WORK ORDER NUMBER 4
Geotechnical Services for
Recycling Transfer and Household Hazardous Waste Facility

This Work Order Number 4 is entered into as of this _____ day_____, **2021** pursuant to that certain Continuing Contract Agreement for Continuing Geotechnical Engineering into on the 4th day of December, 2018 collectively referred to as the "Agreement", by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Andersen Andre Consulting Engineers, Inc. ("CONSULTANT").

The COUNTY has selected the CONSULTANT to perform the professional services set forth on Exhibit A (Scope of Services), attached to this Work Order No. **4** and made part hereof by this reference. The professional services will be performed by the CONSULTANT for the fee schedule set forth in Exhibit A (Fee Schedule), attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframes more particularly set forth in Exhibit A, attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT:
ANDERSEN ANDRE
CONSULTING ENGINEERS, INC.

By: _____

Name: _____

Title: _____

INDIAN RIVER COUNTY
SOLID WASTE DISPOSAL DISTRICT

By: _____
Joseph E. Flescher Chairman

BCC Approved Date: _____

Attest:
Jeffrey R. Smith, Clerk of Court and Comptroller

By: _____
Deputy Clerk

Approved: _____
Jason E. Brown, County Administrator

Approved as to form and legal sufficiency: _____
Dylan Reingold, County Attorney

ANDERSEN ANDRE CONSULTING ENGINEERS, INC.
Geotechnical Engineering
Construction Materials Testing
Environmental Consulting

AACE Proposal No. P20-1772
(November 2, 2020)
December 17, 2020 (Rev2)

Indian River County
Solid Waste Disposal District
1325 74th Avenue SW
Vero Beach, FL 32968

Attention: Mr. Himanshu H. Mehta, P.E.
Managing Director

PROPOSAL FOR SUBSURFACE SOIL EXPLORATION AND GEOTECHNICAL ENGINEERING CONSULTING INDIAN RIVER COUNTY LANDFILL IMPROVEMENTS PROPOSED HOUSEHOLD HAZARDOUS WASTE FACILITY INDIAN RIVER COUNTY, FLORIDA

As requested, Andersen Andre Consulting Engineers, Inc. (AACE) is pleased to present this proposal for preparing a subsurface exploration and geotechnical engineering evaluation for the above referenced project. The purpose of the exploration is to obtain general subsurface soil information so that recommendations can be provided for site preparation procedures, foundation design, and other geotechnical aspects of the proposed development project. Additionally, as requested, pre-construction materials testing services will be performed as part of a fill stockpiling process.

PROJECT UNDERSTANDING

Based on our review of the forwarded project information prepared by Kimley-Horn, we understand that it is proposed to construct a single-story ±29,000SF prefabricated metal building ("Household Hazardous Waste Facility") with a column spacing of about 75'x40', maximum column loads of 45 kips (gravity) and 60 kips (uplift), and maximum wall loads of 1 KLF.

Further, as part of a pre-construction fill selection process, we understand that the County is proposing to stockpile suitable fill materials as they are being hauled to the landfill from various construction sites around the county. As part of that process, AACE is being requested to periodically visit the landfill and inspect/sample ±160CY stockpiles on an estimated 22 occasions for the purpose of rendering an opinion relative to the suitability of each stockpile for use as either roadway construction, landscape fill(1) material, or mass site and pad fill for the new facility.

Note (1): With respect to landscape fill, AACE will simply provide information relative to organic content and percent fines of the materials; no nutrient testing will be performed.

GEOTECHNICAL FIELD EXPLORATION PROGRAM

Based on our understanding of the project, and our experience with subsurface conditions in the site vicinity, and on the request of Kimley-Horn, we propose to perform eight (8) Standard Penetration Test (SPT) borings (ASTM D1586) to depths of 30 feet below the existing ground surface. In addition, as requested, we proposed to complete two (2) Double Ring Infiltrometer tests (ASTM D3385) and two (2) 6-ft deep in-situ borehole permeability tests.

General Comments

Our field work will be completed using truck-mounted drilling equipment and support trucks. An AACE field engineer will oversee all drilling/field work operations. AACE will take reasonable efforts to reduce damage to property, such as rutting of the ground surface. However, it should also be understood that in the normal course of our work some such disturbance could occur. We have not budgeted to restore the site beyond backfilling our boreholes with accumulated soil cuttings. If there are any restrictions or special requirements regarding this site or exploration, these should be known prior to commencing the field work.

Safety

AACE has a commitment to safety of all its employees. As such, and in accordance with our safety culture, we will prepare a "Pre-Task Plan" to identify the potential site safety and job hazards associated with the proposed scope of work. Prior to commencement, and during on-site activities, we will re-evaluate potential job hazards and appropriate safe working procedures. At this time, we anticipate that a United States Occupational Safety and Health Administration (OSHA) Level D work uniform consisting of hard hats, traffic vests, safety glasses, protective gloves, and steel-toed boots will be required by all personnel in the work area.

Underground Utility Location Services

Florida Statute 240, Section 556.101 through 556.111 established a state-wide service, whereby persons or companies who plan to excavate the earth may advise Sunshine State One-Call Center (Sunshine 811) of the location, date and other operation particulars, to allow affected utility companies the opportunity to mark the location of their buried lines prior to excavation. The statute provides for fines and other sanctions to be imposed in the event that such notification is not given. To comply with this statute, if deemed necessary, representatives of AACE will notify Sunshine 811 of our proposed explorations. In addition, non- participating utility companies, as identified by us, will be notified of our proposed explorations. This service will require a lead time of between 2 and 5 business days, prior to the mobilization of exploration equipment, to comply with Sunshine 811 operation procedures.

In addition to notifying Sunshine 811, we have included a budget for a private utility locate company (GeoTek Services, LLC) who will scan the boring locations using Ground Penetrating Radar and Electromagnetic Induction.

LABORATORY TESTING PROGRAM

AACE's project engineer will perform visual classification on the recovered samples and will coordinate a suitable laboratory testing program of select samples. Laboratory testing may include grain size, Atterberg limits, organic content, moisture content, etc.

ENGINEERING ANALYSIS & REPORT

AACE will perform engineering analysis of all data obtained to evaluate general subsurface conditions and to develop engineering recommendations to guide site preparation procedures, foundation design, and any other pertinent geotechnical engineering aspects of the project. Our recommendations will be presented in a written report upon conclusion of the study, along with all data developed during the exploration and our laboratory testing.

SCHEDULE

Weather condition permitting, we will mobilize our crews and drilling equipment within 3 to 5 business days. We preliminarily estimate that AACE's field work will have a duration of 2 to 3 days. Our laboratory testing and report preparation will require an additional 7 to 10 business days to complete, however, verbal recommendations can be provided shortly after the completion of the field and laboratory exploration program.

COST ESTIMATE

Based on our knowledge of the project to-date, the attached summary of services and corresponding fees will be necessary to meet our goals. We expect that the total fee for our services will not exceed **$23,542.00**. Should we encounter conditions on the site that warrant more investigative effort than anticipated, we will inform you immediately. AACE will not proceed with additional work without your approval. Charges will be made for the work actually performed using the unit fees given in the attached "Project Services and Fees" which are included in our Continuing Services Contract with Indian River County.

TERMS & CONDITIONS

This proposal is subject to the following terms and conditions: (1) the site is accessible to our field crews and equipment), (2) we have right of entry onto the site, (3) the requested number of borings and the boring depths will be sufficient for our analysis, (4) AACE will contact the Sunshine 811 and coordinate the location of underground utilities through them. We cannot take responsibility for damages to underground structures and/or services which do not subscribe to "Sunshine"; their locations are to be provided by the client prior to commencement of the field work.

CLOSURE

We sincerely appreciate the opportunity to present this proposal. If the terms above are acceptable to you, please sign and return the attached Professional Services Agreement as an indication of your acceptance and authorization to proceed with the work. Please contact us if you should have any questions concerning this cost estimate.

Best regards,
ANDERSEN ANDRE CONSULTING ENGINEERS, INC.

Peter G. Andersen, P.E.
Principal Engineer

David P. Andre, P.E.
Principal Engineer

Attachments: Project Services and Fees
Professional Services Agreement & General Conditions

Project Services and Fees

Geotechnical Services

1. Project Management (Layout of Boring Locations and Underground Utility Clearance):
   Staff Engineer; 5 hours @ $80.00/hour $400.00

2. Utility Locating Services (by GeoTek Services, LLC); $1,500.00 plus 15% $1,725.00

3. Mobilization/Demobilization of Truck-Mounted Drilling Equipment $250.00

4. Standard Penetration Test borings (8 borings to 30 feet):
   200 feet of borehole (0-25 feet bls) @ $14.00/foot $2,800.00
   40 feet of borehole (26-50 feet bls) @ $15.00/foot $600.00

5. DRI Tests: 2 tests @ $500.00/test. $1,000.00

6. Borehole Permeability Tests: 2 tests @ $375.00/test $750.00

7. Laboratory Testing Program: Visual Classification and Laboratory Test for Classification and Determination of Strength and Compressibility Characteristics. These May Include Natural Moisture Content, Organic Content, Grain-Size Analysis, Etc.
   Budget Allowance $700.00

8. Engineering Services & Report Preparation:

Principal Engineer (P.E.):	$135.00/hour
Senior Project Engineer (P.E.):	$120.00/hour
Project Engineer (P.E.):	$95.00/hour
Staff Engineer:	$80.00/hour
CAD Draftsman/Technical Secretary:	$48.00/hour
Estimate:	$1,600.00

Subtotal. $9,825.00

Materials Testing Services (Stockpile Review)

1. Site Visits for Stockpile Review/Sampling:
   22 site visits (Sr. Engineering Technician) @ 3 hours/site visit @ $59.00/hour. $3,894.00

2. Laboratory Testing Program (based on collecting 3 samples per stockpile/visit, if needed):
   Staff Engineer (lab classification of up to 66 samples); 0.5 hours/sample @ $80.00/hour $2,640.00
   Percent Fines (-200 wash) tests; 66 tests @ $50.00/test. $3,300.00
   Organic Content tests; 66 tests @ $35.00/test $2,310.00

3. Engineering Review and Report Issuance:
   Project Engineer (P.E.); 22 events @ 0.5 hour per event @ $95.00/hour $1,045.00
   Technical Secretary; 22 events @ 0.5 hour per event @ $48.00/hour. $528.00

Subtotal. $13,717.00

Total Budget $23,542.00