

C.T. MALE ASSOCIATES

Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 www.ctmale.com



November 1, 2016

Mr. Kevin Bryant
Corporation Counsel
City of Kingston
420 Broadway
Kingston, NY 12401

Re: *Results of Water Spray Testing*
Pike Plan Restoration Project
Kingston, NY
C.T. Male Associates Project No. 15.5150

Dear Mr. Bryant:

In accordance with our proposal to you dated February 22, 2016, and our Agreement for Engineering and Professional Services dated July 14, 2016, C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture, D.P.C. (C.T. Male Associates) and our roofing subconsultant, Exterior Consulting & Roof Management, conducted controlled water spray testing on designated buildings and areas of the Pike Plan canopy on North Front Street and Wall Street in the City of Kingston. The intent of this testing was to attempt to determine the source of water infiltration/leaks into the buildings and/or through the canopy, as reported by the building owners and/or tenants, and to generally determine the most appropriate method of repair for these reported leaks.

The results of the water spray testing for the following buildings are presented in the attached reports from Exterior Consulting & Roof Management:

- 33 North Front Street
- 39 North Front Street
- 41 North Front Street
- 51 North Front Street
- 57 North Front Street
- 301 Wall Street

The reports for the remainder of the buildings that were water spray tested will be forwarded under separate cover.

C.T. MALE ASSOCIATES

*Results of Water Spray Testing
Pike Plan Restoration Project - Kingston, NY
November 1, 2016
Page - 2*

If you have any questions or require additional information, please feel free to contact me at (518) 786-7437 or c.shaver@ctmale.com.

Sincerely,

C.T. MALE ASSOCIATES

A handwritten signature in black ink, appearing to read 'C. Shaver', written in a cursive style.

Christopher M. Shaver, P.E.
Managing Structural Engineer

Exterior Consulting & Roofing Management: A Professional Engineering P.C.

P.O. Box 13926 · Albany, NY 12212 · Tel: 518.456.5274 · Email: extconsulting@nycap.rr.com

October 14, 2016

Mr. Christopher M. Shaver, P.E.
Managing Structural Engineer
C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, NY 12110

REF: Kingston-Pike Plan: Water Tests,
33 North Front Street: Signature Fitness

Dear Chris:

As the City of Kingston requested and on your behalf, I conducted water testing at the above address at discrete locations in an effort to replicate the leak(s) that may have their source in the Pike Plan canopy on August 26, 2016. There are photographs attached to this report that reasonably represent my observations of the water testing events.

The leak location(s) were described by the people who either occupied or owned the property in a questionnaire that was previously distributed by the City, see attached. With my over 40 years of leak and building envelope leak investigation experience, discrete locations were selected to be water tested that best matched the reported leak location(s) with the most likely exterior canopy water entry(s).

As most leaks were reported to occur after a heavy rain storm or snow build up, a simple garden hose with a nozzle to control the direction of the water stream and replicate a heavy rain event was employed on these selected discrete locations. The start time and end time of the water test(s) were recorded and the time duration for the water test(s) is represented in this report.

Leak "A" complaint: Water infiltration inside display windows along window and frame during a heavy rains which occur two to three times per year. See photos 2, 3 and 4.

Finding for Leak "A": There are two severely deteriorated wood infill panels at the top of the metal panels which are believed to contribute the leak issues, see photos 5, 6, 7, 9, 10 and 11. The sealant (caulking) at the top of the metal base flashing is also suspect. The water test began at 12:10 PM between the vertical white siding with a deteriorated wood infill panel, see photos 12 and 13. Water leaks were observed at 12:12 PM on the exterior of the display window, see photo 14, 15 and 16; then, at 12:18 PM on the interior of the display windows, see photos 18 and 19.

Recommendation to resolve Leak "A": Remove and replace the wood infill panels with a more substantial water tight flashing. Remove and replace the green metal base flashing and sealants.

This concludes this report for this address.

Please contact me if I can further assist your efforts.

Sincerely,
Exterior Consulting and Roof Management:
A Professional Engineering P.C.

A handwritten signature in black ink that reads "W Hope". The signature is fluid and cursive, with a long horizontal stroke extending to the right from the end of the word "Hope".

William J. Hope, PE
Registered Building Envelope Consultant
RRC, RWC, REWC, CCS, GRP
President

w/ attachments

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Investigation of Canopy Structure
Pike Plan - Kingston, NY
Questions for Business Owners/Tenants

1. Street Address: 33 N. Front St.
2. Business Name: Signature Fitness
3. Contact Person: John Perry
4. Contact Person Phone and Email: cell # 845-338-6980 / Signature01@MSN.com
5. How long have you operated this business in this location? 4 years
6. Has the business experienced water infiltration? yes
7. If so, what type of water infiltration? Please describe in as much detail as possible.
IN SIDE Display windows
8. When did you first notice signs of water infiltration? AFTER PIKE Renovations
9. Where specifically does water infiltration occur? Along window and frame
10. When does water infiltration occur? Heavy Rain
11. How often does water infiltration occur? 2/3 x A year
12. What type of weather event causes the water infiltration? RAIN
13. Does the water infiltration continue after the weather event ends? UNKNOWN
14. If so, for how long after does the water infiltration continue? Not long "Visible"
15. Have there been any attempts to stop the water infiltration? NO
16. If so, please describe the attempts: NONE
17. When were the attempts made and by whom? NONE
18. Please describe any damages that have occurred due to water infiltration. Window lettering warped and peeling off
19. Have you or the property owner reported and documented your issues/damages by letter or email? NO
20. If so, to whom were they sent and when? _____

KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 1 Signature Fitness



Photo 2 Reported leaks on interior surface of front display window



Photo 3 Close up of photo 2, see dried water streaks



KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 4 Below photo 2, see dried water streaks and peeled paint



Photo 5 Deteriorated wood infill panel below air conditioner



Photo 6 Close up of photo 5



KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 7 Deteriorated wood infill panel



Photo 8 Partially filled gutter



KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 9 Deteriorated wood infill panel below air conditioner



Photo 10 Opening between deteriorated wood infill panel and green metal base flashing



Photo 11 Close up of photo 10



KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 12 Water test between vertical white siding began at 12:10 PM



Photo 13 Close up of photo 12



Photo 14 Water leak observed at upper exterior of front display window at 12:12 PM



KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 15 Close up of photo 14



Photo 16 Water on side walk beneath leak shown in photo 14 and 15



KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 17 General location of leak in photo 14



Photo 18 Water leak observed on the interior of front display window at 12:18 PM



KINGSTON PIKE PLAN: WATER TESTS
33 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 19 Close up of photo 18



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October 14, 2016

Mr. Christopher M. Shaver, P.E.
Managing Structural Engineer
C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, NY 12110

REF: Kingston-Pike Plan: Water Tests
39 North Front Street: Vapology

Dear Chris:

As the City of Kingston requested and on your behalf, I conducted water testing at the above address at discrete locations in an effort to replicate the leak(s) that may have their source in the Pike Plan canopy on August 26, 2016. There are photographs attached to this report that reasonably represent my observations of the water testing events.

The leak location(s) were described by the people who either occupied or owned the property in a questionnaire that was previously distributed by the City, see attached. With my over 40 years of leak and building envelope leak investigation experience, discrete locations were selected to be water tested that best matched the reported leak location(s) with the most likely exterior canopy water entry(s).

As most leaks were reported to occur after a heavy rain storm or snow build up, a simple garden hose with a nozzle to control the direction of the water stream and replicate a heavy rain event was employed on these selected discrete locations. The start time and end time of the water test(s) were recorded and the time duration for the water test(s) is represented in this report.

Leak "A" complaint: Water comes into the light fixture in the outside vestibule.

Finding for Leak "A":

There are many wide openings at the window sills and jambs that can easily allow water to infiltrate the building and contribute to the leak issues. See photos 3 through 17.

As our testing was limited to the canopy components, we observed cracks in the sealant (caulking) at the top of the green metal base flashing, see photos 18 and 19. We began water testing the building front's full width at the top of the green metal base flashing at 11:14 AM, see photo 20.

At 11:17 AM, a water leaks were observed at the vestibule's front edge, see photo 21, 22 and 23, south skylight, see photos 24, 25 and 26, and north skylight, see photos 29 and 30.

At 11:18 AM, a second water leak was observed at the vestibule's front edge, see photos 27 and 28.

At 11:32 AM, a water leak was observed from the light in the front vestibule, see photos 31 and 32.

Recommendation to resolve Leak "A":

The many wide openings at the window sills and jambs that can easily allow water to infiltrate the building and contribute to the leak issues must be remedied. See photos 3 through 17.

The leaks that were observed have their sources in the green metal flashing at the top of the sloped metal roof, otherwise known as the "head flashings". The head flashing must be removed and properly installed with the proper sealants in the proper locations.

This concludes this report for this address.

Please contact me if I can further assist your efforts.

Sincerely,
Exterior Consulting and Roof Management:
A Professional Engineering P.C.

A handwritten signature in black ink that reads "W Hope". The signature is stylized with a large, looped "W" and a long horizontal stroke extending to the right.

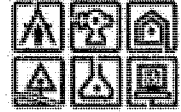
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Investigation of Canopy Structure
Pike Plan - Kingston, NY
Questions for Business Owners/Tenants

1. Street Address: 39 North Front Street
2. Business Name: " " " "
3. Contact Person: Alan Eisenson
4. Contact Person Phone and Email: 845 6579903
5. How long have you operated this business in this location? 4 yrs
6. Has the business experienced water infiltration? yes
7. If so, what type of water infiltration? Please describe in as much detail as possible. Building & Canopy come together where
8. When did you first notice signs of water infiltration? 2 years ago
9. Where specifically does water infiltration occur? Over front entrance
10. When does water infiltration occur? when it rains & snows
11. How often does water infiltration occur? when it rains & snows
12. What type of weather event causes the water infiltration? " "
13. Does the water infiltration continue after the weather event ends? no, only if snow meets slowly
14. If so, for how long after does the water infiltration continue? _____
15. Have there been any attempts to stop the water infiltration? none
16. If so, please describe the attempts: _____

17. When were the attempts made and by whom? nobody
18. Please describe any damages that have occurred due to water infiltration. Some warping of ceiling but seal front door
19. Have you or the property owner reported and documented your issues/damages by letter or email? yes
20. If so, to whom were they sent and when? To the City Planner

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Investigation of Canopy Structure
Pike Plan - Kingston, NY
Questions for Business Owners/Tenants

1. Street Address: 39 North Front Street
2. Business Name: VAPOLOGY
3. Contact Person: AIAN EISENSON
4. Contact Person Phone and Email: 8456579903
5. How long have you operated this business in this location? years
6. Has the business experienced water infiltration? Yes
7. If so, what type of water infiltration? Please describe in as much detail as possible.
water comes into light fixtures in outside vestibul
8. When did you first notice signs of water infiltration? As soon as they finished work
9. Where specifically does water infiltration occur? ↑
10. When does water infiltration occur? when it rains
11. How often does water infiltration occur? when it rains
12. What type of weather event causes the water infiltration? Rain
13. Does the water infiltration continue after the weather event ends? NO
14. If so, for how long after does the water infiltration continue? _____
15. Have there been any attempts to stop the water infiltration? NO
16. If so, please describe the attempts: N/A
17. When were the attempts made and by whom? — N/A
18. Please describe any damages that have occurred due to water infiltration.
softening material around light fixture
19. Have you or the property owner reported and documented your issues/damages by letter or email? _____
20. If so, to whom were they sent and when? twice once by us ago and a few months ago

Aian Eisenso Building Owner

KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

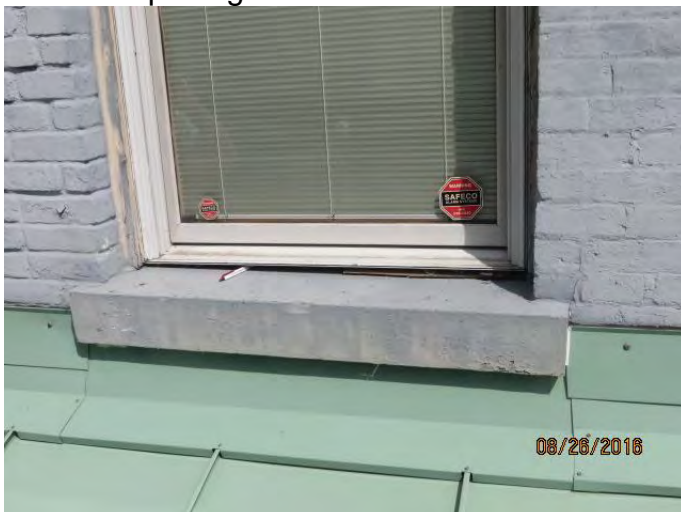
Photo 1 39 North Front St.: Vapology



Photo 2



Photo 3 Opening between window sill frame and stone sill, see pen in opening



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 4 close up of photo 3



Photo 5 Opening between window jamb frame and brick wall, see pen in opening



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 6 Opening between window jamb frame and brick



Photo 7 Opening between window jamb frame and brick wall, see pen in opening



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 8 Opening between window jamb frame and brick



Photo 9 Opening between window jamb frame and brick wall



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 10 Opening between window sill frame and stone sill, see pen in opening



Photo 11 Close up of photo 10



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 12 Opening between window jamb frame and brick wall



Photo 13 Close up of photo 12



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 14 Opening between window jamb frame and brick wall



Photo 15 Opening between window jamb frame and brick wall



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 16 Opening between window jamb frame and brick wall



Photo 17 Close up of photo 16



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 18 Sealant at top of green metal base flashing cracked and not adhered to green metal



Photo 19 Close up of photo 18



Photo 20 Began water test of green metal base flashing at 11:14 AM



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 21 Water leak at vestibule at 11:17 AM



Photo 22 Drops on sidewalk from Water leak at vestibule at 11:17 AM



Photo 23 Close up of photo 22



**KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY**

PHOTOS TAKEN 8/26/2016

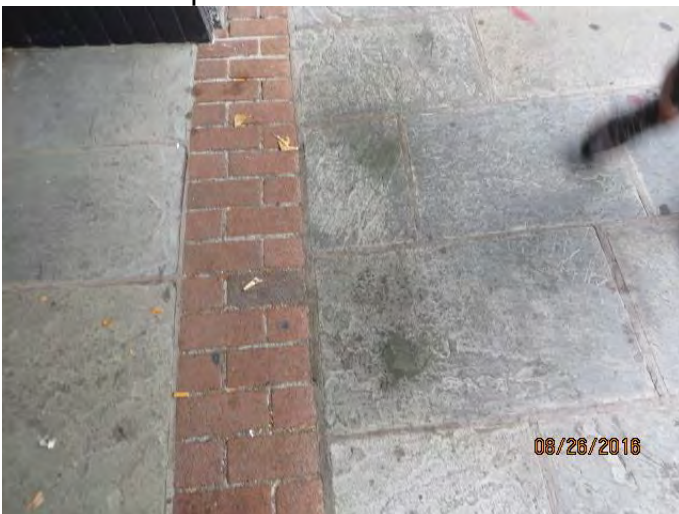
Photo 24 Water leak at south skylight at 11:17 AM



Photo 25 Close up of photo 24



Photo 26 Drops on side walk from water leak at south skylight at 11:17 AM



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 27 Second water leak at vestibule at 11:18 AM



Photo 28 Drops on sidewalk second water leak at vestibule at 11:18 AM



Photo 29 Water leaks at North Skylight



KINGSTON PIKE PLAN: WATER TESTS
39 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/26/2016

Photo 30 Drops on side walk from water leaks at North Skylight



Photo 31 Water leak at vestibule light at 11:24 AM



Photo 32 Drops on sidewalk from water leak at vestibule light at 11:24 AM



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October 14, 2016

Mr. Christopher M. Shaver, P.E.
Managing Structural Engineer
C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, NY 12110

REF: Kingston-Pike Plan: Water Tests
41 North Front Street: Kingston Electrolysis

Dear Chris:

As the City of Kingston requested and on your behalf, I conducted water testing at the above address at discrete locations in an effort to replicate the leak(s) that may have their source in the Pike Plan canopy on August 26, 2016. There are photographs attached to this report that reasonably represent my observations of the water testing events.

The leak location(s) were described by the people who either occupied or owned the property in a questionnaire that was previously distributed by the City, see attached. With my over 40 years of leak and building envelope leak investigation experience, discrete locations were selected to be water tested that best matched the reported leak location(s) with the most likely exterior canopy water entry(s).

As most leaks were reported to occur after a heavy rain storm or snow build up, a simple garden hose with a nozzle to control the direction of the water stream and replicate a heavy rain event was employed on these selected discrete locations. The start time and end time of the water test(s) were recorded and the time duration for the water test(s) is represented in this report.

Leak "A" complaint:

Water leaks through the canopy with heavy rain and especially during the winter time when the snow and ice melt, then freezes on the side walk. When facing the street, the right side of the canopy leaks during the above event until all the water dissipates.

Finding for Leak "A":

Probes revealed unsealed openings between the roof membrane and the metal roof panel, see photos 3 and 6. Opening in the metal edge flashing, see photo 4. Unsealed opening between the metal roof panels, see photos 7 and 8. Void in gutter roof membrane, see photo 9.

With the downspout taped closed, the gutter water test began at 9:43 AM by filling the gutter. At 9:53 AM, water dripped through the metal edge splice, see photo 12 and water dripped from under the metal edge, see photo 13. At 10:02, another water drip was observed at the second splice, see photo 14. At 10:10 AM the water test ended.

Recommendation to resolve Leak "A":

There are many openings and voids for water to infiltrate. The gutter must be reflashed, but making a watertight seal between the new gutter flashing and the metal roof panels is extremely difficult without removing the metal panels.

This concludes this report for this address.

Please contact me if I can further assist your efforts.

Sincerely,
Exterior Consulting and Roof Management:
A Professional Engineering P.C.

A handwritten signature in black ink, appearing to read "W. Hope". The signature is fluid and cursive, with a horizontal line extending from the end of the word "Hope".

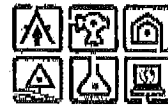
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Investigation of Canopy Structure
Pike Plan - Kingston, NY
Questions for Business Owners/Tenants

1. Street Address: 41 N. Front St. Kingston, NY 12401
2. Business Name: Kingston Electrolysis
3. Contact Person: Arianna Eisenson
4. Contact Person Phone and Email: (845) 338-2600
5. How long have you operated this business in this location? 2 years does
6. Has the business experienced water infiltration? NO - However water leaks through the canopy & onto the sidewalk!
7. If so, what type of water infiltration? Please describe in as much detail as possible. The canopy does leak, especially in the winter as the ice & snow melts. Then the water drips onto the sidewalk & freezes.
8. When did you first notice signs of water infiltration? about 1/2 yrs ago
9. Where specifically does water infiltration occur? when facing the street, on the @ front of the canopy
10. When does water infiltration occur? Anytime there is excess water
11. How often does water infiltration occur? see above ↑
12. What type of weather event causes the water infiltration? Rain, snow/ice melt + freeze
13. Does the water infiltration continue after the weather event ends? yes
14. If so, for how long after does the water infiltration continue? until all water dissipates
15. Have there been any attempts to stop the water infiltration? NO
16. If so, please describe the attempts: _____
17. When were the attempts made and by whom? _____
18. Please describe any damages that have occurred due to water infiltration. Like a leaky roof. The more it leaks the more damage is done. I think it is always the canopy causing it is causing icy sidewalks in the winter.
19. Have you or the property owner reported and documented your issues/damages by letter or email? yes!
20. If so, to whom were they sent and when? City, Mayor etc. Winter 2014/2015

Shaver, Chris

From: A.E. [ariannawrlp@yahoo.com]
Sent: Tuesday, August 09, 2016 8:04 PM
To: Shaver, Chris
Subject: Canopy Questionnaire

To Whom It May Concern:

I received paperwork with regard to the investigation of the Canopy Structure-Pike Plan-Kingston, NY. As a building owner, I would like to respond. I have filled out paperwork in the past, but was given it again and am thus following up. Answers below correspond to the questionnaire.

Thank you,
Arianna Eisenson
41 N. Front St.
Kingston, NY 12401

1. 41 N. Front St.
2. Stockade Guitars-ground level/Apartment-2nd floor-owner occupied
3. Arianna Eisenson
4. (845) 338-2600 or (845) 338-2305 / ariannawrlp@yahoo.com
5. I have owned the building for almost 5 years.
6. Water seeps from the canopy, but to date, has not entered the building.
7. Water leaks from the canopy and down the columns in the area between 43 N. Front and 41. N. Front. This is especially noticeable after rain storms and in the winter with the constant thawing and refreezing of ice and snow. This then creates very dangerous ice patches on the sidewalk.
8. Water leaking from the canopy began at least 2 years ago.
9. See #7
10. See #7
11. When it rains and after it rains-often for days. During the thawing and refreezing of ice and snow. So as often as those events happen depending upon the weather during a particular year.
12. Rain/Snow
13. Yes
14. Sometimes many days or all season-such as in the winter.
15. Not that I am aware of.
16. N/A
17. N/A
18. Water is leaking through a wooden structure. I am not sure exactly what the damage is, but I am sure it is slowly corroding and eroding the wood pillars of the canopy as well as the sidewalk. When water freezes on the sidewalk because it is not draining through proper channels, but going through what should be a solid structure, it creates a hazardous situation.

19. I have sent many, many emails to the City of Kingston. I have gone to meetings and told them about these damages too.

20. I have sent various emails at various times over the past years to Sue Cahill-I think she is the city planner, the former Mayor, our former ward representative, (I have said former because the administration has changed) the building department, the Canopy Commission etc. Should you need copies of these I will be happy to provide them to you.

KINGSTON PIKE PLAN: WATER TESTS
41 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 1



Photo 2



Photo 3 pen inserted between roof membrane and metal roof panel



KINGSTON PIKE PLAN: WATER TESTS
41 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 4 pen inserted into roof membrane opening at metal edge flashing



Photo 5 downspout starter lip raised above gutter botom



Photo 6 five inch long probe inserted between roof membrane and metal panel



KINGSTON PIKE PLAN: WATER TESTS
41 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 7 five inch long probe inserted between metal roof panel splice



Photo 8 five inch probe inserted into metal panel side lap



Photo 9 Void in gutter roof membrane



KINGSTON PIKE PLAN: WATER TESTS
41 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 11 gutter filled with water



Photo 12 drip from metal edge splice



Photo 13 drip from behind metal edge



KINGSTON PIKE PLAN: WATER TESTS
41 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/26/2016

Photo 14 drip from second splice in metal edge



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October 14, 2016

Mr. Christopher M. Shaver, P.E.
Managing Structural Engineer
C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, NY 12110

REF: Kingston-Pike Plan: Water Tests
51 North Front Street: Dallas Hot Weiners

Dear Chris:

As the City of Kingston requested and on your behalf, I conducted water testing at the above address at discrete locations in an effort to replicate the leak(s) that may have their source in the Pike Plan canopy on August 18, 2016. There are photographs attached to this report that reasonably represent my observations of the water testing events.

The leak location(s) were described by the people who either occupied or owned the property in a questionnaire that was previously distributed by the City, see attached. With my over 40 years of leak and building envelope leak investigation experience, discrete locations were selected to be water tested that best matched the reported leak location(s) with the most likely exterior canopy water entry(s).

As most leaks were reported to occur after a heavy rain storm or snow build up, a simple garden hose with a nozzle to control the direction of the water stream and replicate a heavy rain event was employed on these selected discrete locations. The start time and end time of the water test(s) were recorded and the time duration for the water test(s) is represented in this report.

Leak "A" complaint:

Water flows over the outside of the canopy/gutter

Finding for Leak "A":

The gutter was partially plugged, see photos 4 and 5. During the first water test, water was directed at the exposed rotted wood blocking at the step between roofs at 51 and 53 N. Front St., see photos 5, 6, 11 and 12. Water leaked out from under the green metal edge before the gutter filled with water in a few locations within 6 minutes.

Recommendation to resolve Leak "A":

1. Keep gutters and downspout strainers clear.
2. At a minimum, remove and replace the existing gutter flashing, metal edge and the transition step between 51 and 53 N. Front St.

Leak "B" complaint:

After snow builds up, they experience leaks.

Finding for Leak "B":

During the first water test, water was directed at the exposed rotted wood blocking at the step between roofs at 51 and 53 N. Front St., see photos 5, 6, 11 and 12. After 32 minutes, water leaked out from the top of the column under the canopy and the front fascia at 53 N. Front St., see photo 13, 14 and 15.

Recommendation for Leak "B":
Same as Recommendation for Leak "A".

Leak "C" complaint:
Interior electrical outlet leaks

Finding for Leak "C":
During the second water test, water was directed at the white base flashing at the base of the building wall over the vicinity of the interior outlet, see photo 16. The water test began at 10:27 Am and ended at 11:00 AM. No leak was observed at the interior electrical outlet

Recommendation for Leak "C":
The large opening at the window frame, see photos 7 and 8 could contribute to the leak. The large opening between 51 and 53 N. Front St., see photos 9 and 10 could contribute to the leak.

This concludes this report for this address.

Please contact me if I can further assist your efforts.

Sincerely,
Exterior Consulting and Roof Management:
A Professional Engineering P.C.

A handwritten signature in black ink, appearing to read "W. Hope". The signature is stylized and written in a cursive-like font.

William J. Hope, PE
Registered Building Envelope Consultant
RRC, RWC, REWC, CCS, GRP
President

w/ attachments

C.T. MALE ASSOCIATES

Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.

50 Century Hill Drive, Latham, NY 12110
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Investigation of Canopy Structure
Pike Plan - Kingston, NY
Questions for Business Owners/Tenants

1. Street Address: 51 NORTH FRONT STREET
2. Business Name: DALLAS HOT WIENERS
3. Contact Person: EVAN PAPPAS
4. Contact Person Phone and Email: W-845-338-6094 C- 914-466-5758
5. How long have you operated this business in this location? 40 + YEARS
6. Has the business experienced water infiltration? YES
7. If so, what type of water infiltration? Please describe in as much detail as possible.
WINTER TIME, AFTER HEAVY ACCUMULATION OF SNOW BUILD UP, THEN FREEZING TEMPS FOLLOWED BY WARM TEMPS
8. When did you first notice signs of water infiltration? DURING AND AFTER PIKE PLAN REMOVAL
9. Where specifically does water infiltration occur? IN BUILDING BY WINDOWS ALSO OUTSIDE OF BUILDING, COMES THROUGH LIGHT FIXTURES AND ELECTRICAL SOCKETS.
10. When does water infiltration occur? AND ELECTRICAL SOCKETS.
11. How often does water infiltration occur? DEPENDS ON THE WEATHER
12. What type of weather event causes the water infiltration? SEE # 7
13. Does the water infiltration continue after the weather event ends? YES
14. If so, for how long after does the water infiltration continue? TILL ICE AND SNOW MELT OR IS REMOVED
15. Have there been any attempts to stop the water infiltration? NO
16. If so, please describe the attempts: _____
17. When were the attempts made and by whom? _____
18. Please describe any damages that have occurred due to water infiltration. SOME SHEET ROCK DAMAGE.
19. Have you or the property owner reported and documented your issues/damages by letter or email? NO
20. If so, to whom were they sent and when? _____

KINGSTON PIKE PLAN: WATER TESTS
51 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 1



Photo 2



KINGSTON PIKE PLAN: WATER TESTS
51 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/18/2016

Photo 3 gutter partially plugged



Photo 4 downspout strainer partially plugged



KINGSTON PIKE PLAN: WATER TESTS
51 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

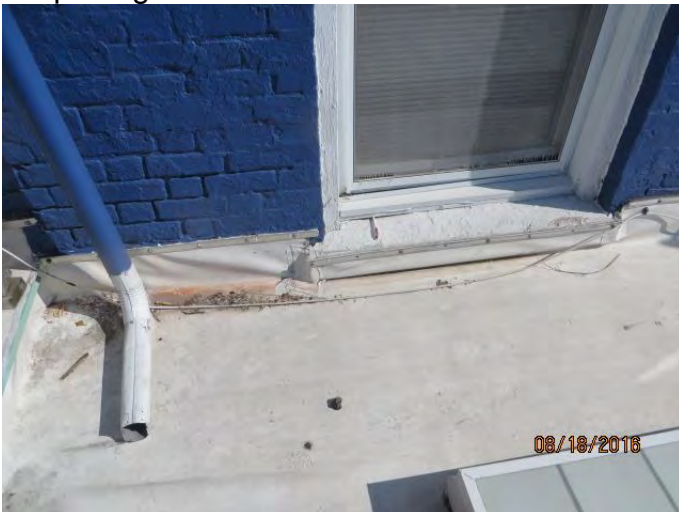
Photo 5 exposed wood blocking rotted at step between roof levels



Photo 6 exposed wood blocking rotted at step between roof levels



Photo 7 wide opening between window sill frame and stone sill, see pen inserted in opening



KINGSTON PIKE PLAN: WATER TESTS
51 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/18/2016

Photo 8 close up of photo 7, wide opening between window sill frame and stone sill, see pen inserted in opening



Photo 9 wide opening between buildings, see pen in opening



KINGSTON PIKE PLAN: WATER TESTS
51 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/18/2016

Photo 10 close up of photo 9, wide opening between buildings, see pen in opening



Photo 11 begin water testing at exposed wood blocking at 9:50 AM



KINGSTON PIKE PLAN: WATER TESTS 51 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/18/2016

Photo 12 by 9:56 AM, water began to drip out from under the green metal edge in at least three locations without the gutter filling up, then water test resumed

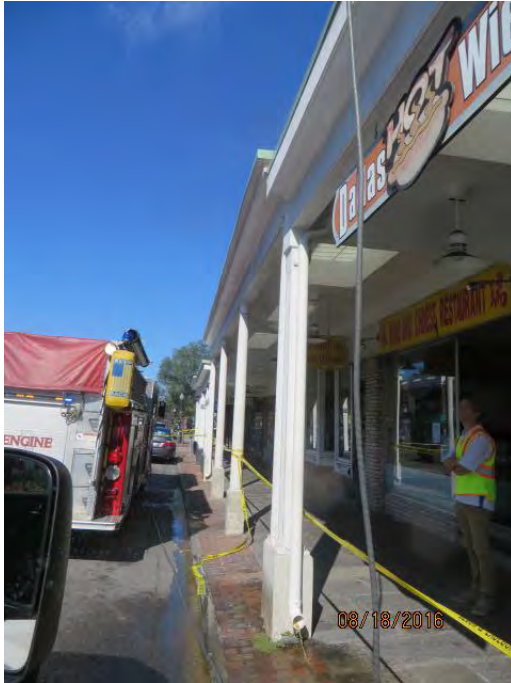


Photo 13 by 10:22 AM, water dripped out from the column top on the 53 N. Front St. side



KINGSTON PIKE PLAN: WATER TESTS
51 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/18/2016

Photo 14 Close up of photo 13, by 10:22 AM, water dripped out from the column top on the 53 N. Front St. side



Photo 15 by 10:22 AM, water dripped out from the street side fascia at 53 N. Front St. side



KINGSTON PIKE PLAN: WATER TESTS
51 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/18/2016

Photo 16 at 10:27 AM, water testing began on the white colored base flashing to attempt to replicate the leak at the interior electrical outlet at 51 N. Front Street. The water test ended at 11:00 AM with no water observed at the interior electrical ceiling outlet.



Exterior Consulting & Roofing Management: A Professional Engineering P.C.

P.O. Box 13926 · Albany, NY 12212 · Tel: 518.456.5274 · Email: extconsulting@nycap.rr.com

October 14, 2016

Mr. Christopher M. Shaver, P.E.
Managing Structural Engineer
C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, NY 12110

REF: Kingston-Pike Plan: Water Tests
57 North Front Street: Wine and Spirit aka Ester Wine

Dear Chris:

As the City of Kingston requested and on your behalf, I conducted water testing at the above address at discrete locations in an effort to replicate the leak(s) that may have their source in the Pike Plan canopy on August 18, 2016. There are photographs attached to this report that reasonably represent my observations of the water testing events.

The leak location(s) were described by the people who either occupied or owned the property in a questionnaire that was previously distributed by the City, see attached. With my over 40 years of leak and building envelope leak investigation experience, discrete locations were selected to be water tested that best matched the reported leak location(s) with the most likely exterior canopy water entry(s).

As most leaks were reported to occur after a heavy rain storm or snow build up, a simple garden hose with a nozzle to control the direction of the water stream and replicate a heavy rain event was employed on these selected discrete locations. The start time and end time of the water test(s) were recorded and the time duration for the water test(s) is represented in this report.

Leak "A" complaint:

Interior water leaks in through the cracks in the two front display windows (one on each side of the front entrance). See photos 3, 4 and 5. The worst leaks occur during a heavy blowing rain.

Finding for Leak "A":

There are two second floor windows that overlook the canopy roof. There is a window centered over each of the front display windows. Our field investigation found each of the two second floor window wooden frames are severely aged and deteriorated with large cracks. See photos 6 through 22.

A water test was conducted on the base flashing at the bottom of the second floor wall for the full width of the building front, see photo 23. The water test began at 11:58 AM and ended at 12:30 PM. No leaks were observed at the interior front display windows.

However, a leak did develop on the exterior sidewalk at 12:27 PM, see photo 24 and 25. The roof membrane was observed to be open, see photo 28.

Recommendation to resolve Leak "A": The roof membrane opening in photo 28 does not contribute to the leaks that appear on the interior front window displays. However, it should be repaired.

The two second floor windows are believed to be the sources of the interior leaks, see photos 6 through 22. The second floor windows must be repaired.

This concludes this report for this address.

Please contact me if I can further assist your efforts.

Sincerely,
Exterior Consulting and Roof Management:
A Professional Engineering P.C.

A handwritten signature in black ink, appearing to read "W. Hope". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

William J. Hope, PE
Registered Building Envelope Consultant
RRC, RWC, REWC, CCS, GRP
President

w/ attachments

C.T. MALE ASSOCIATES

Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 www.ctmale.com



Investigation of Canopy Structure
Pike Plan - Kingston, NY
Questions for Business Owners/Tenants

1. Street Address: 57 N FRONT ST
2. Business Name: ESTER WINE
3. Contact Person: ROBERT PROVENZ
4. Contact Person Phone and Email: 845-331-1921 ROBERT@ESTERWINE.COM
5. How long have you operated this business in this location? 2 YEARS
6. Has the business experienced water infiltration? YES
7. If so, what type of water infiltration? Please describe in as much detail as possible.
WHEN THERE IS SHEET/HARD RAIN, WATER COMES INSIDE MY BUSINESS THROUGH CRACKS IN CEILING
8. When did you first notice signs of water infiltration? APRIL, 2016
9. Where specifically does water infiltration occur? AT FRONT WINDOW
10. When does water infiltration occur? WHEN ITS RAINING HARD
11. How often does water infiltration occur? DURING RAIN
12. What type of weather event causes the water infiltration? RAIN
13. Does the water infiltration continue after the weather event ends? NO
14. If so, for how long after does the water infiltration continue? _____
15. Have there been any attempts to stop the water infiltration? NO
16. If so, please describe the attempts: _____

17. When were the attempts made and by whom? _____
18. Please describe any damages that have occurred due to water infiltration. CRACKS IN CEILING
19. Have you or the property owner reported and documented your issues/damages by letter or email? YES
20. If so, to whom were they sent and when? DEPUTY FIRE CHIEF THOMAS TIAND

KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 1



Photo 2



Photo 3 reported area of leaks after heavy blowing rain



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY

PHOTOS TAKEN 8/18/2016

Photo 4 close up of photos 3, reported area of leaks after heavy blowing rain



Photo 5 reported area of leaks after heavy blowing rain



Photo 6 window above area of reported leaks



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 7 window above area of reported leaks, see pen in window frame opening



Photo 8 close up of photo 7



Photo 9 window above area of reported leaks, cracks in window frame



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 10 window above area of reported leaks



Photo 11 cracks in window frame



Photo 12 cracks in window frame



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 13



Photo 14



Photo 15 hole in window frame



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 16 close up of photos 15



Photo 17



Photo 18



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 19 cracks in window frame



Photo 20 close up of photo 19



Photo 21 opening in window frame



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 22 close up of photo 21

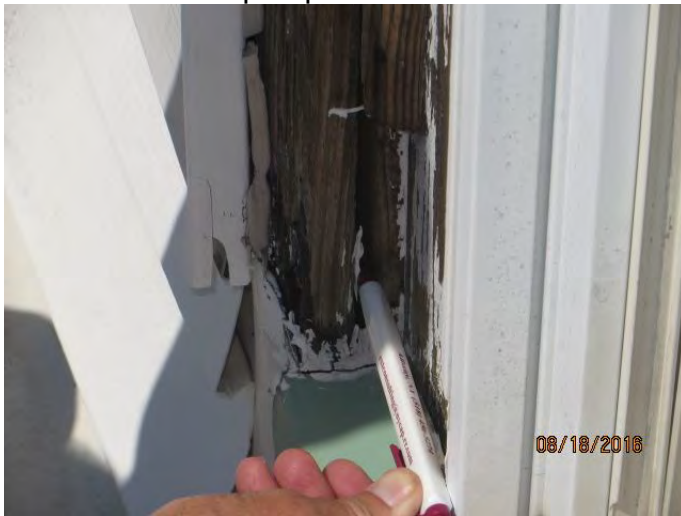
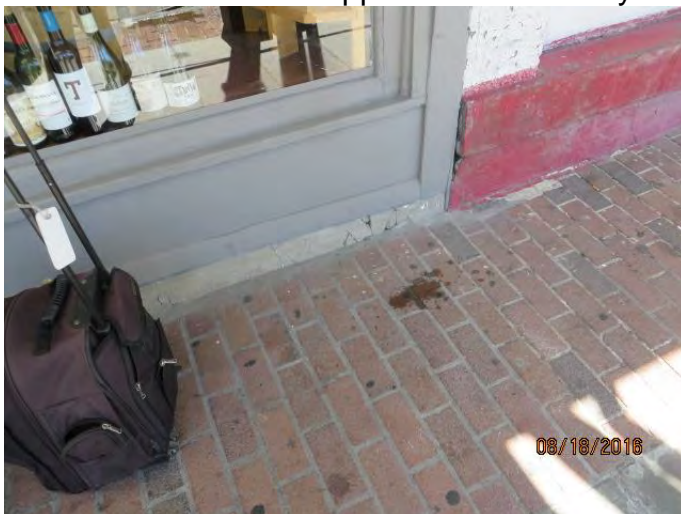


Photo 23 water test base flashing along base of wall over reported leak locations



Photo 24 exterior leak appeared on walkway



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 25 exterior leak from canopy ceiling



Photo 26 water testing canopy



Photo 27 lifted up wood in vicinity of exterior leak



KINGSTON PIKE PLAN: WATER TESTS
57 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/18/2016

Photo 28 roof membrane opening over exterior leak location



Exterior Consulting & Roofing Management: A Professional Engineering P.C.

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October 10, 2016

Mr. Christopher M. Shaver, P.E.
Managing Structural Engineer
C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, NY 12110

REF: Kingston-Pike Plan: Water Tests
301 Wall Street: Tonner Doll Company

Dear Chris:

As the City of Kingston requested and on your behalf, I conducted water testing at the above address at discrete locations in an effort to replicate the leak(s) that may have their source in the Pike Plan canopy on September 8, 2016. There are photographs attached to this report that reasonably represent my observations of the water testing events.

The leak location(s) were described by the people who either occupied or owned the property in a questionnaire that was previously distributed by the City, see attached. With my over 40 years of leak and building envelope leak investigation experience, discrete locations were selected to be water tested that best matched the reported leak location(s) with the most likely exterior canopy water entry(s).

As most leaks were reported to occur after a heavy rain storm or snow build up, a simple garden hose with a nozzle to control the direction of the water stream and replicate a heavy rain event was employed on these selected discrete locations. The start time and end time of the water test(s) were recorded and the time duration for the water test(s) is represented in this report.

Leak "A" complaint:

Water ran into ceiling of the first floor from the top of the canopy. When asked to show the location of the leak, the upper corner of the wall and ceiling adjacent to the 303 Wall Street building was shown. See photo 3.

Finding for Leak "A":

The flashing directly above the leak location was found to be unattached, see photos 6 and 7. The sealant at the top of the base flashing was cracked, see photo 8. Water test began at 10:16 AM, see photo 9 and water appeared directly below the water test area at 10:17 AM, see photo 10.

Recommendation to resolve Leak "A":

Remove the existing flashings and properly install new flashing materials.

Leak "B" complaint: Previously not reported.

Water stains along the exterior front of the building, see photo 11.

Finding for Leak "B":

Water test began at 10:21 AM and water appeared on the building's exterior at 10:23 AM, see photos 12, 13, 14 and 15.

Recommendation for Leak "B":

Remove the existing flashings along the building's front and properly install new flashing materials.

This concludes this report for this address.

Please contact me if I can further assist your efforts.

Sincerely,

Exterior Consulting and Roof Management:
A Professional Engineering P.C.

A handwritten signature in black ink, appearing to read "W. Hope", with a horizontal line extending to the right.

William J. Hope, PE
Registered Building Envelope Consultant
RRC, RWC, REWC, CCS, GRP
President

w/ attachments

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Investigation of Canopy Structure
Pike Plan - Kingston, NY
Questions for Business Owners/Tenants

1. Street Address: _____
2. Business Name: _____
3. Contact Person: _____
4. Contact Person Phone and Email: _____
5. How long have you operated this business in this location? _____
6. Has the business experienced water infiltration? _____
7. If so, what type of water infiltration? Please describe in as much detail as possible.

8. When did you first notice signs of water infiltration? _____
9. Where specifically does water infiltration occur? _____
10. When does water infiltration occur? _____
11. How often does water infiltration occur? _____
12. What type of weather event causes the water infiltration? _____
13. Does the water infiltration continue after the weather event ends? _____
14. If so, for how long after does the water infiltration continue? _____
15. Have there been any attempts to stop the water infiltration? _____
16. If so, please describe the attempts: _____

17. When were the attempts made and by whom? _____
18. Please describe any damages that have occurred due to water infiltration. _____

19. Have you or the property owner reported and documented your issues/damages by letter or email? _____
20. If so, to whom were they sent and when? _____

KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY
PHOTOS TAKEN 9/8/2016

Photo 1 301 Wall Street



Photo 2 301 Wall Street Exterior Signage



KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY

PHOTOS TAKEN 9/8/2016

Photo 3 Reported location of leak in upper ceiling corner



Photo 4 Water stains and deteriorated wood on the canopy underside on the opposite side of the wall from the reported leak location



KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY
PHOTOS TAKEN 9/8/2016

Photo 5 Close up photo 4



Photo 6 Flashing directly above canopy water stains and deteriorated wood



KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY

PHOTOS TAKEN 9/8/2016

Photo 7 Flashing repair is not attached to roof membrane and seam probe inserted into flashing opening



Photo 8 Crack in sealant at top of termination bar, seam probe inserted into crack



KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY

PHOTOS TAKEN 9/8/2016

Photo 9 Commence water test at 10:16 AM



Photo 10 At 10:17 AM, water observed at water stained and damaged wood on underside of canopy directly below water test



KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY

PHOTOS TAKEN 9/8/2016

Photo 11 Water stains on wall beneath canopy, previously not reported



Photo 12 Commence water test at top of base flashing along the wall directly above the water stains on the wall at 10:21 AM.



KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY

PHOTOS TAKEN 9/8/2016

Photo 13 Close up photo 12



Photo 14 water running down the wall directly below the water test area at 10:23 AM.



KINGSTON PIKE PLAN: WATER TESTS
301 WALL STREET STEET, KINGSTON, NY
PHOTOS TAKEN 9/8/2016

Photo 15 Close up of photo 14

