SAN ANTONIO WATER SYSTEM
WATER SYSTEM CONSTRUCTION
Addendum No. 1
2017 Annual Sanitary Sewer Main Point Repair, Manhole Adjustments and Laterals
Construction Contract, Package 2
SAWS Job Nos. 17-0109 (O&M) and 17-1402 (CIP) and 17-1403 (CIP)
Solicitation No. CD-B-17-007-JG

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

Table of Contents:

Add the following line item:

Special Specification Item No. 1003 . . . . . SS1 - (1-6)

Add under "Separate Documents" the following line item:

TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES (Latest Edition)

Clarification to "SAWS SPECIFICATIONS FOR WATER & SANITARY SEWER CONSTRUCTION (April 2014)":

Revisions to SAWS Standard Specifications Item No. 851, Item No. 852, Item No. 855 and Item No. 900 were updated March 3, 2017, superseding previous versions and are hereby part of and included in the Contract Documents.

Invitation to Bidders:

Clarification: The Invitation to Bidders is being modified to provide more time for questions due to technical specification changes.

Remove the fourth paragraph on Page IV-1 and replace with the following:

*For questions regarding this solicitation, technical questions or additional information, please contact Jessica Goforth, Contract Administrator, in writing via email to: Jessica.GoForth@saws.org or by fax to (210) 233-4466 until **4:00 PM (CT)** on **March 15, 2017**. Answers to the questions will be posted to the web site by **4:00 PM (CT)** on **March 17, 2017** as a separate document or included as part of an addendum. Please be advised that Bidders are prohibited from communicating with any other SAWS staff, the Consultant, the Developer, or City of San Antonio officials regarding this IFB up until the contract is awarded as outlined in the Instructions to Bidders.*

The non-mandatory pre-bid meeting was convened 9:00 AM (CT) on March 9, 2017 at the San Antonio Water System's Customer Service Building, 1st floor, Conference Room CR-C137, 2800 U.S. Hwy 281 North, San Antonio, Texas. No prospective bidders attended.

Special Provisions:

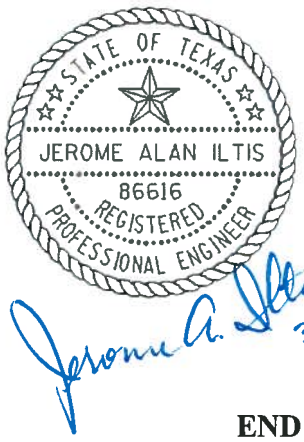
Clarification:

Revisions to SAWS Standard Specifications Item No. 851, Item No. 852, Item No. 855 and Item No. 900 were updated March 3, 2017, superseding previous versions and are hereby part of and included in the Contract Documents. Therefore, the requirements of these updated Item Nos. apply to all references thereto in the Special Provisions.

Remove and replace the Special Provisions with the Special Provisions attached to this addendum.

Special Specification:

Attached to this addendum is Special Specification Item No. 1003 Internal CIPP Point Repair of Pipelines, which is hereby added to and included in the contract documents.



Jerome A. Iltis, P.E.

END OF ADDENDUM NO. 1

This Addendum is twenty-three (23) pages in its entirety, including attachments.

Attachments: Special Specification Item No. 1003 – six (6) pages,
Special Provisions to the Technical Specifications – fifteen (15) pages.

SPECIAL SPECIFICATION ITEM NO. 1003
INTERNAL CIPP POINT REPAIR OF PIPELINES

A. General

1. Scope

The work covered in this item includes the labor, equipment, materials for performing all work necessary to rehabilitate gravity sanitary sewers by installation of a resin impregnated fiberglass patch into the existing pipe using an inflatable element and air pressure. Curing of the resin impregnated fiberglass patch shall be accomplished at ambient temperature and shall result in a hard, impermeable, corrosion resistant pipe within a pipe.

2. Design

Wall thickness calculations for the point repair shall be made in accordance with ASTM 1216 Appendix XI. The design of the point repair shall take into consideration the type of deterioration or damage to the existing host pipe, as well as hydraulic, soil and live loads.

3. General Procedures

The installation of the point repair shall be defined as the rehabilitation of an existing conduit by the installation of a composite material tube (silicate resin-impregnated fiberglass), which is first formed into an overlapping tube from a sheet and then pulled, pushed or both into the sewer host pipe. After insertion, the tube shall be inflated using air pressure and then cured at ambient temperature until the composite material tube is a hard, impermeable pipe. The repair shall extend a minimum of one foot past either end of the defect.

4. Corrosion Resistance

The point repair shall be fabricated from materials which, when cured, will be able to withstand internal exposure to sewer gasses and effluent containing hydrogen sulfide, carbon monoxide, carbon dioxide, methane, dilute sulfuric acid, and external exposure to soil bacterial and chemical attack which may be due to materials in the surrounding ground.

B. Materials

1. Fiberglass Mat

The tube shall be fabricated from a two-sided fiberglass mat, comprised of a chopped fiber mat on one side bonded to a woven fiberglass mat on the order.

2. Silicate Resin

The resin shall be an ambient curing, two-part silicate based resin with an MDI ("Waterglass") hardener.

3. Physical Properties

When cured the minimum physical properties of the patch shall be equal to or greater than those listed in the table below:

Physical Property	Value
Flexural Strength	27,000 psi
Flexural Modulus	800,000 psi

C. Execution

1. Application

This process is applicable for short repairs up to 5 feet (1.5 meters) in length and in diameters from 3 to 27 inches (80 to 700 mm), and longer lengths up to 16 feet (5 meters) in length and in diameters from 3 to 32 inches (80 to 800 mm). Longer repairs may be accomplished by installing multiple patches end to end with a 6 inch overlap of material where the patches are joined.

2. Referenced Specifications

ASTM F 1216 *Standard Practice for Rehabilitation of Existing Pipelines and conduits by the Inversion and Curing of a Resin-Impregnated Tube.*

ASTM D 790 *Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulation Materials.*

3. Preparatory Procedures

The following procedures shall be adhered to unless otherwise approved.

a. Safety

Safety precautions shall be in strict accordance with all applicable OSHA standards. All requirements for traffic control and confined space entry will be observed.

b. Flow Control

The flow of sewage around the section of sewer pipe under repair shall be maintained. A suitable bypass shall be constructed by installing a plug in the sewer line at a point upstream of the pipe under repair and pumping the sewage to a point in the same sewer line downstream of that section. The pump and by pass lines shall be of adequate capacity and size to handle the flow of sewage and prevent any back flow of sewage into homes connected to the sewer line.

c. Cleaning

Cleaning of the sewer pipe shall be carried out immediately before TV inspection.

d. Inspection

TV inspection of the sewer pipe shall be carried out immediately before insertion of the tube, to ensure that the sewer is clean and that the pipe conditions have not changed.

4. Installation Procedures

The process of installing a point repair using the AM-PATCH system involves the following steps:

a. CCTV

1. Measure pipe diameter.

2. Determine position and size of the defect.

3. Mark the TV cable with a piece of tape to indicate the distance from the entrance of the host pipe to the defect.

b. Clean

1. Clean the pipe using a high pressure water jet.

2. Remove any roots, dirt or debris that might affect the installation.

c. Insert Pull Rope

1. Insert a pull rope from the upstream to downstream manhole.

d. Calculate Length of Patch

1. Calculate the length of the patch, adding sufficient length to allow for the patch to extend 1 foot into the undamaged host pipe at each end of the repair.

e. Calculate the Amount of Material Required to Make the Patch

1. Calculate the amount of fiberglass material required for the patch, allowing enough material for the three-layer thickness recommended by the manufacturer.

2. Calculate the amount of resin required to wet out the patch according to tables provided by the manufacturer.

f. Wet Out the Patch

1. Lay out the fiberglass material woven side down on a clean sheet of plastic.

2. Mix the two-part silicate resin in accordance with manufacturer's instructions.

3. Apply resin to the fiberglass material and fold the patch in accordance with manufacturer's instructions.

g. Roll Wet Out Patch Onto the Fixed Diameter Packer

1. Install protective sleeve around fixed diameter packer.

2. Roll the patch around the packer.

3. Secure the patch to the packer with the binding wire.

h. Insert Packer and Patch into the Sewer Line

1. Mark the push rods and positioning rope with the measurement for the position of the defect.

2. Insert the packer into the host pipe and center the area of the defect on the Patch.

i. Inflate the Packer

1. Slowly inflate the packer to a safe working pressure.

2. Listen for the binding wire to pop.

3. Tie off positioning rope.

j. Cure the Patch

1. Allow the patch to cure the prescribed amount of time.

k. Deflate and Remove Packer

l. Post TV

1. Using CCTV to examine the patch and determine that it is properly installed.

2. Make a video tape for the owner.

5. Finish

The finished repair shall be as smooth as commercially feasible, with a smooth transition from the host pipe to the repair pipe on either end. The repair shall overlap past the defect by at least one foot onto sound pipe at either end.

6. Cleanup

After all work has been completed, the contractor will clean up the project area. The contractor will dispose of any excess material and debris in a safe manner.

7. Final Acceptance

In addition to any specific acceptance criteria specified in the contract, the following standards should be met:

a. Finish

The finished pipe should be continuous over the length of the defect plus two feet and be free as practical from significant defects.

b. Defects

Any defects which will affect (in the foreseeable future or warranty period) the integrity of the installed pipe should be repaired at the Contractor's expense, in a manner mutually agreed upon by the Owner and the Contractor.

c. Service Connections

Reinstatement of all building sewer connections must be done neatly and smoothly.

8. Warranty

Unless otherwise agreed upon prior to bid, the Contractor shall warrant the liner for a period of two year. During the warranty period, any workmanship or material defects which affect the integrity of strength of the repair shall be repaired at the Contractor's expense in a manner mutually agreed upon by the Owner and the Contractor.

D. Payment

Payments shall be based upon an accepted bid price agreed upon prior to the work being performed, and each repair shall be treated as a separate bid, unless the agreements are mutually approved prior to commencement of work. Cleaning and TV will be considered incidental to the point repair cost.

END OF SECTION SS1

Special Provisions to the Technical Specifications

Revision to City of San Antonio Standard Specifications Item No. 516 SODDING

516.2 MATERIALS:

Add the following paragraph as follows:
F. Drought Tolerant Species. *Turf grass shall conform to the approved list of drought-tolerant varieties found at http://www.saws.org/Conservation/Commercial/TurfGrass/.*

Revision to SAWS Standard Specifications Item No. 851 ADJUSTING EXISTING MANHOLES

851.1 DESCRIPTION:

Clarification: Interior coating of existing sections of manholes is only required in conjunction with manhole adjustments when it is specifically included in the work order. Otherwise, interior coating of existing sections of manholes is not required in conjunction with the manhole adjustment.

Delete the following sentence:

The context of this specification is limited to adjusting the final elevation of the manhole by the maximum or minimum number of throat rings.

Add the following sentence:

This item shall also consist of locating and exposing manholes when specifically included in the work order.

851.4 MATERIALS:

Add the following sentence to paragraph 2:

HDPE throat rings of the same 2" thick dimension and approved mastic shall be used in lieu of concrete throat rings.

851.5 CONSTRUCTION:

Replace the second paragraph with the following paragraph:

Existing 24 inch manhole rings and covers which are determined by the SAWS Inspector to be in an unacceptable condition shall be removed and replaced with new 24 inch hinged "watertight" rings and covers when the cone section doesn't require removal.

Add the following paragraphs:

When locating and exposing a manhole is specifically included in the work order, the contractor shall use any available means and technology to locate the manhole

including but not limited to metal detectors, deployment of an electronic locating device with television inspection capabilities in the main via an existing adjacent manhole, and ground penetrating radar.

When adjusting existing manholes using only throat rings, the Contractor shall reinstall the existing rings and covers if they are determined by the SAWS Inspector to be undamaged and in good condition.

In the case where existing rings and covers to be re-installed will require the removal of broken bolts and/or the restoration of the threaded bolt holes, the Contractor shall remove the broken bolt from the bolt hole and/or, if necessary, restore the threads to accept a bolt to be screwed into the bolt hole to tightly secure the cover to the ring. Comply with the manufacturer's recommendations for removing broken bolts and restoring threaded bolt holes.

Replace ring and cover with a new hinged ring and cover when required by the work order.

In the case of an extra height manhole adjustment, where the elevation must be adjusted higher than the elevation using the maximum allowed six throat rings, the installation of an additional pre-cast reinforced concrete manhole section is required. The existing ring and cover shall be replaced with a new nominal 32" hinged ring and cover (30 inch opening) and associated new cone section in conjunction with all extra height manhole adjustments. The applicable material and construction requirements of SAWS Standard Specification 852 apply except that HDPE throat rings may be used instead of concrete throat rings.

The contractor shall comply with the coating requirements and approved coating materials in accordance with Standard Specification 852 when tasked by SAWS.

The Contractor shall perform leakage testing in accordance with Standard Specification 852 when tasked by SAWS.

The Contractor shall conform to detail DD-852-03 for installing concrete manhole ring encasements for manhole adjustments and for ring and cover replacements and re-installations when required by the governing right-of-way authority, or when directed by SAWS.

851.6 MEASUREMENT: Delete section in its entirety.

Add a new section **MEASUREMENT AND PAYMENT** as follows:

Payment for locating and exposing manholes will be made for each manhole successfully located and exposed only when such work is specifically included in the work order. Payment will be made regardless of means and methods, depth, surface features and location.

If the work order requires coating of the existing manhole, and/or new precast section, and/or new cone, and throat rings, it will be measured and paid separately based on vertical footage of the manhole under pay item 851.2.

Bolt hole restoration, including broken bolt removal, will be paid per each bolt hole restored under pay item 851.0.0.

Installation of concrete manhole ring encasement will be paid separately for manhole adjustments and for ring and cover replacements and re-installations, when encasement is required, under pay item 851.1.4 on a per each encasement basis, regardless of the size of the opening.

Adjusting the manhole using only throat rings and reinstalling the existing ring and cover will be paid per each manhole under pay item 851.0.1.

If manhole adjustment using only throat rings is required in conjunction with replacement of ring and cover, the cost of the manhole adjustment is incidental to the cost of replacing the ring and cover.

The removal and replacement of existing 24 inch ring and cover with a new standard nominal 24 inch hinged "watertight" ring and cover will be measured and paid at the unit price of each set under pay item 851.1.1.

The removal and replacement of existing 24 inch ring and cover with a new standard nominal 32 inch hinged "watertight" ring and cover (30 inch opening) and associated new cone section will be measured and paid at the unit price of each set under pay item 851.1.2.

The removal and replacement of existing 30 inch ring and cover with a new standard nominal 32 inch hinged "watertight" ring and cover (30 inch opening) will be measured and paid at the unit price of each set under pay item 851.1.3.

Extra height manhole adjustment will be paid under pay item 851.0.2 per vertical foot of the pre-cast reinforced concrete manhole section installed. Installation of the new cone section, throat rings, and ring and cover is paid separately under pay item 851.1.2. The applicable requirements of SAWS Standard Specification 852 are incidental to the cost of extra height manhole adjustment, except for 1.) coating of new precast section, cone and throat rings when required; and 2.) installing concrete manhole ring encasement when required; each of which are paid separately. The provisions for payment under Item No. 855 RECONSTRUCTION OF EXISTING MANHOLES do not apply.

Traffic control, flowable fill, and any other bid items that are not incidental to the work will be paid separately under the appropriate bid item(s).

Leakage testing, when directed by SAWS, will be paid separately on a per each manhole basis.

851.7 PAYMENT: Delete section in its entirety.

Revision to SAWS Standard Specifications Item No. 852 SANITARY SEWER MANHOLES

852.1 DESCRIPTION:

Clarification: Situations that this item governs include 1.) the installation of a new 4 foot diameter manhole on an existing main up to 24 inches in diameter, 2.) the replacement of an existing manhole with a new 4 foot diameter manhole on an existing main up to 24 inches in diameter, and 3.) the renovation of the invert channel and/or the bench of the manhole on an existing main up to 12 inches in diameter.

852.4 MATERIALS:

Add the following sentence to paragraph 3:

HDPE throat rings of the same 2" thick dimension and approved mastic shall be used in lieu of concrete throat rings.

Delete the following sentence from paragraph 6:

Note of Clarification: Existing manholes being adjusted only as per Item 851 will not require a coating system.

852.5 CONSTRUCTION:

Add the following paragraphs:

When a work order requires the renovation of the invert channel and/or bench, the contractor shall chip away the concrete bench to a sufficient depth to accommodate the high early strength non-shrink grout and the grout shall be mixed and applied in accordance with the grout manufacturer's instructions.

When an existing lateral is connected to a manhole to be replaced, renew the entire length of the existing lateral from the manhole to the property line, unless otherwise directed by SAWS.

852.6 TESTING:

Delete the second sentence and replace it with the following:

The Contractor shall perform only leakage testing, and shall conduct the test only when directed by SAWS.

MEASUREMENT

Change the section number "852.6" to "852.7".

PAYMENT:

Change the section number "852.7" to "852.8".

Delete paragraph 1. and replace it with the following:

Payment for installing manholes is distinguished between installing new manholes on existing sewer mains up to 24 inches in diameter and replacing existing manholes on mains up to 24 inches in diameter.

New manholes installed on existing sewer mains will be paid for each new manhole installed under Bid Item 852.1, regardless of the size of the main up to 24 inches in diameter.

When replacing an existing manhole with a new manhole, removal and disposal of the existing manhole is incidental to the replacement work. Payment for replacing existing manholes on mains up to 24 inches in diameter is distinguished between the size ranges of the mains. The largest diameter main connected to the manhole being replaced governs the determination of the size range. Payment includes up to 10 LF of new main piping. Installation of any concrete cradles is incidental to the manhole replacement; no separate payment will be made.

When renovating the invert channel and/or bench, bypass pumping is incidental to the renovation. Payment for each such renovation will be made under Bid Item 852.1, regardless of the depth and regardless of the size of main up to 12 inches in diameter.

All manholes shall be paid at the contract unit price bid for each such manhole, which price shall be full compensation for all precast sections, throat rings, UV stabilized polyethylene liner, heat shrink wrap, cones, bases, rings and covers, concrete, mortar, drop pipes and fittings, couplings, labor, tools, equipment, tees, wyes, bypass pumping, any lateral reconnections, backfill with approved secondary materials when flowable fill isn't required, and incidentals necessary to complete the work.

Leakage testing, when directed by SAWS, will be paid separately on a per each manhole basis.

Traffic control, ground level surface restoration, flowable fill, and concrete ring encasement, will be paid separately under the appropriate bid item(s).

Delete paragraph 3.

Delete paragraph 5.

Revision to SAWS Standard Specifications Item No. 854 SANITARY SEWER LATERALS

854.1 DESCRIPTION:

Add the following sentences:

This item shall also consist of installing a backwater valve assembly when directed by SAWS.

854.3 MATERIALS:

Add the following paragraphs:

Backwater valves shall be the Clean Check® brand manufactured by RectorSeal® Corp. For access, the valve assembly shall include a 10 inch diameter SDR 35 PVC standpipe with a threaded PVC adaptor and cap.

Cast iron cleanout caps shall be manufactured by AccuCast, catalog number 710215, or approved equal.

Plastic cleanout caps shall be manufactured by AccuCast, catalog number 710225, or approved equal.

854.4 CONSTRUCTION:

Add the following paragraphs:

4. Renewal of Existing Lateral:

The Contractor shall be responsible for verifying the location of the existing lateral to be renewed.

When excavating to expose all or part of an existing lateral to be renewed by either the open cut method or the pipebursting method, remove and dispose of the exposed existing lateral, and dispose of the existing service connection if it isn't reused.

When renewing an existing lateral using the pipebursting method, the requirements of SAWS Standard Specifications Item No. 900 apply.

If it is the opinion of the SAWS inspector that the existing tee at the main cannot be reused, install a new tee fitting in the main to receive the lateral pipe. All service connections shall not be concrete encased.

5. Installation of Cleanout and Backwater Valve:

For a cleanout installed in concrete or paved areas such as street, sidewalk, driveway, parking lot, etc., a cast iron cap encased in concrete conforming to SAWS

standard detail drawing DD-854-02 shall be used. For all other locations, a plastic cap shall be used. No concrete encasement is required for plastic caps.

Install backwater valve assemblies in accordance with the manufacturer's recommendations.

854.6 PAYMENT: Delete the section in its entirety and replace with the following paragraphs:

Sanitary sewer laterals shall be paid at the contract bid price per linear foot complete in place regardless of the lateral pipe size, regardless of the renewal method, and regardless of the depth.

When reusing the existing tee in the main, reconnection to the main is incidental to renewing laterals; no additional compensation will be allowed. When replacing an existing connection by installing a new tee in the main, connection to the main will be paid separately distinguished by the size and depth of the main.

A new connection of a lateral to an existing manhole is paid separately. Reconnection of a renewed lateral to an existing manhole is incidental to renewal of the lateral.

Any necessary bypass pumping is incidental to the connection of the lateral to the main; no separate payment will be made.

Installation of a cleanout will be paid separately on a per each basis, regardless of the size, regardless of the depth, regardless of the lateral material type, and regardless if the installation is in conjunction with renewing a lateral or if installation is on an existing lateral. Payment will be distinguished by the material type of the cleanout cap.

Installation of backwater valve assembly in a lateral will be paid separately on a per each basis, regardless of the size, regardless of the depth, regardless of the lateral material type, and regardless if the installation is in conjunction with renewing a lateral or if installation is on an existing lateral.

Bid items associated with Standard Specifications Item No. 854 include all fittings and lateral pipe, excavation, trenching, shoring, removal and disposal of existing piping and fittings from excavations, backfilling, and all necessities and related work specified herein to complete the work, except for traffic control, flowable fill and surface restoration which will be paid separately under the appropriate bid item(s), and except any other bid items that are not incidental to renewing laterals and/or installing cleanouts and/or installing backwater valves.

Revision to SAWS Standard Specifications Item No. 860 VERTICAL STACKS

860.4 CONSTRUCTION:

Add the following sentence:

The connection to the main shall not be concrete encased. All requirements for connecting a renewed lateral to the main shall likewise apply to connecting a constructed vertical stack to the main.

860.5 MEASUREMENT:

Delete the section in its entirety and replace it with the following paragraph:

Vertical stacks shall be measured by the vertical foot. Footage shall be computed as follows: Dimension from the top of the lateral (where the connection to the stack is made) to the top of the sewer main.

860.6 PAYMENT:

Delete the section in its entirety and replace it with the following paragraphs:

When reusing the existing tee in the main, reconnection to the main is incidental to construction of the stack; no additional compensation will be allowed. When replacing an existing connection by installing a new tee in the main, connection to the main will be paid separately distinguished by the size and depth of the main.

Any necessary bypass pumping is incidental to the connection of the stack to the main; no separate payment will be made.

Vertical stacks shall be paid at the contract unit price bid per vertical foot as measured, which price shall be full compensation for furnishing all materials, tools, equipment, labor, pipe, pipe fittings, excavation, trenching, shoring, removal and disposal of existing piping and fittings from excavations, backfilling, and all necessities and related work specified herein to complete the work, except for traffic control, flowable fill and surface restoration which will be paid separately under the appropriate bid item(s), and except for any other bid items that are not incidental to the construction of vertical stacks.

Revision to SAWS Standard Specifications Item No. 900 RECONSTRUCTION OF SANITARY SEWER BY PIPE BURSTING/CRUSHING REPLACEMENT PROCESS

900.3 SUBMITTALS:

Delete paragraphs 2 through 5.

900.4 MATERIALS:

In paragraph 1.a. delete the following sentence:

HDPE pipe on this project shall further be required to have a minimum pipe stiffness of 46 psi for 12inch to 48inch diameter pipe and 115 psi for 8inch to 10inch diameters as required by SAWS and TCEQ.

In paragraph 1.a. add the following sentence:

HDPE pipe on this project shall further be required to have a minimum pipe stiffness of 115 psi for 6 inch to 10 inch diameters as required by SAWS and TCEQ.

900.6 TESTING:

Add the following paragraph:

5. *If allowed by TCEQ, waiver of the foregoing inspection and testing requirements or the use of alternate methods of testing the renewed laterals is authorized.*

900.7 MEASUREMENT AND PAYMENT

Replace Sections 900.6 MEASUREMENT and 900.7 PAYMENT in their entirety with the following paragraph:

Measurement and payment for items included in this specification shall be in accordance with the Section 854.6 of these Special Provisions. Additionally, payment for work to pipeburst laterals includes furnishing and placing of all materials, labor, tools, equipment, cleaning, preparation, lateral repairs, obstruction removal, bypass pumping, phasing, protecting, work execution, sealing materials at manholes and annulus (if required), launching pits, receiving pits, shoring, television inspection, post-construction testing, and all necessary, corresponding, and related work specified necessary to complete the renewal of the lateral, except for traffic control, flowable fill and surface restoration which will be paid separately under the appropriate bid item(s), and except for any other bid items that are not incidental to renewal of the lateral using the pipebursting method.

Revision to SAWS Standard Specifications Item No. 1103 POINT REPAIRS AND OBSTRUCTION REMOVALS

1103.2 MATERIALS

Delete paragraph 2. and replace it with the following:

2. *Jointing Material: Use shielded couplings manufactured by Fernco, or approved equal.*

1103.3 CONSTRUCTION

1. Point Repair:

Clarification: Although pre-repair and post-repair cleaning, televising and/or smoke testing may be used by the Contractor as quality assurance measures for open cut point repairs, they are not required by this contract and no payment will be made if they are used. This does not relieve the Contractor from the responsibility to verify locations identified by SAWS for point repairs.

Add the following subparagraph:

When an existing lateral is connected to the main within the limits of an open cut point repair on the main, renew the entire length of the existing lateral from the main to the property line, unless otherwise directed by SAWS.

Add the following subparagraph:

The minimum length CIPP point repair for 8" and 10" diameter mains is 5 LF. The minimum length CIPP point repair for 12" through 24" diameter mains is 4 LF. All CIPP point repairs shall comply with Special Specification "Internal CIPP Point Repair of Pipelines" and shall be of the thickness required by the "fully deteriorated" design. Digital post-TV video inspection is required for CIPP point repairs and may be submitted on a hard drive instead of a DVD.

8. Typical Sequence of Point Repair:

Change the subparagraph e. to read as follows:

Connect the new pipe to existing pipe using properly sized shielded couplings.

Delete subparagraph f. in its entirety.

Delete subparagraph g. in its entirety.

1103.4 MEASUREMENT AND PAYMENT

1. <u>Unit Prices - Point Repair</u>:

Add the following sentence to subparagraph a.:
No payment will be made for an open cut point repair within the limits of a service new tee connection.

Change subparagraph b. to read as follows:
The minimum length of a sewer main open cut point repair is 10 feet.

Change subparagraph c. to read as follows:
Measurement for sewer line extra length point repair is on a linear foot basis in excess of the 10 foot minimum replacement length for the ranges of pipe diameter and ranges of depths as distinguished in the bid items. If the point repair is within, and extends beyond, the 4 LF limits of a new tee connection, then the length of repair of main beyond the 4 LF limits of the connection will be paid as extra length point repair. Payment will be made for the ranges of pipe diameter and ranges of depths as distinguished in the bid items.

Change subparagraph d. to read as follows:
The minimum length of a lateral open cut point repair is 3 feet. Payment will be made for each service lateral point repair regardless of the size of service lateral and regardless of the depth. No separate payment will be made for a lateral point repair done in conjunction with, and within 3 feet of, installation of a new tee connection in the main. For any repair to a lateral in excess of 3 feet, payment for the length of repair will be made under Item 854, in which case no additional payment will be made for point repair. No payment will be made for extra length point repair for laterals.

Delete subparagraph h.(5).

Change subparagraph h.(7) to read as follows:
Bypass pumping and all other necessary work to complete (is included in the unit prices for point repairs), except for the following work will be paid separately:

- *traffic control*
- *surface restoration*
- *lateral new tee connections*
- *flowable fill, if required*
- *any other bid items that are not incidental to the point repair work.*

Add the following paragraph:
After the submitted post-repair TV video has been approved by SAWS, payment for CIPP point repair will be made on a per each CIPP point repair basis, distinguished by pipe size, in accordance with the bid items in the proposal, regardless of the depth. Reinstatement of any service within the limits of the CIPP point repair will be paid separately.

Revision to SAWS Standard Specifications Item No. 1109 SANITARY SEWER SERVICE STUB OUTS OR RECONNECTIONS

1109.1 DESCRIPTION:

Add the following paragraphs:

Service connection of renewed sanitary sewer lateral or stack to the existing sanitary sewer main.

Reinstatement of service within the limits of a CIPP point repair.

Service connection of a sanitary sewer lateral to a manhole.

1109.3 CONSTRUCTION:

Change subparagraph 4.a. to read as follows:

Reinstate service connections using remote-operated cutting tools on cured-in-place (CIPP) liners at all depths.

Replace paragraph 6 in its entirety with the following paragraph to read as follows:

6. *Service Connection of Renewed Lateral or Stack to Existing Main:*

   a. *If it is the opinion of the SAWS inspector that the existing tee at the main can be reused, reconnect the renewed lateral or stack to the existing tee. In this case, the term "reconnection" is used.*

   b. *When the existing tee cannot be reused, cut out 24 inches of main pipeline on both sides from the centerline of the existing service connection for a total of 4 linear feet of main. Dispose of the existing connection fitting and pipe. Replace the removed 4 linear foot section of main and connection fitting with PVC pipe and a PVC tee fitting to receive the renewed service pipe. Conform to SAWS standard specifications "Sanitary Sewers" Item No. 848. In this case, the term "new tee connection" is used.*

   c. *When connections of one or more other active services exist within the 4 foot length of replaced main where the renewed service is to be connected, renew the entire length of the other existing services from the main to the property line, unless otherwise directed by SAWS.*

   d. *Use properly sized shielded couplings manufactured by Fernco, or approved equal, for connecting the PVC pipe to the existing main, and for connecting the lateral to the tee or stack when the pipebursting lateral renewal method is used. All service connections shall be installed per SAWS Standard Drawing No. DD-854, except that the connection shall not be concrete encased.*

1109.4 MEASUREMENT AND PAYMENT:

Replace subparagraphs 1.a. and 1.b. in their entirety with the following:

Payment will be made for service new tee connections for laterals and stacks installed complete in place on a per each connection basis distinguished by size of main and distinguished by the depth of the main, regardless of the type of lateral material. Payment includes removal and disposal of existing pipe and fittings, new mainline pipe and all new fittings, couplings, excavation, trenching, shoring, backfilling, and all necessities and related work specified herein to complete the reconnection, except for traffic control, flowable fill and surface restoration which will be paid separately under the appropriate bid item(s), and except for any other bid items that are not incidental to connecting renewed laterals to the mains. Bypass pumping is incidental to the connection work; no additional payment will be made. No payment will be made for reconnection of the renewed service to the existing tee at the main.

Add the following sentences to subparagraph 1.d.:

When the situation occurs that one or more other active services exist within the 4 foot length of replaced main where the renewed lateral is to be connected, necessarily requiring the connection of those other service(s) to the main, such connection of those other services will be paid on a per each new tee connection basis distinguished by size of main and distinguished by the depth of the main, regardless of the type of lateral material. However, where two active services discharge to the main at a common point, payment will be made for only one new tee connection at that common point.

Replace subparagraph 1.e. with the following:

If protruding tap removal is required prior to making a CIPP point repair, it will be paid on a "per each" tap removed basis.

Add the following subparagraphs:

Reinstatement of any lateral within the limits of the CIPP point repair will be paid on a per each reinstatement basis.

A new connection of a lateral to an existing manhole is paid separately. Reconnection of a renewed lateral to an existing manhole is incidental to renewal of the lateral.

Reconnection of a lateral to a manhole is incidental to replacing manholes and installing new manholes.

Clarification to the foregoing Special Provisions:

When a work order is issued to perform a point repair to the main and a sewer service lateral or stack exists within the limits of the repair requiring a new tee connection, the entire length of the service piping shall be renewed from the main to the property line unless otherwise directed by SAWS. If the main is repaired within the 4 LF limits of a new tee connection, the 10 foot minimum length requirement for the point repair doesn't apply. Payment will be made for the lateral renewal if required, stack renewal if any, and the new tee connection, but not for the point repair.

When a work order is issued to renew a lateral and a main repair is required within the 4 LF limits of the new service tee connection, the 10 foot minimum length requirement for the point repair doesn't apply. Because the main is incidentally repaired by virtue of installing a service tee connection, payment will be made for the lateral renewal, stack renewal if any, and the new tee connection, but not for the point repair.

In both cases above, if the point repair is within, and extends beyond, the 4 LF limits of the new tee connection for the service piping, then the length of repair of main beyond the 4 LF limits of the connection will be paid as extra length point repair in addition to payment for the lateral if renewed, stack renewal if any, and required new tee connection. The new tee connection of any other existing services encountered within the limits of the extra length point repair will be paid, but the extra length point repair within the 4 LF limits of the new tee connection of the other existing services encountered will not be paid.