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Client Data

Client: Sherman Board of Education

Client Data

Name	Sherman Board of Education		
Address 1	2 CT-37		
City	Sherman	State	Connecticut
ZIP	06784	Country	United States

Contact Info

Contact Person	Joe Lombardozzi	Title	Facilities Manager
Mobile Phone:	845-278-6348	Office Phone:	860-355-3793 x377
Email:	lombardozzij@shermanschool.com		



Facility Summary

Client: Sherman Board of Education

Facility: Sherman School

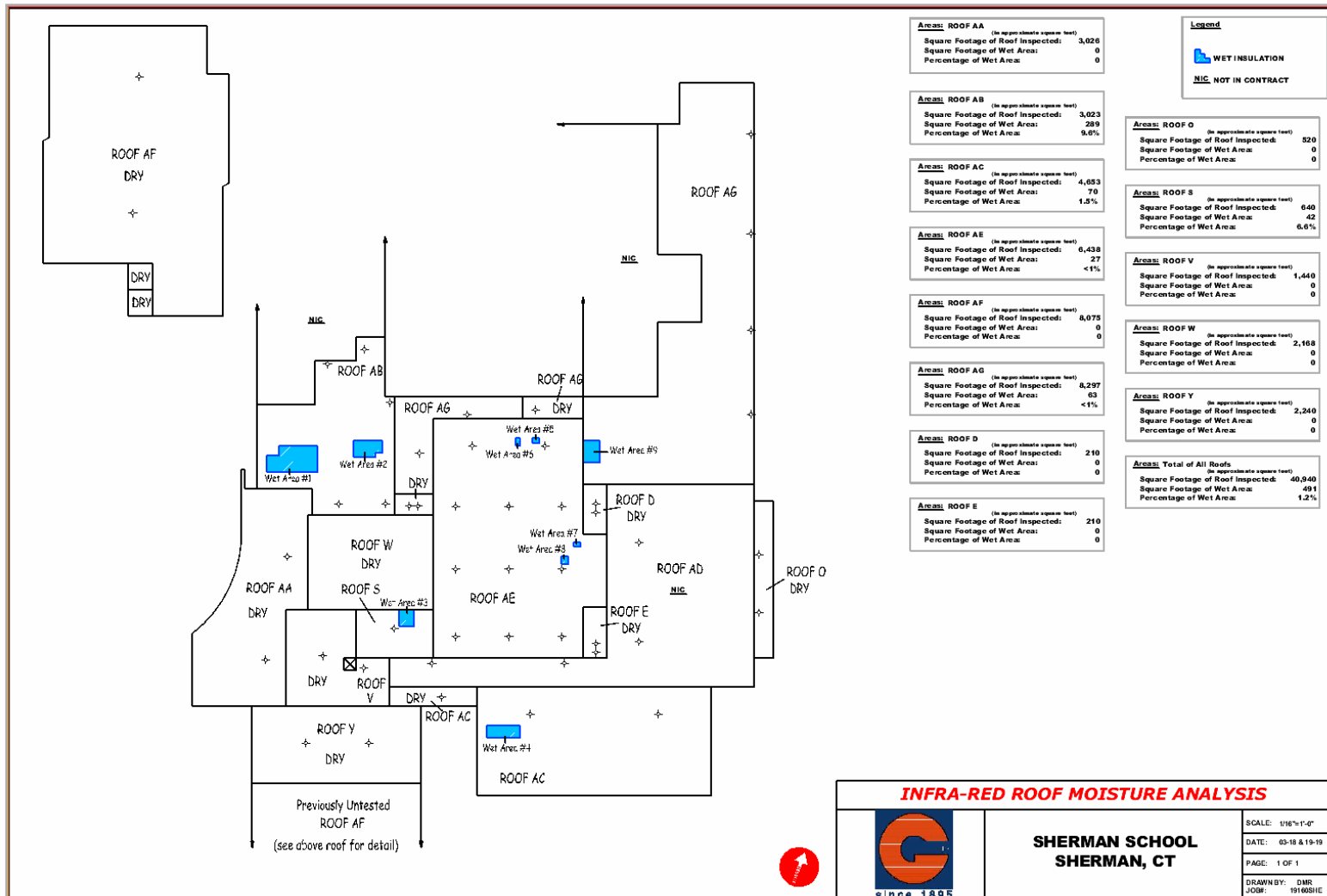


Facility Data

Address 1	2 CT-37
City	Sherman
State	Connecticut
ZIP	06784
Type of Facility	School
Square Footage	60,300
Contact Person	Joe Lombardozzi

Asset Information

Name	Date Installed	Square Footage	Roof Access
All Roof Sections except Roof Section AD & Shingle Sections	various	-	Internal Roof Hatch

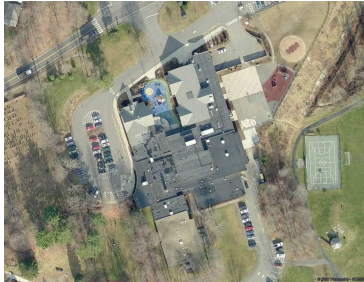




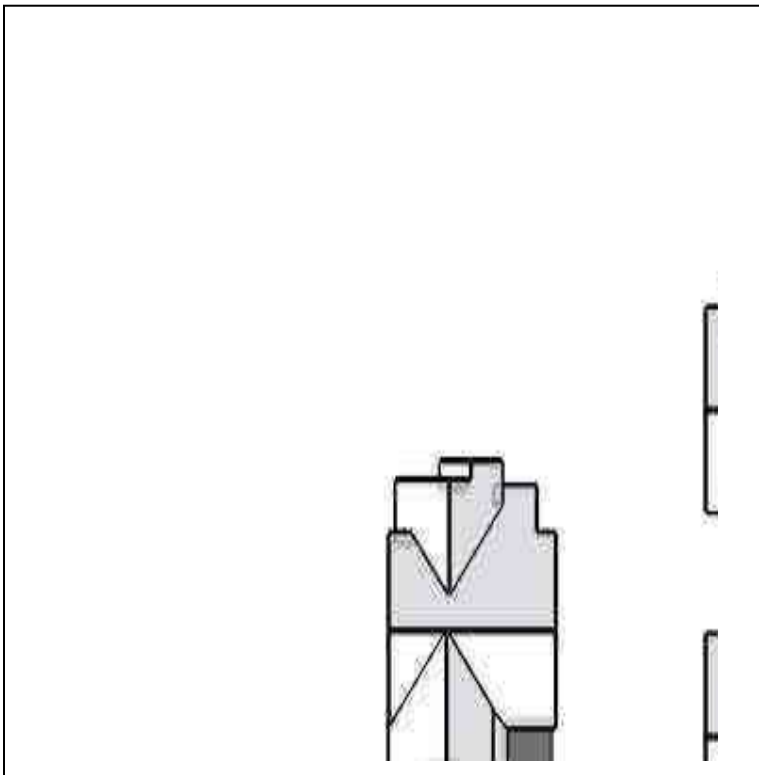
ROOF MEASUREMENT REPORT

2 Connecticut 37, Sherman, CT 06784

Report Contents



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In this 3D model, facets appear as semi-transparent to reveal overhangs.

Report Details

Date:	02/19/2014
Report:	7873498

Roof Details

Total Area:	60,300 sq ft
Total Roof Facets:	33
Predominant Pitch:	0/12
Number of Stories:	>1
Total Ridges/Hips:	341 ft
Total Valleys:	300 ft
Total Rakes:	495 ft
Total Eaves:	411 ft
Total Penetrations:	66
Total Penetrations Perimeter:	1,018 ft
Total Penetrations Area:	1,395 sq ft

Contact Us

Contact:	Steve Botelho
Company:	The Garland Company Inc.
Address:	3800 East 91st St Cleveland OH 44105
Phone:	216-641-7500

Measurements provided by www.eagleview.com



Certified Accurate

www.eagleview.com/Guarantee.aspx

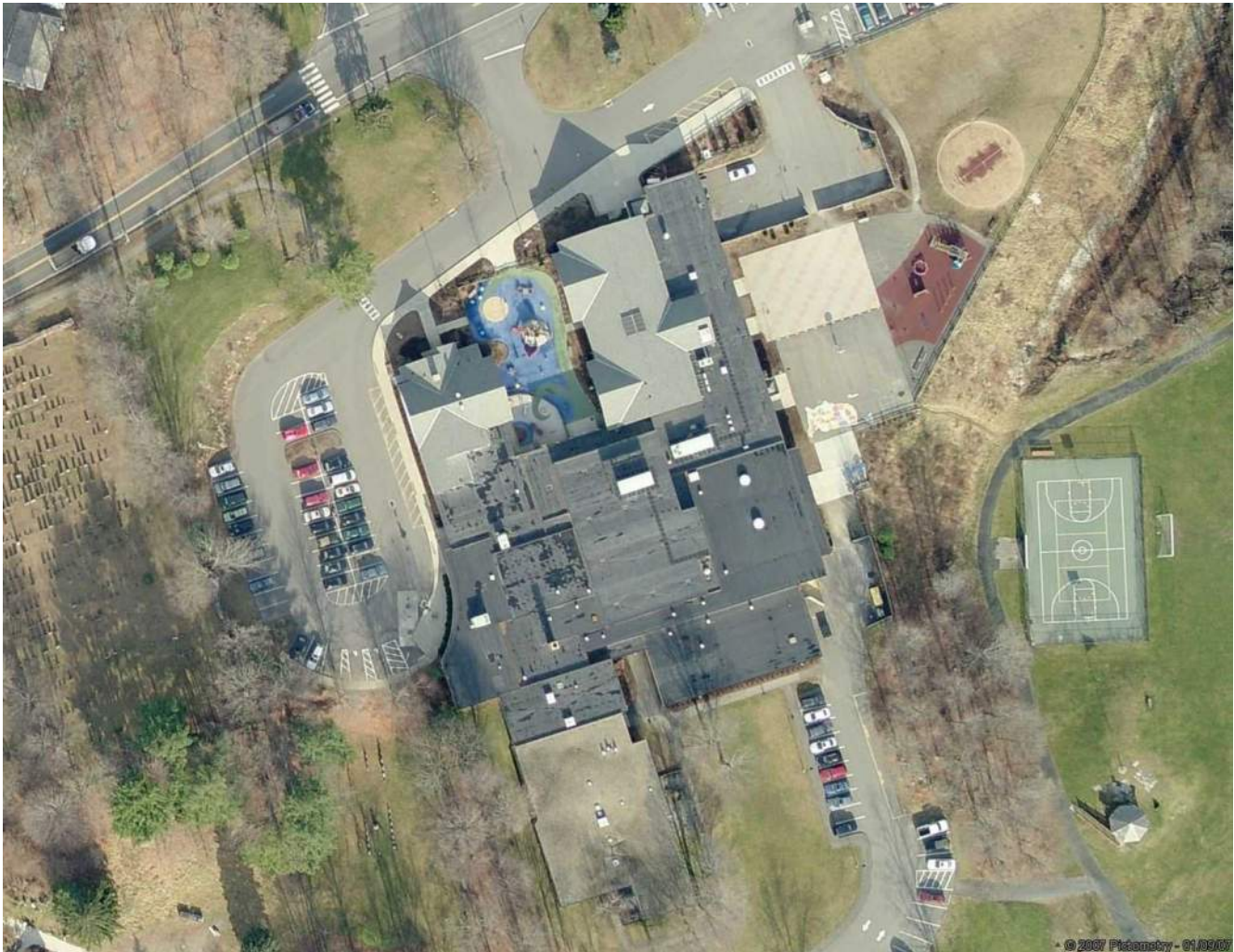
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REPORT IMAGES

The following aerial images show different angles of this structure for your reference.



Top View

REPORT IMAGES



North View

East View

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REPORT IMAGES



South View



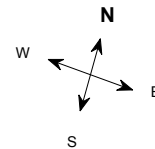
West View

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Total Line Lengths: **Ridges = 341 ft** **Valleys = 300 ft** **Flashing = 6 ft** **Eaves = 411 ft**
 Hips = 0 ft **Rakes = 495 ft** **Step flashing = 41 ft** **Parapets = 3,718 ft**

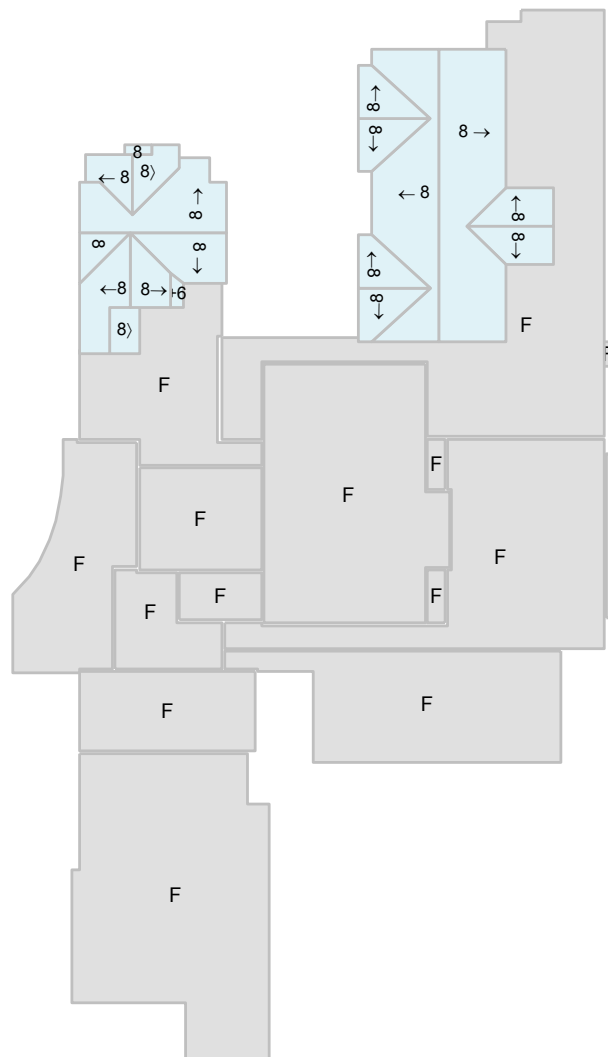


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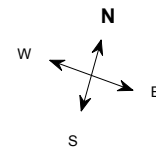
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PITCH DIAGRAM

Pitch values are shown in inches per foot, and arrows indicate slope direction. The predominant pitch on this roof is 0/12.



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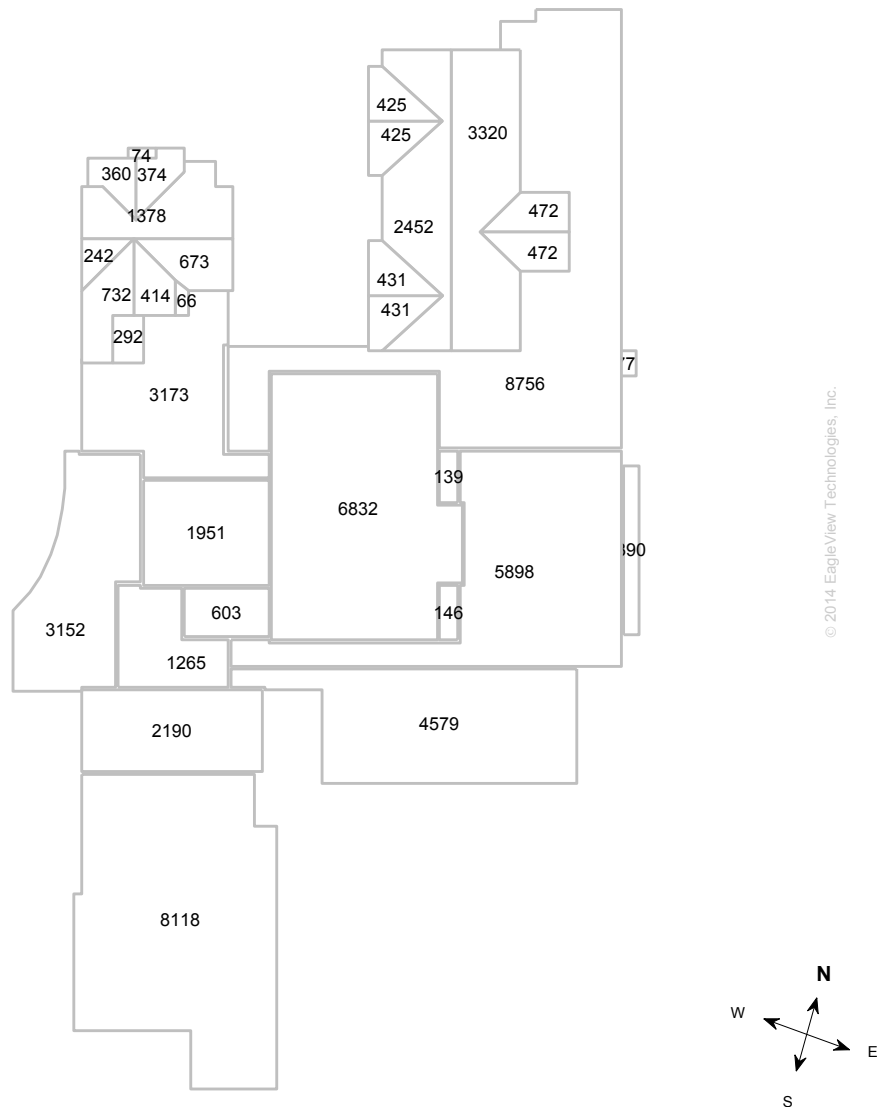
Note: This diagram contains labeled pitches for facet areas larger than 20 square feet. In some cases, pitch labels have been removed for readability. Gray shading indicates flat, 1/12 or 2/12 pitches. If present, a value of "F" indicates a flat facet (no pitch).

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AREA DIAGRAM

Total Area = 60,300 sq ft, with 33 facets.



Note: This diagram shows the square feet of each roof facet (rounded to the nearest foot). The total area in square feet, at the top of this page, is based on the non-rounded values of each roof facet (rounded to the nearest square foot after being totaled).

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PENETRATIONS

Penetrations Notes Diagram

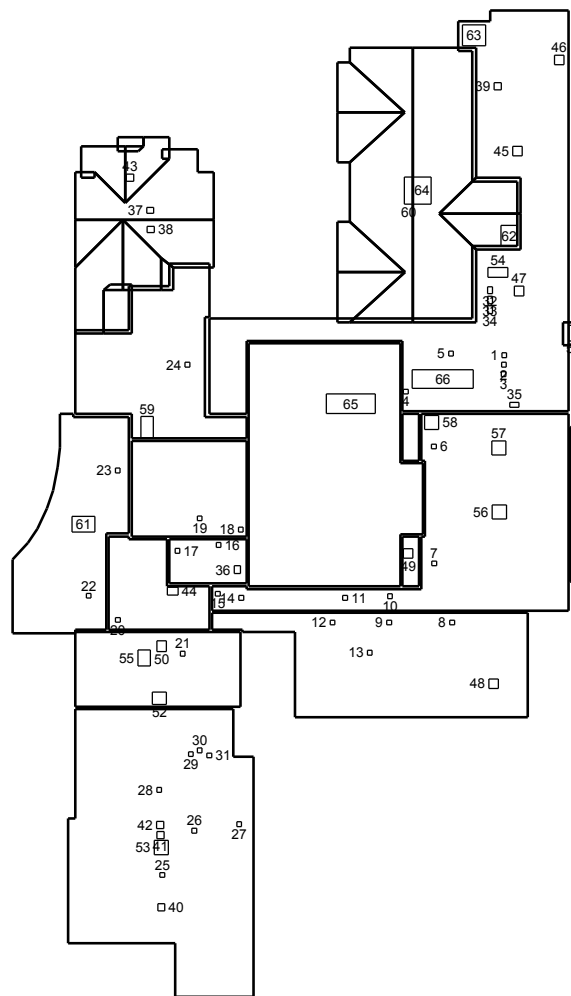
Penetrations are labeled from smallest to largest for easy reference.

Total Penetrations: 66

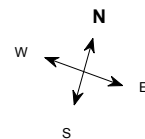
Total Penetrations Perimeter = 1,018 ft

Total Penetrations Area: 1,395 sq ft

Total Roof Area Less Penetrations = 58,905 sq ft



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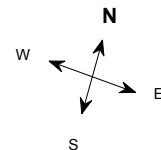
Note: Any measured penetration smaller than 3x3 feet may need field verification. Accuracy is not guaranteed. The total penetration area is not subtracted from the total roof area.

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Roof facets are labeled from smallest to largest (A to Z) for easy reference.



8

Property Info



Property Location

Longitude = -73.4960318

Latitude = 41.5782656

Online map of property:

http://maps.google.com/maps?f=g&source=s_q&hl=en&geocode=&q=2+Connecticut+37,Sherman,CT,06784

Property Info

Year Built: 1970

Effective Year Built: N/A *

**Effective Year Built is when the property's major components were revised to meet that year's code..*



Weather Data

Last Hail Event: 6/24/2013

Hail Count: 15 †

†Last hail event is the date of the last recorded hail event (greater than or equal to 3/4") within a one-mile radius. Hail count is the number of recorded hail events (greater than or equal to 3/4") within a one-mile radius in the past three years.



Notes

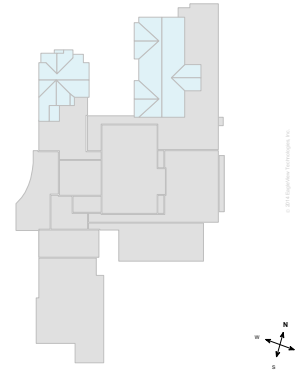
This was ordered as a commercial property. There were no changes to the structure in the past four years.

REPORT SUMMARY

Below is a measurement summary using the values presented in this report.

Lengths, Areas and Pitches

Ridge	341 ft (10 Ridges)
Hips	0 ft (0 Hips)
Valleys	300 ft (11 Valleys)
Rakes*	495 ft (24 Rakes)
Eaves/Starter**	411 ft (26 Eaves)
Drip Edge (Eaves + Rakes)	906 ft (50 Lengths)
Parapet Walls	3,718 ft (117 Lengths)
Flashing	6 ft (2 Lengths)
Step Flashing	41 ft (6 Lengths)
Total Area	60,300 sq ft
Total Penetrations Area	1,395 sq ft
Total Roof Area Less Penetrations	58,905 sq ft
Total Penetrations Perimeter	1,018 ft
Predominant Pitch	0/12



Total Roof Facets = 33

*Rakes are defined as roof edges that are sloped (not level).

** Eaves are defined as roof edges that are not sloped and level.

Areas per Pitch

Roof Pitches	0/12	6/12	8/12
Area (sq ft)	47268.6	66.3	12965
% of Squares	78.4%	0.1%	21.5%

The table above lists each pitch on this roof and the total area and percent (both rounded) of the roof with that pitch.

Waste Calculation Table

Waste %	0%	10%	12%	15%	17%	20%	22%
Area (sq ft)	60,300	66,330	67,536	69,345	70,551	72,360	73,566
Squares	603.0	663.3	675.4	693.5	705.5	723.6	735.7

This table shows the total roof area and squares (rounded up to the nearest decimal) based upon different waste percentages. The waste factor is subject to the complexity of the roof, individual roofing techniques and your experience. Please consider this when calculating appropriate waste percentages. Note that only roof area is included in these waste calculations. Additional materials needed for ridge, hip, valley, and starter lengths are not included.

Parapet Calculation Table

Wall Height (ft)	1	2	3	4	5	6	7
Vertical Wall Area (sq ft)	3718	7436	11154	14872	18590	22308	26026

This table provides common parapet wall heights to aid you in calculating the total vertical area of these walls. Note that these values assume a 90 degree angle at the base of the wall. Allow for extra materials to cover cant strips and tapered edges.

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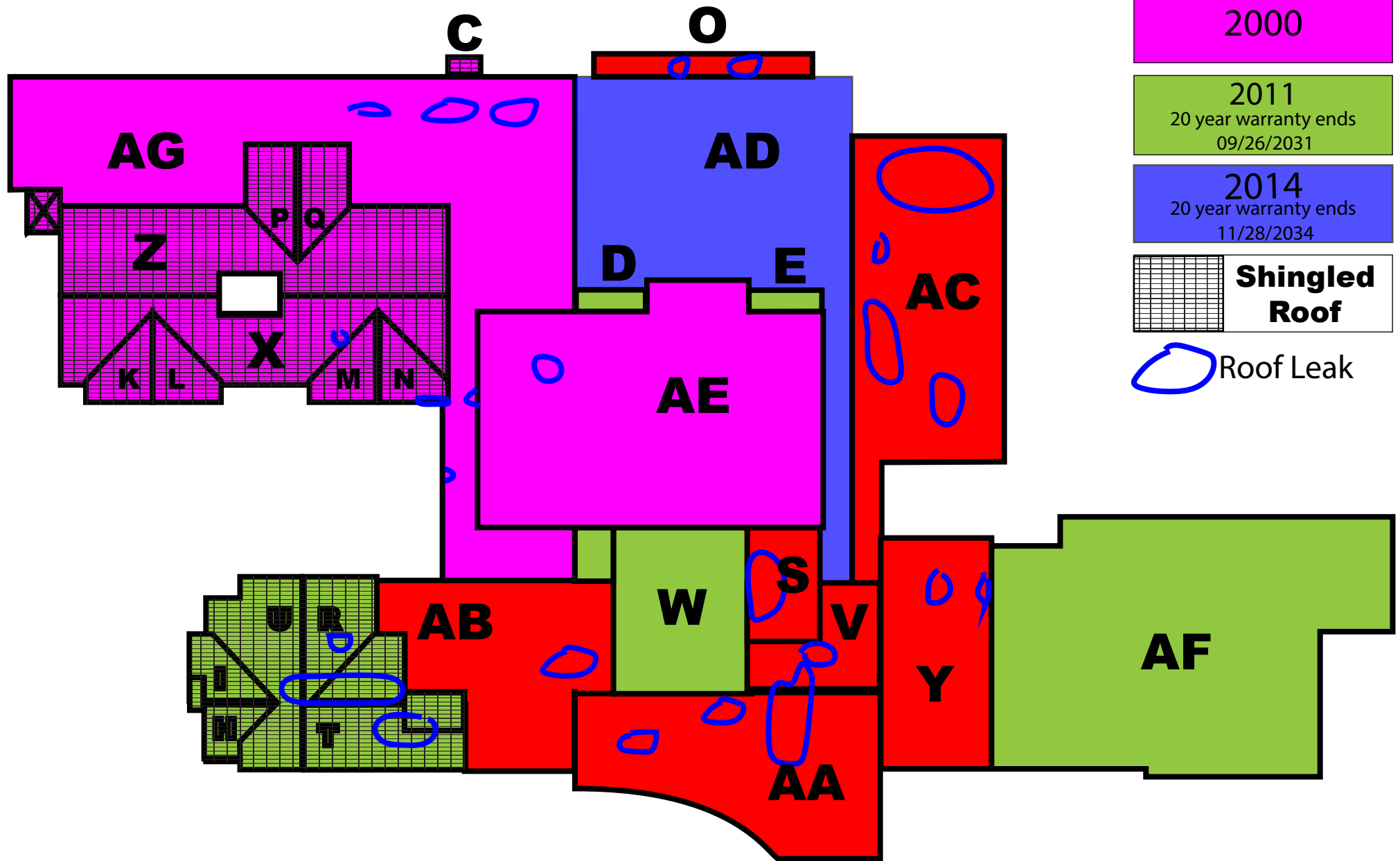


ROOF MEASUREMENT REPORT

Penetration Table	1-31	32	33	34	35	36	37-42	43	44	45
Area (sq ft)	4	6	6.6	6.8	7.7	8.6	9	11.5	14.9	16
Perimeter (ft)	8	10	10.6	10.8	11.6	11.8	12	13.6	15.6	16
	46-49	50	51	52	53	54-57	58	59	60	61
Area (sq ft)	16	18.3	27.2	31.4	35.3	36	33.7	46.3	45.9	63
Perimeter (ft)	16	17.2	21.4	22.4	24	24	24.8	28	30.8	32.4
	62	63	64	65	66					
Area (sq ft)	70.5	83.9	101.1	170.5	202.9					
Perimeter (ft)	34.2	36.8	40.6	57.8	67					

Any measured penetration smaller than 3x3 feet may need field verification. Accuracy is not guaranteed. The total penetration area is not subtracted from the total roof area.

Roof Ages



THE GARLAND COMPANY, INC.
ROOFING GUARANTEE

WHEREAS (Contractor Name) BARRETT INC. of (Complete address) 106 MILL PLAIN ROAD, DANBURY, CT 06811 herein called "Contractor" has completed application of the following roof:

Owner: TOWN OF SHERMAN

Address of Owner: 2 ROUTE 37 EAST, SHERMAN, CT 06784

Type and Name of Building: SHERMAN SCHOOL

Roof Identification: _____

Total Square Footage: 5,900 SF

Completion Date: 11/28/2014

Expiration Date: 11/28/2016

WHEREAS, at the inception of such work, Contractor agreed to guarantee the aforesaid roof for a limited period and subject to the conditions herein set forth:

NOW, THEREFORE, Contractor hereby Guarantees, subject to the conditions herein set forth, that during the guarantee effective period which is referenced above as the "Guarantee Expiration date" of said roof, it will, at its own cost and expense, make or cause to be made such repairs to said roof resulting solely from faults or defects in materials or workmanship applied by or through Contractor as may be necessary to maintain said roof in watertight condition.

This guarantee is made subject to the following conditions:

1. Specifically excluded from this guarantee is any and all damage to said roof, the building or contents caused by the acts or omissions of other trades or contractors; lightning, windstorm, winds of gusts speeds of 55 mph or higher measured at 10 meters above ground, hailstorm, flood, earthquake or other unusual phenomena of the elements; foundation or structural settlement; failure, movement, cracking or excess deflection of the roof deck; defects or failure of material used as a roof base over which the roof is applied, faulty construction of parapet walls, copings, chimneys, skylights, vents, supports, or other parts of the building; vapor condensation beneath the roof; penetrations for pitch boxes, erosion, cracking and porosity of mortar and brick; dry rot; stoppage of roof drains and gutters; penetration of the roof from beneath by rising fasteners of any type; inadequate drainage, slope, or other conditions beyond the control of Contractor which cause ponding or standing of water; termites or other insects; rodents or other animals, fire or harmful chemicals, oils, acids and the like that come in contact with the roofing system and cause a leak or otherwise damage the roof system. If the roof is damaged by reason of any of the foregoing, this Agreement shall thereupon become null and void for the remaining balance of the two-year Guarantee Period, but all terms and conditions of the Agreement shall remain in full force and effect for the time period and events occurring prior thereto.
2. Contractor is not liable for consequential damages to the building or contents resulting from any defects in said roof, including but without limitation, any interruption of business experienced by Owner or occupants of the building.
3. This guarantee shall become null and void unless the Contractor is promptly notified in writing of any alleged defect in materials or workmanship and provided an opportunity to inspect and, if required by the terms of the Guarantee, to repair the roof.
4. No work shall be done on said roof, including, but without limitation, work in connection with flues, vents, drains, sign braces, railings, platforms or other equipment fastened to or set on the roof, and no repairs or alterations shall be made to said roof, unless Contractor shall first be notified in writing, shall be given the opportunity to make the necessary roofing applications recommendations with respect thereto, and such recommendations are complied with. In addition, no work shall be done on said roof, including the above-mentioned inclusions, unless The Garland Company, Inc., Cleveland, Ohio offices, shall first be notified, given the opportunity to inspect the roof and the opportunity to make necessary installation and application recommendations to be complied with by Contractor. Failure to observe these conditions shall render this guarantee null and void.
5. This guarantee shall become null and void if the roof is used as a promenade or work deck or is sprayed or flooded, unless such use was originally specified by the Purchaser/Owner and the specifications were reduced to writing and received by Garland or the specifications are noted in paragraph 10, below.
6. This guarantee shall not be or become effective unless and until Contractor has been paid in full for said roof in accordance with the agreement pursuant to which such roof was applied.
7. This guarantee shall accrue only to the benefit of the original Owner named above. It is not transferable to any other person, except with the prior written consent of Contractor.
8. Contractor must inspect the roof with a representative from The Garland Company, Inc. present three (3) months prior to the expiration of the written guarantee. Failure to adhere to this paragraph will extend the guarantee period as set forth herein until said joint inspection takes place. During this extended time period, Contractor's guarantee will remain in full force and effect.
9. This guarantee is in lieu of all other guarantees or warranties, express or implied. ALL IMPLIED GUARANTEES AND WARRANTIES, AND SPECIFICALLY THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY EXCLUDED AND DISCLAIMED.

10. Additional conditions or exclusions: _____

IN WITNESS WHEREOF this instrument has been duly executed this 10TH day of DECEMBER, 2014

By: _____

0708

The Garland Company, Inc.®

Twenty (20) Year High-Performance Edge-to-Edge No Dollar Limit (NDL) Warranty

Owner Name: <u>Sherman School</u>	Contractor Name: <u>Barrett Roofing Co.</u>
Address: <u>2 Route 37 East</u>	Address: <u>PO Box 496</u>
City: <u>Sherman</u> State/Zip: <u>CT 06784</u>	City: <u>Dansbury</u> State/Zip: <u>CT 06813</u>
Building Name: <u>The Sherman School</u>	Products: <u>StressPly IV Mineral</u>
Roof ID: <u>Multipurpose Room Roof</u>	Square Footage: <u>5,900</u>

MANUFACTURER RESPONSIBILITIES

The Garland Company, Inc. (hereinafter referred to as "Garland"), a Corporation of the State of Ohio, warrants to the above named Owner that the Garland roof system, including all Garland metal components, will not leak due to manufacturing defects or defective workmanship by the above mentioned installing contractor. Garland will pay all authorized costs of repairs to the roofing system necessary to stop any leaks that occur during a period of twenty (20) years, from the completion date, subject to the terms of this Warranty. In the event repairs to correct leaks caused by defective materials or workmanship require removal and replacement of the roof system in recover applications, Owner will be responsible for costs associated with the removal and replacement of the original roof system.

APPLICABILITY OF WARRANTY

In order for this Warranty to remain in effect, all repairs, changes, alterations, modifications and/or additions to the roofing system must be authorized in advance in writing by Garland. This Warranty is transferable, subject to Garland's approval of the payment of the transfer fee and applicable maintenance required. This Warranty shall not be applicable if, in the sole judgment of Garland, any of the following shall occur:

- A. The roofing system is damaged by natural disasters including, but not limited to, fire, floods, lightning, hail, earthquakes, wind damage in excess of 90 mph, etc.
- B. The roofing system is damaged by structural movement or failure or movement of any material underlying the roofing system or base flashing.
- C. The roofing system is damaged by acts of negligence, misuse or accidents including, but not limited to, use of roof for other than waterproofing the building, vandalism, civil disobedience or acts of war.
- D. Damage to the roofing system resulting from:
 1. Infiltration or condensation of moisture in, through, or around walls, copings, building structure or underlying or surrounding areas not associated with Garland metal components.
 2. Ponding water, defined as standing water 48 hours after rainfall.
 3. Chemical contaminate attacks on the roofing system which have not been approved or accepted by Garland.
 4. Defects in engineering or building design or construction.
 5. Traffic or storage of materials on roof.
 6. Defects in, failure or improper application of the underlying structural material used as a base upon which the roof is applied.
- E. Failure of Owner to properly notify Garland in writing and receive written approval of:
 1. Changes in the usage of the building.
 2. Modifications or additions to the roofing system.
- F. Failure of Owner to properly maintain the roof according to the High-Performance Roof Care & Maintenance Guide.
- G. Failure of Owner to provide Garland with timely written notice of a claim pursuant to the terms of this Warranty.

LIMITATIONS/EXCLUSIONS

Garland shall not be responsible for damages that occur to real or personal property as a result of leaks, including damage to the structure itself or contents therein. Garland's sole responsibility pursuant to this Warranty is for the costs associated with the repair of leaks caused by defective materials or workmanship as set forth above. Furthermore, Garland shall not be responsible for any fading, chalking, or weathering; nor for damage, rust, or other conditions resulting from the building being located within 1,500 feet of the ocean or from acid rain; nor for any normal surface rust along the edges which, in the process of manufacturing and/or installation, have been factory-sheared or exposed in the field. Garland shall not be responsible for the removal or replacement of any roof top equipment or systems; nor for any incidental or consequential damages caused by leaks in the original roof system, including, but not limited to, loss of use or profits.

EXCEPT AS SET FORTH HEREIN, GARLAND MAKES NO OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

OWNER RESPONSIBILITIES

In the event of a leak, Owner shall provide written notice to Garland within seven (7) days of discovery of the leak and before any repairs are undertaken. The written notice shall be sent to 3800 East 91st Street, Cleveland, OH 44105. Owner, or its agent or representatives shall then provide Garland with adequate access to allow Garland to inspect the leak and roofing system. If it is determined that the roof leak is the direct result of defective materials or workmanship, Garland will perform the repairs required to correct the roof leaks at no cost to Owner. If Garland fails to have the repairs performed within 72 hours after its inspection, emergency temporary repairs performed by others will not void this Warranty, as long as those repairs are approved by Garland.

To the fullest extent allowed by law, this Warranty shall be construed under and in accordance with the laws of the State of Ohio and any actions or suits to enforce this Warranty shall be brought in the State of Ohio. This Warranty constitutes the sole and exclusive Warranty of the parties hereto and supersedes any prior understandings or written or oral agreements or warranties between the parties respecting the subject matter within.

In the event that any one or more of the provisions contained in this Warranty shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision thereof, and this Warranty shall be construed as if the invalid, illegal or unenforceable provision had never been contained therein.

WARRANTY ACCEPTANCE

Owner hereby accepts and agrees to the terms and conditions set forth in this Warranty.

By: The Garland Company, Inc.

Owner: _____

Signed By: [Signature] Joe Orlando

Signed By: _____

Date: 2/13/2015

Date: _____



RED SHIELD WARRANTY



RED SHIELD ROOFING SYSTEM LIMITED WARRANTY

Warranty No: R0043590

FBPCO # AD4310

Square Footage: 10200 s.f.

Building Owner: TOWN OF SHERMAN

Building Identification: SHERMAN SCHOOL

Building Address: 2 ROUTE 37 EAST, SHERMAN, CT, 06784-1422

Warranty Period Of: TWENTY (20) Years, Beginning On: 09/26/11

Roofing Contractor: SILKTOWN ROOFING (04832)

For the warranty period indicated above, Firestone Building Products Company, LLC ("Firestone"), an Indiana limited liability company, warrants to the Building Owner ("Owner") named above that Firestone will, subject to the Terms, Conditions and Limitations set forth below, repair any leak in the Firestone Roofing System ("System").

TERMS, CONDITIONS AND LIMITATIONS

- Products Covered.** The System shall mean only the Firestone brand roofing membranes, Firestone brand roofing insulations, Firestone brand roofing metal, and other Firestone brand roofing accessories when installed in accordance with Firestone technical specifications by a Firestone-licensed applicator.
- Notice.** In the event any leak should occur in the System, the Owner must give notice in writing or by telephone to Firestone within thirty (30) days of any occurrence of a leak. Written notice may be sent to Firestone at the street address or fax number shown on the reverse side of this Limited Warranty. Evidence of this notice shall be the receipt by Owner of a Firestone Leak Notification Acknowledgement. By so notifying Firestone, the Owner authorizes Firestone or its designee to investigate the cause of the leak.
- Investigation.** If upon investigation, Firestone determines that the leak is not excluded under the Terms, Conditions and Limitations set forth in this Red Shield Roofing System Limited Warranty (the "Limited Warranty"), the Owner's sole and exclusive remedy and Firestone's total liability shall be limited to the repair of the leak. Should the investigation reveal that the leak is excluded under the Terms, Conditions and Limitations, the Owner shall be responsible for payment of the investigation costs. Failure by Owner to pay for these costs shall render this Limited Warranty null and void. Firestone will advise the Owner of the type and/or extent of repairs required to be made at the Owner's expense that will permit this Limited Warranty to remain in effect for the unexpired portion of its term. Failure by the Owner to properly make these repairs in a reasonable manner using a Firestone-licensed applicator and within 60 days shall render this Limited Warranty null and void.
- Disputes.** Any dispute, controversy or claim between the Owner and Firestone concerning this Limited Warranty shall be settled by mediation. In the event that the Owner and Firestone do not resolve the dispute, controversy or claim in mediation, the Owner and Firestone agree that neither party will commence or prosecute any suit, proceeding, or claim other than in the courts of Hamilton County in the state of Indiana or the United States District Court, Southern District of Indiana, Indianapolis Division. Each party irrevocably consents to the jurisdiction and venue of the above-identified courts.
- Payment Required.** Firestone shall have no obligation under this Limited Warranty unless and until Firestone and the licensed applicator have been paid in full for all materials, supplies, services, approved written change orders, warranty costs and other costs which are included in, or incidental to, the System. In the event that repairs not covered by this Limited Warranty are necessary in the future, Firestone reserves the right to suspend this Limited Warranty until such repairs have been completed and the licensed applicator and/or Firestone has been paid in full for such repairs.
Exclusions. Firestone shall have no obligation under this Limited Warranty, or any other liability, now or in the future if a leak or damage is caused by: (a) Natural forces, disasters, or acts of God including, but not limited to, fires, hurricanes, tornadoes, hail, wind-blown debris, lightning, earthquakes, volcanic activity, atomic radiation, insects or animals; (b) Winds of peak gust speed at or in excess of 55MPH calculated at ten(10) meters above ground using available meteorological data; (c) Act(s), conduct or omission(s) by any person, or act(s) of war, terrorism or vandalism, which damage the System or which impair the System's ability to resist leaks; (d) Failure by the Owner to use reasonable care in maintaining the System, said maintenance to include, but not be limited to, those items listed on the reverse side of this Limited Warranty entitled "Building Envelope Care and Maintenance Guide"; (e) Deterioration or failure of building components, including, but not limited to, the roof substrate, walls, mortar, HVAC units, skylights etc.; (f) Construction generated moisture, condensation or infiltration of moisture in, from, through, or around the walls, copings, rooftop hardware or equipment, skylights, building structure or underlying or surrounding materials; (g) Acid, oil, harmful chemicals, or the reaction between them; (h) Alterations or repairs to the System that are not completed in accordance with Firestone's published specifications, not completed by an approved contractor, and/or not completed with proper notice to Firestone; (i) The design of the roofing system; Firestone does not undertake any analysis of the architecture or engineering required to evaluate what type of System is appropriate for a building and makes no warranty express or implied as to the suitability of its Products for any particular structure; such a determination is the responsibility of the architect, engineer or design professional; (j) Improper selection of materials for the roof assembly or the failure to accurately calculate wind uplift and/or roof loads; (k) Deterioration to metal roofing materials and accessories caused by marine salt water, atmosphere, or by regular spray of either salt or fresh water; or, (l) Change in building use or purpose.
- Transfer.** This Limited Warranty shall be transferable subject to Owner's payment of the current transfer fee set by Firestone.
- Term.** The term of this Limited Warranty shall be for the period set forth above and such term shall not be extended under any circumstances.
- Roof Access.** During the term of this Limited Warranty, Firestone's designated representative or employees shall have free access to the roof during regular business hours. In the event that roof access is limited due to security or other restrictions, Owner shall reimburse Firestone for all reasonable cost incurred during inspection and/or repair of the System that are due to delays associated with said restrictions. Owner shall be responsible for the damage caused by, removal and replacement of any overburdens, superstrata or overlays, either permanent or temporary, excluding accepted stone ballast or pavers, as necessary to expose the system for inspection and/or repair.
- Waiver.** Firestone's failure to enforce any of the terms or conditions stated herein shall not be construed as a waiver of such provision or of any other terms and conditions of this Limited Warranty.
- Governing Law.** This Limited Warranty shall be governed by and construed in accordance with the laws of the State of Indiana without regard to that State's rules on conflict of laws.
- Severability.** If any portion of this Limited Warranty is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall nevertheless continue in full force.

FIRESTONE DOES NOT WARRANT PRODUCTS INCORPORATED OR UTILIZED IN THIS INSTALLATION THAT WERE NOT FURNISHED BY FIRESTONE. FIRESTONE SPECIFICALLY DISCLAIMS LIABILITY UNDER ANY THEORY OF LAW ARISING OUT OF THE INSTALLATION OF, PERFORMANCE OF, OR DAMAGES SUSTAINED BY OR CAUSED BY, PRODUCTS NOT FURNISHED BY FIRESTONE.

THIS LIMITED WARRANTY SUPERSEDES AND IS IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND FIRESTONE HEREBY DISCLAIMS ALL SUCH WARRANTIES. THIS LIMITED WARRANTY SHALL BE THE OWNER'S SOLE AND EXCLUSIVE REMEDY AGAINST FIRESTONE, AND FIRESTONE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR DAMAGES TO THE BUILDING OR ITS CONTENTS OR THE ROOF DECK. THIS LIMITED WARRANTY CANNOT BE AMENDED, ALTERED OR MODIFIED IN ANY WAY EXCEPT IN WRITING SIGNED BY AN AUTHORIZED OFFICER OF FIRESTONE. NO OTHER PERSON HAS ANY AUTHORITY TO BIND FIRESTONE WITH ANY REPRESENTATION OR WARRANTY WHETHER ORAL OR WRITTEN.

FIRESTONE BUILDING PRODUCTS COMPANY, LLC

By: Phil LaDuke

Authorized

Signature:

Title:

Director, Quality Assurance

Firestone

**BUILDING ENVELOPE CARE AND MAINTENANCE GUIDE
(For Red Shield Warranted Roofing Systems)**

Congratulations on your purchase of a Firestone Roofing System! Your roof is a valuable asset that should be properly maintained. **All roofs and roofing systems require periodic inspection and maintenance to perform as designed and to keep your Limited Warranty in full force and effect.**

1. The roof should be inspected at least twice yearly and after any severe storms. A record of all inspection and maintenance activities should be maintained, including a listing of the date and time of each activity as well as the identification of the parties performing the activity.
2. Proper maintenance and good roofing practice require that ponded water (defined as water standing on the roof forty-eight hours after it stops raining) not be allowed on the roof. Roofs should have slope to drain, and all drain areas must remain clean. Bag and remove all debris from the roof since such debris can be quickly swept into drains by rain. This will allow for proper water run-off and avoid overloading the roof.
3. The Firestone Roofing System should not be exposed to acids, solvents, greases, oil, fats, chemicals and the like. If the Firestone Roofing System is in contact with any such materials, these contaminants should be removed immediately and any damaged areas should be inspected by a Firestone Licensed Applicator and repaired if necessary.
4. The Firestone Roofing System is designed to be a waterproofing membrane and not a traffic surface. Roof traffic other than periodic traffic to maintain rooftop equipment and conduct periodic inspections should be prohibited. In any areas where periodic roof traffic may be required to service rooftop equipment or to facilitate inspection of the roof, protective walkways should be installed by a Firestone Licensed Applicator as needed to protect the roof surface from damage.
5. Some Firestone roofing membranes require maintenance of the surface of the membrane:
 - a. **Smooth-surfaced Firestone APP membranes** should be coated with an approved liquid coating, such as Firestone Aluminum Roof Coating or Firestone AcryliTop applied in accordance with Firestone specifications, in order to maximize the service life of the membrane. If this coating is not applied as part of the initial roofing installation, it should be applied within the first five years after the roof is installed to help protect the membrane from surface crazing and cracking. In addition, this coating should be maintained as needed to re-coat any areas that have blistered, peeled or worn through.
 - b. **Granule-surfaced Firestone APP and SBS membranes** do not normally require surface maintenance other than periodic inspection for contaminants, cuts or punctures. If areas of granular loss are discovered during inspection, these areas should be coated with Firestone AcryliTop or other Firestone-approved coating applied in accordance with Firestone specifications.
 - c. **Gravel-surfaced Firestone BUR membranes** do not normally require surface maintenance other than periodic inspection for contaminants or damage. If areas of gravel loss are discovered during inspection, gravel must be reinstalled into hot asphalt to protect the surface of the membrane. Coatings on smooth surface BUR membranes must be maintained as needed to re-coat any areas that have blistered, peeled or worn through.
 - d. **Firestone EPDM and TPO roofing membranes** do not normally require surface maintenance other than periodic inspection for contaminants, cuts or punctures. Occasionally, approved liquid roof coatings, such as Firestone AcryliTop, are applied to the surface of EPDM membranes in order to provide a lighter surface color. Such coatings do not need to be maintained to assure the performance of the underlying EPDM roof membrane, but some maintenance and re-coating may be necessary in order to maintain a uniform surface appearance.
 - e. **Firestone Una-Clad metal roofing panels and trim** do not normally require surface maintenance other than periodic inspection for contaminants or damage. In addition, periodic cleaning of the surface may be required to remove dirt and maintain the aesthetic appearance of the coated metal. Simple washing with plain water using hoses or pressure spray equipment is usually adequate. If cleaning with agents other than water is contemplated, several precautions should be observed: (1) do not use wire brushes, abrasives, or similar cleaning tools which will mechanically abrade the coating surface, and (2) cleaning agents should be tested in an inconspicuous area before use on a large scale.
6. All metal work, including counter-flashings, drains, skylights, equipment curbs and supports, and other Firestone brand rooftop accessories must be properly maintained at all times. Particular attention should be paid to sealants at joints in metal work and flashings. If cracking or shrinkage is observed, the joint sealant should be removed and replaced with new sealant.
7. Any alterations to the roof, including but not limited to roof curbs, pipe penetrations, roof-mounted accessories, and tie-ins to building additions must be performed by a licensed Firestone Licensed Applicator and reported to Firestone. Additional information and reporting forms for roof alterations are available at www.firestonebpco.com.
8. Should you experience a leak:
 - (a) Check for the obvious: clogged roof drains, loose counterflashings, broken skylights, open grills or vents, broken water pipes.
 - (b) Note conditions resulting in leakage. Heavy or light rain, wind direction, temperature and time of day that the leak occurs are all-important clues to tracing roof leaks. Note whether the leak stops shortly after each rain or continues to drip until the roof is dry. If you are prepared with the facts, the diagnosis and repair of the leak can proceed more rapidly.
 - (c) Contact Firestone Warranty Claims at 1-800-830-5612 as soon as possible...but please don't call until you are reasonably sure that the Firestone Roofing System is the cause of the leak.

Firestone feels that the preceding requirements will assist you, the building owner, in maintaining a watertight roof for many years. Your roof is an investment, and maintenance is essential to maximize your return on this important investment.

Firestone

BUILDING PRODUCTS

NOBODY COVERS YOU BETTER™

250 West 96th Street – Indianapolis, IN 46260

1-800-428-4442 * 1-317-575-7000 * FAX 1-317-575-7100

www.firestonebp.com



NOW THAT YOU HAVE A NEW FIRESTONE ROOFING SYSTEM...

Congratulations on your purchase of a Firestone Roofing System! Your new roof is a valuable asset and as such should be properly maintained. All components of the building envelope require periodic maintenance to perform as designed. "Building Envelope Care And Maintenance Guide" printed on the back of your Firestone Limited Warranty contains a number of important items to assist you in maintaining a watertight building for many years. These maintenance guidelines recommend that the building envelope be inspected at least twice each year. Although this inspection can be performed by any qualified person selected by you, **Firestone recommends that at least one inspection every year be conducted by the Firestone Licensed Applicator who installed your roof.**

Whenever an inspection of the roof is performed, Firestone recommends that the following items be included:

1 ROOF CONDITIONS REQUIRING PERIODIC INSPECTION:

Periodic inspection of the following items is very important to assure that the Firestone Roofing System has not been exposed to conditions not covered by Firestone's Limited Warranty:

- a. Roof Traffic & Walkways:** The Firestone Roofing System is designed to be a waterproofing component—not a traffic bearing component of the building envelope. As stated in Firestone's System Design Instructions for all Firestone Roofing Systems, "Walkways help protect the membrane from damage due to necessary roof-top service traffic." Please note that walkways should be maintained at all roof access points, around all mechanical equipment which requires maintenance and at all areas where roof traffic more frequent than once a month is anticipated. **If, because of traffic requirements, walkways need to be installed on your roof, contact your Firestone Licensed Applicator before proceeding.**
- b. Discharges:** All components of the Firestone roof system must be protected from discharges, such as petroleum products, greases, oils and fats, acids and the like. If the building will have any such discharges, please contact Firestone for suggested methods of protection. **If, because of the presence of chemical discharges, protection measures are recommended, contact your Firestone Licensed Applicator before proceeding.**

- c. **Ponding Water:** Proper maintenance and good roofing practice suggests that ponded water (defined as standing water on the roof forty-eight (48) hours after it stops raining) should not be allowed on the roof. Roofs should have slope to drain and all drain areas should remain clean. **If ponded water areas are observed on the roof that cannot be corrected by periodic cleaning of drain areas, contact your Firestone Licensed Applicator for suggestions.**
- d. **Storms:** The building envelope should be inspected after any severe storm, especially after any storm that involves high sustained winds, heavy wind gusts or tornado-like conditions. All roof surfaces should be inspected for damage caused by wind-blown debris. The roof also should be inspected after any hail or ice storm which could have damaged the roofing system. **If storm-related damage to the roof system is observed, contact your Firestone Licensed Applicator before proceeding.**
- e. **Moisture Infiltration:** It is very important to inspect the roofing system for moisture infiltration from sources excluded by Firestone's Limited Warranty. These sources can include but are not limited to:
 - 1. Latent moisture in a pre-existing roofing system or roof insulation remaining beneath the Firestone Roofing System.
 - 2. Moisture infiltration in or through building walls, copings, mortar joints and roof-top equipment.
 - 3. Condensation of water vapor within the roofing system due to temperature and humidity differentials.

Because inspection for moisture infiltration requires professional roofing experience, Firestone recommends that this inspection be performed by a Firestone Licensed Applicator at least once a year.

2 NON-FIRESTONE MATERIALS:

In some instances, non-Firestone supplied materials are used in conjunction with Firestone Roofing Systems. These materials may include, but are not limited to the following items:

- a. Locally-fabricated sheet metal flashings.
- b. Non-Firestone sealants at roof terminations.
- c. Non-Firestone roof insulations.
- d. Non-Firestone insulation fastening devices, including but not limited to roofing screws, insulation plates, construction adhesives and roofing asphalt.
- e. Preservative-treated wood nailers and blocking.
- f. Roof drains and drain inserts.
- g. Pre-fabricated roof curbs.
- h. Concrete walkway or ballast pavers.
- i. Stone ballast.
- j. Non-Firestone roof coatings.

Because such items are not warranted by Firestone, it is important to establish an ongoing inspection and maintenance program to assure that the performance of non-Firestone materials does not adversely affect the weathertight integrity of the Firestone roofing system. **Sheet metal items** should be checked for weathertightness and re-anchored/recalced as needed. **Nailers and blocking** should be checked for soundness, and replaced or re-secured if necessary. **Roof drains and drain inserts** should be cleared of any debris. **Sealants** should be inspected for shrinking or cracking and replaced as required. The integrity of **roof insulation and insulation attachments** should be verified. **Walkway pavers** should be checked for cracking or splitting and replaced if necessary. **Ballast stone** should be checked for deterioration due to freeze/thaw conditions. In addition, all ballasted roofs should be inspected for localized wind displacement of the ballast, especially along perimeter roof areas. In the event ballast displacement is observed, the ballast should be carefully re-dispersed uniformly and the addition of larger ballast stones should be considered.

3 FIRESTONE PRODUCTS REQUIRING PERIODIC INSPECTION:

Although Firestone products do not necessarily require periodic maintenance to assure long-term performance, periodic inspection is very important to assure that these products have not been exposed to conditions excluded by Firestone's Limited Warranty:

- a. The **Firestone Roofing Membrane** should be inspected for tears or punctures caused by wind storms, falling objects, roof traffic and the like. If the Firestone membrane is supplied with a factory applied coating, such as roofing granules, the coating should be inspected for any discontinuities caused by abrasion from wind, roof traffic or other sources. **Tears, punctures and abrasions to the membrane must be repaired by a Licensed Firestone Applicator using Firestone specified repair procedures.**

In addition, the membrane should be inspected for any contamination from discharges, such as petroleum products, greases, oils and fats, acids and the like. If any such discharges are observed on the membrane, please contact Firestone for suggested methods of protection. If, because of the presence of chemical discharges, protection measures are recommended by Firestone, contact your Firestone Licensed Applicator before proceeding.

- b. **Firestone Wall Flashings** also should be inspected for tears, punctures, abrasion and contamination from discharges, following the same procedures as for the Firestone Roof Membrane.

4 INSPECTIONS AND SAFETY:

Inspection of any building envelope should be undertaken only by qualified persons who are familiar with safe practices, including all applicable occupational health and safety regulations relating to roofing and construction. **Firestone recommends that all roof inspections be performed by a Firestone Licensed Applicator or a similar roofing professional.**

- c. **Ponding Water:** Proper maintenance and good roofing practice suggests that ponded water (defined as standing water on the roof forty-eight (48) hours after it stops raining) should not be allowed on the roof. Roofs should have slope to drain and all drain areas should remain clean. **If ponded water areas are observed on the roof that cannot be corrected by periodic cleaning of drain areas, contact your Firestone Licensed Applicator for suggestions.**
- d. **Storms:** The building envelope should be inspected after any severe storm, especially after any storm that involves high sustained winds, heavy wind gusts or tornado-like conditions. All roof surfaces should be inspected for damage caused by wind-blown debris. The roof also should be inspected after any hail or ice storm which could have damaged the roofing system. **If storm-related damage to the roof system is observed, contact your Firestone Licensed Applicator before proceeding.**
- e. **Moisture Infiltration:** It is very important to inspect the roofing system for moisture infiltration from sources excluded by Firestone's Limited Warranty. These sources can include but are not limited to:
 - 1. Latent moisture in a pre-existing roofing system or roof insulation remaining beneath the Firestone Roofing System.
 - 2. Moisture infiltration in or through building walls, copings, mortar joints and roof-top equipment.
 - 3. Condensation of water vapor within the roofing system due to temperature and humidity differentials.

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- b. Non-Firestone sealants at roof terminations.
- c. Non-Firestone roof insulations.
- d. Non-Firestone insulation fastening devices, including but not limited to roofing screws, insulation plates, construction adhesives and roofing asphalt.
- e. Preservative-treated wood nailers and blocking.
- f. Roof drains and drain inserts.
- g. Pre-fabricated roof curbs.
- h. Concrete walkway or ballast pavers.
- i. Stone ballast.
- j. Non-Firestone roof coatings.



SILKTOWN ROOFING, INC.
CONTRACTOR'S WARRANTY

Project: Sherman School

Owner: Town of Sherman, CT

Silktown Roofing, Inc. hereby warrants the Roofing Work for a period of Two (2) Years from September 26, 2011 against failures of Workmanship and Materials in accordance with the Project Specifications.

Silktown Roofing, Inc.


Joan K. McConville, Corporate Secretary

Notary Public: 
My Commission Expires January 31, 2014.



An Affirmative Action / Equal Opportunity Employer



Inspection Report

Client: Sherman Board of Education

Facility: Sherman School

Report Date: 04/29/2019

Roof Section: All Roof Sections except Roof Section AD & Shingle Section:

Inspection Information

Inspection Date	04/29/2019	Core Data	Yes
Inspection Type	Infrared Scan	Leakage	Yes
Deck Conditions	Good		

Flashing Conditions

Perimeter	Failed	Wall	Fair
Projections	Failed	Counterflashing	Failed

Miscellaneous Details

Reglets	Failed	Debris	Yes
Control Expansion Joints	N/A	Ponding Water	Minor
Parapet Wall	N/A	Coping Joints	N/A

Perimeter

Rating	Failed
Condition	Due to UV exposure and age there is shrinkage in the flashing membrane causing splits and lifting of the seams.

Field

Rating	Failed
Condition	Due to UV exposure and age there is shrinkage in the membrane which causes the splits and lifting of seams

Penetrations

Rating	Fair
Condition	As show in pictures there are several penetrations in which is the flashing around them is compromised due to UV exposure and age.

Drainage	
Rating	Good
Condition	Overall drainage is in good condition. The number of drains and locations are sufficient for the roof size. The overall tapered slope of the roof insulation system is allowing the water to properly drain. There are some areas of minor ponding/bird bathing of which some is contributed to wet/compromised insulation

Overall	
Rating	Failed
Condition	<p>Roofs AE and AG are both single ply EPDM roof surface and were both installed in 2000 and are in fair/good condition, most likely out of warranty. The IR scan showed some wet areas that should be repaired.</p> <p>Roof D, E, W and AF were all installed in 2011 and are still under warranty until September 2031. These roofs are also single ply EPDM roof surfaces and are in fair condition.</p> <p>The following roof sections S, V, Y, AA, AB, and AC were all installed in 1991 and are in failing condition. The infrared scans shows there are some wet areas which leads us to believe that the actual waterproofing membrane is breaking down and failing. These sections are at the end of their useful life and immediate action should be taken to properly care for them.</p> <p>The rest of the rating is geared towards the roofs sections that were installed in 1991 since these are the sections of the roof that need immediate attention.</p>



Photo Report

Client: Sherman Board of Education

Facility: Sherman School

Report Date: 04/29/2019

Roof Section: All Roof Sections except Roof Section AD & Shingle Section:



Photo 1

Overview of roof section AF - roof installed in 2011



Photo 2

Splits in seams causing leaks



Photo 3

Overview of roof AB which was installed in 1991 and is at the end of its usable life and needs immediate attention



Photo 4

Another view of roof AB - installed in 1991



Photo 5

Overview of multiple roof sections



Photo 6

Overview of Roof AE

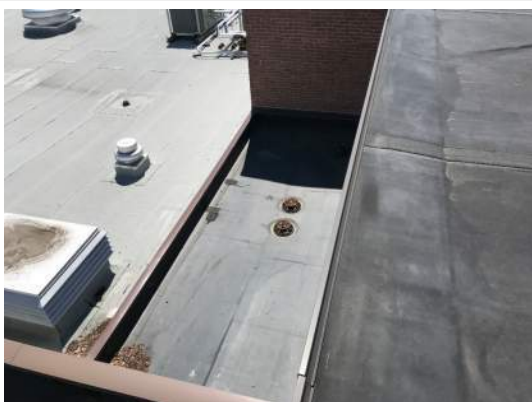


Photo 7

Overview of roof D which was installed in 2011 and is currently still under warranty until 2031



Photo 8

Overview of Roof AD which is a Garland which is a 2 ply SBS modified roof system, which was installed in 2014 and is currently under a 20 year warranty which will expire in 2034.



Photo 9

Overview of roof AD and AG



Photo 10

Overview of roof AG which was installed in 2000.



Photo 11

Photo confirmation of weep holes that needs to be cleared



Photo 12



Photo 13

Photo confirmation of warranties in place on certain roof sections



Photo 14

Core cut roof AB shows structurally sloped wood deck with 2" of ISO



Photo 15

Core cut of one section of roof AA - Fully adhered EPDM roof with a structurally sloped metal deck. This section has 3" ISO, 1/4" of polystyrene and 1/2" wood fiber board. We did a core cut on another section of roof AA and there was no recovery board or polystyrene present, just ISO. The existing EPDM membrane is significantly worn which you can see the reinforcement showing.



Photo 16

Another view of core cut



Photo 17

Another view of core cut



Photo 18

Overview roof section V which was installed in 1991 and is one of the sections that need immediate attention



Photo 19

Overview of roof section S which was installed in 1991 and is in need of immediate attention



Photo 20

Photo confirmation showing the field side laps being to open up due to UV exposure



Photo 21

Photo confirmation of seam lifting and curling. The actual membrane is beginning to break down due to age and UV exposure.



Photo 22



Photo 23

Photo confirmation of more seams lifting and curling due to UV exposure



Photo 24



Photo 25

Photo confirmation of penetrations in the field.

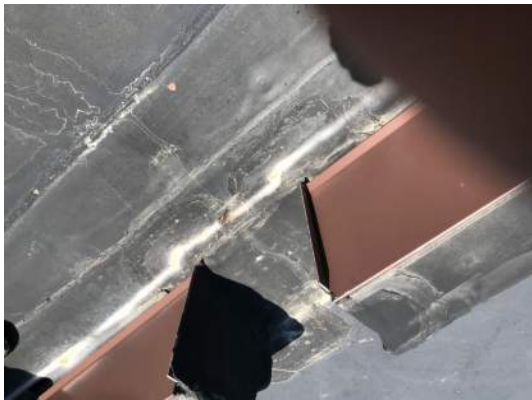


Photo 26

Unfortunately the photo is rotated but this is a roof to roof scupper.



Photo 27

Overview of roof section AC which was installed in 1991 and is one of the sections that need immediate attention

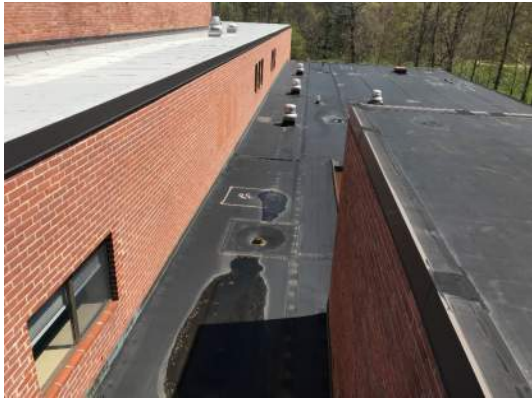


Photo 28

another view of roof section AC



Photo 29

Overview of roof section AE which was installed in 2000



Photo 30

Another view of roof section AE



Photo 31

Electrical conduit on roof section AA - the seams are lifting and there is a tear in the pipe boot



Photo 32

Photo confirmation of lifting seams around the pipe boot penetration



Photo 33

Pipe boot is damaged which can and may be contributing to water infiltration



Photo 34

Overview of Roof AA which was installed in 1991 and is a roof section that needs immediate attention



Photo 35

Photo confirmation showing where seams are lifting



Photo 36



Photo 37

Photo confirmation of lifting seams



Photo 38

Photo confirmation on a 1991 roof section where the single ply roof scrim is showing. This is a common wide spread condition on all of the 1991 roof sections which happens based on age and UV exposure and once this happens the roof is failed.



Photo 39

Overview of Roof AA which shows some ponding/bird bathing.



Photo 40

Overview of roof AB which was installed in 1991 and is another roof section that is in need of immediate attention.



Photo 41

Another view of roof AB



Photo 42



Photo 43

Another view of roof AB



Photo 44

Photo confirmation of cracks in the masonry walls



Photo 45

Based on past experience over the last several years the windows have been troublesome, which was caused when there was no metal or waterproofing membrane installed under the sill during the installation process.



Solution Options

Client: Sherman Board of Education

Facility: Sherman School

Roof Section: All Roof Sections except Roof Section AD & Shingle Section:


Repair Options

Solution Option:	Repair	Action Year:	2021
Square Footage:	-	Expected Life (Years):	5
Budget Range:	\$120,000.00 - \$145,000.00		

This solution would be for the 1991 EPDM sections.

This option would be to do flashing and field repairs and use a liquid applied coating over the existing roof and insulation system. Due to the existing conditions of the waterproofing membrane in place, there would be no warranty, but it should extend the life of the roof another 3-5 years, with some expected maintenance during that time.

Replace Options

Solution Option:	Replace 	Action Year:	2021
Square Footage:	-	Expected Life (Years):	25
Budget Range:			

This solution is for the 1991 roof sections.

This would be a complete rip to the deck. We would install an all new insulation system. This will be a 2 ply modified painted silver mineral surface, the same system as the 2014 section which is also a Garland roof.

This will give you a 25 year warranty plus if you were to use OMNIA cooperative purchasing you would get an additional 2 years.




Solution Options

Client: Sherman Board of Education

Facility: Sherman School

Roof Section: All Roof Sections except Roof Section AD & Shingle Section:

Restore Options

Solution Option:	Restore 	Action Year:	2021
Square Footage:	-	Expected Life (Years):	15
Budget Range:			

This solution would be for the 2000 roof sections

This option includes partial or fully reinforced fluid applied restoration on this roof extending the usable life by 15-20 years depending on the scope of work.

This is a 21 year old EPDM roof that is currently out of warranty. A restoration needs to be completed otherwise it will be in the same situation as the 1991 roof section.