

# **Investigate Reported Areas of Water Infiltration**

For  
25 Sigourney Street  
Hartford, CT 06106  
DPW Project Number B1-2B-033L

Prepared For  
STATE OF CONNECTICUT  
Department of Public Works

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Prepared by:

Silver Petrucelli & Associates, Inc.  
Architects & Engineers  
3190 Whitney Ave. Building #2  
Hamden, Ct. 06518  
(203) 230-9007

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## EXECUTIVE SUMMARY / OBSERVATIONS

At the request of Connecticut Department of Public Works, Silver Petrucelli & Associates, Architects and Engineers was retained to conduct a water infiltration study at 25 Sigourney Street Hartford, Connecticut. Field work was conducted on November 6<sup>th</sup> 2008, by Silver Petrucelli & Associates, Architects and Engineers, to exam an active leak on the 18<sup>th</sup> floor of the office building at 25 Sigourney Street. The leak was reported in the northwest corner office on the 18<sup>th</sup> floor around 3pm. When Silver Petrucelli & Associates arrived at the building to examine the leak, approximately 1 hour later, there was no active water movement down the window. However, further examination into the ceiling cavity exposed a small pool of water in the middle of the window in the identical location of previous leaks. The water was pooling on top of the metal flashing and spilling over the back of the flashing and dripping through the weld of the flashing at the bend of the window. We were able to see the location of the water in the building, but were unable to track where the leak was entering the building. The current leaks in the building are all occurring in the corner offices on the 18<sup>th</sup> floor located directly below corner balconies of the 19<sup>th</sup> floor. We have a few theories about where these remain few leaks are entering the building. We recommend to further examination the balconies on the 19<sup>th</sup> to determine if the water is gaining access to the building through either the floor of the balconies or through the parapet wall around the balconies. Further testing is recommended to determine the exact locations of water infiltration.



LOCATION OF LEAK

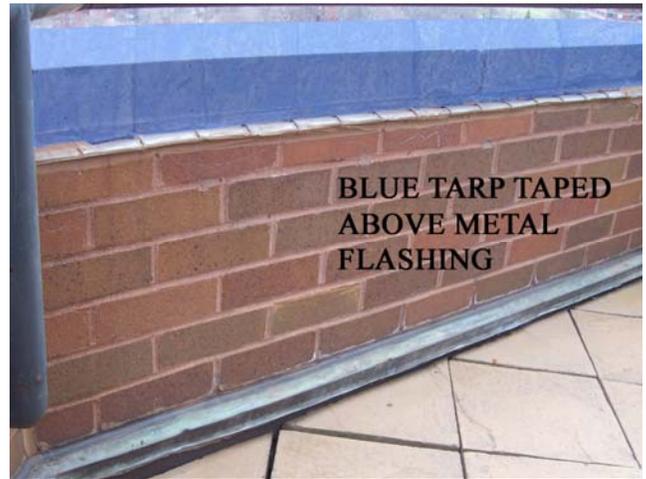


GAP IN FLASHING

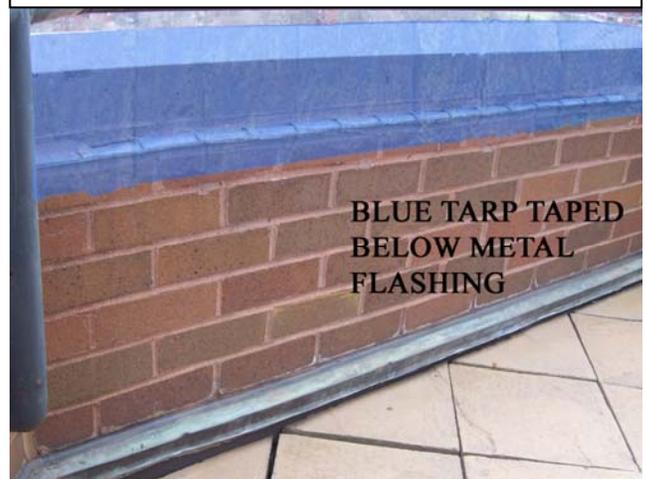
## **RECOMMENDATIONS**

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We have several recommended tests that should be performed sequentially to help determine the exact locations of water infiltration. One of the staffs theories is that water may be saturating through the stone caps of the parapet walls of the balconies traveling along the flashing to welds and punctures in the metal flashing and then leaking into the wall cavity of the building below. We recommend a simple and inexpensive way of testing this theory that involves a blue tarp, some duct tape, and the help of one or two member of Servus Management Corporation. We recommend placing the tarp to cover the stone caps on the parapets of the balcony above one of the leaking windows. The tarps can be put in place by members of Servus Management Corporation and duct taped to the face of the building. First, we recommend placing the tarp so it only covers the stone and not the metal flashing at the top of the parapet. If water continues to leak after the tarps are put into place, then we would recommend expanding the tarp lower to cover the flashing on the parapet to see if that stops the flow of water. If either of these two stops are successful we can pin point that the leaks are occurring within the parapet. If they are unsuccessful, we recommend taking the next measures to remove the balcony pavers, exposing the roofing membrane as well as the roof drains to examine if the water is entering either around the drain itself or through punctures in the roofing membrane. This is done by first removing the stone pavers on the balconies, then plugging the drains and then slowly flooding the balcony flooding progressively further away from the drains until a leak in the membrane occurs. This step is a logical progression from the parapet test which is at a higher elevation, which is why we recommending testing with the tarp first and then this only after we determine that the parapets are not the problem.



**STEP ONE**



**STEP TWO**