

City of Hogansville City Council

Work Session Meeting Agenda

Monday, April 15, 2024 – 6:00 pm

Meeting will be held at Hogansville City Hall

Mayor: Jake Ayers	2025	City Manager: <i>Lisa E. Kelly</i> Assistant City Manager: Niles Ford
Council Post 1: Michael Taylor, Jr *	2025	Assistant City Manager: Niles Ford
Council Post 2: Matthew Morgan	2025	City Attorney: <i>Alex Dixon</i>
Council Post 3: Mandy Neese	2027	Chief of Police: Jeffrey Sheppard
Council Post 4: Mark Ayers	2027	City Clerk: LeAnn Lehigh
Council Post 5: Kandis Strickland	2027	* Mayor Pro-Tem

WORK SESSION - 6:00 pm

ORDER OF BUSINESS

- 1. Fireworks
- 2. Royal Theater Managing Director
- 3. Royal Theater Water Mitigation Results

March 26, 2024

Ms. Lisa Kelly City Manager City of Hogansville 111 High St. Hogansville, GA 30230 Office: 706-637-8629 x 101

Cell: 706-333-3330

Email: lisa.kelly@cityofhogansville.org

Re: Building Exterior Consulting Services Leakage Evaluation Report Royal Theatre 400 East Main St Hogansville, GA 30230 (W&A- 24-00191)

Dear Ms. Kelly,

Williamson & Associates has performed a leakage evaluation of the building exterior associated with the reported water leakage occurring in the Projection Room. The projection room is located above the main entrance. The tower exterior features "the top hat" is clad with cast stone and stucco. Additional leakage was reported by Principle Construction during the evaluation, leaking along the east elevation of the building located below a steel truss supporting the roof framing and spanning the stage. Our evaluation was performed in accordance with our proposal dated February 12, 2024. This report presents our findings performed March 12th & 13th, 2024 with our recommendations for repair.

We appreciate the opportunity to provide our building exterior consulting services on this project. Please contact us with any questions you have regarding the below report or our services in general.

Sincerely,

Williamson & Associates

Michael C. Allen

Field Services Manager

Attachments: Leakage Evaluation Report

Original Drawings - Attachments "A" - "C"

Photographs (85)

Leakage Evaluation Report Royal Theatre 400 East Main St Hogansville, GA 30230 (W&A- 24-00191)

I. EXECUTIVE SUMMARY

Williamson & Associates visited the site on March 12th & 13th, 2024 to investigate leakage as proposed. Services performed generally adhered to practices outlined in ASTM E 2128 "*Standard Guide for Evaluating Water Leakage of Building Walls*".

The water leakage above the projector room at the top hat is a result of a failing stucco and cast stone cladding, along with failures in the multiple applications of roof coating, that allow water to penetrate the current as-built construction. Leakage occurred within 5 minutes of testing. In our opinion the exterior walls and the top hat need to be reclad with stucco or other suitable cladding, along with appropriate roof systems, and incorporated flashings. The walls once repaired should be coated with an elastomeric coating to minimize water penetration.

The east and west scupper/conductor heads revealed leaks either around the throughwall scuppers or from water penetration of the existing multi-wythe masonry wall assembly, entering through deteriorated mortar, missing mortar, and/or broken bricks. The application of a water repellant will not prevent/reduce water penetration of the mass masonry wall. Tuck pointing repairs are recommended, pointing to a minimum depth of 1-1/4" with an integral water repellant added to the mortar mix.

Additional leakage could occur at the throughwall scuppers, and/or from deterioration of the terra cotta copings and exposed brick between the coping and the roof termination. The roof termination includes roof counterflashing's, top sealed with sealant. There is exposed masonry between the roof flashing and terra cotta. The brick should be coated, or additional counter flashing should be added to improve the roof termination against water penetration.

The existing scuppers should be modified to incorporate overflow provisions. This could include lowering the top of the conductor's head below the bottom of the scupper, adding cut outs in the side walls or face of the conductor's head, and enlarging the downspouts to handle the volume of roof water. The area of the roof compared to drainage should be evaluated by the Architect.

W&A also recommends replacing the roof access door, as the door is significantly corroded at its' head and sill, and the door does not properly close. Rainwater will penetrate the access door, as it is not weather protected.

II. BUILDING BACKGROUND

The referenced building was constructed circa 1936. The Architect of record was Tucker and Howell Architects, Atlanta, GA. Seven drawing sheets were provided. From review of the limited drawings and the review of the building from the exterior and interior we have compiled the following information:

 The tower top hat originally housed a metal fabricated lantern element. The element is no longer present, and the original opening is covered by a metal hood.

- Original drawings showed the top hat comprised of concrete, cast stone, and stucco.
- Exterior walls on the front (south) face and wrapping walls were shown as stucco over muti-wythe brick masonry. From our observations, it appears 3 wythes of masonry were used. There is exposed masonry on a majority of the east, west, and north elevations of the building.
- The stucco is in poor condition with notable cracks, delamination's, and the build-up of effloresce staining (calcium carbonate). The walls have been painted, several coats present.
- The lower sections of the wall, street level, green in color are EIFS cladding, appearing to be clad over furred out wall framing.
- Cast stone elements on the top hat are cracked and delaminated in numerous locations.
- The roof is a single ply roof system, likely TPO. Reported to be less than 5 years old. The roof slopes primarily to the north, near front of the interior stage, then slopes from the north south to a valley that is discharged via throughwall scuppers into conductor heads and downspouts. Original drawings noted 6" downspouts. 3" round downspouts were present. No overflow provisions were provided. Based on the roof area, it is suspected the 3" downspouts will not handle the water volume from heavy rains.
- The interior is being renovated by Principle Construction, scheduled completion is circa July 2024. It was reported that the building exterior, exposed masonry is to be cleaned then treated with a water repellant coating. The Architect for the renovation is Dunwody/Belland Architects.
- A leakage was reported to occur below the top hat, leaking into the projector room. Additional leakage was reported by Principle Construction, occurring along the base of the west wall into the theatre seating area and on the east wall of the stage, located below the exposed steel truss and the east scupper/conductor head. We evaluated leakage along the east wall. Testing on the west elevation at the scupper/conductor head revealed similar leakage below the steel truss at the stage. The west wall was not evaluated, regards the leak at the base of wall

III. BUILDING ELEVATIONS

Photo 1 shows the south elevation looking northwest. **Photo 2** shows the east side of the building in the alley. **Photo 3** shows the north elevation, looking southwest. **Photo 4** shows the south elevation, looking northeast. **Photo 5** shows the west elevation, looking northeast. **Photo 6** shows the north elevation, looking southeast. Brick is exposed on a majority of the east and west elevations with all brick on the north elevation of the building.

IV. GENERAL OBSERVATIONS

Leak Area 1

Photo 7 shows an overview of the top hat located on the south elevation of the building and rising above the front entrance. The exposed stucco cladding and cast stone elements exhibit significant cracking on each elevation of the stucco clad walls. The most severe deterioration occurs on the south elevation of the building. Leakage has been reported below the top hat occurring in the original projector room (**Photos 10-11**), reference **Attachment "A"**. Water is penetrating cracks in the attic slab. **Photos 12-14** show the top hat structure within the confines of the attic. A combination of

structural steel and concrete was observed. There were pronounced cracks in the concrete walls/lids with separation at cast cold joints. There were heavy concentrations of calcium carbonate build-up on the interior walls. The result of prolonged water penetration. Water penetrating the attic enters the projector room through cracks in the slab. Water contracting the floor of the project room has penetrated the slab and resulted in water damage to new interior GWB finishes (**Photo 15**). **Photos 16-17** show the interstitial space above the lobby ceiling and below the projector room floor.

Leak Area 2

Photo 18 shows the stage. Principle Construction reported leakage occurring along the east wall below the steel truss seen in Photo 19, reference Attachment "A". It was reported water migrates down the interior face of the masonry, seen on the wall below the duct work (Photo 20). Water collects on the small ledge located along the stairs leading to the basement (Photo 21). Water collects on the basement floor, migrating out from behind the new GWB finishes. The leak occurs near/below the east conductor head/downspout (Photo 22). Water testing revealed leakage through around the scupper or penetration of the mass masonry wall.

Leak Area 3

Principle Constructed reported a leak periodical occurs along the west wall of the building in the theatre seating area, migrating from beneath the GWB finishes, Reference **Attachment "A"**. The floor slab is above the exterior sidewalk. The leak was not evaluated. Based on other testing, it is suspected water is penetrating the mass masonry wall construction.

Top Hat

We were provided access to the top hat by Hogansville City Maintenance Department, accessed via a boom truck. **Photos 23–42** show the various conditions observed. **Attachment "B"** notes the various cladding elements.

- Photos 23-27 show various cracks and delamination that have occurred in the cast stone elements of the structure. The delamination is likely contributed to water migration into the crack with freeze/thaw cycling, causing the delamination. Delamination of the cast stone elements above the city sidewalk poses concern with life safety. Falling debris can injure pedestrians. Repairs to the cast stone is needed.
- Photos 27-29 show the corbeled sections of the top hat. The skyward facing surfaces have been coated multiple times with various roof coatings/chemistries. Coating delamination was observed. At the terminating edges, the stucco is deteriorated/delaminated (Photos 29-30) allowing water migration of the stucco cladding.
- Water penetrating the cladding through cracks/delamination's has resulted in the development of
 calcium carbonate on the face of the stucco clad walls (Photo 31-42). Water penetration has led
 to paint/coating delamination. The stucco cladding was sounded and found delaminated from the
 back-up wall substrate, likely mass masonry. The stucco delamination above the sidewalk poses
 concern with life safety. Falling debris can injure pedestrians. Removal/replacement of the stucco
 is recommended.

Roofing/Terra Cotta Coping

Photos 43-44 show the newer TPO roof system, reportedly installed 5 years prior. The roof slopes primarily from south to north and interfaces a valley and crickets that discharge water from the roof via throughwall scuppers located on the east and west elevation that collect in a conductor head and discharge via a round downspout (**Photo 49**), reference **Attachment "C"**, the original roof plan. Original drawings note 6" downspouts, reference **Attachment "C"**. The current downspouts are 3". It is suspected the conductor heads become overwhelmed in heavy rains. These scuppers are located above the steel truss seen above stage in the theatre. The roof appears visibly in good condition.

The roof parapets are capped with terra cotta copings (**Photo 45**). The terra cotta coping in general is in fair condition with only several broken units. **Photos 46-48** show one of the broken units. It appears the break is recent. The loose pieces were removed to eliminate an overhead falling hazard. The mortar filled joints between the units were in poor condition and can permit water penetration. Water penetrating the terra cotta coping can allow water leakage into the mass masonry structure. The broken sections should be replaced. The existing mortar filled joints should be ground back and the joints sealed with an approved sealant that will bond to the glaze, improving watertightness.

The roof is accessed through a small sized steel hollow metal door/frame. The frame is significantly corroded and will permit water penetration through/around the door and cause leakage in the projector room (**Photos 83-85**). The door should be replaced with a new access door that has watertight performance ratings to reduce the risk of leakage.

V. WATER TESTING

Based on observations made and the brief history of leakage being understood, several locations were selected for water testing. Testing was performed utilizing a spray rack/bar and or a Monarch B-25 testing nozzle.

Water Test # 1

Photo 50 shows the spray bar placed on the roof upslope of the valley, spraying water into the air then cascading back onto the roof. **Photo 51** shows the sheet flow of water on the roof surface, directed from the valley/crickets to the east scupper. During the test, water was observed leaking from joints in the conductor head and downspout (**Photos 52-54**). During the 2-hour test, no leakage was witnessed below the roof on the interior.

Water Test # 2

Photo 55 shows the spray bar placed on the roof upslope of the valley, at the north end of the roof. Water was sprayed into the air then cascading back onto the roof. After approximately 1 hour testing, water was seen leaking below the steel truss and running down the wall behind the duct work (**Photos 56-58**). The test was stopped. The leak is suspected to water penetrating the scupper sleeve penetrating the masonry parapet and or from saturation of the mass masonry wall below the scupper being wetted by the leaking conductor head.

Water Test # 3

After observing the leak. We placed the handheld nozzle atop the terra cotta coping with water spray directed at the conductor head and mass wall (**Photos 59-60**). **Photos 61-62** shows voids in the mortar joints that will permit water penetration of the wall. During this test, there was a significant increase of water penetrating the mass masonry wall (**Photos 63-66**).

Water Test # 4

After observing the leak on the east side and with water stains present on the interior wall, west side beneath the scupper. We tested the west wall using the same handheld nozzle placed atop the terra cotta coping with water spray directed at the conductor head and mass wall (**Photos 67-68**). After approximately 1 hour of testing, water was observed penetrating the mass masonry wall (**Photos 69-73**).

Water Test # 5

Photos 74-76 show the spray bar placed on the upper corbel of the top hat with water sprayed into the air then cascading back onto the structure. Within 5 minutes of testing, a significant amount of water was observed penetrating the structure located in the attic above the projection room (**Photos 77-79**). Water collected on the floor of the attic and penetrated cracks in the concrete deck (**Photos 80-81**). Water then collected on the floor of the projection room (**Photo 82**). Water is penetrating the failing stucco and the delamination/cracks in the cast stone elements leaking to the interior through cracks and cold joints in the top hat construction.

VI. CONCLUSIONS AND RECOMMENDATIONS

Water leakage below the top hat is related to the physical distress in the exposed exterior elements along with a failing fluid applied roof coating(s) and cast cold joints and/or cracks in the corbeled section of the top hat. To address the top hat and stucco clad walls, we recommend the following:

- In our opinion the full exterior south wall, and partial returns on the east and west walls should be reclad with stucco or other suitable cladding to match that of the existing to maintain the theatres original appearance, along with appropriate roof systems, and incorporated flashings at low slope roof interfaces and at the top hat corbels.
- The walls once repaired should be coated with an elastomeric coating to minimize water penetration.

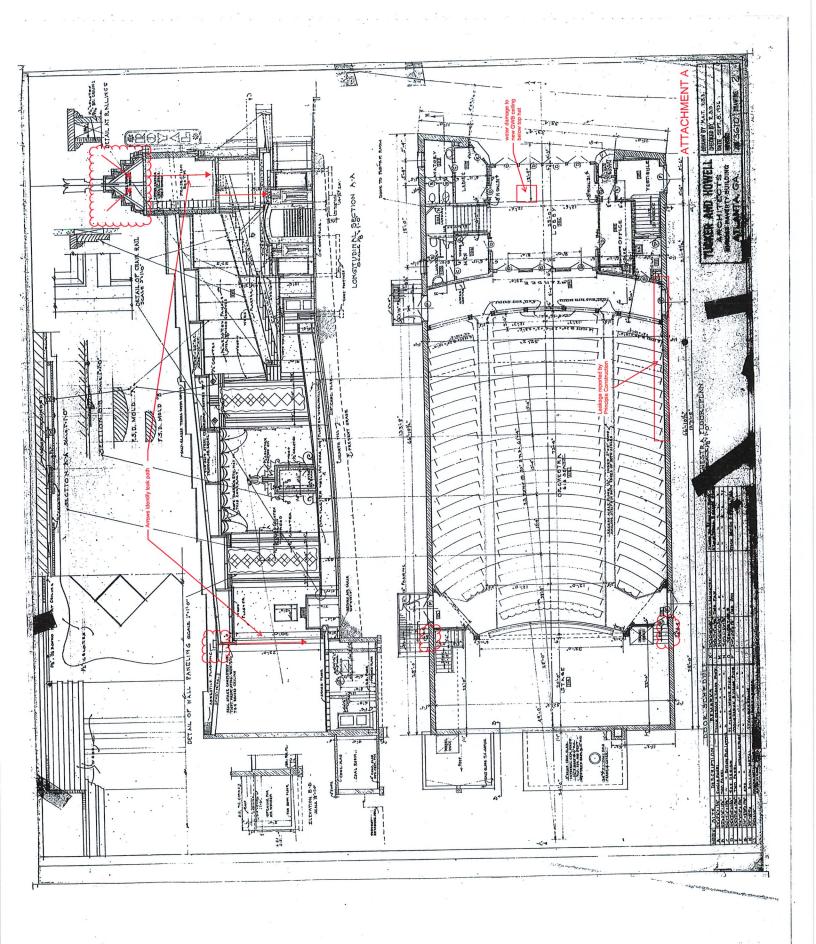
Leaks associated with the mass masonry wall appear to be contributed to voids in the existing exposed mass masonry wall construction, penetrating voids in mortar, cracks in mortar, and through cracks in the brick. The application of a water repellant likely will not prevent leakage. Masonry repairs are recommended to improve visual watertightness of the mass masonry wall, we recommend the following:

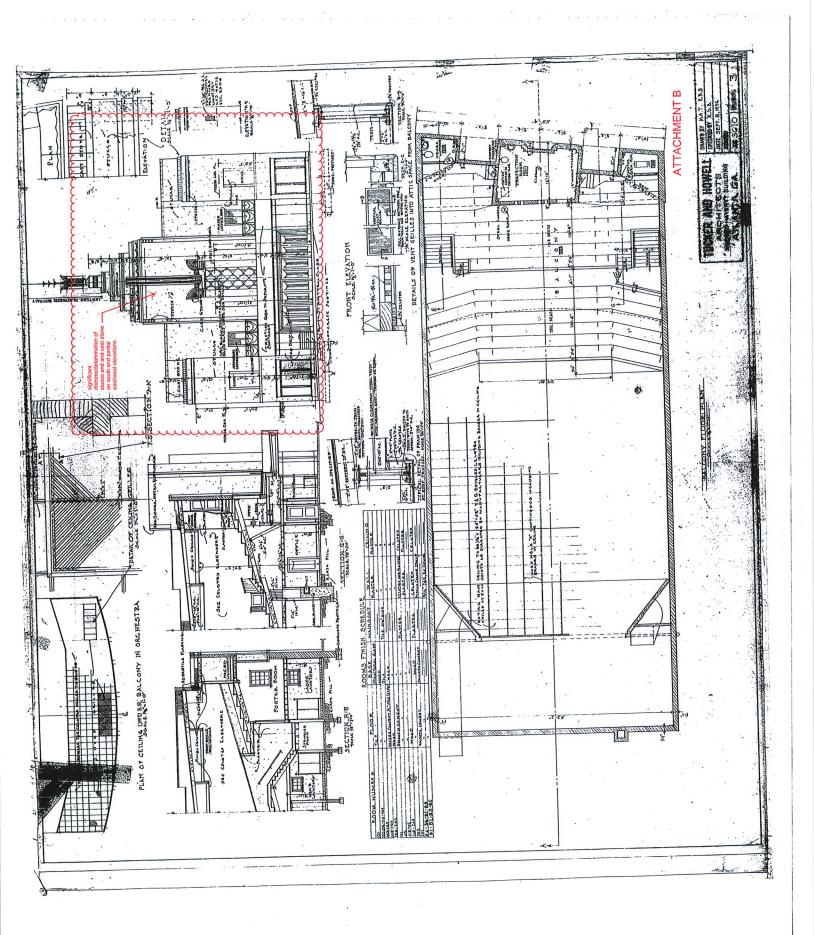
 Access the building exterior to inspect the existing masonry. Locate deteriorated mortar and cracked mortar. These areas should be abraded to remove mortar to a nominal depth of 1-1/4" to repoint the walls using a water repellant admixture like Grace Dryblock to the mortar mix. With mortar should be placed in lifts of a 1/4" packed tightly then pointed in additional layers after each layer has received thumb print hardness.

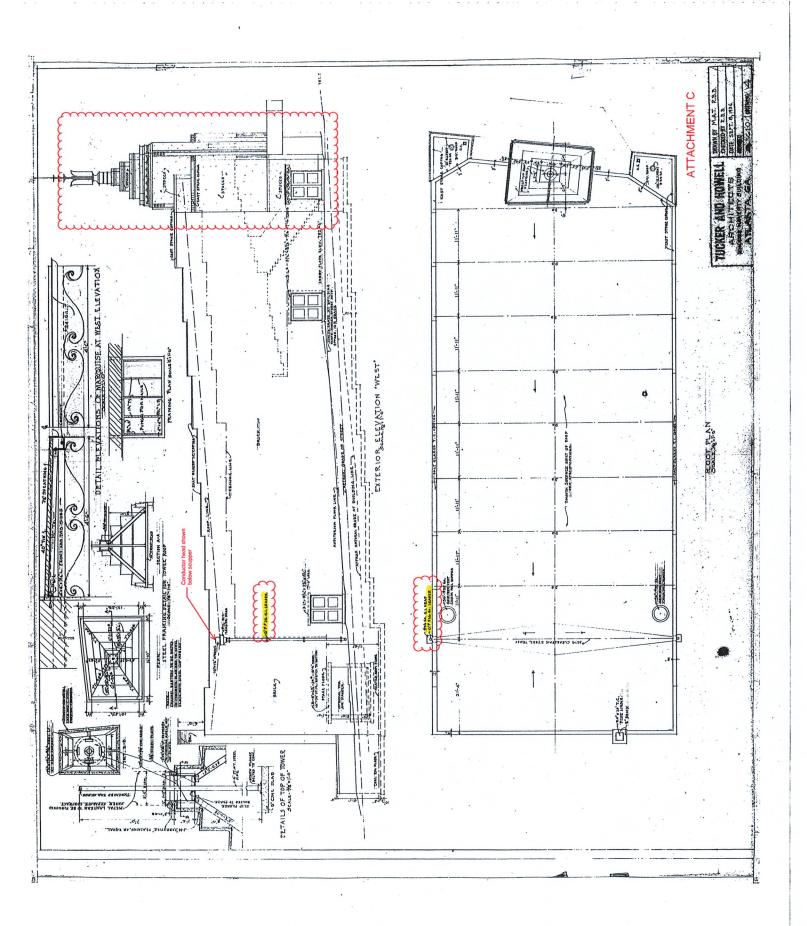
- Cracked bricks should be removed and replaced.
- After mortar cure, clean walls and treat with the projects approved water repellant.
- At terra cotta elements, remove/replace broken units. At joints, cut back mortar and seal joints with an approved sealant that bonds to the terra cotta glaze.
- At scuppers, remove conductor heads. Inspect scupper sleeves. Seal the scupper sleeves to the masonry.
- Install new conductor heads with the top of the conductor head 1" below the bottom edge of the scupper.
- Increase the size of the downspout to handle the volume of water.

W&A also recommends replacing the roof access door, as the door is significantly corroded at its' head and sill, and the door does not properly close. Rainwater will penetrate the access door, as it is not weather protected.

END OF REPORT

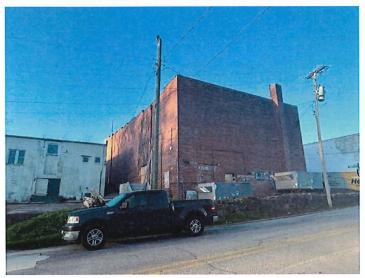












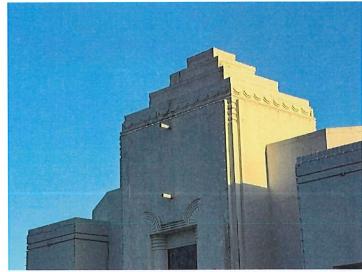


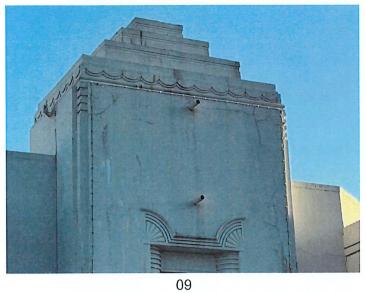
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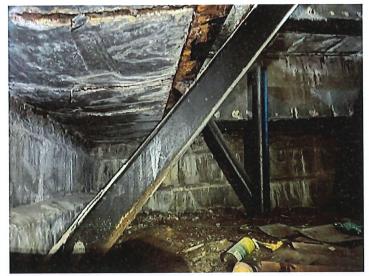


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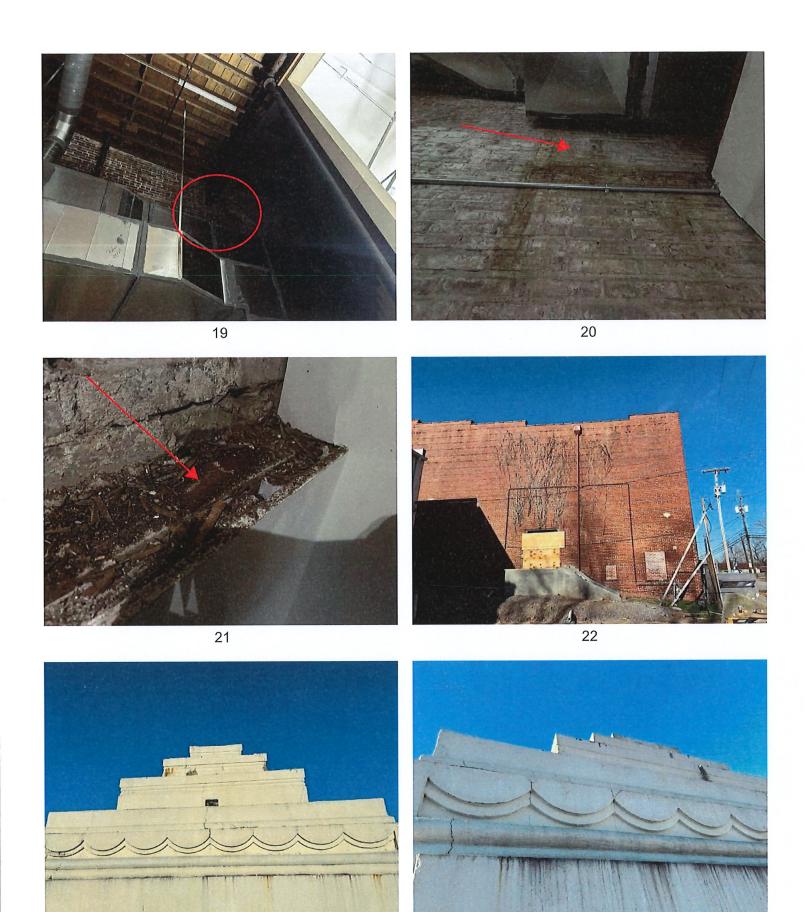






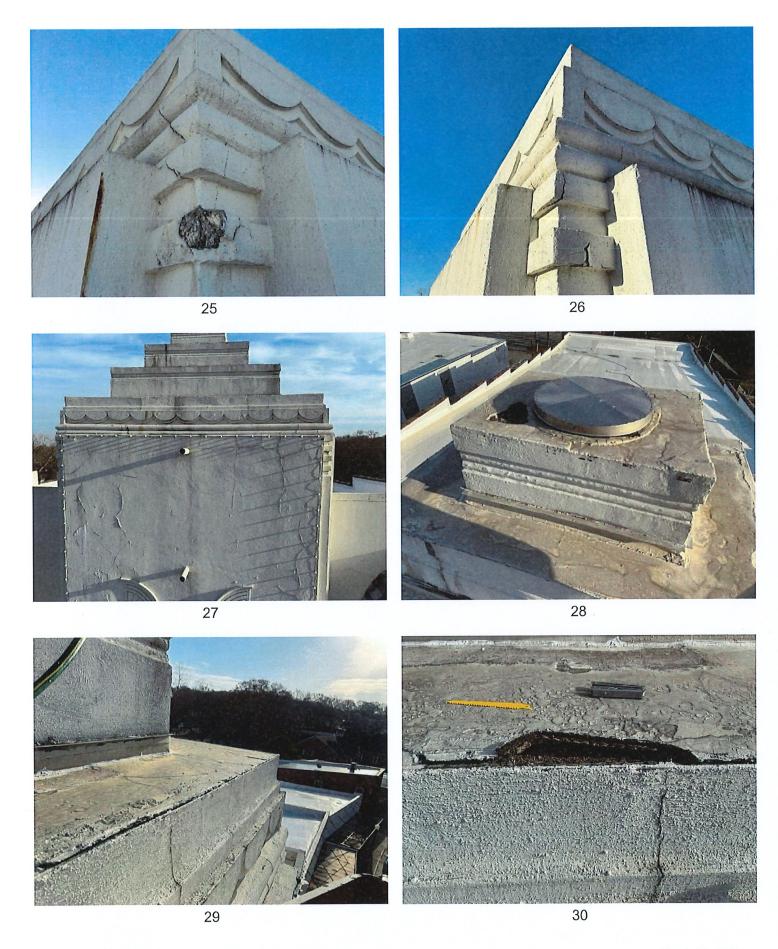






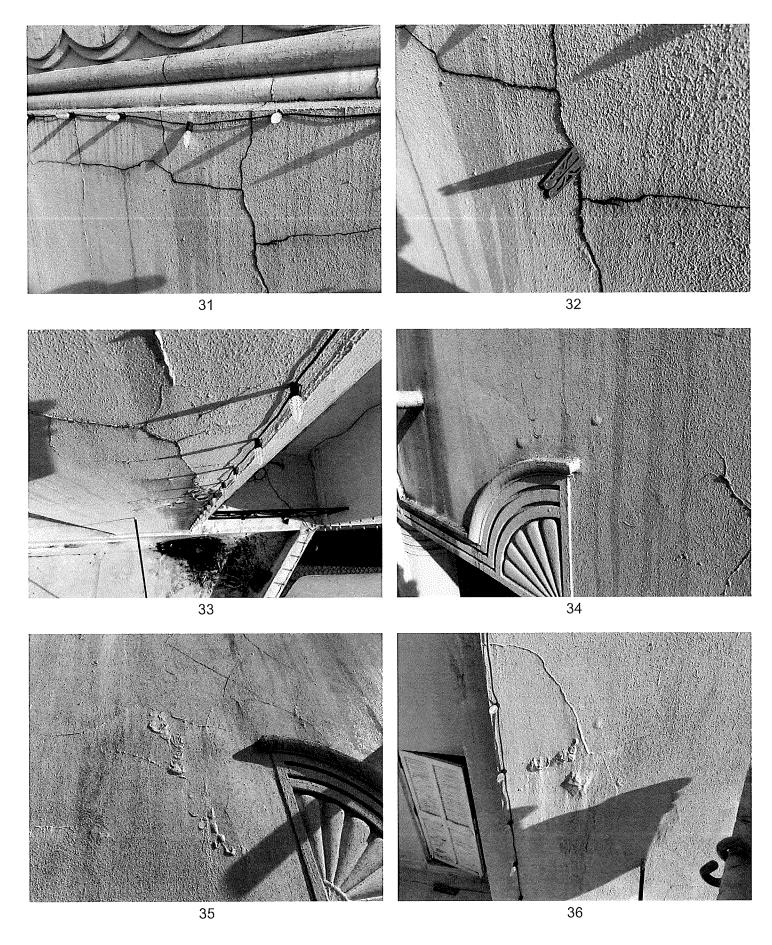
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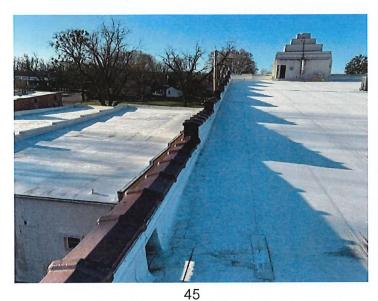


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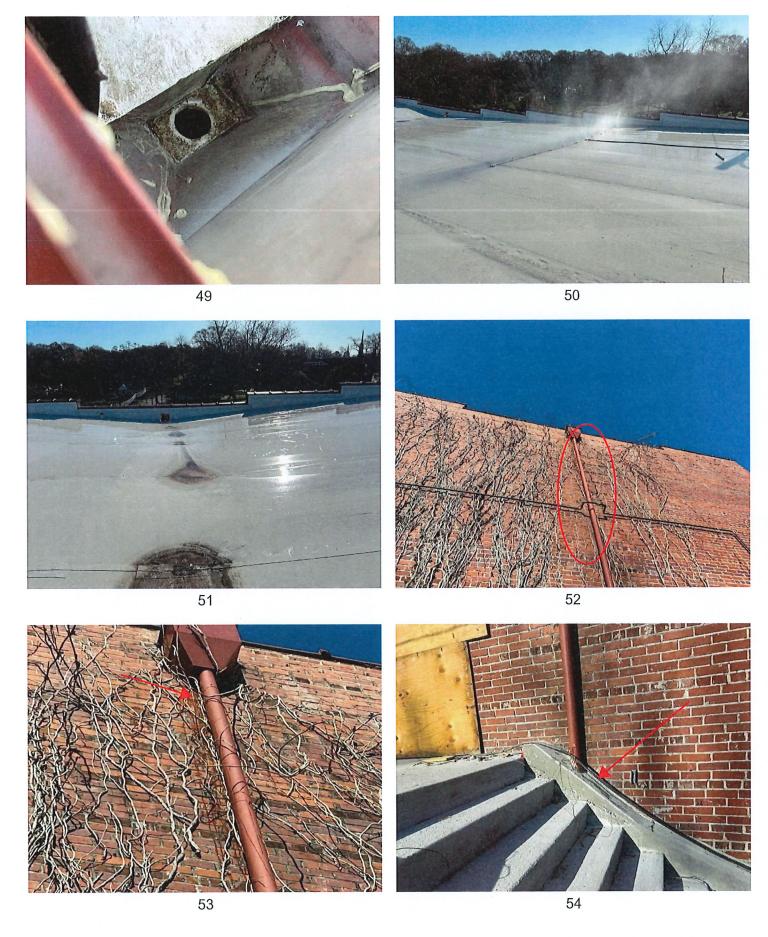












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