FUSS & O'NEILL

FUSS & O'NEILL, INC.
TASK AUTHORIZATION REQUEST

Prepared For: City of Central Falls
Contact: Jillian Finkle, Principal Planner

Prepared By: Shawn Martin
Title: Vice President

Date: July 26, 2019

F&O Project/No: Blackstone Bikeway
20170811.A20

Task No: 00015

Task Title: Geotechnical Design

Task Description:

Fuss & O'Neill will conduct a geotechnical subsurface investigation to assess soil conditions for the design of the proposed slope retaining structure along the Blackstone River to accommodate the proposed bikeway. We will arrange for our subcontractor to pre-mark the site and notify DigSafe prior to completing the subsurface investigation. Based on our understanding of the site, we have assumed that the subcontractor will access the vicinity of the proposed retaining structure utilizing the sports field and the boreholes will be completed as close to the existing fence as practical. The geotechnical subsurface investigation will consist of the following:

- Sampling will be performed continuously in the top 10 feet of soil and at 5-foot intervals thereafter using a rubber-tired ATV-mounted drill rig. Up to two (2) boreholes will be advanced to a maximum depth of refusal or 30 feet below the current ground surface if bedrock is not encountered. Soils will be sampled using the Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils (ASTM D1586-18). Soil samples will be logged and visually classified in the field by a Fuss & O'Neill engineer using the Standard Practice for Classification of Soils for Engineering Purposes (ASTM D2487-17) and the Modified Burmister Classification System and placed in glass jars for subsequent review and laboratory testing.
- Boreholes will be backfilled with soil cuttings and additional clean sand will be placed in the borehole if required to restore the existing grade.
- We have budgeted up to one day to complete the field investigation.

- Submit up to three samples for gradation analysis to confirm field soil classifications on selected soils samples. We have budgeted for three grain size analyses to be completed (ASTM Method D422, without hydrometer gradation).
- Interpret boring logs and develop geotechnical recommendations for the proposed retaining structure. The retaining structure will consist of either a concrete-capped cantilevered steel sheet pile wall or a segmental retaining wall designed by a third party.

- Prepare a geotechnical design basis memorandum that describes the subsurface conditions at the site, including: groundwater levels at the time of the investigation, provide design parameters required for design, potential suitability of existing soils for reuse as backfill on-site, and geotechnical issues related to construction including dewatering needs.
- The concrete capped cantilevered steel sheet pile wall is the preferred alternative. We will develop a wall design suitable of supporting the proposed improvements. We have assumed that one design case will be analyzed.

Fees:

We propose a lump sum fee ~~of $13,000~~ for this task and will be billed on a monthly basis as a percentage complete.

Authorized By: _____ Date: 8/22/2019
James ~~A~~ Diossa, Mayor

_____ Date: 8/7/19
Matthew Jerzyk, City Solicitor

_____ Date: 8-21-19
~~Leonard Morgan~~is, Finance Director
Barbara Addison,

Purchase Order #: _____

Please return a signed copy to Fuss & O'Neill to initiate this task and retain one copy for your files. Terms and Conditions previously approved shall apply.

EXCEL PROJECT BUDGET WORKSHEET

CLIENT	City of Central Falls	DATE PREPARED/UPDATED	7/26/2019		PREPARED BY	S. Martin	APPROVED BY		DATE APPROVED	7/26/2019
JOB NO	20170811.A20	PROJECT NAME/DESCRIPTION	Task 15 - Geotechnical Design						DATE PRINTED	7/26/2019

TASK INFORMATION		LABOR																REIMBURSABLE and DIRECT COSTS										SUMMARY
		Senior Officer	Officer	Associate	Sr Engr/ Scl III	Sr Engr/ Scl II	Sr Engr/ Scl I	Engr/ Scl III	Engr/ Scl II	Engr/ Scl I	CADD Tech III	CADD Tech II	CADD Tech I	Proj Administrator	Clerical	TOTAL HOURS	LABOR @ BILLING	Company Mileage (# of Miles)	Co Vehicle Daily Rate (# of days)	Personal Vehicle Mileage (# of Mileage)		Reprographics / Miscellaneous	Billable Field Equipment (Geoprobe subject to sales tax)	TOTAL F&O DIRECT COSTS @ BILLING	Subcontractors @ Cost (including Laboratories)	Subcontractors Markup	TOTAL SUBCONTRACTORS @ BILLING	TOTAL EXPENSES @ BILLING	ESTIMATED CONTRACT VALUE
	Potential Staff (initials)																												
		225	215	206	190	166	148	130	111	102	98	86	82	82	71			0.350	100.000	0.580	0.000					15%			
TASK #	TASK DESCRIPTION																												
	Geotechnical Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	$0	-	-	-	-	-	-	$0	$0	$0	$0	$0	$0
	Task Initiation/JHA	-	-	-	1	-	4	-	2	-	-	-	-	-	-	7	$1,004	-	-	-	-	-	-	$0	$0	$0	$0	$0	$1,004
	Subsurface Investigation	-	-	-	-	-	2	-	10	-	-	-	-	-	-	12	$1,406	30	1	-	-	10	-	$121	$2,600	$390	$2,990	$3,111	$4,517
	Utility clearance	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	$148	-	-	-	-	-	-	$0	$300	$45	$345	$345	$493
	Soil testing (geotechnical)	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	$148	-	-	-	-	-	-	$0	$300	$45	$345	$345	$493
	Boring logs	-	-	-	2	-	5	-	-	-	-	-	-	-	-	7	$1,120	-	-	-	-	-	-	$0	$0	$0	$0	$0	$1,120
	Design	-	-	-	3	-	10	-	-	-	-	-	-	1	1	15	$2,203	-	-	-	-	-	-	$0	$0	$0	$0	$0	$2,203
	Coordination with CDV	-	2	-	-	-	2	-	-	-	-	-	-	-	-	4	$726	-	-	-	-	-	-	$0	$0	$0	$0	$0	$726
	Reporting	-	2	-	2	-	10	-	-	-	-	-	-	-	2	16	$2,432	-	-	-	-	-	-	$0	$0	$0	$0	$0	$2,432
	CATEGORY TOTALS	0	4	0	8	0	35	0	12	0	0	0	0	1	3	63	$9,187	30	1	0	0	$10	$0	$121	$3,200	$480	$3,680	$3,801	$12,988