



DELAWARE ENGINEERING, D.P.C.

55 South Main Street Tel: 607.432.8073
Oneonta, NY 13820 Fax: 607.432.0432

**City of Norwich, N.Y.
Water Main Replacement Project
Contract No. CN2-G-22 – General**

ADDENDUM NO. 1:

March 14, 2023

To all holders of Contract Documents, please note the following addenda:

Contract Documents

Item #1: Contract No. CN2-G-22 – General Construction

Contract Documents:

Due to inclement weather and short bidding duration the Water Main Replacement Project – Contract No. CN2-G-22 – General bid date is being extended.

As indicated in the Advertisement To Bid, page 1, and any other reference in the project documents:

Notice is hereby given that sealed bids will be received until 2:00 P.M., March 17, 2023, at the City Clerks' Office, One City Plaza, Norwich, New York 13815, at which time bids will be publicly opened and read aloud for:

Shall be DELETED and REPLACED with the following:

Notice is hereby given that sealed bids will be received until 2:00 P.M., March 24, 2023, at the City Clerks' Office, One City Plaza, Norwich, New York 13815, at which time bids will be publicly opened and read aloud for:

Item #2: Contract No. CN2-G-22 – General Construction

Contract Documents:

As indicated in the Advertisement To Bid, page 1, and any other reference in the project documents:

All work will need to be coordinated with the City of Norwich Water Department. Work to be Substantially completed by July 31, 2023:

Shall be DELETED and REPLACED with the following:

All work will need to be coordinated with the City of Norwich Water Department. Work to be Substantially completed by August 31, 2023:

Item #3: Contract No. CN2-G-22 – General Construction – Technical Specification Section 001010 – Summary of Work

Contract Technical Specification Section 001010 – Summary of Work

Complete Technical Specification Section Shall be DELETED and REPLACED with the updated Technical Specification included as part of this addendum:

Contract Technical Specification Section 001010 – Summary of Work

Item #4: Contract No. CN2-G-22 – General Construction – Supplementary Conditions

As indicated in the Supplementary Conditions and in any other reference in the specifications not specifically mentioned under this addendum item number, any and all references to the following exhibits shall be deleted and found not applicable to this project:

- Exhibit A - Software Requirements for Electronic Document Exchange
- Exhibit B – Foreseeable Bad Weather Days
- Exhibit C - Geotechnical Baseline Report Supplement to the Supplementary Conditions

Respectfully Submitted,

DELAWARE ENGINEERING, D.P.C.



Derrick P. Wilcox, P.E.

P:\City of Norwich\Norwich South Broad and East Main Watermain RFQ\Design Phase\Bid & Award\Addendum No. 1\Norwich (C) Water Main Replacement Project Addendum No. 1 - 03-14-2023.doc

Attachments:

Contract Technical Specification Section 001010 – Summary of Work

SECTION 001010
SUMMARY OF WORK – CONTRACT #CN2-G-2022

CONTRACT #CN2-G-2022: GENERAL CONSTRUCTION – CITY OF NORWICH – BROAD STREET WATER MAIN REPLACEMENT PROJECT

PART 1. GENERAL

1.01 SUMMARY

- A. Contract # CN2-G-2022 consists of all general construction work for the City of Norwich Broad Street Water Main Replacement Project
- B. The scope of the improvements project includes, but is not limited to the following:
 - 1. Coordinate all work City of Norwich Water Department.
 - 2. Installation of approximately 4200 lineal feet of 8” watermain along Broad Street from Prentice Street to West Park Street (NYSDOT Road).
 - 3. Installation of approximately 470 lineal feet of 10” watermain along East Main Street from Broad Street to the railroad tracks. (NYSDOT Road).
 - 4. Installation of approximately 300 lineal feet of 6” watermain along various side streets (combination of NYSDOT and City Roads).
 - a. **Note that the City of Norwich will be furnishing all Ductile Iron Water Main for the project. The Contractor shall be responsible for the transportation of the pipe from city stock pile to job site. The City will be furnishing the pipe for contractor’s installation. Contractor shall provide all fittings, gaskets, valves, hydrants.**
 - b. **The pipe the City is furnishing is Atlantic States C-52 push on joint. Contractor shall provide new gaskets to match.**
 - c. **The Contractor will be responsible for all other fittings, valves, hydrants, water service material, appurtenances, gaskets for the pipe, brass wedges, etc.**
 - 5. Replacement of all existing valves and hydrants and addition of new valves as specified by the Owner.
 - 6. Replacement of all services from the main to the private connection at the curb with new copper pipe, new corporations, stops, and new curb valves.
 - 7. Removal of all temporary facilities
 - 8. Site Restoration

1.02 PROJECT AND SITE CONDITIONS

- A. Project and site conditions are generally illustrated on the Drawings. CONTRACTOR is responsible for inspecting all work locations and familiarizing himself with conditions affecting the work prior to submitting a bid for the work.
- B. The approximate locations of known underground utilities are shown on Drawings for CONTRACTOR’s information. This does not relieve CONTRACTOR from the requirement to locate and protect the utilities.

1.03 COORDINATION WITH UTILITY COMPANIES

- A. The CONTRACTOR shall notify NYS Dig Safe and pertinent utility companies 72 hours in advance of doing any work at or adjacent to said utilities.

1.04 DESIGN ENGINEER’S ESTIMATE OF QUANTITIES

- A. Bid Items and estimated quantities are presented on the Bid Form included in these Contract Documents. The estimated quantities for unit price pay items are approximate only and are included solely for the purpose of comparison of bids.

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- B. The OWNER does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of materials encountered or required will correspond therewith and reserves the right to increase or decrease any quantity or to eliminate any quantity as OWNER may deem necessary.
- C. CONTRACTOR will not be entitled to any adjustment in a unit bid price as a result of any change in an estimated quantity and agrees to accept the aforesaid unit bid prices as complete and total compensation for any additions or deductions caused by a variation in quantities, as a result of more accurate field measurement or by any changes or alterations in the Work ordered by the OWNER. If the actual quantities measured in the field are 100 % over the original estimated quantities, then the unit price may be adjusted by negotiation.
- D. The estimated quantities as shown in the various bid item descriptions are for information purposes only. The CONTRACTOR shall not rely on these estimates. The quantity takeoff remains the responsibility of the CONTRACTOR. Should any discrepancy between the Drawings and the listed estimates occur, the quantities as shown on the Drawings shall govern.
- E. This Summary of Work is **not** intended to substitute for thorough review of all Contract Drawings and Specifications by the CONTRACTOR. Items not specifically included in the Summary of Work but shown on the Contract Drawings and Specifications are the responsibility of the CONTRACTOR to complete. The CONTRACTOR shall include the cost of completing these items in the Bid Item most closely associated to the work item in question. No additional compensation will be provided to the CONTRACTOR for any of these items.

1.05 MEASUREMENTS FOR PAYMENT

- A. Bid items
 - 1. For unit price items, the CONTRACTOR shall be paid based on actual quantities measured in the field as shown on the pay limits of the contract plans and described in the bid form times the unit price on the bid form. The measurement for each bid item is listed under Part 3 of this specification.
 - 2. For lump sum items, the CONTRACTOR shall be paid either by partial payments or Lump Sum after the completion of the bid item as set forth below. For partial payments, the CONTRACTOR shall submit for ENGINEER's review and approval a "schedule of values" that shall provide the basis for partial payments. The total costs of all components of work shall equal the Lump Sum bid for this Item.
- B. CONTRACTOR shall prepare monthly payment requests in a standard form as given by the ENGINEER. CONTRACTOR shall review a preliminary payment request with the ENGINEER prior to submittal of the formal request.
- C. On a daily basis as required, CONTRACTOR shall review daily production and payment quantities with the ENGINEER.
- D. After the completion of the project, the measurements for each bid item shall be re-measured. The remaining payments from the OWNER to the CONTRACTOR shall be adjusted accordingly to the final measurements of the bid items.

PART 2. PRODUCTS

- A. This section is not used. Refer to individual specification sections for more information on each bid item.

PART 3. EXECUTION

GENERAL

3.01 GENERAL CONSTRUCTION

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- A. General Construction shall be covered by the following seventeen work items,
1. 100 – Mobilization and Demobilization, Bond & Insurance, (Lump Sum Max 5% of Bid)
 2. 101 – Maintenance and Protection of Traffic (M&PT), (Lump Sum Fixed Max)
 3. 102 – NYSDOT Highway Work Permits, (Lump Sum Fixed Max)
 4. 103 – Utility Clearance/Support During Construction, (Lump Sum)
 5. 104 – Site Work, (Lump Sum)
 6. 105 – Site Restoration, (Lump Sum)
 7. 106 – Watermain Replacement/Installation, (Linear Feet)
 8. 107 – Watermain Valve Replacement/Installation, (Each)
 9. 108 – Water Services, (Linear Feet)
 10. 109 – Hydrant Assemblies, (Each)
 11. 110. – Hot Tap In-Line Valve Insertions (Each)
 12. 111. – Temporary Water Service (Lump Sum)
- B. The bid shall include all costs for labor, materials, equipment, supplies, services, etc, as required to complete the work including:
1. Pre-construction photos, Pre-construction survey of adjacent properties to Construction Site, Record Drawings, Project Photos, Project Videos, and etc.
 2. Coordination of all inspections.
 3. Certified Payrolls, documents, and other project documentation.
 4. Maintenance and documentation of project schedule.
 5. Maintenance of temporary field facilities.
 6. Procurement and maintenance of all local and state highway permits
 7. Procurement and maintenance of required insurance and bonds.
 8. Shop drawings and material submittals.
 9. As-built drawings.
 10. Health and Safety Plans.
 11. Mobilization and demobilization of equipment & workforce, as many times as required to complete the work
 12. All required permits not provided by others.
 13. All other work required by the Contract Documents but not listed individually under other Bid Items.

Item 100 - Mobilization and Demobilization, Bond & Insurance, (Lump Sum Max 5% of Bid)

1. This work item shall include all materials, labor, tools, equipment and services necessary for the assembling and setting up of the project and all incidental work necessary to complete this item in accordance with the Contract Drawings, Specifications, and directions of the Owner's Representative(s) and Engineer, including, but not limited to:
 - Mobilize and demobilize as many times as necessary during the project as required per site conditions, traffic, public events, construction schedule, to maintain the NYSDOT highway work permit requirements, etc.
 - Provide and maintain a project work plan summarizing planned work and any proposed deviations from the contract documents.
 - Provide site security at all times during both construction activity and non-work activity
 - Preparation for, and attendance at project meetings, and response required to issues raised at project meetings (including, but not limited to, pre-construction meetings, periodic project progress meetings, punch-list review and final inspection meetings)
 - Procurement and maintenance of required bonds and insurances

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- Providing and maintaining Construction Schedule and Schedule of Values
- Providing payment applications materials including but not limited to AIA or equivalent forms, certified payroll, invoices for materials, etc.
- ~~Providing MWBE documents, and other project documentation as required by ESD or other funding sources~~
- Contact UFPO/811/One Call Center/Dig Safe NY, and work with utility companies to properly protect any utilities, both overhead and underground, that are affected by the work. Any subcontractors are to call Dig Safe for their excavations, if any
- Coordinate with affected utilities to mark-out utilities and establish clearance and support, and temporary and/or permanent relocation requirements, and confirm as-built information requirements
- Provide and maintain support of located utilities
- Provide verification to the Owner and Engineer, in the form of letters or other acceptable documents (e.g., e-mail), throughout the work, prior to final site restoration roadway paving and prior to issuance of Substantial Completion of the work, from affected utilities that their utilities have been acceptably cleared, supported, relocated, and restored for permanent service, adequate as-built/record information has been provided, and that service has been acceptably maintained throughout construction
- Perform clearance of, protect, repair, and re-locate utilities as required
- Provide and maintain erosion and sediment control measures, as required
- Protect and maintain property pins
- Retain a NYS Licensed land Surveyor to re-survey properties and produce maps, field stake and install new property pins for locations where property pins have been damaged or lost due to Contractor's operations
- Provide traffic control, signage, etc., as required to maintain safe vehicular travel to, from and through the work area as required per the NYSDOT highway work permit.
- Provide all warranties and guarantees
- Provide all permits, inspections and fees
- Perform construction field surveying/stakeout
- ~~Obtaining all necessary certificates of occupancy~~
- Provide and maintain all temporary services for power, sanitary facilities, communication services (i.e., internet services) as well as use charges and disconnections, fencing, signage, site security measures as required for the work
- Coordination of all inspections
- Provide/perform services as necessary to comply with NYS Department of Labor (e.g., prevailing wages), OSHA (e.g., confined space entry), and other applicable regulations
- Project documentation
- Maintenance and documentation of project schedule
- Coordinate schedule with the County, Owner, Engineer, affected property owners, other contractors, funding agencies, etc.
- Provide on-site supervision, by an experienced superintendent, while all on-site work is being performed
- Procurement and maintenance of all local and state highway permits
- Procurement and maintenance of required insurance and bonds
- Shop drawings and material submittals
- Provide as-built drawings and logs to Engineer, along with required contract closeout information, as pre-condition for release of retainage
- Coordination with Chenango County DPW and their contractors, NYSDOT, City of Norwich Highway Department, and the City of Norwich Water Department and affected

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utilities and all utility company's including but not limited to NYSEG (Gas and Electric) Frontier, etc.

- Field measure as necessary to verify sizes, dimensions, and project requirements, ~~for demolition and installation of new equipment and appurtenances~~, prior to shop drawing preparation, and during construction. It will be the contractor's responsibility to verify that all material and equipment is sized correctly and fits in its plan specified location
 - All other work required by the Contract Documents but not specifically listed individually under other Bid Items
2. No payment for demobilization will be made when the Contractor abandons the project Site without the Engineer's authorization or prior to completion of the work. No payment for demobilization and/or re-mobilization will be made if the Contractor returns to the Site to remedy deficiencies in work previously performed under this Contract or for the Contractor's convenience.
3. Payment under this item is limited to a maximum of 5% of the base bid price and will be made as follows:
- 40% after issuance of Notice to Proceed, less 5% retainage
 - Additional 10% [total of 50%] after completion of 50% of the work, less 5% retainage
 - Additional 20% [total of 70%] upon completion of 70% of the work, less 5% retainage
 - Additional 20% [total of 90%] after issuance of Substantial Completion, less 5% retainage
 - Remaining 10% [total of 100%], including retainage, following Engineer's receipt and satisfactory acceptance of as-built information.

NOTE: Total lump sum for this work item shall not exceed 5% of the bid price.

Item 101 – Maintenance and Protection of Traffic (M&PT), (Lump Sum)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to provide maintenance and protection of traffic in accordance with the Contract Documents.

Work will include but not be limited to:

- Provide site work security [e.g., fencing, barricades, etc.]
- Provide traffic control, flag persons, lights, signage, a minimum of two VMS boards, etc., as required to maintain safe vehicular travel to, from and through the work area.
- Maintain traffic flow for at least two lanes during the entire project unless otherwise agreed to in advance with the City's Public Works Superintendent on any project roadway and NYSDOT on NYSDOT roadways. One lane traffic flow will require redirection of traffic and additional conditions to the NYSDOT highway permit.
- Coordinate roadway signage and traffic restrictions with the City on City streets and NYSDOT roadways. An approved highway work permit will be required as described in the Item 102.
- For NYSDOT roadways, provide/perform all MP&T as required by NYSDOT. Coordinate all NYSDOT roadway restrictions and M&PT with NYSDOT including but not limited to NYSDOT's at (607)-721-8082 and/or NYSDOT other offices.
- Perform regular clean-up of work areas.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld

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until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 102 – NYSDOT Highway Work Permits (Lump Sum Fixed Max 2% of Bid)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to secure and maintain NYSDOT highway work permits as required by NYSDOT in accordance with the Contract Documents.

Work will include but not be limited to:

- Obtain, complete and submit necessary NYSDOT work permit applications to NYSDOT for replacement of the existing watermain, connections to side streets, hydrant assemblies and water services for the new watermain to be installed along NYS Rt. 12 – Broad Street and East Main Street and maintain an approved highway permit for the duration for the project.
- Obtain and maintain NYSDOT required insurance for the project. Obtain and forward certificates of insurance to NYSDOT.
- Provide for any other NYSDOT required items associated with the work permits (e.g., inspection/supervision, permit design review, etc.)
- Provide one copy of all work permits, certificates of insurance, related correspondence, etc., to the Owner for their files.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 103 – Utility Clearance/Support (Lump Sum)

Under this item, the General Contractor shall coordinate with local utility companies (e.g., Frontier, Spectrum, NYSEG, City of Norwich, NYSDOT, etc.) regarding utilities which will or could be impacted by the work for mark-out, to establish and maintain clearance and support requirements and/or proper relocation and clearances to facilitate contract work.

Work will include but not be limited to:

- Contact 811/One Call Center/New York Dig Safely and utility companies and work with utility companies to properly deal with all utilities affected by the work, including both overhead and underground utilities (all that are affected).
- Coordinate with affected utilities to mark-out utilities and establish clearance and support, and temporary and/or permanent relocation requirements, and confirm as-built information requirements.
- Contractor shall provide final utility location verification by ground penetrating radar if necessary or by pot holing to locate the existing utilities, their size, pipe type and depths. Existing site maps will be provided upon request, however the utilities shown on these maps are not confirmed as accurate.
- Temporary and permanent relocation of affected utilities and/or a temporary means of providing service to local residents and continuing service during all phases of construction.

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- Provide and maintain support of utilities.
- Provide verification to the Owner and Engineer, in the form of letters or other acceptable documents (e.g., e-mail), throughout the work, prior to final roadway paving and prior to issuance of Substantial Completion of the work, from affected utilities that their utilities have been acceptably cleared, supported, relocated, and restored for permanent service, adequate as-built/record information has been provided, and that service has been acceptably maintained throughout construction.
- Record as-built information (e.g., utility identification (e.g., gas), plan location and elevations/depths (note all changes in elevation and direction), pipe/conduit types and diameters, concrete encasement or special embedment, other information deemed necessary by the utility companies, etc., on the Contract Drawings and in supplementary notebooks as necessary, and provide to the Engineer and utility companies at the completion work.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 104 – Sitework (Lump Sum)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to complete all site work in accordance with the Contract Documents.

Work will include but not be limited to:

- Adjust utility covers, valve boxes, shutoffs, etc. to final grade
- Remove and dispose of materials, within the work area as necessary to complete the work, and which are unsuitable for reuse (e.g., removed sidewalk, existing pavement, unsuitable excavated materials, old piping, etc.), at acceptable disposal locations, in accordance with applicable regulations. Note that it is anticipated that approximately 2" of asphalt and 8" of concrete is currently in place as a road base.
- Remove stumps, roots, brush, trees, debris, railroad ties, existing piping/manholes, etc., within the work area, as necessary to complete the work. All trees on private property shall be approved for removal by the Owner in advance of work. Dispose of said materials at suitable locations in accordance with applicable regulations.

[Note, no material is to be placed in State or Federal designated wetlands]

- Remove existing items (e.g., fences, embankments, mailboxes, signs, etc.) as necessary to access and complete the work [Note: No buildings shall be impacted and impacts to property (e.g., walks, lawns, patios, etc.) shall be minimized]
- Remove materials suitable for reuse, which will not be reincorporated into the work at the work site within 24 hours, to other suitable locations (e.g., other work sites where material will be reused within 24 hours, designated stockpile areas or secure, upland stockpile areas of the Contractor's choosing).
- Relocation of materials suitable for reuse within the work sites
- Load and haul material to and from work sites and stockpiles
- Provide erosion and sediment control measures, as required

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- Perform regular clean-up of work areas
- Maintain suitable access to driveways, businesses, etc.
- Protect and maintain property pins
- Remove existing hydrant assemblies (hydrant to shutoff valve) on lines to be abandoned and cap line at point of removal.
- Confirm with the City DPW Superintendent which hydrants to be removed as part of the work are desired to be kept by the City, and deliver and unload existing hydrants, to the location designated by the City DPW Superintendent. Remove and dispose of hydrants and appurtenances not desired by the City.
- Cut and cap existing waterlines that are to be abandoned in place after new waterlines and services have been successfully tested.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 105 – Site Restoration (Lump Sum)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to complete all site restoration in accordance with the Contract Documents.

Work will include but not be limited to:

- Provide topsoil, grade, shape, fertilize, seed, mulch, etc. all areas affected by contract work.
- Re-ditch designated areas for proper runoff
- Re-grade all access driveways and surrounding areas necessary to restore to pre-work conditions.
- Restore or replace all items removed or impacted by the work to pre-work or new conditions (e.g., install new chain-link fence where existing was removed or damaged, replace bush or shrub damaged during work, overlay asphalt driveway damaged during the work with hot-mix asphalt, settled, damaged or failing curbing, etc.) Site restoration associated with storm drainage work shall be included in the work items associated with storm drainage work (since storm drainage work may not be eligible for NYSEFC (DWSRF) or USDA RD funding).
- For Contract CN2-G-22 all new watermains are anticipated to be located within the existing streets, not in the sidewalks.
- Any sidewalks damaged by the work shall be fully restored by the Contractor unless other arrangements are previously agreed to by the Owner and Engineer.
- In areas with paved driveways, the Contractor shall restore the trenches across the paved driveway with compacted Item #4 and provide hot mix asphalt and perform final paving as required to restore driveway to pre-construction condition, or better. Areas damaged by the work beyond the trenches shall also be fully restored by the Contractor.
- For non-paved driveways impacted by the work, the contractor shall fully restore the driveway to grade and slope with material that matches or most closely matches the existing material (e.g., Item 4 gravel, crushed stone, run of crusher stone, etc.). If driveway lacks definable type of material the contractor shall provide run of crusher stone unless otherwise agreed to with the affected property owner.
- Grade, shape and restore impacted stockpile and staging areas, lawns, embankments, etc., providing clean fill, topsoil, lime, fertilizer, seed, mulch, etc. as necessary to restore to pre-work conditions.

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That is, work associated with both the water storage tank and watermain installation.

- Perform daily and final clean-up of all areas impacted by the work.
- Retain a NYS Licensed Land Surveyor to re-survey properties and produce maps, field stake and install new property pins for locations where property pins have been damaged or lost due to Contractor's operations.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 106 – Water Main Replacement/Installation 6", 8", AND 10" Diameter (Lineal Foot Basis)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to install the City provided ductile iron watermain/or replace an existing waterline in accordance with the Contract Documents, where required in the field by the Owner or Engineer, or where conflicts exist with work necessitating relocation of a portion of the existing waterline, in areas not subject to NYSDOT requirements.

Note that the City of Norwich will be furnishing all Ductile Iron Water Main for the project. The Contractor shall be responsible for the transportation of the pipe from city stock pile to job site. The City will be furnishing the pipe for contractor's installation. Contractor shall provide all fittings, gaskets, valves, hydrants.

The pipe the City is furnishing is Atlantic States C-52 push on joint. Contractor shall provide new gaskets to match.

The Contractor will be responsible for all other fittings, valves, hydrants, water service material, appurtenances, gaskets for the pipe, brass wedges, etc.

Work will include but not be limited to:

- Perform/provide excavation, backfill, embedment and compaction
- Provide sheeting and shoring, as required.
- Provide steel plating over excavations as required by NYSDOT and by the City.
- Provide temporary paving in excavated trenches as required by NYSDOT when work zones are in transition or completed prior to final site restoration.
- Maintain, as required, continuous water service to all existing service connections except for the short time period required to reconnect the existing customer's service to their new water service
- Perform/provide proctor tests, sieve analysis and compaction tests, and provide results to Engineer
- Conduct dewatering, as required
- Provide and maintain erosion and sediment control measures as required.
- Provide piping, fittings, couplings, restrained joints and flange kits (e.g., Megalug retainers, etc.) valves, valve boxes, specials, and appurtenances as required for a complete waterline system. Note valves to be provided under Work Item 107.

Note that the City of Norwich will be furnishing all Ductile Iron Water Main for the project. The Contractor shall be responsible for the transportation of the pipe from city stock pile to job site. The City will be furnishing the pipe for contractor's installation. Contractor shall provide all fittings, gaskets, valves, hydrants.

The pipe the City is furnishing is Atlantic States C-52 push on joint. Contractor shall

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provide new gaskets to match.

The Contractor will be responsible for all other fittings, valves, hydrants, water service material, appurtenances, gaskets for the pipe, brass wedges, etc.

- Provide geotextile
- Provide concrete thrust blocks
- Provide tapping equipment and appurtenances and install taps
- Reconnect existing, properly functioning services, as required
- Perform pressure and leakage tests and provide results to Engineer. Tests to be supervised and approved by the City's Superintendent of Public works or by the Engineer.
- Perform disinfection tests (i.e., provide suitable bottles, collect water samples, submit to NYSELAP certified laboratory for testing as many times as is required to demonstrate compliance, etc.) and provide test results to the Engineer and City's Superintendent of Public Works. Tests to be supervised and approved by the City's Superintendent of Public works or by the Engineer. Disinfection results will be submitted to the NYSDOH - by the City or Engineer – for their approval prior to bringing any new water line into service.
- Record as-built information (i.e., location and elevation of new watermain as well as existing utilities encountered during the work) on Contract Drawings and in supplementary notebooks as required to document the information and provide to the Engineer
- Once new water main has been installed it shall be confirmed that all existing sanitary laterals were not damaged during the installation via CCTV. Any damaged laterals caused by the installation of the new water main will be the responsibility of the contractor to repair and or replace.
- In existing City (i.e., non-NYSDOT) paved areas scheduled to be grinded and re-topped by the City (i.e., CHIPS Paving Contract to be grinded and re-topped), restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt.
- In existing paved areas not scheduled to be grinded and/or re-topped, restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt, including the top course.
- In NYSDOT roadway areas, restore trench and all excavations associated with waterline work in accordance with NYSDOT requirements including but not limited to providing controlled density backfill/flowable fill and Superpave asphalt as detailed in the contract documents.
- For Contract CN2-G-22 all new watermains are anticipated to be located within the existing streets, not in the sidewalks.
- Any sidewalks damaged by the work shall be fully restored by the Contractor unless other arrangements are previously agreed to by the Owner and Engineer.
- Provide equipment, labor, materials, services, etc. to comply with confined space entry requirements
- Coordinate roadway barricading and traffic restrictions with the Owner in accordance with NYSDOT requirements. See Work Item 101
- Attend project meetings See Work Item 100
- Provide project schedules See Work Item 100
- Perform daily and final clean-up of all areas impacted by the work.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

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Item 107 – Watermain Valve Replacement/Installation (Each Basis)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to install/replace watermain valves (sizes shown on the bid sheets, Contract Drawings, etc.) in accordance with the Contract Documents.

Work will include but not be limited to:

- Perform/provide excavation, backfill, embedment and compaction
- Provide sheeting and shoring, as required
- Provide equipment, labor, materials, services, etc. to comply with confined space entry requirements
- Remove and dispose of valves and materials unsuitable for reuse, etc.
- Provide new resilient seat (AWWA C509) gate valves, valve boxes/risers/lids (marked WATER), t-wrenches (one wrench for every 4 valves), joint restraint, concrete thrust blocks and appurtenances as required for a complete valve assembly. (Note the City will not be providing valves for this project)
- Furnish and install insertion valves and valve assemblies and appurtenances as required for a complete installation including but not limited to insertion valve, valve box and riser, riser cap, etc. as described in work item no. 110. Valve location and/or size as indicated on the Drawings and/or in the bid sheets.
- Perform/provide proctor tests, sieve analysis and compaction tests, and provide results to Engineer
- Conduct dewatering, as required
- Provide and maintain erosion and sediment control measures as called for in the specifications.
- Provide geotextile
- Perform pressure and leakage tests and provide results to Engineer. Tests to be supervised and approved by the City's Superintendent of Public works or by the Engineer.
- Perform disinfection tests (i.e., provide suitable bottles, collect water samples, submit to NYSELAP certified laboratory for testing as many times as is required to demonstrate compliance, etc.) and provide test results to the Engineer and City's Superintendent of Public Works. Tests to be supervised and approved by the City's Superintendent of Public works or by the Engineer. Disinfection results will be submitted to the NYSDOH - by the City or Engineer – for their approval prior to bringing any new water line into service.
- In NYSDOT roadway areas, restore trench and all excavations associated with waterline work in accordance with NYSDOT requirements including but not limited to providing controlled density backfill/flowable fill, Superpave asphalt, etc. as detailed in the contract documents
- For Contract CN2-G-22 all new watermains are anticipated to be located within the existing streets, not in the sidewalks.
- Any sidewalks damaged by the work shall be fully restored by the Contractor unless other arrangements are previously agreed to by the Owner and Engineer.
- Record as-built information (i.e., location and elevation of new facilities as well as existing facilities encountered during the work) on Contract Drawings and in supplementary notebooks as required to document the information and provide to the Engineer
- Perform daily and final clean-up of all areas impacted by the work.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld

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until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 108 – Water Services (Linear Foot Basis)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to install new water services and replace existing services or extend an existing, recently replaced service where the new watermain is located farther away from the existing tap on the existing waterline to be replaced, by open cut or directional boring methods, in NYSDOT and non-NYSDOT areas, in accordance with the Contract Documents.

Work will include but not be limited to:

- Conduct a pre-work inspection with the City, Engineer and NYSDOT to confirm the locations for directional boring and open cut methods for service installation. Pre-work inspection shall include pot holing, ground penetrating radar survey, etc. to locate and confirm existing utility locations. NYSDOT favors directional boring to minimize disturbances to state roadways. If the open cut method will affect the traffic pattern on the West side of the construction area this will need to be addressed in the highway work permit. Note this is not the preferred installation method as a complete shutdown would be required.
- Develop list of services by street listing house number, service size, estimated length proposed method of service installation (i.e., open cut or directional bore) and submit to Engineer for processing as a shop drawing. The number of open cut and directional boring services listed on the Contract Drawings and Bid Sheets have been estimated based on anticipated work methods and will be modified during construction based on the pre-work inspection and as otherwise required subsequent thereto due to work conditions. City reserves the right to request justification for and possible adjustment to the unit prices listed in the Contractor's bid if the post-bid quantity for either method changes by more than 15%.
- Maintain, as required, continuous water service to all existing service connections (except for the short time period required to reconnect the existing customer's service to their new water service) or in cases where temporary service is being provided.
- Coordinate shut-off and reactivation of service with the City. Develop and provide to the City and Engineer a list of services and planned schedule for service work at each location. Update and provide new schedules to the City and Engineer when the schedule changes and on a not less than weekly basis once service work begins
- Coordinate any system valving with the City.
- Notify City and Engineer and, if required, the connected user of conflict and need to relocate all or a portion of the service, and agree in advance to the extent and scope of the work
- Coordinate and minimize disruption of service to water customer
- Provide written notice of intent to shutdown an existing connection to the affected property one week in advance of the work and then again within 48 hours of the planned work. Continue to provide advance notices until work is completed.
- Perform/provide excavation, backfill, embedment and compaction
- Perform Horizontal Directional boring
- Provide sheeting and shoring, as required
- Perform/provide proctor tests, sieve analysis and compaction tests, and provide results to Engineer
- Provide new 2" HDPE pipe sleeve (full length under roadway and sidewalks, to within a maximum of 2 feet of the main and 1 foot of the curb stop), Type K copper pipe/tubing, fittings, couplings, curb boxes, wrenches (one curb stop key for every 10 services) and appurtenances as required for a completely new water service connection or an extension of an existing service, as required by

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the work conditions. Note, 2” HDPE casing does not need to be provided for services which do not cross under a street or sidewalk and are located on the same side (East side) of the street as the watermain to which they will connect. Casing to be provided at locations listed in the water services schedules on the Contract Drawings, and/or as deemed necessary by the City and/or Engineer. In addition, where site conditions dictate that the boring cannot be terminated near the scheduled points of connection (i.e., at the curb stop/shutoff and/or watermain), for example, to avoid a tree, the 2” HDPE sleeve and boring will be terminated behind the roadway/sidewalk area and the rest of the service can be run without the casing (i.e., as copper only). Cost for the service or portion of service not in the 2” HDPE casing will be provided at unit costs shown in the bid sheet for providing copper service only. Trench and excavations shall be restored to NYSDOT requirements (if within NYSDOT jurisdiction) or non-NYSDOT requirements (if outside of NYSDOT jurisdictions).

- Furnish and install removable materials as required to seal off the ends of the 2” sleeve pipe to prevent backfill from entering the sleeve pipe.
- Provide tapping equipment and appurtenances, and perform taps.
- Conduct dewatering, as required.
- Provide equipment, labor, materials, services, etc. to comply with confined space entry requirements.
- Perform pressure and leakage tests and provide results to Engineer. Tests to be supervised and approved by the City’s Superintendent of Public works or by the Engineer.
- Perform disinfection tests (i.e., provide suitable bottles, collect water samples, submit to NYSELAP certified laboratory for testing as many times as is required to demonstrate compliance, etc.) and provide test results to the Engineer and City’s Superintendent of Public Works. Tests to be supervised and approved by the City’s Superintendent of Public works or by the Engineer. Disinfection results will be submitted to the NYSDOH - by the City or Engineer – for their approval prior to bringing any new water line into service.
- In existing City (i.e., non-NYSDOT) paved areas scheduled to be grinded and re-topped by the City or by the Contract as a bid alternate work item (i.e., CHIPS Paving Contract to be grinded and re-topped), restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt.
- In existing paved areas not scheduled to be grinded and/or re-topped, restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt, including the top course.
- In NYSDOT roadway areas, restore trench and all excavations associated with waterline work in accordance with NYSDOT requirements including but not limited to providing controlled density backfill/flowable fill, Superpave asphalt, etc. as detailed in the contract documents.
- For Contract CN2-G-22 all new watermains are anticipated to be located within the existing streets, not in the sidewalks.
- Any sidewalks damaged by the work shall be fully restored by the Contractor unless other arrangements are previously agreed to by the Owner and Engineer.
- Record as-built information (i.e., location and elevation of new facilities as well as existing facilities encountered during the work) on Contract Drawings and in supplementary notebooks as required to document the information and provide to the Engineer (Note: retainage will be considered for release upon Engineer’s receipt of acceptable as-built information).
- Perform daily and final clean-up of all areas impacted by the work.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor’s schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld

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until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 109 – Hydrant Assemblies (Each Basis)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to provide new hydrant assemblies in accordance with the Contract Documents.

Work will include but not be limited to:

- Perform/provide excavation, backfill, embedment and compaction
- Provide sheeting and shoring, as required
- Conduct dewatering, as required
- Provide and maintain erosion and sediment control measures as called for in the specifications.
- Maintain fire protection by maintaining the existing water lines and hydrants in service until the new water lines and hydrants have been installed, successfully tested and authorized by NYSDOH for operation.
- Furnish and install City's standard Mueller Super Centurion 250 Model A-423 hydrant assemblies, tie-rods, joint restraint, tees, thrust blocks, and appurtenances for a complete hydrant assembly in accordance with these contract documents.
- Provide hydrants with standard factory finish with Mueller's standard red color or Hydrants to be painted fill in color.
- Provide extensions to hydrant stems where required
- Perform/provide proctor tests, sieve analysis and compaction tests, and provide results to Engineer
- Provide geotextile
- Provide equipment, labor, materials, services, etc. to comply with confined space entry requirements
- Confirm the successful operation of each hydrant with a water flushing test conducted by in the presence of the City DPW and Engineer.
- Perform pressure and leakage tests and provide results to Engineer. Tests to be supervised and approved by the City's Superintendent of Public works or by the Engineer.
- Perform disinfection tests (i.e., provide suitable bottles, collect water samples, submit to NYSELAP certified laboratory for testing as many times as is required to demonstrate compliance, etc.) and provide test results to the Engineer and City's Superintendent of Public Works. Tests to be supervised and approved by the City's Superintendent of Public works or by the Engineer. Disinfection results will be submitted to the NYSDOH - by the City or Engineer – for their approval prior to bringing any new water line into service.
- In existing City (i.e., non-NYS DOT) paved areas scheduled to be grinded and re-topped by the City or by this Contract as a bid alternate work item (i.e., CHIPS Paving Contract to be grinded and re-topped), restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt.
- In existing paved areas not scheduled to be grinded and/or re-topped, restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt, including the top course.
- In NYSDOT roadway areas, restore trench and all excavations associated with waterline work in accordance with NYSDOT requirements including but not limited to providing controlled density backfill/flowable fill, Superpave asphalt, etc. as detailed in the contract documents.
- For Contract CN2-G-22 all new watermains are anticipated to be located within the existing streets, not in the sidewalks.
- Any sidewalks damaged by the work shall be fully restored by the Contractor unless other

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arrangements are previously agreed to by the Owner and Engineer.

- Record as-built information (i.e., location and elevation of new facilities as well as existing facilities encountered during the work) on Contract Drawings and in supplementary notebooks as required to document the information and provide to the Engineer
- Perform daily and final clean-up of all areas impacted by the work.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

Item 110 – Hot Tap In-Line Valve Insertions (Each)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to complete a valve insertion using the hot tap method in accordance with the Contract Documents.

Work will include but not be limited to:

- Conduct pre-work inspections with the City DPW Superintendent or his representative to confirm which locations, if any, will require new hot tap valves prior to installation of new waterlines
- Conduct, as required, test digs to verify the location, diameter, type of pipe, etc. as required to determine the size or requirements for each new hot tap in line insertion valve. Work to be conducted in the presence of the City DPW and/or Engineer.
- Provide taping and cutting equipment.
- Provide necessary temporary valves, permanent valves and blind flanges, and appurtenances, etc. to install a complete hot tap insertion valve while maintaining service in the line into which the hot tap valve is being installed.
- Perform/provide excavation, backfill, embedment and compaction
- Provide sheeting and shoring, as required
- Provide equipment, labor, materials, services, etc. to comply with confined space entry requirements
- Remove and dispose of materials unsuitable for reuse, etc.
- Perform/provide proctor tests, sieve analysis and compaction tests, and provide results to Engineer
- Conduct dewatering, as required
- Provide and maintain erosion and sediment control measures as called for in the specifications.
- Provide geotextile
- Perform pressure and leakage tests and provide results to Engineer that ensures a tight non-leaking (water tight) valve is installed. Tests to be supervised and approved by the City's Superintendent of Public works or by the Engineer.
- Record as-built information (i.e., location and elevation of new facilities as well as existing facilities encountered during the work) on Contract Drawings and in supplementary notebooks as required to document the information and provide to the Engineer (Note: retainage will be considered for release upon Engineer's receipt of acceptable as-built information).
- Perform daily and final clean-up of all areas impacted by the work.

Payment for this work item will be provided for the actual number (each) of hot tap in-line watermain insertion valves successfully installed and deemed acceptable by the Owner. Contractor shall provide with

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each payment application an itemized summary table of locations and quantity and date (e.g., location (near House 20 on Delaware Ave), quantity (1 – 8” valve date installed (June 15, 2018), etc.) of hot tap in-line insertion valve assemblies provided. Payment to be based on the bid alternative unit price, with 5% retainage withheld until Engineers’ receipt and satisfactory acceptance of as-built information and contract closeout information.

Item 111 – Temporary Water Service (Lump Sum)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to supply temporary water service to existing water system users whose water service will be interrupted due to construction (i.e., removal of existing main buried in the street).

Work will include but not be limited to:

- Supplying a minimum of a 2” Diameter High Density Polyethylene pipe (min 100 psi rating) which will be connected to existing fire hydrants and run parallel to streets, above ground to supply temporary water service to system users whose existing service will be interrupted due to construction.
- The final size of the temporary watermain shall be determined by the length of run that the contractor is proposing in their temporary water main installation plan. The plan shall indicate the anticipated flows, number of connections, length of temporary service, connection points, etc.
- Supplying ¾” minimum diameter polyethylene pipe to connect 2” main temporary service line to individual system users through existing hosebibs or similar watertight shutoff connections. Individual connections shall be made on a case by case basis and may require the contractor to supply and install additional fittings and appurtenances within the system users plumbing system to facilitate connection to the temporary water service.
- For contract CN2-G-22, Temporary Water Services to be installed along North Broad Street, South Broad Street, and East Main Street during installation of the new watermains within these streets.
- Contractor shall set up a minimum of a 2” temporary water service “mains” along each side of the applicable street, and set up service for one block at a time or as agreed to by the City and Engineer (i.e., on Broad Street and Main Street). The temporary service main on the west side of the street shall be connected to the systems users on the west side, the temporary service main on the east side shall be connected to the system users on the east side.
- In area where the temporary water main will need to cross a City street the temporary main shall be installed under the street surface.
- Contractor shall set up temporary water service, and install to the individual users, but not open the shutoffs and supply water through these lines until instructed to do so by the Engineer and it has been accepted by NYSDOH.
- The temporary service lines shall be pressure tested and disinfected prior to being allowed to be turned on. Water samples from the temporary service lines shall be taken and tested at a NYSELAP certified lab and two days of negative bacteriological tests obtained before temporary service lines can be used to serve the system users.
- Once the two consecutive days of negative Bac-T samples have been obtained, the Contractor shall notify the Owner and Engineer and at such time the Owner will shut off service to the mains in the streets and the Contractor shall notify the Owner and Engineer and at such time the Owner will shut off service to the mains in the streets and the Contractor will open the individual shutoff for each system user allowing that service to be fed through the temporary water service connection.
- No interruption of service from a properly sanitized system will be allowed and service shall remain uninterrupted until the new water main and service lines have been approved by the City, the Engineer and NYSDOH.

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Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

3.02 GENERAL CONSTRUCTION – BID ALTERNATE WORK

A. General Construction Bid Alternates shall be covered by the following ten work items,

1. 200 – Rock Removal, (Cubic Yard Basis)
2. 201 – Sanitary Sewer Laterals, (Linear Foot Basis)
3. 202 – Granite Curbing, (Lineal Feet)
4. 203 – Concrete Sidewalk (Square Foot Basis)
5. 204 – Encasement of Watermain Joints (Each)

B. The bid shall include all costs for labor, materials, equipment, supplies, services, etc, as required to complete the work including:

1. Pre-construction photos, Pre-construction survey of adjacent properties to Construction Site, Record Drawings, Project Photos, Project Videos, and etc.
2. Coordination of all inspections.
3. Certified Payrolls, documents, and other project documentation.
4. Maintenance and documentation of project schedule.
5. Maintenance of temporary field facilities.
6. Procurement and maintenance of all local and state highway permits
7. Procurement and maintenance of required insurance and bonds.
8. Shop drawings and material submittals.
9. As-built drawings.
10. Health and Safety Plans.
11. Mobilization and demobilization of equipment & workforce, as many times as required to complete the work
12. All required permits not provided by others.
13. All other work required by the Contract Documents but not listed individually under other Bid Items.

Bid Alternate Item 200 – Rock Removal (Cubic Yard Basis)

Work will include but not be limited to:

- Removal of rock - to the limits necessary to install pipelines, structures, etc. – by extraordinary means (e.g., blasting, drilling, hoe-pack rock hammer, etc.)
- Disposal of rock at an acceptable location in accordance with applicable regulations
- Conduct activities and provide information, services, etc. as required by the Technical Specification Section entitled “Rock Removal”, the NYSDOT, the City, or other affected agencies
- Obtain and maintain all permits, approvals and licensing required for work
- Notify One Call Center/8-1-1/Dig Safe NY
- Perform clearance of, protect, repair and relocate utilities as required for this work

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- Mobilize and demobilize as many times as necessary during the project for this work.
- Provide and maintain any additional project security/bonds for this work.
- Provide any additional insurance certificates and maintain insurances for the contract with the Owner for this work
- Preparation for, attendance at, and response required to issues raised at project meetings associated with this additional work
- Provide site security [e.g., fencing, barricades, etc.] at all times during both construction activity and non-work activity associated with this additional work.
- Provide all additional maintenance and protection of traffic as required for this additional work
- Provide submittals associated with this additional work
- Perform/provide all sitework and restoration associates with this additional work.

Payment for this work item will be provided for the actual amount (cubic yards) of rock successfully removed and disposed of and deemed acceptable by the Owner. Contractor to provide a summary sheet with a breakdown/itemization of the amount of rock removed each day to provide substantiation of the quantity being requested for payment. Payment to be based on the bid alternative unit price, with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information and contract closeout information.

Bid Alternate Item 201 – Sanitary Sewer Laterals (Linear Foot Basis)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to install/replace sanitary sewer laterals in accordance with these contract documents, where required in the field by the Owner or Engineer, or where conflicts exist with work necessitating relocation of a portion of the existing waterline.

Under this work item, the Contractor shall provide a new sanitary lateral from the new mainline sewer, or another location agreed to with the City DPW Superintendent, to a point behind the curb or sidewalk, when:

- replacing an existing sanitary sewer in the existing trench,
- installing a new sanitary sewer in a new trench or in a previously unserved area,
- shown on the Contract Drawings,
- required in the field due to utility conflicts, or
- when agreed that work is required with the Owner, Engineer and/or NYSDOT due to utility conflicts or other reasons.

Work shall include:

- Notify affected properties of any interruption of service prior in advance of the work
- Perform clearance of, protect, repair and relocate utilities as required for this work
- Mobilize and demobilize as many times as necessary during the project for this work
- Perform/provide excavation, backfill, embedment and compaction
- Provide sheeting and shoring, as required
- Perform/provide proctor tests, sieve analysis and compaction tests, and provide results to Engineer
- Provide pipe, fittings, couplings, end caps, stakes and appurtenances as required for a complete sanitary lateral system
- Maintain sewer service (e.g., provide plugs, conduct bypass pumping, etc.), as required
- Perform leakage tests
- Conduct dewatering, as required

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- Record as-built information (e.g., location and elevation at point of connection to sanitary sewer, building sewer, or point of termination (e.g., end cap)) on the Contract Drawings and in supplementary notebooks as necessary, and provide to the Engineer at the completion work
- Provide watertight pipe penetrations
- Connect to new or existing sanitary sewers
- Provide non-shrink grout and hydraulic cement
- Provide equipment, labor, materials, services, etc. to comply with confined space entry requirements

Payment for this work item will be provided for the actual amount (lineal feet) of sanitary sewer laterals successfully installed, and/or replaced and deemed acceptable by the owner. Contractor shall provide with each payment application an itemized summary table of locations and quantity (e.g., location (House 230 Jones Ave), quantity (32 LF), date installed, etc.) of laterals provided. Payment to be based on the bid alternative unit price, with 5% retainage withheld until Engineers' receipt and satisfactory acceptance of as-built information and contract closeout information.

Bid Alternate Item 202 – Granite Curbing (Linear Foot Basis)

Work will include but not be limited to:

- Excavate and remove and dispose of existing curbing and materials unsuitable for reuse
- Grading, truing and compacting subbase
- Providing and compacting base material (Type B-4 compacted gravel or dry mix concrete per NYSDOT Section 609)
- Providing adequate forming concrete base, etc. for proper installation of granite curbing
- Provide and connect curb drains to storm drainage where storm drainage exists and elevations allow for connection
- Provide granite curbing
- Providing concrete backing, expansion joints, joint sealants, concrete sealer, etc.
- Backfill and site restoration
- Record as-built information (e.g., locations and depth of new curb, etc.) on the Contract Drawings and in supplementary notebooks as necessary, and provide to the Engineer at the completion work

Payment for this work item will be provided for the actual amount (linear feet) of concrete curb successfully installed, or removed and replaced, and deemed acceptable by the Owner. Contractor shall provide with each payment application an itemized summary table of locations and quantity and date (e.g., location (House 1-30 on Jones Ave), quantity (100 lineal feet), date installed (June 15, 2023), etc.) Payment to be based on the bid alternative unit price, with 5% retainage withheld until Engineers' receipt and satisfactory acceptance of as-built information and contract closeout information.

Bid Alternate Item 203 – Concrete Sidewalk (Square Foot Basis)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to provide concrete sidewalk in addition to the amount in the base bid, in accordance with the contract documents, where shown on the Contract Drawings and/or where/when identified for installation and/or removal/replacement by the Owner.

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Work shall include:

- Meet with the Owner, property owner (if non-municipal sidewalk is damaged or requires replacement) and Engineer to agree upon the scope of the work. All sidewalk to be concrete unless a non-municipal property with non-concrete sidewalk is affected by the work wherein the property owner will determine the type of new sidewalk.
- Removal and disposal of existing sidewalk and materials unsuitable for reuse
- Grading, truing and compacting subbase
- Providing geotextile
- Providing and compacting base material (Item 4 gravel)
- Provide adequate forming to allow for proper installation of concrete sidewalk
- Provide concrete sidewalk with concrete Mix SW with fiberglass fibers
- Providing concrete finishing, expansion joints, joint sealants, concrete sealer, etc.,
- Backfill and site restoration
- Record as-built information (e.g., locations and depth of new curb, etc.) on the Contract Drawings and in supplementary notebooks as necessary, and provide to the Engineer at the completion work
- Perform daily and final site cleanup.

Payment for this work item will be provided for the actual amount (square feet) of concrete sidewalk successfully installed, or removed and replaced above the base bid amount, and deemed acceptable by the Owner. Payment to be based on the bid alternative unit price, with 5% retainage withheld until Engineers' receipt and satisfactory acceptance of as-built information and contract closeout information.

Bid Alternate Item 204 – Encasement of Watermain Joints (Each Basis)

Under this item, the General Contractor shall provide all materials, labor, equipment, tools, services, etc., as required to encase watermain joints in controlled low strength material (flowable fill) using NYSDOT approved material when:

- (1) the watermain is located less than 5 feet away horizontally (outside to outside) and less than 18 inches vertically above the top of a sanitary sewer or storm drain.
- (2) the watermain is located less than 10 feet away horizontally (outside to outside) and vertically below the top of a sanitary sewer or storm drain.
- (3) the watermain joint is located a distance of less than 10 feet from a sanitary or storm sewer manhole.

Work will include but not be limited to:

- Providing submittals and shop drawings
- Furnish and wrap 6 mil polyethylene around the pipe joint, furnish and install temporary form work and then furnish and install controlled low strength material (CLSM, No Fly Ash) per NYSDOT Item # 204.02 with a 28-day compressive strength of 275 to 1030 kPa (40 to 150 psi) around the new water main pipe joints (i.e., all joints except valves) that are within specified limits relative to the sanitary sewer or storm drain and require encasement. Encasement to extend 12 inches beyond both sides of the joint (along the pipe) and at least 8" all around the outside of the pipe (i.e., a block 2' long and pipe O.D. plus 8 inches all around).
- Provide roadway plating, signage, barricading, traffic control, etc., as required to keep traffic off of the trench for a period of at least 24 hours following completion of installation of the controlled low strength material and/or until the trench is restored in accordance with City and NYSDOT requirements, as applicable.
- Remove and dispose of any temporary form work necessary to encase the joints

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- Backfill and compaction around the encased joint
- Provide sheeting and shoring as required to comply with OSHA requirements and for protection of work
- Conduct dewatering, as required
- Provide equipment, labor, materials, services, etc. to comply with confined space entry requirements
- Compaction of subgrade and other granular materials
- Provide the services of a NYS certified testing company as required for compaction and sieve analysis tests for granular materials and concrete testing (field and lab work) with copies of the reports provided to the Engineer. Three (3) CLSM samples shall be collected for every 10 cubic yards of joint material supplied and for each day's work if less than 10 cubic yards of CLSM is supplied on a given day with lab cylinder breaks at one at 7 and one to two at 28 days.
- Provide and maintain erosion and sediment control measures
- In existing City (i.e., non-NYSDOT) paved areas scheduled to be grinded and re-topped by the City or by this Contract as a bid alternate work item (i.e., CHIPS Paving Contract to be grinded and re-topped), restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt.
- In existing paved areas not scheduled to be grinded and/or re-topped, restore trench and all excavations associated with waterline work, perform sawcuts, provide bituminous sealer, and provide and maintain all trench repair hot mix asphalt, including the top course.
- In NYSDOT roadway areas, restore trench and all excavations associated with waterline work in accordance with NYSDOT requirements including but not limited to providing controlled density backfill/flowable fill, Superpave asphalt, etc.
- For Contract CN2-G-22 all new watermains are anticipated to be located within the existing streets, not in the sidewalks.
- Any sidewalks damaged by the work shall be fully restored by the Contractor unless other arrangements are previously agreed to by the Owner and Engineer.
- Perform daily and final clean-up of all areas impacted by the work.

Payment for this bid item will be provided based on the percentage of work successfully completed and deemed acceptable by the Engineer and Owner at the time of submission of a payment application, for the various lump sum breakdown items listed in the contractor's schedule of values for this Work Item (as submitted and agreed to with the Engineer following contract award), multiplied by the agreed upon lump sum unit prices for this Work Item (totaling to the bid price for this Work Item), with 5% retainage withheld until Engineer's receipt and satisfactory acceptance of as-built information, contract close-out information and the receipt of the required maintenance bond.

END OF SECTION

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