

# Green Communities Competitive Grant Application Town of Burlington

## Project Narrative

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April 2021

### Prepared for:

Town of Burlington  
25 Center Street  
Burlington, MA 01803

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## Energy Reduction Plan Overview

The Town of Burlington is a Middlesex County community situated on the watersheds of the Ipswich, Mystic, and Shawsheen rivers. This 11.9 square-mile community has an estimated population of 26,600. Municipal energy is consumed in the form of electricity, natural gas, heating oil, gasoline, and diesel. The Town was designated as a Green Community in February 2020.

The Town's 2019 Energy Reduction Plan showed that buildings account for the greatest use of energy among all municipal uses (about two thirds). Within this building category, the schools are the highest users of energy in the Town and take up the top 10 energy users. Of the 103,111 MMBTUs of the baseline year, these schools we are targeting in the spring 2021 grant account for 30,486 MMBTUs (29.57%). By completing an energy efficiency project within these top energy users, the town can efficiently continue to implement the Energy Reduction Plan.

The total energy consumption by the Town of Burlington in the baseline year (FY2019) was 103,111 MMBTU. The total energy consumption by the Town of Burlington in FY22 was 94,139 MMBTU.

Facility Category	MMBTU Used in Previous Year	% of Total MM BTU Baseline Energy Consumption
<b>Non-Weather Normalized</b>		
Buildings	58,713	62.36%
Open Space	1,680	1.78%
Street/Traffic Lights	2,174	2.31%
Vehicles	12,276	13.04%
Water/Sewer/Pumping	19,297	20.51%
<b>Total Non-Weather Normalized</b>	<b>94,140</b>	<b>100%</b>

The Town of Burlington has made a strong commitment to reducing its energy consumption, and this Green Communities funding will enable the Town to implement projects toward this goal.

## Project Narrative

## Overview

The Town of Burlington is proposing to utilize the total Green Communities Competitive Grant funding to weatherize four elementary schools - Fox Hill, Francis Wyman, Memorial, and Pine Glen, along with one middle school - Marshall Simonds.

## Weatherization at Fox Hill Elementary School

### Background

RISE Engineering performed an energy savings assessment of the Fox Hill Elementary school in August of 2019. It was discovered that this 59,000 square foot building would benefit from perimeter air sealing, door and window weather-stripping, and pipe insulation.

**Air Sealing:** There are gaps causing air leakage at the wall to roof connection around the perimeter of the school. We plan to seal the 3-6" nominal gaps between the roof deck and the perimeter I beam. We also plan to seal the 1-2" nominal gaps between the bottom of the I beam and the top of the exterior walls. The total lineal footage to be treated is 1,522 ft.

**Door weather-stripping:** There are 34 exterior doors that would benefit from new/replacement weather-stripping. We plan to install weather-stripping and appropriate sweeps to 27 single aluminum doors (weather-strip the frame, install sweeps), 5 double aluminum doors (replace existing damaged/ineffective bulb and astragal pile weather-stripping and install new sweeps), and 2 single steel doors (weather-strip the frame and install a new sweep).

**Pipe Insulation:** There are exposed copper and iron heating pipes in the boiler room and in the catwalk area above the locker room. We plan to install fiberglass pipe insulation with all service jacket and PVC fitting covers. The total lineal footage is 70 ft with 34 fittings.

### Energy Savings

Project Energy Savings	Weatherization
Electric Savings (kWh)	3,240
Gas Savings (Therms)	2,570
Energy Savings (MMBTU)	268.1

In FY 2020, the Fox Hill Elementary School used 219,840 kWh and 23,629 therms. As indicated above, the completed weatherization measures are anticipated to save 3,240 kWh (representing savings of 1.47%) and 2,570 therms (representing savings of 10.88%) on an annual basis. This weatherization improvement will account for annual energy savings of 268.1 MMBTUs.

### Project Scope

## **Purpose**

This project is the first step in upgrading any end-of-life HVAC equipment at the Fox Hill Elementary School. Combined with four other schools, these weatherization upgrades will help improve everyday life for students and teachers alike.

## **Benefits**

The upgrade of weatherization will both reduce the electric and thermal energy use for the building and will provide annual cost and maintenance savings.

## **Timeline**

### **Engineering Study (August 2019)**

This step has already been completed for the Fox Hill Elementary School for weatherization measures.

### **Contracting (July 2021)**

We anticipate contracting with the selected vendor to take approximately one month.

### **Weatherization Installation (August 2021)**

It would be highly beneficial to complete the weatherization in August of 2021 when the school is unoccupied.

## **Procurement**

The Town has cost estimates for this project both from the initial Energy Audit of the building and from the Engineering Study from RISE Engineering. Based on these numbers, the Town will not have to go out to bid.

## **Anticipated Impact**

The improvement of the weatherization measures is anticipated to have a positive impact on the Fox Hill Elementary School.

We anticipate a noticeable improvement in the overall temperature quality in the schools by installing these proposed measures. Students and teachers should not have any cool air flowing in during the winter, nor should they feel warm air flowing in during the summer. We also anticipate that the reduction in MMBTUs and kWhs will result in lower gas and electric bills. Going forward, this could mean a reduction in the occupancy line of the annual operating budget.

This Green Communities project allows an opportunity for the Town of Burlington to conduct outreach about the new Green Communities Designation and what the Energy Reduction Plan will mean for the Town moving forward, especially when it comes to the schools. Many residents have children who either currently attend or have attended at least one school in Town and put a lot of value into the improvement of said schools.

## **Permits and Approvals**

All permits and approvals for this project are within the jurisdiction of the Town of Burlington. Additional permitting fees or timelines are not anticipated for this project.

## **Relation to the ERP**

The schools represent a large portion of the Town's energy usage. By biting off a few punch list items in the proper order, we will be able to slowly improve each school and over the next few years and get to that 20% goal.

## **Outreach and Education Opportunities**

Most of the schools in Burlington are outdated with the exception of the Memorial Elementary school. This project will give employees and students at each school the opportunity to learn about how incremental changes like door weather-stripping can vastly improve the overall climate and comfortability for those who spend countless hours there.

## **Project Budget**

The annual estimated cost savings for the project is \$1,213 with a net upfront cost of approximately \$68,814. This estimate is based off the attached RISE energy audit and automated calculations from the GC Grant Table.

The Town anticipates utilizing utility incentives to offset some of the cost of the installation. The Town plans to use the total Green Communities Competitive Grant to try and fund the remaining costs of this project.

The COVID-19 pandemic caused the Town to take a hit financially. When it came to budgeting projects, sadly the energy efficiency improvements took the back burner. With the help of the Green Communities grant money, we can bring these projects up front and continue to improve our facilities and get closer to that 20% reduction goal.

Project Economics		Weatherization at Fox Hill Elementary School
<b>Total Project Cost</b>		\$ 69,308
<b>Estimated Utility Incentives</b>		\$ 494
<b>Estimated Net Cost</b>		\$ 68,814
<b>Estimated Annual Cost Savings</b>		\$ 1,213
<b>Estimated Annual Maintenance Savings</b>		\$2,675

# Weatherization at Francis Wyman Elementary School

## Background

RISE Engineering performed an energy savings assessment of the Francis Wyman Elementary school in August of 2019. It was discovered that this 122,000 square foot building would benefit from door weather-stripping and pipe insulation.

**Door weather-stripping:** There are 21 exterior doors that would benefit from new/replacement weather-stripping. We plan to install weather-stripping and appropriate sweeps to 3 single steel doors (weather-strip the frame and install sweeps) and 18 double steel doors (replace the existing damaged/ineffective bulb and astragal pile weather-stripping and install new sweeps).

**Pipe Insulation:** There are exposed copper and domestic hot water pipes in the boiler room. We plan to install fiberglass and foam pipe insulation. The total lineal footage is 5ft with 1 fitting.

## Energy Savings

Project Energy Savings	Weatherization
Electric Savings (kWh)	362
Gas Savings (Therms)	495
Energy Savings (MMBTU)	50.7

In FY 2020, the Francis Wyman Elementary School used 430,080 kWh and 38,386 therms. As indicated above, the completed weatherization measures are anticipated to save 362 kWh (representing savings of .084%) and 495 therms (representing savings of 1.29%) on an annual basis. This weatherization improvement will account for annual energy savings of 50.7 MMBTUs.

## Project Scope

### Purpose

This project should help Francis Wyman Elementary School save energy on heating and cooling, especially in the New England hot summers and cold winters. Combined with four other schools, these weatherization upgrades will help improve everyday life for students and teachers alike.

### Benefits

The upgrade of weatherization will both reduce the electric and thermal energy use for the building and will provide annual cost and maintenance savings.

### Timeline

**Engineering Study** (August 2019)

This step has already been completed for the Francis Wyman Elementary School for weatherization measures.

### **Contracting (July 2021)**

We anticipate contracting with the selected vendor to take approximately one month.

### **Weatherization Installation (August 2021)**

It would be highly beneficial to complete the weatherization in August of 2021 when the school is unoccupied.

### **Procurement**

The Town has cost estimates for this project both from the initial Energy Audit of the building and from the Engineering Study from RISE Engineering. Based on these numbers, the Town will not have to go out to bid.

### **Anticipated Impact**

The improvement of the weatherization measures is anticipated to have a positive impact on the Francis Wyman Elementary School.

We anticipate a noticeable improvement in the overall temperature quality in the schools by installing these proposed measures. Students and teachers should not have any cool air flowing in during the winter, nor should they feel warm air flowing in during the summer. We also anticipate that the reduction in MMBTUs and kWhs will result in lower gas and electric bills. Going forward, this could mean a reduction in the occupancy line of the annual operating budget.

This Green Communities project allows an opportunity for the Town of Burlington to conduct outreach about the new Green Communities Designation and what the Energy Reduction Plan will mean for the Town moving forward, especially when it comes to the schools. Many residents have children who either currently attend or have attended at least one school in Town and put a lot of value into the improvement of said schools.

### **Permits and Approvals**

All permits and approvals for this project are within the jurisdiction of the Town of Burlington. Additional permitting fees or timelines are not anticipated for this project.

### **Relation to the ERP**

The schools represent a large portion of the Town's energy usage. By biting off a few punch list items in the proper order, we will be able to slowly improve each school and over the next few years and get to that 20% goal.

### **Outreach and Education Opportunities**

Most of the schools in Burlington are outdated with the exception of the Memorial Elementary school. This project will give employees and students at each school the opportunity to learn about how incremental changes like door weather-stripping can

vastly improve the overall climate and comfortability for those who spend countless hours there.

## Project Budget

The annual estimated cost savings for the project is \$211 with a net upfront cost of approximately \$9,081. This estimate is based off the attached RISE energy audit and automated calculations from the GC Grant Table.

The Town anticipates utilizing utility incentives to offset some of the cost of the installation. The Town plans to use the total Green Communities Competitive Grant to try and fund the remaining costs of this project.

The COVID-19 pandemic caused the Town to take a hit financially. When it came to budgeting projects, sadly the energy efficiency improvements took the back burner. With the help of the Green Communities grant money, we can bring these projects up front and continue to improve our facilities and get closer to that 20% reduction goal.

Project Economics		Weatherization at Francis Wyman Elementary School
<b>Total Project Cost</b>		\$ 9,765
<b>Estimated Utility Incentives</b>		\$ 684
<b>Estimated Net Cost</b>		\$ 9,081
<b>Estimated Annual Cost Savings</b>		\$ 211
<b>Estimated Annual Maintenance Savings</b>		\$ 640

## Weatherization at Marshall Simonds Middle School

### Background

RISE Engineering performed an energy savings assessment of the Marshall Simonds Middle school in August of 2019. It was discovered that this 125,368 square foot building would benefit from air sealing, door weather-stripping, and pipe insulation.

**Air Sealing:** There are gaps causing air leakage at the wall to roof connection around the perimeter of the school in some sections. We plan to seal the 3" nominal gaps where the roof deck connects with the perimeter I beam. We also plan to seal the 1" nominal gaps between the bottom of the I beam and the top of the exterior walls. The areas to be treated include 74' of the front entry and the other one story perimeter around the cafeteria and gym areas. The total lineal footage is 1,304 ft.

**Door weather-stripping:** There are 29 exterior doors that would benefit from new/replacement weather-stripping. We plan to install weather-stripping and appropriate sweeps to 8 single aluminum doors (weather-strip the frame and install new sweeps), 20 double aluminum doors (replace the existing damages/ineffective bulb and astragal pile weather-stripping and install new sweeps), and 1 single steel door (weather-strip the frame and install a new sweep).

**Pipe Insulation:** There are exposed copper and iron heating pipes in the boiler room and in the catwalk area about the locker room. We plan to install fiberglass and foam pipe insulation with all service jacket and PVC fitting covers. The total lineal footage is 71ft with 35 fittings.

## Energy Savings

Project Energy Savings	Weatherization
Electric Savings (kWh)	6,201
Gas Savings (Therms)	4,892
Energy Savings (MMBTU)	510.4

In FY 2020, the Marshall Simonds Middle School used 911,040 kWh and 46,922 therms. As indicated above, the completed weatherization measures are anticipated to save 6,201 kWh (representing savings of .68%) and 4,892 therms (representing savings of 10.43%) on an annual basis. This weatherization improvement will account for annual energy savings of 510.4 MMBTUs.

## Project Scope

### Purpose

This project should help Marshall Simonds Middle School save energy on heating and cooling, especially in the New England hot summers and cold winters. This is the first step in updated the out of date boilers in the school. Combined with four other schools, these weatherization upgrades will help improve everyday life for students and teachers alike.

### Benefits

The upgrade of weatherization will both reduce the electric and thermal energy use for the building and will provide annual cost and maintenance savings.

### Timeline

#### Engineering Study (August 2019)

This step has already been completed for the Marshall Simonds Middle School for weatherization measures.

#### Contracting (July 2021)

We anticipate contracting with the selected vendor to take approximately one month.

#### **Weatherization Installation (August 2021)**

It would be highly beneficial to complete the weatherization in August of 2021 when the school is unoccupied.

#### **Procurement**

The Town has cost estimates for this project both from the initial Energy Audit of the building and from the Engineering Study from RISE Engineering. Based on these numbers, the Town will not have to go out to bid.

#### **Anticipated Impact**

The improvement of the weatherization measures is anticipated to have a positive impact on the Marshall Simonds Middle School.

We anticipate a noticeable improvement in the overall temperature quality in the schools by installing these proposed measures. Students and teachers should not have any cool air flowing in during the winter, nor should they feel warm air flowing in during the summer. We also anticipate that the reduction in MMBTUs and kWhs will result in lower gas and electric bills. Going forward, this could mean a reduction in the occupancy line of the annual operating budget.

This Green Communities project allows an opportunity for the Town of Burlington to conduct outreach about the new Green Communities Designation and what the Energy Reduction Plan will mean for the Town moving forward, especially when it comes to the schools. Many residents have children who either currently attend or have attended at least one school in Town and put a lot of value into the improvement of said schools.

#### **Permits and Approvals**

All permits and approvals for this project are within the jurisdiction of the Town of Burlington. Additional permitting fees or timelines are not anticipated for this project.

#### **Relation to the ERP**

The schools represent a large portion of the Town's energy usage. By biting off a few punch list items in the proper order, we will be able to slowly improve each school and over the next few years and get to that 20% goal.

#### **Outreach and Education Opportunities**

Most of the schools in Burlington are outdated with the exception of the Marshall Simonds Middle school. This project will give employees and students at each school the opportunity to learn about how incremental changes like door weather-stripping can vastly improve the overall climate and comfortability for those who spend countless hours there.

## Project Budget

The annual estimated cost savings for the project is \$2,311 with a net upfront cost of approximately \$55,488. This estimate is based off the attached RISE energy audit and automated calculations from the GC Grant Table.

The Town anticipates utilizing utility incentives to offset some of the cost of the installation. The Town plans to use the total Green Communities Competitive Grant to try and fund the remaining costs of this project.

The COVID-19 pandemic caused the Town to take a hit financially. When it came to budgeting projects, sadly the energy efficiency improvements took the back burner. With the help of the Green Communities grant money, we can bring these projects up front and continue to improve our facilities and get closer to that 20% reduction goal.

Project Economics		Weatherization at Marshall Simonds Middle School
<b>Total Project Cost</b>		\$ 63,557
<b>Estimated Utility Incentives</b>		\$ 8,069
<b>Estimated Net Cost</b>		\$ 55,488
<b>Estimated Annual Cost Savings</b>		\$ 2,312
<b>Estimated Annual Maintenance Savings</b>		\$ 7,103

## Weatherization at Memorial Elementary School

### Background

RISE Engineering performed an energy savings assessment of the Memorial Elementary school in August of 2019. It was discovered that this 42,000 square foot building would benefit from door weather-stripping. This is the newest school in the Town and minimal improvements need to be made.

**Door weather-stripping:** There are 16 exterior doors that would benefit from new/replacement weather-stripping. We plan to install weather-stripping and appropriate sweeps to 7 single aluminum doors (weather-strip the frame and install sweeps) and 9 double aluminum doors (replace the existing damaged/ineffective bulb and astragal pile weather-stripping and install new sweeps).

## Energy Savings

Project Energy Savings	Weatherization
Electric Savings (kWh)	193
Gas Savings (Therms)	272
Energy Savings (MMBTU)	27.9

In FY 2020, the Memorial Elementary School used 390,444 kWh and 17,133 therms. As indicated above, the completed weatherization measures are anticipated to save 193 kWh (representing savings of .049%) and 272 therms (representing savings of 1.59%) on an annual basis. This weatherization improvement will account for annual energy savings of 27.9 MMBTUs.

## Project Scope

### Purpose

This project should help Memorial Elementary School save energy on heating and cooling, especially in the New England hot summers and cold winters. Combined with four other schools, these weatherization upgrades will help improve everyday life for students and teachers alike.

### Benefits

The upgrade of weatherization will both reduce the electric and thermal energy use for the building and will provide annual cost and maintenance savings.

### Timeline

#### Engineering Study (August 2019)

This step has already been completed for the Memorial Elementary School for weatherization measures.

#### Contracting (July 2021)

We anticipate contracting with the selected vendor to take approximately one month.

#### Weatherization Installation (August 2021)

It would be highly beneficial to complete the weatherization in August of 2021 when the school is unoccupied.

## **Procurement**

The Town has cost estimates for this project both from the initial Energy Audit of the building and from the Engineering Study from RISE Engineering. Based on these numbers, the Town will not have to go out to bid.

## **Anticipated Impact**

The improvement of the weatherization measures is anticipated to have a positive impact on the Memorial Elementary School.

We anticipate a noticeable improvement in the overall temperature quality in the schools by installing these proposed measures. Students and teachers should not have any cool air flowing in during the winter, nor should they feel warm air flowing in during the summer. We also anticipate that the reduction in MMBTUs and kWhs will result in lower gas and electric bills. Going forward, this could mean a reduction in the occupancy line of the annual operating budget.

This Green Communities project allows an opportunity for the Town of Burlington to conduct outreach about the new Green Communities Designation and what the Energy Reduction Plan will mean for the Town moving forward, especially when it comes to the schools. Many residents have children who either currently attend or have attended at least one school in Town and put a lot of value into the improvement of said schools.

## **Permits and Approvals**

All permits and approvals for this project are within the jurisdiction of the Town of Burlington. Additional permitting fees or timelines are not anticipated for this project.

## **Relation to the ERP**

The schools represent a large portion of the Town's energy usage. By biting off a few punch list items in the proper order, we will be able to slowly improve each school and over the next few years and get to that 20% goal.

## **Outreach and Education Opportunities**

Most of the schools in Burlington are outdated with the exception of the Memorial Elementary school. This project will give employees and students at each school the opportunity to learn about how incremental changes like door weather-stripping can vastly improve the overall climate and comfortability for those who spend countless hours there.

## **Project Budget**

The annual estimated cost savings for the project is \$116 with a net upfront cost of approximately \$7,971. This estimate is based off the attached RISE energy audit and automated calculations from the GC Grant Table.

The Town anticipates utilizing utility incentives to offset some of the cost of the installation. The Town plans to use the total Green Communities Competitive Grant to try and fund the remaining costs of this project.

The COVID-19 pandemic caused the Town to take a hit financially. When it came to budgeting projects, sadly the energy efficiency improvements took the back burner. With the help of the Green Communities grant money, we can bring these projects up front and continue to improve our facilities and get closer to that 20% reduction goal.

Project Economics		Weatherization at Memorial Elementary School
<b>Total Project Cost</b>		\$ 7,971
<b>Estimated Utility Incentives</b>		\$ 0
<b>Estimated Net Cost</b>		\$ 7,971
<b>Estimated Annual Cost Savings</b>		\$ 116
<b>Estimated Annual Maintenance Savings</b>		\$ 259

## Weatherization at Pine Glen Elementary School

### Background

RISE Engineering performed an energy savings assessment of the Pine Glen Elementary school in August of 2019. It was discovered that this 57,532 square foot building would benefit from door weather-stripping, door sidelight and transom improvements, air sealing, and pipe insulation.

**Door weather-stripping:** There are 28 exterior doors that would benefit from new/replacement weather-stripping. We plan to install weather-stripping and appropriate sweeps to 17 single aluminum doors (weather-strip the frame and install sweeps), 4 double aluminum doors (replace the existing damaged/ineffective bulb and astragal pile weather-stripping and install new sweeps), 4 single steel doors (weather-strip the frame and install new sweeps), 4 double steel doors (replace the existing damage/ineffective bulb and astragal pile weather-stripping and install new sweeps).

**Door sidelight and transom improvements:** There are 4 exterior double doors that would benefit from replacing the single pane glass or insulating the solid panel. We plan to replace the single pane sidelights and transoms on doors 3 and 15 with double pane, tempered glass packs. We also plan to replace the single pane sidelights on door 4 with double pane, tempered glass packs and install a 1" (R-6.5) rigid insulation panel with a PVC trim board cover for the transom. Lastly, we will install a 1" (R-6.5) rigid insulation panel with a PVC trim board cover for the sidelights and transom of door 14.

**Air sealing:** There are gaps causing air leakage at the wall to roof connection around the perimeter of the teachers' lounge. We plan to seal the 6" nominal gaps where the roof deck connects with the perimeter I beam. We also plan to seal the 1" nominal gaps between the bottom of the I beam and the top of the exterior walls. The total lineal footage to be treated is 38 ft.

**Pipe insulation:** There are exposed copper and iron heating pipes in the various rooms in the basement. RISE Engineering plans to install fiberglass pipe insulation with all service jacket and PVC fitting covers. The total lineal footage is 140 ft with 19 fittings.

## Energy Savings

Project Energy Savings	Weatherization
Electric Savings (kWh)	2,949
Gas Savings (Therms)	2,483
Energy Savings (MMBTU)	258.4

In FY 2020, the Pine Glen Elementary School used 191,419 kWh and 37,193 therms. As indicated above, the completed weatherization measures are anticipated to save 2,949 kWh (representing savings of 1.54%) and 2,483 therms (representing savings of 6.68%) on an annual basis. This weatherization improvement will account for annual energy savings of 258.4 MMBTUs.

## Project Scope

### Purpose

This project is the first step in upgrading any end-of-life HVAC equipment (boilers and hot water heaters) at the Pine Glen Elementary School. Combined with four other schools, these weatherization upgrades will help improve everyday life for students and teachers alike.

### Benefits

The upgrade of weatherization will both reduce the electric and thermal energy use for the building and will provide annual cost and maintenance savings.

### Timeline

#### Engineering Study (August 2019)

This step has already been completed for the Pine Glen Elementary School for weatherization measures.

#### Contracting (July 2021)

We anticipate contracting with the selected vendor to take approximately one month.

### **Weatherization Installation (August 2021)**

It would be highly beneficial to complete the weatherization in August of 2021 when the school is unoccupied.

### **Procurement**

The Town has cost estimates for this project both from the initial Energy Audit of the building and from the Engineering Study from RISE Engineering. Based on these numbers, the Town will not have to go out to bid.

### **Anticipated Impact**

The improvement of the weatherization measures is anticipated to have a positive impact on the Pine Glen Elementary School.

We anticipate a noticeable improvement in the overall temperature quality in the schools by installing these proposed measures. Students and teachers should not have any cool air flowing in during the winter, nor should they feel warm air flowing in during the summer. We also anticipate that the reduction in MMBTUs and kWhs will result in lower gas and electric bills. Going forward, this could mean a reduction in the occupancy line of the annual operating budget.

This Green Communities project allows an opportunity for the Town of Burlington to conduct outreach about the new Green Communities Designation and what the Energy Reduction Plan will mean for the Town moving forward, especially when it comes to the schools. Many residents have children who either currently attend or have attended at least one school in Town and put a lot of value into the improvement of said schools.

### **Permits and Approvals**

All permits and approvals for this project are within the jurisdiction of the Town of Burlington. Additional permitting fees or timelines are not anticipated for this project.

### **Relation to the ERP**

The schools represent a large portion of the Town's energy usage. By biting off a few punch list items in the proper order, we will be able to slowly improve each school and over the next few years and get to that 20% goal.

### **Outreach and Education Opportunities**

Most of the schools in Burlington are outdated with the exception of the Memorial Elementary school. This project will give employees and students at each school the opportunity to learn about how incremental changes like door weather-stripping can vastly improve the overall climate and comfortability for those who spend countless hours there.

## Project Budget

The annual estimated cost savings for the project is \$1,157 with a net upfront cost of approximately \$23,357. This estimate is based off the attached RISE energy audit and automated calculations from the GC Grant Table.

The Town anticipates utilizing utility incentives to offset some of the cost of the installation. The Town plans to use the total Green Communities Competitive Grant to try and fund the remaining costs of this project.

The COVID-19 pandemic caused the Town to take a hit financially. When it came to budgeting projects, sadly the energy efficiency improvements took the back burner. With the help of the Green Communities grant money, we can bring these projects up front and continue to improve our facilities and get closer to that 20% reduction goal.

Project Economics		Weatherization at Pine Glen Elementary School
<b>Total Project Cost</b>		\$ 27,073
<b>Estimated Utility Incentives</b>		\$ 3,716
<b>Estimated Net Cost</b>		\$ 23,357
<b>Estimated Annual Cost Savings</b>		\$ 1,157
<b>Estimated Annual Maintenance Savings</b>		\$3,662

## Project Team

Frank Davey - RISE Engineering Manager of Special Projects

- Key point of contact at RISE Engineering

Erik Nersheimer - RISE Engineering Field Services Supervisor

- Prepared initial scope of the project

Rod Butcher- Burlington Public Schools Heating and Boiler Service Technician

- Maintains the HVAC systems at all public schools. Will work alongside the hired HVAC company to supervise the work being completed. Will coordinate day to day activities.

Rachel Leonardo- Town of Burlington Public Works Operations Analyst

- Point of contact for Green Communities and the engineering studies.

Lisa Matarazzo - Town of Burlington Engineering Aide

- In charge of posting the bid opening and collecting bids from all engineering and HVAC companies.

John Sanchez - Town of Burlington Public Works Director

- Will assist in choosing the right company to complete the job. Makes all final decisions in relation to Public Works projects.

Robert Cunha - Burlington Public Schools Director of Operations

- Project lead and financial decision maker for any energy efficiency project related to the Schools.

## **Supporting Materials**

The following supporting materials are attached to this application:

### **Burlington Grant Application Table**

This completed Grant Application Table includes the metrics for the weatherization measures proposed for this funding.

### **Burlington RISE Energy Audit**

This energy audit was conducted for the Town of Burlington in the summer of 2019 and serves as the basis for many of the energy conservation measures included in the energy conservation plan, including the weatherization measures mentioned in this project.

### **RISE Engineering Spec Sheets**

There are spec sheets for each type of weatherization measure - air sealing, weather-stripping, pipe insulation, and sidelight & transom improvements.

### **Utility Bills**

There are PDFs for each school's gas bills from March 2021 and electric bills from February 2021.

## Contacts

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