Village of Whitefish Bay Public Works Department
155 W. Fairmount Ave • Whitefish Bay, Wisconsin 53217 • (414) 962-6690 • Fax (414) 967-1391

Mathew Collins, Director of Public Works

May 19, 2025

Memo to: President Kevin Buckley and the Village Board of Trustees
From: Matthew Collins, Director of Public Works
Re: Visual Roof Survey Report

Village staff hired Industrial Roofing Services, Inc. (IRS) to perform a Visual Roof Survey for seven facilities owned and maintained by the Village. This survey and the accompanying summary provides the Village with the information necessary to plan required roofing work during the next five (5) years, creating a roof management program to facilitate proactive asset management practices that result in reduced life-cycle costs of new and existing roof systems.

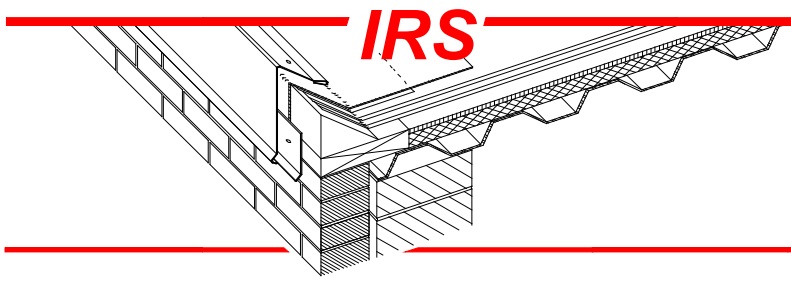
IRS has completed their on-site survey and roof assessment to provide the Village with the following:

- Roof Plan Drawing
- Roof Conditions and Photographs
- Recommendations and Estimated Costs
- Annual Budget Summary

Based on the evaluation of the roof conditions, IRS has created a proposed maintenance and capital improvement project plan for the Village Board to consider as part of the upcoming Capital Improvement Plan meetings.

On 5/12/25, the Public Works Committee voted to recommend to accept the Visual Roof Survey Report to the Village Board.

Public Works Committee recommends to the Village Board:
To accept the Visual Roof Survey report as shown within the attached exhibits.



Industrial **R**oofing **S**ervices, Inc.
13000 West Silver Spring Drive
Butler, Wisconsin 53007
Phone: (262) 432-0500
Fax: (262) 432-0504
www.irsroof.com

Proposal for

VISUAL ROOF SURVEY

Of

SIX (6) FACILITIES PER THE ATTACHED FACILITY LIST

Submitted by

MR. DAVE ANGOVE

Prepared for

Mr. Matthew Collins
Director, Department of Public Works
Village of Whitefish Bay
155 W. Fairmount Avenue
Whitefish Bay, Wi 53217

February 10, 2025

IRS
Industrial Roofing Services, Inc.
13000 West Silver Spring Drive
Butler, Wisconsin 53007
Phone: (262) 432-0500
Fax: (262) 432-0504
www.irsroof.com

February 10, 2025

Mr. Matthew Collins
Village of Whitefish Bay
155 W. Fairmount Avenue
Whitefish Bay, Wi 53217

SUBJECT: **Proposal to Complete a Visual Roof Survey for the Six (6) Facilities on the Attached List**

Dear Mr. Collins:

Industrial Roofing Services, Inc. is pleased to submit the following proposal to perform a Visual Roof Survey for the Six (6) sites on the attached facility list. This survey and the accompanying summary will provide you with the information necessary to plan required roofing work during the next five (5) years, creating a roof management program to facilitate proactive asset management practices that result in reduced life-cycle costs of new and existing roof systems.

The results of this survey will be available for your review through a secure client login via our Web Based Asset Management Program at www.irsroof.com. Secure, web based access to the information gathered during this survey along with our observations and recommendations provide easy access to all information necessary to effectively manage your roof assets.

IRS shall supply all services necessary to provide the following information:

Roof Plan Drawing: IRS will create a scaled, CAD-generated roof plan of your facility to identify individual roof areas and determine total square footage for the purpose of establishing budgets. All perimeters will be shown on the plan.

Roof Conditions and Photographs: IRS will examine each roof system's general appearance to analyze flashing conditions, membrane surface conditions, general drainage characteristics, excessive traffic patterns, etc., and to identify the presence of any contaminants and/or previous repairs. The adjoining building walls will also be examined for conditions that could affect the performance of the roof system. Conditions of each roof area will be confirmed and documented with photographs.

Recommendations and Estimated Costs: Based on the existing construction and conditions of each roof area, IRS will establish recommendations and estimated costs for all roofing work that may be required over the next five (5) years.

Annual Budget Summary: The recommendations and budgets will be compiled into a summary for any necessary maintenance and capital roofing expenditures over the next five (5) years.

FEES

Industrial Roofing Services, Inc. shall provide the above-described services for the lump sum fee of four thousand four hundred dollars ($4,400.00).

AUTHORIZATION

To acknowledge acceptance of this proposal, please return a signed copy of the Authorization page with any paperwork (i.e. a purchase order or signed contract) to our corporate headquarters:

Industrial Roofing Services, Inc.
13000 West Silver Spring Drive
Butler, WI 53007
Fax: (262) 432-0504
Office@irsroof.com

Upon receipt of a purchase order or signed contract we will enter the information in our system and schedule the work to be completed.

Should you have any questions regarding this proposal, please do not hesitate to call. We appreciate this opportunity and look forward to working with you on this project.

Sincerely yours,
INDUSTRIAL ROOFING SERVICES, INC.

Mr. Dave Angove

Mr. Dave Angove
Project Manager

Acknowledged by:

_____ **Date:**_____
Name Title

FACILITY LIST

Site Name	Site Address	Cost
DPW Facility	155 W. Fairmount Avenue. Whitefish Bay, WI 53217	$900.00
DPW Facility	5111 N. Lydell Avenue. Whitefish Bay, WI 53217	$900.00
Village Hall/Police Department	5300 N. Marlborough Drive. Whitefish Bay, WI 53217	$900.00
Fire Dept. Station 84	825 E Lexington Blvd. Whitefish Bay, WI 53217	$700.00
Klode Park Warming House	5960 N Lake Dr. Whitefish Bay, WI 53217	$500.00
Cahill Park Warming House	1001 E Fairmount Ave. Whitefish Bay, WI 53217	$500.00
	TOTAL	$4,400.00

VILLAGE OF WHITEFISH BAY

Roof Capital Budgets ($)

4/2/2025

Building Name	Year Surveyed	2025	2026	2027	2028	2029	2030
DPW - 155 W. Fairmount Avenue	April-25		$ -	$ -	$ -	$ -	$ -
DPW - 5111N. Lyndell Avenue	April-25		$ 230,000.00	$ -	$ -	$ -	$ -
Fire Dept. - Station 84	April-25		$ -	$ -	$ 175,000.00	$ -	$ -
Parks Dept. - Cahill Park Warming House	April-25		$ -	$ 30,000.00	$ -	$ -	$ -
Parks Dept. - Craig Counsel Park Building	April-25		$ -	$ -	$ -	$ 20,000.00	$ -
Parks Dept. - Klode Park Warming House	April-25		$ -	$ -	$ -	$ 20,000.00	$ -
Police Dept. - Village Hall	April-25		$ -	$ -	$ -	$ -	$ -
TOTAL ROOF CAPITAL		**$ -**	**$ 230,000.00**	**$ 30,000.00**	**$ 175,000.00**	**$ 40,000.00**	**$ -**

VILLAGE OF WHITEFISH BAY

Roof Maintenance Budgets ($)

4/2/2025

Building Name	Year Surveyed	2025	2026	2027	2028	2029	2030
DPW - 155 W. Fairmount Avenue	April-25		$ 31,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
DPW - 5111N. Lyndell Avenue	April-25		$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
Fire Dept. - Station 84	April-25		$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
Parks Dept. - Cahill Park Warming House	April-25		$ 1,000.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00
Parks Dept. - Craig Counsel Park Building	April-25		$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00
Parks Dept. - Klode Park Warming House	April-25		$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00
Police Dept. - Village Hall	April-25		$ 10,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
TOTAL ROOF MAINTENANCE		**$ -**	**$ 45,000.00**	**$ 5,500.00**	**$ 5,500.00**	**$ 5,500.00**	**$ 5,500.00**

IRS
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Fax: (262) 432-0504
www.irsroof.com

VILLAGE OF WHITEFISH BAY

VISUAL ROOF SURVEY

DPW Facility (Lydell)

5111 N. Lydell Avenue
Whitefish Bay, WI

Prepared for: Mr. Matthew Collins
Prepared by: Mr. Dave Angove

April 2, 2025

Table of Contents

Introduction

The purpose of the visual roof survey was to complete a visual assessment of the facility's roof systems and provide management with an opinion regarding their condition, immediate maintenance needs, annual proactive maintenance recommendations, and long-term capital requirements.

The facility consists of two (2) roof areas encompassing approximately 14,800 square feet of roof surface. (Note: there is a 3rd sloped roof area; however, this was not included in this survey, as this area is already scheduled for demolition in the near future) The ages of the roof systems are unknown, but they are not known to be covered under any active warranties.

On March 27, 2025, IRS completed the visual survey of the installed roof systems. The weather conditions during the survey were overcast skies and ambient temperature of 50° Fahrenheit. The survey was performed with the assistance of Mr. Pat McCarthy, Superintendent of Public Works, who indicated there has been ongoing leakage below Roof Area 2.

Roof Area 1

Construction
Steel roof deck
Rigid insulation board
EPDM single-ply roof membrane, fully-adhered

Roof Drainage

The roof system appears to be drained moderately well via a single roof drain. We noted evidence of ponding water around the drain, which is likely worsened by debris clogging the drain strainer.

Roof Membrane

The EPDM single-ply membrane remains in serviceable condition. No notable deficiencies were found within the field of the roof membrane.

Roof Perimeters

The roof system terminates at its perimeters via cap flashing and counter flashing, which remain in serviceable condition.

Roof Projections

The roof system is penetrated by pitch pockets, small pipes, soil stacks, and AC units on rails. The flashings associated with each of these projections remain in serviceable condition, with no notable deficiencies.

Roof Area 2

Construction

Steel roof deck
Rigid insulation board
Asphalt built-up roof membrane, with gravel surfacing

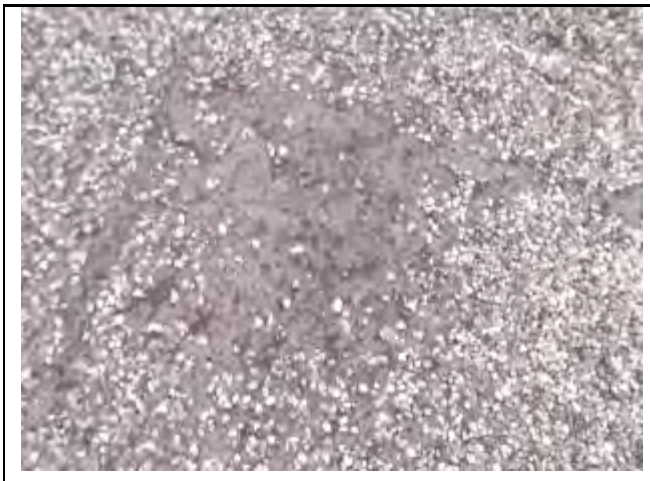
Roof Drainage

The roof system appears to be suitably drained via internal roof drains; however, we noted previous repairs around the roof drains.

Roof Membrane

The built-up roof membrane is in poor condition and is reportedly suffering from ongoing leakage. We believe it has reached the end of its useful service life. Noted deficiencies include bare felts, blistering, eroded flood coat, ridging, splitting, and wind-blown corners. There have been numerous repairs attempted and the roof system will likely continue to develop leaks until replacement is accomplished.

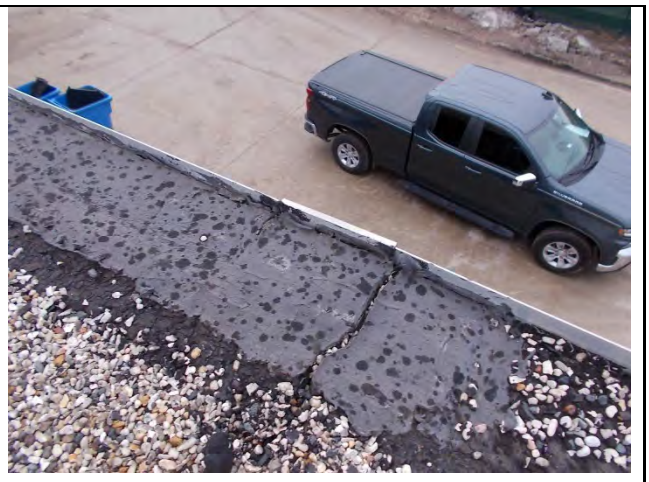
Roof Membrane (continued)






Roof Perimeters

The roof system terminates at its perimeters via counter flashing and metal edge which are in poor condition and require replacement. The flashings associated with these perimeters require replacement.



Roof Projections

The roof system is penetrated by pipe vents and ducts. The flashings associated with each of these projections require replacement.

Report Conclusions

The facility's existing roof systems have the following design service lives.

Roof System	Design Service Life	Current Age	Remaining Useful Service Life
EPDM Single-ply, Stone Ballasted (Roof Area 1)	20 years	11 years	6-9 years
Asphalt BUR, Gravel-Surfaced (Roof Area 2)	25 years	Unknown	0 years

EPDM Single-Ply
The EPDM single-ply roof system on Roof Area 1 remains in serviceable condition. It appears to be adequately drained and does not require any repairs at this time (besides debris removal from around the roof drain). Provided the roof system receives continued proactive annual maintenance, we believe it should be capable of performing properly for an additional 6-9 years, or more.

Asphalt BUR
The asphalt BUR system on Roof Area 2 is in poor condition and suffering from ongoing leakage. Based on the numerous deficiencies noted and reported leak history, we believe this roof system has reached the end of its useful service life and should be scheduled for replacement as soon as budget allows.

Recommendations

Ownership should begin to plan and budget for replacement of Roof Area 2 as soon as budget allows. In the meantime, complete only emergency repairs on an as needed basis to address any leaks that arise.

Safety
No safety concerns were noted during our survey.

Preventative Maintenance
Remove debris that has accumulated around the roof drains.

Remedial Maintenance
No remedial maintenance recommended.

The roof systems should be resurveyed once every two (2) years by a qualified person.

Additional Comments
During our survey, we noted deficiencies within adjacent masonry walls and a deteriorated/abandoned canopy. Ownership should consider removing the unused canopy and completing repairs to the masonry wall to prevent leakage into the adjacent roof system.

5 YEAR MAINTENANCE PROJECTIONS

Year	Roof Area	Required Maintenance	Estimated Cost
2026	All	Normal Maintenance	$1,000
2027	All	Normal Maintenance	$1,000
2028	All	Normal Maintenance	$1,000
2029	All	Normal Maintenance	$1,000
2030	All	Normal Maintenance	$1,000

5 YEAR CAPITAL PROJECTIONS

Year	Roof Area	Work Required	Estimated Cost
2026	2	Roof Replacement *(includes drain replacement, likely isolated rusted deck replacement, and removal of unused duct penetrations)*	$230,000
2027	All	No Capital	$0
2028	All	No Capital	$0
2029	All	No Capital	$0
2030	All	No Capital	$0

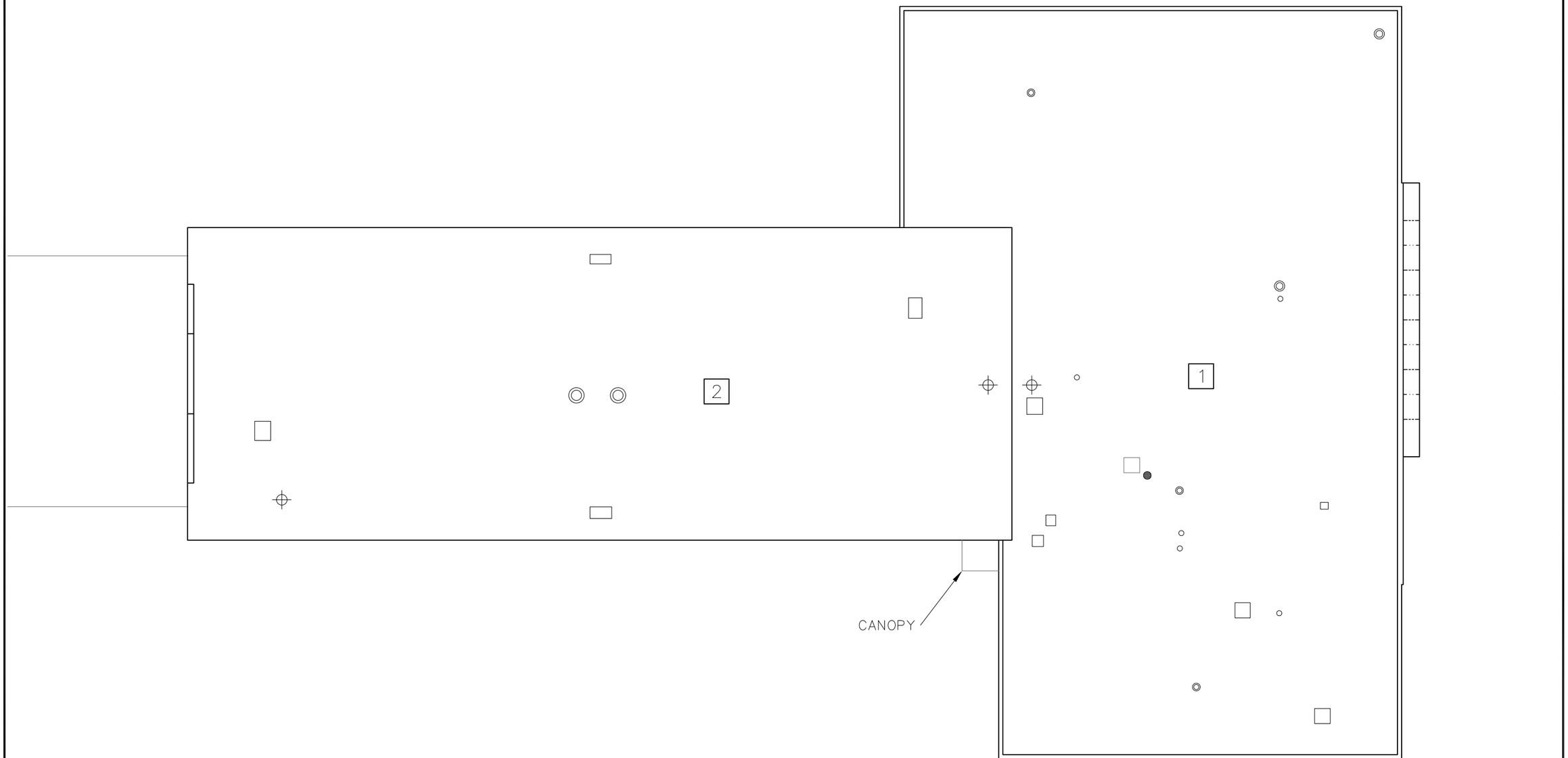
**Anticipated future replacement of Roof Area 1: Circa 2035*

APPENDICES

APPENDIX A: Roof Plan

APPENDIX A:

ROOF PLAN



ROOF SIZES		
ROOF AREA	SQ. FEET	PERIMETER
1	8,097	402
2	6,682	367
TOTAL	14,779	769

IRS
INDUSTRIAL ROOFING SERVICES, INC.
13000 WEST SILVER SPRING DRIVE – BUTLER, WI 53007
PHONE: (800) 236-3477 / (262) 432-0500 FAX: (262) 432-0504

PROJECT NAME:	DRAWN BY:	DATE:	SITE ID NO.:
VILLAGE OF WHITEFISH BAY DPW FACILITY LYDELL 5111 N LYDELL AVE, WHITEFISH BAY, WI	CAP	3/28/25	8987
TITLE:	**SCALE:**	**DRAWING TYPE:**	**SHEET NO:**
VISUAL ROOF SURVEY	N.T.S.	ROOF PLAN	A0

NORTH ARROW:

KEY:
- ROOF DRAIN
- THROUGH-WALL SCUPPER
- GUTTER EDGE
- CURBED OPENING
- ROOF SCUTTLE
- SKYLIGHT
- CURBED PIPE VENT
- UNUSED
- CHIMNEY
- ROOF LADDER
- PIPE VENT
- SOIL STACK
- PIPE PENETRATION
- PITCH PAN
- EXPANSION JOINT
- RIDGE TRANSITION
- VALLEY/HIP TRANSITION
- SCREEN WALL

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VILLAGE OF WHITEFISH BAY

VISUAL ROOF SURVEY

Fire Station 84

825 E. Lexington Blvd.
Whitefish Bay, WI

Prepared for: Mr. Matthew Collins
Prepared by: Mr. Dave Angove

April 2, 2025

Table of Contents

Introduction

The purpose of the visual roof survey was to complete a visual assessment of the facility's roof systems and provide management with an opinion regarding their condition, immediate maintenance needs, annual proactive maintenance recommendations, and long-term capital requirements.

The facility consists of two (2) roof areas encompassing approximately 7,800 square feet of roof surface. The ages of the roof systems are unknown, but they are not known to be covered under any active warranties.

On March 27, 2025, IRS completed the visual survey of the installed roof systems. The weather conditions during the survey were overcast skies and ambient temperature of 50° Fahrenheit. The survey was performed with the assistance of Mr. Pat McCarthy, Superintendent of Public Works.

Roof Area 1

Construction

Wood roof deck
Underlayment
Architectural laminated asphalt shingles

Roof Drainage

The roof system appears to be adequately drained via sheet metal gutters; however, the gutters are damaged and filled with debris.

Roof Membrane

The shingles remain in serviceable condition, but are beginning to near the end of their useful service life. We noted slippage, granule loss, haze cracking, and embrittlement of the shingles.






Roof Perimeters

The roof system is improperly terminated where it transitions to Roof Area 2 (lacking sheet metal drip edge). There is also a low-slope saddle at a parapet wall that is deteriorated.






Roof Projections

The roof system is penetrated by hot stacks, soil stacks, ducts, attic vents, and square curbs which are improperly flashed into the roof system and have received previous repairs.






Roof Area 2

Construction
Wood roof deck
Rigid insulation board
Asphalt built-up roof membrane, with gravel surfacing

Roof Drainage

The roof system appears to be suitably drained via perimeter gutters, though the gutters have debris.

Roof Membrane

The built-up roof membrane is beginning to near the end of its useful service life. We noted previous repairs, splitting, eroded surfacing, and general deterioration.

Roof Perimeters

The roof system terminates at its perimeters via sheet metal drip edge, gutters, and an isolated section of parapet wall. The flashings along the parapet wall are deteriorated and improperly terminated. The drip edge is deflecting upwards, causing a raised ridge along the gutter edge, impeding drainage. There are also vines growing over much of the perimeters.






Roof Perimeters (continued)

Roof Projections

The roof system is penetrated by hot stacks, curbs, soil stacks, ducts, and small pipes. Many of these penetrations are improperly flashed into the roof system.






Report Conclusions

The facility's existing roof systems have the following design service lives.

Roof System	Design Service Life	Current Age	Remaining Useful Service Life
Architectural Laminated Shingles (Roof Area 1)	25 years	Unknown	3-5 years
Asphalt BUR, Gravel-Surfaced (Roof Area 2)	25 years	Unknown	3-5 years

Architectural Laminated Shingles
The shingle roof system on Roof Area 1 remains in serviceable condition; however, based on the noted deficiencies, we believe it is beginning to near the end of its useful service life. It will likely require replacement in the next 3-5 years.

Asphalt BUR
The asphalt BUR system on Roof Area 2 is also beginning to near the end of its useful service life, based on the observed deficiencies. It should be scheduled for replacement in conjunction with Roof Area 1.

Recommendations

Ownership should begin to plan and budget for replacement of all Roof Areas in the next 3-5 years. In the meantime, complete only emergency repairs on an as needed basis to address any leaks that arise.

Safety
No safety concerns were noted during our survey.

Preventative Maintenance
Remove debris that has accumulated on the roof surface and in the gutters.

Remedial Maintenance
No remedial maintenance recommended.

The roof systems should be resurveyed once every two (2) years by a qualified person.

5 YEAR MAINTENANCE PROJECTIONS

Year	Roof Area	Required Maintenance	Estimated Cost
2026	All	Emergency Repairs Only *(as needed)*	$1,000
2027	All	Emergency Repairs Only *(as needed)*	$1,000
2028	All	Normal Maintenance	$1,000
2029	All	Normal Maintenance	$1,000
2030	All	Normal Maintenance	$1,000

5 YEAR CAPITAL PROJECTIONS

Year	Roof Area	Work Required	Estimated Cost
2026	All	No Capital	$0
2027	All	No Capital	$0
2028	All	Roof Replacement	$175,000
2029	All	No Capital	$0
2030	All	No Capital	$0

APPENDICES

APPENDIX A: Roof Plan

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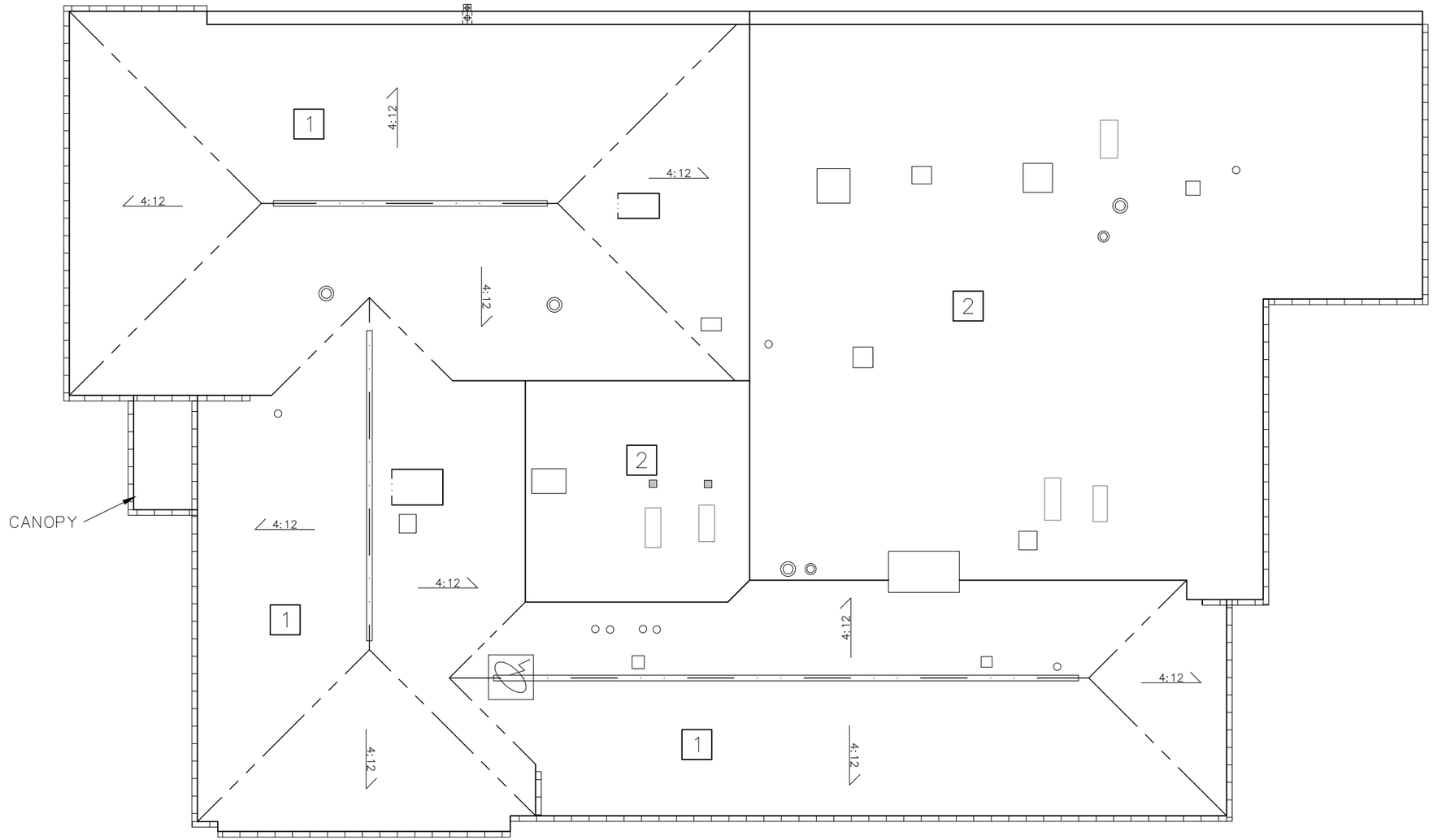
ROOF PLAN



ROOF SIZES		
ROOF AREA	SQ. FEET	PERIMETER
1	4,659	397
2	3,036	266
TOTAL	7,695	663

IRS
INDUSTRIAL ROOFING SERVICES, INC.
13000 WEST SILVER SPRING DRIVE – BUTLER, WI 53007
PHONE: (800) 236-3477 / (262) 432-0500 FAX: (262) 432-0504

PROJECT NAME:	DRAWN BY:	DATE:	SITE ID NO.:
VILLAGE OF WHITEFISH BAY FIRE DEPARTMENT STATION 84 825 E LEXINGTON BLVD, WHITEFISH BAY, WI	CAP	3/28/25	5068
TITLE:	**SCALE:**	**DRAWING TYPE:**	**SHEET NO:**
VISUAL ROOF SURVEY	N.T.S.	ROOF PLAN	A0

NORTH ARROW:

KEY:
- ⌖ – ROOF DRAIN
- ⌖ – THROUGH-WALL SCUPPER
- ▤ – GUTTER EDGE
- □ – CURBED OPENING
- ☒ – ROOF SCUTTLE
- ☒ – SKYLIGHT
- ◎ – CURBED PIPE VENT
- ▤ – UNUSED
- ▨ – CHIMNEY
- ⊤ – ROOF LADDER
- ◎ – PIPE VENT
- ○ – SOIL STACK
- ⌀ – PIPE PENETRATION
- ■ – PITCH PAN
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VILLAGE OF WHITEFISH BAY

VISUAL ROOF SURVEY

Village Hall

5300 N. Marlborough Drive
Whitefish Bay, WI

Prepared for: Mr. Matthew Collins
Prepared by: Mr. Dave Angove

April 2, 2025

Table of Contents

Introduction

The purpose of the visual roof survey was to complete a visual assessment of the facility's roof systems and provide management with an opinion regarding their condition, immediate maintenance needs, annual proactive maintenance recommendations, and long-term capital requirements.

The facility consists of seven (7) roof areas encompassing approximately 19,000 square feet of roof surface. Based on documentation provided by the Owner and visual observations, the roof systems were all replaced in 2018 by JRT Roofing and remain covered under a 20-year warranty from the roof system's manufacturer (Carlisle).

On March 27, 2025, IRS completed the visual survey of the installed roof systems. The weather conditions during the survey were overcast skies and ambient temperature of 50° Fahrenheit. The survey was performed with the assistance of Mr. Pat McCarthy, Superintendent of Public Works, who indicated he was not aware of any leaks or roof related concerns.

Roof Areas 1-4

Construction

Wood roof deck
Rigid insulation board
EPDM single-ply roof membrane, fully-adhered

Roof Drainage

The roof system appears to be adequately drained via eave run-off onto the adjacent metal roofs, with some isolated areas of ponding water noted.

Roof Membrane

The EPDM single-ply membrane remains in serviceable condition. We noted several holes punctured through the membrane on Roof Area 1 and debris collecting on Roof Area 4.






Roof Perimeters

The roof system terminates at its perimeters via counter flashing and metal edge, which remain in serviceable condition.

Roof Projections

The roof system is penetrated by hot stacks, pitch pockets, roof curbs, roof scuttle, small pipes, soil stacks, and AC units on rails. The flashings associated with each of these projections remain in serviceable condition, with no notable deficiencies.

Roof Areas 5-7

Construction
Wood roof deck
Underlayment
Standing seam metal panels

Roof Drainage

The roof system appears to be suitably drained via built-in gutters; however, we noted debris clogging the gutters and failed sealant along the termination-bar for the EPDM gutter lining.



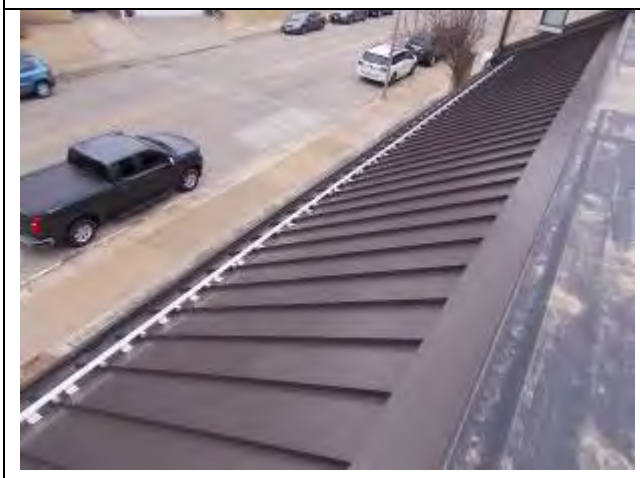



Roof Membrane

The standing seam metal roof panels remain in serviceable condition, with no obvious deficiencies noted.








Roof Perimeters

The roof system terminates at its perimeters via counter flashing, metal edge flashing, and built-in gutters. No obvious deficiencies were noted along the perimeters, except for the debris and failed sealant within the gutters, mentioned above.






Report Conclusions

The facility's existing roof systems have the following design service lives.

Roof System	Design Service Life	Current Age	Remaining Useful Service Life
EPDM Single-ply, Fully-Adhered (Roof Areas 1-4)	20 years	7 years	10-14 years
Standing Seam Metal Panels (Roof Areas 5-7)	30 years	7 years	20+ years

EPDM Single-Ply

The EPDM single-ply roof systems installed on Roof Areas 1-4 remain in serviceable condition, requiring only isolated repairs to address punctures and debris. Provided the roof systems receive timely preventative maintenance, followed by continued proactive annual maintenance, we believe they should be capable of performing properly for an additional 10-14 years.

Standing Seam Metal Panels

The metal panel roof systems installed on Roof Areas 5-7 are in good condition, but do require repairs to address large amounts of debris and failed sealant along then built-in gutters. Provided the roof systems receive timely preventative maintenance, followed by continued proactive annual maintenance, we believe they should be capable of performing properly for an additional 20+ years.

Recommendations

Safety
No safety concerns were noted during our survey.

Preventative Maintenance
Ownership should engage IRS to develop an Annual Maintenance & Repair Specification (AMRS) to address the required preventative maintenance items described in this report.

Remedial Maintenance
No remedial maintenance recommended.

The roof systems should be resurveyed once every two (2) years by a qualified person.

5 YEAR MAINTENANCE PROJECTIONS

Year	Roof Area	Required Maintenance	Estimated Cost
2026	All	Preventative Maintenance	$10,000
2027	All	Normal Maintenance	$1,000
2028	All	Normal Maintenance	$1,000
2029	All	Normal Maintenance	$1,000
2030	All	Normal Maintenance	$1,000

5 YEAR CAPITAL PROJECTIONS

Year	Roof Area	Work Required	Estimated Cost
2026	All	No Capital	$0
2027	All	No Capital	$0
2028	All	No Capital	$0
2029	All	No Capital	$0
2030	All	No Capital	$0

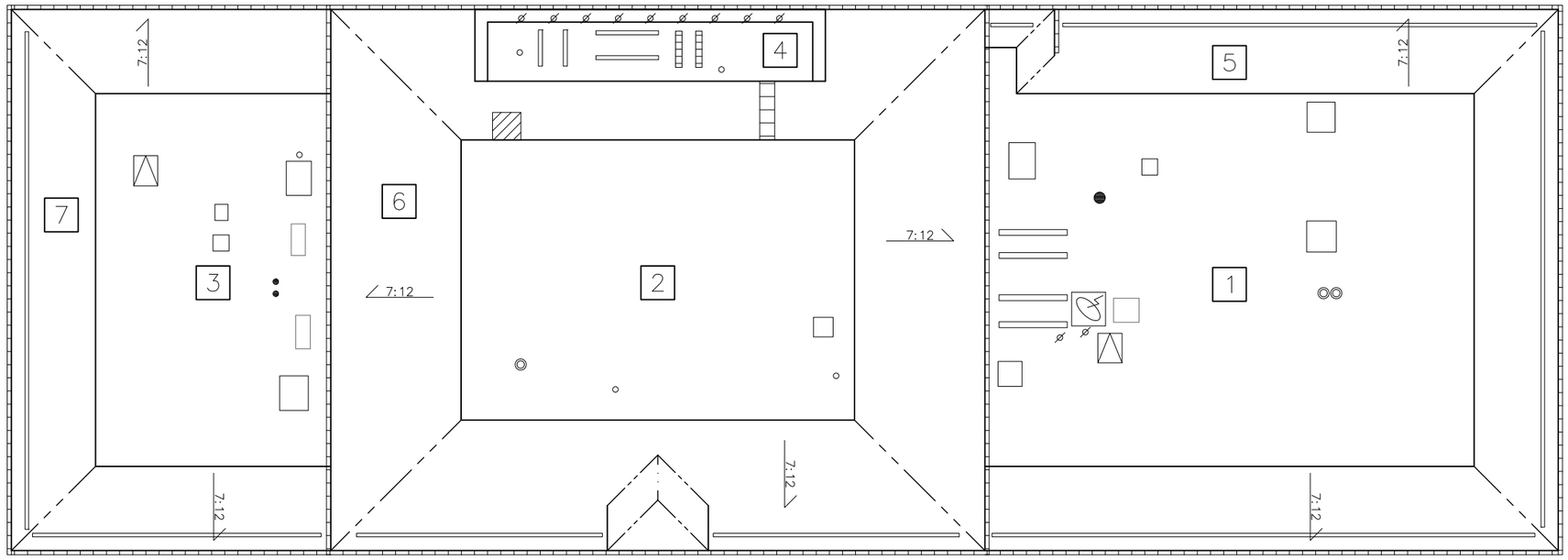
**Anticipated future replacement: Circa 2040*

APPENDICES

APPENDIX A: Roof Plan

APPENDIX A:

ROOF PLAN



ROOF SIZES		
ROOF AREA	SQ. FEET	PERIMETER
1	2,598	216
2	1,559	161
3	1,240	145
4	272	92
5	2,068	382
6	5,791	570
7	1,393	261
TOTAL	14,921	1,827

IRS
INDUSTRIAL ROOFING SERVICES, INC.
13000 WEST SILVER SPRING DRIVE – BUTLER, WI 53007
PHONE: (800) 236-3477 / (262) 432-0500 FAX: (262) 432-0504

PROJECT NAME:
VILLAGE OF WHITEFISH BAY
VILLAGE HALL – POLICE DEPARTMENT
5300 N MARLBOROUGH DR, WHITEFISH BAY, WI

TITLE:
VISUAL ROOF SURVEY

DRAWN BY:	DATE:	SITE ID NO.:
CAP	3/28/25	8988

SCALE:	DRAWING TYPE:	SHEET NO:
N.T.S.	ROOF PLAN	A0

NORTH ARROW:

KEY:
- ⌖ – ROOF DRAIN
- ⌖ – THROUGH-WALL SCUPPER
- ▤ – GUTTER EDGE
- □ – CURBED OPENING
- ☒ – ROOF SCUTTLE
- ☒ – SKYLIGHT
- ◎ – CURBED PIPE VENT
- ▤ – UNUSED
- ▨ – CHIMNEY
- ⊓ – ROOF LADDER
- ◎ – PIPE VENT
- ○ – SOIL STACK
- ⌀ – PIPE PENETRATION
- ■ – PITCH PAN
- ═══ – EXPANSION JOINT
- —·—·— – RIDGE TRANSITION
- —··—··— – VALLEY/HIP TRANSITION
- ·····– SCREEN WALL

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Butler, Wisconsin 53007
Phone: (262) 432-0500
Fax: (262) 432-0504
www.irsroof.com

VILLAGE OF WHITEFISH BAY

VISUAL ROOF SURVEY

Cahill Park Warming House

1001 E. Fairmount Avenue
Whitefish Bay, WI

Prepared for: Mr. Matthew Collins
Prepared by: Mr. Dave Angove

April 2, 2025

Table of Contents

Introduction

The purpose of the visual roof survey was to complete a visual assessment of the facility's roof system and provide management with an opinion regarding its condition, immediate maintenance needs, annual proactive maintenance recommendations, and long-term capital requirements.

The facility consists of one (1) roof area encompassing approximately 4,700 square feet of roof surface. The age of the roof system is unknown, but it is not known to be covered under any active warranties.

On March 27, 2025, IRS completed the visual survey of the installed roof systems. The weather conditions during the survey were overcast skies and ambient temperature of 50° Fahrenheit. The survey was performed with the assistance of Mr. Pat McCarthy, Superintendent of Public Works, who indicated he was not aware of any recent roof leaks.

Roof Area 1

Construction

Wood roof deck
Underlayment
Original 3-tab shingles
Architectural laminated asphalt shingles (installed over the original shingles)

Roof Drainage

The roof system appears to be adequately drained via sheet metal gutters; however, we noted the shingles are buckled at the roof edge, creating a raised ridge along the gutter edge.

Roof Membrane

The shingles are nearing the end of their useful service life. We noted widespread haze cracking, granule loss, ridges, raised fasteners, and embrittlement of the shingles. The shingle was installed over the original shingles, so future roof replacement will require double tear-off.






Roof Membrane (continued)

Roof Perimeters

The roof system is terminated at its perimeter via sheet metal drip edge and ridge shingles. We noted poor detailing, damaged shingles, and exposed fasteners.






Roof Projections

The roof system is penetrated by hot stacks, soil stacks, and square curbs which are improperly flashed into the roof system and have received previous repairs. We also noted failed sealant at large masonry chimney.

Report Conclusions

The facility's existing roof system has the following design service life.

Roof System	Design Service Life	Current Age	Remaining Useful Service Life
Retrofit Architectural Laminated Shingles *(Installed over old original shingles)*	15 years	Unknown	1-2 years

Architectural Laminated Shingles

The shingle roof system was installed over original 3-tab shingles. The shingles are very brittle and showing signs of nearing the end of their useful service life, based on the noted deficiencies. We believe the roof system will likely require replacement in the next 1-2 years.

Recommendations

Ownership should begin to plan and budget for replacement of the roof system in the next 1-2 years. In the meantime, complete emergency repairs on an as needed basis to address any leaks that arise.

Safety
No safety concerns were noted during our survey.

Preventative Maintenance
Ownership should engage IRS to develop an Annual Maintenance & Repair Specification (AMRS) to address some of the preventative maintenance items (failed sealant, loose flashings, debris)

Remedial Maintenance
No remedial maintenance recommended.

The roof systems should be resurveyed once every two (2) years by a qualified person.

5 YEAR MAINTENANCE PROJECTIONS

Year	Roof Area	Required Maintenance	Estimated Cost
2026	All	Preventative Maintenance	$1,000
2027	All	Normal Maintenance	$500
2028	All	Normal Maintenance	$500
2029	All	Normal Maintenance	$500
2030	All	Normal Maintenance	$500

5 YEAR CAPITAL PROJECTIONS

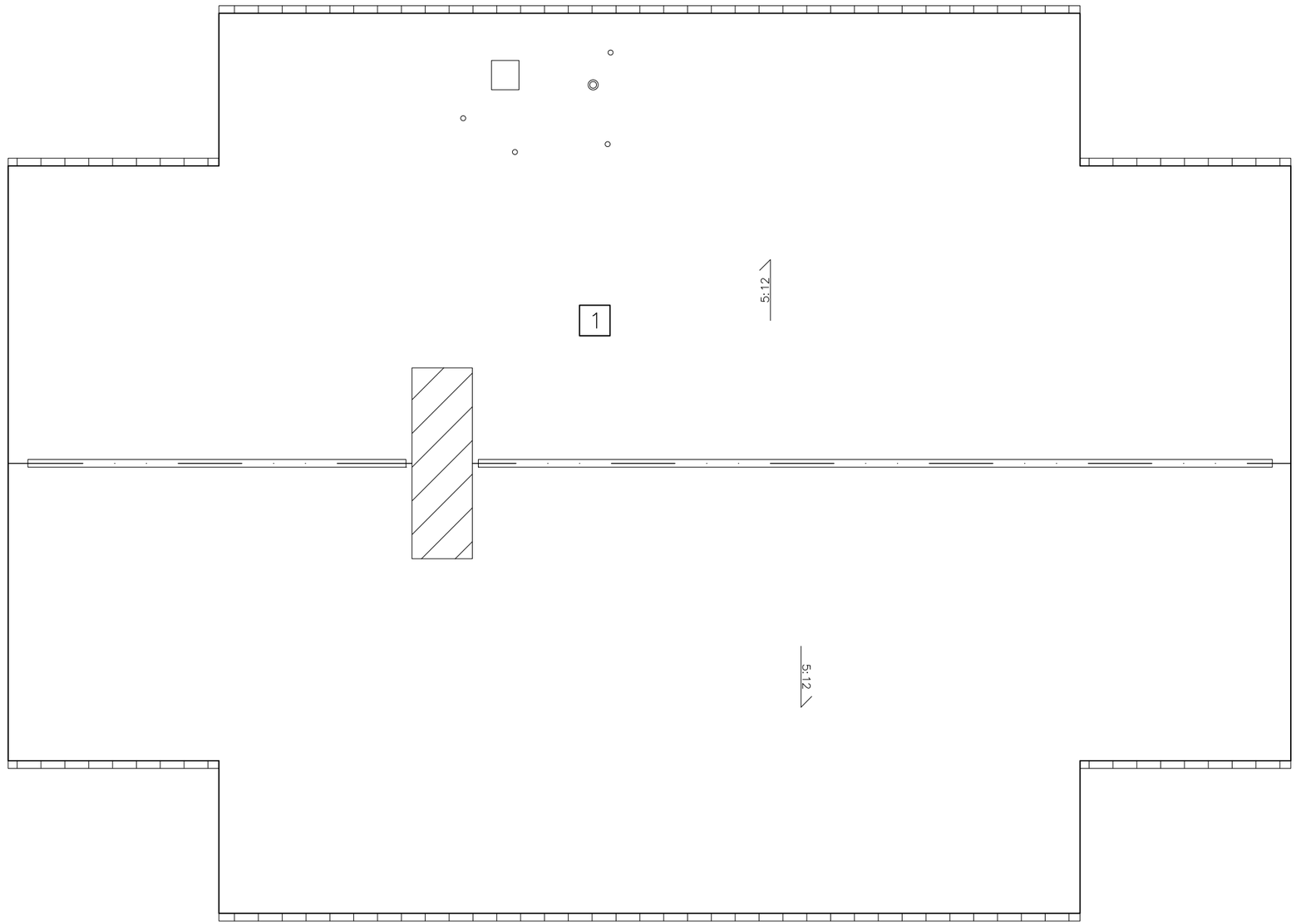
Year	Roof Area	Work Required	Estimated Cost
2026	All	No Capital	$0
2027	All	Roof Replacement *(including double tear-off)*	$30,000
2028	All	No Capital	$0
2029	All	No Capital	$0
2030	All	No Capital	$0

APPENDICES

APPENDIX A: Roof Plan

APPENDIX A:

ROOF PLAN



ROOF SIZES		
ROOF AREA	SQ. FEET	PERIMETER
1	4,774	287
TOTAL	4,774	287

IRS
INDUSTRIAL ROOFING SERVICES, INC.
13000 WEST SILVER SPRING DRIVE – BUTLER, WI 53007
PHONE: (800) 236-3477 / (262) 432-0500 FAX: (262) 432-0504

PROJECT NAME:	DRAWN BY:	DATE:	SITE ID NO.:	NORTH ARROW:
VILLAGE OF WHITEFISH BAY CAHILL PARK WARMING HOUSE 1001 E FAIRMOUNT AVE, WHITEFISH BAY, WI	CAP	3/28/25	8990	
TITLE:	**SCALE:**	**DRAWING TYPE:**	**SHEET NO:**	
VISUAL ROOF SURVEY	N.T.S.	ROOF PLAN	A0	

KEY:
- ROOF DRAIN
- THROUGH-WALL SCUPPER
- GUTTER EDGE
- CURBED OPENING
- ROOF SCUTTLE
- SKYLIGHT
- CURBED PIPE VENT
- UNUSED
- CHIMNEY
- ROOF LADDER
- PIPE VENT
- SOIL STACK
- PIPE PENETRATION
- PITCH PAN
- EXPANSION JOINT
- RIDGE TRANSITION
- VALLEY/HIP TRANSITION
- SCREEN WALL

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Butler, Wisconsin 53007
Phone: (262) 432-0500
Fax: (262) 432-0504
www.irsroof.com

VILLAGE OF WHITEFISH BAY

VISUAL ROOF SURVEY

DPW Facility (Fairmount)

155 W. Fairmount Avenue
Whitefish Bay, WI

Prepared for: Mr. Matthew Collins
Prepared by: Mr. Dave Angove

April 2, 2025

Table of Contents

Introduction

The purpose of the visual roof survey was to complete a visual assessment of the facility's roof system and provide management with an opinion regarding its condition, immediate maintenance needs, annual proactive maintenance recommendations, and long-term capital requirements.

The facility consists of two (2) roof areas encompassing approximately 41,000 square feet of roof surface. Based on documentation provided by the Owner, the roof system was installed in 2014 by JRT Roofing and remains covered under a 15-year warranty from the roof system's manufacturer (Johns Manville).

On March 27, 2025, IRS completed the visual survey of the installed roof systems. The weather conditions during the survey were overcast skies and ambient temperature of 50° Fahrenheit. The survey was performed with the assistance of Mr. Pat McCarthy, Superintendent of Public Works, who indicated he was not aware of any active leakage (but did point out a small area of surface rusting on the underside of the roof deck).

Roof Areas 1 & 2

Construction

Steel roof deck
Rigid insulation board
EPDM single-ply roof membrane, stone-ballasted

Roof Drainage

The roof system appears to be adequately drained via internal roof drains paired with overflow scuppers.

Roof Membrane

The EPDM single-ply membrane remains in serviceable condition. No notable deficiencies were found within the field of the roof membrane. A large portion of the membrane is covered by solar panels, which will make future roof replacement difficult.






Roof Perimeters

The roof system terminates at its perimeters via cap flashing, copings, and counter flashing, which require remedial maintenance. At the parapet walls, it appears the perimeter base flashings are not properly adhered to the underlying securement strip (likely a workmanship error during installation). This is causing significant tenting of the base flashing as the membrane shrinks and pulls away from the wall. We also noted an area along the cap flashing where it appears the membrane was not installed to properly extend over the roof edge. This has caused it to become loose and pull away from the cap flashing, exposing the underlying substrate. We also noted other minor flashing and sealant deficiencies in several areas.

Perimeters (continued)






Roof Projections

The roof system is penetrated by hot stacks, pitch pockets, roof curbs, small pipes, soil stacks, and HVAC units. The flashings associated with each of these projections remain in serviceable condition, though we did note minor tenting at the curbs.






Report Conclusions

The facility's existing roof systems have the following design service lives.

Roof System	Design Service Life	Current Age	Remaining Useful Service Life
EPDM Single-ply, Stone Ballasted	20 years	11 years	6-9 years

EPDM Single-Ply

The EPDM single-ply roof system remains in serviceable condition, but does require significant remedial repairs along its perimeters to address the deficiencies described within this report. It is believed that the perimeter deficiencies are likely due to workmanship errors during installation; however, it is impossible to confirm this. Provided the roof system receives timely remedial maintenance, followed by continued proactive annual maintenance, we believe it should be capable of performing properly for an additional 6-9 years.

Recommendations

Safety
No safety concerns were noted during our survey.

Preventative Maintenance
Ownership should engage IRS to develop an Annual Maintenance & Repair Specification (AMRS) to address the minor preventative maintenance items (holes, open flashing seams, failed sealant).

Remedial Maintenance
Ownership should engage IRS to develop an Annual Maintenance & Repair Specification (AMRS) to address the remedial maintenance items noted along the perimeters (replace tented base flashings).

The roof systems should be resurveyed once every two (2) years by a qualified person.

5 YEAR MAINTENANCE PROJECTIONS

Year	Roof Area	Required Maintenance	Estimated Cost
2026	All	Preventative Maintenance	$1,000
		Remedial Maintenance (perimeter flashings)	$30,000
		Total	**$31,000**
2027	All	Normal Maintenance	$1,000
2028	All	Normal Maintenance	$1,000
2029	All	Normal Maintenance	$1,000
2030	All	Normal Maintenance	$1,000

5 YEAR CAPITAL PROJECTIONS

Year	Roof Area	Work Required	Estimated Cost
2026	All	No Capital	$0
2027	All	No Capital	$0
2028	All	No Capital	$0
2029	All	No Capital	$0
2030	All	No Capital	$0

**Anticipated future replacement: Circa 2035*

APPENDICES

APPENDIX A: Roof Plan

APPENDIX A:

ROOF PLAN

ROOF SIZES		
ROOF AREA	SQ. FEET	PERIMETER
1	38,394	972
2	2,701	209
TOTAL	41,095	1,181

IRS
INDUSTRIAL ROOFING SERVICES, INC.
13000 WEST SILVER SPRING DRIVE – BUTLER, WI 53007
PHONE: (800) 236-3477 / (262) 432-0500 FAX: (262) 432-0504

PROJECT NAME:	DRAWN BY:	DATE:	SITE ID NO.:
VILLAGE OF WHITEFISH BAY DPW FACILITY (FAIRMOUNT) 155 W FAIRMOUNT AVE, WHITEFISH BAY, WI	CAP	3/28/25	5067
TITLE:	**SCALE:**	**DRAWING TYPE:**	**SHEET NO:**
VISUAL ROOF SURVEY	N.T.S.	ROOF PLAN	A0

NORTH ARROW: N

KEY:
- ⌖ – ROOF DRAIN
- ⌖ – THROUGH-WALL SCUPPER
- ▤ – GUTTER EDGE
- □ – CURBED OPENING
- ☒ – ROOF SCUTTLE
- ☒ – SKYLIGHT
- ◎ – CURBED PIPE VENT
- ▤ – UNUSED
- ▨ – CHIMNEY
- ⊓ – ROOF LADDER
- ◎ – PIPE VENT
- ○ – SOIL STACK
- ⌀ – PIPE PENETRATION
- ■ – PITCH PAN
- ═══ – EXPANSION JOINT
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- —··—··— – VALLEY/HIP TRANSITION
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Butler, Wisconsin 53007
Phone: (262) 432-0500
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www.irsroof.com

VILLAGE OF WHITEFISH BAY

VISUAL ROOF SURVEY

Craig Counsel Park Building

6321 N Lydell Avenue
Whitefish Bay, WI

Prepared for: Mr. Matthew Collins
Prepared by: Mr. Dave Angove

April 2, 2025

Table of Contents

Introduction

The purpose of the visual roof survey was to complete a visual assessment of the facility's roof system and provide management with an opinion regarding its condition, immediate maintenance needs, annual proactive maintenance recommendations, and long-term capital requirements.

The facility consists of one (1) roof area encompassing approximately 2,000 square feet of roof surface. The age of the roof system is unknown, but it is not known to be covered under any active warranties.

On March 27, 2025, IRS completed the visual survey of the installed roof systems. The weather conditions during the survey were overcast skies and ambient temperature of 50° Fahrenheit. The survey was performed with the assistance of Mr. Pat McCarthy, Superintendent of Public Works, who indicated he was not aware of any recent roof leaks.

Roof Area 1

Construction

Wood roof deck
Underlayment
Original 3-tab shingles
2nd layer of 3-tab shingles (installed over the original shingles)

Roof Drainage

The roof system appears to be adequately drained via sheet metal gutters.

Roof Membrane

The shingles remain in serviceable condition; but are showing signs of aging. We noted granule loss, missing tabs, minor haze cracking, and embrittlement of the shingles.






Roof Perimeters
The roof system is terminated at its perimeter via sheet metal drip edge and gutter.

Roof Projections
The roof system is penetrated by attic vents and a soil stack.

Report Conclusions

The facility's existing roof system has the following design service life.

Roof System	Design Service Life	Current Age	Remaining Useful Service Life
Retrofit 3-Tab Shingle *(Installed over old original shingles)*	15 years	Unknown	3-5 years

3-Tab Shingles

The shingles are very brittle and showing signs of nearing the end of their useful service life, based on the noted deficiencies. We believe the roof system will likely require replacement in the next 3-5 years.

Recommendations

Ownership should begin to plan and budget for replacement of the roof system in the next 3-5 years. In the meantime, complete emergency repairs on an as needed basis to address any leaks that arise.

Safety
No safety concerns were noted during our survey.

Preventative Maintenance
Remove debris from the gutters.

Remedial Maintenance
No remedial maintenance recommended.

The roof systems should be resurveyed once every two (2) years by a qualified person.

5 YEAR MAINTENANCE PROJECTIONS

Year	Roof Area	Required Maintenance	Estimated Cost
2026	All	Normal Maintenance	$500
2027	All	Normal Maintenance	$500
2028	All	Normal Maintenance	$500
2029	All	Normal Maintenance	$500
2030	All	Normal Maintenance	$500

5 YEAR CAPITAL PROJECTIONS

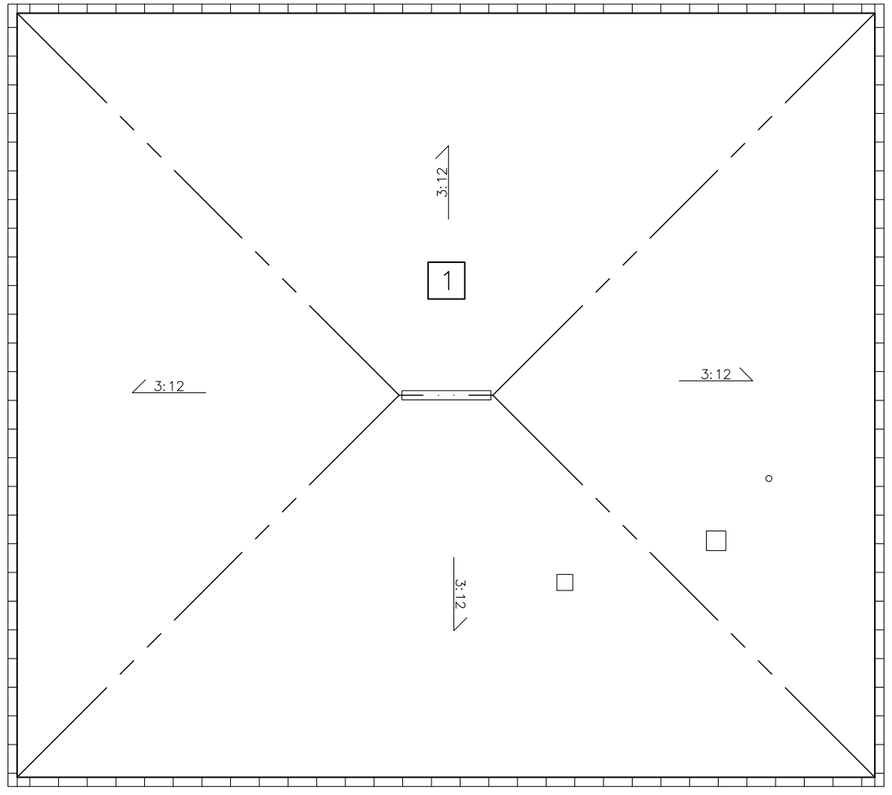
Year	Roof Area	Work Required	Estimated Cost
2026	All	No Capital	$0
2027	All	No Capital	$0
2028	All	No Capital	$0
2029	All	Roof Replacement *(including double tear-off)*	$20,000
2030	All	No Capital	$0

APPENDICES

APPENDIX A: Roof Plan

APPENDIX A:

ROOF PLAN



ROOF SIZES		
ROOF AREA	SQ. FEET	PERIMETER
1	2,005	177
TOTAL	2,005	177

IRS
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13000 WEST SILVER SPRING DRIVE – BUTLER, WI 53007
PHONE: (800) 236-3477 / (262) 432-0500 FAX: (262) 432-0504

PROJECT NAME:	DRAWN BY:	DATE:	SITE ID NO.:
VILLAGE OF WHITEFISH BAY CRAIG COUNSEL PARK BUILDING 6321 LYDELL AVE, WHITEFISH BAY, WI	CAP	3/28/25	8996
TITLE:	SCALE:	DRAWING TYPE:	SHEET NO:
VISUAL ROOF SURVEY	N.T.S.	ROOF PLAN	A0

NORTH ARROW:

KEY:

- ⌖ – ROOF DRAIN
- ⌖ – THROUGH-WALL SCUPPER
- ▤ – GUTTER EDGE
- □ – CURBED OPENING
- ☒ – ROOF SCUTTLE
- ☒ – SKYLIGHT
- ◎ – CURBED PIPE VENT
- ▤ – UNUSED
- ▨ – CHIMNEY
- ⊓ – ROOF LADDER
- ◎ – PIPE VENT
- ○ – SOIL STACK
- ⌀ – PIPE PENETRATION
- ■ – PITCH PAN
- ═══ – EXPANSION JOINT
- —·—·— – RIDGE TRANSITION
- —··—··— – VALLEY/HIP TRANSITION
- ····· – SCREEN WALL

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13000 West Silver Spring Drive
Butler, Wisconsin 53007
Phone: (262) 432-0500
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www.irsroof.com

VILLAGE OF WHITEFISH BAY

VISUAL ROOF SURVEY

Klode Park Warming House

5932 N. Lake Drive
Whitefish Bay, WI

Prepared for: Mr. Matthew Collins
Prepared by: Mr. Dave Angove

April 2, 2025

Table of Contents

Introduction

The purpose of the visual roof survey was to complete a visual assessment of the facility's roof system and provide management with an opinion regarding its condition, immediate maintenance needs, annual proactive maintenance recommendations, and long-term capital requirements.

The facility consists of one (1) roof area encompassing approximately 1,150 square feet of roof surface. The age of the roof system is unknown, but it is not known to be covered under any active warranties.

On March 27, 2025, IRS completed the visual survey of the installed roof systems. The weather conditions during the survey were overcast skies and ambient temperature of 50° Fahrenheit. The survey was performed with the assistance of Mr. Pat McCarthy, Superintendent of Public Works, who indicated he was not aware of any recent roof leaks.

Roof Area 1

Construction

Wood roof deck
Underlayment
Architectural laminated asphalt shingles

Roof Drainage

The roof system appears to be adequately drained via sheet metal gutters; however, we noted debris in the gutters.




Roof Membrane

The shingles remain in serviceable condition; but are showing signs of aging. We noted granule loss, missing tabs, raised fasteners, minor haze cracking, and embrittlement of the shingles.

Roof Perimeters

The roof system is terminated at its perimeters via sheet metal drip edge and gutters, which are filled with debris.

Roof Projections

The roof system is penetrated by a soil stack and a masonry chimney. The chimney is deteriorated and should be repaired by a masonry contractor.

Report Conclusions

The facility's existing roof system has the following design service life.

Roof System	Design Service Life	Current Age	Remaining Useful Service Life
Architectural Laminated Shingles	25 years	Unknown	3-5 years

Architectural Laminated Shingles
The shingles are very brittle and showing signs of nearing the end of their useful service life, based on the noted deficiencies. We believe the roof system will likely require replacement in the next 3-5 years.

Recommendations

Ownership should begin to plan and budget for replacement of the roof system in the next 3-5 years. In the meantime, complete emergency repairs on an as needed basis to address any leaks that arise.

Safety
No safety concerns were noted during our survey.

Preventative Maintenance
Remove debris from the gutters.

Remedial Maintenance
No remedial maintenance recommended.

The roof systems should be resurveyed once every two (2) years by a qualified person.

5 YEAR MAINTENANCE PROJECTIONS

Year	Roof Area	Required Maintenance	Estimated Cost
2026	All	Normal Maintenance	$500
2027	All	Normal Maintenance	$500
2028	All	Normal Maintenance	$500
2029	All	Normal Maintenance	$500
2030	All	Normal Maintenance	$500

5 YEAR CAPITAL PROJECTIONS

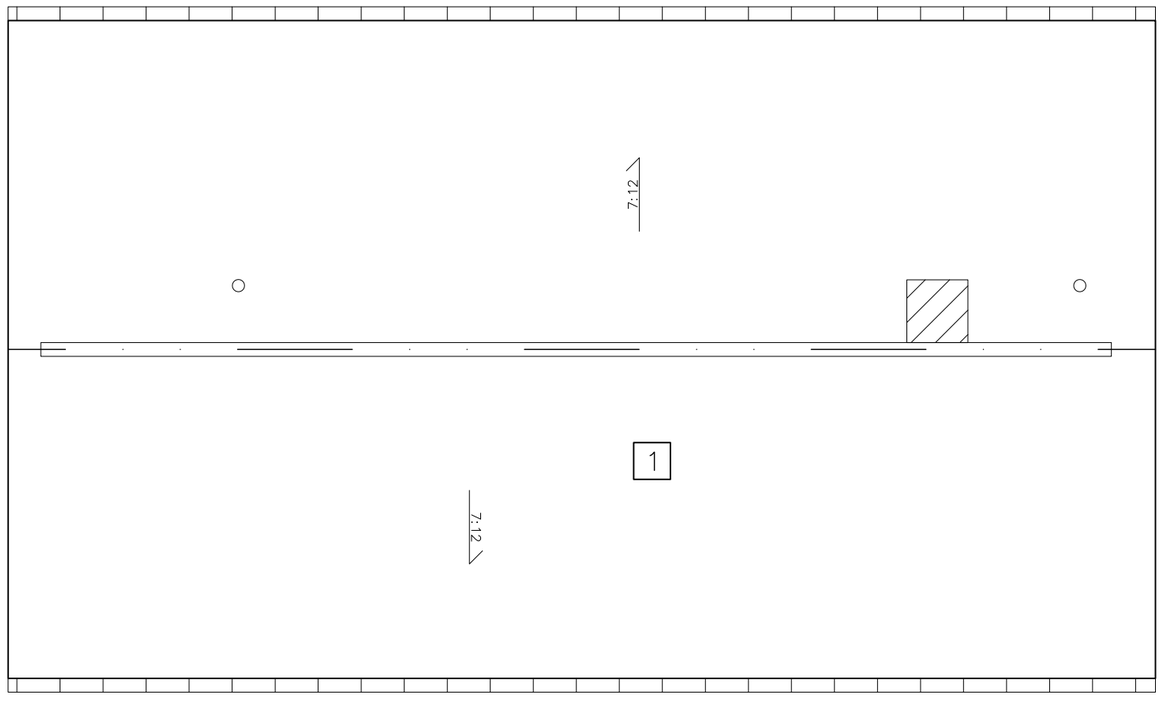
Year	Roof Area	Work Required	Estimated Cost
2026	All	No Capital	$0
2027	All	No Capital	$0
2028	All	No Capital	$0
2029	All	Roof Replacement	$20,000
2030	All	No Capital	$0

APPENDICES

APPENDIX A: Roof Plan

APPENDIX A:

ROOF PLAN



ROOF SIZES		
ROOF AREA	SQ. FEET	PERIMETER
1	1,153	132
TOTAL	1,153	132

IRS
INDUSTRIAL ROOFING SERVICES, INC.
13000 WEST SILVER SPRING DRIVE – BUTLER, WI 53007
PHONE: (800) 236-3477 / (262) 432-0500 FAX: (262) 432-0504

PROJECT NAME:	DRAWN BY:	DATE:	SITE ID NO.:
VILLAGE OF WHITEFISH BAY KLODE PARK WARMING HOUSE 5932 N LAKE DR, WHITEFISH BAY, WI	CAP	3/28/25	8989
TITLE:	SCALE:	DRAWING TYPE:	SHEET NO:
VISUAL ROOF SURVEY	N.T.S.	ROOF PLAN	A0

NORTH ARROW: N

KEY:
- ROOF DRAIN
- THROUGH-WALL SCUPPER
- GUTTER EDGE
- CURBED OPENING
- ROOF SCUTTLE
- SKYLIGHT
- CURBED PIPE VENT
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