



TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

Daniel Bennett
Building Commissioner

TO: Selectboard/ School Committee

FROM: Ray Masak, PE Project Manager

SUBJECT: Brookline High School- Amendment 19
Design Services (FY 19)

DATE: January 13, 2021

On the Calendar this week, the Building Department is requesting the approval of an amendment for designer services for the subject project in the total amount of \$17,888.

The appropriation for this contract was approved by Town Meeting as part of the overall CIP for FY19. This amendment is for additional services involving geotechnical services, involving a construction issue with the MBTA Station. Refer to the Hill memo dated January 7, 2021 and the Rawn memo dated January 7, 2021 for further explanation of services.

The Building Department will be available on Tuesday evening to answer any questions. Thank you for your consideration.

PURCHASE ORDER CHANGE FORM

TO:	William Rawn Associates, Architects, Inc 10 Post Office Square, Suite 1010 Boston MA 02109
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21803108

53540

\$17,888.00

FUND	ORGANIZATION	ACTIVITY	OBJECT
	2594C204		524003

Amendment	Date	
19	1/7/2021	Amendment - Design and Engineering services for assisting the construction manager with designing a low cost solution for (6) helical piles that did not achieve proper design depth due to unforeseen obstructions on the outbound platform below the overbuild.

Mary Ellen Normen, Assistant Superintendent For Administration and Finance

HILL
Hill International

Hill International, Inc.
75 Second Avenue, Suite 300
Needham, MA 02494
Tel: 617-778-0900
Fax: 617-778-0999
www.hillintl.com

January 7, 2021

Mr. Ray Masak, P.E.
Project Manager
Town of Brookline Building Department
333 Washington Street
Brookline, MA 02445

Re: William Rawn Associates Amendment 19 – AECOM design-assistance due to obstructions

Dear Mr. Masak:

We have received and reviewed WRA's Amendment Request #19 for requested additional design services to assist in evaluating options for cost-effective engineered solutions proposed by Skanska Civil subsequent to the platform helical pile obstructions that were encountered underneath the Tappan Building back in June 2020. As a result of the collaborative approach between Design Team and Contractors, Skanska Civil was able to complete the remedial work during Weekend #7 MBTA diversion just before Thanksgiving, 2020.

As discussed for this Amendment, the Design Team have omitted their fee mark-ups. Hill recommends approval of the \$17,888 Amendment #19.

Very truly yours,



Andy Felix
Project Director

WILLIAM RAWN ASSOCIATES | Architects, Inc.

10 Post Office Sq.
Suite 1010
Boston, MA 02109
t. 617.423.3470
www.rawnarch.com

Ray Masak
Project Manager
Town of Brookline Building Department
Brookline Town Hall
333 Washington Street
Brookline, MA 02445

January 7, 2021

Project Name: Brookline High School Expansion Project

Re: **Contract Amendment #20** 19

CC: Andy Felix, Sam Lasky, Roger Gagnier

Additional Service Proposal for:

- *Design and Engineering services for assisting the Construction Manager with designing a low cost solution for (6) helical piles that did not achieve proper design depth due to unforeseen obstructions on the outbound platform below the overbuild.*

Dear Ray,

Per our discussion prior to the holidays attached is a proposal from AECOM which excludes AECOM and WRA markups. AECOM's team of engineers was proactive in assisting Skanska Civil and GZA to find a cost effective solution to the roughly 30'x15' area under the overbuild where 6 helical piles were driven about 20' short of their target depth of 40' due to unforeseen obstructions. Originally, projected at \$32,700, the solution the design team worked out reduced the cost of new piles to approximately \$17,000. Several meetings and discussions were held between the design and construction teams to achieve the final design. Please see AECOM's proposal for additional information.

CA #20 Fee Summary:

AECOM:

\$17,888


William Rawn Associates 10% Admin:

N/A

Total:

\$17,888 ✓

Regards,



Andy Jonic, AIA
Senior Associate
William Rawn Associates, Architects Inc.

Attachments: AECOM proposal



One Federal Street, Suite 800, Boston, MA 02110

Project Name:	Brookline Hills Station
AECOM Project Number:	60580112
Subject:	Contract Change Order No. 4

Mr. Andrew Jonic, AIA, LEED AP BD+C
Senior Associate
William Rawn Associates Inc.
10 Post Office Square Suite 1010
Boston, MA 02109

December 21, 2020

The following provides AECOM's outline to Change Order No. 4 for supplemental services after the conclusion of the Final Design phase and during construction. These services were a direct result of unforeseen conditions that prohibited Skanska's from constructing the platform Helical Piles to the required depth. The project is scheduled to be substantially complete in in June of 2021.

1. On July 21, 2020 Skanka issued submittal 02350-004 - Helical Pile Report. When AECOM reviewed the report, it was clear that 6 piles were constructed not conforming to the contract requirements.
As a result, AECOM was asked to meet and work with Skanska to help them correct the construction problem. AECOM at the time pointed out in an email this is added scope and would track the effort.

AECOM over the three-month time period between the time the issue was uncovered until resolution:

1. Attending 5 different meetings with Skanka and/or WRA and Hill. These meeting were to achieve a design solution to address the construction deficiency of the rejected piles not built per contract requirements. AECOM staff in attendance was Roger Gagnier, Abdallah Alhmood (Aboud), Todd Dwyer and Michael McDonough attending 4 of the 5 meetings. Also, the AECOM team met on 3 additional times internally to prepare for the joint meetings and to coordinate a design solution. I have attached a list of meetings attended with the dates and attendees for each.
2. Reviewed Skanska/GZA design proposals and reports on the rejected piles.
3. Worked with the school's structural designer to develop design solutions.
4. Work with Skanka on developing a design solution that works with the construction space limitations. This process resulted in refining several technical solutions and revisions, achieving the most cost-effective construction solution.
5. After agreeing on a design solution with Skanska and the project, develop Field Bulletin #25 to establish a construction plan of action that meets the design requirements to support the platform and allows Skanska to construct the design within the new site limitations.

The below table are the total hours spent addressing the unforeseen conditions that prohibited Skanska's from constructing the platform's helical piles to the required depth. A more detailed breakdown per the listed task is attached as backup. Please note that Michael McDonough is included in the backup and is listed as an attendee at 4 different meetings. He spent 14 hours attending those meetings and preparing field bulletin #25 but was not included in the list below and should have been.

Name/Technical Team	Rate*	Hours	Total
Roger Gagnier	\$252.00	20	\$5,040.00
Structural (Aboud)	\$166.50	21	\$3,496.50
Structural (Xiaolei)	\$153.00	38	\$5,814.00
Geotech (Dwyer)	\$166.50	20	\$3,330.00
Technical Support	\$103.50	2	\$207.00
		101	\$17,887.50

(*) Standard rates have been negotiated with the Town of Brookline and are 10% lower than contract agreed standard rates for out of scope work.

In addition to the listed task above, there were several hours spent explaining the pile issue in generic terms so all parties could understand. It was difficult for everyone on the project to comprehend how 6 piles not installed to the proper contractual depth supporting a platform at grade would result in design problems. AECOM spent time explaining this to the town and developed a clear outline of the problem for all.

Finally, we feel that our involvement in correcting the pile installation issue saved construction dollars. Without the AECOM design team, the solutions required bigger drill rigs to install mini-piles and track impacts during construction. In addition, the platform would have had to be redesigned (thicker with more reinforcing) to get the loads into the new piles.

The final design resolution allowed additions H-pile to be installed using a small rig. AECOM made changes to the platform slab detailing after working with the school's structural designer. The detailing change reduced the loads the replacement piles would have had to support and used the existing reinforcing in the platform slab.

In total, this Change Order is for **\$17,887.50** labor cost. Please let us know if any further documentation is required at this time. As you know this work has been completed in good faith to keep ahead of the contractor's construction schedule.

Sincerely,



Roger Gagnier, P.E.
Vice President



Nicholas Rubino, P.E.
Vice President

Cc: Brian Vaillancourt

Task Items	Staff	Hours	Rate	Total
1	Roger Gagnier	9	\$ 252.00	\$ 2,268.00
	Alhmood, Abdallah (Aboud)	9	\$ 166.50	\$ 1,498.50
	Michael McDonough	4	\$ 153.00	\$ 612.00
	Todd Dwyer	9	\$ 166.50	\$ 1,498.50
	Xiaolei Chen	0	\$ 153.00	\$ -
	Sophie Kwon	0	\$ 103.50	\$ -
2	Roger Gagnier	1	\$ 252.00	\$ 252.00
	Alhmood, Abdallah (Aboud)	2	\$ 166.50	\$ 333.00
	Michael McDonough	0	\$ 153.00	\$ -
	Todd Dwyer	2	\$ 166.50	\$ 333.00
	Xiaolei Chen	1	\$ 153.00	\$ 153.00
	Sophie Kwon	0	\$ 103.50	\$ -
3	Roger Gagnier	4	\$ 252.00	\$ 1,008.00
	Alhmood, Abdallah (Aboud)	2	\$ 166.50	\$ 333.00
	Michael McDonough	2	\$ 153.00	\$ 306.00
	Todd Dwyer	0	\$ 166.50	\$ -
	Xiaolei Chen	5	\$ 153.00	\$ 765.00
	Sophie Kwon	0	\$ 103.50	\$ -
4	Roger Gagnier	4	\$ 252.00	\$ 1,008.00
	Alhmood, Abdallah (Aboud)	6	\$ 166.50	\$ 999.00
	Michael McDonough	0	\$ 153.00	\$ -
	Todd Dwyer	6	\$ 166.50	\$ 999.00
	Xiaolei Chen	12	\$ 153.00	\$ 1,836.00
	Sophie Kwon	0	\$ 103.50	\$ -
5	Roger Gagnier	2	\$ 252.00	\$ 504.00
	Alhmood, Abdallah (Aboud)	2	\$ 166.50	\$ 333.00
	Michael McDonough	8	\$ 153.00	\$ 1,224.00
	Todd Dwyer	3	\$ 166.50	\$ 499.50
	Xiaolei Chen	20	\$ 153.00	\$ 3,060.00
	Sophie Kwon	2	\$ 103.50	\$ 207.00
	Total (Roger)	20	\$ 252.00	\$ 5,040.00
	Total (Aboud)	21	\$ 166.50	\$ 3,496.50
	Total (McDonough)	14	\$ 153.00	\$ -
	Total (Xiaolei)	38	\$ 153.00	\$ 5,814.00
	Total (Todd)	20	\$ 166.50	\$ 3,330.00
	Total (Sophie)	2	\$ 103.50	\$ 207.00
		101		\$ 17,887.50

	Date	Time	Title	Attendees
1	10/7/2020	4:30	Brookline - MBTA helical pile solution review	Andrew Jonic Organizer Gagnier, Roger, Alhmood, Abdallah (Aboud), McDonough, Michael, Dan Bielenin, IanParks@hillintl.com, Felix, Andy, Chen, Xiaolei, Dwyer, Todd
2	10/7/2020	8:30	Brookline Hills H-Piles (in house)	Roger Gagnier, Alhmood, Abdallah (Aboud), Michael McDonough, Todd Dwyer
3	9/17/2020	9:30	Brookline - Helical Pile Obstructions	Hale, Thomas Organizer Gagnier, Roger Koenig, Robert Alhmood, Abdallah (Aboud) Dwyer, Todd Parks, Ian Hersey, Christopher Andrew Jonic Dan Bielenin Mon, Peter Rasim Tumer James McDermott
4	8/12/2020	11:30	Brookline Hills Piles (in house)	Roger Gagnier, Alhmood, Abdallah (Aboud) <Abdallah.Alhmood@aecom.com>; Dwyer, Todd <Todd.Dwyer@aecom.com>
5	8/5/2020	9:00	Brookline Hills Piles (in house)	Roger Gagnier, Alhmood, Abdallah (Aboud) <Abdallah.Alhmood@aecom.com>; Dwyer, Todd <Todd.Dwyer@aecom.com>
6	8/4/2020	11:00	Brookline - SOE Pile Cut Off Elevations- six shallow piles	Parks, Ian, Organizer, Koenig, Robert, Gagnier, Roger, Alhmood, Abdallah (Aboud), Andrew Jonic, Dan Bielenin, McDonough, Michael, Dwyer, Todd, Felix, Andy,
7	7/29/2020	3:30	Brookline Hills Station - Pile Rejection	Roger Gagnier Alhmood, Abdallah (Aboud) <Abdallah.Alhmood@aecom.com>; Dwyer, Todd <Todd.Dwyer@aecom.com>; McDonough, Michael <Michael.McDonough@aecom.com>
8	7/22/2020	2:30	Brookline Hills - Helical Pile Discussion	Hale, Thomas Organizer, Gagnier, Roger, 'AJonic@rawnarch.com', Parks, Ian, Hersey, Christopher, Mon, Peter, Justin Zarrella, Rasim Tumer, James McDermott, Koenig, Robert, Dwyer, Todd,
9	7/8/2020	3:30	Brookline Hills - Shallow Helical Pile Discussion	Hale, Thomas, Gagnier, Roger, Andrew Jonic, Alhmood, Abdallah (Aboud), Dan Bielenin, Dwyer, Todd, McDonough, Michael, Hersey, Christopher, Mon, Peter, Parks, Ian, Koenig, Robert, Justin Zarrella, Rasim Tumer, James McDermott,

ATTACHMENT F

CONTRACT FOR DESIGNER SERVICES

AMENDMENT NO. ~~20~~¹⁹

WHEREAS, the Town of Brookline _____ ("Owner") and William Rawn Associates, Architects Inc. _____, (the "Designer") (collectively, the "Parties") entered into a Contract for Designer Services for the _Brookline High School Expansion_____ Project (Purchase Order # 21803108) at the Brookline High _____ School on _July 6, 2018_____.
"Contract"; and

WHEREAS, effective as of ___ January 7, 2021 ___, the Parties wish to amend the Contract:

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. The Owner hereby authorizes the Designer to perform services for the Design Development Phase, the Construction Phases, and the Final Completion Phase of the Project, pursuant to the terms and conditions set forth in the Contract, as amended.
2. For the performance of services required under the Contract, as amended, the Designer shall be compensated by the Owner in accordance with the following Fee for Basic Services:

Fee for Basic Services:	Original Contract*	After this Amendment: Amendment fee: \$17,888✓
Feasibility Study Phase	\$ _____	\$ _____
Schematic Design Phase	\$ _____	\$ _____
Design Development Phase	\$ _____	\$ _____
Construction Document Phase	\$ _____	\$ _____
Bidding Phase	\$ _____	\$ _____
Construction Phase	\$ _____	\$ _____
Completion Phase	\$ _____	\$ _____
*Includes previous Amendments thru #18		
Total Fee	\$14,336,127.00 \$14,243,477	\$14,354,015.00 \$14,261,365

This Amendment is a result of: Design and engineering services for assisting the Construction Manager with a solution for the outbound MBTA platform where 6 helical piles failed. The failure was due to unforeseen obstructions preventing the piles from achieving their design depth of 40'.

3. The Construction Budget shall be as follows:

Original Budget: \$n/a_____

Amended Budget \$n/a_____

4. The Project Schedule shall be as follows:

Original Schedule: \$n/a_____

Amended Schedule \$n/a_____

5. This Amendment contains all of the terms and conditions agreed upon by the Parties as amendments to the original Contract. No other understandings or representations, oral or otherwise, regarding amendments to the original Contract shall be deemed to exist or bind the Parties, and all other terms and conditions of the Contract remain in full force and effect.

IN WITNESS WHEREOF, the Owner, with the prior approval of the Authority, and the Designer have caused this Amendment to be executed by their respective authorized officers.

OWNER

(print name)

(print title)

By _____
(signature)

Date _____

DESIGNER

Andrew Jonic
(print name)

Senior Associate
(print title)

By



(signature) _____
Date 1/7/21 _____