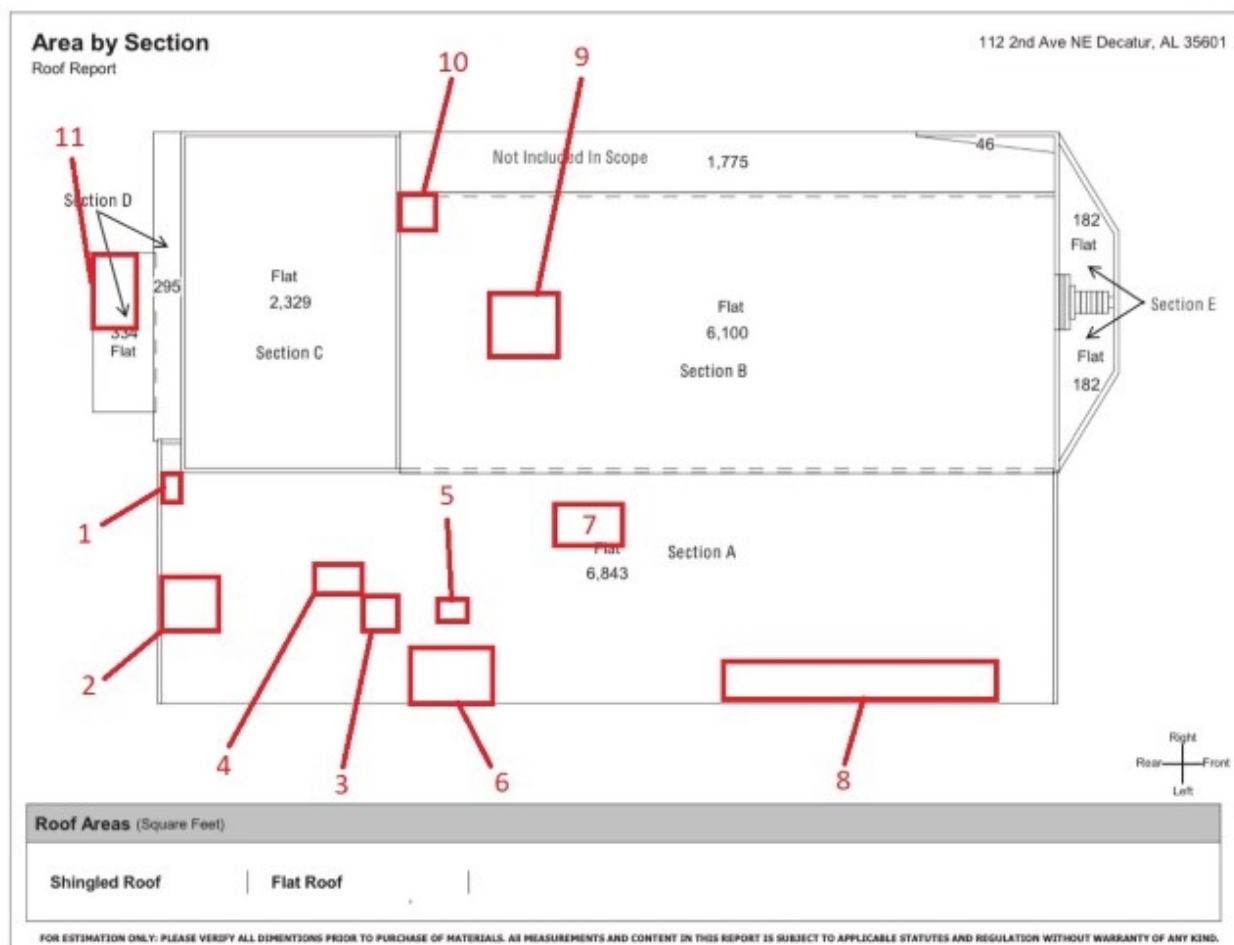
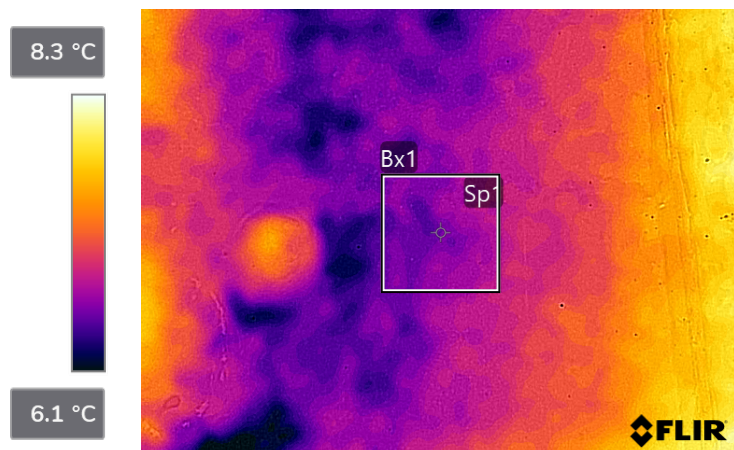


After scanning the entire flat roof system for defects I located multiple punctures and wet spots, 11 in total. The marked square footage of those 11 spots comes to 801SF. Section E or "marquee roof" has had multiple spots of deck failure due to long term leakage around flashing and windows. I would estimate over 50% of the insulation on Section E is wet, damaged or missing and would not recommend restoring this section.





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flir_20211119T160335.jpg

Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	18.0 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T160335.jpg
File size	970 KB
Width	640
Height	480
Minimum temp.	5.9 °C
Maximum temp.	8.1 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

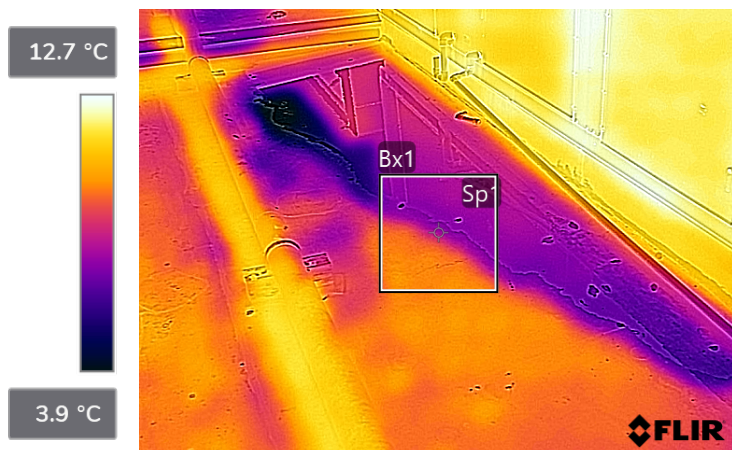
Measurements

Sp1	6.5 °C
Bx1	
Max	6.9 °C
Avg	6.6 °C
Min	6.4 °C

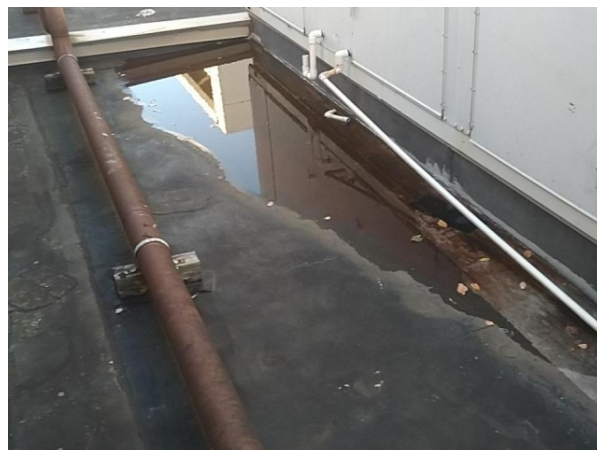
This is a test shot to check settings on camera and get a base temprature reading on a known dry area of roofing.



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flir_20211119T160836.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	22.1 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T160836.jpg
File size	1172 KB
Width	640
Height	480
Minimum temp.	3.7 °C
Maximum temp.	12.5 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

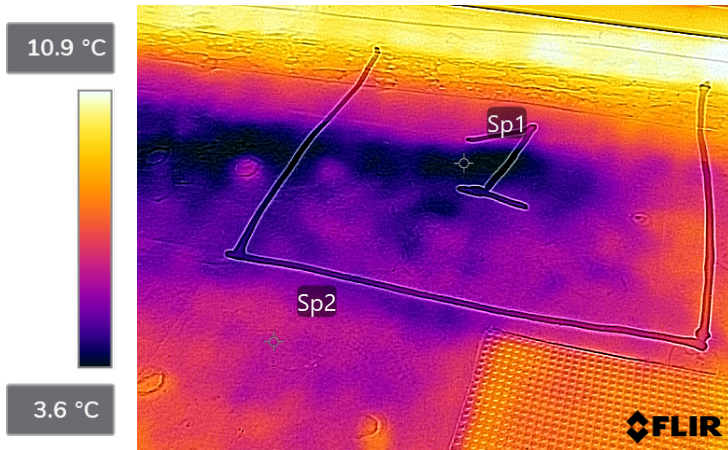
Measurements

Sp1	7.8 °C
Bx1	
Max	10.0 °C
Avg	8.5 °C
Min	6.3 °C

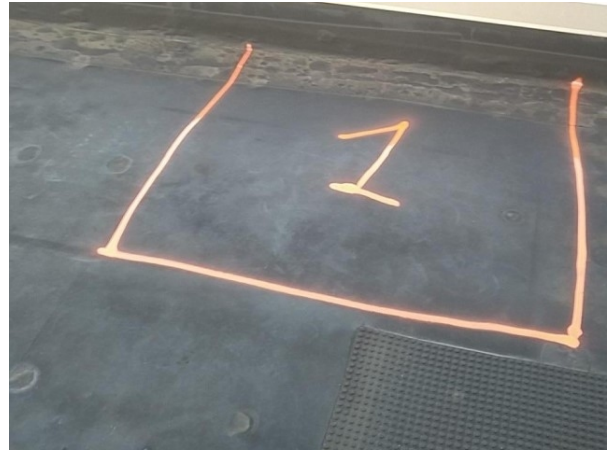
This area of the roof system ponds water and should be addressed with a cricket. Issues have been repaired here in the past, however the IR reflects off the pool making it impossible to get a picture of the wet insulation substrate.



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flir_20211119T160449.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	20.1 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T160449.jpg
File size	1076 KB
Width	640
Height	480
Minimum temp.	3.4 °C
Maximum temp.	10.8 °C

Camera information

Camera model	CAT® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

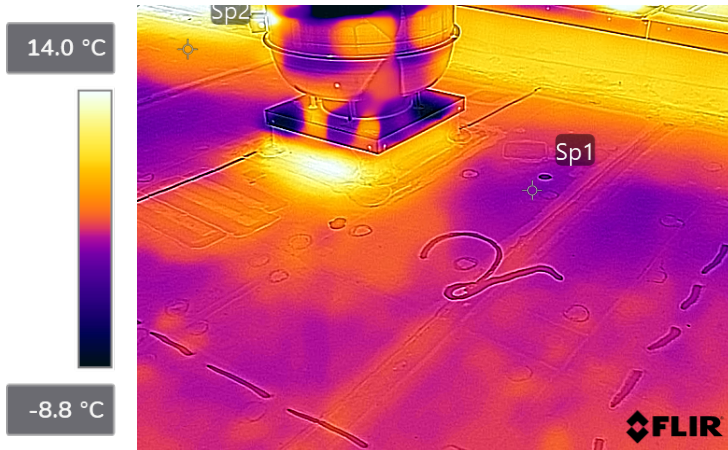
Measurements

Sp2	5.6 °C
Sp1	3.7 °C

Spot 1 | located leak caused by puncture and wet insulation approx. 4' by 4'



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flir_20211119T160638.jpg

Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	21.6 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T160638.jpg
File size	1122 KB
Width	640
Height	480
Minimum temp.	-19.5 °C
Maximum temp.	16.2 °C

Camera information

Camera model	CAT® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

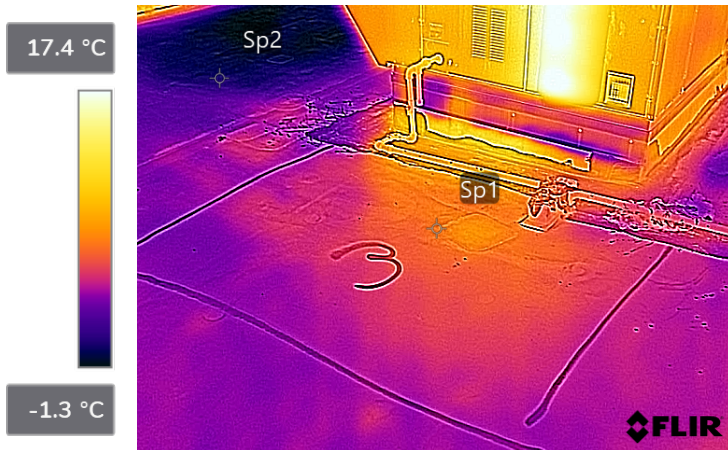
Measurements

Sp2	6.6 °C
Sp1	1.8 °C

Spot 2 | located puncture in membrane and wet insulation around RTU with an approx. size of 10' by 8'



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flir_20211119T160756.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	22.2 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T160756.jpg
File size	1154 KB
Width	640
Height	480
Minimum temp.	-1.5 °C
Maximum temp.	17.7 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

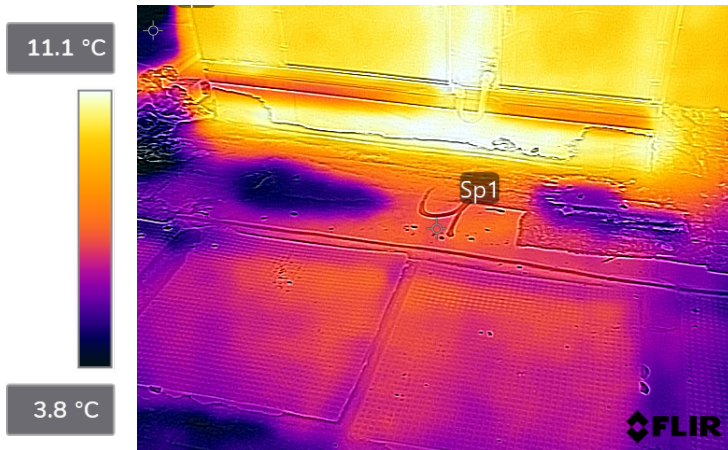
Measurements

Sp2	0.2 °C
Sp1	7.5 °C

Spot 3 I located an area of insulation that has been wet before and has degraded to a point that it has visible humps. The size is 5' by 5'



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flir_20211119T160905.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	22.2 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T160905.jpg
File size	1166 KB
Width	640
Height	480
Minimum temp.	2.3 °C
Maximum temp.	11.4 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

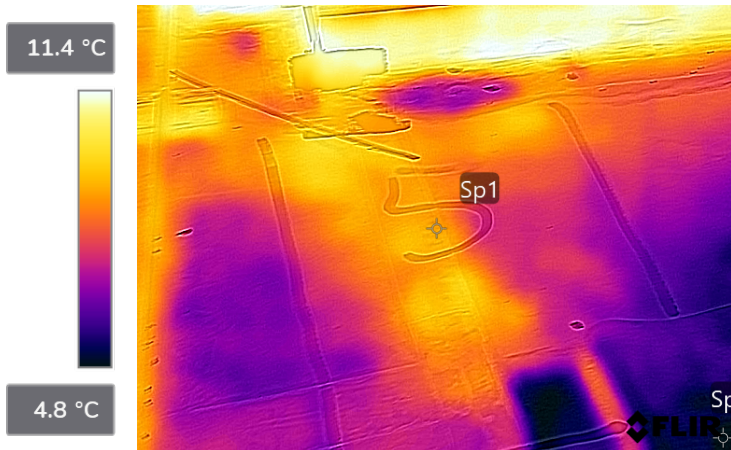
Measurements

Sp2	4.5 °C
Sp1	7.1 °C

Spot 4 I found water in the flashings and damp insulation on the top side of an RTU curb 3' by 9' in size.



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flir_20211119T161032.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	22.0 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T161032.jpg
File size	1056 KB
Width	640
Height	480
Minimum temp.	4.4 °C
Maximum temp.	12.0 °C

Camera information

Camera model	CAT® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

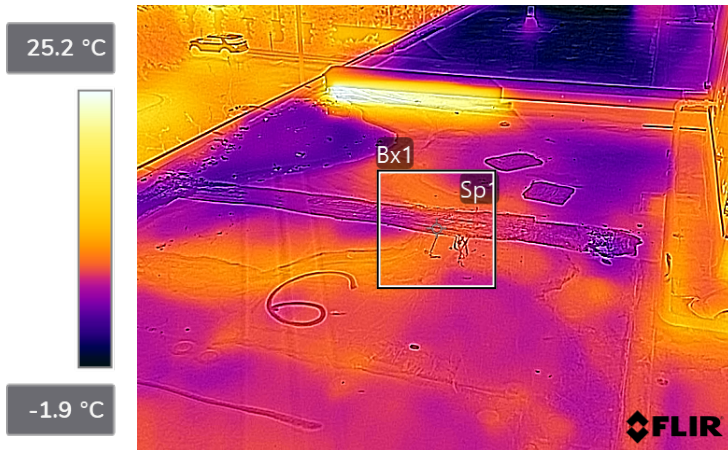
Measurements

Sp2	4.6 °C
Sp1	9.1 °C

Spot 5 I found a puncture in the membrane and wet insulation approx. 3' by 4'.



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flir_20211119T161124.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	22.2 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T161124.jpg
File size	1288 KB
Width	640
Height	480
Minimum temp.	-2.2 °C
Maximum temp.	25.5 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

Measurements

Sp1	8.4 °C
Bx1	
Max	10.6 °C
Avg	8.6 °C
Min	6.4 °C

Spot 6 I located a large section of wet insulation extending from and RTU to the expansion joint and the drip edge. Size 12' by 12'



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flir_20211119T161151.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	22.7 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T161151.jpg
File size	1016 KB
Width	640
Height	480
Minimum temp.	0.7 °C
Maximum temp.	10.2 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

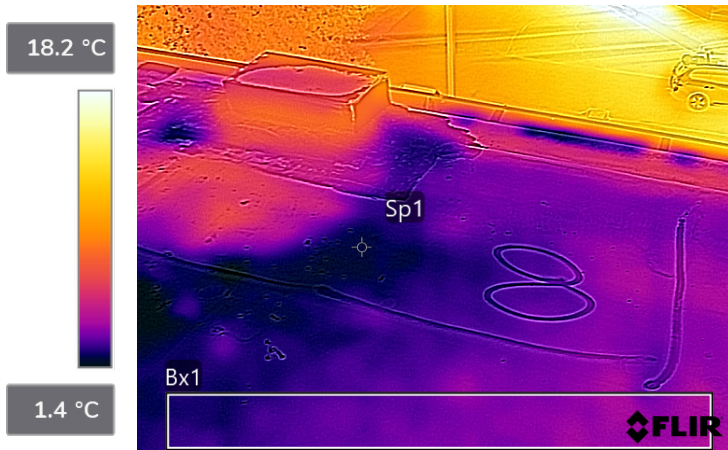
Measurements

Sp1	3.3 °C
Bx1	
Max	6.8 °C
Avg	5.7 °C
Min	4.2 °C

Spot 7 I located a puncture in the membrane and wet insulation about 6' by 4'.



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flir_20211119T161454.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	23.7 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T161454.jpg
File size	1104 KB
Width	640
Height	480
Minimum temp.	1.2 °C
Maximum temp.	21.3 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

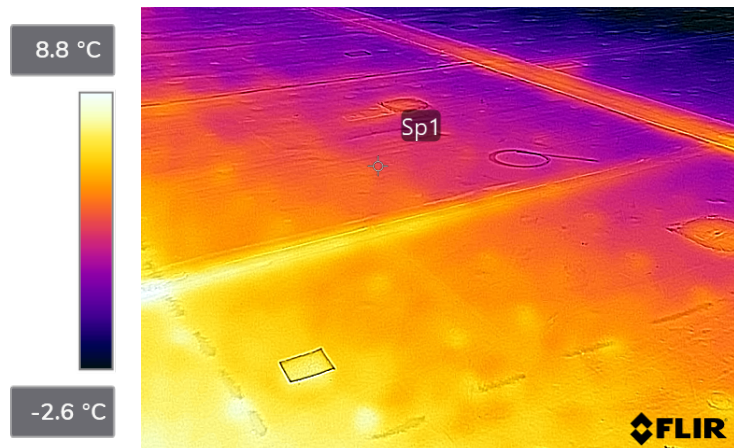
Measurements

Sp1	1.9 °C
Bx1	
Max	4.4 °C
Avg	3.4 °C
Min	2.1 °C

Spot 8 I found moisture in flashings and moisture in insulation all along the drip edge about 4' by 35'.



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flir_20211119T164029.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	20.8 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T164029.jpg
File size	1051 KB
Width	640
Height	480
Minimum temp.	-2.7 °C
Maximum temp.	8.8 °C

Camera information

Camera model	CAT® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

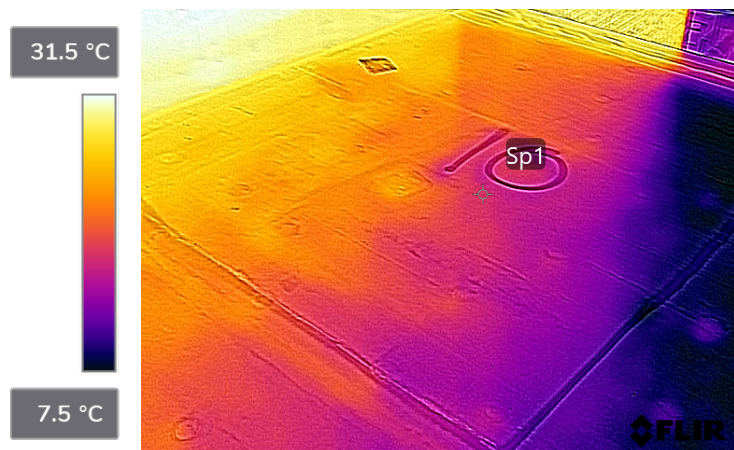
Measurements

Sp1	3.7 °C
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Spot 9 I found insulation that has been wet and some spots where it is buckling up due to moisture damage, approx. 10' by 15'.



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flir_20211119T164043.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	21.2 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T164043.jpg
File size	980 KB
Width	640
Height	480
Minimum temp.	7.3 °C
Maximum temp.	31.8 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

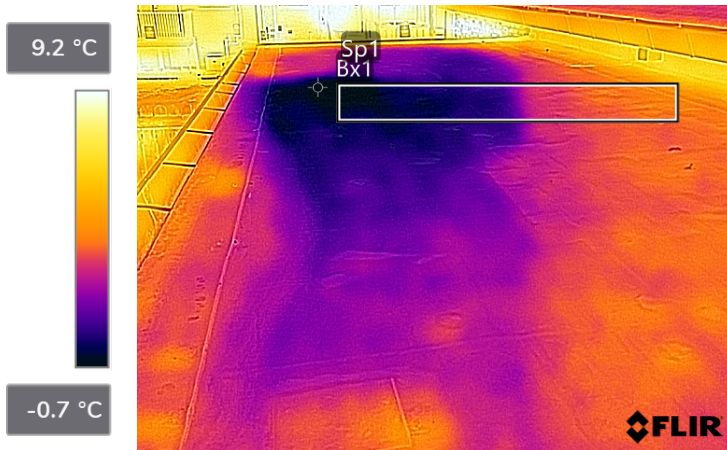
Measurements

Sp1	12.2 °C
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Spot 10 I found insulation that has been wet and damaged approx. 10' by 10'. Spot 9 and 10 had heat radiated from wall affecting the shot, when viewed from several angles you can draw an outline.



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flir_20211119T164950.jpg



Parameters

Emissivity	1.00
Distance	1.00 m
Reflected temp.	298.1 °C
Atmospheric temp.	20.0 °C
Relative humidity	50.0%
Ext. optics temp.	17.7 °C
Ext. optics trans.	0.82

File information

File name	flir_20211119T164950.jpg
File size	1141 KB
Width	640
Height	480
Minimum temp.	-1.0 °C
Maximum temp.	9.8 °C

Camera information

Camera model	CATÂ® S61
Lens	
Camera serial	
Filter	
Range max.	150.0 °C
Range min.	-20.0 °C
Field of view	-1.00

Measurements

Sp1	-0.7 °C
Bx1	
Max	5.6 °C
Avg	1.7 °C
Min	-0.9 °C

Spot 11 I found a puncture in the membrane and a large area of wet insulation extending out from the corner of the building about 14' by 7'.