



SAN RAFAEL CITY COUNCIL AGENDA REPORT

Department: Public Works

**Prepared by: Bill Guerin,
Director of Public Works**

City Manager Approval: 

TOPIC: FIRE STATION 55 – ENVIRONMENTAL SERVICES

SUBJECT: RESOLUTION APPROVING AND AUTHORIZING THE CITY MANAGER TO EXECUTE A FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH BSK ASSOCIATES, INC. FOR SERVICES REQUIRED FOR ENVIRONMENTAL PERMITTING, SAMPLING, SOILS TESTING, AND REMOVAL AND SOILS REMEDIATION WORK RELATED TO THE UNFORESEEN UNDERGROUND STORAGE TANK DISCOVERED AT FIRE STATION 55, IN THE AMOUNT OF \$63,805, INCREASING THE TOTAL CONTRACT AMOUNT TO \$209,549, AND AUTHORIZING THE CITY MANAGER TO EXPAND THE SCOPE OF WORK IF EXTENSIVE CONTAMINATION IS DISCOVERED.

RECOMMENDATION: Adopt a resolution approving and authorizing the City Manager to execute a first amendment to the professional services agreement with BSK Associates, Inc. for services required for environmental permitting, sampling, soils testing, and removal and soils remediation work related to the unforeseen underground storage tank discovered at Fire Station 55, in the amount of \$63,805, increasing the total contract amount to \$209,549, and authorizing the City Manager to expand the scope of work if extensive contamination is discovered.

BACKGROUND:

On November 5, 2013, Measure E passed, extending the existing one-half percent local sales tax and increasing the rate by one-quarter percent to provide funding for city services. The City has since used those resources to plan, design, construct and manage two new stand-alone fire stations, 52 and 57, and a new Public Safety Center (PSC) that incorporates Fire Station 51. These three projects are collectively referred to as “Phase 1” of the City’s Essential Facilities Program. They have all been successfully completed, occupied and operational. The Essential Facilities program also includes the design, construction, and management of Fire Stations 54 and 55 referred to as “Phase 2”.

On October 18, 2021, pursuant to Resolution No. 14988, the City of San Rafael authorized the City Manager to execute a construction agreement for the Essential Facilities Phase 2 Fire Station 54 and 55 Project to Wickman Development and Construction (“Wickman”).

On December 20, 2021, pursuant to Resolution No. 15014, the City of San Rafael authorized the City Manager to execute a professional services agreement with BSK Associates (“BSK”) for

FOR CITY CLERK ONLY

Council Meeting:

Disposition:

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Materials Testing and Special Inspection and Geotechnical Testing and Inspection Services fees concerning Fire Station 54 and 55 Project, in an amount not to exceed \$145,744.

ANALYSIS:

On January 10, 2022, the City of San Rafael issued notice to proceed with construction of the Essential Facilities Phase 2 project, Fire Station 54 & 55 Project to Wickman Development and Construction (“Wickman”). Wickman mobilized to the two project sites and demolition activities started immediately.

In late March 2022, Wickman was directing ongoing excavation activities for an underground utilities trench at Fire Station 55, located at 955 Point San Pedro Road. Wickman discovered the existence of an abandoned underground storage tank (UST). The metal UST is forty-two inches in diameter and approximately six feet long. The contractor suspended the excavation to avoid potential soils contamination and notified the City of San Rafael construction team, in compliance with Environmental Protection Agency protocols.

Upon notification of the discovery of the UST, the City is required to follow specific notification, sampling, permitting, and removal procedures required for the discovery of potentially hazardous materials at a construction site. These procedures include but are not limited to notification to the Bay Area Air Quality Management District (BAAQMD), and Marin County Certified Unified Program Agencies (CUPA), collection and analysis of water and soils samples in and around the tank, preparation of a work and health & safety plan for the removal of the tank, removal supervision, coordination with regulating agencies, and preparation of site assessment report and final closure report. Staff recommends engaging an Environmental Protection Agency (EPA)-qualified underground storage tank removal company to perform the extraction of the UST and associated soils remediation work.

City staff has solicited proposals from two qualified firms: Advantage Environmental and BSK Associates. Advantage Environmental indicated that they do not have the capacity to undertake this project at this time due to staffing constraints. BSK has submitted a proposal to perform these services for the amount of \$63,805 (Attachment 3). Staff recommends authorizing the City Manager to execute a first amendment to the professional services agreement with BSK Associates to include the additional services required for environmental permitting, sampling, soils testing, and the work required to extract and remediate the soils related to the unforeseen UST discovered at Fire Station 55, in the form attached as Attachment 2 to this report, subject to final approval as to form by the City Attorney.

The proposed cost of \$63,805 assumes that there is minimal soil contamination around and below the tank. Preliminary investigation shows that the tank was drained and filled with inert material in the past. However, if it is discovered that there is significant contamination, staff further requests that the City Manager be authorized to expand the scope of work in order to remove and dispose of the material. Any additional disposal work will be performed on a time and material basis, and staff will monitor the removal and document, through off-haul manifests, the extent of material removed.

The work associated with the removal of the UST is critical to maintaining the Fire Station 55 Project on schedule and avoiding delays.

FISCAL IMPACT: These funds will be appropriated from the portion of Measure E revenues allocated to public safety facilities construction and improvements.

OPTIONS:

1. Adopt a resolution authorizing the City Manager to execute a first amendment to the professional services agreement with BSK Associates, Inc. for services required for environmental permitting, sampling, soils testing, and removal and soils remediation work related to the unforeseen underground storage tank discovered at Fire Station 55, in the amount of \$63,805, and authorizing the City Manager to expand the scope of work if extensive contamination is discovered.
2. Do not adopt the resolution and provide direction to staff. If this option is chosen, project construction schedule will be delayed.

RECOMMENDED ACTION: Adopt a resolution approving and authorizing the City Manager to execute a first amendment to the professional services agreement with BSK Associates, Inc. for services required for environmental sampling, soils testing, and removal and soils remediation work related to the unforeseen underground storage tank at Fire Station 55, in the amount of \$63,805, increasing the total contract amount to \$209,549, and authorizing the City Manager to expand the scope of work if extensive contamination is discovered.

ATTACHMENTS:

1. Resolution Authorizing the City Manager to Execute a first amendment to the Professional Services Agreement with BSK Associates for services required for environmental permitting, sampling, soils testing, and removal and soils remediation work related to the unforeseen underground storage tank at Fire Station 55, in an amount not to exceed \$63,805, and authorizing the City Manager to expand the scope of work if extensive contamination is discovered.
2. First Amendment to the Professional Services Agreement with BSK Associates, Inc. for Environmental Services for the Removal of an Underground Storage Tank (UST) at Fire Station 55.
3. Proposal – Exhibit “A” to First Amendment to Professional Services Agreement.

RESOLUTION NO.

RESOLUTION OF THE SAN RAFAEL CITY COUNCIL APPROVING AND AUTHORIZING THE CITY MANAGER TO EXECUTE A FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH BSK ASSOCIATES, INC. FOR SERVICES REQUIRED FOR ENVIRONMENTAL PERMITTING, SAMPLING, SOILS TESTING, AND REMOVAL AND SOILS REMEDIATION WORK RELATED TO THE UNFORESEEN UNDERGROUND STORAGE TANK DISCOVERED AT FIRE STATION 55, IN THE AMOUNT OF \$63,805, INCREASING THE TOTAL CONTRACT AMOUNT TO \$209,549, AND AUTHORIZING THE CITY MANAGER TO EXPAND THE SCOPE OF WORK IF EXTENSIVE CONTAMINATION IS DISCOVERED

WHEREAS, in November 2013, the local voters passed Measure E extending the existing one-half percent local sales tax and increasing the rate by one-quarter percent to provide funding to preserve essential city services. This tax supplanted the former, one-half cent transactions and use tax (Measure S), effective April 1, 2014; and

WHEREAS, the City has since used those resources to plan, design, construct and manage two new stand-alone fire stations, 52 and 57, and a new Public Safety Center (PSC) that incorporates Fire Station 51. These three projects, collectively referred to as “Phase 1” of the City’s Essential Facilities Program, have successfully been completed and occupied; and

WHEREAS, the Essential Facilities program also includes the design, construction, and management of Fire Stations 54 and 55 referred to as “Phase 2”; and

WHEREAS, under a professional services agreement dated January 19, 2022, BSK Associates, Inc. (“BSK”) has provided materials testing and special inspection and geotechnical testing and inspection services for the “Phase 2” projects for renovation of Fire Stations 54 and 55; and

WHEREAS, the City successfully bid the Fire Station 54 and 55 Project and has awarded the construction contract to Wickman Development and Construction, Inc. and issued notice to proceed with construction; and,

WHEREAS, during excavation activities at Fire Station 55, Wickman Development and Construction, Inc. discovered an unforeseen underground fueling storage tank and subsequently notified the City; and,

WHEREAS, the City is required to follow specific notification, sampling, permitting, removal procedures; as well as proper extraction and soils remediation by an Environmental Protection Agency-qualified underground storage tank (“UST”) removal company; and,

WHEREAS, BSK has provided a proposal to perform the additional environmental services related the work associated with proper extraction of the tank, disposal, and soils remediation; and

WHEREAS, BSK’s proposal is based on preliminary investigation results that show minimal contamination around and below the tank because the tank was drained and filled with inert material in the past; and

WHEREAS, if during extraction of the tank it is discovered that significant contamination exists, additional work will need to be performed on a time and material basis and staff will monitor the removal and document the extend of the material removed; and

WHEREAS, the work associated with the removal of the UST is critical to maintaining the Fire Station 55 Project on schedule and avoiding delays;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of San Rafael as follows:

1. The City Manager is hereby authorized to execute a First Amendment to the Professional Services Agreement with BSK Associates, Inc., in the form included with the staff report for this resolution, subject to final approval by the City Attorney, for necessary comprehensive environmental services, in the amount of \$63,805, increasing the total contract amount to \$209,549.
2. The City Manager is hereby authorized to further amend the Professional Services Agreement to expand the scope of work, to be performed on a time and materials basis, if extensive contamination is discovered during excavation, as needed for the removal and disposal of the excess material.
3. Funds totaling \$63,805 will be appropriated for City Project No. 11395 from the Essential Facilities Capital Projects Fund (#420).

I, LINDSAY LARA, Clerk of the City of San Rafael, hereby certify that the foregoing Resolution was duly and regularly introduced and adopted at a regular meeting of the City Council of said City held on Monday, the 2nd day of May 2022 by the following vote, to wit:

AYES: COUNCILMEMBERS:

NOES: COUNCILMEMBERS:

ABSENT: COUNCILMEMBERS:

LINDSAY LARA, City Clerk

**FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT WITH
BSK ASSOCIATES, INC. FOR ENVIRONMENTAL SERVICES FOR THE REMOVAL
OF AN UNDERGROUND STORAGE TANK (UST) AT FIRE STATION 55**

THIS FIRST AMENDMENT to the Professional Services Agreement by and between the **CITY OF SAN RAFAEL** (hereinafter “**CITY**”), and **BSK ASSOCIATES, INC.** (hereinafter “**CONSULTANT**”), is made and entered into as of the _____ day of _____, 2022.

RECITALS

WHEREAS, pursuant to City Council [Resolution No. 15014](#), the **CITY** and **CONSULTANT** entered into a Professional Services Agreement dated January 19, 2022 to perform materials testing and special inspection services in connection with the **CITY’S** project to reconstruct Fire Stations 54 & 55 for an amount not to exceed \$145,744 (the “Agreement”); and

WHEREAS, the **CITY** discovered the existence of an Underground Storage Tank (“UST”) located at Fire Station 55 and requires additional environmental services from the **CONSULTANT** to perform environmental soil sampling and testing as well as the UST removal and site closure, and the **CONSULTANT** is willing to provide such services.

AMENDMENT TO AGREEMENT

NOW, THEREFORE, the parties hereby agree to amend the Agreement as follows:

1. Article II of the Agreement, entitled “DUTIES OF CONTRACTOR” is hereby amended to include the additional services set forth in **CONSULTANT’S** proposal entitled “Contract Change Order No. 1 – Revision 1”, dated April 26, 2022, attached to this First Amendment as Exhibit A and incorporated herein by reference.
2. Article IV of the Agreement, entitled “COMPENSATION” is hereby amended to include additional compensation payable to **CONSULTANT** for the services described in Exhibit A to this First Amendment, in

accordance with the "Fee Arrangements" included in Exhibit A, in a not-to-exceed amount of \$63,805, and to change the total not-to-exceed amount under the Agreement to \$209,549.

3. Except as specifically amended herein, all of the other provisions, terms and obligations of the Agreement between the parties shall remain valid and shall be in full force.

IN WITNESS WHEREOF, the parties have executed this First Amendment on the day, month, and year first above written.

CITY OF SAN RAFAEL

CONSULTANT

JIM SCHUTZ, City Manager

By:_____

Name:_____

Title:_____

ATTEST:

[If Contractor is a corporation, add signature of second corporate officer]

LINDSAY LARA, City Clerk

By:_____

Name:_____

APPROVED AS TO FORM:

Title:_____

ROBERT F. EPSTEIN, City Attorney



399 Lindbergh Avenue
Livermore CA 94551
P 925.315.3151
www.bskassociates.com

Sent via email: Fabiola.GuillenUrfer@cityofsanrafael.org

April 26, 2022

BSK Project No. C22-038-61L

A. Fabiola Guillen
Sr. Project Manager
City of San Rafael
Department of Public Works
111 Morphew Street
San Rafael, CA 94901

**SUBJECT: Contract Change Order No. 1 – Revision 1
Perform Limited Environmental Sampling and Testing and UST Removal
City of San Rafael Essential Facilities Project - Fire Station 55
955 Point San Pedro Road
San Rafael, California**

Dear Ms. Guillen:

BSK Associates (BSK) is pleased to provide this contract change order no. 1 to provide limited environmental sampling and testing services of in-situ soil and the underground storage tank (UST) removal at the Fire Station 55 in San Rafael, California.

BACKGROUND

In 2022, the City of San Rafael (City) discovered the existence of an UST in the area of Fire Station 55 in San Rafael. The size of the UST is not known but is estimated at 42 inches diameter and 6 feet long. The City has requested a cost estimate from BSK to perform environmental soil sampling and testing and the UST removal and site closure.

SCOPE OF SERVICES

In order to evaluate a suitable approach for the eventual UST removal and site closure, BSK proposes to collect a total of two (2) representative soil samples from approximate depths of one foot below the bottom of the UST.

BSK will prepare the required documentation and a work plan. The work plan will include the following activities to assess the fuel line release to the satisfaction of the Marin County Environmental Health (MCEH):

- Permitting and notification through the MCEH and Bay Area Air Quality District (BAAQD);

- Preparation of work plan and Health & Safety Plan for the MCEH;
- Mobilization, including utility clearance;
- Retain Patriot Environmental (Patriot) to remove and recycle the UST (Patriot Environmental scope of work and quote is attached this change order)
- Observe the removal of the existing UST and note the physical condition of the UST and piping.
- Collection and transmittal of soil and water samples for analytical laboratory testing;
- Analytical laboratory analyses of the collected soil samples;
- Review of collected field data and analytical laboratory results;
- Preparation of a Conceptual Site Model (CSM); and
- Preparation of a Site Assessment Report to the MCEH.

We will submit each of the two (2) collected soil and 1 water samples to a California ELAP-certified laboratory to be tested as follows:

- Volatile Organic Compounds (EPA Method 8260B)
- Gasoline Range Organics (EPA Method 8015B/LUFT)
- Total Petroleum Hydrocarbons, Diesel and Motor Oil (EPA Method 8015M/LUFT) with Silica Gel Cleanup
- Tetraethyl Lead (organic)

The standard turnaround time for the chemical analyses is approximately 10 to 14 business days from the date the samples are delivered to the laboratory. If necessary, an accelerated laboratory turnaround time may be available at an additional charge. **The test results will be presented in an analytical report and spreadsheet, which will include limited interpretation of the results by BSK.**

SCHEDULE

BSK is ready to proceed with our services proposed herein immediately following our receipt of formal authorization to proceed. We anticipate tank removal will be performed within one to four weeks of receipt of our notice to proceed, depending on Patriot's availability, from the MCEH and BAAQD, subsurface sampling can be completed in one day, and analytical testing will be completed within approximately two weeks following the completion of the sampling. We assume that our investigation will be performed during weekdays between the hours of 7:00 am and 7:00 pm. If weekend or holiday work is necessary, we will need to revise our estimate.



FEE ARRANGEMENTS

The table below provides a breakdown of our estimated fees to cover our proposed services. We will provide the services described above on a time and materials basis per our current rates presented in our attached 2022 Schedule of Fees. Our fee will be invoiced monthly. If the Marin County Environmental Health requires changes to the work plan, this estimate may change. This estimate is based on BSK's current understanding of the project scope and site conditions.

Task/Units	Description	Unit Rate	Estimated Fee
Task1	Project Setup, Work Plan, Permitting, and Mobilization		
1 hours	Principal	\$260/hr.	\$260.00
4 hours	Senior Professional	\$230/hr.	\$920.00
2 hours	Staff Professional I	\$145/hr.	\$290.00
2 hours	Project Administrator	\$100/hr.	\$200.00
1 each	Permit	\$800.00	\$800.00
Task 1 Subtotal			\$2,470.00
Task 2	Field Work		
16 hours	Staff Professional I	\$145/hr.	\$2,320.00
1 each	Materials and Equipment	\$658.00	\$658.00
2 trips	Trip Charges	\$100/trip	\$200.00
1 each	Underground Utility Locator (includes markup)	\$1,500.00	\$1,500.00
1 each	Patriot Environmental (includes markup)	\$40,200	\$40,200
Task 2 Subtotal			\$44,878.00
Task 3	Laboratory Testing		
1 hour	Senior Professional	\$230/hr.	\$230.00
3 tests	TPH as gasoline	\$65 ea.	\$195.00
3 tests	TPH as Diesel	\$75 ea.	\$225.00
3 tests	Volatile Organic Compounds/Naphthalene	\$139 ea.	\$417.00
3 tests	Tetraethyl Lead (organic)	\$232 ea.	\$696.00
Task 3 Subtotal			\$1,763.00
Task 4	Data Analysis, Reporting and Closeout		
2 hours	Principal	\$260/hr.	\$520.00
12 hours	Senior Professional	\$230/hr.	\$2,760.00
4 hours	Staff Professional I	\$145/hr.	\$580.00
2 hours	Project Administrator	\$100/hr.	\$200.00
Task 4 Subtotal			\$4,060.00
20% contingency			\$10,634.00
TOTAL ESTIMATED FEES			\$63,805.00

Our estimated fee applies to work commenced within 90 days of this proposal. After that time, we may review our proposal for applicability. The fees presented in this proposal are based on prompt payment for services presented in our standard invoicing format. Additional charges will be applied for



specialized invoicing if backup documentation is needed. These special services and other services not included in our scope of services will be charged on a time-and-expense basis in accordance with our current schedule of fees.

PROPOSAL ASSUMPTIONS

Our scope of services and fee estimate were prepared based on the following assumptions:

- 1) The City will provide to BSK any applicable background information on the Site area.
- 2) The City, as the landowner, will be considered the “Generator” of all wastes, not BSK. BSK, its owners, employees, shareholders, officers, directors, subcontractors, etc. will not be considered the “Generator” of any wastes, expressed or implied.
- 3) Our services can be performed during normal business hours (Monday through Friday, 7:00 a.m. to 7:00 p.m).
- 4) The collection, management and testing of soil and water samples other than those described herein is not included.
- 5) Traffic control services are not required.

AUTHORIZATION

If you are in agreement with the proposed scope of services and estimated fee presented herein, please send us an amendment to our existing agreement for the project for our review and signature.

BSK offers a range of environmental and engineering services to suit the varying needs of our clients. Although risk can never be eliminated, more detailed and extensive engineering yields more information, which may help the client understand and manage the degree of risk. Since such detailed services involve greater expense, our clients participate in determining the level of service, which provides adequate information for their purposes at an acceptable level of risk. Acceptance of this proposal will indicate that you have reviewed the scope of services and have determined that it does not need or want more services than are being proposed at this time. Any exceptions should be noted and may result in a change in fees.

LIMITATIONS

This proposal was developed after discussion with you and is a preliminary understanding of your desires. If a portion of this proposal does not meet your needs, or if those needs have changed, BSK will consider appropriate modifications, subject to the standards of care to which we adhere as professionals. Modifications such as changes in scope, methodology, scheduling, and contract terms and conditions may result in changes to the risks assumed by the City of San Rafael as well as adjustments to our fees.

BSK’s services will be performed in a manner consistent with the level of care and skill ordinarily exercised by other professionals practicing in the same locale and under similar circumstances at the



time the work is performed. No warranty, either express or implied, is included. The findings of the field studies may have a potential for negative impact on the value or suitability of the import fill transported to the Import Site for some purposes. BSK cannot assume liability for any such negative impact(s).

CLOSURE

We appreciate the opportunity to continue to assist the City of San Rafael on this project. Please, contact us at (925) 315-3151 if you have any questions or require additional information.

Respectfully submitted,

BSK Associates



John C. Bird, P.G.
Senior Environmental Geologist



Cristiano Melo, PE, GE
Livermore Branch Manager

Attachments: 2022 Schedule of Fees

BSK Associates - September 1, 2021 to June 30, 2022 Schedule of Fees (North Determination)

PERSONNEL RATES																																																																																																																																							
<p>PROFESSIONAL STAFF</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Principal</td><td style="text-align: right;">\$ 260.00</td></tr> <tr><td>Senior Professional</td><td style="text-align: right;">\$ 230.00</td></tr> <tr><td>Project Professional II</td><td style="text-align: right;">\$ 215.00</td></tr> <tr><td>Project Professional I</td><td style="text-align: right;">\$ 180.00</td></tr> <tr><td>Staff Professional II</td><td style="text-align: right;">\$ 160.00</td></tr> <tr><td>Staff Professional I</td><td style="text-align: right;">\$ 145.00</td></tr> <tr><td>Seismic GIS</td><td style="text-align: right;">\$ 200.00</td></tr> <tr><td>GIS Specialist</td><td style="text-align: right;">\$ 145.00</td></tr> <tr><td>Information Specialist II</td><td style="text-align: right;">\$ 160.00</td></tr> <tr><td>Information Specialist I</td><td style="text-align: right;">\$ 145.00</td></tr> <tr><td>CAD</td><td style="text-align: right;">\$ 105.00</td></tr> <tr><td>Project Administrator</td><td style="text-align: right;">\$ 100.00</td></tr> </table> <p>REIMBURSABLES</p> <table style="width: 100%; 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R-Value of Soils (CT 301)	\$ 454.00																																																																																																																																						
R-Value of Treated Materials (CT 301))	\$ 502.00																																																																																																																																						
Consolidation (ASTM D2435)	\$ 478.00																																																																																																																																						
Consolidation , Extra Points (ASTM D2435)	\$ 64.00																																																																																																																																						
Collapse Potential of Soils (ASTM D2435)	\$ 233.00																																																																																																																																						
Remolded Consolidation (ASTM D2435)	\$ 405.00																																																																																																																																						
One-Dimen Swell of Soil (ASTM D4546)	\$ 149.00																																																																																																																																						
CBR at 100% (ASTM D1883 or AASHTO T-180)	\$ 585.00																																																																																																																																						
CBR at 95% (ASTM D1883 or AASHTO T-180)	\$ 1,133.00																																																																																																																																						
Rigid Wall Permeability (ASTM D2434)	\$ 322.00																																																																																																																																						
Flexible Wall Permeability (ASTM D5084)	\$ 502.00																																																																																																																																						
Remolded Flexwall Perm (ASTM D5084)	\$ 638.00																																																																																																																																						
Minimum Resistivity of Soils (CT 643)	\$ 161.00																																																																																																																																						
pH	\$ 75.00																																																																																																																																						
Soluble Sulfate, Chloride and Sulfide	\$ 149.00																																																																																																																																						
Freeze Thaw Abrasion (ASTM D560)	\$ 715.00																																																																																																																																						
Wetting-Drying Abrasion (ASTM D559)	\$ 679.00																																																																																																																																						
Preparation of Freeze-Thaw or Wetting-Drying Tests	\$ 859.00																																																																																																																																						
Soil Cement Compression (ASTM D1633)	\$ 275.00																																																																																																																																						
Sand Density Calibration (ASTM D1566)	\$ 107.00																																																																																																																																						
Unconfined Compression (ASTM D2166)	\$ 144.00																																																																																																																																						
Direct Shear, Undisturbed (ASTM D3080)	\$ 250.00																																																																																																																																						
Direct Shear, Remolded (ASTM D3080)	\$ 299.00																																																																																																																																						
Triaxial Compression Testing	QUOTE																																																																																																																																						

BSK Associates - September 1, 2021 to June 30, 2022 Schedule of Fees (North Determination)

MATERIALS LABORATORY TESTS	
AGGREGATES	
Sieve Analysis Coarse or Fine (ASTM C136)	\$ 95.00
Sieve Analysis w/ Fineness Modulus	\$ 102.00
Minus 200 Wash, Aggregates (ASTM C117)	\$ 95.00
Specific Gravity/Absorption (ASTM C127)	\$ 183.00
Specific Gravity/Absorption (ASTM C128)	\$ 183.00
Organic Impurities (ASTM C40)	\$ 95.00
% Lumps/Friable Particles (ASTM C142)	\$ 92.00
% Flat and Elongated (ASTM D4791)	\$ 144.00
Fine Aggregate Angularity (AASHTO 304)	\$ 92.00
Moisture Content (ASTM D2216)	\$ 49.00
Aggregate Wt., pcf Compacted (ASTM C29)	\$ 101.00
Aggregate Wt., pcf Loose (ASTM C29)	\$ 75.00
Abrasion by LA Rattler, Small Size (ASTM C131)	\$ 269.00
Abrasion by LA Rattler, Large Size (ASTM C131)	\$ 327.00
Sodium Sulfate Soundness, Per Sieve (ASTM C88)	\$ 125.00
Sodium Sulfate Soundness, Min. Charge (ASTM C88)	\$ 399.00
Sand Equivalent (ASTM D2419 OR CT 217-I)	\$ 144.00
Durability Index (CT 229)	\$ 286.00
Potential Reactivity of Aggregates	QUOTE
Cleanness Value of Aggregate (CT 227)	\$ 206.00
Hydrometer (ASTM D422 OR CT 205-E)	\$ 256.00
% Crushed particles (CT 205)	\$ 189.00
Lightweight Pieces (ASTM 123)	\$ 250.00
HOT MIX ASPHALT	
JMF Mix Design, HVEEM	\$ 3,542.00
JMF Mix Design, Marshall	\$ 4,197.00
JMF Mix Design, Superpave / Caltrans	\$ 10,226.00
JMF Verification - HMA - Superpave / Caltrans	\$ 5,926.00
JMF Production Startup - Superpave / Caltrans	\$ 5,513.00
RAP Material Testing - Additional Fee	\$ 717.00
Rubberized RHMA Material - Additional Fee	\$ 1,654.00
Hamburg Wheel Track (AASHTO T324)	\$ 3,005.00
Gyratory Compaction (AASHTO T312)	\$ 382.00
AC Content by Centrifuge (ASTM D2172)	\$ 328.00
AC Content-Ignition (ASTM D6307 / CT382 / AASHTO T308)	\$ 256.00
Superpave Ignition Oven Correction (AASHTO T308)	\$ 595.00
Moisture Content of Asphalt (CT 370)	\$ 75.00
Gradation/Extraction Aggregate (ASTM D5444)	\$ 155.00
Film Stripping	\$ 102.00
Compaction/Preparation of HMA Briquette (CT 304)	\$ 250.00
Stabilometer Value (CT 366 / AASHTO T246)	\$ 201.00
AC Core Specific Gravity (ASTM D2726)	\$ 64.00
AC Core Specific Gravity - Paraffin Coated (AASHTO T275)	\$ 167.00
AC Max Density Rice Method (ASTM D2041)	\$ 286.00
CIR/FDR Compressive Strength Testing (pre-compacted specimen, includes conditioning) – CTM 371	\$ 275.00
Tensile Strength Ratio (AASHTO T283)	\$ 1,253.00
Moisture Vapor Susceptibility (CT 307)	\$ 233.00
AC Surface Abrasion (CT 360)	\$ 572.00
Index Retained Strength (ASTM D1074-D1075)	\$ 512.00
AC Hveem Maximum Density (CT 375)	\$ 512.00
Marshall Stability and Flow (ASTM D6927)	\$ 286.00
Calculated AC Maximum Density (CT 367)	\$ 113.00
Marshall Maximum Density, 50 Blows (ASTM D6926)	\$ 333.00
Examination of AC Cores	\$ 39.00
Thickness Determination of AC Cores	\$ 25.00
AC Tensile-Strength Premixed ASTM D4867	\$ 740.00
AC Tensile-Strength Lab Mixed ASTM D4867	\$ 1,253.00
REINFORCING STEEL	
Tensile & Bend of Rebar, #3 - #8	\$ 169.00
Tensile & Bend of Rebar, #9 - #11	\$ 169.00
Bend Test of Rebar	\$ 69.00
Slip and Tensile Rebar Couplers (CT 670)	\$ 246.00
Tension Test of Welded Wire Fabric	QUOTE
Bend Test of Welded Wire Fabric	QUOTE
Weld Shear Test, Welded Wire Fabric	QUOTE
PT Cable Tensile and Elongation (ASTM A416 or A421)	\$ 310.00
PT Cable Preparation	QUOTE
CONCRETE	
Cement Content Concrete (ASTM C1084)	\$ 431.00
Chemical Test (ASTM C150)	QUOTE
Set Times Cement-Vicat Needle (ASTM C191)	\$ 357.00
Specific Gravity of Hydraulic Cement (ASTM C191)	\$ 172.00
Lineal Shrinkage Set of 3 (ASTM C157)	\$ 454.00
Compression Test of Concrete - 1 (ASTM C39)	\$ 39.00
Compression Test of Concrete - 4 (ASTM C39)	\$ 155.00
Compression Test of Core (ASTM C42)	\$ 69.00
Preparation of Specimens, Sawing	\$ 78.00
Compressive Strength of Shotcrete Panel	\$ 364.00
Proportion of Cement in Concrete (ASTM C85)	\$ 399.00
Flexural Test Per Beam (ASTM C78)	\$ 102.00
Splitting Tensile Strength of Concrete (ASTM C496)	\$ 102.00
Unit Weight Lt Wt Concrete (ASTM C567)	\$ 64.00
"AZ" Test-Reinforced Concrete Pipe "Life Factor"	\$ 89.00
9 Pt Core Measurements, Each (ASTM C174)	\$ 39.00
Concrete Trial Batches	QUOTE
Unit Weight & Abs Concrete (ASTM D642)	\$ 144.00
Accelerated Curing of Concrete (ASTM C684)	\$ 286.00
Cylinder Molds (each)	\$ 8.00
Storage of Concrete Cylinders for more than 45 Days	\$ 66.00
RH Probe	\$ 66.00
Calcium Chloride Kit	\$ 44.00
Mixing Water (pH, elec. conductance, chloride, sulfate)	\$ 113.00
Contact Soil (pH, elec. conductance, chloride, sulfate)	\$ 136.00
MASONRY	
Concrete Masonry Units Testing (ASTM C90)	
Compression Test Pavers, Single	\$ 88.00
Compression Test Composit CMU Prism	\$ 189.00
Specific Gravity and Unit Weight	\$ 131.00
Moisture Content	\$ 61.00
Compression Test, Masonry Units (ASTM C140)	\$ 119.00
Absorption / Moisture Content (ASTM C140)	\$ 119.00
Linear Shrinkage (ASTM C426)	\$ 460.00
Masonry Core Shear Test (Title 24)	\$ 214.00
Masonry Core Compression/Shear Test (Title 24)	\$ 214.00
Compression Test Brick, Each (ASTM C67)	\$ 85.00
Absorption/ Unit Wt. of Brick (ASTM C67)	\$ 89.00
Compression Test Grout (Set of 3 or 4)	\$ 137.00
Compression Test Mortar (Set of 3 or 4)	\$ 125.00
WELDING AND STRUCTURAL STEEL	
Welder Qualification Testing	
Welder / Procedure Welder Qualification Testing	QUOTE
Face Bend of Steel	\$ 69.00
Root Bend of Weld Coupon	\$ 69.00
Side Bend of Weld Coupon	\$ 69.00
Tensile Test of Steel Coupon	\$ 95.00
Bend Test of Steel Coupon	\$ 82.00
Machining Charges (Per Coupon)	QUOTE
Brinell Hardness of Steel (ASTM E10)	\$ 113.00
Rockwell Hardness of Steel (ASTM E18)	\$ 113.00
Bolt Ultimate Load	\$ 151.00
Bolt Hardness (set of 3)	\$ 113.00
Nut Hardness (set of 3)	\$ 113.00
Washer Hardness (set of 3)	\$ 113.00
Proof Loading, bolt or nut	\$ 161.00
FIREPROOFING	
Cohesion/Adhesion Fireproofing Materials	\$ 144.00
Dry Density Fireproofing (ASTM E605)	\$ 108.00

Escalation: The prices noted above are subject to an increase of 3-5% annual, effective January 1 of each year following the initiation of a services agreement.