



Brunswick-Glynn County Joint Water and Sewer Commission

**RFP No. 19-018
Request For Proposals**

Smoke and Dye Testing Services–Brunswick and North Mainland Districts for the Brunswick-Glynn County Joint Water and Sewer Commission

Wednesday, June 26, 2019

MANDATORY Pre-proposal meeting Friday, July 12, 11:00 a.m.

Deadline for questions Wednesday, 07/17/2019, no later than 5:00 p.m. EST.

**Questions must be directed in writing (via e-mail) to the
Purchasing Director, Pamela Drury-Crosby, email- pcrosby@bgjwsc.org**

Responses Due by:

12:00 NOON, EST Tuesday July 30, 2019 to:

**Purchasing Division
Joint Water and Sewer Commission
1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7100**

Proposals should be clearly labeled as follows:

“RFP No. 19-018 Smoke and Dye Testing Services – Brunswick and North Mainland Districts”

**Submit responses in hard copy only; electronic or fax responses will not be accepted.
Responses received after the deadline or at any other locations will not be accepted.**

FOR COMPLETE DETAILS OF THIS SOLICITATION, please visit the BGJWSC website, utilizing the following link:

<http://www.bgjwsc.org/departments/procurement/>

**BRUNSWICK-GLYNN COUNTY
JOINT WATER AND SEWER COMMISSION**

REQUEST FOR PROPOSAL

No. 19-018

Smoke And Dye Testing Services–Brunswick and North Mainland Districts

1.0 INTRODUCTION

The Brunswick-Glynn Joint Water & Sewer Commission (JWSC) wishes to receive Requests for Proposals (“RFP”) for Smoke and Dye testing services for the Brunswick and North Mainland District service districts.

The Scope of Work for the Inflow Source Investigations shall include the following:

- Smoke testing in the following meter basins: 4001, 4002, 4003, 4006, 4007, 4009, 4012, 4013, 4015, 4017, 4021, 4023, 4024, 4027, 4028, 4029, 4035, 4036, 4038, 4039, 4043, 4043, 4044, 4048, 4056. (see Exhibit A for maps of each service district) – approximately 556,887 linear feet of sanitary sewer main pipeline. (see Exhibit A for lift station address listing)
- Dye Water testing for estimate of (35) dye traces and (35) dye floods.

The firms must comply with all applicable state, local and federal regulations related to the services provided to the BGJWSC. The BGJWSC reserves the right, subject to negotiation and agreement, in writing, with the selected firm, to either expand or limit the scope of services as needed. The selected firm will be required to have sufficient personnel to complete the tasks required by this scope of services. The selected firm will complete the required tasks in a timely and efficient manner. The selected firm would be expected to enter into a contract for services based upon the firm’s hourly rates and an agreed-upon not to exceed amount.

All services performed shall be in accordance with applicable BGJWSC Standards and State EPD regulations. Firms expressing interest should be fully capable of providing the end results requested. A deliverables reference document is presented as Exhibit B that includes the following:

- Smoke testing specification guideline
- Software table field listing
- Smoke Test SOP
- Clean Out Smoke Testing Example
- Manhole Smoke Testing Example

All proposals must be made on the proposal form included with the Contract Documents for the proposed work.

No proposer may withdraw his/her proposal for a period of ninety (90) days after the date set for the opening thereof. All proposals shall remain valid for that period of time.

The award (if an award is made) will be made as provided in the Proposal. The award shall be made to the lowest responsive and responsible bidder, provided that if the JWSC believes that the

public interest will be best served by accepting other than the lowest bid, it shall have the authority to accept the proposal that will best serve the public interest.

The JWSC reserves the right to accept or reject any and all bids, alternate bids, or unit prices and/or waive any irregularities in any bid received.

Time of Completion shall be (180) one hundred eighty calendar days after issuance of the Notice to Proceed. Liquidated damages for failure to complete the work within the specified time are specified in the Contract Documents.

A certified check or corporate surety bond of not less than 10% of the amount bid for the total cost of the project must accompany each proposal.

The Contractor will be required to comply with all applicable Equal Employment Opportunity laws and regulations. All bids must cover the entire work required under this contract.

Proposers' attention is directed to the Special Provisions of the Contract Documents which require the Contractor, to whom the contract for the work is awarded, to provide at the time of executing said contract, a Contractor's Payment Bond and Bond for Faithful Performance, in the amount of 100% of the contract amount, meeting all requirements of said Contract Documents and approved by the JWSC Attorney. Additionally, all forms relevant to Insurance, Drug-Free Workplace, EEO and E-verify are to be executed at this time.

2.0 SPECIAL CONDITIONS

The selected firm shall be responsible for obtaining any additional information needed for their evaluation and design. The selected firm will be provided access to any pertinent system information in the possession of the JWSC, if available (drawdown/flow meter data, Master Plan, GIS mapping, etc.). Additional evaluation activities will be the responsibility of the selected firm. Any costs involved with additional information are the responsibility of the selected firm.

The Consultant is to complete all testing within **120 days** of receiving a signed notice to proceed. The JWSC requires that selected firm be available for bi-weekly progress meetings (either onsite at JWSC or via teleconference) with all noted deliverables by the end of the **180 day** period. Each firm's experience and qualifications will be evaluated primarily as they relate to the firm's ability to provide **Smoke and Dye Testing Services for the Brunswick and North Mainland Districts.**

The BGJWSC will make an award only to a responsible firm possessing the ability to perform successfully under the terms and conditions of the procurement. Consideration will be given to such matters as firm integrity, compliance with public policy, record of past performance, and financial and technical resources. This is a qualifications-based procurement of professional services whereby competitors' qualifications will be evaluated and the most qualified firm will be selected, subject to negotiation of fair and reasonable compensation.

Written proposals will be reviewed and rated by a panel of qualified BGJWSC staff members. The rating system will consist of a numerical grading system, as set forth in Section 6. The BGJWSC may or may not elect to interview any of the responding firms.

The BGJWSC has exclusive and sole discretion to determine the firm whose services will be most advantageous to the BGJWSC, and reserves the right to reject all firms. The purpose of this inquiry is to determine the interest or non-interest and the qualifications of firms in providing the professional services required. A number of firms may be asked to express their interest in regard to these

services in the form of a Proposal. Following the receipt of Proposals, a certain firm or firms may be selected for further consideration.

This project is funded through JWSC rehabilitation and repair reserves and subject to availability of funds.

3.0 INFORMATION REQUESTS AND INSTRUCTIONS FOR PROPOSAL SUBMITTAL

Date	Event
06/26/2019	Solicitation Released; Bid Docs Available for prospective Bidders
07/12/2019 – 11:00 a.m.	Mandatory Pre-Bid Meeting - JWSC Headquarters
07/17/2019 – 5:00 p.m.	Deadline for Questions
07/30/2019 - NOON	Bids Due
08/08/2019	Anticipated Award Date
08/08 – 09/15/2019	Contract Execution Period and Pre-Construction Meeting
Week of 09/15/2019	Commencement of Work
No Later than 01/15/2019	Completion of Testing
No Later than 03/15/2019	Inspection Reports Due

Additional information and clarifications desired by a Proposer shall be requested from the BGJWSC in writing and if explanations are necessary, a reply shall be made in the form of an Addendum, a copy of which will be forwarded to each Proposer. Every request for such clarification shall be in writing (email) addressed to Pamela Crosby at pcrosby@bgjwsc.org. Any verbal statements regarding same by any person prior to the award shall be considered not authoritative and not binding.

Addenda issued to Proposers prior to the date of receipt of Proposals shall become a part of the RFP and Proposals shall include the work described in the Addenda. No inquiry received within five days of the date fixed for the submission of Proposals will be given consideration. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda, which, if issued, shall be emailed to all prospective Proposers, not later than five days prior to the date fixed for the submission of Proposals (**no later than 12:00 noon EST on Monday, July 22, 2019**).

Proposals are to be submitted with:

- A detailed description of the services provided for each phase of the project
- Proposal total anticipated not-to-exceed cost
- Time period for each phase of the project and project workflow that demonstrates actions/decision trees based on initial smoke test results
- A detailed list and fee schedule for any anticipated work not included in the proposal
- A sample package of all deliverables included for each work element (smoke testing, dye water tracing, dye water flooding and final technical memo). This should be representative

of what BGJWSC will receive as documentation for the following items: testing schedule, notification communication, results spreadsheet, defect spreadsheet and final report output/technical memorandum with map and photo outputs.

All proposals shall include a completed 5.0 Proposal Summary Sheet (see attached). Please submit an original plus (4) four copies and (1) one electronic version of the proposal. Each proposal should be prepared simply and economically, providing straightforward, concise delineation of the firm's capabilities to satisfy the requirements of this RFP. Fancy binding and color displays other than those necessary are highly discouraged. Please limit responses to a total of (75) seventy-five single-sided pages. This total should include the sample of all report, map and photo outputs outlined for each service group.

Proposals are due by 12:00 noon (EST) on Tuesday, July 30, 2019. Mandatory label required on outside of envelope: "Request for Proposals 19-018 for Smoke and Dye Testing Services – Brunswick and North Mainland Districts" Proposals are due by the time and on the date listed above. **ALL LATE PROPOSALS FOR WHATEVER REASON WILL BE RETURNED UNOPENED.**

4.0 SCOPE OF SERVICES

SMOKE TESTING

Service provider will conduct smoke testing of the lift station service areas exhibiting the highest levels of storm water inflow. The following identifies the tasks which will be completed during the smoke testing initiative:

1. Select area to be tested and develop working field maps of the area.
2. Field review the area selected and note on the map all "hundred block" addresses.
3. Distribute smoke testing notice to all homes, businesses, schools and Fire & Rescue, etc. In addition, Fire & Rescue will be notified of any proposed smoke testing activities (72) seventy two hours prior to the initiation.
4. During the initial field review, identify all types of businesses, specifically any doctors offices, hospitals, schools, retirement communities or any other establishment that may need special consideration and handling during the actual smoke test. Strict consideration and coordination with customers who have sensitive needs must be adhered to some of whom will not be included on any smoke testing schedule as the nature of their business, such as hospitals, is far too delicate.
5. (24) Twenty-four hours minimum must expire from the issuance of smoke testing notices to allow all affected to prepare for the testing or call with special exceptions, such as persons with health problems living at home, etc.
6. On the day of the testing, the selected portion of the study area will be identified and all street names and related hundred block addresses will be given to the fire department/emergency personnel for the area where the testing will occur. **UNDER NO CIRCUMSTANCES WILL THE AREA SELECTED FOR THAT DAY'S TESTING BE MODIFIED TO INCLUDE ADDITIONAL WORK UNLESS THE FIRE DEPARTMENT/EMERGENCY RESPONSE PERSONNEL HAVE BEEN NOTIFIED FIRST.** The name and ID number of the fire department person contacted will be documented on the appropriate form. The fire department/emergency personnel will be provided the exact locations and specific time frames of where and when the tests will be performed.
7. Multi-day scheduling with one time reporting to the fire department/emergency personnel will not be permitted.

8. The JWSC's Project representative will be notified on a daily basis of the same information.
9. Should the fire department/emergency personnel respond to the target area during the actual smoke testing, all testing will cease immediately and the Smoke Testing Team's field supervisor in charge will contact the fire unit responding to answer any questions that the fire department officer may have.
10. All testing activity will cease when any resident complains of smoke entering their establishment. Smoke Testing Team's field personnel will then attempt to isolate where the smoke is entering the establishment and make the occupant aware of what the problem may be. All defective plumbing found inside should be documented appropriately for future reference. The occupant will be advised to have the defect repaired by a licensed plumber.
11. During the actual smoke testing, Smoke Testing Team field personnel will scout the area for smoke escaping from ground sources, roof vents, storm drain structures, etc. All sources of infiltration/inflow will be photographed, measured, drawn and documented accordingly with addresses, data, and sketches. The smoke test form will identify which sewer reach is being tested by its component identification in the JWSC's GIS database. This data should be provided to the JWSC on a weekly basis at a minimum and can be accepted daily if that is preferable to the selected firm.
12. All defects encountered will also be recorded using a GPS receiver with sub foot accuracy. Said receiver will be compatible with JWSC GIS, and all data deliverable from units will be provided in .SHP shape file format for continuity. The firm will have access to the JWSC's wastewater collection system GIS which will be overlaid on a digital ortho map and the R1 unit will allow the smoke test team member to see his location on the map in real time and allow for accurate recording of defects encountered. Each image taken will be geocoded to a specific location and the information will be stored electronically for future use. JWSC will be provided a link to the defect mapping and can easily monitor the smoke testing effort simply by refreshing the computer's image displayed.

It is understood that JWSC staff members may accompany service provider field staff during the smoke testing initiative to gain a better understanding of how to quantify potential inflow volumes from the smoke defects recorded and how to compare the smoke testing defect results to the previously recorded flow data.

Deliverables will include the following:

- Service provider will develop a "Smoke Testing Results" spreadsheet that identifies each pipe section tested and the results of the test, whether positive or negative.
- A separate spreadsheet; "Smoke Testing Defects" will be prepared that identifies all defects encountered during the smoke testing activity. This spreadsheet will contain a column which identifies the surface area associated with each defect, the associated inflow volume based on a one inch rainfall event at the defect and if there is a need to conduct dye water testing/flooding.

If a dye test is necessary, a service order number will be prepared for the work effort using the JWSC's Cityworks asset management system and a description provided of what personnel and equipment will be needed.

DYED WATER TRACING

Private sector dyed water testing will be conducted by introducing a small quantity of liquid dye concentrate into suspect sources such as downspouts, area drains, patio drains, window well drains, and driveway drains, and then introducing a sufficient volume of clean water to locate the

source's discharge point. During each tracing, sanitary sewers, storm drains, and curb lines located downstream of the sources shall be monitored for signs of dyed water. The quantity of dye concentrate and water used will vary depending on pipe size and the quantity of flow and debris in each line section.

Deliverable will include the following:

- A report will be prepared for each location where dye water tracing was performed.
- The report will identify where the dye water was introduced and its' susceptibility for entering the wastewater collection system.
- Photos will be taken of where the dye water is introduced and where it is recorded discharging into the downstream wastewater collection system manhole.

CCTV inspection equipment may be utilized to identify exactly where the dye water is entering the wastewater collection system piping.

DYE WATER FLOODING

The Field Inspection Procedures for Dyed Water Flooding are as follows:

1. A mixture of water and any approved dye coloring substance will be introduced to the identified source. Dye water team inspectors will be stationed immediately downstream on the local sanitary and storm sewer lines. Observations, whether positive or negative, will be documented appropriately. Whenever possible, the dyed water point of exit will be documented by HD closed circuit television inspection equipment.
2. Prior to any testing, the appropriate JWSC staff shall be notified of the specific location of testing and what adjacent waterways may be affected when the dye water is released into the storm drainage system.

Fire hydrants used to supply the water source needed will be opened slowly and closed in the same manner. A flow restrictive device shall be used on the hydrant to prevent discoloration problems. Should the water be running cloudy or dirty after use, the fire hydrant shall be left open at a slow pace until the water clears. If long term draining is required, the Dye Water Team shall notify Fire and Rescue.

Dye water flooding results will be documented for each location where the storm drainage system is flooded. Each dye water flood report will identify the following:

- the section of wastewater gravity piping being tested
- the location(s) where the storm water system piping was isolated and flooded
- photographs of each setup
- CCTV inspection results identifying the location(s) where dye water was identified entering the wastewater collection system.

Additional documentation will include:

- Evidence of dyed water in manholes downstream from the ponding area, stream crossing, or other suspected sources where the dyed water is placed
- Time of travel from contributing source to manhole sampled, and the concentration of the dyed water

STORM WATER INFLOW ABATEMENT DESIGN

A Dye Testing Technical Memorandum will be developed upon completion of the dye tracing/flooding. This will contain recommendation of effective forms of abatement for each inflow source discovered. While defining the necessary abatement activity, note will be made as to whether said activity can be accomplished by JWSC staff in-house or will require the services of a third party contractor.

The technical memorandum will include:

- The individual dye test reports including verbiage describing the necessary work which must be completed to eliminate the storm water inflow source(s)
- Projected costs for completing the work
- 11 x 17 map which identifies the sanitary and storm water features affected by the proposed I/I remediation effort

General notes will be added to the map which identifies the proposed I/I abatement scope, but no physical survey, or utility location, will be completed. For corrective measures designated as in-house, the diagrams, sketches and notes should be sufficient for use by JWSC crews to address the inflow abatement. Outside engineering will be utilized (at the discretion and additional cost to the JWSC) for required corrections beyond the internal JWSC crew's capability.

5.0 PROPOSAL SUMMARY SHEET

Item No.	Description	Estimated Quantity	Unit	Unit Cost
1	Mobilization and Demobilization	1	Lump Sum	\$
2	Traffic Control	1	Lump Sum	\$
3	Notification	1	Lump Sum	\$
4	Digital Database, Final Report, Technical Memorandum and Other Administrative Costs	1	Lump Sum	\$
Unit Prices for SMOKE TESTING (including all work described herein):				
5	Mainline	556,887	Linear Feet	\$
Unit Prices for DYE WATER TESTING (including all work described herein):				
6	Dye Trace	35	Each	\$
7	Dye Flood	35	Each	\$

TOTAL (Figures): \$ _____

(Words): _____

Bidders Name: _____

Signature: _____

Company Name: _____

Date: _____

6.0 EVALUATION CRITERIA

The selected firm or firms must be experienced and qualified to provide the required scope of services. The firm or firms selected must have expertise related to the general Scope of Services set forth in Section 4. The following information must be submitted with the proposal on the date indicated above and in the order indicated below:

- a. Recently Completed Projects.** Evidence of satisfactory performance of no less than (3) three and no more than (5) five recently completed projects of the type and nature indicated above. The projects should be within the past five (5) years and include email and phone contacts. Include email and phone contact information. **(25 points possible)**

- b. Project Approach, Timeline and Deliverables Package.** Discuss the proposed approach to completing the needed services in the required timeline. Please detail how your firm will coordinate the project, include listing all activities, coordination of all activities with JWSC and community, plus associated timeline. A sample packet of work element documents must be submitted for evaluation as part of the proposal package. **(50 points possible)**

- c. Pricing.** Fees required for all design, permitting, easement procurement support (if any), and services during construction will be considered. **(25 points possible)**

- d. Required Licensure.** Firm must be licensed and approved for work in the State of Georgia; please include a copy of engineering license. **(Pass/Fail)**

- e. Professional Standing.** A statement as to a professional standing including any pending controversies outstanding. If none exists, such a statement. **(Pass/Fail)**

AFFIDAVIT

This Bid is submitted to Brunswick-Glynn County Joint Water and Sewer Commission (JWSC) by the undersigned who is an authorized officer of the company and said company is licensed to do business in Georgia. Further, the undersigned is authorized to make these representations and certifies these representations are valid. The Bidder recognizes that all representations herein are binding on the Company and failure to adhere to any of these commitments, at the JWSC's option, may result in a revocation of the granted contract.

Consent is hereby given to the JWSC to contact any person or organization in order to make inquiries into legal, character, technical, financial, and other qualifications of the Bidder.

The Bidder understands that, at such time as the JWSC decides to review this Bid, additional information may be requested. Failure to supply any requested information within a reasonable time may result in the rejection of the Bid with no re-submittal rights.

The successful Bidder understands that the JWSC, after considering the legal, financial, technical, and character qualifications of the Bidder, as well as what in the JWSC's judgment may best serve the interest of its rate payers and employees, may grant a contract.

The successful Bidder understands that this bid is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a bid for the same, and is in all respects fair and without collusion or fraud. I understand that collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.

Any contract issued will be on the basis of the Bidder's service, financial plans and arrangements being feasible and adequate to fulfill the conditions set forth in this project and the successful Bidder's response.

Company Name: _____

Authorized Person: _____ Signature: _____

(Print/Type)

Title: _____ Date: _____

Address: _____

Telephone: _____ Fax: _____ Email: _____

OATH

State of Georgia
City of Brunswick
County of Glynn

I, _____ (Name of individual), solemnly swear
that in the procurement of the contract for

19-018 Smoke and Dye Testing Services – Brunswick and North Mainland Districts

that I, nor any other person associated with me or my business, corporation or partnership, has prevented or attempted to prevent competition in the bidding or Bids of said project or from submitting a bid for this project by any means whatever.

Lastly, I swear that neither I, nor any other person associated with me or my business, Corporation or partnership has caused or induced any other bidder to withdraw his/her bid from consideration for this project. Said oath is filed in accordance with the requirements set forth in O.C.G.A. § 36-91-21 (e).

This the _____ day of _____ 2019.

Name of Party: _____

Corporate or Partnership Name: _____

Sworn to and subscribed before me this the _____ day of _____ 2019.

NOTARY PUBLIC:

Name: _____

My Commission Expires: _____

(SEAL)

REPRESENTATION

EQUAL EMPLOYMENT OPPORTUNITY (EEO) PRACTICE:

EEO Plan: The successful Bidder will develop and implement an EEO policy that, as a minimum, will recruit, hire, train, and promote, at all levels, without regard to race, color, religion, national origin, sex, or age, except where sex or age is a bona fide occupational qualification.

EEO For Veterans/Handicapped: The successful Bidder will also provide equal employment opportunities for qualified disabled veterans, handicapped persons and veterans of the Vietnam Era.

EEO For Successful Bidder Programs: The successful Bidder, will ensure equal employment opportunity applies to all terms and conditions of employment, personnel actions, and successful Bidder-sponsored programs. Every effort shall be made to ensure that employment decisions, programs and personnel actions are non-discriminatory. That these decisions are administered on the basis of an evaluation of an employee's eligibility, performance, ability, skill and experience.

EEO Acquisitions: The successful Bidder will develop and implement a policy that will give equal opportunity to the purchase of various goods and services from small businesses and minority-owned businesses.

a. Does the Bidder have the above EEO policy in place?

Yes

No

b. If the answer to a. above is no, will the Bidder have such a policy in place for the project?

Yes

No

Statement of Assurance: The Bidder herein assures the JWSC that it is in compliance with Title VI & VII of the 1964 Civil Rights Act, as amended, in that it does not on the grounds of race, color, national origin, sex, age, disability, or veteran status, discriminate in any form or manner against employees or employers or applicants for employment and is in full compliance with A.D.A.

(Firm's Name)

(Authorized Signature)

(Title)

(Date)

Brunswick-Glynn County Joint Water and Sewer Commission

1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7100

INSURANCE REQUIREMENTS

The description section of your insurance certificate must read:

BGWSC is named as an additional insured on all coverage except Workers' Compensation as per written contract. A waiver of Subrogation applies to all policies shown above as per written contract.

Insurance Requirements

Before starting and until acceptance of the Work by BGJWSC, and without further limiting its liability under the Contract, Company shall procure and maintain at its sole expense, insurance of the types and in the minimum amounts stated below:

SCHEDULE	AMOUNT
<u>Workers' Compensation</u>	
Georgia Statutory coverage and Employer's Liability (including appropriate Federal Acts)	Statutory Limits (Workers' Compensation) \$500,000 Bodily Injury each accident \$500,000 Bodily Injury by Disease each Employee \$1,000,000 Bodily Injury policy limit
<u>Commercial General Liability</u>	
Premises-Operations	\$1,000,000 each occurrence
Products-Completed Operations	\$2,000,000 annual aggregate for bodily injury and property damage, combined single limit
Contractual Liability	
Independent Contractors	
Broad Form Property Damage	
Explosion, Collapse and Underground Hazards (XCU Coverage) as appropriate	
Primary and Non Contributory	
<u>Automobile Liability</u>	
All autos-owned, hired, or non-owned	\$1,000,000 each occurrence, combined single limit
<u>Excess or Umbrella Liability</u>	
(This is additional coverage and limits above the following primary insurance: Employer's Liability, Commercial General Liability and Automobile Liability)	\$2,000,000 each occurrence and annual aggregate

Company's Commercial General Liability and Excess or Umbrella Liability policies shall be effective for two years after Work is complete. The above Indemnification provision is separate and is not limited by the type of insurance or insurance amounts stated above. The General liability shall contain a "Per Project Aggregate".

Company shall specify BGJWSC as an additional insured for all coverage except Workers' Compensation and Employer's Liability. Such insurance shall be primary and non-contributory as to any and all other insurance or self-insurance maintained by BGJWSC. Company shall include a Waiver of Subrogation on all required insurance in favor of BGJWSC, its commission members, employees, agents, successors and assigns.

Such insurance shall be written by a company or companies authorized to do business in the State of Georgia, rated at least A- VII by A M Best and satisfactory to BGJWSC. Prior to commencing any Work under this Contract, certificates evidencing the maintenance of the insurance shall be furnished to BGJWSC for approval.

CERTIFICATE OF INSURANCE

This is to certify that _____

(Insurance Company)

of _____

(Insurance Company Address)

has issued policies of insurance, as identified by a policy number to the insured name below, and that such policies are in full force and effect at this time. Furthermore, this is to certify that these policies meet the requirements described in the General Conditions of this project; and it's agreed that none of these policies will be canceled or changed so as to affect this Certificate until thirty (30) days after written notice of such cancellation or change has been delivered to:

BRUNSWICK-GLYNN COUNTY JOINT WATER AND SEWER COMMISSION

1703 GLOUCESTER STREET, BRUNSWICK, GEORGIA 31520

It is further agreed that Brunswick-Glynn County Joint Water and Sewer Commission shall be named as an additional insured on the Contractor's policy.

1. **Insured:** _____

2. **Project Name:** **19-018 SMOKE AND DYE TESTING SERVICES – BRUNSWICK AND NORTH MAINLAND DISTRICTS**

3. **Policy Number(s):** _____

Date: _____

(Insurance Company)

Issued At: _____

(Authorized Representative)

Address: _____

Note: Please attach Certificate of Insurance form to this page.

CERTIFICATE OF DRUG FREE WORKPLACE

In order to have a drug- free workplace, a business shall:

Publish a statement notifying employees that the unlawful, manufacture, distribution, dispensing, possession, or use of controlled substances is prohibited in the workplace and specifying the actions that shall be taken against employees for violation of such prohibition.

Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

As a condition of working on the commodities or contractual services then under bid, the employee shall notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of any controlled substance law of the United States or any State, for a violation occurring in the workplace no later than five (5) days after such conviction.

Impose a sanction on, or require satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

Company Name: _____

Authorized Signature: _____

Title: _____

Date: _____

E-VERIFY CONTRACTOR AFFIDAVIT AND AGREEMENT

Georgia Security Immigration and Compliance (GSIC) Act

The Brunswick-Glynn County Joint Water and Sewer Commission and Contractor agree that compliance with the requirements of O.C.G.A. § 13-10-91 and Rule 300-10-1-.02 of the Rules of the Georgia Department of Labor are conditions of this Agreement for the physical performance of services.

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, *stating affirmatively that the individual, firm, or corporation which is contracting with the Brunswick- Glynn County Joint Water and Sewer Commission has registered with and is participating in the federal work authorization program known as: "E-Verify", web address <https://e-verify.uscis.gov/enroll/> operated by the United States Citizenship and Immigration Services Bureau of the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91.* The undersigned Contractor also verifies that he/she/it is using and will continue to use the federal work authorization program throughout the contract period.

The undersigned Contractor agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to the contract with the Brunswick- Glynn County Joint Water and Sewer Commission, Contractor will secure from each subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees the Contractor will advise the Brunswick-Glynn County Joint Water and Sewer Commission of the hiring of a new subcontractor and will provide the Brunswick-Glynn County Joint Water and Sewer Commission with a Subcontractor Affidavit attesting to the Subcontractor's name, address, user identification number, and date of authorization to use the Federal Work Authorization Program within five (5) days of the hiring before the Subcontractor begins working on the Project. Contractor also agrees to maintain all records of such compliance for inspection by the Brunswick-Glynn County Joint Water and Sewer Commission at any time and to provide a copy of each such verification to the Brunswick-Glynn County Joint Water and Sewer Commission at the time the subcontractor(s) is retained to perform such services.

(Continued on Next Page)

E-Verify Employment Eligibility Verification User I.D. Number

Date of Authorization to Use Federal Work Authorization Program

Name of Contractor

Title of Authorized Officer or Agent of Contractor

Signature and Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this the ____ day of _____, 2019.

NOTARY PUBLIC:

Name: _____

My Commission Expires: _____

(NOTARY SEAL)

As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

EXHIBIT A

**MAP FOR BRUNSWICK AND NORTH MAINLAND
SERVICE DISTRICTS**

RFP No. 19-018
Smoke and Dye Testing Services
Brunswick and North Mainland Districts

Exhibit A
Lift Station Address Listing

Lift Station	Address
4001	Between 327 & 411 Newcastle St. ROW
4002	1309 Reynolds Street
4003	2020 Newcastle Street
4006	3700 Altama Avenue
4007	4501 Habersham Street
4009	3123 Boxwood Street
4012	4614 Altama Avenue
4013	301 Hornet Drive
4015	4000 Riverside Drive
4017	2845 Parkwood Drive
4021	4727 Altama Avenue
4023	5801 Altama Avenue
4024	122 Landover Drive
4027	167 Stafford Avenue
4028	101 Oscar Lane
4029	145 Emanuel Farm Road
4035	3850 Ross Road
4036	1253 B & W Grade Road
4038	398 Marana Circle
4039	150 Indigo Drive @ Airport Industrial Drive
4043	1000 Fountain Lake Drive
4044	130 Altama Connector
4048	3983 Darien Highway
4056	2000 Old Cypress Mill Road

EXHIBIT B

DELIVERABLES REFERENCE PACKET

SMOKE TESTING

PERFORMANCE SPECIFICATION GUIDELINE FOR SANITARY SEWER

December, 2010



Thanks to the following participants for the development of this document:

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Paul R. Casey - Flow Assessment Services, LLC
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Disclaimer

These specifications were prepared by NASSCO and peer reviewed by industry professionals. These specifications are not specific to any one product and should be considered a guideline only. Conditions for use may require additions, deletions or amendments to these guidelines so as to conform to project specific site conditions. NASSCO assumes no liability as to content, use and application of these guidelines.

Index

PART 1 - GENERAL BACKGROUND	1
1.1 SCOPE.....	2
1.2 REQUIREMENTS.....	2
1.3 PERSONNEL QUALIFICATIONS.....	3
1.4 NOTIFICATION.....	3
PART 2 - EQUIPMENT	3
2.1 BLOWERS.....	3
2.2 SMOKE PRODUCTION.....	4
2.3 OTHER EQUIPMENT.....	4
PART 3 - INSTALLATION	4
3.1 WORK PROGRESS.....	4
3.2 WORK SCHEDULE.....	5
3.3 PERFORMING THE TESTS.....	6

PART 1 - GENERAL BACKGROUND

- A. The nature of the smoke testing inspections is to confirm system connectivity, identify gravity sewer system defects, assist in locating cross-connections between storm and sanitary sewer, locate the source(s) for odor complaints and to provide a permanent record of the defects including type, location, and severity. Smoke testing is one of the tools available for evaluating sanitary sewers and should not be considered the only test necessary to evaluate a collection system nor is it intended to be used for quantification of sources. When combined with flow monitoring, manhole inspection, flow isolation, dye water flooding and closed circuit television inspection a complete condition assessment of the collection system can be made. Smoke testing is very effective in identifying sources of inflow and restrictive conditions in sewers. Smoke exiting from a storm sewer catch basin (in a separate system) identifies a potentially large source of inflow; however, smoke testing alone does not identify where the connection or problem is located. It will be necessary to dye flood and CCTV various sewers to identify the connection, poor joints or service lateral that is the source for the smoke entering the storm sewer. Further investigations are commonly required based on the initial smoke test findings to establish the cause, location and repair method(s).
- B. It is important to realize that smoke exiting a mainline sewer may be a symptom of more significant problems and caution should be made in making one point repair without investigating the entire segment. It is common to find only a few smoke defects on entire lengths of sewer that when internally CCTV inspected are in very poor structural condition. Keep in mind that smoke will travel through the soil in a path of least resistance and may surface a considerable distance away from the actual defect source.
- C. Caution should also be taken in assessing storm drainage connections. Once smoke enters a storm sewer, many inlet structures may exhibit smoke exiting. The possible cause for smoke exiting the storm sewer may be due to poor joints, in both the storm and sanitary sewer, broken service lateral crossing the storm sewer, directional drilling that damaged storm or sewer pipe, direct connection, etc. Additional investigation, which may include dye flooding and CCTV, will be required to determine the exact location of the source and establish the repair method.
- D. (Note: During the planning stages of the smoke testing program, verification of the use of "catchment hoods" should be made. If hoods are being utilized, smoke may not exit from those catch basins connected to the sanitary sewer. It may be necessary to clean and/or drain the sumps below the level of the hood if testing is to be successful.)
- E. Smoke testing can provide detailed information on wet weather inflow sources, cross-connections with storm sewers, odor complaints and service connection confirmation, etc. However, soils that are saturated will not allow smoke to exit and limit the

usefulness of the testing. Therefore, it is recommended that smoke testing be scheduled during the dry season(s) to optimize the effectiveness of the test. Local conditions will dictate the time required after a rainfall event that will allow for smoke testing to be optimally effective. Establishing a test section of sewer, with previously identified defects, can provide a means of checking if soils are sufficiently dry. If the same defects are observed with similar intensity of smoke, then it is presumed that soils are sufficiently dry.

- F. Field documentation of the defects is extremely important and will include sketches of each system defect along with pertinent information for prioritizing the defects. Data documentation should be sufficient to establish the location of each defect. Additional inspections pinpoint the source and determine the best repair method. Color photographs will be taken to document each defect during the smoke test. The location of the defect will be determined by referencing the defect relative to the upstream manhole or by measurement from permanent objects (corner of house, power pole, etc.). The data collected in the field may be computerized using an industry standard database format so that the defects identified can be readily listed by priority for subsequent repair. Note that it may be feasible on small projects to collect all data on paper forms and manually perform analysis. Additionally, smoke testing information may be used to generate a list of line segments that require dye testing and internal TV inspection.

1.1 SCOPE

- A. It is the intent of this specification to provide for the smoke testing materials and procedures to be used in the investigation of the sanitary sewer facilities as shown on the project study area maps. All materials and procedures shall be consistent with these specifications, current industry standards, and as approved by the Utilities Department Project Manager.

1.2 REQUIREMENTS

- A. The Contractor shall test the gravity sanitary sewer system using high capacity blower(s). The smoke blower will be suitable for the anticipated testing and generate non-toxic smoke. The contractor personnel will visually identify and document each defect location. Contractor shall provide safety equipment suitable for the anticipated field and traffic conditions. Digital camera(s) will be used for documentation of observations. All inspections shall be recorded on standard smoke testing paper forms or entered into an electronic database.
- B. The nature of the smoke testing inspections shall be to confirm system connectivity, identify gravity sewer system defects, cross-connections between storm and sanitary sewer, location of potential building traps visualized by sewer vents with no smoke and to provide a permanent record of the defects including type, location, and severity.

Inspections will be performed by introducing non-toxic smoke into the sanitary sewer pipes using a high capacity blower (or approved equal depending on the project goals), observing smoke exiting vent stacks and at defect locations, and documenting the defects.

1.3 PERSONNEL QUALIFICATIONS

- A. The field crew will be of sufficient size to properly operate the smoke generation machine and provide full coverage of the area to visually locate smoke discharged from defects. This must include personnel for traffic control.
- B. The employees performing the smoke testing under the provisions of these specifications shall be properly trained and thoroughly experienced in the use of the equipment and procedures.
- C. Each employee shall wear or have on them a photo ID identifying him/her by name, company name and contact information. Clothing and vehicles identifying the company is also preferred. All job supervisors will have business cards with contact information to provide to residents if requested.
- D. The Contractor shall take appropriate action to ensure that his/her employees are polite to the public in all aspects of the work and that immediate assistance is provided to property owners if needed.

1.4 NOTIFICATION

- A. Contractor shall notify the project manager a minimum of 48 hours prior to the startup of smoke testing work or re-startup following delays due to weather. Contractor will provide the project manager the location for the next days work at the end of each day, if requested. No payment will be made for work performed without proper notification. Refer to section 3.1.A.5 for daily notification requirements.

PART 2 - EQUIPMENT

2.1 BLOWERS

- A. The Contractor shall provide a portable blower designed and built specifically for the use of smoke testing. The blower shall be self contained and capable of producing a minimum of 4,500 cubic feet of air per minute. Blowers with less cfm may be approved by the project manager provided it is demonstrated that sufficient pressure is generated for the testing. If inadequate pressure is being generated, then additional blowers (dual blowers) or larger blowers may be required. Adequate pressure is being provided when smoke is exiting the vent stacks as a plume or, where no vent stacks are present, smoke is exiting the upstream/downstream manhole casting/vent

hole/pick hole, etc. In general, the larger the pipeline diameter being tested, the higher the smoke blower capacity (cfm) required.

- B. The base of the blower shall have appropriate adapters and seals to make a good connection to the manhole without excessive loss of smoke.

2.2 SMOKE PRODUCTION

- A. Smoke fluid, smoke candles, or approved equal, shall produce continuous smoke that can be controlled by the testing crew for the duration of the test. The smoke generated shall be white to gray in color, leave no residue, and shall be non-toxic and non-explosive.
- B. The Contractor shall supply the smoke MSDS sheet to the Project Manager.

2.3 OTHER EQUIPMENT

- A. In addition to the blower, the Contractor shall provide all other equipment, tools, and incidentals required to perform smoke testing as required by these specifications including, but not limited to, sewer line stoppers, sand bags, cameras, confined space entry equipment, and traffic control equipment.

PART 3 - INSTALLATION

3.1 WORK PROGRESS

- A. The work shall generally progress as follows:
 1. The Contractor shall apply for and obtain work permits for all work to be performed in State and/or County Highways if applicable. All required insurances, traffic control measures, and other terms of the permit shall be provided to the satisfaction of the Project Manager.
 2. The Project Manager will provide the contractor with the procedure that should be followed regarding notification of fire department, police department, emergency personnel, etc.
 3. The Contractor shall have the Project Manager review required submittals including, but not limited to, the field inspection forms and database deliverable. Work shall not proceed until Project Manager accepts all submittals.
 4. A WORK SCHEDULE shall be submitted to the Project Manager for review and approval. No field testing or notification may proceed until the schedule has been approved by the Project Manager. After approval of the WORK SCHEDULE, the Contractor shall not make any revisions or modifications to it without the Project Manager's written approval.
 5. Daily Notifications
 - a. The Contractor shall notify, by hand delivery of approved door hangers to each address, all residences and businesses in the study area. All notification door

hangers shall be approved by the Project Manager before printing and distribution. The Contractor shall place door hangers on all residences and business 2-7 days prior to smoke testing at those specific addresses. Notification shall be an ongoing process throughout the project and shall be limited to the area provided in the look ahead schedule. Door hangers shall not be placed for areas which will not be tested within 7 days. If smoke testing is delayed for more than 7 days due to rain, etc., the area shall be re-notified. Logs will be maintained to document notification of hospitals, nursing homes, schools, high rise buildings, etc. The logs will include the facility name, notification date, time and individual notified. Notification of sensitive locations such as hospitals, nursing homes, day care, schools and the like must be done again immediately prior to testing.

- b. The Contractor shall check with all residents who expressed special concerns or special needs/notification prior to testing.
 - c. Notification of Emergency Services and dispatch centers will be completed each morning prior to testing that day. Project Manager will provide the required contact information for notifications by the contractor.
6. It shall be the Contractor's responsibility to keep adequate records of all notifications and to produce them upon Project Manager's request. Failure to comply with this requirement may be cause to suspend the Contractor's operations until compliance is achieved.
 7. Perform the smoke testing (Refer to Section 3.3).
 8. Prepare and provide the smoke testing data documents.

3.2 WORK SCHEDULE

- A. Upon award of the Contract, and prior to commencing any work, the Contractor shall provide a complete WORK SCHEDULE to the Project Manager for review and approval. The Work Schedule shall be typed and indicate the planned progress for the proposed work.
- B. The WORK SCHEDULE shall consist of a study area map showing the anticipated area(s) to be tested each day, week or month (depending on project size and duration).
- C. Acceptable Periods of Work
 1. Work hours must be approved by the Project Manager. However, the Contractor shall not typically commence testing before 8:00 a.m. local time and shall terminate testing no later than 5:00 p.m. each day. If the Contractor wishes to test before 8:00 a.m. or after 5:00 p.m. local time in commercial areas or high traffic areas, such testing shall be shown on the submitted WORK SCHEDULE and is subject to the Project Manager's approval.
 2. Smoke testing shall not be performed on weekends or on holidays without the prior approval of the Project Manager.

- D. Contractor shall not perform smoke testing on days that, in the opinion of the Project Manager, will hinder the results of the test. (For example, when heavy rains, or excessively saturated soil conditions would interfere with the effectiveness of the testing). Contractor may provide soil moisture or segment re-testing data as evidence that soil conditions are favorable for smoke testing.

3.3 PERFORMING THE TESTS

A. PROCEDURES:

1. Safety
 - a. The Contractor and his personnel shall be aware of and follow all Federal, State, and Local safety laws and regulations.
 - b. No entry into any part of the collection system shall be permitted until the Contractor has demonstrated that on-site personnel has been trained in applicable confined space safety procedures and has the equipment on-site to allow those procedures to be followed.
 - c. The Contractor shall minimize the physical entry of personnel into the sanitary sewer facilities. If required, manhole entry shall be in accordance with Federal, State, and local regulations for confined space entry and other regulations that may apply. The Contractor shall provide all safety equipment required for manhole entry operations, including harnesses, ventilation equipment, etc.
 - d. Traffic Control. The area of work shall, at all times, be protected by means of an adequate number of cones, barricades, flags, or by other means necessary to properly and safely protect both vehicular and pedestrian traffic.
 - e. Any condition deemed to be an unsafe by the Contractor shall be reported to the Project Manager. It is further understood that the Contractor shall not be required to work where, in the opinion of the Contractor, conditions would not be safe for the public, company personnel, equipment and/or other.
2. Confirm that adequate conditions (soil moisture, existence of catchment hoods, proper notifications, residents requiring assistance or notification, any preliminary procedures that may be necessary prior to conducting test, etc.) exist which will allow for desired results
3. Unless otherwise approved by the Project Manager, the sections of sewer subject to testing shall typically:
 - a. Consist of a central manhole, where the blower will be positioned, and an upstream and downstream manhole and the sewer pipe between them. With three (3) manholes and two pipe sections, lengths should not exceed 1000 feet. The blower capacity and/or number of blowers necessary will be determined by the adequacy of pressure as observed at the vent stack or downstream/upstream manholes. (Refer to Section 2.1)
 - b. Upon approval of the Project Manager, longer sections may be tested provided good pressure, as evidenced by smoke plume, is observed at the vent stacks.
4. The walk through for locating defects will not begin until smoke is highly visible with a smoke plume emanating from the plumbing vents of houses at the end of

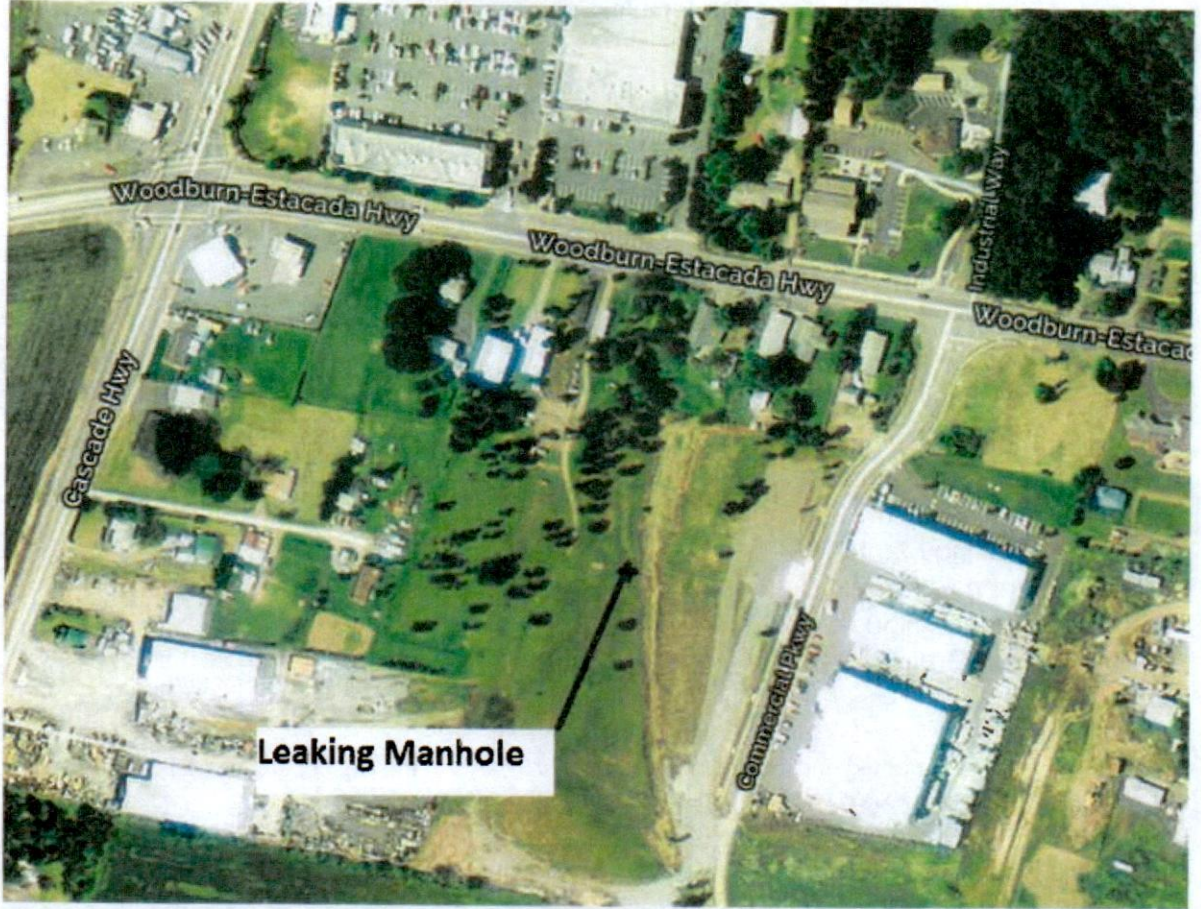
the setup location (maximum 500 ft radius) from the smoke testing machine. A locate flag will be placed at the location of the defect. Walkers shall traverse not only the sidewalk but between all homes and in back yards looking for illegal connections including patio, pool drains, roof drain connections and buildings where vent stacks do not exhibit smoke.

5. Defects must be located and documented as approved by the Project Manager. Typical methods to locate and re-locate defects in order of accuracy include:
 - a. Triangulate the defect with respect to the distance from two fixed objects (house corners, power poles, fire hydrant, etc.) and record on a location sketch
 - b. Sub-meter GPS coordinates
 - c. The distance from the upstream manhole to a point perpendicular to the defect is measured and the distance left/right to the defect is then measured.
6. Flow Control - It is the intent of this specification that the smoke testing be accomplished without the need for bypass pumping. The Contractor shall provide temporary plugs, sandbags, or flow barriers as required to contain an adequate volume of smoke within the section of sewer being tested. The Contractor shall monitor the resulting surcharged sewer at the manhole upstream of the tested section of sewer and prevent overflow conditions from occurring by removing the flow barriers or removing sewage by vacuum trucks.
7. All smoke testing information shall conform to the most recent version of the NASSCO smoke testing codes and database structure.
8. Data will be accurately and neatly recorded on field worksheets as provided by the Project Manager.
9. For each sewer main tested, the Contractor shall prepare a field log identifying each point of smoke exfiltration from:
 - a. Roof gutters
 - b. Sewer cleanouts
 - c. Leakage in house laterals
 - d. Patio or area drains
 - e. Storm drain cross connections
 - f. Manholes
 - g. Sewer vents (lack of smoke)
 - h. Any other source not stated above
10. Each smoke defect, as identified above, shall include an address, be referenced by sketch, and dimensioned to permanent landmarks.
11. A photograph of all leaks using a digital camera shall be included in the field log. Photographs of smoke evidence shall have a location indicated in the photograph using a defect flag where possible. All photographs shall be clearly cross-referenced to the typed and/or computer generated log indicating the location of the leak. Once the defect has been flagged the Smoke Testing Contractor will snap a digital picture (delivered in minimum 640x480 resolution) showing the smoke exiting from the defect, flag and physical features at or near the defect. Photographs should include sufficient field of view so that drainage patterns can be discerned.

12. The Project Manager may authorize QA/QC testing of specific line segments previously tested to determine the quality of testing performed and/or establish if soil conditions are sufficiently dry to continue smoke testing into new areas. Any re-testing will follow the same procedures.
13. The Contractor shall deliver project data in the NASSCO format approved by the Project Manager. Deliverables will include:
 - a. Maps of study area with corrections noted.
 - b. Summary of work quantities completed.
 - c. Summary of defect findings.
 - d. Completed field forms and sketches that document the testing and findings using the NASSCO smoke testing codes.
 - e. NASSCO database. All data codes and definitions shall conform to the NASSCO smoke testing requirements.
 - f. Submit one (1) complete copy of the field data and the electronic database to the Project Manager for review. Upon receiving the Project Manager's review and comments, the Contractor shall edit or revise the data delivery and/or electronic report as necessary and resubmit a copy of the final report (one hard copy and the electronic database) to the Project Manager.

****END OF SECTION****

AERIAL



SMOKE TEST REPORT

The Dyer Partnership, Engineers & Planners, Inc.

Molalla Smoke Testing

Commercial Parkway

Project Name :

Location / Address:

100.26

4-24

BC B

BC B 11 and BC B 12

Project No.

Report No.

Basin:

MH No. / Main:

Tyler J. Molatore

10/17/2017

Tested By:

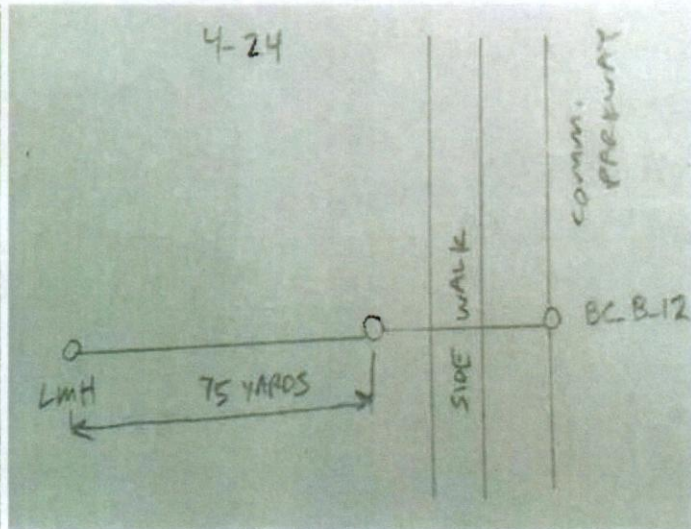
Date:

TESTING CODE	PHOTOGRAPHS
LSL = Leaking Service Lateral	<u>No.</u> <u>Description</u>
LML = Leaking Main Line	1 Leaking manhole
CB = Catch Basin	_____
LMH = Leaking Manhole	_____
OCO = Open Cleanout	_____
PHV = Plugged House Vent	_____
RD = Roof Drain	_____

Comments

- Manhole was unmarked and located approximately 75 yards to the west of the sidewalk, due west of BC B 12. Smoke exited from around manhole. Manhole is located in field.
- Also refer to aerial on following page.
-
-
-

SKETCH



Smoke Test Report

Project Name: _____ **Address:** _____

W/O #: _____ **Report #:** _____ **Basin #:** _____

Tested By: _____ **Date:** _____

Defect Codes:

Inflow Potential:

LSL = Leaking Service Lateral	1 = None Likely
LML = Leaking Gravity Main	2 = None
LCB = Leaking Catch Basin	3 = Light
LMH = Leaking Manhole Lid	4 = Moderate
LMHF = Leaking Manhole Frame	5 = Severe
LCO = Leaking Clean Out	
LSD = Leaking Storm Drain	
LSH = Leaking Sinkhole	
LSO = Leaking Stub Out	
LRD = Leaking Roof Drain	
PHV = Plugged House Vent	
MPH = Manhole Pick Holes	

Photographs:

Number:

Description:

Comments:

|

|

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