CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 8

(1) **PROJECT NAME:** ADA Compliance Upgrades - Districtwide FY24
PROJECT STATUS:

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This project request is for the continued improvements focused on providing access to all district facilities

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction						
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other	390,000	390,000	390,000	390,000	390,000	
	TOTAL	390,000	390,000	390,000	390,000	390,000	-

(5) **PRIORITY:**

a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) **EFFECTS ON ANNUAL OPERATING BUDGET:**

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) **PROPOSED FUNDING SOURCE(S):**

1) **Bond**
2) **Grants**
3)

(10) **PROJECT OR EQUIPMENT LOCATION:**

District wide

(11) **ASSET TYPE:**

Building Infrastructure; Parking Lots; Playgrounds;

(7a) **POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)**

MOD Grant, if applicable

(8) **PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)**

TBD

(9) **FINANCE DEPARTMENT NOTES:**

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 9

(1) **PROJECT NAME:** Asbestos Abatement - Districtwide FY24
PROJECT STATUS: In Earlier CIP - Not in Edmunds

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This project request is for the continued abatement of asbestos in district wide buildings.

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction						
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other	750,000	561,000	598,800	550,000	550,000	550,000
	TOTAL	750,000	561,000	598,800	550,000	550,000	550,000

(5) **PRIORITY:**

a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) **EFFECTS ON ANNUAL OPERATING BUDGET:**

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) **PROPOSED FUNDING SOURCE(S):**

1) **Bond**
2)
3)

(10) **PROJECT OR EQUIPMENT LOCATION:**

District wide

(11) **ASSET TYPE:**

Building Infrastructure

(7a) **POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)**

(8) **PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)**

TBD

(9) **FINANCE DEPARTMENT NOTES:**

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 5

(1) **PROJECT NAME:** Exterior Envelope Design & Construction King and Framingham High School FY24-25

PROJECT STATUS: In Earlier CIP - Not in Edmunds

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This request for capital budget funding is for the design of exterior envelope repairs to the King Elementary and Framingham High Schools. These two facilities fall within our long range exterior envelope repair program and have experienced a number of deficiencies and damage throughout the years. This funding request of $322,000 would allow the Department to work with our House Doctor Design to investigate the major areas of concerns, moisture infiltration, extent of damage to the infrastructure, and begin developing a plan for repairs. Once this effort is completed, the Department will have a phased approach and bidding documents to begin the repair process. This project will address many issues at King and FHS, including failing window perimeter sealant systems; deteriorating expansion joints; deteriorating fascia; deteriorated mortar; foundation cracks and failure; spalling concrete; and associated components. King was constructed in 1957 and has undergone numerous improvements throughout the years. However, there have been minimal repairs to the building's exterior envelope, which has resulted in the deteriorating conditions of today. Framingham High School was constructed in 1961 and underwent expansion and renovations from 2001 through 2007. While this building has undergone numerous renovations and repairs, the exterior envelope has not been the focus of repairs or renovations for a number of years. This is shown in the current condition and continued moisture infiltration throughout the building. Estimated Design Costs - King Elementary School - $135,000 Framingham High School - $187,000 Total Requested - $322,000

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

This funding request is for design only. An appropriation for construction will be in a future capital year.

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design	322,000					
d.	Construction		3,220,000				
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other						
	TOTAL	322,000	3,220,000	-	-	-	-

(5) **PRIORITY:**

a.		**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.		**level service maintenance**	maintains City desired level of service
c.		**economic development**	adds to the City's economic vibrancy
d.		**service improvement**	new or improved service to meet demand

(6) EFFECTS ON ANNUAL OPERATING BUDGET:

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) PROPOSED FUNDING SOURCE(S):

1) **Bond**
2)
3)

(10) PROJECT OR EQUIPMENT LOCATION:

FHS and King School's

(11) ASSET TYPE:

Building

(7a) POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)

(8) PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)

Thomas Begin, tbegin@framingham.k12.ma.us

(9) FINANCE DEPARTMENT NOTES:

5. **<u>Exterior Envelope Repair Design - King Elementary and FHS</u>**

This request for capital budget funding is for the design of exterior envelope repairs to the King Elementary and Framingham High Schools. These two facilities fall within our long range exterior envelope repair program and have experienced a number of deficiencies and damage throughout the years.

This funding request of $300,000 would allow the Department to work with our House Doctor Design to investigate the major areas of concerns, moisture infiltration, extent of damage to the infrastructure, and begin developing a plan for repairs. Once this effort is completed, the Department will have a phased approach and bidding documents to begin the repair process.

This project will address many issues at King and FHS, including failing window perimeter sealant systems; deteriorating expansion joints; deteriorating fascia; deteriorated mortar; foundation cracks and failure; spalling concrete; and associated components.

King was constructed in 1957 and has undergone numerous improvements throughout the years. However, there have been minimal repairs to the building's exterior envelope, which has resulted in the deteriorating conditions of today.

Framingham High School was constructed in 1961 and underwent expansion and renovations from 2001 through 2007. While this building has undergone numerous renovations and repairs, the exterior envelope has not been the focus of repairs or renovations for a number of years. This is shown in the current condition and continued moisture infiltration throughout the building.

Estimated Design Costs

- King Elementary School - $135,000
- Framingham High School - $187,000

Total Requested - $322,000

9/15/2022 9:52

PREPARED FOR:
Framingham Public School
Framingham, MA

FY 24 COST ESTIMATES

EXTERIOR ENVELOPE 10 YEAR SPREADSHEET

SCHOOL ID	Material and Labor Subtotal	Engineering Fee Construction Contingency 10%	Total	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	Recommended Repairs
Framingham High School	$ 1,700,195	$ 170,020	$ 1,870,215	**$ 1,870,215**	$ 1,959,985	$ 2,054,064	$ 2,152,659	$ 2,255,987	$ 2,364,274	$ 2,477,759	$ 2,596,692	$ 2,721,333	$ 2,851,957	Glazing Replacement, Masonry, Sealant, Concrete and Misc. Repairs
King Elementary School	$ 1,175,700	$ 179,647	$ 1,355,347	**$ 1,355,347**	$ 1,420,404	$ 1,488,583	$ 1,560,035	$ 1,634,917	$ 1,713,393	$ 1,795,635	$ 1,881,826	$ 1,972,154	$ 2,066,817	Window and Doors Replacement, Masonry, Sealant, and Misc. Repairs
Dunning Elementary School	$ 1,783,910	$ 272,581	$ 2,056,491	$ 2,056,491	**$ 2,155,203**	$ 2,258,653	$ 2,367,068	$ 2,480,687	$ 2,599,760	$ 2,724,549	$ 2,855,327	$ 2,992,383	$ 3,136,017	Window and Doors Replacement, Concrete Repairs
Thayer Campus of FHS	$ 268,445	$ 41,018	$ 309,463	$ 309,463	**$ 324,318**	$ 339,885	$ 356,199	$ 373,297	$ 391,215	$ 409,994	$ 429,673	$ 450,298	$ 471,912	Window and Doors Replacement, Masonry, Sealant and Concrete Repairs
Juniper Hill Elementary School	$ 575,730	$ 87,972	$ 663,702	$ 663,702	$ 695,559	**$ 728,946**	$ 763,935	$ 800,604	$ 839,033	$ 879,307	$ 921,514	$ 965,746	$ 1,012,102	Window and Doors Replacement, Masonry, Sealant, Concrete and Misc. Repairs
Brophy Elementary School	$ 2,166,730	$ 331,076	$ 2,497,806	$ 2,497,806	$ 2,617,701	$ 2,743,350	**$ 2,875,031**	$ 3,013,033	$ 3,157,658	$ 3,309,226	$ 3,468,069	$ 3,634,536	$ 3,808,994	Window and Doors Replacement, Masonry, Sealant, Concrete, Wood and Misc. Repairs
Potter Road Elementary School	$ 2,155,000	$ 329,284	$ 2,484,284	$ 2,484,284	$ 2,603,530	$ 2,728,499	$ 2,859,467	**$ 2,996,721**	$ 3,140,564	$ 3,291,311	$ 3,449,294	$ 3,614,860	$ 3,788,373	Window and Doors Replacement, Masonry, Sealant, Concrete and Misc. Repairs
TOTAL			$ 11,237,308	$ 11,237,308	$ 11,776,699	$ 12,341,980	$ 12,934,395	$ 13,555,246	$ 14,205,898	$ 14,887,781	$ 15,602,395	$ 16,351,310	$ 17,136,172	
TOTAL PROJECTS BY FISCAL YEAR				$ 3,225,561	$ 2,479,521	$ 2,783,010	$ 2,875,031	$ 2,996,721	TBD	TBD	TBD	TBD	TBD	

***** FY24 thru FY32 are costs with 4.8% escalation

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FRAMINGHAM PUBLIC SCHOOLS
DRAFT CAPITAL BUDGET PROPOSAL

Exterior Envelope Repair Design - $322,000

Design Repairs to Exterior Envelopes of King and FHS

Deteriorating foundation

KING ELEMENTARY SCHOOL

Asbestos Window Glazing

Structural cracks, allowing moisture infiltration

FRAMINGHAM HIGH SCHOOL

Crack and spalling foundation

Failing fascia

Deteriorating bricks, allowing moisture infiltration

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 11

(1) **PROJECT NAME:** Farley Generator Installation - Farley Building FY24
PROJECT STATUS: In Earlier CIP - Not in Edmunds

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This request for capital budget funding is for the purchase and installation of an appropriately sized generator at the Farley Building. The current generator is greatly undersized for the Districts needs now that the building is occupied by central office staff. This project would allow for the installation of an appropriately sized generator that will provide coverage for the newly relocated offices. Additionally, this generator will be designed to support future operational expansion within the building, allowing for continued operations of the District's Central Office during power outages. The requested funding amount incorporates an increase due to continued inflation and fluctuation in pricing experienced in the market. While this is an estimate, we believe the number will cover all costs associated with this project but understand the continued market fluctuation will result in volatile numbers for the foreseeable future.

Total Requested $610,000

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

This was requested in a previous fiscal year.

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction	610,000					
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other						
	TOTAL	610,000	-	-	-	-	-

(5) **PRIORITY:**

a.		**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.		**level service maintenance**	maintains City desired level of service
c.		**economic development**	adds to the City's economic vibrancy
d.		**service improvement**	new or improved service to meet demand

(6) **EFFECTS ON ANNUAL OPERATING BUDGET:**

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) **PROPOSED FUNDING SOURCE(S):**

1) **Bond**

2)

3)

(10) **PROJECT OR EQUIPMENT LOCATION:**

Farley Administration Building, 19 Flagg Drive

(11) **ASSET TYPE:**

Building Infrastructure

(7a) **POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)**

(8) **PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)**

Thomas Begin, tbegin@framingham.k12.ma.us

(9) **FINANCE DEPARTMENT NOTES:**

11. Farley Generator Installation

FY24:

This request for capital budget funding is for the purchase and installation of an appropriately sized generator at the Farley Building. The current generator is greatly undersized for the Districts needs now that the building is occupied by central office staff. This project would allow for the installation of an appropriately sized generator that will provide coverage for the newly relocated offices. Additionally, this generator will be designed to support future operational expansion within the building, allowing for continued operations of the District's Central Office during power outages. The requested funding amount incorporates an increase due to continued inflation and fluctuation in pricing experienced in the market. While this is an estimate, we believe the number will cover all costs associated with this project but understand the continued market fluctuation will result in volatile numbers for the foreseeable future.

Total Requested **$610,000**

SHEPHERD ENGINEERING, INC.

1308 GRAFTON STREET • WORCESTER, MA 01604 • (508) 757 7793 • FAX: (508) 753 2309

Ms. Carol Brodeur
Capital Project Coordinator
Framingham Public Schools
Building and Grounds Dept.
31 Flagg Drive, Suite #6
Framingham, MA 01702

Re: Farley School Generator System Upgrade
31 Flagg Drive
Framingham, MA 01702

Proposed Generator Systems Upgrade Budget:

The project will consist of but not limited to the following to support the electrical systems throughout the entire building:

The overall intent would be to install the new standby generator close to the existing utility padmount transformer. Intercept the existing line-load secondary conductors then connect to a new NEMA 3R service entrance rated automatic transfer switch. This will allow for the majority of the work to be performed outside of the building structure and not interfere with trying to reconnect onto the existing main distribution board currently located within the central portion of the building.

Demolition Phase: **$8,500.00**

- Disconnect and removal of the interior natural gas generator set with a rating of 45kW, 277/480 volt, 3 phase.
- Disconnect, removal and capping of the natural gas piping.
- Disconnect and removal of the interior and exterior exhaust pipe up to the roof line. City of Framingham to be responsible for the equipment removal and all necessary patching.
- Disconnect and removal of the existing wall mounted remote radiator exhaust unit and related piping back to the generator. City of Framingham to be responsible for all the exterior wall section infill.
- Disconnect and removal of the existing automatic transfer switch and related cabling to the generator set.
- Disconnect and removal of the service disconnect switches related to the remote panels – replacement with new distribution panel with reconnection to the existing branch circuits.
- Disconnect and removal of the existing generator/ATS feed from the main distribution board with new branch circuit breaker and related branch circuit feeder to the main electric room.

Note: Excludes demolition work performed by City of Framingham

Proposed Generator Upgrade:

New 400KW Standby Generator in Sound Attenuated Enclosure Diesel: **$190,000.00**

- Purchase a new 400kW diesel base tank style generator within a sound attenuated enclosure with a new 2000 ampere, 3 pole, 480 volt NEMA 3R circuit breaker style automatic transfer switch. Includes tailgate delivery and setting onto the concrete pad.

Generator System Infrastructure: Material and Labor **$120,000.00**

- Preparation of the new generator concrete pad. Pad dimensions to be approximately 12”-0” wide X 26’-0” long. Proposed location along the street side of Flagg Drive adjacent to the end of the maintenance garage.
- New exhaust stack to rise the exterior of the building and rise 10’-0” above the roof structure.
- Intercept the existing secondary electrical feeders as they exit the main utility company padmount transformer. Redirect to the new 2000 ampere, 277/480 volt service entrance rated automatic transfer switch.
- New manhole located in the drive area to intercept the existing line and load secondary feeders.
- New branch circuits from the generator to the new automatic transfer switch (ATS) and related support electrical systems – power to originate from the branch circuit panel currently located within the maintenance garage.
- New branch circuit distribution panel to be located adjacent to the new ATS to support the existing branch lighting circuits.
- Coordination with EVERSOURCE for all required utility power shutdowns to safely transfer the power.
- All necessary connections to the new generator and related controls.

Total Estimated Construction Cost: **$318,500.00**

Note: Excludes overhead and profit contractor costs

Respectfully Submitted John D. Shepherd

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DRAFT CAPITAL BUDGET PROPOSAL

Farley Generator Installation - $610,000

Installation of a Generator to Support Entire Building Systems

- **Current Building Has a 45kW Generator**
  - **This Services only Emergency Devices**
- **Purchase and Installation of 400 kW Generator**
  - **This Will Provide Service to All Building Systems and Relocated District Offices**
  - **Ensures Central Office and Support Departments Will Remain in Operations During Power Outages and Ensure Date Operations Are Not Interrupted**
- **Buildings & Grounds Will Perform Some Work To Help Reduce Expense**

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 2

(1) **PROJECT NAME:** Feasibility Study Additional Funding Request, Hemenway Elementary School FY24
PROJECT STATUS: In Earlier CIP - Not in Edmunds

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This request for capital budget funding is for supplemental funding that will allow the District to undertake a full feasibility study for the potential Hemenway Elementary School Project. Originally, a capital appropriation was approved for $600,000 for this study during the FY21 process. This appropriation coincided with the District's first application submission to the MSBA Core Program for Hemenway. This funding amount was sufficient at that time. During a meeting with representatives from the MSBA and their consultants, it was pointed out that District's are now allocating and expending between $800,000 - $1,200,000 for these types of studies once invited into the Core Program. It was then recommended that we incorporate this recommendation into our funding strategy for this study. As such, we are respectfully requesting appropriation of an additional $400,000 for this study, which will bring the total appropriated amount to $1,000,000.

Total Requested
$400,000

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

This is an additional funding request to a previously approved capital project, to match what is recommended by the MSBA

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design	400,000					
d.	Construction						
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other						
	TOTAL	400,000	-	-	-	-	-

(5) **PRIORITY:**

a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) **EFFECTS ON ANNUAL OPERATING BUDGET:**

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7)	**PROPOSED FUNDING SOURCE(S):**	**(10) PROJECT OR EQUIPMENT LOCATION:**
1)	**Bond**	**Hemenway Elementary School**
2)	**MSBA**	**(11) ASSET TYPE:**
3)		**Building**

(7a) POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)

MSBA; required to appropriate full funding as part of their program requirements;

(8) PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)

Matt Torti, mtorti@framingham.k12.ma.us

(9) FINANCE DEPARTMENT NOTES:

2. Feasibility Study Additional Funding Request, Hemenway Elementary School MSBA Application

FY24:

This request for capital budget funding is for supplemental funding that will allow the District to undertake a full feasibility study for the potential Hemenway Elementary School Project. Originally, a capital appropriation was approved for $600,000 for this study during the FY21 process. This appropriation coincided with the District's first application submission to the MSBA Core Program for Hemenway. This funding amount was sufficient at that time. During a meeting with representatives from the MSBA and their consultants, it was pointed out that District's are now allocating and expending between $800,000 - $1,200,000 for these types of studies once invited into the Core Program. It was then recommended that we incorporate this recommendation into our funding strategy for this study. As such, we are respectfully requesting appropriation of an additional $400,000 for this study, which will bring the total appropriated amount to $1,000,000.

Total Requested **$400,000**

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 89

(1) **PROJECT NAME:** Fire Alarm Systems Upgrades - FY24
PROJECT STATUS: In Earlier CIP - Not in Edmunds

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This project request is for the continued upgrades to fire alarm systems throughout the district. FY24 Cameron, FY25 Harmony Grove, FY 25 & FY26 Dunning, FY27 Potter Road, FY28 Stapleton, FY29 Walsh and others TBD (out years FY29-33 totals are combined)

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction						
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other	165,000	200,000	118,800	118,000	112,200	625,000
	TOTAL	165,000	200,000	118,800	118,000	112,200	625,000

(5) **PRIORITY:**

a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) **EFFECTS ON ANNUAL OPERATING BUDGET:**

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) **PROPOSED FUNDING SOURCE(S):**

1) **Bond**
2)
3)

(10) **PROJECT OR EQUIPMENT LOCATION:**

District wide

(11) **ASSET TYPE:**

Building Infrastructure

(7a) **POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)**

(8) **PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)**

TBD

(9) **FINANCE DEPARTMENT NOTES:**

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT:	Schools	**DEPARTMENT PRIORITY:**	3

(1)	**PROJECT NAME:**	King Front Entrance Replacement FY24
	PROJECT STATUS:	NEW Project This Year

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This request for capital budget funding is for the full replacement of the front entrance to King Elementary School. During the spring of 2022, the Department contracted Newport Construction to perform repairs to the top slab of the entranceway in an effort to maintain accessibility. During excavation, it was discovered that the structural support of the entranceway had deteriorated beyond what was expected and required further investigation. Newport made minor repairs and sealed up the slab, ensuring it was safe for usage. The Department is currently working with Beta Design on conceptual renderings for a remodeled front entrance that will eliminate any structural concerns while maintaining accessibility.

Total Requested $775,000

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

New request due to urgent need of replacement.

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction	775,000					
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other						
	TOTAL	775,000	-	-	-	-	-

(5) **PRIORITY:**

a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) **EFFECTS ON ANNUAL OPERATING BUDGET:**

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) **PROPOSED FUNDING SOURCE(S):**

1) **Bond**
2)
3)

(10) **PROJECT OR EQUIPMENT LOCATION:**

King Elementary School

(11) **ASSET TYPE:**

Building

(7a) **POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)**

(8) **PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)**

	Matt Torti, mtorti@framingham.k12.ma.us
(9)	**FINANCE DEPARTMENT NOTES:**

3. Roof King Front Entrance Replacement

FY24:

This request for capital budget funding is for the full replacement of the front entrance to King Elementary School. During the spring of 2022, the Department contracted Newport Construction to perform repairs to the top slab of the entranceway in an effort to maintain accessibility. During excavation, it was discovered that the structural support of the entranceway had deteriorated beyond what was expected and required further investigation. Newport made minor repairs and sealed up the slab, ensuring it was safe for usage. The Department is currently working with Beta Design on conceptual renderings for a remodeled front entrance that will eliminate any structural concerns while maintaining accessibility.

Total Requested **$775,000**

Front Entrance Replacement - King

Location	Cost			
Construction Estimate	*$705,000*			
Project Contingency	*$70,000*			
PROJECT TOTAL	**$775,000**			

From: Bill McGrath <BMcGrath@BETA-Inc.com>
Sent: Tuesday, September 13, 2022 1:23 PM
Subject: King School Improvements

Matt,

Our budgetary estimate for the King School Improvements including removal of the existing pedestrian bridge, new retaining wall section, short span bridge over the lower walkway, new accessible ramp from the parking lot and associated site work is $705,000.

Bill

William P. McGrath, PE
Vice President

40 Years BETA
IMPROVING COMMUNITIES TOGETHER

BETA Group, Inc.
401.333.2382 | C: 508.223.7811

Be GREEN, keep it on the SCREEN

July 18, 2022

Mr. Matthew Torti

Director of Buildings and Grounds
19 Flagg Drive #21A
Framingham, MA 01702

Re: Transportation Consulting Services – Letter of Understanding
Task Order T15 - King School Site Improvements Preliminary Design

Dear Mr. Torti:

BETA Group, Inc. is pleased to submit this Letter of Understanding (LOU) in connection with our Master Service Agreement, dated December 6, 2021 for services associated with the above referenced assignment. The services to be provided for this Task Order are for engineering services for the design of improvements to the entrance at the King School and are set forth in detail under Section 1. This LOU, when executed, will serve as a contract between the City of Framingham Schools and BETA (Consultant) for the Consultant to complete the work outlined in the Scope of Services presented herein.

SECTION 1 – Scope of Services

The main entrance to the King Elementary School situated on the second floor of the east side of the building. The entrance is accessed by a pedestrian bridge with dimension of approximately 30 feet long by 30 feet wide. The bridge spans over a pedestrian walkway that provides access to a smaller entrance to the first floor of the building below. The bridge is constructed of a reinforced concrete deck slab supported by either reinforced concrete beams or concrete-encased steel beams. These beams span from columns at the building to a stub abutment at the east end of the bridge. A set of five concrete steps is situated at the east abutment.

The bridge and concrete steps are in a deteriorated condition, with many areas of delamination and spalling on the surface of the steps, underside of the deck, and on the beams. Approximately eight years ago the surface of the deck was overlain with 1″ of asphalt to provide a smooth walking surface over delamination and spalling that was occurring on the top surface of the deck. The asphalt is now heaving in places.

It is our understanding that the Client wishes to remove the pedestrian bridge and fill in the area below much of the bridge, using a system of cast-in-place or precast concrete retaining walls to contain the fill and maintain access to the existing pedestrian pathway adjacent to the first floor of the building. A short span cast-in-place concrete slab will be provided between the building and the top of the retaining walls to maintain access to the main entrance. The remainder of the approach pathway to the entrance will be constructed as an at-grade path at slopes meeting accessibility requirements. The lower-level

pedestrian walkway and stairs adjacent to the building will be removed and replaced as required to facilitate the excavation for the retaining walls.

This task order is for Preliminary Design. Conceptual design of the improvements were prepared under Task Order T8 (10172.08). Final design and construction services will be completed under a future task order.

Task 1 Preliminary Design

1.1 Prepare preliminary plans of the proposed retaining wall system and building modifications. Precast options will be considered to facilitate installation. The preliminary design will build on concepts developed under a separate task order.

1.2 Prepare preliminary plans for a new ramp and sidewalk system to provide ADA compliant access to the building. The preliminary design will build on concepts developed under a separate task order.

1.3 Prepare a preliminary estimate of probable construction costs. Submit preliminary plans and estimate to Client for review. Attend one meeting with Client to review.

1.4 Conduct field survey to support preliminary design effort. Survey to be performed by a subconsultant to BETA and will include locating existing features including building, steps, doorways, pedestrian bridge, sidewalk, curb, parking lot, retaining wall, generator and related site features. Existing topography will be collected sufficient to complete the preliminary design including ADA compliance.

Assumptions and Exclusions:

- The existing construction plans will contain boring logs or other geotechnical information sufficient to be able to design the retaining wall system without supplemental subsurface investigation.
- Environmental Permitting is not included

SECTION 2 – Schedule

The work to be performed under this Task Order shall be for the period of twelve (12) weeks from Notice to Proceed.

SECTION 3 – Compensation

3.1 Method of Compensation. The City shall pay Consultant for Basic Services rendered under SECTION 1, in connection with all work described herein, a fee not to exceed Twenty-One Thousand Five Hundred Dollars ($21,500), without additional authorization by the City.

Task	BETA Estimated Fee
Task 1 –Preliminary Design	$15,100
Direct Expenses (survey, mileage)	$ 6,400

3.2 Future Adjustment. If the scope of the services to be rendered is changed materially or if the period of time during which Consultant is required to render services hereunder is extended beyond the completion dates established in the Section 2, the amount of compensation provided for herein shall be adjusted appropriately, provided that approval for such adjustment is obtained by BETA from the City and this Letter of Understanding is so amended.

3.3 Times of Payment. Payments to Consultant shall be made in accordance with paragraph 3.3.1.

3.3.1 Consultant may submit monthly statements for Basic and Additional Services rendered and for Reimbursable Expenses incurred. Town shall make prompt payments in response to Consultant's statements (subject to the provisions of paragraph 3.3.2).

3.3.2 If City objects to any statement submitted by Consultant, City shall so advise Consultant in writing giving reasons therefore within fourteen (14) days of receipt of such bill.

SECTION 4 – Acceptance

If this LOU meets with your approval, please sign, date and return the original and one (1) copy to our office, to the attention of Mark Gershman, P.E., Senior Vice President.

Respectfully yours,

BETA GROUP, INC.

By: _____
Mark Gershman, P.E.,
COO & Senior Vice President

Date: July 18, 2022

CITY OF FRAMINGHAM

By: _____
Lincoln Lynch
Director of Finance Operations

Date: _____

Framingham
PUBLIC SCHOOLS
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FRAMINGHAM PUBLIC SCHOOLS
DRAFT CAPITAL BUDGET PROPOSAL

King Front Entrance Replacement - $775,000

Demolish and Replacement Front Entrance to King

Overall deterioration of front entrance slab and stairs

Rebar deterioration at top slab

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT:	Schools	**DEPARTMENT PRIORITY:**	7

(1)	**PROJECT NAME:**	Paving Replacement/Storm Water - Walsh Middle & McCarthy Elementary Schools FY24
	PROJECT STATUS:	In Earlier CIP - Not in Edmunds

(2)	**PROJECT DESCRIPTION AND JUSTIFICATION:**	**(3) PURPOSE OF PROJECT:**

This request for capital budget funding is for the continued upgrades of existing parking areas, driveways, and stormwater management systems at District School's. Additionally, this project also continues the District's efforts to comply with National Pollutant Discharge Elimination System (NPDES) regulations, which require all City and School buildings' stormwater run-off, including from roofs, is pretreated prior to allowing storm-water to run into streams, brooks, ponds, etc. This project will focus on improvements at Walsh Middle and McCarthy Elementary School's.

Walsh Middle School Improvements

Pavement mill and overlay; new ADA compliant sidewalk and pedestrian ramps; parking and driveway restriping; stormwater manage-ment system upgrades; project design and administration;

$645,200

McCarthy Elementary School

Pavement mill and overlay; new HMA parking area expansion; new ADA compliant sidewalk and pedestrian ramps; parking and driveway restriping; stormwater management system upgrades; project design and administration;

$ 564,000

Total Requested $1,210,000

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

This was previously requested in prior capital years and deferred.

(4) BUDGET REQUEST BY YEAR:

FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33

a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction	1,210,000					
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other						
	TOTAL	1,210,000	-	-	-	-	-

(5)	**PRIORITY:**	
a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) EFFECTS ON ANNUAL OPERATING BUDGET:

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) PROPOSED FUNDING SOURCE(S):

1) **Bond**
2)
3)

(10) PROJECT OR EQUIPMENT LOCATION:

McCarthy Elementary and Walsh Middle Schools

(11) ASSET TYPE:

Parking Lots and Stormwater Management Systems

(7a) POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)

(8) PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)

Thomas Begin, tbegin@framingham.k12.ma.us

(9) FINANCE DEPARTMENT NOTES:

7. **Paving / Stormwater Improvements – Walsh and McCarthy School's**

FY24:

This request for capital budget funding is for the continued upgrades of existing parking areas, driveways, and stormwater management systems at District School's. Additionally, this project also continues the District's efforts to comply with National Pollutant Discharge Elimination System (NPDES) regulations, which require all City and School buildings' stormwater run-off, including from roofs, is pretreated prior to allowing stormwater to run into streams, brooks, ponds, etc. This project will focus on improvements at Walsh Middle and McCarthy Elementary School's.

- **Walsh Middle School Improvements**
  Pavement mill and overlay; new ADA compliant sidewalk and pedestrian ramps; parking and driveway restriping; stormwater management system upgrades; project design and administration;

  $645,200

- **McCarthy Elementary School**
  Pavement mill and overlay; new HMA parking area expansion; new ADA compliant sidewalk and pedestrian ramps; parking and driveway restriping; stormwater management system upgrades; project design and administration;

  $ 564,000

Total Requested **$1,210,000**

Paving and Stormwater Improvements
Walsh and McCarthy

Location	Cost			
Walsh	*$645,200*			
McCarthy	*$564,000*			
PROJECT TOTAL	**$1,209,200**			

Town of Framingham
School Department
Miriam F. McCarthy School Site Improvements FY 23

Date: 09-2022

Item No.	Estimated	Unit	Description	Unit Cost	Total
120.1	400	CY	Unclassified Excavation	$ 55.00	$ 22,000.00
151.	325	CY	Gravel Borrow	$ 55.00	$ 17,875.00
170.	909	SY	Fine Grading and Compacting	$ 8.00	$ 7,272.00
201.5	4	EA	Catch Basin - Municipal Standard	$ 4,500.00	$ 18,000.00
202.01	2	EA	Manhole – Municipal Standard	$ 5,000.00	$ 10,000.00
241.12	200	FT	12 Inch Reinforces Concrete Pipe	$ 110.00	$ 22,000.00
415.1	800	SY	Pavement Fine Milling	$ 8.50	$ 6,800.00
452.	463	GAL	Asphalt Emulsion for Tack Coat	$ 8.90	$ 4,120.70
450.23	741	TON	Superpave Surface Course - 12.5 (SSC - 12.5)	$ 126.00	$ 93,366.00
450.31	100	TON	Superpave Intermediate Course - 12.5 (SIC - 12.5)	$ 205.00	$ 20,500.00
504	748	FT	Granite Curb Type VA-4 (Straight/Curve Avg.)	$ 75.00	$ 56,100.00
509.	156	FT	Granite Transition Curb for Wheelchair Ramps (Straight/Curved Avg)	$ 65.00	$ 10,140.00
580.	1,200	FT	Curb Removed and Reset	$ 32.00	$ 38,400.00
701	470	SY	Cement Concrete Sidewalk	$ 85.00	$ 39,950.00
701.2	40	SY	Cement Concrete Wheelchair Ramp	$ 120.00	$ 4,800.00
860.92	2,616	FT	6 Inch Reflectorized White Line (Epoxy Resin)	$ 2.00	$ 5,232.00
	1	LS	Stormwater Management	$ 50,000.00	$ 50,000.00
			SUBTOTAL		$ 426,555.70
			CONT. 15%		$ 63,983.36
			TOTAL		$ 490,539.06
			SAY		$ 491,000.00

Engineering/Permitting

1. Civil/SiteDesign	$22,000.00
2. Permitting - NOI	$10,000.00
3. Construction Admin/Oversight	$34,000.00
4. Direct Expense - Survey/Mileage	$7,000.00
Total	$73,000.00

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Town of Framingham

9 - 2022

School Department

Walsh Middle School Site Improvements FY 23

Item No.	Estimated	Unit	Description	Unit Cost	Total
120.1	200	CY	Unclassified Excavation	$ 55.00	$ 11,000.00
151.	150	CY	Gravel Borrow	$ 55.00	$ 8,250.00
170.	615	SY	Fine Grading and Compacting	$ 8.00	$ 4,920.00
201.5	2	EA	Catch Basin - Municipal Standard	$ 4,500.00	$ 9,000.00
241.12	100	FT	12 Inch Diameter Reinforced Concrete Pipe	$ 110.00	$ 11,000.00
415.2	12,600	SY	Pavement Fine Milling	$ 8.50	$ 107,100.00
452.	966	GAL	Asphalt Emulsion for Tack Coat	$ 8.90	$ 8,597.40
450.21	1,420	TON	Superpave Surface Course - 12.5 (SSC - 12.5)	$ 126.00	$ 178,920.00
504	16	FT	Granite Curb Type VA-4 (Straight/Curve Avg.)	$ 75.00	$ 1,200.00
509.	52	FT	Granite Transition Curb for Wheelchair Ramps (Straight/Curved Avg)	$ 65.00	$ 3,380.00
580	1,200	FT	Curb Removed and Reset	$ 32.00	$ 38,400.00
701	550	SY	Cement Concrete Sidewalk	$ 85.00	$ 46,750.00
701.2	48	SY	Cement Concrete Wheelchair Ramp	$ 120.00	$ 5,760.00
860.92	3,700	FT	6 Inch Reflectorized White Line (Epoxy Resin)	$ 2.00	$ 7,400.00
	1	LS	Stormwater Management	$ 50,000.00	$ 50,000.00
				SUBTOTAL	$ 491,677.40
				CONT. 15%	$ 73,751.61
				TOTAL	$ 565,429.01
				SAY TOTAL	$ 566,000.00

Engineering/Permitting

1. Civil/SiteDesign	$24,000.00
2. Permitting - NOI	$10,000.00
3. Construction Admin/Oversight	$38,000.00
4. Direct Expense - Survey/Mileage	$7,200.00
Total	$79,200.00

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FRAMINGHAM PUBLIC SCHOOLS
DRAFT CAPITAL BUDGET PROPOSAL

Paving and Stormwater Improvements - $1,210,000

Walsh Middle and McCarthy Elementary Schools

Lacking Stormwater Mitigation, Leading To Flooding Within Building

Repointing and Repaving Stormwater Catch Basins, Regrading Driveway

Temporary Parking Lot Requiring Repaving and Stormwater Mitigation

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 1

(1) **PROJECT NAME:** Roof Repairs/Replacement - McCarthy Phase I/Dunning FY24

PROJECT STATUS: Project in process

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This request for capital budget funding is for the construction of new roofs at Dunning and McCarthy Elementary (Phase I) Schools. These roofs are in poor condition and rapidly deteriorating. Additionally, the warranty for both phases at McCarthy Elementary have expired while the warranty for Dunning Elementary is set to expire in 2023. Both of these roofs are experiencing moisture infiltration and deterioration that is requiring full replacement in order to ensure the continued usage of the school. The Department has submitted a statement of interest to the MSBA for the accelerated repair program for both roofs, and is awaiting follow up from the MSBA on whether the City has been accepted into the program for these roofs. However, as part of the MSBA program, the City is required to allocate full project costs within a given timeline, which this funding request would accomplish. Replacement design was funded through the FY 2023 Capital Budget. That is underway and slated to be completed during fall/winter of 2022/2023. We currently utilize $10,000 per building annually for repairs for roofs that are off warranty. By replacing these roofs, we will save $20,000 per year in our operating budget.

Recommended Repairs/Replacements
Dunning Elementary School $4,822,444
McCarthy Elementary School $2,420,225

Total Requested $7,242,669

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

Project costs have changed due to continued inflation and material costs. Those numbers are reflected in our budget request.

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction	#REF!					
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other	7,243,000					
	TOTAL	7,243,000	-	-	-	-	-

(5) **PRIORITY:**

a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc

b.		**level service maintenance**	maintains City desired level of service
c.		**economic development**	adds to the City's economic vibrancy
d.		**service improvement**	new or improved service to meet demand

(6) EFFECTS ON ANNUAL OPERATING BUDGET:

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating	-	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(100,000)

(7) PROPOSED FUNDING SOURCE(S):

1) **Bond**
2) **MSBA**
3)

(10) PROJECT OR EQUIPMENT LOCATION:

McCarthy and Dunning Elementary Schools

(11) ASSET TYPE:

Building

(7a) POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)

MSBA Accelerated Repair Program - Dunning

(8) PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)

Matt Torti, mtorti@framingham.k12.ma.us

(9) FINANCE DEPARTMENT NOTES:

1. <u>Roof Repairs/Replacements - Dunning and McCarthy Elementary (SOI's Submitted to MSBA)</u>

<u>FY24:</u>

This request for capital budget funding is for the construction of new roofs at Dunning and McCarthy Elementary (Phase I) Schools. These roofs are in poor condition and rapidly deteriorating. Additionally, the warranty for both phases at McCarthy Elementary have expired while the warranty for Dunning Elementary is set to expire in 2023. Both of these roofs are experiencing moisture infiltration and deterioration that is requiring full replacement in order to ensure the continued usage of the school. The Department has submitted a statement of interest to the MSBA for the accelerated repair program for both roofs, and is awaiting follow up from the MSBA on whether the City has been accepted into the program for these roofs. However, as part of the MSBA program, the City is required to allocate full project costs within a given timeline, which this funding request would accomplish. Replacement design was funded through the FY 2023 Capital Budget. That is underway and slated to be completed during fall/winter of 2022/2023.

Recommended Repairs/Replacements

• Dunning Elementary School	$4,822,444
• McCarthy Elementary School	$2,420,225
Total Requested	**$7,242,669**

FRAMINGHAM PUBLIC SCHOOLS - ROOF REPAIRS AND REPLACEMENTS
FISCAL YEAR 2022-2023 SNAPSHOT

Scope Item	Bldg. Name	Construction	(SF)	Installation	Warranty	Consultant Total (Solar, Structural, and Enclosure)	Construction Total (Material, Labor, Bonds, Insurance, Profit, etc.)	FY23 Replacement Cost
		Date		Date	Expiration			
1	Miriam McCarthy Elementary School Phase I	1952	32,500	1999	Oct 22 2014	**$278,125**	**$2,031,250**	**$2,420,225**
2	Charlotte Dunning Elementary School	1965	65,841	1996	Aug 31 2023	**$486,506**	**$4,115,063**	**$4,822,444**
3	Potter Road Elementary School	1955	50,840	1996	Aug 31 2023	**$392,750**	**$3,177,500**	**$3,741,622**
4	Brophy Elementary School	1968	63,000	2002	Sep 6 2022	**$468,750**	**$3,937,500**	**$4,617,750**
5	Barbieri Elementary School	1974	69,383	1998	Aug 31 2023	**$508,644**	**$4,336,438**	**$5,077,645**
6	King Elementary School	1957	45,803	1998	Aug 31 2023	**$361,269**	**$2,862,688**	**$3,378,706**
7	Hemenway Elementary	1961	65,126	1996	Aug 31 2023	**$482,038**	**$4,070,375**	**$4,770,928**
8	Cameron Middle	2001	70,000	2001	Aug 31 2023	**$512,500**	**$4,375,000**	**$5,122,100**
9	Harmony Grove Elementary School	1998	58,000	1998	Aug 31 2023	**$437,500**	**$3,625,000**	**$4,257,500**
10	Juniper Hill - BLOCKS	1960	45,600	2001	Sep 12 2021	**$360,000**	**$2,850,000**	**$3,364,080**
11	Stapleton Elementary School	1922, 1956, 1976	30,200	2007	Dec 12 2027	**$263,750**	**$1,887,500**	**$2,254,510**

12	Miriam McCarthy Elementary School Phase II	1952	24,300	2007	Dec 12 2027	**$226,875**	**$1,518,750**	**$1,829,415**
13	Walsh Middle School	1969	119,800	2005	May 16 2025	**$823,750**	**$7,487,500**	**$8,710,190**
14	Framingham High	1963, 2006	215,000	2006	May 24 2026	**$1,418,750**	**$13,437,500**	**$15,569,350**
15	New Fuller Middle School	2021	137,000	2021	Sept 1 2041	**TBD**	**TBD**	**TBD**
16	Farley Middle School : (Scheduled Replacement, Summer of 2023)	TBD	54,200	TBD	TBD	**TBD**	**TBD**	**TBD**

ROOF SYSTEM EVALUATION
AT DUNNING ELEMENTARY SCHOOL
FRAMINGHAM PUBLIC SCHOOLS
73 MOUNT WAYT AVENUE, SUITE 5
FRAMINGHAM, MA 01702

October 20, 2020

Evaluation Report

Prepared For:

Mr. Matt Torti
Director of Buildings and Grounds
Framingham Public Schools
73 Mount Wayt Avenue, Suite 5
Framingham, MA 01702

Gale Associates, Inc.
163 Libbey Parkway | Weymouth, MA 02189
P 781.335.6465 F 781.335.6467 www.gainc.com

Gale JN 837040

ROOF SYSTEM EVALUATION
AT THE DUNNING ELEMENTARY SCHOOL
FRAMINGHAM PUBLIC SCHOOLS
73 MOUNT WAYT AVENUE, SUITE 5
FRAMINGHAM, MA 01702

table of contents

Appendices:

Gale Associates, Inc.
163 Libbey Parkway | Weymouth, MA 02189
P 781.335.6465 F 781.335.6467 www.gainc.com

Executive Summary

In accordance with our contract, Gale Associates, Inc. (Gale) has prepared a roof condition survey for the Framingham Public Schools (FPS). This submission relates specifically to the existing condition of the low-sloped roof areas at the Charlotte A. Dunning Elementary School (DES), located at 48 Frost St. Framingham, Massachusetts. This report includes descriptions of the existing conditions, photo documentation, and provides roof remediation options.

The existing roofing systems at DES consists of multi-ply built-up roofing assembly adhered to 2 inches of rigid polyisocyanurate insulation. The roof deck at the DES was observed to consist of sloped light weight concrete. Based on our observations, reported leaks and test cuts, portions of the roof system components are wet and allowing moisture infiltration and reported leaks. The system appears to be approaching the end of its useful service life.

As part of the evaluation, a thermographic infrared roof scan and exploratory test cuts were performed and based on the results, Gale recommends a partial roofing system replacement and full roof edge perimeter remediation be considered at the Dunning Elementary School. Additional deficiencies observed include the lack of effective slope to direct moisture to the drains resulting in areas of ponding water, deteriorated roofing lap seams between reinforcing plys, deteriorated perimeter roof/ expansion joint flashing transitions and the presence of water within the roofing system in select locations.

- Roof Area F appeared to exhibit the most widespread signs of moisture within the roofing system. It is Gale's opinion that Roof Area F be considered for immediate removal and replacement.
- Select areas within Roof Areas A and G where also found to contain moisture within the roofing system components in the location were test cuts were performed. Although the areas of discovered moisture appear to be isolated, the underlying deteriorating condition of the existing roofing system components has contributed to the moisture infiltration.
- Its Gale's opinion that Roof Areas A, B, C, D, E, G, H, I, and J also be considered for replacement based on the discovery of moisture within the roofing system in areas of previous repairs, evidence of widespread water ponding, and the observations of deteriorating roofing membrane condition where gravel surfacing has been displaced. Continued exposure to moisture can affect the underlying structural components of the roof.

Please note that the estimated cost noted below does not include any special permitting fees which may or may not be required for this project, additional engineering fees, Framingham's monitoring of the project, interior renovations beyond those that are described within this report, a construction trailer/office space, or soft costs associated with working with Framingham Public Schools. Again, these recommended budgets are preliminary, and should not be used for sensitive budgeting, as the final scope of work, and detailing has not been confirmed at this time.

Estimated Remediation Cost:

- Limited System Replacement with a Multi-ply Built-up Roofing System: $2,000,000
- Full System Replacement with a Multi-ply Built-up Roofing System: $3,650,000
- Full System Replacement with a Single-ply PVC Roofing Membrane: $2,600,000
- Full System Replacement with a Single-ply Kee Roofing Membrane: $2,650,000

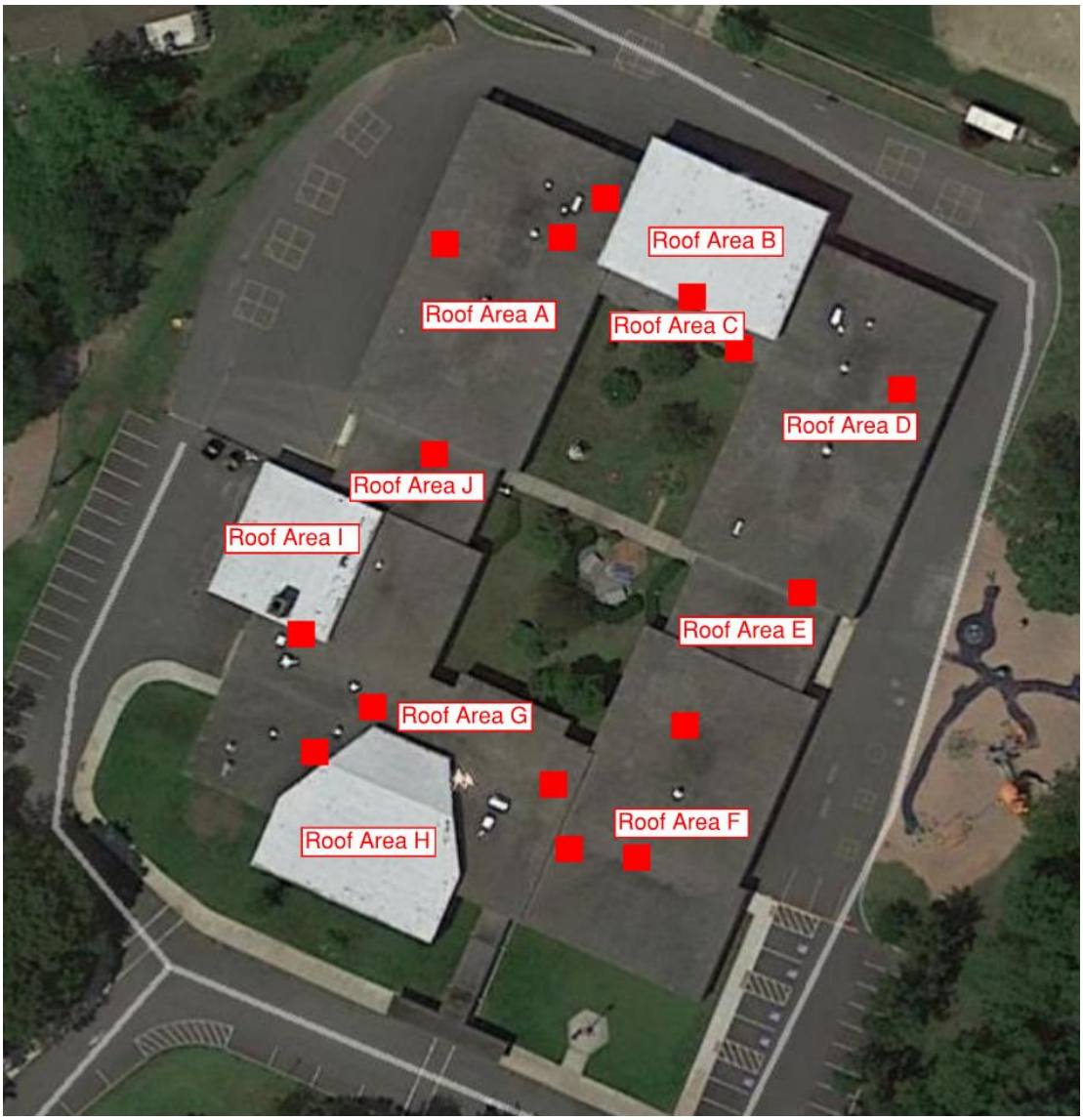


Figure 1: ***Dunning Elementary School Roof Area Plan***

Background

The Charlotte Dunning Elementary School (Dunning) was built in 1965. The single-story building is constructed with a combination of concrete masonry units (CMU) and brick masonry. Dunning is an elementary school housing grades K through 5, and it contains a cafetorium, kitchen, gymnasium, library, bathrooms, and assorted classrooms and offices. The rectangular shaped building is clad in a composite of aluminum storefront windows, hollow metal access doors, and brick and mortar exterior walls.

The existing approximately 61,500 sq. ft. roof area at the DES includes low sloped and limited areas of steep sloped roofs. The areas of steep sloped roofs consist of an aluminum coating clad, multiply built up roofing assembly. The low sloped roof system consists of gravel surface built-up roofing assemblies incorporating multiple plys of reinforcing fabric that are adhered with an asphaltic based

adhesive to the top facer of flat stock, 2-inch polyisocyanurate rigid insulation. The roofing system is installed on a sloped light weight concrete deck with penetrations for several small air conditioners units and HVAC vents located within the roof areas.

Visual Evaluation

As part of the evaluation, Gale conducted a visual evaluation of the DES's roof areas to observe the extent and location of defects as well as locate areas of potential moisture infiltration using non-destructive capacitance metering and infrared thermography. The following is a synopsis of the observations made during our visual evaluation.

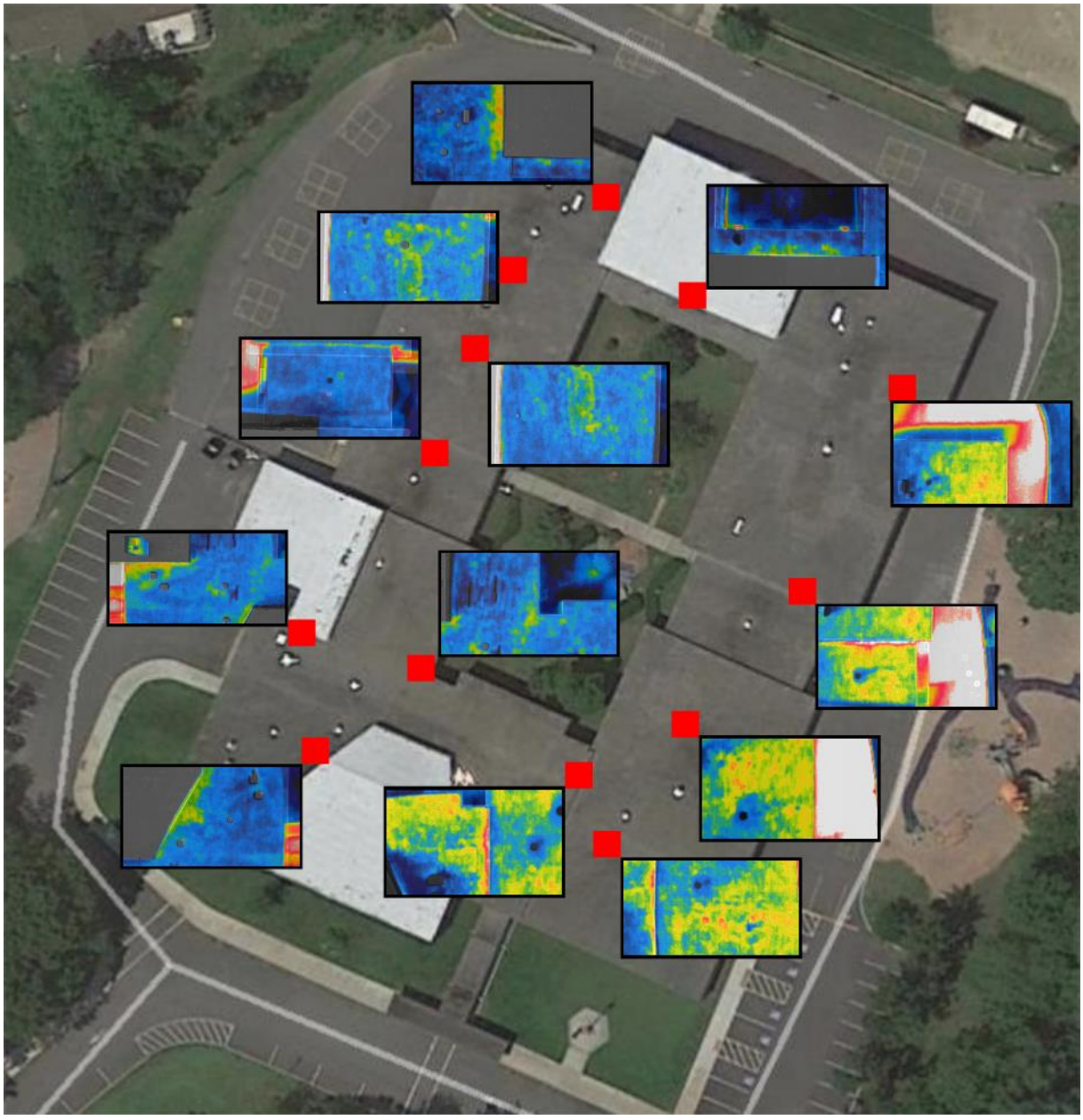


Figure 2: ***Dunning Elementary School Roof Area Plan with Infrared Images Overlayed***

Low Sloped Roofs, Roof Areas A, C, D, E, F, G, and J

Gale's general observations include but are not limited to the following:

1. The existing roof drains generally consist of lead and okum set cast iron assemblies that appear to be in fair condition however, they exhibit surface rust in the bowls and on drain hardware. Cast iron strainers are generally in good condition but are dislodged from the clamping rings at some locations.
2. Numerous previously performed repairs were evident based on the quantity of stripped-in membrane seams and roof patches that were observed in the field of the roof and at roof-to-wall flashings. The repairs appear to be in fair condition, but the presence of the stone ballast created difficulties in confirming the extent of the repairs and condition of the patch perimeters which are typically more susceptible to failure and allowing moisture infiltration.
3. The roof to wall, roof expansion joints and roof transitions between roof areas were observed to be heavily deteriorated. The roof to wall and roof expansion joint conditions appear to have been painted with a reflective coating that was observed to be failing.
4. The current roof flashing heights were generally observed to meet or exceed the industry recommended standard of 8" minimum. The addition of insulation may affect limited areas around select rooftop unit curbs.
5. An area of exposed roofing membrane reinforcing plys were observed to be exposed within a select area within Roof Area C.
6. Roof access ladders to Roof Areas B and H were observed to be heavily deteriorated and rusted.
7. Results of the roof infrared (IR) thermographic survey revealed areas of thermal anomalies and potential wet insulation at the following locations:
    a. Several limited areas within Roof Areas A, E, G, and J where anomalies were identified could potentially indicate wet roofing system components.

Steep Sloped Roof Areas B, I, and H

1. Due to the presence of the reflective coating over the roof membrane, Gale was unable to utilize the infrared camera to review the integrity of the sloped Roof Areas B, I, and H for areas of potential moisture due to interference caused by the presence of the reflective coating applied to the existing roofing.
2. Roof membrane laps were observed to be opening and showing signs of delamination.

Destructive Testing

On Wednesday, September 9, 2020, a representative from Gale coordinated with Greenwood Industries to perform destructive test cuts to determine existing conditions at select areas of the low sloped roofs. Test cuts were performed to document representative existing details and as-built conditions, as well as subsurface conditions at the roof openings. In total, fourteen (14) test cuts, most of which were approximately 6" square in size, were performed on the existing low sloped roof systems. Test cut locations were patched by Greenwood following Gale's review of the test cut locations. Please note that the test cuts we observed were representative of details that were observed during the evaluation, and not indicative of each detail condition that may exist on the building. Refer to the following roof plan for approximate test cut locations, Figure 3.

Test cuts on low sloped roofs revealed the following cross section from top to bottom: stone ballast, multi-ply built-up roofing, 2 inches of flat stock polyisocyanurate (polyiso) insulation, adhesive attached single-ply vapor barrier installed over a sloped light weight concrete roof deck.

Test cuts on low sloped roofs revealed the following cross section from top to bottom:

- Stone ballast
- Multi-ply built-up roofing
- 2 inches of flat stock polyisocyanurate (polyiso) insulation
- Loose laid single ply reinforcing sheet installed over a fully adhered single-ply vapor barrier
- Light weight concrete deck

Test Cut #	**Roof Area**	**Observed Condition**	
1	G	Dry	System components dry at test cut location
2	G	Dry	System components dry at test cut location
3	J	Dry	System components dry at test cut location
4	A	Dry	System components dry at test cut location
5	A	Wet	System damp at test cut location
6	A	Dry	System components dry at test cut location
7	C	Dry	System components dry at test cut location
8	C	Dry	System components dry at test cut location
9	D	Dry	System components dry at test cut location
10	F	Wet	System damp at test cut location
11	F	Wet	System damp at test cut location
12	F	Wet	System damp at test cut location
13	G	Dry	System components dry at test cut location
14	G	Wet	System damp at test cut location

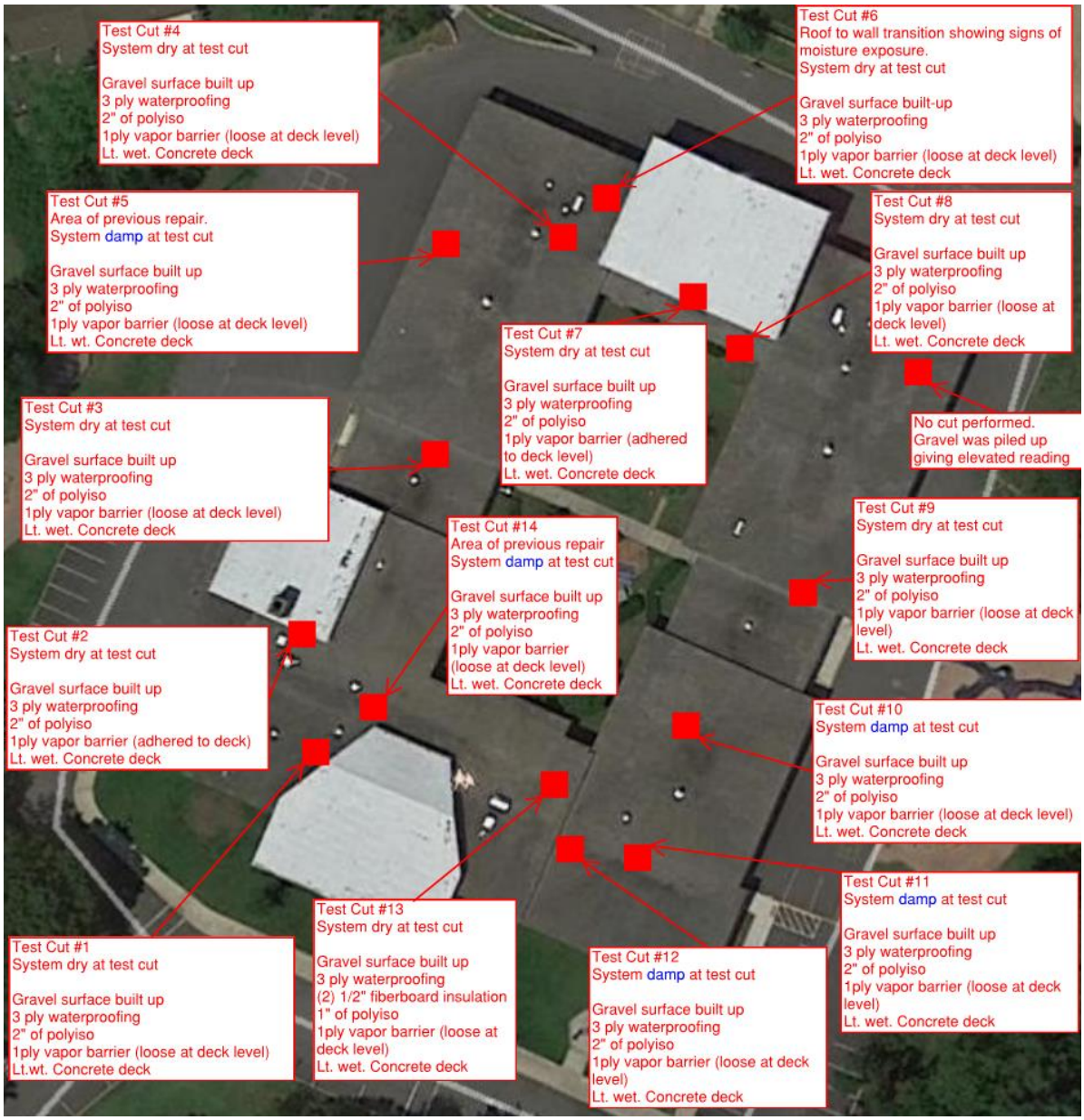


Figure 2: ***Dunning Elementary School – Partial Roof Area Plan – Approximate Test Cut locations***

DESIGN CONSIDERATIONS

New construction, as well as repair and alteration of existing buildings in Massachusetts, is regulated by 780 CMR, Massachusetts State Building Code (MSBC), and 521 CMR, The Architectural Access Board (AAB). The code review was based on the proposed renovations being constructed under the 9th Edition of the MSBC which is based upon the *International Building Code 2015* (IBC) and the Massachusetts Amendments. The 9th Edition is reportedly based upon the 2015 versions of the International Building Code (IBC), International Existing Building Code (IEBC), 2018 International Energy Conservation Code (IECC), and along with Massachusetts amendments.

Under the 9th edition of the MSBC *Chapter 34 Existing Structures* refers to the *International Existing Building Code 2015* (IEBC) as modified by the Massachusetts Amendments. This section of the code applies when there are repairs, alterations, additions or a change in use to existing buildings and generally refers to other sections of 780 CMR for specific requirements. Alterations to existing buildings including the removal and replacement of building elements with a continuation of the same use group (as is the case for the roof replacement at the FHS) are governed by *Chapter 6, Alterations – Level 1:*

- *Section 602: Building Elements and Materials* – Generally, existing buildings must be modified in a manner that does not decrease safety.
- *Section 603: Fire Protection* – At this time, Gale does not anticipate any modifications to the existing fire protection system.
- *Section 604: Means of Egress* – It is Gale's understanding that the building is fully compliant with egress requirements. No modifications to egress components are anticipated.
- *Section 605: Accessibility* – Gale recommends that FPS confirm that the building conforms with the MAAB requirements or perform a compliance study.

  Based on the current scope of work and anticipated costs, FPS should confirm that the renovations do not exceed 30% of the full and fair cash value of the facility and will not require additional accessibility improvements. As the project will exceed $500,000, a minimum accessible entrance and bathroom will be required if not already present. Gale recommends that FPS confirm that the building conforms with the MAAB requirements or perform a compliance study.
- *Section 606: Structural* – This section of the code outlines requirements of the alterations of work where reroofing is required. As part of the evaluation of the existing roofing system, Gale completed a gravity load code review of the existing FHS building's roof framing in accordance with Chapter 34: Existing Structures, of 780 CMR, the MSBC. Based on our review and calculations, the following is a summary of our findings:
  - As this building appears to be Seismic Design Category B, it is Gale's opinion this section of the code does not apply for this project.
  - Because the basic wind speed for the City of Framingham is 130 mph and the building appear to be classified as Occupancy Category III, this section of the code does not appear to apply for this project.
  - The proposed replacement at FMS building is not anticipated to increase the roof dead and live load capacity more than 5%.

Due the presence of stone ballast and the potential for displacing stones down the drain, Gale was not able to confirm the exact sizes and locations of all roof drains and therefore was not able to confirm the capacity of the existing roof drainage system. However, based on our visual observations, the existing roof drains of the low slope roof areas appear to provide adequate drainage, but evidence of ponding water suggests that low lying areas are collecting and retaining moisture following rain events. A full review of the existing drainage to confirm the capacity of the existing roof drainage system for compliance with the Massachusetts State Plumbing Code (MSPC) should be performed during the design phase of the roof replacement. Additional crickets should

be provided to facilitate drainage from low areas. Secondary overflow drainage may be recommended at some locations.

DISCUSSION AND OPINIONS

Low Sloped Roofs

Based on our limited evaluation of the low sloped roofs, select areas of the roof were found to have experience water infiltration. The limited areas should be removed and replaced to a point that dry roofing system components can be identified. Roof Area F appears to suffer the most from water infiltration as moisture was discovered in the roofing system components as well as on the roof deck. It is Gale opinion that roof areas found to contain moisture should be considered for replacement. Adding to the presence of moisture within the roofing system, areas of exposed roofing membrane are showing its age based on the numerous roofing system patches throughout the roof. Aside from the areas where moisture was discovered in the roofing system components, the Owner can select to preserve portions of the roofing, but the system overall should be considered for remediation to preserve the service life of the building.

Low Sloped Roof Systems

Based on the observed conditions previously noted, there are five (5) types of roof coverings which could be considered for the low-slope replacement roof systems at this facility. Each system has its own chemical and physical properties and proven performance characteristics. Refer to the appropriate building section for discussions of unique conditions, and how they may affect the final design recommendations. These membrane systems are as follows:

1. Gravel Surfaced Built-Up Roofing (GSBUR) membranes are alternating layers of asphalt, reinforcing felts (organic or non-organic) and gravel surfacing similar to the current roof system. Of the systems discussed herein for low slope applications, the GSBUR is the most time proven. Properly designed and installed, these systems have shown good longevity. GSBUR systems are field fabricated and therefore, considered more workmanship dependent, and can be susceptible to problems during construction. GSBUR can be applied with hot asphalt or cold mastics. Hot applied systems are accompanied by the odor of asphalt and use of 450°F to 500°F asphalt on the roof. The asphalt acts as the waterproofing materials while the fabric and felts provide the strength. Hot asphalt used to install the system can have logistic implications due to the strong fumes associated with the asphalt and the possibility of a fire hazard created by the asphalt kettle application. "Cold-process" built-up systems avoid temperature application of asphalt, and as such, have less odor. The cold process systems offer superior resistance to vandalism but can be difficult to repair. Manufacturers of this type of system offer 10-20 and sometimes 30-year material and workmanship guarantees.

2. Styrene – Butadiene – Styrene Granular Surfaced Modified-Bitumen Roof Membranes (SBS) are field fabricated and installed in multi-ply (minimum of two) configurations. SBS membranes can be set in hot asphalt or cold adhesive, or they can be torch applied. With its thick, puncture resistant, granular surfaced cap sheet, SBS exhibits excellent puncture and impact resistance similar to the BUR systems. As with cold and hot applied BUR systems, modified-bitumen membranes are workmanship dependent and can be susceptible to problems during construction for contractors not proficient with the installation

requirements. Hot applied systems are accompanied by the odor of asphalt and use of 450°F to 500°F asphalt on the roof. The asphalt acts as the waterproofing material while the plies provide the strength. Hot asphalt used to install the system can have logistic implications due to the strong fumes associated with the asphalt and the possibility of a fire hazard created by the asphalt kettle or torch application. Cold process systems avoid temperature application of asphalt, and as such, have less odor and would be a good alternative for this site. The manufacturers of SBS membrane systems offer 15-20 year and sometimes 30-year material and workmanship warranties that are similar with other membrane system manufacturers.

3. Elastomeric Roof Membranes (EPDM - Ethylene Propylene Diene Terpolymer) are single-ply synthetic rubber membranes which can be installed as a fully adhered or mechanically attached system. EPDM roof coverings are field fabricated with the seams of the membrane adhered with adhesive or a two-sided adhesive seam tape. The adhered membrane seams require specific preparation work to conform to the manufacturer's requirements. It has been Gale's experience that the seams of EPDM systems are prone to delamination within the warranty period and unless leaks occur, are not repaired under warranty. Proper slope to drain is required to effectively remove water from the membrane surface, and is critical for extended surface life and warranty coverages. Some EPDM warranties have specific limitations excluding ponded water as a result of seam adhesive degeneration when exposed to prolonged moisture. EPDM sheets are prefabricated off-site in the manufacturer's plants by making large sheets of membrane that are installed in "panels" on the site. Each of these panels are then adhered together using the bonding adhesives or pre-manufactured tapes to provide a watertight roof. These systems have a lower puncture resistance compared to the SBS, but their reparability is good and can easily be performed by certified maintenance personnel.

   Gale is aware of 15-year-old EPDM systems which are currently performing satisfactorily. However, it is Gale's experience that after seven to ten years, maintenance in the form of seam repairs will be required. Manufacturers of this type of system typically offer 10 to 20-year materials and workmanship warranties and have recently promoted thicker membranes that carry a 30-year warranty. Gale would recommend stripping-in all field fabricated seams if EPDM is specified, as well as designing for complete removal of all water through proper slope to drain (i.e. additional tapered insulation).

4. Single-ply thermoplastic polyolefin (TPO) roof membranes are also single-ply membranes that are available from several manufacturers. TPO membranes are manufactured in wide rolls similar to that of the EPDM sheets and can be adhered with a bonding adhesive, or in some cases with a self-adhesive backing, to the insulation system. TPO membrane seams are thermally fused (hot air welded or in some cases solvent welded depending on the manufacturer's requirements) to form a monolithic sheet that does not rely on adhesives for a watertight bond. Warranties that are competitive with SBS and EPDM systems are available. TPO warranties do not typically contain a ponded water exclusion as a result of the thermally fused seams. Similar to the EPDM systems, the puncture resistance of the TPO membrane is lower than that of SBS. It should be noted that repairs to TPO membrane can often be difficult as the top surface of the membrane ages, making future welding problematic. Also, there are multiple manufacturers of TPO systems, with multiple

formulations and differing material characteristics. These different characteristics do not allow for accurate monitoring of the product's track record. It should also be noted that there have been several reports of premature aging and failures of TPO systems, which is assumed to be a direct result of modifying the formulations in an attempt to modify the final roofing product. Should TPO's be considered, additional walkway pads should be used as the membrane becomes very slippery when exposed to accumulated precipitation.

5. Single-ply thermoplastic (polyvinyl chloride – PVC, or Elvaloy based) roof membranes are another option. PVC/Elvaloy membrane systems are available from several manufacturers. Based on our experience, it is Gale's opinion that the reinforced coated systems offer satisfactory chemical/physical properties. PVC/Elvaloy membranes can be installed as a fully adhered, mechanically attached or a loose laid and ballasted application. Similar to the EPDM and TPO membranes, the PVC/Elvaloy membrane is manufactured in wide rolls. However, the PVC/Elvaloy membrane seams are thermally fused by hot air welds only to form a monolithic sheet that does not rely on adhesives for a watertight bond. Warranties that are competitive with GSBUR and EPDM systems are available. PVC/Elvaloy warranties do not typically contain a ponded water exclusion as a result of the thermally fused seams. Similar to the EPDM systems, the puncture resistance of the PVC/Elvaloy membrane is lower than that of SBS, but is easy to repair using handheld heat welding equipment. Gale is aware of several membrane assemblies in New England which have been performing successfully for over 20 years. There are European installations of these products reported to be in excess of 25-years old. Similar to the TPO system, additional walkway pads should be considered on this membrane as it becomes very slippery when wet.

Coverboards

As standard polyisocyanurate insulation systems are typically susceptible to puncture from falling objects, can be crushed if uneven weight is applied, or can allow sharp objects such as tools to damage the roof membranes proposed, Gale recommends that a dense coverboard be utilized between the polyisocyanurate and roof membrane components. This coverboard can vary from manufacturer and roof system, but would either be a moisture resistant gypsum board such as that manufactured by Georgia-Pacific, a high density isocyanurate as supplied by several single ply manufactures, or a wood fiberboard insulation as required by the manufacturers of GSBUR or SBS systems.

It is however the experience of this office that the moisture resistant gypsum and fiberboard coverboards are more susceptible to moisture accumulation over long periods of time should water infiltration or vapor drive issues occur under the roof membrane. Therefore, Gale recommends that a high density, polyisocyanurate insulation be fully adhered over the attached roof insulation system to provide a more durable substrate for the roof membrane, as well as reduce the potential of damage to the roof membrane as a result of potential fastener back-out should the fasteners be in direct contact with the roof membrane. Some additional review of these products may be required during the design phase to confirm the intent of the installation requirements.

Insulation

There are several types of roof insulation boards that may be considered suitable for application on these roofs. In a conventional, insulated roof system, only polyisocyanurate insulation has a higher thermal resistance (R-Value) per inch requiring much less overall insulation thicknesses over its competitors. Due to the existing positive slope of the roof deck, the use of flat stock insulation should be considered. The greater thicknesses of insulation may result in additional wood blocking and raising rooftop equipment to accommodate flashing heights.

As referenced, areas where moisture was discovered within the roofing system components the system remediation would consist of the installation of and adhesively attached system including a high-density insulation cover board, rigid flat and tapered insulation. Full roofing system replacement could incorporate the existing vapor barrier given all deficiencies are corrected prior to the placement of the new roofing system. For areas where the existing roofing insulation was found to be dry, remediation could include, but not be limited to removal of all loose gravel surfacing, repairing any observed damages to the existing roofing system multiply roofing, mechanical attachment of rigid insulation and adhesive attachment of a multiply built-up roof waterproofing and granular surfaced cap sheet. Roof remediation would also include new membrane and sheet metal flashings along the perimeter and around rooftop penetrations. Based on the age of the drains, FPS should consider replacement of drain assemblies in conjunction with the roof replacement.

Thank you for your attention. Should you have any questions or comments, please do not hesitate to contact us at this office.

Best regards,

GALE ASSOCIATES, INC.

Derick Wiaderski/

Derick A. Wiaderski
Staff Engineer

DAW:
Attachments: Roof Plans

cc: Jason Wagner – Gale
Brian Neely – Gale

I:\837040\01 Evaluation\report\837040 Framingham Schools Dunning Roof Condition Evaluation 2020 1019.docx

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

PHOTOS

Photo 1 – The initial appearance of the existing conditions at the Dunning Elementary School Building appear to indicate a reasonably sound roofing system. The presence of stone ballast reduces the ability to identify deficiencies through visual evaluation alone.

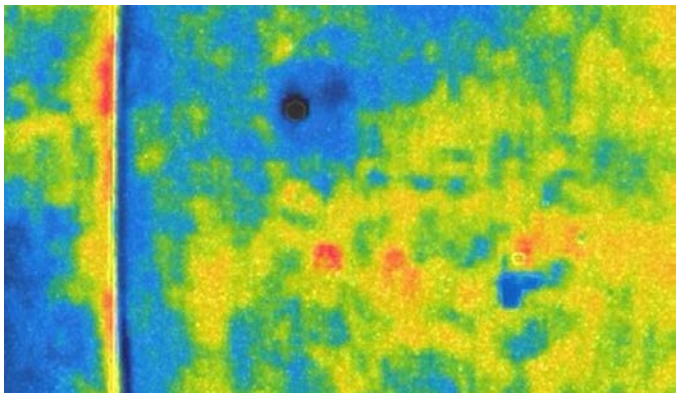


Photo 2 – Through the use of unmanned areal drones equipped with infrared camera technology, Gale identified several areas with the potential of containing moisture within the roofing assembly.

Photo 3 – In conjunction with the infrared roof scan, Gale utilized capacitance testing to determine the locations of test cuts.

Photo 4 – Fourteen (14) individual test cut locations were selected based on the gather data. In general, the roofing system at the test locations consists of a gravel surface built-up roofing membrane installed over Polyiso rigid insulation, vapor retarder and a sloped light weight concrete deck.

Photo 5 – The presence of moisture within the roofing system components was confirmed with the use of moisture sensitive test strips. Varying levels of moisture were observed at each of the test locations where moisture was found.

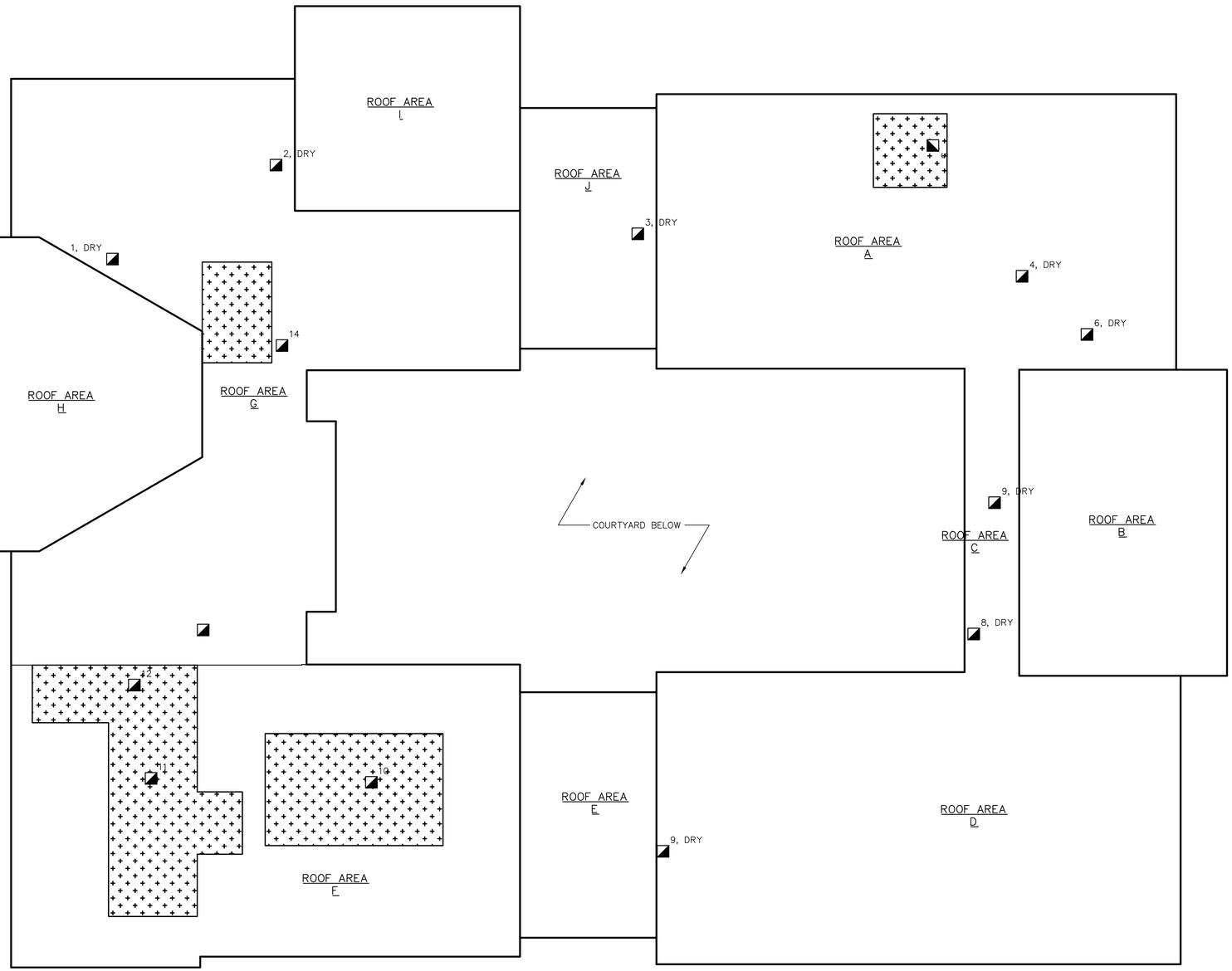
Photo 6 – Typical deteriorated roof to wall flashing condition.

Photo 7 – Roofing system degradation resulting in exposed reinforcing fabric that could provide a path for water to enter into the roofing system.

Photo 8 – Damaged and deteriorated roof access ladder to access Roof Areas B and H.

APPENDIX B

DUNNING SCHOOL ROOF AREA PLAN



1 DUNNING SCHOOL ROOF PLAN
SCALE: 1/16"=1'-0"

LEGEND

AREA OF MOIST ROOFING TO BE REPLACED

TEST CUT LOCATION

GALE

Gale Associates, Inc.
Engineers and Planners

163 LIBBEY PARKWAY | WEYMOUTH, MA 02189
P 781.335.6465 F 781.335.6467 www.gainc.com

Boston Baltimore Orlando Hartford

PROJECT
ROOF EVALUATION AT THE
DUNNING BUILDING
FRAMINGHAM, MA

OWNER
CITY OF FRAMINGHAM; FRAMINGHAM PUBLIC SCHOOLS
73 MT WAYTE AVE
FRAMINGHAM, MA 01702

NO.	DATE	DESCRIPTION	BY

PROJECT NO.	837040
CADD FILE	837040 A100s
DESIGNED BY	DAW/BHN
DRAWN BY	SWW
CHECKED BY	BHN
DATE	
DRAWING SCALE	1/16"=1'-0"

GRAPHIC SCALE

SHEET TITLE

DUNNING SCHOOL
ROOF PLAN

DRAWING NO.

A101

LEGEND

ROOF EDGE	RTU — ROOF TOP MECHANICAL UNIT
E.J. — EXPANSION JOINT	S — SKYLIGHT
LIGHTENING PROTECTION CABLE	SLEEPER
GUTTER WITH DOWNSPOUT	J — J–VENT
MAIN ENTRANCE	ROOF AREA NOT IN CONTRACT
F — FAN	ELEV.=_'–_"± — ROOF ELEVATION RELATIVE TO GRADE WHICH IS ASSUMED TO BE ZERO FEET
LINE OF ROOF OR WALL BELOW OVERHANG	A50 / NOTE — DETAIL INDICATOR
TAPERED INSULATION SLOPE	WATER SPIGOT
STRUCTURAL ROOF SLOPE	LIGHTNING PROTECTION PENETRATION
LIGHTNING ROD	
CONDUIT	

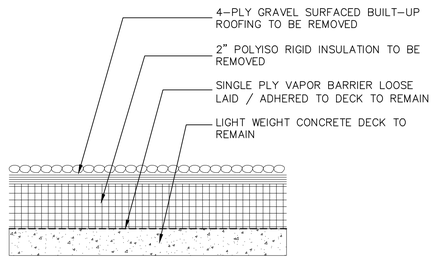
GENERAL NOTES

1. THE INFORMATION SHOWN ON THIS DRAWING HAS BEEN COMPILED FROM VARIOUS SOURCES, AND MAY NOT REFLECT THE ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION.
2. FOR THE SAKE OF CLARITY, EACH INDIVIDUAL DETAIL ON THE ROOF PLAN HAS NOT BEEN INDICATED. INSTALLATION DETAILS HAVE BEEN INDICATED FOR TYPICAL COMPONENTS AT RANDOM LOCATIONS.
3. HATCH PATTERNS ARE FOR REPRESENTATION ONLY AND SHOULD NOT BE USED A MEANS FOR QUANTIFYING.
4. REMOVE ALL WET INSULATION PRIOR TO INSTALLATION OF NEW ROOF COMPONENTS.
5. DETAILS NOT DEPICTED SHALL BE CONSTRUCTED IN A MANNER CONSISTENT WITH THE DETAIL DRAWINGS.
6. THE DEFECTS NOTED INDICATE APPROXIMATE LOCATIONS. THEY ARE NOT INTENDED TO DEFINE LIMITS OF WORK. AREAS NOT NOTED ON THESE DRAWINGS EXHIBITING SIMILAR DEFECTS AS THOSE SHOWN SHALL BE REPAIRED IN A SIMILAR MANNER.

CODE INFORMATION

ROOFING NOTES

EXISTING ROOF CROSS SECTIONS



DUNNING ELEMENTARY SCHOOL
EXISTING ROOF CROSS SECTION
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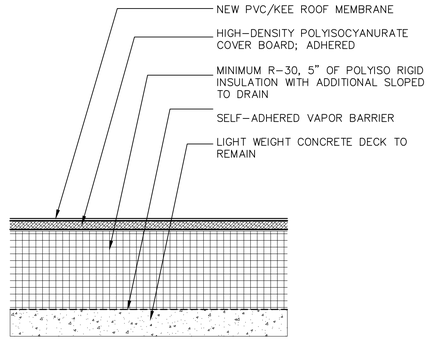
NOTE: ALL ITEMS ARE EXISTING.

PROPOSED ROOF CROSS SECTIONS



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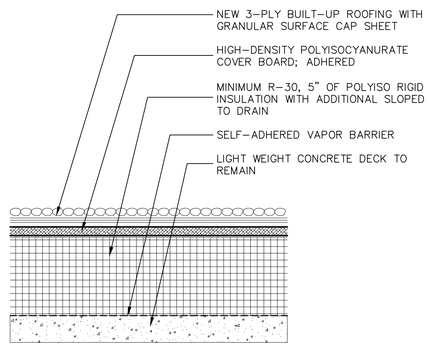

DUNNING ELEMENTARY SCHOOL
PROPOSED ROOF CROSS SECTION – TYPE 2
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NNOTE: ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING.

GALE

Gale Associates, Inc.
Engineers and Planners

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Boston Baltimore Orlando Hartford

PROJECT
ROOF EVALUATION AT THE DUNNING BUILDING FRAMINGHAM, MA

OWNER
CITY OF FRAMINGHAM; FRAMINGHAM PUBLIC SCHOOLS
73 MT WAYTE AVE
FRAMINGHAM, MA 01702

NO.	DATE	DESCRIPTION	BY

PROJECT NO.	837040
CADD FILE	837040 G100's
DESIGNED BY	DAW/BHN
DRAWN BY	SWW
CHECKED BY	BHN
DATE	
DRAWING SCALE	AS NOTED

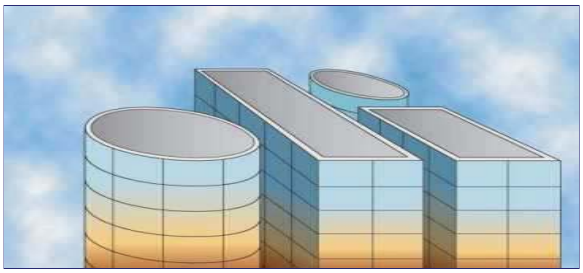
GRAPHIC SCALE

SHEET TITLE

GENERAL NOTES

DRAWING NO.

G101



ONLINE INFORMATION

Framingham Public Schools
Miriam F. McCarthy Elementary School

8 Flagg Drive

Framingham, MA 01701

Tremco Incorporated

January 08, 2019

TABLE OF CONTENTS

SECTION 1.

INTRODUCTION

REPORT CONTENT

Your report provides information essential to the analysis of your roofing investment and development of action plans. It will assist you to effectively and efficiently manage your roofing expenditures. The data you need in order to maintain your roofs in the optimum condition and preserve your substantial investment is provided.

Information is organized into the Executive Summary section followed by details for each roof. The Executive Summary provides overall information on your roofing inventory, asset value, the condition of roofs and budget amounts for maintenance, replacement and restoration work. Information is presented in numerical and graphical formats and is supported by data and recommendations for each individual roof area.

A roof area is defined by the following feature(s): An elevation change separation by walls, fire walls, expansion, control joints or a change of construction.

INFORMATION COLLECTION

Information collected includes historical data, construction and condition information. The information is collected by well trained, experienced roof inspectors. The inspection consists of on-site interviews whenever possible, a visual examination of the roof and extractions of roof samples for analysis. All accessible roof projections and equipment are inspected.

Information about the roof insulation and deck are based on what the inspector is able to determine by field examination of a core where possible and a visual examination of the underside of the deck if accessible.

This report and associated recommendations are based on the conditions at the time of the inspection. Both conditions and recommendations will change with time, weather and normal wear and tear associated with roofs.

CONDITION CATEGORIES

Your inspected roofing inventory has been classified into condition categories. Based on this analysis of certain key characteristics and noted conditions on each roof. Some conditions are clear indicators of future problems. Prompt attention to certain issues now may avoid or forestall a major expenditure later.

The condition categories are as follows:

1 . Replace Immediately
2 . Replace Eventually
3 . Restore Immediately
4 . Restore Eventually
5 . Repairs Required, Major
6 . Repairs Required, Minor
7 . Good Condition
8 . Fair Condition
9 . Other
10. No Condition Recorded

The assignment of a roof to one of these categories is based on data collected. It does not take into account owner preferences or knowledge of a building or its anticipated future. These factors must be the subject of discussion using the inspection data as a base. This step may well result in a re-organization priority assessment.

FOLLOW-UP WORK

Expanded recommendations, comprehensive specifications and pertinent cost estimates will be provided to you upon request, based on a more exhaustive on-site examination of the roof areas identified as priorities.

Use the services of Tremco Incorporated Account Executive to supplement the information in this report to help in establishing priorities and in the management of your roofing investment.

2. Executive Summary

2.1 Overview

This section provides information in numeric and graphical formats to summarize the detailed data in the body of this report.

This section essentially answers four questions:

1. “What roofing inventory do we have?”
2. “What condition is it in?”
3. “What will it cost to undertake the necessary work?”
4. “Where can I save through maintenance and/or restoration?”

The contents of this section are as follows:

1. Summary of the roofing inventory examined with total number of buildings and square footage.
2. Analysis based on number of roofs.
3. Analysis based on square footage.
4. Analysis based on condition categories.
5. Analysis based on roof type.

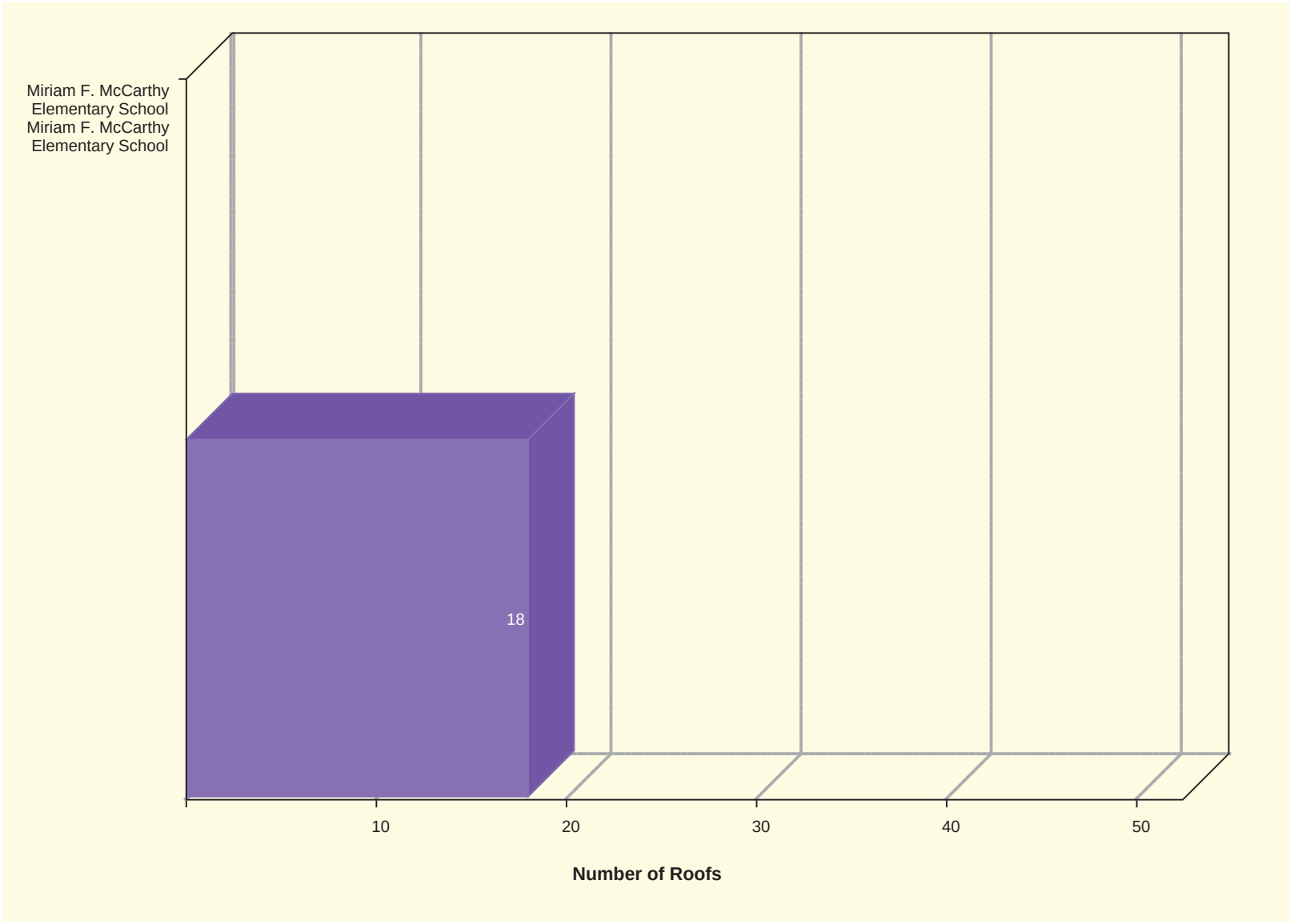
2.2 Roofing Inventory Examined

Number of Buildings	1
Number of Individual Roof Areas	18
Total Square Footage	45,161

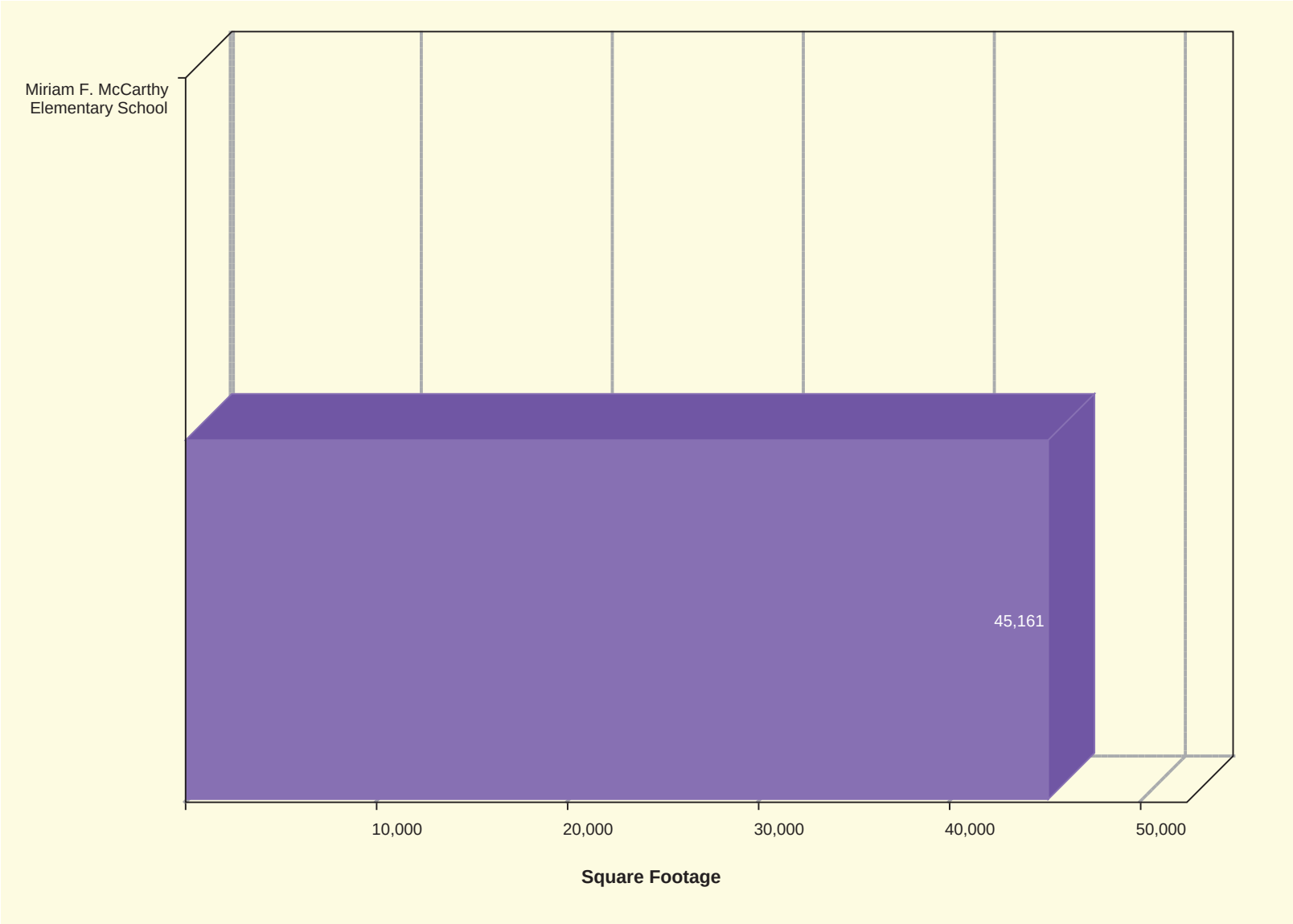
* Please be aware that there are roofs without an asset value

Miriam F. McCarthy Elementary School	**Asset**	**Sq. Ft.**
Miriam F. McCarthy Elementary School		
Roof 01		12,060
Roof 02		1,500
Roof 03		186
Roof 04		1,537
Roof 05		1,718
Roof 06		1,193
Roof 07		3,782
Roof 08		2,366
Roof A		775
Roof B		102
Roof C		676
Roof D		8,823
Roof F		4,815
Roof G		3,117
Roof I		345
Roof J		976
Roof K		383
Roof L		807
Building Total: 18 roof area(s)	*$0.00*	*45,161*

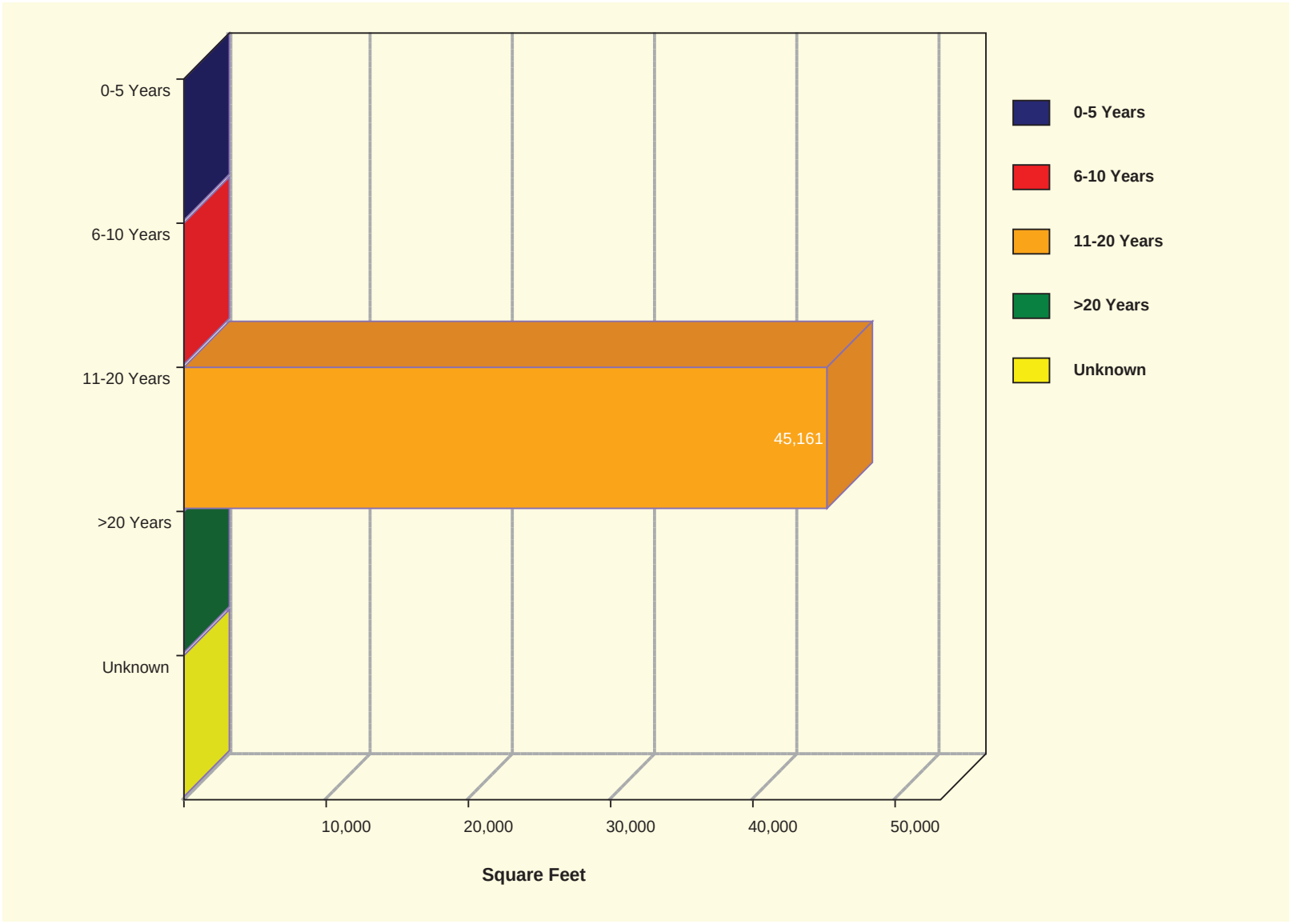
2.3 Roof Inventory Distribution



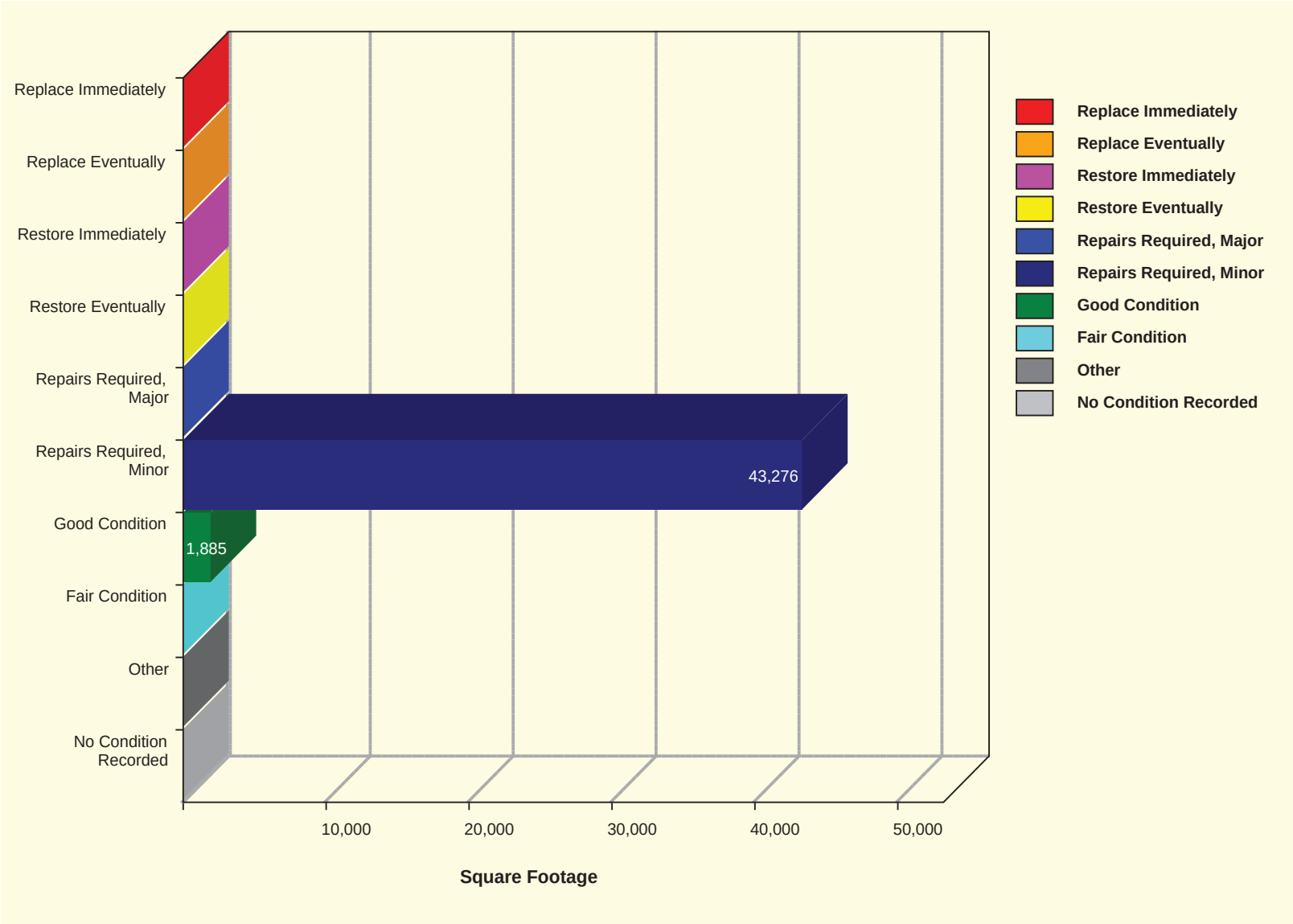
2.4 Square Footage Distribution



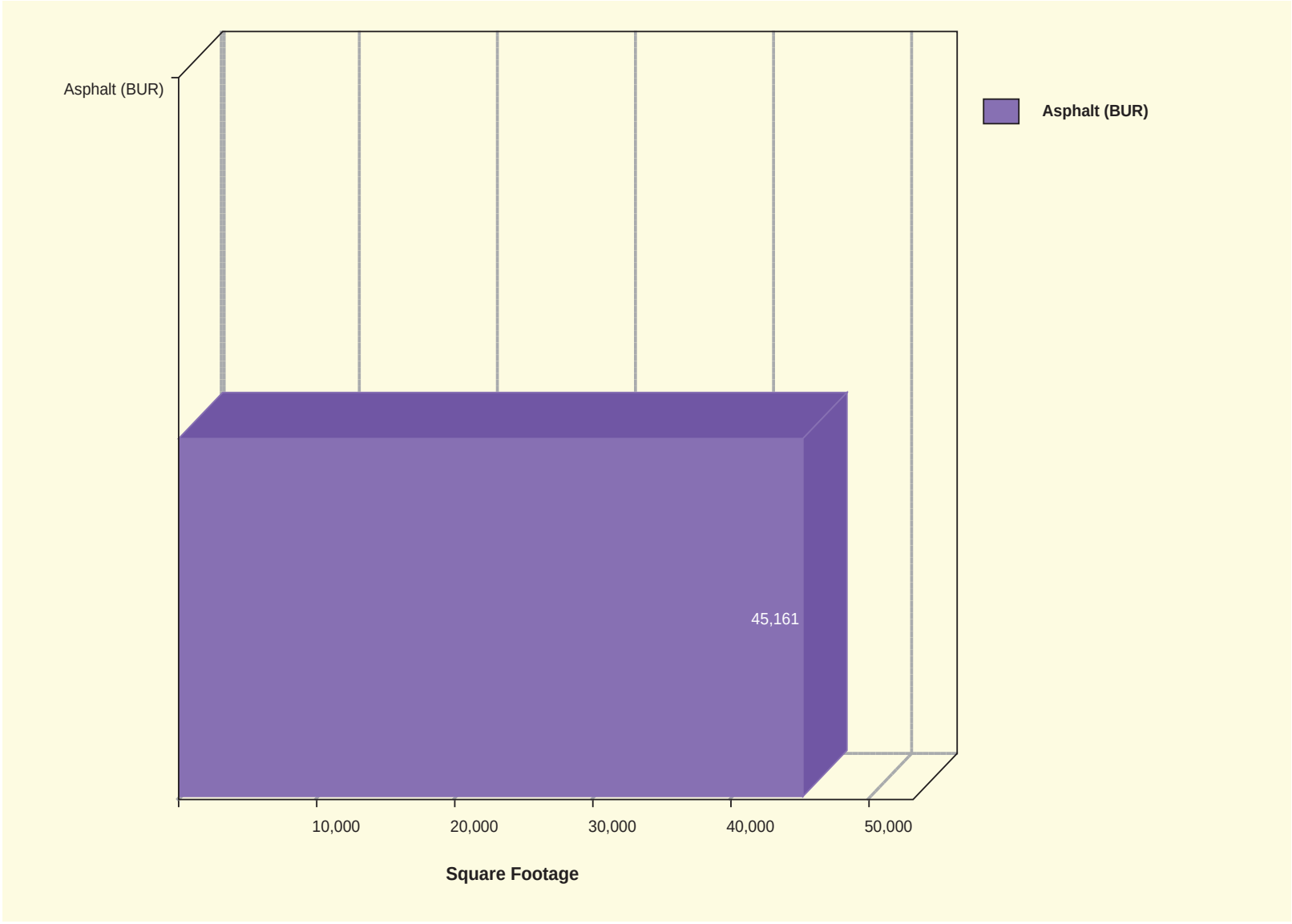
2.5 Age Analysis by Square Feet



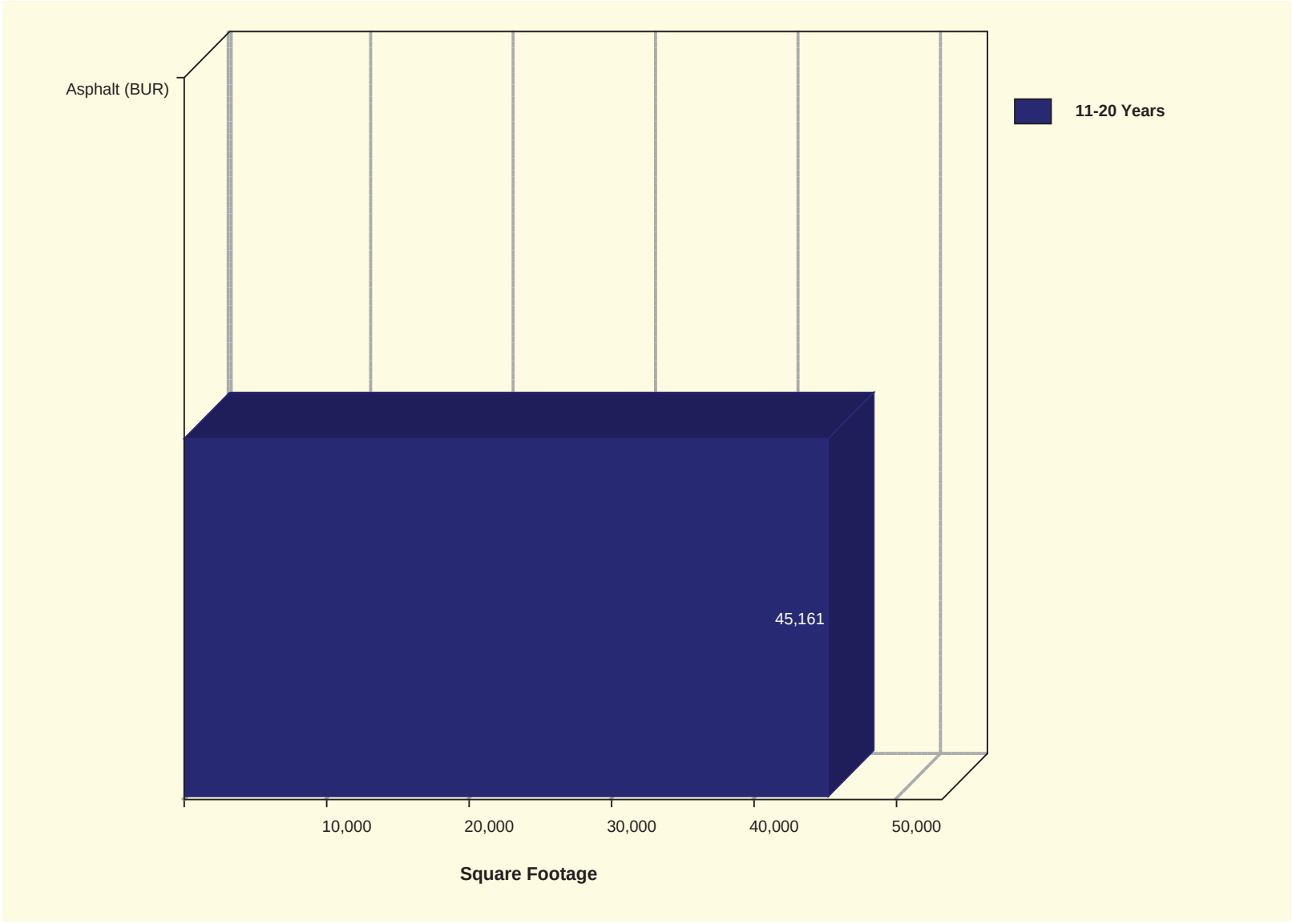
2.6 Condition Category by Square Feet



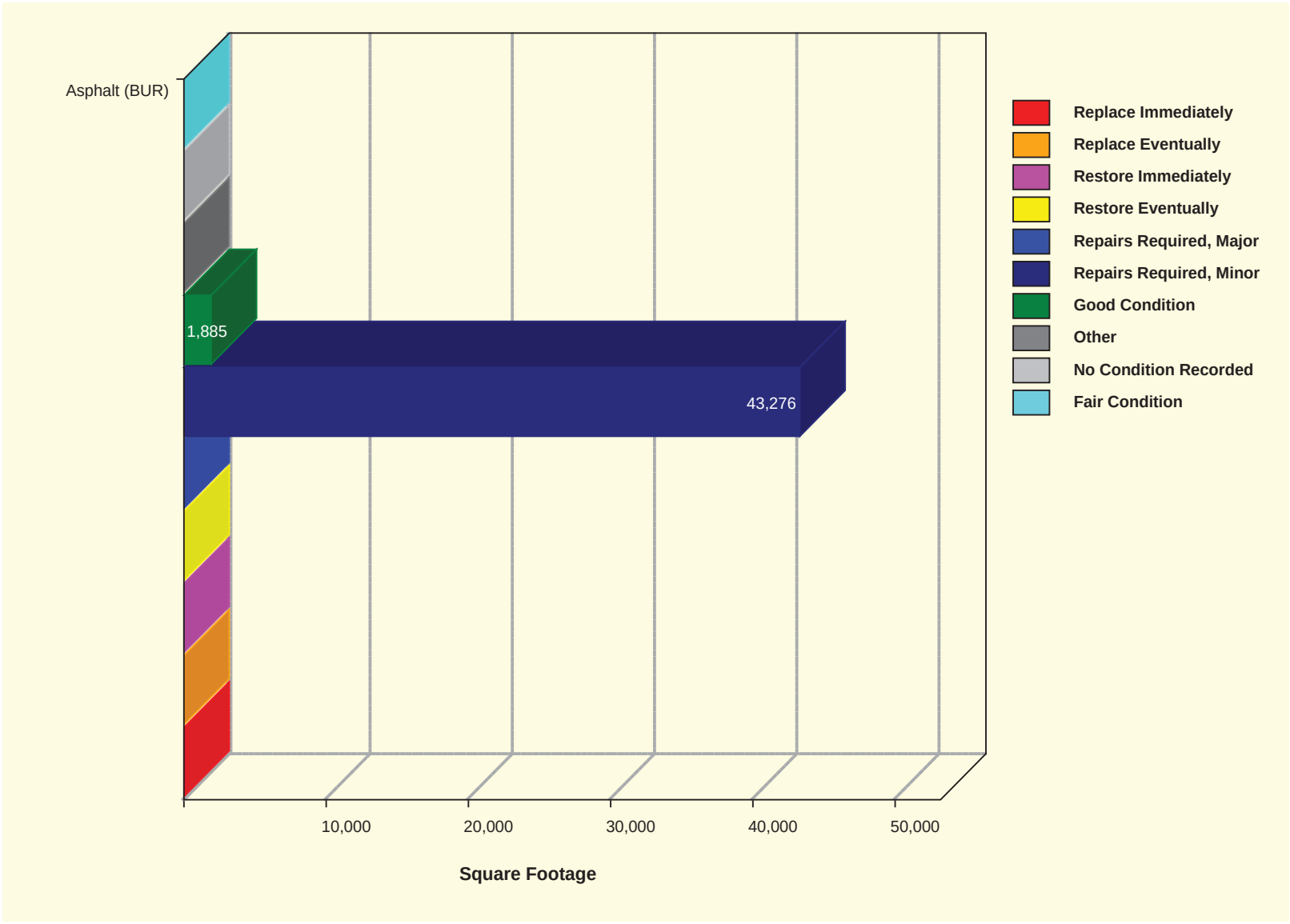
2.7 Roof Membrane Type by Square Feet



2.8 Age Analysis by Membrane Type



2.9 Condition by Membrane Type



3.1 Recommended Budget Summary by Roof

Building name	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Subtotal										
Annual Total										

3.2 Recommended Budget Summary by Task

Building name	Task	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Subtotal										
	Annual Total										

Maintenance Summary - Work Performed

Framingham Public Schools

Miriam F. McCarthy Elementary School	Type	Description	Completed
Miriam F. McCarthy Elementary School			
Roof 01	TremCare	Removed debris from the roof and drains. Repaired open curb flashing corners.	April 14, 2014
Roof 02	TremCare	Reinforced previous repairs.	April 16, 2014
Roof 03	TremCare	No maintenance required at this time.	May 05, 2014
Roof 04	TremCare	Removed debris from the roof. Repaired open flashing corner. Sealed open counterflashing.	May 05, 2014
Roof 05	TremCare	Repaired open flashing corner.	May 05, 2014
Roof 06	TremCare	Repaired open curb flashing corners. Repaired open flashing corners.	May 05, 2014
Roof 07	TremCare	Removed debris from the roof. Repaired open curb flashing corners. Sealed open counterflashing. Repaired open perimeter flashing.	April 16, 2014
Roof 08	TremCare	Repaired open flashing corners.	May 05, 2014
Roof A	Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof and drain.	January 24, 2018
Roof B	Preventive Maintenance	Completed inspection checking all details and membranes.	January 24, 2018
Roof C	Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof.	January 24, 2018
Roof D	Preventive Maintenance	Removed debris from the roof and drains. Repaired open curb flashing corners.	January 24, 2018
Roof F	Preventive Maintenance	Removed debris from drain. Repaired open curb flashing corners.	January 24, 2018
Roof G	Preventive Maintenance	Removed debris from the roof and scuppers. Repaired open lead base flashing.	January 24, 2018
Roof I	Preventive Maintenance	Completed inspection checking all details and membranes.	January 24, 2018
Roof J	Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof and scuppers.	January 24, 2018
Roof K	Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof and drain.	January 24, 2018
Roof L	Preventive Maintenance	Completed inspection checking all details and membranes.	January 24, 2018

Miriam F. McCarthy Elementary School	Type	Description	Completed
Miriam F. McCarthy Elementary School			
		Removed debris from the scuppers.	

Maintenance Summary - Customer's Responsibility

Framingham Public Schools

Miriam F. McCarthy Elementary School	Type	Description	Recommended
Miriam F. McCarthy Elementary School			
Roof 01	Repairs Required, Minor	Recommend installing a safety approved railing around hatch.	2014
	Repairs Required, Minor	Recommend raising wall mounted ladder to OSHA approved height.	2014
	Repairs Required, Minor	Recommend repointing the chimney.	2014
	Tree Work	Recommend trimming back the tree limbs that overhang the roof surface.	2014
Roof 02	Repairs Required, Minor	Recommend installing one (1) ply of comp ply on metal edge.	2014
	Repairs Required, Minor	Recommend installing scuppers. in gravel stop to alleviate ponding water on gutter edge.	2014
	Repairs Required, Minor	Recommend resloping the gutter so it drains.	2014
Roof 03	Repairs Required, Minor	Recommend installing scuppers in gravel stops to alleviate ponding warter.	2014
Roof 04	Recommendation	Recommend sealing the open window sills and counterflashing.	2014
	Repairs Required, Minor	Recommend coating the weathered wall and curb flashings.	2014
	Repairs Required, Minor	Recommend replacing the damaged ventilator hood.	2014
Roof 05	Recommendation	Recommend removing the obsolete pitch pocket and conduit pipe from the roof.	2014
	Repairs Required, Minor	Recommend coating the weathered wall flashings.	2014
	Repairs Required, Minor	Recommend repairing the crack in the brick wall.	2014
	Repairs Required, Minor	Recommend sealing the open window sills.	2014
Roof 06	Repairs Required, Minor	Recommend coating the wall and curb flashings.	2014
	Repairs Required, Minor	Recommend having a masonry contractor tuckpoint the brick walls.	2014
Roof 07	Repairs Required, Minor	Recommend coating wall and curb flashing with a reflective coating.	2014
	Repairs Required, Minor	Recommend reinstalling the expansion joint flashing.	2011
	Repairs Required, Minor	Recommend sealing the open window sill.	2014
Roof 08	Repairs Required, Minor	Recommend one hundred thirty square feet (130 sq. ft.) of weathered wall flashing.	2014
Roof A	Preventive Maintenance	Recommend customer perform	2018

Miriam F. McCarthy Elementary School	Type	Description	Recommended
Miriam F. McCarthy Elementary School			
		maintenance to drainage areas to keep proper drainage of the roof.	
Roof A	Repairs Required, Minor	Recommend coating rusted vent curb.	2018
	Repairs Required, Minor	Recommend coating wall and curb flashings with a reflective coating.	2018
	Repairs Required, Minor	Recommend installing proper storm collars on 2 process pipes.	2018
Roof C	Recommendation	Recommend installing wall mounted ladder to acess the roof.	2018
	Repairs Required, Minor	Recommend coating the wall flashing with a reflective coating.	2018
Roof D	Repairs Required, Minor	Recommend coating the wall and curb flashings.	2018
Roof F	Repairs Required, Minor	Recommend coating the weathered curb flashing.	2018
	Repairs Required, Minor	Recommend repairing approximately 30 linear feet of lead flashing under the windows.	2018
	Repairs Required, Minor	Recommend replacing 4 deteriorating splash blocks.	2018
Roof G	Repairs Required, Minor	Recommend coating approximately 55 linear feet of weathered curb flashing.	2018
Roof I	Repairs Required, Minor	Recommend coating approximately 45 linear feet of weathered wall flashing.	2018
Roof J	Preventive Maintenance	Recommend removing debris periodically.	2018
Roof K	Repairs Required, Minor	Recommend coating the wall and curb flashing with a reflective type coating.	2018
	Repairs Required, Minor	Recommend sealing approximately 50 linear feet of window sill.	2018

Overall Roof Condition

Number of Buildings	1
Number of Individual Roof Areas	18
Total Square Footage	45,161

Framingham Public Schools

Miriam F. McCarthy Elementary School, Miriam F. McCarthy Elementary School

Repairs Required, Minor

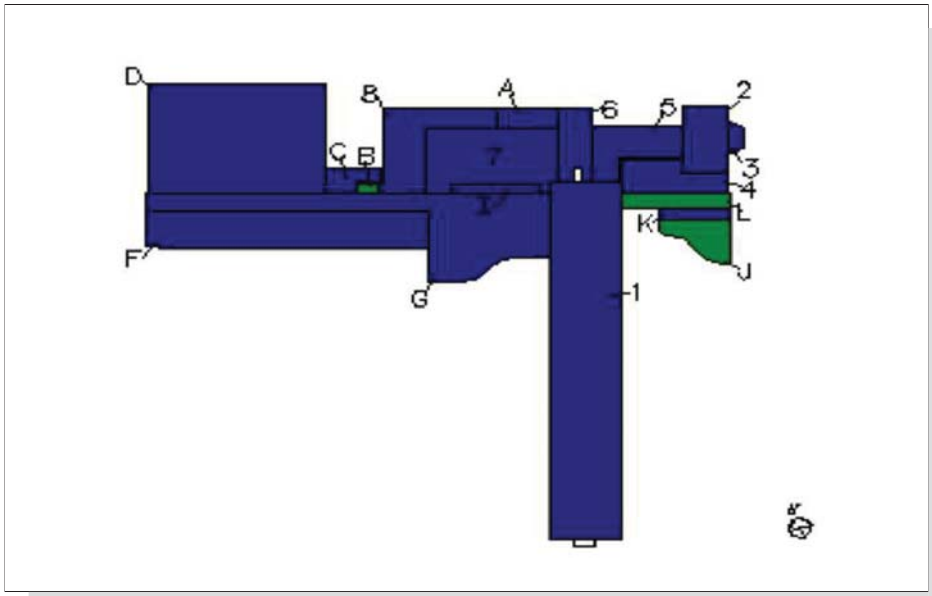
Region/Facility	Building	Roof	Sq. Ft.	Inspection Comments
Miriam F. McCarthy Elementary School	*Miriam F. McCarthy Elementary School*	Roof 01	12,060	
		Roof 02	1,500	
		Roof 03	186	
		Roof 04	1,537	
		Roof 05	1,718	
		Roof 06	1,193	
		Roof 07	3,782	
		Roof 08	2,366	
		Roof A	775	Roof is in good condition. No leaks were reported during time of inspection. This roof system collects an extensive amount of debris. A bi-annual cleanup is recommended to keep the drains clear of debris.
		Roof C	676	Roof is in good condition. No leaks were reported during time of inspection.
		Roof D	8,823	Roof is in good condition. No leaks were reported during time of inspection.
		Roof F	4,815	
		Roof G	3,117	Roof is in good condition. No leaks reported during time of inspection. There are splits forming in the lead base flashing of the expansion joint. Future inspectors should monitor this condition.
		Roof I	345	Roof is in good condition. There is no safe means of access to this roof system.
		Roof K	383	Roof is n good condition. No leaks were reported during time of inspection. Approximately 50' of window sill needs to be resealed.
	Subtotal	**15 Roof(s)**	**43,276**	**Sq. Ft.**

Good Condition

Region/Facility	Building	Roof	Sq. Ft.	Inspection Comments
Miriam F. McCarthy Elementary School	*Miriam F. McCarthy Elementary School*	Roof B	102	There is no safe means of accessing this roof.
Miriam F. McCarthy Elementary School	*Miriam F. McCarthy Elementary School*	Roof J	976	Roof is in good condition. No leaks were reported during time of inspection.
		Roof L	807	No leaks were reported during time of inspection.
	Subtotal	**3 Roof(s)**	**1,885**	**Sq. Ft.**
	Grand Total	**18 Roof(s)**	**45,161**	**Sq. Ft.**

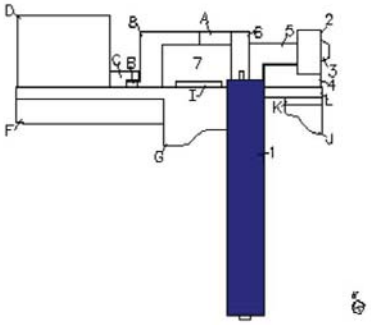
Miriam F. McCarthy Elementary School

8 Flagg Drive
Framingham, MA 01701
18 roof(s) - 45,161 sq. ft.



GENERAL INFORMATION

Roof Name	Roof 01
Service Activity Type	TremCare Gold
Service Activity Date	Apr 14 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	12,060 sq. ft.
# of Stories	2
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/8 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Fair Condition	
	Non-Parapet Wall	Fair Condition	
Wall Type	Brick Wall	Fair Condition	
Perimeter Wall and Flashing Type	Composite Ply	Fair Condition	
	Metal	Fair Condition	
Counterflashing Type	Through Wall	Fair Condition	
Counterflashing Material Type	Copper	Fair Condition	
Projection Flashings Type	Metal	Fair Condition	
	TRA Single Ply	Fair Condition	

PROJECTION AND EQUIPMENT

	Type	Require Attention
	Chimney(s)	0
	Drain(s)	0
	Hatch Cover(s)	0
	Soil Stack(s)	0
	Ventilator(s) (Curb)	0
	Walkpad(s)	0

MAINTENANCE SUMMARY

Work Performed	
TremCare	Removed debris from the roof and drains. Repaired open curb flashing corners.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2014		Recommend repointing the chimney.
Repairs Required, Minor	2014		Recommend installing a safety approved railing around hatch.
Repairs Required, Minor	2014		Recommend raising wall mounted ladder to OSHA approved height.
Tree Work	2014		Recommend trimming back the tree limbs that overhang the roof surface.

Overview.

Overview.

Debris.

Removed debris.

Debris.

Removed debris.

Open curb flashing corner.

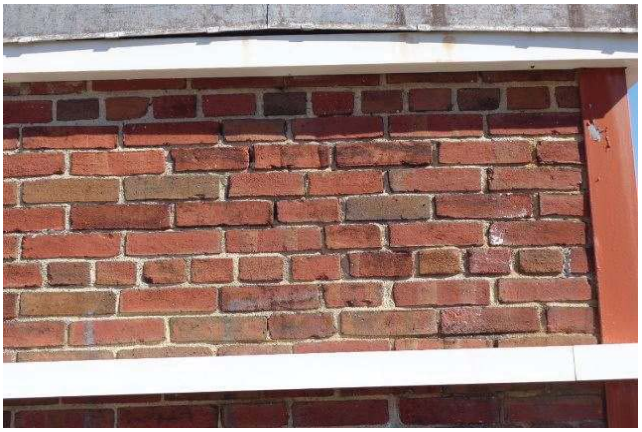
Repaired curb flashing corner.

Open curb flashing corner.

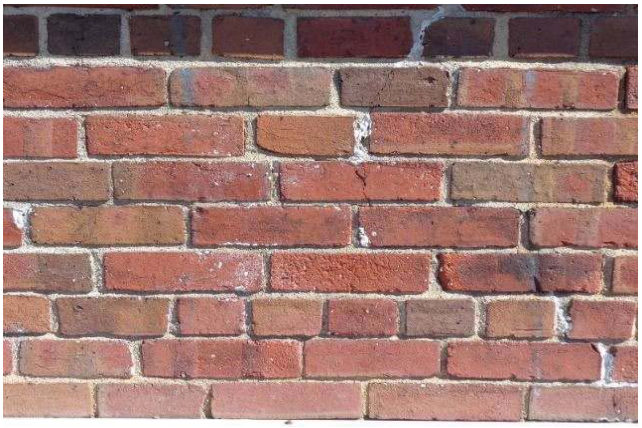
Repaired curb flashing corner.

Tree limbs overhanging the roof surface.

Tree limbs overhanging the roof surface.



Open mortar joints.

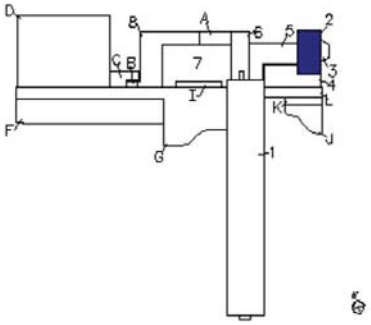


Open mortar joints.

Missing fall protection.

GENERAL INFORMATION

Roof Name	Roof 02
Service Activity Type	TremCare Gold
Service Activity Date	Apr 16 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	1,500 sq. ft.
# of Stories	1
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Gutters
Slope	1/2 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Good Condition	
	Gutter	Good Condition	
Perimeter Wall and Flashing Type	Composite Ply	Good Condition	
	Metal	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
TremCare	Reinforced previous repairs.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2014		Recommend resloping the gutter so it drains.
Repairs Required, Minor	2014		Recommend installing scuppers. in gravel stop to alleviate ponding water on gutter edge.
Repairs Required, Minor	2014		Recommend installing one (1) ply of comp ply on metal edge.

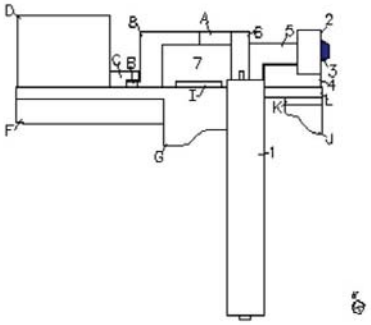
Overview.

Overview.

Previous repair.

Reinforced previous repair.

GENERAL INFORMATION



Roof Name	Roof 03
Service Activity Type	TremCare Gold
Service Activity Date	May 5 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	186 sq. ft.
# of Stories	1
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Gutters
Slope	1/8 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Fair Condition	
	Gutter	Fair Condition	
	Non-Parapet Wall	Fair Condition	
Wall Type	Brick Wall	Fair Condition	
Perimeter Wall and Flashing Type	Composite Ply	Fair Condition	
	Metal	Fair Condition	
Counterflashing Type	Through Wall	Fair Condition	
Counterflashing Material Type	Copper	Fair Condition	

MAINTENANCE SUMMARY

Work Performed	
TremCare	No maintenance required at this time.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

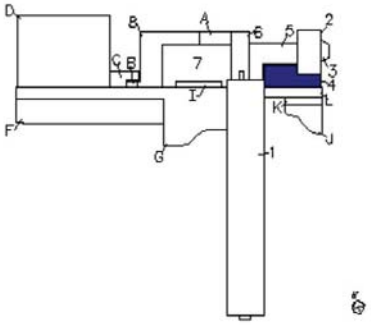
Task	Year	Project $	Task Description
Repairs Required, Minor	2014		Recommend installing scuppers in gravel stops to alleviate ponding warter.

Overview.

Overview.

GENERAL INFORMATION

Roof Name	Roof 04
Service Activity Type	TremCare Gold
Service Activity Date	May 5 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	1,537 sq. ft.
# of Stories	1
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/8 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Expansion Joint	Fair Condition	
	Gravel Stop	Fair Condition	
	Non-Parapet Wall	Fair Condition	
Wall Type	Brick Wall	Fair Condition	
	Metal Clad Wall	Fair Condition	
	Window Wall	Fair Condition	
Perimeter Wall and Flashing Type	Metal	Fair Condition	
	TRA Single Ply	Fair Condition	
Counterflashing Type	Face Mount	Fair Condition	
	Through Wall	Fair Condition	
Counterflashing Material Type	Aluminum	Fair Condition	
	Lead Coated Copper	Fair Condition	
Projection Flashings Type	Lead	Fair Condition	
	TRA Single Ply	Fair Condition	

PROJECTION AND EQUIPMENT

	Type	Require Attention
	Drain(s)	0
	Soil Stack(s)	0
	Ventilator(s) (Curb)	0

MAINTENANCE SUMMARY

Work Performed	
TremCare	Removed debris from the roof. Repaired open flashing corner. Sealed open counterflashing.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Recommendation	2014		Recommend sealing the open window sills and counterflashing.
Repairs Required, Minor	2014		Recommend replacing the damaged ventilator hood.
Repairs Required, Minor	2014		Recommend coating the weathered wall and curb flashings.

Overview.

Overview.

Debris.

Removed debris.

Open flashing corner.

Repaired flashing corner.

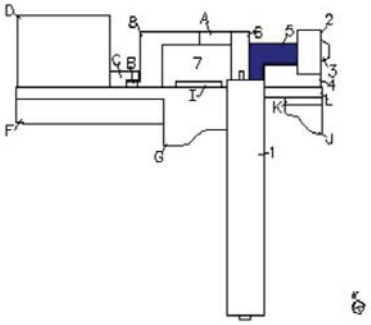
Open counterflashing.

Sealed counterflashing.

Open window sill.

GENERAL INFORMATION

Roof Name	Roof 05
Service Activity Type	TremCare Gold
Service Activity Date	May 5 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	1,718 sq. ft.
# of Stories	1
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/8 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Expansion Joint	Fair Condition	
	Gravel Stop	Fair Condition	
	Non-Parapet Wall	Fair Condition	
Wall Type	Brick Wall	Fair Condition	
	Window Wall	Fair Condition	
Perimeter Wall and Flashing Type	Composite Ply	Fair Condition	
	Metal	Fair Condition	
	TRA Single Ply	Weathered	Minor
Counterflashing Type	Through Wall	Fair Condition	
Counterflashing Material Type	Copper	Fair Condition	
Projection Flashings Type	Lead Coated Copper	Fair Condition	
	Metal	Fair Condition	

PROJECTION AND EQUIPMENT

	Type	Require Attention
	Drain(s)	0
	Hot Pipe(s)	0
	Pitch Pocket(s)	0
	Soil Stack(s)	0
	Walkpad(s)	0

MAINTENANCE SUMMARY

Work Performed	
TremCare	Repaired open flashing corner.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Recommendation	2014		Recommend removing the obsolete pitch pocket and conduit pipe from the roof.
Repairs Required, Minor	2014		Recommend sealing the open window sills.
Repairs Required, Minor	2014		Recommend repairing the crack in the brick wall.
Repairs Required, Minor	2014		Recommend coating the weathered wall flashings.

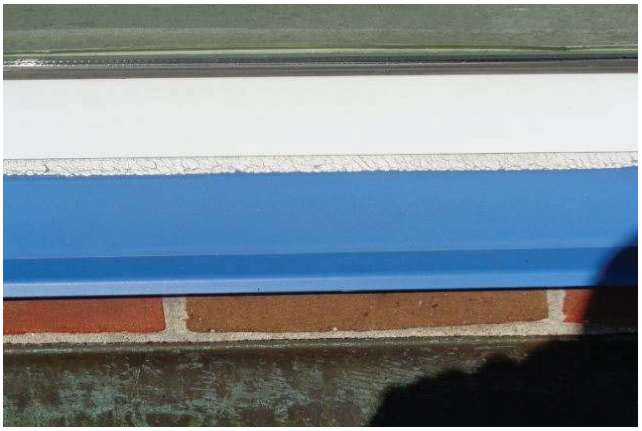
Overview.

Overview.

Open flashing corner.

Repaired flashing corner.

Obsolete pitch pocket & conduit.

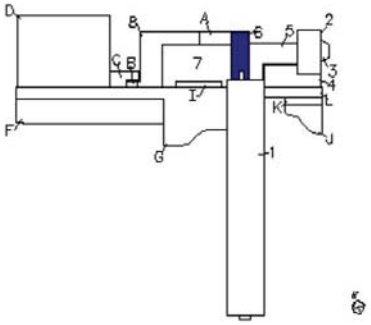


Open window sill.

Open mortar joint.

GENERAL INFORMATION

Roof Name	Roof 06
Service Activity Type	TremCare Gold
Service Activity Date	May 5 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	1,193 sq. ft.
# of Stories	1
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/8 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Fair Condition	
	Non-Parapet Wall	Fair Condition	
Wall Type	Brick Wall	Cracked	Moderate
		Fair Condition	
		Open Joints	Moderate
Perimeter Wall and Flashing Type	Composite Ply	Fair Condition	
	Metal	Fair Condition	
	TRA Single Ply	Weathered	Minor
Counterflashing Type	Through Wall	Fair Condition	
Counterflashing Material Type	Copper	Fair Condition	
Projection Flashings Type	Lead Coated Copper	Fair Condition	
	TRA Single Ply	Fair Condition	

PROJECTION AND EQUIPMENT

	Type	Require Attention
	Drain(s)	0
	Soil Stack(s)	0
	Ventilator(s) (Curb)	0
	Walkpad(s)	0

MAINTENANCE SUMMARY

Work Performed	
TremCare	Repaired open curb flashing corners. Repaired open flashing corners.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2014		Recommend coating the wall and curb flashings.
Repairs Required, Minor	2014		Recommend having a masonry contractor tuckpoint the brick walls.

Overview.

Overview.

Open curb flashing corner.

Repaired curb flashing corner.

Open flashing corner.

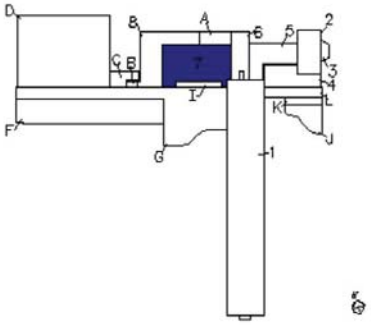
Repaired flashing corner.

Open mortar joints.

Open mortar joints.

GENERAL INFORMATION

Roof Name	Roof 07
Service Activity Type	TremCare Gold
Service Activity Date	Apr 16 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	3,782 sq. ft.
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/8 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Expansion Joint	Fair Condition	
	Gravel Stop	Fair Condition	
	Non-Parapet Wall	Fair Condition	
Wall Type	Brick Wall	Fair Condition	
	Window Wall	Good Condition	
Perimeter Wall and Flashing Type	Composite Ply	Fair Condition	
	Metal	Fair Condition	
	TRA Single Ply	Weathered	Minor
Counterflashing Type	Face Mount	Fair Condition	
	Through Wall	Fair Condition	
Counterflashing Material Type	Aluminum	Fair Condition	
	Copper	Fair Condition	
Projection Flashings Type	TRA Single Ply	Weathered	Minor

PROJECTION AND EQUIPMENT

	Type	Require Attention
	Conduit/Pipe(s) (No PP)	0
	Fire Hatch(es)	0
	Ventilator(s) (Curb)	0
	Walkpad(s)	0

MAINTENANCE SUMMARY

Work Performed	
TremCare	Removed debris from the roof. Repaired open curb flashing corners. Sealed open counterflashing. Repaired open perimeter flashing.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2011		Recommend reinstalling the expansion joint flashing.
Repairs Required, Minor	2014		Recommend coating wall and curb flashing with a reflective coating.
Repairs Required, Minor	2014		Recommend sealing the open window sill.

Overview.

Overview.

Debris.

Removed debris.

Debris.

Removed debris.

Open perimeter flashing.

Repaired perimeter flashing.

Open curb flashing corner.

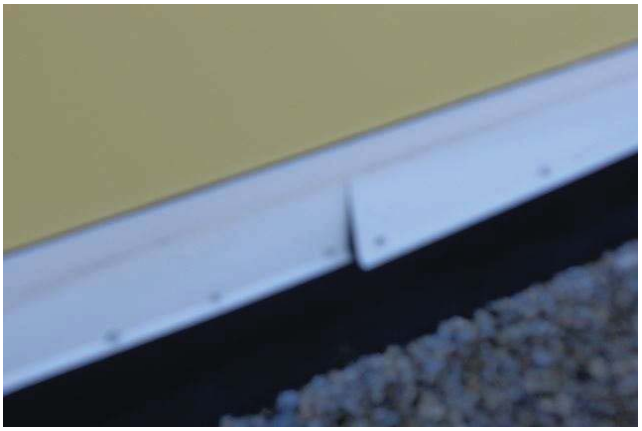
Repaired curb flashing corner.

Open curb flashing corner.

Repaired curb flashing corner.

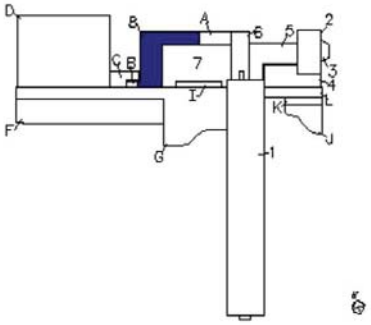
Open counterflashing.

Sealed counterflashing.



Open counterflashing.

GENERAL INFORMATION



Roof Name	Roof 08
Service Activity Type	TremCare Gold
Service Activity Date	May 5 2014
Job Number	155800
Information Source	Specification
Year of Installation	1999
Warranty	Issued By: Tremco Expiration Date: Oct 21, 2019 Type: 20 Year QA Plus
Roof Leaks	No
Leak Sensitivity	Medium
Roof Size	2,366 sq. ft.
# of Stories	1
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Technician	Ernie Rezendes

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Cold Adhered, Tapered
Deck Type	Concrete

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/8 inch(es) per foot

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Expansion Joint	Fair Condition	
	Gravel Stop	Fair Condition	
	Non-Parapet Wall	Fair Condition	
	Parapet Wall	Fair Condition	
Wall Type	Brick Wall	Fair Condition	
	Metal Clad Wall	Fair Condition	
Coping Type	Metal Coping	Fair Condition	
Perimeter Wall and Flashing Type	Metal	Fair Condition	
	TRA Single Ply	Weathered	Minor
Counterflashing Type	Face Mount	Fair Condition	
	Through Wall	Fair Condition	
Counterflashing Material Type	Aluminum	Fair Condition	
	Copper	Fair Condition	
Projection Flashings Type	Lead Coated Copper	Fair Condition	
	Metal	Fair Condition	
	TRA Single Ply	Weathered	Minor

PROJECTION AND EQUIPMENT

	Type	Require Attention
	A/C Unit(s)	0
	Drain(s)	0
	Hatch Cover(s)	0
	Pitch Pocket(s)	0
	Sleeper(s) (Exposed)	0
	Soil Stack(s)	0
	Ventilator(s) (Curb)	0
	Walkpad(s)	0

MAINTENANCE SUMMARY

Work Performed	
TremCare	Repaired open flashing corners.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)			
Task	Year	Project $	Task Description
Repairs Required, Minor	2014		Recommend one hundred thirty square feet (130 sq. ft.) of weathered wall flashing.

Overview.

Overview.

Debris.

Removed debris.

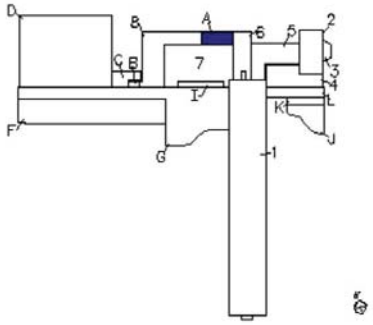
Open flashing corner.

Repaired flashing corner.

Open flashing corner.

Repaired flashing corner.

GENERAL INFORMATION



Roof Name	Roof A
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	775 sq. ft.
# of Stories	2
Is Ladder Required?	Yes
Overall Roof Condition	Repairs Required, Minor
Inspection Comments	Roof is in good condition. No leaks were reported during time of inspection. This roof system collects an extensive amount of debris. A bi-annual cleanup is recommended to keep the drains clear of debris.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered 2-1/2" Polyisocyanurate, Cold Adhered
Base Sheet	1 ply Composite Ply, Nailed
Deck Type	Wood

DRAINAGE AND SLOPE

Drainage	Internal Drains, Overflow Scuppers
Slope	1/2 inch(es) per foot, Saddles/Crickets, Variable Slope

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Expansion Joint	Good Condition	
	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Wall Type	Brick Wall	Good Condition	
	Window Wall	Good Condition	
Coping Type	Metal Coping	Good Condition	
Perimeter Wall and Flashing Type	TRA Single Ply	Good Condition	
Counterflashing Type	Reglet Mount	Good Condition	
Counterflashing Material Type	Copper	Good Condition	
Projection Flashings Type	Lead Coated Copper	Good Condition	
	Metal	Good Condition	
	TRA Single Ply	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof and drain.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Preventive Maintenance	2018		Recommend customer perform maintenance to drainage areas to keep proper drainage of the roof.
Repairs Required, Minor	2018		Recommend coating wall and curb flashings with a reflective coating.
Repairs Required, Minor	2018		Recommend coating rusted vent curb.
Repairs Required, Minor	2018		Recommend installing proper storm collars on 2 process pipes.

Overview.

Overview.

Debris in drain.

Removed debris.

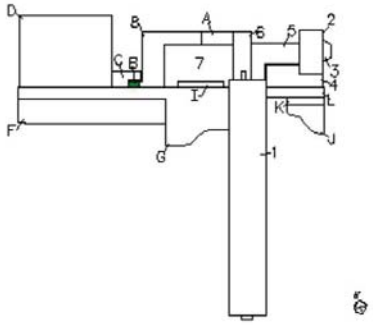
Debris on roof.

Removed debris.

Debris on roof.

Removed debris.

GENERAL INFORMATION



Roof Name	Roof B
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	102 sq. ft.
Is Ladder Required?	No
Overall Roof Condition	Good Condition
Inspection Comments	There is no safe means of accessing this roof.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered 2-1/2" Polyisocyanurate, Cold Adhered
Base Sheet	1 ply Composite Ply, Nailed
Deck Type	Wood

DRAINAGE AND SLOPE

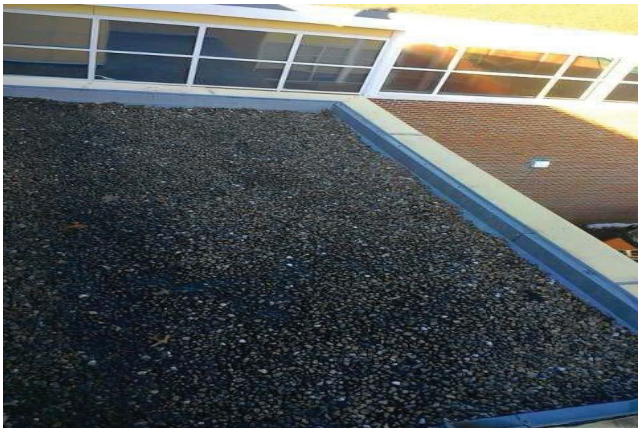
Drainage	Internal Drains, Overflow Scuppers
Slope	1/2 inch(es) per foot, Saddles/Crickets, Variable Slope

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Non-Parapet Wall	Good Condition	
	Raised Edge	Good Condition	
Wall Type	Window Wall	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Face Mount	Good Condition	
Counterflashing Material Type	Galvanized	Good Condition	

MAINTENANCE SUMMARY

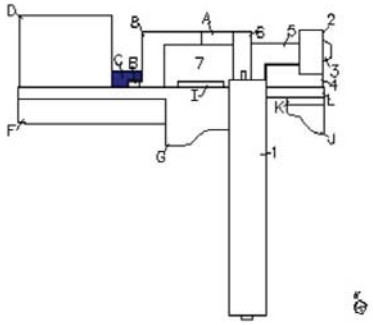
Work Performed	
Preventive Maintenance	Completed inspection checking all details and membranes.



Overview.

Overview.

GENERAL INFORMATION



Roof Name	Roof C
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	676 sq. ft.
# of Stories	1
Is Ladder Required?	Yes
Overall Roof Condition	Repairs Required, Minor
Inspection Comments	Roof is in good condition. No leaks were reported during time of inspection.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered 2" Polyisocyanurate, Mechanically Attached
Deck Type	Metal

DRAINAGE AND SLOPE

Drainage	Internal Drains, Overflow Scuppers, Over Edge
Slope	1/4 inch(es) per foot, Saddles/Crickets

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Wall Type	Brick Wall	Good Condition	
	Metal Clad Wall	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Through Wall	Good Condition	
Counterflashing Material Type	Copper - Lead Coated	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Recommendation	2018		Recommend installing wall mounted ladder to acess the roof.
Repairs Required, Minor	2018		Recommend coating the wall flashing with a reflective coating.

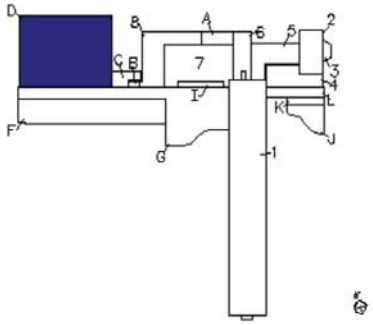
Overview.

Overview.

Debris on roof.

Removed debris.

GENERAL INFORMATION



Roof Name	Roof D
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	8,823 sq. ft.
# of Stories	2
Is Ladder Required?	Yes
Overall Roof Condition	Repairs Required, Minor
Inspection Comments	Roof is in good condition. No leaks were reported during time of inspection.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered Polyisocyanurate, Mechanically Attached, Tapered
Deck Type	Metal

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/2 inch(es) per foot, Saddles/Crickets, Variable Slope

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Wall Type	Window Wall	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Face Mount	Good Condition	
Counterflashing Material Type	Aluminum	Good Condition	
	Galvanized	Good Condition	
Projection Flashings Type	TRA Single Ply	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Removed debris from the roof and drains. Repaired open curb flashing corners.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2018		Recommend coating the wall and curb flashings.

Overview.

Overview.

Overview.

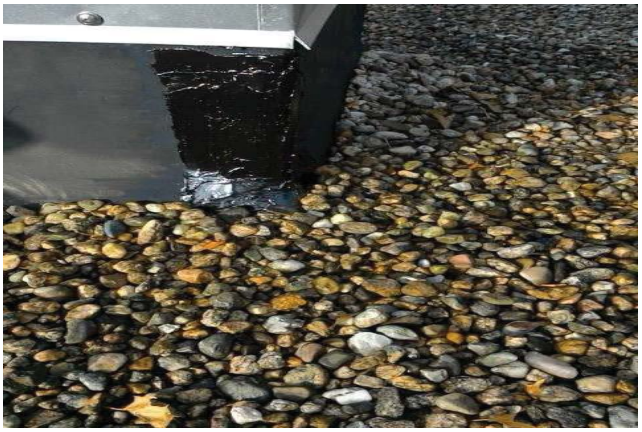
Debris in drain.

Removed debris from drain.

Debris on roof.

Removed debris from roof.

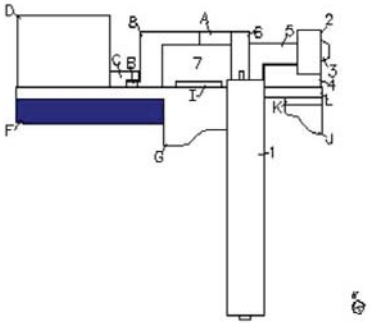
Exposed mesh at curb corner.



Coated exposed mesh.

GENERAL INFORMATION

Roof Name	Roof F
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	4,815 sq. ft.
# of Stories	1
Is Ladder Required?	Yes
Overall Roof Condition	Repairs Required, Minor
Technician	Jason Davis



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered 2-1/2" Polyisocyanurate, Cold Adhered
Base Sheet	1 ply Composite Ply, Nailed
Deck Type	Wood

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/2 inch(es) per foot, Saddles/Crickets, Variable Slope

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Expansion Joint	Good Condition	
	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Wall Type	Metal Clad Wall	Good Condition	
	Window Wall	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Face Mount	Good Condition	
Counterflashing Material Type	Galvanized	Good Condition	
Projection Flashings Type	Lead Coated Copper	Good Condition	
	TRA Single Ply	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Removed debris from drain. Repaired open curb flashing corners.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2018		Recommend repairing approximately 30 linear feet of lead flashing under the windows.
Repairs Required, Minor	2018		Recommend coating the weathered curb flashing.
Repairs Required, Minor	2018		Recommend replacing 4 deteriorating splash blocks.

Overview.

Overview.

Debris in drain.

Removed debris from drain.

Debris in drain.

Removed debris from drain.

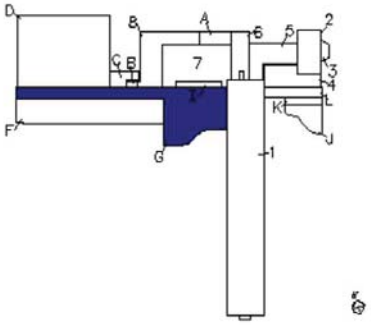
Exposed mesh.

Coated exposed mesh.

Lead base flashing pulling away from wall.

Deteriorating splash block.

GENERAL INFORMATION



Roof Name	Roof G
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	3,117 sq. ft.
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Inspection Comments	Roof is in good condition. No leaks reported during time of inspection. There are splits forming in the lead base flashing of the expansion joint. Future inspectors should monitor this condition.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered 2" Polyisocyanurate, Mechanically Attached
Deck Type	Metal

DRAINAGE AND SLOPE

Drainage	Internal Drains, Scuppers, Over Edge
Slope	1/4 inch(es) per foot, Saddles/Crickets

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Face Mount	Good Condition	
Counterflashing Material Type	Aluminum	Good Condition	
Projection Flashings Type	Lead	Good Condition	
	Metal	Good Condition	
	TRA Single Ply	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Removed debris from the roof and scuppers. Repaired open lead base flashing.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2018		Recommend coating approximately 55 linear feet of weathered curb flashing.

Overview.

Overview.

Overview.

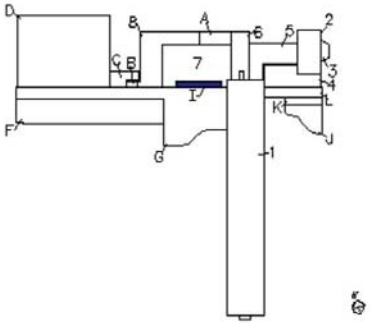
Debris in scupper.

Removed debris from scupper.

Split in lead base flashing.

Repaired split in lead base flashing.

GENERAL INFORMATION



Roof Name	Roof I
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	345 sq. ft.
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Inspection Comments	Roof is in good condition. There is no safe means of access to this roof system.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered 2-1/2" Polyisocyanurate, Cold Adhered
Base Sheet	1 ply Composite Ply, Nailed
Deck Type	Gypsum / Cementitious Wood Fiber

DRAINAGE AND SLOPE

Drainage	Internal Drains, Overflow Scuppers
Slope	1/2 inch(es) per foot, Saddles/Crickets, Variable Slope

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Expansion Joint	Good Condition	
	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Wall Type	Window Wall	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Face Mount	Good Condition	
Counterflashing Material Type	Galvanized	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Completed inspection checking all details and membranes.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

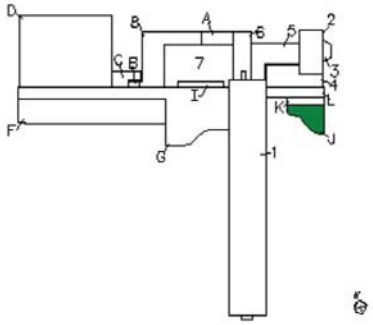
Task	Year	Project $	Task Description
Repairs Required, Minor	2018		Recommend coating approximately 45 linear feet of weathered wall flashing.

Overview.

Overview.

GENERAL INFORMATION

Roof Name	Roof J
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	976 sq. ft.
Is Ladder Required?	No
Overall Roof Condition	Good Condition
Inspection Comments	Roof is in good condition. No leaks were reported during time of inspection.
Technician	Jason Davis



ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered
	2" Polyisocyanurate, Mechanically Attached
Deck Type	Metal

DRAINAGE AND SLOPE

Drainage	Scuppers
Slope	1/4 inch(es) per foot, Saddles/Crickets

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof and scuppers.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Preventive Maintenance	2018		Recommend removing debris periodically.

Overview.

Overview.

Debris on roof.

Removed debris.

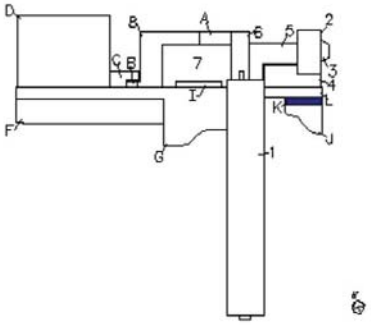
Debris in scupper.

Removed debris.

Debris in scupper.

Removed debris.

GENERAL INFORMATION



Roof Name	Roof K
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	383 sq. ft.
Is Ladder Required?	No
Overall Roof Condition	Repairs Required, Minor
Inspection Comments	Roof is n good condition. No leaks were reported during time of inspection. Approximately 50' of window sill needs to be resealed.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered
	2" Polyisocyanurate, Mechanically Attached
Deck Type	Metal

DRAINAGE AND SLOPE

Drainage	Internal Drains
Slope	1/4 inch(es) per foot, Saddles/Crickets

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Wall Type	Brick Wall	Good Condition	
	Window Wall	Caulking Problems	Less than ¼ of roof
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Face Mount	Good Condition	
	Through Wall	Good Condition	
Counterflashing Material Type	Galvanized	Good Condition	
	Lead Coated Copper	Good Condition	
Projection Flashings Type	Lead Coated Copper	Good Condition	
	TRA Single Ply	Good Condition	

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from roof and drain.

OUTSTANDING BUDGET

Work Beyond Scope of Maintenance Agreement (Customer Responsibility)

Task	Year	Project $	Task Description
Repairs Required, Minor	2018		Recommend coating the wall and curb flashing with a reflective type coating.
Repairs Required, Minor	2018		Recommend sealing approximately 50 linear feet of window sill.

Overview.

Overview.

Debris on roof.

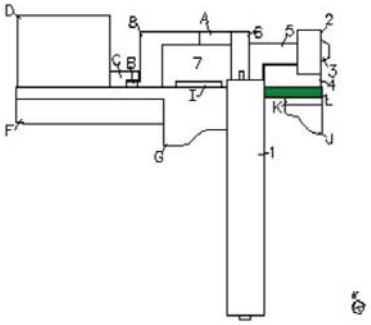
Removed debris.

Debris in drain.

Removed debris.

Overview of window sill in need of resealing.

GENERAL INFORMATION



Roof Name	Roof L
Service Activity Type	QA + Inspection
Service Activity Date	Jan 24 2018
Job Number	121953
Information Source	Specification
Year of Installation	2007
Warranty	Issued By: Tremco Expiration Date: Dec 12, 2027 Type: 20 Year QA Plus
Installing Contractor	RELIABLE ROOFING CO.
Roof Leaks	No
Leak Sensitivity	Low
Roof Size	807 sq. ft.
Is Ladder Required?	No
Overall Roof Condition	Good Condition
Inspection Comments	No leaks were reported during time of inspection.
Technician	Jason Davis

ROOF CONSTRUCTION

Surfacing	Aggregate
Roof Type/System	Asphalt (BUR), BURmastic 200
Ply Info	4 plys Composite Ply, Cold Adhered
Insulation	1/2" Fiberboard, Cold Adhered 2" Polyisocyanurate, Mechanically Attached
Deck Type	Metal

DRAINAGE AND SLOPE

Drainage	Scuppers
Slope	1/4 inch(es) per foot, Saddles/Crickets

PERIMETER, WALL AND COPING

	Type	Condition(s)	Magnitude
Perimeter Type	Gravel Stop	Good Condition	
	Non-Parapet Wall	Good Condition	
Wall Type	Window Wall	Good Condition	
Perimeter Wall and Flashing Type	Metal	Good Condition	
	TRA Single Ply	Good Condition	
Counterflashing Type	Face Mount	Weathered	Less than ¼ of roof
Counterflashing Material Type	Galvanized	Weathered	Less than ¼ of roof

MAINTENANCE SUMMARY

Work Performed	
Preventive Maintenance	Completed inspection checking all details and membranes. Removed debris from the scuppers.

Overview.

Overview.

Debris in scupper.

Removed debris.

Debris in scupper.

Removed debris.

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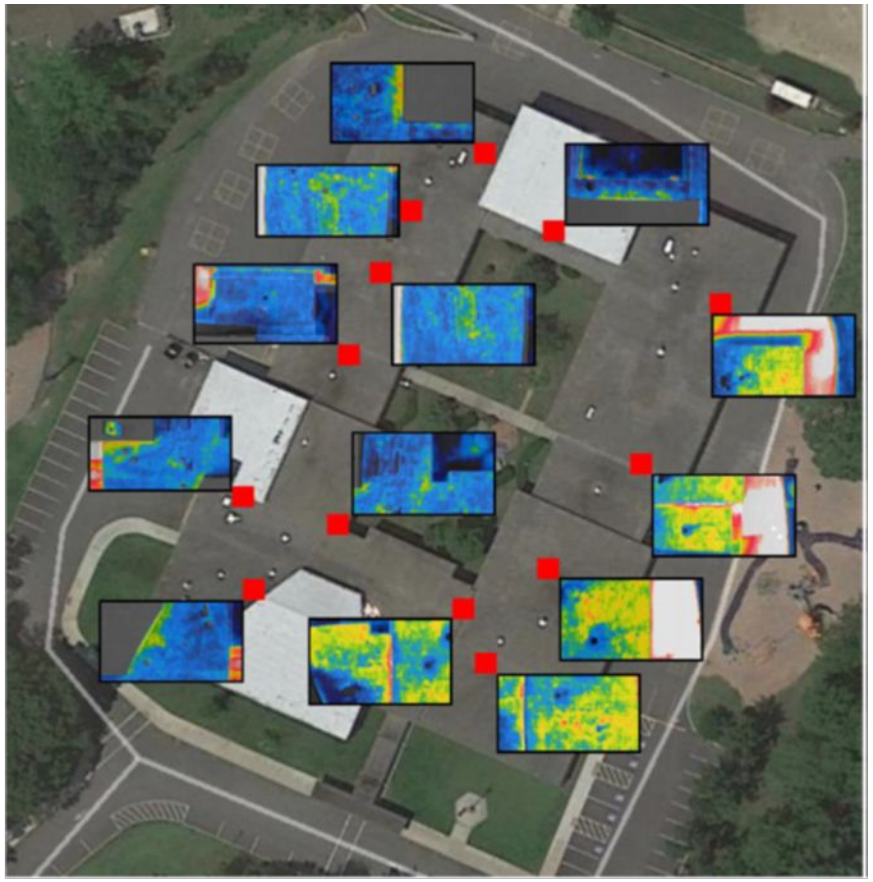
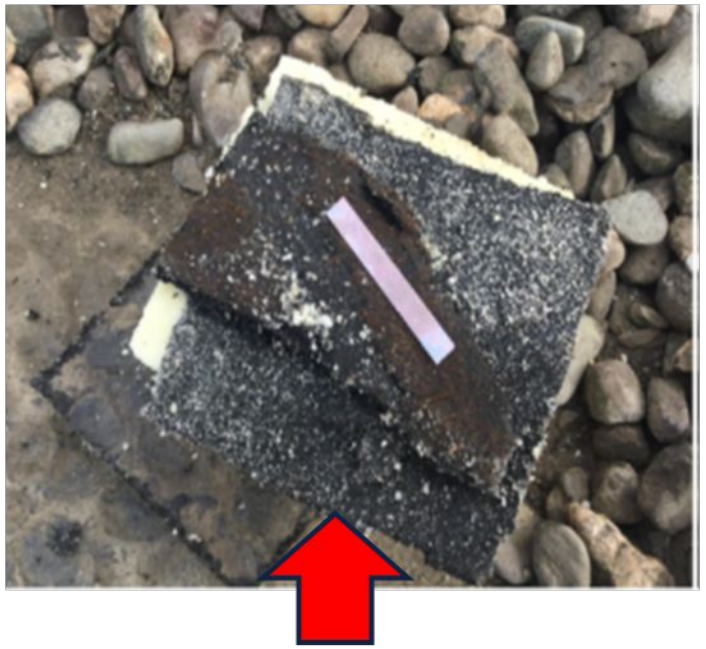
DRAFT CAPITAL BUDGET PROPOSAL

Roof Repairs/Replacement - $7,243,000

Dunning and McCarthy Elementary (SOI's Submitted to MSBA)



Infrared Scans Showing Moisture Infiltration Of Roof - Dunning



Test Pit At Roof Exposing Water Infiltration

Roofing System Degradation Resulting in Exposed Reinforcing Fabric

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 4

(1) **PROJECT NAME:** Roof Replacement Design & Construction Potter and Brophy Schools FY24-25

PROJECT STATUS: In Earlier CIP - Not in Edmunds

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

This request for capital budget funding is for the design of roof replacements at Potter Road and Barbieri Elementary Schools. These roofs are in poor condition and rapidly deteriorating. Additionally, the warranty for Brophy expired on September 6, 2022; and Potter Road is set to expire in August of 2023. Both of these warranties were extended for an additional 5 years through Tremco, our roof warranty contractor. Currently, both of these roofs are experiencing moisture infiltration and deterioration that is requiring full replacement in order to ensure the continued usage of the school. The Department has submitted a statement of interest to the MSBA for the accelerated repair program for the Potter Road roof replacement. However, as part of the MSBA program, the City is required to allocate full project costs within a given timeline, which this funding request would accomplish. Funding for construc-tion of these roofs will be requested through our FY2025 capital budget proposal.

Brophy Elementary School Replacement Design $347,000

Potter Road Elementary School Replacement Design $508,000

Total Requested $855,000

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

This is request is different from last years as we are now requesting design funding in one fiscal year and construction in the next fiscal year.

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design	855,000					
d.	Construction		8,550,000				
e.	Equipment/Vehicles						

f.	Contingency						
g.	Other						
	TOTAL	855,000	8,550,000	-	-	-	-

(5)	**PRIORITY:**	
a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) EFFECTS ON ANNUAL OPERATING BUDGET:

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating			(20,000)	(20,000)	(20,000)	(20,000)	(100,000)

(7) PROPOSED FUNDING SOURCE(S):

1) **Bond**
2) **MSBA**
3)

(10) PROJECT OR EQUIPMENT LOCATION:

Potter Road and Brophy Elementary Schools

(11) ASSET TYPE:

Building

(7a) POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)

We have applied to the MSBA accelerated repair program for Potter Road and hopeful our application is accepted into the program, which would offset total costs

(8) PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)

Thomas Begin, tbegin@framingham.k12.ma.us

(9) FINANCE DEPARTMENT NOTES:

4 . Roof Repairs/Replacement Design - Potter Road and Barbieri Schools

FY24:

This request for capital budget funding is for the design of roof replacements at Potter Road and Barbieri Elementary Schools. These roofs are in poor condition and rapidly deteriorating. Additionally, the warranty for Brophy expired on September 6, 2022; and Potter Road is set to expire in August of 2023. Both of these warranties were extended for an additional 5 years through Tremco, our roof warranty contractor. Currently, both of these roofs are experiencing moisture infiltration and deterioration that is requiring full replacement in order to ensure the continued usage of the school. The Department has submitted a statement of interest to the MSBA for the accelerated repair program for the Potter Road roof replacement. However, as part of the MSBA program, the City is required to allocate full project costs within a given timeline, which this funding request would accomplish. Funding for construction of these roofs will be requested through our FY2025 capital budget proposal.

• Brophy Elementary School Replacement Design	$347,000
• Potter Road Elementary School Replacement Design	$508,000
Total Requested	**$855,000**

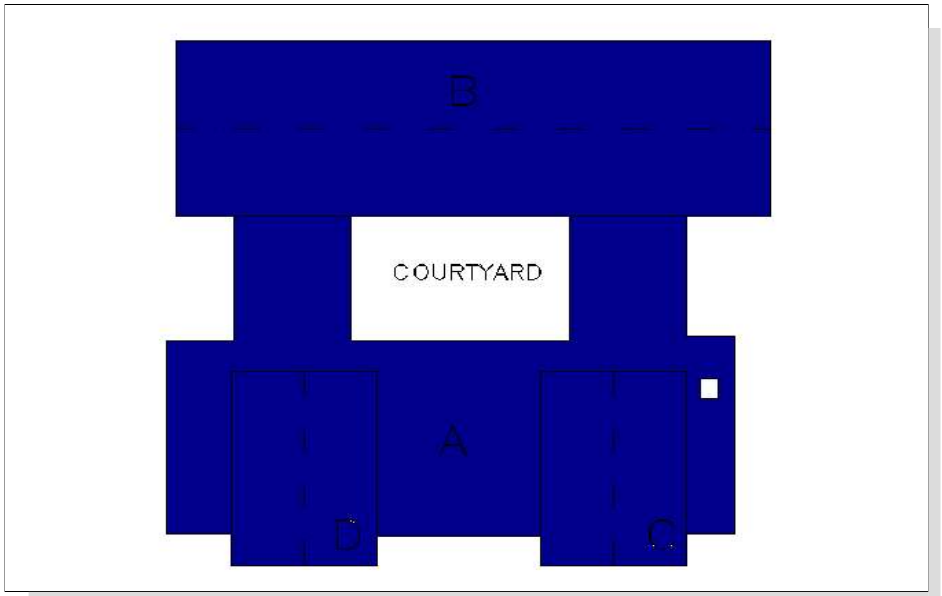
FRAMINGHAM PUBLIC SCHOOLS - ROOF REPAIRS AND REPLACEMENTS
FISCAL YEAR 2022-2023 SNAPSHOT

Scope Item	Bldg. Name	Construction	(SF)	Installation	Warranty	Consultant Total (Solar, Structural, and Enclosure)	Construction Total (Material, Labor, Bonds, Insurance, Profit, etc.)	FY23 Replacement Cost
		Date		Date	Expiration			
1	Miriam McCarthy Elementary School Phase I	1952	32,500	1999	Oct 22 2014	**$278,125**	**$2,031,250**	**$2,420,225**
2	Charlotte Dunning Elementary School	1965	65,841	1996	Aug 31 2023	**$486,506**	**$4,115,063**	**$4,822,444**
3	Potter Road Elementary School	1955	50,840	1996	Aug 31 2023	**$392,750**	**$3,177,500**	**$3,741,622**
4	Brophy Elementary School	1968	63,000	2002	Sep 6 2022	**$468,750**	**$3,937,500**	**$4,617,750**
5	Barbieri Elementary School	1974	69,383	1998	Aug 31 2023	**$508,644**	**$4,336,438**	**$5,077,645**
6	King Elementary School	1957	45,803	1998	Aug 31 2023	**$361,269**	**$2,862,688**	**$3,378,706**
7	Hemenway Elementary	1961	65,126	1996	Aug 31 2023	**$482,038**	**$4,070,375**	**$4,770,928**
8	Cameron Middle	2001	70,000	2001	Aug 31 2023	**$512,500**	**$4,375,000**	**$5,122,100**
9	Harmony Grove Elementary School	1998	58,000	1998	Aug 31 2023	**$437,500**	**$3,625,000**	**$4,257,500**
10	Juniper Hill - BLOCKS	1960	45,600	2001	Sep 12 2021	**$360,000**	**$2,850,000**	**$3,364,080**
11	Stapleton Elementary School	1922, 1956, 1976	30,200	2007	Dec 12 2027	**$263,750**	**$1,887,500**	**$2,254,510**

12	Miriam McCarthy Elementary School Phase II	1952	24,300	2007	Dec 12 2027	**$226,875**	**$1,518,750**	**$1,829,415**
13	Walsh Middle School	1969	119,800	2005	May 16 2025	**$823,750**	**$7,487,500**	**$8,710,190**
14	Framingham High	1963, 2006	215,000	2006	May 24 2026	**$1,418,750**	**$13,437,500**	**$15,569,350**
15	New Fuller Middle School	2021	137,000	2021	Sept 1 2041	**TBD**	**TBD**	**TBD**
16	Farley Middle School : (Scheduled Replacement, Summer of 2023)	TBD	54,200	TBD	TBD	**TBD**	**TBD**	**TBD**

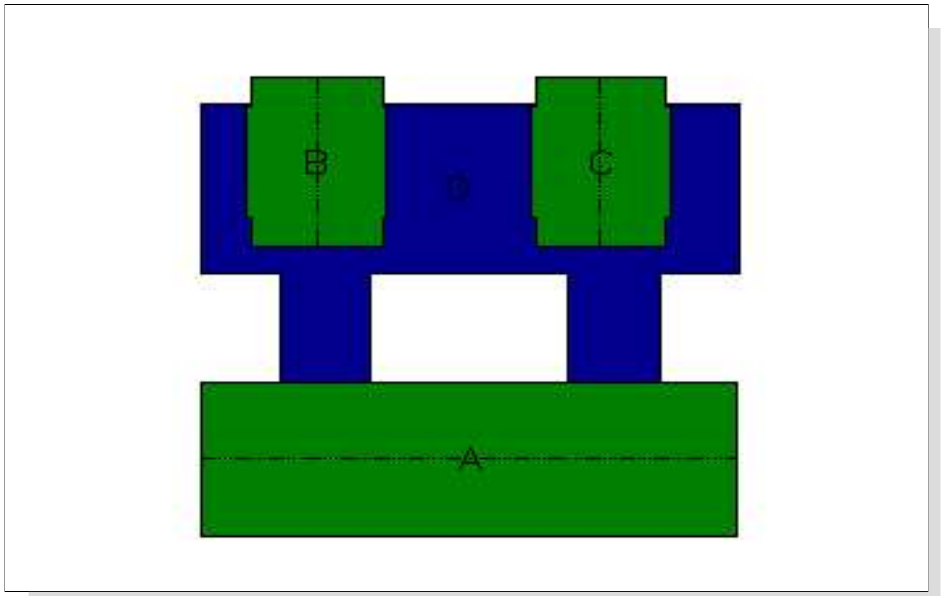
Potter Road School

492 Potter Road
Franingham, MA 01701
4 roof(s) - 49,906 sq. ft.



Brophy Elementary School

575 Pleasant Street
Framingham, MA 01701
4 roof(s) - 50,840 sq. ft.



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DRAFT CAPITAL BUDGET PROPOSAL

Roof Repairs/Replacement Design - $855,000

Design of Repairs/Replacements to Potter Road and Brophy School Roofs

Potter Road Roof

Deterioration of Roof Membranes at Potter Road and Brophy Leading to Failing Systems and Water Infiltration, Further Damaging Building Infrastructure

Brophy Roof

CITY OF FRAMINGHAM
CAPITAL PROJECT/EQUIPMENT REQUEST - FY2024-2033 CIP

DEPARTMENT: Schools **DEPARTMENT PRIORITY:** 10

(1) **PROJECT NAME:** Security Enhancement Throughout the District FY24
PROJECT STATUS: In Earlier CIP - Not in Edmunds

(2) **PROJECT DESCRIPTION AND JUSTIFICATION:**

The School Department has implemented increased security measures throughout the District. This year, we are proposing improvements and security installations focused on continuing the District's efforts in enhancing safety and security. Those enhancements include purchasing and installation of cameras throughout district schools; install new and upgrade current security systems; install new and upgrade current communication equipment and systems; and upgrade the current security system at Farley and integrate the building and system into the district's system.Cost per item: District Wide Camera Purchases and Install: $100,000; Upgrade / Additional Security Systems: $50,000; Communication Upgrade/Install and equipment: $60,000; Farley Upgrade and Integration: $140,000; Contingency: $50,00 Total Requested $400,000

PROJECT ADDITIONS/CHANGES JUSTIFICATION:

This was previously requested in prior fiscal years and is carried annually

(3) **PURPOSE OF PROJECT:**

X	Replace existing infrastructure
	Replace existing capital asset
	Replace existing vehicle
	Replace equipment
	New infrastructure
	New capital asset
	New vehicle
	New equipment
	Strategic/Comprehensive/Master plan

(4) **BUDGET REQUEST BY YEAR:**

		FY 24	FY 25	FY 26	FY 27	FY 28	FY 29-33
a.	Land Acquisition						
b.	Planning / Feasibility						
c.	Design						
d.	Construction						
e.	Equipment/Vehicles						
f.	Contingency						
g.	Other	400,000	400,000	400,000	400,000	400,000	400,000
	TOTAL	400,000	400,000	400,000	400,000	400,000	400,000

(5) **PRIORITY:**

a.	**health and safety**	safety concern, hazardous condition, agency compliance, non-functional, etc
b.	**level service maintenance**	maintains City desired level of service
c.	**economic development**	adds to the City's economic vibrancy
d.	**service improvement**	new or improved service to meet demand

(6) **EFFECTS ON ANNUAL OPERATING BUDGET:**

	FY 24	FY 25	FY 26	FY 27	FY 28	FY29	YEARS 29-33
Personnel							
Operating							

(7) **PROPOSED FUNDING SOURCE(S):**
1) **Bond**

(10) **PROJECT OR EQUIPMENT LOCATION:**
Districtwide

2)		**(11) ASSET TYPE:**
3)		**Building Infrastructure**

(7a) POTENTIAL GRANT FUNDING SOURCE IF APPLICABLE: (List source and matching requirements)

Safety and Security Federal Grant

(8) PROJECT LEAD NAME & CONTACT INFO: (ADDITIONAL PROJECT INFO AS NEEDED)

Scott Penrod, epenrod@framingham.k12.ma.us

(9) FINANCE DEPARTMENT NOTES:

10. School Department Security Enhancement throughout the District

FY24:

The School Department has implemented increased security measures throughout the District. This year, we are proposing improvements and security installations focused on continuing the District's efforts in enhancing safety and security. Those enhancements include purchasing and installation of cameras throughout district schools; install new and upgrade current security systems; install new and upgrade current communication equipment and systems; and upgrade the current security system at Farley and integrate the building and system into the district's system.

Cost per item:

- District Wide Camera Purchases and Install: $100,000
- Upgrade / Additional Security Systems: $50,000
- Communication Upgrade/Install and equipment: $60,000
- Farley Upgrade and Integration: $140,000
- Contingency: $50,000

Total Requested **$400,000**

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DRAFT CAPITAL BUDGET PROPOSAL

Security Upgrades/Improvements - $400,000
Districtwide Improvements

- Installation of Classroom Security Devices
- Districtwide Camera Purchases and Install
- Upgrade and Install Additional Security Systems Districtwide
- Communication System Upgrade and Install New Equipment
- Farley Security System Upgrade and Integration Into District System