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ABB TESTING

Making Buildings Perform Better

July 9, 2021 **(Revised 04/14/2022)**

City of South San Francisco

ATTN: Jacob Gilchrist, Director of Capital Projects
500 North Canal Street
San Francisco, CA 94080

CC: Mr. Farshid Samsami
Senior Project Manager
Kitchell CEM
71 Stevenson Street, Suite 400
San Francisco, CA

**Re: Proposal for Third-Party Building Envelope Testing and Inspection Services
South San Francisco Community Civic Campus – Phase 2
Library, Parks & Recreation and Community Theater (City Project pf2103 – RFP #2652)
400 Grand Avenue
South San Francisco, CA 94080**

ON: 2012-01574

Dear Mr. Gilchrist,

ABB Testing (ABBT) is pleased to present **City of South San Francisco (City)** and **Kitchell CEM (Kitchell)** with this proposal to provide Third-Party Building Envelope Testing and Inspection Services for the above referenced project located in South San Francisco, California.

At Kitchell's request, we have revised our original proposal to remove the Below-Grade Monitoring services scope/fee, since this scope was pulled out and put into a separate proposal. Our revised fee total is provided in the enclosed Attachment 8 – Inspection Cost Worksheet.

Background

To assist us with our proposal, you have provided us with the project RFP issued June 18, 2021 including project bidding documentation, plans and specifications. Smith Group is the project's Architect of Record.

It is our understanding that this project involves the construction of Phase 2 of the City of South San Francisco's Library, Parks and Recreation project, which includes four key components including: an 84,250 SF, three-story building; a 12,400 SF parking garage; surface parking; and a 1.35-acre park. The planned exterior building envelope assemblies include cement plaster, stucco finish, planted green screen over stucco, curtain wall, operable glazing, and spandrel / vision glass. Estimated total project construction value is \$81,372,971.

At this time, **The City of South San Francisco** through **Kitchell**, the project's Construction Manager, is requesting ABBT to provide third-party building envelope testing services for the systems listed. Based on our review of project specifications, ABBT is proposing to provide the following testing and inspection services via the following test methods:

- Electronic Leak Detection (ELD) Testing
 - 07 14 13 Hot Fluid Applied Waterproofing – 3.10.B Field Quality Control
 - Low-Voltage ELD Testing via Platform Scanner
- Adhesion Testing
 - 07 92 13 Exterior Joint Sealants – 3.5.C Field Quality Control
 - Non-Destructive Field Adhesion Testing – 3.5.C.1
 - Destructive Field Adhesion Testing – 3.5.C.2



- Visual Observations – 3.5.C.3
- Fenestration Water Spray Testing using hose and nozzle via AAMA 501.2
 - 08 42 26 Exterior Glass Entrances – 3.3.B
 - 08 43 13 Aluminum Framed Storefronts – 3.5.F.1
 - 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.E
 - 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.F
 - 08 62 00 Unit Skylights – 3.3.B
- Fenestration Water Penetration and Air Leakage Testing using chamber via ASTM E1105 & E 783
 - 08 42 26 Exterior Glass Entrances – 3.3.E.2-3
 - 08 43 13 Aluminum Framed Storefronts – 3.5.F.2-3
 - 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.E.1-2
- Fenestration Water Penetration using chamber via ASTM E1105
 - 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.F.4
- Field Quality Assurance (QA) Observations
 - 07 27 00 Air Barriers – 3.4.B
 - 4 visits
 - Exterior Building Envelope/Waterproofing
 - 7 visits
 - Roofing
 - Exterior walls / waterproofing
 - Sealants
 - Curtain Wall
- Field Water Penetration Resistance Testing
 - 07 27 00 Air Barriers – 3.4.C *Field Quality Control, Testing*
 - 3 days of testing per ASTM E1105

ABBT Recommended Services (as needed by Kitchell):

The following services are based on past requests from Kitchell for observations of building envelope and waterproofing systems. At this time, ABBT recommends a limited number of site visits that can be performed as directed by Kitchell. We recommend:

Based on our understanding of your project requirements and our experience with similar projects, ABBT proposes the following scope of service:

Scope of Services

1. Electronic Leak Detection (ELD) Testing (2,200 SF Level 2 Plaza HRA Waterproofing)

Electronic Leak Detection (ELD) Testing

Initials_____



- a) Receive and review available as-built or record drawings, plans, specifications, and other relevant documentation to provide our Staff with an understanding of the proposed project and existing conditions for preparing our testing protocol.
- b) Prepare testing protocol, check-list, and testing equipment in accordance with ASTM D7877.
- c) Conduct site visits to perform Low-Voltage ELD testing on waterproofing membrane. Observations will be documented with field notes, sketches, and photos which will be summarized our report.
 - i. Prior to testing any exposed membrane, voids, deficiencies, defects or concerns will be documented.
 - ii. This proposal assumes Owner will provide a potable water source with a minimum 30 psi water pressure and 110-volt exterior grounded power supply within or directly adjacent to the proposed testing area(s). ABBT will provide ASTM compliant or uniform ELD testing equipment.
 - iii. This proposal includes one (1) full-day site visit for the waterproofing ELD testing and observation.
- d) Prepare an ELD Testing Report. The Testing Report will include:
 - i. Description of the testing we performed.
 - ii. Written descriptions of our observations and ELD testing results.
 - iii. Roof sketch location observed and ELD identifying deficiencies
- e) Re-testing is EXCLUDED from this proposal. ABBT can provide an additional services agreement for re-testing if requested.
- f) Report to be provided to the Owner in electronic (PDF) format and will be made available within 72 hours of our final site visit

2. Field QA Observation and Adhesion Testing (Exterior Sealant Joints)

Specification section does not outline the number of observations but does outline the frequency. The following is ABBT's recommendation based on the scale of the project.

- a) Conduct site visits to perform adhesion testing at the systems listed. Observations will be documented with field notes, sketches and digital photographs which will be the basis for our report. Scope includes:
 - i. 07 92 13 Exterior Joint Sealants – Field Quality Control:
 - Assume **two (2) site visits** by a Field Monitor for up to 12 hours per visit inclusive of preparation, observations travel, and reporting.
 - Site visits will include the following based on specification section 07 92 13 – 3.5.C *Field Quality Control*:
 - a. Non-Destructive Field Adhesion Testing
 - b. Destructive Field Adhesion Testing
 - c. Visual Observations
 - b) ABBT will prepare written observation reports for each site visit. Field reports will conform to ABBT's reporting requirements. Our field reports will be created and distributed electronically.

3. Water Spray Testing Services (AAMA 501.2)

- 08 42 26 Exterior Glass Entrances – 3.3.B

Initials_____



- 3 visits min.
- 08 43 13 Aluminum Framed Storefronts – 3.5.F.1
 - 3 visits min.
- 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.E
 - 1 visit min.
- 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.F
 - 4 visits min.
- 08 62 00 Unit Skylights – 3.3.B
 - 1 visit min.

Total = 12 visits

ABBT's water testing scope includes the following:

- a) Receive and review the project documentation including as-built or record drawings, specifications, shop drawings, submittals to provide our staff with an understanding of the window construction, testing requirements and project schedule.
 - b) Conduct water hose testing of the systems outlined above in accordance with AAMA 501.2. Observations will be documented with field notes, sketches, and photos, which will be the basis for our report. ABBT's testing scope will include:
 - i. Assume each day or visit includes two (2) Field Monitors on site to conduct testing and observations in accordance with the provisions of specification sections outlined above.
 - ii. Equipment and supplies necessary to provide AAMA 501.2 testing. ABBAE will provide hoses, spray nozzle. Contractor will provide water source, access via lift if necessary.
 - iii. On the day of testing, ABBT will set up testing equipment, and conduct the water and air infiltration testing according to the project specifications.
 - c) EXCLUDED – Re-testing is excluded from this proposal. ABBT can provide an additional service agreement for re-testing if requested.
 - d) Prepare a water testing report documenting the test results and our recommendations for further testing and/or repairs if required. Report will be provided within 3 business days of testing date.
- 4. Water Penetration and Air Leakage Testing Services (ASTM E1105 or ASTM E 1105/E783 combined)**

ASTM E 1105 and E 783 combined:

- 08 42 26 Exterior Glass Entrances – 3.3.E.2 and 3
 - 1 visit min
- 08 43 13 Aluminum Framed Storefronts – 3.5.F.2 and 3
 - 3 visits min
- 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.E.1 and 2
 - 1 visit min

Total = 5 visits

Initials_____



ASTM E 1105 only:

- 08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.F.4
 - 4 visits min

ABBT's water testing scope includes the following:

- a) Receive and review the project documentation including as-built or record drawings, specifications, shop drawings, submittals to provide our staff with an understanding of the window construction, testing requirements and project schedule.
- b) Conduct in field pressurized window water penetration resistance testing via ASTM E1105, and air leakage testing via ASTM E 783 simultaneously, for the systems outlined above. Observations will be documented with field notes, sketches, and photos, which will be the basis for our report. The water testing scope will include:
 - i. Assume each day or visit includes one (1) Field Monitor and one (1) Consultant on site to conduct testing and observations in accordance with the provisions of specification sections outlined above.
 - ii. ABBT will spray water from a calibrated spray rack at the exterior window locations identified in our testing protocol. Spray rack and 100' of hoses to be provided by ABBT. Contractor will provide potable water (min. 30 psi), power, and the required scaffolding, man lifts, ladders, and other equipment as required for our staff to safely access the interior and exterior sides of the testing areas.
 - iii. An allowance for a scissor lift rental is included in our budget.
- c) EXCLUDED – Re-testing is excluded from this proposal. ABBT can provide an additional service agreement for re-testing if requested.
- d) Contractor responsibilities for Water Testing (ABBT exclusions):
 - i. Complete installations of sample windows are the responsibility of the Contractor. A show-up fee of **full service cost** will be charged to the project if the samples are not ready for testing. This fee can be back-charged to the contractor by the Owner. The following must be completed prior to testing
 - Window and window waterproofing installation. Cladding or exterior insulation shall not be installed as to obstruct the testing.
 - Exterior (if designed) and interior sealants that interface with window frame.
 - Drywall shall not obstruct the view of the window assembly from the interior. Drywall removal and repair necessary to observe the testing are the responsibility of the Contractor.
 - Scheduling and coordination of the appropriate team members on the dates of testing shall be completed by the Contractor. If ABBT is requested to handle this duty, additional time and fee will be necessary.
 - Contractor shall provide one (1) week's notice to ABBT prior to testing.
 - Owner's Contractor to construct test chambers as outlined in ABBT's testing protocol, if needed.
 - Water providing a minimum of 25 psi at the location of the sample and power within 20 feet of the sample.

Initials_____



- Materials, debris, and any other obstructions shall be removed from the sample area prior to our arrival.
 - Access to both the exterior and interior of the testing sample. Lifts, scaffolding or swing stages shall be provided by the Contractor for samples 15 feet or higher.
 - If an interior buck is needed for the penetration testing, disposal of the buck shall be the responsibility of the Contractor.
- e) Prepare a water testing report documenting the test results and our recommendations for further testing and/or repairs if required. Report will be provided within 3 business days of testing date.

5. Field Quality Assurance (QA) Observation

- a) Conduct site visits to perform observations of the systems listed. Observations will be documented with field notes, sketches and digital photographs which will be the basis for our report. Scope includes:
- i. **07 27 00 Air Barriers – 3.4.B**
 - Assume **four (4) site visits** by a Field Monitor for up to 12 hours per visit inclusive of preparation, observations travel, and reporting.
 - b) ABBT will prepare written observation reports for each site visit. Field reports will conform to ABBT's reporting requirements. Our field reports will be created and distributed electronically.
 - ii. **Exterior Building Envelope & Waterproofing:**
 - Assume up to **seven (7) half-day site visits** by a Consultant for up to four (4) hours per visit inclusive of preparation, observations travel, and reporting.
 - Systems may include: roofing, exterior walls, exterior waterproofing, sealants, curtain wall, etc.
 - a) ABBT will prepare written observation reports for each site visit. Field reports will conform to ABBT's reporting requirements. Our field reports will be created and distributed electronically.

6. Water Penetration Testing Services (Air Barriers)

ASTM E 1105 only:

- 07 27 00 Air Barriers – 3.4.C Field Quality Control, Testing
 - Per Spec, assume 3 tests at 10%, 35% and 70% (up to 3 visits total)

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Proposal Fees

Our fees for testing and inspection services described above have been outlined in **Attachment 8 – Inspection Cost Worksheet**, which is enclosed separately. Fees are also outlined below:

Completed Services:

Opp #	Completed Services	Fee (*)
2106-02333	Field QA Observation & Adhesion Testing (Below-Grade Waterproofing)	\$21,120
2012-01574.01	Laboratory Mock-up Testing (by third-party lab)	\$71,500

Future Remaining Services (This Proposal):

Item	Service Phase	Fee Type	Fee (*)
	Specification Required 'Owner' Services		
1.	Electronic Leak Detection (ELD)		
1a.	ELD via Low-Voltage Scanner Testing	\$2,500 / day x 1 Day	\$2,500
2.	Field QA Observations & Adhesion Testing		
2.a	07 92 13 Exterior Joint Sealants (Incl. Non-Destructive & Destructive Field Adhesion Testing)	\$2,400 /day x 2 days	\$4,800
3.	Fenestration Water Spray Testing Using Hose & Nozzle	(AAMA 501.2)	
3.a	08 42 26 Exterior Glass Entrances	\$2,950 / day x 3 Days	\$8,850
3.b	08 43 13 Aluminum Framed Storefronts	\$2,950 / day x 3 Days	\$8,850
3.c	08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.E	\$2,950 / day x 1 Day	\$2,950
3.c	08 44 23 Structural Sealant Glazed Curtain Walls – 3.9.F	\$2,950 / day x 4 Days	\$11,800
3.d	08 62 00 Unit Skylights	\$2,950 / day x 1 Day	\$2,950
4.	Fenestration Water Penetration and Air Leakage Testing	(ASTM E1105 & E783)	
4.a	08 42 26 Exterior Glass Entrances	\$3,750 / day x 1 Day	\$3,750
4.b	08 43 13 Aluminum Framed Storefronts	\$3,750 / day x 3 Days	\$11,250
4.c	08 44 23 Structural Sealant Glazed Curtain Walls	\$3,750 / day x 1 Day	\$3,750
5.	Fenestration Water Penetration Only	(ASTM E1105)	
5.a	08 44 23 Structural Sealant Glazed Curtain Walls	\$3,750 / day x 4 Days	\$15,000
	(Fees continued from above)		

Initials _____



6.	Field QA Observations		
6.a	07 27 00 Air Barriers	\$2,400 /day x 4 days	\$9,600
6.b	Misc. Exterior Building Envelope & Waterproofing	\$2,400 /day x 7 days	\$16,800
7.	Field Water Penetration Resistance Testing		
7.a	07 27 00 Air Barriers	\$3,750 / day x 3 Days	\$11,250
8.	Equipment Allowances:		
8.a	Boom Lift Rental Allowance	<i>Time and Expense</i>	\$2,000
8.b	Interior Chamber Construction & Demo Allowance	<i>Time and Expense</i>	\$3,900
		TOTAL FEE	\$120,000

Assumptions and Exclusions

1. ABBT is not the Architect of Record for the overall project design. ABBT is providing third-party Testing services for the building envelope systems described.
2. ABBT's services are limited to those specifically described above. If additional services are requested or required, we will be pleased to provide you with an additional service agreement (ASA) once the scope of additional services is defined.
3. Proposal does not include lab testing.
4. Testing of other systems beyond those mentioned in our scope is excluded.
5. Design, Bidding and Permitting and Construction phase services are not included in this proposal.
6. ABBT will charge **full service cost** for each site visit cancelled by the client within 48 hours of the scheduled services due to any reason.
7. This proposal assumes that the Owner or their General Contractor will arrange for ABBT to have access to the necessary construction areas. Any fees or special equipment such as man lifts, extension ladders, etc. necessary to gain access are not included in this proposal but are assumed as allowances.
8. It is the responsibility of the project Contractor(s) to install fully functioning building enclosure systems that provide water tightness and meet the design intent. If the Contractor fails to comply with specifications and other documents, ABBT may require more field visits which would be performed at an additional time and expense fee, but not without prior approval from the Owner.
9. ABBT is not responsible for damages to finishes or tested membrane damages during or after our testing, including any potential water damage to interior/exterior of the building or test site.
10. Jobsite and Contractor Safety will be the sole responsibility of the Contractor.

Initials_____



Agreement

Our Agreement consists of this executed proposal and the enclosed General Terms and Conditions. We will initiate this project upon receipt of your written authorization to proceed. If this Agreement is acceptable, please sign and return one copy by email to contracts@abbae.com, US Mail, or FAX.

When ABBT is requested to perform services described in this proposal prior to receiving an executed Agreement from you, such request will constitute an acceptance of this agreement. If you request ABBT to provide services in addition to those specifically outlined in this agreement, it is understood that ABBT will invoice for those additional services on a time and expense basis in accordance with our attached General Terms and Conditions.

Thank you for this opportunity to be of service to **City of South San Francisco** and **Kitchell CEM**. Please call us if you have any questions regarding this proposal or other aspects of our capabilities.

Very truly yours,

Allana Buick & Bers, Inc.

Petersen Lambert, P.E.
Principal, Testing Division Manager

Enclosures: General Terms and Conditions (2020)

This proposal and attached General Terms and Conditions are accepted by:

City of South San Francisco

C/o: Kitchell CEM

Authorized Signature

Printed Name

Date

Initials_____

TESTING GENERAL TERMS and CONDITIONS

California
(Updated June 2020)

The following General Terms and Conditions are incorporated into, and made part of, the attached AGREEMENT dated **February 22, 2022** between ABB Testing, LLC (ABBT) and **City of South San Francisco** hereinafter referred to as "CLIENT"), and together are referred to as the "AGREEMENT".

1. ABBT SERVICES.

- 1.1. **STANDARD OF CARE.** In performing professional services, ABBT will use that degree of care and skill ordinarily exercised under similar circumstances by members of the profession practicing at the same time in the same or similar locality, but perfection is not promised. In accepting this AGREEMENT for professional services, CLIENT acknowledges the inherent risks associated with building evaluation and construction and therefore no warranty, express or implied, is made or intended by this AGREEMENT, by the foregoing statement of the applicable standard of care, by providing services or by furnishing oral or written reports of findings made. CLIENT acknowledges that leak detection and building forensics are inexact processes, based in part upon a process of elimination and therefore ABBT may not determine the source of all leaks.
- 1.2. **ASSUMPTIONS AS BASIS FOR SERVICES.** The CLIENT and ABBT have relied upon certain assumptions stated in ABBT's proposal. Both parties, however, recognize that such assumptions may materially change and, in that event, the CLIENT and ABBT shall equitably adjust the schedule, ABBT's scope of services, and compensation. ABBT's services provided for remodeling, repair, or rehabilitation of any structure rely upon certain assumptions regarding existing conditions. Because these assumptions are often not verifiable without expending significant sums of money, or may require destroying otherwise functioning and serviceable portions of the structure, the client understands and agrees to be responsible for and to defend, indemnify and hold harmless ABBT from and against any claims arising out of the professional services provided under this agreement as a result of unforeseen conditions, including but not limited to conditions encountered where forensic analysis, testing, or field verification of conditions is recommended by ABBT but rejected by the Client.
- 1.3. **STAFFING.** As determined by ABBT, the staff necessary to deliver our contracted scope of services will be provided. It is likely that our assigned staff will vary depending upon the type of project, experience and qualifications needed, and staff availability. Our estimated fee tables, when provided, are not a commitment, pledge, promise or assurance to provide exactly each type of staff member listed, to provide a specific individual, or a commitment to provide the exact hours estimated for each task, phase, person, staff type or activity. Fee tables, when provided, are only a general best effort at predicting the staffing and hours required to complete our scope of services based upon our initial understanding of client goals and preliminary assessment of the project.
- 1.4. **SAMPLES.** Samples and the remains of samples subjected to testing will be discarded 60 days after submission of ABBT's report, unless CLIENT advises ABBT otherwise in writing. Upon request, ABBT shall ship or deliver the samples, charges collect, or will store samples for a monthly fee until such time as CLIENT directs ABBT how to dispose of the samples or where to ship them.
- 1.5. **USE AND OWNERSHIP OF DOCUMENTS.** ABBT retains all intellectual property rights including copyrights in all reports, field data, notes, laboratory test data, calculations, estimates, plans, drawings, specifications and other documents, which ABBT prepares as instruments of service. Upon full payment of ABBT's invoices, ABBT grants CLIENT a nonexclusive limited license to use the drawings, specifications, reports and other instruments of service furnished by ABBT, or its agents, but only for the project for which they are prepared and intended. If ABBT is not paid in full for all its services CLIENT shall, upon demand, return to ABBT all drawings, specifications reports and other work furnished by ABBT, or its agents, along with all copies, whether tangible or intangible, and refrain from using all such documents for any purpose whatsoever. ABBT will retain records that it deems pertinent relating to its services for five years following performance of its services, during which period the records will be made available to CLIENT at CLIENT'S sole costs.
- 1.6. **ESTIMATES OF CONSTRUCTION COSTS.** ABBT has no control over the cost of labor, materials or equipment for construction, over any contractor's methodology for determining bid prices, or over competitive bidding, market or negotiating conditions. Accordingly, ABBT cannot, and does not, warrant or represent that bids or negotiated prices will not vary from any cost estimate or evaluation prepared by or under the direction of ABBT. Any statements of estimated construction costs furnished by ABBT are based on professional opinions and judgment, and ABBT will not be responsible for fluctuations in construction costs.
- 1.7. **ON-SITE SERVICES DURING PROJECT CONSTRUCTION.** Should ABBT's services be provided on-site during project construction, CLIENT agrees that the project contractor(s) shall be solely responsible for jobsite conditions, including safety in, on and about the site, safety of all persons and property during the performance of the work, in compliance with applicable OSHA regulations, and that these requirements shall apply continuously and not be limited to normal working hours. Under no circumstances shall ABBT's services include any review of the adequacy of the contractor's safety measures in, on, or about the construction site.
- 1.8. **CONTRACTORS MEANS AND METHODS.** ABBT shall not be held in any way responsible for or to guarantee any contractor's work, nor to assume responsibility for the means, methods, techniques, sequencing or appliances used by any contractor nor to assume responsibility for a contractor's compliance with laws and regulations or for contractor's acts, errors, omissions, or defective work. On-site services provided by ABBT shall not relieve CLIENT's construction contractor of its responsibilities to perform the construction work in accordance with CLIENT's construction agreement, the project drawings and specifications, and applicable laws.
- 1.9. **CONTRACT ADMINISTRATION.** If ABBT is retained as the designer of record, it is customary and may be required by law for ABBT to also provide Contract Administration services. Contract Administration services may also include construction administration, construction observation, and construction monitoring services if expressly included in ABBT's proposal. Contract Administration services may enable ABBT to verify that ABBT's design intent is being complied with and to address unforeseen conditions. If Client does not retain ABBT to provide Contract Administration services, or if for any reason ABBT is not able to provide the minimum level of construction observation required by law, then to the fullest extent permitted by law, CLIENT shall defend, indemnify and hold ABBT harmless from and against any and all claims arising out of the professional services provided under this agreement and the failure to comply with ABBT's design intent, except caused by ABBT's sole negligence as determined by a court or arbitration. CLIENT agrees and acknowledges that Contract Administration services provided by ABBT, including construction monitoring, or observations, are intended only to assist the CLIENT in reducing, but not eliminating, the risks associated with construction defects and poor workmanship. Despite ABBT's diligent efforts, defects and failures in construction may occur. Therefore, it is agreed that CLIENT's contractors remain solely responsibility for their acts, errors, omissions, and defects in their work and to install and protect fully functioning assemblies, systems, and components.
- 1.10. **INSURANCE AND LEGAL SERVICES.** ABBT does not provide legal counsel or insurance consultation. Upon the written direction of CLIENT, ABBT will provide to CLIENT's legal or insurance representatives for review, copies of reports; budgets; construction documents; agreements; and other project specific documents prepared by ABBT.

2. CLIENT'S OBLIGATIONS.

- 2.1. **EXISTING DOCUMENTS.** Should ABBT's services be provided for an existing structure, the CLIENT shall provide ABBT with a full and complete set of "As-Built", "Record Drawings", construction documents and progressive development sets for all construction projects. If these documents are not provided, ABBT's services required to perform field measurements and/or create electronic documentation shall be invoiced as additional services in accordance with the Schedule of Fees. CLIENT shall be responsible for, and ABBT may rely upon, the accuracy and completeness of all documents, data and other information provided by CLIENT and its agents to ABBT.
- 2.2. **RIGHT OF ENTRY.** Unless otherwise expressly included within ABBT's proposal, CLIENT shall furnish ABBT with right-of-entry onto the land and/or facility for ABBT to perform its services. ABBT will take reasonable precautions to minimize damage to the land and facilities which could be caused by its services or its use of equipment, but our fee does not include the cost for restoration of damage that may result from our services. If requested in writing by CLIENT and agreed to by ABBT, restoration, or repair services for the facility or land shall be a reimbursable expense in addition to ABBT's fees and costs.
- 2.3. **ON-SITE TESTING, EXPLORATION, AND ACCESS.** Should ABBT's services be provided for an existing structure, the CLIENT shall retain and provide a qualified contractor ("CLIENT ACCESS CONTRACTOR") to provide ABBT access to sites or portions thereof. CLIENT ACCESS CONTRACTOR shall provide scaffolding, swing stage, hydraulic man lift and other means required for ABBT to safely access the site or portions thereof.
- 2.4. If ABBT's services include destructive testing, sampling of construction materials, restoration or other testing or exploration services as expressly described in ABBT's scope of work, Client understands and acknowledges that building exploration and forensic services such as but not limited to water testing, leak testing, roof core sampling, in situ destructive testing, and similar analysis may cause damage to the property and will likely require repair.
- 2.5. CLIENT acknowledges that repair of such work may not restore the property to its original, pre-destructive testing or pre-sampling condition and waives any and all claims, including a waiver of California Civil Code Section 1542, and any similar state and federal law, against ABBT arising from destructive testing, sampling of construction materials, restoration or other testing or exploration services.
- 2.6. ABBT may provide CLIENT with a list of contractor(s) or service providers, but it does not guarantee their work and is not responsible for the quality, performance, or accuracy of work performed by such contractor(s) or service providers.
- 2.7. **PERMITS.** Unless expressly included in ABBT's proposal, CLIENT shall obtain, at its cost and expense, all approvals, permissions, and permits from all governing entities having jurisdiction over construction work associated with ABBT's services.

TESTING GENERAL TERMS and CONDITIONS

California

(Updated June 2020)

- 2.8. **HAZARDOUS MATERIALS.** ABBT does not provide hazardous material investigation, environmental engineering or consulting, laboratory analysis, or similar services that require specialized environmental training. Should these services become necessary, CLIENT shall retain and provide a qualified environmental consultant(s) to perform these services. Nothing in this agreement shall impose liability upon ABBT for claims, lawsuits, or any damages arising from or related to the discovery of, exposure to, handling of, or disposal of asbestos containing materials, PCBs, mold, mildew or other microbial growths, or any material defined by the U.S. Environmental Protection Agency as hazardous.
- 2.9. **SERVICES OF OTHERS.** If expressly included within ABBT's proposal, ABBT may directly engage the specialized services of individual consultants or other companies to participate in the project. The cost of such services shall be invoiced to CLIENT in accordance with the REIMBURSABLE EXPENSES schedule outlined in Exhibit B (attached).
- 2.10. **REQUIRED OF CONTRACTORS.** CLIENT agrees to require in all construction contracts for the project, provisions that CLIENT and ABBT shall be defended and indemnified by the contractor and its subcontractors and named additional insureds on contractor's and subcontractor's insurance.
3. **FEES, REIMBURSABLE EXPENSES, AND INVOICES.**
 - 3.1. **SCHEDULE OF FEES AND REIMBURSABLES.** All projects are subject to a startup and close out fees which are calculated into the proposed fee. For time and expense contracts the Fees for services are based on the actual hours worked on the project by staff personnel, the billing rates will be in accordance with the fee schedule contained within Exhibit A. ABBT expenses shall be invoiced to client in accordance with the Reimbursable schedule contained within Exhibit B. The Schedule of Fees and Reimbursable Expenses are subject to ABBT's adjustment once per calendar year.
 - 3.2. **EXPERT WITNESS AND CONSULTING FEES.** Fees for preparing for, travel to and appearing at depositions, mediations, arbitrations, and trials, whether as an expert witness or a percipient witness, whether requested by CLIENT or subpoenaed by others, will be invoiced to CLIENT at 1.5 times ABBT's base rates.
 - 3.3. **DELAYS OR SUSPENSIONS OF SERVICES.** If ABBT's services are delayed or suspended in whole or in part by CLIENT or CLIENT'S contractors for more than forty-five (45) cumulative days through no fault of ABBT, then ABBT shall be entitled to an equitable adjustment of its fees to reflect reasonable costs incurred by ABBT in connection with such delay, suspension, or reactivation. ABBT has the right to renegotiate its fee if the scope of its services is changed or not completed within 12 months. CLIENT shall provide ABBT fourteen (14) days written notice of its intent to suspend ABBT's services. ABBT shall be entitled to invoice CLIENT for wind down costs upon suspensions and startup/mobilization costs during (re)startup.
 - 3.4. **ADDITIONAL SERVICES.** ABBT's fee includes a fixed quantity of time for meetings and other project related communication. Additional services such as conference calls, CLIENT meetings, written correspondences, email messaging, contractor meetings, subcontractor meetings, or other coordination meetings beyond those included in ABBT's proposal will be considered an additional service, invoiced to CLIENT on a monthly basis in accordance with ABBT's Schedule of Fees in Exhibit A and ABBT's Reimbursable Schedule in Exhibit B.
 - 3.5. **TAXES AND OTHER LEGISLATED FEES.** Unless expressly included in ABBT's estimates and proposals, appropriate federal, state and local taxes and other fees or costs imposed by any level of government are not included in ABBT's fee estimates and shall be added to all invoices as required by law prior to distributing said invoices to CLIENT for payment.
 - 3.6. **INVOICES.** Invoices will generally be submitted once per month for services performed during the previous month. Payment of an invoice in full must be received by ABBT within thirty (30) days of the date of such invoice.
 - 3.7. **EFFECT OF INVOICE.** The services provided shall be deemed approved and accepted by CLIENT as and when invoiced unless CLIENT objects within fifteen (15) days of invoice date by written notice specifically stating the details in which CLIENT believes such work is incomplete or defective, and the invoice amount(s) in dispute. CLIENT shall pay undisputed amounts as provided for in the preceding paragraph.
 - 3.8. **INTEREST; SUSPENSION OF WORK.** Failure of CLIENT to make full payment of an invoice so that it is received by ABBT within thirty (30) days of the invoice date subjects the amount overdue to a delinquent account charge of one percent (1.5%) of the invoice amount per month, compounded monthly, (18% per annum), but not to exceed the maximum rate permitted by law. Failure of CLIENT to submit full payment of an invoice within thirty (30) days of the date thereof subjects this AGREEMENT and the work herein contemplated to suspension or termination at ABBT's discretion, without penalty or breach of AGREEMENT.
4. **TERMINATION.**

This AGREEMENT may be terminated by either party by written notice should the other party fail substantially to perform its obligations under this AGREEMENT and continue such default after the expiration of a seven (7) day notice period. Either party may terminate this AGREEMENT without necessity of cause upon the expiration of a fourteen (14) day notice period. If this AGREEMENT is terminated by CLIENT in the absence of default by ABBT, ABBT shall be paid for services performed and costs incurred by it prior to its receipt of notice of termination from CLIENT, including but not limited to reimbursement for direct expenses due, wind down costs, not to exceed ten percent (10%) of charges incurred to the termination notice date, to cover services to orderly close the work and prepare project files and documentation, any additional direct expenses incurred by ABBT including but not limited to cancellation fees or charges, plus ABBT's anticipated profit of fifteen percent (15%) of the value of the services not performed by the Architect. ABBT will use reasonable efforts to minimize such additional charges. Upon termination, CLIENT agrees to pay ABBT's final invoice within fifteen (15) days of the invoice date. Within two (2) working days after receipt of final payment, ABBT will mail to CLIENT one set of all completed documents and reports, if not already provided to CLIENT.
5. **DISPUTES, NEGOTIATION, MEDIATION, ARBITRATION, AND ATTORNEY'S FEES.**
 - 5.1. **CHOICE OF LAW FORUM.** This AGREEMENT has been entered into under the laws of the State of California and shall be interpreted and enforced according to the laws of the State of California. The exclusive forum for all disputes shall be located in Santa Clara County, California.
 - 5.2. **DISPUTES AND NEGOTIATION.** The parties will first attempt in good faith to resolve through negotiation between officers or principals of the highest levels of the parties any dispute, claim or controversy arising out of or relating to this AGREEMENT. To facilitate discussions, the parties shall exchange information and documents requested by the other party prior to the negotiations.
 - 5.3. **MEDIATION.** Should a dispute not be resolved by face to face discussions, the parties agree to try to settle disputes through mediation before resorting to arbitration or litigation as required by this AGREEMENT. The mediator shall be an attorney or similar expert experienced in mediating construction and design professional disputes and shall be chosen by mutual agreement of the parties. If no agreement on a mediator can be reached, then a mediator shall be appointed by the Presiding Judge of the Superior Court in and for the County of Santa Clara, California. Each party shall bear its own costs and expenses of the mediation, including attorney's and expert's fees. The fees and costs of the mediator shall be borne equally by the parties.
 - 5.4. **ARBITRATION.** At ABBT's sole discretion, ABBT may elect to have any claims or disputes arising out of this AGREEMENT decided by arbitration in accordance with the rules of JAMS in effect at the time of the demand for arbitration and as amended herein.
 - 5.4.1. If ABBT so elects, a demand for arbitration shall be filed with JAMS. Venue for such arbitration shall be in Santa Clara County, California.
 - 5.4.2. The arbitrator shall be chosen by mutual agreement of all parties and the arbitrator shall follow all California Evidentiary, substantive and procedural law as if tried in a Superior Court of California.
 - 5.4.3. The arbitration award shall be in writing, shall set forth detailed factual findings and conclusions of law supporting the award and shall be final and conclusive as to all parties to such dispute. Should any party fail to pay their fees required by JAMS, fail to appear, or fail to participate in such arbitration proceedings, the arbitrator may decide on the evidence presented in such proceedings by the other party to such dispute.
 - 5.4.4. Rights of appeal shall follow the JAMS Arbitration Appeal Procedure, except the appeal to a JAMS Appeal Panel shall be as if appealed to a California Appellate Court.
 - 5.5. **ATTORNEY'S FEES, COSTS AND EXPENSES.** Should litigation or arbitration occur between the parties, all reasonable litigation or arbitration expenses, collection expenses, witness fees, court costs, and attorney's fees incurred by the prevailing party shall be paid by the non prevailing party to the prevailing party.
6. **NO THIRD PARTY BENEFICIARIES.**

Nothing contained in this AGREEMENT or by the action of any person, shall create a contractual relationship with, any obligation toward or a cause of action in favor of a third party against either ABBT or its consultants or employees.
7. **INSURANCE.**

ABBT is protected by Worker's Compensation Insurance, Professional Liability Insurance, and by General Liability Insurance. Upon request, ABBT will furnish information and Certificates of Insurance. ABBT will not be responsible for any loss, damage or liability beyond the amounts, limits and conditions of such insurance.
8. **WAIVER OF CONSEQUENTIAL DAMAGES.**

TESTING GENERAL TERMS and CONDITIONS

California
(Updated June 2020)

CLIENT and ABBT waive consequential, indirect, special, direct, delay, acceleration and interference damages for claims, disputes or other matters in question arising out of or relating to this AGREEMENT. This mutual waiver is applicable, including but not limited to and without limitation, to all consequential damages due to either party's termination in accordance with this AGREEMENT.

9. ALLOCATION OF RISK AND EXCLUSIVE REMEDY.

- 9.1. ABBT and CLIENT have discussed the risks associated with this project and the extent to which those risks should be shared by ABBT and CLIENT, and have agreed: (a) To the fullest extent permitted by law, CLIENT agrees to limit the liability of ABBT, its officers, employees, and sub-consultants to CLIENT, all landowners, contractors, subcontractors, lenders, suppliers, manufacturers, third parties, and their employees such that the total aggregate liability, including all attorney's fees and costs shall not exceed \$50,000.00, but in no case greater than the available proceeds under ABBT's professional and general liability insurance. (b) All damages such as loss of use, profits, anticipated profits, and the like losses are consequential damages for which ABBT is not liable. (c) ABBT is not responsible for the acts, errors or omissions of CLIENT, any contractor or supplier. (d) CLIENT shall give written notice to ABBT of any claim of negligent act, error or omission within one (1) year after the completion of the work performed by ABBT. Failure to give notice herein required shall constitute a waiver of claims by CLIENT. If prior to CLIENT's acceptance of ABBT's proposal, CLIENT requests the limitation of liability to be greater than the limit specified above, CLIENT may pay a surcharge of 2% of the project fee. If the client accepts the 2% insurance fee, this cost will be added to every invoice.
- 9.2. If prior to CLIENT's acceptance of ABBT's proposal, CLIENT requests the limitation of liability to be greater than the limits of the available insurance coverage, ABBT will obtain professional and general liability insurance coverage for the greater requested limits, if available. The cost to obtain the additional insurance coverage shall be paid by CLIENT.
- 9.3. If, after prompt written notice by CLIENT of any dissatisfaction with services of ABBT, and after inspection or review by ABBT of the services, ABBT determines the services did not comply with this Agreement, ABBT, at its sole option, will redo the services or refund an appropriate portion of the fee paid for the service. This remedy of redoing a service or refunding a fee as provided for herein is the sole and exclusive remedy of CLIENT for any and all claims arising out of this Agreement.

10. CORPORATE PROTECTION.

In no event shall the officers, directors, owners or employees of CLIENT or ABBT be personally liable for any obligation under this AGREEMENT, for any alleged breach of this AGREEMENT, for any direct, indirect, incidental or consequential losses or damage of any kind or nature whatsoever. The Parties agree that the sole and exclusive remedy by all Parties for any and all obligations and claims shall be against the contracting entities (e.g., public entities, corporations, partnerships and sole proprietors) and not against any owner, shareholder, officer, director or employee. CLIENT and ABBT expressly waive any applicable statute or regulation to the contrary.

11. The AGREEMENT represents the entire and integrated AGREEMENT between the CLIENT and ABBT and supersedes any prior negotiations, representations or contracts, whether written or oral, and may be amended only by written instrument signed by both the CLIENT and ABBT. If any provision or part of this AGREEMENT, including these General Terms and Conditions, are held to be ambiguous, void or unenforceable under any laws or regulations or by any arbitrator, court or administrative agency, then such ambiguous, void or unenforceable provisions shall be rewritten and enforced to the maximum extent permitted by law to accomplish as near as possible the intent of the original provision.

12. PROPOSAL VALID FOR 60 DAYS.

This fee proposal will remain valid for 60 days from date of issuance.

13. NOTICE.

Any notice required under this AGREEMENT shall be in writing addressed to the appropriate party at its address set forth in this AGREEMENT and either delivered personally to that party or mailed by registered or certified mail, postage prepaid, or by commercial courier service. All notices shall be effective as of the date of receipt.

14. SURVIVAL OF TERMS.

All terms included in this AGREEMENT, including these General Terms and Conditions, shall survive the completion or termination of AGREEMENT for any reason.

15. NONWAIVER.

Non-enforcement of any provision of this AGREEMENT by either party shall not constitute a waiver of that provision and shall not affect the enforceability of that provision or of the remainder of the AGREEMENT. One or more waiver of any term, condition or other provision of this AGREEMENT by either party shall not be construed as a waiver of a subsequent breach of the same or any other provision.

16. PRECEDENCE OF CONDITIONS.

Should any conflict exist between the terms herein and the terms of any purchase order or confirmation issued by CLIENT, the terms of these Standard Conditions shall prevail in the absence of ABBT's express written agreement to the contrary.

17. FORCE MAJEURE.

Any delay or default in the performance of any obligation of ABBT under this AGREEMENT resulting from any cause(s) beyond ABBT's reasonable control shall not be deemed a breach of this AGREEMENT. The occurrence of any such event shall suspend the obligations of ABBT as long as performance is delayed or prevented thereby, and the fees due hereunder shall be equitably adjusted.

18. **CONFLICTS OF INTEREST** – ABBT's services may presently or in the future involve parties with interests potentially adverse to those of ABBT's existing or future clients ("Affected Client(s)"). ABBT has made reasonable efforts to identify any Affected Clients based on information in ABBT's possession. ABBT will inform the CLIENT as to the identity of such parties. CLIENT agrees to allow ABBT to release to any Affected Client the fact of ABBT's engagement by the CLIENT and any other information required to evaluate any potential conflict. Regardless of ABBT's relationship with an Affected Client, ABBT shall be entitled to payment for all services rendered to the date of discovery or notice, whichever occurs first, of a relationship between ABBT and an Affected Client. ABBT does not guarantee that an actual or potential conflict between the CLIENT and an Affected Client will not arise during the course of this assignment or thereafter. ABBT disclaims responsibility for such actual or potential conflict and to the fullest extent permitted by law, the CLIENT agrees to waive any claim and conflict against ABBT arising out of any such actual or potential conflict.



EXHIBIT A
ABBT
Standard Schedule of Fees
(Updated June 2020)

When Fees for services are based on the actual hours worked on the project by position, the billing rates will be in accordance with the following schedule:

Position	Rate
Principal I	\$ 270.00
Principal II	\$ 290.00
Principal III	\$ 330.00
Principal IV	\$ 380.00
Associate I	\$ 210.00
Associate II	\$ 230.00
Associate III	\$ 240.00
Associate IV	\$ 250.00
Consultant I	\$ 170.00
Consultant II	\$ 190.00
Consultant III	\$ 210.00
Consultant IV	\$ 230.00
Construction Manager I	\$ 160.00
Construction Manager II	\$ 180.00
Construction Manager III	\$ 200.00
Executive Project Manager	\$ 230.00

Position	Rate
Building Technologist I	\$ 150.00
Building Technologist II	\$ 160.00
Building Technologist III	\$ 170.00
Field Monitor I	\$ 130.00
Field Monitor II	\$ 140.00
Field Monitor III	\$ 150.00
Field Monitor (Part-Time)	\$ 160.00
CAD Graphics Specialist I	\$ 140.00
CAD Graphics Specialist II	\$ 150.00
CAD Graphics Specialist III	\$ 160.00
Admin Services	\$ 100.00
Forensic Document Specialist	\$ 160.00
IT Consultant	\$ 160.00



EXHIBIT B
ABBT
Standard Reimbursable Schedule
(Updated June 2020)

1. All invoices for sub-contractors and sub-consultants retained by ABB shall be reimbursed based on sub-consultants or sub-contractors invoice plus a 15% service charge. Alternately, CLIENT may enter into an agreement with the subcontractor or sub-consultant directly.
2. All outside vendors, rental costs, travel costs and expenses utilized for the project such as, airline travel, car rental, man lift rental, staging costs, reproduction, etc shall be invoiced to CLIENT, plus a 15% service charge.
3. Automobile expenses for personal or company vehicles will be charged at the Internal Revenue Service reimbursement rate in effect at the time the expense was incurred. Travel time is calculated from portal to portal, or round trip to the local ABB office.
4. Reproduction costs for in-house plotting are \$1.50 per square foot; color photocopying is \$0.85 per 8 1/2" x 11" page. Cost of black and white photocopying is \$0.10 per 8 1/2" x 11" page. Black and white printing on special paper is \$0.20 per page. Cost of color printing and photocopying is \$0.85 per 8 1/2" x 11" page.
5. Delivery or shipping charges for samples, field testing equipment, etc. Laboratory equipment and instrumentation directly identifiable to the project. Purchase of specialized equipment and rental of equipment from outside vendors.
6. Photographs for project records and reproductions of drawings and reports. Photographs are charged at a flat rate of \$35/roll of film including processing and handling. Digital photos are charged at a flat rate of \$0.25 per image. Digital photos copied on to a CD or DVD are charged at a flat rate of \$35 per disk. Digital photo reproduction for reports will be invoiced at \$1.50/sheet.
7. Airfare, rental vehicles, other transportation, and living expenses incurred for out-of-town projects. Principals will travel on business class or better for flights longer than 2 hours in order to make efficient use of travel time.
8. For out-of-town travel, per diems will be charged according to published U.S. government rates.
9. Equipment and Other Reimbursable Expenses:
 - 9.1. Boroscope usage will be invoiced at \$200/day.
 - 9.2. Nuclear Moisture Gauge usage will be invoiced at \$600/day.
 - 9.3. Fastener Pull Test Gauge usage will be invoiced at \$200/day.
 - 9.4. Ultrasonic Thickness Gauge usage will be invoiced at \$200/day.
 - 9.5. Infrared imaging will be invoiced at \$250/day.
 - 9.6. X-Ray imaging will be invoiced at \$500/day for equipment rental, plus \$100 per image.
 - 9.7. Single Ply Membrane Seam Testing will be invoiced at \$250/day, plus \$25 per test.
 - 9.8. Rebar size and cover meter usage will be invoiced at \$200/day.
 - 9.9. Half cell, potential for corrosion meter will be invoiced at \$250 per day.
 - 9.10. Impact echo testing equipment will be invoiced at \$500 per day.
 - 9.11. Spray rack(s) for water testing will be invoiced at \$300/day.
 - 9.12. Sample storage fee is \$50 per month after the first 60 days of in-house storage.
 - 9.13. Publications or other reference material needed to complete projects including AIA, AAMA, ASTM, NRCA, ASCE, ASHRAE, and similar standards.
 - 9.14. Preparation and printing of AIA contract documents using metered AIA contract document software.
 - 9.15. Reproduction costs for all outsourced printing, plotting photocopying, binding and other reproduction services.
 - 9.16. Specialized sounding equipment for detection of delaminating or spalling concrete will be invoiced at \$50/day.
 - 9.17. Blower fans and room pressurization equipment will be invoiced at \$250/day.
 - 9.18. Electronic Leak Detection Equipment will be invoiced at \$250/day.
 - 9.19. Temperature and Humidity Data Loggers will each be invoiced at \$25/day.
 - 9.20. Calcium Chloride Testing will be invoiced at \$50/test.
 - 9.21. Exterior Glazing Transmission will be invoiced at \$250/day.
 - 9.22. AMMA Nozzle (Spray Wand) will be invoiced at \$75/day.
 - 9.23. Strainoptics Roller Wave Gauge will be invoiced at \$300/day.
 - 9.24. Flir Exttech
 - 9.24.1. Thermo Anemometer will be invoiced at \$25/day.
 - 9.24.2. IR Thermometer and Humidity Meter will be invoiced at \$25/day.
 - 9.25. Elcometer Paint and Powder Gauge will be invoiced at \$45/day.
 - 9.26. Delmhorst Moisture Meters will be invoiced at \$50/day.
 - 9.27. Tramex
 - 9.27.1. Deck Scanner will be invoiced at \$675/day.
 - 9.27.2. Relative Humidity Probe will be invoiced at \$100/day/
 - 9.27.3. CRH Data Logger will be invoiced at \$50/day.
 - 9.27.4. Moisture Encounter Plus will be invoiced at \$50/day.
 - 9.28. Booster Pump for Spray Racks will be invoiced at \$130/day.