



Rodney Square Building Restorations, Inc.

Caulking, Waterproofing, Painting

Dimension Stone, Tile and Stone Cladding Restoration, EIFS Repair

Brick / Masonry / Mortar Repair and Restoration, Consulting

SINCE 1972

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February 26, 2010

Phone: [REDACTED]

ATTN: [REDACTED]
Property Manager

RE: [REDACTED] Wall Repair

Prepared by Rob Crimmins, RSBR, Inc., cell 302-632-4972, email: robcrimmins@comcast.net

Dear James:

We were called to [REDACTED] Drive in Moorestown late last year to address leaks in several locations. Since we had done extensive joint restoration there recently we addressed the possibility that something was wrong with our work. A crew spent several days replacing joints but leaks persisted. During a significant rain and wind storm in January the actual source of the leaks was discovered. Another condition that contributes to water infiltration needs to be brought to your attention too.

At least one significant leak source is broken brick and mortar joints (Fig. 1). It may be the only source. During the inspection that was conducted during the rain and wind event in January water was found on the inside of the brick (Fig. 2). From there it traveled to the top of the window frames and ceiling grid and then into the offices.



Fig. 1 - Broken Brick & Open Mortar Joints



Fig. 2 - Soaked Mortar On Inside Of Wall

Leaks were found at the locations indicated in Fig. 3.

Best practices and guidelines offered by the American Brick Institute direct the starting point for remediation of leaking brick walls is repair or replacement of broken brick and re-pointing of failed mortar joints.

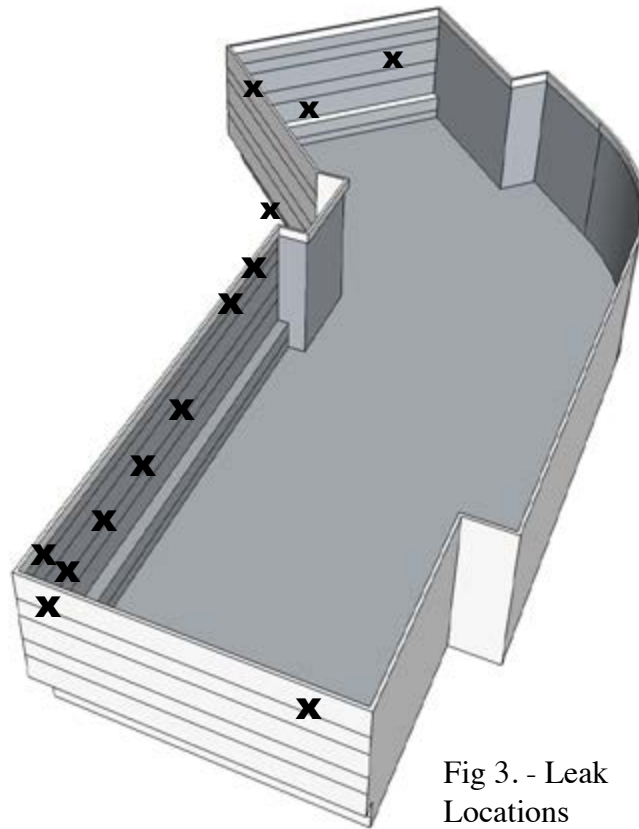


Fig 3. - Leak Locations

Although slightly different than the walls at [REDACTED], the details in Figures 4 and 5 serve to illustrate the condition mentioned that affects water infiltration.

Note the cavity between the back of the brick and the flashing in Figure 5. A wall built as shown allows water that penetrates the brick or condenses on the back of the brick to exit the wall through weeps installed in the base.

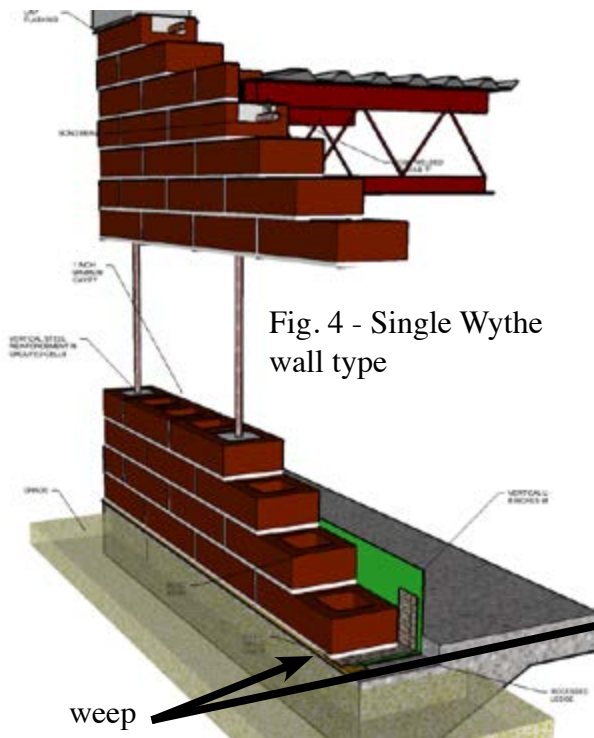


Fig. 4 - Single Wythe wall type

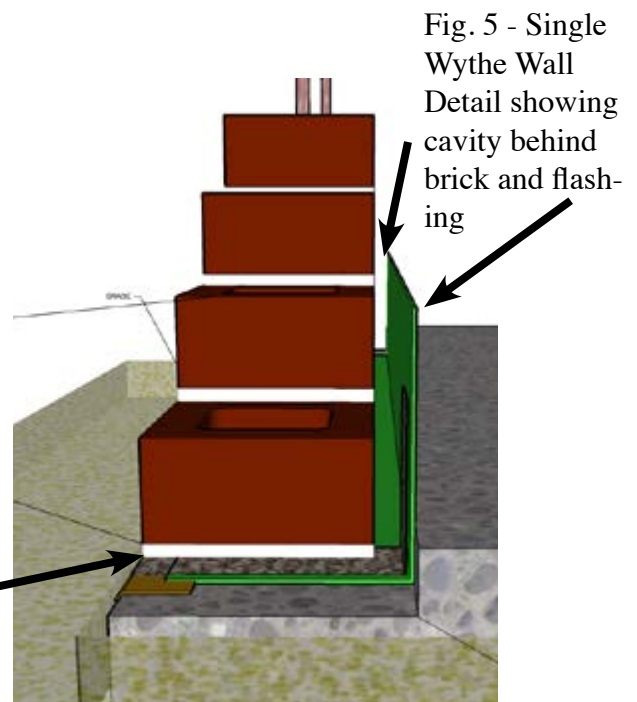


Fig. 5 - Single Wythe Wall Detail showing cavity behind brick and flashing

Figures 6 and 7 are pictures of the wall above one of the upper floor ceilings at [REDACTED]. There is no cavity between the vertical leg of the brick shelf angle and the brick as shown in Figures 4 and 5. Water that penetrates the brick above this point flows down the plastic vapor barrier until it reaches the top of the shelf angle. Some of that water will flow to the bottom course of brick and out the weeps. During heavy, wind blown rain the amount of water exceeds that which can bleed through the confined space behind the brick. The excess water gets out somewhere else and flows to the inside.



Fig. 6



Fig. 7

With the wall as it is, cracked and built without the cavity behind the brick, and without flashing, there are two courses to follow to correct the problem. Both begin with the same step.

The first thing to do is rig a two point, swing stage scaffold at the south end of the building and repair the broken wall above the suite on the top floor in that corner. The repair would consist of chipping and / or grinding out the broken mortar joints and replacing the mortar and creating new joints at places where the brick is cracked or replacing the brick. This is a standard “tuckpointing” process which we’ve completed on many projects in the past.

We would then continue down the face of the building repeating the process on all the areas we find that are in need of repair. Once that “drop” is finished we would move the scaffold to the area adjacent to the one just completed and repeat the process until the south, east and north side walls have been repaired. The walls on the west side are slightly different than the others and don’t currently leak.

The second way begins like the first, with the south end of the building at the top floor suite. But from there the work will be confined to the second and third floors and maybe even only on the areas that are currently leaking. This would be a less costly approach initially but if the walls continue to break returning to them repeatedly would eventually cost more.

Given that the wall was improperly assembled the choice of which approach to take isn’t easy. Since water can’t escape through the weeps as it should even small breaks in the wall result in leaks to the inside. If the weeps were working that wouldn’t be the case.

Given these considerations we propose to complete the work by:

1. Rigging the scaffold on the south end of the building at the southwest corner. This “rigging and setup” charge will be \$[REDACTED]
2. Re pointing the broken brick joints and otherwise repairing the brick on the south wall outside the corner suite from the top of the second floor to the parapet. Until the wall surface is within reach the number of lineal feet of joint to be restored and brick repaired won’t be known. Our charge for this work will therefore have to be by the day at \$[REDACTED] per day. Replacement mortar joints are installed in at least two successive layers with the original material removed to a depth equal to about twice the joint width. The first layer has to set before the second is applied. The need to do the work in two steps adds to the time needed. It’s likely the time required to identify and re point the broken joints on the south wall outside the corner suite from the top of the second floor to the parapet will be two to three days.

3. Clean out all weeps by drilling through the existing opening from the outside face of the brick to the shelf angle behind the brick.
4. The same conditions and estimates apply to any other portions of the building we may be asked to remediate in the same fashion.

We can begin work on fairly short notice and will strive to complete the project in as little time as possible. The weather will have a bearing on the project because mortar can't be laid if there is a chance that it will freeze before it sets. The average daily low temperature for Philadelphia is 35 degrees in March so we can start the work now but there could be interruptions.

When enough work has been completed to allow for an estimate of the time to complete the project a production schedule will be provided.

Thank you for the opportunity to review your needs and offer a solution.

Sincerely yours,

A handwritten signature in black ink, reading "Robert Crimmins". The signature is fluid and cursive, with the first name "Robert" and last name "Crimmins" clearly distinguishable.

Robert Crimmins, President
Rodney Square Building Restorations, Inc.