



**CITY OF PLANO  
COUNCIL AGENDA ITEM**

<b>CITY SECRETARY'S USE ONLY</b>				
<input type="checkbox"/> Consent <input type="checkbox"/> Regular <input type="checkbox"/> Statutory				
Council Meeting Date:		11/12/12		
Department:		Public Works		
Department Head:		Gerald P. Cosgrove, P.E.		
Agenda Coordinator (include phone #): <b>Kathleen Schonne (7198)</b>				<b>Project No. 6239.1</b>
<b>CAPTION</b>				
To approve a Professional Services Agreement by and between the City of Plano and Pipeline Analysis, LLC, in the amount of \$1,131,881, for Rowlett Creek Basin Sanitary Sewer Assessment and authorizing the City Manager to execute all necessary documents.				
<b>FINANCIAL SUMMARY</b>				
<input type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> OPERATING EXPENSE <input type="checkbox"/> REVENUE <input checked="" type="checkbox"/> CIP				
FISCAL YEAR: <b>2012-13</b>	<b>Prior Year (CIP Only)</b>	<b>Current Year</b>	<b>Future Years</b>	<b>TOTALS</b>
Budget	117,940	1,190,000	0	<b>1,307,940</b>
Encumbered/Expended Amount	-117,940	-50,585	0	<b>-168,525</b>
This Item	0	-1,131,881	0	<b>-1,131,881</b>
BALANCE	0	7,534	0	<b>7,534</b>
<b>FUND(S): SEWER CIP</b>				
<p><b>COMMENTS:</b> Funds are included in the FY 2012-13 Sewer CIP. This item, in the amount of \$1,131,881, will leave a current year balance of \$7,534 for the Rowlett Creek Basin I/I project.</p> <p><b>STRATEGIC PLAN GOAL:</b> A professional services agreement for a sanitary sewer assessment relates to the City's Goal of Financially Strong City with Service Excellence.</p>				
<b>SUMMARY OF ITEM</b>				
<p>This agreement with Pipeline Analysis, LLC, is for an engineering study for Rowlett Creek Basin Sanitary Sewer Assessment. This project will consist of a Sanitary Sewer Assessment of portions of the Rowlett Creek Basin (including the City of Plano system within the Cottonwood Creek drainage basin that were found to have the worst cases of inflow and infiltration during a previous evaluation of these basins). The approach to the work tasks is organized around the City's objectives for this project:</p> <ul style="list-style-type: none"> <li>■ Reduction in dry and wet weather infiltration/inflow</li> <li>■ Cost controls and Least Cost Rehabilitation Alternatives</li> <li>■ Attainment of long-term Infiltration/Inflow solutions</li> <li>■ Collection System Capacity Assurance</li> <li>■ Regulatory compliance</li> <li>■ Customer satisfaction</li> </ul> <p>The contract fee is for \$1,131,881.17 and is detailed as follows:</p>				



## CITY OF PLANO COUNCIL AGENDA ITEM

Description	Total
Mobilization/Startup	\$ 1,250.00
Manhole/Pipe Inspection/Data Entry	\$ 258,075.00
Smoke Testing- Public Awareness, Data Entry	\$ 342,152.72
Dye Flooding	\$ 21,600.00
Preparatory Cleaning- 15% (For Task 600 Lb)	\$ 226,776.40
CCTV/Logs/DVD/Analysis	
Rowlett Creek Interceptor (no pre-cleaning)	\$ 62,212.65
CCTV SSA Defects - 15%	\$ 137,259.40
Portable Zoom Camera Inspection for no access ROW	\$ -
Admin., Project Mgt.	\$ 9,350.00
Defect Analysis/Rehabilitation	\$ 20,550.00
Database tabular listing	\$ 5,100.00
Rehab. Cost Estimates/Priority Ranking/Method	\$ 7,600.00
Mapping/Database	\$ 5,280.00
Draft/Final Report/Preliminary Rehab Plan	\$ 34,675.00
Total Not to Exceed	\$ 1,131,881.17

*Funding is available from the FY 2012-13 Sewer Community Investment Program.*

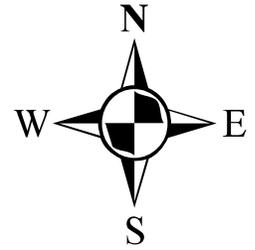
List of Supporting Documents: Location Map Engineering Services Agreement	Other Departments, Boards, Commissions or Agencies N/A
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# LOCATION MAP

## Rowlett Creek Basin

### Sanitary Sewer Assessment

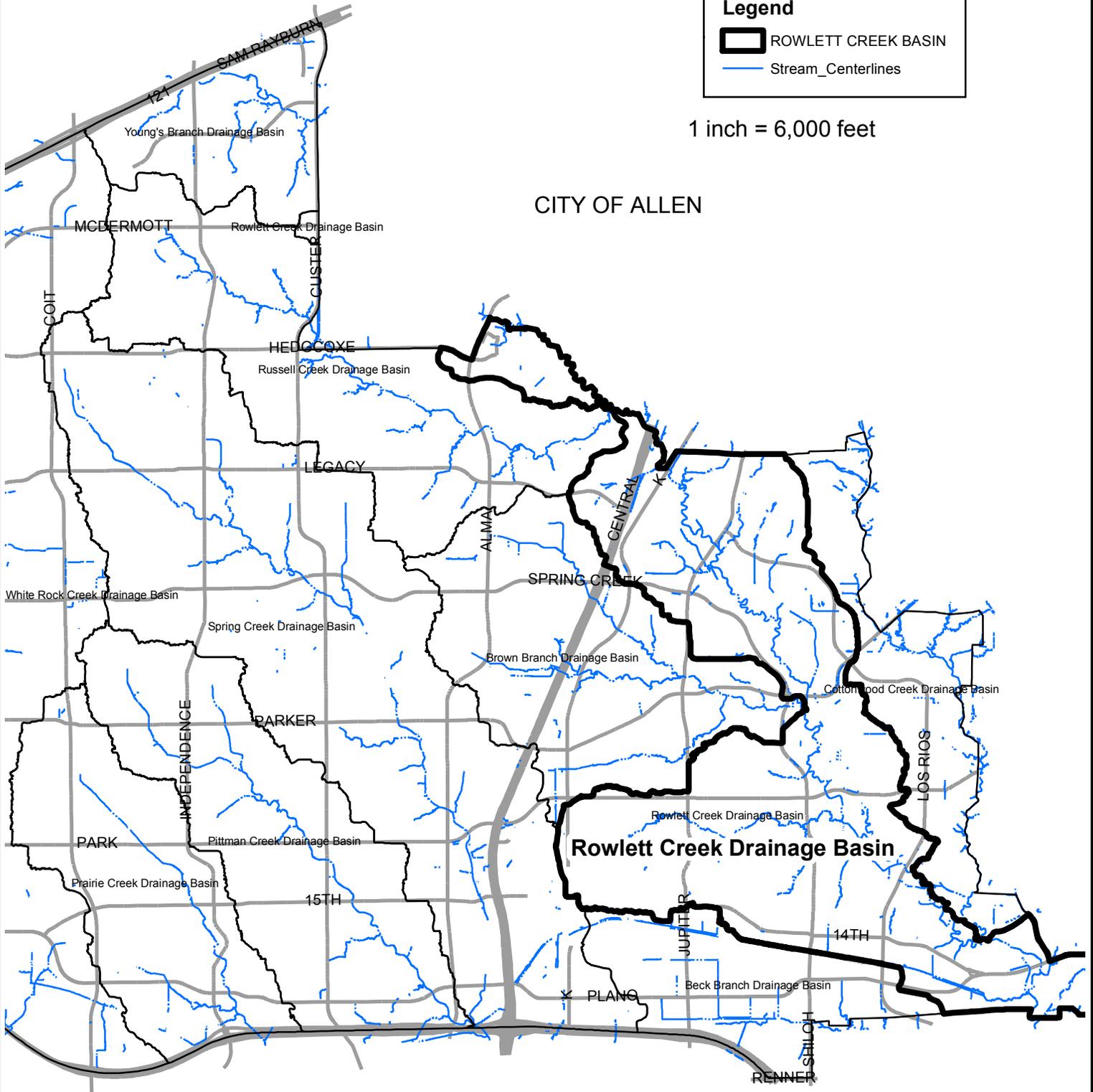
#### #6239.1



**Legend**

- ROWLETT CREEK BASIN
- Stream\_Centerlines

1 inch = 6,000 feet



# ROWLETT CREEK BASIN SANITARY SEWER ASSESSMENT

PROJECT NO. 6239.1

## ENGINEERING SERVICES AGREEMENT

**THIS AGREEMENT** is made and entered by and between the **CITY OF PLANO, TEXAS**, a Home-Rule Municipal Corporation, hereinafter referred to as "City", and **PIPELINE ANALYSIS, LLC**, a **TEXAS** Corporation, hereinafter referred to as "Engineer", to be effective from and after the date as provided herein.

### WITNESSETH:

**WHEREAS**, the City desires to engage the services of the Engineer to prepare construction plans, specifications, details and special provisions and to perform other related engineering services in connection with the **ROWLETT CREEK BASIN SANITARY SEWER ASSESSMENT** project located in the City of Plano, Collin County, Texas, hereinafter referred to as the "Project"; and

**WHEREAS**, the Engineer desires to render such engineering services for the City upon the terms and conditions provided herein.

**NOW, THEREFORE**, for and in consideration of the covenants contained herein, and for the mutual benefits to be obtained hereby, the parties hereto agree as follows:

#### I. Employment of the Engineer

The City hereby agrees to retain the Engineer to perform professional engineering services in connection with the Project. Engineer agrees to perform such services in accordance with the terms and conditions of this Agreement.

#### II. Scope of Services

The parties agree that Engineer shall perform such services as are set forth and described in Exhibit "A", which is attached hereto and thereby made a part of this Agreement. The parties understand and agree that deviations or modifications in the form of written contract modifications may be authorized from time to time by the City.

### **III. Schedule of Work**

The Engineer agrees to commence work immediately upon execution of this Agreement, and to proceed diligently with said work, except for delays beyond the reasonable control of Engineer, to completion as described in the Completion Schedule, attached hereto as Exhibit "B" and thereby made a part of this Agreement.

### **IV. Compensation and Method of Payment**

The parties agree that Engineer shall be compensated for all services provided pursuant to this Agreement in the amount and manner described and set forth in the Payment Schedule attached hereto and incorporated herein as Exhibit "C". The contract amount specified in Exhibit "C" shall not be exceeded without the written permission of the City.

### **V. Information to be Provided by the City**

The City agrees to furnish, prior to commencement of work, all that information requested by Engineer and available in City's files.

### **VI. Insurance**

Engineer agrees to meet all insurance requirements, and to require all consultants who perform work for Engineer to meet all insurance requirements, as set forth on Exhibit "D", which is attached hereto and thereby made a part of this Agreement.

Engineer agrees to notify the City of any changes in insurance policy coverage, including but not limited to changes in limits and cancellation. The Engineer shall notify the City in writing of any changes within forty-eight (48) hours of the change. The Engineer's notice shall include a description of the changes and how those changes vary from the insurance requirements of the contract/agreement.

### **VII. INDEMNITY**

**THE ENGINEER AGREES TO DEFEND, INDEMNIFY AND HOLD THE CITY AND ITS RESPECTIVE OFFICERS, AGENTS AND EMPLOYEES, HARMLESS AGAINST ANY AND ALL CLAIMS, LAWSUITS, JUDGMENTS, FINES, PENALTIES, COSTS AND EXPENSES FOR PERSONAL INJURY (INCLUDING DEATH), PROPERTY DAMAGE OR OTHER HARM OR VIOLATIONS FOR WHICH RECOVERY OF DAMAGES, FINES, OR PENALTIES IS SOUGHT, SUFFERED BY ANY PERSON OR PERSONS, THAT MAY ARISE OUT OF OR BE OCCASIONED BY ENGINEER'S BREACH OF ANY OF THE TERMS OR PROVISIONS OF THIS CONTRACT, VIOLATIONS OF LAW, OR BY ANY NEGLIGENT, GROSSLY**

NEGLIGENT, INTENTIONAL, OR STRICTLY LIABLE ACT OR OMISSION OF THE ENGINEER, ITS OFFICERS, AGENTS, EMPLOYEES, INVITEES, SUBCONTRACTORS, OR SUB-SUBCONTRACTORS AND THEIR RESPECTIVE OFFICERS, AGENTS, OR REPRESENTATIVES, OR ANY OTHER PERSONS OR ENTITIES FOR WHICH THE ENGINEER IS LEGALLY RESPONSIBLE IN THE PERFORMANCE OF THIS CONTRACT. THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL NOT APPLY TO ANY LIABILITY RESULTING FROM THE SOLE NEGLIGENCE OF THE CITY, AND ITS OFFICERS, AGENTS, EMPLOYEES OR SEPARATE ENGINEERS. THE CITY DOES NOT WAIVE ANY GOVERNMENTAL IMMUNITY OR OTHER DEFENSES AVAILABLE TO IT UNDER TEXAS OR FEDERAL LAW. THE PROVISIONS OF THIS PARAGRAPH ARE SOLELY FOR THE BENEFIT OF THE PARTIES HERETO AND ARE NOT INTENDED TO CREATE OR GRANT ANY RIGHTS, CONTRACTUAL OR OTHERWISE, TO ANY OTHER PERSON OR ENTITY.

ENGINEER AT ITS OWN EXPENSE IS EXPRESSLY REQUIRED TO DEFEND CITY AGAINST ALL SUCH CLAIMS. CITY RESERVES THE RIGHT TO PROVIDE A PORTION OR ALL OF ITS OWN DEFENSE; HOWEVER, CITY IS UNDER NO OBLIGATION TO DO SO. ANY SUCH ACTION BY CITY IS NOT TO BE CONSTRUED AS A WAIVER OF ENGINEER'S OBLIGATION TO DEFEND CITY OR AS A WAIVER OF ENGINEER'S OBLIGATION TO INDEMNIFY CITY PURSUANT TO THIS AGREEMENT. ENGINEER SHALL RETAIN DEFENSE COUNSEL WITHIN SEVEN (7) BUSINESS DAYS OF CITY'S WRITTEN NOTICE THAT CITY IS INVOKING ITS RIGHT TO INDEMNIFICATION UNDER THIS AGREEMENT. IF ENGINEER FAILS TO RETAIN COUNSEL WITHIN THE REQUIRED TIME PERIOD, CITY SHALL HAVE THE RIGHT TO RETAIN DEFENSE COUNSEL ON ITS OWN BEHALF AND ENGINEER SHALL BE LIABLE FOR ALL COSTS INCURRED BY THE CITY.

#### **VIII. Independent Contractor**

Engineer covenants and agrees that Engineer is an independent contractor and not an officer, agent, servant or employee of City; that Engineer shall have exclusive control of and exclusive right to control the details of the work performed hereunder and all persons performing same, and shall be responsible for the acts and omissions of its officers, agents, employees, contractors, subcontractors and consultants; that the doctrine of respondeat superior shall not apply as between City and Engineer, its officers, agents, employees, contractors, subcontractors and consultants, and nothing herein shall be construed as creating a partnership or joint enterprise between City and Engineer.

## **IX. Assignment and Subletting**

The Engineer agrees that neither this Agreement nor the work to be performed hereunder will be assigned or sublet without the prior written consent of the City. The Engineer further agrees that the assignment or subletting of any portion or feature of the work or materials required in the performance of this Agreement shall not relieve the Engineer from its full obligations to the City as provided by this Agreement.

## **X. Audits and Records/Prohibited Interest**

The Engineer agrees that at any time during normal business hours and as often as City may deem necessary, Engineer shall make available to representatives of the City for examination all of its records with respect to all matters covered by this Agreement, and will permit such representatives of the City to audit, examine, copy and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this Agreement, all for a period of one (1) year from the date of final settlement of this Agreement or for such other or longer period, if any, as may be required by applicable statute or other lawful requirement.

The Engineer agrees that it is aware of the prohibited interest requirements of the City Charter and Code of Conduct and will abide by the same. Further, a lawful representative of Engineer shall execute the affidavit shown in Exhibit "E". Engineer understands and agrees that the existence of a prohibited interest during the term of this contract will render the contract voidable.

## **XI. Contract Termination**

The parties agree that City shall have the right to terminate this Agreement with or without cause upon thirty (30) days written notice to Engineer. In the event of such termination, Engineer shall deliver to City all finished or unfinished documents, data, studies, surveys, drawings, maps, models, reports, photographs or other items prepared by Engineer in connection with this Agreement. Engineer shall be entitled to compensation for any and all work completed to the satisfaction of City in accordance with the provisions of this Agreement prior to termination.

## **XII. Engineer's Opinion of Probable Construction Costs**

The parties recognize and agree that any and all opinions of probable construction costs prepared by Engineer in connection with the Project represent the best judgment of Engineer as a design professional familiar with the construction industry, but that the Engineer does not guarantee that any bids solicited or received in connection with the Project will not vary from opinions prepared by Engineer.

### **XIII. Ownership of Documents**

Original drawings and specifications are the property of the Engineer; however, the Project is the property of the City and Engineer may not use the drawings and specifications therefor for any purpose not relating to the Project without City's consent. City shall be furnished with such reproductions of drawings and specifications as City may reasonably require. Upon completion of the work or any earlier termination of this Agreement under Article XI, Engineer will revise drawings to reflect changes made during construction and he will promptly furnish the City with one (1) complete set of reproducible record prints. Prints shall be furnished, as an additional service, at any other time requested by City. All such reproductions shall be the property of the City who may use them without Engineer's permission for any proper purpose including, but not limited to, additions to or completion of the Project. However, use of the documents for other than their intended purpose shall be at the sole risk of the City.

### **XIV. Complete Contract**

This Agreement, including the Exhibits lettered "A" through "E", constitute the entire agreement by and between the parties regarding the subject matter hereof and supersedes all prior or contemporaneous written or oral understandings. This Agreement may only be amended, supplemented, modified or canceled by a duly executed written instrument.

### **XV. Mailing of Notices**

Unless instructed otherwise in writing, Engineer agrees that all notices or communications to City permitted or required under this Agreement shall be addressed to City at the following address:

City of Plano  
Public Works Department, Suite 250  
P.O. Box 860358  
Plano, TX 75086-0358  
Attn: Husain Hamza, P.E.

City agrees that all notices or communications to Engineer permitted or required under this Agreement shall be addressed to Engineer at the following address:

Pipeline Analysis, LLC  
1115 Main Street  
Garland, TX 75040  
Attn: James H. Forbes, Jr., President

All notices or communications required to be given in writing by one party or the other shall be considered as having been given to the addressee on the date such notice or communication is posted by the sending party.

## **XVI. Miscellaneous**

### **A. Paragraph Headings:**

The paragraph headings contained herein are for convenience only and are not intended to define or limit the scope of any provision in this Agreement.

### **B. Contract Interpretation:**

Although this Agreement is drafted by the City, should any part be in dispute, the parties agree that the Agreement shall not be construed more favorably for either party.

### **C. Venue/Governing Law:**

The parties agree that the laws of the State of Texas shall govern this Agreement, and that it is performable in Collin County, Texas. Exclusive venue shall lie in Collin County, Texas.

### **D. Successors and Assigns:**

City and Engineer, and their partners, successors, subcontractors, executors, legal representatives, and administrators are hereby bound to the terms and conditions of this Agreement.

### **E. Severability:**

In the event a term, condition, or provision of this Agreement is determined to be void, unenforceable, or unlawful by a court of competent jurisdiction, then that term, condition, or provision, shall be deleted and the remainder of the Agreement shall remain in full force and effect.

### **F. Effective Date:**

This Agreement shall be effective from and after execution by both parties hereto.

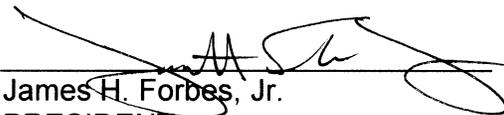
G. Authority to Sign:

The undersigned officers and/or agents of the parties hereto are the properly authorized officials and have the necessary authority to execute this Agreement on behalf of the parties hereto.

**SIGNED** on the date indicated below.

**PIPELINE ANALYSIS, LLC**  
A Texas Limited Liability Company

DATE: Oct 25, 2012

BY:   
James H. Forbes, Jr.  
PRESIDENT

**CITY OF PLANO, TEXAS**

DATE: \_\_\_\_\_

BY: \_\_\_\_\_  
Bruce D. Glasscock  
CITY MANAGER

**APPROVED AS TO FORM:**

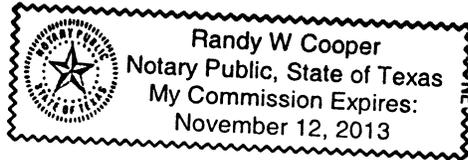
\_\_\_\_\_  
Diane C. Wetherbee  
CITY ATTORNEY

**ACKNOWLEDGMENTS**

STATE OF TEXAS       §  
                                  §  
COUNTY OF DALLAS   §

This instrument was acknowledged before me on the 25<sup>th</sup> day of Oct., 2012, by **JAMES H. FORBES, JR., PRESIDENT**, of **PIPELINE ANALYSIS, LLC**, a **Limited Liability Company**, on behalf of said limited liability company.

  
\_\_\_\_\_  
Notary Public, State of Texas



STATE OF TEXAS       §  
                                  §  
COUNTY OF COLLIN   §

This instrument was acknowledged before me on the \_\_\_\_\_ day of \_\_\_\_\_, 2012, by **BRUCE D. GLASSCOCK, City Manager**, of the **City of Plano, Texas**, a Home-Rule Municipal Corporation, on behalf of said municipal corporation.

\_\_\_\_\_  
Notary Public, State of Texas

**EXHIBIT "A"**  
**SCOPE OF SERVICES**  
**ROWLETT CREEK BASIN**  
**SANITARY SEWER ASSESSMENT**  
**PROJECT NUMBER 6239.1**

**PROJECT DESCRIPTION**

This project will consist of a Sanitary Sewer Assessment of portions of the Rowlett Creek Basin (including the City of Plano owned system within the Cottonwood Creek drainage basin). The service areas included in this scope of services is shown in Figure 1– Study Area Maps. The approach to the work tasks is organized around the City’s objectives for this project:

- Reduction in dry and wet weather infiltration/inflow
- Cost controls and Least Cost Rehabilitation Alternatives
- Attainment of long-term Infiltration/Inflow solutions
- Collection System Capacity Assurance
- Regulatory compliance
- Customer satisfaction

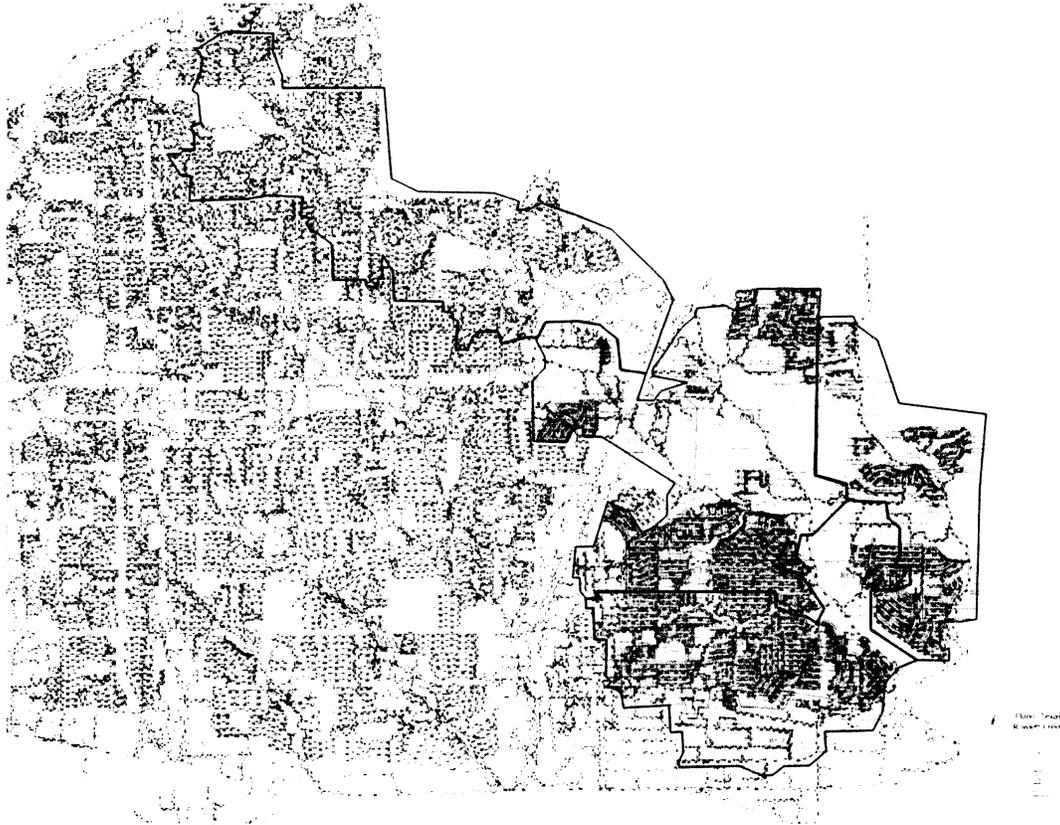
**BASIC SERVICES**

The investigation objectives and goals will be achieved through the performance of the following:

**Rowlett Creek 3,1,14,4,5,11/13, and 2**

Task	Description	Quantity
100	Mobilization/Startup	L.S.
200	Manhole/Pipe Inspection/Data Entry	2775 each
300	Smoke Testing- Public Awareness, Data Entry	795,704 linear feet
400	Dye Flooding	60 each
500	Preparatory Cleaning - 15% (for Task 600b. only)	119,356 linear feet
600	CCTV/Logs/DV/DA Analysis	
600a	a. Rowlett Creek Interceptor (no pre-cleaning)	21,829 liner feet
600b	b. CCTV SSA Defects - 15%	119,356 linear feet
700	Portable Zoom Camera Inspection for no access ROW	each
800	Admin., Project Mgt.	L.S.
900	Defect Analysis/Rehabilitation	L.S.
1000	Database tabular listing	L.S.
1100	Rehab. Cost Estimates/Priority Ranking/Method	L.S.
1200	Mapping/Database	L.S.
1300	Draft/Final Report/ Preliminary Rehabilitation Plan	L.S.

FIGURE 1 – RUSSELL CREEK BASIN AND ROWLETT CREEK  
SUB-BASINS 1, 2, 3, 4, 5, 11, 13 AND 14



Note: Meter Basins 4 and 5 are in the Cottonwood Creek Basin which is tributary to Rowlett Creek Basin. Cottonwood interceptor is owned by NTMWD and is not included in the evaluation.

## **SANITARY SEWER ASSESSMENT (SSA) FOR ROWLETT CREEK SUB-BASINS**

The following summarizes the various field testing and inspection tasks anticipated to complete a Sanitary Sewer Assessment (SSA) of the recommended priority areas within the City of Plano wastewater collection system. The sub-basins included in the SSA account for approximately 80% of the wet weather rainfall dependent infiltration/inflow within the basins.

### **TASK 100 MOBILIZATION/STARTUP**

Mobilize project team and coordinate startup. Establish personnel assignments and responsibilities. Inventory equipment needs and order expendable supplies.

### **TASK 200 MANHOLE AND PIPE INSPECTION & REHABILITATION PLAN**

Manholes can be a significant source of extraneous infiltration/inflow and thereby reduce system wet weather capacity. For this reason field crews will inspect each manhole within the designated study area.

The data gathered during this phase of the project will be used to prioritize manholes for rehabilitation and establish the base data necessary to accurately determine mainline sewer rehabilitation alternatives and costs. Other important deliverables resulting from this work task are the updating of the collection system GIS map, determination of debris levels in pipes, condition of right-of-way, and record structural conditions of manholes. This information is critical in preparing subsequent rehabilitation plans, cleaning requirements to restore capacity and updating of the system maps.

Inspection personnel will use digital cameras during the inspection of all manholes on this project. All photographs will be included in the field inspection computer database so that a permanent electronic record can be maintained. During inspection, each of the following types of information will be obtained to establish the condition and prioritize least cost repairs:

1. Basin Designation
2. Manhole/Cleanout ID
3. Inspection Status
4. Address
5. Surface cover, grade, type of cover (paved, yard, etc.)
6. Material of construction – brick, concrete, etc.

7. Area and Internal photo of manhole
8. All incoming and outgoing pipe depths from rim to invert
9. All incoming and outgoing pipe digital photographs
10. All incoming and outgoing pipe material of construction
11. Outgoing pipe length
12. Debris depth
13. Defects – Active, Evidence or No Infiltration/Inflow with digital photographs
14. Field corrections to collection system map

#### TASK 300 SMOKE TESTING OF STUDY AREA

Smoke testing will provide detailed information on wet weather inflow sources for the high priority study areas determined from the flow monitoring. In order to identify defects in the lines, a non-toxic smoke will be forced into the sewer by high capacity blowers. Data documentation includes measurements from two permanent points, use of GPS where possible, and will be sufficient to establish the location of each defect and determine the best repair method and priority. Color digital photographs will be taken to document each defect during the smoke test.

Forty-eight (48) hours prior to testing, door hangers will be used to notify residents. A local telephone number will be provided for those individuals with questions or for anyone requiring special assistance. Each day the fire department will be notified of the crew location since smoke may enter homes through defective plumbing.

#### *DELIVERABLES:*

- Defects listing and database
- Defect location sketch
- Digital photographs
- Smoke Notification Flyers and Notification of Residents
- Priority ranking of defects (both private and public sector)
- Repair methods and estimated costs
- GPS smoke defect locations to sub-meter accuracy where possible



## **SMOKE TESTING NOTICE TO RESIDENT**

For the next few days, inspection crews will conduct a physical survey of the wastewater collection system. Pipeline Analysis will perform this study, which involves opening manholes in the streets and backyard utility easements. Information gained from this study will be used to repair and improve the wastewater collection system.

One important task of the survey will be smoke testing of sewer lines to locate breaks and defects in the system. During this testing, white smoke will exit through vent pipes on the roofs of homes and through sewer line breaks. The smoke is non-toxic, leaves no residue, and creates no fire hazard. The smoke should not enter your home unless defective plumbing exists or drain traps are dry.

If you have seldom-used drains, please pour a gallon of water in the drain to fill the drain trap. This procedure will help prevent the possibility of smoke entering your living areas through those drains.

Field crews will perform testing of all sewers in the area. At no time will field crews have to enter your business or residence.

Your cooperation is appreciated. Should you have any additional questions concerning this study or if you desire special assistance, please phone:

**972-479-0655**

 PIPELINE ANALYSIS

#### TASK 400 DYE FLOODING

Dye water testing can be anticipated to assist in the location and quantifying of specific defects during the CCTV inspection. Non-toxic dye will be introduced as a powder or liquid. Cross-connections, roof drains and area drains that are suspected of being connected to the sanitary sewer will be positively identified using the dye tracer procedure. Field documentation and photographs will be used to record all findings. Internal inspection will determine the exact source of the 'cross-connection' and establish the best repair option (i.e., point repair, direct connection, etc.).

#### TASK 500 AND 600 PREPARATORY CLEANING AND CLOSED CIRCUIT TELEVISION INSPECTION

A listing of line segments recommended for internal cleaning and closed circuit television inspection (CCTV) inspection will be prepared and will be based on previous pipe inspection, smoke testing results, SSO locations and maintenance locations identified during the SSA (Task 600b). In addition, major trunk interceptors will be CCTV inspected (Task 600a) to determine condition, evidence of groundwater infiltration/inflow and to document current conditions and potential need for rehabilitation. Preparatory cleaning (Task 500) shall consist of hydraulic jet cleaning to facilitate the internal CCTV inspection on the smaller diameter pipelines. Debris will be removed from the line and transported for disposal. Knowing the conditions, locations of services, degree of pipe deterioration, etc. is paramount in developing the least cost alternatives. Note that the major trunk interceptors generally follow the creeks and in many cases have limited access for cleaning equipment. Therefore, pre-cleaning of the large diameter interceptor prior to CCTV inspection is not recommended for the condition assessment. The following information will be provided:

1. Field forms, equipment, supplies and oversight QA/QC
2. Document findings. Data to include:
  - a. Date inspected
  - b. Line segment being inspected
  - c. Project name
  - d. Location (Address)
  - e. Footage location from manhole
  - f. Defect code and/or type and severity rating using the national Pipeline Assessment Certification Program (PACP) codes
  - g. Pipeline surface cover
3. Review tapes and logs
4. Provide digital video on hard disk of segments televised

5. Summary of line segments cleaned and CCTV'd
6. Results of TV inspection summarized on printed logs
7. Video of inspection in digital format
8. Prepare prioritized mainline rehabilitation plan

#### TASK 700 PORTABLE ZOOM CAMERA INSPECTION

Where right of way will not permit placement of cleaning and/or CCTV equipment, a portable zoom camera may be used to inspect mainline sewers recommended for CCTV. The portable self-contained zoom camera will record digital video to obtain as much information as possible on the condition of the pipeline being inspected. Recorded data will be reviewed and recommendations on the rehabilitation method(s) will be determined where possible. The use of a zoom camera will only be considered where conventional CCTV equipment cannot be used.

#### TASK 800 ADMINISTRATION AND PROJECT MANAGEMENT

This task includes internal project administration and oversight including scheduling, budget, quality assurance and control meetings and reporting. The project schedule will be reviewed in detail and milestones for the completion of each task will be assigned. The project schedule will be reviewed and updated monthly to ensure that all tasks are completed in a timely and organized fashion.

Management work items include:

1. Field crew supervision and project planning
2. Obtain initial maps for field use and verification
3. Prepare monthly billings
4. Schedule equipment and order supplies
5. Monthly meetings and progress reports

#### TASK 900 DEFECT ANALYSIS

This project will generate a considerable amount of data that will require proper entry and quality control. Data collection will include the following:

1. All collected data will be included in a Microsoft Access or Excel spreadsheet.
2. All collected defect data will be correlated between sources to address duplicate defects that were identified by different testing methods.
3. Defect data will be presented graphically (data visualization) using the City of Plano GIS mapping system.

4. Evaluate the various rehabilitation options (including trenchless methods) based on the soils, line cover, pipe depth, easement restrictions, pipe material and defects identified. Much of the baseline data required for rehabilitation decision is gathered during the normal course of field investigations. For example, "area photos" are taken of each manhole in the direction of the outgoing pipe. This photograph not only shows the location of the manhole but also provide data on the line cover and easement conditions.
5. Since private sector defects can contribute to excessive inflow, proper documentation for subsequent repair is important. Property owner address, photograph and sufficient information to document the defect will be recorded and incorporated into the database.
6. Rehabilitation recommendations will consider the best repair for the particular asset (manhole, pipeline, etc.) being rehabilitated. A long-term least-cost solution may have an initial higher cost, but provide a higher level of service and lower operating and maintenance cost.

#### TASK 1000 DATABASE TABULAR LISTING

All inspection forms, photographs and sketches taken during the field investigation efforts will be provided as documentation and compiled into an Excel spreadsheet summary. Sketches will be scanned in pdf electronic format and referenced. Each system defect will be prioritized and sorted by repair method. An updated electronic collection system map will be provided and will be used to reference each system defect by line segment and manhole number.

#### TASK 1100 REHABILITATION COST ESTIMATES/FINAL PRIORITY RANKING

Based on the inspection and testing results, the severity of each defect will be evaluated and the estimated cost for repair will be assigned. Both public and private sector defects identified during the project will be evaluated. Estimated rehabilitation costs will utilize current bid tabulations to accurately estimate construction costs. For each public and private sector asset, a priority repair number will be assigned along with repair method and estimated cost.

#### TASK 1200 GIS MAPPING/DATABASE

This task will update the existing GIS maps based on the field observations. Where new lines are discovered during the course of the project they will be added to the GIS maps with new asset numbers added. All manhole, cleanout and mainline sewers will be identified by unique identifiers approved by the City. The updated GIS maps and database will be provided upon the completion of the project.

TASK 1300 DRAFT/FINAL SSES REPORT

The Draft and Final report will include an executive summary, conclusions, recommendations and estimated costs. This report will summarize all field activities and provide a summary for use by management. Prepare and submit one (1) Draft Final Report in hard copy and five (5) draft report copies on CD-ROM for review and comments. Address comments and submit three (3) bound Final Reports in hard copy and ten (10) final report copies on CD-ROM which will include electronic data summaries, rehabilitation costs and supporting tables and maps. The comprehensive reports to include the following:

1. Executive Summary
2. Description of all tasks undertaken including methodologies
3. Manhole Rehabilitation Plan
4. Mainline Rehabilitation Plan
5. Service Lateral Rehabilitation Plan
6. Appendix of collected field data, photographs and electronic database
7. Conclusions and recommendations
8. CD-ROM/DVD with final report, databases and photographs and project hard drive with CCTV digital video, scanned defect location sketches, GIS maps, project photographs and report data
9. Data visualization maps showing prioritized rehabilitation plan
10. Updated GIS maps
11. Reports shall be bound. All field data, photographs, sketches, maps, database, report narrative, etc. will be placed on hard drive and included with the Final Report.

**EXHIBIT "B"**

**SCHEDULE OF WORK**

The work will be initiated immediately upon receipt of Authorization to Proceed, and is estimated to be completed within approximately twelve months from the notice to proceed. If uncooperative weather conditions are encountered during the study period (i.e. inadequate rainfall preventing analysis of wet weather infiltration/inflow) the project schedule can be extended at the City's option.

**Basic Services Schedule**

Rowlett Creek Sewer System Assessment

Task	Description	Month													
		1	2	3	4	5	6	7	8	9	10	11	12		
100	Mobilization/Startup	█													
200	Manhole/Pipe Inspection/Data Entry	█	█	█	█										
300	Smoke Testing- Public Awareness, Data Entry														
400	Dye Flooding														
500	Preparatory Cleaning - 15% (for Task 600b. only)														
600	CCTV/Logs/DVD/Analysis														
600a	a. Trunk Interceptor (no pre-cleaning)														
600b	b. CCTV SSA Defects - 15%														
700	Portable Zoom Camera Inspection for no access ROW														
800	Admin., Project Mgt.	█	█	█	█	█	█	█	█	█	█	█	█	█	█
900	Defect Analysis/Rehabilitation														
1000	Database tabular listing														
1100	Rehab. Cost Estimates/Priority Ranking/Method														
1200	Mapping/Database														
1300	Draft/Final Report/ Preliminary Rehabilitation Plan														

Note: Includes Meter Basins 4 and 5 in Cottonwood Creek

**EXHIBIT "C"**

**COMPENSATION AND METHOD OF PAYMENT**

**Basic Services**

Payment for the Sanitary Sewer Assessment (SSA) work shall be a unit price for each manhole, dye flood, zoom camera setup and for each linear foot of mainline smoke tested, cleaned and televised. Cannot locate (CNL) manholes will not be billed. Manholes that are located, but buried or could not be opened will be billed and a list will be provided the City project manager. If the City uncovers or provides access, then these manholes will be re-inspected to gather inspection data at no additional charge. The basis for partial payment will be the unit rate multiplied by the number of units completed. Lump sum items will be billed based on the percentage completion of the work task. The total contract for basic services associated with the Sanitary Sewer Assessment (SSA) of the Rowlett Creek Sub-basins (including meter basins 4 and 5 in Cottonwood Creek) will not exceed \$1,131,881.17 without an amendment to this contract and authorization by the City to perform additional services.

<b>Basic Services</b>	<b>Total</b>
<b>Rowlett Creek 3,1,14,4,5,11,13, and 2</b>	\$ 1,131,881.17

## Detailed Cost Summaries

### Sanitary Sewer Assessment (SSA) Rowlett Creek Basin Cost Summary

#### Rowlett Creek 3,1,14,4,5,11/13, and 2

Task	Description	Quantity	Unit Price	Total
100	Mobilization/Startup	L.S.	L.S.	\$ 1,250.00
200	Manhole/Pipe Inspection/Data Entry	2775 each	\$ 93.00	\$ 258,075.00
300	Smoke Testing- Public Awareness, Data Entry	795,704 linear feet	\$ 0.43	\$ 342,152.72
400	Dye Flooding	60 each	\$ 360.00	\$ 21,600.00
500	Preparatory Cleaning - 15% (for Task 600b. only)	119,356 linear feet	\$ 1.90	\$ 226,776.40
600	CCTV/Logs/DVD/Analysis			
600a	a. Rowlett Creek Interceptor (no pre-cleaning)	21,829 liner feet	\$ 2.85	\$ 62,212.65
600b	b. CCTV SSA Defects - 15%	119,356 linear feet	\$ 1.15	\$ 137,259.40
700	Portable Zoom Camera Inspection for no access ROW	each	\$ 325.00	\$ -
800	Admin. Project Mgt.	L.S.	L.S.	\$ 9,350.00
900	Defect Analysis/Rehabilitation	L.S.	L.S.	\$ 20,550.00
1000	Database tabular listing	L.S.	L.S.	\$ 5,100.00
1100	Rehab. Cost Estimates/Priority Ranking/Method	L.S.	L.S.	\$ 7,600.00
1200	Mapping/Database	L.S.	L.S.	\$ 5,280.00
1300	Draft/Final Report/ Preliminary Rehabilitation Plan	L.S.	L.S.	\$ 34,675.00
	Total Not to Exceed			\$ 1,131,881.17

**EXHIBIT "D"**

**ENGINEERING**

**INSURANCE**

**INSURANCE:** (Review this section carefully with your insurance agent prior to bid or proposal submission. See "Insurance Checklist" on the last page or specific coverages applicable to this contract).

**1. General Insurance Requirements:**

- 1.1 The Engineer (hereinafter called "Engineer") shall not start work under this contract until the Engineer has obtained at his own expense all of the insurance called for here under and such insurance has been approved by the City. Approval of insurance required of the Engineer will be granted only after submission to the Purchasing Agent of original, signed certificates of insurance or, alternately, at the City's request, certified copies of the required insurance policies.
- 1.2 All insurance policies required hereunder shall be endorsed to include the following provision: "It is agreed that this policy is not subject to cancellation, non-renewal, without first providing the Risk Manager, City of Plano, at least ten (10) days prior written notice."
- 1.3 No acceptance and/or approval of any insurance by the City shall be construed as relieving or excusing the Engineer from any liability or obligation imposed upon the provisions of the Contract.
- 1.4 The City of Plano (including its elected and appointed officials, agents, volunteers, and employees) is to be named as an additional insured under Engineer's General Liability Policy, and the certificate of insurance, or the certified policy, if requested, must so state. Coverage afforded under this paragraph shall be primary as respects the City, its elected and appointed officials, agents and employees.
  - 1.4.1 The following definition of the term "City" applies to all policies issued under the contract:

The City Council of the City of Plano and any affiliated or subsidiary Board, Commission Authority, Committee, or Independent Agency (including those newly constituted), provided that such affiliated or subsidiary Board Commission, Authority, Committee, or Independent Agency is either a Body Politic created by the City Council of the City of Plano, or one in which controlling interest is vested in the City of Plano; and City of Plano Constitutional Officers.
- 1.5 The Engineer shall provide insurance as specified in the "Insurance Checklist" (Checklist) found on the last page of the bid or proposal form. Full limits of insurance required in the Checklist of this agreement shall be available for claims arising out of this agreement with the City of Plano.

- 1.6 Engineer agrees to defend and indemnify the City of Plano, its officers, agents and employees as provided in Paragraph VII. of this contract.
- 1.7 Insurance coverage required in these specifications shall be in force throughout the Contract Term. Should the Engineer fail to provide acceptable evidence of current insurance within seven (7) days of written notice at any time during the Contract Term, the City shall have the absolute right to terminate the Contract without any further obligation to the Engineer, and the Engineer shall be liable to the City for the entire additional cost of procuring performance and the cost of performing the incomplete portion of the Contract at time of termination.
- 1.8 Written requests for consideration of alternate coverages must be received by the City Purchasing Manager at least ten (10) working days prior to the date set for receipt of bids or proposals. If the City denies the request for alternative coverages, the specified coverages will be required to be submitted.
- 1.9 All required insurance coverages must be acquired from insurers authorized to do business in the State of Texas and acceptable to the City. The City prefers that all insurers also have a policyholder's rating of "A-" or better, and a financial size of "Class VI" or better in the latest edition of A.M. Best, or A or better by Standard and Poors, unless the City grants specific approval for an exception.
- 1.10 Any deductibles shall be disclosed in the Checklist and all deductibles will be assumed by the Engineer. Engineer may be required to provide proof of financial ability to cover deductibles, or may be required to post a bond to cover deductibles.

**2. Engineer's Insurance - "Occurrence" Basis:**

- 2.1 The Engineer shall purchase the following insurance coverages, including the terms, provisions and limits shown in the Checklist.
  - 2.1.1 Commercial General Liability - Such Commercial General Liability policy shall include any or all of the following as indicated on the Checklist:
    - i. General aggregate limit is to apply per project;
    - ii. Premises/Operations;
    - iii. Actions of Independent Contractors;
    - iv. Contractual Liability including protection for the Engineer from claims arising out of liability assumed under this contract;
    - v. Personal Injury Liability including coverage for offenses related to employment;
    - vi. Explosion, Collapse, or Underground (XCU) hazards; if applicable. This coverage required for any and all work involving drilling, excavation, etc.
  - 2.1.2 Business Automobile Liability including coverage for any owned, hired, or non-owned motor vehicles and automobile contractual liability.

2.1.3 Workers' Compensation - statutory benefits as required by the State of Texas, or other laws as required by labor union agreements, including Employers' Liability coverage.

**3.0 Engineer's Insurance – Claims Made**

Professional Errors and Omissions

The Engineer shall carry Professional Liability insurance which will pay for injuries arising out of negligent errors or omissions in the rendering, or failure to render professional services under the contract, for the term of the Contract and up to three years after the contract is completed in the amount shown in the Checklist.

Professional Errors and Omissions, Limit \$1,000,000  
per claim and aggregate of \$2,000,000

# ENGINEERING

## City of Plano - Insurance Checklist

("X" means the coverage is required.)

### Coverages Required

### Limits (Figures Denote Minimums)

<input checked="" type="checkbox"/> 1. Workers' Compensation & Employers' Liability	Statutory limits of State of Texas \$100,000 accident \$100,000 disease \$500,000 policy limit disease
<input type="checkbox"/> 2. For Future Use	
<input type="checkbox"/> 3. City Approved Alternative Workers' Comp. Program	\$150,000 medical, safety program
<input checked="" type="checkbox"/> 4. General Liability	Complete entry No. 26 Minimum \$500,000 each occurrence \$1,000,000 general aggregate
<input checked="" type="checkbox"/> 5. General aggregate applies per project (CGL)	
<input checked="" type="checkbox"/> 6. Premises/Operations	(Items No. 3-10 & 12 require)
<input checked="" type="checkbox"/> 7. Independent Contractors	<u>\$500,000</u> combined single limit for bodily injury and property damage
<input type="checkbox"/> 8. Products	damage each occurrence with
<input type="checkbox"/> 9. Completed Operations	\$1,000,000 general aggregate that applies to project under contract
<input checked="" type="checkbox"/> 10. Contractual Liability	
<input checked="" type="checkbox"/> 11. Personal Injury Liability	\$500,000 each offense & aggregate
<input type="checkbox"/> 12. XCU Coverages	
<input checked="" type="checkbox"/> 13. Automobile Liability	\$500,000 Bodily Injury & Property
<input checked="" type="checkbox"/> 14. Owned, Hired & Non-owned	Damage each accident
<input type="checkbox"/> 15. Motor Carrier Act Endorsement	
<input checked="" type="checkbox"/> 16. Professional Liability	\$1,000,000 each claim \$2,000,000 aggregate
<input type="checkbox"/> 17. Garage Liability	\$_____ BI & PD each occurrence





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
10/25/2012

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Davis-Dyer-Max Insurance a Member of the Insurors Group P.O. Box 495429 Garland TX 75049	CONTACT NAME: Michele McGill	
	PHONE (A/C, No, Ext): (972) 864-0400 FAX (A/C, No): (972) 278-8400 E-MAIL ADDRESS: michele.mcgill@davis-dyer-max.com	
INSURED Pipeline Analysis, LLC 1115 Main Street Garland TX 75040-6130	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: Employers Mutual Casualty	21415
	INSURER B: Underwriters @ Lloyds, London	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES CERTIFICATE NUMBER: Amended 12-13 Renewal REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR			2N91686	5/21/2012	5/21/2013	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS			2R91686	5/21/2012	5/21/2013	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE			2K91686	5/21/2012	5/21/2013	EACH OCCURRENCE \$ 1,000,000 AGGREGATE \$ 1,000,000
	DED <input checked="" type="checkbox"/> RETENTION \$ 10,000						
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	2P91686	5/21/2012	5/21/2013	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
B	Professional Liability			PPIP00112 Retro Date: 09/28/2004	9/28/2012	9/28/2013	General Aggregate 2,000,000 Each Claim 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
Project: Rowlett Creek Basin Sanitary Sewer Assessment - PSA No. 6239.1  
The General Liability, Automobile, & Workers' Compensation policies include a blanket automatic waiver of subrogation endorsement only when there is a written contract between the named insured and the certificate holder.

<b>CERTIFICATE HOLDER</b>  City of Plano Public Works Engineering Dept 1520 K Avenue Plano, TX 75074	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  Larry Hughston/CT <i>Larry T. Hughston</i>

**EXHIBIT "E"**

**AFFIDAVIT OF NO PROHIBITED INTEREST**

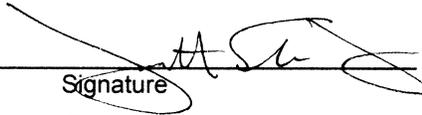
I, the undersigned declare that I am authorized to make this statement on behalf of Pipeline Analysis, LLC and I have made a reasonable inquiry and, to the best of my knowledge, no person or officer of Pipeline Analysis, LLC is employed by the City of Plano or is an elected or appointed official of the City of Plano within the restrictions of the Plano City Charter.

I am aware that Section 11.02 of the City Charter states:

"No officer or employee of the city shall have a financial interest, direct or indirect, in any contract with the city, nor shall be financially interested, directly or indirectly, in the sale to the city of any land, or rights or interest in any land, materials, supplies or service. The above provision shall not apply where the interest is represented by ownership of stock in a corporation involved, provided such stock ownership amounts to less than one (1) per cent of the corporation stock. Any violation of this section shall constitute malfeasance in office, and any officer or employee of the city found guilty thereof shall thereby forfeit his office or position. Any violation of this section with the knowledge, express or implied, of the persons or corporation contracting with the city shall render the contract voidable by the city manager or the city council."

I further understand and acknowledge that a violation of Section 11.02 of the City Charter at anytime during the term of this contract will render the contract voidable by the City.

Pipeline Analysis, LLC  
Name of Consultant

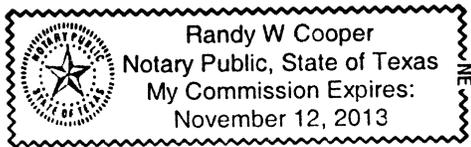
By:   
Signature

James H. Forbes Jr  
Print Name

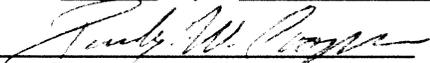
President  
Title

Oct. 25, 2012  
Date

STATE OF TEXAS       §  
  §  
COUNTY OF DALLAS   §



SUBSCRIBED AND SWORN TO before me this 25th day of Oct, 2012.

  
Notary Public, State of Texas