

BURGESS & NIPLE

9601 Amberglen Boulevard | Suite 275 | Austin, TX 78729 | 512.306.9266

Proposal for Technical Services

DATE: March 28th, 2024

TO: Town of Prosper
250 W. First St.
Prosper, TX 75078

FROM: Burgess & Niple, Inc.
9601 Amberglen Blvd, Suite 275
Austin, Texas 78729

PROJECT: 2024 Phase 8 Smoke Testing

This project is an assessment of portions of the Town of Prosper wastewater collection system using a traditional smoke testing method. The goal of the project is to identify system deficiencies caused by structural and inflow and infiltration related issues. The goals of the project shall be accomplished through the performance of various tasks listed below by Burgess and Niple, Inc. (ENGINEER) for the Town of Prosper (OWNER):

1.0 PROJECT WORK PLAN

This proposed work plan is being presented to the OWNER with the primary goal to perform a traditional smoke test of OWNER designated portions of the wastewater collection system and document findings.

Task 1 – Preparatory Work, Project Organization & Mobilization

This task provides for the deployment of equipment and personnel to the project area and development of formal communication channels and data security protocols. Under this task, ENGINEER will:

- Attend any scheduled Project Kickoff Meetings
- Develop and organize field task efforts
- Develop project status reporting formats
- Develop formal communication channels
- Develop field task maps and data collection formats
- Develop format for preparing and submitting invoices
- Develop channels for communication of Action Items
- Mobilize field crews to the project area

Required from Others: Wastewater collection system map in electronic format.

Deliverables: Attendance of the appropriate personnel at the Project Kickoff Meeting and development of the items listed above for ENGINEER interface with the OWNER.

Compensation for this task shall be on a lump sum basis as shown in Table 1 – Compensation.

Task 2 – Smoke Testing

Smoke testing shall be completed on portions of the wastewater collection system (currently estimated to be ±56,053 linear feet) within the area of the collection system as designated by the OWNER. A map of the area is attached to this proposal for the area identified to be smoke tested. Harmless smoke will be introduced into the sewer system using air blowers having a minimum rated capacity of 4,000 CFM. Smoke testing shall be conducted under dry weather conditions to allow the maximum detection of inflow and rainfall responsive infiltration sources. Notification of residences and businesses shall be made 24 hours prior to smoke testing via door hangers and verbal communication.

Digital photographs of every smoke leak found will be taken and GPS coordinates of the leak location collected and attached to the field forms.

Smoke testing data collected in the field will include:

- Upstream/downstream manhole number/Line ID
- Length of sewer line
- Ground cover over line segment
- GPS coordinates of smoke emission
- Degree of smoke observed
- Leak location relative to drainage paths/ponding areas
- Storm sewer crossings or cross connections
- Classifications of defects as:
 - Main line
 - Manhole
 - Public service line
 - Private service line

Assumptions: Based on available information, there are an estimated 56,053 LF of wastewater collection lines in the area to be tested. The field data for each smoke test shall be recorded in Microsoft Access format. ENGINEER will provide immediate notification of field conditions that could cause damage to persons or property. Any public meetings, if required for this project, should be conducted before the smoke testing operations begin.

Required from Others: The OWNER will provide assistance in locating and opening existing manholes, cleanouts, and access devices as required. The OWNER will provide access to all system appurtenances in the study area. The OWNER shall provide listings of persons to be notified on a daily basis of work locations during smoke testing.

Deliverables: Smoke testing services for approximately 56,053 LF of existing sanitary sewer mains of various sizes.

Compensation for this task shall be on a per unit basis as shown in Table 1 – Compensation.

Task 3 – Engineering Evaluation, Data Analysis, and Report

This task consists of engineering supervision of all field data collection operations, analysis of the collected data and presentation of the field data and analysis results as a Final Report, which shall include the following information. The OWNER may, at its discretion, request that an Interim Report be presented for the purpose of review and comment. Comments from the Interim Report shall be incorporated into the Final Report.

- a. Description of the type and nature of the problems found in the system. This information shall include the type of leak located, estimated leak rate, and estimated construction cost to repair the leak.

- b. Database printout of recommended rehabilitation cost ranked by unit cost
- c. Database listing of all problems located, along with the digital photograph documentation of the defect. Database inventory of all inspected collection lines.
- d. Recommendations for rehabilitation work grouped by major system component (main lines, service lines, and manholes). The recommendations will provide the information necessary for the rehabilitation work to be performed either by the OWNER or by a Contractor.
- e. ArcGIS project outlining the location of all located leaks, all inspected system components, and location of all recommended system rehabilitation.

One original copy of the collected field data with photographs of smoke leaks and project database will be provided to the OWNER in both electronic and hardcopy formats, as appropriate.

Compensation for this task shall be on a lump sum basis as shown in Table 1 – Compensation.

2.0 INDEMNIFICATION

In addition, and notwithstanding any other provisions of the Agreement, the OWNER agrees, to the fullest extent permitted by law, to indemnify and hold harmless The ENGINEER, its officers, directors, employees, and subconsultants, against all damages, liabilities or costs including reasonable attorneys' fees and defense costs, arising out of or in any way connected with this project or the performance by any of the parties above names of the services under this Agreement, excepting only those damages, liabilities, or costs attributable to the negligent acts of negligent failure to act by ENGINEER.

3.0 INSURANCE

Prior to the commencement of any work, ENGINEER shall furnish the OWNER with certificates of insurance covering claims arising out of the performance of the Services and caused in whole or part by the errors, omissions, or negligent acts for which B&N is legally liable. Such certificates shall provide that the OWNER receives at least thirty (30) days prior written notice of any material change in, or the cancellation of such insurance.

- Workers' Compensation Insurance in accordance with applicable state requirements
- Errors and Omissions Insurance with limits not less than \$1,000,000.00 combined single limit
- Business Automobile Liability Insurance for all owned, non-owned, and hired vehicles with a minimum combined limit of \$500,000.00 per occurrence for bodily injury and property damage.

4.0 COMPENSATION FOR SERVICES AND TERMS OF PAYMENT

The total price to cover all services described under the Scope of Work will be computed based on the unit prices shown in Table 1 and quantities of work completed as authorized by the OWNER including the lump sum tasks amounts being established by percent of completion. Quantities found in field investigation may vary and will be performed and charged by the unit price shown in Table 1 in an amount not to exceed the total proposal cost of \$49,855.00 by 10%, unless authorized in writing by the OWNER. Invoices will be rendered monthly and are due within thirty (30) days of receipt. Table 1 delineates the unit price for each task.

Table 1 – Compensation

Task	Task Description	Unit	Estimated Quantities	Unit Price	Total Price
1	Preparatory Work, Project Organization & Mobilization	Lump Sum	1	\$4,300.00	\$4,300.00
2	Smoke Testing	Linear Foot	56,053	\$0.67	\$37,555.00
3	Engineering Evaluation, Data Analysis and Report	Lump Sum	1	\$8,000.00	\$8,000.00
TOTAL					\$49,855.00

5.0 INFORMATION AND SERVICES TO BE PROVIDED BY THE OWNER

The OWNER shall provide the following information and services:

1. Mapping (ArcGIS format) and associated data representing the existing sewer system including lift stations, sewer lines, manholes, cleanouts, street right of ways, easements, and creeks and/or waterways within the Study Area.
2. Liaison with OWNER officials to provide effective coordination and cooperation between the fire, police, utility departments and ENGINEER as necessary during execution of field work.
3. Access to manholes and cleanouts.
4. Assistance by OWNER personnel, knowledgeable of manhole and cleanout locations, and in locating buried or hidden manholes or cleanouts.
5. Expose for entry, manholes that require excavation, cutting of pavement, and/or have lids fastened or frozen in place.

6.0 SCHEDULE

The work being performed under this project shall be completed in eight weeks (assuming favorable weather conditions and field crew availability).

7.0 NOTICE TO PROCEED

The completion of the proposed work shall be contingent upon receipt of Authorization to Proceed by the OWNER and a signed copy of this proposal.

Town of Prosper
3/28/2024

BURGESS & NIPLE, INC.

TOWN OF PROSPER



Edwin J. Mucillo, PE
Chairman

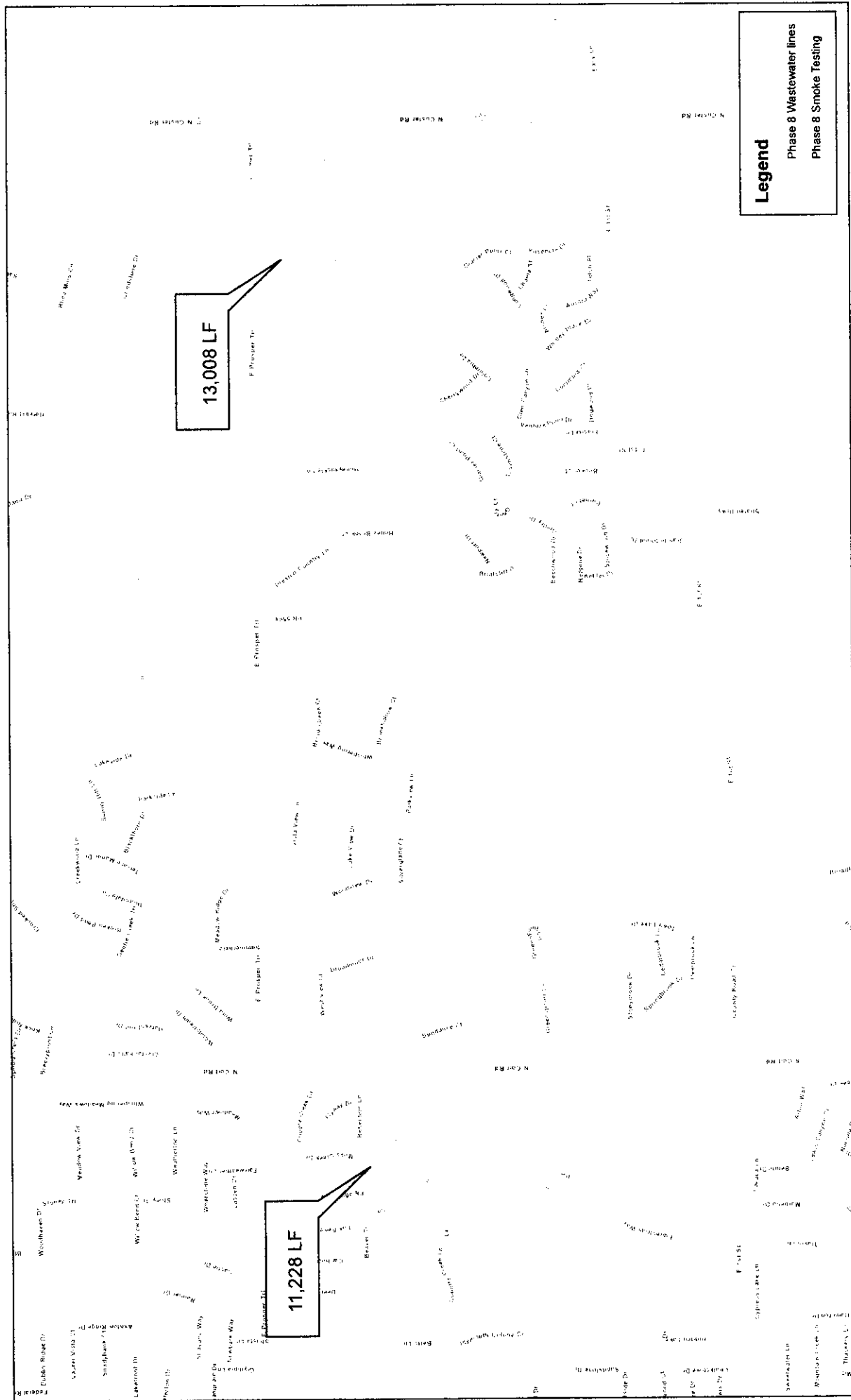
3/28/2024

Date

Signature

Title

Date



TOWN OF PROSPER SMOKE TESTING 2024 PHASE 8: FIGURE 2