



TOWN OF WAKEFIELD

ENVIRONMENTAL SUSTAINABILITY COMMITTEE

Thursday, May 14, 2022
7:00 P.M.
Zoom Meeting

COMMITTEE MEMBERS PRESENT:

Melissa Eusden, Chair
Myra Sessions, Vice Chair
Robin Greenberg, Secretary
Tiana Veldwisch
Sean Cash
Chris Lewis
Julie Smith-Galvin, Town Council rep
Thomas Boettcher, WMGLD rep
Nick Pilleri, Student Liaison

COMMITTEE MEMBERS ABSENT:

Dan Noren
Joe Conway, DPW rep
Open seat, School Committee rep
Abby Lane, Student Liaison
Sophie Brown, Student Liaison
Addie Festel, Student Liaison
Uma Gerweck, Youth Council rep

----- TOPICS OF DISCUSSION -----

Call to Order

The meeting was called to order at 7:01 p.m by M. Session.
The meeting is being recording and closed captioning is available.

Public Participation

Judy Green, Wakefield's Conservation Commission (ConComm) Secretary, shared that the ConComm is working to update the town's Open Space Plan. The Commission is hiring a consultant to assist in development of the plan. The Commission hopes to highlight special areas in town like the Town Forrest in addition to the Lake Quannapowitt, address other open space issues, and show why open spaces are critical for health, i.e. benefits of forest bathing. The town could have an "Emerald Necklace" of 100 acres of continuous protected open space. She has spoken with the Planning Board on collaborative effort. As part of the development of the plan, there will be at least two public meetings and a public survey to get public input. S. Cash express interest working with the Commission on awareness and other efforts. She also noted that the town hopes to get volunteers to be Trail Wardens to assist maintaining in town trails. More information about the efforts is on ConComm's website.

Carol Zoubek noted her concern about loss of open space at the Northeast Metro Tech School as a result of their school building project.

Jenn Kallay noted that she is involved with the scouting club and they are looking for volunteer opportunities, i.e. trail work.

Approval of April Minutes

R. Greenberg motioned to approve with M. Eusden's and T. Veldwisch edits. T. Boettcher second. Motion passed.



Welcome New Members	Current and new members introduced themselves.
Green Communities Presentation	<p>J. Kallay, WMGLD Commissioner Chair, presented the draft Energy Reduction Plan (see attached). The Plan is a piece of the town's application to the Green Communities grant program. 2021 is being used as the town's baseline year for energy use. The goal is to submit application to the state in June 2022 after approval by Town Council and School Committee. The reduction plan does not include the WMGLD's planned PV installation because their buildings are not considered Wakefield municipal facilities and so not counted. Northeast Metro Tech School's (NEMT) facilities are also not a Wakefield municipal facility. Also, the plan looks at energy reduction, not reduction of energy needs from the grid.</p> <p>J. Kallay will get a copy of the building audit used in the Plan to share with interested ESC members. ESC is interested in helping with implementation of the energy reduction.</p>
Election of Committee Officers	M. Eusden was voted unanimously as ESC Chair. M. Eusden asked M. Sessions to moderate the remainder of the meeting. M. Sessions was voted unanimously as ESC Vice Chair. R. Greenberg was voted unanimously as ESC Secretary.
Volunteer Engagement	No update
Waste Reduction	M. Eusden gave overview of this Saturday's Wakefield Recycling & Sustainability Day event, 10am-1pm at WMHS. T. Boettcher said that WMGLD will be there for dehumidifier collection.
School Building Projects	<p>R. Greenberg shared that there have been no recent meetings on NEMT School project. For the Wakefield High School project, at the April Community Meeting, various public attendees showed interested in sustainability features for the new high school.</p> <p>MA School Building Authority (MSBA) is hosting a training, Green School Buildings for MA Students: The People Who Make It Work Heading toward a green school infrastructure. Wakefield has been invited to attend the online training.</p>
Town Council Member Update	J. Smith-Galvin shared that Wakefield and MAPC is hosting a Pedestrian and Bike Plan Infosession on May 31 st at 6:30pm.
WMGLD Update	<p>T. Boettcher shared:</p> <ul style="list-style-type: none"> • As of last night's meeting, WMGLD added battery powered lawn equipment to their rebate program. • Northeast Metro Tech School (NEMT) project is now considering the utility's proposal to be an electrified building (instead of use of natural gas for heating) which will a part of the proposed energy park plan. The park could include all three schools in the area.

- The natural gas moratorium expansion vote was tabled to their next meeting.
- There was a motion to sell our share in the Peabody Power project. The motion failed 2-3.
- WMGLD is planning to return to in person meetings in September.

DPW Update

T. Veldwisch shared that DPW distributed the rain barrels today. T. Boettcher noted that there are currently 391 Black Earth clients in town.

Next Meetings

The next regular Environmental Sustainability Committee meeting is scheduled for Thursday, June 9, at 7pm. The meeting may be done in person.

Committee Meeting Adjournment

R. Greenberg motioned to adjourn. S. Cash second. Meeting adjourned at 9:10 pm.

Respectfully submitted,

Robin Greenberg, Secretary

Attachments: Green Communities Update: Draft Energy Reduction Plan powerpoint

Green Communities Update: Draft Energy Reduction Plan

ESC Meeting
May 12, 2022

Purpose of the presentation

- Describe Green Communities
- Summarize activities to date
- Review draft energy reduction plan and solicit feedback
- Identify next steps and timing

What is Green Communities?

- A grant program for Massachusetts municipalities
- Focused on reducing energy use by municipal buildings and vehicles
- Utilized by most towns and cities in the state to reduce energy costs and environmental impacts and improve Town Halls, libraries, schools, water and wastewater treatment plants, senior centers, and fire and police buildings, among others

What are the program benefits?

- An estimated \$170,000 upon acceptance into the program
- Awards of up to \$200,000 annually, towards municipal energy conservation measures
- Reduces energy costs for the Town and its residents
- Enables reinvestment of cost savings in buildings and vehicles, thereby reducing future infrastructure investment and maintenance costs
- Improves utilization of buildings
- Improves health, safety, and environment

Energy reduction commitment and plan

An understanding of current energy use (a baseline)
and a plan to reduce this use by:

20 % in 5 years

Activities to date

2021

- Stretch energy code adoption
- Energy use baseline development

Winter/Spring 2022

- Efficient vehicle policy adoption
- Draft energy reduction plan
- Review and incorporation of feedback

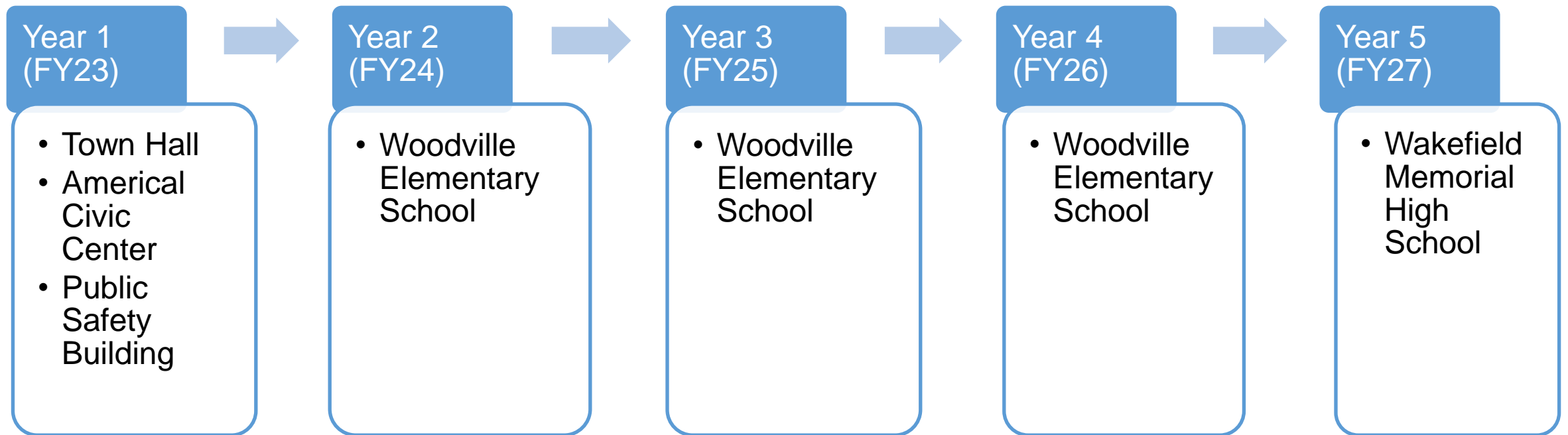
June 2022:

- Application to be a Green Community



Proposed Energy Reduction Plan

Wakefield can reach its energy reduction goal by incorporating comprehensive energy improvements for five larger, less efficient buildings into its existing capital plan



Proposed Energy Reduction Plan (cont'd)

Wakefield can reach 77% of its energy reduction goal by building a new, highly efficient high school

- Energy reductions at four other buildings are proposed for goal achievement

Energy Improvements	Projected MMBTU Savings	MMBTU Usage	Savings % of Usage
Town Hall	99	1,463	7%
Americal Civic Center	60	1,526	4%
Public Safety Building	828	5,464	15%
Woodville Elementary School	2,155	4,812	45%
Wakefield High School	12,726	20,526	62%
Other Town Building and Vehicle Energy Usage	-	45,550	0%
Total	15,868	79,341	20.0%

Please note that the Public Safety Building savings estimates will be updated after a more detailed review of measures recommended in the energy audit against measures current planned for in the upcoming building renovation.

Proposed Energy Reduction Plan (cont'd)

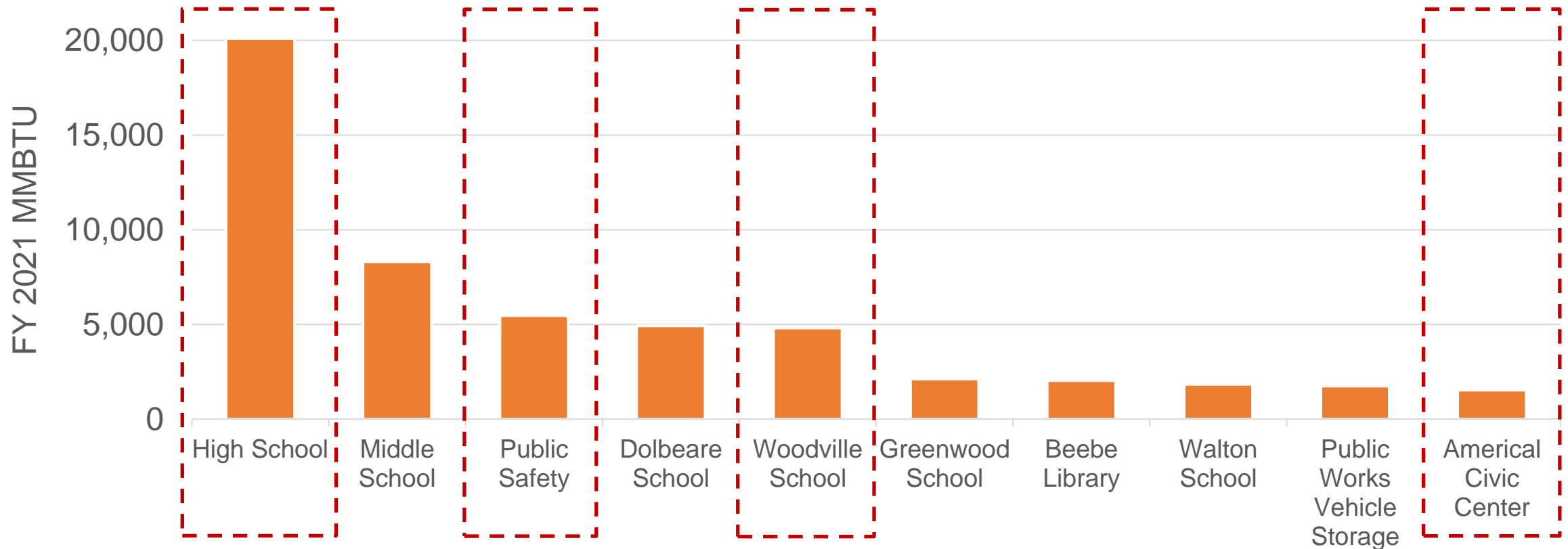
Green Communities grants provide funding to support the significant energy improvement opportunities

Energy Improvements	Total Cost	Estimated Green Communities Grants	Costs Funded by Town Capital or General Fund
Year 1	\$215,000	\$170,000	\$45,000
Town Hall	\$16,000		
Public Safety Building	\$192,000		
Americal Civic Center	\$7,000		
Year 2: Woodville Elementary School	\$633,333	\$200,000	\$433,333
Year 3: Woodville Elementary School	\$633,333	\$200,000	\$433,333
Year 4: Woodville Elementary School	\$633,333	\$200,000	\$433,333
Total	\$2,115,000	\$770,000	\$1,345,000

Please note that the Public Safety Building cost estimates will be updated after a more detailed review of measures recommended in the energy audit against measures current planned for in the upcoming building renovation.

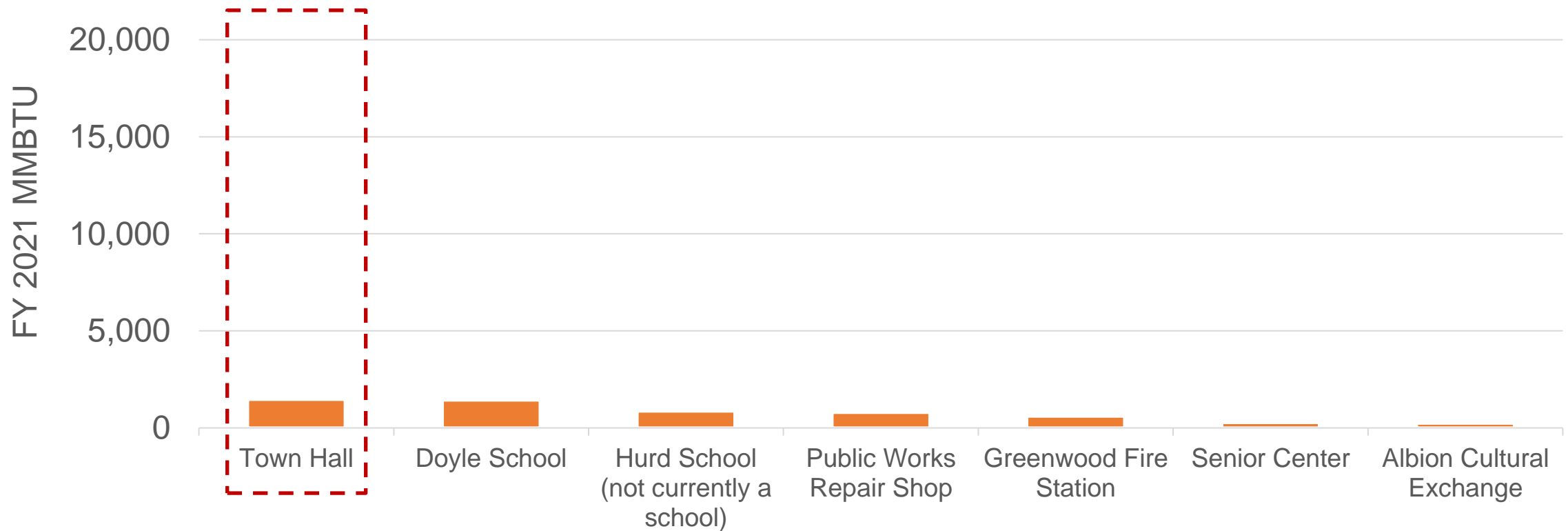
Energy Use by Building

Larger buildings, like schools, tend to use more energy



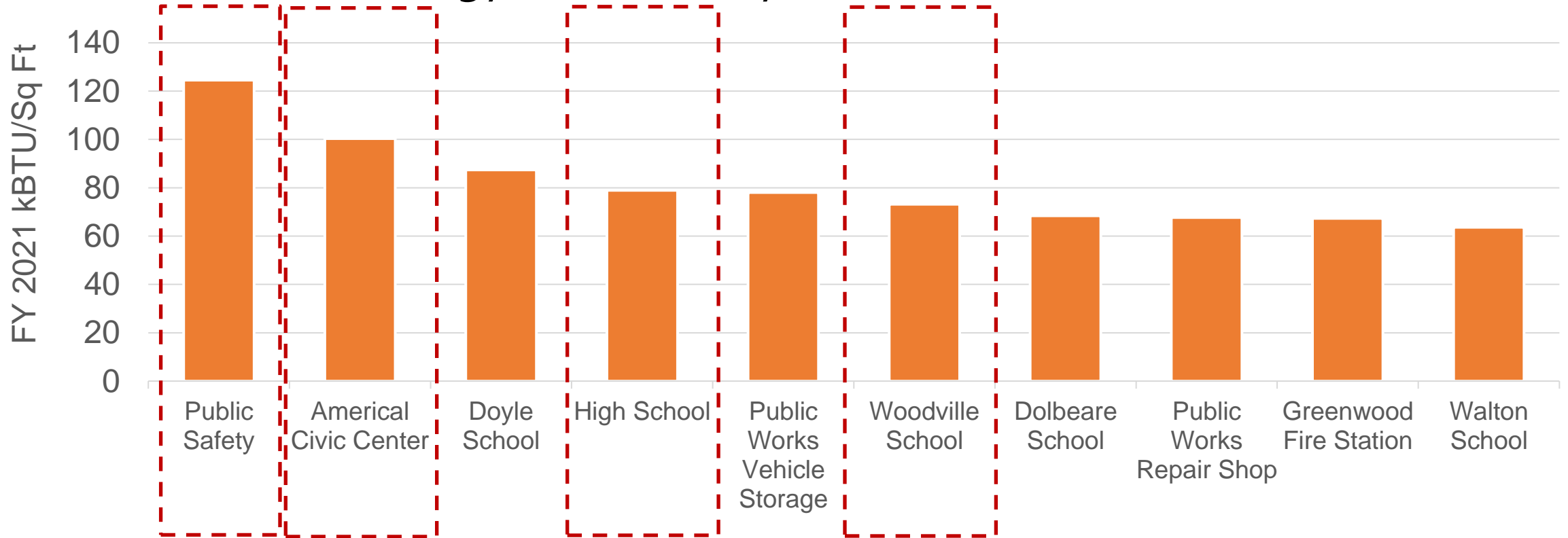
Energy Use by Building (cont'd)

Wakefield's 7 schools represent 75 percent of the Town's building energy use
The other 10 buildings shown here account for the remaining 25 percent



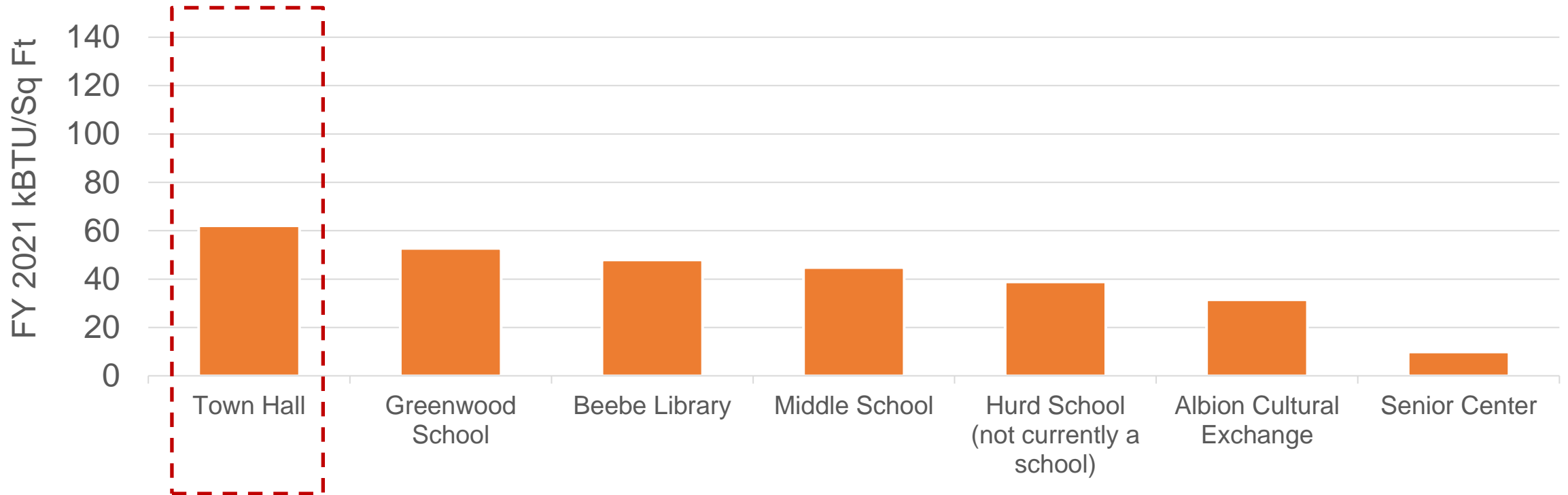
Energy Efficiency by Building

These buildings have a higher energy use per square foot, which is referred to as energy use intensity (EUI)



Energy Efficiency by Building (cont'd)

EUI reflects structural and equipment inefficiencies as well as use characteristics (days/hours open, equipment types)



Town Hall

Non-Energy Improvements

- Siding, flooring, ceilings, masonry, railings, window trim, smoke detectors, exterior lighting, electrical panel



Est. Cost:
\$165,000

Energy Improvements

- Interior & exterior lighting upgrades, low flow faucets, HVAC pump upgrade, heat pump water heater



Est. Cost:
\$16,000
% Energy
Reduction: 7%



Public Safety Building

Non-Energy Improvements

- Windows, variable air volume (VAV) replacement

Est. Cost:
\$24,000

Energy Improvements

- New boilers, new chiller, interior and exterior lighting, lighting controls, weatherization, low flow fixtures, vending machine controls

Est. Cost:
\$192,000
% Energy
Reduction: 15%

Please note that the Public Safety Building cost and energy reduction estimates will be updated after a more detailed review of measures recommended in the energy audit against measures current planned for in the upcoming building renovation.

Americal Civic Center

Non-Energy Improvements

- Roofing, mezzanine, bathrooms

Est. Cost:
\$50,000

Energy Improvements

- Lighting upgrades, weatherization, insulation, low flow fixtures, heat pump water heaters

Est. Cost: \$7,000
% Energy
Reduction: 4%

Renewable Energy

- Solar PV after roof replacement



Woodville Elementary School

Non-Energy Improvements

- None planned

n/a

Energy Improvements

- HVAC upgrades, interior and exterior lighting, heat pump water heater (planned), boiler replacement with heat pump system

Est. Cost:
\$1.9M
% Energy
Reduction: 45%



Wakefield Memorial High School

Existing Building

- 250,400 sf
- ~80 kBTU/sf (2021)
- 20,500 MMBTU/year
- No air conditioning



New Building (proposed)

- 260,000 sf
- ~30 kBTU/sf
- 7,800 MMBTU/year
- Air conditioning included
- Solar opportunity on new roof

Next Steps and Timing

- Solicit and incorporate feedback – early May
- Provide updated ERP for final review and approval – late May
- Apply to Green Communities program - June