

**BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA
AMENDMENT NO. 1 / CONTRACT NO. Y22-900A
CONTINUING PROFESSIONAL ENGINEERING DESIGN SERVICES**

**Florida Engineering Group, Inc.
5127 S. Orange Avenue, Suite 200
Orlando, FL 32809**

EFFECTIVE DATE: August 2, 2023

This Amendment is issued in accordance with Section VIII of this contract, entitled:
TERM OF CONTRACT, as follows:

The term of this contract is hereby extended for one (1) additional year from
August 2, 2023 through August 1, 2024, at the same hourly rates and terms
and conditions.

All other terms and conditions of the original Contract remain the same.

**BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA**



Gian Otero, Contracting Agent
Procurement Division

**FLORIDA ENGINEERING GROUP, INC.
ORLANDO, FLORIDA**



Signature

DATE: 4/5/23

JEAN ABI-ADOUN, PE
Type or Print Name
V.P.

CONTRACT

#Y22-900A

THIS CONTRACT made and entered into this 2nd day of August, 2022, by and between the:

**ORANGE COUNTY, FLORIDA
201 S. ROSALIND AVENUE
ORLANDO, ORANGE COUNTY, FLORIDA**

a political subdivision of the State of Florida, hereinafter referred to as the COUNTY, and:

Florida Engineering Group, Inc.
5127 S. Orange Avenue, Suite 200
Orlando, FL 32809
FEDERAL I.D. # 59-3203487

hereinafter referred to as the **CONSULTANT**.

RECITALS

WHEREAS, the COUNTY desires to retain the services of the CONSULTANT to provide continuing engineering services, to be issued as Task Authorizations under individual Purchase Orders; and;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter contained, upon the terms and conditions hereinafter set forth, and the CONSULTANT is desirous of obtaining such employment and of performing such services upon said terms and conditions; it is agreed by and between the parties hereto as follows:

**I
SCOPE OF SERVICES**

The CONSULTANT shall, diligently and timely, perform professional engineering services as described in Exhibit A - Scope of Professional Services, entitled, "CONTINUING PROFESSIONAL ENGINEERING DESIGN SERVICES " which is attached hereto and made a part hereof by reference. As the COUNTY generates individual projects, a detailed scope of work will be prepared for each project and furnished to the CONSULTANT. Upon receipt of the scope of services, the CONSULTANT will submit a cost Proposal to the COUNTY with the following:

- a. Position classification, total hours, hourly rate and extended total amount.
- b. Subcontracted services including information in "a" above
- c. Performance period for the services
- d. Out-of-pocket expenses

Proposal shall be submitted within fifteen (15) days after receipt of written request for proposal.

Y22-900A

CONSULTANTS COMPETITIVE NEGOTIATION ACT

This Contract is a continuing Contract as defined in Section 287.055 (2) (g), Florida Statutes. Task Authorizations to be performed by the CONSULTANT under this Contract shall be approved and authorized by the COUNTY in writing by issuance of County approved Purchase Orders, pursuant to the CONSULTANT'S Proposal and fee, whether or not modified by negotiation. The CONSULTANT'S authority to proceed with the specified scope of work will be either the County approved Purchase Orders or a County issued written Notice to Proceed to be determined by the County Project Manager.

II PAYMENT

The COUNTY will pay to the CONSULTANT for duly authorized services performed by the CONSULTANT and accepted by the County as follows:

- A. **FEES:** For services performed under Article I, a firm fixed fee (lump sum) will be agreed upon prior to commencement of services; or, if a firm fixed fee cannot be determined, a not-to-exceed maximum dollar amount will be agreed upon; however, in either case, the fee shall be calculated in accordance with the hourly rate schedule identified as Exhibit B, which is attached and made a part of this Contract.
- B. **PAYMENT:** The COUNTY shall pay the CONSULTANT in accordance with the Florida Local Government Prompt Payment Act, Chapter 218, Florida Statutes.

Payment will be due and payable monthly in proportion to the percentage of work approved and accepted by the COUNTY. All invoices shall be prepared in the format prescribed by the COUNTY. When an invoice includes charges from a subconsultant, the subconsultant's invoice/backup shall accompany the CONSULTANT'S invoice. A separate Pay Item Breakdown sheet for the CONSULTANT and each subconsultant shall accompany each invoice. The CONSULTANT'S Pay Item Breakdown sheet shall include, in aggregate, the CONSULTANT'S and subconsultant's pay items. All requests for payment must be accompanied by a narrative description of the scope of services from Exhibit A performed by the CONSULTANT and subconsultants during the period covered by the invoice. The narrative shall also describe the work to be performed during the next billing period

- C. **PAYMENT IN EVENT OF TERMINATION BY COUNTY:** In the event this Contract is terminated or canceled prior to completion of any project in progress, payment shall be made in accordance with the provisions of Article IX.
- D. **CHANGES WITHIN SCOPE; ALLOWANCE OF ADDITIONAL COMPENSATION:** If instructed to do so by the COUNTY, the CONSULTANT shall change or revise work that has been performed, and if such work is not required as a result of error, omission or negligence of the CONSULTANT, the CONSULTANT may be entitled to additional compensation. In all disputes arising over the right to additional compensation,

the COUNTY shall be the party to determine whether substantial acceptable work has been done on documents such that changes, revisions or preparation of additional documents will result in additional compensation to the CONSULTANT. The additional compensation shall be computed by the CONSULTANT on a revised fee quotation Proposal that must be submitted to the COUNTY for prior approval. The fee shall be agreed upon before commencement of any additional work and shall be incorporated by Change Order to the corresponding Purchase Order issued against this Contract.

- E. **SUBCONSULTANTS:** The CONSULTANT shall, upon requiring the services of various sub-consultants, be responsible for the integration of all sub-consultants' work into the documents and for all payments to such sub-consultants out of the lump sum fee agreed to. Services rendered by the CONSULTANT in connection with the coordination of any such sub-consultants or other personnel services shall be considered within the scope of the basic contract and no additional fee will be due the CONSULTANT for such work.

- F. **TRAVEL AND PER DIEM:** Travel and per diem charges shall not exceed the limits as set forth in Section 112.061 Florida Statutes, as set forth in Exhibit C, which is attached to this Contract.

- G. **COMPENSATION:** The CONSULTANT'S compensation shall be established and authorized for each Task Authorization on the basis of the CONSULTANT'S personnel hourly billable rates and related allowable costs as set forth in the basic Contract. The CONSULTANT'S personnel hourly billable rates and multiplier shall remain in effect and unchanged during the duration of the Contract and any extensions thereto, except as provided by Article II, paragraph I, Price Adjustment. Compensation for any authorized cost that is not set forth in the basic Contract shall be negotiated prior to issuance of the Task Authorization and shall be supported by the appropriate cost and pricing data.

- H. **MULTIPLIERS:** The following multipliers are applicable to this contract and shall remain in effect and unchanged for the duration of the contract, including any extensions thereto:

1.	Prime Consultant FEG	Multiplier 2.23
2.	Sub-Consultants	Multiplier
	BFA	2.99
	Bowman and Blair Ecology	1.89
	Devo Seereeram, PH.D.	2.47
	ERD	2.99
	Florida Bridge & Transportation, Inc.	2.52
	Landscape Designs, LLC	2.24
	Pegasus Engineering	2.99

I. **PRICE ADJUSTMENT:**

Written request for a price adjustment may be made only under the following conditions:

- i. If a project specific contract's performance period exceeds three years a price adjustment may be requested not more than 60 days after the end of the three-year period and for each annual period thereafter or for the remaining period of the contract if less than one year.
- ii. For continuing contracts with a performance period that exceeds three years, an adjustment may be requested not more than 60 days after the end of three years.
- iii. Retroactive requests for price adjustments will not be considered.

The provisions of this clause shall not apply to contracts with fees based on ranges. Retroactive requests for price adjustments will not be considered.

Any request for a price adjustment will be subject to negotiation and must be approved by the Manager, Procurement Division. Any request for such increase shall be supported by adequate justification to include Consumer Price Index (CPI) documentation.

The CPI documentation shall be based on the All Items, CPI-U, U.S. City Average, not seasonally adjusted index.

The prevailing CPI in the month when the contract was executed by the County shall be the base period from which changes in the CPI will be measured for the initial request for a price adjustment. Any subsequent requests for a price adjustment shall be based on the CPI prevailing in the month when an amendment affecting a previous price adjustment was executed by the County. The maximum allowable increase shall not exceed the percent change in the CPI from the base period (either the month when the contract was executed by the County or the month when an amendment effecting a price adjustment was executed by the County) to the CPI prevailing at time of request for a price adjustment and in no case shall it exceed 4%. Any price adjustment shall only be effective upon the execution of a written amendment to the contract executed by both parties.

III
DESIGN WITHIN FUNDING LIMITATIONS

The following provisions are applicable to contracts for design services:

- A. The CONSULTANT shall accomplish the design services under this Contract, when applicable, so as to permit the award of a contract (using standard Orange County procedures for the construction of the facilities) at a price that does not exceed the estimated construction contract price as set forth in paragraph (c) below. When bids or Proposals for the construction contract are received that exceed the estimated price, the CONSULTANT shall perform such redesign and other services as are necessary to permit contract award within the funding limitation. These additional services shall be performed at no increase in the price of this Contract. However, the CONSULTANT shall not be required to perform such additional services at no cost to the COUNTY, if the unfavorable bids or Proposals results from conditions beyond the CONSULTANT'S reasonable control. The COUNTY shall exercise reasonable commercial judgment in making the controlling determination as to whether such conditions are within the reasonable control of the CONSULTANT.

- B. The CONSULTANT will promptly advise the COUNTY if it finds that the project being designed will exceed or is likely to exceed the funding limitations and it is unable to design a usable facility within these limitations. Upon receipt of such information, the COUNTY will review the CONSULTANT'S revised estimate of construction cost. The COUNTY may, if it determines that the estimated construction contract price set forth in this Contract is so low that award of a construction contract not in excess of such estimate is improbable, authorize a change in scope or materials as required to reduce the estimated construction cost to an amount within the estimated construction contract price set forth in paragraph (c) below, or the COUNTY may adjust such estimated construction contract price via amendment to this Contract. When bids or Proposals are not solicited or are unreasonably delayed, the COUNTY shall prepare an estimate of constructing the design submitted and such estimate shall be used in lieu of bids or Proposals to determine compliance with the funding limitation.

- C. The estimated construction cost for any project under this contract shall not exceed \$4,000,000. Each Task Authorization shall specifically indicate the project's estimated construction cost. Task Authorizations issued for study activities may not exceed \$500,000.

- D. The CONSULTANT and its subsidiaries or affiliates who designed the project shall be ineligible for the award of the construction contract for that project.

IV
RESPONSIBILITY OF THE CONSULTANT

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

The CONSULTANT shall, without additional compensation, correct or revise any errors or deficiencies in its designs, drawings, specifications, and other services.

- B. The Project Manager and the Project Engineer may be the same individual currently employed by the Prime Consultant or may be two different individuals BOTH currently employed by the Prime Consultant. The Project Manager and the Project Engineer must be professional engineers registered in the state of Florida.
- C. Substitution of the Project Manager, Project Engineer or Other Key Personnel: The CONSULTANT shall not substitute any key personnel without the prior written approval of the Manager of the Procurement Division. Any such requests shall be supported by comprehensive documentation outlining the reason(s) for the proposed substitution to include the specific qualifications of the proposed substitute. Approval of the request shall be at the discretion of the COUNTY. Further, the COUNTY, in lieu of approving a substitution, may initiate other actions under the contract, including termination.
- D. Neither the County's review, approval or acceptance of, nor payment for, the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract, and the CONSULTANT shall be and remain liable to the COUNTY in accordance with applicable law for all damages to the COUNTY caused by the CONSULTANT'S negligent performance of any of the services furnished under this contract.
- E. The rights and remedies of the COUNTY provided for under this contract are in addition to any other rights and remedies provided by law.
- F. If the CONSULTANT is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.
- G. For contracts requiring design services, the CONSULTANT shall comply with the following requirements:
 - 1. Concurrent with the submission of the 100% design submittal to the user division, the CONSULTANT shall submit a complete breakdown of the subcontracting opportunities for the project based on traditional industry practices and their expertise to the Business Development Division, 400 E. South St., Orlando, FL 32801. This information will identify subcontracting elements such as electrical, trucking, sodding, surveying, etc. with the estimated percentage of the total project represented by each subcontracting element.
 - 2. Upon submission of the 100% submittals to the user department, the CONSULTANT shall provide to the Business Development Division an estimate of the percentage of work to be performed under each standard CSI division heading, the total of which shall in all cases equal 100%.

- H. The CONSULTANT shall maintain an adequate and competent staff of professionally qualified persons during the term of this Contract for the purpose of rendering the required services hereunder. The CONSULTANT shall not sublet, assign or transfer any services under this agreement without the written consent of the COUNTY.
- I. The COUNTY may require in writing that the CONSULTANT remove from the Work any of the CONSULTANT'S personnel that the COUNTY determines to be incompetent, careless or otherwise objectionable. No claims for an increase in Contract Amount or Contract Time based on the COUNTY'S use of this provision will be valid. CONSULTANT shall indemnify and hold the County harmless from and against any claim by CONSULTANT'S personnel on account of the use of this provision.
- J. All final plans and documents prepared by the CONSULTANT must bear the endorsement of a person in the full employ of the CONSULTANT and currently registered as a professional in the State of Florida.

V

COUNTY'S RIGHTS AND RESPONSIBILITIES

The COUNTY shall:

- A. Furnish the CONSULTANT with existing data, plans, profiles, and other information necessary or useful in connection with the planning of the program that is available in the COUNTY'S files, all of which shall be and remain the property of the COUNTY and shall be returned to the COUNTY upon completion of the services to be performed by the CONSULTANT,
- B. Make COUNTY personnel available on a time-permitting basis, where required and necessary to assist the CONSULTANT. The availability and necessity of said personnel to assist the CONSULTANT shall be determined solely within the discretion of the COUNTY,
- C. Be entitled, upon request and without additional cost, to any documents as requested by the COUNTY for any project on which the CONSULTANT is working.

VI

COUNTY'S 'DESIGNATED' REPRESENTATIVE

It is understood and agreed that the COUNTY designates the County Administrator or their designated representative, in writing, to represent the COUNTY in all technical matters pertaining to and arising from the work and performance of this Contract. The County Administrator or designated representative shall have the following responsibilities:

- A. Examination of all reports, sketches, drawings, estimates, Proposals, and other documents presented by the CONSULTANT and rendering, in writing, decisions indicating the COUNTY'S approval or disapproval within a reasonable time so as not to materially delay the work of the CONSULTANT.

- B. Transmission of instructions, receipt of information, and interpretation and definition of COUNTY policies and decisions with respect to design, materials and other matters pertinent to the work covered by this Contract.
- C. Giving prompt written notice to the CONSULTANT whenever the COUNTY observes, or otherwise becomes aware of, any defects or changes necessary in a project.

VII
CONTRACT TYPE

This is an indefinite quantity contract for the goods and/or services specified in Exhibit A – Scope of Professional Services. The quantities of goods and/or services specified are unknown. Delivery or performance shall be only as authorized by task authorizations in accordance with the terms of this contract. The CONSULTANT shall furnish the goods and/or services to the COUNTY, when and if ordered. The COUNTY shall order at least \$35,000.00 in fees during the initial contract performance period. The COUNTY may issue orders requiring delivery to multiple destinations or performance at multiple locations.

VIII
TERM OF CONTRACT

The term of this contract shall be for one (1) year from date of execution; however, by mutual consent, the contract may be extended for two additional one-year terms, not to exceed a total of three (3) years.

Any Purchase Orders for Task Authorizations issued during the effective period of this contract and not completed within that period, shall be completed by the CONSULTANT within the time specified in the order. The contract shall govern the CONSULTANT'S and the COUNTY'S rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period.

IX
TERMINATION OF CONTRACT

A. TERMINATION FOR DEFAULT:

The COUNTY may, by written notice to the CONSULTANT, terminate this contract for default in whole or in part (task authorizations, if applicable) if the CONSULTANT fails to:

1. provide products or services that comply with the specifications herein or fails to meet the County's performance standards
2. deliver the supplies or to perform the services within the time specified in this contract or any extension.
3. make progress so as to endanger performance of this contract
4. perform any of the other provisions of this contract.

Prior to termination for default, the COUNTY will provide adequate written notice to

the CONSULTANT through the Manager, Procurement Division, affording him/her the opportunity to cure the deficiencies or to submit a specific plan to resolve the deficiencies within ten (10) days (or the period specified in the notice) after receipt of the notice. Failure to adequately cure the deficiency shall result in termination action.

Such termination may also result in suspension or debarment of the CONSULTANT in accordance with the County's Procurement Ordinance. The CONSULTANT shall be liable for any damage to the COUNTY resulting from the CONSULTANT'S default of the contract. This liability includes any increased costs incurred by the COUNTY in completing contract performance.

In the event of termination by the COUNTY for any cause, the CONSULTANT will have, in no event, any claim against the COUNTY for lost profits or compensation for lost opportunities. After a receipt of a Termination Notice and except as otherwise directed by the COUNTY the CONSULTANT shall:

1. Stop work on the date and to the extent specified.
2. Terminate and settle all orders and subcontracts relating to the performance of The terminated work
3. Transfer all work in process, completed work, and other materials related to the terminated work as directed by the COUNTY.
4. Continue and complete all parts of that work that have not been terminated.

If the CONSULTANT'S failure to perform the contract arises from causes beyond the control and without the fault or negligence of the CONSULTANT, the contract shall not be terminated for default. Examples of such causes include (1) acts of God or the public enemy, (2) acts of a government in its sovereign capacity, (3) fires, (4) floods, (5) epidemics, (6) strikes and (7) unusually severe weather.

B. TERMINATION FOR CONVENIENCE:

The COUNTY, by written notice, may terminate this contract, in whole or in part, when it is in the COUNTY'S interest. If this contract is terminated, the COUNTY shall be liable only for goods or services delivered and accepted. The COUNTY Notice of Termination shall provide the Consultant thirty (30) days prior notice before it becomes effective.

A termination for convenience may apply to individual purchase/delivery orders or to the contract in its entirety.

C. PAYMENT

If a Task Authorization or Purchase Order is terminated for the convenience of the COUNTY, a settlement will be negotiated. This settlement shall not exceed the total amount due for services rendered and accepted by the COUNTY in accordance with the payment terms of the Contract. If the Contract is terminated for convenience in its entirety, the CONSULTANT shall be paid an amount not in excess of all services rendered and accepted under the various orders issued against the Contract.

However, if the termination is for cause, no amount shall be allowed for anticipated profit on unperformed services or other work, and the payment may be adjusted to

take into account any additional costs to be incurred by the COUNTY due to such default.

D. TERMINATION NOTICE

The Manager, Procurement Division, shall issue any and all notices involving termination of this contract.

X

INDEMNITY/INSURANCE AND SAFETY REQUIREMENTS

Consultant agrees to maintain on a primary basis and at its sole expense, at all times throughout the duration of this contract the following types of insurance coverage with limits and on forms (including endorsements) as described herein. These requirements, as well as the County's review or acceptance of insurance maintained by Consultant is not intended to and shall not in any manner limit or qualify the liabilities assumed by Consultant under this contract. Consultant is required to maintain any coverage required by federal and state workers' compensation or financial responsibility laws including but not limited to Chapter 324 and 440, Florida Statutes, as may be amended from time to time.

The Consultant shall require and ensure that each of its sub-consultants providing services hereunder (if any) procures and maintains until the completion of their respective services, insurance of the types and to the limits specified herein.

Insurance carriers providing coverage required herein must be licensed to conduct business in the State of Florida and must possess a current A.M. Best's Financial Strength Rating of A- Class VIII or better.

(Note: State licenses can be checked via www.floir.com/companysearch/ and A.M. Best Ratings are available at www.ambest.com)

Required Coverage:

- Commercial General Liability - The Consultant shall maintain coverage issued on the most recent version of the ISO form as filed for use in Florida or its equivalent, with a limit of liability of not less than \$1,000,000 per occurrence. Consultant further agrees coverage shall not contain any endorsement(s) excluding or limiting Product/Completed Operations, Contractual Liability, or Separation of Insureds. The General Aggregate limit shall either apply separately to this contract or shall be at least twice the required occurrence limit.

Required Endorsements:

- Additional Insured- CG 20 26 or CG 20 10/CG 20 37 or their equivalents.
Note: CG 20 10 must be accompanied by CG 20 37 to include products/completed operations
- Waiver of Transfer of Rights of Recovery- CG 24 04 or its equivalent.
Note: If blanket endorsements are being submitted please include the entire endorsement and the applicable policy number.

- Business Automobile Liability - The Consultant shall maintain coverage for all owned; non-owned and hired vehicles issued on the most recent version of the ISO form as filed for use in Florida or its equivalent, with limits of not less than \$500,000

(five hundred thousand dollars) per accident. In the event the Consultant does not own automobiles the Consultant shall maintain coverage for hired and non-owned auto liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

~~Required Endorsements:~~

~~MCS 90 for operations governed by the Sections 29 & 30 of the Motor Carrier Act of 1980~~

- Workers' Compensation - The Consultant shall maintain coverage for its employees with statutory workers' compensation limits, and no less than \$100,000 each incident of bodily injury or disease for Employers' Liability. Elective exemptions as defined in Florida Statute 440 will be considered on a case-by-case basis. Any Consultant using an employee leasing company shall complete the Leased Employee Affidavit.

Required Endorsements:

- Waiver of Subrogation-WC 00 03 13 or its equivalent
- Professional Liability- with a limit of not less than \$1,000,000 per occurrence/claim

When a self-insured retention or deductible exceeds \$100,000 the COUNTY reserves the right to request a copy of Vendor/Contractor/Consultant's most recent audit or review of their organizational financial statements certified by a CPA. Compiled financial statements will not be accepted. For policies written on a "Claims-Made" basis the Consultant agrees to maintain a retroactive date prior to or equal to the effective date of this contract. In the event the policy is canceled, non-renewed, switched to occurrence form, or any other event which triggers the right to purchase a Supplemental Extended Reporting Period (SERP) during the life of this contract the Consultant agrees to purchase the SERP with a minimum reporting period of not less than two years. Purchase of the SERP shall not relieve the Consultant of the obligation to provide replacement coverage.

By entering into this contract Consultant agrees to provide a waiver of subrogation or a waiver of transfer of rights of recovery, in favor of the County for the workers' compensation and general liability policies as required herein. When required by the insurer or should a policy condition not permit the Consultant to enter into a pre-loss agreement to waive subrogation without an endorsement, then Consultant agrees to notify the insurer and request the policy be endorsed with a Waiver of Subrogation or a Waiver of Transfer of Rights of Recovery Against Others endorsement.

Prior to execution and commencement of any operations/services provided under this contract the Consultant shall provide the COUNTY with current certificates of insurance evidencing all required coverage. In addition to the certificate(s) of insurance the Consultant shall also provide endorsements for each policy as specified above. All specific policy endorsements shall be in the name of the Orange County, Florida.

For continuing service contracts renewal certificates shall be submitted immediately upon request by either the COUNTY or the COUNTY's contracted certificate compliance management firm. The certificates shall clearly indicate that the Consultant has obtained insurance of the type, amount and classification as required for strict compliance with this insurance section. Consultant shall notify the COUNTY not less than thirty (30) business days (ten business days for non-payment of premium) of any material change in or cancellation/non-renewal of insurance coverage. The Consultant shall provide evidence of replacement coverage to maintain compliance with the aforementioned insurance requirements to the COUNTY or its certificate management representative five (5) business days prior to the effective date of the replacement policy (ies).

The certificate holder shall read:

Orange County, FL
Risk Management Division
109 E. Church Street, Suite 200
Orlando, Florida 32801

INDEMNIFICATION- CONSULTANTS:

The CONSULTANT to the extent permitted in Section 725.08, Florida Statutes shall indemnify and hold harmless the COUNTY and its officers and employees from liabilities damages, losses, and costs (including attorney's fees) to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the CONSULTANT and persons employed or utilized by the CONSULTANT in the performance of this Contract. The remedy provided to the COUNTY by this paragraph shall be in addition to and not in lieu of any other remedy available under this Contract or otherwise and shall survive the termination of this Contract.

SAFETY AND PROTECTION OF PROPERTY (for services provided on the premises of Orange County)

The Consultant shall at all times:

- Initiate, maintain and supervise all safety precautions and programs in connection with its services or performance of its operations under this contract.
- Take all reasonable precautions to prevent injury to employees, including County employees and all other persons affected by their operations.
- Take all reasonable precautions to prevent damage or loss to property of Orange County, or of other vendors, consultants or agencies and shall be held responsible for replacing or repairing any such loss or damage.
- Comply with all ordinances, rules, regulations, standards and lawful orders from authority bearing on the safety of persons or property or their protection from damage, injury or loss. This includes but is not limited to:
 - Occupational Safety and Health Act (OSHA)
 - National Institute for Occupational Safety & Health (NIOSH)
 - National Fire Protection Association (NFPA)
 - American Society of Heating, Refrigeration & Air-Conditioning Engineers (ASHRAE)

- The Consultant must also comply with the guidelines set forth in the Orange County Safety & Health Manual. The manual can be accessed online at the address listed below:

<http://www.orangecountyfl.net/VendorServices/OrangeCountySafetyandHealthManual.aspx>

XI

TRUTH IN NEGOTIATION AND MAINTENANCE AND EXAMINATION OF RECORDS

- A. The Consultant hereby represents, covenants and warrants that wage rates and other factual unit costs supporting the compensation provided for in this Contract are accurate, complete and current as of the date of contracting. It is further agreed that the Contract price shall be adjusted to exclude any amounts where the County determines the Contract price was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs.
- B. The Consultant shall keep adequate records and supporting documents applicable to this Contract. Said records and documentation shall be retained by the Consultant for a minimum of five (5) years from the date of final payment on this contract. If any litigation, claim or audit is commenced prior to the expiration of the five (5) year period, the records shall be maintained until all litigation, claims or audit findings involving the records have been resolved.
- C. If applicable, time records and cost data shall be maintained in accordance with generally accepted accounting principles. This includes full disclosure of all transactions associated with the contract. Also, if applicable, all financial information and data necessary to determine overhead rates in accordance with Federal and State regulatory agencies and the contract shall be maintained.
- D. The Consultant's "records and supporting documents" as referred to in this Contract shall include any and all information, materials and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase orders, invoices, leases, contracts, commitments, arrangements, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in the County's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract document.

Such records and documents shall include (hard copy, as well as computer readable data, written policies and procedures; time sheets; payroll registers; cancelled checks; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, etc.); original estimates; estimating worksheets; correspondence; change order files (including pricing data used to price change proposals and documentation covering negotiated settlements); back-charge logs and supporting documentation; general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends; and any other Consultant records which may have a bearing on matters of interest to the County in connection with the Consultant's dealings with the County (all foregoing hereinafter referred to as "records and supporting documents") to the extent necessary to adequately permit evaluation and verification of:

- 1) Consultant compliance with contract requirements; or
 - 2) Compliance with provisions for pricing change orders; or
 - 3) Compliance with provisions for pricing invoices; or Compliance with provisions regarding pricing of claims submitted by the Consultant or his payees; or
 - 4) Compliance with the County's business ethics; or
 - 5) Compliance with applicable state statutes and County Ordinances and regulations.
- E. Records and documents subject to audit shall also include those records and documents necessary to evaluate and verify direct and indirect costs, (including overhead allocations) as they may apply to costs associated with this Contract. In those situations where Consultant's records have been generated from computerized data (whether mainframe, mini-computer, or PC based computer systems), Consultant agrees to provide the County's representatives with extracts of data files in computer readable format on data disks or suitable alternative computer exchange formats.
- F. The County and its authorized agents shall have the right to audit, inspect and copy records and documentation as often as the County deems necessary throughout the term of this contract and for a period of five (5) years after final payment. Such activity shall be conducted during normal business working hours. The County, or any of its duly authorized representatives, shall have access within forty-eight (48) hours to such books, records, documents, and other evidence for inspection, audit and copying.
- G. The County, during the period of time defined by the preceding paragraph, shall have the right to obtain a copy of and otherwise inspect any audit made at the direction of the Consultant as concerns the aforesaid records and documentation.
- H. Records and documentation shall be made accessible at the Consultant's local place of business. If the records are unavailable locally, it shall be the Consultant's responsibility to insure that all required records are provided at the Consultant's expense including payment of travel and maintenance costs incurred by the County's authorized representatives or designees in accessing records maintained out of the county. The direct costs of copying records, excluding any overhead cost, shall be at the County's expense.
- I. The Consultant shall require all payees (examples of payees include sub Consultants, insurance agents, material suppliers, etc.) to comply with the provisions of this article by including the requirements hereof in a written contract agreement between Consultant and payee. Such requirements include a flow-down right of audit provisions in contracts with payees, which shall also apply to Sub Consultants and Sub-sub Consultants, material suppliers, etc.
- The Consultant shall cooperate fully and shall cause all aforementioned parties and all of Consultant's sub Consultants (including those entering into lump sum subcontracts and lump sum major material purchase orders) to cooperate fully in furnishing or in making available to the County from time to time whenever requested in an expeditious manner any and all such records, documents, information, materials and data.
- J. The County's authorized representatives or designees shall have reasonable access to the Consultant's facilities, shall be allowed to interview all current or

former employees to discuss matters pertinent to the performance of this Contract and shall have adequate and appropriate work space, in order to conduct audits in compliance with this article.

- K. Even after a change order proposal has been approved, Consultant agrees that if the County later determines the cost and pricing data submitted was inaccurate, incomplete, not current or not in compliance with the terms of the Contract regarding pricing of change orders, then an appropriate contract price reduction will be made. Such post-approval contract price adjustment will apply to all levels of Consultants and/or sub Consultants and to all types of change order proposals specifically including lump sum change orders, unit price change orders, and cost-plus change orders.
- L. If an audit inspection or examination by the County, or its designee, in accordance with this article discloses overpricing or overcharges (of any nature) by the Consultant to the County in excess of one-half of one percent (.5%) of the total contract billings, the reasonable actual cost of the County's audit shall be reimbursed to the County by the Consultant. Any adjustments and /or payments that must be made as a result of any such audit or inspection of the Consultant's invoices and/or records and supporting documents shall be made within a reasonable amount of time (not to exceed 90 days) from presentation of the County's findings to the Consultant.

XII

OWNERSHIP OF DOCUMENTS

It is understood and agreed that all documents, including detailed reports, plans, original drawings, "as built", specifications, original field survey, data notes, and all other data, prepared or obtained by the CONSULTANT in connection with its services hereunder shall be delivered to, and shall become the property of the COUNTY prior to final payment to the CONSULTANT.

The CONSULTANT shall not be liable for any use by the COUNTY of said documents or data if they are modified in any manner without written approval of the CONSULTANT.

XIII

SUSPENSION OF WORK BY COUNTY

Right of COUNTY to Suspend Work and Order Resumption - The performance of CONSULTANT'S services hereunder may be suspended by the COUNTY at any time.

However, in the event the COUNTY suspends the performance of CONSULTANT'S services hereunder, it shall so notify the CONSULTANT in writing, such suspension becoming effective upon the date of its receipt by CONSULTANT. The COUNTY shall promptly pay to the CONSULTANT all fees that have become due and payable to the CONSULTANT prior to the effective date of such suspension. COUNTY shall thereafter have no further obligation for payment to the CONSULTANT unless and until the COUNTY notifies the CONSULTANT that the services of the CONSULTANT called for hereunder are to be resumed.

Upon receipt of written notice from the COUNTY that CONSULTANT'S services hereunder are to be resumed, CONSULTANT shall complete the services of CONSULTANT called for in this Contract and CONSULTANT, shall, in that event, be entitled to payment of the remaining unpaid compensation which becomes payable to him under this Contract, same to be payable in the manner specified herein.

In no event will the compensation or any part thereof become due or payable to CONSULTANT under this Contract unless and until CONSULTANT has attained that stage of work where the same would be due and payable to CONSULTANT under the provision of this Contract.

XIV STANDARDS OF CONDUCT

- A. The CONSULTANT represents that he has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this Contract and that he has not paid or agreed to pay any person, company, corporation, individual or firm other than a bona fide employee working solely for the CONSULTANT any fee, commission, percentage, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.
- B. The CONSULTANT shall comply with all Federal, State and local laws and ordinances applicable to the work or payment for work thereof, and shall not discriminate on the grounds of race, religion, sex, sexual orientation and gender expression/identity, color, age, disability or national origin in the performance of work under this Contract.
- C. The CONSULTANT hereby certifies that no undisclosed conflict of interest exists with respect to the present Contract, including any conflicts that may be due to representation of other clients, other Contractual relationships of the CONSULTANT, or any interest in property that the CONSULTANT may have. The CONSULTANT further certifies that any apparent conflict of interest that arises during the term of this Contract will be immediately disclosed in writing to the COUNTY. Violation of this section will be considered as justification for immediate termination of this Contract under the provisions of Article VIII.
- D. The CONSULTANT and its subsidiaries or affiliates who designed the project, shall be ineligible for the award of the construction contract for that project.

XV ASSIGNABILITY

The CONSULTANT shall not assign any interest in this Contract, and shall not transfer any interest in the same without prior written approval of the COUNTY, provided that claims for the money due or to become due the CONSULTANT from the COUNTY under this Contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of any such assignment or transfer shall be furnished promptly to the COUNTY.

XVI
SUBCONTRACTING AND MINORITY/WOMEN EMPLOYMENT PARTICIPATION

- A. The CONSULTANT shall be responsible for reporting Minority/Women Business Enterprise (M/WBE) sub-consultant Contract dollar amount(s) for the M/WBE SUBCONSULTANT(s) listed in this document, by submitting the appropriate documents, which shall include but not limited to fully executed sub-contract agreements and/or purchase orders evidencing contract award of work, to the Business Development Division. Submittal of these sub-contract agreements/purchase orders is a condition precedent to execution of the prime contract with the County. Quarterly updated M/WBE utilization reports and Equal Opportunity Workforce Schedule reports are to be submitted every quarter during the term of the contract. Additionally, the Consultant shall ensure that the M/WBE participation percentage proposed in the Consultant's Proposal submitted for this Contract is accomplished.
- B. Subsequent amendments to this contract shall be submitted with the appropriate documentation evidencing contractual change or assignment of work to the Business Development Division, with a copy to the COUNTY'S designated representative, within ten (10) days after COUNTY'S execution.
- C. The CONSULTANT shall be responsible for reporting local minority/women employment percentage levels within the firm and the minority/women employment percentage levels that the firm anticipates utilizing to fulfill the obligations of this Contract. The report(s) shall be submitted to the Business Development Division, on a quarterly basis during the life of the Contract.
- D. The awarded prime consultant shall furnish written documentation evidencing actual dollars paid to **all sub-consultants** utilized by the prime consultant on the project. This will include, but not limited to: copies of cancelled checks, approved invoices, and signed affidavits certifying the accuracy of payments so that the County may determine actual MWBE participation achieved by the Prime Consultant prior to the issuance of final payment.
- E. The awarded Prime Consultant's responsibilities and requirements are listed below and shall be included in the sub-agreement:
1. Whereas the prime contractor is being paid in accordance with the Local Government Prompt Payment Act, contractor shall incorporate a 72-hour prompt payment assurance provision and payment schedule in all sub-contracts between the prime and sub-consultants.

Note: The County reserves the right to verify that all sub-contractors are being paid within 72 hours of the County's remittance to the Prime Consultant.
 2. File copies of all executed subcontractor agreement/contracts between the prime and all M/WBE subconsultants on the project to Orange County Business Development Division one-time for the duration of the contract.

3. The awarded Prime Consultant shall furnish written documentation evidencing actual dollars paid to each subcontractor utilized by the Prime Consultant on the project. This will include, but not limited to: copies of cancelled checks, approved invoices, and signed affidavits certifying the accuracy of payments so that the County may determine actual participation achieved by the Prime Consultant prior to the issuance of final payment.
4. The sub-contract agreement shall include: (a) the percentage of the overall contract value to be sub-contracted; and (b) the dollar amount based on the percentage of the contract value to be sub-contracted (if available at time of sub-contract agreement).
5. The Prime Consultant shall submit an updated quarterly MWBE utilization report and the Equal Opportunity Workforce Schedule report for all professional service contracts. The required reports are to be submitted to the Business Development Division no later than the fifth day after end of reporting period.
6. All sub-contracts shall include the following statement: "It is the M/WBE responsibility to submit the required Quarterly payment verification form to the prime and Final M/WBE payment verification form to Business Development Division denoting the percentage of the overall contract fees"

The M/WBE's failure to submit the required documents could negatively impact their M/WBE certification.

7. The awarded Prime Consultant shall not substitute, replace or terminate any M/WBE firm without prior written authorization of the Business Development Division, nor shall the prime reduce the scope of work or monetary value of a subcontractor without written authorization of the Business Development Division.
 8. Upon execution of any renewal or extension to this contract, the Prime Consultant shall execute renewals with all approved specified sub-contractors for the full duration of the contract.
 9. The Prime Consultant shall expeditiously advise all M/WBE's and the Business Development Division of all change orders, contract modifications, additions and deletions to any and all contracts issued to the M/WBE firm on their team.
 10. The COUNTY may at its discretion require copies of subconsultants/purchase orders for the non-M/WBE's listed on the **Project Team Form (FORM B)** and or utilized on the project. However, if this option is not exercised the awarded Proposer shall provide a list of all non-M/WBE sub-Consultants certifying that a prompt payment clause has been included in that contract or purchase order.
- F. By entering into this contract, the CONSULTANT affirmatively commits to comply with the M/WBE subcontracting requirements submitted with his/her Proposal. The failure of the CONSULTANT to comply with this commitment during the

Contract's performance period may be considered a breach of Contract. The County may take action up to and including termination for default if this condition is not remedied within the time period specified by the Manager, Procurement Division.

The COUNTY may take action up to and including termination for default if this condition is not remedied within the time period specified by the Manager, Procurement.

XVII
INDEPENDENT CONSULTANT STATUS

The CONSULTANT shall be an independent Consultant and neither CONSULTANT nor anyone employed by CONSULTANT shall be deemed for any purpose to be the employee, agent, servant or representative of the COUNTY in the performance of the work hereunder. The COUNTY shall have no direction or control of CONSULTANT or CONSULTANT'S employees and agents, except in the results to be obtained.

XVIII
EQUAL OPPORTUNITY

The County's policies of equal opportunity and non-discrimination are intended to assure equal opportunities to every person, regardless of race, religion, sex, color, age, disability or national origin, in securing or holding employment in a field of work or labor for which the person is qualified, as provided and enforced by Section 17-314 of the Orange County Code and the County's relevant Administrative Regulations. It is also the county policy that person(s) doing business with the County shall recognize and comply with this policy and that the County shall not extend public funds or resources in a manner as would encourage, perpetuate or foster discrimination. As such:

1. The Association shall adopt and maintain, or provide evidence to the County that Association has adopted and maintains, a policy of nondiscrimination as defined by Section 17-288, Orange County Code, throughout the term of this Agreement.
2. The Association agrees that, on written request, the Association shall permit reasonable access to all business records or employment, employment advertisement, applications forms, and other pertinent data and records, by the County, for the purpose of investigating to ascertain compliance with the non-discrimination provisions of this contract; provided, that the Contractor shall not be required to produce for inspection records covering periods of time more than one year prior to the date of this Agreement.
3. The Agency agrees that, if any obligations of this contract are to be performed by subcontractor(s), the provisions of subparagraphs 1 and 2 of this Section shall be incorporated into and become a part of the subcontract.

XIX
INDEMNIFICATION FOR TORT ACTIONS/LIMITATION OF LIABILITY

- A. The provisions of Florida Statute 768.28 applicable to Orange County, Florida apply in full to this Contract.

Any legal actions to recover monetary damages in tort for injury or loss of property, personal injury, or death caused by the negligent or wrongful act or omission of

any employee of the COUNTY acting within the scope of his/her office or employment are subject to the limitations specified in this statute.

- B. No officer, employee or agent of the COUNTY acting within the scope of his/her employment or function shall be held personally liable in tort or named as a defendant in any action for any injury or damage suffered as a result of any act, event, or failure to act.
- C. The COUNTY shall not be liable in tort for the acts or omissions of an officer, employee, or agent committed while acting outside the course and scope of his/her employment. This exclusion includes actions committed in bad faith or with malicious purpose, or in a manner exhibiting wanton and willful disregard of human rights, safety, or property.

XX
ASBESTOS FREE MATERIALS

For contracts for design services, CONSULTANT shall provide a written and notarized statement on company letterhead to certify and warrant that the project was designed with asbestos free materials. Such statement shall be submitted with the final payment request.

Final payment shall not be made until such statement is submitted. CONSULTANT agrees that if materials containing asbestos are subsequently discovered at any future time to have been included in the design, CONSULTANT shall be liable for all costs related to the redesign or modification of the construction of the project so that materials containing asbestos are removed from the design, plans or specifications or construction contract documents, and, in addition, if construction has begun or has been completed pursuant to a design that includes asbestos containing materials, the CONSULTANT shall also be liable for all costs related to the abatement of such asbestos.

XXI
CONTROLLING LAWS

This Contract shall be governed by the laws of the State of Florida. Any and all legal action necessary to enforce the provisions of this Contract will be held in Orange County, Florida. Venue for any litigation involving this contract shall be the Ninth Circuit Court in and for Orange County, Florida.

XXII
AVAILABILITY OF FUNDS

The obligations of Orange County under this Contract are subject to need and availability of funds lawfully appropriated for its purpose by the Board of County Commissioners, or other specified funding source for this contract.

XXIII
DISLOCATED WORKERS

N/A

XXIV

REGISTERED SERVICE-DISABLED VETERAN PARTICIPATION

- A. The CONSULTANT shall be responsible for reporting Registered Service-Disabled Veteran (SDV) sub-consultant Contract dollar amount(s) for the SDV SUBCONSULTANT(s) listed in this document, by submitting the appropriate documents, which shall include but not limited to fully executed sub-contract agreements and/or purchase orders evidencing contract award of work, to the Business Development Division. Submittal of these sub-contract agreements/purchase orders is a condition precedent to execution of the prime contract with the County. Quarterly updated SDV utilization reports Schedule of Minorities and Women reports are to be submitted every quarter during the term of the contract. Additionally, the Consultant shall ensure that the SDV participation percentage proposed in the Consultant's Proposal submitted for this Contract is accomplished.
- B. Subsequent amendments to this contract shall be submitted with the appropriate documentation evidencing contractual change or assignment of work to the Business Development Division, with a copy to the COUNTY'S designated representative, within ten (10) days after COUNTY'S execution.
- C. The awarded prime consultant shall furnish written documentation evidencing actual dollars paid to **all sub-consultants** utilized by the prime consultant on the project. This will include, but not limited to: copies of cancelled checks, approved invoices, and signed affidavits certifying the accuracy of payments so that the County may determine actual SDV participation achieved by the Prime Consultant prior to the issuance of final payment.
- D. The awarded prime consultant shall not substitute, replace or terminate any M/WBE firm without prior written authorization from the Business Development Manager. In the event a certified SDV sub-Consultant's sub-contract is terminated for cause, the CONSULTANT shall justify the replacement of that sub-consultant, with another certified M/WBE firm in writing to the Business Development Division, accompanied by the Project Manager's recommendation.
- E. It is the intent of the COUNTY to insure prompt payment of all sub-consultants working on COUNTY projects. The CONSULTANT shall:
1. Submit copies of executed contracts between the CONSULTANT and all of its SDV sub-consultants to the Business Development Division.
 2. The County may at its discretion require copies of subcontracts/purchase orders for the non-SDV's listed on Form B and or utilized on the project. However, if this option is not exercised the awarded Proposer shall provide a list of all non-SDV subConsultants certifying that a prompt payment clause has been included in that contract or purchase order.
 3. Incorporate a prompt payment assurance provision and payment schedule in all contracts between the CONSULTANT and sub-consultants (including those with non-SDV's) stating that payment will be made to the sub-consultant within 72 hours of receipt of payment from the COUNTY.

The CONSULTANT shall pay each sub-consultant for all work covered under an invoice within the 72 hour time frame.

The Proposer shall contact the Business Development Division Liaison at 407-836-8363 for any questions and/or concerns as it relates to Registered Service-Disabled Veterans.

- F. By entering into this contract, the CONSULTANT affirmatively commits to comply with the SDV subcontracting requirements submitted with his/her Proposal. The failure of the CONSULTANT to comply with this commitment during the Contract's performance period may be considered a breach of Contract. The County may take action up to and including termination for default if this condition is not remedied within the time period specified by the Manager, Procurement Division.

XXV

CONTRACT CLAIMS

"Claim" as used in this provision means a written demand or written assertion by one of the contracting parties seeking as a matter of right, the payment of a certain sum of money, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract.

Claims made by a Consultant against the County relating to a particular contract shall be submitted to the Procurement Division Manager in writing clearly labeled "Contract Claim" requesting a final decision. The Consultant also shall provide with the claim a certification as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Consultant believes the County is liable; and that I am duly authorized to certify the claim on behalf of the Consultant."

Failure to document a claim in this manner shall render the claim null and void. Moreover, no claim shall be accepted after final payment of the contract.

The decision of the Procurement Division Manager shall be issued in writing and shall be furnished to the Consultant. The decision shall state the reasons for the decision reached. The Procurement Division Manager shall render the final decision within sixty (60) days after receipt of Consultant's written request for a final decision. The Procurement Division Manager's decision shall be final and conclusive.

The Consultant shall proceed diligently with performance of this contract pending final resolution of any request for relief, claim, appeal or action arising under the contract and shall comply with any final decision rendered by the Manager of the Procurement Division.

XXVI
PROHIBITION AGAINST CONTINGENT FEES

The Consultant warrants that they have not employed or retained any company or person, other than a bona fide employee working solely for the Consultant, to solicit or secure this Contract and that they have not paid or agreed to pay any person, company, corporation, individual or firm other than a bona fide employee working solely for the Consultant any fee, commission, percentage, gift or any other consideration, contingent upon or resulting from the award of this Contract. For the breach or violation of this provision, the County shall have the right to terminate the Contract at its sole discretion, without liability and to deduct from the Contract price, or otherwise recover, the full amount of such fee, commission, percentage, gift or consideration.

XXVII
TOBACCO FREE CAMPUS

All Orange County operations under the Board of County Commissioners shall be tobacco free. This policy shall apply to parking lots, parks, break areas and worksites. It is also applicable to Consultants and their personnel during contract performance on county-owned property. Tobacco is defined as tobacco products including, but not limited to, cigars, cigarettes, e-cigarettes, pipes, chewing tobacco and snuff. Failure to abide by this policy may result in civil penalties levied under Chapter 386, Florida Statutes and/or contract enforcement remedies.

XXVIII
VERIFICATION OF EMPLOYMENT STATUS

Prior to the employment of any person performing services under this contract, the CONSULTANT shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of: (a) all employees within the State of Florida that are hired by the CONSULTANT after the execution of the contract who are providing labor under the contract during the contract term; and, (b) all employees within the State of Florida of any of the CONSULTANT'S sub-consultants that are hired by those sub-consultants after the execution of the contract who are providing labor under the contract during the contract term. Please refer to USCIS.gov for more information on this process.

XXIX
DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION:

By executing this agreement the Bidder affirms that it is in compliance with the requirements of 2 C.F.R. Part 180 and that neither it, its principals, nor its subcontractors are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

XXX

FLORIDA CONVICTED/SUSPENDED/DISCRIMINATORY COMPLAINTS:

By executing this agreement the Bidder affirms that it is not currently listed in the Florida Department of Management Services Convicted/Suspended/Discriminatory Complaint Vendor List.

XXXI

SEVERABILITY

The provisions of this Agreement are declared by the parties to be severable. However, the material provisions of this Agreement are dependent upon one another, and such interdependencies a material inducement for the parties to enter into this Agreement. Therefore, should any material term, provision, covenant or condition of this Agreement be held invalid or unenforceable by a court of competent jurisdiction, the party protected or benefited by such term, provision, covenant, or condition may demand that the parties negotiate such reasonable alternate contract language or provisions as may be necessary either to restore the protected or benefited party to its previous position or otherwise mitigate the loss of protection or benefit resulting from holding.

XXXII

PUBLIC RECORDS COMPLIANCE (APPLICABLE FOR SERVICE CONTRACTS)

Orange County is a public agency subject to Chapter 119, Florida Statutes. The Consultant agrees to comply with Florida's Public Records Law. Specifically, the Consultant shall:

1. Keep and maintain public records required by Orange County to perform the service.
2. Upon request from Orange County's custodian of public records, provide Orange County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from the public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Consultant does not transfer the records to Orange County.
4. Upon completion of the contract, Consultant agrees to transfer at no cost to Orange County all public records in possession of the Consultant or keep and maintain public records required by Orange County to perform the service. If the Consultant transfers all public record to Orange County upon completion of the contract, the Consultant shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Consultant keeps and maintains public records upon completion of the contract,

the Consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to Orange County, upon request from Orange County's custodian of public records, in a format that is compatible with the information technology systems of Orange County.

5. A Consultant who fails to provide the public records to Orange County within a reasonable time may be subject to penalties under section 119.10, Florida Statutes.

6. IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

400 E. South Street, 2nd Floor, Orlando, FL 32801
407-836-5897
ProcurementRecords@ocfl.net

FLORIDA ENGINEERING GROUP, INC
ORLANDO, FLORIDA

Jean Abi Aoun

Digitally signed by Jean Abi Aoun
DN: cn=Jean Abi Aoun, o, ou,
email=jabiaoun@feg-inc.us, c=US
Date: 2022.08.01 15:05:54 -04'00'

Signature


Jean Abi Aoun, PE

Name Typed

Vice President

Title

BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA



Carrie Mathes, MPA, CFCM, NIGP-CPP,
CPPO, C.P.M., CPPB, APP,
Manager, Procurement Division

Date: **8.2.2022**

(for County use only)

EXHIBIT A
SCOPE OF SERVICES

Exhibit A
Scope of Services
(Project Limits)
(Approximate Length)

Continuing Professional Final Engineering Design Services

The Consultant shall provide engineering design and construction plan preparation for each task authorized. The Consultant shall perform those engineering services required to prepare a complete set of contract documents (plans and specifications).

The projects incorporated under this Continuing Professional Services Contract may include, but are not limited to, design, permitting, construction plan preparation, and post design services. The following is a list of representative types of projects that may be assigned. The list is not all inclusive.

- Paving Unpaved Roads
- Roadside and Basin Wide Drainage Collection, Treatment and Disposal Systems
- Environmental Analysis, Evaluation, Permitting and Investigation
- Drainage Structures
- Sidewalks and Trails
- Bridge Replacement or Rehabilitation
- Culvert Replacement or Rehabilitation
- Guardrails
- Intersection Improvements
- Roadway Improvements
- Construction Plan Review
- Groundwater testing/NPDES
- Best Management Practices such as, Alum treatment design, baffle box, bio active media etc.

The project's specific services will be identified and negotiated with each new task authorization. The Consultant man-hours will also be negotiated with each task authorization.

The Consultant's Engineer-of-Record shall sign and seal a certification on the plans stating that the design has been prepared in accordance with the State of Florida Manual of Uniform Standards for Design, Construction, and Maintenance for Streets and Highways. Plans shall be accurate, legible and completed in accordance with the Florida Department of Transportation Design Manual (FDM) and the Florida Department of Transportation Standard Plans for Road and Bridge Construction latest English Units edition in effect at the time of the Notice to Proceed, as modified herein. The Consultant shall utilize best engineering judgment, practices and principles in performing the work.

The tasks included in this Scope of Services can be generally grouped into the following nine primary categories:

1. Administration
2. Public Information
3. Design and Plans Preparation
4. Permitting
5. Right-of-Way Engineering
6. Design Surveys
7. Geotechnical Services
8. Railroad Coordination
9. Post Design Services

This Scope of Services addresses each task within these elements and serves to further define specific requirements. The Consultant shall submit all required deliverables and provide specific services (with the exception of Post Design Services) within ____ calendar days (inclusive of four-week review periods by County for review of progress submittals) upon written authorization from the COUNTY.

1.0 Administration

1.1 Notice to Proceed Meeting

The Consultant shall prepare for and attend a Notice to Proceed Meeting with the Orange County Project Manager and staff. At this meeting, Orange County staff and key members of the Consulting team shall set the final parameters for the project and formally initiate final design.

1.2 Project Meetings

The appropriate members of the Consulting team shall attend periodic meetings (up to _____ ()) with the Orange County Project Manager and staff to discuss project progress and status, technical issues such as constructability, utility coordination, right-of-way requirements, and upcoming events and activities. The purpose of these meetings is to maintain clear communication between the County and the Project Team. The Consultant shall prepare and distribute meeting minutes following each of these meetings.

1.3 Project Management and Supervisions

Project Management and Supervision shall be included as a percentage of manhours for each primary categories listed above except for Administration and Post Design Services

1.4 Final Design Project Schedule

The Consultant shall prepare and submit a detailed project schedule no later than 7 days after the Notice to Proceed Meeting for completion of final design and plans preparation identifying major tasks, their duration and tasks relationships. All deliverables shall be identified as milestones on the schedule. This schedule will utilize the Orange County Standard Roadway Project Schedule format on MS Project. The Consultant shall submit an updated design project schedule as directed by the Orange County Project Manager. Project Design Schedules shall only be updated by an amendment to the contract

1.5 Cost Estimates and Construction Schedule

The Consultant shall prepare and submit a detailed engineer's cost estimate for construction of the project at each 60%, 90%, and final submittal. The Consultant shall also provide an estimate of construction time at the 90% and final submittals.

Note: If no bid is within +/- 10 % of the Engineer's estimate, the Consultant shall prepare a revised estimate, re-evaluate the construction plans, evaluate the bids and submit a report that summarizes this information. This report will include recommendations for revisions to the construction documents, if needed. This report shall be prepared at no cost to the County.

1.6 Utility Coordination

The Consultant shall coordinate with all utility providers within the project limits by furnishing plans at the 30%, 60%, 90%, 100% and final review stages to the utilities for review, confirmation of utility location and relocation purposes. The development of the roadway plans shall incorporate and consider the input provided by each utility. The Consultant shall coordinate with all utilities to ensure that the final design considers all existing and proposed utilities. As part of each progress submittal The Consultant shall provide a list of all utilities that have been provided copies of the construction plans, and the dates the plans were delivered to each Utility. The Consultant shall also provide a summary of the response received from each Utility.

The Consultant shall conduct timely on-going utility coordination efforts to ensure timely receipt of design information from the various utilities. The Consultant shall hold utility coordination meetings at Orange County Public Works at 60%, 90% and at 100% plans as necessary, and shall furnish the most recent project schedule to the utility companies. The Consultant shall prepare and distribute the meeting minutes following each of these meetings.

The Consultant shall obtain Utility Work Schedules (UWSs) from all utilities.

The Consultant shall prepare a utilities conflict matrix and resolve all utility conflicts prior to submitting final plans. No utilities shall be in conflict with any proposed roadway improvements.

The consultant shall be responsible to coordinate with utility companies to identify any unrecorded or prescriptive easements. Said information shall be communicated to Orange County appraisal/right-of-way acquisition staff.

1.7 Coordination with project stakeholders (Limiting Amount)

Any required coordination related to the design with any other city, county, or any Orange County department outside of Public Works should be handled by the Consultant.

1.8 Quality Assurance/Quality Control

The Consultant shall designate appropriate staff to conduct Quality Assurance/Quality Control (QA/QC) reviews of all work products. These reviews shall be performed for all work products prior to their being submitted to the County for review or use. Work effort for QA/QC reviews shall be addressed as part of the work effort for each Pay Item as identified elsewhere herein.

1.9 Deliverables

Work to be completed under this section by the Consultant shall require the following items to be delivered and accepted by the County:

- Final design project Schedule
- Construction Time Estimate
- Cost Estimate
- Utility Conflict Matrix

1.10 Pay Item

Work to be completed under this section by the Consultant shall be paid for under the following pay items as listed on the Activity and Fee Summary:

- Administration

2.0 Public Information (Limiting Amount)

The purpose of the public information element is to keep the community advised of the project status. Therefore, the Consultant shall conduct the following public information activities throughout the project.

2.1 Small Group Meetings

The Consultant shall be available to conduct up to _____ () meetings with organizations interested in the final design. These meetings/presentations may be made to informal homeowners groups, formal homeowner associations or other formal organizations. The Consultant shall be responsible for all presentation and handout materials, as identified in the Table of Deliverables.

2.2 Newsletters

The Consultant shall prepare and distribute project newsletters at the following three (3) milestones during the design:

1. Within two weeks of the Notice to Proceed
2. At the start of the right-of-way acquisition process
3. When the project is advertised for bids

The newsletters shall be printed in color on 8 ½ inch X 11 inch sheets in a format acceptable to the County. Sufficient copies of each edition shall be printed by the Consultant to provide 110% of the addressees on the mailing list at each mailing. The newsletters will be sent to each

entry included in the data base mailing list. Newsletters shall be mailed as First Class mail. Those newsletters not mailed will be distributed as needed through small group meetings and workshops. The Project Manager, the Chief Engineer of the Engineering Design Section and the Manager of the Transportation Planning Division must approve all final newsletter proofs prior to final printing.

2.3 Web Page Update / Maintenance

The Consultant shall provide updated information for the Orange County website during the design phase of the project. The information shall be provided to Orange County within three (3) weeks of the Notice to Proceed being issued to the Consultant, and shall be installed on the Orange County web page by Orange County staff. The information format shall be in conformance with ADA requirements. The information shall be consistent with the county template.

The Consultant shall provide updated information as necessary throughout the design process, but at a minimum concurrently with the issuance of project newsletters. The web site file shall also be updated to reflect the results of the bid process and at the issuance of the Notice to Proceed to the Contractor.

2.4 Mailing List

The County will provide the Consultant with a current mailing list of property owners and their addresses. The list shall contain all homeowners/property owners located within a corridor as determined by the County. The County will provide the Consultant with an updated list of homeowners/property owners prior to the mailing of each newsletter. The Consultant shall update the mailing list with the information provided by the County prior to mailing the newsletters. The Consultant shall also expand the initial mailing list throughout the duration of the project to include any person or institution expressing an interest in the project, potential permitting or review agencies, elected and appointed officials in the area, community leaders, and media representatives.

2.5 Deliverables

Work to be completed under this section by the Consultant shall require the following items to be delivered and accepted by the County:

- Small group meeting presentations materials and handouts
- Newsletters
- Initial web site information and periodic updates

s2.6 Pay Item

Work to be completed under this section by the Consultant shall be paid for under the following pay items as listed on the Activity and Fee Summary:

- Public Involvement

3.0 Design and Plans Preparation

The Consultant shall prepare the Final Roadway Plans Package. This work effort includes the roadway design needed to provide complete construction plans and specifications for the project with sufficient information to allow for constructing, permitting and right-of-way acquisitions. These plans are for the use of the Contractor to bid and build the project and for Orange County to ensure the project is built as designed and to specifications. The Consultant shall provide 30%, 60%, 90% and 100% progress review submittals, in 11 inches x 17 inches format. All text shall be clear and legible on 11"x17" plans. 11"x17" plans shall identify the scale of the drawing in both numerical and graphic formats. Each submittal shall contain the information items listed in the appropriate Orange County Progress Review Submittal checklist. A copy of the appropriate checklist shall accompany each submittal with a certification signed by the Consultant's Project Manager certifying that the submittal completely addresses the required items as listed on the check list. Each review submittal shall include documentation of the internal Quality Assurance and Quality Control review conducted by the Consultant. The Consultant shall complete designs required for all aspects of the project as specifically described herein.

Final bid documents shall be submitted in both hard copy, as specified elsewhere herein, and electronic format in accordance with the standards established by the Orange County Purchasing and Contracts Division.

3.1 Roadway Design

The Consultant shall complete all design analysis, studies, and geotechnical investigations as required to complete the roadway design of the project. This effort shall include, but not be limited to the following areas.

3.1.1 Design Analysis

The Consultant shall design the geometrics for the project using the design standards that are most appropriate, with the proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, design consistency and driver expectancy, aesthetics, pedestrian and bicycle concerns, ADA requirements, access management, to be consistent with the alignment and typical sections, the type of construction and other design parameters. The design elements shall include, but not be limited to, the horizontal and vertical alignments, lane widths, shoulder widths, cross slopes, borders, side slopes and ditches, lane transitions, superelevation, features of intersections and interchanges, and limited access points. The geometric design developed by the Consultant shall be the engineering solution to a given problem and not merely an adherence to minimum County, ASHTO and/or FDOT standards.

The Consultant shall prepare a Typical Section Package that shall include information sufficient for the County to approve overall elements of the roadway improvements related to the typical section. Significant variations along a corridor, or multiple affected roadways, may require multiple typical sections. Information to be included in the typical section package shall include the following elements with dimensions as

appropriate: lanes, medians, profile grade point(s), cross-slopes (all elements as appropriate), curb type, shoulders, sidewalk placement relative to curb (or edge of pavement), centerline of construction, right of way, easements, clearing and grubbing limits, and side slopes or retaining walls as appropriate. Other elements to be provided in the package include: type of (but not necessarily thickness of) subgrade stabilization, base course, structural course and friction course (for concrete pavement the concrete is shown in lieu of the latter two items); design speed, recommended posted speed, and traffic volumes (opening and design year).

The Consultant shall then prepare a Typical Section Package addressing the proposed section(s) for the mainline (including bridges if applicable) as well as all side streets. The Consultant shall also prepare a Roadway Design Criteria Package utilizing the basic design parameters. This criteria package shall address such items as Roadway Classification, Design Vehicle, Design Year, Design Speed, Horizontal Alignment, Vertical Alignment, Cross Section elements, MOT concept etc. The Typical Section and Roadway Design Packages shall be submitted to the County for review and approval prior to commencing any work for the 30% design and plans packages.

The Consultant shall prepare a Pavement Design Package in accordance with FDOT's Flexible Pavement Design Manual. The Consultant shall determine the twenty-year Equivalent Single-Axle Loads based on traffic counts and projections, including truck traffic. The Consultant shall review the traffic data provided by the Roadway Conceptual Analysis and shall obtain additional data as necessary to support the pavement design, if available. The Consultant shall also determine the pavement structural number necessary to withstand the projected traffic loads. The pavement design shall include calculation of the thickness of each layer of the pavement structure based on the appropriate layer structural coefficients. The Consultant shall utilize Superpave (SP) Asphalt Concrete or Type S Asphalt Concrete as directed by the County. For designs using Superpave Asphalt Concrete, The Consultant shall determine the type of asphalt binder, traffic level, and nominal maximum aggregate size for each pavement layer, and shall show this information on the typical sections. All Superpave Asphalt designs shall specify that fine graded mixes shall be used. Soils and traffic loading data used as input for the design shall be included in the package. The Pavement Design Package shall be submitted to the County for review and approval with the 30% Plans Package.

3.1.2 Roadway Design Documentation and Quantities Computation

The Consultant shall submit all design notes; design calculations and computations to document the decisions and conclusions reached during the development of the construction plans. The Consultant shall also submit accurate quantities that provide a breakdown of the pay items necessary to construct the project.

3.2 Drainage Design

The Consultant shall finalize the design of the drainage and stormwater management systems. The Consultant shall verify the number and location of pond sites, floodplain compensating

storage sites, and/or water quality and quantity treatment needed to appropriately meet the needs of the project.

3.2.1 Drainage Analysis

The Consultant shall finalize the drainage design for the project including underdrain as necessary using the design standards that are applicable for the appropriate Water Management District, Florida Department of Environmental Protection, Federal Emergency Management Agency, and applicable County standards as determined by Engineering. The final drainage design shall consider and address property impacts in accordance with section 5.4 of this scope of work.

3.2.2 Design Documentation and Drainage Calculations

The Consultant shall submit a Drainage Design Documentation Report containing all design notes and computations, including modeling input and output files to document the decisions and conclusions reached during the development of the stormwater management systems including geotechnical investigations and reports. The Consultant shall also submit signed and sealed drainage calculations for the project.

3.2.3 Bridge Hydraulics Report (BHR)

The Consultant shall prepare a Bridge Hydraulics Report (BHR) for all bridges crossing over a water body including bridge and box culvert widening and replacement. This report shall address hydrology, hydraulics, deck drainage and scour. The report shall include all modeling input and output files. The outcome of the scour analysis shall be reflected in the Bridge Hydraulics Recommendation Sheet discussed in detail under section 3.4.27.3 of this scope.

3.3 Structural Design

3.3.1 Bridge Concept Report (BCR)

The Consultant shall prepare and evaluate design alternatives for all bridge structures. The Consultant shall provide the County with acceptable justification for Consultant's selection of superstructure, substructure and retaining wall types from the list below. Selection of viable alternatives shall be site specific and agreed upon by the County. The Consultant shall coordinate with all utilities to ensure alternatives accommodate all affected existing and proposed utilities.

3.3.1.1 Superstructure Alternatives

The Consultant shall evaluate at a minimum two separate superstructure types for possible development during final design. Whenever span configurations allow, a concrete and a steel alternative shall be evaluated. Each superstructure type shall be developed to the point of beam size selection and spacing to allow for constructability and cost analysis to be performed.

3.3.1.2 Static System Alternatives

The Consultant shall evaluate multiple span arrangements and configurations to determine feasibility of each system with regards to substructure requirements

and placement, superstructure depths and profile requirements, and possible right of way and traffic impacts.

3.3.1.3 Substructure Foundation Alternatives

The Consultant shall evaluate at a minimum two separate substructure types for possible development during final design. Whenever soil conditions allow, a shallow and a deep alternative shall be evaluated. Each substructure type shall be developed to the point of pile and/or footing size selection and spacing to allow for constructability and cost analysis to be performed.

3.3.1.4 Retaining Wall Alternatives

The Consultant shall evaluate the potential utilization of conventional (non-proprietary) walls and proprietary wall systems. Cost analysis and recommended foundation designs for the evaluated systems shall be prepared and submitted to the County for review and selection of the wall system(s) to be implemented in the final design.

3.3.2 Bridge Design

3.3.2.1 Bridge Geometrics

Bridge geometrics shall be developed in accordance with the roadway design

3.3.2.2 Structure Design Analysis

The bridge design shall include all components of the structure as well as the approach slabs and erosion protection for bridge approaches and embankments. The Consultant shall submit to the County all reports and design calculations prepared during the development of the plans. The design calculations submitted shall adequately address the complete design of all bridge components and retaining walls. These calculations shall be neatly and logically presented on 8-1/2" X 11" paper (where possible) and shall be signed and sealed by a Florida registered professional engineer. A cover sheet indexing the contents of the calculations shall be included and the engineer shall sign and seal that sheet. These structure design calculations shall include, but not be limited to the following:

Superstructure design, pile capacity computations (vertical and horizontal), end bent design, intermediate bent design, pier design, pre-stressed concrete beam design, steel beam design, geometric data, quantities and tabulation, cost estimates and quantity computation book backup.

3.3.2.3 Load Rating

The Consultant shall complete a bridge load rating for inventory and operating conditions for design and Florida Legal Load configurations.

3.3.2.4 Bridge Number Identification

The Consultant shall complete a Bridge Number Request form and submit it to the FDOT District 5 Structures and Facilities Engineer for processing. The resulting Bridge Identification Number(s) shall be included in the Structures Plan package.

3.3.3 Retaining Wall Design

The Consultant shall provide all necessary design effort required to produce a complete set of construction documents for a conventional retaining wall system. The Consultant shall also determine appropriate Proprietary Wall types from the FDOT FDM proprietary wall standards to the extent necessary to finalize the wall plans as described herein for proprietary wall systems. Retaining walls are anticipated at the following locations:

At the County's option, the Consultant shall obtain project specific retaining wall drawings from proprietary wall companies and incorporate these drawings into the contract document.

[Add locations here]

3.3.4 Critical Temporary Retaining Wall Design

A critical temporary retaining wall is defined as a wall required during the construction stage only to protect existing facilities during excavation operations, when other construction methods such as benching or sloping are not practical. These walls may be removed and reused after completion of the work. Such systems as steel sheet pilings, soldier beams and lagging, or other similar systems are commonly used. In such cases, the Consultant is responsible for designing and detailing the wall in the set of contract plans.

Critical temporary retaining walls are anticipated to be required at the following locations:

[Add locations here]

3.3.5 Miscellaneous Highway Related Structures

The Consultant shall design miscellaneous Highway Related Structures. This work effort includes the design analysis and associated plan preparation needed to prepare a complete set of contract plans and other necessary documents pursuant to the County criteria and the Florida Department of Transportation Design Manual (FDM).

- 3.3.5.1 Box Culverts – The Consultant shall provide the structural design for all box culverts (new and/or existing) for both storm water and wildlife crossings. Existing box culverts that are hydraulically adequate shall be structurally evaluated to determine whether it is appropriate to extend or replace the structure. Applicable FDOT Box Culvert standards shall be evaluated and incorporated to the extent possible.

All box culverts are to be determined by the Consultant and approved by the County.

[Add locations here]

- 3.3.5.2 Overhead Sign Structures – The Consultant shall provide the design of sign structures for overhead cantilever and overhead truss sign assemblies and the associated foundation design. Applicable FDOT Overhead Sign Structure standards shall be evaluated and incorporated to the extent possible.

Overhead Sign Structures are anticipated at the following locations:

[Add locations here]

- 3.3.5.3 Traffic Mast Arms/Mono Tubes/Trusses – The Consultant shall provide the design of traffic mast arms/mono tube/trusses and the associated foundation design for signalized intersections. Applicable FDOT Standard pole and arm configurations shall be evaluated and incorporated to the extent possible.

Mast Arms/Mono Tube/ Trusses are anticipated at the following locations:

[Add locations here]

3.4 Roadway Construction Plans

The Consultant shall prepare final construction plan sheets, notes and details to include, all sheets necessary to convey the intent and scope of the project for the purposes of construction. The plan sheets shall be assembled in the following order:

1. Cover Sheet
2. General Notes
3. Standard Drawings and Details
4. Summary of Pay Items
5. Drainage Map
6. Typical Sections
7. Summary of Quantities
8. Summary of Drainage Structures
9. Survey Control Sheets
10. Plan and Profile Sheets
11. Driveway Profiles
12. Intersection Details
13. Drainage Structure Cross Section

14. Box Culvert Plans
15. Pond Details and Cross Sections
16. Flood Plain Compensation Area Details
17. Environmental Consideration Plans (Dredge and Fill Sketches) and Mitigation Plans
18. Geotechnical Soil Survey
19. Cross Sections
20. Erosion Control Plans
21. Miscellaneous Details
22. Screen Wall Plans
23. Maintenance of Traffic Plans
24. Utility Adjustment Plans
25. Signing and Pavement Marking Plans
26. Signalization Plans
27. Landscape Plans
28. Structure Plans
 - Bridge Structure Plans Package
 - Wall Control Drawings
 - Bridge Hydraulic Recommendation Sheet
 - Retaining Wall Plans
 - Critical Temporary Retaining Wall Plans
 - Miscellaneous Highway Related Structures

3.4.1 Cover Sheet

The County will provide a standard County cover sheet in AutoCAD format to the Consultant. The Consultant shall complete the cover sheet with the information applicable to the project.

3.4.2 General Notes

The County shall provide a standard general notes sheet in AutoCAD format to the Consultant. The Consultant shall review and modify the general notes as required for this project.

3.4.3 Standard Drawings and Details

The Consultant shall include standard drawings and details as required for this project, including:

1. Supplementary details shall be provided for superelevation transitions. Profiles shall be shown for the profile grade line and the outside edge of each

driving lane. Elevations shall be shown at 25-foot intervals, at grade breaks for the profile grade line, each lane profile on the graphical profile and on a superelevation table.

2. Details for all non-standard structures not covered elsewhere.
3. Standard details provided by Orange County, e.g., driveways, man hole rim and cover, etc.

3.4.4 Summary of Pay Items

The Consultant shall include all pay items and quantities that are required for this project. Pay items shall be based on FDOT pay items, but may be amended by the County. The necessary pay items and quantities shall be shown on the summary of pay items sheet. The summary of pay items with quantities shall be submitted no later than the 60% plans.

3.4.5 Drainage Map

Drainage maps shall be developed at 1" = _____ (200)' scale on current black and white aerial photography provided by the Consultant for the entire length of the project. Ponds should be shown in their entirety.

3.4.6 Typical Sections

Upon approval of the Typical Section Package, the Consultant shall prepare the typical section sheets including the mainline, bridges (if applicable) and side streets with all applicable details added to the sections. These sheets shall also include other miscellaneous details necessary to construct the project. The details shall include but are not limited to milling and resurfacing, non-standard superelevation transitions, etc.

3.4.7 Summary of Quantities

The Consultant shall prepare a summary of quantities sheet in accordance with FDOT Basis of Estimates Manual showing individual summaries including but not limited to guardrail, fence, turnouts, sodding, ditch pavement, side drains, underdrains, and earthwork.

3.4.8 Summary of Drainage Structures

The Consultant shall prepare a table listing all proposed or modified drainage structures on the project. The structures shall be listed by structure number in numerical order. Cross drains and storm sewer structures shall be tabulated by structure number, providing the station, side (left/right), size, type, length and incidental quantities appropriate for the pipe material contained in the plans.

3.4.9 Survey Control Sheets

See Section 6.3.

3.4.10 Plan and Profile Sheets

The plan and profile sheets shall be developed for (street names) _____, _____, _____, and _____, and conform to the following requirements:

1. Plan and profile sheets shall be prepared at a scale of 1"=40' horizontal and 1"=4' vertical, and oriented such that north is shown to the top or right side of each sheet.
2. All stationing shall be positive and shall proceed from south to north or from west to east.
3. Existing features including existing utilities shall be shown with dashed lines and proposed or design features shall be shown with solid lines. Vertical utility locations verified in the field shall be shown on the profile.
4. Locations, dimensions and types of existing and proposed driveways shall be shown.
5. The plans shall show the names of all intersecting streets and shall identify the station and angle of the intersection of the centerlines.
6. Each plan and profile sheet shall show two readily accessible benchmarks to establish vertical control.
7. Horizontal control points shall be shown at all Points of Curvature, Points of Tangency, and Points of Intersection. Horizontal control points shall also be shown for Points on Curve or Points on Line such that the maximum spacing between control points is 600 feet or less.
8. All property lines and improvements located within 25 feet of the right-of-way or limits of construction, whichever extent is greater, shall be shown on the plan view.
9. Existing and proposed elevations shall be shown on the profile at even hundred foot stations and at all Points of Vertical Intersection on the Profile Grade Line. Proposed elevations shall be shown at 25-foot intervals along vertical curves and at Points of Vertical Curvature and Points of Vertical Tangency.
10. The following information shall be given for each horizontal curve on the centerline of construction and the center line of right-of-way:
 1. Curve Number
 2. P.I. Station
 3. Delta in degrees, minutes and seconds
 4. Degree of Curve
 5. Tangent length
 6. Arc length
 7. Radius
 8. P.C. Station
 9. P.T. Station
 10. Superelevation rate
11. Percent of slope for profile grade lines, ditch flow lines, and all drainage pipes where not shown on the drainage details.

12. Plan and profile sheets shall be provided for all side street improvements extending more than 50 feet from the right-of-way of the main project alignment.
13. Plan and profile sheets shall be provided for all drainage outfalls extending more than 50 feet from the right-of-way of the main project alignment.
14. No separate profile sheets will be allowed unless approved by the County.
15. Driveway horizontal geometry shall conform to County standards. Profiles shall be shown for all driveways.
16. Submittal of 60% construction plans and 90% right-of-way maps shall only show the centerline of construction. Baseline of survey shall not be shown. All locations and offsets shall be based on centerline of construction.

3.4.11 Driveway Profiles

The Consultant shall prepare driveway profiles for each driveway within the limits of construction, including side streets. Driveway profiles shall be drawn on the cross section sheets at the stations where they occur. These profiles shall show existing and proposed grade lines. Grades of proposed driveways shall conform to Orange County policies and procedures and Florida Department of Transportation Standard Indexes

3.4.12 Intersection Details

The Consultant shall prepare intersection detail sheets for the intersections of (street names) _____ and _____, _____, _____, _____. Intersection sheets shall show all necessary details and geometric controls/access management features, including, turn lanes, special drainage and grading. Intersection details shall be drawn at a scale of 1" = 10'. Spot elevations shall be shown along pavement lane lines and curb returns at 10 foot intervals and at all grade breaks. Profiles for all radius returns shall be included with the detail of each intersection.

3.4.13 Drainage Structure Cross Sections

The Consultant shall prepare drainage structure cross sections for all pipes crossing under the roadway. Drainage structure sheets shall show the drainage structures, location, offsets not covered by template/standard index sheets, cross section, flow line elevations of all weirs or slots, top of grates, culverts and top of manhole elevations, pipe slopes and similar data.

3.4.14 Box Culverts (If Required)

Details shall be provided for box culverts showing all dimensions, critical elevations and all reinforcing steel. Major box culverts may be included in the bridge plans portion of the construction plans.

3.4.15 Pond Details and Cross Sections

Pond detail sheets shall be provided showing a plan view of each pond at a scale acceptable to the County. Typical sections of each pond shall be shown for at least two axes of the pond. Each pond shall have cross sections to accurately depict the pond

configuration. Details shall be provided for all control structures. Boring locations shall be shown on the plan view and soil boring logs shall be plotted on the pond cross sections.

3.4.16 Flood Plain Compensation Area Details and Cross Sections

Detail sheets shall be provided showing a plan view of each flood plain compensation area at a scale acceptable to the County. Typical sections of each area shall be shown for at least two axes of the area. Each flood plain compensation area shall have cross sections to accurately depict the compensation area configuration. Boring locations shall be shown on the plan view and soil boring logs shall be plotted on the cross sections.

3.4.17.1 Environmental Consideration Plans (Dredge and Fill Sketches)

The consultant shall develop Environmental Consideration Plans, at a scale acceptable to the County, including necessary notes and details, as part of the contract plans necessary to secure applicable permits. The objectives of the plans are to depict wetland and upland buffer locations and impacts. The plans shall provide, at a minimum, wetland and upland buffer locations, impact areas, limits of construction, and limits of the project. The objective of the plans are to provide unencumbered details of wetland and buffer impacts including remaining wetland and upland buffers that would be preserved throughout construction.

3.4.17.2 Mitigation Plans (Limiting Amount)

Once a mitigation plan has been reviewed and approved by the County, the Consultant shall be responsible for coordinating the proposed mitigation plan with the environmental agencies and for preparing the wetland mitigation plan to be included as a part of the Environmental Resource Permit application and to be included in the final construction documents.

Wetland mitigation area detail sheets shall be provided showing a plan view of each mitigation area at a scale acceptable to the County. Typical sections of each mitigation area shall be shown for at least two axes of each mitigation area. Planting zones shall be shown and dimensioned on the plan view with elevations shown on both the plan view and the cross sections. Each wetland mitigation area shall have cross sections to accurately depict the configuration of the mitigation area suitable for construction purposes. Plantings shall be listed in a table giving the common and scientific name of each species, the size of the plantings, and the number of each size of each species to be planted in each zone. Planting details, as necessary, shall also be provided. Soil boring locations shall be plotted on the plan views. Soil boring logs shall be plotted on mitigation area cross-sections or other acceptable location.

3.4.18 Geotechnical Soil Survey

The Consultant shall prepare soil survey sheets, which depicts the various types of soils encountered within the project limits, classification, mechanical properties, and recommended usage of those soils. The soil survey sheets shall include the following information at a minimum:

- Narrative description of each soil type with its engineering characteristics
- Supplemental soils investigations, such as muck probes

3.4.19 Cross Sections

Cross sections sheets shall include the following information at a minimum for roadways, lateral ditches, ponds, flood compensation areas and mitigation areas.

1. Unless otherwise approved by the County, the horizontal scale shall be 1" = 10' and the vertical scale shall be 1" = 5'.
2. The elevation grid shall be labeled on both left and right sides of each section.
3. The station shall be shown to the right each section.
4. Existing ground, structures, drainage conduits and utilities shall be shown as dashed lines and designed or proposed features shall be shown as solid lines.
5. End areas in square feet for earthwork cut and fill shall be shown. End areas for unsuitable materials shall be identified.
6. Existing ground shall be shown at least 25 feet outside the proposed rights-of-way lines, easements or limits of construction, whichever is further.
7. Existing buildings, structures, or drainage facilities shall be shown within the limits of the cross section as described in Item 6 above.
8. Section stationing shall increase from the bottom of the sheet to the top. When more than one row of sections are placed on a sheet, the stationing shall increase from bottom to top and from left to right.
9. The existing ground elevation at the centerline, design profiles and ditches shall be shown on each section.
10. Cross sections shall be shown at intervals not exceeding 50 feet. Additional intermediate cross sections shall be shown as necessary to provide supplementary information at bridges, box culverts, intersections, side streets, railroads, etc. Additional cross sections as negotiated on a project-by-project basis may be necessary to support right-of-way acquisition basis.
11. Cross section sheets shall be provided for all side street improvements extending more than 50 feet from the right-of-way line of the main project alignment.
12. Soil boring information, including encountered and estimated seasonal high groundwater levels shall be shown on all applicable cross sections.
13. Horizontal and vertical location of unsuitable soils.

3.4.20 Erosion Control Plans

The Consultant shall develop Erosion Control details, at a scale acceptable to the County, including necessary notes and details, as part of the contract plans necessary to secure applicable permits. The objectives of the erosion control plans are to prevent erosion where construction activities are occurring, prevent pollutants from mixing with storm water and prevent pollutants from being discharged by trapping them on-site. The construction documents shall provide for stormwater pollution prevention plan (SWPPP) and control to be paid for as a lump sum item.

3.4.21 Miscellaneous Details

Any details not included elsewhere in the plan set shall be shown here.

3.4.22 Screen Wall Plans

The Consultant shall evaluate the project relative to screen wall placement and/or replacement and make recommendations in accordance with the County's "Screen Wall Policy."

Areas that may require new walls include the following locations:

(List potential locations)

Any other locations identified in the Roadway Conceptual Analysis

The County will make the final determination if new walls will be included in the project. All new walls shall be placed within the public right-of-way, unless otherwise directed by the County.

Existing walls along the corridor which may require adjustment or replacement due to project impacts, include the following:

(List potential locations)

Any other locations identified in the Roadway Conceptual Analysis

The County shall provide an electronic copy of its standard wall detail sheet to the Consultant. The Consultant shall review, modify and supplement the County's standard wall detail sheet as necessary to provide all necessary plans and details for all screen walls (new or adjusted) along the corridor. The Consultant shall determine that the detail sheet and any necessary modifications meet all current standards and the requirements of the project. The consultant shall sign and seal the detail sheet. Plans shall include depiction of walls on plan and profile sheets and cross section sheets; notes on plan and profile sheets, general construction and foundation notes, structural details and wall finishing notes and details.

3.4.23 Maintenance of Traffic Plans

The Consultant shall prepare plan sheets, notes and details to move vehicular and pedestrian traffic during all phases of construction. The maintenance of traffic plans shall include construction phasing of _____ (including side streets), ingress and egress to existing properties, temporary signing and pavement markings, temporary signals, and detour routes. Additional sheets such as cross sections, profiles, drainage structures, retaining wall details and sheet piling may be necessary to ensure implementation of the maintenance of traffic plan and will be provided by the Consultant. The plan sheets will be developed at 1" = ___' scale. The construction documents shall provide for Maintenance of Traffic to be paid for as a lump sum item.

3.4.24 Utility Adjustment Plans/Roadway Lighting Coordination

The Consultant shall prepare separate plan and profile sheets showing proposed new or relocated facilities by others. These plans shall be prepared based on information provided by the utility companies.

Consultant shall coordinate with the applicable power companies to arrange for a lighting design to be prepared in accordance with agreements between the County and the power companies. The Consultant shall coordinate the design of the lighting (performed by the power company) with the design of the roadway improvements and landscaping. The Consultant shall show the location of the street lights provided by the power company on the Utility Adjustment Plans.

3.4.25 Signing and Pavement Marking Plans

The Consultant shall prepare plan sheets at a scale of 1"=___' for the entire length of the project, including side streets, showing pavement markings and signage to be installed on the project. Pavement markings and signs shall conform to the *Manual on Uniform Traffic Control Devices*. Signing and Marking Plans shall include, but not be limited to, the following: General Note sheet(s), summary of Pay Items sheets, Plan sheet(s), and Special Marking Detail sheet(s), as needed.

3.4.26 Signalization Plans

The Consultant shall prepare plan sheets, notes and details to include, but not be limited to, the following: Intersection Signalization Plan sheets at 1" = 20' scale, General Note sheet(s), Summary of Pay Items sheet(s), Pole Mast Arm Detail sheet(s), Foundation Details sheet(s) and special detail sheet(s) and soil boring data, as needed. The signalization plans will include overhead and pole mounted lighted street signs and signal support structures and required foundations. Florida Department of Transportation standard foundation designs shall be used where applicable. The sign support structures will be aesthetically compatible with the County's current lighted sign standards. This project will involve _____ signals at _____, _____, _____ and _____, which shall be interconnected, with _____ to the (provide compass direction) and _____ to the (provide compass direction). The County will provide all available traffic data. The Consultant shall provide additional traffic data as necessary for these intersections. Span wire signal designs are not acceptable. All signals shall be mast arm/mono tube/truss design as appropriate and approved by the County.

3.4.27 Landscape Plans

The Consultant shall provide landscape plans prepared by a registered Landscape Architect. The plans shall identify the location and type of plant materials to be installed. Unless otherwise directed by the County, plantings shall be limited to drought tolerant trees of a species that will not require irrigation after establishment. Species and location shall be coordinated with clear zone requirements, sight distance requirements, proposed signage, ground conditions, streetlight locations, billboard locations, and utility conflicts and clearance. The location of the streetlights, structures, and pipes shall also be shown on the landscaping plans to ensure there are no conflicts with existing trees to

remain or proposed trees. The landscape plans shall also include General Notes and Details and a summary of Pay Items sheet (s).

Design shall be based on a landscaping construction budget not to exceed \$100,000 per mile of total project length.

3.4.28 Structural Plans

The Consultant shall prepare plan sheets, notes and details to include all drawings referenced in the submittal checklist.

3.4.28.1 Bridge Structure Plans Package

Upon approval of the BCR, the Consultant shall prepare a Structure Plans Package for each bridge structure included in the project. This work includes the effort needed to prepare a complete set of Structure Plans pursuant to all applicable County criteria and the Florida Department of Transportation Design Manual (FDM). The structural concept shall represent the recommended structure type presented in the BCR as approved by the County.

3.4.28.2 Wall Control Drawings

3.4.28.2.1 The Consultant shall prepare control drawings for all permanent walls required. These drawings shall provide vertical and horizontal alignments, wall lengths, and details for any special features that need to be provided. Barriers, architectural treatments, etc., are considered to be special features.

3.4.28.2.2 For conventional wall designs, the Consultant shall prepare drawings and specifications needed to supplement the control drawings. Appropriate FDOT standard drawings may be used if applicable.

3.4.28.3 Bridge Hydraulic Recommendation Sheet

The Consultant shall furnish and complete the Bridge Hydraulics Recommendation Sheet for all bridges over water and applicable box culvert systems. For information on the preparation of this sheet, see the FDOT Drainage Manual, (January 2021). The Consultant shall be responsible for the design of erosion protection for bridge approaches and embankments.

3.4.28.4 Retaining Wall Plans

This task includes the effort necessary for the preparation of a complete set of Retaining Wall Drawings to include Plan and Elevation, Reinforcement Details (if required) and Special Details. The Plans shall be prepared pursuant to the County standards and the Florida Department of Transportation Design Manual (FDM).

3.4.28.5 Critical Temporary Retaining Wall Plans

This task includes the effort necessary for the preparation of a complete set of Critical Temporary Retaining Wall Drawings to include Plan and Elevation,

Reinforcement Details (if required) and Special Details. The Plans shall be prepared pursuant to the County standards and the Florida Department of Transportation Design Manual (FDM).

3.4.28.6 Miscellaneous Highway Related Structures

This task includes the effort necessary for the preparation of a complete set of Drawings to include Plan and Elevation, Reinforcement Details (if required) and Special Details for any miscellaneous highway related structures not covered elsewhere herein, including box culverts, overhead sign structures traffic signal mast arms, mono tubes and trusses. The Plans shall be prepared pursuant to the County standards and the Florida Department of Transportation Design Manual (FDM).

3.5 Progress Review Submittals

All submittals shall be accompanied by documentation of the Quality Assurance/Quality Control reviews in accordance with Section 1.9 herein. Submittals shall conform to the requirements outlined in the Orange County Progress Review Submittal checklist incorporated herein by reference. A copy of the checklist certified by the Consultant's Project Manager in accordance with Section 1.9 herein. Submittals shall conform to the requirements outlined in the Orange County Progress Submittal checklist. A copy of the checklist certified by the Consultant's Project Manager in accordance with Section 3.0 herein shall accompany each submittal.

The Consultant shall submit construction plans to the County for review at the 30%, 60%, 90%, 100% and final completion stages. The 30% roadway plans and the 30% bridge plans shall be separate submittals. A 60% bridge plan submittal is not required.

All County comments or questions on previous submittals, and any additional direction received from County must be addressed. Responses to the comments submitted by the reviewers should be addressed in writing and distributed to all reviewers. Cost estimates are required per section 1.5.

3.6 Electronic Design and Topography

The Consultant shall provide electronic Design and Topography files to the County in MicroStation DGN format and Autodesk DWG file format at each review submittal and as requested by the County.

3.7 Bid Package

The Consultant shall prepare a draft and a final bid packages for the project. Orange County will provide the Consultant with a master reference document. The bid package shall include, but are not limited to the following documents:

- Project Information Sheet
- Location Map

- Scope of Work
- Engineer's Estimate
- Index of Plan Sheets
- Part D Schedule of prices (In Word Format)
- Part G Special provisions
- Index of Technical Provisions
- Part H Technical Provisions
- Permits
- Construction Plans
- Bid Check List

3.8 Deliverables

Work to be completed under this section by the Consultant shall require the following items to be delivered and accepted by the County:

- Drainage Design Documentation Report
- Roadway Design Criteria Package
- Typical Section Package
- Pavement Design Package
- Bridge Hydraulics Report (BHR)
- 30% Bridge Plans
- 30%, 60%, 90%, and 100% Construction Plans and Engineer's Cost Estimate
- Bridge Concept Report
- Final Construction Plans and Engineer's Cost Estimate
- Roadway Design Documents and Computation Book
- Quantity Computation Book
- Draft Schedule of Prices Technical and Special Provisions
- Final Schedule of Prices Technical and Special Provisions
- Final Electronic Design and Topography Files
- Electronic Bid Document Package
- Load Rating (Form or Report)
- Environmental Consideration Plans
- Mitigation Plans
- Alum Treatment Facility Plans
- Draft Bid Package
- Final Bid Package

3.9 Pay Items

Work to be completed under this section by the Consultant shall be paid for under the following pay items as listed on the Activity and Fee Summary.

- Drainage Design Documentation Report

- Bridge Hydraulics Report (BHR)
- 30% Bridge Plans
- Roadway Design Criteria, Typical Section and Pavement Design Packages
- 30%, 60%, 90%, 100% Construction Plans
- Bridge Concept Report
- Final Construction Plans
- Design Notes and Computations Book
- Quantity Computation Book
- Draft Technical and Special Provisions
- Final Technical and Special Provisions
- 30%, 60%, 90%, 100% and Final Engineer's Cost Estimate
- Electronic Bid Document Package
- Final Electronic Design and Topography Files
 - Load Rating (Form or Report)
 - Environmental Consideration Plans
 - Mitigation Plans
 - Alum Treatment Facility Plans
 - Draft Bid Package
 - Final Bid Package

4.0 Permitting

The Consultant shall prepare all applications and other submittals and provide all environmental services necessary to obtain all permits including Environmental Resource Permits, Army Corps of Engineers Permits, Florida Department of Environmental Protection, FDOT connection permits, N.P.D.E.S. permit package, Florida Fish and Wildlife Conservation Commission, Federal Fish and Wildlife Service, dewatering permits, and any other permits that may be necessary for the construction of the proposed improvements. The Consultant will pay for all permit application fees from out of pocket expenses. The construction plans package shall not be considered complete until all required permits have been received.

4.1 Environmental Permitting

4.1.1 Agency Coordination

The Consultant shall coordinate the environmental permitting effort with the Orange County Project Manager and Public Works Environmental Project Manager. The Consultant shall notify the County Project Manager and Orange County Public Works Environmental Project Manager of all meetings with regulatory agencies to coordinate attendance by County staff. The Consultant shall submit meeting minutes and provide copies of all permit-related correspondence. In addition, the Consultant shall coordinate with County staff including but not limited to the Orange County Environmental Protection Division for any information, which may be relevant to the project design. This coordination shall take place prior to any regulatory meetings.

4.1.2 Wetland Delineation and Agency Field Review

The Consultant shall conduct and identify wetlands in accordance with all applicable State and Federal Regulations. A minimum of three (3) Seasonal High Water Table Elevations (SHWT) shall be established for each wetland. The Consultant shall conduct and coordinate field investigations as necessary with County staff and with the appropriate regulatory agencies. The consultant shall provide meeting minutes and field notes to County Environmental Project Manager.

4.1.3 Wetland Mitigation (Limiting Amount)

If wetland impacts cannot be avoided, the Consultant shall coordinate with the County and investigate mitigation alternatives including the following, as appropriate:

- Payment to DEP/WMD per acre of wetlands impacted as defined in CH 373.4137 FS
- Monetary participation in regional offsite mitigation area (ROMA) and/or a private mitigation bank
- Creation/restoration/preservation on private or County owned lands

The Consultant shall coordinate with County personnel prior to approaching any environmental permitting or review agency. In the event that physical creation, restoration or preservation is the only feasible alternative to offset wetland impacts, the Consultant shall collect all of the data and information necessary to prepare alternative mitigation concepts. The alternative mitigation concepts may be presented to the permitting agencies and commenting agencies that are processing or reviewing a permit application for this project.

Prior to selection of a final mitigation site, the Consultant will provide as necessary and evaluate the following, in the development of alternative mitigation concepts:

- Wetland jurisdictional determination for each proposed site
- Preliminary geotechnical and survey data to substantiate each design alternative
- Construction and ROW cost estimations for each proposed site
- Contamination Screening Evaluation for each site
- Coordination of alternative sites with the County and affected environmental agencies

The Consultant shall prepare and submit a written Alternative Wetland Mitigation Concepts Report, listing potential sites with justifications for those recommended and non-recommended. The County shall review this report and make the final determination as to the recommended mitigation alternative.

4.1.4 Threatened and Endangered Species (Limiting Amount)

The Consultant shall review the Threatened and Endangered Species Study to familiarize himself with the location and extent of any protected species (plant and animal species listed by state and federal agencies as threatened, endangered or species of special concern).

The Consultant shall also:

- Review occurrence records, GIS Data Bases, and other records from the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC) and any other generally accepted source for the potential presence of protected species.
- Conduct qualitative site reviews of the project area to verify the presence of protected species and/or critical habitats.
- Conduct quantitative population surveys for those protected species confirmed within the project area following methodologies approved by the USFWS, FFWCC, or other regulatory agencies having jurisdiction.
- Prepare a Protected Species Management Alternatives Report which shall discuss the results of preliminary species evaluations and population surveys, regulations affecting each species, potential affect of the project upon each species, potential impacts to the project and a discussion of available and acceptable management alternatives, including but not limited to monitoring the species during construction or obtaining a permit to relocate the species.
- Prepare a final Protected Species Management Plan, which shall be suitable for submittal to the appropriate State and Federal review agencies. This shall address specific Management approaches to be used to address unavoidable impacts. It shall include all additional investigations, maps or other documentation needed to support permitting of the unavoidable impacts.
- Update the Threatened and Endangered Species Survey and Management Plan which shall be performed 90 days prior to the start of construction.
- Gopher Tortoise Live Capture and Off-Site Relocation
 - The Consultant shall provide a Registered Gopher Tortoise agent certified to survey, permit, and relocate by both mechanical and bucket trapping.
 - The Consultant shall perform the following:
 - Coordination with the FFWCC, backhoe operator, recipient site representative, and the County to schedule excavation, relocation of gopher tortoises.
 - Provide personnel and equipment (including a hydraulic backhoe and operator) necessary to excavate gopher tortoises burrows and live capture gopher tortoises from the area proposed for development.
 - Transport the gopher tortoises to an approved long-term protected, off-site location (recipient site) for release. Payment of the recipient site fees will be responsibility of the County.
 - Prepare and submit to the FFWCC an Off-Site Gopher Tortoise Relocation After Action Report.
- The Consultant shall conduct wildlife surveys as defined by rules or regulations of any permitting agency, or commenting agency that is processing a DEPARTMENT permit. This information shall be utilized for determination of appropriate wildlife crossings.

4.2 Other Permitting Agencies

The Consultant shall be responsible for obtaining all other permits required to construct the proposed improvements. These permits may include FDOT, CFX, SHPPO, FAA, GOAA, FDEP, FFWCC, FWS, dewatering permits, local agencies (i.e. City of Orlando) etc. The Consultant is responsible for coordination with these agencies early on to confirm the permitting process and the agency's criteria. This shall also include preparation of all necessary documents to secure the permit.

4.3 Preparation and Submittal

The Consultant shall prepare and submit all necessary permits. Copies of all permit packages will be provided to the County for review and comment prior to submittal. It is anticipated that permit preparation shall include one or more Requests for Additional Information (RAI) from the permitting agencies. The Consultant shall prepare an N.P.D.E.S. Stormwater Pollution Prevention Plan, which will satisfy the requirements, at the time the permit application is submitted, of the FDEP. The Stormwater Pollution Prevention Plan shall be included in the Technical Provisions.

4.4 Renewals and Extensions

Permit fee renewals and extensions, as necessary, shall be paid for under Post Design Services.

4.5 Additional Permit Requirements (Limiting Amount)

The Consultant shall conduct surveys and prepare legal descriptions and sketches and survey drawings as necessary to address permit conditions. These shall include the following as necessary:

- Conservation/mitigation easements
- Releasing of an existing conservation easement
- Sovereign/submerged lands leases/easements

4.5.1 Site Evaluation Report

The report shall include a search of all applicable databases to determine if a contaminated site is adjacent to the project, results from water and soil testing, and potential impacts to the project and a recommendation of how to handle any possible contamination that may effect the project.

The Consultant shall also perform the following:

- Install monitoring wells in accordance with all rules and regulations to test groundwater as required under the FDEP NPDES groundwater permitting requirements.
- Abandon all monitoring wells in accordance with all rules and regulations.
- Perform soil testing in accordance with all rules and regulations.

4.6 Deliverables

Work to be completed under this section by the Consultant shall require the following items to be delivered and accepted by the County:

- Water Management District/ACOE Permit Package/FDEP Permit Package
- Alternative Wetland Mitigation Concepts Report
- FDOT Permit Application Package(s)
- N.P.D.E.S. Stormwater Pollution Prevention Plan Package
- Special Permit Documents (Surveys)
- Dewatering Permits
- Threatened and Endangered Species Reports and After Action Report (if applicable)
- Site Evaluation Report and FDEP Contaminated Groundwater Permit (if applicable)

4.7 Pay Items

Work to be completed under this section by the Consultant shall be paid for under the following pay items as listed on the Activity and Fee Summary:

- Water Management District/ACOE Permit Package/FDEP Permit Package
- Alternative Wetland Mitigation Concepts Report
- FDOT Permit Application Package(s)
- N.P.D.E.S. Stormwater Pollution Prevention Plan Package
- Permit(s) Issuance
- Special Permit Documents (Survey) Limiting Amount
- Dewatering Permits
- Threatened and Endangered Species Reports and After Action Report (if applicable)
- Site Evaluation Report and FDEP Contaminated Groundwater Permit (if applicable)

5.0 Right-of-Way Engineering for Survey Projects

Right-of-Way Engineering services shall begin immediately upon issuance of the Notice to Proceed by the County, and shall be conducted on an expedited schedule. The County will provide the Consultant with title searches on each parcel identified on the Parcel Identification Map as furnished by the County. The title work will be provided to the Consultant at the Notice to Proceed meeting or as specified by the Project Manager. All survey work shall meet the requirements of Chapter 472, Florida Statutes and Chapter 5J-17, Florida Administrative Code.

The Consultant shall not deviate from the alignment and right-of-way limits per from the Scope of Services as provided by the County. Any deviations must be justified by the Consultant and approved by the Project Manager.

5.1 Right-of-Way Mapping

The Consultant shall prepare right-of-way maps/miscellaneous surveys for the entire project area at a scale of 1" = 40' on half size (11 inches x 17 inches) or at a scale approved by the

Project Manager. Right-of-way mapping services shall conform to the most current version (at the time of the Notice to Proceed) of the Orange County Procedures for Right-of-Way Engineering, a copy of which will be provided to the Consultant. The Consultant shall analyze each proposed acquisition to identify the appropriate property interest to be acquired (fee simple right-of-way, drainage easement, fill slope easement, temporary construction easement, temporary demolition easement, etc.). The Consultant shall submit 30%, 60%, 90% and 100% progress review submittals of the right-of-way maps in 11 inches x 17 inches formats, as well as electronic copies in AutoCAD and PDF format as requested by the County.

Each submittal of right-of-way maps/miscellaneous surveys, legal descriptions and parcel sketches shall implement the information items listed in the appropriate Orange County Procedures for Right-of-Way Engineering checklist. A copy of the appropriate checklist shall accompany each submittal with a certification signed by the Consultant's Project Manager and the Surveyor of Record certifying that the submittal completely addresses the required items as listed on the checklist.

Prior to submittal of the 60% right-of-way maps, the baseline of survey and/or the centerline of construction shall be the same line and approved by the Project Manager. From that time on, only the centerline of construction shall be shown on the right-of-way maps/miscellaneous surveys and construction plans, if required.

The Consultant shall update and modify legal descriptions and parcel sketches, right-of-way maps/miscellaneous surveys and construction plans in a timely manner to reflect changes in proposed acquisitions resulting from right-of-way acquisitions, negotiations and litigation. After approval of the 100% right-of-way maps/miscellaneous surveys modifications shall be addressed in accordance with Section 5.5.

5.2 Parcels

5.2.1 Review of Title Work

The Consultant shall review the title work provided by the County, supplemental surveys and investigations performed by the Consultant and/or other record information. The size, location, and dimensions of each parent tract, parcel and property interest s and encumbrances (easements, leases, etc.) shall be determined by the Consultant from this review. This information shall be shown on the right-of-way maps/miscellaneous surveys and parcel sketches, as appropriate. Recorded and Unrecorded easements shall be shown to the extent they can be identified and located on the right-of-way maps/miscellaneous surveys and parcel sketches.

5.2.2 Legal Descriptions and Parcel Sketches

The Consultant shall have a licensed Professional Surveyor and Mapper prepare legal descriptions and parcel sketches for each parcel as necessary in accordance with the previously described Orange County Procedures for Right-of-Way Engineering. A draft of each legal description and parcel sketch for every parcel shall be submitted prior to the 90% right-of-way maps, if required. If any parcels are added or modified prior to the 100% right-of-way map submittal, the Consultant shall submit the legal descriptions and

sketches of the modified parcels with revisions to the right-of-way maps showing the modifications. The signed and sealed final Parcel Sketches and Legal Descriptions shall be submitted upon request by the County for use in parcel acquisitions, but not later than with the submittal of the 100% Right-of-Way Map.

5.2.3 Parcel Staking for Appraisal (If Required)

The Consultant shall have a licensed Professional Surveyor and Mapper stake the limits of acquisition on each parcel in preparation for appraisals. The timing and method of marking the acquisition limits shall be as directed by the Project Manager.

5.3 Map of Survey; Right-of-Way Surveys, Boundary Surveys, Specific/Miscellaneous Surveys and Control Surveys

The Consultant shall have a licensed Professional Surveyor and Mapper conduct field surveys to supplement the field survey data that is provided to the Consultant. All surveying and mapping work performed for the County will be in accordance with Chapters 177 and 472, 5J-17 in conjunction with Florida Standards of Practice for Surveyors and Mappers. All survey information shall conform to the most current version of the Orange County Procedures for Right-of-Way Engineering, and shall be recorded in a cross section field book that has 10 columns by 10 rows per inch on both pages supplied by the Consultant. The field book remains the property of the County, and must be submitted with the Final Right-of-Way Map/miscellaneous surveys and be Signed and Sealed. When a data collector is used, the Consultant shall submit a paper copy of the raw data files and coordinate data files bound in a book, together with the electronic copy on a disk. All Right-of-Way computations and field work shall be documented in a binded book, which shall be submitted to the Project Manager with the Survey Field Notes, State Plane Coordinate file, adjusted bench run and Final Map of Surveys such as right-of-way maps, boundary surveys and/or specific/miscellaneous surveys, dated and signed by the Professional Surveyor and Mapper

The Consultant shall have a licensed Professional Surveyor and Mapper monument the center line of construction at stations that are not more than 600 feet apart and at all P.C.'s, P.T.'s, side street intersections, and changes in direction. Stationing shall be marked in the field. Similar monumentation and markings shall be provided at all side streets to 150 feet beyond the limits of the topographic survey or at other locations as approved by the Project Manager. The centerlines of construction shall be referenced to permanent monumentation located outside the limits of construction at the beginning and end of project, all P.C.'s and P.T.'s, all changes in direction, and intermediate points such that referenced points are spaced not more than 600 feet apart. Horizontal control, as stated above shall be tied to the Florida State Plane Coordinate System, North American Datum of 1983/1990 Adjustment East Zone and shall be shown on the Map of Survey for right-of-way surveys, boundary surveys, and specific/miscellaneous surveys.

5.4 Minimization of Compensable Impacts (If Required)

The Consultant shall coordinate with Orange County Right of Way Acquisition Section as early as possible in the design phase of the project to review the design corridor and make the necessary revisions to the design to minimize compensable impacts to private properties. The

Consultant shall also identify and evaluate alternatives to right-of-way acquisition (e.g., retaining walls instead of fill slope easements, closed drainage system instead of ditch systems, etc.) to determine the most cost effective way to meet the project needs.

The Consultant shall perform the following services during this phase:

- Meet as necessary with the Orange County Right of Way Acquisition Section and property owners.
- Perform site inspections of properties together with the Orange County Right of Way Acquisition Section as may be necessary to evaluate the potential for minimization of compensable impacts. Coordinate with the Orange County Right of Way Acquisition Section to identify compensable impacts and evaluate cost effective ways to reduce compensable impacts to the greatest extent possible.
- Consult with the Orange County Right of Way Acquisition Section during the design process and fully address any right-of-way review comments provided.

During this phase the Consultant and the County shall inspect affected properties in the field to determine the extent of compensable impacts on each parcel, and whether such impacts can be reduced in a cost-effective manner. The Consultant shall at a minimum consider site access, onsite drainage, onsite parking, onsite utilities, including septic systems, and any other existing facilities impacted by the proposed improvements. This effort shall include meetings with property owners to obtain their input on the configuration of the proposed improvements in those cases where various options exist. The Consultant shall modify the design, where possible, to minimize the number and extent of such compensable impacts, and to accommodate the property owner preferences where appropriate.

The Consultant shall document the above-described investigations and their findings and recommendations. This work should occur early in the design process and prior to completion of 60% plans.

The Consultant shall meet with all property owners where the proposed right-of-way exceeds the limits shown on the Right-of-Way Identification Maps prepared during Phase I.

5.5 Changes to Documents during Right-of-Way Acquisition

There shall be a limiting amount in this contract to cover work required due to right-of-way acquisition or other developments. This work shall include, but not limited to changes to construction plans (beyond the normal design process as agreed to by the County), right-of-way maps, legal descriptions and parcel sketches. It will also include staking parcels at the County's request (in addition to the parcel staking for appraisals), attendance at Order of Taking Hearings, Mediations and Settlement Conferences, and responding to questions posed by the County from property owners and property owners' representatives and experts. This work may be required at any time during the contract at the request of the County. It will be billed on an hourly basis, as approved by the Project Manager. The limiting amount shall include hourly rates for the consultant and all applicable sub-consultants including, but not limited to, surveyor, drainage engineer and environmental staff.

5.6 Deliverables

Work to be completed under this section shall require the following items to be certified, signed/sealed, delivered and accepted by the County:

- Right-of-Way Maps (30%,60%, 90%, 100%, and Final)/miscellaneous surveys
- Parcel Legal Descriptions and Sketches (Draft and Final) (If Required)
- Right-of-Way Survey Field Books and electronic AutoCAD files.
- Right-of-Way Computation Book (Raw Data Files, Coordinate data files, Benchmarks, etc.)
- Parcels staked for appraisal
- Updated/Modified documents during right-of-way acquisition

5.7 Pay Items

Work to be completed under this section by the Consultant shall be paid for under the following pay items as listed on the Activity and Fee Summary:

- Right-of-Way Maps (30%, 60%, 90%, 100%, and Final)/miscellaneous surveys.
- Parcel Legal Descriptions and Sketches (Draft and Final) (If Required).
- Right-of-Way Survey Field Books and electronic AutoCAD files.
- Right-of-Way Computation Book (Raw Data Files, Coordinate Data Files, benchmarks, Etc.)
- Parcels staked for appraisal
- Changes to documents during right-of-way acquisition (Limiting Amount)
- Subsurface Utility Locations
- Boring Locations
- Recordation of Right-of-Way Maps with the Orange County Comptroller Office (Required, to be Recorded and paid by Consultant)

6.0 Design Survey Services

The Consultant shall have a licensed Professional Surveyor and Mapper conduct field surveys as necessary to support the design of the project. These surveys shall include, but not be limited to, horizontal and vertical control surveys and topographic surveys of the roadway alignment and adjacent areas and retention ponds, mitigation areas, wetland, jurisdictional limits, environmentally sensitive areas, flood plain compensation areas, or other areas where information is needed to support the design and permitting of the project.

Controlled aerial photography or other data collection methods may be used to collect topographic information as approved by the Project Manager. When aerial photography is used the Consultant shall provide all necessary control and shall document the setting of targets and collection of other control information as required above.

All such survey information will be recorded in a cross section field book that has 10 columns by 10 rows per inch on both pages supplied by the Consultant. The field book remains the property of the County, and must be submitted with the Final Construction Plans, if required.

When a data collector is used, the Consultant shall submit a paper copy of the raw data files and coordinate data files bound in a book, together with an electronic copy on a disk.

All survey work shall meet the requirements of Chapter 472, Florida Statutes, and Chapter 5J-17, Florida Administrative Code, and shall provide sufficiently detailed information to meet the design requirements of the project. Survey data shall be sufficient to establish drainage basins, address localized drainage issues within and adjacent to the project limits, and include all areas as necessary to address project design considerations.

6.1 Horizontal Control and Monumentation

The Consultant shall monument the center line of construction at each 600-foot station and at all P.C.'s, P.T.'s, side street intersections, and changes in direction. Stationing shall be marked in the field. Similar monumentation and markings shall be provided at all side streets to one hundred fifty (150) feet beyond the limits of the topographic survey. The center line of construction shall be referenced to permanent monumentation located outside the limits of construction at the beginning and end of project, all P.C.'s and P.T.'s, all changes in direction, and intermediate points such that referenced points are spaced not more than six hundred (600) feet apart. Horizontal control shall be tied to the Florida State Plane Coordinate System, North American Datum of 1983/1990 Adjustment East Zone and either shown graphically or in tabulation format on the Right of Way Maps/miscellaneous surveys and Survey Control Sheet(s).

6.2 Vertical Control and Monumentation

All vertical control shall be based on NAVD 1988 datum, and shall be established from at least two (2) Orange County benchmarks or NGS marks. Permanent benchmarks shall be set outside the limits of construction. The location of benchmarks shall be approximately 600 feet apart and coordinated with the design such that a minimum of two benchmarks are identified on each sheet of the construction plans. Features that may be moved/adjusted in the future (e.g., utility poles, fire hydrants, etc.) shall not be used for benchmarks. Preferred locations include, but not limited to concrete drop inlets, concrete curb inlets, concrete headwalls, etc. or other permanent structures as approved by the County Surveyor or his/her agent.

6.3 Survey Control Sheet(s)

The Consultant shall prepare Survey Control Sheet(s) for inclusion in the Construction plans. The survey control sheet(s) shall identify and show the location and type of all horizontal control points, reference points (three (3) outside of proposed right-of-way limits) and benchmarks. Details shall be included as necessary to clarify the relationship of monumentation and project control lines. The survey control sheet(s) shall be signed and sealed by a Professional Surveyor and Mapper registered in the State of Florida, and shall conform to the requirements of Chapter 5J-17 of the Florida Administrative Code. The Survey Control Sheet(s) shall also include, but not limited to the following:

- The complete centerline alignment data, including beginning of survey station, all curve data, P.C.'s, P.T.'s, side street intersections, changes of directions, all intermediate control point stations, and end of survey station must be shown. All control points must be identified as to type of material set and/or found at each respective point.

- All section lines, all quarter section lines, (and all quarter-quarter section lines when pertinent) must be shown with the station where their intersection with the centerline or baseline of survey occurs, a distance from the nearest corner to the centerline, and bearings and distances to all corners. The type of corner, found or set, shall be spelled out or identified by a legend.
- Centerline data will be referenced to State Plane Coordinate System, and labeled on the Survey Control Sheet(s) using North American Datum of 1983/1990 adjustment (NAD83/90) East Zone and shown on the Survey Control Sheet(s) either in tabular format or placed on the survey alignment.
- All Centerline Control points shall have a minimum of 3 reference points outside the limits of construction and shall be shown on the Survey Control Sheet(s).
- All Benchmarks shall be shown both in graphic and note form on the Survey Control Sheet(s).

6.4 Vertical Data

Vertical data shall be of sufficient accuracy to support the development of profiles and/or cross sections at intervals not exceeding 50 feet, including, but not limited to the main line roadway, side streets, drainage ways, retention ponds, etc. Check cross sections shall be measured at appropriate intervals, but no less than every 1000 feet.

6.5 Pay Items

- Control Survey
- Design Survey
- Design Survey Field Books and/or raw data files hard copies and electronic copies
- Design survey Computation Book
- Subsurface utility locations
- Boring locations
- Wetland Designation and Locations

6.6 Deliverables

- Control Survey
- Design Survey
- Design Survey Field Books and/or raw data files hard copies and electronic copies
- Design Survey Computation Book
- Subsurface utility locations
- Boring locations
- Wetland Designation and Locations

7.0 Geotechnical Services

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The Consultant shall be responsible for a complete geotechnical investigation. All work performed by the Consultant shall be in general accordance with the Florida Department of Transportation Soils and Foundation Handbook and other applicable standards, or as otherwise described in this scope of services. Any changes regarding geotechnical standards, policies and procedures shall be discussed on a project-by-project basis. The Consultant shall be responsible for obtaining any permits needed to perform the work. The County will assist in obtaining property owner permission to perform the necessary geotechnical fieldwork.

7.1 Data Collection

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

7.2 Roadway

The Consultant shall be responsible for coordination of all geotechnical related fieldwork activities. The Consultant shall retain all samples until Final Plans are submitted.

7.2.1 A preliminary roadway exploration shall be performed before the 30% plans submittal. The preliminary roadway exploration will be performed and results provided to assist in setting roadway grades and locating potential problem areas. Boring frequency shall be one every ____ feet. Borings shall be of sufficient depth to determine seasonal high water elevation and other critical geotechnical features. The preliminary auger borings shall be surveyed for use in the final design.

Pavement cores shall be obtained in areas to be milled and resurfaced, and specifically at the following locations:

-
-
-

7.2.2 The final roadway exploration shall include one auger boring every 200 feet to a depth of 5 feet. The borings shall be extended to 20 feet every 600 feet along the roadway. Boring depths shall be adjusted to accommodate roadway cuts and utility excavations. Additional _____ borings or muck probes shall be performed in suspected muck areas to evaluate the extent of organic soils.

Standard Penetration Test (SPT) borings shall be performed every 400 feet in high fill embankment areas (i.e., fill greater than about 10 feet). SPT boring depths shall be to 1.5 times the fill height. Undisturbed samples of compressible materials such as muck, peat, clay or silt shall be obtained for use in consolidation testing for settlement analysis.

Routine soil classification shall be performed on representative samples obtained from the borings. These tests typically include grain size analysis, percent fines, Atterberg limits, organic content and moisture content. Additional bulk samples of representative soils encountered along the alignment shall be collected for Limerock Bearing Ratio (LBR) and corrosion testing. All laboratory testing and classification shall be performed in accordance with applicable AASHTO or ASTM standards.

7.3 Stormwater Systems

The Consultant shall evaluate subsurface conditions in proposed stormwater systems. For stormwater ponds, two auger borings to a depth of 20 feet below the bottom of the proposed pond elevation shall be performed per acre of pond. One field permeability test per acre of pond shall also be provided. One auger boring to a depth of 20 feet shall be performed every 500 feet for exfiltration trenches and treatment swales. One field permeability test or Double Ring Infiltrometer (DRI) test shall be performed every 500 feet.

Two auger borings per acre shall be performed in proposed floodplain compensation areas and mitigation areas to a depth below the proposed lowest elevation in those areas.

The Consultant shall provide an analysis of stormwater volume recovery through infiltration or background see page analysis as required.

7.4 Structures

SPT borings shall be performed at bridge structures to evaluate foundation alternatives. Borings shall be performed at end bent and intermediate bent locations. Borings for intermediate bents shall be no further apart than one every ___ feet. Borings shall be of sufficient depth to determine a bearing layer for pile foundations and are expected to be ___ feet deep. SPT borings shall be sampled on two-foot centers to 10 feet and at five-foot centers thereafter to the termination depth.

7.5 Special Geotechnical Investigations

This shall include box culverts, signals, overhead signs and retaining walls. A minimum of two SPT borings shall be performed to a depth of 30 feet at each box culvert location. Box culverts are anticipated at the locations listed in Section 3.3.5.1.

Borings shall also be drilled to a depth of 30 feet at the mast arm pole locations listed in Section 3.3.5.3.

SPT borings shall be performed 40 feet deep at each overhead cantilever or truss sign location. Overhead signs are anticipated at the locations listed in Section 3.3.5.2.

SPT borings shall be performed every 200 feet along retaining wall alignments to a depth equal to 2 times the wall height. The borings shall be sampled on two-foot centers to ten feet and at five-foot centers thereafter to the termination depth. Retaining walls are anticipated at the locations listed in Section 3.3.3 and 3.3.4.

7.6 Contamination Evaluation

The Consultant shall determine the location and extent of soil and groundwater contamination within the project limits, and shall avoid or minimize impacts to contaminated areas to the extent possible.

7.6.1 Contamination Screening Evaluation Report Update (CSER)

The Contamination Screening Evaluation Report prepared during the Roadway Conceptual Analysis shall be updated as requested by the County. The update is intended to obtain and review the most current information about potential contamination impact sites identified in the Roadway Conceptual Analysis Contamination Screening Evaluation Report and to identify any new sites not identified in the original report. The methodology to be used to update the report shall follow ASTM standard 1527-13 or the most current version.

7.6.2 Preliminary Contamination Assessment (PCA)

The Consultant shall perform Preliminary Contamination Assessment on sites identified in the Contamination Screening Report as MEDIUM or HIGH risk for contamination impacts. Soil and groundwater samples shall be obtained from those sites and tested for the presence of contaminant of concern as identified in the report. Based on the Roadway Conceptual Analysis Contamination Screening Evaluation Report, the following sites shall be investigated:

-
-
-

The Preliminary Contamination Assessment investigations shall be performed in such a manner as to detect the contaminants of concern identified in the Contamination Screening Evaluation Report. For petroleum-impacted sites, auger borings with Organic Vapor Analyzer soil screening shall be performed at locations where contamination is most likely. A laboratory shall test soil samples with high Organic Vapor Analyzer readings. Groundwater samples shall be obtained and analyzed for the contaminants of concern using testing protocols approved by the Florida Department of Environmental Protection. If appropriate, geophysical methods such as Ground Penetrating Radar or Magnetometer surveys shall be performed to look for unknown buried fuel storage tanks or other buried objects of concern such as sumps, pits, etc. All field and sampling activities shall conform to Florida Department of Environmental Protection requirements. A Florida Department of Health approved laboratory shall perform all laboratory analyses. Prior to drilling any borings or installing/obtaining groundwater samples, the location of underground utilities shall be determined and sampling locations cleared in accordance with local regulations.

The County shall assist the Consultant in obtaining access onto private property as necessary to conduct the Preliminary Contamination Assessments.

The approximate area of potential construction contamination impacts shall be crosshatched on the plan view of the roadway and labeled as “Approximate Limits of Potential Contamination Area.” The following issues shall be addressed in the plans, details and/or specifications:

- Type of contamination.
- Specific Contractor responsibilities (dewatering, disposal of contaminated soils, etc).
- Special permitting requirements and constraints.

7.7 Geotechnical Reports

7.7.1 Roadway Soil Survey Report

The Consultant shall submit a preliminary Roadway Soil Survey Report with the 60% plans and a final report with the 90% plans. The preliminary and final Roadway Soil Survey Reports shall include the following:

- Copies of U.S.C.G.S and S.C.S. maps with project limits shown.
- A report of tests sheet (i.e. Roadway Soil Survey sheet) that summarizes the laboratory test results, the soil stratification (i.e., soils grouped into layers of similar materials) and construction recommendations relative to FDOT Standard Plans 120-001 and 120-002.
- Data interpretation and analysis including a Design LBR, seasonal high groundwater levels for roadway base clearance, aquifer parameters for stormwater systems and volume recovery analysis, limits of unsuitable material and removal recommendations, magnitude and time rate of embankment settlement, calculation of factor of safety for embankment slope stability, and embankment construction recommendations.
- Determination of seasonal high water shall consider proposed improvements impacting existing hydrological features, and identifying impacts to adjacent properties, including existing septic systems.
- 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.

7.7.2 Bridge Foundation Report

The Consultant shall submit preliminary and final Bridge Foundation Reports. The preliminary Bridge Foundation Report shall include the following:

- Copies of the U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, U.S.G.S., S.C.S., geologic and potentiometric data.
- Data interpretation and analysis including soil and rock classification, design groundwater level for structures, evaluation and selection of foundation

alternatives such as spread footings, pre-stressed concrete piling, steel H and pipe piles and drilled shafts.

- Soil D₅₀ values for scour calculations.
- Soil and/or water corrosion data for substructure environmental classification.
- An Appendix which includes SPT boring 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.

The detailed analysis and basis for the selected foundation alternative shall include the following:

- For pile and drilled shaft foundations, provide graphs of ultimate axial soil resistance versus tip elevations. Scour resistance and/or downdrag (negative skin friction) shall be calculated, if applicable.
- Provide the design soil profile(s), including the soil model/type of each layer and all soil-engineering properties required to run the FBPIer computer program. Review lateral analysis of the selected foundation for geotechnical compatibility.
- Bearing capacity for shallow foundations (including soil bearing capacity, minimum footing width, and minimum embedment depth) shall be given.
- The maximum driving resistance anticipated for pile foundations shall be estimated.
- Settlement analysis of foundation systems shall be provided.

In addition to the information included in the preliminary Bridge Foundation Report, the final Bridge Foundation Report shall include the following:

- A detailed analysis of the foundation system selected in the BCR, including test pile lengths, scour resistance, downdrag, minimum tip elevation, etc.
- Recommendations for foundation installation, or other site preparation soils-related construction considerations.
- Special provisions required for construction that are not addressed in the FDOT Standard Specifications.

7.7.3 Miscellaneous Structure Foundation Report

The Consultant shall prepare a Miscellaneous Structure Foundation Report to cover traffic signal and sign supports, box culverts and walls. The report shall include the following:

- Copies of U.S.C.G.S. and S.C.S maps with project limits shown.
- A summary of structure background data, U.S.G.S., S.C.S, geologic and potentiometric data.

- Data interpretation and analysis including design soil profiles(s) that include the soil model/type of each layer and all soil properties required for foundation design, lateral earth pressure coefficients, estimated differential and total (long term and short term) settlements, wing wall stability evaluation, external stability of conventional and retained earth wall systems, soil parameters used in analysis for retained earth wall systems and minimum soil reinforcement lengths versus wall heights, sheet pile wall analysis, and a review of the design for geotechnical compatibility and constructability.
- Recommendations for foundation installation, or other site preparation soils related construction considerations.
- An Appendix which includes SPT boring 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, and any other pertinent information.

7.7.4 Updated Contamination Screening Report

The updated Contamination Screening Report shall identify all potential contamination impact sites and shall rank them with their risk potential. A discussion of the available information about the contamination issues at each site shall be provided. Recommendations for further Preliminary Contamination Assessment evaluation shall be made.

7.7.5 Preliminary Contamination Assessment Report

The Preliminary Contamination Assessment Report shall fully describe the contamination concerns at each site, and shall discuss the sampling and testing methodologies used and the findings. The following information shall be presented in the report:

- Site location map on an aerial photo background
- Background information relative to known or suspect contamination issues (e.g., plume maps, groundwater flow direction maps, etc.)
- Sampling and testing locations map
- Sampling and testing results
- Conclusions relative to contamination impacts affecting the project, including potential costs during construction

7.8 Deliverables

- Roadway Soil Survey Report (Preliminary and Final)
- Bridge Foundation Report (Preliminary and Final)
- Miscellaneous Structures Foundation Report
- Updated Contamination Screening Evaluation Report
- Preliminary Contamination Assessment Report

7.9 Pay Items

- Fieldwork, lab analysis and engineering
- Roadway Soil Survey Report (Preliminary and Final)
- Bridge Foundation Report (Preliminary and Final)
- Miscellaneous Structures Foundations Report
- Updated Contamination Screening Evaluation Report
- Preliminary Contamination Assessment Report

8.0 Railroad Coordination

This project includes (expansion of an existing at-grade railroad crossing **or** (grade separated railroad crossing) **or** (a new railroad crossing) with the _____ Railroad. The Consultant will be responsible for all coordination with the _____ Railroad, including preparation of all documentation as necessary to secure the FDOT railroad crossing permit and/or Railroad agreements. The following activities may be necessary:

- Confirmation of railroad criteria as may affect the project.
- Coordinate signal interconnects with Railroad.
- Meetings and miscellaneous coordination with the _____ Railroad and existing utilities within the railroad right-of-way.
- Preparation of studies as may be necessary to support the project design (at-grade crossing versus grade-separated, reference Florida Administrative Code Section 14-57).
- FDOT permit application preparation and follow-up as necessary where applicable.
- Inclusion of agreement conditions into plans, specifications and/or technical provisions.
- Pipeline and/or wireline crossing agreements.

Orange County shall execute permits and agreements and shall pay any fees associated therewith. It is anticipated the _____ Railroad will prepare the design of all facilities to be owned by the Railroad.

8.1 Deliverables

- FDOT permit application.

8.2 Pay Items

- FDOT permit application.
- Meetings
- Railroad coordination.

9.0 Post Design Services

The Consultant shall provide engineering support as necessary which includes, but is not limited to, the following:

- **Shop Drawing Review**

The Consultant shall provide engineering services to complete a shop drawing review for bridge and structural component submittals.

- **Construction Administration**

The Consultant shall provide engineering services during the construction of the project as requested by the County. The Consultant may be required to attend a Pre-Bid Construction Meeting, the Pre-Construction Conference, or any other meeting requested by the County.

- **Modification of Final Construction Plans**

The Consultant shall update and modify the final Construction Plans as may be necessary to reflect changes in proposed improvements identified after submittal of the 100% plans. The consultant shall provide signed and sealed copies of the updated final construction plans. Additional signed and sealed copies of the final construction plans, or portions thereof, shall be provided during the completion of the right-of-way acquisition process, as requested by the County. Plans may require revisions until the completion of the right-of-way acquisition process.

- **Permit renewals and extensions**

The Consultant will be responsible for renewals and extensions of the permits as requested by the County.

- **Pay Items**

- Post Design Services

TABLE OF DELIVERABLES

1.0 Administration

<i>Final Design Project Schedule – Paper, Digital File & pdf File</i>	<i>3/1/1 Copies</i>
<i>Construction Time Estimate – Paper, Digital File & pdf File</i>	<i>3/1/1 Copies</i>
<i>Workshop Review Meeting Minutes Paper, pdf file</i>	<i>1/1 Copies</i>

2.0 Public Involvement

<i>Public Involvement Plan – Paper, Digital File & pdf File</i>	<i>3/1/1 Copies</i>
<i>Small Group Meeting Materials</i>	<i>As required</i>

3.0 Design and Plans Preparation

<i>Preliminary Drainage Calculations – Paper & Digital pdf File</i>	<i>3/1 Copies</i>
<i>Final Drainage Calculations (Signed & Sealed& pdf File)</i>	<i>3/1 Copies</i>
<i>Roadway Design Criteria Package (Paper & pdf File)</i>	<i>3/1 Copies</i>
<i>Typical Section Package (Paper & pdf File)</i>	<i>3/1 Copies</i>
<i>Pavement Design Package (paper & pdf File)</i>	<i>3/1 Copies</i>
<i>30%, 60%, 90% & 100% Cost/Engineers Estimate – Paper</i>	<i>3 Copies</i>
<i>Final Cost/Engineers Estimate – Paper, Digital File& pdf File)</i>	<i>3/1/1 Copies</i>
<i>Design Notes and Computation Book</i>	<i>3 Copies</i>
<i>Quantity Computation Book</i>	<i>3 Copies</i>
<i>Draft Schedule of Prices and Technical and Special Provisions – Paper & MS Word File</i>	<i>3/1 Copies</i>
<i>Final Schedule of Prices Technical and Special Provisions – Paper & MS Word File</i>	<i>3/1 Copies</i>
<i>Electronic Bid Document Package</i>	<i>1 Copy</i>
<i>Final Electronic Design and Topography files (ACAD 2010 & Microstation)</i>	<i>1 Copy</i>
<i>Environmental Consideration Plans-Paper, Digital & pdf File</i>	<i>3/1/1 Copies</i>
<i>Alum Treatment Facility Plans-Paper, Digital & pdf File</i>	<i>3/1/1 Copies</i>
<i>Draft Bid Package – Paper, Digital file,</i>	<i>3/1 Copies</i>
<i>Final Bid Package – Paper, Digital File, pdf File</i>	<i>3/1/1 Copies</i>

3.0 A - Construction Plans

<i>30% Submittal – Paper (11”x17”)/ pdf,</i>	<i>10/1 Copies</i>
<i>60% Submittal – Paper (11”x17”)/ pdf,</i>	<i>13/1 Copies</i>
<i>90% Submittal – Paper (11”x17”)/ pdf,</i>	<i>13/1 Copies</i>
<i>100% Submittal – Paper (11”x17”) / pdf</i>	<i>13/1 Copies</i>

3.0 B - Final Construction Plans

<i>Hard Copy – Paper, 11”x17”</i>	<i>25 Copies</i>
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<i>Hard Copy – Paper, 11”x17”</i>	<i>(Signed and Sealed)</i>	3 Copies
<i>Digital Files – AutoCAD 2010, MicroStation & pdf Files</i>		1 Copy each

4.0 Permitting

<i>Water Management District/ACOE Permit Package/FDEP</i>	1 Copy
<i>Alternatives Wetland Mitigation Concepts Report (Paper & pdf File)</i>	1/1 Copy
<i>FDOT Permit Application Package(s)</i>	1 Copy
<i>RCID Permit Application Package(s) (Paper & pdf File)</i>	1 Copy
<i>N.P.D.E.S. Pollution Prevention Plan (Paper & pdf Files)</i>	3/1 Copies
<i>Special Permit Documents (signed and scaled surveys). If required</i>	3 Copies
<i>Site Evaluation Report (Paper & pdf File)</i>	1/1 Copy

5.0 Right-of-Way Engineering

<i>Sample Format (with list of parcels for each)</i>	1 Copy/Format
<i>Draft Sketches and Legal Descriptions</i>	3 Copies
<i>Final Sketches and Legal Descriptions (Signed and Sealed)</i> <i>(Hard copy, Digital, PDF copy)</i>	7 Copies/Parcel
<i>Right-of-Way Survey Field Books</i>	Original Books
<i>Raw Data Files – Paper</i>	1 Copies
<i>Right-of-Way Computation Book</i>	1 Copies
<i>Parcels Staked in Field for Appraisal</i>	2 Time/Parcel
<i>Minimization of Compensable Impacts Report (Paper & pdf File)</i>	3/1 Copies
<i>Updated/Modified Sketches and Legal Descriptions</i>	7 Copies/Parcel

5.0 A - Preliminary Surveys: Right-of-Way, Boundary, Specific, Miscellaneous

<i>30% Submittal – Paper, 11” X 17” Sized, PDF copy</i>	3/1 Copies
<i>60% Submittal – Paper, 11” X 17” Sized, PDF copy</i>	3/1 Copies
<i>90% Submittal – Paper, 11” X 17” Sized, PDF copy</i>	3/1 Copies
<i>100% Submittal – Paper, 11” X 17” Sized, PDF copy</i>	3/1 Copies

5.0 B - Final Surveys: Right-of-Way, Boundary, Specific, Miscellaneous

<i>Hard Copy – Paper, 11” X 17” Sized (Signed and Sealed)</i>	3 Copies
<i>Digital Files – AutoCAD 2016 & pdf Files</i>	1 Copy each

5.0 - Updated/Modified Surveys: Right-of-Way, Boundary, Specific, Miscellaneous (Each Modification Cycle)

<i>Hard Copy – Paper, 11” X 17” Sized, PDF copy</i>	3 Copies
<i>Hard Copy – Paper, 11” X 17” Sized (Signed & Sealed), PDF copy</i>	3 Copies

6.0 Design Survey Services

<i>Control Survey – paper copies signed and sealed, PDF copy</i>	<i>3 Copies</i>
<i>Design Survey – paper copies signed and sealed, PDF copy</i>	<i>3 Copies</i>
<i>Design Survey Field Books (Signed and Sealed)</i>	<i>All Books</i>
<i>Raw Data Files – Paper</i>	<i>1 Copy</i>
<i>Design Survey Computation Book, if applicable</i>	<i>1 Copy</i>

7.0 Geotechnical Services

<i>Final Preliminary Roadway Soil Survey Report (including ponds and swales)</i>	<i>3 Copies</i>
<i>Roadway Soil Survey Report (including ponds and swales)(S & S)</i>	<i>3 Copies</i>
<i>Miscellaneous Structure Foundation Report</i>	<i>3 Copies</i>
<i>Updates Contamination Screening Report</i>	<i>3 Copies</i>
<i>Preliminary Contamination Assessment Report</i>	<i>3 Copies</i>
<i>Box Culvert Report (If Required) (Signed & Sealed)</i>	<i>3 Copies</i>
<i>Mast Arm Signal Pole Report (Signed & Sealed)</i>	<i>3 Copies</i>
<i>Retaining Walls Report (Signed & Sealed)</i>	<i>3 Copies</i>

EXHIBIT B

Contract: Y22-900-A

**Project Description – Continuing Professional Engineering Design Services
Florida Engineering Group, Inc.**

Rate Wage Data

As Requested, the following is our information regarding overhead multipliers and personnel hourly rates for projects with Orange County. There rates will be used throughout the duration of the Contract:

Base Rate	100%
Overhead & Fringe Benefits	99.48%
Subtotal	199.48%
Profit (12%)	23.94%
Overall Multiplier	<u>2.23</u>

Classification	Basic Hourly Rate	Overall Multiplier	Billable
Project Manager	\$57.69	2.23	\$128.65
Sr. Project Engineer	\$72.10	2.23	\$160.78
Project Engineer	\$51.44	2.23	\$114.71
Sr. Cad Technician	\$34.62	2.23	\$77.20
Admin. Assistant	\$25.58	2.23	\$57.04

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.

Jean Abi Aoun, PE Vice President
Printed Name and Title

Signature

Date: _____

Contract: Y22-900-CH

**Project Description – Continuing Professional Engineering Design Services
Florida Engineering Group, Inc.**

Direct Reimbursables

Photocopies

B/W Copies (8.5 X 11)	\$0.05/page (in-house)
B/W Copies (8.5 X 14)	\$0.15/page (in-house)
B/W Copies (11 X 17)	\$0.35/page (in-house)
B/W Copies (12 X 18)	\$0.50/page (in-house)
Color Copies (8.5 X 11)	\$1.00/page (in-house)
Color Copies (11 X 17)	\$1.50/page (in house)
Color Copies (12 X 18)	\$1.75/page (in-house)

Plan Reproduction

Bond (B&W)	\$.25/sf
Bond (Color)	\$.60/sf
Mylar	\$4.00/sf

Regular Pickup/Delivery (in town)	\$25
Fedex Express Mail (Letter Size)	\$20
Fedex Ground	Actual Cost
Priority Mail	Actual Cost
Certified Mail	Actual Cost
Delivery	\$25
CD Charges	\$5/file up to \$100 \$2/file after \$100



**Re: BFA Fee Quotation Proposal
Orange County Continuing Professional Engineering Design Services
Contract Y22-900-CH**

As requested, the following is our information regarding overhead multiplier and personnel hourly rates for projects with Orange County. These rates will be used throughout the duration of the contract.

Base Rate:	100%
Overhead & Fringe Benefits:	168%
Subtotal:	268%
Profit (12%):	0.30
Multiplier:	3.00 (use capped multiplier as shown below)
Orange County Overall Allowable Multiplier	<u>2.99</u>

Individual classifications for personnel hourly rates are as follows:

Classification	Hourly Rate	Overall Multiplier	Billable Rate
Principal Engineer	\$67.60	2.99	\$202.12
Sr. Surveyor and Mapper	\$50.00	2.99	\$149.50
Surveyor and Mapper	\$45.50	2.99	\$136.05
Survey Technician	\$32.00	2.99	\$95.68
2 Person Survey Crew	\$47.00	2.99	\$140.53
3 Person Survey Crew	\$61.00	2.99	\$182.39
Utility Coordinator	\$27.30	2.99	\$81.63
S.U.E. 2 Person Crew	\$49.00	2.99	\$146.51
S.U.E. 3 Person Crew	\$61.00	2.99	\$182.39

**Survey and Subsurface Utility Engineering (SUE) Field Services
Schedule of Fees**

Item Description	Units	Unit Price
Utility Test Hole Excavation "Soft Dig" (Grass, Dirt areas, etc....)	Each	\$500.00
Utility Test Hole Excavation "Hard Dig" (Concrete, Paved areas, etc....)	Each	\$750.00

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 95.525(3), Florida Statutes.

Sincerely,

Willie E. Thomas, P.E.
President

6/3/2022

Date

**1230 Hillcrest Street • Suite 100 • Orlando, Florida 32803
Office (407) 896-8608 • Fax (407) 896-1822**



Bowman and Blair Ecology and Design, Inc.

Re: Y22-900 – Continuing Professional Engineering Design Services
Subconsultant for Professional Services

As requested, the following is our information regarding overhead multipliers and personnel hourly rates for projects with Orange County. These rates will be used throughout the duration of the Contract:

Base Rate	100%
Overhead & Fringe Benefits	69%
Subtotal	169%
Profit (12%)	0.20
OVERALL MULTIPLIER	<u>1.89</u>

Individual classification for personnel hourly rates are as follows:

Classification	Basic Hourly Rate	Overall Multiplier	Billable
Senior Project Scientist	\$29.15	1.89	\$55.09
Environmental Specialist	\$23.00	1.89	\$ 43.47
CADD Technician	\$22.29	1.89	\$ 42.13

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.

Catherine L. Bowman

(Printed name and title)

(Signature)

6/04/2022

(Date)

**CONTINUING PROFESSIONAL
ENGINEERING SERVICES
CONTRACT #22-900-CH**

**DEVO SEEREERAM, PH.D., P.E., LLC
Billable Rates and Multiplier**

Position Category	Hourly Rate	Multiplier	Billable Rate
Principal Engineer	\$70.00	2.47	\$172.90
Senior Civil Design Engineer	\$60.00	2.47	\$148.20
Senior Geotechnical Engineer	\$55.00	2.47	\$135.85
Senior Field Inspector	\$35.00	2.47	\$86.45
Senior Engineering Technician	\$35.00	2.47	\$86.45
Junior Field Technician	\$31.00	2.47	\$76.57
Senior CADD Designer and Engineer	\$40.00	2.47	\$98.80
Senior-level CADD/GIS	\$35.00	2.47	\$86.45
Junior Graphics Technician	\$31.00	2.47	\$76.57
Senior Administrative Manager	\$35.00	2.47	\$86.45
Administrative Manager	\$31.00	2.47	\$76.57
Clerical/Technical Secretary	\$25.00	2.47	\$61.75

In the most recent reporting period, which consisted of January 1 to December 31 of the year 2021, Devo Seereeram, Ph.D., P.E., LLC had the following multipliers, which are submitted to Orange County to be used on this Contract (See attached Overhead Analysis Statement).

General Overhead Rate	116.33%
Fringe Benefit Rate	8.60%
Fringe + General Overhead Rate	124.93%
Salary + Fringe + General Overhead Rate	224.93%
Profit Margin	22.49%
Total Overhead Rate	247.42%

This is to certify that the above information is accurate as of January 2022.

Devo Seereeram, Manager
Name of Company Officer, Title

6/1/2022
Date

Devo Seereeram

Signature

(Maximum multiplier allowed by Orange County: 2.99 - Maximum profit: 10%)

**TABLE I. LABORATORY SOIL & WATER TESTING SERVICES
CONTRACT Y22-900-CH**

Description of Work Item	Unit	Rate
I.I GEOTECHNICAL LAB TESTING SERVICES		
<u>Classification Tests:</u>		
Senior Technician for classification of soil samples by visual & tactile methods	hr	\$80.00
Natural moisture content & fines content (% passing U.S. #200 sieve)	each	\$65.00
Complete sieve analysis (8 sieves)	each	\$90.00
Organic Content Test	each	\$80.00
Atterberg Limits (soil plasticity)	each	\$85.00
<u>Chemical Tests:</u>		
Soil Corrosivity Series (pH, sulfates, chlorides and resistivity)	each	\$300.00
<u>Permeability Tests:</u>		
Hydraulic conductivity test on undisturbed Shelby tube sample (> 0.1 ft/day)	each	\$225.00

**TABLE 2. FIELD TESTING SERVICES
CONTRACT Y22-900-CH**

Description of Work Item	Unit	Depth Range	Rate
2.1 GENERAL			
Senior Technician for preliminary site reconnaissance, utility location, coordination with site contractors, layout of boreholes and measure stabilized water table	hr	Not Applicable	\$85.00
Mobilization/Remobilization/Demobilization of truck-mounted drilling equipment	sum	Not Applicable	\$700.00
Mobilization/Remobilization/Demobilization of mud-bug or track drilling equipment	sum	Not Applicable	\$900.00
Stand-by time for circumstances beyond the control of the drilling crew	hr	Not Applicable	\$250.00
Site Clearing	hr	Not Applicable	\$250.00
2.2 GEOTECHNICAL			
Hand auger borings	lin. ft.	0 to 15 ft	\$15.50
Hand auger borings with piezometers	lin. ft.	0 to 15 ft	\$17.50
	lin. ft.	0 to 50 ft	\$15.00
Power auger borings	lin. ft.	50 to 100 ft	\$16.00
Power auger borings with piezometers	lin. ft.	0 to 50 ft	\$17.00
	lin. ft.	0 to 50 ft	\$17.00
	lin. ft.	50 to 100 ft	\$21.50
Standard penetration test borings	lin. ft.	100 to 150 ft	\$28.00
	lin. ft.	150 to 200 ft	\$33.00
	lin. ft.	0 to 50 ft	\$7.00
Seal boreholes with cement/bentonite grout	lin. ft.	50 to 100 ft	\$8.00
	lin. ft.	100 to 150 ft	\$9.00
	lin. ft.	150 to 200 ft	\$10.00
Install temporary casing (3" Φ)	lin. ft.	0 to 50 ft	\$9.00
	lin. ft.	50 to 100 ft	\$11.00
	lin. ft.	100 to 150 ft	\$14.00
Extra split spoon samples (SPT)	each	0 to 50 ft	\$35.00
	each	50 to 100 ft	\$40.00
	each	100 to 150 ft	\$45.00
Undistributed (Shelby Tube) samples	each	0 to 50 ft	\$120.00
	each	50 to 100 ft	\$220.00
Sample Jars	case	n.a.	\$20.00
Muck survey or wash borings (2 man crew)	day	n.a.	\$1,000.00
Muck survey or wash borings (3 man crew), with boat if needed	day	n.a.	\$1,500.00
Collection of shallow depth vertical permeability samples	each	0 to 10 ft	\$125.00
Field borehole permeability test	each	0 to 10 ft	\$450.00
Piezometer permeability test (does not include piezometer installation)	each	0 to 25 ft	\$350.00
	lin. ft.	0 to 50 ft	\$36.00
Rock corings: HQ Size (2.5" dia)	lin. ft.	50 to 100 ft	\$40.00
	lin. ft.	100 to 150 ft	\$46.00
2.5 PAVEMENT CORINGS ON TRAFFICED STREETS			
Cut pavement core and reinstate	each	Not Applicable	\$350.00
Full traffic control including M.O.T. plan to facilitate coring and drilling on street	day	Not Applicable	\$2,800.00

**TABLE 3. PRINTING & DATA MEDIA
CONTRACT Y22-900-CH**

Description of Work Item	Unit	Rate
3.1 PRINTING AND BINDING SERVICES		
8.5" by 11" - Black & white	each	\$0.75
11" by 17" - Black and white	each	\$2.00
8.5" by 11" - Color	each	\$1.00
11" by 17" - Color	each	\$5.00
24" by 36" - Black and White Plot	each	\$20.00
24" by 36" - Color Plot on regular paper	each	\$40.00
CD Data	each	\$10.00
DVD Data	each	\$10.00
Coil binding with stock cover and backing	each	\$15.00
Binders with Tabs and Covers	each	\$25.00
Courier service to prime consultant	each	\$35.00
Courier service to public works	each	\$35.00
Printing / Reprographics by printing companies	NA	Cost



ENVIRONMENTAL RESEARCH & DESIGN, INC.

Engineering • Science • Chemistry • Research
3419 Trentwood Blvd. • Suite 102 • Belle Isle (Orlando), FL 32812-4864
Telephone: 407-855-9465 • Fax: 407-826-0419

FEE QUOTATION PROPOSAL FOR ORANGE COUNTY CONTRACT #Y22-900

As requested, the following is our information regarding overhead multipliers and personnel hourly rates for projects with Orange County. These rates will be used throughout the duration of the Contract:

Base Rate:	100%
Overhead and Fringe Benefits:	180%
Subtotal:	280%
Profit (10%):	28

OVERALL MULTIPLIER: 3.09
REQUESTED MULTIPLIER: 2.99

Individual classification for personnel hourly rates are as follows:

Classification	Basic Hourly Rate (\$)	Overall Multiplier	Billable Rate (\$)
Project Manager	60.00	2.99	179.40
Senior Engineer	36.50	2.99	109.14
Limnologist	30.00	2.99	89.70
CADD Technician	25.00	2.99	74.75
Field Technician	23.00	2.99	68.77
Lab Manager	31.50	2.99	94.19
Chemist	22.50	2.99	67.28
Admin. Assistant	23.00	2.99	68.77

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.

Harvey H. Harper, III

June 9, 2022

Harvey H. Harper, III, Ph.D., P.E. – President

Date



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ORANGE COUNTY CONTRACT #Y22-900 REIMBURSABLE EXPENSES FEE SCHEDULE

Prepared June 9, 2022

ITEM		FEE
A. Office Expenses	Copies (8.5" x 11") - Black/White	\$ 0.10/copy
	Copies (8.5" x 11") - Color	\$1.00/copy
	Report Preparation Materials (i.e., binders, tabs/dividers, etc.)	At Cost
	Mileage - Local	N/C
	Mileage - Out of Orange County	\$0.45/mile
	Outside Printing / Reproduction	At Cost
B. Direct Expenses	General Subconsultants	At Cost
	Other Expenses	At Cost
C. Field Expenses	Automatic Sampler Rental	\$350/month/unit
	Seepage Meter Preparation and Rental (12 months)	\$125/meter
	Surface Water Monitoring Equipment (boat, Hydrolab, Pumps, etc.)	\$100/day
	Groundwater Monitoring Equipment (Hydrolab, water level meter, pumps, bailer, etc.)	\$200/day
	Groundwater Sample Filters	\$25/site
	Surface Water Sample Filters	\$ 15/site
	Digital Water Level Recorder	\$150/month
	Recording Rain Gauge	\$100/month
D. Alum Surface Treatments	Alum Application (includes labor, boats, barges, equipment and expenses; full or partial tanker)	\$1500/tanker
	Liquid Alum	Cost plus 10% or purchased by County
	Lime	\$5/gallon (includes application)
E. Laboratory Subconsultants	1. SGS Accutest 2. Jupiter Labs 3. Other labs as needed	At cost per quote At cost per quote At cost per quote



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ORANGE COUNTY CONTRACT #Y22-900 LABORATORY FEE SCHEDULE

Prepared June 9, 2022

PARAMETER	METHOD	METHOD MDL	ANALYSIS COST PER SAMPLE (\$)	
	SM 21 ¹			
A. General Parameters	Alkalinity	Sec. 2320 B	1.4 mg/l	10.00
	Chloride	Sec. 4500-Cl ⁻ C	0.2 mg/l	12.00
	Color	Sec. 2120 C	1 Pt-Co unit	8.00
	Conductivity	Sec. 2510 B	0.2 µmho/cm	7.00
	Hardness	Sec. 2340 C	0.3 mg/l	12.00
	pH	Sec. 4500-H ⁺ B	NA	5.00
	Total Dissolved Solids (TDS)	Sec. 2540 C	5 mg/l	10.00
	Total Suspended Solids (TSS)	Sec. 2540 D	1.1 mg/l	12.00
	VDS or VSS	Sec. 2540 E	1.0 mg/l	15.00
	Turbidity	Sec. 2130 B	0.3 NTU	8.00
Sulfate	SM 4500 SO ₄ ⁻² E	0.4 mg/l	10.00	
B. Nutrients	Ammonia (NH ₃ /NH ₄)	Sec. 4500-NH ₃ G	0.005 mg/l	10.00
	Nitrite (NO ₂)	Sec. 4500-NO ₂ B	0.002 mg/l	12.00
	Nitrate (NO ₃)	Sec. 4500-NO ₃ F	0.005 mg/l	12.00
	Nitrite + Nitrate (NO _x)	Sec. 4500-NO ₃ F	0.005 mg/l	12.00
	Total Nitrogen (TN)	Sec. 4500-N C	0.010 mg/l	25.00
	Dissolved Total Nitrogen (DTN)	Sec. 4500-N C	0.01 mg/l	30.00
	Organic Nitrogen (ON)	Calculated	--	No Charge if TN and PN measured
	Orthophosphorus (SRP)	Sec. 4500-P F	0.001 mg/l	10.00
	Total Phosphorus	Sec. 4500-P F Sec. 4500-P B.5	0.005 mg/l	15.00
	Dissolved Total Phosphorus (DTP)	Sec. 4500-P F Sec. 4500-P B.5	0.005 mg/l	20.00
Organic Phosphorus	Calculated	0.005 mg/l	No Charge if TP and PP measured	

METHODS USED:

1. Standard Methods for the Examination of Water and Wastewater, 22nd Ed., APHA/AWWA/WEF, 2012.



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ORANGE COUNTY CONTRACT #Y22-900 LABORATORY FEE SCHEDULE – CONTINUED

Prepared June 9, 2022

PARAMETER	METHOD	METHOD MDL	ANALYSIS COST PER SAMPLE (\$)	
	SM 21 ¹			
C. Demand Parameters	BOD ₅	Sec. 5210 B	2 mg/l	20.00
	CBOD	Sec. 5210 B	2 mg/l	22.00
	COD	Hach 8000	3 mg/l	25.00
D. Microbiological Parameters	Chlorophyll-a	Sec. 10200 H.1.3	0.06 mg/m ³	25.00
	Fecal Coliform	Sec. 9221 E Sec. 9222 D	1 CFU	25.00
	E. Coli	EPA 1603 ²	1 CFU	25.00
	Fecal Streptococcus	Sec. 9221 B, C Sec. 9222 B	1 CFU	25.00
	Enterococcus	Sec. 9230 C	1 CFU	30.00
E. Metals	Aluminum (total/dissolved)	Sec. 3111 D	11 µg/l	12.00 / 15.00
	Cadmium (total/dissolved)	Sec. 3111 B	0.8 µg/l	12.00 / 15.00
	Calcium (total/dissolved)	Sec. 3111 B	1.3 µg/l	12.00 / 15.00
	Chromium (total/dissolved)	Sec. 3111 B	1.5 µg/l	12.00 / 15.00
	Copper (total/dissolved)	Sec. 3111 B	1.1 µg/l	12.00 / 15.00
	Iron (total/dissolved)	Sec. 3111 B	18 µg/l	12.00 / 15.00
	Lead (total/dissolved)	Sec. 3111 B	2 µg/l	12.00 / 15.00
	Magnesium (total/dissolved)	Sec. 3111 B	1.0 µg/l	12.00 / 15.00
	Nickel (total/dissolved)	Sec. 3111 B	1.8 µg/l	12.00 / 15.00
	Potassium (total/dissolved)	Sec. 3111 B	11 µg/l	12.00 / 15.00
	Sodium (total/dissolved)	Sec. 3111 B	10 µg/l	12.00 / 15.00
Zinc (total/dissolved)	Sec. 3111 B	1.7 µg/l	12.00 / 15.00	
F. Stable Isotopes	Stable isotopes of Nitrogen (N) and Oxygen (O)	Mass Spectrometry	--	100.00

METHODS USED:

1. Standard Methods for the Examination of Water and Wastewater, 22nd Ed., APHA/AWWA/WEF, 2012.
2. Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Revised March 1983.



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ORANGE COUNTY CONTRACT #Y22-900 LABORATORY FEE SCHEDULE

Prepared June 9, 2022

PARAMETER	METHOD	METHOD MDL	ANALYSIS COST PER SAMPLE (\$)	
F. Sediment Analyses	Moisture Content	EPA/CE-81-1 ¹	0.1%	15.00
	Organic Content	EPA/CE-81-1	0.1%	15.00
	pH	EPA 9045	0.1 unit	8.00
	Total Nitrogen	EPA/CE-81-1	0.01 mg/kg	25.00
	Total Phosphorus	EPA/CE-81-1	0.005 mg/kg	25.00
	Density	EPA/CE-81-1	N/A	10.00
	Particle Size	EPA/CE-81-1	1%	50.00
	Aluminum	EPA 3010/7020	5 mg/kg	15.00
	Cadmium	EPA 3010/7130	0.1 mg/kg	15.00
	Chromium	EPA 3010/7190	2 mg/kg	15.00
	Copper	EPA 3010/7210	0.35 mg/kg	15.00
	Iron	EPA 3010/7380	0.5 mg/kg	15.00
	Lead	EPA 3010/7420	1.0 mg/kg	15.00
	Magnesium	EPA 3010/7460	0.5 mg/kg	15.00
	Nickel	EPA 3010/7520	0.25 mg/kg	15.00
	Zinc	EPA 3010/7950	0.25 mg/kg	15.00
	Phosphorus Speciation (saloid, Fe-bound, & Al-bound)	Modified Chang & Jackson	N/A	150.00

METHODS USED:

1. Procedures for Handling and Chemical Analysis of Sediments and Water Samples, EPA/Corps of Engineers, EPA/CE-81-1, 1981.



Florida Bridge and Transportation, Inc.
Structural and Transportation Engineers

**CONTINUING PROFESSIONAL ENGINEERING
DESIGN SERVICES
Contract Y22-900
Florida Bridge and Transportation, Inc.
Proposed Wage Rate Data**

Position/Category	Raw Hourly Rate	Multiplier	Billable Hourly Rate
Project Manager	\$84.88	2.5203	\$213.92
Senior Engineer	\$63.26	2.5203	\$159.43
Engineer Intern	\$37.64	2.5203	\$94.86
Senior Designer/CADD	\$36.65	2.5203	\$92.37
Administrative/Clerical	\$30.36	2.5203	\$76.52

In the most recent reporting period, which consisted of the January 1 through December 31 of the year 2020, **Florida Bridge and Transportation, Inc.** had the following multipliers, which are submitted to Orange County to be used on this Contract (see Overhead Analysis Statement).

General Overhead Rate	66.33%
Fringe Benefit Rate	58.70%
Fringe + General Overhead Rate	125.03%
Salary + Fringe + General Overhead Rate	225.03%
Profit Margin 12% (since overhead is very low)	0.27
Total Overhead Rate	252.03%

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.

FBT will provide Structural Engineering Services involving design and plans production including (but not limited to) bridge design and studies, load ratings, retaining walls, box culverts, overhead signs, signal structures, construction plans and shop drawing reviews. The work will be performed in accordance with AASHTO, FDOT and County standards.

Mark Niedermann, P.E., President
Name of Company Officer, Title

7/2/22
Date

Signature



Landscape Designs, LLC

- Landscape Architecture
- Site Planning

4663 Tiffany Woods Cir
 Oviedo, FL 32765
 PH: (407) 484-3414
 License #: LC26000290

FEE QUOTATION PROPOSAL **Y22-900-A**

As requested, the following is our information regarding overhead multipliers and personnel hourly rates for projects with Orange County. These rates will be used throughout the duration of the contract.

Base Rate:	100%
Overhead & Fringe Benefits:	100%
Subtotal:	200%
Profit (12%)	0.24
OVERALL MULTIPLIER	<u>2.24</u>

Individual classification for personnel hourly rates are as follows:

	Classification Basic Hourly Rate	Overall Multiplier	Billable
Landscape Architect	\$60.26	2.24	\$135.00

Under penalty of perjury, I declare that I have read the forgoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.

Carl J. Kelly Jr./ President

(Printed name and title)

(Signature)

07/08/22

(Date)



CONTINUING PROFESSIONAL ENGINEERING DESIGN SERVICES
Y22-900
PEGASUS ENGINEERING, LLC
Proposed Wage Rate Data

Position Category	Raw Hourly Rate	Multiplier	Billable Hourly Rate
Project Manager	\$59.50	2.99	\$177.91
Senior Project Engineer	\$55.25	2.99	\$165.20
Project Engineer	\$49.13	2.99	\$146.90
Senior Designer	\$39.50	2.99	\$118.11
CADD Technician	\$33.50	2.99	\$100.17
Administrative/Clerical	\$25.00	2.99	\$74.75

In the most recent reporting period, which consisted of the January 1 through December 31 of the year 2020, **PEGASUS ENGINEERING, LLC** had the following multipliers, which are submitted to Orange County to be used on this Contract.

General Overhead Rate	145.82%
Fringe Benefit Rate	35.54%
Fringe + General Overhead Rate	181.36%
Salary + Fringe + General Overhead Rate	281.36%
Profit Margin (10% of 281.36)	28.14%
Total Multiplier Rate	309.50%
Multiplier Capped at 2.99	299.00%

“Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.”

Fursan S. Munjed, P.E., Principal
 Name of Company Officer, Title

5/20/2022
 Date


 Signature

EXHIBIT C

EXHIBIT "C"

ORANGE COUNTY TRAVEL AND SUBSISTENCE POLICY AND ALLOWANCES

1. Reimbursement for air fare shall be based on coach rates. First class rates will only be approved if the County required an expeditious action and coach rates were unavailable.
2. Maximum mileage allowance will be \$0.56 cents per mile. Local mileage not allowed.
3. Car rental reimbursement shall be for compact cars, up to two occupants, and intermediate cars for over two occupants. The **CONSULTANT** shall attempt to obtain the lowest rates available.
4. Reimbursement for lodging shall be \$80.00 per diem or the actual expenses for lodging at a single room rate at a "non-resort" type hotel located in the vicinity of the **COUNTY'S** administrative offices.
5. Meals shall be reimbursed as follows:

A.	Breakfast	\$ 6.00
B.	Lunch	\$11.00
C.	Dinner	\$19.00

Reimbursement for meals shall not apply to local employees of the **CONSULTANT**.

6. Other necessary identifiable travel expenses such as tolls, parking, taxis, etc., shall also be reimbursed.

All of the above expenses shall be supported by a source document, such as a receipt or invoice, with the employee's name, project name, and brief explanation. These should be reconciled to the monthly invoice.

NOTE: THE COST OR EXPENSE FOR MEALS, VEHICLE MILEAGE, TOLLS, PARKING OR TAXIS, IF INCURRED WITHIN ORANGE COUNTY, SHALL NOT BE ELIGIBLE FOR REIMBURSEMENT.