

Watertown Public Schools Building Committee

DesignWatertown

Elementary Schools Project

*Ai3 Architects, LLC
Hill International, Inc*

Agenda - October 20, 2021

- Call to Order
- Approval of Meeting Minutes
 - Elementary Schools Project Meeting Minutes for September 15, 2021
- Review & Approval of:
 - Elementary Schools Monthly Invoices
 - Hosmer: Purchase Order for Third-Party PV Inspections
- Executive Summary
- Elementary Schools Project Updates
 - Cunniff: Certificate of Substantial Completion
 - Lowell: Proprietary Items - Req'd Vote
 - Hosmer: Battery Storage Overview
- Elementary Schools Questions/Comments
- Adjournment

To Connect via Zoom:*

Passcode: 099746

<https://us02web.zoom.us/j/84188596018?pwd=M0x-HeWF2OWZzTU0vYXRHSTJxMHdUUT09>

**Members of the Public:* please use the Q&A button to ask questions when appropriate or email questions to: buildingforfuture@watertown-ma.gov



Watertown Public Schools Building Committee

Call to Order

Approvals

- ▶ Meeting Minutes
 - Elementary School meeting minutes for September 15, 2021

- ▶ Invoices
 - Elementary Schools Project

- ▶ Purchase Order
 - Third-Party Photovoltaic Inspections for Hosmer

Summary of Invoices: Elementary Schools Project

VENDOR	PROJECT	INVOICE DATE	INVOICE NUMBER	INVOICE AMOUNT
Hill International	Elementary Schools	10/11/21	0000028	\$90,210.00
Ai3 Architects	Elementary Schools	09/30/21	0043B-1610.00	\$68,025.63
Ai3 Architects	Elementary Schools	09/30/21	0035E-1610.00	\$29,820.00 <i>(Extra Services)</i>
Ai3 Architects	Elementary Schools	09/30/21	0025R-1610.00	\$3,485.00 <i>(Reimbursable Expenses)</i>
Brait Builders	Elementary Schools	10/13/21	Application #16	\$3,850,516.30
UTS (Testing Agency)	Elementary Schools	09/17/21	95932	\$1,340.00
Colliers International (CxA)	Elementary Schools	08/31/21	010347	\$10,042.55
FF&E Invoices	Elementary Schools	10/05/21	varies	\$230,003.89
Total				\$4,283,443.37

Purchase Order for Hosmer: Third Party Photovoltaic Inspections

Description: Ridgeline Energy Analytics proposes to provide a third-party electrical inspection of the new 796.9 kWdc solar installation at the Hosmer Elementary School, located at 1 Concord Rd in Watertown, MA.

Purpose: To ensure conformance with Massachusetts Electrical Code (MEC) requirements, the approved system design, and good installation practices. A final inspection report will be provided.

The proposed amount of **\$22,150.00** is a fixed fee based on the rates of the engineers completing the review.

PHASE	TASK	TIMELINE	COST
01, 02	Electrical Design Review	1 week	\$1,850.00
01	Installation Review	12 weeks	\$6,650.00
01	Final Inspection & Report	2 weeks	\$3,500.00
Phase 01 Subtotal:			\$12,000.00
02	Installation Review	12 weeks	\$6,650.00
02	Final Inspection & Report	2 weeks	\$3,500.00
Phase 02 Subtotal:			\$10,150.00
Purchase Order Total:			\$22,150.00

Watertown Public Schools Building Committee

Executive Summary



Project Accomplishments from Last Month

Cunniff Elementary School
Furniture, Fixture and Equipment (FF&E) Substantially Completed
Owner Furnished and Installed Technology Equipment Substantially Completed

Hosmer Elementary School
Maintaining the Substantial Completion date of December 31, 2021 for the new Building including perimeter sidewalks
Winthrop St. Playground Substantially Completed for the first day of school

Lowell Elementary School
Contractor Pre-qualifications reviewed and substantially completed
Advertise Bid Schedule established

Projected Major Tasks This Month

Cunniff Elementary School
Ribbon cutting ceremony October 5, 2021
First day of school is October 12, 2021

Hosmer Elementary School
Completion of exterior windows, masonry, and exterior finishes along with metal edging at the roof this month
Continue with finish painting, ceilings, carpentry, flooring and finish MEPS in the interior of the building

Lowell Elementary School
Pre-Bid Conference Scheduled for October 20, 2021 with Pre-qualified Contractors

Schedule Summary - Upcoming Milestones

	Scheduled Start	Scheduled Finish	Status	Comments
Cunniff Elementary School				
Architectural Punchlist	9/1/21	10/30/21	Ongoing	After hours
Furniture, Fixture and Equipment punchlist	9/7/21	10/30/21	Ongoing	After hours
Move Management - St. Jude to new Cunniff ES	10/6/21	10/8/21	Complete	
Site Work and Landscaping	4/1/21	10/30/21	Ongoing	
Final Paving & Line Painting - Parking lot/Warren St.	10/4/21	10/11/21	Ongoing	
Owner Furnished and Installed Technology Equip.			Complete	
Hosmer Elementary School				
Exterior storefronts, curtainwalls and roofing	3/1/21	10/30/21	Ongoing	Weather Delay
Painting & Ceilings	6/1/21	11/30/21	Ongoing	
Finish Carpentry	6/1/21	11/30/21	Ongoing	
Flooring	7/1/21	11/30/21	Ongoing	
Finished Fire Prot., Plumbing, HVAC and Electrical	8/1/21	11/30/21	Ongoing	
Building Perimeter Site Work	9/1/21	12/1/21	Ongoing	

Hosmer - Progress Photos



Cunniff - Progress Photos



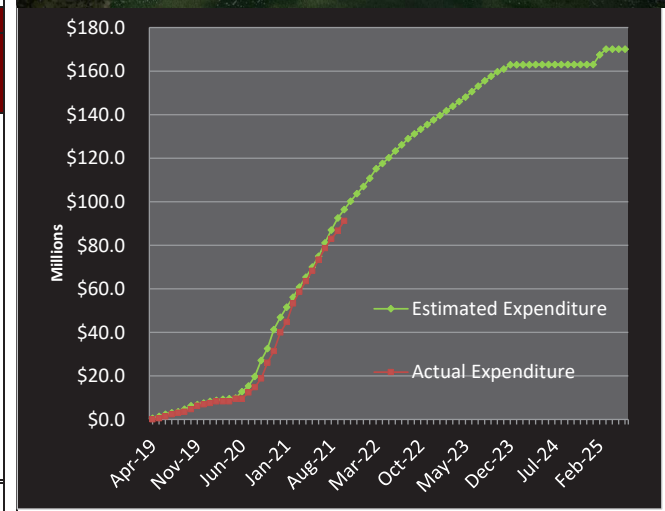
Scope changes from the Original Scope

CO#1 - \$128,881.27 Approved 9/16/2020
 CO#2 - \$315,914.69 Approved 9/16/2020
 CO#3 - \$108,988.03 Approved 11/18/2020
 CO#4 - \$143,575.52 Approved 2/17/2021
 CO#5 - \$0.00 Approved 2/17/2021
 CO#6 - \$191,818.60 Approved 4/21/2021
 CO#7 - \$201,523.75 Approved 7/21/2021
 CO#8 - \$248,810.44 Approved 7/21/2022
 CO#9 - \$807,045.31 Approved 9/15/2021
 Change Order #1 - #9 Total \$2,146,557.61
 2.26% of the Total Construction Contract

Lowell - Progress Photos



Description	BUDGET			COST				CASH FLOW	
	Baseline	Budget	Authorized Changes	Approved Budget	Committed Costs	Uncommitted Costs	Forecast Costs	Total Project Costs	Expenditures to Date
Construction	\$ 136,000,000	\$ (1,835,442)	\$ 134,164,558	\$ 97,101,558	\$ 37,063,000	\$ -	\$ 134,164,558	\$ 77,253,960	\$ 56,910,598
Design Services	\$ 12,441,016	\$ -	\$ 12,441,016	\$ 12,441,016	\$ -	\$ -	\$ 12,441,016	\$ 11,180,161	\$ 1,260,855
Administrative	\$ 8,908,984	\$ (580,000)	\$ 8,328,984	\$ 4,987,533	\$ 3,341,451	\$ -	\$ 8,328,984	\$ 2,689,124	\$ 5,639,860
FF&E	\$ 4,150,000	\$ 225,000	\$ 4,375,000	\$ 1,870,539	\$ 2,504,461	\$ -	\$ 4,375,000	\$ 230,004	\$ 4,144,996
SUBTOTAL	\$ 161,500,000	\$ (2,190,442)	\$ 159,309,558	\$ 116,400,646	\$ 42,908,912	\$ -	\$ 159,309,558	\$ 91,353,249	\$ 67,956,309
Construction Contingency (Hard Cost)	\$ 7,400,000	\$ (2,209,558)	\$ 5,190,442	\$ -	\$ 5,190,442	\$ -	\$ 5,190,442	\$ -	\$ 5,190,442
Owner's Contingency - COVID-19	\$ -	\$ 1,000,000	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000
Owner's Contingency (Soft Cost)	\$ 1,100,000	\$ 3,400,000	\$ 4,500,000	\$ -	\$ 4,500,000	\$ -	\$ 4,500,000	\$ -	\$ 4,500,000
SUBTOTAL	\$ 8,500,000	\$ 2,190,442	\$ 10,690,442	\$ -	\$ 10,690,442	\$ -	\$ 10,690,442	\$ -	\$ 10,690,442
PROJECT TOTAL	\$ 170,000,000	\$ -	\$ 170,000,000	\$ 116,400,646	\$ 53,599,354	\$ -	\$ 170,000,000	\$ 91,353,249	\$ 78,646,751



Watertown Public Schools Building Committee

Project Updates

Cunniff Elementary School: Certificate of Substantial Completion

Appendix A: Owner/Contractor Responsibilities

Security

Punchlist work to be performed by the Contractor and/or Subcontractors within the Owner occupied areas will be conducted at times acceptable to the Owner.

The Owner maintains responsibility for security of Owner-occupied areas.

Maintenance

The Owner assumes responsibility for maintenance of Substantially Complete areas. However, the Contractor is responsible for maintenance and clean-up of all areas where trades are performing punchlist work for the Contractor.

Damage to the Work

The Contractor or any Subcontractors shall be responsible for any damage caused by their employees, subcontractors, or agents.

The Owner shall be responsible for any damage caused by their employees, subcontractors, or agents.

Insurance

The Owner assumes responsibility for insurance.

The Contractor and all Subcontractors shall maintain Liability Insurance and Worker's Compensation Insurance as required by the contract documents.

Utilities

The Owner assumes responsibility for all utilities within Owner occupied areas.



526 BOSTON POST ROAD
WAYLAND, MA 01778

T: 508-358-0790
F: 508-358-0791

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Name: Cunniff Elementary School
246 Warren Street
Watertown, MA 02472

Project No.: 1611.00
Contract Date: June 2020

Date of Issuance: September 27, 2021

To Contractor: Brait Builders Corporation
(Name & Address) 57 Rockwood Road
Marshfield, MA 02050

To Owner: Town of Watertown
(Name & Address) 149 Main Street
Watertown, MA 02472

PROJECT OR DESIGNATED PORTION SHALL INCLUDE:

Demolition of the existing Cunniff Elementary School building and construction of a new 82,384 gsf Cunniff Elementary School building and associated site, civil and landscaping work identified on the contract documents.

The Work performed under this Contract has been reviewed and found, to the best knowledge, information and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion thereof designated above is hereby established as

September 27, 2021

which is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

N/A

A list of items to be completed or corrected is attached hereto (see Appendix B). The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Ai3 Architects, LLC

ARCHITECT

By: Daren Sawyer, AIA, Partner

Date: 10/7/21

The Contractor will complete or correct the Work on the list of items attached hereto within 60 days from the above date of Substantial Completion.

Brait Builders Corporation

CONTRACTOR

By: TJ Dahill, Brait Builders Corporation

Date: 10/7/21

The Owner accepts the Work or designated portion thereof as substantially complete and will assume full possession thereof at (time) 12:01:00 AM on (date) September 27, 2021

Town of Watertown

OWNER

By: Mark Sideris, School Building Committee Chairman

Date:

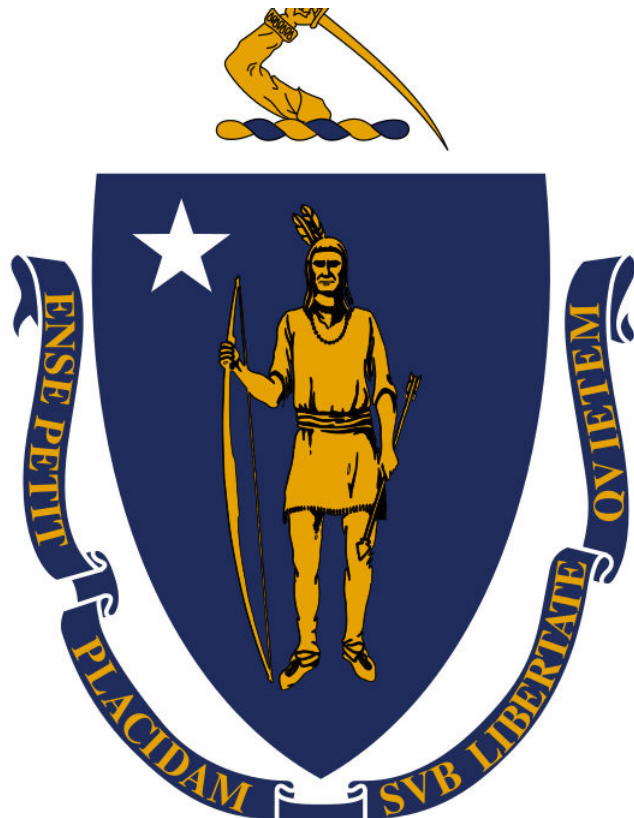
The responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance shall be as follows:

(Note - Owner's and Contractor legal and insurance counsel should determine and review insurance requirements and coverage.)

see Appendix A

Proprietary Specifications Under M.G.L. c.149, §§44A-M

A presentation on Proprietary Specifications specific to technology for the Elementary School Projects was originally given to the School Building Committee on February 5, 2020.



Excerpts from M.G.L.

M.G.L. c.30, §39M(b) requires that **proprietary specifications for public construction projects**, including buildings, shall only be used "... for sound reasons in the public interest stated in writing in the public records of the awarding authority ... such writing to be prepared after reasonable investigation." A governmental body must document the reasons and provide them in writing to anyone making a written request for the information. M.G.L. c.30, §39M(b) expressly applies to construction contracts procured under M.G.L. c.149, §§44A-M as well as to construction contracts procured under M.G.L. c. 30, §39M.

The governmental body therefore has the responsibility for ensuring that a reasonable investigation is conducted before proprietary specifications can be used in an invitation for bids (IFB) for a public construction project.

Proprietary specifications, while permitted by Massachusetts construction law, may be used only after careful consideration and proper documentation that the use is justified by sound reasons in the public interest.

There are cases where, after a reasonable investigation, a governmental body concludes that only one acceptable brand of product exists, or that technology has advanced so rapidly that fewer than three brands or manufacturers of a particular material are available in the commercial marketplace.

The proprietary specifications must still include an "or equal" clause.

Lowell Elementary School: Proprietary Items

Vote Required:

The following is a list of **technology, controls, & door hardware** items to be specified as proprietary for consistency across the district.

The School Building Committee shall vote to specify these items as proprietary for the Lowell Elementary School Construction Bid.

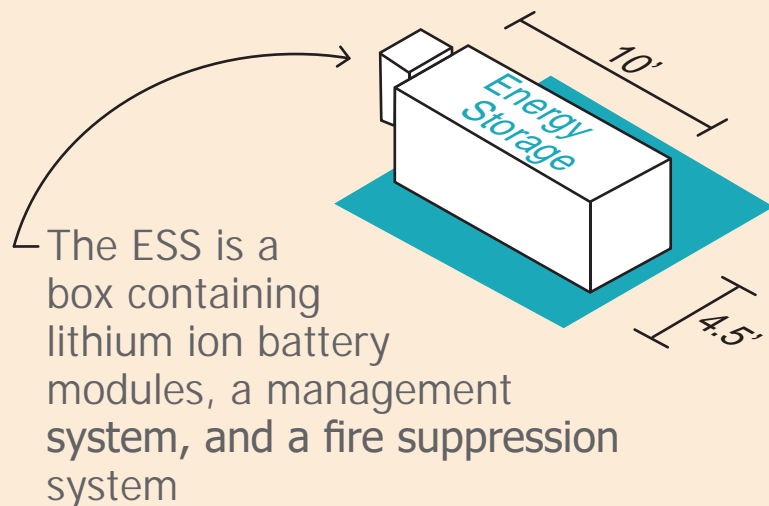


- Addressable Fire Alarm: as manufactured by Autocall
- Mass Notification System: as manufactured by Autocall
- Building Management System: as manufactured by KMC Controls
- HVAC Controls: as manufactured by KMC Controls
- Exterior door cylinders: as manufactured by Medeco, X4 Cylinders
- Interior door cylinders: as manufactured by Sargent, Degree
- Voice Lift System: as manufactured by Lightspeed, TCN-FS, & MCN
- Portable Sound System: as manufactured by Yamaha, STAGEPASS600BT
- Assisted Listening System: as manufactured by Williams, FMT55
- Public Address System and Components: as manufactured by TELECOR, eSERIES
- 8MP Camera: as manufactured by Panasonic, WV-SFV781L
- Brightlink Interactive Projector: as manufactured by Epson, 735Fi with wireless
- Access Control System: as manufactured by Software House, CCURE Enterprise 9000 SSVR3-32
- Access Control Hardware: as manufactured by Software House, iSTAR Ultra Controllers USTAR016/08
- Intrusion System and Components: as manufactured by MAXSYS, PC4020
- Video Management System: as manufactured by TYCO, EEXACQVISION Enterprise Software and NVR
- Card Readers: as manufactured by HID, RP10, SIGNO 20, SIGNO 40
- Wireless Access Points: interior and exterior, as manufacture by ARUBA

▶ Building Energy Storage System (ESS)

What is it?

Energy Storage System (ESS): a device that stores electrical energy from the [solar] power systems and converts it back to electrical energy when needed; a battery.



Why do we need it?

As of July 2020, to participate in the **SMART Program** (Solar Massachusetts Renewable Target), an ESS is required if the amount of solar produced on site exceeds 500 kW DC.

Hosmer production = 796.8 kW DC
Cunniff production = 485.1 kW DC

Note: This requirement was put in place after the projects were bid for construction in March 2020, therefore an ESS was not included in the bid.

The System Owner will be responsible for the operation of the battery and ensuring it remains compliant with DOER's Guidelines.

Is it worth it?

Yes, the design team recommends it.

By participating in the SMART Program, anticipated incentives range from **\$115,000-\$150,000/year***.

For the nearly \$800,000 ESS at Hosmer then, that is roughly a **payback period of 5-7 years**.

Typical **life expectancy** of the ESS is **10-30 years** before replacement.

** This is in addition to renewable energy incentives, which would offset utility costs*

For more information on the SMART Program:
<https://masmartsolar.com/learn.php#faq>

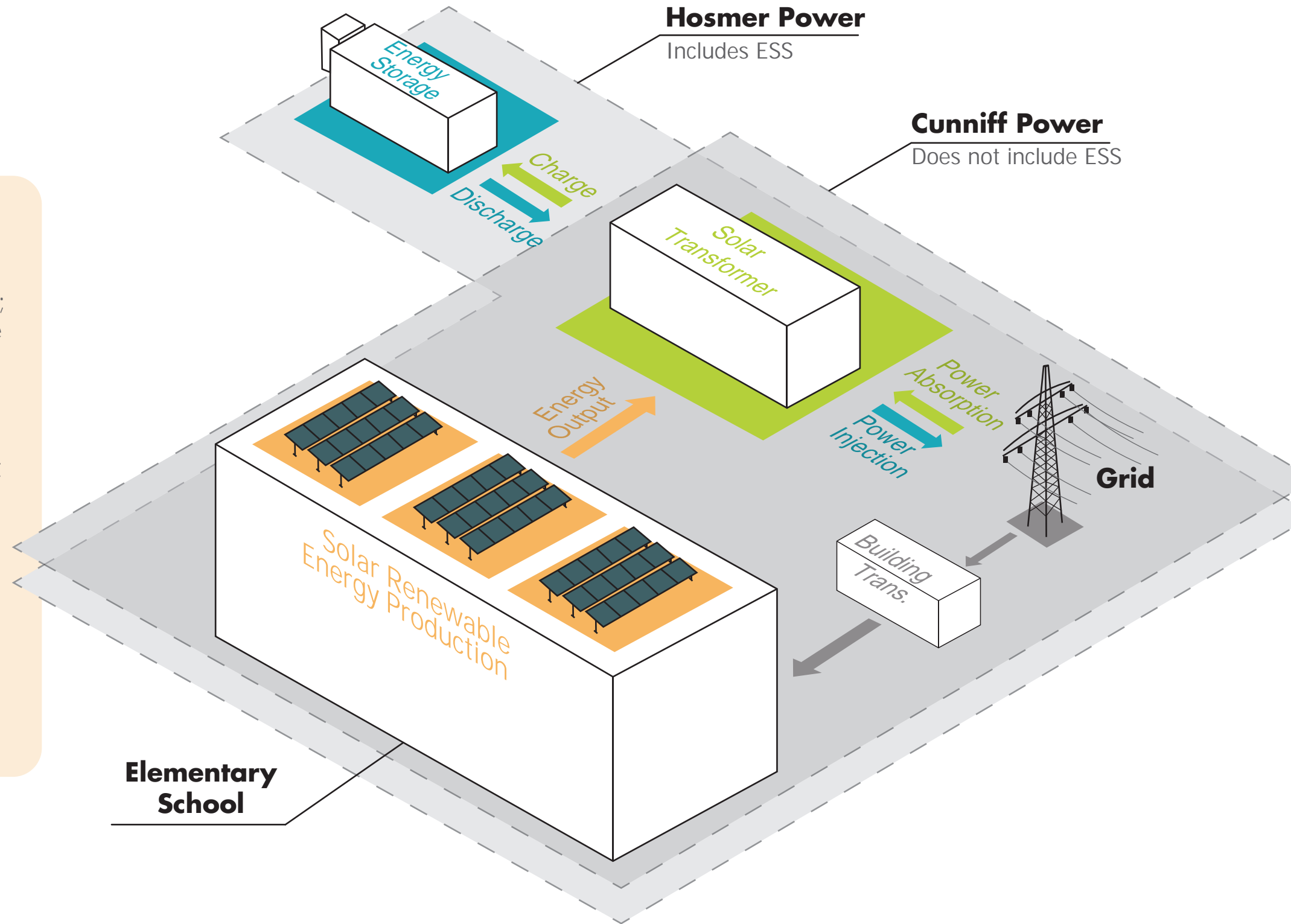
Building Energy Storage System (ESS)

How does it work?

The building is not directly served by the **renewable energy produced**; this still **goes to the grid** before the grid distributes it back to the building for power.

Similarly, **power from the ESS** is not directly supplied to the building, it **goes to the grid**. The stored power contributes to Massachusetts overall, not just the municipality, but the financial return drives the incentive.

The ESS is **not a substitute** for the generator on site because stored electricity from the ESS cannot be directly sent to the building.



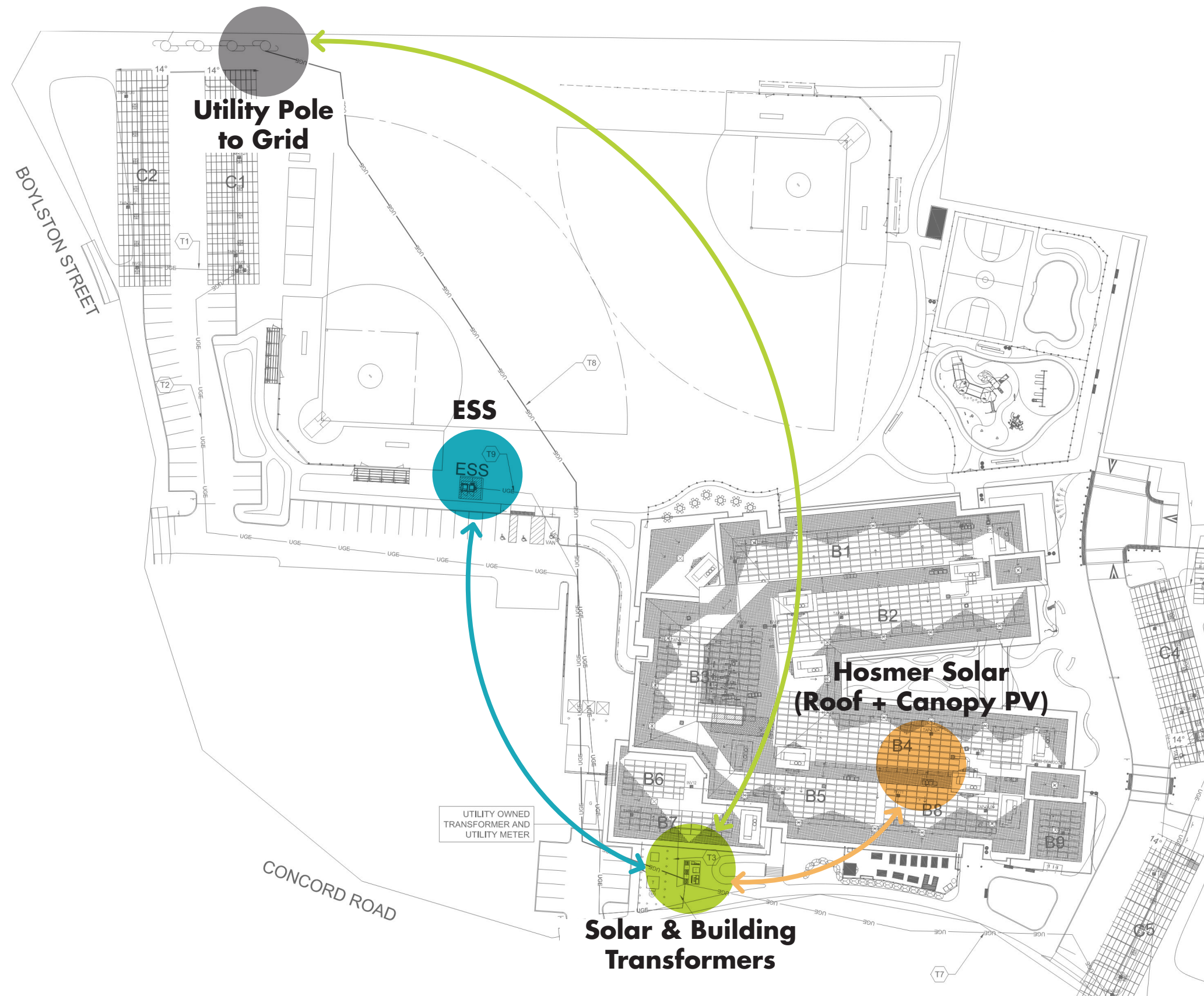
Building Energy Storage System (ESS)

Where will it be located?

At Hosmer, the ESS is located along the Brigham House parking lane. It is required to be at least 100' from the Hosmer building.

Of the surrounding utility poles, only the electric service along Mt. Auburn St. is capable of taking the medium voltage produced at Hosmer. This was determined by the Eversource Interconnection Study.

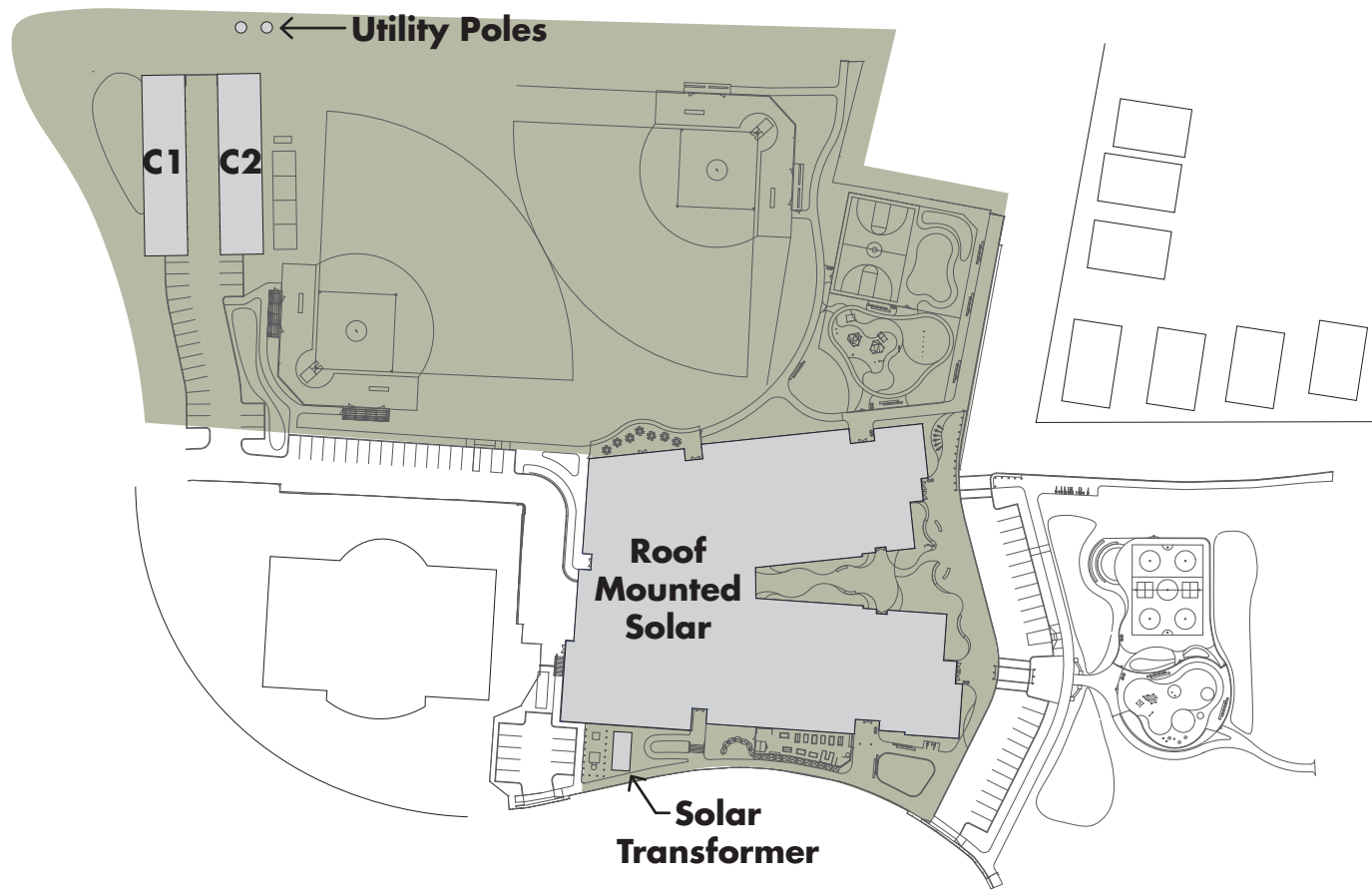
Due to the sequence of Eversource's work to upgrade its distribution system and install its recloser, the project **cannot connect** phase I PV to the grid until phase II is completed.



Building Energy Storage System (ESS)

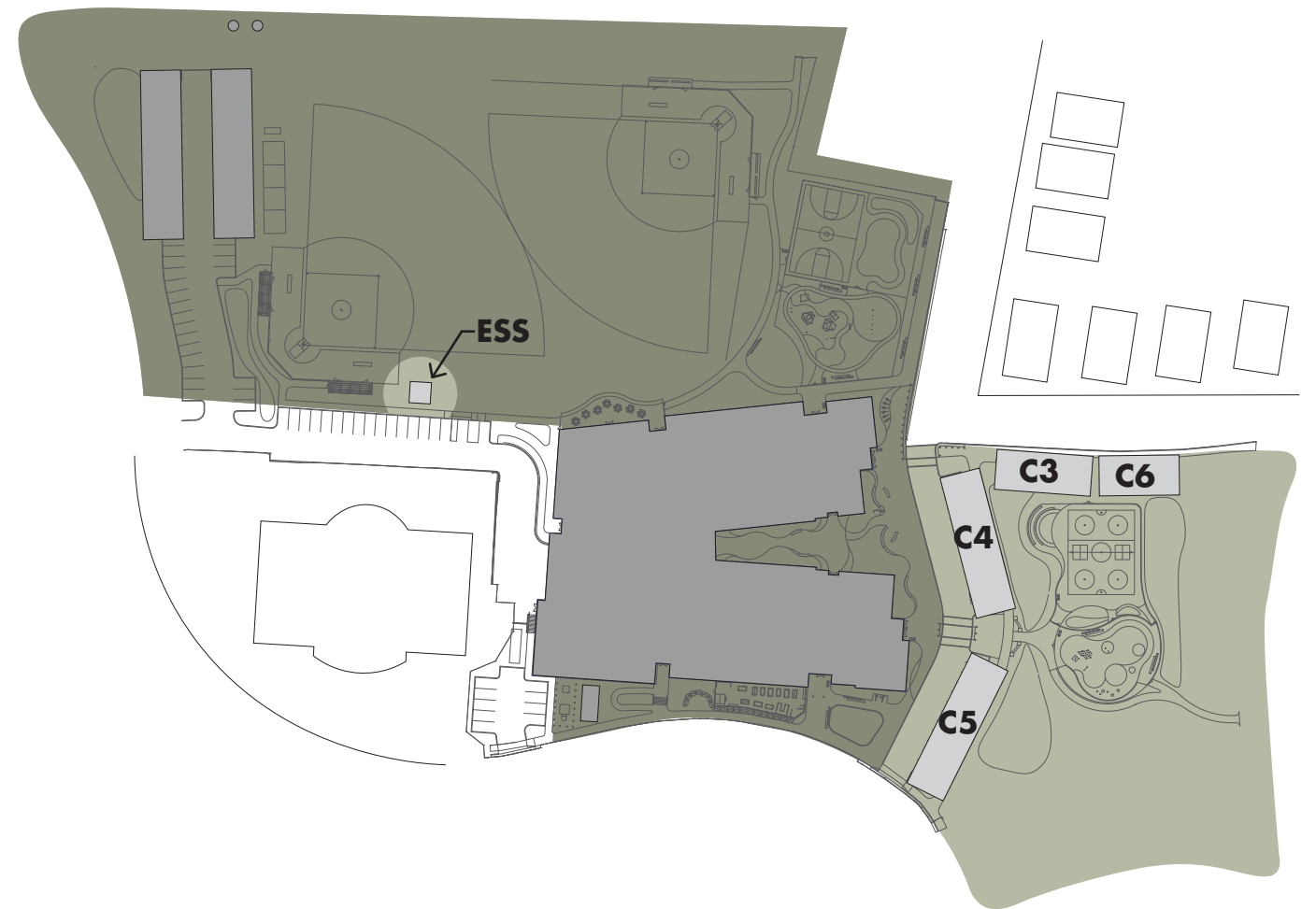
PV Install: Phase I

Dec 31, 2021



PV Install: Phase II

Aug 31, 2022



Watertown Public Schools Building Committee

Questions / Comments



Those members of the public joining via Zoom, please use the Q&A button at this time to ask questions

or email questions to:
buildingforfuture@watertown-ma.gov

Questions?
Thank you

