and shall not stop work on the Project unless directed to do so by the City Engineer.

## **SECTION 20. PAYMENT FOR WORK**

**20.1 Monthly Construction Estimates:** Monthly construction estimates shall be submitted to the City Engineer, Noel C. Taylor Municipal Building, 215 Church Avenue, S.W., Room 350, Roanoke, Virginia 24011, no more than once every thirty (30) calendar days.

**20.2 Preparing Progress Payment Requests:** In preparing construction estimates, the Contractor may request a progress payment based on the actual percentage of work completed during the preceding month. The estimate shall contain a breakdown of the total Contract amount, to include a separate breakdown of all approved change orders, into principal items of construction, showing the estimated quantity, unit price, and total



for each item. In preparing progress payment requests, the material delivered on the site and preparatory work done may be taken into consideration, if properly documented, or as may be required by the City Engineer so that quantities can be verified. In addition to material delivered on the site, material such as large pieces of equipment and items purchased specifically for the project, but stored off the site, may be considered for payment, provided prior written approval is given by the City Engineer.

- 20.3 Progress Payments:** The City will make a progress payment to the Contractor on the basis of a duly certified and approved progress payment request for the work performed under the Contract. In the event that the City disagrees with the monthly construction progress payment request submitted by the Contractor, or in the event the As-Built Drawings are not being kept current, the City may withhold all or a portion of the progress payment until such dispute is resolved to the satisfaction of the City. If there are any objections or problems with the progress payment request, the City will notify the Contractor of such matters. If the progress payment request is approved by the City, payment will be made by the City to the Contractor not more than thirty (30) calendar days after such request has been approved. However, if there is an objection or problem with a progress payment request, the Contractor shall continue with the Work as may be directed by the City Engineer and shall not stop work on the Project unless directed to do so by the City Engineer. Any such disputes shall be handled as set forth in Section 31 of these General Conditions.
- 20.4 Retainage:** To ensure proper performance of the Contract, the City shall retain, unless stipulated otherwise, five percent (5%) of each progress payment until Final Acceptance of all work covered by the Contract. The Contractor may request that such retainage be paid into an escrow account on certain Contracts, pursuant to Section 2.2-4334 of the Code of Virginia. (See also Sections 6.2 and 14.6 of Instructions to Bidders.)
- 20.5 Ownership of Material and Work:** All material and work covered by progress payments shall become the property of the City. This provision shall not relieve the Contractor from the responsibility for all material and to maintain all completed work and to repair all damaged work. The Contractor shall not deem a progress payment as a waiver to complete the terms of the Contract or shift the risk of loss from the Contractor to the City. The Contractor warrants that Contractor has good title to all material, equipment, and supplies which Contractor uses in the Work or for which Contractor accepts payment in whole or in part.
- 20.6 Payments to Others by Contractor:** The Contractor agrees that Contractor will comply with the requirements of Section 2.2-4354 of the Code of Virginia regarding Contractor's payment to other entities and that Contractor will take one of the two actions permitted therein within seven (7) calendar days after receipt of amounts paid to Contractor by the City. The Contractor agrees that Contractor shall indemnify and hold the City harmless for any lawful claims resulting from failure of the Contractor to make prompt payments to all persons supplying him equipment, labor, tools, or material in prosecution and completion of the Work provided for in the Contract. In the event of such claims, the City may, after providing written notice to the Contractor, withhold from any progress and/or final payment the unpaid sum of money deemed sufficient to pay all lawful claims and associated costs in connection with the Contract.
- 20.7 Final Payment:** Within thirty (30) calendar days after the Final Acceptance of the Work, the City shall pay the Contractor the Final Payment, less all prior payments, damages, setoffs, liquidated damages, any amounts withheld from retainage, or any other amounts Contractor may owe the City for any reason whatever.
- 20.8 Payment and Acceptance:** No payment, final or otherwise, nor partial or entire use, occupancy, or acceptances of the Work by the City shall be an acceptance of any work
- Project: Kirk Avenue Compactor General Conditions  
Rev. 7/1/2012

or material not in accordance with the Contract, nor shall the same relieve the Contractor of any responsibility for any faulty material or workmanship or operate to release the Contractor or its surety from any obligation under the Contract or the Performance Bond or the Labor and Material Payment Bond.

- 20.9 Right to Audit:** The Contractor agrees that the City, and any approving Federal or State Agency or any of their duly authorized representatives, shall have access to any books, documents, papers, records, schedules and electronic data of the Contractor which are pertinent to this Project for the purpose of making an audit, examinations, excerpts, copies or transcriptions and that Contractor will provide copies of such items to City upon City's request, at no cost to City.

## **SECTION 21. LIQUIDATED DAMAGES**

If liquidated damages are provided by the Contract, the following provisions shall apply:

- a. Subject to the provisions of the General Conditions granted for extension of time allowed for completion of the Work, if the Work is not substantially completed by the date required in the Contract, the Contractor shall owe to the City, not as a penalty but as step one liquidated damages, the sum stated in the Contract for step one liquidated damages for each and every calendar day of delay in substantial completion.
- b. Once the Work is substantially complete, the accrual of step one liquidated damages shall stop and the Contractor shall have thirty (30) calendar days in which to achieve Final Acceptance of the Work.
- c. If Final Acceptance of the Work is not achieved by the thirtieth (30th) calendar day after substantial completion, and if any extension of time is not granted by the City, the Contractor shall owe to the City, not as a penalty but as step two liquidated damages, the sum stated in the Contract as step two liquidated damages for each and every calendar day of delay in Final Acceptance. All such liquidated damages set forth in this Section 21 are in addition to any other damages the City may be entitled to recover from the Contractor.

## **SECTION 22. INSPECTION FOR SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE**

- 22.1 Substantial Completion:** The Contractor shall notify the City, in writing, that the Work will be ready for inspection to determine if it is substantially complete and ready for testing on or after a certain date, which date shall be stated in the notice. The notice shall be given at least ten (10) calendar days in advance of said date and shall be forwarded through the City Engineer. Inspection and testing shall take place at a time mutually agreeable to the Contractor, City, and City Engineer. The inspection shall determine if substantial completion has been accomplished. If so, the City Engineer will issue a Certificate of Substantial Completion and attach a written list of unfinished Work and defective Work, commonly referred to as a "punch list", which must be finished and corrected to obtain Final Acceptance.
- 22.2 Request for Final Acceptance:** The Contractor shall notify the City Engineer, in writing, that the Work will be ready for final inspection and testing on or after a certain date, which date shall be stated in the notice. That inspection and any necessary testing shall be conducted in the same manner as the inspection for substantial completion. When the Work is finally and totally complete, including the elimination of all known deficiencies, the Work shall be finally accepted by the City and final payment shall be made in accordance with Section 20.7 of these General Conditions.

- 22.3 Final Inspection:** The City Engineer will conduct the final inspection, and may elect to have other persons of its choosing also participate in the inspection. If one or more reinspection is required, the Contractor shall reimburse the City for all costs of reinspection or, at the City's option, the costs may be deducted from payments due to the Contractor.
- 22.4 As-Built Drawings:** No Contract retainage will be released prior to receipt of all approved As-Built Drawings.
- 22.5 Final Acceptance:** Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of the following documents and items; As-Built drawings, operation and maintenance manuals, written warranties, Certificate of Substantial Completion, Affidavit of Payment of Claims, and MBE/WBE/SB/VB Usage Status Form, the City Engineer will furnish a written Certificate of Final Acceptance of the Work to the Contractor. The City Engineer may accept the Work for occupancy or use while asserting claims against the Contractor, disputing the amount of compensation due to the Contractor, disputing the quality of the Work, its completion, or its compliance with the Contract Documents, and the like.
- 22.6 Release By Contractor:** The acceptance by the Contractor of the final payment or a payment designated as such shall be and does operate as a release by the Contractor of all claims by the Contractor against City and of all other liability of the City to the Contractor whatever, including liability for all things done or furnished in connection with the Work or the Contract.

## **SECTION 23. WARRANTY OF MATERIAL AND WORKMANSHIP**

- 23.1** The Contractor warrants that, unless otherwise specified, all material and equipment incorporated in the Work under the Contract shall be new, in first class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.
- 23.2** Work not conforming to these warranties shall be considered defective.
- 23.3** These warranties of material and workmanship are separate and independent from and in addition to any of the Contractor's other guarantees or obligations in this Contract, or that may arise by law.

## **SECTION 24. GUARANTEE OF WORK**

- 24.1 One Year Warranty:** The Contractor does warrant and guarantee the Work against defects or deficiencies in the Work and in all material, equipment, and workmanship for a period of one (1) year from the date of Final Acceptance.
- 24.2 Defective Work:** The Contractor agrees it shall repair or replace, at Contractor's sole expense, and to the satisfaction of the City Engineer, any work, material, equipment, or part that is found, by the City Engineer, to be defective.

**24.3 Repairs:** If, within any guarantee period, defects are noticed by the City Engineer which require repairs or changes in connection with the guaranteed work, those repairs or changes being in the determination of the City Engineer rendered necessary as the result of the use of material, equipment, or workmanship which is defective, inferior, or not in accordance with the terms of the Contract, then the Contractor shall, promptly upon receipt of notice from the City Engineer, such notice being given not more than four weeks after the expiration of any such guarantee period, and without any expense to the City:

- a. Place in satisfactory condition all guaranteed work and correct all defects therein; and
- b. Make good all damage to the structure, site, equipment, or contents thereof, which in the determination of the City Engineer is the result of the use of material, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the Contract; and
- c. Make good any work or material or the equipment and contents of structures or the site disturbed in fulfilling any such guarantee.

**24.4 Warranty Extension:** In any case, where in fulfilling the requirements of the Contract or any guarantee embraced in or required thereby, the Contractor disturbs, damages or repairs any work guaranteed under the Contract, Contractor shall restore such work to a condition satisfactory to the City Engineer and guarantee such restored work to the same extent and for a like additional period of time as it was originally guaranteed under this Contract.

**24.5 Correction of Defects:** If the Contractor, after notice, fails to proceed promptly, but in no event longer than thirty (30) calendar days after such notice, unless otherwise agreed to by the City Engineer, to comply with the terms of the guarantee and/or correct the Work, the City may have the defects corrected by its own forces or another contractor and the Contractor and its surety shall be liable for all costs and expenses incurred in doing so.

**24.6** Nothing contained in this section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents or the law of Virginia, including liability for defective work.

## **SECTION 25. STOP WORK ORDER**

In the event that conditions exist such that no work can or should continue, other than the routine closing of the site, the Contractor may submit to the City Engineer a request to stop work or the City Engineer on his/her own may issue a Stop Work Order. The City Engineer will, if he/she approves the request or issues the order himself/herself, deliver a written "Stop Work Order" to the Contractor stipulating the effective date and the Contract time remaining. The Work, other than the routine closing of the site, and Contract time shall not again be started until a written "Resume Work Order" is received by the Contractor from the City Engineer. When the Work is stopped at the request of the Contractor and through no fault of the Contractor, the Contractor may only recover from the City payment for the cost of the Work actually performed, together with reasonable overhead and profit thereon up to that time, but profit shall be recovered only to the extent that the Contractor can demonstrate that it would have had profit on

the entire Contract if it had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed, including, but not limited to, home office overhead or any other such costs. The Contractor may also recover the actual cost of physically closing down the jobsite, but no other costs of the Stop Work Order. The City may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall the Stop Work Order to the Contractor relieve in any way the obligations of the Contractor's surety on its payment and performance bonds. When work is stopped by the City Engineer due to any fault of the Contractor, the Contractor may not recover any of the above costs or items or any other costs, profits, expenses, or damages of any type.

## **SECTION 26. TERMINATION OF CONTRACT FOR CAUSE**

- 26.1 Termination for Cause:** If the Contractor should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the City may terminate the Contract. If the Contractor should refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper material, or if it should fail to make prompt payment to subcontractors or suppliers of material or labor, or disregard laws, ordinances, or the written instructions of the City Engineer, or otherwise fails to comply with any of the terms or provisions of this Contract including, but not limited to, poor services, work or material, then the City may terminate this Contract. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.
- 26.2 Possession of Work:** Upon termination of the Contract, the City may take possession of the premises and of all material, tools, and appliances thereon and finish the Work by whatever method the City may deem expedient. In such case the Contractor shall not be entitled to receive any further payment of any type. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract price, the Contractor shall pay the difference to the City, together with any other cost or expenses of terminating the Contract and having it completed by others, together with any and all other damages City may be entitled to from the Contractor.
- 26.3 Alternative Termination:** If it should be judicially determined that the City improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the City.
- 26.4 Termination Rights:** Termination of this Contract under Section 26 or Section 27 is without prejudice and in addition to any other rights or remedies of the City against the Contractor.

## **SECTION 27. TERMINATION FOR CONVENIENCE OF CITY**

- 27.1 Termination for Convenience:** The City, at its discretion, may terminate this Contract at any time without cause, in whole or in part, upon giving the Contractor written notice of such termination. Upon such termination, the Contractor shall immediately cease work and remove from the jobsite all of its labor forces, equipment, and material as City elects not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as City may require to assign to the City the Contractor's interest in all subcontracts and purchase orders designated by City. After all such steps have been taken to City's satisfaction, the Contractor shall receive as full compensation for termination and assignment only the following:

- a. All amounts then otherwise due under the terms of this Contract for actual work performed and approved by City; and
- b. Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination. The Contractor shall not be entitled to any compensation for lost profits or for any other type of contractual compensation or damage, other than those provided by the preceding sentence, including any on site or home office overhead. Upon payment of the foregoing, City shall have no further liabilities or obligations to Contractor of any nature.

**27.2 Termination Effect on Surety:** In no event shall termination for the convenience of the City terminate the obligation of the Contractor's surety on its payment and performance bonds.

## **SECTION 28. PRECONSTRUCTION CONFERENCE**

The City Engineer shall notify the Contractor as to the location, date, and time of a preconstruction conference to confirm procedures for processing construction estimates for payment and related submissions and to discuss other matters pertaining to scheduling and execution of the Work.

## **SECTION 29. PROJECT SIGN(S)**

The Contractor shall supply, erect, and maintain Project Sign(s) in accordance with the City of Roanoke Standard Detail. The sign(s) shall be located as directed by the City Engineer. The Contractor shall not display any other signs or advertisements.

## **SECTION 30. ASSIGNMENTS**

The Contractor shall not assign, in whole or in part, any of its rights, duties, or obligations under this Contract with the City without the prior written consent of the City.

## **SECTION 31. CONTRACTUAL DISPUTES**

Contractual claims, whether for money or for other relief, including any disputes as to change orders or extra work, shall be submitted, in writing, no later than sixty (60) calendar days after final payment or payment designated as a final payment; however, written notice of the Contractor's intention to file such claim must be given at the time of the occurrence or beginning of the work upon which the claim is based. Such notice is a condition precedent to the assertion of any such claim by the Contractor. A written decision upon any such claims will be made by the City Manager or his/her designee (hereafter City Manager) within thirty (30) calendar days after submittal of the claim and any practically available additional supporting evidence required by the City Manager. The Contractor may not institute legal action prior to receipt of the City's decision on the claim unless the City Manager fails to render such decision within one hundred twenty (120) calendar days from submittal of its claim. The decision of the City Manager shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim or from expiration of the 120 day time limit, whichever occurs first, initiates legal action as provided in Section 2.2 - 4364, of the Code of Virginia. Failure of the City to render a decision within said one hundred twenty (120) calendar days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The

sole result of the City's failure to render a decision within said one hundred twenty (120) calendar days shall be Contractor's right to immediately institute legal action. No administrative appeals procedure pursuant to Section 2.2 - 4365, of the Code of Virginia, has been established for contractual claims under this Contract.

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**CITY OF ROANOKE, VIRGINIA**

**SUPPLEMENTAL GENERAL CONDITIONS**

1. Regardless of the amount of the Contract awarded for this Work, Contractor shall provide the minimum insurance requirements set forth in Sections 4.1 and 4.2 of the General Conditions and Section 4.3 of the General Conditions shall in no event be applicable.



## **General Technical Specifications**

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01000	Special Conditions
01200	Measurement and Payment
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#### **Division 2 - Site**

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02100	Existing Underground Utilities (Public and Private)
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A	City of Roanoke Project Sign Detail
B	Transmittal of Shop Drawings
C	Request for Information Form

**End of Table of Contents**

## Section 01000

### Special Conditions

#### 1. Part 1 General

- 1.1. **Description of Work** -The project consists of the construction of a trash compactor enclosure, conduits, concrete slab, and associated work on the Kirk Alley side of 121 Campbell Ave, SE .
- 1.2. Not Used
- 1.3. The plan set is incomplete unless accompanied by the City project manual. Likewise, this project manual is incomplete unless accompanied by the plan set.
- 1.4. All products shall be new and in first class condition.
- 1.5. The Contractor shall provide the City's project manager, City's inspector, or other City representatives, safe access to all areas of work throughout the course of the construction project and for final inspection. Safe access includes the use of man-lifts, operated by a Contractor's representative, or any other such equipment as needed to reach areas of inspection.
- 1.6. A Request for Information Form is attached in Appendix C for the Contractor's use.
- 1.7. **Contractor Superintendent** – At all times during the project, the Contractor shall be required to have a competent Superintendent on site. The Contractor shall designate the Superintendent at the pre-construction conference. Under no circumstances, shall the Contractor designate multiple Superintendents. The designated Superintendent shall have adequate social skills to interact with City Inspector and City Project Manager. Not having the designated Superintendent on-site during any work operations, including subcontractor's work operations, may result in a Stop Work Order issued by the City Project Manager. The Contractor shall be responsible for any delays and monetary losses resulting from the Stop Work Order. Once the designated Superintendent has returned to the project site, a Resume Work Order may be issued by the City Project Manager.
- 1.8. In accordance with Section 29 of the General Conditions, one week prior to mobilization for construction activities, the Contractor shall erect a construction sign(s) on site to notify the business owners, commuters and residents about the construction activities. See Appendix A for a detail.
- 1.9. Not Used.

1.10.       **Safety**

1.10.1. Citizen and workman safety shall be given top priority at all times.

1.10.2. See Section 17 of the General Conditions for additional requirements.

**2. Traffic Maintenance, Work Area Protection, and Access**

2.1. Maintenance of Traffic and Work Area Protection Plan - All traffic control shall be subject to approval by the City Traffic Engineer (Transportation Department 540-853-2385). Changes to the Maintenance of Traffic and Work Area Protection Plan, as directed by the City Traffic Engineer, shall not be a basis for additional compensation. The Contractor shall submit the Maintenance of Traffic and Work Area Protection Plan sealed by a Professional Engineer registered in Virginia for review and approval within 14 calendar days from the date that the Contract is fully executed. All lane and street closures and detours shall be coordinated with the Transportation Department. Note that the Engineering and Transportation Departments are separate departments. Contractor shall be required to provide all signage and devices in accordance with the Virginia Work Area Protection manual. In addition, the Contractor shall provide and maintain all signs for road/alley detours. **The City of Roanoke will not provide any signs.** This item also includes pedestrian traffic plans and details.

2.2. Any sign, to be posted on the job site/work zone for more than 72 hours, must be anchored into the ground with a steel/wooden post. Placing signs on trees, existing road sign posts, or mailbox posts, etc. shall not be allowed.

2.3. Work Area Protection - A traffic control plan conforming to the Virginia Work Area Protection Manual shall be submitted to the City of Roanoke for approval prior to starting construction. Contractor shall be required to provide all signage and devices in accordance with the Virginia Work Area Protection manual. In addition, the Contractor shall provide and maintain all signs. The City of Roanoke will not provide any signs.

2.4. Access - access to neighboring businesses shall be coordinated directly with business owner/operators. Advance notification of Kirk Alley closure shall be provided to businesses that use Kirk Alley for access 72 hours prior to scheduled alley closure. The alley shall not be closed while no work is being performed, but must be opened to traffic once work stops for the day. All open excavations shall be properly and safely covered with steel plates or restored upon completion of work for the day.

2.5. Contractor shall be responsible for providing all signage for the project. The Contractor shall not rely on City personnel to provide any signage.

2.6. There will be other Contractors and Utilities working on related projects in the area. Incidental coordination and cooperation with the Contractors shall be required.

2.7. Not Used.

### **3. Utilities – See Section 02100**

### **4. Tracer Wire**

4.1. A tracer wire shall be buried with all non-conductive pipe. Tracer wire shall be a 14 AWG SOLID copper conductor with a 30 mil thick, high-density, high molecular weight polyethylene (HDPE) insulation and rated for 30 volts. Insulation and jacket shall be RoHS compliant and utilize virgin grade material. Insulation color shall meet the APWA color code standard for identification of buried utilities. Tracer wire shall be made in the USA.

4.2. Install tracer wire along pipe and terminate at structure, cleanout, or other appurtenance in a 3-inch triple coil so that it is accessible for future utility location.

### **5. Required Permits**

5.1. The Contractor shall obtain a City of Roanoke business license before any permits are issued. Contact the City Commissioner of the Revenue for information on obtaining a license at 1-540-853-2521.

5.2. City of Roanoke Right of Way Excavation Permit for any work performed in the City of Roanoke Right of Way.

5.2.1. Contractor shall apply for the permit at the Development Assistance Center (DAC) located in the municipal building - 215 Church Ave, SW). City projects are exempt from Right of Way Excavation Permit Fees.

5.3. Not Used.

5.4. Not Used.

5.5. City of Roanoke building, fencing, and demolition permits shall be required for this project. Contractor shall coordinate and arrange for City of Roanoke Building Department inspections. The City of Roanoke Engineering Department will not coordinate this effort.

5.5.1. The Contractor shall apply for and obtain approval of all permits.

5.5.2. The City will pay for the building permit(s) but the Contractor shall be named as permittee.

5.5.3. The Contractor shall be responsible for the preparation of drawings and details sealed by a Professional Engineer licensed in Virginia of adequate detail for acceptance and approval by the City Building Department. Work also includes the preparation of shop drawings and review of those drawings by the engineer-of-record prior to starting fabrication.

#### 5.6. Permits for Off-Site Soil Disposal and Soil Borrow Areas

5.6.1. The City of Roanoke Planning Department may require permit verification (City and County land disturbing permits) for any off-site soil disposal and soil borrow areas. It is the Contractor's responsibility to coordinate and comply with Planning Department requirements.

### **6. Landscaping Establishment**

6.1. Not Used.

### **7. Inspectors**

7.1. The City of Roanoke will have a construction inspector assigned to each project.

7.1.1. The construction inspector reports directly to the City of Roanoke project manager.

7.1.2. The inspector shall be responsible for checking quality control, conformance of work with respect to project documents, and quantities for pay requests.

7.1.3. Contractor shall give the inspector proper notice for paving operations and concrete pours.

7.1.3.1. Inspector shall be present during all concrete pours and paving / tacking operations.

7.1.4. Upon substantial completion of the project, the inspector shall develop a punch list of items to be resolved before final acceptance.

7.1.5. Inspectors shall be responsible for checking work for acceptance within warranty periods.

- 7.2. The Contractor shall remove from the project site any employee or subcontractor employee deemed disorderly in accordance with Section 5.2 of the General Conditions.

## **8. Progress Meetings and Construction Schedule**

- 8.1. The Contractor's Project Manager and Superintendent shall attend bi-weekly progress meetings with the City Project Manager and other parties as required. The meeting dates and times will be determined at the pre-construction meeting. Meetings will be held on or near the job site. An updated Construction Schedule shall be provided at the meeting.
- 8.2. The Contractor shall prepare, submit, and maintain a Construction Schedule using the Critical Path Method (CPM) format. The schedule shall show the principal categories of work, corresponding with those used in the breakdown on which progress payments are based, the order in which the Contractor proposes to carry on the work, the date on which it will start each category of work, and the dates for completion. The construction schedule shall be at a suitable scale to indicate graphically the total percentage of work scheduled to be in place at any time. No activity shall have a value exceeding \$10,000, or a duration longer than 30 working days, without prior approval of the Owner. A critical path shall be developed based on scheduling logic that identifies all successor and predecessor activities. Float shall also be shown. Activities shall account for weather delays that can be reasonably expected. Milestones shall also be shown on the schedule including, but not limited to, notice to proceed date, construction start, substantial completion, and final inspection.
- 8.3. At least bi-weekly, and with each progress payment, the Contractor shall update the construction schedule with progress and provide an update to the Owner. The schedule shall be dated and the progress shall match the work that is complete and in place on that date. If at any time the work falls behind the construction schedule, the Contractor shall take such action necessary to improve progress (re: Paragraph 11.3 of General Conditions). The Contractor shall submit a revised schedule demonstrating its proposed recovery plan to make up the lag in scheduled progress. The plan shall show how the Contractor shall achieve recovery by increasing resources, work force, accelerating the planned construction volume, increasing assigned construction equipment, or taking other action as necessary, all without increase to the contract value and duration. If the Owner finds the proposed plan unacceptable, the Contractor shall submit a new plan.
- 8.4. Construction schedules shall be submitted in .pdf format and as three (3) color hard copies at a scale acceptable to the Owner.
- 8.5. The Construction Schedule shall show all necessary street/lane closures (see Section 2.4 – Access).

## **9. Erosion and Sediment Control**

- 9.1. Payment for Erosion and Sediment Control devices shall not only include installation and maintenance of the device but also the removal and disposal of the device after final stabilization is achieved. Additional mobilization for disposal of Erosion and Sediment Control devices will not be a basis for a increase in contract amount.

## **10. Geotechnical Reports – Appendix D**

- 10.1. No geotechnical reports have been performed for this project.

## **11. Environmental Reports**

- 11.1. No environmental investigations have been performed for this project.

## **12. Storage of Fuel Tanks**

- 12.1. No fuel tanks shall be stored overnight on the City right-of-way system or project site.

**End of Section**

## **Section 01200**

### **Measurement and Payment**

#### **1. General**

##### **1.1. Unit Prices**

- 1.1.1. Unit prices on the Bid Form shall include the cost, overhead and profit of providing all labor, materials, testing, tools and equipment necessary to perform all work in accordance with contract documents. No separate payment shall be made for incidental work relating to Bid Items.

##### **1.2. Basis of Payment**

- 1.2.1. The Contract is based on the unit prices listed on the Bid Form. The estimated quantities listed on the Bid Form are for the purpose of bid comparisons. All bid item payments shall be made based on actual provided quantities measured and accepted in place.
- 1.2.2. Include the cost for items not listed in the Bid Form, which are mentioned in the specifications, indicated on the drawings, or normally a part of the work described by the Contract Documents, in the cost of the appropriate items which are listed in the Bid Form.
- 1.2.3. No separate payments shall be made for work, material, equipment, or other expense which is not part of construction items listed in the Bid Form.
- 1.2.4. Payment can only requested for in-place materials. Payment for stored materials, on-site or off-site, can not be requested.

#### **2. Payment for Work**

- 2.1.1. Pay requests shall be submitted in tabular form including all pay items listed on the bid form and the unit price for each pay item along the total completed quantity for each item. The form shall have signature lines for the Contractor, City of Roanoke Project Manager, and City of Roanoke Inspector. Pay requests are to be limited to one per thirty (30) calendar days.

#### **3. Products – Not Used**

- 4. **Execution** - Each bid item shall include full compensation for performing the work specified in the bid items and furnishing all materials, labor, tools, equipment, profit and incidentals as required. Each bid item shall be paid on a percentage completed for that bid item unless otherwise noted.



- 4.1. Construction Stakeout Survey - Shall be paid on lump sum basis. Pay request may be made based on the percentage of completion of the overall project. Construction stakeout shall be performed by a Virginia Licensed Surveyor. The lump sum price shall include staking out all proposed improvements, checking elevations at utility crossings and connections, checking and adjusting curb elevations and heights, all grades to ensure positive drainage, and all other survey services necessary to complete the work.
- 4.2. Mobilization – Shall include the performance of construction preparatory operations, including the movement of personnel and equipment to the project site, storage and relocation of road signs, installation of project signs, application for and obtaining all permits, payment of performance and payment bond and other insurance premiums and for establishment of facilities necessary to begin work on a substantial phase of the contract. The first payment of 50% of the lump sum price may be requested on the first estimate following partial mobilization and initiation of construction work. The second and final payment request may be requested on the next estimate following completion of substantial mobilization.
- 4.2.1. No additional payment shall be made for demobilization or remobilization due to shutdowns, removal of E&S devices, temporary stop work orders, suspensions of work or for other mobilization activities.
- 4.3. Maintenance of Traffic and Work Area Protection - Shall be paid on a lump sum basis. Pay requests may be made for this item based on a percentage of completion for the project. The lump sum price shall include furnishing and installing all materials and manpower. The lump sum price shall also include maintaining the work area in accordance with Virginia Work Area Protection Manual, and the approved Maintenance of Traffic and Work Area Protection Plan. The Contractor shall submit a Maintenance of Traffic and Work Area Protection Plan sealed by a Professional Engineer registered in Virginia for review and approval within 14 calendar days from the date that the Contract is fully executed. All traffic control shall be subject to approval by the City Traffic Engineer (Transportation Department 540-853-2385). Changes to the Maintenance of Traffic and Work Area Protection Plan, as directed by the City Traffic Engineer, shall not be a basis for additional compensation.
- 4.4. Demolition – Shall be paid on a lump sum basis. Payment for this item is for the proper removal and disposal of all items, including but not limited to reinforced concrete slabs, curbs, concrete and asphalt pavement, milled pavement, existing aggregate base, concrete base, brick and cobble/granite pavers, buried sidewalks and road pavements, abandoned utility structures and lines, storm structures and manholes, foundations, roof drains, concrete entrances, and all other items necessary for the installation of new work. This item also includes protection of adjoining properties, buildings, and fences. Pay request may be made on a percentage of completion.

- 4.5. Utility relocations / Adjustments / Coordination – Shall be paid on a lump sum basis. The lump sum price shall include labor, materials, and equipment necessary for the bracing, shoring, raising and lowering of all utility manhole frames and covers, vaults, hydrants, valves and boxes, utility lines, incidental demolition, and all other items as necessary to complete the work and match new finished surfaces flush. The lump sum price shall also include all coordination with utility companies necessary to complete the work. Coordination shall include, but not be limited to, work in the same trench with utility companies or their contractor to relocate any utility necessary to complete the new work. Coordination shall also include work in the same trench to provide new services to the new work.
- 4.6. Rock Excavation - Shall be paid on a cubic yard basis. The unit price shall include rock removal by a combination of mechanical means and rock splitting mortar (blasting not allowed), excavation, transporting, and disposal of excess or unsuitable material offsite. Payment for this item shall be based on the in place measurement of exposed undisturbed rock, including required over-excavation for trench bedding, by person authorized by City project manager.
- 4.7. Geogrid Subgrade Stabilization – Shall be paid on a square yard basis. The unit price shall include all labor, materials, and equipment to install Tensar Triax Geogrid TX160 per the manufacturer's requirements. Where poor subgrade is encountered, the City project manager may authorize the use of geogrid in lieu of remedial excavation.
- 4.8. Light/Gate Post Foundation – Light/gate post foundation shall be paid for on a lump sum basis, complete in place. The unit price shall include all labor, equipment, and material for excavation, backfill, compaction, form work, reinforcement, anchor bolts, concrete placement, ground rod and wire, and all other work required for a complete installation. The unit price also includes pot-holing, and final alignment adjustments to avoid utility conflicts.
- 4.9. Gate Post Foundation – Gate post foundation shall be paid for on a lump sum basis, complete in place. The unit price shall include all labor, equipment, and material for excavation, backfill, compaction, form work, reinforcement, anchor bolts, concrete placement, and all other work required for a complete installation. The unit price also includes pot-holing, and final alignment adjustments to avoid utility conflicts.
- 4.10. Light Fixture and Wiring – Light Pole and fixture shall be paid on a lump sum basis, complete in place. The unit price shall include all labor, equipment, material for installation and wiring, aiming the fixture, and all other work required for a complete working installation. The Contractor shall ensure that the bolt template is the correct one for the job prior to beginning light pole foundation work. Pole shall be set plumb. The unit price also includes pot-holing, and final alignment adjustments to avoid utility conflicts.

- 4.11. Electrical Trench - Shall be paid on a linear foot basis, complete in place. Measurements for payment shall be the horizontal distance of the installed conduit. The linear foot price shall include all labor, equipment, materials, fittings for trenching, installation of 4" PVC conduit, installation of nylon pull rope, backfill, and all other work to provide a complete working system. All conduit backfill shall be flowable fill. Long-sweep radii shall be used at all bends. The unit price also includes pot-holing, final alignment adjustments to avoid utility conflicts.
- 4.12. Electrical Service Extension Duct - Shall be paid on a linear foot basis. Measurements for payment shall be the horizontal distance of the installed conduit. The linear foot price shall include all labor, equipment, materials, fittings for trenching, installation of a single PVC conduit (sizes shown on plans), conduit spacers, installation of conductors and ground of matching gage, encasement with concrete, and backfill with flowable fill. This item also includes asphalt restoration (which must be completed for this pay item to be eligible for payment). The unit price also includes pot-holing and final alignment adjustments to avoid utility conflicts. Long-sweep radii shall be used at all bends. Work shall be coordinated with APCO.
- 4.13. Reinforced Concrete Slab - Shall be measured in square feet, complete in place. No additional compensation shall be allowed for radial walk. The unit price shall include all labor and materials required for excavation; backfill and compaction of VDOT 21A aggregate, forming using forms in good condition; steel reinforcement, placement, finishing, curing, and hot/cold weather protection of concrete, expansion and crack control joints. This item also includes demolition of existing concrete, saw-cutting, demolition to provide a neat, uniform tie-in, and curing compound. Minimum slab thickness shall be 8 inches. This item also includes neat saw-cutting at the existing alley pavement, and asphalt restoration.
- 4.14. Fence Enclosure – Shall be paid on a lump sum basis. The unit price shall include all labor, equipment, and material for the fabrication and erection of the steel posts and frame, anchor plates, sliding gate and hardware, double leaf gate and hardware, decking panels, and all other work required to provide a complete and lockable fence enclosure. This work also includes surface preparation and cleaning, and application of high-performance epoxy/urethane coating system on frame and panels. This work also includes the preparation of drawings and details sealed by a Professional Engineer licensed in Virginia of adequate detail for acceptance and approval by the City Building Department. Work also includes the preparation of shop drawings and review of those drawings by the engineer-of-record prior to starting fabrication.
- 4.15. Flange-mounted Bollards – Shall be paid for each, complete in place. The unit price shall include all labor, equipment, and material for the fabrication and installation of steel flange-mounted bollards, drilling the new concrete slab,

threaded rod anchors and bolts, filling with concrete, priming, painting, and touch-up painting upon completion.

- 4.16. Handicap Ramp (City Standard) - Shall be measured and paid for per each, complete in place. The unit price shall include all labor and materials required for excavation; backfill and compaction of VDOT 21A aggregate, forming using steel forms in good condition (including face form), placement, finishing, curing, and hot/cold weather protection of concrete, length of gutter, neat saw-cutting of existing pavement and concrete, and asphalt restoration in front of the ramp. This item also includes demolition of existing concrete to provide a neat, uniform tie-in; demolition of existing pavements, shoulder restoration and installation of cast iron detectable warning plates that are powder-coated red. Minimum two 2' by 2' plates at each location. Minimum slab thickness shall be 7 inches.
- 4.17. Unistrut Post and Frame System (for future electrical panels) – Shall be paid on a lump sum basis. The unit price shall include all labor, equipment, and material for the fabrication and erection of the galvanized unistrut posts, flange-mount post bases, frame, and threaded rod and epoxy system, as shown on the plans.

### **End of Section**

## Section 01350

### Submittals

#### 1. General

- 1.1. Submittals shall include all anticipated shop drawings, product data, and samples as defined in the Contract Documents and also include certificates, test data, and other submitted data required to demonstrate compliance with the contract documents. See General Conditions Section 14 for more information.
- 1.2. Submittal Register – Provide electronic PDF copy of transmittal and submittal by e-mail (See blank form in Appendix B for cover transmittal). All samples may be delivered to job trailer.

Submittal Number	Description
1	**Schedule
2	**Maintenance of Traffic and Work Area Protection Plan (including pedestrian detour plans)
3	Contractor's Superintendent, Quality Control officer, and Safety Officer 24-hour contact information
4	Proctor Data for VDOT 21-A (new test for this project) (ASTM D698)
5	Concrete Mix Designs: VDOT A3 general purpose (with No. 57 aggregate). Sample 28-day breaks, admixtures
6	Flowable Fill Mix Design, sample 28-day breaks, admixtures
7	Concrete expansion joint material, "zip strip" for recessed joint, joint sealer, and curing compound product data, detectable warning plate product data
8	Geogrid Product Data (Tensar Triax TX160)
9	Light Fixture Product Data
10	Asphalt Mix Designs and tack coat product data (hot mix only, no warm mix asphalt, WMA)
11	Fence Enclosure drawings and details prepared and sealed by a Virginia Professional Engineer and approved by the City Building Department.
12	Fence Enclosure Shop Drawings, including but not limited to metal panels, gate and hardware details, fastener product data.
13	Fence Enclosure Frame Paint System Product Data.
14	Metal Panel Paint System Product Data.
15	Flange-mounted bollard Shop Drawing and paint system product data
16	Unistrut Post and Frame System product data

**\*\* - Must be submitted within 14 calendar days from the date that the Contract is fully executed.**

- 1.3. City Procedures - City's Review: Submittals will be reviewed with reasonable promptness. Submittals will be stamped by the City with one of the five following actions:

- 1.3.1. "Approved" indicates approval with no exception taken and the plan of work shown may proceed. However, the City's approval of any submittal shall not relieve the Contractor from the responsibility of complying with all requirements of this Contract, including the obligation to provide submittals that are accurate and complete. The City assumes no responsibility for figured dimensions on shop drawings. In addition, the City assumes no responsibility for concrete compression strength tests even after the mix design has been approved.
  - 1.3.2. "Approved as Noted" indicates approval subject to the noted corrections. Ordering or fabrication of work shown may proceed on the basis of corrections indicated.
  - 1.3.3. "Correct and Resubmit" indicates that additional information or changes (as noted) are required prior to taking further action. Corrections shall be made to the submittal and it shall be resubmitted. Ordering or fabrication of work shall not proceed.
  - 1.3.4. "Disapproved" indicates information provided reveals that submittal does not conform to the contract requirements. Submittal conforming to the contract requirements shall be submitted for approval.
  - 1.3.5. "No Action Taken" indicates one of the following: Submittal incomplete and a proper review cannot be performed, Insufficient copies submitted, Transmittal form incomplete, Contractor's certificate approving submittal not signed or missing, Submittal not required and the contract documents do not require the City to take action on this item, and Other causes or reasons as noted.
- 1.4 Changes After Approval – Contractor shall not make any changes in submittal marked "Approved" or "Approved as Noted" without obtaining the prior written consent of the City. If such written consent is obtained, revise the submittal to show fully the altered parts of the work and resubmit according to the procedures specified herein. State on resubmitted plans that the work shown supersedes and voids identified parts of the same work previously shown. Give full identification on the drawings previously approved by the City and the date of such action.
- 1.5 Proceeding without Approval - Proceeding with any construction and ordering or fabricating materials before all relevant drawings have been "Approved" or "Approved as Noted" shall be done at the Contractor's sole risk.

#### **End of Section**

## **Section 02100**

### **Existing Underground Utilities (Public and Private)**

#### **1. General**

- 1.1. This Section includes the requirements for identifying, marking, and determining the location of underground utilities, both public and private. This Section applies to the following underground utilities: electrical ducts and lines, cable lines, communication lines, fiber optic lines, traffic signal lines, potable and non-potable water lines, processed water lines, storm drain lines, sanitary sewer lines, natural gas lines, petroleum lines, railroad lines, and all other lines located within the project limits.
- 1.2. The Contractor shall contact Miss Utility (811 or 1-800-552-7001) and a private utility locating service, for location marks of utilities at least 48 hours prior to construction, or as far in advance as necessary to not interfere with the progress of the work.
- 1.3. Existing utilities along the project route, or on the project site, are shown on the Plans based on available records. The Contractor acknowledges that there may be unknown public or private utilities that are not shown on the Plans. The location of all known utilities (both public and private) shall be verified prior to the start of construction. Existing utilities shall be supported and maintained as necessary during construction.
- 1.4. Some utilities shown on the plans are duct banks, but are represented by a single line. The Contractor shall verify the limits of these facilities by potholing or excavation to ensure there are no conflicts with the proposed work.
- 1.5. When connecting into existing gravity utility systems, the Contractor shall verify tops and inverts of all existing structures, and expose and investigate any potential utility conflicts before fabrication of new structures.
- 1.6. Coordination of Utility Relocation
  - 1.6.1. Where proposed construction shown on the plans crosses or is adjacent to existing utilities, the Contractor shall coordinate construction with utility companies or owners where existing utilities need to be relocated or adjusted. The Contractor shall allow adequate time for the relocation of utilities by utility companies should such be necessary. No additional time or compensation shall be provided for delays that result from relocation of utilities.
- 1.7. Utility Conflict between Proposed Construction and Existing Utility not Shown on the Plans.
  - 1.7.1. If the Contractor suspects that there is a utility conflict between proposed construction and an existing utility not shown on the plans, then the Contractor shall expose the suspect utility that may be in conflict with the work at his own expense. Should the Contractor believe that a conflict exists; the Contractor must provide a plan and profile of sufficient

scale and detail to clearly show the conflict with all dimensions. The Contractor must also identify the owner of the utility and provide written documentation from that owner that the utility is in service, and not abandoned. It is the responsibility of the Contractor to prove that the conflict exists. The City Project Manager may require that the Contractor's plan and profile showing the conflict be prepared and sealed by a licensed surveyor registered in Virginia.

1.7.2. Remove abandoned utility lines and structures to allow for installation of the new work.

**2. Products – Not Used**

**3. Execution – Not Used**

**End of Section**



## **Section 02231**

### **Demolition**

#### **1. General**

##### 1.1. Section includes requirements for the demolition of

- 1.1.1. Aggregate base, concrete base, brick and cobble base, macadam base, reinforced concrete pavement, asphalt pavement, milled pavement, both on the surface and buried.
- 1.1.2. Curb, Gutter, medians, sidewalk, concrete walls and foundations, both on the surface and buried.
- 1.1.3. Buried Pipe and Associated Structure Removal / Abandoned utility structures
- 1.1.4. Storm drains and structures.
- 1.1.5. Asphalt milling and jack hammering to achieve uniform tie-in of finished asphalt surface.
- 1.1.6. Buried train or trolley tracks and cross ties and associated items.

##### 1.2. Related Sections

- 1.2.1. Section 02100 - Existing Underground Utilities (Public and Private)
- 1.2.2. Section 02315 – Fill and Backfill
- 1.2.3. Section 03200 – Flowable Fill

##### 1.3. References – Not Used

##### 1.4. Quality Assurance – Not Used

##### 1.5. Submittals – Upon request, the Contractor shall furnish the names, addresses, and permit numbers of all disposal sites to the owner.

##### 1.6. The use of explosives will not be permitted.

##### 1.7. The sale of salvage on-site will not be permitted.

#### **2. Products**

- 2.1. Remove and store on the site at a location directed by the owner salvage items designated to be reused.

#### **3. Execution**

##### 3.1. Preparation

- 3.1.1. Locate, identify, and protect all utilities. Relocate or coordinate relocation of utilities as necessary.

- 3.1.2. Demolition of certain items subject to the Building Code may require a demolition permit from the City of Roanoke Development Assistance Center (DAC) located at 215 Church Avenue.

## 3.2. Activities

### 3.2.1. Pavement

- 3.2.1.1. Identify length and location of pavement to be demolished.
- 3.2.1.2. Excavate and remove pavement, overlays, asphalt or concrete base, brick and cobble base, macadam base, and aggregate stone base.
- 3.2.1.3. Contractor shall saw cut locations where curb, gutter, sidewalk and pavement are to remain in place.
- 3.2.1.4. Dispose of excavated pavement in accordance with local laws and regulations. Burying the demolition debris on site will not be allowed.
- 3.2.1.5. Backfill in accordance with Section 2315 – Fill and Backfill.

### 3.2.2. Milled Pavement

- 3.2.2.1. Asphalt pavement section to be milled as shown on the plans.
- 3.2.2.2. Contractor shall take care not to damage any remaining curb, curb inlets, manhole structures, valve boxes, etc.
- 3.2.2.3. Milled pavement must have a uniform surface and be free of debris.
- 3.2.2.4. Incidental jack hammering or pavement removal by other methods will be necessary to achieve a uniform tie-in of finished asphalt surface where access by a milling machine is limited.
- 3.2.2.5. Pavement overlay shall be properly tacked. See Section 02741 – Asphalt Paving.
- 3.2.2.6. Contractor shall maintain any existing road crowns or super elevations, unless shown otherwise on plans

### 3.2.3. Curb, Gutter and Sidewalk, Concrete Slabs, Walls & Foundations

- 3.2.3.1. Identify length and location of curb, gutter, and sidewalk, walls and foundations to be demolished.
- 3.2.3.2. Excavate and remove curb, gutter and sidewalk, slabs, walls or foundations.
- 3.2.3.3. Contractor shall saw cut locations where curb, gutter, sidewalk, slabs, walls or foundations and pavement are to remain in place.

3.2.3.4. Dispose of excavated material in accordance with local laws and regulations. Burying the demolition debris on site will not be allowed.

3.2.3.5. Backfill in accordance with Section 2315 – Fill and Backfill.

### 3.2.4. Buried Pipe and Associated Structure Removal / Abandoned Utility Structures

3.2.4.1. Identify length and location of buried pipe and structures to be demolished.

3.2.4.2. Excavate and remove all identified pipe and associated structures as shown on drawings.

3.2.4.3. Abandon underground utilities (pipes and structures), which are indicated to remain in place, by filling with flowable fill in accordance with Section 3200 – Flowable Fill.

3.2.4.4. Dispose of all pipe and structures in accordance with local laws and regulations. Burying the demolition debris on site will not be allowed.

3.2.4.5. Backfill in accordance with Section 2315 – Fill and Backfill.

### 3.2.5. Below-Grade Construction

3.2.5.1. Demolish and remove all foundations, footings, concrete slabs both buried and at grade, and all other below grade construction.

## 3.3. Regulatory and Safety Requirements

3.3.1. Contractor shall comply with federal, state, and local hauling and disposal regulations. In addition to other requirements, herein, safety requirements shall conform with ANSI A10.6.

## 3.4. Dust and Debris Control

3.4.1. Contractor shall prevent the spread of dust and debris on pavements and avoid the creation of a nuisance or hazard in the surrounding area. Water misting, temporary barriers, or enclosures shall be used to control dust when necessary. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution. Sweep pavements as often as necessary to control the spread of dust, mud and debris. Comply with governing regulations.

## 3.5. Filling Voids

3.5.1. Completely fill below-grade areas and voids resulting from the demolition of structures.

## 3.6. Protection of Project Site

### 3.6.1. Traffic Control Signs

- 3.6.1.1. Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights.
- 3.6.2. Existing Work - Protect existing work which is to remain in place, be reused, or remain the property of the Owner. Repair items which are to remain and which are damaged during performance of the work to their original condition, or replace with new. Do not overload pavements to remain.
- 3.6.3. Trees - Protect existing trees to remain.
- 3.6.4. Facilities - Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities.
- 3.6.5. Temporary Asphalt Repair – A temporary asphalt repair (i.e., cold patch or other approved material) must be applied over a backfilled excavation before the lane containing the excavation is opened to traffic. The patch must be a minimum of 2 inches thick, level with the surrounding pavement, and of sufficient quality to carry the traffic loading of the street without sinking, displacement, or breaking apart.
- 3.6.6. Burning - Burning will not be permitted.
- 3.6.7. Relocations - Perform the removal and reinstallation of relocated items as indicated with workmen skilled in the trades involved. Repair items to be relocated which are damaged or replace items with new undamaged items as approved by the City of Roanoke.

**End of Section**

## **Section 02315**

### **Fill and Backfill**

#### **1. General**

- 1.1. Section includes filling, backfilling, and compacting for various construction applications: areas under concrete pavement and utility trenches.
- 1.2. Related Sections:
  - 1.2.1. Section 02100 - Existing Underground Utilities (Public and Private)
- 1.3. References (latest Edition and Errata)
  - 1.3.1. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbs/ft<sup>3</sup>), Standard Proctor.
  - 1.3.2. VDOT RBS – Virginia Department of Transportation - Road and Bridge Standards and Specifications
  - 1.3.3. City of Roanoke Right of Way Excavation and Restoration Standards
- 1.4. Quality Assurance – Not Used
- 1.5. Submittals - Soil classifications

#### **2. Products**

- 2.1. General Backfill Material
  - 2.1.1. VDOT No. 21-A Aggregate, Type I in accordance with VDOT RBS, Section 208
- 2.2. Select Backfill Material for Trenches
  - 2.2.1. VDOT No. 21-A Aggregate, Type I in accordance with VDOT RBS, Section 208

#### **3. Execution**

- 3.1. Preparation
  - 3.1.1. Locate and identify all utilities. Care should be taken not to damage utilities during backfilling activities.
  - 3.1.2. Identify required lines, levels, contours, and datum locations.
  - 3.1.3. Verify that survey bench marks and intended elevations for the Work are as indicated.
  - 3.1.4. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

### 3.2. Backfill Activities for concrete pavement and utility trench:

- 3.2.1. Backfill material shall be VDOT No. 21A Aggregate, placed in loose lifts not exceeding 6", and compacted to at least 95% maximum dry density within 2 percentage points of optimum moisture (VTM-1) with the use of mechanical tampers or vibratory rollers.
- 3.2.2. Excavator mounted trench compactor wheels shall **not** be allowed for compacting within the pavement area.
- 3.2.3. Water compaction is not permitted.
- 3.2.4. Take special care to compact material under haunches of pipe and adjacent to precast concrete structures.
- 3.2.5. Coordinate compaction efforts on sides of pipes or structure so as not to displace the pipe or structure.

**End of Section**

## **Section 02317**

### **Trenching**

#### **1. General**

1.1. Section includes the trenching requirements for electric/communication/signal conduits and ducts, and all other utilities part of the proposed construction.

##### 1.2. Related Sections

- 1.2.1. Section 02100 - Existing Underground Utilities (Public and Private)
- 1.2.2. Section 02315 – Fill and Backfill
- 1.2.3. Section 03200 – Flowable Fill

##### 1.3. References (latest Edition and Errata)

- 1.3.1. OSHA Technical Manual

##### 1.4. Quality Assurance – Not Used

##### 1.5. Submittals – Not Used

#### **2. Products**

##### 2.1. Fill materials

- 2.1.1. Not Used.
- 2.1.2. Within pavement limits - Select Fill: Material used for Select Fill shall be crushed stone meeting the requirements VDOT Road and Bridge Specifications, size 21A aggregate or flowable fill. All electrical conduits shall be bedded in flowable fill. All electrical service ducts shall be encased in concrete, and then bedded in flowable fill.
- 2.1.3. All new utilities not to be backfilled with flowable fill or encased in concrete shall be bedded in VDOT No. 57 aggregate.

#### **3. Execution**

##### 3.1. Preparation

- 3.1.1. Locate and identify all utilities. Care should be taken not to damage utilities during trenching activities. Hand trenching may be required at no additional cost to the City.

- 3.1.2. Identify required lines, levels, contours, and datum locations.
- 3.1.3. Verify that survey bench marks and intended elevations for the Work are as indicated.
- 3.1.4. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- 3.1.5. Where the utility line is in an existing pavement area, the pavement shall be saw cut in a straight line parallel to the pipe on each side. Saw cutting operations shall be performed prior to excavation to avoid excessive removal of asphalt. Care shall also be taken during installation of pipe to avoid damage to adjoining paved surfaces.
- 3.1.6. Just prior to paving, a final saw-cut shall be performed to establish a straight and uniform pavement restoration, and to create a bench into the existing pavement.

### 3.2. Activities

- 3.2.1. Trench wall shall be supported by shoring or trench boxes to protect workmen and the work. All measures shall meet the requirements of the Occupational Safety and Health Act (OSHA) and OSHA technical manual, chapter 2, titled "Excavations: Hazard Recognition in Trenching and Shoring".
  - 3.2.1.1. Contractor shall be responsible for the design and implementation of any shoring requirements.
  - 3.2.1.2. The contractor may have to temporarily remove or relocate a utility, at no additional cost to the City, in order to place trench boxes or shoring.
- 3.2.2. Notify project manager of unexpected subsurface conditions.
- 3.2.3. Provide a method of dewatering, if necessary.
- 3.2.4. Do not interfere with 45 degree bearing splay of foundations.
- 3.2.5. Hand trim excavations. Remove loose matter.
- 3.2.6. No more than 200 feet of trench may be opened at one time.
- 3.2.7. Cut out soft areas of subgrade not capable of compaction in place. Backfill with VDOT 21A aggregate.
  - 3.2.7.1. Compact subgrade to ninety five (95) percent of the material's maximum dry density as determined by ASTM D698, Standard Proctor.
- 3.2.8. Remove all excavated material from site.



- 3.2.9. The bedding surface shall provide a firm, stable, and uniform support through the entire length of pipe.
- 3.2.10. Stockpiling shall not be allowed on site. All excavated material shall be deposited directly into a dump truck. New aggregate backfill shall be dumped and installed by the close of business that day.
- 3.2.11. Until ready to backfill, maintain excavations and prevent loose soil from falling.
- 3.2.12. Remove excess excavated material from site. Contractor shall adhere to all applicable laws and ordinances regarding the permitting of waste site, erosion control, zoning, etc. as may be applicable.
- 3.2.13. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches. Reroute surface water runoff away from or around excavated areas.
- 3.2.14. Open Trench Exposure
  - 3.2.14.1. Once a trench is opened, proceed immediately to place specified materials in a trench, or to otherwise utilize trench for intended purpose. Schedule work and order materials so that trenches are not left open for a longer period than is reasonably necessary.

**End of Section**

## **Section 02318**

### **Rock Removal**

#### **1. General**

1.1. Section includes the requirements for removal of rock during excavation.

1.1.1. Not used.

1.1.2. Explosive blasting is not allowed for rock removal on this Project. Contractor shall remove rock by combination of mechanical means and rock splitting mortar (non-explosive).

1.2. Related Sections

1.2.1. Section 02231 – Demolition

1.2.2. Section 02315 – Fill and Backfill

1.2.3. Section 02317 – Trenching

1.3. References – Not Used.

1.4. Quality Assurance

1.4.1. Pre-Rock Removal Conference: Before the rock removal work is scheduled to commence, a conference shall be held at the site for the purpose of reviewing the contract documents and discussing requirements for the work. The conference shall be attended by the Contractor's Representative and the person supervising the rock removal operations.

1.4.1.1. Submittals – Not Used.

1.5. Definitions

1.5.1. Rock: Hard rock excavation material for Mass or Trench Rock. In open excavations and mass grading, rock requiring hard rock excavation methods for removal is defined as any material which cannot be dislodged by a Caterpillar D-8N heavy duty track type tractor, rated at not less than 285 hp flywheel power and equipped with a single-shank hydraulic ripper, capable of exerting not less than 45,000 lbs breakout force or equivalent without use of drilling or blasting or hoe-ramming. In confined excavation, such as footing or trench excavation, it is defined as any material which cannot be dislodged by a Caterpillar 215D LC track type hydraulic excavator, equipped with a 24-inch wide short-tip radius rock bucket, rated at not less than 120 hp flywheel power with bucket curling force of not less than 25,000 lbs and stick-crowd force of not less than 18,000 lbs should be used. Boulders or masses of rock exceeding one cubic yard in volume shall also be considered rock excavation. This classification does not include materials such as loose rock, concrete, or other materials that can be removed by excavation, but which for

reasons of economy in excavating, the contractor chooses to remove by drilling and blasting or hoe-ramming techniques.

## **2. Products**

- 2.1. Rock Splitting Mortar – Da-mite, as manufactured by Daigh Company, 2393 Canton Hwy. Ste 400 Cumming, GA 30040, 1-770-886-4711, or approved equal.

## **3. Execution**

### **3.1. Preparation**

- 3.1.1. Locate and identify all utilities. Care should be taken not to damage utilities during rock removal activities.
- 3.1.2. Identify required lines, levels, contours, and datum locations.
- 3.1.3. Prior to starting rock removal work, thoroughly examine the existing property and construction at the site and record, with notes and drawings or other documentation, existing defects and deterioration. Make this information available to the Project Manager upon request.

### **3.2. Not Used**

### **3.3. Activities**

- 3.3.1. Excavate and remove rock by mechanical methods and rock splitting mortar.
  - 3.3.1.1. Form level bearing at bottom of excavations.
  - 3.3.1.2. In utility and storm drain trenches, remove rock to six (6) inches below standard bottom elevation of bedding material and twenty four (24) inches wider than pipe diameter.
  - 3.3.1.3. Stabilize trench in accordance with Sections 02315 – Fill and Backfill and Section 02317 – Trenching.
  - 3.3.1.4. Remove excavated materials not suitable for backfill from site.

**End of Section**

## Section 02741

### Asphalt Paving

#### 1. General

1.1. Section includes the requirements for the proper installation of:

- 1.1.1. Aggregate base course
- 1.1.2. Prime coat and fine aggregate
- 1.1.3. Asphalt Base Mix (BM)
- 1.1.4. Asphalt Surface Mix (SM)
- 1.1.5. Pavement Overlays with Tack Coat

Related Sections – Not Used.

1.2. References (latest Edition and Errata)

- 1.2.1. VDOT RBS – Virginia Department of Transportation - Road and Bridge Standards and Specifications.
- 1.2.2. City of Roanoke Right of Way Excavation Standards.

1.3. Quality Assurance - All work shall be performed in accordance with the VDOT RBS.

1.4. Submittals

- 1.4.1. Asphalt Mix Designs
- 1.4.2. Liquid Asphalt Source
- 1.4.3. Not Used.

1.5. Contractor shall participate in the performance of the roller pattern and control strip density testing on surface and base courses. The Owner will provide the testing agency.

**1.6. Products - All products and materials shall be new and in first class condition.**

1.7. Materials

- 1.7.1. All materials shall conform to the requirements of the VDOT RBS.
- 1.7.2. Aggregate for base course shall be VDOT No. 21-A aggregate.

1.7.3. Not Used.

1.7.4. Tack – CRS-1

1.7.5. Not Used.

1.7.6. Asphalt base mix shall be VDOT BM-25.

1.7.7. Asphalt surface mix shall be VDOT SM-12.5D. This mix shall contain non-polishing fine and coarse aggregate.

1.7.8. All asphalt mixes shall be hot mix asphalt. Warm mix asphalt (WMA) will not be allowed.

## **2. Execution – Pavement Sections (Does not include pavement overlays)**

### **2.1. Preparation**

2.1.1. Verify that compacted subgrade is dry and ready to support paving and imposed loads. Soft or yielding areas shall be removed and backfilled with suitable material. Backfilled areas shall be compacted to ninety-five (95) percent of maximum dry density as determined by ASTM D698.

2.1.2. Verify gradients and elevations of subgrade are correct. The subgrade shall be shaped to provide the road cross-section shown on the plans.

2.1.3. Edges of curbs, medians, and gutter pans shall be properly tacked.

### **2.2. Construction**

2.2.1. Place aggregate base course in layers, with the compacted thickness of each layer not exceeding six (6) inches. Each layer shall be compacted in accordance with the VDOT RBS.

2.2.2. Not Used.

2.2.3. Place and compact base and surface mix asphalt in accordance with VDOT Road and Bridge Specifications, Section 315.

### **2.3. Quality Control**

2.3.1. Flatness: Maximum variation of ¼ inch measured with 10 foot straight edge

2.3.2. Compact Thickness: Within ¼ inch of specified or indicated thickness

2.3.3. Variation from True Elevation: Within ½ inch.

2.3.4. Provide positive drainage. Absolutely no ponded water will be allowed.

### **3. Execution – Pavement Overlays with Tack Coat**

#### **3.1. Preparation**

3.1.1. Verify that milled pavement section is uniform and to the elevations shown on the plans.

3.1.2. Milled pavement must have a uniform surface and be free of debris.

3.1.3. All milled and non-milled pavement, medians, curbs, and gutters shall be properly tacked in accordance VDOT RBS, Section 310.

#### **3.2. Construction**

3.2.1. All milled and non-milled surface shall be tacked with approximately 0.05 to 0.1 gal/s.y. of **undiluted** CRS-1 asphalt. Tack material shall be uniformly applied with a pressure distributor conforming to the requirements of VDOT RBS, Section 314.04B.

3.2.2. Contractor shall maintain any existing road crowns or superelevation, unless shown otherwise on plans.

3.2.3. Place and compact surface mix asphalt in accordance with VDOT RBS, Section 315.

#### **3.3. Quality Control**

3.3.1. Flatness: Maximum variation of ¼ inch measured with 10 foot straight edge

3.3.2. Compact Thickness: Within ¼ inch of specified or indicated thickness

3.3.3. Variation from True Elevation: Within ½ inch.

**End of Section**

## **Section 02751**

### **Asphalt Restoration**

#### **1. General**

- 1.1. Section includes the requirements for the proper asphalt restoration in front of the concrete slab, curb/gutter system, or other items.
- 1.2. Related Sections
  - 1.2.1. Section 02100 - Existing Underground Utilities (Public and Private)
  - 1.2.2. Section 03100 – Incidental Concrete
- 1.3. References (latest Edition and Errata)
  - 1.3.1. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbs/ft<sup>3</sup>), Standard Proctor.
  - 1.3.2. VDOT RBS – Virginia Department of Transportation - Road and Bridge Standards and Specifications.
  - 1.3.3. City of Roanoke Right of Way Excavation and Restoration Standards
- 1.4. Quality Assurance – Not Used
- 1.5. Submittals – Not Used

#### **2. Products**

- 2.1. Backfill Material - VDOT No. 21-A Aggregate in accordance with VDOT RBS, Section 208
- 2.2. Asphalt Base Mix – VDOT BM-25
- 2.3. Asphalt Surface Mix – VDOT SM 12.5D
- 2.4. Tack Coat – VDOT CRS-1

#### **3. Execution**

- 3.1. As mentioned in the Section 03100 - Incidental Concrete, the Contractor shall saw cut pavement 12” from the proposed edge of concrete slab. The 12” gap shall allow space for proper installation of concrete and re-compaction.
- 3.2. In addition, the Contractor shall make a final sawcut into the asphalt surface layer to create a minimum bench width of 12”. Prior to the sawcut the Contractor shall lay out a straight line, parallel with the curb face, to assist with saw cutting.

- 3.3. For asphalt restoration, the Contractor shall compact VDOT 21-A to at least ninety-five (95) percent of the material's maximum dry density as determined by ASTM D698, Standard Proctor, followed by two 3" lifts of VDOT BM-25 and finished with a 2" lift of VDOT SM12.5D. The VDOT 21-A aggregate shall be compacted in lifts no greater than 6" thickness.
- 3.4. A full coverage tack coat is required on all existing asphalt and concrete surfaces/edges that will contact the new asphalt.

#### **4. Quality Control**

- 4.1.1. Flatness: Maximum variation of  $\frac{1}{4}$  inch measured with 10 foot straight edge
- 4.1.2. Compact Thickness: Within  $\frac{1}{4}$  inch of specified or indicated thickness
- 4.1.3. Variation from True Elevation: Within  $\frac{1}{2}$  inch.
- 4.1.4. Contractor shall compact aggregate and asphalt base layer with jumping jack rammer tamper compactor with minimum impact energy of 85 joules and force per blow of 3,025 lbs.
- 4.1.5. Contractor shall compact asphalt surface layer with smooth drum roller.

**End of Section**



## **Section 03100**

### **Incidental Concrete**

#### **1. General**

1.1. Section includes the requirements for proper installation of

1.1.1. Post Foundations

1.1.2. Reinforced Concrete Slab

1.2. Related Sections

1.2.1. Section 02751 Asphalt Restoration

1.3. References

1.3.1. ACI 304R -Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.

1.3.2. ACI 308 -Standard Practice for Curing Concrete; American Concrete Institute International; 2001.

1.3.3. ASTM A 185 -Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2002.

1.3.4. ASTM A 615/A 615M -Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2004.

1.3.5. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbs/ft<sup>3</sup>), Standard Proctor.

1.3.6. VDOT Road and Bridge Standards and Specifications, latest edition.

1.3.7. City of Roanoke Right of Way Excavation and Restorations, latest revision.

1.4. Quality Assurance

1.4.1. Specified concrete strengths shall be obtained at the 28-day break. Averaging, as defined by ACI or ASTM methodologies, of compression break results shall not be permitted. The City reserves the right to test any portion of the concrete work.

1.4.2. Any concrete represented by a test which indicates a strength which is less than the specified 28-day compressive strength will be rejected and shall be removed and replaced with acceptable concrete at no expense to the City. Such rejection shall prevail unless the Contractor, at his expense, obtains and submits evidence

acceptable to the City Engineer that the strength and quality of the reject is acceptable. If such evidence consists of cores taken from the work, the cores shall be obtained and tested in accordance with the standard methods of ASTM C42.

## 1.5. Submittals

### 1.5.1. Concrete mix design

## 2. Products

### 2.1. Reinforcement

#### 2.1.1. Welded wire fabric for sidewalks - Wire Gage: 6 x 6 – W1.4 x W1.4.

#### 2.1.2. Reinforcing bars shall conform to the requirements of VDOT Road and Bridge Specifications Section 223, Grade 40.

##### 2.1.2.1. Plain steel reinforcing.

##### 2.1.2.2. Expansion Joint Steel Dowels - Smooth wall steel reinforcing with expansion cap and chair – 1/2” diameter @ 18” long, Grade 60

### 2.2. Sidewalk Doors

#### 2.2.1. Not used.

### 2.3. Concrete

#### 2.3.1. All concrete items unless otherwise specified: Concrete shall be Class A3 (3,000 psi) General conforming to VDOT Road and Bridge Standards, Section 217.

#### 2.3.2. Not Used.

### 2.4. Concrete Accessories

#### 2.4.1. Curing Compound: Curing Compound shall be 1100-CLEAR series conforming to ASTM C 309, Type 1, Classes A & B.

#### 2.4.2. Not used.

### 2.5. Joint Material

#### 2.5.1. Isolation Joint Filler: Joint filler conforming to ASTM D 1751.

#### 2.5.2. Expansion Joint Filler:

- 2.5.2.1. Preformed asphalt joint filler conforming to AASHTO M213.
- 2.5.2.2. Sponge rubber joint filler conforming to AASHTO M153, Type I.
- 2.5.2.3. Or approved equal.
- 2.5.3. Sealant
  - 2.5.3.1. L & M Construction Chemicals, Inc., Pentane-40.
  - 2.5.3.2. W.R. Meadows #164, "HI-SPEC, cold applied SOF-SEAL"
  - 2.5.3.3. Or approved equal.
- 2.6. Bedding - VDOT No. 21A Aggregate in accordance with VDOT Road and Bridge Specifications, Section 208.

### **3. Execution**

#### **3.1. Preparation**

- 3.1.1. Locate and identify all utilities. Care should be taken not to damage utilities during trenching activities.
- 3.1.2. Identify required lines, levels, contours, and dimensions before proceeding with work of this section.
- 3.1.3. Verify that survey bench marks and intended elevations for the Work are as indicated.
- 3.1.4. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- 3.1.5. Sawcut edges of existing pavement, sidewalk, or curb.
- 3.1.6. If curb or curb and gutter is being added to existing pavement, sawcut pavement 12" from the proposed edge of curb and gutter or face of curb. The 12" gap shall allow space for proper installation of concrete and re-compaction.
- 3.1.7. Excavate existing material to allow for the installation of VDOT 21-A base stone, forms, and concrete in accordance with the plan details.
- 3.1.8. Compact subgrade with vibratory roller or other suitable compaction equipment as approved by Project Inspector.
- 3.1.9. Cut out soft areas of subgrade not capable of compaction in place. Compact subgrade to ninety five (95) percent of the material's maximum dry density as

determined by ASTM D698, Standard Proctor. Replace material with VDOT 21-A aggregate.

3.1.10. All excavated material shall be loaded on a dump truck and removed from the site no less frequently than once a day. No stockpiling in the City Right of Way, or on adjoining private property will be allowed.

3.1.11. The surface tolerance shall be plus or minus 3 /8 in. over a 10 ft. straight edge.

### 3.2. Construction

3.2.1. Construct post foundations and concrete slab where shown on plans and in accordance with City of Roanoke specifications and plan details.

3.2.2. Construct and compact a minimum 5" aggregate base of VDOT 21A under all concrete items. Remove soft or yielding areas and backfill with VDOT 21A aggregate. All aggregate base shall be compacted to at least ninety-five (95) percent of the material's maximum dry density as determined by ASTM D698, Standard Proctor.

3.2.3. Install forms in straight lines or smooth curves as shown on the plans.

### 3.3. Curb and Curb and Gutter

3.3.1. Forms for curb and gutter shall be steel and in good condition.

#### 3.3.2. Joints for Curb and Gutter

3.3.2.1. Construct contraction joints (1/2" deep by 1/8" wide) for crack control at approximate ten (10) foot intervals.

3.3.2.2. Construct expansion joints at approximate 50 foot intervals, points of curvature, all radii points at concrete entrances and curb returns and at any drainage structure (i.e. curb inlets or drop inlets), and any other above grade utility structure. Expansion joints shall extend through the concrete with the void filled with one half (1/2) inch joint filler. Welded wire fabric shall not be constructed through an expansion joint.

3.3.2.3. Construct expansion joints where new concrete work is constructed next to existing concrete work, "cold joints", or when time elapsing consecutive concrete placement exceeds 60 minutes.

3.3.3. Curb and gutter shall not require steel reinforcement.

3.3.4. Curb heights and gutter cross-slopes vary as shown on the plans. Adjust formwork accordingly.

3.3.5. Not Used.

3.4. Not Used

3.5. Concrete Sidewalk

3.5.1. Sidewalk shall be constructed in accordance with City of Roanoke Standards. In addition, sidewalks shall be a minimum of 5 feet wide, 5 inches thick and reinforced with welded wire fabric.

3.5.1.1. For large obstructions, the Contractor may narrow the sidewalk to 3' minimum with City project manager's approval.

3.5.1.2. Sidewalks crossing driveway entrances shall be constructed 7 inches thick.

3.5.2. Unless shown on the plans, all sidewalks shall maintain a  $\frac{1}{4}$  inch per foot transverse slope.

3.5.3. Forms for sidewalk shall be steel and in good condition.

3.5.4. Joints for Concrete Sidewalk

3.5.4.1. Construct contraction joints (1/8" wide by 1/2" deep) for crack control at approximate five (5) foot intervals unless plans specify otherwise.

3.5.4.2. Where slabs are more than seven (7) feet in width, contraction joints shall be formed longitudinally to obtain uniform blocks.

3.5.4.3. Expansion joints shall be constructed at intervals of approximately 50 feet. Slabs shall be separated by transverse preformed joint filler,  $\frac{1}{2}$  inch in thickness that extends from the bottom of the slab to top surface.

3.5.4.4. Steel dowels with expansion cap shall be used, 3'-0" on center, to connect slabs that are separated by expansion joints. Minimum of 2 dowels per expansion joint.

3.5.4.5. Expansion joints shall be used to separate sidewalk slabs and curb.

3.6. Concrete Handicap Ramps

3.6.1. ADA compliant handicap ramps shall be constructed at all street intersections and at other major points of pedestrian crossing. Each ramp shall have a detectable warning surface at least 2' long x 4' wide. Pressing or forming the detectable warning surface in the concrete shall not be allowed.

### 3.7. Reinforced Concrete Slabs

- 3.7.1. Prior to construction of concrete slab, verify that the surface tolerance is plus or minus 3 /8 in. over a 10 ft. straight edge.
- 3.7.2. Shall be constructed of VDOT A3 concrete with reinforcement.
- 3.7.3. Construct contraction joints (1/8" wide by 2" deep) for crack control at approximate ten (10) foot intervals, each way.
- 3.7.4. Full-depth expansion joints shall be provided at building walls, storm and utility structures, at all pole foundations, manhole penetrations, and at every 50'.
- 3.7.5. Slope of Concrete Base shall mirror the finished slope of the pavers.

### 3.8. Placing Concrete

- 3.8.1. Place concrete in accordance with ACI 304R.
- 3.8.2. Install joint devices in accordance with manufacturer's instructions.
- 3.8.3. Place concrete continuously between predetermined expansion, control, and construction joints. No concrete shall be poured when the outside temperature is 40 degrees and falling.
- 3.8.4. Cold weather curing shall be utilized when the temperature is 50 degrees to 40 degrees. No additional compensation shall be made for cold weather curing.
  - 3.8.4.1. Routine cold weather curing shall include heating blankets. Calcium chloride admixture, conforming to AASHTO designation M144, type 2, shall not be used in any concrete reinforced with bars or welded wire fabric.
- 3.8.5. Hot weather curing shall be utilized when the temperature is 80 degrees or above. No additional compensation shall be made for hot weather curing.
  - 3.8.5.1. Routine hot weather curing measures shall include cooling forms and wetting subgrade in addition to other measures.
- 3.8.6. Concrete shall be placed in the forms in such a manner as to prevent the segregation of the mortar and the aggregate. The concrete shall be spaded, tamped, or vibrated sufficiently to bring the mortar to the surface. Concrete shall not be dropped a distance of more than 5 feet.

### 3.9. Concrete Finishing

- 3.9.1. Concrete surfaces shall be worked and dressed with a consistent "broom" finish.
- 3.9.2. Edges shall be tooled to produce a rounded edge with approximate one eighth (1/8) inch radius.

3.9.3. The Contractor shall apply a “light broom finish” perpendicular to the street.

3.10. Curing and Protection

3.10.1. Comply with requirements of ACI 308. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

3.10.2. Curing compound shall be applied at the rate of one (1) gallon per one hundred fifty (150) square feet to concrete surfaces for curing.

3.11. Field Quality Control

3.11.1. All exposed concrete shall be air entrained with air content conforming to the requirements of Table II-17, Section 217 of the VDOT Road and Bridge Specification.

3.11.2. Concrete slump shall be between 1 and 3 inches.

3.11.3. All curb and gutter flow lines shall be sloped to provide positive drainage at a minimum slope of 1%. Ponding shall not be allowed. All gutter pan cross-slopes shall match the cross-slope of the street, but shall not be less than 1%. Ponding of water in front of the gutter pan shall not be allowed.

3.11.4. The existing pavement shall not be used as a front form for curb and gutter construction.

3.12. Protection of Concrete

3.12.1. Protect new concrete from pedestrian traffic for a minimum of 24 hours. Erect and maintain warning signs and lights to protect and direct pedestrian traffic.

3.12.2. Protect concrete slabs from vehicular traffic for a minimum of 7 days. Erect and maintain warning signs and lights to direct traffic as needed.

3.13. Defective Concrete

3.13.1. Any defective concrete shall be removed and replaced at the contractor's expense.

**End of Section**

## **Section 03200**

### **Flowable Fill**

#### **1. General**

1.1. Section includes the requirements for proper installation of flowable fill.

1.1.1. Flowable fill is a cementitious slurry consisting of a mixture of fine aggregate, water, and cementitious material(s). The slurry can be used as fill or backfill in lieu of compacted earth. In addition, the slurry can be used to fill abandoned pipelines or structures where noted on the plan drawings.

1.2. Related Sections-Not Used

1.3. References

1.3.1. ASTM D4832-02 – Standard Test Method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders.

1.3.2. ASTM C618-03 – Standard Specifications for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use as Mineral Mixture in Concrete.

1.3.3. ASTM C403/C403M-05 – Standard Test Method for Time of Setting of Concrete Mixtures by Penetration Resistance.

1.3.4. ASTM C150-99 Rev A-04 – Standard Specification for Portland Cement.

1.3.5. ASTM C33-03 – Standard Specification for Concrete Aggregates.

1.3.6. ASTM C494/C494M-04 – Standard Specification for Chemical Admixtures for Concrete.

1.3.7. ASTM RevA=98 – Standard Specification for Expansion and Bleeding of Freshly Mixed Grouts for Preplaced – Aggregate in the Laboratory.

1.3.8. ACI SP-150-94 – Controlled Low-Strength Materials

1.4. Quality Assurance

1.4.1. Provide documentation that the admixture supplier has experience of at least one year with the product being provided and any equipment required to obtain desired performance of product.

1.5. Submittals



#### 1.5.1. Flowable fill mix design

## 2. Products

### 2.1. Flowable Fill

- 2.1.1. Portland Cement: ASTM C150
- 2.1.2. Mixing Water: Fresh, clean, potable
- 2.1.3. Air Entraining Mixture: ASTM C260
- 2.1.4. Chemical Admixtures: ASTM C494
- 2.1.5. Aggregate: ASTM C33
- 2.1.6. At the contractor's option, the mix may also include fly ash or chemical admixtures in any proportions such that the final product meets the strength, flow consistency, and shrinkage requirements of 3.3.

## 3. Execution

### 3.1. Preparation

- 3.1.1. Examine conditions of substrate and other conditions under which work is to be performed and notify Project Manager, in writing, of circumstances detrimental to the proper completion of the work.
- 3.1.2. Secure tanks, pipes and other members to be encased in flowable fill.
- 3.1.3. Insure that there are no exposed metallic pipes, conduits, or other items that will be in contact with the flowable fill after placement. If so, replace with non-metallic materials or apply manufacturers recommended coating to protect metallic objects before placing flowable fill.
- 3.1.4. Deliver and handle all products and equipment, in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.

### 3.2. Construction

- 3.2.1. Install flowable fill in areas as shown on plans.

### 3.3. Field Quality Control

- 3.3.1. Flowable fill mix design shall produce a consistency that will result in a flowable product at the time of placement which does not require manual means to move it in place.
- 3.3.2. Flowable fill shall have a compressive strength in the range of 30 to 200 psi at 28 days of placement.

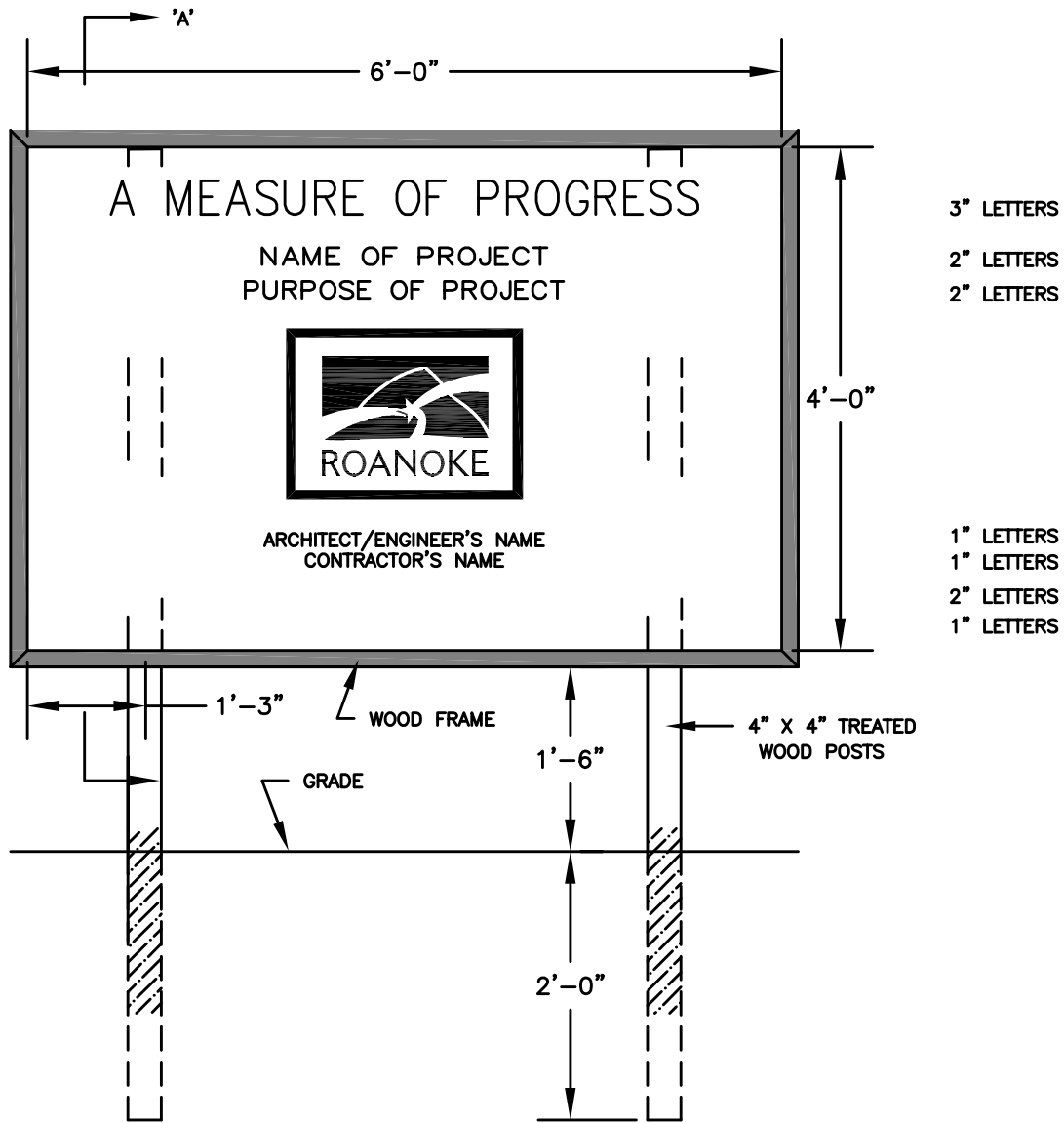
3.3.3. Flowable fill shall have a unit weight of 115 to 145 lbs/ft<sup>3</sup>.

3.3.4. Flowable fill shall have a minimal subsidence and bleed water shrinkage. Evaporation of bleed water shall not result in shrinkage or more than 1/8" per foot of flowable fill depth. Measurement of a Final Bleeding shall be as measured in Section 10 of ASTM C940.

#### 3.4. Protection of Flowable Fill

3.4.1. Protect exposed surfaces of flowable fill from premature drying.

**End of Section**

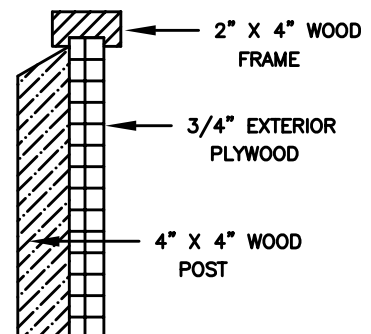


## ELEVATION

NOT TO SCALE

## GENERAL NOTES:

- BACKGROUND PAINTED WHITE.
- FRAME, "ROANOKE" AND LOGO  
PAINTED PMS 7469U
- ALL LETTERING  
PAINTED PMS 7545U
- "OPTIMA" STYLE LETTERS



## SECTION 'A'

NOT TO SCALE

OFFICE OF THE CITY ENGINEER

ROANOKE, VIRGINIA

APPENDIX A

PROJECT SIGN

DETAIL  
P S

**City of Roanoke - Transmittal of Shop Drawings, Equipment Data, Material Samples, Or  
Manufacturer's Certificates of Compliance (Appendix B)**

**Section I - Request for Approval of the Following Items**

To: City of Roanoke  
Engineering Department  
215 Church Avenue, SW - Rm 350  
Roanoke, VA 24011

From:

Contract:

Check One:

Date:

<input type="checkbox"/>
<input type="checkbox"/>

New Submittal

Revised Submittal

Submittal Number	Description	No. of Copies

Remarks:

I certify that the above submitted items have been reviewed in detail and are correct and in the strict conformance with the contract drawings and specifications except as otherwise stated.

\_\_\_\_\_  
Name and Signature of Contractor Representative

**For City Use - Section II - Approval Action**

Name:

Comments:

Date:

**City of Roanoke – Office of the City Engineer  
Appendix C – Blank Form**

**REQUEST FOR INFORMATION**

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**RFI No.**

**City Project Manager:**

**Date:**

**Contractor:**

**Contractor Project Manager:**

**City of Roanoke Project Title:**

**Subject:**

**Spec Section:**

**Drawing No.**

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**Request:**