

**Proposal to Provide  
Professional Engineering Services  
for  
IRC Project No. 1638 – 6<sup>th</sup> Avenue Resurfacing Project  
US-1 to 21<sup>st</sup> Street  
Vero Beach, Indian River County, Florida**

Indian River County (County) is proposing to improve the safety and operation of 6<sup>th</sup> Avenue from Highway US-1 to 21<sup>st</sup> Street. Approximately 3,700 LF (0.7 miles) of the road (15th Place north to 21<sup>st</sup> Street) are within the city limits of Vero Beach, FL. The proposed improvements consist of milling and resurfacing the existing asphalt pavement, filling in sidewalk gaps, and upgrading pedestrian crossings to current FDOT standards. Included in the scope of services are survey and geotechnical services for roadway cores. The total length of roadway within the project area is approximately 10,560 LF (2.0 miles).

The following are noted from the 8/29/2018 coordination meeting with IRC staff and follow up site visit with IRC staff on 9/11/2018:

- Limited available right of way is expected to be a factor.
- No lane or shoulder widening is to occur.
- The use of shared lanes may be considered by IRC staff.
- The limits of existing curbing are to remain unless needed for drainage.
- The drop off near 12th Street may require drainage improvements to create an acceptable shoulder, however this is not a drainage project. Any drainage improvements are limited to what is required for the proposed sidewalk improvements.
- Replace existing asphalt sidewalks with 6" concrete (with fibermesh).
- Connect and fill in sidewalk gaps along the project area (east side 6<sup>th</sup> Avenue) from US-1 to 21<sup>st</sup> Street.
- Replace damaged sidewalk panels and panels where vertical joint deflection exceeds ADA tolerances.
- Upgrade pedestrian crossings at intersections to the current Indian River County PW/FDOT/ADA standards.
- Maintain brick and concrete pedway crossings, but stamped asphalt pedway crossings are to be removed (during pavement milling) and replaced with stamped asphalt.
- Include cross slope correction in typical section.
- All traffic signals will remain span wire, no upgrades to mast arms.
- Upgrade existing in-ground signal detection loops to video detection at two traffic signals (8<sup>th</sup> Street and 12<sup>th</sup> Street).
- Provide an ITS fiber conduit for future use.
- Include cost estimate in the scope of services, with breakdown for inside/outside city limits.

At the request of the County, ATKINS (Consultant) has prepared a scope of services for providing engineering design and construction documents for the proposed roadway improvements as follows:

## SECTION 1 SCOPE OF SERVICES

### TASK 1: SURVEY

Prepare a road route survey, including right-of-way and topographic survey, of 6<sup>th</sup> Avenue from and including the intersection of US-1 to and including the intersection with 21<sup>st</sup> Street (10,400± feet). The survey observations shall include the following:

1. Establish right-of-way and vertical control for topographic collection along 6<sup>th</sup> Avenue within the project limits. Topographic information to include crown of the road and well-defined edges of pavement, shoulders, side slopes and ditch information every 100 feet. Existing improvements will include pavement, walks, trees, storm structures, visible utilities, including inverts and rim elevations, curb and gutters, sidewalks, utilities, pull boxes, drainage and street signs, power pole, mast arms, existing driveways and other above ground (visible) features within the project limits.
2. Prepare a detailed plan view drawing of recovered and recorded information under the guidelines and requirements set forth by Indian River County.
3. The survey base line will be monumented with offset control points to avoid being disturbed during construction.
4. Survey will be referenced to the North American Datum of 1983, Adjustment of 2011, Florida East State Plane Coordinate System (Zone 901) and displayed in US Survey Feet.
5. Extend topographic survey approximately 10 feet beyond the existing right of way of 6<sup>th</sup> Avenue at approximately 30 intersecting road right of ways (750± feet).
6. Extend topographic survey east of the east right of way of 6<sup>th</sup> Avenue for approximately 4000 feet (width varies) per aerial exhibits (Sheets 1-3).

All surveys shall meet minimum technical standards adopted by the Florida Board of Professional Surveyors and Mappers as set forth in Chapter 5J-17 F.A.C.

Exclusions: Title Reports and Review thereof, Control Survey or Right of Way Maps, easements or right of way parcel sketch and descriptions are not included in this scope of work.

### TASK 2: PAVEMENT CORES

Atkins will utilize the services of a geotechnical testing firm to provide 6 pavement cores within the limits of asphalt pavement. The locations of the cores will be based on an aerial photograph provided to the geotechnical firm based on coordination with the County. The cores will be obtained using portable electric core drill equipped with a 4-inch diameter diamond tipped core barrel. Cores will be removed and measured for asphalt and base thickness. A 3-inch diameter hand held bucket auger will then be used to perform shallow hand auger borings to a maximum depth of 3 feet below top of pavement to obtain samples of the subgrade for classification. Bore holes will be backfilled with the soil cuttings and pavement core holes will be patched with cold-patch asphaltic concrete upon completion. The following findings will be provided for each pavement core: Approximate core location, approximate asphalt and base thickness, apparent base type, and subgrade soil classification. LBR and gradation testing will not be performed.

February 14, 2019

### **TASK 3: EXISTING CONDITIONS REVIEW**

Atkins will review the existing survey of the roadway area provided by the County and will make a site visit to review the project area. A list of existing conditions and the survey with field markups will be provided to the County. This task also includes meeting with County Staff to review the project and discuss areas of particular concern.

### **TASK 4: ROADWAY PLANS**

1. Based on review of the information obtained in Tasks 1, 2 and 3, the Consultant will prepare design and construction documents for the proposed improvements. The construction documents will be prepared in 11x17 inch format and will include the following drawing sheets:

- Key Sheet,
- Summary of Pay Items,
- Typical Section & Cross Slope Correction Details,
- Project Layout and Control,
- General Notes,
- Roadway Plan,
- Cross Sections (at points of interest, up to 15 Cross Sections),
- Stormwater Pollution Prevention Plan,
- Signing and Pavement Markings,
- Signalization Plans (Task 5).

Any storm sewer improvements, utility adjustments, clearing and grubbing areas will be shown on the plan sheets. Side walk grade spot elevations will also be shown on the plan sheets in lieu of sidewalk profiles. Pavement markings will be based on existing aerial photograph. Applicable FDOT standard index sheets, including Index 600 Traffic Control Details will be provided as a separate attachment to the plan set.

Plans will be submitted to the County for review at the 60%, 90% and 100% design stages. Final 100% Construction Documents signed and sealed will be submitted to the County for record.

2. Prepare three (3) estimates of probable construction costs based on 60%, 90% and 100% Construction Documents. Asphalt quantities computed for cross slope correction will be based on evaluation of roadway section elevations via spreadsheet (a 3-D corridor will not be generated). The area of any easements or right of way required for construction of the proposed improvements will be shown on the roadway plan sheets but no dollar value will be assigned.
3. Provide technical specifications for the project. The technical specifications will be based on an approved current edition provided by the County. Specifications shall be submitted to the County for review with the 90% and 100% design submittal.

**TASK 5: SIGNAL UPGRADE PLANS**

The following traffic signal upgrades are proposed by the County:

1. **8<sup>th</sup> Street and 12<sup>th</sup> Street intersections:** Upgrade existing in-ground signal detection loops to new video detection per Indian River County requirements.
2. **6<sup>th</sup> Avenue from US-1 to 21<sup>st</sup> Street:** Provide conduit for future ITS system. This information will be shown on the roadway plan sheets. Assumes conduit will stop at the south end of 6<sup>th</sup> Ave and the intersection at 21<sup>st</sup> Street.

The Consultant will develop signal design plans prepared in accordance with the County standards and preferences, the Florida Department of Transportation (FDOT) standards and the Manual on Uniform Traffic Control Devices (MUTCD). Locations of signal equipment and power source will be coordinated with FPL.

The signal design plans will be prepared in 11-inch x 17-inch format and will include the following sheets:

- Tabulation of Quantities Sheet,
- General Notes Sheet,
- Signalization Plan Sheets,
- Detail Sheets.

The plans will be submitted to the County at the 60%, 90% and 100% stages for review and comment. Review comments received from the County will be incorporated into the plans and written responses to the comments will be provided. Final 100% Construction Documents, signed and sealed will be submitted to the County for record.

**TASK 6: PERMITTING AND UTILITY NOTIFICATION**

The Consultant will prepare and submit permit applications with accompanying Construction Documents for agency review, coordinating each submittal with the Client as necessary. The following permitting activities are anticipated:

1. **Indian River County Public Works staff review:**  
The Consultant will prepare and submit to County Public Works submittal packages with accompanying Construction Documents (plans and specifications), and the Engineers Estimate of Probable Construction Cost in support of obtaining Public Works Approval for the proposed improvements. The submittals will occur at the 60%, 90% and 100% design stages. Comments from County staff will be incorporated into the plans and the Consultant will provide a written response to each comment. This task includes one meeting with the County to review comments.
2. **City of Vero Beach Right of Way Permit:**  
The Consultant will prepare and submit to the City of Vero Beach in support of obtaining a Right of Way Permit for the proposed project improvements located within the City. The initial submittal will occur at the 90% design stage. Comments from city staff on the 90% submittal will be incorporated into the 100% plans and the Consultant will provide a written response to each comment. It is assumed that the 100% submittal will be approved by the city.

St. Johns River Water Management District (SJRWMD) Permit Exemption Request:

The Consultant shall prepare and submit a request for permit exemption for the proposed improvements. It is assumed that this project will qualify for an exemption under F.A.C. Chapter 62-330.05 Exempt Activities (c) Minor roadway safety construction, alteration, or maintenance and operation.

3. Florida Department of Transportation (FDOT) General Use Permit:

The Consultant shall prepare and submit a General Use Permit application to FDOT for the proposed improvements within FDOT Right of Way. The submittals will occur at the 90% and 100% design stage. Comments from FDOT staff on the 90% submittal will be incorporated into the 100% plans and the Consultant will provide a written response to each comment. It is assumed that the 100% submittal will be approved by FDOT.

4. Utility Notification and Coordination:

The Consultant will coordinate with local utility providers including FP&L, AT&T, Bright House Networks, NUI City Gas Company, County and Town Utility department to obtain available information regarding existing utilities within the proposed project limits. The Consultant will provide a Notice to Utility Owner Providers of the proposed improvements. Upon request by the County a record of email delivery confirmation to each utility provider will be provided to the County. The Consultant will provide a copy of each submittal (60%, 90% and 100%) to the utility providers identified by Sunshine State One Call of Florida with a request for plan markups from the utility. The Consultant will also attend a Utility Coordination Meeting at the County following the 60% and 90% submittal (2 total) during the design phase to review utility conflicts that have been identified by the utility provider or determined during the design phase. It is anticipated that only minor utility and hydrant adjustments will be required, and those adjustments will be shown on the plans. Utility design, utility adjustment plans and utility main relocation is not included in this scope of work.

**TASK 7: BID PHASE SERVICES**

Following approval of the Final Construction Documents the Consultant will prepare bid documents to the County consisting of the approved construction drawings and the project technical specifications issued for bid. The Consultant will also edit Division 0 and 1 specifications provided by the County in MS Word format to insert project specific information in these sections, including the bid schedule. It is assumed that only minor project specific information editing of Division 0 and 1 specifications will be required. The Consultant will also:

1. Attend a pre-bid meeting.
2. Prepare answers to questions submitted by potential bidders to the County (7 calendar day review period). Estimated level of effort is based on providing one combined response of all questions submitted to and compiled by the County.
3. Assist the County with preparing bid addendums for technical items (one bid addenda is assumed).
4. Review and make recommendations to County regarding acceptance of the low bid contractor's Schedule of Values.

Following bid submittal, the Consultant will review the submitted bids and provide a recommendation for award to the County.

**SECTION 2 ASSUMPTIONS AND EXCLUSIONS**

1. Application fees, impact fees and any other fees required by regulatory agencies are considered a direct expense to the County.
2. The following assumptions apply to this scope of services:
  - The County has supplied legal descriptions of parcels fronting the Right of Way via 9/25/2018 email with FTP site link.
  - The proposed facilities will not require relocation of major utility facilities, including power, communications, water, sewer and gas. Design and permitting of major utility relocation is assumed to be by the utility provider and is not included in this proposal.
  - It is assumed pavement resurfacing will be based on standard County pavement section, detailed pavement design is not included in this scope of services.
  - Any lane sharing will be accomplished by pavement marking “Sharrows”, lane narrowing and adding additional lanes, including bike lanes or lanes adjacent to the travel lane is not included in this proposal.
  - Drainage, grading, and utility adjustment information will be shown on the roadway plan sheets.
  - ITS conduit information will be shown on the roadway plan set.
  - The Contractor will be responsible for preparation and submittal of a Maintenance of Traffic (MOT) Plan to the County for approval prior to construction. No MOT details will be included in the Construction Plans.
  - The Contractor will be responsible for preparation and submittal of the FDEP NOI for the project prior to construction and N.O.T. upon completion of construction.
  - It is assumed that no changes or upgrades to existing pedestrian crossing signals are required and that structural analysis of existing strain poles is not required.
  - It is assumed the County will schedule the Utility Coordination Meetings.
  - FDOT General Use Permitting assumes one submittal and one response to comments. Additional submittals are not included in this scope of work.
  - The Contractor shall provide an as-built survey, prepared by a land surveyor registered in the State of Florida, to the County and Atkins.
  - Task 7 Bid Phase services is assumed to last approximately two months from submittal of Issue for Bid documents to the County.
3. Design and permitting of any offsite improvements, are not included in this proposal.

4. FDOT standard structures will be specified for all proposed drainage structures. The structural design of special structures that may be required to address special design conditions or conflicts is not included in this scope.
5. The following items are not included in this scope of work:
  - Traffic Signal Warrant, Traffic Planning, Traffic Studies and ITS design.
  - Additional Geotechnical Investigations not specified in Task 2 of this scope of services,
  - Subsurface Utility Engineering (SUE), including soft digs and utility locates.
  - Profile Drawings of the proposed improvements.
  - Stormwater management system design and permitting.
  - Additional City of Vero Beach, SJRWMD and FDOT permitting not specified in Task 6 of this scope of services
  - ACOE and FEMA and FDEP permitting is considered an additional service.
  - Utility design, utility adjustment plans and utility main relocation (except for minor utility service or hydrant adjustments).
  - Easements and land acquisition support services.
  - Division 0 and 1 Specification preparation (except as specified in the scope) and legal review.
  - Maintenance of Traffic (MOT) Plans and MOT Details.
  - Evaluation of Contractors Means and Methods or alternative designs for components proposed by Contractor.
  - Construction phase services, including pre-construction meeting, review of shop drawings, responses to requests for information (RFI's), review of change orders, pay application reviews, site inspections, as-built survey review, certification of completion and record drawings.