



1800 Reynolds Ave.
North Charleston, SC 29405
P (843) 884-1234
Terracon.com

October 19, 2023

South Carolina Office of Resilience
632 Rosewood Drive, Columbia, SC 29201

Attn: Amy Azarias
E: amy.azarias@scor.sc.gov

Re: **Proposal for Soils Testing and Special Inspections**
Isle of Palms Stormwater Infrastructure
Isle of Palms, South Carolina
Proposal Number: PEN231207

Ms. Azarias:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal for the materials testing and special inspection services during the construction phase of the above referenced project.

1.0 PROJECT INFORMATION

Our Scope of Services is based on our understanding of the project as described by information provided.

1.1 Planned Construction

Item	Description
Information Provided	Civil Drawings dated 10/09/2019 and Terracon Geotechnical Report dated May 26, 2020
Location	41 st Avenue, Isle of Palms, SC
Description	This project consists of the new installation of approximately 1,105 LF of storm drain pipes and culverts with associated earthwork construction.

Proposal for Special Inspection

Isle of Palms Stormwater Infrastructure ■ Isle of Palms, South Carolina
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2.0 SCOPE OF SERVICES

Base Scope

The base scope of services is expected to include the following:

- Site Utilities
- Consulting / reporting / supervision

We recommend the scope of work described in this proposal be provided to the person(s) who will be responsible for scheduling our services. Our services specifically exclude testing of any part of the project outside of the currently shown proposed building footprints and job site safety responsibility. Our services do not relieve any contractor / subcontractor from complying with the project specifications.

2.1 Site Utilities

- Bulk samples of existing soils, proposed fill and backfill will be collected and laboratory tested. Reports will be issued indicating the soil's natural moisture content, gradation, maximum dry density and optimum moisture content for compaction in accordance with ASTM D698 Standard Proctor for on-site soils and ASTM D1557 Modified Proctor for import fill.
- A Soil Technician will observe subgrades and perform density testing, document fill placement, moisture levels, suitability, and compaction of backfill over utilities.

2.2 Cast-in-Place Concrete – Headwall Construction

- Terracon will monitor concrete placements for proper concrete mix usage, placement techniques, and water-cement ratio continuity. Terracon will also obtain samples of fresh concrete at specification intervals (every 100 cubic yards), or fraction thereof per day, and mold sets of 6 cylinders (4" x 8"). We will document concrete for mix temperature, slump, unit weight, and air content when cylinders are molded.
- After initial curing, we will transport cylinders to the laboratory for final moist curing and compressive strength testing (2 at 7 days, 3 at 28 days, and 1 in reserve).
- Terracon will provide standard special inspection services as it pertains to concrete construction.

2.3 Consulting / Reporting / Supervision

Terracon will designate a Project Manager / Engineer to oversee Terracon's scope of construction testing and site monitoring for the project. The PM will review reports of field tests and observations or designate appropriate parties to do so. A draft of our daily field report and field tests will be prepared by our on-site personnel. After review, final reports will be distributed electronically to any team members or other parties you designate.

Non-compliant tests or observations will be immediately verbally reported on site to the contractor so corrective action can be taken and documented. **A discrepancy report detailing the non-compliant element will be distributed electronically to the project team within 24 hours.**

During construction, **Terracon requests to be provided access to current / revised drawings, details, specifications, Requests for Information (RFI's), reviewed submittals, and any other**

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clarifying or modifying communication that may affect our portion of the work. We would also like the opportunity to attend pre-construction and project meetings should issues related to our scope of work be discussed.

3.0 TERMS

3.0 Compensation

Based on the project information and scope described above, we will provide the listed services on a time and materials basis using the unit and hourly rates as shown on the attached budget estimate. **We recommend an estimated budget of \$18,643 be allotted for performance of the materials testing as listed above. Our services will be invoiced on a monthly basis.**

3.1 Scheduling

During the earthwork and vertical construction phases of the project, our services will be performed on a full time or as-requested basis with scheduling by contractor field personnel or your designated representative. Terracon will not be responsible for scheduling our services and will not be responsible for tests that are not performed due to a failure to schedule our services or any resulting damage.

Please note that we will only be on-site as you or your representative schedule our services, and as our cost for services are most dependent on the contractor's schedule, our costs may vary accordingly.

We request our services be scheduled a minimum of one working day in advance and two working days prior to the commencement of each *category* of activities. We will endeavor to schedule services on lesser notice but may not always be able to meet the desired project schedule.

Our fees include all anticipated charges for mileage, travel, equipment, personnel, etc. for the anticipated scope of services. **If you believe we need to increase or decrease our scope of services / trip frequency, please notify us so we can make the appropriate changes.**

3.2 Authorization

This proposal may be accepted by signing / dating where indicated the attached service agreement and returning one copy to doug.jennings@terracon.com. Terracon greatly appreciates the opportunity to provide this proposal to you. Please do not hesitate to contact us at (843) 884 1234 or via email should you have any questions. We look forward to hearing from you at your earliest convenience.

Sincerely,

Terracon Consultants, Inc.

Doug Jennings

S. Douglas Jennings
Project Manager

Hayden W. Seignious, PE
Authorized Project Reviewer

Attachments: SE955
SE955A

SE-955

INSPECTION / MATERIAL TESTING ORDERAGENCY: SC OFFICE OF RESILIENCEPROJECT NAME: ISLE OF PALMS STORMWATER INFRASTRUCTUREPROJECT NUMBER: D30-N015-MJMASTER AGREEMENT CONTRACT NUMBER: 4400023202

AGENCY INSPECTION ORDER NUMBER: _____

INSPECTION FIRM: TERRACON CONSULTANTS INCADDRESS: 1800 Reynolds Ave, North Charleston, SC 29405**FEE INFORMATION**

Inspection Firm's services and associated fees are set forth in the attached SE-955A, Inspection / Material Testing Order Negotiation Worksheet, dated 10/2/2023, and the attachments to the Worksheet, all of which are incorporated herein by reference.

INSPECTION/TESTING FEE TOTAL: \$ 17,908.00REIMBURSABLES: \$ 735.00CONTRACT TOTAL: \$ 18,643.00**SCHEDULE**

SCHEDULED START DATE: _____

SCHEDULED COMPLETION DATE: _____

In response to the Request for Inspection Services from the Agency, dated the ____ day of ____, 20 ____, the Agency and Inspection Firm agree, as indicated by the signatures below, to the scope of services as described in this Inspection / Material Testing Order and the attached SE-955A shall be assigned to the Master Agreement for Inspection Services identified above.

AGENCY:

BY: 

(Signature of Representative)

PRINT NAME: Eric G. FosmireChief of Staff
General Counsel

PRINT TITLE: _____

DATE: 11/13/2023

INSPECTION FIRM:

BY: 

(Signature of Representative)

PRINT NAME: Kyle MurrellPRINT TITLE: Regional ManagerDATE: 11/08/2023

INSPECTION ORDER CONSISTS OF:

1. This Order, SE-955
2. SE-955A, Inspection / Material Testing Order Negotiation Worksheet
3. SE-962, Statement of Special Inspections Responsibilities (for Chapter 17 inspections only).

SE-955A

INSPECTION/MATERIAL TESTING ORDER NEGOTIATION WORKSHEET

AGENCY:	SC Office of Resilience	
PROJECT NAME:	Isle of Palms Stormwater Infrastructure	
PROJECT NUMBER:	D30-N015-MJ	
INSPECTION FIRM:	Terracon Consultants Inc	
PROJECT MANAGER FOR INSPECTION FIRM:		
		Sylvan Douglas Jennings
ICC CHAPTER 1 INSPECTORS	NAME	CREDENTIALS (Insert or Attach)
Building		
Electrical		
Mechanical		
Plumbing		
Fire Protection Systems		
ICC CHAPTER 17 INSPECTORS	NAME	CREDENTIALS (Insert or Attach)
Prestressed Concrete		
Reinforced Concrete	Sylvan D. Jennings	Social Inspector LLR Reg. No. 1416
Structural Masonry		
Spray-applied Fireproofing		
Structural Steel & Bolting		
Structural Steel Welding		
Soils	Sylvan D. Jennings	Social Inspector LLR Reg. No. 1416
Smoke Control		
Cold Formed Steel Framing		
Wood Construction		
Architectural Components		
Fire Protection Systems		
Mechanical & Electrical Components		
FIELD TESTING TECHNICIANS	NAME	CREDENTIALS (Insert or Attach)
Soil	Steven Turner	SCDOT Earthwork Reg. No. 4857-919
Masonry Grout		
Concrete	Steven Turner	SCDOT Earthwork Reg. No. 4857-919
Footings		
Pile		
Deep Foundations		

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INSPECTION/MATERIAL TESTING ORDER NEGOTIATION WORKSHEET

IBC CHAPTER 1	INSPECTION TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
110.2	Site				\$ -
110.3.1	Footing and Foundation				\$ -
110.3.2	Concrete Slab and Under-Floor				\$ -
110.3.3	Lowest Floor Elevation				\$ -
110.3.4	Frame				\$ -
110.3.5	Lath and Gypsum Board				\$ -
110.3.6	Exposed Balcony & Walking Surface Waterproofing				\$ -
110.3.7	Fire- and Smoke-Resistant Penetrations				\$ -
110.3.8	Energy Efficiency				\$ -
110.3.9	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Plan Review & Major Task Pre-Planning Mtgs.				\$ -
SECTION TOTAL					\$ -
NEC CHAPTER 1	INSPECTION TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
107.2(1)	Underground				\$ -
107.2(2)	Rough-In				\$ -
107.2(3)	Final				\$ -
107.2.1	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Plan Review & Major Task Pre-Planning Mtgs.				\$ -
SECTION TOTAL					\$ -
IFGC CHAPTER 1	INSPECTION TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
107.2(1)	Underground				\$ -
107.2(2)	Rough-In				\$ -
107.2(3)	Final				\$ -
107.2.1	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Plan Review & Major Task Pre-Planning Mtgs.				\$ -
SECTION TOTAL					\$ -

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INSPECTION/MATERIAL TESTING ORDER NEGOTIATION WORKSHEET

IMC CHAPTER 1	INSPECTION TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
107.2(1)	Underground				\$ -
107.2(2)	Rough-In				\$ -
107.2(3)	Final				\$ -
107.3	Observation of Tests				\$ -
107.2.1	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Plan Review & Major Task Pre-Planning Mtgs.				\$ -
SECTION TOTAL					\$ -
IPC CHAPTER 1	INSPECTION TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
107.2(1)	Underground				\$ -
107.2(2)	Rough-In				\$ -
107.2(3)	Final				\$ -
107.3	Observation of Tests				\$ -
107.4	Testing of plumbing work & systems				\$ -
107.2.1	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Plan Review & Major Task Pre-Planning Mtgs.				\$ -
SECTION TOTAL					\$ -
IFC CHAPTER 9	INSPECTION/TESTING TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
901.5	Fire Detection & alarm systems				\$ -
901.5	Gas Detection systems				\$ -
901.5	Fire-extinguishing Systems				\$ -
901.5	Fire Hydrant Systems				\$ -
901.5	Fire Standpipe Systems				\$ -
901.5	Other (<i>specify</i>)				\$ -
	Other (<i>specify</i>)				\$ -
	Plan Review & Major Task Pre-Planning Mtgs.				\$ -
SECTION TOTAL					\$ -

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INSPECTION/MATERIAL TESTING ORDER NEGOTIATION WORKSHEET

IBC CHAPTER 17	INSPECTION TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
1704.2.5	Fabricators				\$ -
1705.2	Steel Construction				\$ -
1705.3	Concrete Construction	2	4	\$ 70	\$ 560
1705.4	Masonry Construction				\$ -
1705.5	Wood Construction				\$ -
1705.6	Soils	2	4	\$ 70	\$ 560
1705.7	Driven Deep Foundations				\$ -
1705.8	Cast-in-place Deep Foundations				\$ -
1705.9	Helical Pile Foundations				\$ -
1705.11	Wind Resistance				\$ -
1705.12 & 13	Seismic Resistance				\$ -
1705.14	Spray Fire-resistant Materials				\$ -
1705.15	Mastic & Intumescent fire-resistant coatings				\$ -
1705.16	Exterior Insulation and Finish Systems (EIFS)				\$ -
1705.17	Fire-resistant penetrations and joints				\$ -
1705.18	Special Inspection for Smoke Control				\$ -
Other	<i>Specify</i>				\$ -
Other	<i>Specify</i>				\$ -
	Plan Review & Major Task Pre-Planning Mtgs.				\$ -
SECTION TOTAL					\$ 1,120
MISC.	INSPECTION TYPE	NO. OF INSPECTIONS	HOURS	HOURLY RATE	TOTAL
CWA § 402	NPDES Erosion Control	35	3	\$ 75	\$ 7,875
Other	<i>Specify</i>				
Other	<i>Specify</i>				
	Plan Review & Major Task Pre-Planning Mtgs.				
SECTION TOTAL					\$ 7,875
TESTING TECHINCIAN FIELD TESTS		NUMBER OF TESTS	HOURS /TESTS	TECH. HOURLY RATE	TOTAL
Soil		12	5	\$ 55	\$ 3,300
Masonry Grout					
Concrete		2	5	\$ 55	\$ 550
Footings					
Pile					
Concrete Sample Pickup		2	2.5	\$ 55	\$ 275
Other (<i>specify</i>)					
Plan Review & Major Task Pre-Planning Mtgs.					
SECTION TOTAL					\$ 4,125

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INSPECTION/MATERIAL TESTING ORDER NEGOTIATION WORKSHEET

INSPECTION AND TESTING EQUIPMENT	UNIT OF MEASURE	NO. OF UNITS	COST /UNIT	TOTAL
Concrete Coring Equipment	Days			
PDA Pile Test Equipment	Days			
Bolt Torque Wrench	Hours			
Ultrasonic Testing Equipment	Hours			
Nuclear Density Test Equipment (Soil)	Days	12	\$ 35	\$ 420
Other (<i>specify</i>)				
Other (<i>specify</i>)				
Other (<i>specify</i>)				
			SECTION TOTAL	\$ 420

LAB TESTS	NO. OF TESTS	PRICE / TEST	TOTAL
Standard Proctor - ASTM D698			\$ -
Modified Proctor - ASTM D1557	2	\$ 155	\$ 310
Stone-Aggregate Density - ASTM D698/1557			\$ -
California Bearing Ratio - ASTM D1883			\$ -
Soil Moisture Content - ASTM D2216			\$ -
Atterberg Limits - ASTM D4318	2	\$ 65	\$ 130
Wash 200 Fines - ASTM D1140/C117	2	\$ 55	\$ 110
Grain Sieve Analysis w/o hydro. - ASTM C136			\$ -
Grain Sieve Analysis w/hydro. - ASTM D422			\$ -
Soil Specific Gravity - ASTM D854/D550			\$ -
Concrete Beam Strength - ASTM C78			\$ -
Concrete Cores Strength - ASTM C42			\$ -
Concrete Cylinders, Cure & Test - ASTM C31/39	12	\$ 14	\$ 168
Grout Prism Strength - ASTM C 1019			\$ -
Mortar Cub Strength - ASTM C 109			\$ -
CMU Compressive Strength - ASTM C140			\$ -
Masonry Compressive Strength - ASTM C1314			\$ -
Masonry Testing - ASTM C67/78			\$ -
Modified Proctor - Type C (ASTM D1557)	1	\$ 205	\$ 205
Sieve Analysis (ASTM C136)	1	\$ 105	\$ 105
		SECTION TOTAL	\$ 1,028

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INSPECTION/MATERIAL TESTING ORDER NEGOTIATION WORKSHEET

PROJECT SUPPORT				
SUPPORT TYPE	TASKS	HOURS	HOURLY RATE	TOTAL
Project Manager	Authorized Project Review	4	\$ 170	\$ 680
	Senior Geotechnical Engineer	1	\$ 205	\$ 205
	Milestone Meetings		\$ 100	\$ -
	Inspector Management	14	\$ 100	\$ 1,400
Clerical	Reports			
	Administrative and Reporting	6% of Total		\$ 1,055
SECTION TOTAL				\$ 3,340
TOTAL OF ALL SECTIONS		\$ 17,908		
REIMBURSABLES		TOTAL UNITS	UNIT RATE	TOTAL
Trip Charge / Mileage (circle one)		21	\$ 35	\$ 735
Lodging Fees				\$ -
Per Diem Fees				\$ -
Other (specify)				\$ -
Other (specify)				\$ -
SECTION TOTAL				\$ 735
GRAND TOTAL (Section Totals + Reimbursables)		\$ 18,643		

The Forgoing is Based on the Following Assumptions & Attachments

NOTE: Required tests and frequency shall be determined by the Design Professional.

APPROVAL	
Agency Representative: <u><i>Elin A. Fox</i></u>	Date: <u>10 Nov. 2023</u>
Inspection Agency: <u><i>John 2. M</i></u>	Date: <u>11/08/2023</u>