



Tammy Etheridge, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

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March 18, 2015

TO: John Denninghoff, Public Works Director

RE: Item VI.A.1., Approval of Professional Engineering Services for the Babcock Street and Valkaria Road/Wyoming Drive Intersection Improvements

The Board of County Commissioners, in regular session on March 17, 2015, authorized Work Order #2014-2681-K-002 for Kelly, Collins & Gentry, Inc. to provide final design engineering services in the amount of \$133,354 for the Babcock Street and Valkaria Road/Wyoming Drive Intersection Improvements Project.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Etheridge, Deputy Clerk

/kg

cc: Finance
Budget



December 1, 2014

Ms. Tammy Thomas-Wood
Brevard County Public Works Department
2725 Judge Fran Jamieson Way, Building A
Viera, Florida 32940

Re: Revised Proposal for Final Design Services

Revised: December 1, 2014

Babcock Street SE and Valkaria Rd / Wyoming Dr SE Intersection Improvement Project

Dear Ms. Thomas-Wood:

Kelly, Collins & Gentry, Inc. (KCG) is pleased to submit this revised proposal for the final design services for the aforementioned Project. Our services will provide the design, survey and preparation of construction documents suitable for the construction of the proposed facility. More specifically, these services include:

Engineering Design Phase Services

- 1) Prepare construction documents including plans, specifications, quantity computations and Engineer's Probable Estimate of Cost for construction of 2,200 ± lf of roadway improvements to Babcock Street SE, 600 ± lf of roadway improvements to Valkaria Road and 400 ± lf of roadway improvements to Wyoming Drive SE within existing Brevard County right-of-way. The aforementioned plans shall include key sheet, typical section(s), plan and profile views, cross sections, notes, quantities, details as necessary, cross sections, erosion control, SWPPP sheets, signing and pavement markings and signalization plans.
- 2) Contact environmental control agencies and verify permit exemptions. We will submit necessary documentation to the appropriate jurisdictional agencies. Agency fees are to be paid directly by Brevard County.
- 3) Complete a Right-of-Way Control Survey for the right-of-ways of Babcock Street, Valkaria Road and Wyoming Drive SE within the limits of the design project; complete a Topographic Survey covering the proposed improvement limits; and prepare a Right-of-Way Map covering existing and proposed right-of-way within the project limits. All surveys shall conform to Chapter 5J-17 FAC and the Brevard County Public Works Finance & Contracts Administration requirements. The Right-of-Way Map shall be prepared in accordance with the Brevard County Public Works Finance & Contracts Administration requirements.

Services to include: Prepare a Right-of-Way Control Survey and prepare a Right-of-Way Map based on existing deeds, plats and sectional lines substantiated by monumentation recovered in the field. The projects limits of the surveys and mappings are approximately 2,200 feet of Babcock St SE, approximately 600 feet of Valkaria Road and approximately 400 feet of Wyoming Dr SE. Topo and cross-section the entire route from the centerline intersection of pavement 15 feet past the Right-of-Way lines at intervals not to exceed 50 feet using both conventional, terrestrial and laser scanning techniques suitable for capturing above fixed improvements and trees (topographic features) meeting the topographic survey requirements of Chapter SJ-17 FAC. Locate and show within the

Topographic Survey any applicable environmental jurisdictional lines within the project limits. Prepare digital files (including an AUTOCAD file, Triangulated DTM file and ASCII text point file) of entire route survey. A Baseline of Survey shall be utilized and Baseline/Survey Reference Points shall be set and described. Underground utilities will be shown on the survey. Any underground utilities in the area will be located as marked by others and as provided by subsurface utility excavation (SUE). The survey shall state the Sunshine Ticket Locate number used to order utility locates. Preliminary surveys will be sent to the appropriate utility companies to verify location and provide utility information such as size, material, etc. This information will be added to the final survey. Utilities located by SUE shall also include depth of lines/elevations. Soil boring sites and geotechnical explorations will be located within the survey. The boring nomenclature shall match the geotechnical report and shall include the elevation of each boring. Coordinates for the survey will be in State Plane Coordinates, Florida East Zone (NAD83) latest adjustment and the elevation datum will be NAVD88. At the initial Design Submittal, four (4) Signed and Sealed hard copies of the Right-of-Way Control Survey and Topographic Survey together with digital files as specified above and PDF formats will be provided. At the Final Design submittal four (4) Signed and Sealed hard copies of the Right-of-Way Map together with the digital files as specified above and PDF formats will be provided

- 4) Complete utility designates and locates within project limits, as described above. More specifically:
 - a) Designates: Electronic sensing devices and will be used to detect those underground utilities that can transmit an electronic signal. Ground penetrating radar will also be used to search for utilities that will not carry the signal or any unknown utilities within the project limits. All discovered underground utilities will be marked with paint and or wire flags that will be the standard color for the type of utility. A color coded sketch will also be prepared showing all utilities designated to assist with the survey of the marks. Designation of sanitary and storm sewer systems and irrigation lines is not included.
 - b) Location/soft digs: Vacuum excavation equipment will be used to safely expose underground utilities at 15 specific places as directed by the engineer. Once the utility has been found a semi-permanent marker will be placed at ground level directly above the utility for location by your surveyor. A Test Hole Report will be prepared showing a measurement down from the semi-permanent marker to the top of the utility. It is our understanding that mast arm poles are likely for the traffic signals. Permits and MOT, if required, are not included as part of this proposal. SSOC will be contacted prior to excavating to obtain a Locate Ticket. A minimum of 2 full business days is required by law before work can begin.
- 5) Complete a geotechnical field exploration of the project limits to include:
 - a) Six (6) pavement cores (4 cores on Babcock St SE, 1 core on Valkaria Rd and 1 core on Wyoming Dr SE)
 - b) Four (4) SPT borings to a depth of 40 feet for signal foundations at the intersection
 - c) Eleven (11) hand auger borings (6 borings on Babcock St SE, 3 borings on Valkaria Rd and 2 borings on Wyoming Dr SE) to a depth of six (6) feet below ground surface.
 - d) A test pit will be excavated to a depth of two (2) to three (3) feet adjacent in two locations as designated. One Shelby-tube sample of soil will be obtained in a vertical orientation from the bottom of the excavation for soil permeability testing.

- e) Five (5) LBRs will be collected at locations adjacent to the roadways, with at least two (2) from Babcock St, one (1) from Valkaria Rd and one (1) from Wyoming Dr SE.
- 6) Prepare the traffic signal design plans in accordance with Brevard County and the MUTCD (Manual on Uniform Traffic Control Devices) standards by traffic subconsultant, GMB. The traffic signal design will utilize mast arm assemblies with mast arms in all four corners of the intersection. A strain pole design may be considered, upon approval of Brevard County, should right-of-way and overhead/underground utility conflicts be too constrictive. Video detection will be installed along with countdown pedestrian signal heads and ADA compliant pedestrian detectors at any proposed crosswalk locations. The design will include a tabulation of quantities sheet, a general notes sheet, a Signal plan sheet for the intersection and either a pole schedule or a mast arm detail sheet, whichever is applicable. Should a strain pole design be opted for, Atlas analysis will be run on the design to determine foundation depth and span wire sizes. The plan set will be prepared in 11"x17" format and will be submitted to the Client at the 60%, 90%, 100% and Final phases for their use in coordinating review and approval with the maintaining agency. Review comments received back from the submittals will be incorporated into the plans, along with written responses. The Consultant will also perform Post Design Services which include shop drawing reviews of the signal equipment submitted by the signal contractor and answering requests for additional information (RFIs) during the construction process. Structural analysis and special foundation designs are not anticipated and are not included in this proposal. Subsurface utility engineering (SUE) and geotechnical services will be required for the signal design, and will be provided by others under separate proposals. Based on coordination with the County, the intersection is currently isolated and there are no plans to install fiber optic cable within the vicinity of the intersection. Therefore, no interconnect, CCTV or splice diagrams will be required.
- 7) Develop signed and sealed engineering design drawings, specifications, and bid documents suitable for review and approval by Brevard County.
 - a) Initial design concept plan meeting with County Staff to occur within 60 days of receipt of complete field survey prior to moving forward with design to address the proposed geometry for the turn lanes, including lengths, widths, and sight distances.
 - b) Three sets (24" x 36") of the 60% design plans and signed, sealed and dated PDF on a CD will be submitted to the County for review 60 days from receipt of County approval of design concept and receipt of complete field survey.
 - c) Three sets (24" x 36") of the 90% design plans and signed, sealed and dated PDF on a CD will be submitted to the County for review 60 days from receipt of County Review Comments.
 - d) Three sets (24" x 36") of the 100% design plans and signed, sealed and dated PDF on a CD will be submitted to the County for review 60 days from receipt of County Review Comments.
 - e) Upon final review acceptance, two sets of Final signed and sealed full size prints (24" x 36"), one CD with Final 24" x 26" PDF (signed and sealed) and one CD with AutoCAD files will be submitted.
- 8) Optional Services: If needed for right-of-way or easement acquisition, signed and sealed Legal Descriptions and Sketches shall be provided for each acquisition parcel and shall comply with Chapter 5J-17 FAC and the Brevard County Public Works Finance and Contracts Administration requirements. The cost of each sketch and description shall not exceed \$750.00.

Ms. Thomas-Wood
December 1, 2014

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The fee proposal for this effort is in the amount of \$133,354.00. If you have any questions or need additional information, please feel free to contact me at 407-898-7858 or on my cell at 407-256-6789. We look forward to working with you on this project and are available to start the work immediately upon notice to proceed.

Sincerely,
KELLY, COLLINS & GENTRY, INC.



Steven M. Kreidt, P.E.
Principal

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