



# HENDERSON COUNTY ENGINEERING

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**Memorandum To:** *Interested Bidders*

**From:** *Greg Wiggins*  
*Utilities Operations Manager*

**Subject:** ***Request for Proposals***  
***CCTV & Clean Sewer Lines***

**Date:** *June 20<sup>th</sup> 2017*

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Henderson County requests proposals to CCTV and clean sewer lines for Cane Creek Water Sewer District. (CCWSD) All bids must be quoted in price per linear foot of each size sewer line to be CCTV and cleaned. Listed below are the approximate lengths of each size sewer line.

24"- 1,000' feet of CCTV and cleaning  
18"- 3,700' feet of CCTV and cleaning  
8"- 30,400' feet of CCTV and cleaning

**Proposals are due:** Monday July 17th, 2017 by 2:00 PM @  
Henderson County Solid Waste Scale House (Attention: Greg Wiggins)  
191 Transfer Station Drive  
Hendersonville N.C. 28791

**Location of Work:** Cane Creek Water Sewer District.

**Scope of Work:**

- CCTV & clean sewer lines
- A still photo shall be provided of the inside of each manhole.
- GPS coordinates of each manhole shall be provided. Accuracy shall be of sub-meter range.
- See attachment for detailed scope of work

**The following information must be included in the proposal:**

1. Work Schedule for start and completion
2. Contractor's Licensure with North Carolina
3. Warranty on above work
4. See Henderson County Insurance posted on the County RFP site  
<http://ww2.hendersoncountync.org/rfp/indexi> for the following:
  - a. Insurance per Article 11
5. For DBE requirements, see Outreach Plan and Guidelines for Recruitment and Selection of Minority Businesses for Participation linked on the County's RFP site @  
<http://ww2.hendersoncountync.org/rfp/index>
6. Proposed Contract signed by bidder and ready for County's signature.
7. Iran Divestment Act Certification Form

Henderson County reserves the right to reject any and / or all bids. Qualified contractors interested in bidding on the project should contact Mr. Dean Ring @ 828-779-3781 for an optional pre-bid meeting located at 800 Stoney Mountain Road– Hendersonville NC 28791 at 10:00 am on Monday July 10th, 2017. All proposals should be original hardcopy and sealed due no later than 2:00 PM Monday July 17, 2017 .The bid opening will follow at 2:01 PM

**Henderson County Utilities Department  
Cane Creek Water Sewer District  
(CCWSD)**

**BID SPECIFICATIONS FOR  
SEWER CLEANING & INSPECTION  
BY CLOSED CIRCUIT COLOR TELEVISION**

**Scope of Work:**

To furnish the necessary labor, supervision, power equipment and material to clean and inspect by closed circuit color television as outlined in the specifications.

**A. Insurance**

Henderson County Insurance Requirements posted on the County RFP site for the following:

1. Insurance per Article 11

**B. Owner's Obligation**

The Owner shall provide the bidder with the following items at Owner's expense:

1. Shall assist in Manhole location.
2. Provide access to all manhole locations
3. Provide sewer maps for areas where sewers will be cleaned and inspected by closed circuit television.

**C. Contractors Responsibility**

1. Provide a dumpsite for the disposal of debris removed from the sewers.
2. Water for flushing purposes.

**D. Notification of Commencing Work**

1. The bidder shall keep the Owner informed as accurately as possible as to when they plan to commence work and in what way they intend to proceed.

**E. Contractor's Responsibility for Safety**

1. The Contractor shall develop and maintain a safety program that will implement required safety procedures recognized and required of their industry group.
2. The Contractor shall have in place and instituted a confined space entry program which at a minimum meets the OSHA regulation - 29 CFR 1910.146.
3. Accidents shall be reported to the engineer/customer promptly, in writing, giving full details describing the incident including statements from witnesses.

#### **F. Traffic Control**

1. The Contractor shall obtain, maintain, and remove all signs, barricades, flagmen, and other traffic control devices as may be necessary for the purpose of regulating, warning, or guiding traffic.
2. Traffic control procedures and devices shall meet the requirements of the applicable laws and regulations covering work area protection.

#### **G. Cleaning of Sewers**

The purpose of the sewer cleaning operation is to remove such accumulation of sediment, debris, blockages, mineral deposits, bricks, grease, etc. to permit a thorough and complete examination of the condition of the sewer through internal closed circuit color television inspection and/or the rehabilitation of the sewer through no-dig CIPP point repairs.

1. The bidder shall provide all equipment necessary for the proper high-pressure water jetting, rodding, bucketing, brushing, and flushing of the sewers prior to the inspection by closed circuit color television.
2. Preparatory Cleaning - shall be performed in a manner as to restore pipe to 95% of its original carrying capacity and to allow clear viewing of the interior surface of pipe during CCTV inspection.
3. If, in the opinion of the CCWSD, preparatory cleaning of sewer produces a satisfactorily clean sewer, the Contractor shall proceed with the internal color television inspection of the sewer. This preparatory cleaning work will be paid for at the contract unit price per lineal foot for preparatory cleaning of sewer (of the diameter specified).

#### **H. Removal of Debris**

1. All sludge, dirt, sand, rocks, grease, roots, and/or grease shall be cut to allow for proper CCTV inspection and viewing of defects and other solid or semisolid material resulting from the cleaning operation shall be removed at the downstream structure of the section being cleaned. Passing material from structure section to structure, which can cause line stoppages, accumulations of sand in wet wells or damage to pumping equipment, shall not be permitted.

#### **I. Disposal of Debris**

1. All dirt, debris, roots, and other material removed from the sewers shall be hauled away by the Contractor to a dumpsite furnished by the contractor. All regulations of the Environmental Protection Agency and all other regulating agencies shall be followed.

#### **J. Cleaning Equipment**

1. The equipment used for sewer cleaning shall be capable of all removing dirt, grease, rocks, roots, and other deleterious materials. The equipment shall be selected by the

Contractor to prevent damage to the pipe. Cleaning equipment capable of cleaning lengths up to 850 feet shall be provided. Equipment must be able to clean this length with vehicular access to one structure only.

2. Cleaning shall be of the entire reach between structures. If cleaning of an entire section cannot be successfully performed from one structure, the equipment shall be set up on the other structure and cleaning again attempted without additional compensation.
3. During sewer cleaning operations, satisfactory precautions shall be taken by the Contractor in the use of cleaning equipment. Precautions shall be taken to ensure that damage to, or flooding of, public or private property does not occur during the cleaning operation.
4. Contractor shall provide all labor, materials, and equipment necessary to uncover sanitary sewer manholes less than 12" deep requiring access for sewer line inspection on this project. Contractor will uncover only those manholes approved by the County.
5. After inspection is complete, the Contractor shall close the lid and re-cover the manhole only with the material removed to access the manhole. The Contractor will not be required to re-seal manhole lid or replace any gasket material that may have been removed or damaged during the opening of the lid.

**K. Color Television Inspection of Sewers**

1. The bidder shall furnish all labor, electronic equipment, and technicians to perform the closed circuit television inspection of the sewers. Operation of the equipment is to be controlled from above ground with a skilled technician at the control panel in the television studio, controlling the movement of the television camera through the sewer in either direction.
2. Televising equipment shall include the television camera, television monitor, cables power source, lights and other equipment necessary to the televising operation.
3. The color television camera shall be one specifically designed and constructed for the purpose of televising sewers. The color camera shall have a high-resolution lens, capable of spanning 360-degrees circumference and 270-degrees on horizontal axis to televise sewer lines 6-inch diameter and larger. Focal distance shall be adjustable through a range of 1 inch to infinity. The purpose of the rotating head camera is to view all service connections, and to locate all defects, as well as any questionable problem areas.
4. For manholes that may be difficult to access or where lamp holes are present in the place of manholes, the Contractor shall have available a self-propelled crawler transporter on which to mount the color television camera to be able to inspect the sewer as required.
5. Camera and lighting quality shall be suitable to provide a clear, continuously in-focus picture of the entire inside periphery of the sewer pipe for all conditions encountered during the work. The camera shall be able to operate efficiently in 100% humidity conditions. The camera, television monitor and all other necessary components of the video system shall be capable of producing a minimum 350-line resolution color video picture.

6. Where obstructions within the sewer line prevent the passage of televising equipment, the Contractor shall reset his equipment to pass through the sewer line section from the other end and thereby complete the inspection.

L. **Digital Recording:**

1. The findings of the sewer inspection shall be digitally recorded on compact discs (CD's) and include both video and audio information that accurately reproduces the original pictures and sounds of the inspection. All recordings shall be provided in MPEG format with a resolution of 352 pixels (x) by 240 pixels (y) at a rate of 29.97 frames per second. Separate MPEG files, reports, and still images shall be created for each manhole-to-manhole pipe segment inspected.
2. The pipeline inspection shall consist of identifying a location both within the pipe segment (physical location) and within the digital recording (video frame location) for each defect or observation. The use of time codes for defect location shall NOT be deemed equivalent or acceptable. The digital recording and inspection data is to be cross-referenced for instant access to any point of interest within the digital recording. The inspection information shall include the digital recording of video and audio, segment identification information (starting manhole, date, time, etc.) including a pointer from each observation to the digital recording (video frame number), and any accompanying digital still images (JPEG or BMP).
3. Any out-of-focus video recordings or portions thereof, shall be cause for rejection of the video recording and will necessitate re-televising at the Contractor's expense. Televising shall be done one section at a time.
4. In the event that equipment becomes lodged in the sewer line, the Contractor shall notify the County immediately. The Contractor will remove the camera at no cost to CCWSD (Henderson County). Timely excavation is necessary to maintain project schedules and to eliminate the possibility of overflows resulting from the lodged equipment creating a blockage.
5. A Still photo shall be provided of the inside of each Manhole.
6. GPS coordinates of each manhole shall be provided. Accuracy shall be of sub-meter range.

M. **Television Inspection Report:**

1. The inspection report shall be stored in a relational database management system that employs relationships to increase data integrity and reduce data storage space. This report shall be computer-generated and will provide commentary on still images and fault areas. The report will also describe all other pertinent findings regarding service connections, breaks, or cracks in tiles, root growth, infiltration and other items of interest.

2. All inspection information (digitally recorded video, still images and computer-generated reports) shall be turned over to the Owner for archival and future review purposes.
3. Shall provide hard copy in permanent binder of pipe run graph from manhole to manhole, showing pertinent findings regarding service connections, breaks, cracks, offsets, roots, and other items of interest for entire project. Contractor shall return field maps used in field by CCTV crews.

**N. Qualifications of Bidders**

No proposal will be considered from any bidder unless he is known to be skilled in work of a similar nature to that covered by the contract, and has sufficient capital to meet all obligations to be incurred in carrying out the work. In addition, the Contractor shall be able to provide conclusively that he have the following:

1. A minimum of five (5) years experience in the municipal sewer cleaning business. List of projects and contacts with submittal.
2. Five (5) years experience in the field of pipeline inspection by means of closed circuit television.
3. Sufficient quantity of cleaning equipment and CCTV cameras, (multiple units), to ensure continuous work, and proof of ownership of equipment. Include copy of titles of at least three units.
4. Cleaning equipment capable of cleaning lengths up to 850 feet with vehicular access to one structure only. Additionally, high-pressure water jetting equipment must be capable of a minimum of 80 GPM.
5. Contractor must certify that the company has never failed to complete a contract.

**O. Personnel Required**

1. The Contractor shall furnish a trained supervisor who has had a minimum of five (5) years experience in the entire field of sewer and rehabilitation such as will be undertaken in the project, and sufficient personnel to perform all the work required.
2. At least one person on the crew must have:
  - a) CCTV operators must be PACP Certified
  - b) First Aid Certified
  - c) Confined Space Certified
  - d) Proof of Completion of Flagger Trainer Course



Name of Party: \_\_\_\_\_  
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**IRAN DIVESTMENT ACT CERTIFICATION  
REQUIRED BY N.C. Gen. Stat. §147-86.59 (formerly §143C-6A-5(a))**

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As of the date listed below, the entity listed above is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C. Gen. Stat. §147.86.58 (formerly §143-6A-4).

The undersigned hereby certifies that he or she is authorized by the entity listed above to make the foregoing statement.



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

\_\_\_\_\_  
Printed Name Title