
**SEMINOLE COUNTY GOVERNMENT
AGENDA MEMORANDUM**

SUBJECT: Professional Services: PS-2825-07/BHJ - Preliminary Engineering and Final Design Services for SR 434 Intersection Improvements - Rangeline Road to CR 427

DEPARTMENT: Administrative Services

DIVISION: Purchasing and Contracts

AUTHORIZED BY: Frank Raymond

CONTACT: David Santiago

EXT: 7106

MOTION/RECOMMENDATION:

Approve the negotiated rates and award PS-2825-07/BHJ - Preliminary Engineering and Final Design Services for SR 434 Intersection Improvements - Rangeline Road to CR 427 with Horizon Engineering Group, Orlando, Florida (\$600,000.00 Estimated Usage amount over the term of the Agreement).

County-wide

Ray Hooper

BACKGROUND:

PS-2825-07/BHJ will provide Preliminary & Final Design Services for the addition of auxiliary lanes to improve the operations of the intersections of SR 434 and Florida Central Parkway and SR 434 and CR 427 (Ronald Reagan Blvd). These improvements may include, but are not limited to, roadway design, drainage design, utility coordination, signing and marking, signalization design, survey and right-of-way mapping. The project approach will provide for three phases in the Scope of Services: Preliminary Engineering, Final Design & Environmental Permitting, and Post Design Services.

On March 25, 2008, the Board approved the ranking and authorized staff to negotiate with Horizon Engineering Group, Inc. of Orlando, the top ranked firm. The Award Agreement includes the negotiated rates as Exhibit "C". The term of the Agreement will be for five (5) years with two renewal periods not to exceed one (1) year each.

Authorization for the performance of services by the Consultant under this Agreement shall be in the form of written Work Orders issued and executed by the County, and signed by the Consultant. The work and dollar amount for each Work Order will be within the constraints of the approved project budget and negotiated on an as-needed basis for the project.

STAFF RECOMMENDATION:

Staff recommends that the Board approve the negotiated rates and award PS-2825-07/BHJ - Preliminary Engineering and Final Design Services for SR 434 Intersection Improvements - Rangeline Road to CR 427 with Horizon Engineering Group, Orlando, Florida (\$600,000.00 Estimated Usage amount over the term of the Agreement).

ATTACHMENTS:

1. PS-2825-07_BHJ Award Agreement with Horizon Engineering Group, Inc

Additionally Reviewed By:

County Attorney Review (Ann Colby)

**CONSULTANT SERVICES AGREEMENT (PS-2825-07/BHJ)
PRELIMINARY AND FINAL DESIGN - S.R. 434 INTERSECTION IMPROVEMENTS**

THIS AGREEMENT is made and entered into this _____ day of _____, 20____, by and between **HORIZON ENGINEERING GROUP, INC.**, duly authorized to conduct business in the State of Florida, whose address is 2500 Maitland Center Parkway, Suite 300, Maitland, Florida 32751, hereinafter called "CONSULTANT", and **SEMINOLE COUNTY**, a political subdivision of the State of Florida, whose address is Seminole County Services Building, 1101 East First Street, Sanford, Florida 32771, hereinafter called "COUNTY".

W I T N E S S E T H:

WHEREAS, COUNTY desires to retain the services of a competent and qualified CONSULTANT to provide preliminary and final design services for S.R. 434 intersection improvements in Seminole County; and

WHEREAS, COUNTY has requested and received expressions of interest for the retention of services of consultants; and

WHEREAS, CONSULTANT is competent and qualified to furnish preliminary and final design services for S.R. 434 intersection improvements services to COUNTY and desires to provide professional services according to the terms and conditions stated herein,

NOW, THEREFORE, in consideration of the mutual understandings and covenants set forth herein, COUNTY and CONSULTANT agree as follows:

SECTION 1. SERVICES. COUNTY does hereby retain CONSULTANT to furnish professional services and perform those tasks as further described in the Scope of Services attached hereto as Exhibit A and made a part hereof. Required services shall be specifically enumerated, described, and depicted in the Work Orders authorizing performance of the specific project, task, or study. CONSULTANT shall also be bound by all requirements as contained in the solicitation package and all

addenda thereto. This Agreement standing alone does not authorize the performance of any work or require COUNTY to place any orders for work.

SECTION 2. TERM. This Agreement shall take effect on the date of its execution by COUNTY and shall run for a period of five (5) years and, at the sole option of COUNTY, may be renewed for two (2) successive periods not to exceed one (1) year each. Expiration of the term of this Agreement shall have no effect upon Work Orders issued pursuant to this Agreement and prior to the expiration date. Obligations entered therein by both parties shall remain in effect until completion of the work authorized by the Work Order.

SECTION 3. AUTHORIZATION FOR SERVICES. Authorization for performance of professional services by CONSULTANT under this Agreement shall be in the form of written Work Orders issued and executed by COUNTY and signed by CONSULTANT. A sample Work Order is attached hereto as Exhibit B. Each Work Order shall describe the services required, state the dates for commencement and completion of work, and establish the amount and method of payment. The Work Orders will be issued under and shall incorporate the terms of this Agreement. COUNTY makes no covenant or promise as to the number of available projects or that CONSULTANT will perform any project for COUNTY during the life of this Agreement. COUNTY reserves the right to contract with other parties for the services contemplated by this Agreement when it is determined by COUNTY to be in the best interest of COUNTY to do so.

SECTION 4. TIME FOR COMPLETION. The services to be rendered by CONSULTANT shall be commenced as specified in such Work Orders as may be issued hereunder and shall be completed within the time specified therein.

SECTION 5. COMPENSATION. COUNTY agrees to compensate CONSULTANT for the professional services called for under this Agreement on either

a "Fixed Fee Basis" or on a "Time Basis Method". The CONSULTANT shall be compensated in accordance with the rate schedule attached as Exhibit C, which includes all reimbursable expenses. The CONSULTANT shall also be required to execute the Truth in Negotiations certificate attached hereto as Exhibit D.

SECTION 6. PAYMENT AND BILLING.

(a) If the Scope of Services required to be performed by a Work Order is clearly defined, the Work Order shall be issued on a Fixed Fee Basis. CONSULTANT shall perform all work required by the Work Order, but in no event shall CONSULTANT be paid more than the negotiated Fixed Fee amount stated therein.

(b) If the Scope of Services is not clearly defined, the Work Order may be issued on a Time Basis Method and contain a Not-to Exceed amount. If a Not-to-Exceed amount is provided, CONSULTANT shall perform all work required by the Work Order, but in no event shall CONSULTANT be paid more than the Not-to-Exceed amount specified in the applicable Work Order.

(c) If the Scope of Services is not clearly defined, the Work Order may be issued on a Time Basis Method and contain a Limitation of Funds amount. CONSULTANT is not authorized to exceed that amount without the prior written approval of COUNTY. Said approval, if given by COUNTY, shall indicate a new Limitation of Funds amount. CONSULTANT shall advise COUNTY whenever CONSULTANT has incurred expenses on any Work Order that equals or exceeds eighty percent (80%) of the Limitation of Funds amount.

(d) For Work Orders issued on a Fixed Fee Basis, CONSULTANT may invoice the amount due based on the percentage of total Work Order services actually performed and completed, but in no event shall the invoice amount exceed a percentage of the Fixed Fee amount equal to a

percentage of the total services actually completed. COUNTY shall pay CONSULTANT ninety percent (90%) of the approved amount on Work Orders ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000.00) and over in value and one hundred percent (100%) of the approved amount on Work Orders under ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000.00) in value issued on a Fixed Fee Basis, provided, however, the COUNTY reserves the right to require retainage for Work Orders under ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000.00) when the COUNTY deems it in its best interest to do so, in which case the Work Order shall be treated as any other Work Order with retainage for payment purposes.

(e) For Work Orders issued on a Time Basis Method with a Not-to-Exceed amount, CONSULTANT may invoice the amount due for actual work hours performed, but in no event shall the invoice amount exceed a percentage of the Not-to-Exceed amount equal to a percentage of the total services actually completed. COUNTY shall pay CONSULTANT ninety percent (90%) of the approved amount on Work Orders ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000.00) and over in value issued on a Time Basis Method with a Not-to-Exceed amount and one hundred percent (100%) on Work Orders under ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000.00) in value; provided, however, the COUNTY reserves the right to require retainage for Work Orders under ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000.00) when the COUNTY deems it in its best interest to do so, in which case the Work Order shall be treated as any other Work Order with retainage for payment purposes.

(f) Each Work Order ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000.00) and over in value issued on a Fixed Fee Basis or Time Basis Method with a Not-to-Exceed amount shall be treated separately for retainage purposes. If COUNTY determines that work is substantially complete and the amount retained is considered to be in excess, COUNTY

may, at its sole and absolute discretion, release the retainage or any portion thereof.

(g) For Work Orders issued on a Time Basis Method with a Limitation of Funds amount, CONSULTANT may invoice the amount due for services actually performed and completed. COUNTY shall pay CONSULTANT one hundred percent (100%) of the approved amount on Work Orders issued on a Time Basis Method with a Limitation of Funds amount.

(h) Payments shall be made by COUNTY to CONSULTANT when requested as work progresses for services furnished, but not more than once monthly. Each Work Order shall be invoiced separately. At the close of each calendar month, CONSULTANT shall render to COUNTY a properly dated itemized invoice describing any services rendered, the cost of the services, the name and address of CONSULTANT, Work Order Number, Contract Number, and all other information required by this Agreement.

The original invoice and one ~~(1)~~ copy shall be sent to:

Director of County Finance 
Seminole County Board of County Commissioners
Post Office Box 8080
Sanford, Florida 32772

Two (2) copies of the invoice shall be sent to:

Engineering Division
520 W. Lake Mary Blvd., Suite 200
Sanford, Florida 32773

(i) Payment shall be made after review and approval by COUNTY within thirty (30) days of receipt of a proper invoice from CONSULTANT.

SECTION 7. GENERAL TERMS OF PAYMENT AND BILLING.

(a) Upon satisfactory completion of work required hereunder and upon acceptance of the work by COUNTY, CONSULTANT may invoice COUNTY for the full amount of compensation provided for under the terms of this Agreement including any retainage and less any amount already paid by COUNTY. COUNTY shall pay CONSULTANT within thirty (30) days of receipt

of proper invoice.

(b) COUNTY may perform or have performed an audit of the records of CONSULTANT after final payment to support final payment hereunder. This audit would be performed at a time mutually agreeable to CONSULTANT and COUNTY subsequent to the close of the final fiscal period in which the last work is performed. Total compensation to CONSULTANT may be determined subsequent to an audit as provided for in subsections (b) and (c) of this Section, and the total compensation so determined shall be used to calculate final payment to CONSULTANT. Conduct of this audit shall not delay final payment as provided by subsection (a) of this Section.

(c) In addition to the above, if federal funds are used for any work under the Agreement, the Department of Housing and Urban Development, the Comptroller General of the United States, or any of their duly authorized representatives shall have access to any books, documents, papers, and records  of CONSULTANT which are directly pertinent to work performed under this Agreement for purposes of making audit, examination, excerpts, and transcriptions.

(d) CONSULTANT agrees to maintain all books, documents, papers, accounting records, and other evidence pertaining to work performed under this Agreement in such a manner as will readily conform to the terms of this Agreement and to make such materials available at CONSULTANT's office at all reasonable times during the Agreement period and for five (5) years from the date of final payment under the contract for audit or inspection as provided for in subsections (b) and (c) of this Section.

(e) In the event any audit or inspection conducted after final payment, but within the period provided in paragraph (d) of this Section, reveals any overpayment by COUNTY under the terms of the

Agreement, CONSULTANT shall refund such overpayment to COUNTY within thirty (30) days of notice by COUNTY.

SECTION 8. RESPONSIBILITIES OF CONSULTANT.

(a) CONSULTANT shall be responsible for the professional quality, technical accuracy, competence, methodology, accuracy, and the coordination of all of the following which are listed for illustration purposes and not as a limitation: documents, analysis, reports, data, plans, plats, maps, surveys, specifications, and any and all other services of whatever type or nature furnished by CONSULTANT under this Agreement. CONSULTANT shall, without additional compensation, correct or revise any errors or deficiencies in his plans, analysis, data, reports, designs, drawings, specifications, and any and all other services of whatever type or nature.

(b) Neither COUNTY's review, approval, or acceptance of, nor payment for, any of the services required shall be construed to operate as a waiver of any rights under this Agreement nor of any cause of action arising out of the performance of this Agreement; and CONSULTANT shall be and always remain liable to COUNTY in accordance with applicable law for any and all damages to COUNTY caused by CONSULTANT's negligent or wrongful performance of any of the services furnished under this Agreement.

SECTION 9. OWNERSHIP OF DOCUMENTS. All deliverable analysis, reference data, survey data, plans, and reports or any other form of written instrument or document that may result from CONSULTANT's services or have been created during the course of CONSULTANT's performance under this Agreement shall become the property of COUNTY after final payment is made to CONSULTANT.

SECTION 10. TERMINATION.

(a) COUNTY may, by written notice to CONSULTANT, terminate this Agreement or any Work Order issued hereunder, in whole or in part, at any time, either for COUNTY's convenience or because of the failure of CONSULTANT to fulfill its Agreement obligations. Upon receipt of such notice, CONSULTANT shall:

(1) immediately discontinue all services affected unless the notice directs otherwise; and

(2) deliver to COUNTY all data, drawings, specifications, reports, estimates, summaries, and any and all such other information and materials of whatever type or nature as may have been accumulated by CONSULTANT in performing this Agreement, whether completed or in process.

(b) If the termination is for the convenience of COUNTY, CONSULTANT shall be paid compensation for services performed to the date of termination. If this Agreement calls for the payment based on a Fixed Fee amount, CONSULTANT shall be paid no more than a percentage of the Fixed Fee amount equivalent to the percentage of the completion of work, as determined solely and conclusively by COUNTY, contemplated by this Agreement.

(c) If the termination is due to the failure of CONSULTANT to fulfill its Agreement obligations, COUNTY may take over the work and prosecute the same to completion by other Agreements or otherwise. In such case, CONSULTANT shall be liable to COUNTY for all reasonable additional costs occasioned to COUNTY thereby. CONSULTANT shall not be liable for such additional costs if the failure to perform the Agreement arises without any fault or negligence of CONSULTANT; provided, however, that CONSULTANT shall be responsible and liable for the actions of its subcontractors, agents, employees, and persons and entities of a similar

type or nature. Such causes may include acts of God or of the public enemy, acts of COUNTY in its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but, in every case, the failure to perform must be beyond the control and without any fault or negligence of CONSULTANT.

(d) If after notice of termination for failure to fulfill its Agreement obligations it is determined that CONSULTANT had not so failed, the termination shall be conclusively deemed to have been effected for the convenience of COUNTY. In such event, adjustment in the Agreement price shall be made as provided in subsection (b) of this Section.

(e) The rights and remedies of COUNTY provided for in this Section are in addition and supplemental to any and all other rights and remedies provided by law or under this Agreement.

SECTION 11. AGREEMENT AND WORK ORDER IN CONFLICT. Whenever the terms of this Agreement conflict with any Work Order issued pursuant to it, the Agreement shall prevail.

SECTION 12. EQUAL OPPORTUNITY EMPLOYMENT. CONSULTANT agrees that it will not discriminate against any employee or applicant for employment for work under this Agreement because of race, color, religion, sex, age, disability, or national origin and will take steps to ensure that applicants are employed, and employees are treated during employment, without regard to race, color, religion, sex, age, disability, or national origin. This provision shall include, but not be limited to, the following: employment; upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

SECTION 13. NO CONTINGENT FEES. CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for CONSULTANT, to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for CONSULTANT, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from award or making of this Agreement. For the breach or violation of this provision, COUNTY shall have the right to terminate the Agreement at its sole discretion, without liability and to deduct from the Agreement price, or otherwise recover, the full amount of such fee, commission, percentage, gift, or consideration.

SECTION 14. CONFLICT OF INTEREST.

(a) CONSULTANT agrees that it will not contract for or accept employment for the performance of any work or service with any individual, business, corporation,  or government unit that would create a conflict of interest in the performance of its obligations pursuant to this Agreement with COUNTY.

(b) CONSULTANT agrees that it will neither take any action nor engage in any conduct that would cause any COUNTY employee to violate the provisions of Chapter 112, Florida Statutes, relating to ethics in government.

(c) In the event that CONSULTANT causes or in any way promotes or encourages a COUNTY officer, employee, or agent to violate Chapter 112, Florida Statutes, COUNTY shall have the right to terminate this Agreement.

SECTION 15. ASSIGNMENT. This Agreement, or any interest herein, shall not be assigned, transferred, or otherwise encumbered, under any circumstances, by the parties hereto without prior written consent of

the other party and in such cases only by a document of equal dignity herewith.

SECTION 16. SUBCONTRACTORS. In the event that CONSULTANT, during the course of the work under this Agreement, requires the services of any subcontractors or other professional associates in connection with services covered by this Agreement, CONSULTANT must first secure the prior express written approval of COUNTY. If subcontractors or other professional associates are required in connection with the services covered by this Agreement, CONSULTANT shall remain fully responsible for the services of subcontractors or other professional associates.

SECTION 17. INDEMNIFICATION OF COUNTY. CONSULTANT agrees to hold harmless, replace, and indemnify COUNTY, its commissioners, officers, employees, and agents against any and all claim, losses, damages or lawsuits for damages, arising from the negligent, reckless, or intentionally wrongful provision of services hereunder by CONSULTANT, whether caused by CONSULTANT or otherwise.

SECTION 18. INSURANCE.

(a) GENERAL. CONSULTANT shall at its own cost procure the insurance required under this Section.

(1) CONSULTANT shall furnish COUNTY with a Certificate of Insurance signed by an authorized representative of the insurer evidencing the insurance required by this Section (Professional Liability, Workers' Compensation/Employer's Liability and Commercial General Liability). COUNTY, its officials, officers, and employees shall be named additional insured under the Commercial General Liability policy. The Certificate of Insurance shall provide that COUNTY shall be given not less than thirty (30) days written notice prior to the cancellation or restriction of coverage. Until such time as the insurance is no longer required to be maintained by CONSULTANT,

CONSULTANT shall provide COUNTY with a renewal or replacement Certificate of Insurance not less than thirty (30) days before expiration or replacement of the insurance for which a previous certificate has been provided.

(2) The Certificate shall contain a statement that it is being provided in accordance with the Agreement and that the insurance is in full compliance with the requirements of the Agreement. In lieu of the statement on the Certificate, CONSULTANT shall (at the option of COUNTY) submit a sworn notarized statement from an authorized representative of the insurer that the Certificate is being provided in accordance with the Agreement and that the insurance is in full compliance with the requirements of the Agreement. **The Certificate shall have this Agreement number clearly marked on its face.**

(3) In addition to providing the Certificate of Insurance, if required by COUNTY, CONSULTANT shall, within thirty (30) days after receipt of the request, provide COUNTY with a certified copy of each of the policies of insurance providing the coverage required by this Section.

(4) Neither approval by COUNTY nor failure to disapprove the insurance furnished by a CONSULTANT shall relieve CONSULTANT of its full responsibility for performance of any obligation including CONSULTANT's indemnification of COUNTY under this Agreement.

(b) INSURANCE COMPANY REQUIREMENTS. Insurance companies providing the insurance under this Agreement must meet the following requirements:

(1) Companies issuing policies (other than Workers' Compensation) must be authorized to conduct business in the State of Florida and prove same by maintaining Certificates of Authority issued to the companies by the Department of Insurance of the State of Florida.

Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by Section 440.57, Florida Statutes.

(2) In addition, such companies other than those authorized by Section 440.57, Florida Statutes, shall have and maintain a Best's Rating of "A" or better and a Financial Size Category of "VII" or better according to A.M. Best Company.

(3) If during the period which an insurance company is providing the insurance coverage required by this Agreement, an insurance company shall: (i) lose its Certificate of Authority; (ii) no longer comply with Section 440.57, Florida Statutes; or (iii) fail to maintain the requisite Best's Rating and Financial Size Category, CONSULTANT shall, as soon as CONSULTANT has knowledge of any such circumstance, immediately notify COUNTY and immediately replace the insurance coverage provided by the insurance company with a different insurance company meeting the requirements of this Agreement. Until such time as CONSULTANT has replaced the unacceptable insurer with an insurer acceptable to COUNTY, CONSULTANT shall be deemed to be in default of this Agreement.

(c) SPECIFICATIONS. Without limiting any of the other obligations or liability of CONSULTANT, CONSULTANT shall, at its sole expense, procure, maintain, and keep in force amounts and types of insurance conforming to the minimum requirements set forth in this subsection. Except as otherwise specified in the Agreement, the insurance shall become effective prior to the commencement of work by CONSULTANT and shall be maintained in force until the Agreement completion date. The amounts and types of insurance shall conform to the following minimum requirements.

(1) Workers' Compensation/Employer's Liability.

(A) CONSULTANT's insurance shall cover CONSULTANT for liability which would be covered by the latest edition of the standard Workers' Compensation Policy as filed for use in Florida by the National Council on Compensation Insurance, without restrictive endorsements. CONSULTANT will also be responsible for procuring proper proof of coverage from its subcontractors of every tier for liability which is a result of a Workers' Compensation injury to the subcontractor's employees. The minimum required limits to be provided by both CONSULTANT and its subcontractors are outlined in subsection (c) below. In addition to coverage for the Florida Workers' Compensation Act, where appropriate, coverage is to be included for the United States Longshoremen and Harbor Workers' Compensation Act, Federal Employers' Liability Act, and any other applicable Federal or State law.

(B) Subject to the restrictions of coverage found in the standard Workers' Compensation Policy, there shall be no maximum limit on the amount of coverage for liability imposed by the Florida Workers' Compensation Act, the United States Longshoremen's and Harbor Workers' Compensation Act, or any other coverage customarily insured under Part One of the standard Workers' Compensation Policy.

(C) The minimum amount of coverage under Part Two of the standard Workers' Compensation Policy shall be:

\$ 500,000.00	(Each Accident)
\$1,000,000.00	(Disease-Policy Limit)
\$ 500,000.00	(Disease-Each Employee)

(2) Commercial General Liability.

(A) CONSULTANT's insurance shall cover CONSULTANT for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01) as filed for use in the State of Florida by the Insurance

Services Office, without the attachment of restrictive endorsements other than the elimination of Coverage C, Medical Payment, and the elimination of coverage for Fire Damage Legal Liability.

(B) The minimum limits to be maintained by CONSULTANT (inclusive of any amounts provided by an Umbrella or Excess policy) shall be as follows:

	<u>LIMITS</u>
General Aggregate	Three (3) Times the Each-Occurrence Limit
Personal & Advertising Injury Limit	\$1,000,000.00
Each Occurrence Limit	\$1,000,000.00

(3) Professional Liability Insurance. CONSULTANT shall carry professional liability insurance with limits of not less than ONE MILLION AND NO/100 DOLLARS (\$1,000,000.00).

(d) COVERAGE. The insurance provided by CONSULTANT pursuant to this Agreement shall apply on a  primary basis, and any other insurance or self-insurance maintained by COUNTY or COUNTY's officials, officers, or employees shall be in excess of and not contributing to the insurance provided by or on behalf of CONSULTANT.

(e) OCCURRENCE BASIS. The Workers' Compensation Policy and the Commercial General Liability required by this Agreement shall be provided on an occurrence rather than a claims-made basis. The Professional Liability insurance policy must be on an occurrence basis or claims-made basis. If a claims-made basis, the coverage must respond to all claims reported within three (3) years following the period for which coverage is required and which would have been covered had the coverage been on an occurrence basis.

(f) OBLIGATIONS. Compliance with the foregoing insurance requirements shall not relieve CONSULTANT, its employees, or its agents

of liability from any obligation under a Section or any other portions of this Agreement.

SECTION 19. DISPUTE RESOLUTION.

(a) In the event of a dispute related to any performance or payment obligation arising under this Agreement, the parties agree to exhaust COUNTY dispute resolution procedures prior to filing suit or otherwise pursuing legal remedies. COUNTY dispute resolution procedures for proper invoice and payment disputes are set forth in Section 22.15, "Prompt Payment Procedures," Seminole County Administrative Code. Contract claims include all controversies, except disputes addressed by the "Prompt Payment Procedures," arising under this Agreement within the dispute resolution procedures set forth in Section 8.1539, "Contract Claims," Seminole County Administrative Code.

(b) CONSULTANT agrees that it will file no suit or otherwise pursue legal remedies based on facts or evidentiary materials that were not presented for consideration in COUNTY dispute resolution procedures set forth in subsection (a) above of which CONSULTANT had knowledge and failed to present during COUNTY dispute resolution procedures.

(c) In the event that COUNTY dispute resolution procedures are exhausted and a suit is filed or legal remedies are otherwise pursued, the parties shall exercise best efforts to resolve disputes through voluntary mediation. Mediator selection and the procedures to be employed in voluntary mediation shall be mutually acceptable to the parties. Costs of voluntary mediation shall be shared equally among the parties participating in the mediation.

SECTION 20. REPRESENTATIVES OF COUNTY AND CONSULTANT.

(a) It is recognized that questions in the day-to-day conduct of performance pursuant to this Agreement will arise. COUNTY, upon request by CONSULTANT, shall designate in writing and shall advise CONSULTANT in

writing of one (1) or more of its employees to whom all communications pertaining to the day-to-day conduct of this Agreement shall be addressed. The designated representative shall have the authority to transmit instructions, receive information, and interpret and define COUNTY's policy and decisions pertinent to the work covered by this Agreement.

(b) CONSULTANT shall at all times during the normal work week designate or appoint one or more representatives of CONSULTANT who are authorized to act on behalf of and bind CONSULTANT regarding all matters involving the conduct of the performance pursuant to this Agreement and shall keep COUNTY continually and effectively advised of such designation.

SECTION 21. ALL PRIOR AGREEMENTS SUPERSEDED. This document incorporates and includes all prior negotiations, correspondence, conversations, agreements, or understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements, or understandings concerning the subject matter of this Agreement that are not contained or referred to in this document. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

SECTION 22. MODIFICATIONS, AMENDMENTS OR ALTERATIONS. No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

SECTION 23. INDEPENDENT CONTRACTOR. It is agreed that nothing herein contained is intended or should be construed as in any manner creating or establishing a relationship of co-partners between the parties or as constituting CONSULTANT (including its officers,

employees, and agents) an agent, representative, or employee of COUNTY for any purpose, or in any manner, whatsoever. CONSULTANT is to be and shall remain forever an independent contractor with respect to all services performed under this Agreement.

SECTION 24. EMPLOYEE STATUS. Persons employed by CONSULTANT in the performance of services and functions pursuant to this Agreement shall have no claim to pension, workers' compensation, unemployment compensation, civil service, or other employee rights or privileges granted to COUNTY's officers and employees either by operation of law or by COUNTY.

SECTION 25. SERVICES NOT PROVIDED FOR. No claim for services furnished by CONSULTANT not specifically provided for herein shall be honored by COUNTY.

SECTION 26. PUBLIC RECORDS LAW. CONSULTANT acknowledges COUNTY's obligations under Article I, Section 24, Florida Constitution, and Chapter 119, Florida Statutes, to release public records to members of the public upon request. CONSULTANT acknowledges that COUNTY is required to comply with Article I, Section 24, Florida Constitution, and Chapter 119, Florida Statutes, in the handling of the materials created under this Agreement and that said statute controls over the terms of this Agreement.

SECTION 27. COMPLIANCE WITH LAWS AND REGULATIONS. In providing all services pursuant to this Agreement, CONSULTANT shall abide by all statutes, ordinances, rules, and regulations pertaining to or regulating the provisions of such services, including those now in effect and hereafter adopted. Any violation of said statutes, ordinances, rules, or regulations shall constitute a material breach of this Agreement and shall entitle COUNTY to terminate this Agreement immediately upon delivery of written notice of termination to CONSULTANT.

SECTION 28. NOTICES. Whenever either party desires to give notice unto the other, it must be given by written notice, sent by registered or certified United States mail, return receipt requested, addressed to the party for whom it is intended at the place last specified. The place for giving of notice shall remain such until it shall have been changed by written notice in compliance with the provisions of this Section. For the present, the parties designate the following as the respective places for giving of notice, to-wit:

For COUNTY:

Engineering Division
420 W. Lake Mary Blvd., Suite 200
Sanford, FL 32773

For CONSULTANT:

Horizon Engineering Group, Inc.
2500 Maitland Center Parkway, Suite 300
Maitland, FL 32751

SECTION 29. RIGHTS AT LAW RETAINED. The rights and remedies of COUNTY, provided for under this  Agreement, are in addition and supplemental to any other rights and remedies provided by law.

(Signature Page Follows)

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the date below written for execution by COUNTY.

ATTEST: HORIZON ENGINEERING GROUP, INC.

, Secretary

(CORPORATE SEAL)

By: _____
, President

Date: _____

ATTEST: BOARD OF COUNTY COMMISSIONERS
SEMINOLE COUNTY, FLORIDA

MARYANNE MORSE
Clerk to the Board of
County Commissioners of
Seminole County, Florida.

By: _____
BRENDA CAREY, Chairman

Date: _____

For use and reliance
of Seminole County only.

As authorized for execution by
the Board of County Commissioners
at their _____, 20____
regular meeting.

Approved as to form and
legal sufficiency.

County Attorney



AEC/lpk/sjs
2/27/08, 4/24/08, 4/28/08, 4/30/08, 5/1/08
P:\Users\Legal Secretary CSB\Purchasing 2008\Agreements\PS-2825.doc

- Attachments:
- Exhibit A - Scope of Services
 - Exhibit B - Sample Work Order
 - Exhibit C - Rate Schedule
 - Exhibit D - Truth in Negotiations Certificate

EXHIBIT A-1

**SCOPE OF SERVICES
PHASE I – PRELIMINARY ENGINEERING**

County Project Number: *PS-2825-07/BHJ*
County CIP Number: *00205304*
Financial Project ID: *240233-4*
Description: *SR 434 from Rangeline Rd to CR 427 in Seminole County*

1	PURPOSE	1
2	PRELIMINARY ENGINEERING ANALYSIS	1
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**SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES
PRELIMINARY ENGINEERING**

This Exhibit forms an integral part of the agreement between the Seminole County Board of County Commissioners (hereinafter referred to as the COUNTY) and XXXX (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

County Project Number: *PS-2825-07/BHJ*
County CIP Number: *00205304*
Financial Project ID: *240233-4*
Description: *SR 434 from Rangeline Rd to CR 427 in Seminole County*

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the CONSULTANT and the COUNTY in connection with preliminary engineering analysis, for:

- Roadway improvements to the transportation facility described herein

The general objective is for the CONSULTANT to prepare a preliminary engineering analysis report for the proposed improvements. The CONSULTANT is also responsible for full Right of Way Mapping for the proposed improvements.

The Scope of Services establishes which items of work described in the Plan Preparation Manual(s) published by the Florida Department of Transportation (hereinafter referred to as the DEPARTMENT) and other pertinent manuals to accomplish the work are specifically included in this contract, and also which of the items of work will be the responsibility of the CONSULTANT or the COUNTY.

All plans and design documents are to be prepared with standard English values in accordance with all applicable COUNTY and DEPARTMENT Manuals and guidelines.

The CONSULTANT shall be aware that as a project is developed, certain modifications and/or improvements to the original recommendation may be required. The CONSULTANT is to incorporate these refinements into the design and will consider this effort to be an anticipated and integral part of the work. This will not be a basis for any supplemental fee request(s).

The CONSULTANT shall demonstrate good project management practices while working on this project. These include communication with the COUNTY and others as necessary, management of time and resources, and documentation. The CONSULTANT shall set up and maintain throughout the design of the project a contract file in accordance to COUNTY procedures. It shall be the CONSULTANT's responsibility to utilize the very best engineering judgment, practices and principles possible during the prosecution of the work commissioned under this contract.

The COUNTY will provide contract administration and management services. Both the COUNTY and the DEPARTMENT will provide technical reviews of all work associated with the development and preparation of the contract plans. The COUNTY will provide job specific information and/or functions as outlined in this contract.

2 PRELIMINARY ENGINEERING ANALYSIS

The following descriptions provide a non-exclusive summary of the specific tasks within this Scope-of-Services and are the minimum criteria for project performance and execution. The COUNTY will issue work orders on an as needed basis. The CONSULTANT is responsible to provide the following required professional services as requested:

2.1 Project Description

Scope: Add auxiliary lanes to improve the operations of the intersections of SR 434 and Florida Central Parkway and SR 434 and CR 427 (Ronald Reagan Blvd).

SR 434 and Florida Central Parkway – Add an additional Westbound left turn lane, Eastbound right turn lane and northbound left turn lane.

SR 434 and CR 427 (Ronald Reagan Blvd) – Add additional Eastbound and Westbound left turn lanes and Eastbound and Westbound right turn lanes.

Limits: SR 434 from Rangeline Rd to CR 427 in Seminole County

Variations/Exceptions: None anticipated. If needed, the proper application letters will be developed.

2.2 Review/Update of PD&E Study

The CONSULTANT shall review the existing PD&E study for this corridor and will review the conditions and conclusions from that study. The CONSULTANT will work with the DEPARTMENT to perform any required updates to the PD&E.

2.3 Roadway Alignment Analysis

The CONSULTANT shall perform a roadway alignment analysis to determine the most effective design of the proposed improvements that will result in the most cost effective right-of-way acquisition.

2.4 Preliminary Roadway Design Analysis

The CONSULTANT shall provide a preliminary roadway design analysis to determine any potential design issues related to the proposed improvements.

2.5 Preliminary Stormwater Design Analysis

The CONSULTANT shall review the pond siting report from the PD&E study and shall determine the potential Stormwater design and permitting issues related to the proposed improvements. The CONSULTANT shall have a pre-application meeting with SJRWMD to discuss the proposed permitting requirements.

2.6 Costs Estimates

The CONSULTANT shall prepare preliminary costs estimates for both right-of-way acquisition and construction costs.

2.7 Conceptual Drawings

The CONSULTANT will prepare conceptual drawings of the proposed improvements that will be shown on aerial photography.

2.8 Preliminary Engineering Report

The CONSULTANT will prepare a Preliminary Engineering report to summarize the findings of the Preliminary Engineering analysis. It will document the roadway analysis, Stormwater analysis and will include the cost estimates and conceptual drawings.

2.9 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed project activity/event schedule for COUNTY and CONSULTANT activities required to meet the current COUNTY Production Date. The schedule shall not exceed one hundred and eighty days (180) to produce the Preliminary Engineering Report. The schedule for Right of Way Mapping shall not exceed two years.

2.10 Submittals

The CONSULTANT shall provide copies of the required plans and documents as listed below. Two (2) CD's containing the submittals in Adobe Acrobat electronic format should be provided for each submittal :

- Draft Preliminary Engineering Report2
- Final Preliminary Engineering Report 5

3 SURVEY

The CONSULTANT shall perform survey tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

The CONSULTANT shall submit all survey notes and computations to document the surveys. All field survey work shall be recorded in approved media and submitted to the DEPARTMENT. Field books submitted to the DEPARTMENT must be of an approved type. The field books shall be certified by the surveyor in responsible charge of work being performed before the final product is submitted.

The survey notes shall include documentation of decisions reached from meetings, telephone conversations or site visits. All like work (such as bench lines, reference points, etc.) shall be recorded contiguously. The DEPARTMENT may not accept field survey radial locations of section corners, platted subdivision lot and block corners, alignment control points, alignment control reference points and certified section corner references. The DEPARTMENT may instead require that these points be surveyed by true line, traverse or parallel offset.

3.1 Horizontal Project Network Control (HPNC)

Establish or recover HPNC, for the purpose of establishing horizontal control on the Florida State Plane Coordinate System or datum approved by the District Location Surveyor (DLS); may include primary or secondary control points. Includes analysis and processing of all field collected data, and preparation of forms.

3.2 Vertical Project Network Control (VPNC)

Establish or recover VPNC, for the purpose of establishing vertical control on datum approved by the District Location Surveyor (DLS); may include primary or secondary vertical control points. Includes analysis and processing of all field collected data, and preparation of forms.

3.3 Alignment and/or Existing Right of Way Lines

Establish, recover or re-establish project alignment. Also includes analysis and processing of all field collected data, existing maps, and/or reports for identifying mainline, ramp, offset, or secondary alignments. Depict alignment and/or existing R/W lines (in required format) per DEPARTMENT R/W Maps, platted or dedicated rights of way.

3.4 Aerial Targets

Place, locate, and maintain required aerial targets and/or photo identifiable points. Includes analysis and processing of all field collected data, existing maps, and/or reports.

3.5 Reference Points

Reference HPNC points, project alignment, vertical control points, section, ¼ section, center of section corners and G.L.O. corners as required.

3.6 Digital Terrain Model DTM/3D

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of creating a DTM with sufficient density. Shoot all break lines, high and low points. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

3.7 Topography (2D)

Locate all above ground features and improvements. Deliver in appropriate electronic format. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

3.8 Roadway Cross Sections/Profiles

Perform field survey check sections or profiles to verify the required accuracy of the digital terrain model and/or to determine existing cross slope. Includes analysis and processing of all field-collected data for comparison with DTM.

3.9 Side Street Surveys

Refer to tasks of this document as applicable.

3.10 Underground Utilities

Designation includes 2-dimensional collection of existing utilities and selected 3-dimensional verification as needed for designation. Location includes non-destructive excavation to determine size, type and location of existing utility, as necessary for final 3-dimensional verification. Survey includes collection of data on points as needed for designates and locates. Includes analysis and processing of all field collected data, and delivery of all appropriate electronic files.

3.11 Outfall Survey

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of a D.T.M. Survey with sufficient density of shots. Shoot all break lines, high and low points. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

3.12 Drainage Survey

Locate underground data (XYZ, pipe size, type, condition and flow line) that relates to above ground data. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

3.13 Bridge Survey (Minor/Major)

Locate required above ground features and improvements for the limits of the bridge. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

3.14 Channel Survey

Locate all topographic features and improvements for the limits of the project by collecting the required data for the purpose of a D.E.M. Survey with sufficient density of shots. Shoot all break lines, high and low points. Includes field edits, analysis and processing of all field collected data, maps, and/or reports.

3.15 Pond Site Survey

Refer to tasks of this document as applicable.

3.16 Mitigation Survey

Refer to tasks of this document as applicable.

3.17 Jurisdiction Line Survey

Perform field location (2-dimensional) of jurisdiction limits as defined by respective authorities, also includes field edits, analysis and processing of all field collected data, preparation of reports.

3.18 Geotechnical Support

Perform 3-dimensional (X,Y,Z) field location, or stakeout, of boring sites established by geotechnical engineer. Includes field edits, analysis and processing of all field collected data and/or reports.

3.19 Sectional/Grant Survey

Perform field location/placement of section corners, 1/4 section corners, and fractional corners where pertinent. Includes analysis and processing of all field-collected data and/or reports.

3.20 Subdivision Location

Survey all existing recorded subdivision/condominium boundaries, tracts, units, phases, blocks, street R/W lines, common areas. Includes analysis and processing of all field collected data and/or reports. If unrecorded subdivision is on file in the public records of the subject county, tie existing monumentation of the beginning and end of unrecorded subdivision.

3.21 Maintained R/W

Perform field location (2-dimensional) of maintained R/W limits as defined by respective authorities, if needed. Also includes field edits, analysis and processing of all field collected data, preparation of reports.

3.22 Boundary Survey

Perform boundary survey as defined by DEPARTMENT standards. Includes analysis and processing of all field-collected data, preparation of reports.

3.23 Water Boundary Survey

Perform Mean High Water, Ordinary High Water and Safe Upland Line surveys as required by DEPARTMENT standards.

3.24 Right of Way Staking / Right of Way Line

Perform field staking and calculations of existing/proposed R/W lines for on-site review purposes.

3.25 Right of Way Monumentation

Set R/W monumentation as depicted on final R/W maps for corridor and water retention areas.

3.26 Line Cutting

Perform all efforts required to clear vegetation from the line of sight.

3.27 Work Zone Safety

Provide work zone as required by DEPARTMENT standards.

3.28 Miscellaneous Surveys

Refer to tasks of this document, as applicable, to perform surveys not described herein.

3.29 Supplemental Surveys

Supplemental survey days and hours are to be approved in advance by DLS. Refer to tasks of this document, as applicable, to perform surveys not described herein.

3.30 Document Research

Perform research of documentation to support field and office efforts involving surveying and mapping.

3.31 Field Review

Perform verification of the field conditions as related to the collected survey data.

3.32 Technical Meetings

Attend meetings as required and negotiated by the Surveying and Mapping Department.

3.33 Quality Control/Quality Assurance

Establish and implement a QAQC plan. Also includes subconsultant review, response to comments and any resolution meetings if required, preparation of submittals for review, etc.

3.34 Supervision

Perform all activities required to supervise and coordinate project. These activities must be performed by the project supervisor, a Florida Professional Surveyor.

3.35 Coordination

4 MAPPING

The CONSULTANT will be responsible for the preparation of control survey maps, right of way maps, maintenance maps, sketches, other miscellaneous survey maps, and legal descriptions as required for this project in accordance with all applicable DEPARTMENT Manuals, Procedures, Handbooks, and Florida Statutes. All maps, surveys and legal descriptions will be prepared under the direction of a Florida Professional Surveyor and Mapper (PSM) to DEPARTMENT size and format requirements utilizing DEPARTMENT approved software, and will be designed to provide a high degree of uniformity and maximum readability. The CONSULTANT will submit maps, legal descriptions, quality assurance check prints, checklists, electronic

media files and any other documents as required for this project to the DEPARTMENT for review at stages of completion as negotiated.

Master CADD File

- 4.1 Alignment
- 4.2 Section and 1/4 Section Lines
- 4.3 Subdivisions
- 4.4 Existing Right of Way
- 4.5 Topography
- 4.6 Parent Tract Properties and Existing Easements
- 4.7 Proposed Right of Way Requirements

The ENGINEER OF RECORD (EOR) will provide the proposed requirements. The PSM is responsible for calculating the final geometry.

4.8 Limits of Construction

The limits of construction DGN file as provided by the EOR will be imported or referenced to the master CADD file. Additional labeling will be added as required. The PSM is required to advise the EOR of any noted discrepancies between the limits of construction line and the existing/proposed right of way lines, and for making adjustments as needed when a resolution is determined.

4.9 Jurisdictional/Agency Lines

These lines may include, but are not limited to, jurisdictional, wetland, water boundaries, and city/county limit lines.

Sheet Files

- 4.10 Control Survey Cover Sheet
- 4.11 Control Survey Cover Sheet
- 4.12 Control Survey Key Sheet
- 4.13 Control Survey Detail Sheet
- 4.14 Right of Way Map Cover Sheet
- 4.15 Right of Way Map Key Sheet
- 4.16 Right of Way Map Detail Sheet
- 4.17 Maintenance Map Cover Sheet
- 4.18 Maintenance Map Key Sheet
- 4.19 Maintenance Map Detail Sheet

4.20 Reference Point Sheet

This sheet(s) will be included with the Control Survey Map, Right of Way Map and Maintenance Map.

4.21 Project Network Control Sheet

This sheet depicts the baseline, the benchmarks, the primary and secondary control points and their reference points including the type of material used for each point, their XYZ coordinates, scale factors and convergence angles. This sheet(s) may be included with the Control Survey Map, Right of Way Map and Maintenance Map.

4.22 Table of Ownerships Sheet

Miscellaneous Surveys and Sketches

4.23 Parcel Sketches

4.24 TITF Sketches

4.25 Other Specific Purpose Survey(s)

4.26 Boundary Survey(s) Map

4.27 Right of Way Monumentation Map

4.28 Title Search Map

4.29 Title Search Report

4.30 Legal Descriptions

4.31 Final Map/Plans Comparison

The PSM will perform a comparison of the final right of way maps with the available construction plans to review the correctness of the type of parcel to be acquired and the stations/offsets to the required right of way. The PSM will coordinate with the EOR to resolve any conflicts or discrepancies and provide documentation of the review.

4.32 Field Reviews

4.33 Technical Meetings

4.34 Quality Assurance/Quality Control

4.35 Supervision

4.36 Coordination

4.37 Supplemental Mapping

This task is to cover efforts resulting from major design changes after 60% and 90% map development and may include any number of tasks. The hours negotiated under this task may or may not be utilized, at the Department's option, on this project. Request and approval to utilize Supplemental Mapping hours will be in writing.

5 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the COUNTY, in a format prescribed by the COUNTY. The COUNTY Project Manager and the CONSULTANT shall monitor the cumulative invoiced billings to insure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the COUNTY.

The CONSULTANT will provide a list of key events and the associated total percentage of work considered to be complete at each event. This list will be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those events have actually occurred and the results are acceptable to the COUNTY.

EXHIBIT A-2

**SCOPE OF SERVICES
PHASE II - HIGHWAY FINAL DESIGN & PERMITTING**

County Project Number: *PS-2825-07/BHJ*
County CIP Number: *00205304*
Financial Project ID: *240233-4*
Description: *SR 434 from Rangeline Rd to CR 427 in Seminole County*

November 20, 2007

PS-2825-07/BHJ
SR 434 from Rangeline Rd to CR 427

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**SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES
HIGHWAY AND BRIDGE FINAL DESIGN & PERMITTING**

This Exhibit forms an integral part of the agreement between the Seminole County Board of County Commissioners (hereinafter referred to as the COUNTY) and ??? (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

County Project Number: *PS-2825-07/BHJ*
County CIP Number: *00205304*
Financial Project ID: *240233-4*
Description: *SR 434 from Rangeline Rd to CR 427 in Seminole County*

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the CONSULTANT and the COUNTY in connection with the design and preparation of a complete set of construction contract plans and special provisions, if necessary, for:

- Roadway improvements to the transportation facility described herein

The general objective is for the CONSULTANT to prepare a set of plans to be used by the contractor to build the project, and by the COUNTY to ensure the project is built as designed and to specifications. Elements of work shall include roadways, structures, intersections, geotechnical activities, surveys, drainage, signing and pavement markings, signalization, utility relocation, landscaping right-of-way maps and legal descriptions, maintenance of traffic, cost estimates, environmental permits, environmental mitigation plans, quantity computation books, and all necessary incidental items for a complete project.

The Scope of Services establishes which items of work described in the Plan Preparation Manual(s) published by the Florida Department of Transportation (hereinafter referred to as the DEPARTMENT) and other pertinent manuals to accomplish the work are specifically included in this contract, and also which of the items of work will be the responsibility of the CONSULTANT or the COUNTY.

All plans and design documents are to be prepared with standard English values in accordance with all applicable COUNTY and DEPARTMENT Manuals and guidelines.

The CONSULTANT shall be aware that as a project is developed, certain modifications and/or improvements to the original recommendation may be required. The CONSULTANT is to incorporate these refinements into the design and will consider this effort to be an anticipated and integral part of the work. This will not be a basis for any supplemental fee request(s).

The CONSULTANT shall demonstrate good project management practices while working on this project. These include communication with the COUNTY and others as necessary, management of time and resources, and documentation. The CONSULTANT shall set up and maintain throughout the design of the project a contract file in accordance to COUNTY procedures. It shall be the CONSULTANT's responsibility to utilize the very best engineering judgment, practices and principles possible during the prosecution of the work commissioned under this contract.

The COUNTY will provide contract administration and management services. Both the COUNTY and the DEPARTMENT will provide technical reviews of all work associated with the development and preparation of the contract plans. The COUNTY will provide job specific information and/or functions as outlined in this contract.

2 PROJECT DESCRIPTION

The CONSULTANT shall investigate the status of the projects and become familiar with concepts and commitments (typical sections, alignments, etc.) developed from prior studies. The CONSULTANT shall use the approved concepts from the review as a basis for the design unless otherwise directed by the COUNTY.

The CONSULTANT shall incorporate the following into the design of this facility:

2.1 Roadway

Scope: Add auxiliary lanes to improve the operations of the intersections of SR 434 and Florida Central Parkway and SR 434 and CR 427 (Ronald Reagan Blvd).

SR 434 and Florida Central Parkway – Add an additional Westbound left turn lane, Eastbound right turn lane and northbound left turn lane.

SR 434 and CR 427 (Ronald Reagan Blvd) – Add additional Eastbound and Westbound left turn lanes and Eastbound and Westbound right turn lanes.

Limits: SR 434 from Rangeline Rd to CR 427 in Seminole County

Variations/Exceptions: None anticipated. If needed, the proper application letters will be developed.

2.2 Drainage

Refer to the Preliminary Engineering Report dated November 2001 prepared for the PD&E study for SR 434 from Montgomery Road to US 17/92.

2.3 Utilities Coordination

Refer to the Preliminary Engineering Report dated November 2001 prepared for the PD&E study for SR 434 from Montgomery Road to US 17/92.

2.4 Environmental Permits

Refer to the Preliminary Engineering Report dated November 2001 prepared for the PD&E study for SR 434 from Montgomery Road to US 17/92.

2.5 Structures (N/A)

2.6 Signing and Pavement Markings

Striping and ground signs within project limits. No overhead or cantilever signs anticipated.

2.7 Signals

Intersections: New Mast Arm signals at the intersections of Florida Central Parkway and CR 427 that adhere to the City of Longwood Mast Arm Standards.

2.8 Lighting (N/A)

2.9 Landscape Architecture

Planting Plans: Xeriscape landscaping in median and areas behind the sidewalk on State Road 434 from Interstate 4 to Rangeline Rd.

2.10 Survey

Design Survey: Full topographic survey for roadway corridor and pond sites

2.11 Photogrammetry (N/A)

Provide limits and description. Describe type.

2.12 Mapping

Right of Way Survey: Right of way maps according to FDOT procedures for the project corridor

2.13 Geotechnical

Standard Penetration Test Borings, Auger borings, field permeability tests and associated lab testing.

2.14 Architecture (N/A)

2.15 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed project activity/event schedule for DEPARTMENT and CONSULTANT activities required to meet the

current DEPARTMENT Production Date. *The current production date is June, 2013.* The schedule shall be accompanied by an anticipated payout and fiscal progress curve.

The schedule shall indicate all required submittals.

For purposes of scheduling, the CONSULTANT shall allow for the following DEPARTMENT work activity and submittal review times, when applicable:

Work Activity/Submittal Review (to be determined by DEPARTMENT)	Time (weeks) (to be determined by DEPARTMENT)
Roadway Plans Review	4
Right of Way Maps Review	
(Phase I, Phase II)	8
(Phase IV)	4
Alternative Drainage Design Concept Report Review	4
Pond Siting Report	4
Environmental Permitting Packages Review	4
Environmental Mitigation Plan Review	4
Jurisdictional Determination Report Review	4
Preparation of Right-of-Way Documents Activity	10
Acquisition of Right-of-Way Activity	104
Prepare/Execute Utility Agreements Activity	16

Periodically, throughout the life of the project, the schedule and curves shall be reviewed and, with the approval of the DEPARTMENT, adjusted as necessary to incorporate changes in the work concept and progress to date.

The approved schedule and schedule status report, along with progress and payout curves, shall be submitted with the monthly progress report.

The schedule shall be submitted in Suretrak, Primavera, or system-compatible format.

2.16 Submittals

The CONSULTANT shall furnish plans and documents as required by the DEPARTMENT to adequately control, coordinate, and approve the plans. The CONSULTANT shall distribute phase submittals as directed by the DEPARTMENT.

The CONSULTANT shall provide copies of the required plans and documents as listed below. These are the anticipated printing requirements for the project. This tabulation will be used for estimating purposes. The Project Manager will determine the specific number of copies required prior to each submittal.

Plans Distribution Chart

(District to input number of copies required for each phase submittal and footnotes, if desired.)

Department	Phase			
	I	II	III	IV
Access Management				
Preliminary Estimates (TRNS*PORT)				
Design Services				
Drainage				
Environmental Management				
Environmental Permits				
Traffic Operations				
Traffic Signals				
Signing and Marking				
Geotechnical				
Structures				
Construction				
Maintenance				
Value Engineering				

Plans Distribution Chart

(District to input number of copies required for each phase submittal and footnotes, if desired.)

Department	Phase			
	I	II	III	IV
Utilities (3 sets for DEPARTMENT and 2 sets for each Utility Company)				
Preliminary Right-of-Way Review				
District Land Surveyor				
District Modal Development Manager				
District Design Engineer				
District Right-of-Way Manager				
District Project Management Engineer				
District Drainage Engineer				
District Value Engineer				
District Utility Administrator				
Applicable City and/or County Engineering Dept.				
Mass Transit				
Contamination Reviews/Assessments				

Engineering Documents

(Documents and number of copies to be determined by DEPARTMENT preference.)

Document	No. of Copies Required
Roadway Design	
Typical Section Package	1
Pavement Type Selection Report	1
Pavement Design Report	1
Design Documentation	1
Computation Book	3
CES Input	2
Technical Special Provisions	2
Access Management Reports	3
Lane Closure Analysis Worksheets	3
3 R Reports	2
Drainage	
Preliminary Pond Siting Report	7

Engineering Documents

(Documents and number of copies to be determined by DEPARTMENT preference.)

Document	No. of Copies Required
Final Pond Siting Report	3
Drainage Design Documentation Report	2
Environmental Items	
Environmental Resource Permit Application Package	2
Mitigation Plan	2
Jurisdictional Determination Report	2
Coast Guard Navigation Permit Application Package (if applicable)	2
National Pollutant Discharge Elimination System (NPDES) Permit Application Package	5
Design/Right-of-Way Surveys	
Map and Plat Copies	2
Certified Right-of-Way Control Survey Drawings	2
Aerial Photograph Original Negatives	1
Rectified Aerial Raster Image (HMR Format)	1
24"x36" Aerial Mylars (R/W Format)	1
Geotechnical	
Roadway Report – Preliminary	2
Roadway Report – Final	2
Final Electronic Submittals	
Project CD(s)/DVD(s)	1
Plans and Specifications CD(s)/DVD(s)	1
Other	
Critical Path Method (CPM) Schedule	1

2.17 Provisions for Work

All maps, plans and designs are to be prepared with English values in accordance with all applicable current DEPARTMENT manuals, memorandums, guidelines and other documents listed below:

General

- Florida Statutes
- Florida Administrative Codes
- Florida Department of Transportation Project Development and Environmental Manual

- Florida Department of Transportation Plans Preparation Manual
- Florida Department of Transportation Standard Specifications for Road and Bridge Construction
- Florida Department of Transportation Handbook for Preparation of Specifications Package
- Florida Department of Transportation Design Standards for Design, Construction, Maintenance, and Utility Operations on the State Highway System
- Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways
- Bicycle Facilities Planning and Design Manual, Rev. Ed. 1982
- CADD Production Criteria Handbook
- CADD Manual
- Florida's Level of Service Standards and Guidelines Manual for Planning
- Equivalent Single Axle Load Guidelines
- Design Traffic Procedure
- K-Factor Estimation Process
- Project Traffic Forecasting Guidelines
- Florida Department of Transportation Basis of Estimates Manual
- Quality Assurance Guidelines
- Safety Standards
- Rule 61G17-6, F.A.C., Minimum Technical Standards for Professional Surveyors and Mappers
- Department of Environmental Protection Rules Governing Mean High Water and Jurisdictional Line Surveys
- Any special instructions from the DEPARTMENT
- Utility Accommodations Guidelines
- Policy for Geometric Design of Highways and Streets
- Florida Department of Transportation Materials Manual
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- 40 CFR, Part 61, Subpart M - National Emission Standard for Hazardous Air Pollutants (NESHAP), Environmental Protection Agency (EPA)
- 40 CFR, Part 763, Subpart E – Asbestos-Containing Materials in Schools, EPA
- 40 CFR, Part 763, Subpart G – Asbestos Worker Protection, EPA
- 29 CFR, Part 1910.1101 – Asbestos Standard for Industry, U.S. Occupational Safety and Health Administration (OSHA)
- 29 CFR, Part 1926, 1101 – Asbestos Standard for Construction, OSHA
- Ch. 62257, F.A.C. – Asbestos Program, Florida Department of Environmental Protection (DEP)
- Ch. 469, F.S. – Asbestos Abatement, Florida Department of Business and Professional Regulation (DBPR)
- Model Guide Specifications – Asbestos Abatement and Management in Buildings, National Institute for Building Sciences (NIBS)

Permits

- Chapter 373, F.S.
- Bridge Permit Application Guide, COMDT PUB P16591.3B
- Building Permit

Drainage

- Drainage Manual
- Drainage Handbooks
- Storm Drain
- Optional Pipe Materials
- Stormwater Management Facility
- Cross Drain
- Erosion and Sediment Control
- Hydrology
- Temporary Drainage Handbook

Survey

- Location Survey Manual
- Highway Field Survey Specifications
- Automated Survey Data Gathering
- Outline Specifications for Aerial Surveys and Photogrammetry for Transportation Projects
- Standards for Consultant-Submitted G.P.S. Static Control Projects
- EFB User Guide
- Chapter 472, F.S.
- Chapter 177, F.S.
- FDEP Bureau of Surveying and Mapping

Traffic Operation Manuals

- American Disabilities Act
- AASHTO - Guide for Development of Bicycle Facilities
- Federal Highway Administration Standard Highway Signs Manual
- Florida Department of Transportation Traffic Engineering Manual
- Florida Department of Transportation Manual on Uniform Traffic Studies (MUTS)
- National Electrical Code
- National Electric Safety Code
- Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD)
- Minimum Specifications for Traffic Control Signal Devices
- Florida Department of Transportation - Florida Roundabout Guide
- FHWA - Roundabouts: An Informational Guide

- Florida Department of Transportation Median Handbook
- AASHTO - An Information Guide for Highway Lighting

Mapping

- Right-of-Way Mapping
- Florida Department of Transportation Right-of-Way Handbook
- Florida Department of Transportation Right-of-Way Manual

Geotechnical

- Soils and Foundation Handbook
- Manual of Florida Sampling and Testing Methods

These documents are revised periodically by the responsible agencies and adopted by authorities having jurisdiction on building projects. The design consultant and the project manager are advised to obtain applicable versions of these documents from the responsible agency prior to use.

- American Concrete Institute
- American Institute of Architects - Architect's Handbook of Professional Practice
- American Society for Testing and Materials - ASTM Standards
- Southern Building Code Congress International - Standard Building Codes
- Brick Institute of America
- DMS - Standards for Design of State Facilities
- Florida Concrete Products Association
- Florida Department of Transportation - Standard Specifications for Road and Bridge Construction
- Florida Department of Transportation - Plans Preparation Manual
- Florida Department of Transportation - Roadway and Traffic Design Standards
- Florida Department of Transportation - Structures Design Guidelines
- Florida Department of Transportation - Structures Detailing Manual
- Florida Department of Transportation - Structures Standard Drawings
- Florida Department of Transportation - ADA/Accessibility Procedure
- Florida Department of Transportation - Fixed Capital Outlay Program
- Florida Department of Transportation - Building Code Compliance Procedure
- Florida Department of Transportation - Asbestos Management Program Procedure
- Florida Department of Transportation - Design Build Procurement and Administration
- National Concrete Masonry Association
- National Electrical Code (current edition)
- National Fire Protection Association - Life Safety Code (current edition)

- Portland Cement Association - Concrete Masonry Handbook
- South Florida Building Code

2.18 Services to be Performed by the DEPARTMENT

When appropriate the DEPARTMENT will provide those services and materials as set forth below:

- Provide pre-numbered survey books in which to record field data.
- Furnish standard DEPARTMENT monuments for the bench line.
- Regarding Environmental Permitting Services:
 - Approve all contacts with environmental agencies.
 - Provide general philosophies and guidelines of the DEPARTMENT to be used in the fulfillment of this contract. Objectives, constraints, budgetary limitations, and time constraints will be completely defined by the Project Manager.
 - Provide the appropriate signatures on application forms.
- Provide letters of authorization designating the CONSULTANT as an agent of the DEPARTMENT in accordance with F.S. 327.274.
- Provide phase reviews of roadway plans.
- Permit the CONSULTANT to utilize the DEPARTMENT's Data Processing and Computer Services for programs requested by the CONSULTANT and approved by the DEPARTMENT.
- Furnish an approved Environmental Document when available.
- Furnish all future information that may come to the DEPARTMENT during the term of the CONSULTANT's Agreement, which in the opinion of the DEPARTMENT is necessary for the prosecution of the work.
- Furnish available traffic and planning data.
- Furnish all approved utility relocations.
- Provide project utility certification to the DEPARTMENT's Central Office.
- Provide acquisition of any necessary title searches.
- Provide project data currently on file.
- Provide engineering standards and review services.
- Provide all available information in the possession of the DEPARTMENT pertaining to utility companies whose facilities may be affected by the proposed construction.
- Provide all future information that may come to the DEPARTMENT pertaining to subdivision plans so that the CONSULTANT may take advantage of additional areas that can be utilized as part of the existing right-of-way.
- Provide systems traffic for Projected Design Year, with K, D, and T factors.
- Provide existing right-of-way maps.
- PD&E documents.
- Design Reports

3 PROJECT COMMON and PROJECT GENERAL TASKS

Project Common Tasks

Project Common Tasks, as listed below, are work efforts that are applicable to many project activities, 4.0 Roadway Analysis through 32.0 Noise Impact Design Assessment. These tasks are to be included in the project scope in each applicable activity when the described work is to be performed by the CONSULTANT.

Cost Estimates: The CONSULTANT shall be responsible for producing a construction cost estimate and reviewing and updating the cost estimate when scope changes occur and/or at milestones of the project. Prior to 60% plans and completion of quantities, the DEPARTMENT's Long Range Estimate (L.R.E.) system will be used to produce a conceptual estimate, according to District policy. Once the quantities have been developed (beginning at 60% plans and no later than 90% plans) the CONSULTANT shall be responsible for inputting the pay items and quantities into TRNS*PORT PES (Proposal Estimating System) through the use of the DEPARTMENT's Designer Interface. A Summary of Pay Items sheet shall be prepared with all required Phase II, III, and IV Plans submittals.

Technical Special Provisions: The CONSULTANT shall provide Technical Special Provisions for all items of work not covered by the Standard Specifications for Road and Bridge Construction and the workbook of implemented modifications.

A Technical Special Provision shall not modify the first nine sections of the Standard Specifications and implemented modifications in any way. All modifications to other sections must be justified to the appropriate District Specifications Office to be included in the project's specifications package, typically as special provisions and not as Technical Special Provisions.

The Technical Special Provisions shall be technical in nature and shall provide a description of work, materials, equipment and specific requirements, method of measurement and basis of payment. Proposed Technical Special Provisions will be submitted to the District Specifications Office for initial review at the time of the Phase III plans review submission to the DEPARTMENT's Project Manager. This timing will allow for adequate processing time prior to final submittal. The Technical Special Provisions will be reviewed for suitability in accordance with the Handbook for Preparation of Specification Package. The District Specifications Office will forward the Technical Special Provisions to the District Legal Office for their review and comment. All comments will be returned to the CONSULTANT for correction and resolution. Final Technical Special Provisions shall be electronically signed and sealed in accordance with applicable Florida Statutes.

The CONSULTANT shall contact the appropriate District Specifications Office for details of the current format to be used before starting preparations of Technical Special Provisions.

Field Reviews: Includes all trips required to obtain necessary data for all elements of the

project.

Technical Meetings: Includes meetings with DEPARTMENT and/or Agency staff, between disciplines and subconsultants, such as access management meetings, pavement design meetings, local governments, railroad companies, progress review meetings (phase review), and miscellaneous meetings.

Quality Assurance/Quality Control: It is the intention of the DEPARTMENT that design CONSULTANTS are held responsible for their work, including plans review. Detailed checking of CONSULTANT plans or assisting in designing portions of the project for the CONSULTANT is not the intent of having external design consultants. The purpose of CONSULTANT plan reviews is to ensure that CONSULTANT plans follow the plan preparation procedures outlined in the Plans Preparation Manual, that state and federal design criteria are followed with the DEPARTMENT concept, and that the CONSULTANT submittals are complete.

The CONSULTANT shall be responsible for the professional quality, technical accuracy and coordination of all surveys, designs, drawings, specifications and other services furnished by the CONSULTANT under this contract.

The CONSULTANT shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all maps, design drawings, specifications, and other documentation prepared as a part of the contract. The CONSULTANT shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan may be one utilized by the CONSULTANT as part of their normal operation or it may be one specifically designed for this project. The CONSULTANT shall submit a Quality Control Plan for approval within 20 (twenty) calendar days of the written Notice to Proceed. A marked up set of prints from a Quality Control Review indicating the reviewers for each component (structures, roadway, drainage, signals, geotechnical, signing and marking, lighting, surveys, etc.) and a written resolution of comments on a point-by-point basis will be required with each phase submittal. The responsible Professional Engineer, Landscape Architect, or Professional Surveyor that performed the Quality Control review will sign a statement certifying that the review was conducted.

The CONSULTANT shall, without additional compensation, correct all errors or deficiencies in the designs, maps, drawings, specifications and/or other services.

Independent Peer Review: When directed by the DEPARTMENT, a subconsultant shall perform Independent Peer Reviews.

Supervision: Includes all efforts required to supervise all technical design activities.

Coordination: Includes all efforts to coordinate with all disciplines of the project to produce a final set of construction documents.

Project General Tasks

Project General Tasks, described in Sections 3.1 through 3.7 below, represent work efforts that are applicable to the project as a whole and not to any one or more specific project activity. The work described in these tasks shall be performed by the CONSULTANT when included in the project scope.

3.1 Public Involvement

Public involvement is an important aspect of the project development process. Public involvement includes communicating to all interested persons, groups, and government organizations information regarding the development of the project. The CONSULTANT shall continue the public involvement begun in previous studies through implementing the DEPARTMENT's Community Awareness Plan. Property owners adjacent to the project, including those not subject to right-of-way acquisition shall be informed about the project.

3.2 Joint Project Agreements

The CONSULTANT services shall include all coordination, meetings, etc., required to include Joint Project Agreement (JPA) plans (prepared by others) in contract plans package including all necessary revisions/modifications to contract documents to ensure plans compatibility.

3.3 Specifications Package Preparation

The CONSULTANT shall prepare and provide a complete specifications package, including applicable Technical Special Provisions, for all items and areas of work.

The DEPARTMENT will provide the necessary workbook and electronic files, in Microsoft Word 2000 format, for proper completion of the specifications package. The actual work effort will entail utilization of the supplied electronic files, including updates of new files that may be issued from time to time as mandatory specifications changes, and assembling the package in accordance with the DEPARTMENT's Specification Package Preparation Training. The DEPARTMENT may also require inclusion of special provisions necessary to convey particular DEPARTMENT needs.

The Standard Specifications, for Road and Bridge Construction and, Special Provisions or Supplemental Specifications from the applicable workbook of implemented modifications may not be modified unless absolutely necessary to control project-specific requirements. Proposed modifications to these listed documents must be drafted in redline strikethrough format along with justification of the project specific need, and coordinated with the District Specifications Office, who will obtain District Legal input, and approval by the State Specifications Engineer, prior to inclusion in the final project specifications package.

The specifications package must be submitted for initial review to the District Specifications Office at least 30 days prior to the contract package to Tallahassee due date, or sooner if required by the District Specifications Office. This submittal does not require signing and sealing and shall be coordinated through the District's Project Manager. Submittal material shall consist of (1) the complete specifications package, (2) a copy of the marked-up workbook used to compile package, and (3) a copy of the final project plans.

Final submittal of the complete specifications package must occur at least 10 working days prior to the contract package to Tallahassee due date. This submittal shall be electronically signed, dated, and sealed in accordance with applicable Florida Statutes.

3.4 Contract Maintenance

Contract maintenance includes project management effort for complete setup and maintenance of files, developing monthly progress reports, schedule updates, work effort to develop and execute subconsultant agreements, etc.

3.5 Value Engineering (Multi-Discipline Team) Review

The Consultant shall develop the design and contract documents using sound value engineering practices to the fullest extent possible, in order to support appropriate design decisions in producing the contract plans for the most efficient and economical design.

The design for this project will be subjected to a Value Engineering (VE) review. The VE review will be conducted by a multi-disciplined independent team of Department and Consultant personnel for the purpose of the improving the value of the project.

Value Engineering is an event-related activity and should occur at a time when it will provide the greatest opportunity for value improvement, as determined by the Department Project Manager and Value Engineering Coordinator. This opportune time during the design phase of a project will generally fall between completion of Phase I design plans and completion of Phase II design plans, but may occur at anytime during the development of a project.

Activities required by the Consultant in support of the VE team are:

Providing Materials and Information: The Consultant shall allow ample time for the appropriate knowledgeable members of their staff to present current design documentation and data to the VE team, as deemed necessary for an effective project review.

The Consultant Project Manager and other key members of the design team shall meet with the VE team to explain the development of design features and how and why they were selected. The information will be provided in the form of a personal

verbal presentation and the submittal of a package containing current plans and other documentation. This presentation will take place at the location of the VE study and may be followed up with additional meetings, written communications and phone enquiries.

The plans and document packages to be provided shall include at a minimum:

- One copy of all environmental documents
- One copy of the Preliminary Engineering Report
- Three copies of all plan drawings
- One copy of the Drainage Alternatives Report
- One copy of Bridge Development Reports
- One copy of other miscellaneous reports
- Project Cost Estimate

The Project Cost Estimate shall include a tabulation of estimated construction costs for the proposed design. This list shall, at a minimum, contain a breakdown of costs for each major element of the design.

The Consultant shall provide, in the form of a matrix, all criteria and weighted impacts used in arriving at decisions for the selection of specific design features. These criteria must include Safety, Operation, Maintenance and Public Acceptance.

All reports provided by the Consultant will be returned after the VE review has been completed. However copies of plans and drawings may be kept by the VE team.

3.6 Prime Consultant Project Manager Meetings

Includes only the Prime Project Manager's time for travel and attendance at Activity Technical Meetings and other meetings listed in the meeting summary for Task 3.6 on tab 3.0 Project General Task of the staff hour forms. Staff hours for other personnel attending Activity Technical Meetings are included in the meeting task for that specific Activity.

3.7 Post Design Services

Identifying the effort needed for post design services will vary significantly from project to project depending on size and complexity of the project. The approach described herein assists the Department in determining an initial estimate of the work effort needed for the Engineer of Record (EOR) to support the Department in the construction of a project.

With regards to post design services the EOR will be required to respond to any request from the Contractor within 24 hours. This does not mean that the issue will be resolved; it simply means that the EOR has received the request, states an immediate course of action, and begins the communication process.

The activities associated with Post Design Services can be characterized as the following:

Meetings: The EOR is expected to attend all pre-construction meetings as well as those regularly scheduled meetings throughout the construction phase when deemed necessary by the Construction Project Manager.

Construction Assistance: This includes responses to Requests for Information (RFI), interpretation of construction plans and documents, and engineering solutions to changed conditions encountered in the field. Site visits shall be made by the EOR consultant when agreed upon with the Department's Construction Project Manager.

Plan Updates/Changes: This includes effort required to provide revised plan sheets reflecting any changes made during the Right-of-Way Acquisition or Construction phases of a project. During Right-of-Way or Construction phases, the Consultant may be requested by the Department to review proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and specifications.

Shop Drawing Review: This includes review of shop drawings and erection plans for all components supplied by the contractor and required by the bid documents. For all independently supported sign structures of which the contractor is responsible, the consultant will review and check all the foundation, sign structure design, and shop drawings submitted by the contractor.

Load Ratings: Projects involving bridges typically have the load rating done during the design phase work. If the as-built bridge complies with the bid documents, the EOR should be willing to certify the load rating performed during design is adequate for the as-built condition of the bridge. However, if the as-built bridge was built in a modified or altered condition from the bid documents an updated load rating may be required. Therefore, during construction the EOR may be asked to perform an updated load rating based on the as-built condition of the bridge. As an aid in the negotiations the Structures Design Office has established guidelines for the development of staff-hours for load rating various bridge types.

Note: All services will be agreed upon by the Department's Construction Project Manager and approved by the Department's Design Project Manager.

3.8 Other Project General Tasks

List Tasks.

4 ROADWAY ANALYSIS

The CONSULTANT shall analyze and document Roadway Tasks in accordance with all

applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

4.1 Typical Section Package

The CONSULTANT shall provide an approved Typical Section Package prior to the Phase I plans submittal date.

4.2 Pavement Design Package

The CONSULTANT shall provide an approved Pavement Design Package in accordance with applicable FDOT pavement design manuals prior to the Phase II plans submittal date. If required, provide an approved Pavement Type Selection Report in accordance with the FDOT Pavement Type Selection Manual and preliminary asphalt and concrete alternative designs.

4.3 Access Management

The CONSULTANT shall incorporate access management standards for each project in coordination with DEPARTMENT staff. The CONSULTANT shall review adopted access management standards and the existing access conditions (interchange spacing, signalized intersection spacing, median opening spacing, and connection spacing). Median openings that will be closed, relocated, or substantially altered shall be shown on plan sheets and submitted with supporting documentation for review with the Phase I plans submittal.

The DEPARTMENT shall provide access management classification information and information derived from PD&E studies and public hearings to be used by the CONSULTANT.

4.4 Horizontal/Vertical Master Design Files

The CONSULTANT shall design the geometrics using the design standards that are most appropriate with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, aesthetics, pedestrian and bicycle concerns, ADA requirements, elder road user policy, access management, PD&E documents and scope of work.

4.5 Cross Section Design Files

The CONSULTANT shall establish and develop cross section design files in accordance with the CADD manual.

4.6 Traffic Control Analysis

The CONSULTANT shall design a safe and effective Traffic Control Plan to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage must be maintained at all times. The design shall include construction phasing of roadways to accommodate the construction of utilities when the contract includes Joint Project Agreements (JPAs).

The CONSULTANT shall investigate the need for temporary traffic signals, temporary lighting, alternate detour roads, and the use of materials such as sheet piling in the analysis. The Traffic Control Plan shall be prepared by a certified designer who has completed training as required by the DEPARTMENT. Prior to proceeding with the Traffic Control Plan, the CONSULTANT shall meet with the appropriate DEPARTMENT personnel. The purpose of this meeting is to provide information to the CONSULTANT that will better coordinate the Preliminary and Final Traffic Control Plan efforts.

4.7 Master TCP Design Files

The CONSULTANT shall develop master Traffic Control Plan (TCP) files (for Level II and Level III only) showing each phase of the Traffic Control Plan.

4.8 Design Variations and Exceptions

If available, the DEPARTMENT shall furnish the Variation/Exception Report. The CONSULTANT shall prepare the documentation necessary to gain DEPARTMENT approval of all appropriate Design Variations and/or Design Exceptions.

4.9 Design Report

The CONSULTANT shall prepare all applicable report(s) as listed in the Project Description section of this scope.

The CONSULTANT shall submit to the DEPARTMENT design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.

The design notes, data, and computations shall be recorded on size 8½"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8½"x11" size. The data shall be in a hardback folder for submittal to the DEPARTMENT.

4.10 Computation Book and Quantities

The CONSULTANT shall prepare the Computation Book and various summary of quantities sheets. This includes all efforts required to develop the Computation Book and the supporting documentation, including construction days when required.

4.11 Cost Estimate

4.12 Technical Special Provisions

4.13 Other Roadway Analysis

4.14 Field Reviews

4.15 Technical Meetings

4.16 Quality Assurance/Quality Control

4.17 Independent Peer Review

4.18 Supervision

4.19 Coordination

5 ROADWAY PLANS

The CONSULTANT shall prepare Roadway, Drainage, Traffic Control, Utility Adjustment Sheets, plan sheets, notes, and details. The plans shall include the following sheets necessary to convey the intent and scope of the project for the purposes of construction.

5.1 Key Sheet

5.2 Summary of Pay Items Including Quantity Input

5.3 Drainage Map

5.4 Interchange Drainage Map

5.5 Typical Section Sheets

5.6 General Notes/Pay Item Notes

5.7 Summary of Quantities

5.8 Box Culvert Data Sheet

5.9 Bridge Hydraulics Recommendation Sheets

- 5.10 Summary of Drainage Structures
- 5.11 Optional Pipe/Culvert Material
- 5.12 Project Layout
- 5.13 Plan/Profile Sheet
- 5.14 Profile Sheet
- 5.15 Plan Sheet
- 5.16 Special Profile
- 5.17 Back of Sidewalk Profile Sheet
- 5.18 Interchange Layout Sheet
- 5.19 Ramp Terminal Details (Plan View)
- 5.20 Intersection Layout Details
- 5.21 Miscellaneous Detail Sheets
- 5.22 Drainage Structure Sheet (Per Structure)
- 5.23 Miscellaneous Drainage Detail Sheets
- 5.24 Lateral Ditch Plan/Profile
- 5.25 Lateral Ditch Cross Sections
- 5.26 Retention/Detention Ponds Detail Sheet
- 5.27 Retention Pond Cross Sections
- 5.28 Cross-Section Pattern Sheet
- 5.29 Roadway Soil Survey Sheet
- 5.30 Cross Sections
- 5.31 Traffic Control Plan Sheets
- 5.32 Traffic Control Cross Section Sheets
- 5.33 Traffic Control Detail Sheets

- 5.34 Utility Adjustment Sheets
- 5.35 Selective Clearing and Grubbing
- 5.36 Erosion Control Plan
- 5.37 SWPPP
- 5.38 Project Control Network Sheet
- 5.39 Interim Standards
- 5.40 Utility Verification Sheet (SUE Data)
- 5.41 Quality Assurance/Quality Control
- 5.42 Supervision

6 DRAINAGE ANALYSIS

The CONSULTANT shall analyze and document Drainage Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

The CONSULTANT shall be responsible for designing a drainage and stormwater management system. All design work shall comply with the requirements of the appropriate regulatory agencies and the DEPARTMENT's Drainage Manual.

The CONSULTANT shall coordinate fully with the appropriate permitting agencies and the DEPARTMENT's staff. All activities and submittals should be coordinated through the DEPARTMENT's Project Manager. The work will include the engineering analyses for any or all of the following:

6.1 Determine Base Clearance Water Elevation

Analyze, determine, and document high water elevations which will be used to set roadway profile grade. Determine surface water elevations at cross drains, floodplains, outfalls and adjacent stormwater ponds. Determine groundwater elevations at intervals between the above-mentioned surface waters.

6.2 Pond Siting Analysis and Report

Evaluate pond sites using a preliminary hydrologic analysis. Document the results and coordination for all of the project's pond site analyses. The Drainage Manual provides specific documentation requirements.

6.3 Design of Cross Drains

Analyze the hydraulic design of cross drains. Check existing cross drains to determine if they are structurally sound and can be extended. Document the design as required. Determine and provide flood data as required.

6.4 Design of Roadway Ditches

Design roadway conveyance ditches. This includes determining ditch cross sections, grades, selecting suitable channel lining, designing the side drain pipes, and documentation.

6.5 Design of Outfalls

Analyze and document the design of ditch or piped outfalls. (Pond outlet structure included in task 6.6)

6.6 Design of Stormwater Management Facility (Offsite Pond)

Design stormwater management facilities to meet requirements for stormwater quality treatment and attenuation. Develop proposed pond layout (shape, contours, slopes, etc.), perform routing calculations, and design the outlet control structure.

6.7 Design of Stormwater Management Facility (Roadside Ditch as Linear Pond or Infield Pond)

Design stormwater management facilities to meet requirements for stormwater quality treatment and attenuation. Develop proposed pond layout (shape, contours, slopes, etc.), perform routing calculations, and design the outlet control structure.

6.8 Design of Flood Plain Compensation Area

Determine flood plain encroachments, coordinate with regulatory agencies, and develop proposed compensation area layout (shape, contours, slopes, etc.). Document the design following the requirements of the regulatory agency.

6.9 Design of Storm Drains

Develop a "working drainage map", determine runoff, inlet locations, and spread. Calculate hydraulic losses (friction, utility conflict and, if necessary, minor losses). Determine Design Tailwater and, if necessary, outlet scour protection.

6.10 Optional Culvert Material

Determine acceptable options for pipe materials.

6.11 French Drain Design

Design French Drain Systems to provide stormwater treatment and attenuation. Identify location for percolation tests and review these, determine the size and length of French Drains, design the control structure/weir, and model the system of inlets, conveyances, French Drains, and other outfalls using a routing program such as ICPR.

6.12 Drainage Wells

Design the discharge into deep wells to comply with regulatory requirements. Identify the location of the well, design the control structure/weir, and model the system using a routing program such as ICPR.

6.13 Drainage Design Documentation Report

Compile drainage design documentation into report format. Include documentation for all the drainage design tasks and associated meetings and decisions, except the Pond Siting Analysis Report and Bridge Hydraulics Report.

6.14 Bridge Hydraulic Report

Calculate hydrology, hydraulics, scour, and deck drainage. Prepare report and the information for the Bridge Hydraulics Recommendation Sheet.

6.15 Temporary Drainage Analysis

Evaluate and address drainage to adequately drain the road and maintain existing offsite drainage during all construction phases. Provide documentation.

6.16 Cost Estimate

6.17 Technical Special Provisions

6.18 Other Drainage Analysis

6.19 Field Reviews

6.20 Technical Meetings

6.21 Quality Assurance/Quality Control

6.22 Independent Peer Review

6.23 Supervision

6.24 Coordination

7 UTILITIES

The CONSULTANT shall identify utility facilities and secure agreements, utility work schedules, and plans from the Utility Agency Owners (UAO) ensuring no conflicts exist between utility facilities and the DEPARTMENT's construction project. The CONSULTANT shall certify all utility negotiations have been completed with arrangements made for utility work to be undertaken.

7.1 Kickoff Meeting

Prior to any contact with the UAO(s), the CONSULTANT shall meet with the District Utility Office (DUO) to receive guidance, as may be required, to assure that all necessary coordination will be accomplished in accordance with DEPARTMENT procedures. CONSULTANT shall bring a copy of the design project work schedule reflecting utility activities.

7.2 Identify Existing UAO(s)

Identify all utilities in the corridor; check with Maintenance for Permits, Sunshine State One Call, Subsurface Utility Engineering (SUE) Report, Design Location Survey, and Existing Plans.

7.3 Make Utility Contacts

First Contact: Send letters and two sets of plans to each utility, one set for the utility office, one set each to construction and maintenance if required. Includes contact by phone for meeting coordination. Request type, size, location, easements, cost for compensable relocation, and justification for any utility exceptions. Include the meeting schedule (if applicable) and the design schedule. Include typical meeting agenda.

Second Contact: At a minimum of 4 weeks prior to the meeting, the CONSULTANT shall transmit two complete sets of Phase II plans to each UAO having facilities located within the project limits, and one set to the DEPARTMENT Offices as required by the District.

Third Contact: Identify agreements and assemble packages. Send agreements, letters and two sets of plans to the UAO(s) including all component sets, one set for the utility office, one set to construction and maintenance if required. Include the design schedule. Not all projects will have all contacts as described above.

7.4 Exception Coordination

The CONSULTANT shall be responsible for transmitting/coordinating the appropriate design reports including, but not limited to, the Resurfacing, Restoration and Rehabilitation (RRR) report, Project Scope and/or the Concept Report (if applicable) to each UAO in order to identify any condition that may require a Utility Exception. The CONSULTANT shall coordinate the processing of design exceptions

involving Utilities with the UAO and the DEPARTMENT. Coordinate and process per the UAM.

7.5 Preliminary Utility Meeting

The CONSULTANT shall schedule (time and place), notify participants, and conduct a preliminary utility meeting with all affected UAO(s) for the purpose of presenting the project, review the current design schedule, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each utility, and discuss any future design issues that may impact utilities. This is also an opportunity for the UAO(s) to present proposed facilities. The CONSULTANT shall keep accurate minutes and distribute a copy to all attendees.

7.6 Individual/Field Meetings

The CONSULTANT shall meet with each UAO separately throughout the project design duration to provide guidance in the interpretation of plans, review changes to the plans and schedules, optional clearing and grubbing work, and assist in the development of the UAO(s) plans and work schedules. The CONSULTANT is responsible for motivating the UAO to complete and return the necessary documents after each Utility Contact or Meeting.

7.7 Collect and Review Plans and Data from UAO(s)

Make Determinations (Compensable Interest, Easements, Coordinate, Analyze). Ensure information (utility type, material and size) is sent to the designer for inclusion in the plans. Coordinate programming of funds.

7.8 Subordination of Easements Coordination

The CONSULTANT, if requested by the DEPARTMENT, shall transmit to and secure from the UAO the executed subordination agreements prepared by the appropriate DEPARTMENT office. The CONSULTANT shall coordinate with the DUO the programming of the necessary work program funds to compensate the UAO.

7.9 Utility Design Meeting

At a minimum of 3 weeks prior to the meeting, the CONSULTANT shall transmit two complete sets of Phase II plans to each UAO having facilities located within the project limits, and one set to the DEPARTMENT Offices as required by the District. The CONSULTANT shall schedule (time and place), notify participants, and conduct a Utility meeting with all affected UAO(s). The CONSULTANT shall be prepared to discuss drainage, traffic signalization, maintenance of traffic (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each

utility, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and maintenance of traffic with each UAO. The intent of this meeting shall be to identify and resolve conflicts between utilities and proposed construction prior to completion of the plans, including utility adjustment details. Also recommend resolution between known utility conflicts with proposed construction plans as practical. The CONSULTANT shall keep accurate minutes of all meetings and distribute a copy to all attendees.

7.10 Review Utility Markups and Work Schedules and Processing of Schedules and Agreements

Review utility marked up plans individually as they are received for content and coordinate review with the designer. Send color markups and schedules to the appropriate DEPARTMENT office(s) for review and comment if required by the District. Coordinate with the District for execution. Distribute Executed Final Documents. Prepare Work Order for UAO(s). Coordinate programming of funds.

7.11 Utility Coordination/Followup

This includes follow-up, interpreting plans, and assisting and the completion of the UAO(s) work schedule and agreements. Includes phone calls, face-to-face meetings, etc., to motivate and ensure the UAO(s) complete and return the required documents in accordance with the project schedule. Ensure the resolution of all known conflicts. This task can be applied to all phases of the project.

7.12 Utility Constructability Review

Review utility schedules against construction contract time, and phasing for compatibility. Coordinate with and obtain written concurrence from the construction office.

7.13 Additional Utility Services

Preparation and coordination of Utility Design Plans when the DEPARTMENT participates in cost of utility work. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified.

7.14 Processing Utility Work by Highway Contractor (UWHC)

Formerly called Utility Joint Participation Agreement (JPA). This includes coordination of utility design effort between the DEPARTMENT and the UAO(s). Determine the DEPARTMENT's cost participation, additional coordination meetings, prepare, negotiate, and process the agreements, review tabulation of quantities, prepare Summary of Pay Items (TRNS*PORT) - UWHC, perform UWHC constructability and bidability review, Technical Special Provisions (TSP) review. This does not include utility design effort. This item is not usually included

in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified.

7.15 Contract Plans to UAO(s)

This includes transmittal of the contract plans as processed for letting. Transmittals to UAO(s) are by certified mail, return receipt requested.

7.16 Certification/Close-Out

This includes hours for transmitting utility files to the DUO and preparation of the Utility Certification Letter. The CONSULTANT shall certify to the appropriate DEPARTMENT representative the following:

All utility negotiations (Full execution of each agreement, approved Utility Work Schedules, technical special provisions written, etc.) have been completed with arrangements made for utility work to be undertaken and completed as required for proper coordination with the physical construction schedule.

OR

An on-site inspection was made and no utility work will be involved.

OR

Plans were sent to the Utility Companies/Agencies and no utility work is required.

7.17 Other Utilites

8 ENVIRONMENTAL PERMITS

The CONSULTANT shall notify the DEPARTMENT Project Manager, Environmental Permit Coordinator and other appropriate personnel in advance of all scheduled meetings with the regulatory agencies to allow a DEPARTMENT representative to attend. The CONSULTANT shall copy in the Project Manager and the Environmental Permit Coordinator on all permit related correspondence and meetings.

8.1 Preliminary Project Research

The CONSULTANT shall perform preliminary project research and shall be responsible for early identification of and coordination with the appropriate regulatory agencies to assure that design efforts are properly directed toward permit requirements.

8.2 Complete Permit Involvement Form

The CONSULTANT shall document permit involvement in coordination with the District Permit Coordinator and DEPARTMENT Project Manager. This is to be done upon completion of preliminary project research.

8.3 Establish Wetland Jurisdictional Lines

The CONSULTANT shall collect all data and information necessary to determine the boundaries of wetlands and surface waters defined by the rules or regulations of each agency processing or reviewing a permit application necessary to construct a DEPARTMENT project.

The CONSULTANT shall be responsible for, but not limited to, the following activities:

Determine landward extent of state waters as defined in Chapter 62-340 FAC as ratified in Section 373.4211 FS

- Determine the jurisdictional boundaries of wetlands and surface waters as defined by rules or regulations of any other permitting authority that is processing a DEPARTMENT permit application.
- Prepare aerial maps showing the jurisdictional boundaries of wetlands and surface waters. Aerial maps shall be reproducible, of a scale no greater than 1"=200' and be recent photography. The maps shall show the jurisdictional limits of each agency. Xerox copies of aerials are not acceptable. All jurisdictional boundaries are to be tied to the project's baseline of survey. When necessary, jurisdictional maps shall be signed and sealed by either a Registered Professional Engineer or a Registered Land Surveyor.
- Acquire written verification of jurisdictional lines from the appropriate environmental agencies.

Prepare a written assessment of the current condition and relative value of the function being performed by wetlands and surface waters. Prepare data in tabular form which includes the ID number for each wetland impacted, size of wetland to be impacted, type of impact and identify any wetland within the project limits that will not be impacted by the project.

8.4 Agency Verification of Wetland Data

The CONSULTANT shall be responsible for verification of wetland data identified in Section 8.3 and coordinating regulatory agency field reviews, including finalization of wetland assessments with applicable agencies.

8.5 Complete and Submit All Required Permit Applications

The CONSULTANT shall prepare permit packages as identified in the Project Description section.

The CONSULTANT shall collect all of the data and information necessary to obtain the environmental permits required to construct a project.

The CONSULTANT shall prepare each permit application for DEPARTMENT approval in accordance with the rules and/or regulations of the environmental agency responsible for issuing a specific permit and/or authorization to perform work.

- 8.6 Prepare Dredge and Fill Sketches**
- 8.7 Prepare USCG Permit Sketches**
- 8.8 Prepare Easement Sketches**
- 8.9 Prepare Right-of-Way Occupancy Sketches**
- 8.10 Prepare Coastal Construction Control Line (CCCL) Permit Sketches**
- 8.11 Prepare Tree Permit Information**
- 8.12 Mitigation Coordination and Meetings**

The CONSULTANT shall coordinate with DEPARTMENT personnel prior to approaching any environmental permitting or reviewing agencies. Once a mitigation plan has been reviewed and approved by the DEPARTMENT, the CONSULTANT will be responsible for coordinating the proposed mitigation plan with the environmental agencies.

8.13 Mitigation Design

If wetland impacts cannot be avoided, the CONSULTANT shall prepare a mitigation plan to be included as a part of the Environmental Resource or Wetlands Resource Permit applications.

Prior to the development of alternatives, the CONSULTANT shall meet with the Project Manager to determine the DEPARTMENT's policies in proposing mitigation. The CONSULTANT shall proceed in the development of a mitigation plan based upon the general guidelines provided by the DEPARTMENT.

The CONSULTANT will be directed by the DEPARTMENT to investigate the following methods of mitigation:

Payment to DEP/WMD per acre of wetlands impacted as defined in CH 373.4137 FS

- Monetary participation in offsite regional mitigation plans
- Monetary participation in a private mitigation bank
- Creation/restoration on public lands
- Creation/restoration on right-of-way purchased by the DEPARTMENT
- Creation/restoration on existing DEPARTMENT right-of-way

In the event that physical creation or restoration is the only feasible alternative to offset wetland impacts, the CONSULTANT shall collect all of the data and information necessary to prepare alternative mitigation plans that may be acceptable to all permitting agencies and commenting agencies who are processing or reviewing a permit application for a DEPARTMENT project.

Prior to selection of a final mitigation site, the CONSULTANT will provide the following services in the development of alternative mitigation plans:

Preliminary jurisdictional determination for each proposed site

- Selection of alternative sites
- Coordination of alternative sites with the DEPARTMENT/all environmental agencies

Written narrative listing potential sites with justifications for both non-recommended

8.14 Environmental Clearances

The CONSULTANT shall prepare clearances for all pond and/or mitigation sites identified after the PD&E was completed.

Archaeological and Historical Features: The CONSULTANT shall collect data necessary to completely analyze the impacts to all cultural and historic resources by the pond and/or mitigation sites and prepare a Cultural Resource Assessment Request Package.

Wetland Impact Analysis: The CONSULTANT shall analyze the impacts to wetlands for the pond and/or mitigation sites and complete the Wetlands Evaluation Report.

Wildlife and Habitat Impact Analysis: The CONSULTANT shall collect data necessary to perform an Endangered Species Biological Assessment, and analyze the impacts to wildlife and habitat by the pond and/or mitigation sites.

Contamination Impact Analysis: The CONSULTANT shall perform the necessary analysis to complete the Contamination Screening Evaluation for the pond and/or mitigation sites and complete the Contamination Screening Evaluation Report.

8.15 Other Environmental Permits

8.16 Technical Meetings

8.17 Quality Assurance/Quality Control

8.18 Supervision

8.19 Coordination

18 STRUCTURES - MISCELLANEOUS

The CONSULTANT shall prepare plans for Miscellaneous Structure(s) as specified in Section 2.5.

Mast Arms

18.5 Mast Arms

19 SIGNING AND PAVEMENT MARKING ANALYSIS

The CONSULTANT shall analyze and document Signing and Pavement Markings Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

19.1 Traffic Data Analysis

The CONSULTANT shall review the approved preliminary engineering report, typical section package, traffic technical memorandum and proposed geometric design alignment to identify proposed sign placements and roadway markings. Perform queue analysis.

19.2 No Passing Zone Study

19.3 Reference and Master Design File

The CONSULTANT shall prepare the Signing & Marking Design file to include all necessary design elements and all associated reference files.

19.4 Multi-Post Sign Support Calculations

The CONSULTANT shall determine the appropriate column size from the DEPARTMENT's Multi-Post Sign Program(s).

19.5 Sign Panel Design Analysis

Establish sign layout, letter size and series for non-standard signs.

19.6 Sign Lighting/Electrical Calculations

Includes the verification of photometrics on lighted, load center and voltage drop calculations.

19.7 Quantities

19.8 Computation Book

- 19.9 Cost Estimates**
- 19.10 Technical Special Provisions**
- 19.11 Other Signing and Pavement Marking Analysis**
- 19.12 Field Reviews**
- 19.13 Technical Meetings**
- 19.14 Quality Assurance/Quality Control**
- 19.15 Independent Peer Review**
- 19.16 Supervision**
- 19.17 Coordination**

20 SIGNING AND PAVEMENT MARKING PLANS

The CONSULTANT shall prepare a set of Signing and Pavement Marking Plans in accordance with the Plans Preparation Manual that includes the following.

- 20.1 Key Sheet**
- 20.2 Summary of Pay Items Including CES Input**
- 20.3 Tabulation of Quantities**
- 20.4 General Notes/Pay Item Notes**
- 20.5 Project Layout**
- 20.6 Plan Sheet**
- 20.7 Typical Details**
- 20.8 Guide Sign Work Sheet(s)**
- 20.9 Traffic Monitoring Site**
- 20.10 Cross Sections**
- 20.11 Special Service Point Details**
- 20.12 Special Details**

20.13 Interim Standards

20.14 Quality Assurance/Quality Control

20.15 Supervision

21 SIGNALIZATION ANALYSIS

The CONSULTANT shall analyze and document Signalization Analysis Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

21.1 Traffic Data Collection

The CONSULTANT shall perform all effort required for traffic data collection, including crash reports, 24 hr. machine counts, 8 hr. turning movement counts, 7 day machine counts, and speed & delay studies.

21.2 Traffic Data Analysis

The CONSULTANT shall determine signal operation plan, intersection geometry, local signal timings, pre-emption phasing & timings, forecasting traffic, and intersection analysis run.

21.3 Signal Warrant Study

21.4 Systems Timings

The CONSULTANT shall determine proper coordination timing plans including splits, force offs, offsets, and preparation of Time Space Diagram.

21.5 Reference and Master Signalization Design File

The CONSULTANT shall prepare the Signalization Design file to include all necessary design elements and all associated reference files.

21.6 Reference and Master Interconnect Communication Design File

The CONSULTANT shall prepare the Interconnect Communication Design file to include all necessary design elements and all associated reference files.

21.7 Overhead Street Name Sign Design

The CONSULTANT shall design Signal Mounted Overhead Street Name signs.

21.8 Pole Elevation Analysis

21.9 Traffic Signal Operation Report

(As defined by the District)

21.10 Quantities

21.11 Cost Estimate

21.12 Technical Special Provisions

21.13 Other Signalization Analysis

21.14 Field Reviews

The CONSULTANT shall collect information from the maintaining agencies and conduct a field review. The review should include, but is not limited to, the following:

Existing Signal and Pedestrian Phasing

- Controller Make, Model, Capabilities and Condition/Age
- Condition of Signal Structure(s)
- Type of Detection as Compared With Current District Standards
- Interconnect Media

Controller Timing Data

21.15 Technical Meetings

21.16 Quality Assurance/Quality Control

21.17 Independent Peer Review

21.18 Supervision

21.19 Coordination

22 SIGNALIZATION PLANS

The CONSULTANT shall prepare a set of Signalization Plans in accordance with the Plans Preparation Manual, which includes the following.

22.1 Key Sheet

22.2 Summary of Pay Items Including CES Input

22.3 Tabulation of Quantities

22.4 General Notes/Pay Item Notes

- 22.5 Plan Sheet
- 22.6 Interconnect Plans
- 22.7 Traffic Monitoring Site
- 22.8 Guide Sign Worksheet
- 22.9 Special Details
- 22.10 Special Service Point Details
- 22.11 Mast Arm/Monotube Tabulation Sheet
- 22.12 Strain Pole Schedule
- 22.13 TCP Signal (Temporary)
- 22.14 Temporary Detection Sheet
- 22.15 Utility Conflict Sheet
- 22.16 Interim Standards
- 22.17 Quality Assurance/Quality Control
- 22.18 Supervision

30 GEOTECHNICAL

The CONSULTANT shall, for each project, be responsible for a complete geotechnical investigation. All work performed by the CONSULTANT shall be in accordance with DEPARTMENT standards, or as otherwise directed by the District Geotechnical Engineer. The District Geotechnical Engineer will make interpretations and changes regarding geotechnical standards, policies and procedures and provide guidance to the CONSULTANT.

Prior to beginning each phase of investigation and after the Notice to Proceed is given, the CONSULTANT shall submit investigation plan for approval and meet with the DEPARTMENT's Geotechnical Engineer or representative to review the project scope and DEPARTMENT requirements. The investigation plan shall include, but not be limited to, the proposed boring locations and depths, and all existing geotechnical information from available sources to generally describe the surface and subsurface conditions of the project site. Additional meetings may be required to plan any additional field efforts, review plans, resolve plans/report comments, resolve responses to comments, and/or any other meetings necessary to facilitate the project.

The CONSULTANT shall notify the DEPARTMENT in adequate time to schedule a representative to attend all related meetings and field activities.

30.1 Document Collection and Review

CONSULTANT will review printed literature including topographic maps, county agricultural maps, aerial photography (including historic photos), ground water resources, geology bulletins, potentiometric maps, pile driving records, historic construction records and other geotechnical related resources. Prior to field reconnaissance, CONSULTANT shall review U.S.G.S., S.C.S. and potentiometric maps, and identify areas with problematic soil and groundwater conditions.

Roadway

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities. The CONSULTANT shall retain all samples until acceptance of Phase IV plans. Rock cores shall be retained as directed in writing by the District Geotechnical Engineer.

Obtain pavement cores as directed in writing by the District Geotechnical Engineer.

If required by the District Geotechnical Engineer, a preliminary roadway exploration shall be performed before the Phase I plans submittal. The preliminary roadway exploration will be performed and results provided to the Engineer of Record to assist in setting roadway grades and locating potential problem areas. The preliminary roadway exploration shall be performed as directed in writing by the District Geotechnical Engineer.

CONSULTANT shall perform specialized field-testing as required by project needs and as directed in writing by the District Geotechnical Engineer.

All laboratory testing and classification will be performed in accordance with applicable DEPARTMENT standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

30.2 Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with DEPARTMENT Geotechnical Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the CONSULTANT shall submit a methodology(s) for plugging the borehole to the DEPARTMENT for approval prior to commencing with the boring program.

30.3 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

30.4 MOT Plans for Field Investigation

Coordinate and develop Maintenance of Traffic (MOT) plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Design Standards Index 600 series.

30.5 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

30.6 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the DEPARTMENT's Project Manager.

30.7 Groundwater Monitoring

Monitor groundwater, using piezometers.

30.8 LBR Sampling

Collect appropriate samples for Limerock Bearing Ratio (LBR) testing.

30.9 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

30.10 Soil and Rock Classification - Roadway

Refine soil profiles recorded in the field, based on results of laboratory testing.

30.11 Design LBR

Determine design LBR values from the 90% and mean methods.

30.12 Laboratory Data

Tabulate laboratory test results for inclusion in the geotechnical report, the report of tests sheet (Roadway Soil Survey Sheet), and for any necessary calculations and analyses.

30.13 Seasonal High Water Table

Review the encountered ground water levels and estimate seasonal high ground water levels. Estimate seasonal low ground water levels, if requested.

30.14 Parameters for Water Retention Areas

Calculate parameters for water retention areas, exfiltration trenches, and/or swales.

30.15 Limits of Unsuitable Material

Delineate limits of unsuitable material(s) in both horizontal and vertical directions. Assist the Engineer of Record with detailing these limits on the cross-sections. If requested, prepare a plan view of the limits of unsuitable material.

30.16 ASCII Files for Cross-Sections

Create ASCII files of boring data for cross-sections.

30.17 Embankment Settlement and Stability

Estimate the total magnitude and time rate of embankment settlements. Calculate the factor of safety against slope stability failure.

30.18 Stormwater Volume Recovery and/or Background Seepage Analysis

Perform stormwater volume recovery analysis as directed by the DEPARTMENT.

30.19 Geotechnical Recommendations

Provide geotechnical recommendations regarding the proposed roadway construction project including the following: description of the site/alignment, design recommendations and discussion of any special considerations (i.e. removal of unsuitable material, consolidation of weak soils, estimated settlement time/amount, groundwater control, high groundwater conditions relative to pavement base, etc.) Evaluate and recommend types of geosynthetics and properties for various applications, as required.

30.20 Preliminary Roadway Report and Pavement Evaluation Report

If a preliminary roadway investigation is performed, a preliminary roadway report shall be submitted before the Phase I plans submittal. The purpose of the preliminary roadway report will be to assist in setting road grades and locating potential problems.

Copies of U.S.G.S. and S.C.S. maps with project limits shown.

- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505.

Results of all tasks discussed in the previous section (Data Interpretation and Analysis).

- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.

The CONSULTANT will respond in writing to any changes and/or comments from the DEPARTMENT and submit any responses and revised reports.

If a pavement evaluation is performed, the evaluation and report submittal shall be in accordance with Section 3.4 of the Materials Manual: Pavement Coring and Evaluation.

30.21 Final Report

The Final Roadway Report shall include the following:

Copies of U.S.G.S. and S.C.S. maps with project limits shown.

- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505.

Results of all tasks discussed in the previous section (Data Interpretation and Analysis).

- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.

The CONSULTANT will respond in writing to any changes and/or comments from the DEPARTMENT and submit any responses and revised reports.

30.22 Auger Boring Drafting

Draft auger borings as directed by the DEPARTMENT.

30.23 SPT Boring Drafting

Draft SPT borings as directed by the DEPARTMENT.

Structures

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities. The CONSULTANT shall retain all samples until acceptance of Phase IV plans. Rock cores shall be retained as directed in writing by the District Geotechnical Engineer.

CONSULTANT shall perform specialized field-testing as required by needs of project and as directed in writing by the District Geotechnical Engineer.

All laboratory testing and classification will be performed in accordance with applicable DEPARTMENT standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

The staff hour tasks for high embankment fills and structural foundations for bridges, box culverts, walls, high-mast lighting, overhead signs, mast arm signals, strain poles, buildings, and other structures include the following:

30.24 Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with DEPARTMENT Geotechnical Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the CONSULTANT shall submit a methodology(s) for plugging the borehole to the DEPARTMENT for approval prior to commencing with the boring program.

30.25 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

30.26 MOT Plans for Field Investigation

Coordinate and develop MOT plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Design Standards Index 600 series.

30.27 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

30.28 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the DEPARTMENT's Project Manager.

30.29 Collection of Corrosion Samples

Collect corrosion samples for determination of environmental classifications.

30.30 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

30.31 Soil and Rock Classification – Structures (N/A)

30.32 Tabulation of Laboratory Data

Laboratory test results should be tabulated for inclusion in the geotechnical report and for the necessary calculations and analyses.

30.33 Design Groundwater Level for Structures

Review encountered groundwater levels, estimate seasonal high groundwater levels, and evaluate groundwater levels for structure design.

30.34 Selection of Foundation Alternatives (BDR) (N/A)

30.35 Detailed Analysis of Selected Foundation Alternate(s) (N/A)

30.36 Bridge Construction and Testing Recommendations (N/A)

30.37 Lateral Load Analysis (Optional) (N/A)

30.38 Walls

Provide the design soil profile(s), which include the soil model/type of each layer and all soil engineering properties required by the Engineer of Record for conventional wall analyses and recommendations. Review wall design for geotechnical compatibility and constructability.

Evaluate the external stability of conventional retaining walls and retained earth wall systems. For retained earth wall systems, calculate and provide minimum soil reinforcement lengths versus wall heights, and soil parameters assumed in analysis. Estimate differential and total (long term and short term) settlements.

Provide wall construction recommendations.

30.39 Sheet Pile Wall Analysis (Optional) (N/A)

30.40 Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations (N/A)

30.41 Box Culvert Analysis (N/A)

30.42 Preliminary Report – BDR (N/A)

30.43 Final Report - Bridge and Associated Walls (N/A)

30.44 Final Reports - Signs, Signals, Box Culvert, Walls, and High Mast Lights

The final reports shall include the following:

Copies of U.S.G.S. and S.C.S. maps with project limits shown.

- Summary of structure background data, SCS, USGS, geologic and potentiometric data.
- The results of all tasks discussed in the previous section (Data Interpretation and Analysis).

- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.

An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information.

Final reports will incorporate comments from the DEPARTMENT and contain any additional field or laboratory test results, recommended foundation alternatives along with design parameters and special provisions for the contract plans. These reports will be submitted to the District Geotechnical Engineer for review prior to project completion. After review by the District Geotechnical Engineer, the reports will be submitted to the District Geotechnical Engineer in final form and will include the following:

All original plan sheets (11" x 17")

- One set of all plan and specification documents, in electronic format, according to DEPARTMENT requirements
- Two sets of record prints
- Six sets of any special provisions

All reference and support documentation used in preparation of contract plans package

Additional final reports (up to four), aside from stated above, may be needed and requested for the DEPARTMENT's Project Manager and other disciplines.

The final reports, special provisions, as well as record prints, will be signed and sealed by a Professional Engineer registered in the State of Florida.

Draft the detailed boring/sounding standard sheet, including environmental classification, results of laboratory testing, and specialized construction requirements, for inclusion in final plans.

30.45 SPT Boring Drafting

Prepare a complete set of drawings to include all SPT borings, auger borings and other pertinent soils information in the plans. Include these drawings in the Final Geotechnical Report. Draft borings, location map, S.C.S. map and U.S.D.A. map as directed by the DEPARTMENT. Soil symbols must be consistent with those presented in the latest Florida Department of Transportation Soils and Foundations Handbook.

30.46 Other Geotechnical

Define

30.47 Technical Special Provisions

30.48 Field Reviews

Identify and note surface soil and rock conditions, surface water conditions and locations, and preliminary utility conflicts. Observe and note nearby structures and foundation types.

30.49 Technical Meetings

30.50 Quality Assurance/Quality Control

30.51 Supervision

30.52 Coordination

30.53 Optional Preliminary Contamination Assessment

When required, all work shall be performed in accordance with current Florida Department of Environmental Regulation (DER) and Federal OSHA and EPA standards. The following work shall be included, but not limited to:

A minimum of four borings will be required per site.

- Soil gas analysis will be required by use of a flame ionization detector; e.g. Organic Vapor Analyzer (OVA).
- Installation of monitoring wells may be required.
- Water sampling and laboratory analysis may be required. The State of Florida Department of Health shall certify the laboratory performing the analysis.

Four copies of the draft PCA report will be required for review and comment by the DEPARTMENT. After comments have been addressed, six signed and sealed copies of the final PCA report shall be submitted to the DEPARTMENT. Copies of all documents will be additionally transmitted to the DEPARTMENT in electronic format in accordance with the DEPARTMENT's current standards.

34 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the DEPARTMENT, in a format prescribed by the DEPARTMENT. The DEPARTMENT Project Manager and the CONSULTANT shall monitor the cumulative invoiced billings to insure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the DEPARTMENT.

The CONSULTANT will provide a list of key events and the associated total percentage of work considered to be complete at each event. This list will be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those events have actually occurred and the results are acceptable to the DEPARTMENT.

EXHIBIT A-3

**SCOPE OF SERVICES
PHASE III – POST DESIGN SERVICES**

County Project Number: *PS-2825-07/BHJ*
County CIP Number: *00205304*
Financial Project ID: *240233-4*
Description: *SR 434 from Rangeline Rd to CR 427 in Seminole County*

1	PURPOSE	1
2	POST DESIGN SERVICES	1
2.1	Plans and Right of Way Documents Update and Maintenance	1
2.2	Construction Assistance	1
2.3	Permit Updates	2
2.4	Review Structural Shop Drawings	2
2.5	Survey Update	2
2.6	Web Site Updates (N/A)	2
2.7	Newsletters	2
3	INVOICING LIMITS	2

**SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES
HIGHWAY AND BRIDGE FINAL DESIGN & PERMITTING**

This Exhibit forms an integral part of the agreement between the Seminole County Board of County Commissioners (hereinafter referred to as the COUNTY) and XXXX (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

County Project Number: *PS-2825-07/BHJ*
County CIP Number: *00205304*
Financial Project ID: *240233-4*
Description: *SR 434 from Rangeline Rd to CR 427 in Seminole County*

1 PURPOSE

At the COUNTY's option, the CONSULTANT may be requested to provide post design services. The purpose is to achieve quality post design services from competent professionals in order to satisfactorily complete construction. These services are intended to address changed conditions or services not covered that occur following acceptance of final plans, including changes required as part of right of way acquisition. These services are not intended for instances of CONSULTANT error and/or omissions.

2 POST DESIGN SERVICES

The following descriptions provide a non-exclusive summary of the specific tasks within this Scope-of-Services and are the minimum criteria for project performance and execution. The COUNTY will issue work orders on an as needed basis. The CONSULTANT is responsible to provide the following required professional services as requested:

2.1 Plans and Right of Way Documents Update and Maintenance

The CONSULTANT shall perform engineering analyses and/or make revisions to the plans, right of way maps, legal descriptions and special provisions, as requested by the COUNTY and the DEPARTMENT, to reflect additions, deletions and/or modifications prior to and subsequent to construction advertising. Whenever the plans or Right of Way Maps are revised, the CONSULTANT shall submit two (2) sets of signed and sealed half size prints of the revised sheets and one (1) set of the revised reproducibles. The Right of Way maps and drainage maps will be full size.

2.2 Construction Assistance

The CONSULTANT shall provide to the COUNTY qualified representation during the construction phase concerning the intent and interpretation of the construction plans and documents. Should changed conditions be encountered in the field and when requested by the COUNTY, the CONSULTANT shall respond in a timely manner with suitable engineering solutions which take into account the changed conditions.

On site appearance of CONSULTANT shall be made during construction at the written request of the COUNTY.

From time to time during construction, the COUNTY may request the CONSULTANT to review contractor proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and specifications.

2.3 Permit Updates

The CONSULTANT shall provide valid permits extending through construction. The CONSULTANT shall apply for and provide the necessary information to modify, extend or renew required permits, prior to or subsequent to construction advertising.

2.4 Review Structural Shop Drawings

The CONSULTANT shall review structural shop drawings during construction as needed.

2.5 Survey Update

If requested, the CONSULTANT shall provide additional field survey updates prior to and during the construction contract.

2.6 Web Site Updates (N/A)

The CONSULTANT will maintain and update as needed the web site previously developed for this project. The web site will include information such as the project scope, schedule and progress.

2.7 Newsletters

The CONSULTANT will prepare and send out newsletters to inform the public of when construction will begin, general project information, and construction contacts. The newsletter will be sent to all those on the mailing list.

3 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the COUNTY, in a format prescribed by the COUNTY. The COUNTY Project Manager and the CONSULTANT shall monitor the cumulative invoiced billings to insure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the COUNTY.

The CONSULTANT will provide a list of key events and the associated total percentage of work considered to be complete at each event. This list will be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those events have actually occurred and the results are acceptable to the COUNTY.

**Board of County Commissioners
SEMINOLE COUNTY, FLORIDA**

WORK ORDER

Work Order Number: _____

Master Agreement No.: _____ Dated: _____

Contract Title: _____

Project Title: _____

Consultant:

Address:

ATTACHMENTS TO THIS WORK ORDER:

- drawings/plans/specifications
- scope of services
- special conditions
- _____

METHOD OF COMPENSATION:

- fixed fee basis
- time basis-not-to-exceed
- time basis-limitation of funds
- retainage shall be withheld

TIME FOR COMPLETION: The services to be provided by the CONSULTANT shall commence upon execution of this Agreement by the parties and shall be completed by _____ of the effective date of this agreement. Failure to meet the completion date shall be grounds for Termination of both the Work Order and the Master Agreement for Default.

Work Order Amount: _____ DOLLARS (\$_____)

IN WITNESS WHEREOF, the parties hereto have made and executed this Work Order on this _____ day of _____, 20____, for the purposes stated herein.

(THIS SECTION TO BE COMPLETED BY THE COUNTY)

ATTEST:

, Secretary

By: _____
, President

(CORPORATE SEAL)

Date: _____

BOARD OF COUNTY COMMISSIONERS
SEMINOLE COUNTY, FLORIDA

WITNESSES:

(Procurement Analyst)

By: _____

(Procurement Analyst)

Date: _____

As authorized by Section 8.153 Seminole
County Administrative Code.

OC # _____ ON # _____

WORK ORDER TERMS AND CONDITIONS

- a) Execution of this Work Order by the COUNTY shall serve as authorization for the CONSULTANT to provide, for the stated project, professional services as set out in the Scope of Services attached as Exhibit "A" to the Master Agreement cited on the face of this Work Order and as further delineated in the attachments listed on this Work Order.
- b) Term: This work order shall take effect on the date of its execution by the County and expires upon final delivery, inspection, acceptance, and release of the final payments and encumbrances of the last approved amount of this work order, unless terminated earlier in accordance with the termination provisions herein.
- c) The CONSULTANT shall provide said services pursuant to this Work Order, its Attachments, and the cited Master Agreement (as amended, if applicable) which is incorporated herein by reference as if it had been set out in its entirety.
- d) Whenever the Work Order conflicts with the cited Master Agreement, the Master Agreement shall prevail.
- e) METHOD OF COMPENSATION - If the compensation is based on a:
 - (i) FIXED FEE BASIS, then the Work Order Amount becomes the Fixed Fee Amount and the CONSULTANT shall perform all work required by this Work Order for the Fixed Fee Amount. The Fixed Fee is an all-inclusive Firm Fixed Price binding the CONSULTANT to complete the work for the Fixed Fee Amount regardless of the costs of performance. The work to be performed by the CONSULTANT shall be based on the Labor Hour Rates established in the Master Agreement that are in effect on the date of the CONSULTANT'S price proposal for this project. In no event shall the CONSULTANT be paid more than the Fixed Fee Amount.
 - (ii) TIME BASIS WITH A NOT-TO-EXCEED AMOUNT, then the Work Order Amount becomes the Not-to-Exceed Amount and the CONSULTANT shall perform all the work required by this Work Order for a sum not exceeding the Not-to-Exceed Amount. In no event is the CONSULTANT authorized to incur expenses exceeding the not-to-exceed amount without the express written consent of the COUNTY. Such consent will normally be in the form of an amendment to this Work Order. The CONSULTANT's compensation shall be based on the actual work required by this Work Order and the Labor Hour Rates established in the Master Agreement that are in effect on the date of the CONSULTANT'S price proposal for this project
 - (iii) TIME BASIS WITH A LIMITATION OF FUNDS AMOUNT, then the Work Order Amount becomes the Limitation of Funds amount and the CONSULTANT is not authorized to exceed the Limitation of Funds amount without prior written approval of the COUNTY. Such approval, if given by the COUNTY, shall indicate a new Limitation of Funds amount. The CONSULTANT shall advise the COUNTY whenever the CONSULTANT has incurred expenses on this Work Order that equals or exceeds eighty percent (80%) of the Limitation of Funds amount. The CONSULTANT's compensation shall be based on the actual work required by this Work Order and the Labor Hour Rates established in the Master Agreement.
- f) Payment to the CONSULTANT shall be made by the COUNTY in strict accordance with the payment terms of the referenced Master Agreement.
- g) It is expressly understood by the CONSULTANT that this Work Order, until executed by the COUNTY, does not authorize the performance of any services by the CONSULTANT and that the COUNTY, prior to its execution of the Work Order, reserves the right to authorize a party other than the CONSULTANT to perform the services called for under this Work Order; if it is determined that to do so is in the best interest of the COUNTY.
- h) The CONSULTANT shall sign the Work Order first and the COUNTY second. This Work Order becomes effective and binding upon execution by the COUNTY and not until then. A copy of this Work Order will be forwarded to the CONSULTANT upon execution by the COUNTY.

Exhibit "C"



Horizon Engineering Group
2500 Maitland Center Parkway, Suite 300
Maitland, FL 32751
Ph: 407.644.7755 Fx: 407.644.7855

Contract No.: PS-2825-07/BHJ

**Project Description: SR 434 From Central Fla. Pkwy to CR 427
Intersection improvements**

RATES - PRIMARY AGREEMENT

Date: 04/15/08

<u>Labor Category</u>	<u>Raw Hourly Rate</u>	<u>Multiplier</u>	<u>Billing Rate</u>
Project Manager	\$ 48.07	2.91	\$ 139.88
Senior Engineer	\$ 51.68	2.91	\$ 150.39
Project Engineer	\$ 33.73	2.91	\$ 98.15
Designer/Technician	\$ 29.69	2.91	\$ 86.40
Secretarial/Clerical	\$ 15.00	2.91	\$ 43.65

Exhibit "D"

Truth in Negotiations Certificate

This is to certify that, to the best of my knowledge and belief, the wage rates and other factual unit costs supporting the compensation (as defined in section 287.055 of the Florida Statutes (otherwise known as the "Consultants' Competitive Negotiations Act" or CCNA) and required under CCNA subsection 287.055 (5) (a)) submitted to Seminole County Purchasing and Contracts Division, Contracts Section, either actually or by specific identification in writing, in support of PS-2825-07/BHJ – Preliminary Engineering and Final Design Services for SR 434 Intersection Improvements – Rangeline Road to CR 427 are accurate, complete, and current as of April 4, 2008 (Date)*.

This certification includes the wage rates and other factual unit costs supporting any Work Orders or Amendments issued under the agreement between the Consultant and the County.

Firm Horizon Engineering Group

Signature Scott Seck

Name Scott Seck
(Print or Type)

Title Vice-President
(Print or Type)

Date of execution** April 4, 2008

* Insert the day, month, and year when wage rates were submitted or, if applicable, an earlier date agreed upon between the parties that are as close as practicable to the date of agreement on compensation.

** Insert the day, month, and year of signing.

(End of certificate)