SCOPE OF WORK

Town of Lake Park

10th STREET ROADWAY AND GREEN INFRASTRUCTURE PROJECT

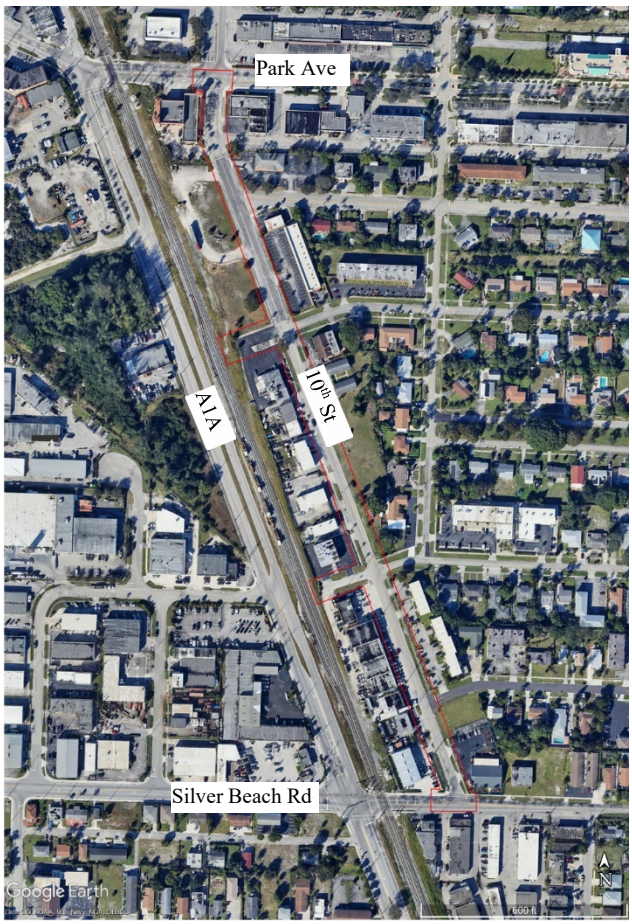
PROJECT NO. _____

The Town of Lake Park (TOWN) has requested a scope of services from an Engineering consultant (CONSULTANT) to perform engineering design, permitting, bidding assistance and construction phase services for the 10th Street Green Infrastructure Improvements Project.

The Project includes design of paving, drainage, landscape, lighting and other related improvements on 10th Street from Silver Beach Road to Park Avenue. A Basis of Design Report, dated July 22, 2021, was previously prepared by WRMA and the planning document will be reviewed and utilized for the design under this scope of work.

The Engineering Services will include the following primary tasks:

- Task 1 – Meetings and Coordination
- Task 2 – Data Collection
- Task 3 – Preliminary Engineering
- Task 4 – Public Outreach
- Task 5 – Design Services
- Task 6 – Permitting
- Task 7 – Bidding & Pre-Construction Assistance



Task 1 – Meetings & Coordination

Subtask 1.1 Design Meetings

CONSULTANT will attend one (1) kick-off meeting and three (3) design meetings (at 30%, 60%, and 90%) with the TOWN and provide an agenda and a written summary of the issues discussed. CONSULTANT will provide agendas and meeting minutes.

Subtask 1.2 Progress Meetings and Coordination

CONSULTANT will conduct weekly progress meetings and adjust resources as needed to meet deadlines. Staff will coordinate on a daily basis to facilitate design.

Task 2 - Data Collection and Successor Engineer

Subtask 2.1 – Topographic Survey

CONSULTANT shall furnish the services of a professional surveyor, Dennis J. Levy & Associated, Inc. (DJLA) to perform topographic survey of the project area. A field check will be performed to verify that the needed topographic features are in the survey. This includes visible, physical objects, roadway pavement, driveways, sidewalks, curb, trees, drainage swales, landscaping, signs, lift stations, fences, power poles, buildings with finished floor elevations, and other encumbrances.

The control will be referenced from the National Geodetic Survey (NGS) or Palm Beach County Control Network which is the North American Datum of 1983 and the 1990 adjustment for horizontal control (NAD 83/90) and the North American Vertical Datum of 1988 (NAVD 88) for vertical control. Reference benchmarks will be provided at maximum 600-foot intervals. Elevations to be referenced to an existing established Town or County Benchmark.

The survey will be provided in AutoCAD format at a scale of 1"=20' for preparation of the basis of the design plans.

Subtask 2.2 – Subsurface Utility Engineering

CONSULTANT will furnish the services of a professional surveyor, Ritzel - Mason, Inc. to perform Subsurface Utility Engineering (SUE) to locate underground utilities such as electric, fiber optic, cable, gas, etc. as a means to avoid conflicts. Ground Penetrating Radar (GPR) will be used.

Subtask 2.3 – Geotechnical

CONSULTANT will furnish the services of a professional geotechnical engineer (Terracon) to provide subsurface investigations of the project area that will include standard penetration borings and percolation testing. The collected field data will be evaluated and presented in a geotechnical engineering report. A geotechnical report will be produced that will include the following:

Five (5) 15-foot deep Standard Penetration Test borings

Two (2) Borehole Permeability Tests

Subtask 2.4 – Field Investigation

CONSULTANT will conduct two (2) site visits to review existing conditions, preferably following a rainfall event in order to observe roadway ponding or flooding; to observe the pavement and sidewalk condition; and to conduct a survey field check of the general project conditions pertinent to the design.

Subtask 2.5 – Previous Documents and Plans

The Basis of Design Report, dated July 22, 2021, was previously prepared by WRMA and the planning document will be thoroughly reviewed with the intent of utilizing portions that remain relevant. CONSULTANT will perform all duties as required by Florida Administrative Code (FAC) 61G15-27.001 "Procedures for a Successor Professional Engineer Adopting As Their Own the Work of Another Engineer". The Town shall provide all documents (i.e. AutoCAD, hydrologic and hydraulic calculations and model data,

reports, models and studies previously completed by others. CONSULTANT will review and assess the information provided in order to adopt the work as the successor engineer.

It is anticipated that the Basis of Design and related materials will include information such as existing as-built drawings and permits issued by the TOWN. Additional information will be obtained by the CONSULTANT from Seacoast Utility Authority, the South Florida Water Management District (SFWMD) and Palm Beach County Engineering and Public Works Department (PBC) as needed.

Task 3 – Preliminary Engineering

Subtask 3.1 Utility Coordination

Coordination with utility agencies (electric, phone, gas, cable TV, and fiber optics, etc.) shall be performed to collect record information. This Subtask includes reconciling apparent discrepancies between record information and existing photographic and field-verification information. Coordination with Seacoast Utility Authority (SUA) will also occur regarding potential conflicts with their water and sewer infrastructure. Replacement of SUA's facilities will be discussed with SUA and contracted separately, apart from this contract.

Subtask 3.2 – Stormwater Modeling

Basin Delineation: Basins will be delineated and subdivided based on previous reports, permits, stormwater piping and topography. The delineation will be designed to estimate the contributing areas to the critical portions of the Stormwater infrastructure to properly model the capacities of the systems. Although this work may have been performed by previous engineers, it shall be verified by the CONSULTANT. Inflow from surrounding developments is particularly important to the drainage evaluation.

Model Input: ICPR4 shall be used for hydrologic and hydraulic modeling to assess the existing conditions and alternative scenarios unless the TOWN would prefer that the CONSULTANT modify the model developed for their Stormwater Master Plan.

Hydrologic Model Input
Primary basin and subbasin hydrologic information shall be entered including areas, times of concentration, curve numbers, rainfall and imperviousness. Times of concentration shall be calculated based on travel lengths and roughness coefficients. Curve numbers shall be calculated based soils and land use.

Hydraulic Model Input
Model links and nodes shall be added to the model to define stormwater network. Links shall consist primarily of pipes and also include broad crested weirs to represent sheetflow between basins and subbasins. Pipe data shall include sizes, lengths and roughness coefficients based on available information and survey data. LiDAR data shall be used to create stage-area curves for each storage node in the system using GIS algorithms.

Water Quality Computations
SFWMD has imposed new rules associated with water quality compliance requiring pollutant loading analyses.

Subtask 3.3 – Roadway, Landscaping and Street Lighting Evaluations

Preliminary design of the roadway shall be performed. Typical road sections shall be drafted showing the proposed roadway, sidewalks grassed areas and green infrastructure features. Locations for specialized pedestrian crossings will be determined. The need for changes at intersections will be evaluated including potential signalization changes at Park Avenue. Typical locations and plant types for proposed landscaping shall be determined based on coordination with TOWN staff. Water sources for irrigation will be identified. Street lighting will also be coordinated with the TOWN to determine pole and fixture selection. Up to three (3) renderings of typical section examples showing landscaping, lighting and roadway shall be produced that can be used for Public Outreach meetings.

Subtask 3.4 – Preliminary Design Report (PDR)

Stormwater: A description of the data and procedures taken to develop, test and run the model shall be documented. The recommended drainage design will be described with figures illustrating the associated proposed improvements in conjunction with the proposed green infrastructure. The results shall be presented in tables, figures and charts demonstrating the benefits of the design compared to the existing conditions.

Roadway: The pavement condition shall be discussed in conjunction with the recommended drainage improvements along with full roadway reconstruction versus mill and overlay improvements shall be recommended based on 1) the pavement condition, 2) the level of impacts on the pavement by the planned utility and drainage improvements and 3) the necessity and extent of changing the road grades to facilitate drainage. Roadway sections shall be presented showing the proposed roadway (pavement, base and subgrade), a shared path, sidewalks, crossings and grassed areas. Intersection and/or signalization modifications/detection will be discussed and recommendations will be documented and illustrated.

Landscaping and Lighting: Based on coordination with TOWN staff, landscaping and lighting within the Project limits shall be discussed and illustrated with color renderings and selection of decorative light poles and fixtures.

Engineer's Opinion of Probable Construction Cost: An engineer's opinion of probable construction cost (preliminary) shall be prepared to correspond to the design level at 30 percent design of the Project.

The CONSULTANT will submit a Draft PDR (one hard copy and .pdf format) to the TOWN for its review and comment. A meeting shall be scheduled with the TOWN staff to review the comments. The Final PDR will be prepared addressing the comments received, one (1) hard copy and the report in .pdf format shall be submitted to the TOWN.

Task 4 – Public Outreach

Subtask 4.1 Prepare Presentation Material

CONSULTANT will develop presentation materials for the public workshop to the stakeholders including the affected property owners and businesses. Presentation material shall include preparation of display boards and creation of a 3-D model of the proposed improvements using Autodesk InfraWorks for an interactive demonstration during the workshop.

Subtask 4.2 Public Meetings

CONSULTANT will present the project at the fore mentioned stakeholder workshop (at 30% design) and also at a public workshop (at 90% design). CONSULTANT will document comments and concerns from the public and mitigate concerns, such as access to properties, to the extent possible with site plan, schedule, and phasing adjustments. CONSULTANT will also attend a public meeting prior to construction with the selected construction contractor to inform property owners and business entities in the area what can be expected during construction. The meetings shall be coordinated by and attended by the TOWN and at a location provided by the TOWN. The TOWN shall be responsible for sending notifications to the public.

Task 5 – Design Services

Subtask 5.1 – Field Verification (soft digs)

CONSULTANT will furnish the services of Ritzel – Mason, Inc. to provide underground field locations and depths of potential utility conflicts. The work shall consist of measuring and recording the approximate horizontal, vertical, width and depth data of affected utilities within the project limits. It is estimated that approximately twenty-five (25) utility locations will need to be pot-holed.

Subtask 5.2 Design Drawings

Design disciplines will include drainage; roadway: hardscape; street lighting; and landscaping. Preparation of construction documents shall include contract drawings and details and shall include: cover sheet, general notes, plan/profile drawings, and miscellaneous detail sheets. The drawing scale shall be 1-inch equals 20 feet for plan and 1-inch equals 2 feet for profile. CONSULTANT will prepare the engineering design elements on topographic survey information in an AutoCAD format. Drawings shall be submitted for TOWN review at 60 percent, 90 percent and 100 percent stages. CONSULTANT will meet with the TOWN to discuss comments, and incorporate comments into final documents. CONSULTANT will furnish the plans (and in PDF format) of the 60%, 90% and 100% design drawings, one (1) set of AutoCAD files in electronic format upon project completion.

Subtask 5.3 Technical Specifications

Technical specifications are to be prepared by CONSULTANT for bidding purposes for the proposed improvements. The Front-End Contract Documents are to be prepared by the TOWN and provided to the CONSULTANT. Specifications will be submitted in .pdf format for TOWN review at 60 percent, 90 percent and 100 percent stages.

Subtask 5.4 Construction Cost Opinion

An opinion of probable construction cost will be prepared for the 60 percent, 90 percent and 100 percent drawings submittal. The cost estimate format will be consistent with the bid proposal tabulation sheet for the project.

Task 6 - Permitting & Grant Application Assistance

Subtask 6.1 – SFWMD Environmental Resource Permit

During the Design Phase the CONSULTANT will meet with the South Florida Water Management District (SFWMD) to verify potential design permitting requirements. An application for an Environmental Resource Permit will be prepared along with supporting information and submitted to SFWMD. The submittal will include signed and sealed drawings and calculation to demonstrate that the project will meet SFWMD's regulatory requirements in regard to water quality and water quantity.

Subtask 6.2 Dewatering Permit (SFWMD)

There are two sites less than 1,000 feet from project that have been identified by the Florida Department of Environmental Protection (FDEP) as having groundwater contamination. SFWMD will require that a dewatering permit application be submitted and reviewed concurrently with the ERP permit review and that a dewatering plan be developed to avoid the movement of contaminated plumes. The CONSULTANT will design such a plan and submit a "Water Use Permit Application" for short-term dewatering to SFWMD. Groundwater drawdown calculations will be performed and temporary impoundment areas, if needed, will be determined.

Subtask 6.3 Palm Beach County (PBC)

There are no FDOT rights-of-way within or adjacent to the project area. However, there is a PBC right-of-way for Silver Beach Road, for which a permit may be required depending on whether the project improvements encroach that right-of-way. The CONSULTANT will meet with PBC Engineering and Public Works Department to determine if there are any special concerns in that area. A permit application, if necessary, will be submitted.

Subtask 6.4 Lake Park Community Development Office (CDO)

Plans will be submitted to CDO for a preliminary review before being submitted to officially by the selected contractor for building permits. Comments from CDO will be address and incorporated into the design.

Subtask 6.5 Grant Application Assistance

CONSULTANT shall provide applicable design and cost estimating documentation as necessary for compilation and submittal by the TOWN for grant compliance.

Task 7 - Bidding & Pre-Construction Assistance

Subtask 7.1 Bid Advertisement

CONSULTANT will assist TOWN in advertising for and obtaining bid proposals for construction (including materials, equipment and labor). It is anticipated that work shall be awarded under a single construction contract. The TOWN will be responsible for uploading the bid documents to DemandStar.

Subtask 7.2 Pre-Bid Conference

CONSULTANT will attend pre-bid conference and provide a written summary of issues discussed.

Subtask 7.3 Bid Clarification/Addenda

CONSULTANT will prepare addenda and shall provide supplemental information or clarification, as appropriate to interpret, clarify, or expand the bidding documents to all prospective bidders. The addenda will be provided to the TOWN for upload to DemandStar.

Subtask 7.4 Bid Review and Recommendation

CONSULTANT will attend the bid opening, prepare bid tabulation sheets and assist TOWN in evaluating bids and proposals, and in assembling and awarding contract for construction. CONSULTANT will submit to TOWN a written recommendation concerning contract award.

Subtask 7.5 Conformed Documents

CONSULTANT will incorporate any changes that may have occurred during the bidding process and provide to the Town Conformed Contract Documents including construction drawings and specifications in electronic (PDF) format on a USB drive and hard copies of construction drawings (one copy 22" x 34") and Contract Specifications Book (1 copy).

Subtask 7.6 Preconstruction Conference

CONSULTANT will attend a preconstruction conference with representatives of TOWN, contractors and major subcontractors for the construction contract. CONSULTANT will prepare, in writing, minutes of conference.

Subtask 7.7 Submittal Review

CONSULTANT will review and process shop drawings, samples, schedules, certifications and any other data which the construction contractor is required to submit. The review will be for general conformance with the design intent and compliance with the construction contract documents. Review of up to 24 submittals (which includes submittals and re-submittals, if required) is included in the budget for this subtask. CONSULTANT will submit reviewed shop drawings/submittals to TOWN for their records. Shop drawings will be processed as electronic copies unless otherwise requested or for samples.

Subtask 7.8 Construction Clarifications

Respond in writing to Contractor's Request for Information (RFI) regarding design documents during the construction period. CONSULTANT will issue interpretations and clarifications of the Contract Documents, along with associated support materials, such as Change orders and Field Change Orders, as necessary. Those interpretations will be rendered and a response prepared and submitted to the Contractor within five (5) working days.

Subtask 7.9 Certification of Construction Completion

CONSULTANT will certify to SFWMD and PBC based on the visible project features; part-time field observations; CONSULTANT's inspections; and review of the testing reports, that the project was

constructed in accordance with the plans and specifications approved by the permitting agencies. The Contractor shall provide all record drawings at the completion of construction for final review by the CONSULTANT. CONSULTANT will provide an overall project certification to the TOWN.

Assumptions:

In addition to, the work items discussed above, the following assumptions were made in establishing the scope of this Work and associated fee. Changes and/ or modifications in the above work items or these assumptions are considered an Additional Services Item under the terms of the contract. Assumptions include:

1. TOWN will provide CONSULTANT available record drawings, prior to NTP date, of facilities within the project area which have been modified since the Preliminary Design Report was prepared.
2. The TOWN will provide CONSULTANT an electronic version of their standard construction contract documents in MICROSOFT "WORD" version format. These include the TOWN's standard bid document forms, construction contract, General and Special Conditions, surety, schedules, retainage and other contract forms specific to TOWN construction contracts. CONSULTANT will provide the Technical Specification sections.
3. The TOWN is responsible for all permitting fees, including costs of public notification in local newspapers.
4. A single bidding effort is assumed for the project. Re-bidding of the project is considered an Additional Services item.
5. The design is to be based on the federal, State and local codes and standards in effect at the beginning of the project. Revisions required for compliance with any subsequent changes to those regulations is considered an Additional Services Item.
6. In regard to the contaminated groundwater in the vicinity of the project, CONSULTANT will attempt to determine what will be an acceptable design to the regulatory agencies. However, CONSULTANT cannot be responsible if agencies ultimately reject the proposed design and require significant design or construction method changes. Significant changes in the design shall require Additional Services.
7. Construction Management services and site observations, necessary for project certification, are not included in this contract.

Schedule (relative to receipt of Notice to Proceed):

Engineering Services	Time per Phase	Cumulative Time
Task 1 – Meetings and Coordination	On-going	On-going
Task 2 – Data Collection	12 weeks	12 weeks
Task 3 – Preliminary Design	8 weeks	20 weeks
Task 4 – Public Outreach	2 weeks	22 weeks
Task 5 – Design Services	10 weeks(1)	32 weeks
Task 6 – Permitting & Grant Assistance	8 weeks	40 weeks
Task 7 – Bidding & Pre-Construction	4 weeks	44 weeks

(1) Estimated, based upon usual regulatory agency review period.

Town of Lake Park

10th Street Green Infrastructure Design, Permitting, Bidding and Construction Services

Engineering Fee Proposal

Task No.	Task Description	Labor Classification and Hourly Rates								
		Vice President $260.00	Engineer VI $242.00	Engineer II $160.00	CAD Tech III $160.00	Construction Eng. Tech.IV (Const. Mgr.) $210.00	Engineering Tech III (Field Rep) $145.00	Admin Support $110.00	Total Labor	Sub-Consultant Services
1	**Meeting andCoordinations**									
1.1	Design Meetings (4 Mtgs)	2	8	12					$4,376	
2.1	Internal Progress Meetings & Coordination	8	30	24					$13,180	
	Subtotal Task 1	**10**	**38**	**36**					**$17,556**	
2	**Data Collection and Successor Engineer**									
2.1	Topographic Survey			2	2				$640	$24,150
2.2	Subsurface Utility Engineering (SUE)			2	2				$640	$14,480
2.3	Geotechnical Report		2	4					$1,124	$21,000
2.4	Field Investigation		4	4					$1,608	
2.5	Previous Documents and Plans		12	20					$6,104	
	Subtotal Task 2		**18**	**32**	**4**				**$10,116**	**$59,630**
3	**Preliminary Engineering**									
3.1	Utility Coordination		4	12					$2,888	
3.2	Stormwater Modeling		20	60					$14,440	
3.3	Roadway/Landscaping/Lighting Evaluations		30	45	15				$16,860	$7,000
3.4	Preliminary Design Report	2	24	40	10			20	$16,528	
	Subtotal Task 3	**2**	**78**	**157**	**25**			**20**	**$50,716**	**$7,000**
4	**Public Outreach**									
4.1	Prepare Presentation Material		6	16	20				$7,212	
4.2	Public Meetings	2	8	12					$4,376	
	Subtotal Task 4	**2**	**14**	**28**	**20**				**$11,588**	
5	**Design Services**									
5.1	Field Verification (soft digs)		1	3					$722	$17,365
5.2.1	60% Design Drawings									
	Drainage & Roadway	2	45	85	120				$44,210	
	Street Lighting - Electrical		2	4					$1,124	$9,000
	Landscaping and Irrigation		2	4					$1,124	$12,875
5.2.2	90% Design Drawings									
	Drainage & Roadway	2	30	50	90				$30,180	
	Street Lighting - Electrical		2	4					$1,124	$5,625
	Landscaping and Irrigation		2	2					$804	$7,725
5.2.3	100% Design (Bid) Drawings	4	16	20	30	6			$14,172	$8,525
5.3	Technical Specifications (60%, 90% & 100%)		10	16				10	$6,080	
5.4	Construction Cost Opinion (60%, 90% & 100%)		10	16					$4,980	
	Subtotal Task 5	**8**	**120**	**204**	**240**	**6**		**10**	**$104,520**	**$61,115**
6	**Permitting & Grant Application Assistance**									
6.1	SFWMD Environmental Resource Permit	2	16	40				2	$11,012	
6.2	SFWMD Water Use Permit (dewatering)		10	30				2	$7,440	
6.3	PBC Engineering and Public Works		6	12				2	$3,592	
6.4	Lake Park Community Development Office		3	8				2	$2,226	
6.5	Grant Assistance		10	20				2	$5,840	
	Subtotal Task 6	**2**	**45**	**110**				**10**	**$30,110**	
7	**Bidding & Pre-Construction Assistance**									
7.1	Bid Advertisement		1	3					$722	
7.2	Pre-Bid Conference		2	4		2			$1,544	
7.3	Bid Clarification/Addenda		4	8		2		2	$2,888	
7.4	Bid Review and Recommendation		4	8		2		2	$2,888	
7.5	Conformed Documents		2	4	4	2		2	$2,404	
7.6	Preconstruction Conference			4		8			$2,320	
7.7	Submittal Review			22		20			$7,720	$11,250
7.8	Construction Clarifications			14		16			$5,600	
7.9	Certification of Construction Completion		8	12		8			$5,536	$11,250
	Subtotal Task 7		**21**	**79**	**4**	**60**		**6**	**$31,622**	**$22,500**
	Labor Subtotal Hours	24	334	646	293	66		46		
	Labor Subtotal Costs	$6,240	$80,828	$103,360	$46,880	$13,860		$5,060	$256,228	$150,245
	Labor Total Costs	**$256,228**								
	Subconsultant Costs Total	$150,245								
	Subconsultant Multiplier	1.1								
	Subconsultant Total	**$165,270**								
	Reimbursable Expenses	**$2,400**								
	Project Total	**$423,898**								