

**WORK AUTHORIZATION # CM2499-WA05
NASSAU COUNTY
BOARD OF COUNTY COMMISSIONERS
CONTINUING CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES
RFQ/BID NO. NC 17-006**

| | |
|-------------------------|--------------------|
| Consultant: | EltonAlan, Inc. |
| Contract Number: | CM2499 |
| Contact Name: | Michael Holcomb |
| Contact Number: | 904-891-0360 |
| Email: | mike@eltonalan.com |

| CURRENT WORK AUTHORIZATION | | | |
|--|-------------------|---|--------------|
| Project Short Title: Design Services for Pratt Siding Road | | | |
| | | CONTRACT OVERVIEW | |
| Date Submitted | 10/11/19 | Total of Previous Authorizations | \$137,000.00 |
| | | Change Orders/Adjustments | \$0.00 |
| Amount | \$272,582.24 | This Work Authorization | \$272,582.24 |
| Scheduled Completion | 30 weeks from NTP | Current Contract Total | \$409,582.24 |

This Work Authorization is to the AGREEMENT between Nassau County and the Consultant known as the Continuing Contract for Professional Engineering Services for Nassau County, Florida, dated January 8, 2018. The services to be provided under this Work Authorization are as follows:

ARTICLE 1. Services Described as:

EltonAlan, Inc. will provide engineering design services for the paving of Pratt Siding Road, pursuant to the Scope of Services dated October 11, 2019, attached hereto as Attachment "A".

ARTICLE 2. Time Schedule

The total estimated time to complete the services under this Work Authorization is 30 weeks from NTP.

ARTICLE 3. Budget

EltonAlan, Inc. will perform the *Scope of Services* outlined herein for the Total of \$272,582.24. EltonAlan, Inc. will be using billing rates established under Continuing contract CM2499.

Article 4. Other Provisions

The services covered by this Work Authorization will be performed in accordance with the provisions set forth in the AGREEMENT referenced above and any of its attachments or schedules. Additional terms or contract provisions whether submitted purposely or

inadvertently, shall have no force or effect. This Work Authorization will become a part of the referenced AGREEMENT when executed by both parties.

In presenting this Work Authorization, Consultant agrees that:

Unless detailed herein, all drawings, data, electronic files and other information required for this Work Authorization has been accepted by Consultant. Specifically, all electronic files have been reviewed and accepted for the purposes of this Work assignment. Any additional information, including detailed scope of services are attached.

AGREED TO BY:

BY: _____
Print Name: _____
Title: _____
Date: _____

RECOMMENDED AND APPROVED BY NASSAU COUNTY:

County Engineer:

Department Head or Designee

Contract Management:

Grayson Hagins

Office of Management & Budget:

Megan Diehl

County Manager:

Michael S. Mullin

Ex-Officio Clerk:

John Crawford

County Attorney:

Michael S. Mullin

APPROVED by the BOARD OF COUNTY COMMISSIONERS, this ____ day of _____, 2019.

BOARD OF COUNTY COMMISSIONERS
NASSAU COUNTY, FLORIDA

Justin M. Taylor
Chairman

ACCOUNT NO.: 63470541-563365 PRATT

Attachment A
SCOPE OF SERVICES
ENGINEERING SERVICES
FOR CR PRATT SIDING
NASSAU COUNTY, FLORIDA
OCTOBER 11, 2019

A. PROJECT DESCRIPTION

- 1) The intent of this project to pave the existing Pratt Siding dirt road from Old Dixie to US1. Some of the items within the project limits includes:
 - a. Three Minor Cross Drain Culverts – Proposed to be replaced due to inadequate length
 - b. Approximately 18 driveways – All proposed to be modified / paved to 5'
 - c. 5 Named Cross Streets – All “intersections” proposed to be improved to some extent (either treated as a driveway connection or as a typical intersection)
 - d. One major CSX R/R crossing to be upgraded to current standards.
 - e. The project also appears to fall within an impaired water body.
- 2) This scope of services includes all engineering services required to develop final construction documents, right of way acquisition documents (if/as necessary) and obtain all required permits to achieve the project intent.
- 3) All services provided within the Scope of Services shall be in accordance with Nassau County Ordinance 99-7 Appendix D Roadway and Drainage Standards as well as the “Construction and Maintenance for Streets and Highways”, commonly known as the “Florida Green Book”.
- 4) The scope of services includes:
 - a. Data Collection
 - b. Engineering Design
 - c. Plans and Specifications Preparation
 - d. Right of Way Mapping (if/as necessary)
 - e. Environmental Permitting
 - f. Bid Phase Services
 - g. Post Design Services

B. Professional Services to be Provided– The Consultant shall provide the following services:

1) Data Collection

a. Geotechnical Engineering – Collect field samples, perform laboratory testing and provide a detailed Geotechnical report as follows:

1. Collect Auger Borings to 6' depth spaced at 500' alternating left and right of centerline. Encountered ground water levels and unsuitable materials will be noted with each sample. (16 locations total)
2. Collect SPT borings to a depth of 20' at all culvert crossings. Encountered ground water levels and unsuitable materials will be noted with each sample. (3 locations total)
3. Collect Limerock Bearing Ratio (LBR) samples spaced at 2500' along centerline (3 locations total).
4. Soil samples for laboratory soil testing will be obtained on a frequency of three samples per stratum per mile. Soil samples for pipe corrosion testing will be also be obtained at each culvert crossing.
5. Sufficient testing will be performed on soils recovered from the borings for classification purposes using the AASHTO and the Unified Soil Classification System for organic content, moisture content, waterberg limits, percent fines, corrosion susceptibility, structural characteristics, LBR and estimated seasonal high groundwater elevations.
6. A geotechnical engineer, registered in the State of Florida, will direct the geotechnical exploration and provide engineering analysis and evaluation of the site and subsurface conditions with respect to the planned construction and imposed loading conditions. The results (including past and proposed as applicable) of the exploration and engineering study will be presented in a report containing the following:
 - a. Soil Data Sheets
 - b. Laboratory Test Results
 - c. Design LBR Results
 - d. Estimated Seasonal High Groundwater Levels
 - e. Recommendations concerning the suitability of the subsurface soils for support of the planned roadway.
 - f. Recommendations concerning the suitability of the subsurface soils for support of the planned culverts.
 - g. Recommendations for the required site preparation and earthwork construction

b. Survey – The consultant shall provide survey services within the projects limits as follows:

- a. Establish Horizontal and Vertical Control (state Plane Coordinates)
- b. Establish Baseline of survey
- c. Establish project Benchmarks and Reference Points (every 1000')
- d. Locate existing section lines and property ties
- e. Provide Cross Sections every 100' as well as at each culvert crossing and every intersection from 50' left of centerline to 50' feet right of centerline.

- f. Survey geotechnical boring locations
- g. Survey wetland jurisdictional lines
- h. Provide design survey within right of way limits including all above ground features together with drainage structures and observed utilities
- i. Survey all above ground utilities within right of way
- j. Provide survey data by electronic files (Microstation)
- k. Provide R/W Maintenance Maps (40 scale)

2) Design Analyses – The consultant shall provide a design analysis report containing the following;

- a. Traffic Analysis – The Consultant will conduct a traffic analysis to identify project 5-Year and 20-Year traffic volumes along the corridor and at either end, conduct signal warrant analyses and conduct a no passing zone analysis
- b. Drainage Analysis – The Consultant will prepare a Drainage Study to analyze existing stormwater facilities along the corridor as follows:
 - i. Master Drainage plan (1" = 200') showing existing contours (from County provided LIDAR data) and field verified data for critical areas such as major drainage ways, storm pipes and bridge structures
 - ii. Include as a minimum, drainage calculations for existing and final design conditions using 25 years SCS methodology
 - iii. As part of the study, a pre-application meeting will be conducted with the St. Johns River Water Management District to clarify project criteria, and to identify feasible mitigation and other requirements. Recommendations for accomplishing stormwater treatment will be included in the study
- c. Environmental Analysis - The Consultant will prepare an Environmental Analysis that will include a Wetland, threatened and endangered species field inventory. Based upon these inventories, potential impacts of the project will be identified, and options to mitigate these impacts will be identified based upon the preliminary coordination with the WMD
- d. Utility Impact Analysis - The Consultant shall contact the known private and public utility companies within the project corridor (such as FPL, Okefenoke, CXS, Quest, Comcast, Williams Communications, MCI, AT&T and Level III) or who have definitive plans to locate within the corridor and obtain plans of their existing or planned facilities (both horizontally and vertically) within the project limits. The consultant shall determine potential impacts with the proposed improvements.
- e. Roadway Analysis – Based on the recommendations of the Traffic, Drainage, Environmental and Utility Impact Analyses, the Consultant shall provide a roadway analysis including design documentation that includes:
 - i. Pavement Design
 - ii. Roadway Typical Sections
 - iii. Design speed determinations
 - iv. Roadway Horizontal alignment
 - v. Intersection improvements
 - vi. Right-of-way requirements (if any)

- vii. Maintenance of traffic
 - viii. Conceptual Plans using aerial photography as a base
 - ix. Opinion of probable costs at 30%, 60%, 100% and final design phases
- 3) **Construction Plans and Specifications** - The Consultant will perform the necessary additional analyses and prepare construction plan sheets, notes and details for a complete set of construction documents to convey the intent and scope of the project for the purposes of construction as follows:
- Key Sheet
 - Summary of Pay Items
 - Typical Sections
 - Drainage Map
 - Summary of Quantities / Drainage Structures
 - Project Layout / Benchmark / Reference Points
 - General Notes
 - Roadway Plan / Profiles
 - Drainage Structures
 - Soil Survey
 - Cross Sections
 - SWPPP
 - Traffic Control Plans
 - Signing and Pavement Marking Plans
- 4) **Utility Coordination** - The Consultant shall be responsible for coordinating all design with the affected utility companies in order to minimize utility conflicts. The consultant shall re-contact these utilities and submit 60% design plans that include all known existing utilities. The consultant shall make a final contact with these utilities to submit 90% plans that show all proposed roadway and drainage improvements. Utility coordination meetings will be held at the 60%, 90% and Final phases of design.
- 5) **Right of Way Mapping** (Not included herein – will add as a supplement to this contract if/as necessary)
- 6) **Environmental Permitting** - The Consultant will provide all services (data collection, field surveys, coordination, agency meetings, permit and associated exhibit preparation, etc.) necessary to develop and apply for a permit exemption with the St. Johns River Water Management District pursuant to section 62-330.051 (4)(e) – Repair, stabilization or paving of existing unpaved roads and a Nationwide (NWP) 14 through the US Army Corps of Engineers. Should the project exceed the thresholds of these authorizations, additional services provided under a future scope of services will be required for the preparation and submittal of either a Standard General or Individual permits through those agencies.
- 7) **Bid Phase Services** - The Consultant will prepare a bid package including front end documents for the bidding of this project. The consultant will also formally respond to questions during the bidding phase of the project and prepare a recommendation of the lowest qualified bidder based on the county prepared bid tabulations.

- 8) Post Design Services** - The Consultant will provide services necessary to assist the County during the construction phase of this project. The consultant will respond to contractor requests for information, review and approve shop drawings, attend meetings as necessary and revise plans as necessary.

C. Project Deliverables -The Consultant shall provide the following deliverables:

- 1) Design Concept Report (approximately 10% phase)
- 2) Design Survey (after Preliminary Phase)
- 3) Preliminary and Final Geotechnical Report (after Preliminary Phase)
- 4) Utility Clearance Certifications (@ 90%)
- 5) Environmental Permits (@ 90%)
- 6) Engineers Estimates (60%, 90% and Final)
- 7) Construction Plans (60%, 90%% and Final)

D. Project Schedule -The Consultant shall provide the services included herein within a total of xx weeks from NTP in accordance with the following milestones:

- 1) Design Concept Report – 6 weeks from NTP
- 2) Survey and Geotechnical Report – 8 weeks from concept approval
- 3) Utility Clearance Certifications – 26 weeks from NTP
- 4) Environmental Permits – 26 weeks from NTP
- 5) Construction Plans / Engineers Estimates
 1. 60% – 12 weeks from concept approval
 2. 90% – 8 weeks from 60% approval
 3. Final / Bid Docs– 4 weeks from 90% approval

The total estimated time to complete this project is 30 weeks from EltonAlan's receipt of an NTP.

ELTONALAN ESTIMATE OF WORK EFFORT AND FEE

Pratt Siding Road
Project Length (miles): 1.5

| Tasks | Staff Hour Totals | | | | Staff Hour Distribution | | | | | | | | | | | | | |
|-------|--------------------|------|----------------|--|-------------------------|--|---------------------------------|--|----|--|--------------|--|-------------------|--|-------|--|------|--|
| | Loaded Labor Rates | | | | Total Hours | | Project Manager / Sr. | | | | Sr. Designer | | CADD Tech / Admin | | | | | |
| | | | | | | | Engineer | | | | Hours | | Cost | | Hours | | Cost | |
| | | | | | | | Raw Hourly Rates | | | | Hours | | Cost | | Hours | | Cost | |
| | | | | | | | Allowable FDOT OH Rate: 175.99% | | | | Hours | | Cost | | Hours | | Cost | |
| | Qty. | Unit | Hours per Unit | | | | | | | | | | | | | | | |
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| TASK 1 - DATA COLLECTION SERVICES | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Survey Base Task | | | | | | | | | | | | | | |
| Right of Way Mapping | | | | | | | | | | | | | | |
| Geotechnical | | | | | | | | | | | | | | |
| Environmental - Wetland Delineation and Protected Species Assessment | | | | | | | | | | | | | | |
| Data Collection Subtotal | | | | | | | | | | | | | | |

| TASK 2 - ROADWAY DESIGN ANALYSIS AND PLANS (Based on the Assumption that Additional Right of Way will Not Be Required) | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

| DESIGN ANALYSIS | | | | | | | | | | | | | | |
|--------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Field Review / Site Visit | | | | | | | | | | | | | | |
| Traffic Analysis | | | | | | | | | | | | | | |
| Pavement Design | | | | | | | | | | | | | | |
| Typical Section Design | | | | | | | | | | | | | | |
| Roadway Design Analysis | | | | | | | | | | | | | | |
| Traffic Control Plan Design Analysis | | | | | | | | | | | | | | |
| Key Sheet | | | | | | | | | | | | | | |
| Summary of Pay Items | | | | | | | | | | | | | | |
| Typical Sections | | | | | | | | | | | | | | |
| General Notes | | | | | | | | | | | | | | |
| Summary of Quantities Sheets | | | | | | | | | | | | | | |
| Project Layout | | | | | | | | | | | | | | |
| Roadway Plan and Profiles | | | | | | | | | | | | | | |
| Intersection Detail Sheets | | | | | | | | | | | | | | |
| Soil Survey Sheet | | | | | | | | | | | | | | |
| Cross Sections | | | | | | | | | | | | | | |
| Erosion Control Details & Plans | | | | | | | | | | | | | | |
| Traffic Control Typical and Notes | | | | | | | | | | | | | | |
| Special Details | | | | | | | | | | | | | | |

ROADWAY PLANS

4 Hour Trips (incl travel) x two people)

Develop design traffic volumes based on County data

In conjunction with geotec analysis

Preliminary Conceptual design, final design, plus revisions/updates @ 90% and Final Plan Phase

40 hours for MOT concept development, and 8 hours per mile.

Initial development @ 60%, updates @ 90% and Final

CADD work only (Preferred T.S. Developed Previously)

500 Scale Layout Sheets Plus one Benchmark Sheet

40 Scale

Both Ends Plus Railroad Crossing

100 Foot Spacing, (plus one at each driveway) - 3 Sections Per Sheet

40 Scale

ELTONALAN ESTIMATE OF WORK EFFORT AND FEE

Pratt Siding Road
Project Length (miles): 1.5

| Tasks | Staff Hour Totals | | | | | | | | | | Staff Hour Distribution | | | | | | | | | | Comments | | | | | | | | | | | |
|---------------------------------------|---|--|--|--|--|--|--|--|--|--|--------------------------------|------|----|-------------|--------------|-------------|-------------------|-------|-------|-------------|----------|-----------|----------|-------------|----|----------|--------|----|--------|----|----------|--|
| | Raw Hourly Rates Allowed Bill Foot OH Rate: 175.99% Profit Rate: 10.00% | | | | | | | | | | Project Manager / Sr. Engineer | | | | Sr. Designer | | CADD Tech / Admin | | | | | | | | | | | | | | | |
| | | | | | | | | | | | Hours per Unit | | | | Hours | | Cost | | Hours | | | Cost | | | | | | | | | | |
| | | | | | | | | | | | Qty. | Unit | 60 | Hrs = | 60 | Hrs = | Staff Hours | 9 | \$ | 1,776.24 | | 36 | \$ | 4,448.88 | 15 | \$ | 820.05 | | | | | |
| Loaded Labor Rates | | | | | | | | | | | | | | Total Hours | | Hours | | Cost | | Hours | | Cost | | Cost Totals | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Roadway Design Documentation Report | | | | | | | | | | | | | | 1 | | each x | 60 | Hrs = | 60 | Staff Hours | 9 | \$ | 1,776.24 | 36 | \$ | 4,448.88 | 15 | \$ | 820.05 | \$ | 7,045.17 | Initial comps @ 60%, updates @ 90% and Final |
| Quantities | | | | | | | | | | | | | | 1.5 | | miles x | 24 | Hrs = | 37 | Staff Hours | 6 | \$ | 1,184.16 | 23 | \$ | 2,842.34 | 8 | \$ | 437.35 | \$ | 4,463.86 | |
| Cost & Contract Time Estimate | | | | | | | | | | | | | | 4 | | each x | 12 | Hrs = | 48 | Staff Hours | 8 | \$ | 1,578.88 | 29 | \$ | 3,583.82 | 11 | \$ | 601.37 | \$ | 5,764.07 | |
| Technical Specifications | | | | | | | | | | | | | | 1 | | each x | 24 | Hrs = | 24 | Staff Hours | 4 | \$ | 788.44 | 15 | \$ | 1,853.70 | 5 | \$ | 273.35 | \$ | 2,916.49 | |
| Roadway Technical Hours Sub-Total | | | | | | | | | | | | | | | | | | | | 894 | | Hrs Total | | | | | | | | | | |
| Project Administration / Coordination | | | | | | | | | | | | | | 3% | | x | 894 | Hrs = | 27 | Staff Hours | 14 | \$ | 2,763.04 | 0 | \$ | - | 13 | \$ | 710.71 | \$ | 3,473.75 | Includes coordination / meetings with Nassau County, our subs and other stakeholders if/as necessary |
| QA/QC | | | | | | | | | | | | | | 5% | | x | 894 | Hrs = | 45 | Staff Hours | 0 | \$ | - | 0 | \$ | - | 0 | \$ | - | \$ | - | |
| Roadway Total | | | | | | | | | | | | | | 966 | | Staff Hours | | | | | | | | | | | | | | \$ | | 111,165.49 |

