

Building Diagnostic Robotics Inspection Report

Building Scanned:

Sample Building

Location:

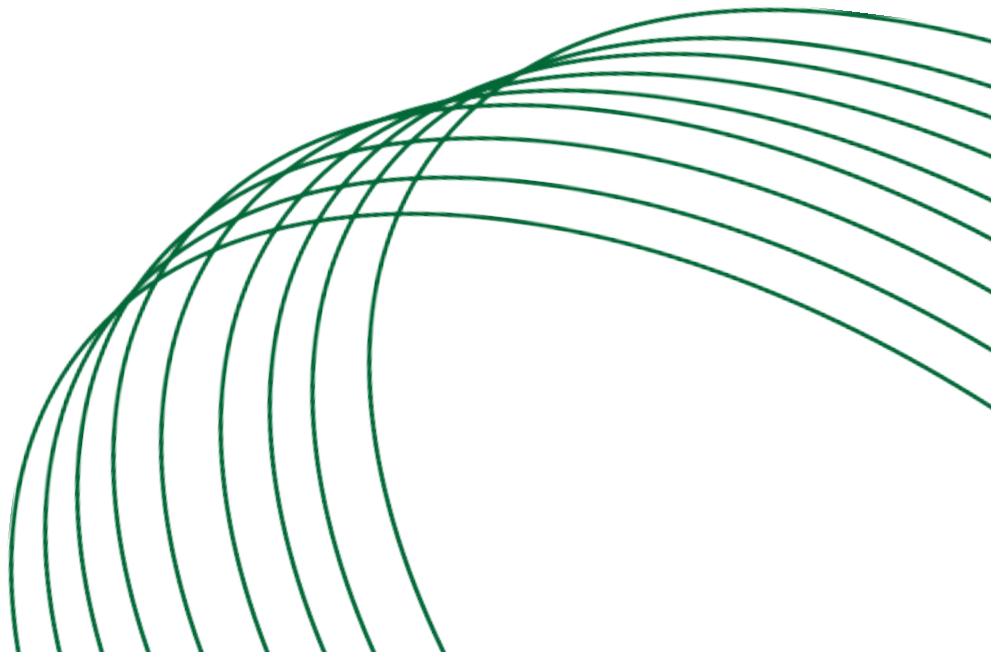
111 ABC Street, NY, 10001

Test Date:

27th February, 2024 10:07 AM

On Site Engineers:

EngineerA, EngineerB, EngineerC



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1. Executive Summary

The following executive summary provides a brief overview of the moisture damage and visual anomalies detected in the building.

Survey conducted on: 27th February, 2024 10:07 AM

Address: 111 ABC Street, NY, 10001

The following table provides a summary of the moisture damage in each section of the building.

Section Number	Moisture Percent	Risk Level	Square Footage	Area Damaged
1	19.08%	High-Risk	3080 sq.ft.	587 sq.ft.
2	15.72%	High-Risk	9160 sq.ft.	1439 sq.ft.

Total Assessed Area: 12240 sq.ft.

Total Rooftop Area: 18604 sq.ft.

The following table provides a summary of the visual anomalies detected in each section of the building.

Anomaly Type	Section 2
Base Flashing-Coated Metal	21
Base Flashing-Membrane Material	12
Debris And Vegetation	2
Defective Seams	10
Flashed Penetrations	3
Improper Equipment Supports	1
Interior Drains And Roof Level Scuppers	1
Membrane Support Deficiencies	1
Ponding	15
Ridges	9
Splits	1

Recommendations:

Section 1: Retain a specialist roof consultant to monitor roof condition and suggest repairs to lengthen the life of your roof asset. Roof likely has between 5 and 15 years of remaining roof life. Roof life can be extended by an additional 10 to 15 years by reroofing or adding a second roofing layer.

Section 2: Retain a specialist roof consultant to monitor roof condition and suggest repairs to lengthen the life of your roof asset. Roof likely has between 5 and 15 years of remaining roof life. Roof life can be extended by an additional 10 to 15 years by reroofing or adding a second roofing layer.

2. Appendix

2.1 Appendix A

2.1.1 Roof Section 1

GPR-Captured Moisture Map



Figure 2.1: GPR-Captured Moisture Map

LiDAR-Captured Moisture Map



Figure 2.2: LiDAR-Captured Moisture Map

2.1.2 Roof Section 2

GPR-Captured Moisture Map

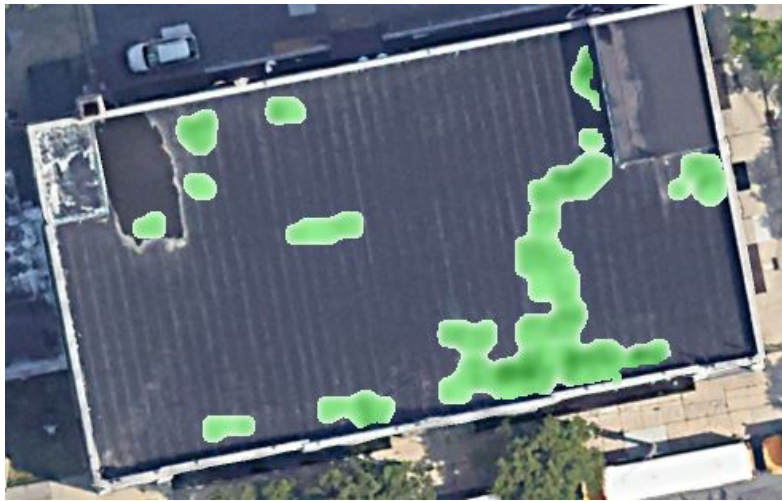


Figure 2.3: GPR-Captured Moisture Map

LiDAR-Captured Moisture Map

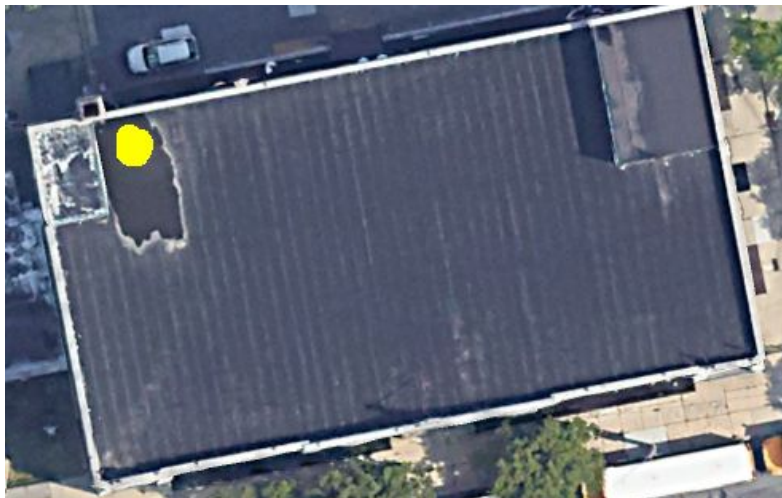


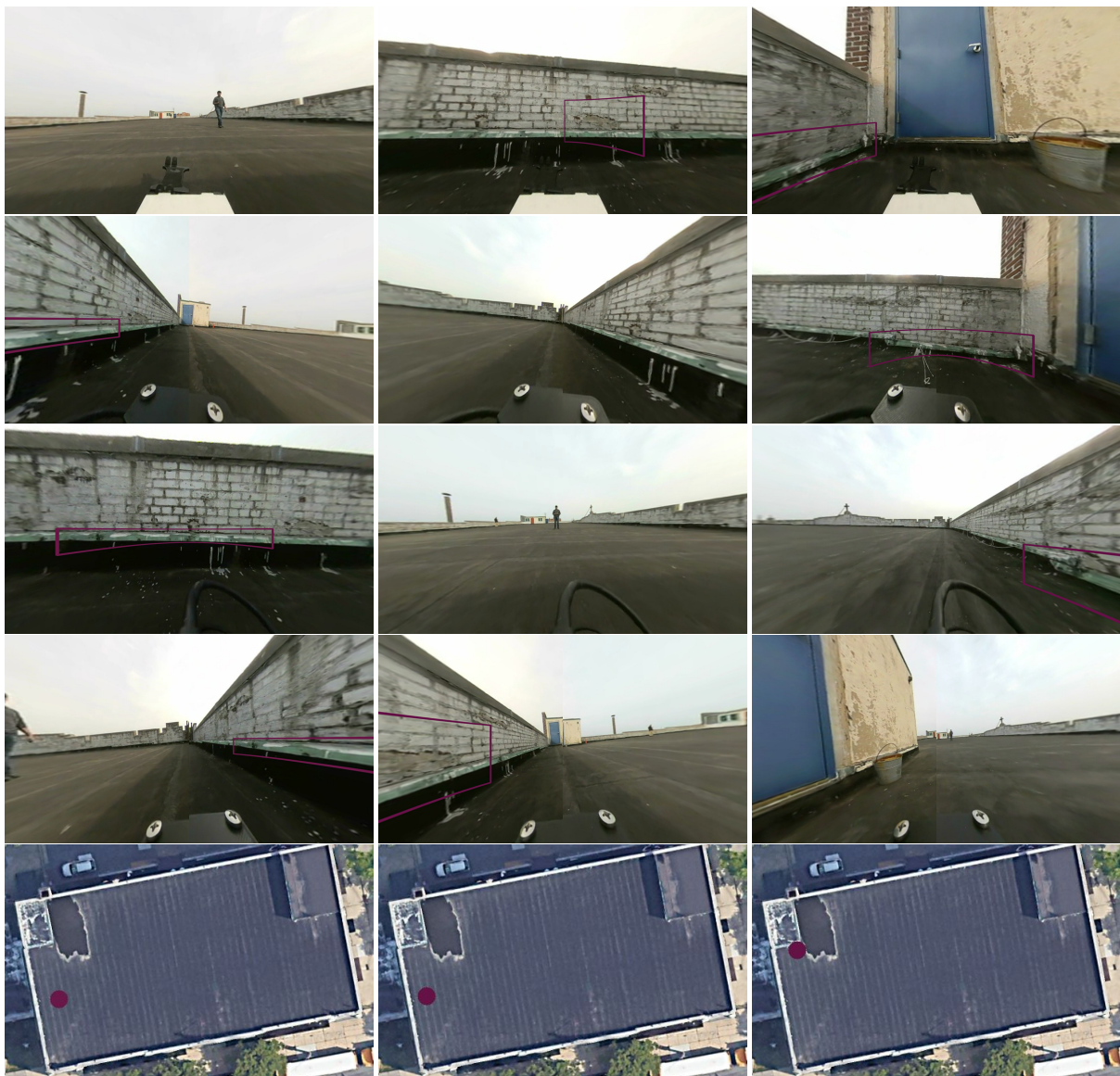
Figure 2.4: LiDAR-Captured Moisture Map

2.2 Appendix B

Note: Each Section in this appendix contains images of a roof section and its corresponding deficiencies. Each column of images contains five images, with each image showing the front view, left view, back view, right view and approximate location of robot on the roof respectively. Below the last image in every column is a location number and a description (with respective colors) of anomalies present at that location. Each page contains 3 locations, each with the potential for multiple visual anomalies annotated with colored boxes.

2.2.1 Roof Section 2

Images of Captured Deficiencies



Location - 1

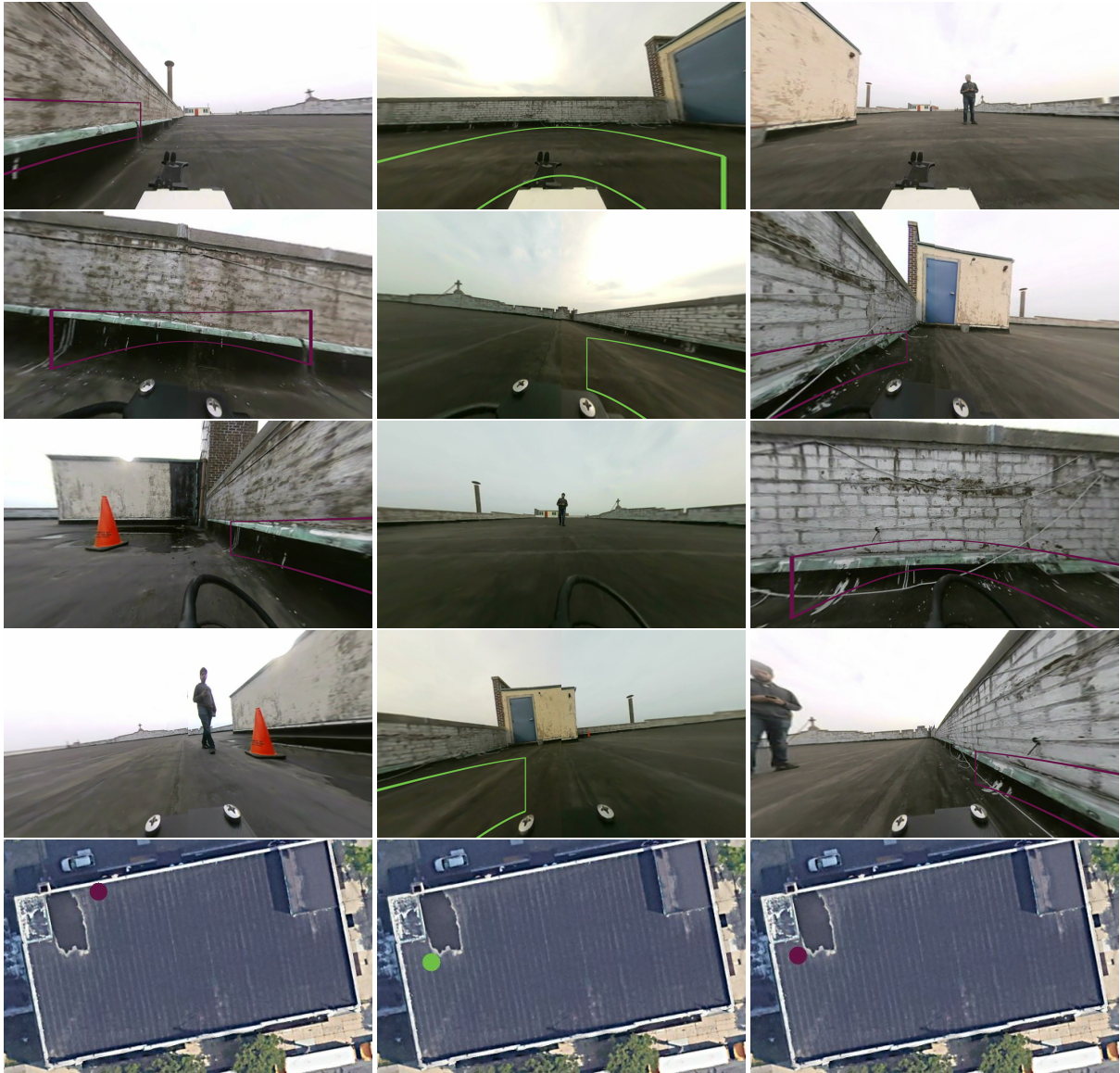
Base Flashing-Membrane
Material

Location - 2

Base Flashing-Coated Metal

Location - 3

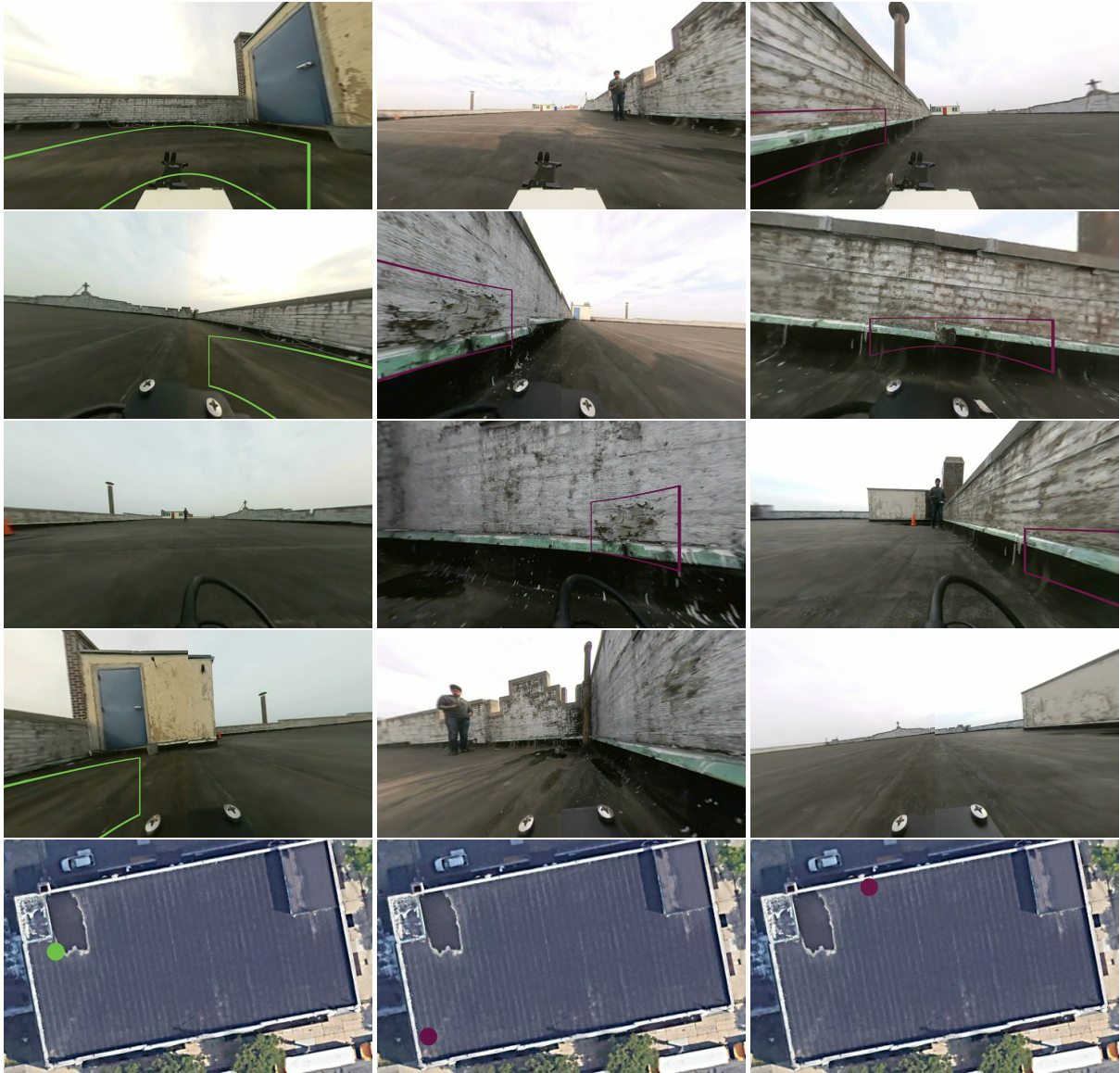
Base Flashing-Coated Metal



Location - 4
Base Flashing-Coated Metal

Location - 5
Ponding

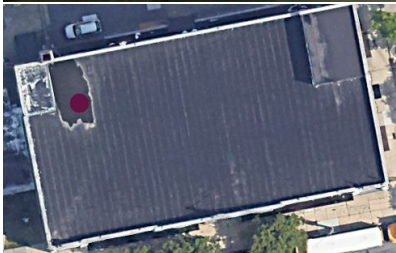
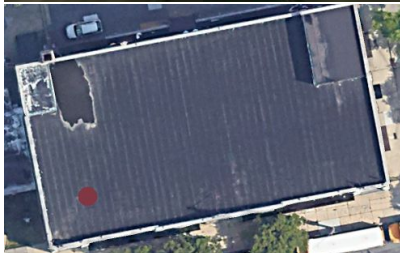
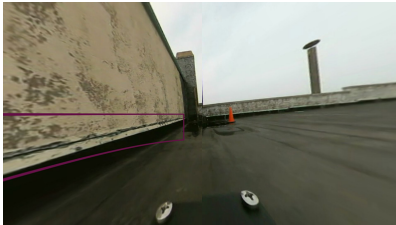
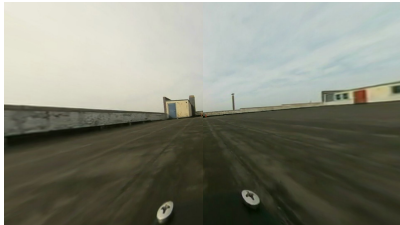
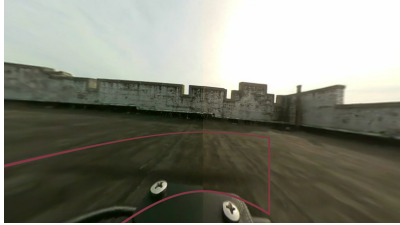
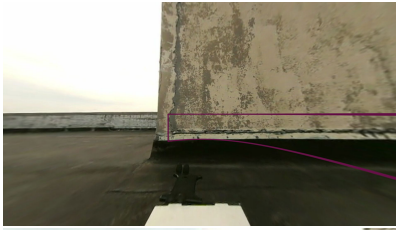
Location - 6
Base Flashing-Coated Metal



Location - 7
Ponding

Location - 8
Base Flashing-Coated Metal

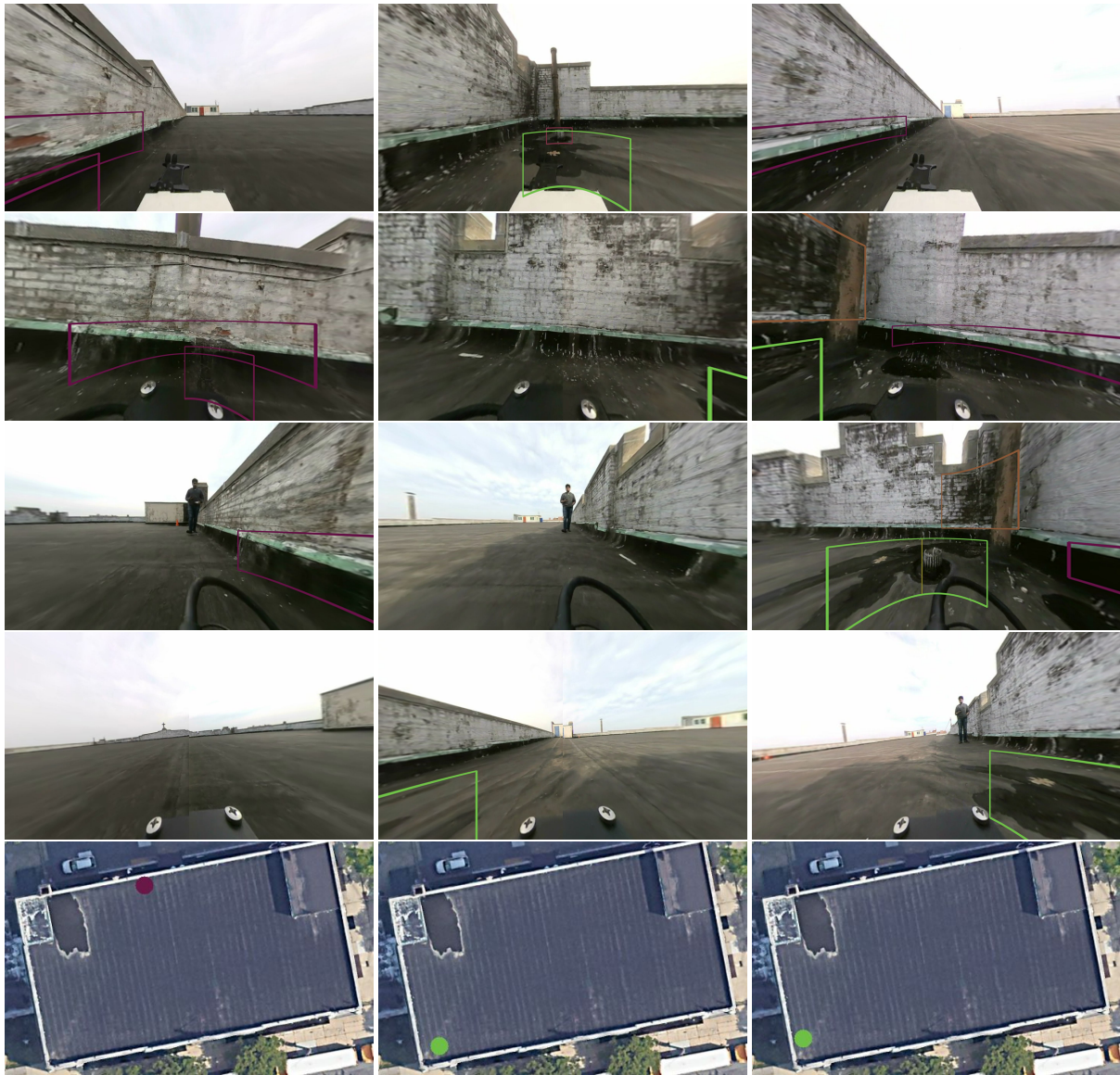
Location - 9
Base Flashing-Membrane
Material



Location - 10
Defective Seams

Location - 11
Base Flashing-Coated Metal

Location - 12
Base Flashing-Coated Metal



Location - 13
 Base Flashing-Coated Metal
 Base Flashing-Membrane
 Material

Location - 14
 Debris And Vegetation
 Ponding

Location - 15
 Ponding
 Base Flashing-Coated Metal
 Flashed Penetrations
 Interior Drains And Roof Level
 Scuppers



Location - 16

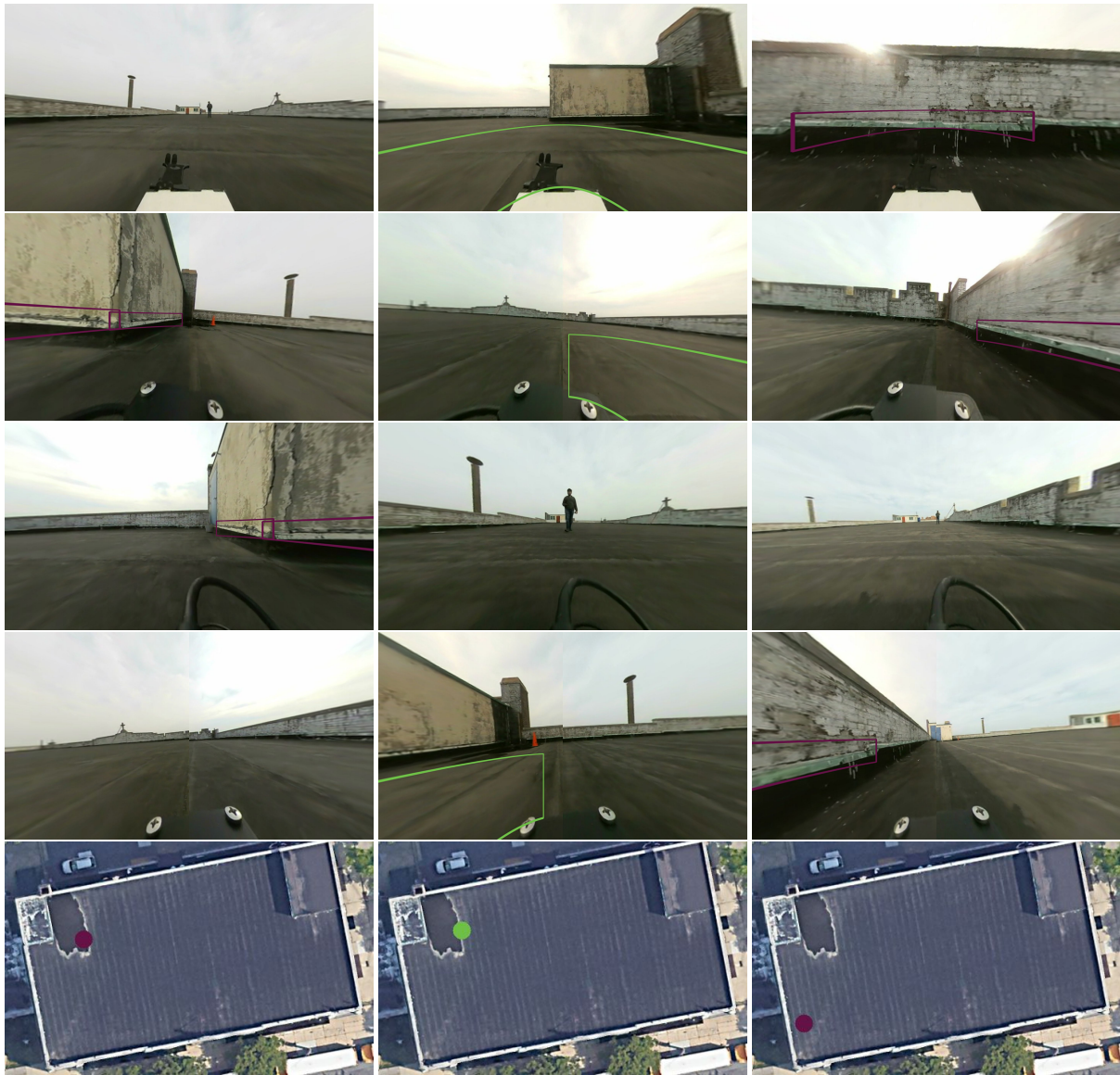
Ponding

Base Flashing-Membrane
Material

Location - 17

Base Flashing-Coated Metal
Ponding

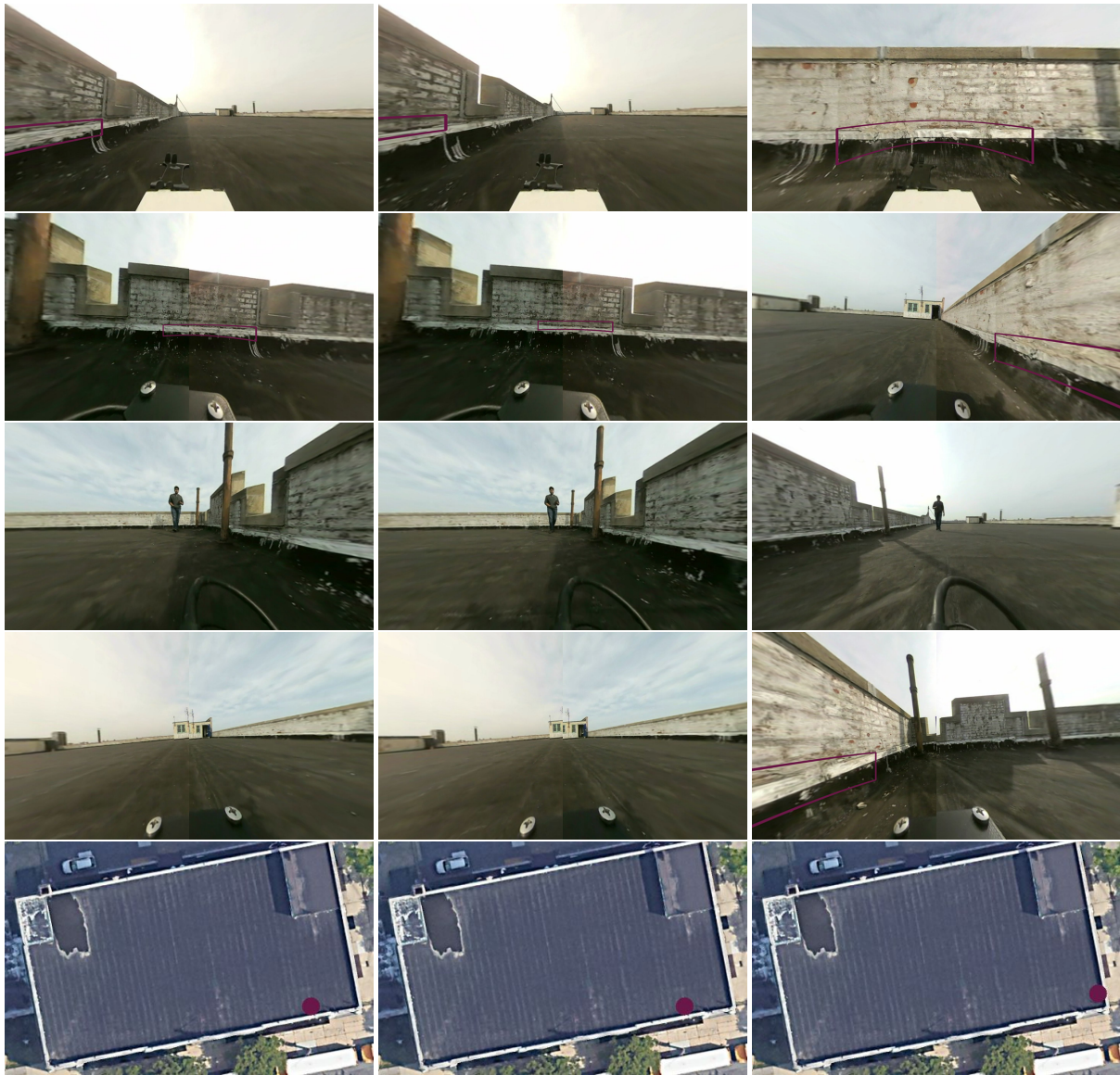
Location - 18
Defective Seams



Location - 19
Base Flashing-Coated Metal

Location - 20
Ponding

Location - 21
Base Flashing-Coated Metal



Location - 22

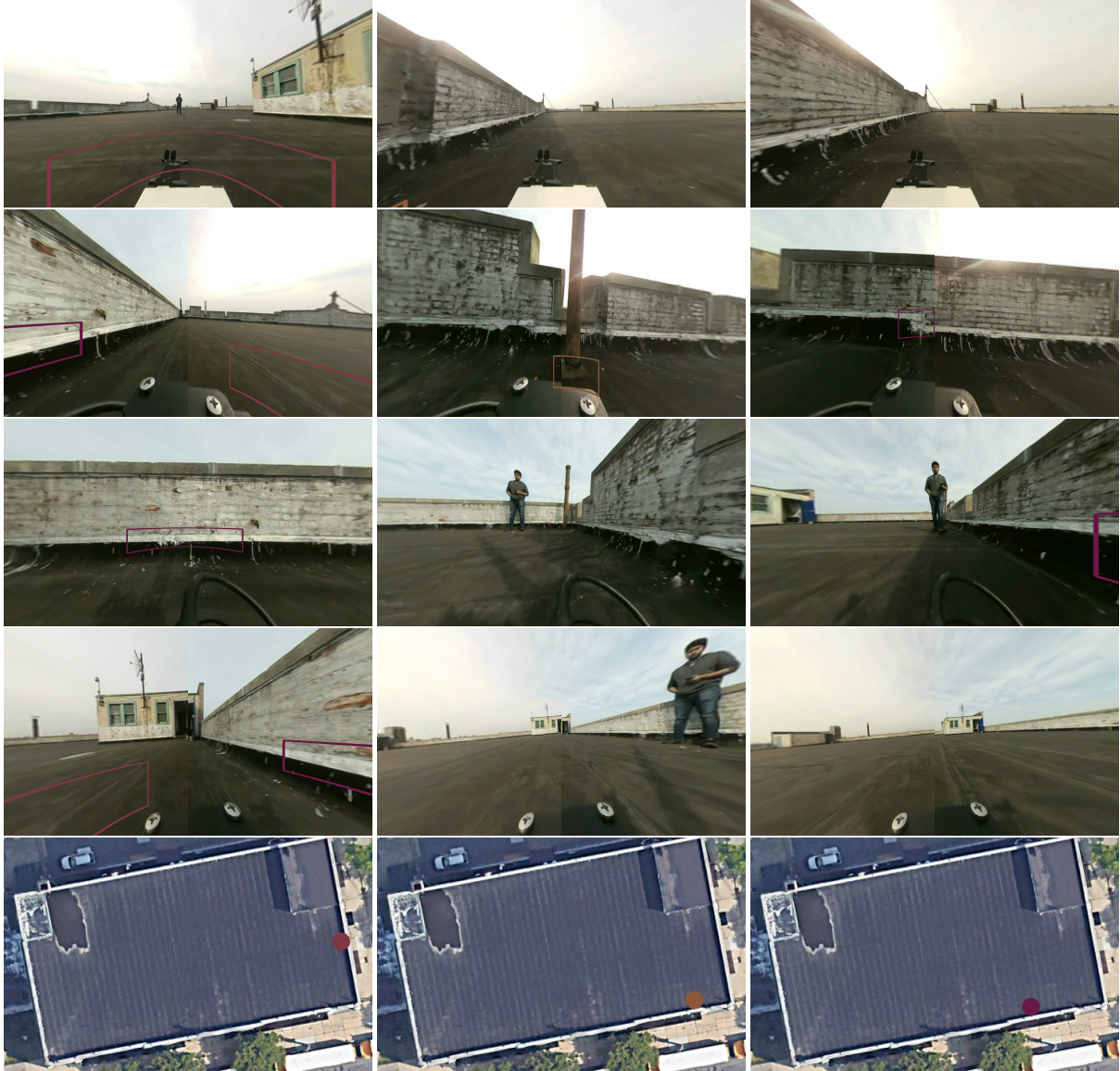
Base Flashing-Membrane
Material

Location - 23

Base Flashing-Membrane
Material

Location - 24

Base Flashing-Membrane
Material

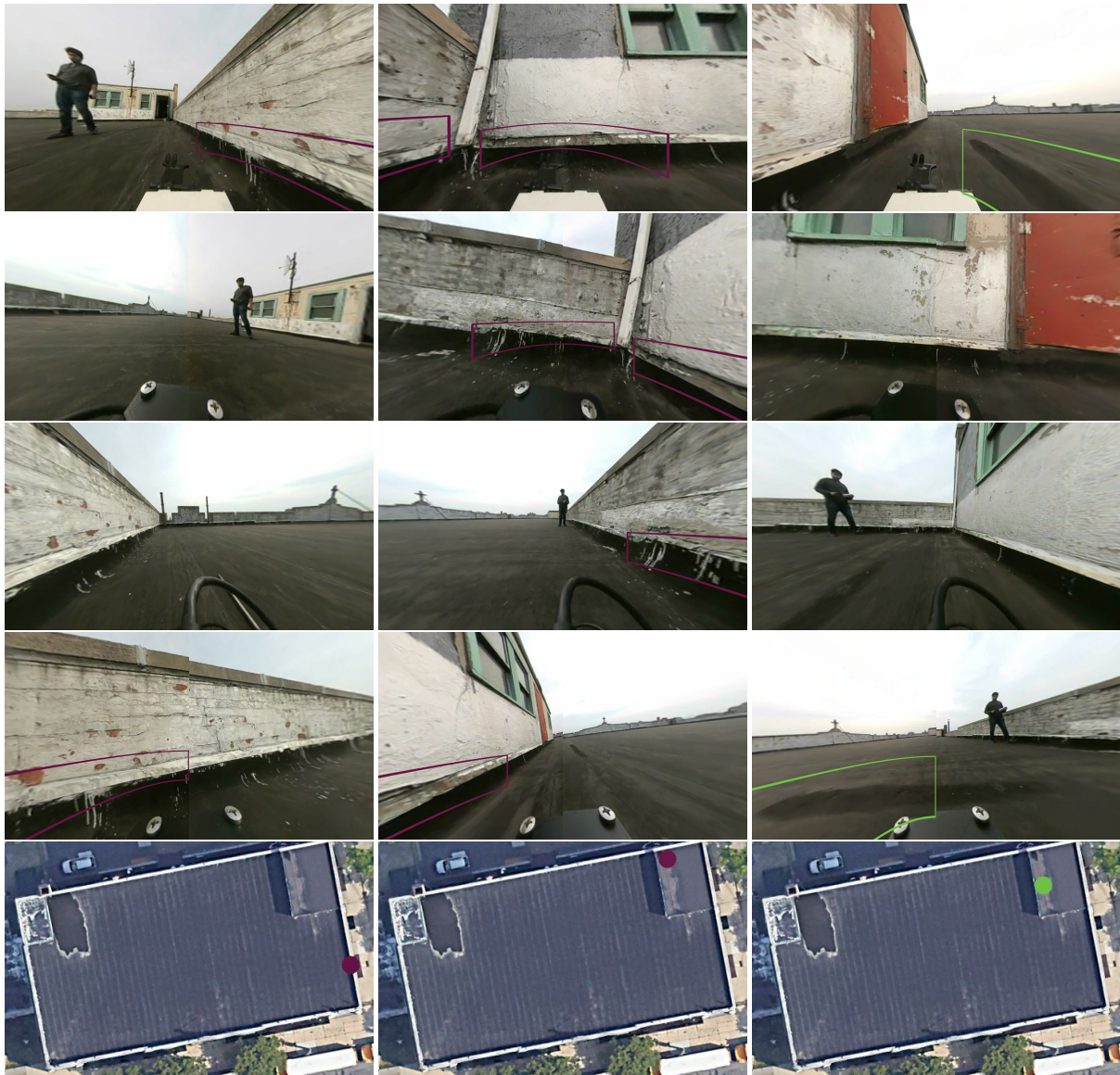


Location - 25

Defective Seams
Base Flashing-Membrane
Material

Location - 26
Flashed Penetrations

Location - 27
Base Flashing-Membrane
Material



Location - 28
Base Flashing-Coated Metal

Location - 29
Base Flashing-Coated Metal
Base Flashing-Membrane
Material

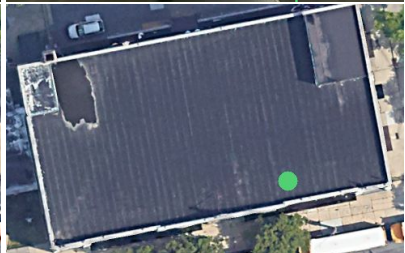
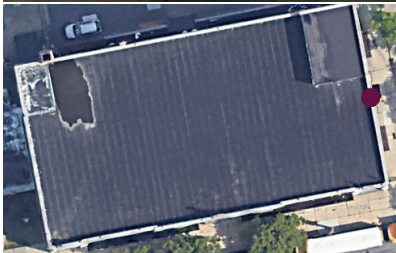
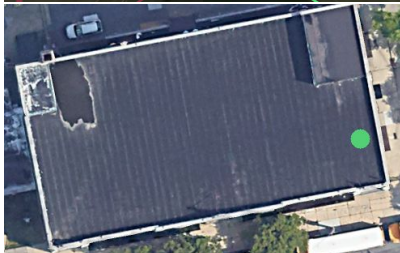
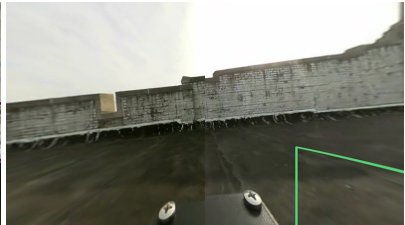
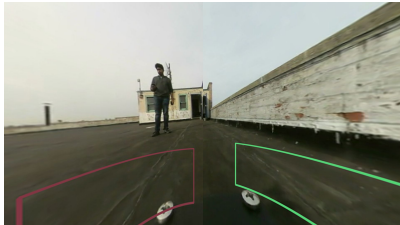
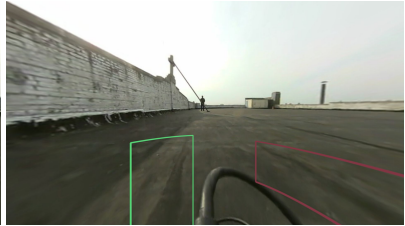
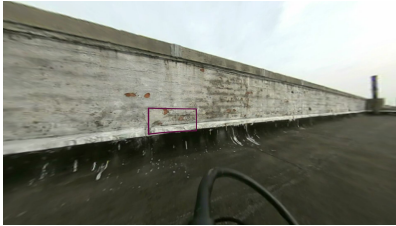
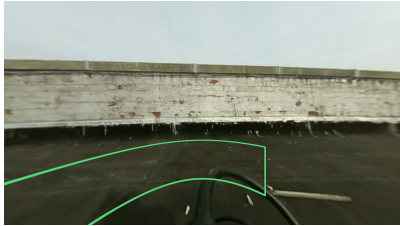
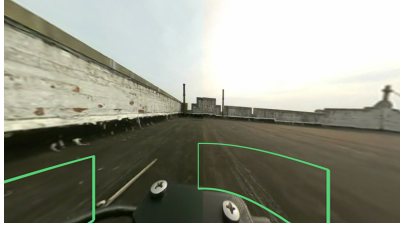
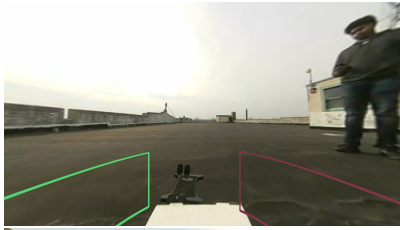
Location - 30
Ponding



Location - 31
Base Flashing-Coated Metal

Location - 32
Debris And Vegetation
Flashed Penetrations
Base Flashing-Membrane
Material

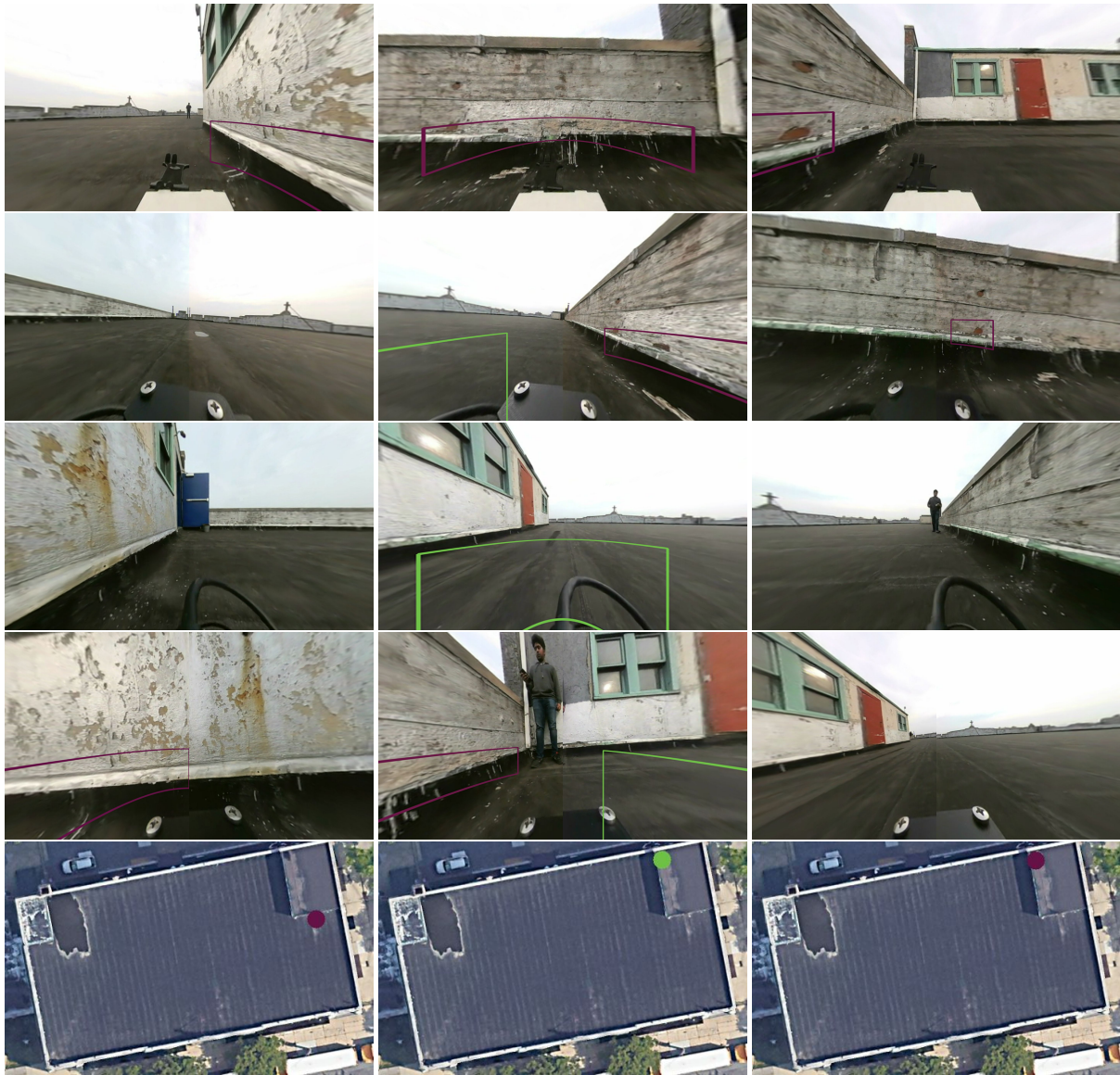
Location - 33
Defective Seams
Ponding



Location - 34
Defective Seams
Ridges

Location - 35
Base Flashing-Coated Metal

Location - 36
Defective Seams
Ridges



Location - 38

Ponding

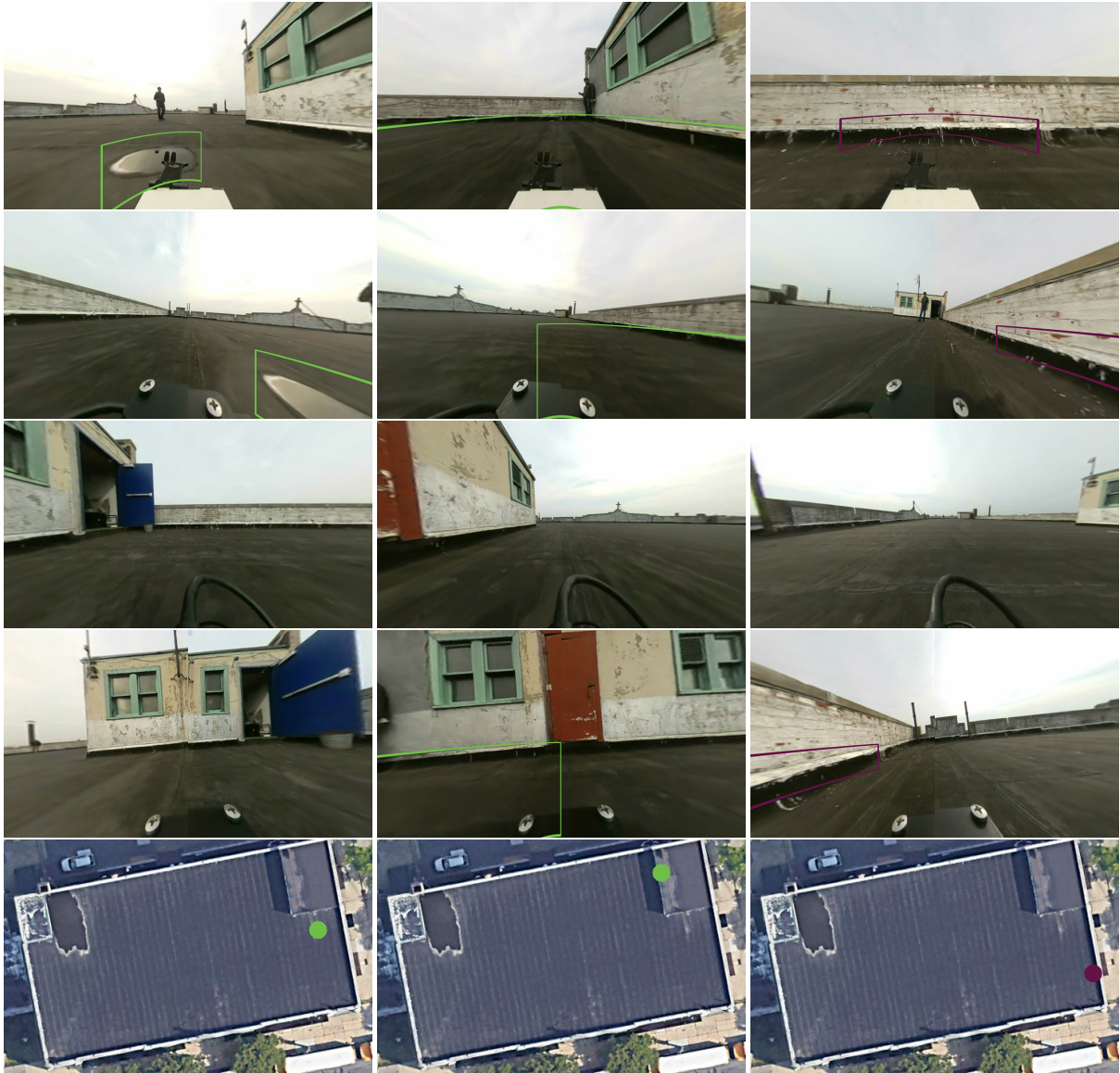
Base Flashing-Membrane
Material

Location - 37

Base Flashing-Coated Metal

Location - 39

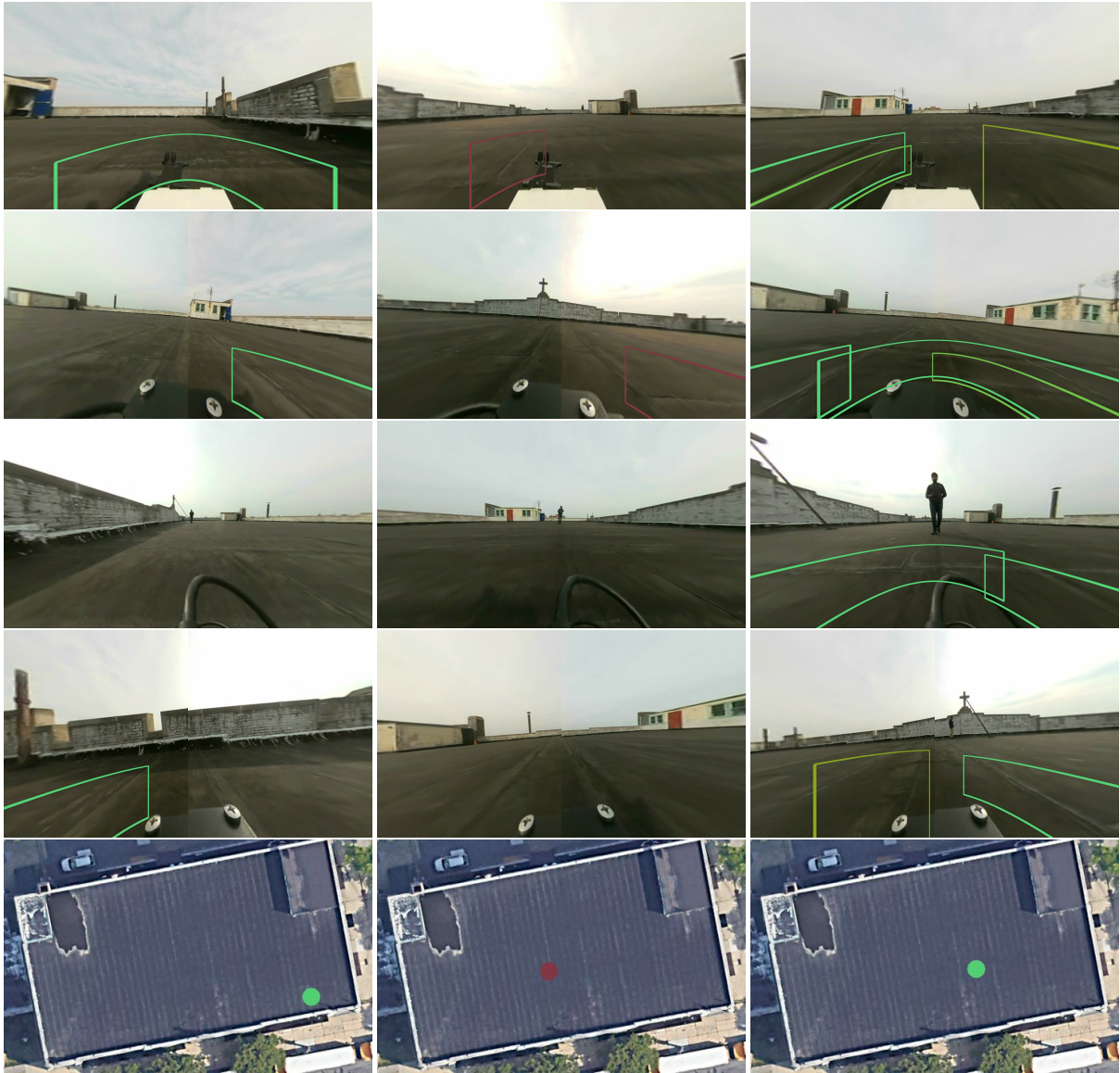
Base Flashing-Coated Metal



Location - 40
Ponding

Location - 41
Ponding

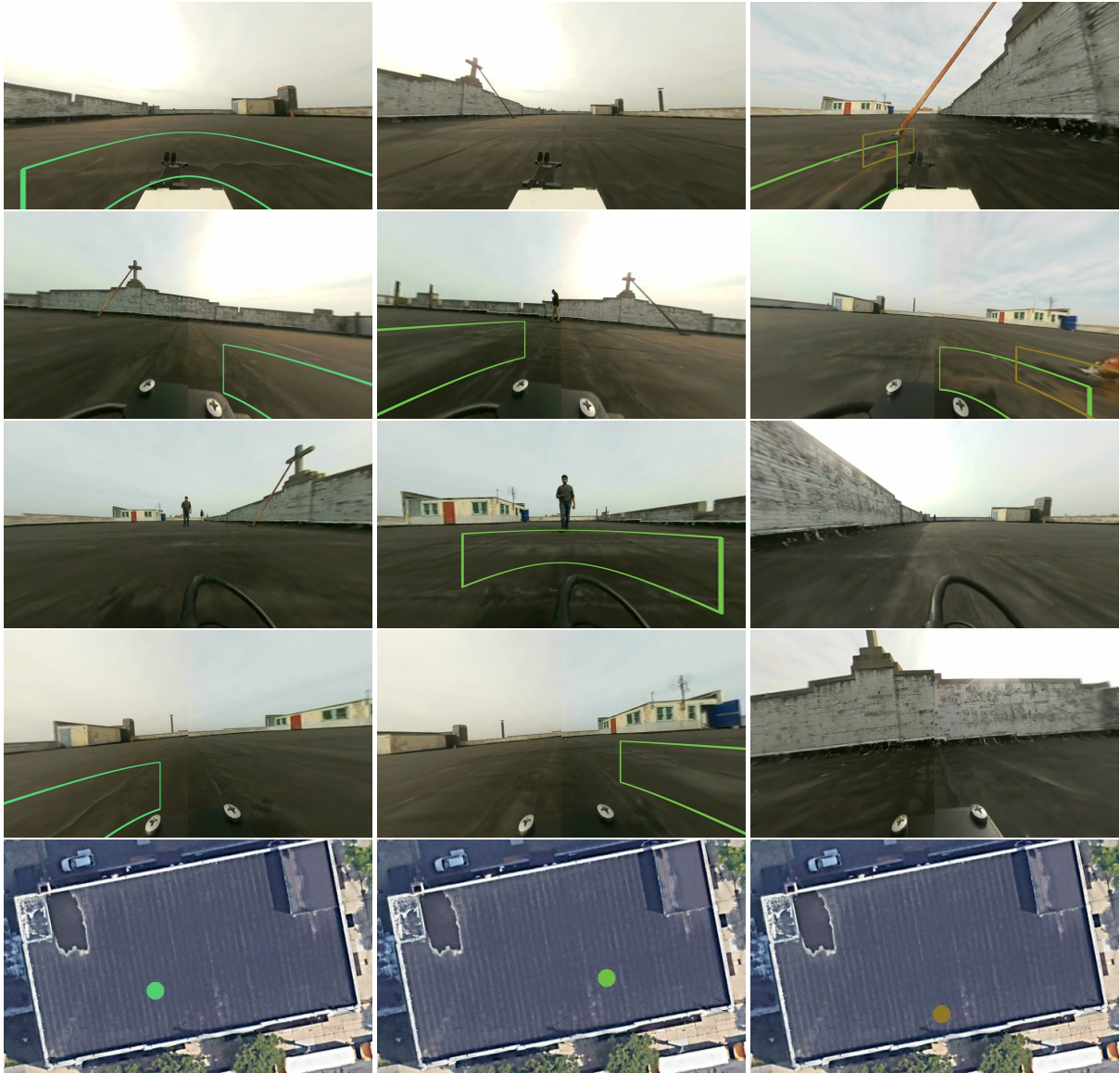
Location - 42
Base Flashing-Coated Metal



Location - 43
Ridges

Location - 44
Defective Seams

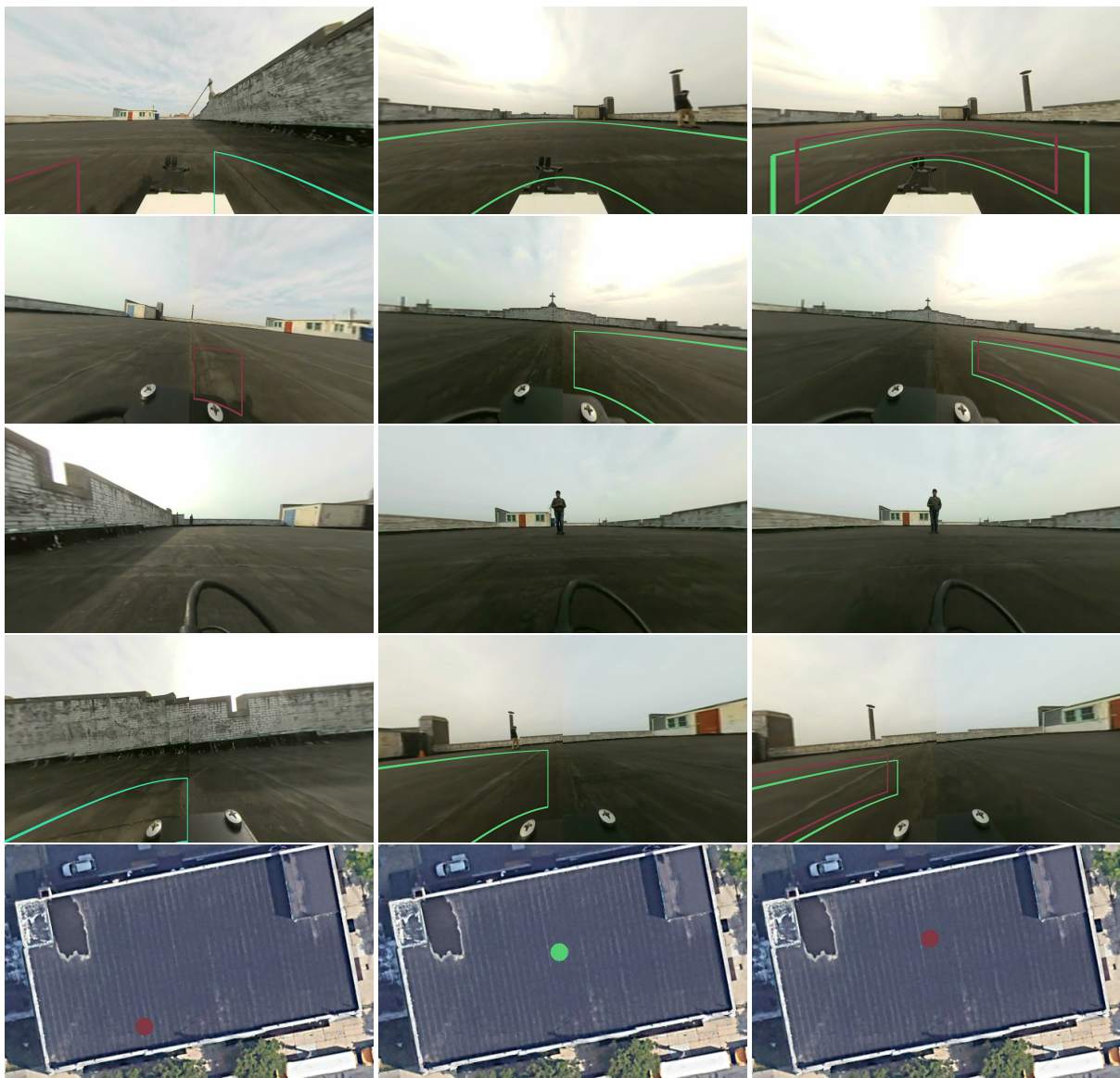
Location - 45
Ridges
Ponding
Membrane Support
Deficiencies



Location - 46
Ridges

Location - 47
Ponding

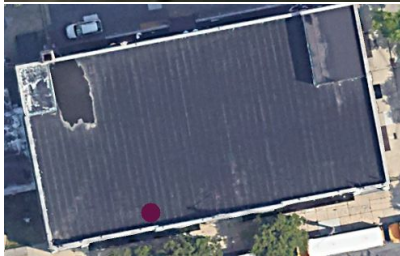
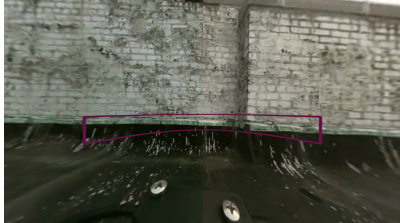
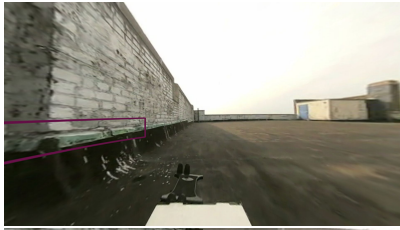
Location - 48
Improper Equipment Supports
Ponding



Location - 49
Defective Seams
Splits

Location - 50
Ridges

Location - 51
Defective Seams
Ridges



Location - 52
Base Flashing-Coated Metal