

M. Gottfried, Inc.

Roofing and Sheet Metal Contractors

89 Research Drive, P.O. Box 2218, Stamford, Connecticut 06906-0218
PHONE: (203) 323 8173 Website: mgottfried.com FAX: (203) 359 2498

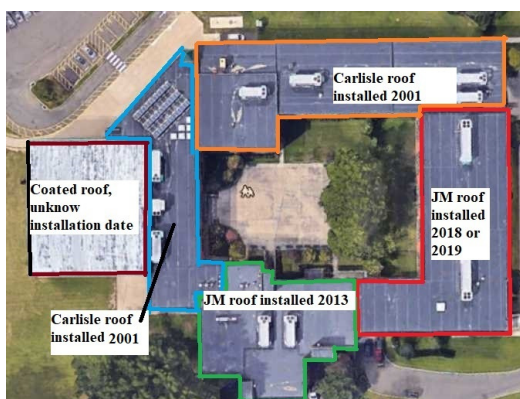
TO: Viking Construction, Inc.
1387 Seaview Avenue
Bridgeport, CT 06607
ATTN: JoAnn Michaels

DATE: November 25, 2019

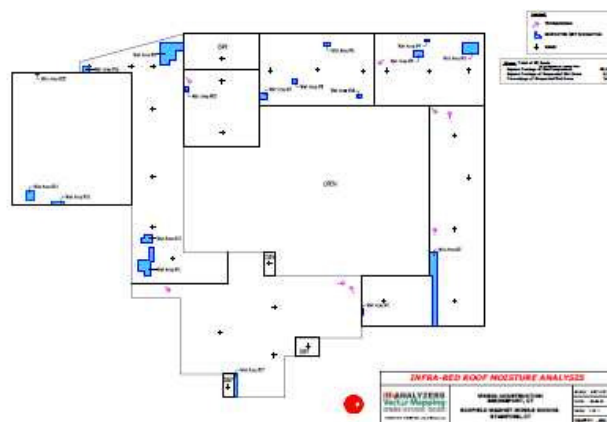
RE: Roof report and repair quotation
Scofield Magnet Middle School
641 Scofieldtown Road
Stamford, CT 06903

Dear Ms. Michaels,

As per your request we went to the above school to perform an inspection of the roofs, and, using the Infrared Thermographic Roof Moisture Analysis Report as a guide, look for possible sources of water leaks in the noted “wet areas”. We also were to perform test cuts, if necessary, to verify the wetness and determine the roof components in those areas. We were also asked to provide pricing on replacing the wet areas, and to provide a recommendation and pricing for roof maintenance.



Roofs labeled with installation dates



Areas of moisture shown on Roof Scan

The condition of the roofs on Scofield Magnet Middle School vary from very good to in need of replacement. The infrared scan revealed 18 areas of wetness, spread over almost all of the roof systems. The manufacturers used for the roofs on the school appear to be Carlisle and JM. The manufacturer on one area is unknown. Warranty information on the various roof areas is sketchy, but installation dates are known. There are two areas where Carlisle roofs are present. They are outlined in blue and orange. A 15-year Carlisle roof warranty was found that expired in 2016. Even though both areas may have been covered under this warranty, we broke them up because of the different condition of the roofs in each section. The Orange section is in good condition and can be repaired, the Blue has large wet areas, areas of loose membrane and other issues. Two roof areas are covered by JM roofs. The green area was installed in 2013. No warranty information was available for this roof, but it most likely had a 15 or 20-year warranty. The other JM roof was recently installed. The warranty status of this roof is unknown. If a warranty was issued for this work, repairing the wet areas found in the infra-red scan as well as items that might not be up to JM standards, should be performed at no charge to the school by JM or the installing contractor. This area will be discussed further in the report. The final roof area is an EPDM roof that had received a roof coating. No data was available on this roof.

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“New JM Roof”

As noted above, one of the JM roofs was installed within the last year. The infra-red scan revealed a couple of wet areas in the roof. In addition, we saw a number of details and flashing that might be questionable. We are not sure what stage this roofing project is in; if a warranty has been issued, if the final inspection was performed by the manufacturer, etc., but regardless of stage, a new roof should not have wet areas. If a warranty was issued, the manufacturer should be contacted immediately and told of the wet areas. JM will be able to give the Owner’s representative more information on warranty, status of inspection, status of inspection repairs as well as giving the procedures to follow to have the wet areas replaced and inspection items repaired to bring this roof area up to JM’s quality standards. Who corrects the issues will be up to JM and their agreement/warranty period from the installing contractor. If a warranty is not present, there should be a warranty/guarantee from the contractor for their work. In either instance the cost for repairs on this roof should not fall to the school.

Carlisle roof – orange section

Wet areas

There were 8 wet areas found in orange section of the Carlisle roof.



All of the wet areas found on this roof appear to have come from holes and punctures in the roof membrane. Most of these have been patched, a few have not. The wet areas should be cut out and replaced with new insulation and membrane. Any penetration that is within the affected area would need to be reflashed.

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Holes in the roof



The roof must be checked for holes. Any hole that is found should be patched as soon as possible before moisture can get into the roofing system. There are also ripples present in the membrane between the marked hole and the wall. This should be investigated to see if there is a loose area of membrane present, or there are just lumps in the installation. We also found a hole in an outlined but un-numbered area.

Drying out curb and penetration flashing



Many of the corner and penetration flashings are starting to dry out. To extend the life of the roof we would recommend cleaning, priming and overlaying the corners and flashing with new flashing membrane.

Field laps



Drying of the field laps and a few fishmouths in the laps were also seen. Overlay the field laps with new flashing membrane will cover the developing voids, protect the laps and extend their life.

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Lifting flashing



Some of the patches are lifting. These also need to be striped in with new flashing.

Unused items should be removed



Abandoned items should be removed and patched to eliminate a possible penetration leak. (Any below deck disconnects would be by others).

Penetration pockets



Penetration pockets need to be checked, topped off and restriped if necessary.

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Carlisle Roof – blue section

This section of the Carlisle roof is in worse condition than the orange section. It is more congested and has 4 noted wet areas.

Wet areas

Wet area #9 spans a large corner of the roof section near the solar panels. It has many patched holes in it.

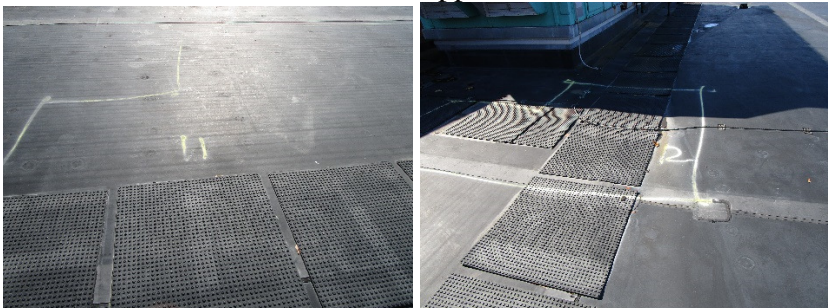


Wet area #16 is tucked under the corner where the Carlisle roof goes under the Coated roof.



This area needs to be scrubbed clean then any holes could be found.

Wet areas #11 and 12 are on the opposite side of the roof.



Holes were found in these areas.

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Other items found in this roof section

Bridged membrane



The field sheet as pulled away from the rising wall and outside curb. As the membrane continues to age and shrink, this problem will worsen.

Lifting patches



Fishmouths and lifting patches are found on this roof area. If these open up all the way to the end of the lap a pathway for water to enter the roofing system develops and leaks may occur.

Soft sumps at drains



The drain sumps feel soft. It is possible that a fiberboard insulation was used to create the sump. This may have gotten wet and become “mushy”.

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Water damage to roof system



We took a roof sample at an unadhered piece of membrane in a “non-wet” area of the roof. We found the insulation plate had rusted and the membrane deboned.

2013 JM Roof

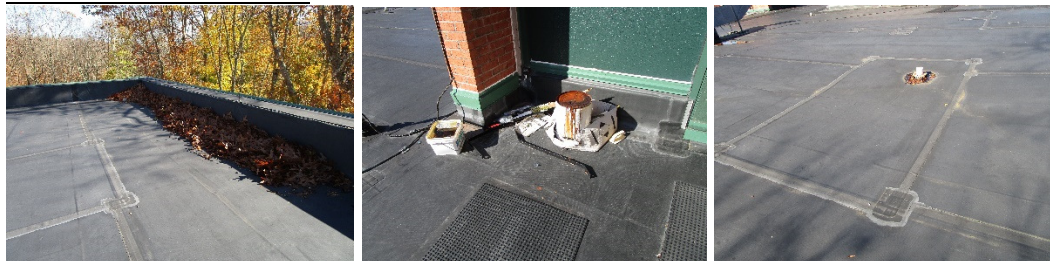
Only one wet area was found on the 2013 JM Roof.



The wet area follows along the stair wall. It is also a collection point for debris. We cannot tell if there are holes under the debris or concrete pad. When this area is removed and replaced, we can get a better idea if the moisture was from holes in the roof or is a wall issue.

Other items noted on this area fall under general and preventative maintenance work.

Clean leaves and debris



All leaves and debris should be removed from the roof. Drains should also be cleared of leaves.

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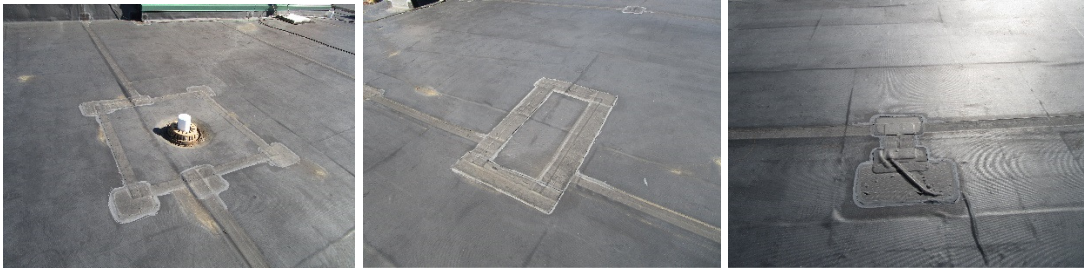
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Overlaying areas of multiple patches and stripping



There are a few areas where cut areas have been overlaid with membrane, or patches have been installed at multiple points around a patch. These areas can be overlaid with new membrane as a secondary precaution.

Coated EPDM Roof



This section of roof has 3 wet areas, # 13, 14 and 15. It is very difficult to see if there are holes that have caused the wetness due to the condition of the coating. Before cutting and replacing any of these wet areas, we would have to clean a test sample of membrane and perform an adhesion test with new membrane. If we get good results, proceeding with replacement of the wet areas can proceed. If adhesion is only moderate, a surface patch the marked areas may be recommended repair. This way the membrane is not cut (may create more problems if it cannot be properly sealed) and the surface patch can be monitored.

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Summary

Scofield Magnet Middle School has conditions that can be repaired, conditions that need research and sections that should be replaced. The “new” roof requires action by others ensure that its warranty is active, the wet areas are dealt with, and the roof meets the manufacturers requirements. We will not be including any work on this area as it should be performed by the manufacturer or installing contractor. Removal of wet areas and general maintenance on the 2013 JM roof and “Orange” Carlisle roof should be performed in order to get the expected live, or as much life as possible out of these systems. The “Blue” Carlisle roof is not in very good condition. When you combine the wet areas, flashing issues, loose membrane areas, etc., It may make more sense to reroof this area rather to repair it. We are not including any costs for repairs to this section. If the roof has (or develops) leaks, they can be dealt with on a time and material basis until replacement is budgeted and performed. The “coated” EPDM roof does not appear to have many issues, but adhesion to the coating is a concern. We have included performing an adhesion test and either replacing the wet areas or patching over the marked areas using standard black/grey EPDM membrane.

Please let us know if you have any questions or need additional pricing on the other items mentioned or wish us to price up any of the discussed work on the “blue” Carlisle section.

Respectfully,



David Lederman