

EXPLANATION OF CONSENT AGENDA ITEM E.2.c.(20) December 16, 2015

ITEM:

Consideration of approving a purchase order to Professional Services Industries, Inc. (PSI) for Geotechnical Services under their Continuing Services Contract for Cruise Terminal 10 in an amount not to exceed \$11,473.00. (Perley/Hicks)

EXPLANATION:

As the Cruise Terminal 10 project moves forward with the design, structural improvements will require a geotechnical report of the existing soil conditions in order to properly design the foundations for the new additions to CT10. This request is for using one of our new Geotechnical consultants under their continuing services contract to perform the testing and issue the report on the existing conditions of the soils.

Funding Review by Finance (Pat Poston):

The total NTE amount of \$11,473 is included in the FY16 Capital Budget and no increase is required. [Budget item 2042 - CT10 Improvements]

Staff Recommends Approval

Prepared by: David W. Perley AIC/CPE



December 4, 2015

Canaveral Port Authority
445 Challenger Road
Suite 301
Cape Canaveral, Florida 32920

Attention: Mr. David W. Perley, AIC/CPE
Senior Director - Construction and Infrastructure

RE: Proposal
Geotechnical Engineering Services
Cruise Terminal 10 Renovations
9005 Charles M. Rowland Drive
Port Canaveral, Brevard County, Florida
PSI Proposal No.: 0757-168145

Dear Mr. Perley:

Pursuant to your request of December 3, 2015, Professional Service Industries, Inc. (PSI) is pleased to submit the following proposal for performance of a subsurface exploration at the site of the proposed Cruise Terminal 10 renovations project. Presented herein is our scope of work, time schedule to complete the work and cost estimate for our services. Our proposal is based on the site being accessible to our truck-mounted drill rig and work being conducted during normal business hours.

Project Information

Based on information provided to us, the project site is located at the west end of Port Canaveral ship basin at the existing Royal Caribbean cruise terminal. Specifically, the site is bound by the cruise ship berthing area to the north, the ship turning basin to the east, Charles M. Rowland Drive and parking lots to the south, and Charles M. Rowland Drive to the west. Based on review of aerial photographs, the site currently contains the existing Cruise Terminal 10 building and associated infrastructure, which was built in the late 1990's.

The project is planned to consist of the renovation of Cruise Terminal 10, including constructing a new entry, second floor additions, elevators, and escalators. Based on information provided in the request for proposal, the maximum wall and column service loads for the project will be 2.5 kips/foot and 125 kips (perimeter columns) to 250 kips (interior columns), respectively. Maximum floor loads are anticipated to be 250 pounds per square foot or less. We understand stormwater will be managed by existing off site retention facilities.

The above listed assumptions have been used for the purpose of preparing this proposal. Adjustments to the scope of services may be necessary if the planned construction or site conditions differ from the noted assumptions.

Scope of Geotechnical Services

The purpose of this exploration is to obtain information on the subsurface soil and groundwater conditions at the proposed project site. The subsurface conditions encountered will then be evaluated with respect to the available project characteristics. In this regard, design level geotechnical engineering assessments for the following items will be formulated:

1. Feasibility of utilizing a shallow or deep foundation system for support of the proposed new structures, with slab-on-grade floor systems.
2. Design parameters required for the foundation systems, including allowable bearing pressures, pile/pier capacity (skin friction and end bearing), foundation levels and expected total and differential settlements.
3. Soil subgrade preparation, including stripping, grubbing and compaction. Engineering criteria for placement and compaction of approved structural fill materials.
4. Identification of groundwater levels (seasonal fluctuations), including normal seasonal high levels.
5. General location and description of potentially deleterious materials encountered in the borings, which may interfere with construction progress or structure performance.
6. Recommendations for design and construction of pavements, both flexible (asphalt) and rigid (concrete) sections.
7. Recommendations for lateral earth pressure design, including active, at-rest and passive coefficients as well as coefficient of sliding friction.
8. Identification of the site class and seismic parameters for structural design.
9. Recommendations for slab on grade construction, including subgrade modulus.
10. Identify design parameters for pile/pier lateral load analyses (p-delta curves).

The following services will be provided in order to achieve the preceding objectives:

1. Review available published geologic and topographic information. This published information will be obtained from the appropriate quadrangle map published by the United States Geological Survey (USGS) and the "Soil Survey of Brevard County, Florida" published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS).
2. As requested, perform eight (8) Standard Penetration Test (SPT) borings to depths of 30 to 100 feet below existing grade. In each SPT boring, samples will be collected and SPT resistances will be measured virtually continuously for the top 10 feet and on intervals of 5 feet thereafter. To facilitate the borings, the pavement will need to be cored and patched at the completion of PSI's work.
3. Review available existing geotechnical data in the project vicinity.
4. Visually classify and stratify representative soil samples in the laboratory using the Unified Soil Classification System. Conduct a laboratory testing program, including tests to determine soil unit weights (buoyant and moist), angle of friction, cohesion, compressive and shear strength, and consolidation characteristics. Identify soil conditions at each boring location and form an opinion of the site soil stratigraphy.
5. Collect groundwater level measurements in the boreholes and estimate normal seasonal high groundwater levels.
6. The results of the field exploration and laboratory tests will be used in the engineering analysis and in the formulation of our geotechnical recommendations. The results of the subsurface exploration, including the recommendations and data on which they are based, will be presented in a written report supervised by a professional engineer.

Schedule

We are in a position to start work on the assignment immediately upon receipt of authorization to proceed. The first task will be to obtain utility clearance for the borings through Sunshine State One Call of Florida, which generally requires 3 business days. Because Sunshine State One Call will not locate private utilities, we will need assistance from Port Canaveral in locating private underground utilities. If needed, PSI can coordinate a private utility locator. We anticipate 3 to 4 days to complete the drilling work. Engineering and laboratory testing will be initiated thereafter, requiring a further 5 to 7 work days to complete. From notice to proceed through submittal of a report will require on the order of 3 weeks. Design recommendation can be presented to the team prior to submittal of our report to facilitate the project schedule.



Service Fee

It is proposed that the fee for the performance of the above-outlined services be determined on a unit price basis, in accordance with our attached Schedule of Services and Fees, and that the work be performed pursuant to our 2015 Continuing Services Contract with Port Canaveral. A copy of our Schedule of Services and Fees is enclosed herewith and incorporated by reference into this proposal. On the basis of the estimated quantities and the Schedule of Services and Fees, it is estimated the fees for the services for the project will be **\$11,472.50**. If private utilities need to be located at the boring sites by PSI, we can coordinate a subcontractor to complete this work for an additional fee of \$1,200.00.

We appreciate the opportunity to offer our services to your project and look forward to working with you. If this proposal is acceptable, please sign below as notice to proceed and return one (1) copy of this proposal intact to our office. Should you have any questions in regard to this proposal, please do not hesitate to contact this office.

Sincerely,
PROFESSIONAL SERVICE INDUSTRIES, INC.



Robert A. Trompke, P.E.
Principal Consultant/Department Manager

0757-168145 (Cruise Terminal 10 - Port Canaveral).docx

cc: Mr. Jeff Martineau – PSI
Mr. Phil Czechowski – PSI

Attachments

- Schedule of Services and Fees
- General Conditions

AGREED TO THIS _____ DAY OF _____, _____

BY (Please Print): _____

TITLE: _____

COMPANY: _____

SIGNATURE: _____



SCHEDULE OF SERVICES AND FEES
Cruise Terminal 10 Renovations
9005 Charles M. Rowland Drive
Port Canaveral, Brevard County, Florida

<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>Total Cost</u>
<u>I. FIELD INVESTIGATION</u>				
A. Mobilization of Men & Truck Rig	1	Trip	\$ 348.78	\$ 348.78
B. Utility Coordination (Sen. Tech.)	2	Hours	71.00	142.00
C. Standard Penetration Test (SPT) Borings (6 at 30 ft and 2 at 100 ft)				
0 to 50 feet deep	280	L.F.	14.31	4,006.80
50 to 100 feet deep	100	L.F.	18.02	1,802.00
D. Core & Patch Pavement	8	Each	64.13	513.04
			Subtotal Field Investigation	\$6,812.62
<u>II. LABORATORY TESTING</u>				
A. Visual Class. (Technician)	2	Hours	\$54.00	\$ 108.00
B. Natural Moisture Content	8	Each	14.84	118.72
C. Percent Fines (-200 sieve)	8	Each	51.41	411.28
D. Liquid & Plastic Limits	4	Each	102.82	411.28
E. Consolidation	2	Each	614.30	1,228.60
			Subtotal Laboratory Testing	\$ 2,277.88
<u>III. ENGINEERING SERVICES</u>				
A. Chief Engineer	2	Hours	\$222.00	\$ 444.00
B. Senior Engineer	2	Hours	\$165.00	330.00
C. Project Engineer	12	Hours	105.00	1,260.00
D. AutoCAD Drafting	2	Hours	74.00	148.00
E. Administrative Assistant	4	Hours	50.00	200.00
			Subtotal Engineering Services	\$ 2,382.00
			TOTAL ALL SERVICES	\$11,472.50

