



**Proposal to Provide Professional Engineering Services for
Village of Wellington
Moncada Final Design, Permitting and Bid Services**

A. Project Description:

Moncada is an existing land parcel recently purchased by the Village. Moncada is located adjacent to, and surrounded by, the Wellington Environmental Preserve (Preserve) at the Marjory Stoneman Douglas Environmental Habitat (aka Section 24). The Village has performed preliminary engineering activities that have included:

- Developing a preliminary civil site plan for development of the site to seamlessly integrate it into Section 24, providing additional stormwater storage and water quality improvement features, as well as incorporate passive park amenities. The preliminary civil site plan incorporates improvements included in the Florida Communities Trust Grant Agreement and Resilient Florida Grant
- Performing permitting activities including coordination with agencies and obtaining a formal Wetland Jurisdiction Determination
- Developing site clearing documents and bidding and awarding a contract to complete the work
- Developing a conceptual site layout for a future Educational Center “outparcel” located at the southmost east corner of the Moncada site

The Village desires to move forward with the development of final design documents for bidding the project. Mock•Roos will provide the final design, permitting and bid services which will include the following general scope of work:

- Topographic Survey and Geotechnical Field Investigation and Analysis
- Earthwork, including perimeter levees, interconnected retention cells providing runoff storage and flood protection, interior features such as uplands, islands, interior levees, deep water basins conveyance channels, “earthen pad” for future Educational Center “outparcel” and mass earthwork balance (cut/fill)
- Site Civil, including paved pathways, equestrian pathways, north parking lot expansion, south parking lot expansion including equestrian spaces and addition entrance/exit driveway, dry/wet retention areas, and culvert pipes connecting water features
- Wetland and Upland Habitat Planting and Mitigation Design
- Park Amenities, including picnic table/shelter area(s), boardwalks and wildlife observation view area(s), entry signage (required by Grant) and bench seating.
- Environmental Permitting
- Bid Phase

B. Scope of Services:

Task 1 – Project Control/ Meetings/Technical Coordination

Mock•Roos will provide Project Management and Controls including:

1. Provide project management and coordination, including attending a Project kick-off meeting, implementing a QA/QC Plan throughout the project, and maintaining a Project Schedule. Task includes coordinating with Village's Project Manager throughout the project.
2. Prepare for and attend routine progress meetings with the Village during design (assumes 4). Provide a brief meeting project status update.
3. Technical Coordination and Design Team Meetings. Mock•Roos' team members (Mock•Roos staff and its subconsultants) shall arrange and participate in meetings to discuss and coordinate various technical issues/topics relating to this project.

Task 2 – Data Collection, Surveying and Field Investigations

1. Underground Utility Coordination. Call in a Sunshine one call design ticket and coordinate with the utility companies that are identified on the design ticket to have infrastructure located within the Project Corridor.
2. Surveying Services and Basemap Preparation. *See attached subconsultant proposal.* Provide and coordinate the services of a Professional Surveyor and Mapper subconsultant to prepare a topographic survey and basemap in AutoCAD in accordance with State of Florida Surveying and Mapping standards according to the Minimal Technical Standards promulgated by the Florida Board of Professional Land Surveyors, 5J-17, of the Florida Administrative Code, Section 472.027, Florida Statutes.

The following pertinent data will be collected:

- a. Locations of visible fixed improvements within the proposed project limits (as indicated within the limits of the red lines on the attached Exhibit 'A'), including physical objects, roadway pavement, driveways, sidewalks, walls, curb, drainage swales, signs, fences, power poles and other utilities, and buildings. Note: tree locations are not a part of this scope of services, a tree disposition will be performed as outlined below.
- b. Elevations shall be indicated at 50-foot stations at a minimum within the proposed project limits (as indicated within the limits of the cyan lines on the attached Exhibit 'A'), to indicate existing grades. Intermediate grades shall be indicated at all significant grade breaks.
- c. Cross sections (2) within the Acme Improvement District C-1 Canal indicated on the attached Exhibit 'A' in yellow. Cross sections will be depicted in plan view at a scale to be determined.
- d. Cross sections (42) along the perimeter berm as indicated on the attached Exhibit 'A' in yellow. Cross sections will be depicted in plan view at a scale to be determined in yellow.

- e. Cross sections (53) of the existing ditches within the interior of the property as indicated on the attached Exhibit 'A' in green. Cross sections will be depicted in plan view at a scale to be determined.
 - f. Topography within the interior of the property on a 100-foot interval.
 - g. Provide and reference benchmarks. Elevations to be referenced to an existing established local or County Benchmark.
3. Geotechnical Services. *See attached subconsultant proposal*. Provide and coordinate the services of a Geotechnical Engineering subconsultant to perform the following scope of services:
- a. Perform 12 Standard Penetration Test (SPT) borings to a depth of 25 feet in accordance with ASTM D-1586. See attached Boring Plan. Following completion of the drilling operations, the boreholes will be backfilled with grout.
 - b. Perform one (1) Double-Ring Infiltrometer test in accordance with ASTM D-3385.
 - c. Perform 15 muck probes across the site to determine the depth of any surficial soft deposits at the site. Note the term "muck probe" is a common term for a test that involves manually advancing a handheld 3/8-inch diameter steel rod into the surficial soils to delineate the transition between soft and dense soils.
 - d. Visually classify the collected soil samples in the field with laboratory confirmation/QC verification of classifications using the Unified Soil Classification System (USCS). Assign and perform a series of laboratory tests (moisture content, organic content, sieve analysis, etc.) to ascertain soil index properties for the soils encountered in each bore.
 - e. Perform appropriate geotechnical engineering analyses and prepare a geotechnical engineering report providing the results of the SPT borings, the soil laboratory testing, timber pile recommendations, and bearing capacity and foundation recommendations. Additionally, the report will provide recommendations regarding proposed backfilling and compaction, pipeline bedding, and other considerations for site construction including utility excavations.
4. Tree Inventory. *See attached subconsultant proposal*. Provide and coordinate the services of Environmental subconsultant to conduct an inventory of native trees (trees considered protected under the Village of Wellington Code) within the limited area associated with parking and access improvements.
- a. Identify each such tree to genus and species, diameter at breast height (DBH) or feet of clear trunk (CT) for palms and provide approximate location information with handheld GPS.
 - b. Number each tree and affix a metal tag embossed with the assigned tree number and prepare a tabular summary of this information.
 - c. Prepare an arborist report (by a Certified Arborist) assessing the condition and likelihood of successful relocation for the subject trees.
5. Wetland Jurisdictional Determination. *No services included/required*. Under a separate authorization, services were previously performed to conduct a field reconnaissance on the site and field flag approximate wetland limits and obtain an official wetland determination through SFWMD.

Task 3 – Finalize Preliminary Civil Site Plan

1. Attend “workshop” with Village staff to discuss preliminary civil site plan. Discuss project goals, grant required improvements, other amenities, locations and alignments of improvements, and wetland and upland plants. Discuss options for improvement items to be included in the base bid and bid as alternates to assist in managing the project budget.
2. Develop criteria and approach for the wetland and upland habitat creation elements of the project. Attend follow-up meeting with Village staff to discuss wetland and upland planting concepts.
3. Incorporate comments and submit a final preliminary civil site plan to Village. Attend meeting to discuss any final comments.

Task 4 – Contract Document Development

Mock•Roos, and its consultants, will coordinate and develop the engineering plans and construction specifications will follow Intermediate (60%), Pre-Final (90%) and Final Bid (100%) review schedule. Document setup, QA/QC reviews, Village and team coordination will be ongoing activities as part of these progress submittals. Each submittal will generally include, but not be limited to, the following:

- Construction Drawings and Specifications (Civil/Site, Structural, Environmental)
- Design Calculations
- Engineer’s Opinion of Probable Construction Cost

Earthwork Design

1. Create existing topology digital terrain mode.
2. Layout east perimeter berm and “blend/connect” south, west and east existing berms using appropriate coordinates.
3. Layout interior features: uplands, islands, interior berms, and deep-water basins.
4. Confirm conveyance requirements are met.
5. Confirm uplands/wetlands/littoral requirements are met.
6. Perform site earthwork balance calculations.
7. Establish contours and check for constructability.
8. Produce construction contour sheets for constructability.
9. Produce construction control sheets including control lines, control points, and control tables.
10. Produce cross-sections/details/hydraulic detail sheets.

Site Civil Design

1. Layout and grading of 8’ wide paved pathways, including connections to existing trails.
2. Layout and grading of the new equestrian trails, including connections to existing trails.
3. Layout, grading and drainage of north parking lot expansion (118 additional parking spaces).
4. Layout, grading and drainage of south parking lot expansion including equestrian spaces and addition entrance/exit driveway (21 additional parking spaces and 6 additional equestrian spaces).
5. Perform calculations and layout of dry/wet retention areas.
6. Perform hydraulic analysis of culvert pipes connecting water features. Perform layout and create cross-sections.

7. Produce construction contour sheets for constructability.
8. Produce construction control sheets including control lines, control points, and control tables.
9. Produce cross-sections and detail sheets.

Environmental Design (Wetland and Upland Habitat)

1. *See attached subconsultant proposal.* Provide and coordinate the services of an Environmental subconsultant to prepare planting plan documents and specifications for the native upland and wetland planting elements of the project. Plan will be based on the developed criteria and approach and preliminary planting concept developed above and will include plant lists and cost estimates. Xeriscape (drought tolerant design) principles and installation methods will be used for upland planting layout compositions as well as the use of native Florida plant materials.
2. Coordinate with Village staff to incorporate existing trees to be removed within the proposed planting plan documents, as appropriate.

Boardwalk Design

1. Prepare layout and plan views for proposed boardwalk systems (totaling approximately 1,800 linear feet) for construction drawings. Coordinate with manufacturers regarding constructability issues/concerns with proposed alignments.
2. Produce construction control sheets including control lines, control points, and control tables for proposed alignments.
3. *See attached subconsultant proposal.* Provide and coordinate the services of a Structural subconsultant to perform structural engineering design, details and prepare construction documents for the typical boardwalk systems.

Picnic Area/Shelter Design

1. Coordinate with the Village regarding shelter structure options, including size, configuration, height, materials, etc.
2. Coordinate with up to three (3) pre-engineered shelter manufacturers.
3. Produce a criteria package for the shelter(s) requiring signed and sealed engineering drawings be submitted by the Contractor for the shelter(s) and foundation(s).

Elevated Overlook Area Design

1. Final the design of the elevated overlook, including the proposed slope and rock rip rap embankment.
2. Produce construction control sheets including control lines, control points, and control tables.
3. Produce cross-sections and details.

60-Percent Progress Package

1. Prepare, assemble, QA/QC and submit a 60-percent progress package for Village review. The 60-percent progress submittal is anticipated to progress the conceptual site planning/engineering efforts and will include the preliminary survey and geotechnical boring

data (if attainable given the timeframe(s) of the clearing contractor's site work), construction drawings, a list of technical specifications by division, and an Engineer's Opinion of Construction Cost. Attend progress review meeting with Village and address comments.

90-Percent Progress Package

1. Prepare, assemble, QA/QC and submit a 90-percent progress submittal for Village review. The 90-percent intermediate progress submittal is anticipated to address the comments from the 60-percent preliminary progress submittal and include the design calculations, construction drawings, the technical specifications by division, and an Engineer's Opinion of Construction Cost.
2. Perform review of the Village's standard front-end documents. Offer any comments and/or input related to this specific project.

100-Percent Bid Package

1. Prepare, assemble and submit a 100-percent final bid package submittal for the City's use. 100-percent final progress submittal is intended to finalize the budget, provide sufficient technical detail to use the documents to publicly advertise the project for Bid.

Task 5 – Permitting

1. Prepare engineering and environmental support documents and forms (Section C. and Section I.) for inclusion with permit applications prepared for submission to SFWMD for an Environmental Resources Permit. *See attached subconsultant proposal.* Based on the findings of the completed wetland jurisdictional determination previously completed, prepare a supporting analysis and request of "No Permit Required" to FDEP for Section 404. Assist and coordinate addressing additional agency requests through the permitting process.
2. Response to up to two (2) formal Requests for Additional Information. Coordinate with agency representatives and Village as normally required.
3. Review the draft permit(s) for accuracy as to reflection of the Village's goals for the project.

Task 6 – Bid Services

1. Attend one (1) pre-bid meeting.
2. Review and address bidder's requests for information (RFIs) and assist the City issue appropriate addendums.
3. Review bid submittals to evaluate their responsiveness from an engineering perspective and prepare a letter of recommendation for City's use in awarding a contract.

Assumptions:

1. Meetings. All meetings referenced above may be in-person or virtual as determined by the Village at the time of the meeting(s).
2. Data Collection, Surveying and Field Investigations. It is understood that the majority of the topographic field survey and the geotechnical explorations will not commence until the Village's

Contractor has successfully cleared the Moncada site, as required to provide the necessary access for subconsultants to perform their services.

3. Permitting. The Village to pay for all permit fees. No preapplication meeting is intended as agencies are aware of the project due to the previous Wetland Jurisdictional Determination effort(s). Permit application(s) will be submitted at 60% design progress submittal. It is understood that permit approvals will likely take a minimum of 180 days from the date(s) of submission. Notice of Intent to use General Permit from Large and Small Activities (NPDES Permit) and SFWMD Dewatering Permits will be prepared and submitted by selected Contractor as appropriate.
4. Geotechnical Analyses. Geotechnical engineering analyses will not include any SEEP/W modeling or Hydrological and Hydraulic analyses for the proposed berm(s).
5. Plantings. The wetland and upland planting designs will be prepared so as to meet the minimum criteria of the Village. Permanent Irrigation for the Project is not required, and an irrigation system design is not included. Temporary irrigation for the establishment of upland plants will be addressed by the Contractor.
6. Educational Center "Outparcel". The outparcel site will only be demucked, filled and brought up to grade with this project. All other improvements will be designed and permitted as part of a future project.
7. Entry Sign. The Florida Communities Trust Grant required sign will be designed and/or selected by the Village. Specifications and design requirements will be provided by the Village. Construction drawings will show the location of the sign only.
8. Boardwalks. It is anticipated that the boardwalks will be constructed 8 foot in width with wooden piles in shallow water areas (Pile length above the mudline no greater than 9'). The pile bent sub-framing and longitudinal framing is anticipated to be pressure treated heavy timber. The railing, posts and vertical elements are anticipated to be conventional pressure treated lumber. All exposed horizontal members and decking are anticipated to be composite lumber (such as Trex).
9. Picnic Areas/Shelter. Proposed picnic shelters will be selected from a pre-engineered shelter manufacturer. A criteria package will be prepared and coordinated with manufacturers. The Contractor will be required to provide signed and sealed engineering drawings, including for the design of the foundation for the shelter(s).
10. Other Exclusions. Pedestrian bridge, observation tower, restroom facilities, water, sewer or electrical service, utility locates services (soft digs, GPR, etc.) are not included.

C. Fee and Rates:

The total fee to provide the Scope of Services outlined above is \$379,944. Mock•Roos will complete the Scope of Services for a lump sum fee. See Attachment A for estimate of hours.

D. Deliverables Schedule

		<u>Days from NTP</u>
Task 1 – Project Control/ Meetings/Technical Coordination		ongoing
Task 2 – Data Collection, Surveying and Field Investigations		120 days
Task 3 – Finalize Preliminary Civil Site Plan		90 days
Task 4 – Contract Document Development	60%	120 days
	90%	180 days
	100%	225 days
Task 5 – Permitting		300 days
Task 6 – Bid Phase		365 days

E. Acceptance and Authorization to Proceed:

This proposal is acceptable and Mock•Roos has authorization to proceed with the Scope of Services upon Mock•Roos receiving a Purchase Order for these services.

MOCK•ROOS

Signed: 

Name: Garry G. Gruber, P.E.

Title: Senior Vice President

Date: May 4, 2023

**Moncada Final Design, Permitting and Bid Services
Village of Wellington
Compensation Fee Schedule**

Task		Task Description	Mock•Roos					Subconsultants				TOTALS
			Project Director \$225.00	Senior Project Manager \$200.00	Senior Professional Engineer \$185.00	Project Engineer II \$130.00	Sr. Admin. Assistant \$70.00	Dennis J. Leavy (Survey)	WIRX (Geotechnical)	EW Consultants (Environmental)	WGI (Structural)	
1		Project Control/Management/Tech. Coordination	28	52	52	0	16	\$0	\$0	\$1,500	\$0	\$28,940
	1	Project Management and Coordination	4	20	20		8					\$9,160
	2	Design Meetings (assume 4)	12	12	12		4					\$7,600
	3	Technical Coordination and Design Team Meetings	12	20	20		4			\$1,500		\$12,180
2		Data Collection, Surveying and Field Investigations	4	14	24	40	14	\$43,175	\$27,814	\$5,500	\$0	\$90,809
	1	Underground Utility Coordination			4	8	2					\$1,920
	2	Surveying Services and Basemap Preparation	2	8	8	24	4	\$43,175				\$50,105
	3	Geotechnical Services	2	4	8		4		\$27,814			\$30,824
	4	Tree Inventory		2	4	8	4			\$5,500		\$7,960
3		Finalize Preliminary Civil Site Plan	10	16	32	24	5	\$0	\$0	\$5,000	\$0	\$19,840
	1	Attend Village Staff Workshop	4	8	8		2			\$2,500		\$6,620
	2	Wetand and Uplands/Develop plan/Meeting(s)	2	4	8		1			\$2,500		\$5,300
	3	Incorporate Comments/Final Preliminary Plan	4	4	16	24	2					\$7,920
4		Contract Document Development	72	120	292	500	18	\$0	\$0	\$15,000	\$20,275	\$195,755
	1	Earthwork Design	8	20	60	120						\$32,500
	2	Site Civil Design	20	32	80	160						\$46,500
	3	Environmental Design	4	16	20	24				\$15,000		\$25,920
	4	Boardwalk Design	4	16	32	40					\$20,275	\$35,495
	5	Picnic Area/Shelter Design	4	8	20	20						\$8,800
	6	Elevated Overlook Area Design	4	8	12	32						\$8,880
	7	60-Percent Progress Package/Meeting	8	8	32	40	4					\$14,800
	8	90-Percent Progress Package/Meeting/Front-End	16	4	24	40	10					\$14,740
	9	100-Percent Bid Package	4	8	12	24	4					\$8,120
5		Permitting	12	20	40	44	12	\$0	\$0	\$15,000	\$0	\$35,660
	1	Permitting Applications	4	8	20	20	4			\$12,000		\$21,080
	2	RAIs	4	8	20	24	4			\$3,000		\$12,600
	3	Review Draft Permit	4	4			4					\$1,980
6		Bid Services	12	12	8	16	4	\$0	\$0	\$0	\$0	\$8,940
	1	Attend Pre-Bid Meeting	4	4								\$1,700
	2	Answer Questions/Addendums	4	4	8	16	2					\$5,400
	3	Review Bids/Recommendation of Award	4	4			2					\$1,840
		Labor Total Hours	138	234	448	624	69					
		Labor Hourly Billing Rate	\$225	\$200	\$185	\$130	\$70					
		Labor Individual Totals	\$31,050	\$46,800	\$82,880	\$81,120	\$4,830	\$43,175	\$27,814	\$42,000	\$20,275	
		Mock•Roos Total Fee	\$246,680									
		Subconsultant Total Fee	\$133,264									
		Project Total Fee	\$379,944									