

Fugro Dallas
2880 Virgo Lane
Dallas, TX 75229
Phone: (972) 484-8301



January 2, 2020
Proposal No. 04.4019-2136

Mr. Aniswarire Kanamazina, P.E.
CIP Engineer
City of McKinney
221 N. Tennessee St.
McKinney, Texas 75040

**COST ESTIMATE FOR
CONSTRUCTION MATERIALS INSPECTION AND TESTING SERVICES
COUNTRY LANE EXTENSION, INDUSTRIAL/AIRPORT, FM 546/AIRPORT RECONSTRUCTION
CIP NO. ST4372
MCKINNEY, TX**

Dear Mr. Kanamazina,

We are pleased to offer to perform the construction materials testing services and submit our cost estimate for the Country Lane Extension CIP No. ST4372 Project. Our estimated costs for the above referenced project is **\$76,430.00**. A cost breakdown based on the project plans and specifications, the contractor's quantities, and the construction schedule follows. Our Dallas/Ft. Worth laboratories meet the requirements of ASTM E 329, are AASHTO accredited, and authorized to operate in the State of Texas.

SCOPE OF SERVICES

We estimate that the following services will be required:

- In-place density testing of pavement subgrades, utility backfill, general fills and for other miscellaneous areas;
- Concrete placement monitoring and compressive strength testing;
- Construction Materials Engineering and Testing (CMET) Project Management and Reporting

BUDGET RECOMMENDATIONS FOR TESTING SERVICES

Our budget recommendations are based upon the project plans/specifications produced by **Garver LLC** (dated Nov. 4, 2019) and contract documents furnished by the **City of McKinney** received 27, 2019. and estimated quantities, and construction schedule. Unit fees and budget recommendations are attached detailing the number of tests proposed and cost estimate for performance of these tests. Our unit fees include all estimated technician time and administrative charges for performance of and review of tests. Our invoices will be based on the enclosed unit rate fee schedule.

You will be invoiced for only the actual services provided. Services required in addition to those outlined herein will be billed in accordance with the attached fee schedule but will not be exceeded without your express authorization.

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TERMS AND CONDITIONS

In accordance with existing contract between City of Mckinney and Fugro.

We thank you for the opportunity to submit this proposal and look forward to working with you on this project. Please feel free to contact us if you have any questions or need any additional information.

Sincerely,

FUGRO USA Land, INC.
TBPE Firm Registration No. 299

A handwritten signature in blue ink that reads "Ahan" with a horizontal line underneath it.

Muhammad Khan, PE
Dallas CMET Manager

CLIENT:

Authorizing Signature

Company

Name and Title

Date



ESTIMATED COST OF SERVICES

**CMET SERVICES PROPOSAL
UTILITY & STREET REHAB COUNTRY LANE
MCKINNEY, TX**

Date: Jan 2, 2019
Proposal No: 04.2019-2136

<u>Description of Hourly Services</u>	<u>Quantity</u>	<u>Unit Fee</u>	<u>Unit</u>	<u>Total</u>
Earth Work Monitoring and Testing				
Compaction Testing - utilities, paving	310	\$ 46.00	hour	\$ 14,260.00
Structural Inspections				
CWI-Welded & Bolted Connections;	0	\$ 75.00	hour	\$ -
Engineering & PM Support				
PM (5%)	1	\$ 4,200.00	each	\$ 4,200.00
Concrete Monitoring and Testing				
Paving, sidewalk, curb and gutter etc.	380	\$ 46.00	hour	\$ 17,480.00
	subtotal			\$ 35,940.00
<u>Description of Laboratory Unit Test Services</u>				
Moisture/Density Relationship, (ASTM D-698)	15	\$ 225.00	each	\$ 3,375.00
Atterberg Limits (ASTM D-4318)	15	\$ 65.00	each	\$ 975.00
Lime Series (Plasticity Method)	6	\$ 210.00	SF	\$ 1,260.00
Compressive Strength, Concrete Test Cylinders	660	\$ 18.00	each	\$ 11,880.00
	subtotal			\$ 17,490.00
<u>Equipment Charges</u>				
Vehicle Charges	260	\$ 50.00	day	\$ 13,000.00
Nuclear Density Device	200	\$ 50.00	day	\$ 10,000.00
	subtotal			\$ 23,000.00
	Total Estimate			\$ 76,430.00

Note: Schedule approx 260 days over 1 year - paving, sidewalk, curb and gutter etc.

FEES FOR CONSTRUCTION MATERIALS TESTING SERVICES

1. Field Technicians	Regular Time⁽¹⁾	Overtime⁽²⁾
1.1. Technician (NICET Level I or equivalent)	\$ 46.00/hour	\$ 65.00/hour
1.2. Senior Technician (NICET Level II, TxDOT Level 1A/1B, Associate Welding Inspector, or equivalent)	\$ 55.00/hour	\$ 75.00/hour
1.3. Senior Supervising Technician (NICET Level III, TxDOT Level II, or equivalent)	\$ 85.00/hour	\$ 115.00/hour
1.4. Certified Welding Inspector	\$ 75.00/hour	\$ 100.00/hour
2. Field Testing and Equipment		Unit Rate
2.1. Transportation (within 35mi one way)		\$ 60.00/trip
2.2. Nuclear Density Tests (In addition to technician time)		\$ 16.00/test
2.3. Torque Wrench		\$ 20.00/day
2.4. Dye Penetrant & Magnetic Particle Supplies		Cost + 15%
2.5. Ultrasonic Testing Equipment		\$ 25.00/hour
2.6. Asphalt Coring Equipment		\$ 25.00/hour
2.7. Concrete Coring Equipment		\$ 25.00/hour
2.8. Concrete Core Bit Charges		+ bit charge
2.8.1 3 inch-diameter Core		\$ 3.00/inch
2.8.2 4 inch-diameter Core		\$ 4.00/inch
2.8.3 6 inch-diameter Core		\$ 6.00/inch
(Other sizes quoted upon request)		
2.9. Floor Flatness/Floor Levelness Equipment (ASTM E1155)		\$ 200.00/day
2.10. Air Content of Fresh Concrete (ASTM C173, C231)		\$ 18.00/each
2.11. Unit Weight of Fresh Concrete (ASTM C138)		\$ 40.00/each
2.12. Soil-Lime Field Gradation (TEX-101-E, Part III)		\$ 35.00/each
2.13. Center-Pull Ram, Gauge and Hand Pump (pull test)		\$ 50.00/test
3. Laboratory Testing - Soil		
3.1. Natural Moisture Content (TEX-103-E)		\$ 15.00/each
3.2. Atterberg Limits (TEX-104, 105, 106, 107-E)		\$ 65.00/each
3.3. Sieve Analysis (TEX-110-E)		\$ 65.00/each
3.4. Percent Passing No. 200 Sieve (TEX-111-E)		\$ 45.00/each
3.5. Combined Sieve Analysis (TEX-110, 110-E)		\$ 65.00/each
3.6. Moisture Density Relationship (ASTM D 698), (ASTM D 1557), (TEX-113-E), (TEX-114-E)		\$ 225.00/each
3.7. Texas Triaxial Compression Test on Base Material (TEX-117-E Part II)		\$1,200.00/set of 7
3.8. Wet Ball Mill (TEX-116-E)		\$ 165.00/each
3.9. Permeability of Silt or Clay (ASTM D 5084)		\$ 345.00/each
3.10. Sample Remolding		\$ 60.00/each
3.11. Sample Preparation (Soils with P.I. >25, or TEX-101-E)		\$ 60.00/sample
3.12. Soil pH (TEX-128-E)		\$ 60.00/each
3.13. Soil-Lime pH Series (6 points, TEX-121-E, Part III)		\$ 210.00/set
3.14. Soluble Sulfates (TEX-145-E)		\$ 90.00/each
3.15. Hydrometer (ASTM D422)		\$ 225.00/each
4. Laboratory Tests - Concrete and Cement		
4.1. Sodium Soundness of Aggregate (ASTM C88)		\$ 270.00/each
4.2. Aggregate Sieve Analysis (ASTM C136)		\$ 70.00/each



4.3.	Specific Gravity of Aggregate (ASTM C127, 128).....	\$ 70.00/each
4.4.	Absorption of Aggregate (ASTM C127, 128)	\$ 70.00/each
4.5.	Unit Weight of Aggregate (ASTM C29)	\$ 70.00/each
4.6.	Concrete Cylinder Compressive Strength (ASTM C39).....	\$ 18.00/each
4.7.	Beam Flexural Strength (ASTM C 78)	\$ 50.00/each
4.8.	Mortar Cube Compressive Strength (ASTM C780).....	\$ 18.00/each
4.9.	Grout Specimen Compressive Strength (ASTM C1019).....	\$ 45.00/each
4.10.	Concrete Masonry Unit Strength (ASTM C140).....	\$ 80.00/each
4.11.	Concrete Masonry Unit Prism Strength (ASTM C1314).....	\$ 225.00/each
4.12.	Drilled Core Compressive Strength (ASTM C42).....	\$ 80.00/each
5.	Laboratory Testing - Asphalt and Roofing	
5.1.	Mix Design (Hveem or Marshall Method)	Quoted on Request
5.2.	Molding Test Specimens, 3 per set (TEX-206-F), Bulk Density (TEX-207-F), and Stability (TEX-208-F)	\$ 130.00/set
5.3.	Determine Maximum Theoretical Density (TEX-227-F)	\$ 75.00/each
5.4.	Asphalt Content & Gradation (TEX-236-F, 200-F), oven	\$ 230.00/each
5.5.	Asphalt Oven Correction Factors (TEX-236-F, 200-F), oven	\$1,100.00/each
5.5.	Asphalt Content and Gradation (ASTM D2172), extraction	\$ 400.00/each
5.6.	Bulk Specific Gravity of Asphalt Core (TEX-207-F)	\$ 45.00/each
5.7.	Roof Ballast Sieve Analysis	\$ 60.00/each
5.8.	Oven Dried Moisture Content of Roofing Materials.....	\$ 35.00/each
6.	Laboratory Testing - Structural Steel	
6.1.	Weld Procedure and Welder Qualification Testing Rates	Quoted on Request
6.2.	Laboratory Density of Field Cut Fireproofing.....	\$ 50.00/each
7.	Report Preparation	
	Test report preparation, review, and initial electronic distribution will be invoiced at a flat rate of 5% of total fees invoiced. Special requests for archived report retrieval, re-distribution, faxing, hard-copy mailing, and preparation of engineered reports and submittals will be invoiced at the following rates:	
7.1.	Word Processing	\$ 60.00/hour
7.2.	Drafting.....	\$ 75.00/hour
7.3.	Reproduction	Cost + 15%
7.4.	Postage and Overnight Service.....	Cost + 15%
8.	Engineering Consultation	
8.1.	Senior Consultant or Project Principal.....	\$ 195.00/hour
8.2.	Project Manager	\$ 170.00/hour
8.3.	Project Engineer, Laboratory Manager	\$ 145.00/hour
8.4.	Geologist	\$ 135.00/hour
8.5.	Graduate Professional.....	\$ 100.00/hour
9.	Outside Services.....	Cost + 15%

Notes: (1) Minimum call-out charge for CMT technician and equipment or sample pick-up is 2 hours. Minimum call-out charge for CWI technician is 4 hours. Charges are accrued portal to portal.

(2) Overtime rates are applicable to time worked in excess of 8 hours per day, Monday through Friday; hours worked before 7:00 am and after 6:00 pm; and all hours worked on Saturdays, Sundays, and holidays.