

CITY OF DELRAY BEACH
Lowson Blvd from Dover Rd to SE 5th Ave (US1/Federal Highway)
LAP Project FM No. 436896-1-58-01
Federal Aid Project ID D418-024-B

Baxter & Woodman, Inc.
Agreement for Construction Engineering & Inspection Services
(Revised 5/12/21)

I. PROJECT DESCRIPTION

This Scope of Services by Baxter & Woodman, Inc. (Consultant) provides Construction Engineering and Inspection (CEI) services for the construction of Lowson Boulevard from Dover Road to SE 5th Avenue (US1/Federal Highway) for the City of Delray Beach, Florida. The project includes generally the mill and overlay of single-lane and two-lane undivided roadway section, segments with the addition of curbing, traffic signage, pavement markings, a pedestrian bridge on the north and the south sides of Lowson Boulevard over the LWDD E-4 Canal, signalization improvements at various intersections, and drainage structure and swale improvements.

The Lowson Boulevard project is funded by both the City and the Florida Department of Transportation (FDOT) under the Local Agency Program. In addition to the CEI services, Consultant shall provide Public Involvement services, agency and utility coordination, and LAP Administration services during the 19.5-month construction period.

II. SCOPE OF SERVICES

Task 1 – Construction Administration

Consultant shall provide CEI services as identified and further detailed below:

Task 1.1 – Constructability Field Review

CEI shall conduct a field review of the Design Drawings to determine if there are any constructability issues or conflicts not shown and address these items prior to construction. CEI will coordinate a meeting with City and CEI Project Engineer to discuss any discovered issues and recommendations to resolve.

CEI shall administer a time extension with Palm Beach County for the existing ROW permit that has expired.

Task 1.2 - Preconstruction Conference

CEI shall prepare the agenda and facilitate the pre-construction conference with the City's awarded Contractor and City staff. CEI will coordinate with all associated Permitting Agencies to attend the meeting. CEI will prepare and issue written minutes of meeting.

Task 1.3 – Submittal Review

CEI shall receive, log, and review shop drawings and product submittals for general conformance with the design intent and provisions of the Contract Documents. Review of up to 130 submittals (total, which includes submittals and re-submittals, if required) is included in the budget for submittal review. CEI will review and return submittals to City and Contractor within 14 days of receipt. Submittals shall be in electronic format unless otherwise approved.

Task 1.4 – Progress Meetings

CEI shall attend construction progress meetings with the City and Contractor once per month and provide an agenda and written summary of the issues discussed. Project meetings will be conducted by the Construction Manager with the Resident Project Representative also in attendance depending on work activities. Following the meeting, the Construction Manager will prepare and distribute meeting minutes to the City and other attendees. Meetings will be held virtually until such time that in person meetings are allowed at the City facilities. Nineteen (19) progress meetings are included in the budget for this task.

Task 1.5 – Pay Estimate Review

CEI shall review monthly payment applications (total of 19) submitted in a format acceptable to the City. Consultant shall verify the quantities as represented on the pay request and make a recommendation to the City to proceed with the payment as requested, or as modified based on CEI review. A 19.5-month construction period is assumed for budgeting this task.

Task 1.6 – Construction Schedule Review

CEI shall monitor the construction schedule monthly and report to the City conditions which may cause delay in completion. If schedule slippage is identified, the CEI will notify the Contractor in writing and request the Contractor to provide a recovery plan.

Task 1.7 - Construction Clarifications

CEI shall respond in writing to Contractor's Request for Information (RFI) regarding the design documents. Consultant shall issue design interpretations and clarifications of the Contract Documents, along with associated support materials, as requested by the Contractor. This task also includes coordination with the design engineer regarding

original design intent. These interpretations will be rendered and a response prepared and submitted to the Contractor in a timely manner.

Task 1.8 – Construction Claims and Changes

CEI shall prepare and negotiate City requested or Contractor initiated Change Orders (CO) and Work Change Directives (WCD) as required during the 19.5-month construction period.

CEI will also review and respond to all Contractor delay claims or requests for compensation, and respond per the Contract Documents.

Task 1.9 – Quality Assurance Program

CEI shall develop a QA Plan and furnish the QA Plan to the City Project Manager for notification. The QA Plan shall detail the procedures, evaluation criteria, and instructions of the Consultant's organization for providing services pursuant to this Agreement.

CEI shall maintain all necessary records for QA Plan compliance and initiate QA Plan Review to make any necessary revisions during the Construction Project.

Task 1.10 – Material Sampling Verification Testing

CEI shall track and oversee Contractor's testing lab for all specified material sampling and testing and verify chain of custody. CEI shall also review signed and sealed reports from testing agencies for compliance.

As required by FDOT Standard Specifications or deemed necessary by the City, the CEI shall provide testing lab for verification purposes.

Task 1.11 - Certification of Construction Completion

CEI shall notify the City, FDOT and Contractor in writing once the Project is deemed to meet Contract Completion milestones. CEI shall certify based on visible project features inspections, and review of testing reports that the project was constructed in accordance with the plans and specifications, and all permit conditions.

CEI shall also prepare and submit certification packages to the applicable permitting agencies once it is determined that the construction work has been completed in substantial conformation with the conditions of the approved permits. These include the SFWMD, LWDD and Palm Beach County Land Development – ROW Division.

Task 1.12 - Substantial and Final Inspections

In conjunction with FDOT & City staff, CEI shall make preliminary and final inspections and assist in the preparation of a Project Completion "punch list" to achieve Final

Completion. CEI shall review completion of identified punch list items to assist in the determination that Final Completion has been achieved by the Contractor. CEI shall administer FDOT LAP Final Completion procedures, advise the City, and provide formal notice to the Contractor once Final Acceptance of the project has been reached in accordance with the Contract Documents.

Item 1.13 – Record Drawings

CEI shall review monthly progressive as-built record drawings from the Contractor and provide comments to achieve the final set of as-built record drawings upon Final Completion.

Item 1.14 – FDOT LAP Administration

CEI shall provide full LAP Administration services and Compliance Specialist for the duration of the Construction Contract, including provision of all necessary LAP Closeout Procedures. CEI shall maintain all required records for FDOT LAP Compliance and upload to LAPIT as Required.

CEI shall conduct LAP Administration compliance review meetings with City and FDOT as required following Bi-Monthly Progress Meetings.

Item 1.15 – Utility & Public Agency Coordination

CEI shall coordinate and assist the City regarding utility coordination with FPL, Comcast, AT&T, Palm Beach County Traffic and other utility providers in the project area. Work will include attendance at monthly Utility Coordination Meetings. CEI shall prepare and maintain the utility tracking spreadsheet.

CEI shall coordinate with LWDD for the pedestrian bridges construction work located within the E-4 Canal ROW.

Item 1.16 – NPDES Compliance Verification

CEI shall coordinate for the Contractor to submit the NPDES NOI and NOT for the project; shall monitor the Contractor's adherence to the requirements of the SWPPP; and shall collect and monitor the Contractor's reporting as required under the NPDES permit requirements.

Task 2 – Inspection Services

Consultant shall provide a full-time (40 hours/week) Inspector during the construction (assumed 17.5-months) of the work (for a total of 2,864 hours) for the construction contract. Activities performed by Consultant under this task consist of furnishing an Inspector during the construction of the project, to observe the quality of the construction work; Contractor's conformance to FDOT Big 4 LAP Specifications; and to determine in general, if the construction is proceeding in accordance with the contract documents so that an engineering certification can be made regarding the construction of the proposed improvements.

Baxter & Woodman, in conjunction with our sub-consultant Terracon, shall provide the commercial inspections for the structural components of the pedestrian bridges as required in Section 23.6.2 of the FDOT LAP Manual.

The Inspector shall:

- Serve as Consultant's liaison with construction contractor, working principally through the contractor's superintendent and assisting him in understanding the intent of the contract documents.
- Conduct on-site observations of the work in progress to assist in determining if the work is proceeding in accordance with the contract documents and that completed work conforms to the contract documents. Consultant's Project Manager shall report, in writing to the City, whenever Consultant believes that work is unsatisfactory, faulty or defective, or does not conform to the contract documents, or does not meet the requirements of inspections, tests or approval required to be made, or has been damaged prior to final payment.
- Accompany visiting inspectors representing permit or regulatory agencies having jurisdiction over the project. Record in writing, the outcome of these inspections and report same to City.
- Consider and evaluate construction contractor's suggestions for modifications in drawings or specifications and report them to the City, in writing. CEI's Construction Manager shall make recommendation for action by the City.
- Review Contractor's As-Built Record Drawing information on a monthly basis to confirm proper updates are being made.
- Assist the Contractor in coordinating all required materials and density testing, as required by the Construction Documents.
- Inspector shall work with the Contractor and develop a Daily Pay Item Quantity Sheet (based on the approved Schedule of Values) to be reviewed and accepted each day agreeing to the quantities of Schedule of Value items installed.

LIMITATIONS OF AUTHORITY

Limitations of Inspector Authority. Except upon written instructions from the City, Inspector:

1. Shall not exceed limitations on CEI's authority as set forth in the Contract Documents.
2. Shall not undertake any of the responsibilities of Contractor, Subcontractors or CEI Construction Manager, or expedite the Work.
3. Shall not issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.

4. Shall observe and oversee but not participate in specialized field or laboratory tests.

Task 3 – Public Outreach

CEI shall lead two (2) public outreach meetings one (1) with City and CEI Team and one (1) with the City's awarded Contractor, either Virtually Online or at the City's Swinton Operations Center. This task shall include preparing meeting notifications, brochures and presentation material for the meetings.

CEI shall develop and update project website and social media site for updates on the construction progress on a routine basis.

CEI shall administer a Project Hotline and Resident's Concern Log to administer items for the Contractor to address and track the status of resolution on all items. The City will be updated by the CEI Team at each progress meeting for the duration of the project.

The CEI will provide a Public Information Officer to provide services to keep the community aware of the status and traffic impacts of the referenced project. With approval from the City's designee, prepare and disseminate information to the public, elected officials and the media of any upcoming events, which will affect traffic flow. CEI's Representative shall produce and distribute all publications, letters, door hangers, mail notifications to homeowners (including postage), flyers, brochures and news releases to the public as necessary for this construction contract. Prior to release, the City's designee will approve all responses, letters, news releases and the like.

As part of the Public Outreach Task, CEI shall supply Drone for aerial video and photographs to be taken prior to commencement of construction and at a 4-month interval thereafter. The Drone Footage displaying the progress of construction, will be made available to the public through the Project Website and Social Media. The Drone Video and photographs shall be reviewed by the CEI Construction Project Manager prior to distribution to City and the Public.

Task 4 – FDOT LAP Administration

CEI shall provide full LAP Administration services and Compliance Specialist for the duration of the Construction Contract, including provision of all necessary LAP Closeout Procedures. CEI shall maintain all required records for FDOT LAP Compliance and upload to LAPIT as Required.

CEI shall conduct LAP Administration compliance review meetings with City and FDOT as required following Monthly Progress Meetings.

ADDITIONAL SERVICES

Supplemental Surveying Services

CEI Team shall provide a State Licensed Surveyor to provide services supplemental to the Contractor's surveyor. Services will be provided when requested by the City, and may include

work such as: survey check of the established the survey control baseline(s) along with sufficient baseline control points and bench marks at appropriate intervals along the project in order to:

- Make and record measurements necessary to calculate and document quantities for pay items.
- Make and record pre-construction and final cross section surveys of the project site in those areas where earthwork (i.e., embankment, excavation, subsoil excavation, etc.) is part of the construction project.
- Perform incidental Engineering Surveys for compliance with City, State, and Americans with Disabilities Act (ADA) regulations.

III. TIME OF PERFORMANCE

The completion dates for this work will be as follows (starting at written notice-to-proceed). Refer to Attachment A.

<u>CEI Services</u>	<u>Time per Phase</u>
Task 1 – Construction Admin	19.5 months
Task 2 – Inspection Services	17.5 months
Task 3 – Public Outreach	19.5 months
Task 4 – FDOT LAP Admin	19.5 months
Additional Services	As Requested

VI. COMPENSATION

The compensation for CEI services provided shall be billed on an hourly basis plus reimbursable expenses for each phase of work, up to the following not to exceed cost for each phase. Refer to *Fee Estimate* attachment for budget summary.

<u>CEI Services</u>	<u>Estimated Fees</u>
Task 1 – Construction Administration	\$ 241,422.76
Task 2 – Inspection Services	\$ 307,164.00
Task 3 – Public Outreach	\$ 31,215.36
Task 4 – FDOT LAP Compliance	\$ 52,981.52
Supplemental Survey Services	\$ 15,000.00
Geotechnical Services	\$ 73,799.00
Direct Expenses	\$ 9,000.00 ⁽¹⁾
TOTAL PROJECT COST	\$ 730,582.64

Notes:

⁽¹⁾*Out-of-Pocket Expenses include the following: printing/reproduction, postage, travel, website.*

Baxter & Woodman, Inc. - Fee Estimate
City of Delray Beach, Project No. 17-004
Lowson Blvd from Dover Rd to SE 5th Ave (US1/Federal Highway)
LAP Project FM No. 436896-1-58-01; Federal Aid Project ID D418-024-B

5/11/2021

***Hours of work are estimated and may not represent the actual hours required to complete the project.**

Direct Expenses:

Seacrest Ph3 budget \$1500 (spent \$675), say \$1000 x (2.357mi/0.397mi) = \$5,937 (Flyers, Door Hangers, Website Fees, postage, etc.)

Est 3 Trips for Structural Review @ \$300/flight RT + \$360 for 2 nights night hotel + \$200 ground transportation + \$75/day meals x 2 days = say \$1,000 per trip x 3 trips = \$3,000

Trips for Pile Inspection, Bridge Erection & Final Walkthrough Inspection

$$\text{TOTAL} = \$6,000 + \$3,000 = \$9,000$$

Baxter & Woodman, Inc. - Estimated Staffing for CEI Services
City of Delray Beach, Project No. 17-004
Lowson Boulevard from Dover Rd to SE 5th Ave (US1/Federal Highway)
LAP Project FM No. 436896-1-58-01; Federal Aid Project ID D418-024-B

Note: Hours of work are estimated and may not represent the actual hours required to complete the project.

POSITION	2021												2022												2023												TOTALS
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug							
Principal/Sr. Engineer					6.00	10.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	10.00	4.00									62.00				
Sr. Structural Engineer					19.00	37.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	36.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	21.00	9.00									167.00				
Senior Engineer					8.00	19.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	33.00	41.00								277.00					
Sr Eng/Construction Manager					64.00	76.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00	93.00	65.00								1130.00					
Engineer II					26.00	22.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	0.00								116.00				
Sr. Construction Manager					15.00	10.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	21.00								148.00					
Sr. Inspector							106.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	106.00								2148.00			
Inspector							10.00	23.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	23.00	16.00							716.00				
Marketing Prof/Community Involvment					43.00	27.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00								104.00					
Admin Support					38.00	25.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00								97.00					
Subtotal Staff-Months					0.00	0.00	219.00	226.00	198.00	226.00	249.00	249.00	249.00	249.00	249.00	249.00	282.00	249.00	249.00	249.00	249.00	249.00	315.00	262.00	0.00	0.00	0.00	0.00	0.00	4965.00							

Estimated Start Date: July 2021
Estimated Duration (Days): 585 days
Estimated Duration (Months): 19.5 months
Estimated Completion Date: Feb 2023



DENNIS J. LEAVY & ASSOCIATES, INC

Land Surveyors • Mappers



2021 DJLA Hourly Rates

Principal	\$140.00/hr.
Professional Surveyor and Mapper	\$125.00/hr.
Field Survey crew (truck, conventional survey equipment)	\$140.00/hr.
Survey Associate.....	\$100.00/hr.
Computer Draftperson	\$ 85.00/hr.
Office	\$ 75.00/hr.
Prints	\$ 1.00/s.f.

March 12, 2021
Revised May 11, 2021



Baxter & Woodman Consulting Engineers
477 S. Rosemary, Ste 228
West Palm Beach, Florida 33401

Attn: Mr. Aaron Cutler, CGC, PMP
Email: acutler@baxterwoodman.com

RE: **Proposal for Materials Testing Services**
Lowson Boulevard Verification Testing
Lowson Blvd from Dover Road to SE 5th Ave
Delray Beach, Florida
Terracon Proposal No.: PHB211023

Dear Mr. Cutler:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to provide Materials Testing Services for the above referenced project. Terracon is an employee-owned firm of consulting engineers and scientists providing multiple, related service lines to clients at local, regional, and national levels. Our services are delivered on a timely basis with attention to our client's needs, which attributes to Terracon's success in consistently achieving growth above the industry average.

This project will be serviced out of our West Palm Beach facility which is located about 20 miles from the project. The West Palm Beach facility provides a full complement of materials testing, geotechnical, and environmental services and is fully accredited by FDOT and CMEC. This facility routinely performs laboratory Verification Testing for FDOT on an assigned project basis. Additionally, the facility has qualified staff who are experienced with FDOT procedures for sampling, testing, and data reporting. We believe that our experience will add value to this project and expedite the materials testing services during the construction.

A. PROJECT INFORMATION

The project is located at Lowson Boulevard from Dover Road to SE 5th Street in Delray Beach, Florida. The City of Delray Beach project is partially funded by federal aid through the FDOT Local Agency Program (LAP). We understand the frequency requirements for sampling and testing will be in accordance with the project's Technical Specifications which include the FDOT "Big Four" Specifications for Off-System Projects, and **FDOT Standard Specifications for Road and Bridge Construction, January 2020**.

Terracon Consultants, Inc. 645 NW Enterprise Drive, Suite 107 Port St. Lucie, Florida 34986
P [772] 343-9787 F [772] 343-9404 terracon.com

The project will generally involve new construction of shared use paths or sidewalks on both sides of the existing roadway, reconstruction of a 1,310 lineal foot (lf) section of existing roadway, sections of variable roadway widening up to 7 feet with exception to one section which is 12 feet, installation of stabilized curb on one or both sides of the existing roadway, and sections of stabilized shoulder. A breakdown of these areas is provided below.

- Roadway Reconstruction (with stabilized curb)
 - 8th Ave to 4th Ave
 - 1,310 lf Full-width
- Roadway Widening (with stabilized curb)
 - E-4 to Congress Ave
 - 1,030 lf 10-ft wide
 - 13th Ave to 10th Ave
 - 1,220 lf 0 to 7-ft wide
 - 2nd Ave to Swinton Ave
 - 800 lf 0 to 6-ft wide (both sides of roadway)
- Stabilized Curb-Only
 - E-4 to Congress Ave
 - 1,030 lf
 - SF RT A Railroad to 17th Ave
 - 480 lf (both sides of roadway)
 - 13th Ave to 10th Ave
 - 1,220 lf
 - Swinton Ave to Miami Blvd
 - 520 lf (both sides of roadway)
 - Miami Blvd to U.S. 1
 - 1036 lf
- Stabilized Shoulder-Only
 - Dover Rd to East of E-4
 - 3,500 lf (both sides of roadway)
 - 17th Ave to 13th Ave
 - 900 lf (both sides of roadway)
 - 10th Ave to 8th Ave
 - 640 lf
 - 4th Ave to 2nd Ave
 - 550 lf (both sides of roadway)
 - Miami Blvd to US 1
 - 1036 lf

Proposal for Materials Testing Services

Lowson Boulevard Verification Testing ■ Delray Beach, Florida
March 12, 2021 ■ Proposal No.: PHB211021



The project will also involve installation of a prefabricated steel truss pedestrian bridge supported by driven precast concrete piles, installation of stormwater drainage components, construction of concrete driveways, and ancillary items such as guardrail, signaling, signage, and striping.

In addition to the general project information listed above, our estimate is based on the projected quantities provided in the contract bid documents, which were provided to us for our use in generating this fee proposal.

We understand an alternate construction method is provided for the shared use path construction. Our budget estimate is based on construction with 6-inches of concrete; Alternative 1 provides for construction with a stabilized subgrade, base course, and two lifts of asphalt. Additional laboratory samples for stabilized subgrade and base course samples would be required for Alternative 1. The quantity of additional samples would be dependent on the size of each lot, i.e. the contractor's construction sequence. We estimate 2 to 3 additional LBR samples for each material.

B. SCOPE OF SERVICES

Terracon will provide qualified technicians as appropriate for Verification Testing (VT) Services associated with this project and as dictated by the type and pace of construction. Frequency requirements for sampling and testing will be in accordance with the applicable FDOT specifications.

The on-site technical staff will report to Terracon's Project Manager. We anticipate the following materials testing related services will be provided:

Field Earthwork Testing

An Engineering Technician will perform sampling and in-place density testing of embankment/compacted subgrade, stabilized subgrade, pipe backfill, and base materials as outlined in Sections 120, 125, 160, and 200 of the FDOT specifications. Bulk samples of embankment/backfill, stabilized subgrade, and base material will be collected for subsequent laboratory testing.

Terracon does not anticipate that the FDOT Earthwork Logbook System will be required on this project.

Field Concrete Testing

An Engineering Technician will perform plastic properties tests on structural concrete as outlined in Sections 346 and 400 of the FDOT Standard Specifications. The technicians will obtain representative samples of freshly placed concrete for each lot. The concrete will be tested for slump, temperature, and air content, and water-cement ratios will be calculated based on batch information. Four compressive strength test specimens, including two "hold" cylinders will be

Proposal for Materials Testing Services

Lowson Boulevard Verification Testing ■ Delray Beach, Florida
March 12, 2021 ■ Proposal No.: PHB211021



molded for each lot. Plastic properties data will be entered into Terracon's proprietary reporting system and reports issued after 28-day compressive strength results are obtained.

Concrete testing of shared use paths, sidewalk, curb, and driveways is non-structural and therefore not required to be tested per FDOT specifications, however, we have allotted a small amount of testing to be performed at the discretion of the Engineer.

Terracon is not responsible for lost or damaged cylinders at the jobsite. Storage and protection of the cylinders will be the responsibility of the contractor.

Laboratory Testing

Laboratory moisture-density relationship tests (AASHTO T-99 or T-180) and soil classifications will be conducted on the soils used as backfill, embankment, stabilized subgrade, and base course material.

Limerock Bearing Ratio (LBR) tests will be performed on the stabilized subgrade and base course materials.

Organic content and Atterberg limits will be measured for the stabilized subgrade and base course materials.

Laboratory compressive strength testing of concrete samples at 28-days of age will be performed on the concrete used for construction.

Asphalt Plant Testing

An Engineering Technician will perform Asphalt Plant Testing to check material conformance to applicable specifications described in *Section 334, Hot Mix Asphalt for Lap (Off-System)* projects. We understand roadway core samples will be cut by others.

PDA & Pile Driving Inspection

Deep Foundation Testing (PDA)

Terracon will provide a Geotechnical Engineer equipped with a Pile Driving Analyzer (PDA) to monitor test piles for the pre-stressed driven piles supporting the planned steel truss pedestrian bridge. Two test piles and six production piles are depicted in the project plans. We anticipate the two test piles will be driven on separate days. The PDA results for each test pile will be analyzed followed by submission of a letter addressing pile length and driving criteria.

Pile Driving Inspection

A Pile Driving Inspector will perform inspection of the driven production piles installed for the pedestrian bridge. We understand there will be six production piles. We have allotted four days for installation of the production piles.

Engineering & Reporting

Our professional staff will coordinate the aforementioned inspection and test program, review the test results, and consult on an as-needed basis.

Adjustments to the estimated scope described above may be necessary if additional project information and/or specifications related to our work are altered. If you would like us to perform additional services beyond the scope described above, we will issue a Supplemental Change Order outlining the additional work to be performed and the associated fees.

C. ADDITIONAL SERVICES

Terracon can perform the following additional service upon written request and adjustment to our total estimated fee.

Vibration Monitoring

We understand vibration monitoring at existing structures is required by the contractor. Terracon is prepared to provide these services should they be required or requested by the Engineer. Unit rates for vibration monitoring are included in the attached cost estimate.

D. SAFETY

At Terracon, we all have a personal commitment to everyone going home safely each and every day. Incident and Injury-Free (IIF) is about care and concern for people. Safety is held as a core value as well as an operational priority. We are proud that our safety initiatives have resulted in a **2020 EMR of 0.86**.

As a supplement to Terracon's safety culture, each employee receives safety training specific to the job function and/or project assigned through one-on-one discussions, safety conference calls, or web-based training seminars. The majority of our field staff in the construction services group has attended the **OSHA 10-hour Construction Safety Training**. IIF is not just something we do; it's part of everything we do.

E. SCHEDULING

Terracon anticipates 5-day work weeks (Monday through Friday, 8 a.m. to 5 p.m.). Our services will be performed on an as-requested basis with scheduling by the client or his designated

personnel. We request our services be scheduled a minimum of one working day in advance. We request a notice of two working days prior to the commencement of each category of activities. We will endeavor to schedule services on lesser notice, but may not always be able to meet the desired project schedule. All requests for services should be submitted to our local West Palm Beach office phone (561) 689-4299 **between 8:00am and 5:00pm, Monday through Friday.** **Messages left on the scheduling line outside of these hours on weekdays or on Saturday, Sunday and Holidays will be received the next business day.**

Terracon will not be responsible for scheduling our services and will not be responsible for tests/inspections that are not performed due to a failure to schedule our services on the project or any resulting damage.

F. COMPENSATION

Based on the quantities and durations described above, we have developed an estimated not-to-exceed fee of **\$73,799.00** for the Materials Testing Services associated with this project. This estimated fee includes the tasks listed on the following page which are shown in more detail on the *Materials Testing Estimate, Exhibit A*.

Item Description	Fee
Earthwork Testing	\$26,925
Concrete Testing	\$2,850
Laboratory Testing	\$8,770
Asphalt Paving Inspection	\$8,400
PDA & Pile Driving Inspection	\$12,404
Engineering & Reporting Services	\$14,450
TOTAL ESTIMATED FEE	\$73,799*

*For bidding purposes, we have made the following assumptions: 1) the work will be constructed in segments per the Typical Sections shown in the project plans and that base and stabilized subgrade will be sampled on a lot basis; it is important to note that lot size will ultimately be dictated by the contractor as isolated mixing/compaction operations are considered separate lots); 2) curb pads will be constructed separately; 3) witnessing of stabilized mixing depths, bases thickness, and base surface checks will be performed by Baxter & Woodman; 4) stabilized subgrade will be non-plastic and therefore Atterberg limits testing will not be required, i.e., is not included in cost.

We have not provided any contingencies for issues such as schedule delays, re-tests due to failing test results, informational testing, or exceeding the projected quantities.

A contract/construction duration, detailed project schedule, or sequence of construction for this project has not been provided to us. Therefore, this proposal is based on the quantities listed in the contract bid documents provided to us for bid preparation and other assumptions. Terracon requests the opportunity for review of a detailed construction schedule and sequence once developed so that if any of the preliminary information or assumptions are inconsistent with the planned construction, we can make any necessary modifications to this proposal.

G. TESTING AND OBSERVATIONS

Client is responsible for notifying Terracon so that we can perform these services. Terracon shall not be responsible for the quality and completeness of the contractor's work or their adherence to the project documents, and Terracon's performance of testing and observation services shall not relieve the contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. Terracon will not supervise or direct the work performed by the contractor or its subcontractors and is not responsible for the contractors' means and methods.

H. AUTHORIZATION

This proposal may be accepted by executing the attached Agreement for Services (Agreement) and returning one executed copy along with this proposal via email (kimberly.roberts@terracon.com). This Agreement, including the limitations it contains, shall constitute the exclusive terms, conditions and services to be performed for this project.

Again, we greatly appreciate the opportunity to provide this revised proposal for our services during construction. If you have any questions, please do not hesitate to contact us.

Sincerely,

TERRACON CONSULTANTS, INC.



Kimberly Roberts
Project Manager



David T. Youngstrom
Office Manager

Michael J. O'Connor, P.E.
Principal Engineer

Enclosures: Materials Testing Estimate
Agreement for Services

EXHIBIT A.1
**Lowson Blvd Verification Testing
Delray Beach, Florida
MATERIALS TESTING ESTIMATE**

Field Earthwork Testing					
Description		Total Units	Type	Rate	Extended Cost
1	Engineering Technician				
2	-Roadway (50 trips at 3 hrs/trip)	150	Hour	x \$65.00 =	\$9,750.00
3	-Utilities/Drainage (45 trips at 4 hrs/trip)	180	Hour	x \$65.00 =	\$11,700.00
4	-Shared Use Path/Sidewalk (20 trips at 2 hrs/trip)	40	Hour	x \$65.00 =	\$2,600.00
5	Vehicle/Trip Charge	115	Trip	x \$25.00 =	\$2,875.00
				Sub-Total	\$26,925.00
Field Concrete Testing					
Description		Total Units	Type	Rate	Extended Cost
1	Concrete Technician (10 trips @ 4 hrs/trip)	40	Hour	x \$65.00 =	\$2,600.00
2	Vehicle/Trip Charge	10	Each	x \$25.00 =	\$250.00
				Sub-Total	\$2,850.00
Laboratory Testing					
Description		Total Units	Type	Rate	Extended Cost
1	Earthwork				
2	Proctor (T-99 or T-180) (Embankment, Backfill)	10	Each	x \$120.00 =	\$1,200.00
3	Limerock Bearing Ratio (LBR) (10 stab. subg; 2 base)	12	Each	x \$330.00 =	\$3,960.00
4	Sieve Analysis (1 per LBR)	12	Each	x \$80.00 =	\$960.00
5	-200 Wash (1 per proctor)	10	Each	x \$50.00 =	\$500.00
6	Atterberg Limits (1 per proctor)	10	Each	x \$60.00 =	\$600.00
7	Organic Content (1 per proctor/stabilized subgrade LBR)	20	Each	x \$40.00 =	\$800.00
8	Concrete				
9	Concrete Compressive Strength Test (10 sets at 4 cyls/set)	10	Each	x \$75.00 =	\$750.00
10	Extra/Early-break Cylinders	0	Each	x \$20.00 =	\$0.00
				Sub-Total	\$8,770.00
Asphalt Plant Inspection					
Description		Total Units	Type	Rate	Extended Cost
1	Asphalt Plant Technician (15 trips @ 8 hrs/trip)	120	Hour	x \$65.00 =	\$7,800.00
2	Trip Charge Allotment (mileage to plant at 0.65 cents/mi)	15	Each	x \$40.00 =	\$600.00
				Sub-Total	\$8,400.00
PDA & Pile Driving Inspection					
Description		Total Units	Type	Rate	Extended Cost
1	Pile Dynamic Load Testing (2 trips for 2 test piles)	1	LS	x \$10,000.00 =	\$10,000.00
2	Pile Driving Inspector (assume 4 days for 6 piles)	32	Hour	x \$72.00 =	\$2,304.00
3	Vehicle/Trip Charge (excludes load testing services)	4	Trip	x \$25.00 =	\$100.00
				Sub-Total	\$12,404.00
Additional Services Upon Request					
Description		Total Units	Type	Rate	Extended Cost
1	Remote Vibration Monitoring, Equip Installation Fee	0	Each	x \$900.00 =	\$0.00
2	Remote Vibration Monitoring, Equip Relocation Fee	0	Each	x \$450.00 =	\$0.00
3	Remote Vibration Monitoring, Equip Monitoring Fee, 1 Unit	0	Month	x \$1,000.00 =	\$0.00
				Sub-Total	\$0.00
Engineering & Reporting Services					
Description		Total Units	Type	Rate	Extended Cost
1	Principal Engineer	18	Hour	x \$175.00 =	\$3,150.00
2	Project Manager	60	Hour	x \$140.00 =	\$8,400.00
3	Clerical/Administration	50	Hour	x \$58.00 =	\$2,900.00
				Sub-Total	\$14,450.00
Material Testing Services					
1	Subtotal of Materials Testing Services			Total	\$73,799.00
2				x =	\$0.00
				Total	\$0.00
				Total	\$73,799.00

PHB211023

AGREEMENT FOR SERVICES

This **AGREEMENT** is between Baxter & Woodman Inc ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the Lowson Blvd Verification Testing project ("Project"), as described in Consultant's Proposal dated 03/12/2021 ("Proposal"), including but not limited to the Project Information section, unless the Project is otherwise described in Exhibit A to this Agreement (which section or Exhibit is incorporated into this Agreement).

- 1. Scope of Services.** The scope of Consultant's services is described in the Proposal, including but not limited to the Scope of Services section ("Services"), unless Services are otherwise described in Exhibit B to this Agreement (which section or exhibit is incorporated into this Agreement). Portions of the Services may be subcontracted. Consultant's Services do not include the investigation or detection of, nor do recommendations in Consultant's reports address the presence or prevention of biological pollutants (e.g., mold, fungi, bacteria, viruses, or their byproducts) or occupant safety issues, such as vulnerability to natural disasters, terrorism, or violence. If Services include purchase of software, Client will execute a separate software license agreement. Consultant's findings, opinions, and recommendations are based solely upon data and information obtained by and furnished to Consultant at the time of the Services.
- 2. Acceptance/ Termination.** Client agrees that execution of this Agreement is a material element of the consideration Consultant requires to execute the Services, and if Services are initiated by Consultant prior to execution of this Agreement as an accommodation for Client at Client's request, both parties shall consider that commencement of Services constitutes formal acceptance of all terms and conditions of this Agreement. Additional terms and conditions may be added or changed only by written amendment to this Agreement signed by both parties. In the event Client uses a purchase order or other form to administer this Agreement, the use of such form shall be for convenience purposes only and any additional or conflicting terms it contains are stricken. This Agreement shall not be assigned by either party without prior written consent of the other party. Either party may terminate this Agreement or the Services upon written notice to the other. In such case, Consultant shall be paid costs incurred and fees earned to the date of termination plus reasonable costs of closing the Project.
- 3. Change Orders.** Client may request changes to the scope of Services by altering or adding to the Services to be performed. If Client so requests, Consultant will return to Client a statement (or supplemental proposal) of the change setting forth an adjustment to the Services and fees for the requested changes. Following Client's review, Client shall provide written acceptance. If Client does not follow these procedures, but instead directs, authorizes, or permits Consultant to perform changed or additional work, the Services are changed accordingly and Consultant will be paid for this work according to the fees stated or its current fee schedule. If project conditions change materially from those observed at the site or described to Consultant at the time of proposal, Consultant is entitled to a change order equitably adjusting its Services and fee.
- 4. Compensation and Terms of Payment.** Client shall pay compensation for the Services performed at the fees stated in the Proposal, including but not limited to the Compensation section, unless fees are otherwise stated in Exhibit C to this Agreement (which section or Exhibit is incorporated into this Agreement). If not stated in either, fees will be according to Consultant's current fee schedule. Fee schedules are valid for the calendar year in which they are issued. Fees do not include sales tax. Client will pay applicable sales tax as required by law. Consultant may invoice Client at least monthly and payment is due upon receipt of invoice. Client shall notify Consultant in writing, at the address below, within 15 days of the date of the invoice if Client objects to any portion of the charges on the invoice, and shall promptly pay the undisputed portion. Client shall pay a finance fee of 1.5% per month, but not exceeding the maximum rate allowed by law, for all unpaid amounts 30 days or older. Client agrees to pay all collection-related costs that Consultant incurs, including attorney fees. Consultant may suspend Services for lack of timely payment. It is the responsibility of Client to determine whether federal, state, or local prevailing wage requirements apply and to notify Consultant if prevailing wages apply. If it is later determined that prevailing wages apply, and Consultant was not previously notified by Client, Client agrees to pay the prevailing wage from that point forward, as well as a retroactive payment adjustment to bring previously paid amounts in line with prevailing wages. Client also agrees to defend, indemnify, and hold harmless Consultant from any alleged violations made by any governmental agency regulating prevailing wage activity for failing to pay prevailing wages, including the payment of any fines or penalties.
- 5. Third Party Reliance.** This Agreement and the Services provided are for Consultant and Client's sole benefit and exclusive use with no third party beneficiaries intended. Reliance upon the Services and any work product is limited to Client, and is not intended for third parties other than those who have executed Consultant's reliance agreement, subject to the prior approval of Consultant and Client.
- 6. LIMITATION OF LIABILITY. CLIENT AND CONSULTANT HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING CONSULTANT'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE ASSOCIATED RISKS. TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF CONSULTANT (AND ITS RELATED CORPORATIONS AND EMPLOYEES) TO CLIENT AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF \$50,000 OR CONSULTANT'S FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF CONSULTANT'S SERVICES OR THIS AGREEMENT. PRIOR TO ACCEPTANCE OF THIS AGREEMENT AND UPON WRITTEN REQUEST FROM CLIENT, CONSULTANT MAY NEGOTIATE A HIGHER LIMITATION FOR ADDITIONAL CONSIDERATION IN THE FORM OF A SURCHARGE TO BE ADDED TO THE AMOUNT STATED IN THE COMPENSATION SECTION OF THE PROPOSAL. THIS LIMITATION SHALL APPLY REGARDLESS OF AVAILABLE PROFESSIONAL LIABILITY INSURANCE COVERAGE, CAUSE(S), OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER CONSULTANT'S COMMERCIAL GENERAL LIABILITY POLICY.**
- 7. Indemnity/Statute of Limitations.** Consultant and Client shall indemnify and hold harmless the other and their respective employees from and against legal liability for claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are legally determined to be caused by their negligent acts, errors, or omissions. In the event such claims, losses, damages, or expenses are legally determined to be caused by the joint or concurrent negligence of Consultant and Client, they shall be borne by each party in proportion to its own negligence under comparative fault principles. Neither party shall have a duty to defend the other party, and no duty to defend is hereby created by this indemnity provision and such duty is explicitly waived under this Agreement. Causes of action arising out of Consultant's Services or this Agreement regardless of cause(s) or the theory of liability, including negligence, indemnity or other recovery shall be deemed to have accrued and the applicable statute of limitations shall commence to run not later than the date of Consultant's substantial completion of Services on the project.
- 8. Warranty.** Consultant will perform the Services in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. EXCEPT FOR THE STANDARD OF CARE PREVIOUSLY STATED, CONSULTANT MAKES NO WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, RELATING TO CONSULTANT'S SERVICES AND CONSULTANT DISCLAIMS ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 9. Insurance.** Consultant represents that it now carries, and will continue to carry: (i) workers' compensation insurance in accordance with the laws of the states having jurisdiction over Consultant's employees who are engaged in the Services, and employer's liability insurance (\$1,000,000); (ii) commercial general liability insurance (\$1,000,000 occ / \$2,000,000 agg); (iii) automobile liability insurance (\$1,000,000 B.I. and P.D. combined single limit); and (iv) professional liability insurance (\$1,000,000 claim / agg). Certificates of insurance will be provided upon request. Client and Consultant shall waive subrogation against the other party on all general liability and property coverage.

10. CONSEQUENTIAL DAMAGES. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR LOSS OF PROFITS OR REVENUE; LOSS OF USE OR OPPORTUNITY; LOSS OF GOOD WILL; COST OF SUBSTITUTE FACILITIES, GOODS, OR SERVICES; COST OF CAPITAL; OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, OR EXEMPLARY DAMAGES.

11. Dispute Resolution. Client shall not be entitled to assert a Claim against Consultant based on any theory of professional negligence unless and until Client has obtained the written opinion from a registered, independent, and reputable engineer, architect, or geologist that Consultant has violated the standard of care applicable to Consultant's performance of the Services. Client shall provide this opinion to Consultant and the parties shall endeavor to resolve the dispute within 30 days, after which Client may pursue its remedies at law. This Agreement shall be governed by and construed according to Kansas law.

12. Subsurface Explorations. Subsurface conditions throughout the site may vary from those depicted on logs of discrete borings, test pits, or other exploratory services. Client understands Consultant's layout of boring and test locations is approximate and that Consultant may deviate a reasonable distance from those locations. Consultant will take reasonable precautions to reduce damage to the site when performing Services; however, Client accepts that invasive services such as drilling or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the Services.

13. Testing and Observations. Client understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. Consultant will provide test results and opinions based on tests and field observations only for the work tested. Client understands that testing and observation are not continuous or exhaustive, and are conducted to reduce - not eliminate - project risk. Client shall cause all tests and inspections of the site, materials, and Services performed by Consultant to be timely and properly scheduled in order for the Services to be performed in accordance with the plans, specifications, contract documents, and Consultant's recommendations. No claims for loss or damage or injury shall be brought against Consultant by Client or any third party unless all tests and inspections have been so performed and Consultant's recommendations have been followed. Unless otherwise stated in the Proposal, Client assumes sole responsibility for determining whether the quantity and the nature of Services ordered by Client is adequate and sufficient for Client's intended purpose. Client is responsible (even if delegated to contractor) for requesting services, and notifying and scheduling Consultant so Consultant can perform these Services. Consultant is not responsible for damages caused by Services not performed due to a failure to request or schedule Consultant's Services. Consultant shall not be responsible for the quality and completeness of Client's contractor's work or their adherence to the project documents, and Consultant's performance of testing and observation services shall not relieve Client's contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. Consultant will not supervise or direct the work performed by Client's contractor or its subcontractors and is not responsible for their means and methods. The extension of unit prices with quantities to establish a total estimated cost does not guarantee a maximum cost to complete the Services. The quantities, when given, are estimates based on contract documents and schedules made available at the time of the Proposal. Since schedule, performance, production, and charges are directed and/or controlled by others, any quantity extensions must be considered as estimated and not a guarantee of maximum cost.

14. Sample Disposition, Affected Materials, and Indemnity. Samples are consumed in testing or disposed of upon completion of the testing procedures (unless stated otherwise in the Services). Client shall furnish or cause to be furnished to Consultant all documents and information known or available to Client that relate to the identity, location, quantity, nature, or characteristic of any hazardous waste, toxic, radioactive, or contaminated materials ("Affected Materials") at or near the site, and shall immediately transmit new, updated, or revised information as it becomes available. Client agrees that Consultant is not responsible for the disposition of Affected Materials unless specifically provided in the Services, and that Client is responsible for directing such disposition. In no event shall Consultant be required to sign a hazardous waste manifest or take title to any Affected Materials. Client shall have the obligation to make all spill or release notifications to appropriate governmental agencies. The Client agrees that Consultant neither created nor contributed to the creation or existence of any Affected Materials conditions at the site and Consultant shall not be responsible for any claims, losses, or damages allegedly arising out of Consultant's performance of Services hereunder, or for any claims against Consultant as a generator, disposer, or arranger of Affected Materials under federal, state, or local law or ordinance.

15. Ownership of Documents. Work product, such as reports, logs, data, notes, or calculations, prepared by Consultant shall remain Consultant's property. Proprietary concepts, systems, and ideas developed during performance of the Services shall remain the sole property of Consultant. Files shall be maintained in general accordance with Consultant's document retention policies and practices.

16. Utilities. Unless otherwise stated in the Proposal, Client shall provide the location and/or arrange for the marking of private utilities and subterranean structures. Consultant shall take reasonable precautions to avoid damage or injury to subterranean structures or utilities. Consultant shall not be responsible for damage to subterranean structures or utilities that are not called to Consultant's attention, are not correctly marked, including by a utility locate service, or are incorrectly shown on the plans furnished to Consultant.

17. Site Access and Safety. Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any other parties, including Client, Client's contractors, subcontractors, or other parties present at the site. In addition, Consultant retains the right to stop work without penalty at any time Consultant believes it is in the best interests of Consultant's employees or subcontractors to do so in order to reduce the risk of exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

**PURSUANT TO SECTION 558.0035 OF FLORIDA STATUTES, AN INDIVIDUAL EMPLOYEE
OR AGENT OF CONSULTANT MAY NOT BE HELD INDIVIDUALLY LIABLE.**

Consultant: **Terracon Consultants, Inc.**
By: _____ Date: **5/11/2021**
Name/Title: **David T Youngstrom / Office Manager I**
Address: **1225 Omar Rd**
West Palm Beach, FL 33405-1046
Phone: **(561) 689-4299** Fax: _____
Email: **Dave.Youngstrom@terracon.com**

Client: **Baxter & Woodman Inc**
By: _____ Date: _____
Name/Title: **Aaron Cutler, CGC / Vice
President/Construction Department Manager**
Address: **477 S Rosemary Ave Ste 330**
West Palm Beach, FL 33401-5798
Phone: **(561) 655-6175** Fax: _____
Email: **acutler@baxterwoodman.com**