




City of Arlington Council Agenda Bill

Item:
CA #5
Attachment
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COUNCIL MEETING DATE:	
April 2, 2018	
SUBJECT:	
Contract with GeoTest Services, Inc. for Geotechnical and Materials Testing services to support the Arlington Valley Road project	
ATTACHMENTS:	
GeoTest Scope of Work and Fee	
DEPARTMENT OF ORIGIN	
Public Works - Transportation	
EXPENDITURES REQUESTED:	\$51,750.00
BUDGET CATEGORY:	Transportation/Water/Sewer/Storm Funds
BUDGETED AMOUNT:	\$3,796,400.00 (<i>entire project</i>)
LEGAL REVIEW:	
DESCRIPTION:	
Proposal to review and accept Scope of Work and Fee for GeoTest Services, Inc to provide Geotechnical and Materials Testing services to support the Arlington Valley Road project.	
HISTORY:	
<p>The City is contracting with Scarcella Brothers, Inc. for construction of the Arlington valley road project. This project will require independent on-site testing of soils (<i>suitable and unsuitable soils, import, borrow, placement & compaction, etc.</i>) and materials (<i>concrete and asphalt</i>) to verify compliance with contract provisions. The City needs to contract for these specialized services.</p> <p>City staff reviewed qualifications from several geotechnical consultants, rated the consultants, and has elected to enter into negotiations with GeoTest Services, Inc. The attached scope of work and fee is the result of those negotiations and will provide sufficient geotechnical and materials testing services to see this project from start-up through close</p>	
ALTERNATIVES:	
Do not approve the contract for materials testing. Remand to staff for further information.	
RECOMMENDED MOTION:	
I move to approve the contract with GeoTest Services, Inc. for geotechnical and materials testing on the Arlington Valley Road Project and authorize the mayor to sign the contract, pending final review by the city attorney.	

GeoTest is pleased to submit this cost estimate for the above project. Based on a review of the of material quantities that have been provided to us, we believe that the costs for construction special inspection and testing will be approximately \$51,750 for the scope of work detailed below (this is the sum of schedule A and B). At this time we have reviewed plans and specifications but not a construction schedule. We recommend revising this proposal as more information becomes available.

Understanding that construction schedules and logistics can vary, we recommend an anticipated budget range of \$45,000 to \$60,000 for our services. *This is a time and materials estimate intended for budgeting purposes. Our costs are a direct reflection of the project construction schedule.*

Assumptions:

Assumes a gauge correlation factor will not be used for density testing of asphalt. One can be provided upon request.

Field time has been estimated based on magnitude of project.

GeoTest has not reviewed plans and specifications at this time. We would be happy to revise this proposal as more information becomes available.

SCHEDULE A - ROADWAY

Item No.	Item	Quantity	Test Type	Test Frequency	Quantity	Unit	Unit Rate	Subtotal	Total
A12 & A13	Roadway Excavation	17,000 CY	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-2,500 CY	100	hours	\$70	\$7,000	\$7,900
			Grading (Sieve Analysis, with Wet Wash)	-	3	each	\$125	\$375	
			Moisture Density Relationship (Proctor)	-	3	each	\$175	\$525	
A14, B1 & B9	Trench Backfill (3,605 LF)	15,000 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-200 LF (per layer)	132	hours	\$70	\$9,240	\$10,060
			Grading (Sieve Analysis, with Wet Wash)	1-4000 ton	4	each	\$125	\$500	
			Sand Equivalent	1-4000 ton	4	each	\$80	\$320	
			Dust Ratio (equation)	1-4000 ton	4	each	\$0	\$0	
A25	Gravel Backfill for Drains (1,535 LF)	4,305 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-200 LF (per layer)	60	hours	\$70	\$4,200	\$5,575
			Grading (Sieve Analysis, with Wet Wash)	1-4000 ton	5	each	\$125	\$625	
			Sand Equivalent	1-4000 ton	5	each	\$80	\$400	
			Dust Ratio (Equation)	1-4000 ton	5	each	\$0	\$0	
			Moisture Density Relationship (Proctor)	-	2	each	\$175	\$350	
A28	Crushed Surfacing Base Course	7,120 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-1,000 LF (per layer)	60	hours	\$70	\$4,200	\$5,435
			Grading (Sieve Analysis, with Wet Wash)	1-2000 ton	4	each	\$125	\$500	
			Sand Equivalent	1-2000 ton	4	each	\$80	\$320	
			Fracture	1-2000 ton	4	each	\$60	\$240	
			Moisture Density Relationship (Proctor)	-	1	each	\$175	\$175	
A29	Crushed Surfacing Top Course	980 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-1,000 LF (per layer)	8	hours	\$70	\$560	\$1,000
			Grading (Sieve Analysis, with Wet Wash)	1-2000 ton	1	each	\$125	\$125	
			Sand Equivalent	1-2000 ton	1	each	\$80	\$80	
			Fracture	1-2000 ton	1	each	\$60	\$60	
			Moisture Density Relationship (Proctor)	-	1	each	\$175	\$175	
A31	HMA Cl. 1/2" PG 64-22	4,880 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-100 ton	64	hours	\$70	\$4,480	\$7,025
			Sand Equivalent	1-2,000 ton	3	each	\$80	\$240	
			Percent Fracture	1-2,000 ton	3	each	\$60	\$180	
			Uncompacted Voids - Fine Aggregate	1-2,000 ton	3	each	\$150	\$450	
			Asphalt Content & Gradation (Ignition Furnace)	1-1,000 ton	5	each	\$245	\$1,225	
			Maximum Specific Gravity (Rice Density)	1-1,000 ton	5	each	\$90	\$450	
			Field Technician	-	40	hours	\$65	\$2,600	
A36-A38	Concrete C & G (500 CY)	7,720 LF	Grading - Fine Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	\$3,600
			Grading - Course Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Grading - Combined Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Compressive Strength - 4" x 8" Cylinders	1 test every 10 trucks	25	each	\$25	\$625	

**Arlington Valley Road
 Arlington, WA
 Construction Testing Cost Estimate**

A39, A40, A60- A63	Concrete Driveways / Sidewalks / Traffic Curb (400 CY)	443 SY	Field Technician	-	32	hours	\$65	\$2,080	
			Grading - Fine Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Grading - Course Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Grading - Combined Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Compressive Strength - 4" x 8" Cylinders	1 test every 10 trucks	20	each	\$25	\$500	\$2,955
Total Estimated Schedule A Costs									\$43,550

SCHEDULE B - UTILITIES

Item No.	Item	Quantity	Test Type	Test Frequency	Quantity	Unit	Unit Rate	Subtotal	Total
B 1 & B9	Included in Schedule A under item A14 (3,605 lf) of trench backfill		Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-200 LF (per layer)		hours	\$70	\$0	
			Grading (Sieve Analysis, with Wet Wash)	1-4000 ton		each	\$125	\$0	
			Sand Equivalent	1-4000 ton		each	\$80	\$0	
			Dust Ratio (equation)	1-4000 ton		each	\$0	\$0	\$0
Total Estimated Schedule B Costs									\$0

OTHER

Item	Test Type	Quantity	Unit	Unit Rate	Subtotal	Total
Sample Pick Up and Processing	(Soils, Concrete, etc.)	80	hours	\$65	\$5,200	
Project Management	(QC Project Meetings, Report Review, etc.)	-	hours	\$100	\$3,000	
Trip Charge (5 mi x 0.60/mi = \$3/trip)	To the Site and Back to Laboratory	80	mileage	0	\$0	\$8,200
Total Estimated Other Costs						\$8,200

Total Estimated Schedule A & B Costs	\$51,750
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GeoTest's actual costs are a function of the contractors schedule as well as site & material conditions.

GEO TEST SERVICES, INC.

Arlington, Bellingham, Oak Harbor, WA

FEE SCHEDULE

2018

ENGINEERING, GEOLOGICAL & ENVIRONMENTAL SERVICES

Senior Geotechnical Engineer	180.00 hour
Professional Engineer	140.00 hour
Geotechnical Engineer	140.00 hour
Technical Director	125.00 hour
Staff Engineer	100.00 hour
Engineering Geologist	100.00 hour
Environmental Professional	100.00 hour
Geotechnical Technician	85.00 hour
Geologist	85.00 hour

CONSTRUCTION INSPECTION SERVICES

Concrete Inspection	65.00 hour
Prestressed Concrete Inspection	65.00 hour
Masonry Inspection	65.00 hour
Grout Inspection	65.00 hour
Fireproofing Inspection	65.00 hour
Firestopping Inspection	65.00 hour
Proprietary Anchor Inspection	65.00 hour
Lateral Framing Inspection (Wood & Steel)	70.00 hour
Structural Steel Welding and Bolting Inspection	70.00 hour
In-Place Density - Nuclear Gauge, Soils & Asphalt	70.00 hour
Soils Observation	70.00 hour
CESCL (Certified Erosion & Sediment Control Lead)	70.00 hour
Building Envelope Inspection	90.00 hour

CONSTRUCTION SUPPORT SERVICES

QA/QC Inspection Engineer	90.00 hour
Field Sampling	65.00 hour
Field Technician	65.00 hour
Laboratory Technician	75.00 hour
Project Manager	100.00 hour

SPECIALTY SERVICES

Bolt Pull-out Tests	90.00 hour
Ground Penetrating Radar (GPR)	150.00 hour
Pachometer (Magnetic) Rebar Location	90.00 hour
Concrete & Asphalt Coring	90.00 hour
Schmidt Hammer	90.00 hour
Windsor Probe	90.00 hour
Brick Shear Testing (2 man crew)	175.00 hour
Floor Flatness Testing (Dipstick)	120.00 hour
Moisture Emission Testing	90.00 hour

GEO TEST SERVICES, INC.

Arlington, Bellingham, Oak Harbor, WA

FEE SCHEDULE

2018

MATERIALS TESTING

CONCRETE

Compressive Strength - Concrete	25.00 ea
Compressive Strength – Concrete (cast by others)	30.00 ea
Compressive Strength - Drilled Cores (includes trimming and testing)	60.00 ea
Compressive Strength - Sawed Specimens (includes trimming and testing)	60.00 ea
Shotcrete Panel - 3 Cores Per Panel	200.00 ea
Additional Shotcrete Cores	75.00 ea
Flexural Strength - 6" x 6" Beams	55.00 ea
Air Dry Unit Weight	35.00 ea
Trimming Specimens – Per End (when required)	15.00 ea

MASONRY

Compressive Strength - Mortar, 2" x 4" Cylinder	25.00 ea
Compressive Strength - Grout, 4" x 4" x 8" Prism	25.00 ea
Compressive Strength - 2" x 2" Cubes (Cementitious Grout)	25.00 ea
Compressive Strength - 2" x 2" Cubes (Epoxy Grout)	30.00 ea
Compressive Strength - Composite Prism	100.00 ea
Compressive Strength – Masonry Units	100.00 ea

AGGREGATE

Sieve Analysis, with Wet Wash	125.00 ea
Sieve Analysis, Dry Only	75.00 ea
Sieve Analysis, % Passing #200 Sieve	75.00 ea
Specific Gravity and Absorption - Fine Aggregate	75.00 ea
Specific Gravity and Absorption - Coarse Aggregate	60.00 ea
Uncompacted Voids – Fine Aggregate	150.00 ea
Unit Weight and Voids	40.00 ea
Sand Equivalent	80.00 ea
Moisture Content	35.00 ea
Percent Fracture	60.00 ea
Organic Impurities Test	60.00 ea
Clay Lumps and Friable Particles	80.00 ea
Lightweight Pieces	75.00 ea
Flat/Elongated Particles	80.00 ea

ASPHALT

Asphalt Content & Gradation (Ignition Furnace)	245.00 ea
Maximum Specific Gravity (Rice Density)	90.00 ea
Asphalt Core Density/Thickness	40.00 ea
Marshall Method Test - Flow, Stability, Density & Voids	
Hot Mix Furnished, Set of 3	300.00 ea
Lab Mixed, Set of 3	350.00 ea

GEO TEST SERVICES, INC.

Arlington, Bellingham, Oak Harbor, WA

FEE SCHEDULE 2018

SOILS

Sieve Analysis, with Wet Sieve	125.00 ea
Sieve Analysis, Dry Only	75.00 ea
Sieve Analysis, % Passing #200 Sieve	75.00 ea
Sieve Analysis w/ Hydrometer	200.00 ea
Moisture Density Relationship (Proctor)	175.00 ea
Moisture Density Relationship (Proctor) w/ Sieve	245.00 ea
Check Point	80.00 ea
Moisture Content	35.00 ea
Atterberg Limits (3 points)	125.00 ea
Specific Gravity	75.00 ea
Consolidation - 5 Loads	350.00 ea
Permeability - Constant Head or Falling Head (each point)	250.00 ea
Organic Content	80.00 ea

MISCELLANEOUS

Fireproofing Density Test	60.00 ea
Floor Moisture Test Kit	50.00 ea
Windsor Probe Pin (Set of 3)	40.00 ea
Whole Building Air Leakage Test	quote
Window Water Penetration Test	quote

- GeoTest requests 24 hours advance notice for scheduling field services. GeoTest may not be able to provide service for same day call out.
- All GeoTest Services, Inc. (GTS) construction inspection services, construction support services & specialty services are billed portal to portal. A daily four hour minimum charge applies to construction inspection & specialty services. Same day cancellations will incur a two-hour minimum charge.
- Engineering, Geological, and Environmental Services will be billed in accordance with a project specific proposal.
- GeoTest standard operating hours are 7 AM to 5 PM, Monday through Friday, with the exception of holidays. A premium rate of 1.5 times the standard rate will be charged for all work in excess of 8 hours per day and Saturdays. Double-time rates will be applied to services provided on Sundays & legal Holidays.
- A one-hour minimum laboratory technician fee will be applied on Saturdays, Sundays & legal Holidays at 1.5 times the regular rate for any laboratory testing services.
- Night shift (work outside standard operating hours): An eight (8) hour minimum charge at 1.5 times the standard rate may apply to such work including same day cancellations. A four (4) hour minimum charge at 1.5 times the regular rate applies to lab night work.
- Trip charge mileage has been waived for this project.
- Field testing equipment expenses are included in the hourly rates except where specifically noted on the fee schedule or a project specific proposal.
- Laboratory rush samples (less than 48hr turn-around time) will be invoiced at 1.5 times the standard test rate.
- Rental equipment, reimbursable expenses and subcontractor fees will be invoiced at cost plus 15%.
- Unless otherwise agreed, test specimens or samples will be disposed of immediately upon completion of the test. The ordering of work from GTS shall constitute acceptance of the Fee Schedule, General Conditions, and any project specific proposal.