

**(REVISED APRIL 2, 2019)**

**ATTACHMENT B-2**  
**MEASUREMENT AND PAYMENT**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Methods of measurement and payment for items of work covered under the Bidder's Unit Price Form

**1.2 SUMMARY**

- A. The total bid price shall cover all work required by the Contract Documents. All work shall meet the more stringent between the Guidance Specifications or the Latest DeKalb County Department of Watershed Management Design Standards Manual. All costs in connection with the proper and successful completion of the Work, including all materials, equipment, supplies, and appurtenances; providing all equipment and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the unit and lump sum prices bid.
- B. All Work not specifically set forth as a pay item in the Bidder's Unit Price Form shall be considered subsidiary obligations of Contractor and all costs in connection therewith shall be included in the prices bid.
- C. All estimated quantities stipulated in the Bidder's Unit Price Form or other Contract Documents are approximate and are to be used only:
  - 1. As a basis for estimating the probable cost of the Work.
  - 2. For the purpose of comparing the bids submitted for the Work.
- D. The basis of payment for work shall be in accordance with the unit price bid items in the Bidder's Unit Price Form and shall be full compensation for all labor, materials, and equipment required to furnish, install, construct, and test the Work covered under the unit price bid item. Payment for work will be made on a linear foot, vertical foot, square foot, square yard, cubic yard, or each based on the Contractor's measurement, contingent on verification by Owner's Representative. Contractor agrees he will make no claim for additional time, damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished.
- E. Payment will be made only for the actual quantities of work performed in compliance with the Drawings and Specifications. The Contractor will be paid an amount equal to the approved quantity times the applicable unit price. Any unused balance of the unit price work shall revert to the Owner upon completion of the project.
- F. Pay requests for work performed shall be itemized by asset. The pay request should list each asset

by ID number, describe the work performed per the payment bid form, provide the unit cost, and provide the extended cost. When seeking partial payment where work was attempted and could not be completed, Owner approved information shall be provided on the pay request to justify the amount requested. Work performed on pipes should be listed in a separate table from work performed on manholes. The Owner's Representative will provide an example of the table format.

- G. The Contractor shall prepare record drawings (as-builts) in accordance with 2017 DeKalb County DWM Design Standards. The Owner will pay no additional cost for the preparation of record drawings (as-builts).

### **1.3 MEASUREMENT AND PAYMENT**

#### **Design Phase**

1. Project Initiation: Payment will be remitted for this bid item based on percent complete approved by the Owner. The Contractor shall provide all services and information as requested in Attachment A Scope of Work.
2. Project Coordination and Management: Payment will be remitted for this bid item based on percent complete approved by the Owner. The Contractor shall provide all services and information as requested in Attachment A Scope of Work.
3. Basis of Design Report: Payment will be remitted for this bid item based on percent complete approved by the Owner. The Contractor shall provide all information as requested in Attachment A Scope of Work.
4. 60 Percent Design Documents: Payment will be remitted for this bid item based on percent complete approved by the Owner. The Contractor shall provide all information as requested in Attachment A Scope of Work.
5. Final Design Documents: Payment will be remitted for this bid item based on percent complete approved by the Owner. The Contractor shall provide all information as requested in Attachment A Scope of Work.

### **DIVISION 1 – GENERAL REQUIREMENTS**

#### **General Conditions**

6. Mobilization: Design Builder to enter in the unit price column a not to exceed amount of two (2) percent of the total contract value. Payment will be remitted for mobilization up to the amount bid upon Owner's representative verification that the Contractor has fully provided all necessary labor, equipment, materials, parking areas, staging areas, signage, administrative items, bonds, submittals, temporary facilities, etc. necessary to commence the Work.
7. Demobilization: Contractor to enter in the unit price column a not to exceed amount of one (1) percent of the total contract value. Payment will be remitted for demobilization up to the amount bid upon Owner's Representative verification that the Contractor has fully demobilized and completed restoration of all project

areas. Demobilization also includes provision of all project record documentation and any other required close-out documentation, removal of temporary facilities, equipment, unused material, etc.

8. Project Closeout, Guide Spec 01700: Contractor to enter in the unit price column a not to exceed amount of one (1) percent of the total contract price. Payment will be remitted upon the Owner's Representative verification that the Contractor has fully provided all project record documentation and any other close-out type of documentation required. The Contractor shall provide all required written notices and supporting documentation when requesting Substantial and Final Completion. Partial submittals of the required documents shall not represent a valid request, and the Owner shall not be liable for any delays in the Substantial and Final Completion dates arising there from.

### **Traffic Control (Commercial Streets)**

- 9.-11. Work Zone Staging and Traffic Control (Per Link): Payment will be remitted for furnishing, installation, maintenance and removal of temporary traffic control per link of roadway based upon the current functional classification of the affected roadway as defined by the Federal Highway Administration per day. A roadway link is defined by two nodes or intersections. In the event a single work zone spans one or more intersections, the average link length will be used to determine the eligible quantity or work zones for payment. Each unit price bid shall include all but not be limited to furnishing, installation, maintenance and removing all traffic control devices, temporary signage, temporary pavement markings and shall include flagging and other means necessary for safe guidance and protection of vehicular and pedestrian traffic through the Work Zone per site based upon the functional classification and site conditions. When Police are required for traffic control the cost shall be included in the unit bid price items 9-11. Police will be required to move traffic through a signalized intersection around the work zone while construction is in progress. Approval will be needed from the Owner or Owner's Representative prior to Contractor's use of Police for traffic control. All traffic control measures and plans shall conform to the requirements of the Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control), latest edition, as published by the US DOT / FHWA. The above referenced bid item are applicable to rehabilitation work within roadways with the following functional classifications:

- 17- Collector Street
- 16- Minor Arterial Street
- 14- Urban Principal Arterial

Functional Classification Maps for the Atlanta Metro Counties are available through Georgia's Department of Transportation (GADOT) website at <http://www.dot.state.ga.us/DOT/plan->

prog/transportation\_data/function\_class\_maps/index.shtml. In the event that a functional classification assignment conflict exists between the drawings and the GADOT, the GADOT classification shall preside. The Contractor shall submit proposed traffic control plans to required regulatory agencies and they shall grant approval before the Work begins. Notification to begin Work shall require at least 48 hour notice to the appropriate agency and the Owner. Traffic control for roadways with “local” or “rural” functional classifications are considered incidental to the Work and the cost shall be included in the unit price for the Work performed. These type roadways shall meet MUCTD requirements. No separate payment will be made for traffic control roadways with functional classification other than those stated herein, unless otherwise authorized by the Owner for exceptional circumstances.

### **GPS Data Collection**

12. GPS Locate and Data Collection for Manholes: Manhole, Guide Spec 01056: Measurement for payment will be per each (EA). Payment will constitute full compensation to locate, obtain coordinates and elevations, and provide attribution information for each located manhole (and associated sewer line assets as applicable) per the direction provided in the latest Department of Watershed Management Design Standards Manual. This payment includes compensation for all digital deliverables outlined in the Design Standards Manual.

### **Sewer Flow Control**

- 13-16 Sewer Flow Control for CCTV Inspection: Bypass Pumping up to and including 24” Diameter Pipe, Guide Spec 01520: Measurement for payment will be per linear feet (LF, measured center of manhole to center of manhole) of pipe segment being inspected by CCTV for the size and flow classification category of bypass pumping and temporary flow control. The determination of the percent of flow within the pipe segment being by-passed will be agreed upon by the Owner and the Contractor prior to Owner approval of the by-pass pumping. Payment will be full compensation for furnishing by-pass pumping plans, all labor, materials, equipment, set-up, removal and incidentals necessary to produce the results specified in Guide Spec 01520.
- 17-19. Sewer CCTV Inspection, Guide Spec 01510: Measurement for payment will be per linear foot (LF) from center of manhole to center of manhole. County approval is required prior to the Contractor performing CCTV inspection. Payment will constitute full compensation to perform a CCTV sewer pipe inspection on sanitary sewer mains. No payment will be made when the Contractor needs to or is required to provide CCTV inspection to supplement a rehab or replacement work item. Defect coding, header data, and coding of

service lateral locations are required and shall meet the Guideline Specifications format and submittal requirements. There will be no separate payment made for light cleaning, use of an easement machine, or data delivery. Payment shall only be made for the footage of sewer assessment between the manholes. Traffic control measures for work in low-traffic/residential areas shall be included in the rehabilitation unit price. Traffic control measures in areas other than low traffic areas will be paid when authorized by the Owner's Representative. Costs shall include, but are not limited to, labor, equipment, transportation, setup, tools, public notification, data management and all other related procedures and materials necessary to complete the inspections, in accordance with Guide Spec 01510.

### **Access Route and Easement Access Clearing**

20. Construction Exit/Entrance Install and Removal, Guide Spec 02110: Measurement for payment will be per each (EA) entrance/exit suitably installed and maintained per the Manual for Erosion and Sediment Control of Georgia, latest edition. Payment will constitute full compensation for all costs associated with access entrances/exits, including installation, maintenance, repair, removal, disposal, and restoration to original grade.
21. Easement or Right of Entry (ROE) Access Road, Guide Spec 02110: Measurement for payment will be per linear foot (LF) of road suitably installed and maintained per the Manual for Erosion and Sediment Control of Georgia, latest edition or as required by the governing agency. Payment will constitute full compensation for all costs associated with access roads, including installation, maintenance, repair, removal, disposal, and restoration to original grade.
- 22-23. Easement or ROE Clearing, Light & Medium, Guide Spec 02110: Measurement for payment will be per square yard (SY) for the type classification category for clearing. The Contractor and the Owner's Representative will determine the category of cleaning Light or Medium prior to beginning the clearing. Light clearing can be achieved with hand equipment or bush hog; medium will use more of the same but larger equipment and add wood chipper(s). Payment will constitute full compensation for easement or ROE clearing, including, but not limited to labor, equipment, transportation, tools, and other related procedures and materials necessary to remove vegetation and other debris on or near the surface of the ground in the construction area to produce the results specified in Guide Spec 02110. Easements or ROEs will be cleared of debris or obstructions impeding access to work areas. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner.
24. Easement Clearing, Heavy, Guide Spec 02110: Measurement for payment will be per

caliber inch for the type classification category of clearing. The classification of per caliber inch will be measured at four (4) feet from the base of the tree. Heavy clearing may include similar equipment as with Light or Medium clearing but also need “timbering” equipment such as skidders or dozers. Payment will constitute full compensation for easement clearing, including, but not limited to labor, equipment, transportation, tools, disposal and other related procedures and materials necessary to remove vegetation and other debris on or near the surface of the ground in the construction area to produce the results specified in Guide Spec 02110. Easements or ROEs will be cleared of debris or obstructions impeding access to work areas. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner.

25. Tree Protection Fence, Guide Spec 02110: Measurement for payment will be per linear foot (LF) for tree protection fence suitably installed and maintained per Guide Spec 02110. Installed when required by Owner or governing agencies. Payment will constitute full compensation for all costs associated with tree protection fencing, including installation, maintenance, repair, removal, and disposal.
- 26-27. Tree/Shrubbery Restoration (Any type except Pine), Guide Spec 02110: Measurement for payment will be per each (EA) bush removed and replace for either native or ornamental types. Payment will be per the 3 gallon or 5 gallon bid item and will constitute full compensation for removing and replacing bushes on private property. Replacement may include removal and replanting, or replacing with a new bush (as directed by the Owner) in accordance with Guide Spec 02110.
- 28-30. Chain Link Fence Removal & Replacement, Guide Spec 02110: Measurement for payment will be per linear foot (LF). Payment will constitute full compensation for removing and replacing chain link fence, in kind, on public or private property in accordance with Guide Spec 02110. Replacement may include installation of a new chain link fence (including removal/disposal of existing fence) as directed by the Owner.
- 31-33. Wood Fence Removal & Replacement, Guide Spec 02110: Measurement for payment will be per linear foot (LF). Payment will constitute full compensation for removing and replacing wood fence, in kind, on public or private property in accordance with Guide Spec 02110. Replacement may include installation of a new wood fence (including removal/disposal of existing fence) as directed by the Owner.

### **Site Restoration & Erosion Control**

- 34-35. Riprap, Guide Spec 02273: Measurement for payment will be per square yard (SY) for riprap installed, including geotextiles filter fabric underlayment at a minimum

18 inch depth, or as directed by the Owner. When crossing a stream or ditch, the quantity eligible for payment shall be limited to 10 feet upstream and 10 feet downstream of top of disturbed area and from five feet from the top of bank, across a creek or ditch, banks and bottoms, to five feet beyond top of bank. Any other areas at creeks or ditches disturbed by the Contractor requiring riprap shall be riprapped at no additional cost to the Owner.

36. Check Dam (Hay Bales), Guide Spec: 02276: Measurement for payment will be per each (EA) for check dams suitably installed and maintained per the Manual for Erosion and Sediment Control of Georgia, latest edition. Payment will constitute full compensation for all costs associated with check dams, including grading, installation, maintenance, repair, removal, and disposal.
37. Inlet Sediment Trap, Guide Spec 02276: Measurement for payment will be per each (EA) for inlet sediment traps suitably installed and maintained per the Manual for Erosion and Sediment Control of Georgia, latest edition. Payment will constitute full compensation for all costs associated with inlet sediment traps at existing storm water inlet structures, including installation, maintenance, repair, removal, and disposal. Contractor shall be responsible for installing the number of sedimentation traps required to adequately capture silt, from leaving construction sites.
- 38-41. Temporary Creek Crossings, Guide Spec 02276: Measurement for payment will be per diameter of temporary culvert on a per linear foot (LF) basis for temporary stream crossings suitably installed, maintained, and removed per the Manual for Erosion and Sediment control of Georgia, latest edition. Prior to installation of the temporary creek crossing, the Contractor will be required to submit construction plans to include sizing of the pipe diameter to convey the required flow. Plans shall be sealed by a registered Professional Engineer in the State of Georgia. Payment will constitute full compensation for all costs associated with temporary stream (creek) crossings, and shall include all necessary materials and labor to install, maintain, remove, and dispose. Cost of aggregate, pipe, and concrete supports shall be included under this item and not in any other bid items.
42. Unsuitable Soil Replacement, (Crusher Run) Guide Spec 02324: Measurement for payment will be per cubic yard (CY) compacted in place. All costs for hauling and placing imported fill material shall be included in the unit price. Payment will be made on the basis of cubic yards (CY) compacted in place. No soil backfill shall be used in pipe trenches under roadways or other paved areas. In all paved areas, trenches shall be backfilled with crushed rock and compacted to a minimum required compaction of ninety-five percent (95%) of the maximum dry density. This pay item includes from the top of pipe bedding zone to the bottom of the concrete cap. Refer to the latest DeKalb County Department of Watershed Management Design Standards Manual Standard Detail No. G-005. Separate payment will be made for surface restoration. Payment for materials testing shall

be made separately by the Owner. Traffic control measures required for work in high traffic/commercial areas will be paid when authorized by the Owner.

43. Unsuitable Soil Replacement (soil – imported fill), Guide Spec 02324: Measurement for payment will be per cubic yard (CY) compacted in place. All costs for hauling and placing imported fill material shall be included in the unit price. Payment will be made on a basis of cubic yards (CY) compacted in place. When allowed by the Owner, in non-paved areas the compaction may be less than ninety-five percent (95%) however not less than ninety percent (90%) of the maximum dry density. In non-paved areas unsuitable soil for final backfill shall be replaced at the Owner's direction. This pay item includes from the top of the pipe bedding zone to final grade. Separate payment will be made for surface restoration. Payment for materials testing shall be made separately. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner.
44. Sodding, Guide Spec 02485: Measurement for payment will be per square yard (SY). Payment will constitute full compensation for fine grading, fertilizing, and sodding disturbed landscaped areas on public or private property in accordance with Guide Spec 02485. Soil preparation and/or topsoil shall be included. Disturbed areas shall be sodded only when directed to do so by the Owner or Owner's Representative.
45. Seeding, Guide Spec 02486: Measurement for payment will be per square yard (SY). Payment will constitute full compensation for fine grading, fertilizing, and sodding disturbed landscaped areas on public or private property in accordance with Guide Spec 02486. Grass seeding shall match in kind the existing adjacent grass of previously landscaped areas. Soil preparation and/or topsoil shall be included.
- 46-47. Silt Fence, Guide Spec 02542: Measurement for payment will be per linear foot (LF) for Type C silt fence suitably installed and maintained per single row and/or double row as required by the Manual for Erosion and Sediment control of Georgia, latest edition. Payment will constitute full compensation for all costs associated with silt fence, including installation, maintenance, repair, removal and disposal.

### **Sanitary Sewer Lining**

- 48-53e. Cured-In-Place-Pipe (CIPP), Felt or Fiberglass (UV) Type, All Diameters – Guide Specs 02500 and 02501: Measurement for payment will be per linear foot (LF) of sewer acceptably lined based on the actual horizontal length of sewer lined as field measured from center of manhole to center of manhole along the axis of the sewer. The length occupied by the manhole itself shall not be deducted. Payment for the diameter (or dimensions) of the sewer being lined



will constitute full compensation for the labor, equipment, and materials required to furnish and install the work complete. All costs for renewing gravity sewer pipe by CIPP liner will be included in the unit prices including, but not limited to, light cleaning of existing sewer pipe, type testing, wet-out, bypass pumping, pre-liner insertion, Vericure type temperature monitoring system, curing, pre and post-installation CCTV inspection for condition confirmation and installation quality control, watertight sealing of connections at manholes, sealing of cut edges in pipe and/or manholes and all other related procedures and materials necessary to complete the pipe lining. Payment shall be withheld due to failure to submit all post-installation CCTV video and other required quality control documentation for the work. No payment shall be made for any portion of failed CIPP lining attempts and result in other methods used, such as open cut. If a section of existing host pipe must be repaired or replace prior to installation, then the section will be paid for only by the appropriate conventional pipe work/point repair bid item. Contractor's 2-year warranty for installed CIPP liner shall be included in the unit price. Should any fault be found with the repair, the fault shall be rectified as specified by the Owner's Representative. Rectification may include complete removal and renewal of the previously installed liner and re-inspection one (1) year from acceptance. Correction of failed CIPP or CIPP deemed defective from mid-warranty internal condition inspection or test reports for structural values, thickness, etc., shall be repaired or replaced at no extra cost to the Owner. Payment for quality assurance sampling and testing of installed liner will be included in the unit price. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.

- 54-58. Internal Pipe Point Repair with CIPP, All Diameters, all wall thickness, guide Spec 02500: Measurement for payment will be per each (EA) point repair up to fifteen (15) linear feet (LF) in length as measured from the centerline of each connection coupling along the longitudinal axis of the sewer main, rounded to the nearest foot. Payment for the liner will constitute full compensation for the labor, equipment, and materials required to furnish and install the work complete. All costs for repairing gravity sewer pipe by CIPP will be included in the unit prices. The unit prices shall include testing, wet-out, bypass pumping, pre-liner, insertion, curing, pre and post-installation CCTV inspection for quality control, watertight sealing connections at manholes, sealing of cut edges in pipe and/or manholes and all other related procedures and materials necessary to complete the pipe lining. Payment shall be withheld due to failure to submit all post-installation CCTV video and other required quality control documentation for the work. No payment shall be made for any portion of failed CIPP lining attempts and result in other methods used, such as open cut. If a section of existing host pipe must be repaired or replace prior to installation, then the section will be paid for only by the appropriate conventional pipe

work/point repair bid item. Contractor's 2-year warranty shall be included in the unit price. Should any fault be found with the repair, the fault shall be rectified as specified by the Owner's Representative. Rectification may include complete removal and renewal of the previously installed liner and re-inspection one (1) year following the acceptance of the liner.

### **Sanitary Sewer Service Laterals**

59. Robotic Reconnection of Existing Services Laterals, Guide Spec 02530: Measurement for payment will be per each (EA). Payment will constitute full compensation to re-connect active services complete and in operation to the lined sewer. Payment for each service re-connection associated with CIPP liners will include the opening of the service tap by robotically cutting the liner insitu, brushing and sealing cut edges as directed by the Owner's Representative. Each lateral shall include a watertight seal. There shall be no additional compensation to complete the watertight sealing of each lateral and shall be included within the unit price bid. This includes CCTV monitoring of the reconnection process, as well as CCTV zoom into each service lateral after reconnection is complete per with Guide Spec 02520. There shall be no distinctions made for size of service connection or lateral. If, in the course of the work, an existing service connection is omitted and the Contractor must return to the location to reconnect a service, the reconnection shall be made at the unit price bid and there shall be no additional compensation for remobilization or set-up.
60. Cured-in-Place, Renewal of Service Lateral, Mainline to Edge of Easement or ROW, Guide Specs 02500 and 02501: Contractor will be paid per lineal foot (LF) for renewing 6-inch service laterals and outside drop assemblies using cured-in-place pipe in accordance with Guide Spec 02500 and include, but are not limited to, materials testing, location of service lateral layout and bends, pre and post-installation CCTV inspection, reconnection of service lateral house connection service, and all other related procedures and materials necessary to complete the lining of each service lateral. All lateral rehabilitation shall terminate at the edge of the Right-of Way or Easement. No payment shall be made for any portion lining attempts which fail and result in other methods of replacement used, such as open cutting.
61. Service Lateral Reconnection 4"-6" Diameter, Various Depths, All Materials, up to 5 LF, Guide Spec 02530: Measurement for payment will be per each (EA). Before each exposed service lateral is reconnected it shall be inspected for defects with a CCTV push-camera manually inserted into the service lateral. When structural defects are observed during the inspection, the service lateral shall be replaced from the mainline to the right-of-way or easement boundary at the discretion of the Owner's Representative. Payment will constitute full compensation to reconnect services excavated and exposed in conjunction with open cut mainline replacement, pipe-bursting, CIPP lining, and external point

repair work. Payment for each service reconnection will include a wye fitting or an electrofusion, saddle connection installed on the mainline, replacement of up to 5 linear feet of service lateral pipe to accommodate change in horizontal/vertical alignment, including replacement of service line fittings and connections, any additional excavation or pavement saw-cutting, removal, disposal, shoring, dewatering, bedding pipe zone backfill and final backfilling. All associated costs for testing, post-installation cleaning, if required, and post-installation CCTV video require quality control documentation for the work. No separate or additional payment will be made to install ductile iron piping or fittings for the service piping connections.

62. Service Lateral Replacement, 4" to 6" Diameter, Any Depth, Additional Footage over 16 LF, Guide Spec 02530: Measurement for payment will be per linear foot (LF). Payment will constitute full compensation at all depths to remove and replace the necessary length of existing service lateral piping beyond the 16 linear feet section of new service lateral piping included with provision of a service reconnection at the R/W or Easement. Each service lateral replacement shall include, but not limited to excavation, shoring, dewatering, pavement saw-cutting, bedding, pipe zone backfill, final backfill, removal and disposal of excavated material if replaced with imported fill material. Each service lateral replacement shall include piping and piping products for a complete installation such as sewer main couplings, sleeves, lateral piping, lateral pipe fittings and lateral connection couplings at no additional cost. All related costs for testing, post-installation cleaning, and post installation CCTV inspection for quality control shall be included under this item. Payment shall be withheld due to failure to submit all post installation CCTV video and other required quality control documentation for the work. No separate or additional payment will be made to install ductile iron piping or fittings for the service piping connection. Separate payment will be made for surface restoration.
63. Service Lateral Replacement, 4" to 6" Diameter, Various Depths, Up to 16 LF, Guide Spec 02530: Measurement for payment will be per linear foot (LF) service lateral replaced. Payment will constitute full compensation at all depths to remove, and replace, the existing sewer lateral piping from the reconnection of the lateral at the sewer main up to 16 linear feet. Each service lateral replacement shall include, but not limited to excavation, shoring, dewatering, pavement saw-cutting, bedding, pipe zone backfill, final backfill, removal and disposal of excavated material if replace with imported fill material, piping and piping products for a complete installation, sleeves, lateral piping, lateral pipe fittings and lateral connection couplings, at no additional cost. All related costs for testing, post-installation cleaning, if required and post-installation CCTV inspection for quality control shall be included under this item. Payment shall be withheld due to failure to submit all post-installation CCTV video and other required quality control documentation for the work. No separate or additional payment will be made to install ductile iron piping or fittings for the service pipe reconnection.

Separate payment will be made for surface restoration.

64. Relocation, Reconnect to Existing Sanitary Sewer, Any Depth, Guide Spec 02530: Measurement for payment will be per each (EA). Payment will constitute full compensation for excavating, removal and disposal of excavated material if replaced with imported fill material, reconnecting, backfilling, site restoration and pavement repair at the connection point. The unit price bid shall include, but not limited to, all costs for material, labor, equipment, and other miscellaneous items as required for a complete installation. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.
65. Relocation from Sanitary Sewer to Property Line, Any Depth, Guide Spec 02530: Measurement for payment will be per linear foot (LF) of pipe from the connection to the sanitary sewer line to the property line. Payment will constitute full compensation for excavating, laying pipe, installing a clean-out, connecting to sanitary sewer line, site restoration and pavement repair. The unit price bid shall include, but not limited to, all costs for material, labor, equipment, and other miscellaneous items as required for a complete installation. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.
66. Sewer, Service Lateral, Cap or Plug Existing Lateral, Any Depth, Guide Spec 02530: Measurement for payment will be per each (EA). Payment will constitute full compensation for excavating, cutting, plugging and backfilling the service lateral. The unit price bid shall include, but not limited to, all costs for material, labor, equipment, and other miscellaneous items as required for a complete installation. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.
67. Sewer, Cleanout, Install at ROW or Edge of Easement on Private Service, Guide Spec 02530: Measurement for payment will be per each (EA). Payment will constitute full compensation to install a two-way cleanout at the edge of the right-of-way or easement boundary complete to include riser piping, cleanout box and/or accessories, cleaning (if necessary), testing, and restoring the service laterals operation per Guide Specs 02730, 02735, Drawing Details, and to the latest DeKalb County DWM Design Standards Manual. The cleanout shall incorporate all appropriate and necessary couplings to both the service connection and house connection. A cleanout shall be installed in conjunction with all service lateral replacements to edge of right-of-way or to edge of easement.

### **Sanitary Sewer Point Repairs**

68-73a. External Sewer Point Repairs, All Diameters, All Pipe Materials, All Depth Categories, Guide Spec 02535: Measurement for payment will be per each (EA) sewer main point repair up to fifteen (15) linear feet (LF) in length as measured along the longitudinal axis of the sewer main, rounded to the nearest foot, and generally from new coupling to new coupling. Payment will constitute full compensation for each external point repair including, but not limited to, labor, new materials, equipment, dewatering, by-pass pumping, pavement saw cutting, excavation, removing, and disposing excavated materials if replaced with imported material per Section 02324, shoring, disposing all waste materials, transportation, safely maintaining open pit until repairs are completed, installing new piping, installing flexible repair couplings, post-construction CCTV quality control inspection, and backfilling. Payment shall be withheld due to failure to submit all post-installation CCTV video and other required quality control documentation for the work. No separate payment shall be made for concrete collars and couplings or rebuilding pipe penetrations and existing manhole inverts considered incidental to the Work. The point repair depth shall be considered the same as the average sewer main depth for measurement and payment purposes regardless of the actual excavation depth required. The average sewer main pipeline depth shall be as measured from the pipe invert to the existing ground level at the upstream and downstream manhole. Each point repair shall include replacing a section of sewer main pipe up to fifteen (15) linear feet in length, replacing up to one (1) service reconnection including furnishing and installing necessary service connection pipe, fittings and flexible coupling for a complete reinstatement of the sewer collection piping assembly. Payment will not be remitted to repair any damage to the surrounding areas caused by the Contractor in performance of the Work unless specifically authorized in writing by the Owner's Representative. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative.

74-79a. External Sewer Point Repairs, All Diameters, All Pipe Materials, All Depth Categories, Additional Linear Footage, Guide Spec: 02535: Measurement for payment will be per linear foot of sewer pipe over the fifteen (15) linear feet included in the unit price for an External Point Repair. All length measurements shall be taken as field measurements along the longitudinal axis of the sewer. The depth category shall be the same average sewer main depth as measured for the aforementioned point. Payment will constitute full compensation for all costs for additional new pipe and materials including, but not limited to, labor, equipment, dewatering, by-pass pumping, pavement saw-cutting, excavating, removing and disposing excavated material if replaced with imported material per Section 02324, shoring, disposing all waste materials, transportation, and safely maintaining open pit until repairs are completed, installing new piping, installing

flexible repair couplings, post-construction CCTV quality control inspection, and backfilling. Payment shall be withheld due to failure to submit all post-installation CCTV video and other required quality control documentation for the work. The point repair depth shall be considered the same as the average sewer main depth for measurement and payment purposes regardless of the actual excavation depth required. Payment will not be remitted to repair any damage to the surrounding areas caused by the Contractor in performance of the Work unless specifically authorized in writing by the Owner's Representative. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative.

80. Abandon (grout fill) Existing Sewer Line in Place, 6" to and including 12" Diameter, Guide Spec 02535: Measurement for payment will be per linear foot (LF). Payment will constitute full compensation for existing sewer abandonment by grout filling the existing sewer line in place. The unit price bid shall include, but not be limited to, all costs for material, labor, equipment, bulkheads, vent piping and other miscellaneous items as required for a complete installation. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.
81. Cut & Plug Existing Sewer Line, 6" to and including 12" Diameter, Guide Spec 02535: Measurement for payment will be per each (EA). Payment will constitute full compensation for excavating, cutting, plugging and backfilling the sewer line. The unit price bid shall include, but not limited to, all costs for material, labor, equipment, and other miscellaneous items as required for a complete installation. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.
82. Flowable Fill, Guide Spec 02535: Price shall include furnishing and installing controlled low strength flowable fill concrete in accordance with Guide Spec 02535, including labor, materials, equipment and any misc. formwork (if required). Measurement shall be in cubic yards complete in-place and accepted.
83. Concrete Encasement (if required), Guide Spec 02535: Price shall include furnishing and installing concrete encasement in accordance with Guide Spec 02535, including labor, equipment, materials and any misc. formwork (if required). Measurement shall be in cubic yards complete in-place, tested and accepted. Payment for all soils and concrete testing shall be made separately.

### **Sanitary Sewer Replacement**

- 84-106. Replacement, Ductile Iron Pipe (DIP) Gravity Pipe (Replace), All Diameters, All Depth Categories, Open Cut, Guide Spec 02537: Measurement for payment will be per linear foot (LF) of pipe for gravity sewer replacement of existing pipe by open cut measured from inside face of manhole to inside face of manhole. Depth of cut shall be the average depth of the pipeline as measured from the pipe invert to the existing ground level at the upstream and downstream manhole. Payment will constitute full compensation for all costs including, but not limited to, all labor, equipment, transportation, tools, dewatering, bypass pumping, pavement saw-cutting, excavation, removal and disposal of excavated material if replaced with imported material per Guide Spec 02324, existing pipe removal and disposal (size and material may vary), pipe bedding, haunching, pipe zone backfill and pipe to manhole connections, pipe cutting, rebuilding existing manhole inverts and pipe beveling, as required, for a complete installation of new piping per Guide Spec 02535. Fittings and materials needed to reconnect service laterals will be a separate payment under Guide Spec 2530. No additional payment will be made for replacing defective materials. No separate payment will be made for cutting or beveling pipe. All associated costs for air testing, post-installation cleaning (if required), and post-installation CCTV inspection for quality control shall be included under this item. Payment shall be withheld due to failure to submit all post-installation CCTV video and other required quality control documentation for the work. No separate payment shall be made for survey work performed by or for the Contractor to establish reference points, benchmarks, cut sheets, limits of rights-of-way or easement, including their restoration, centerlines or baseline points. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.

### **Manhole Rehab**

107. Locate and Expose Buried Manhole, Street, guide Spec 02607: Contractor will be paid for locating and exposing buried manholes on a per each (EA) basis. Locating and exposing manholes to the proper elevation shall be done according to Guide Specs 02607 or 02700, whichever is most applicable for the site and approved by Owner's Representative. Payment shall be made at the bid price for each buried manhole that is acceptably located and exposed and will constitute full compensation for furnishing all labor, materials, tools, and equipment necessary to perform all work. Payment for pavement patch or restoration will be a separate payment item. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.
108. Locate and Expose Buried Manhole, Non-Street, Guide Spec 02607: Contractor will be paid for locating and exposing buried manholes on a per each (EA) basis.

Locating and exposing manholes to the proper elevation shall be done according to Guide Spec 02607 and approved by Owner's Representative. Payment shall be made at the bid price for each buried manhole that is acceptably located and exposed and will constitute full compensation for furnishing all labor, materials, tools, and equipment necessary to perform all work.

109. Height Adjustment, Each 12" Height Adjustment Lift, Guide Spec 02607: Measurement for payment will be per each (EA) 12" height adjustment. The final adjustment may be less than 12" but total adjustment payment will be based on the number of 12" adjustment lifts required to reach the proper height and maintaining a 24" clear manhole opening concentric with the frame. Work shall include removing the casting frame and building up the chimney section of the manhole (reuse existing casting frame and cover). Payment will constitute full compensation for all costs for uncovering and/or adjusting each manhole to grade or higher will be included in the unit price, including, but not limited to, labor, equipment, transportation, tools, manhole vacuum testing and all other related procedures and materials necessary to produce the results specified in Guide Spec 02607. Contractor will advise the Owner's Representative in writing prior to proceeding. There shall be no distinctions made for diameter of the manhole or its material composition. No separate payment shall be made for resetting existing manhole frames and covers. This work shall be considered an integral part of raising manholes. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Additional traffic control measures required for work in high-traffic/commercial areas will be paid for separately when authorized by the Owner's Representative. Payment for all soils and concrete testing shall be made separately by the Owner.
- 110-112. Replace Manhole Frame & Cover, All Types, Guide Spec 02608: Measurement for payment will be per each (EA). Payment will constitute full compensation for costs for replacing manhole frames and covers including, but no limited to labor, equipment, transportation, tools, pavement removal/disposal/replacement, and all other related procedures and materials necessary to produce the results specified in Guide Spec 02608. Contractor and Owner's Representative shall verify the type of frame and cover required for each location prior to replacement. Contractor will advise the Owner's Representative in writing in the daily report identifying each manhole with replaced type frame and cover. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Additional traffic control measures required for work in high-traffic or commercial areas will be paid for separately when authorized by the Owner's Representative.
- 113-114. Replace Manhole Cover, All Types, Guide Spec 02608: Measurement for payment will be per each (EA). Payment will constitute full compensation for costs for replacing manhole covers including, but no limited to labor, equipment, transportation, tools, and all other related procedures and materials necessary to produce the results specified in Guide Spec 02608. Contractor will advise the



Owner's Representative in writing in the daily report identifying each manhole with replaced type cover. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Additional traffic control measures required for work in high-traffic or commercial areas will be paid for separately when authorized by the Owner's Representative.

115. Manhole Frame Sealing, Guide Spec 02609: Measurement for payment will be per each (EA). Payment will constitute full compensation for all costs for installing a manufactured or applied internal or external flexible seal to frame joints including, but no limited to, labor, equipment, transportation, tools, and all other related procedures and materials. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Additional traffic control measures required for work in high-traffic or commercial areas will be paid for separately when authorized by the Owner's Representative.
116. Inside Drop Connection, Guide Spec 02610: Measurement for payment will be per vertical foot (VF). Payment will constitute full compensation for all costs for installing a new inside drop connection per the latest DeKalb County DWM Design Standards Manual Standard Detail No. S-027, including, but no limited to labor, equipment, transportation, tools, bypass pumping, and all other related procedures and materials. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Additional traffic control measures required for work in high-traffic or commercial areas will be paid for separately when authorized by the Owner's Representative.
117. Outside Drop Connection, Guide Spec 02610: Measurement for payment will be per vertical foot (VF). Payment will constitute full compensation for all costs for installing a new outside drop connection per the latest DeKalb County DWM Design Standards Manual Standard Detail No. S-003, including but not limited to labor, equipment, transportation, tools, bypass pumping, excavation, shoring, dewatering, pavement saw-cutting, bedding, pipe zone backfill, final backfill, removal and disposal of excavated material if replace with imported material, piping and piping products for a complete installation, and all other related procedures and materials. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Additional traffic control measures required for work in high-traffic or commercial areas will be paid for separately when authorized by the Owner's Representative. Payment material testing shall be paid for separately by the Owner.
118. Rebuild Invert and Bench, Guide Spec 02900: Measurement for payment will be per each (EA). Payment will constitute full compensation for all costs for rebuilding the invert and bench including, but not limited to, labor, equipment, transportation, tools, bypass pumping, and all other related procedures and materials. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Additional traffic control measures required for

work in high-traffic or commercial areas will be paid for separately when authorized by the Owner's Representative.

119. Remove Intruding Connection, Guide Spec 02900: Measurement for payment will be per each (EA) for each manhole protruding connection removed. Payment will constitute full compensation for cutting and/or grinding down protruding connections, including, but not limited to, labor, equipment, transportation, tools, bypass pumping, and all other related procedures and materials necessary to produce the results specified in Guide Spec 02900. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high traffic or commercial areas will be paid when authorized by the Owner's Representative.
120. Sealing and Patching, 48" to and including 60" Diameter Manhole, Guide Spec 02900: Measurement for payment will be per square foot (SF) of manhole wall actually sealed and/or patched. Payment will constitute full compensation for all manhole surface preparation and cleaning, patching, sealing active leaks, flow control/bypass pumping, clean up, inspection, quality assurance testing (manhole vacuum testing), and any other work or materials necessary to complete the work for up to thirty (30) vertical feet of depth. Sealing and patching work under this item is "stand-alone" and will be paid only for manholes not to be subsequently lined under another pay time. Payment will include all costs associated performing the work in accordance with Guide Spec 02900. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high traffic or commercial areas will be paid when authorized by the Owner's Representative.
121. Cementitious Manhole Coating, 48" to and including 72" Diameter, Guide Spec 02900: Measurement will be per square yard (SY) of manhole wall coated. Payment will constitute full compensation for all labor, equipment, transportation, tools, removal of steps, surface preparation, cleaning, patching, sealing, coating, flow control/bypass pumping, clean up, inspection, quality assurance testing (manhole vacuum testing), and any other work or materials necessary to complete the work for up to thirty (30) vertical feet of depth per Guide Spec 02900. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high traffic or commercial areas will be paid when authorized by the Owner's Representative.
122. Epoxy Manhole Coating, 48' to and including 72" Diameter, Guide Spec 02900: Measurement will be per square yard (SY) of manhole wall coating. Payment will constitute full compensation for all labor, equipment, transportation, tools, removal of steps, surface preparation, cleaning, patching, sealing, coating, flow control/bypass pumping, clean up, inspection, quality assurance testing (manhole vacuum testing), and any other work or materials necessary to complete the work for up to thirty (30) vertical feet of depth per Guide Spec 02900. Traffic control

measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high traffic or commercial areas will be paid when authorized by the Owner's Representative.

123. Fiberglass Manhole Lining, 48" to and including 72" Diameter, Guide Spec 029001: Measurement will be per square yard (SY) of manhole wall lined. Payment will constitute full compensation for all labor, equipment, transportation, tools, surface preparation, cleaning, patching, grouting, sealing, lining, flow control/bypass pumping, clean up, inspection, quality assurance testing (manhole vacuum testing), and any other work or materials necessary to complete the work for up to thirty (30) vertical feet of depth per Guide Spec 02900. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high traffic or commercial areas will be paid when authorized by the Owner's Representative.
124. Abandon & Fill Existing Manhole, Roadway, Any Depth, All Sizes, Guide Spec 02900: Measurement for payment will be per each (EA). Payment will constitute full compensation for existing manhole abandonment by removing frame and cover and demolishing structure as per DeKalb County DWM Design Standards Manual Standard Detail No. S-005, Method of Manhole Abandonment. Finish by grout filling the existing manhole in place. Road surface repair will be a separate pay item and completed as per the latest DeKalb County DWM Design Standards Manual Standard Detail G-005 Typical Patch and Resurfacing Detail. The unit price bid shall include, but not be limited to, all costs for material, labor, equipment, bulkheads, and other miscellaneous items as required for a complete installation. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.
125. Abandon & Fill Existing Manhole, Easement, Any Depth, All Sizes, Guide Specs 02900: Measurement for payment will be per each (EA). Payment will constitute full compensation for existing manhole abandonment as per DeKalb County DWM Design Standards Manual Standard Detail No. S-005, Method of Manhole Abandonment. The unit price bid shall include, but not be limited to, all costs for material, labor, equipment, bulkheads, and other miscellaneous items as required for a complete installation. Surface restoration will be paid separately per Guide Specs 02485 or 02486, whichever is most applicable. Traffic control measures for work in low-traffic/residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic/commercial areas will be paid when authorized by the Owner's Representative.

### **Manhole Replacement**

- 126-133. Sewer Manholes, 48” to and including 72” Diameter, Any Depth, Pre-Cast Concrete, Guide Spec 02641: Payment will be for each (EA) replacement manhole per the diameter and the depth range the manhole falls within as measured from the top of the frame to the invert of the outgoing pipe. Payment will constitute full compensation for all costs for installing new pre-cast concrete manholes complete per Guide Spec 02641 and Guide Spec 02900. The unit price bid shall include, but not limited to bypass pumping,, excavation, shoring, manhole bedding, base, riser sections(s), cone, anti-floatation measures (if required), chimney, frame, cover, sealant, flexible piping connections, invert, bench(s), trough, connecting the pipes to the manhole, backfill and manhole vacuum testing. Payment will include full compensation for removal, transportation, and disposal of the existing manhole and any debris. Traffic control measures for work in low traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high traffic or commercial area will be paid when authorized by the Owner’s Representative.

### **Pavement Repairs**

134. Road Pavement Patch, with Concrete Cap, Guide Spec 02700: Measurement for payment will be per square yard (SY) of pavement removed and replaced. Payment will constitute full compensation for saw-cutting, removal and disposal of existing pavement and placement of new pavement to include concrete cap, restoration of existing pavement markings. The unit price shall include, but not be limited to, labor, equipment, materials, transportation, and tools required to perform the work in accordance with the latest DeKalb County DWM Design Standards Manual Standard Detail G-005, Typical Patch and Resurfacing Detail. No additional payment will be made for removing and replacing adjacent pavement damaged while performing the sewer rehabilitation and replacement work. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner’s Representative. Payment for materials testing shall be paid for separately by the Owner.
135. Road Pavement Patch, Asphalt Guide Spec 02700: Measurement for payment will be per square yard (SY) of pavement removed and replaced. Payment will constitute full compensation for saw-cutting, removing and disposing existing pavement and placing new pavement, including restoring existing pavement markings. The unit price shall include, but not be limited to, labor, equipment, materials, transportation, and tools required to perform the work in accordance with the latest DeKalb County DWM Design Standards Manual Standard Detail G-006, Typical Asphalt Pavement Patch. No additional payment will be made for removing and replacing adjacent pavement damaged while performing the sewer rehabilitation and replacement work. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner’s Representative. Payment for materials testing shall be paid for separately by the Owner.

136. Asphalt Milling and Overlay Guide Spec 02700: Measurement for payment will be per square yard (SY) of pavement removed and replaced. Payment will constitute full compensation for milling, removing and disposing existing asphalt pavement and placing new pavement, including restoring existing pavement markings. The unit price shall include, but not be limited to, labor, equipment, materials, transportation, and tools required to perform the work in accordance with the latest DeKalb County DWM Design Standards Manual. No additional payment will be made for removing and replacing adjacent pavement damaged while performing the sewer rehabilitation and replacement work. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative. Payment for materials testing shall be paid for separately by the Owner.
137. Asphaltic Concrete Driveway Replacement, Residential & Commercial, Guide Spec 02700: Measurement for payment will be per square yard (SY) of driveway removed and replaced. Payment will constitute full compensation for removing, disposing, and replacing asphalt driveways. Replaced driveways shall be installed per the Drawings and Guide Spec 02700. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative. Payment for materials testing shall be made separately by the Owner.
- 138 a.-c. Curb & Gutter Replacement, Granite & Concrete, Guide Spec 2700 & 2710: Measurement for payment will be per linear foot (LF) of curb removed and replaced. Payment will constitute full compensation for removing, disposing, and replacing existing curb and gutter as necessary to complete the sewer rehabilitation or replacement work. Replacing granite curbs and gutters shall be per Section 02700 and concrete curbs and gutters shall be per Section 02710. For unit price bid item 138c Granite Curb Removal and Replacement, payment will constitute full compensation for removal of granite curb and installing the removed granite curb as necessary to complete the sewer rehabilitation or replacement work. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative.
139. Concrete Driveway Replacement, Residential & Commercial, Guide Spec 02710: Measurement for payment will be per square yard (SY) of driveway removed and replaced. Payment will constitute full compensation for saw cutting, removing, disposing, and replacing concrete driveways. Replaced driveways shall be installed per the Drawings and Guide Spec 02710. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative. Payment for all materials testing shall be made separately by the Owner.



140. Concrete Sidewalk, Guide Spec 02710: Measurement for payment will be per square yard (SY) of concrete sidewalk removed and replaced. Payment will constitute full compensation for saw cutting, removing, disposing, and replacing a public or private sidewalk per Guide Spec 02710. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative.

### **Sanitary Sewer and Manhole Maintenance**

- 141-143. Sanitary Sewer, Heavy Cleaning, 6" to and including 24" Diameter, Guide Spec 02956: Measurement for payment will be per linear foot (LF) for the size classification category of sewer acceptably cleaned. Payment will constitute full compensation for sewer cleaning including, but not limited to, labor equipment, transportation, tools, and all other related procedures and materials necessary to produce the results specified in Guide Spec 02956. Sewers will be cleaned to remove debris or obstructions found in sewers impeding or prohibiting flow. All sewer-cleaning debris shall be collected and removed from the line through the manhole by bucket, suction, or other means. Removal and disposal of debris and other solids removed from the sewers shall be paid separately under Guide Spec 02956. Post cleaning CCTV inspection shall be included in this bid item cost for all heavy cleaned pipe segments and be performed per Guide Spec 01510 except defect coding will not be required. CCTV inspection shall also include the manhole to manhole segment immediately downstream of the last heavy cleaned sewer segment. If more than 5% of the pipe's cross sectional area of any inspected pipe remains then the sewer shall be re-cleaned at the contractor's sole expense. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative.
144. Sewer Debris Removal and Disposal From Heavy Cleaning, Guide Spec 02956: Measurement for payment will be per ton for actual tonnage disposed as documented on an official copy of the disposal manifest form or ticket receipt provided by the disposal site. Payment will constitute full compensation for removal, transportation and disposal of debris from sewer cleaning operations including, but not limited to, labor, equipment, transportation, tools, and all other related procedures and materials necessary to produce the results per Guide Spec 02956. The official copy of the disposal manifest form or ticket receipt must clearly indicate the tonnage disposed, and must be submitted to the Owner's Representative no later than three (3) days after the debris was disposed.
145. Sewer, Root Removal, 6" to and including 24" Diameter, Guide Spec 02956: Measurement for payment will be per linear foot (LF) as measured from the farthest root removal section to the nearest manhole for the actual lineal footage of pipeline having roots removed. Payment shall include, but not limited to, labor, equipment, transportation, tools, and all other related procedures and materials

necessary per Guide Spec 02956. Payment will not be remitted for the entire pipe segment length unless continuous root removal is required from the upstream to the downstream manhole. The Contractor must receive authorization for payment from the Owner's Representative prior to proceeding. Traffic control measures for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative.

146. Protruding Lateral Removal and Disposal, Guide Spec 02956: Measurement for payment will be per each (EA) for each protruding service lateral removed. Payment will constitute full compensation for cutting and/or grinding down protruding service laterals, including, but not limited to, labor, equipment, transportation, tools, and all other related procedures and materials necessary to produce the results specified in Guide Spec 01510. Removal of protruding laterals will be done to remove obstructions and/or upsize sewers. Contractor will advise the Owner's Representative in writing prior to proceeding.

### **Sanitary Sewer Pipe Bursting**

- 147-149. Sewer, Replacement with HDPE or DIP using Pipe-Bursting Methods, All Diameters, All Depths, Guide Spec 02958: Measurement for payment will be per linear foot (LF) of sewer replaced by bursting. Payment will constitute full compensation for replacing existing gravity sewer mains with HDPE or DIP piping using pneumatic or static pipe-bursting methods. The unit price bid shall include, but not limited to, furnishing material, installation, equipment, stringing pipe, bypass pumping, installing pipe, lubrication, connecting pipes, rebuilding existing manhole wall and invert, air testing, material testing, post-installation cleaning (if required), post-installation CCTV inspection for quality control, and all other related procedures and materials necessary to complete pipe-bursting per Guide Spec 02958. Payment for reconnecting service laterals shall be a separate pay item under Guide Spec 02530. Pipe bursting payment shall be withheld due to failure to submit all post-installation CCTV video and other required quality control documentation for the Work. No payment shall be made for any portion of a failed pipe-bursting attempt and results in the use of other replacement methods such as open cut. If a section of existing pipe must be otherwise replaced, then the section will be paid for only by the appropriate conventional pipe work/point repair bid item. Traffic control measures required for work in low-traffic or residential areas shall be included in the unit price. Traffic control measures required for work in high-traffic or commercial areas will be paid when authorized by the Owner's Representative.
- 150-151. Pipe-Bursting Launch Pits, All Depths, Guide Spec 02958: Measurement of payment will be per each (EA) pit depth range regardless of pit width and length. Payment shall include but not limited to labor, equipment, transportation, tools, excavation, shoring, dewatering, pavement saw-cutting, bedding, pipe zone

backfill, final backfill, removal and disposal of excavated material if replaced with imported material, and all other related procedures and materials required for replacing gravity sewer by pipe-bursting. Depth of cut for excavation of pit shall be measured from the installed pipe invert to existing ground level at pipe centerline of horizontal alignment. The unit price shall also include installing and removing appropriate trench stabilization equipment. Payment for surface restoration will be a separate pay item and calculated as actual surface area needing restoration or no greater than a surface restoration area allowance; whichever results in the smaller area. The restoration allowance is calculated whereby the pit width is two times the pit depth and the pit length is three times the pit depth.

- 152-153. Pipe-Bursting Receiving Pits, All Depths, Guide Spec 02958: Measurement of payment will be per each (EA) pit depth range regardless of pit width and length. Payment shall include but not limited to labor, equipment, transportation, tools, excavation, shoring, dewatering, pavement saw-cutting, bedding, pipe zone backfill, final backfill, removal and disposal of excavated material if replaced with imported material, and all other related procedures and materials required for replacing gravity sewer by pipe-bursting. Depth of cut for excavation of pit shall be measured from the installed pipe invert to existing ground level at pipe centerline of horizontal alignment. The unit price shall also include installing and removing appropriate trench stabilization equipment. Payment for surface restoration will be a separate pay item and calculated as actual surface area needing restoration or no greater than a surface restoration area allowance; whichever results in the smaller area. The restoration allowance is calculated whereby the pit width is two times the pit depth and the pit length is three times the pit depth.

### **Allowances**

154. Design Support Allowance – This allowance shall cover costs associated with design support services required to complete the Basis of Design Report, 60 percent design drawings, and final design drawings. Contractor shall submit to the County for approval a scope and cost proposal for required support services. All design support activities shall be expensed at cost with no Contractor markup. Design support services shall include the following:
- Subsurface Utility Engineering (SUE) services as required to confirm existing condition information such as geospatial location (alignment), connectivity, material size, invert/rim elevations and locations for any assets proposed for replacement. Subsurface Utility Engineering services must be provided by a GDOT prequalified contractor.
  - Geotechnical Services as determined necessary by the Contractor to confirm the suitability of the proposed rehabilitation design.
  - Other exploration, testing, and analyses that may be required to determine the suitability of the design including but not limited to soil corrosivity analyses and environmental surveys.



155. Rock Excavation Allowance – This allowance shall cover costs associated with rock removal with regard to pipe and manhole installation. Payment for rock excavation will be made for the quantities as described herein measured in place by the cubic yard at a unit price negotiated with the Owner. Payment shall be full compensation for labor, equipment, materials, excavation, blasting and/or mechanical removal and disposal of rock. Payment for placement of backfill material will be made from Guide Spec 02324 Unsuitable Soil Replacement (imported soil fill). When rock is encountered the material shall be uncovered and the Owner’s Representative notified. The Contractor shall take cross sections of the rock surface. Failure to uncover the rock, notify the Owner’s Representative, and provide cross sections of the undisturbed material shall give the Contractor no right of claim to any classification other than unclassified soils. The top of the trench will be ground elevation as determined by the Owner’s Representative prior to excavation. The grade of the invert of the pipe shall be as shown on the drawings. The quantity of rock excavation to be paid shall be the number of cubic yards of rock measured in place, per the trench width pay limits. Measurement for width shall be limited to 12 inches beyond the outside of the pipe. Measurement for rock excavation will extend to a depth of 8 inches below the pipe barrel for pipe diameter of 21 inch or less and extend to a depth of 12 inches for larger diameter pipe. At manholes and other structures, measurement will be to 24 inches from the outside face of the structure and 12 inches below the bottom of the slab. No measurement or payment will be made for over excavation. The Owner’s Representative must confirm the volume of rock removal within the limits herein specified. Weathered rock and mixed face or any material removable with moil-point hydra hoe attachment or a rock bucket on a Cat 345 Backhoe will not be considered rock removal. The Contractor will need to submit a blasting plan to the Owner for review and approval prior to the occurrence of any blasting operations.
156. Materials Testing Allowance – This allowance shall cover cost of the Contractor engaging a third party testing or inspection agency to conduct materials testing for asphalt, concrete, and soil. The allowance does not include costs for retesting on failure of previous tests and inspections, or failure of the Contractor to be ready for scheduled tests or inspections. The Contractor shall submit the third party testing or inspection agency cost proposal to the Owner for review and approval. The Contractor shall not employ any third party agency without obtaining the Owner’s written consent.
157. Owner Controlled Allowance – This allowance shall cover cost of related sewer rehabilitation work to be performed in conjunction with this project at the direction of the Owner. Work performed under this allowance shall comply with required sections of the project specifications utilizing pay items indicated in the Unit Price Bid Form. Work will be provided to the Contractor in written form including supplemental exhibits. No work will be performed without prior written approval of the Owner.

### **Community Outreach/Right of Entry Acquisition**

158. Measurement for payment shall be per each (EA) for plat and legal description required for property easement acquisition. Payment will constitute full compensation for the preparation of each property plat and legal description showing the new permanent and temporary easement. Each property plat and legal description shall be prepared and sealed by a registered land surveyor in the state of Georgia. The final plats and legal descriptions shall meet all legal requirements applicable to DeKalb County for utilization in the acquisition of permanent easements. The Owner will procure a separate firm to complete title work and appraisals associated with easement acquisition.
159. Measurement for payment shall be lump sum for the Contractor's provision of Community Outreach services as per Guide Spec 01351. The Contractor will be responsible for providing notifications to the Public including community notices as well as individual notices. The Contractor will be responsible for obtaining executed Right of Entry (ROE) agreements prior to the start of the Work. Contractor is responsible for three (3) attempts to obtain executed ROEs before escalating ROE procurement to the County for assistance.

### **Permitting**

160. Measurement and payment shall be lump sum for Final Design and Construction permitting services. The Contractor along with the Owner will meet with required regulatory agencies including but not limited to Army Corps of Engineers, Georgia EPD, Georgia Department of Transportation, and local cities. The Contractor shall be responsible for preparation of permitting applications and notices required by the regulatory agencies as well as payment of any permit application fee. The Contractor will be responsible for tracking of permit compliance and all required regulatory notifications and reporting. Contractor shall comply with all regulatory and environmental mitigation requirements.

### **Topographic Surveying**

161. Measurement and payment shall be based on linear feet of survey. Contractor will need to perform topographic survey as determined necessary to confirm the suitability of the proposed rehabilitation design. At a minimum the limits of survey will need to include the required sewer easement area to perform the work. The survey should be referenced to the North American Datum (NAD83) and the vertical datum will be referenced to the North American Vertical Datum (NAVD88). The deliverable to the Owner will include AutoCad files (version 14 or later) of the newly collected survey data and a PDF file of the survey. At a minimum the topographic survey needs to include the following:

- Location of visible property corners adjacent to or within the survey limits.

- Location of apparent drainage and sanitary sewer information including ditch bottoms, top elevations, invert elevations, sizes and connections (pipe material will be noted where it can be determined from visual observations).
- Topographic data at 2-foot contour intervals.
- Location of utilities marked prior to initial survey field work.
- Location of roadway features including edge of pavement, curb, gutter and centerline.
- Labeling of road names and property owners on drawing (per DeKalb County GIS data).
- Location of permanent or significant structures or natural features.
  
- Location of significant observable obstacles within the easement area for each site survey area (lakes, ponds, fences, trailers, sheds, pools, power poles, light poles, signs and driveways). Survey information will be needed for preparation of the clearing plan.
- Location of large diameter trees (> 6 inches) noting size and common name for each tree except where jurisdictional requirements differ.
- Location of wetland and stream buffer delineation limits.

No easement clearing shall be performed, only cut lines will be done as needed or field locates. At a minimum setting of two construction benchmarks will be listed on plans (Northing, Easting, Elevation, Description) near each end of the pipeline route and not to exceed 1000 feet apart. Property lines and right of way lines will be shown on the survey based on monuments found in the field and based on GIS maps.