

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 3, 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:

- 34 North Front Street/335 Wall Street
- 38 North Front Street
- 44 North Front Street
- 54 North Front Street
- 58 North Front Street
- 312 Wall Street

C.T. MALE ASSOCIATES

*Results of Water Spray Testing
Pike Plan Restoration Project - Kingston, NY
November 3, 2016
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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', with a stylized flourish at the end.

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

November 3, 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
34 North Front Street: Dominick's Café/Dream Weavers

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 1, 2016. There are photographs attached to this report that reasonably represent my observations. However, there was a camera malfunction on 9/1/2016. Replacement photos were taken on 9/8/2016 and are attached along with additional photos that were taken in 2015.

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:

The whole ledge across the entire side of the building (on the N. Front St. side) that is attached to the Pike Canopy drips through light fixtures inside the building, see photos 3, 4, 5, 6 and 7.

Finding for Leak "A":

The wood window sills above canopy are deteriorated and can easily allow water to enter the building, see photos 8 and 9.

The brick wall mortar joint above the canopy deteriorated in some location and can allow water to enter the building, see photos 10, 11, and 12..

At the step between the sloped metal canopy roof and the adjacent flat roof, the metal base flashing is open at the top and can easily allow water to enter, see photo 13 and 14. Metal counter flashing is absent.

When water testing, it is best to focus on one entity at a time in an effect to determine which entity is leaking. Water testing began along the N. Front St. side at 9:41 AM at the green metal base flashing's base at the top of the metal canopy roof, then at the standing seam baffle of the metal roof near the top of the metal roof, then, focused on one notch of the baffle until 10:25 AM. No water appeared.

Then, water test began at the top edge of the green metal base flashing, see photo 5 at 10:25 AM. At 10:41 AM, water drips were observed at the underside of the soffit.

Recommendation to resolve Leak "A":

Repair deteriorated wood window sills.

Repair the deteriorated brick mortar joints.

Repair the open metal flashing at the step between the sloped metal canopy and the flat roof. Install metal counter flashing over the top of the metal base flashing.

Remove the green metal base flashing at the top of the metal canopy roof where it contacts the building, see photos 4 and 5, and properly replace the metal flashing and sealants.

Leak "B" complaint: previously not reported.

Water runs down the column at the corner, adjacent to the white downspout, see photos 15, 16 and 17.

Finding for Leak "B":

The metal edge gravel stop flashing adjacent to the gutter is not the proper material as it is sensitive to UV degradation and is deteriorating. See photo 18.

The sloped green metal roof is not sealed to the roof membrane at the base of the metal roof.

Recommendation for Leak "B":

Remove the metal edge gravel stop flashing and replace with the material that is compatible with the gutter membrane and not sensitive to UV degradation.

Seal the gap between the roof membrane and the metal roof panels at the base. This will not be an easy repair.

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 cursive 'Hope'.

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 Place Kingston, NY
Questions for Business Owners/Tenant:

1. Street Address: 34 North Front St. (MAPS 335 Wall St)
2. Business Name: Dominick's Cafe / Dream Weavers
3. Contact Person: Dominick Vanacore Jr.
4. Contact Person Phone and Email: (914) 388-1002 dominickscfe@gmail.com
5. How long have you operated this business in this location? 8 years 20 years - dreamweaver@gmail.com
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 happens with severe rain causing continuous and increased damage
8. When did you first notice signs of water infiltration? 2011
9. Where specifically does water infiltration occur? whole ledge across entire side of building that is attached to Pike Place
10. When does water infiltration occur? drips through light fixtures inside building
11. How often does water infiltration occur? depending on angle of rain.
12. What type of weather event causes the water infiltration? severe rain storms
13. Does the water infiltration continue after the weather event ends? No
14. If so, for how long after does the water infiltration continue? until all water collect on Pike then stops running
15. Have there been any attempts to stop the water infiltration? was supposed to be repaired but they did punch list but it never happened
16. If so, please describe the attempts:
17. When were the attempts made and by whom? No attempts were ever made.
18. Please describe any damages that have occurred due to water infiltration.
peeling paint, water in light fixtures, damaged floor some art work.
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? Sent to city planning board when this survey was sent out the first time.

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

PHOTOS TAKEN 9/8/2016

Photo 1 34 North Front Street



Photo 2



Photo 3 Leaks reported inside the building beneath the top of the green metal roof where it contacts the building



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

PHOTOS TAKEN 9/8/2016

Photo 4 Leaks reported inside the building beneath the top of the green metal roof where it contacts the building



Photo 5 Close up of photos 3 and 4



Photo 6 leaks reported along the window line beneath where the green metal roof contacts the building



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

PHOTOS TAKEN 9/8/2016

Photo 7 Close up of photo 6



Photo 8 wood window sills above canopy are deteriorated



Photo 9 wood window sills above canopy are deteriorated



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

PHOTOS TAKEN 9/8/2016

Photo 10 brick wall mortar joints above the canopy are deteriorated



Photo 11 brick wall mortar joints above the canopy are deteriorated



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

PHOTOS TAKEN 9/8/2016

Photo 12 brick wall mortar joints above the canopy are deteriorated



Photo 13 metal base flashing is open at the top and no metal counter flashing at the top



Photo 14 top view of photo 13, metal base flashing is open at the top and no metal counter flashing at the top



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

PHOTOS TAKEN 9/8/2016

Photo 15 leaks through the column top, previously not reported



Photo 16 Previously not reported leak at top of column near white downspout



Photo 17 Close up of photo 16



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

PHOTOS TAKEN 9/8/2016

Photo 18 Improper flashing material (Protecto Wrap) used to flash metal edge gravel stop adjacent to gutter



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November 2, 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
38 North Front Street: Barry Schwartz Optometrist

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 1, 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.

Leak "A" complaint:
Leak in front of office (damaged ceiling tile)

Finding for Leak "A":
Lack of proper roof system flashing, see photo 3. This deficiency was overwhelmingly obvious and did not require a water test.

Recommendation to resolve Leak "A":
Properly install base flashing from roof to brick wall

Leak "B" complaint: Previously not reported.
Wood column at curb between 38 and 40 North Front Street had water damage, see photo 4.

Finding for Leak "B":
The gutters above the column were plugged, see photo 5. Water was dripping from the upper fascia board without any water tests being performed, see photos 5 and 6.

Recommendation for Leak "B":
Clean out gutters and reflash gutters.

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

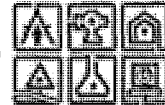
w/ attachments

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Barry A Schwartz
38 N Front Street
Kingston, NY 12401



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

1. Street Address: _____
2. Business Name: As Schwartz
3. Contact Person: Sam
4. Contact Person Phone and Email: BSCHWARTZ1@HVC.RR.COM
5. How long have you operated this business in this location? 1979
6. Has the business experienced water infiltration? Yes
7. If so, what type of water infiltration? Please describe in as much detail as possible.
Leak in front of office - May be fixed now
8. When did you first notice signs of water infiltration? After construction
9. Where specifically does water infiltration occur? RAIN OFFICE FRONT
10. When does water infiltration occur? Rain
11. How often does water infiltration occur? May be fixed
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? no
15. Have there been any attempts to stop the water infiltration? Yes
16. If so, please describe the attempts: Resealed Canopy
17. When were the attempts made and by whom? ?
18. Please describe any damages that have occurred due to water infiltration. Damage to Ceiling Panels
19. Have you or the property owner reported and documented your issues/damages by letter or email? Y
20. If so, to whom were they sent and when? City of Kgr

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

1. Street Address: 38 N. Front
2. Business Name: Barry Schwartz Co
3. Contact Person: Barry Schwartz Co
4. Contact Person Phone and Email: BSCHWARTZ2@HVC.RR.COM
5. How long have you operated this business in this location? 37 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.
Leak in floor of office (better now)
8. When did you first notice signs of water infiltration? New canopy
9. Where specifically does water infiltration occur? Office front
10. When does water infiltration occur? Rain
11. How often does water infiltration occur? Better now
12. What type of weather event causes the water infiltration? Bad weather
13. Does the water infiltration continue after the weather event ends? N
14. If so, for how long after does the water infiltration continue? N
15. Have there been any attempts to stop the water infiltration? Y
16. If so, please describe the attempts: They may have fixed it
17. When were the attempts made and by whom? ?
18. Please describe any damages that have occurred due to water infiltration. Ceiling Tiles
19. Have you or the property owner reported and documented your issues/damages by letter or email? N
20. If so, to whom were they sent and when? ?

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

PHOTOS TAKEN 9/1/2016

Photo 1 38 North Front Street entrance



Photo 2 Ceiling tile with water stains



Photo 3 Directly above the water stained ceiling tile, the roof was found to be improperly terminated to the brick wall.



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

PHOTOS TAKEN 9/1/2016

Photo 4 Previously unreported water damage to column between 38 and 40 North Front St



Photo 5 Above damaged column, gutter is plugged and water dripping down from upper fascia



Photo 6 Close up photo 5, water drips are difficult to see



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November 2, 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
44 North Front Street: Stellas

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 30, 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 was reported through the front storefront windows that drips down the front of business. This occurs during the winter with snow buildup.

Finding for Leak "A":

There are many opportunities for water infiltration through the windows, see photos 10 thru 18 and 21 thru 28.

There are several openings in the roof membrane that allows water to enter, see photos 4 thru 9 and 31 and 32. These locations were water tested and leaks were observed at each locations in a very short period of time, see photos 33 thru 43. Water testing of the roof membrane at the open seam adjacent to the second skylight, started at 9:56 AM and water was observed below at 10:05 AM. Water testing at the base flashing opening started at 10:08 AM and water was observed below at 10:13 AM.

No water tests were conducted at the windows as they are part of the building construction.

The sealant (caulking) at the top of the base flashing has cracked, see photo 19 and 20.

Recommendation to resolve Leak "A":

The many opportunities for water infiltration at the windows must be remedied.

The roof membrane openings must be repaired.

The sealant at the top of the base flashings must be removed and new sealant installed.

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.

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: 44 NORTH FRONT ST
2. Business Name: STELLAS
3. Contact Person: MARK BURN
4. Contact Person Phone and Email: 849-5304 MARK808075@YAHOO.COM
5. How long have you operated this business in this location? 40 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.
THRU FRONT STONEFRONT WINDOWS, ONLY DURING
TIME OF PIKE PLAN RENOVATION
8. When did you first notice signs of water infiltration? —
9. Where specifically does water infiltration occur? FRONT
10. When does water infiltration occur? WINTER, SNOW BUILDUP ON PIKE
11. How often does water infiltration occur? IN DRIPS FROM FRONT OF BUILDING
12. What type of weather event causes the water infiltration? SNOW
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? 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. FLOOR REPLACEMENT,
NEON SIGN REPLACEMENT, DAMAGED WOOD ON FRONT
OF BUILDING, REQUIRED SHEET ROCK, DAMAGED THE
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? INSURANCE REP, PIKE PLAN,
CITY OF KINGSTON

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

PHOTOS TAKEN 8/30/2016

Photo 1 Canopy roof over 44 North Front St at west end looking east.



Photo 2 gutter partially filled



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

PHOTOS TAKEN 8/30/2016

Photo 3 Gutter partially filled



Photo 4 Two openings in roof membrane



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 5 Close up of photo 4



Photo 6 Close up of photo 5



Photo 7 Close up of photo 5



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

PHOTOS TAKEN 8/30/2016

Photo 8 Opening in roof membrane west side of near skylight



Photo 9 Close up of photo 8



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 10 Crack in wood below window



Photo 11 Close up of photo 10



Photo 12 Close up of photo 11



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 13 Crack in window jamb sealant



Photo 14 Close up of photo 13



Photo 15 Fifth window from the west end, air conditioner closure not at window exterior, allows water entry



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 16 Close up of photo 15



Photo 17 Crack in wood above base flashing



Photo 18 Close up of photo 17



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

PHOTOS TAKEN 8/30/2016

Photo 19 Crack at the top of the base flashing



Photo 20 Close up of photo 19



Photo 21 Sixth window from the west end, air conditioner closure not at window exterior, allows water entry



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 22 Close up of photo 21



Photo 23 Eighth window from the west end, outer closure not closed, allows water entry



Photo 24 Close up of photo 23



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

PHOTOS TAKEN 8/30/2016

Photo 25 Eighth window from west end, crack in window sill frame



Photo 26 Close up of photo 25



Photo 27 Ninth window from the west end (farthest east), air conditioner closure not at window exterior, allows water entry



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 28 Close up of photo 27



Photo 29 Ninth window from the west end (farthest east), cracks in sealant at top of base flashing



Photo 30 Close up of photo 29



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

PHOTOS TAKEN 8/30/2016

Photo 31 Eighth window from west end, opening in base flashing



Photo 32 Close up of photo 31



Photo 33 Start water test at west end of 44 N. Front St. at 9:51 AM at roof membrane openings from photos 4, 5, 6 and 7.



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 34 Close up of photo 33



Photo 35 At 9:52, leaks observed between 42 and 44 North Front St directly beneath water test of photos 33 and 34



Photo 36 Water on sidewalk beneath leak of photo 35



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 37 Water test on roof membrane opening of photo 8 and 9 at 9:56 AM



Photo 38 Water observed at skylight fascia at 10:05 AM beneath water test of photo 37



Photo 39 Close up of photo 38



KINGSTON PIKE PLAN: WATER TESTS
44 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 40 Close up photo 39



Photo 41 Water on sidewalk beneath photo 40



Photo 42 Water test open roof membrane at eighth window from the west shown in photos 31 and 32. Started water test at 10:08 AM



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

PHOTOS TAKEN 8/30/2016

Photo 43 At 10:13 AM water observed at base of white fascia board beneath water test of photo 42



Photo 44 Close up of photo 43



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

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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
54 North Front Street: Kingston Clock Shop

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 30, 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:

Leak appears at front entrance between canopy and building during a heavy rain.

Finding for Leak "A":

Large openings were observed in the window jamb frames, see photo 5, 6, 7 and 8.

An electrical junction box penetrates the green metal base flashing.

At 10:34 AM, water test began at the green metal base flashing, see photos 11 and 12. Leaks were observed, see photos 11 and 12, at the outer edge of the canopy, at 10:44 AM, not previously reported, see photos 13 thru 18.

Leaks were observed at the front entrance between the canopy and the building at 10:52 AM and 10:56 AM, see photos 19 thru 23.

Recommendation to resolve Leak "A":

The large window frame openings must be remedied.

The green metal base flashing must be removed and replaced with the proper flashings and sealants installed.

Reflash the gutter.

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.

William J. Hope, PE
Registered Building Envelope Consultant
RRC, RWC, REWC, CCS, GRP
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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: 52-58 No. Front St, KINGSTON
2. Business Name: 54 No. Front (KINGSTON LOCK SHOP
AND 58 No. Front - SAGAR GUITAR)
3. Contact Person: ROSE/NICK MORRIS
4. Contact Person Phone and Email: 845-338-0177 NICK019@yahoo.com
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.
ENTRANCE OF 54 No. FRONT ST (KINGSTON LOCK SHOP)
get water between canopy + building and
WINDOW AT 58 No. FRONT (SAGAR GUITAR SHOP)
8. When did you first notice signs of water infiltration? _____
9. Where specifically does water infiltration occur? NEAR ROOF ↑ see #7
10. When does water infiltration occur? heavy rain
11. How often does water infiltration occur? _____
12. What type of weather event causes the water infiltration? see #10
13. Does the water infiltration continue after the weather event ends? yes
14. If so, for how long after does the water infiltration continue? _____
15. Have there been any attempts to stop the water infiltration? at the beginning
16. If so, please describe the attempts: when canopy completed
patch-up job o.k. AT FIRST - but last few
years - water HAS come in
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? _____

ⓧ gutters + downspouts, not clean but should
not/anything to do with leakage
have

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

PHOTOS TAKEN 8/30/2016

Photo 1 54 North Front Street



Photo 2 54 North Front Street, front entrance

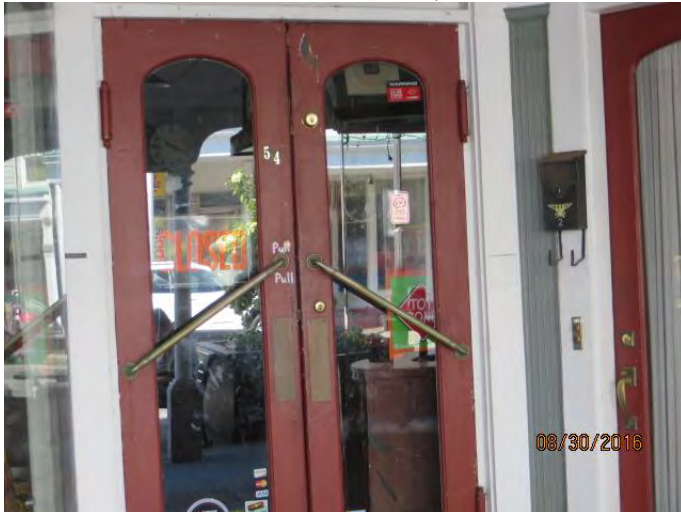


Photo 3 54 North Front Street, outdoor sign



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

PHOTOS TAKEN 8/30/2016

Photo 4 Roof canopy over 54 North Front Street



Photo 5 Roof canopy over 54 North Front Street, see probe in large window jamb opening



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

PHOTOS TAKEN 8/30/2016

Photo 6 Roof canopy over 54 North Front Street, see pen in large window jamb opening



Photo 7 pen in large window jamb opening of photo 6



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

PHOTOS TAKEN 8/30/2016

Photo 8 Probe in large window jamb opening



Photo 9 Electrical junction box through green metal base flashing



KINGSTON PIKE PLAN: WATER TESTS
54 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 10 Close up of photo 9



Photo 11 Begin water test at green metal base flashings across the width of building



Photo 12 continuing water test at green metal base flashing across width of building



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

PHOTOS TAKEN 8/30/2016

Photo 13 Water leak observed at fascia not previously reported



Photo 14 Close up of photo 13, see water drops



Photo 15 Water on side walk beneath fascia leak



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

PHOTOS TAKEN 8/30/2016

Photo 16 Leak behind Clock Shop sign



Photo 17 Close up of photo 16, difficult to see water drops



Photo 18 Water on sidewalk from leak Clock Shop sign



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

PHOTOS TAKEN 8/30/2016

Photo 19 Water leak at fascia of front entrance



Photo 20 Water on sidewalk beneath leak shown in photo 19



Photo 21 Second Water leak at fascia of front entrance



KINGSTON PIKE PLAN: WATER TESTS
54 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 22 Close up of photo 21



Photo 23 Second water spot on sidewalk beneath leak shown in photo 21



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
58 North Front Street: Saker Guitar Store

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 30, 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:

Leak in front window interior per attached survey.

Mr. Ernie Saker, Saker Guitar Store proprietor, said there have been no leaks in the front window interior for nine years.

Finding for Leak "A":

The wooden window trim has several cracks that could allow water to enter the building, see photos 3, 4, 5 and 6.

Within a minute of water testing commencement across the green metal base flashing, water began to pour out from between the building and the canopy, see photos 9 thru 12.

Recommendation to resolve Leak "A":

Remedial work required to fill cracks at the window trim and remedial work to preserve the window frames from further deterioration.

Remove and properly replace the green metal base flashing against the building wall.

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 horizontal line extending from the end of the word "Hope".

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: 52-58 No. Front St, KINGSTON
2. Business Name: 54 No. Front (KINGSTON LOCK SHOP
AND 58 No. Front - SAGAR GUITAR)
3. Contact Person: ROSE/NICK MORRIS
4. Contact Person Phone and Email: 845-338-0177 nicr019@yahoo.com
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.
ENTRANCE OF 54 No. FRONT ST (KINGSTON LOCK SHOP)
get water between canopy + building and
WINDOW AT 58 No. FRONT (SAGAR GUITAR SHOP)
8. When did you first notice signs of water infiltration? _____
9. Where specifically does water infiltration occur? NEAR ROOF ↑ see #7
10. When does water infiltration occur? heavy rain
11. How often does water infiltration occur? _____
12. What type of weather event causes the water infiltration? see #10
13. Does the water infiltration continue after the weather event ends? yes
14. If so, for how long after does the water infiltration continue? _____
15. Have there been any attempts to stop the water infiltration? at the beginning
16. If so, please describe the attempts: when canopy completed
patch-up job o.k. AT FIRST - but last few
years - water HAS come in
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? _____

ⓧ gutters + downspouts, not clean but should
not/anything to do with leakage
have

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

PHOTOS TAKEN 8/30/2016

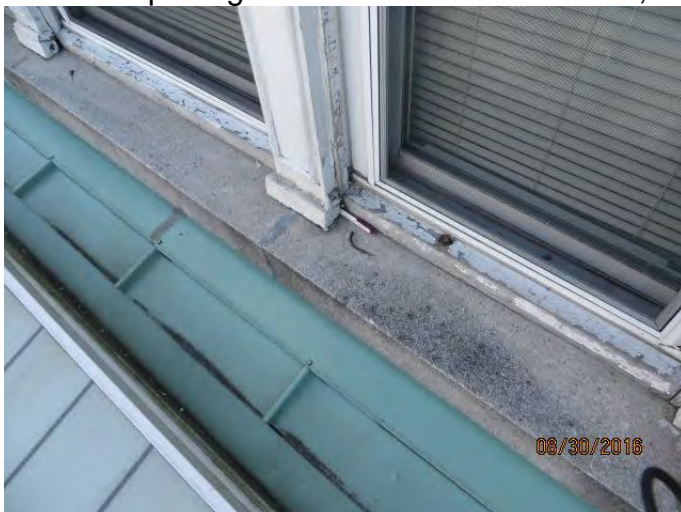
Photo 1 Guitar Store entrance



Photo 2 Canopy roof over 58 N. Front St.



Photo 3 Opening at base of wood window trim, see pen



KINGSTON PIKE PLAN: WATER TESTS
58 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

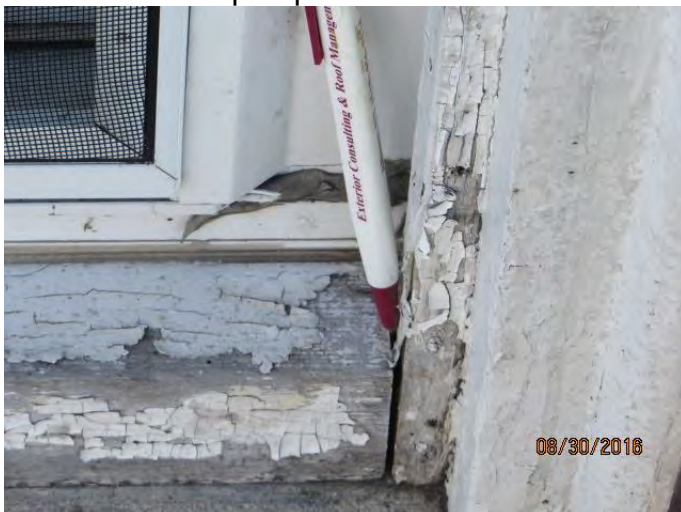
Photo 4 Close up of photo 3



Photo 5 Opening in window sill trim, see pen



Photo 6 Close up of photo 5



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

PHOTOS TAKEN 8/30/2016

Photo 7 Begin water test on green metal base flashing at 11:08 AM across width of 58 N. Front St.



Photo 8 Begin water test on green metal base flashing at 11:08 AM across width of 58 N. Front St.



Photo 9 Water leaks observed across the front of 58 N. Front St. at 11:09 AM



KINGSTON PIKE PLAN: WATER TESTS
58 NORTH FRONT STEET, KINGSTON, NY
PHOTOS TAKEN 8/30/2016

Photo 10 Close up of photo 9



Photo 11 Close up of photo 9



Photo 12 Water on sidewalk across the front of 58 N. Front St.



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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
312 Wall Street: MB Financial

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 leaking in front entrance doorway. See damaged soffit photos 2, 3 and 4.

Finding for Leak "A":

There are very large openings at the window sills that surely allow water entry. The openings were taped closed for the purposes of water testing the canopy, see photos 5, 6, 7 and 8.

There is a large crack along the water table across the building's front, see photos 9, 10 and 11. Water test began at 10:47 AM focused on the water table crack and leaks appeared at 10:48 AM, see photos 12 thru 17.

Recommendation to resolve Leak "A":

Remedy the large openings at the window sills.

Repair water table crack along the building's front.

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 written in a cursive style with a horizontal line extending from the end of the word "Hope".

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

w/ attachments

C.T. MALE ASSOCIATES

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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: 312 Wall Street
2. Business Name: MB Financial
3. Contact Person: bruce katz
4. Contact Person Phone and Email: bruce@bounceonit.com
5. How long have you operated this business in this location? 12 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 leaking in front entrance doorway
8. When did you first notice signs of water infiltration? during Pike plan construction
9. Where specifically does water infiltration occur? Front door way
10. When does water infiltration occur? during rain
11. How often does water infiltration occur? severe rain
12. What type of weather event causes the water infiltration? _____
13. Does the water infiltration continue after the weather event ends? only briefly
14. If so, for how long after does the water infiltration continue? 2 hours
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. Trim damaged from water

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 of Kingston

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

PHOTOS TAKEN 9/8/2016

Photo 1 Front Entrance to 312 Wall Street



Photo 2 Water damage to soffit



Photo 3 Water stains on soffit



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

PHOTOS TAKEN 9/8/2016

Photo 4 Close up of photo 3



Photo 5 Window sills above metal canopy has large openings that were taped off for the water tests



Photo 6 Close up of photo 5



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

PHOTOS TAKEN 9/8/2016

Photo 7 Window sills taped off for water test



Photo 8 Close up of photo 7



**KINGSTON PIKE PLAN: WATER TESTS
312 WALL STREET STEET, KINGSTON, NY**

PHOTOS TAKEN 9/8/2016

Photo 9 Crack along metal water table below windows, see yellow marking adjacent to crack



**KINGSTON PIKE PLAN: WATER TESTS
312 WALL STREET STEET, KINGSTON, NY**

PHOTOS TAKEN 9/8/2016

Photo 10 Close up of photo 9



Photo 11 Water table crack continues across the building's front



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

PHOTOS TAKEN 9/8/2016

Photo 12 Begin water test at 10:47 AM across the building's front focusing on the water table crack with window sills taped



Photo 13 At 10:48 AM, water drops appeared on the soffit below the water test area



Photo 14 soffit with water drops. The water drops are difficult to see in the photo



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

PHOTOS TAKEN 9/8/2016

Photo 15 water drops on side walk below soffit



Photo 16 additional water drops at soffit



Photo 17 water drops on sidewalk beneath soffit of photo 16

