

# ATTACHMENT F

## CONTRACT FOR DESIGNER SERVICES AMENDMENT NO. 9

**WHEREAS**, the Town of Watertown (“Owner”) and Ai3 Architects LLC (the “Designer”) (collectively, the “Parties”) entered into a Contract for Designer Services for the Watertown Elementary Schools Building Project on December 26, 2017 (the “Contract”);

**WHEREAS**, effective as of September 1, 2022 the Parties wish to further 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:

- The Owner hereby authorizes the Designer to perform the following additional services in accordance with the Contract:

### Watertown Elementary Schools Building Project Designer Amendment #9 Detail

Proposed Services	Fee
Additional Civil Engineering services and related fees for the Lowell Elementary School, per the attached proposal from The Vertex Companies, Inc. and associated letter dated February 25, 2022 from The Vertex Companies, Inc.	
(\$44,900.00 VERTEX fee + \$4,490 Ai3 10% administrative mark-up) =	\$49,390.00
	<b>Total: \$49,390.00</b>

- 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 and Extra Services:

Fee for Basic and Extra Services	Original Contract	Previous Amendments	Amount of This Amendment	After This Amendment
<b>Educational Planning, Programming, and Evaluation of Potential Solutions Phase</b>				
<i>Cunniff Elementary School</i>	\$168,000.00	\$0.00	\$0.00	\$168,000.00
<i>Lowell Elementary School</i>	\$273,000.00	\$0.00	\$0.00	\$273,000.00
<i>Hosmer Elementary School</i>	\$285,000.00	\$0.00	\$0.00	\$285,000.00
<b>Schematic Design Phase</b>				
<i>Cunniff Elementary School</i>	\$112,000.00	\$0.00	\$0.00	\$112,000.00
<i>Lowell Elementary School</i>	\$182,000.00	\$0.00	\$0.00	\$182,000.00
<i>Hosmer Elementary School</i>	\$190,000.00	\$0.00	\$0.00	\$190,000.00
<b>Design Development Phase</b>				

<i>Cunniff Elementary School</i>	\$0.00	\$1,013,259.94	\$0.00	\$1,013,259.94
<i>Lowell Elementary School</i>	\$0.00	\$895,659.99	\$0.00	\$895,659.99
<i>Hosmer Elementary School</i>	\$0.00	\$1,634,432.34	\$0.00	\$1,634,432.34
<b>Construction Documents Phase</b>				
<i>Cunniff Elementary School</i>	\$0.00	\$1,484,753.75	\$0.00	\$1,484,753.75
<i>Lowell Elementary School</i>	\$0.00	\$1,312,431.77	\$0.00	\$1,312,431.77
<i>Hosmer Elementary School</i>	\$0.00	\$2,394,972.36	\$0.00	\$2,394,972.36
<b>Bidding Phase</b>				
<i>Cunniff Elementary School</i>	\$0.00	\$115,447.39	\$0.00	\$115,447.39
<i>Lowell Elementary School</i>	\$0.00	\$102,048.45	\$0.00	\$102,048.45
<i>Hosmer Elementary School</i>	\$0.00	\$186,221.65	\$0.00	\$186,221.65
<b>Construction Administration Phase</b>				
<i>Cunniff Elementary School</i>	\$0.00	\$672,271.87	\$0.00	\$672,271.87
<i>Lowell Elementary School</i>	\$0.00	\$594,247.33	\$0.00	\$594,247.33
<i>Hosmer Elementary School</i>	\$0.00	\$1,084,403.76	\$0.00	\$1,084,403.76
<b>Completion Phase</b>				
<i>Cunniff Elementary School</i>	\$0.00	\$60,568.05	\$0.00	\$60,568.05
<i>Lowell Elementary School</i>	\$0.00	\$53,538.46	\$0.00	\$53,538.46
<i>Hosmer Elementary School</i>	\$0.00	\$97,698.89	\$0.00	\$97,698.89
Phase 1: Site Surveyor – Topographical & Boundary Survey	\$67,199.00	\$0.00	\$0.00	\$67,199.00
Phase 1: Preliminary Geotechnical Evaluation of Proposed Site Area	\$33,000.00	\$0.00	\$0.00	\$33,000.00
Phase 1: Traffic Study	\$42,900.00	\$0.00	\$0.00	\$42,900.00
Phase 1: Environmental Site Assessment	\$7,500.00	\$0.00	\$0.00	\$7,500.00

Phase 1: Soil Characterization	\$15,000.00	\$0	\$0.00	\$15,000.00
Phase 1: Hydrant Flow Testing	\$3,000.00	\$0.00	\$0.00	\$3,000.00
Phase 2: Site Surveyor	\$0.00	\$80,620.00	\$0.00	\$80,620.00
Phase 2: Traffic Study	\$0.00	\$17,600.00	\$0.00	\$17,600.00
Phase 2: Geotechnical Evaluation	\$0.00	\$66,965.00	\$0.00	\$66,965.00
Phase 2: On-Site Geotechnical Engineer During Site Excavation/Compaction (Construction Phase)	\$0.00	\$95,147.00	\$0.00	\$95,147.00
Phase 2: Hazardous Materials Investigation	\$0.00	\$15,400.00	\$0.00	\$15,400.00
Phase 2: Hazardous Materials Surveys, Monitoring, Testing and Inspections (Construction Phase)	\$0.00	\$144,368.00	\$0.00	\$144,368.00
Phase 2: Site Permitting and Approvals Planning Board	\$0.00	\$49,500.00	\$0.00	\$49,500.00
Phase 2: Hydrant Flow Testing	\$0.00	\$3,300.00	\$0.00	\$3,300.00
Phase 2: Irrigation Services (Hosmer ONLY)	\$0.00	\$11,660.00	\$0.00	\$11,660.00
Phase 2: Soil Characterization	\$0.00	\$16,500.00	\$0.00	\$16,500.00
Phase 2: Installation Management of FF&E	\$0.00	\$38,000.00	\$0.00	\$38,000.00
Phase 2: LEED/Sustainability	\$0.00	\$200,000.00	\$0.00	\$200,000.00
Phase 2: Zoning or Regulatory Variances, Submittals, Approvals	\$0.00	TBD	TBD	TBD

Phase 2: Design, Specifications, and Procurement of Technology Equipment which is not part of the Building Infrastructure and/or Building Construction Contract Documents	<i>By Owner</i>			
Amendment No. 2: Lowell ES Solar Electric System	\$0.00	\$122,550.00	\$0.00	\$122,550.00
Amendment No. 3: Hosmer ES O'Connell Field Amenities	\$0.00	\$99,400.00	\$0.00	\$99,400.00
Amendment No. 4: Cunniff ES Landscape Modifications	\$0.00	\$1,650.00	\$0.00	\$1,650.00
Amendment No. 5: Hosmer ES Additional FF&E	\$0.00	\$6,930.00	\$0.00	\$6,930.00
Amendment No. 6: Hosmer ES Solar Canopies Relocation	\$0.00	\$37,667.50	\$0.00	\$37,667.50
Amendment No. 7: Lowell ES Existing Concrete Investigation	\$0.00	\$7,308.40	\$0.00	\$7,308.40
Amendment No. 8: Lowell ES FF&E	\$0.00	\$56,100.00	\$0.00	\$56,100.00
Amendment No. 9: Lowell ES Additional Civil Engineering	\$0.00	\$0.00	\$49,390.00	\$49,390.00
<b>Total Fee</b>	<b>\$1,378,599.00</b>	<b>\$12,772,621.90</b>	<b>\$49,390.00</b>	<b>\$14,200,610.90</b>

3. The Construction Budget shall be as follows:

Original Budget:	<u>N/A</u>
Amended Budget:	<u>\$137.5M (Project Budget: \$170M)</u>

4. The Project Schedule shall be as follows:

Original Schedule:	<u>October 2018 (Completion of Schematic Design Phase)</u>	
Amended Schedule:	Design Development -	complete July 2019
	Construction Documents -	complete January 2020
	Bidding -	complete Sept. 2019 thru March 2020
	Construction Administration -	complete September 2023
	Completion -	complete September 2024

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.

6. Detailed Scope of Services as follows:

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:

George Proakis  
(print name)

City Manager, City of Watertown  
(print title)

By \_\_\_\_\_  
(signature)

Date \_\_\_\_\_

DESIGNER:

James S. Jordan  
(print name)

Partner, Ai3 Architects LLC  
(print title)



By \_\_\_\_\_  
(signature)

Date September 1, 2022



August 3, 2022

Daren Sawyer, AIA, LEED AP, Partner  
Ai3 Architects, LLC  
526 Boston Post Road  
Wayland, MA 01778

**Re:** The VERTEX Companies  
Lowell Elementary School  
Add Services – Post Design Watertown Required Modifications  
(Vertex Project No. 49688)

Dear Mr. Sawyer,

In accordance with our recent discussion, we are pleased to have the opportunity to submit this proposal for additional engineering design services for the above referenced project. Outlined herein are our scope of services, and the method and basis of compensation for our services.

As you are aware all three elementary school bid documents were completed in 2020. In the spring of 2020, the Cunniff and Hosmer Elementary Schools went out to bid and in the fall of 2021 the Lowell Elementary School went out to bid.

While the Lowell Elementary School was out to bid in the fall of 2021, DPW requested another review of the Lowell Elementary School. Therefore, the bid documents were provided to DPW for another review.

As a result of DPW's review and comments Vertex, responded to their comments as well as the email from DPW. In the response we outlined modifications that were required along with additional redesign costs related to the items brought up by DPW. As outlined in the response letter these modifications included response to new DPW standards and/or requirements, as well as issues not previously raised, that were issued subsequent to the contract documents being issued for bidding.

At the time of construction commencement, this additional scope of work was not included in the contract with CTA, and it was noted it could be added by change order at a later date.

Since initial response to the comments Vertex has been diligently updating plans and issuing associated sketches. In addition, we have facilitated continuous correspondence and numerous

meetings. Costs associated with these efforts have been significant and as outlined in our initial response we are submitting this change order to cover these costs.

## **1.0 ADDITIONAL SERVICES**

Additional services are detailed in our February 25, 2022 letter to you regarding *Lowell Elementary School Project Engineer Review Comments dated January 14, 2022*. The letter detailed twenty-seven items, and sub items, which were brought up by the Department of Public Works and provided the anticipated work needed to address them.

Subsequent to the letter Vertex met with the Department of Public Works and we were able to negotiate to eliminate items 2, 5(c), 11, and 17(b) such that no action was required by Vertex.

Item 9, which required the installation of cleanouts at “bends” originally was anticipated to have no scope associated with it. Upon further meeting with the Department of Public Works they requested a number of cleanouts be added in various spots which required plan changes by Vertex.

## **2.0 EXCLUSIONS**

Vertex’s Scope of Work is defined above. Vertex has performed a preliminary review of available information, the site, and previous focus group discussions. Based on this preliminary review the following specific exclusions have been identified. Vertex is available to provide additional services related to these exclusions, but at this time they are not included in this proposal.

- At this time Vertex has not included scope and fee for correspondence and meetings.

## **3.0 SERVICES PROVIDED BY OTHERS**

- Existing information, including but not limited to, as-built drawings, previous condition surveys, and previous records where appropriate and available.
- Architectural drawings including dimensions, elevations and details of proposed improvements, alterations, or new construction.
- Preparation of all design or construction cost estimates.
- The services of consultants for the evaluation and design of building steam, gas, electrical, communication, lighting, and other building utilities, as appropriate.
- Hazardous material assessments and remediation to be performed by others.
- Building demolition to be performed by others.

- Coordination and layout of all utilities within the work area.
- Copies of plan depicting existing topography, site layout and grading.

#### 4.0 OUTSIDE SERVICES

Welch Land Surveyors will provide surveying services associated with item 27.

#### 5.0 ADDITIONAL SERVICES

Other services required by Ai3 that are not part of the Scope of Services, as described above, shall be considered Additional Services. Additional Services shall be furnished by VERTEX or obtained from others by VERTEX if requested in writing by Ai3. Ai3 shall pay VERTEX for Additional Services in accordance with rates and charges agreed to in writing prior to authorization by Ai3.

#### 6.0 SCHEDULE FOR SERVICES

Services will commence upon written authorization to proceed, and information required to perform our services. Additional services may materially add to the time required to complete the work on the Project. VERTEX will be entitled to an equitable adjustment in the Period of Service as a result of services added.

#### 7.0 FEE FOR SERVICES

The initial estimate presented in our February 25, 2022 letter to you regarding *Lowell Elementary School Project Engineer Review Comments dated January 14, 2022* totaled \$63,900. As mentioned above, subsequent to the letter Vertex met with the Department of Public Works and we were able to negotiate to eliminate items 2, 5(c), 11, and 17(b) such that no action was required by Vertex. Also, Item 9, which required the installation of cleanouts at “bends” originally was anticipated to have no scope associated with it. Upon further meeting with the Department of Public Works they requested a number of cleanouts be added in various spots which required plan changes by Vertex. Lastly, survey required for item number 27 was obtained at \$2,500 less than the \$10,000 originally estimated. As such, our fee is:

Original Estimate:	\$ 63,900.00
Item 2	(\$ 5,000.00)
Item 5(c)	(\$ 1,500.00)
Item 9	\$ 1,000.00
Item 11	(\$ 3,000.00)
Item 17(b)	(\$ 8,000.00)
Item 27	(\$ 2,500.00)



**Total** **\$ 44,900.00**

Invoices for services rendered and expenses incurred will be submitted monthly and are due and payable within seven days of the Client's receipt of payment for the Engineer's invoices from the Client's Client. Invoices not paid within seven days after the Client's receipt of payment for the Engineer's services shall be subject to a one and one-half percent (1.5%) per month interest charge. In addition, for contracts more than thirty days in arrears for payment, VERTEX may, with seven (7) days written notice, suspend services.

This represents our best judgment at this time as to the effort required to achieve the stated objectives. It should be recognized that should you change the Scope of Services or corresponding level of effort upon which this proposal is based, that an increase or decrease in charges may result. You will be notified of any change regarding an increase in charges and we will not exceed the recommended budget without your approval, nor will be required to work beyond the approved budget.

#### **8.0 TERMS AND CONDITIONS**

This work will be performed under the terms and conditions previously approved for thi project.

#### **9.0 PROJECT AUTHORIZATION**

Attached you will find a copy of the Project Work Authorization. Please sign and return it to VERTEX, the receipt of which shall constitute our notice to proceed.

Sincerely,

**The Vertex Companies, Inc.**



Andrew J. Chagnon, PE  
Managing Director, Design

**PROJECT WORK AUTHORIZATION**

Description of Services: Additional Civil Engineering Service

Project Location: Lowell Elementary School  
Watertown, MA

Project No.: 49688

Cost: \$44,900 Lump Sum

CHARGE INVOICES TO THE ACCOUNT OF:

Client: Daren Sawyer, AIA, LEED AP, Partner  
Ai3 Architects, LLC  
526 Boston Post Road  
Wayland, MA 01778

FEE FOR SERVICES ACCEPTED BY: \_\_\_\_\_ Date: \_\_\_\_\_

PAYMENT TERMS:

Invoices for completed work will be issued by the calendar month for continuous or extended projects unless otherwise agreed. Payment is net thirty days.

FOR APPROVAL OF CHARGES:

If the invoice is to be mailed for approval to someone other than the account charged, please indicate in the space below.

Firm:

Address:

Attn:

Phone:

This is a legal and binding contract between the CLIENT and Vertex Engineering P.C. as referenced in the attached proposal of this date and as described above.





February 25, 2022

Mr. Daren Sawyer, AIA, LEED AP, Partner  
Ai3 Architects, LLC  
526 Boston Post Road  
Wayland, MA 01778

Re: Lowell Elementary School Project Engineer Review Comments dated January 14, 2022.

Dear Mr. Sawyer:

The Vertex Companies, Inc. (VERTEX) is providing comment responses to the Stormwater Management Plan and Construction Document submittal to the Watertown Department of Public Works (DPW). The accompanying documents have been revised to address comments from the DPW's recent review of this project. A summary of the actions taken in response to the DPW's concerns is listed below:

1. Sub-catchment PDA-1 contains new roadways, sidewalk and a building expansion but discharges to the point of analysis untreated.

***Response: Our current design includes replacement pavement, parking areas and sidewalks, two deep-sump hooded catch basins and manhole. The loading dock area also includes a proprietary hydrodynamic separator. An additional hydrodynamic separator can be included into the design within Lowell Avenue for an additional cost.***

***Design time required: Yes***

***Estimated design cost: \$600***

***Estimated construction cost: \$10,000***

- a. The treatment unit shall be placed at the furthest downstream location prior to discharging to the MS4?

***Response: The current design includes two deep-sump hooded catch basins and a proprietary hydrodynamic separator within the treatment train for PDA-1. A jellyfish filter can be added to the design for further treatment prior to discharging to the MS4.***

***Design time required: Yes***

***Estimated Design Cost: \$400***

***Estimated Construction cost: \$5,000***

2. Time of concentration should be 6 minutes minimum per TR-55 and TR-20 methodologies.  
**Response: The current stormwater calculations were completed using the Town of Watertown Rules and Regulations for Stormwater Management and Erosion Control dated June 25, 2015, which were current at the time of the design. The 2015 regulations dictated a 5-minute minimum time of concentration. Per Section 9.2.2 of the 2021 Watertown Rules and Regulations for Stormwater Management and Erosion Control, the minimum time of concentration is 5 minutes. The time of concentration can be updated to 6 minutes per TR-55 and TR-20 methodologies at an additional cost. Modifying the time of concentration could trigger design changes to the stormwater management systems.**

**Design time required: Yes**

**Estimated Design cost: \$5,000**

3. Proprietary treatment units have been submitted with manufacturer's specifications as the STEP program is no longer active.

**Response: Yes, you are correct.**

- a. Recommend utilizing NJDEP's approved recommendation that proprietary treatment units such as hydrodynamic particle separations utilize 50% TSS removal rates to be more conservative and reflect true conditions after consistent use.

**Response: NJDEP's approved recommendation of 50% TSS removal from proprietary treatment devices will be used in updated drainage calculations. Please note that utilizing the data from the inactive STEP program is a widely accepted practice.**

**Design time required: Yes**

**Estimated design cost: \$5,000**

4. TSS calculations for the proposed treatment trains are presented out of order.

**Response: TSS calculations will be updated with the correct order for the treatment trains.**

**Design time required: No**

**Estimated Design cost: N/A**

- a. Please revise. The first step should be where water enters first, i.e. deep sump catch basins with hooded outlets, then a hydrodynamic particle separator, then the subsurface infiltration system. This will reduce the amount of TSS removal anticipated with the current calculations.

**Response: See response above.**

- b. Additional treatment measures may be required to attain 90% removal per the Watertown Stormwater Management and Erosion Control Rules and Regulations.

**Response:** *Our current design was completed using the Town of Watertown Rules and Regulations for Stormwater Management and Erosion Control date June 25, 2015, which were current at the time of the design. Per Section 8.4.7 of the 2015 regulations, the proposed design was to provide 80% TSS removal of all runoff from existing as well as new impervious areas. Additional treatment devices can be included into the design at an additional cost to meet the updated 90% removal rate.*

**Design time required:** *Yes*

**Estimated Design cost:** *\$5,000*

- c. 44% pre-treatment is required prior to entering subsurface infiltration systems or other infiltration BMPs.

**Response:** *Prior to entering the subsurface infiltration system, site runoff is pre-treated through proprietary hydrodynamic separators which have a conservative TSS removal rate of 50% per the NJDEP's recommendation.*

**Design time required:** *No*

**Estimated Design cost:** *N/A*

5. Total Phosphorus removal calculations have not been submitted.

**Response:** *Correct, we did not include phosphorus removal calculations in our submission. Our current design includes subsurface infiltration of Site runoff, and therefore no runoff is entering the MS4 which needs to be treated.*

**Design time required:** *No*

**Estimated Design cost:** *N/A*

- a. Please provide TP removal calculations utilizing the EPA's BATT Version 2.1 Worksheet from the link below: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england>

**Response:** *Yes, we can include phosphorus removal calculations per the EPA's BATT Version 2.1 Worksheet.*

**Design time required:** *Yes*

**Estimated Design cost:** *\$1,000*

- b. 60% TP removal is required for all disturbed areas per the City of Watertown Stormwater Management and Erosion Control Rules and Regulations.

**Response:** *Our current design was completed using the Town of Watertown Rules and Regulations for Stormwater Management and Erosion Control date June 25,*

**2015, which were current at the time of the design, as well as the Final Watertown Stormwater Management Plan dated June 2019. Per the Stormwater Management Plan, the proposed design needed to reduce its phosphorus load by 52% to meet the established waste load allocation for the TMDL. Additional treatment devices can be included into the design at an additional cost to meet the updated 60% phosphorus removal rate.**

**Design time required: Yes**

**Estimated Design cost: \$2,500**

- c. Additional tree trenches may be utilized in Lowell Ave to attain additional TP removal.

**Response: Per conversations with Kevin Duffy and Matthew Shuman in September 2020, five (5) treebox filters were added along Orchard Street and George Street. If additional treebox filters are needed, there will be an additional cost associated.**

**Design time required: Yes**

**Estimated Design cost: \$1,500**

6. A table indicating stormwater management pre- and post-condition stormwater runoff volumes shall be provided for the proposed project.

**Response: The Lowell Stormwater Management Plan that was submitted on November 22, 2019 included net difference in peak flows but not runoff volumes. An additional table will be included to show pre- and post-condition stormwater runoff volumes.**

**Design time required: Yes**

**Estimated Design cost: \$800**

7. The subsurface infiltration systems are modelled in a manner that does not align with the provided plans.

**Response: The current design includes a stepped underground infiltration system that is not easily modeled using software like HydroCAD. The infiltration system was modeled to the best practicable extent using HydroCAD, as shown in Appendix B2 of the Stormwater Management Report.**

**Design time required: No**

**Estimated Design cost: N/A**

- a. The system inverts do not match the model. Please revising the model or the plans to concur.

***Response: The ability to model the stepped infiltration system is not easily possible using HydroCAD or other stormwater modeling software. The system was modeled to the best practicable extent using available software.***

***Design time required: No***

***Estimated Design cost: N/A***

- b. The system is stepped in the plans and on the details provided, however the model is indicating the systems are flat.

***Response: The ability to model the stepped infiltration system is not easy possible using HydroCAD or other stormwater modeling software. The system was modeled to the best practicable extent using available software.***

***Design time required: No***

***Estimated Design cost: N/A***

- c. Both systems were modelled with outlets that indicate pipes that will be out of the ground in the provided model. Please revise the model accordingly.

***Response: The ability to model the stepped infiltration system is not easy possible using HydroCAD or other stormwater modeling software. The system was modeled to the best practicable extent using available software.***

***Design time required: No***

***Estimated Design cost: N/A***

- d. Both systems were modelled with large weirs, UIC-1 with a 60-foot length weir and UIC-2 with a 50-foot length weir. It is unclear where these outlets are and how they function. Please revise the model and the plan accordingly.

***Response: The ability to model the stepped infiltration system is not easy possible using HydroCAD or other stormwater modeling software. The weirs allow the model to be better analyzed in overflow conditions and are not part of the construction.***

***Design time required: No***

***Estimated Design cost: N/A***

- e. Both systems have two primary inverts, a 12 inch culvert and a large weir. It is unclear which outlet controls flow discharging from the system as both are modelled as primary outlets. It is unclear where the 60-foot and 50-foot outlet weirs to the system are currently proposed and how they will function.

***Response: The ability to model the stepped infiltration system is not easy possible using HydroCAD or other stormwater modeling software. The inverts shown on Sheet C5.0 and Sheet C6.6 correctly show the system design. The weirs allow the model to be better analyzed in overflow conditions and are not part of the construction.***

***Design time required: No  
Estimated Design cost: N/A***

- f. Storage calculations will need to be revised based on the subsurface infiltration system revisions.

***Response: The ability to model the stepped infiltration system is not easy possible using HydroCAD or other stormwater modeling software. The system was modeled to the best practicable extent using available software. If the system needs to be updated based on design updates throughout this comment review, the storage calculations will be updated as necessary.***

***Design time required: No  
Estimated design cost: N/A***

- i. Currently the report, plans and model show conflicting storage information.

***Response: We will review the report, plans and model to ensure the correct storage information is presented.***

***Design time required: No  
Estimated design cost: N/A***

- g. Provide revised drawdown calculations based on the infiltration surface area and volume of water entering the subsurface systems. More information can be found in Volume 3 Chapter 1 – Documenting Compliance of the MA Stormwater Handbook.

***Response: We will review drawdown calculations and updated based on any subsurface infiltration system updates.***

***Design time required: No  
Estimated design cost: N/A***



8. Existing and to be demolished features of the existing stormwater management system are unclear.

***Response: Existing stormwater management system features to be demolished can be seen on Sheet C1.0 and C1.1.***

***Design time required: No***

***Estimated design cost: N/A***

- a. Please freeze the existing stormwater management system features that are to be demolished on the proposed grading drainage plan for ease of review. It is unclear if the subsurface infiltration systems will collect stormwater runoff from the existing drainage.

***Response: Existing stormwater management system features that are not remaining in the proposed design will be frozen for ease of review.***

***Design time required: Yes***

***Estimated design cost: \$800***

9. Stormwater management pipes should have cleanouts or area manholes wherever bends are proposed.

***Response: The current design, shown on Sheet C5.0, shows cleanouts at all bends for stormwater management piping.***

***Design time required: No***

***Estimated design cost: N/A***

10. The proposed double grate diversion catch basins shown on sheet C5.1 appear to conflict with existing utilities.

***Response: The proposed design shows the exact replacement of an existing catch basin within George Street which currently coexists with the waterline. The existing waterline location shown on our plans is based on record information and may not be exact. The contractor will verify any conflicts with existing utilities in the field.***

***Design time required: No***

***Estimated Design cost: N/A***

- a. Please revise or propose test pits prior to construction to verify existence of existing underground utilities.

***Response: See response above. Test pits can be performed if necessary prior to construction for an additional cost.***

***Design time required: No***

***Estimated Design cost: N/A***

- b. Why are double catch basins proposed?

***Response: The current design includes a double catch basin because there is a steep incline along George Street. The double catch basin allows for maximum captured volume.***

***Design time required: No***

***Estimated Design cost: N/A***

11. It is unclear why the proposed sanitary sewer slopes vary considerably from pipe to pipe.

***Response: The slope of the sanitary sewer piping is generally around 5%. Areas closer to the building are more restricted, therefore pipe slopes are a little more shallow. If necessary, we can rework the design to include more consistent pipe slopes.***

***Design time required: Yes***

***Estimated design cost: \$3,000***

12. Please provide a sanitary sewer profile for all proposed sanitary sewer services.

***Response: While sanitary sewer service profiles are typically not provided, we can include sanitary sewer profile views on the utility sheets.***

***Design time required: Yes***

***Estimated design cost: \$3,000***

13. What size grease interceptor is proposed?

***Response: The volume and size of the proposed grease interceptor is shown on the Plumbing plans.***

***Design time required: No***

***Estimated design cost: N/A***

14. What utility equipment is proposed on the western concrete utility pad shown on the plans?

**Response: Site electrical can be seen on the Electrical Plans provided by Griffith & Vary (G&V).**

**Design time required: No**

**Estimated design cost: N/A**

15. ADA compliant grades are exceeded at the proposed S-curve concrete sidewalk on Sheet C3.2.

**Response: The current design of the S-curve concrete sidewalk on Sheet C3.2 shows a 4.8% slope, which is less than the 5% maximum slope per ADA. If necessary, we can re-grade the s-curve ramp to have a lower slope.**

**Design time required: Yes**

**Estimated design cost: \$5,000**

16. Additional spot grades are required at each proposed curb ramp.

**Response: We can add additional spot grades at each proposed curb ramp.**

**Design time required: Yes**

**Estimated design cost: \$1,500**

- a. Including but not limited to top and bottom or ramp, ramp transitions, ramp landings etc.

**Response: We can add additional spot grade to top and bottom or ramp, ramp transitions, ramp landings etc.**

**Design time required: Yes**

**Estimated design cost: See above.**

17. The proposed ADA parking spaces are located in an area where no accessible sidewalk is available.

**Response: The current design has two ADA accessible parking spaces with an ADA compliant ramp to the sidewalk located directly above the parking space. The sidewalk then leads to an ADA compliant ramp to the crosswalk within Lowell Ave. From the crosswalk, there is an ADA compliant ramp to the school. This can be seen on sheet C3.1.**

**Design time required: No**

**Estimated design cost: N/A**

- a. The angular cross slope is designed at 2%, which provides no construction tolerance for either proposed ADA space.

***Response: The ADA ramps were designed within ADA compliance and tolerances.***

***Design time required: No***

***Estimated design cost: N/A***

- b. The proposed sidewalks are designed based on the existing roadway which has a running slope that exceeds 5%.

***Response: Yes, the proposed sidewalks were designed to replicate existing features. The current design does not include the regrading of Lowell Avenue. If necessary, we can increase the scope of work to include the regrading of Lowell Avenue which would then allow the sidewalks to have a running slope of less than 5%.***

***Design time required: Yes***

***Estimated design cost: \$8,000***

18. The proposed ADA ramp with handrails is designed with an 8% running slope, which leaves little construction tolerance.

***Response: The ADA ramps with handrails were designed within ADA compliance and tolerances.***

***Design time required: No***

***Estimated design cost: N/A***

19. Denote the proposed EV charging space with signage and striping.

***Response: Proposed EV charging space signage and striping will be added to the plans.***

***Design time required: Yes***

***Estimated design cost: \$800***

20. Existing crosswalks at Lowell and York are proposed to remain.

***Response: Yes, in the current design the existing crosswalks at Lowell and York are proposed to remain.***

***Design time required: No***

***Estimated design cost: N/A***

- a. Are the existing crosswalks and ADA ramps compliant or will rework be necessary?

***Response: The existing crosswalks at Lowell and York match the existing grade of Lowell Avenue. If necessary, the crosswalks can be redesigned to meet DPW requests.***

***Design time required: Yes***

***Estimated design cost: \$2,500***

21. A 6,800 gallon underground storage tank (UST) is referenced but no location is shown on the plans.

***Response: According to the Phase I ESA Report for Lowell Elementary School the UST was removed in September 1995.***

***Design time required: No***

***Estimated design cost: N/A***

- a. Provide an approximate location if there is record data to do so. If not, provide any record data that indicates the UST exists or existed.

***Response: Per the Phase I Environmental Site Assessment (ESA) Report for Lowell Elementary School submitted on April 6, 2018, the UST was removed in September 1995. Records for the 6,800 gallon UST were obtained from the Town of Watertown Town Clerk's office.***

***Design time required: No***

***Estimated design cost: N/A***

22. The reference, demolition and survey notes on the General Notes and Legend sheet have areas that are not filled out or do not concur.

***Response: These areas will be updated with the appropriate information for each section.***

***Design time required: No***

***Estimated design cost: N/A***

- a. Please revise the notes sheet to fill in these blank areas and revise the notes to ensure they are in agreement.

***Response: These areas will be updated with the appropriate information for each section.***

***Design time required: No***

***Estimated design cost: N/A***

- b. Please add the attached Construction Standard Notes to be included on all Site Plans to the General Notes and Legend sheet.

***Response: The attached Construction Standard Notes will be included on all Site Plans, and to the General Notes and Legend sheet.***

***Design time required: Yes***

***Estimated design cost: \$500***

23. The proposed pavement limits shown for Lowell Ave propose to retain portions of pavement that are in need of repair.

***Response: In the current design, while working with the Town of Watertown DPW, we did not include all areas of Lowell Avenue. We can include the entire length of Lowell Avenue north of the school into the design for an additional cost.***

***Design time required: Yes***

***Estimated design cost: \$1,500***

- a. Please revise the extents of pavement to repair all portions of Lowell Ave adjacent to the project from York Ave. to George Street.

***Response: We will update the design to include all portions of Lowell Ave adjacent to the project from York Avenue to George Street. This will incur an additional cost.***

***Design time required: Yes***

***Estimated design cost: See above***

- b. Verify the existing crosswalks and ADA ramps at York Ave are ADA compliant and if not, please include in this project's scope of work.

***Response: Based on the previous comment to include all portions of Lowell Avenue from York Avenue to George Street, we will include updating the crosswalks at York Avenue to meet ADA requirements.***

***Design time required: Yes***

***Estimated design cost: \$2,500***

24. Add an additional Sign S1-1 and W16-7PL on the opposite side of the crosswalk shown on sheet C2.0 so that there are signs on both sides of the roadway.

***Response: We will add additional signage to the opposite side of the crosswalk shown on Sheet C2.0.***

***Design time required: No***

***Estimated design cost: \$500***

25. The Driveway rework proposed opposite York Ave shall have a concrete driveway apron.

***Response: We will include a concrete driveway apron into the design.***

***Design time required: Yes***

***Estimated design cost: \$500***

26. The proposed Tree Trenches do not have a cleanout detail as noted.

***Response: A cleanout detail will be added to the detail sheets.***

***Design time required: No***

***Estimated design cost: N/A***

- a. The tree trench perforated underdrain shall be 8 inches in diameter and shall have a 90 degree bend and then a reducer to a 4 inch riser and cleanout cap.

***Response: We will update the Tree Trench detail to reflect these changes.***

***Design time required: No***

***Estimated design cost: N/A***

- b. Proposed geotextile fabric shall extend across the top of the full extents of crushed stone within the tree trench detail.

***Response: We will update the Tree Trench detail to better demonstrate and clarify this detail.***

***Design time required: No***

***Estimated design cost: N/A***

27. The proposed ADA improvements by Fuller Road and Walcott Road do not appear to have enough existing and proposed conditions information to confirm compliance.

***Response: The original scope of the project for the Lowell School did not include any re-working of the intersection at Walcott Road and Fuller Road. Therefore, the survey for the project does not extent that far east. In discussions with the DPW throughout the design process, the addition of this intersection was brought up. Additional survey information is necessary for the continued design of this intersection.***

***Design time required: Yes***

***Estimated design cost: \$10,000***

- a. Please revise to provide additional information as necessary to ensure compliance.

***Response: See response above. Additional survey information is necessary to ensure compliance.***

***Design time required: Yes***

***Estimated design cost: See above***

- b. Work proposed by Fuller Road and Walcott Road will need to be discussed further with City Representatives prior to design finalization and construction.

***Response: The work proposed by Fuller Road and Walcott Road was not included in the original design. Vertex is open to conversations with City Representatives to ensure proper design of this intersection.***

***Design time required: Yes***

***Estimated design cost: \$2,000***

- c. There appears to be a discrepancy in the Right of Way and street widths of Fuller Road and the proposed improvements shown. Work can only be proposed within the Right of Way of these streets and be able to tie into existing conditions.

***Response: See response above. Additional survey information is necessary to ensure compliance.***

***Design time required: Yes***

***Estimated design cost: See above***

Sincerely,

The Vertex Companies, Inc.



Andrew Street, PE  
Senior Project Manager – Civil Engineering