Challenges of a Building Envelope Restoration Contractor

As a building envelope specialty contractor, one of the challenges we find in working with building owners, property managers and consultants is overcoming the "just fix it" mentality and building a level of trust that allows them to be comfortable with our approach to resolve their issue even when it is not convenient.

Top five requests we hear from clients seeking to resolve their troubles are:

1. Can't you spray some sealer on it?
2. Can you send a guy with some caulking, we have a leak?
3. They caulked it before, and it stopped leaking for a while.
4. We have some loose bricks; can you just repoint them?
5. Our garage needs some concrete work.

Our top five responses to these requests are:

1. Is the issue the building is experiencing a global issue that is happening all over the place or a problem localized to one unit?
2. Does the problem happen occasionally, under certain weather conditions, or does it happen all the time, no matter what the weather is like?
3. How long has the building been experiencing this issue?
4. Has it been fixed previously and how long did that work for?
5. Have you had anyone conduct tests to try and recreate the leak?

Older masonry buildings use their mass to keep water from entering. The walls of historic building would be constructed of multiple wythes of brick masonry to act as a barrier to keep water from entering the building. These wythes of brick would essentially absorb the water and over time the moisture would evaporate and heat from the interior would escape and assist with the drying process though the walls.

Today's modern building façades usually have multiple layers of protection to keep them from leaking. Depending on the type of exterior façade material used such as masonry, metal panel systems, stucco / EFIS and wood cladding, there will often be a drainage cavity with various levels of flashing and waterproof barriers to keep the interior dry and leak free. Because of this complexity, simply guessing at what the cause of the problem is does not, in general, resolve the issue.

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Building materials have a useful life and often they have long exceeded that useful life and begin to fail before failures are noticed and addressed.

Some examples of typical life expectancies of common building materials are:

- Building sealants – urethane 5-10 years, silicones 10-20 years
- Masonry mortar joints – 30+ (This is dependent on weather exposure)
- Parking garage traffic coatings – 5 years (This is dependent on daily vehicle turnover. Is this an hourly parking garage with large vehicle turnover or a condominium association with cars that may remain parked for days at a time?)
- Water repellents – 5, 7, or 10 years
- Elastomeric coatings – 5, 7, or 10 years
- Asphalt shingles – 20-30 years
- Flat roof membranes – 15-25 years

In many cases, if a building is experiencing localized leaking, running some limited water tests to recreate the situation provides insight that allows a quality waterproofing contractor to implement a long-term repair that resolves the issue for the building. Although this approach may be slightly more expensive initially, the testing and investigation process can eliminate the cost of paying to repair the same location multiple times.

When taken into account, along with repairing the interior surfaces that may be getting damaged each time from the recurring leak and the inconvenience to the tenant or unit owner, the overall savings become obvious. Using this process, we have repaired buildings that have had the same recurring leaks for decades. Typically, these buildings have had their maintenance people doing the same fix year after year with limited success in short-term results.

Faulty flashing discovered as source of persistent slider leak after improper caulking of lintel and weep holes.

For buildings that are experiencing global issues at multiple locations around the facility, owners should look to put together a project team to include at least a building envelope engineer and a waterproofing contractor to identify the deficiencies that need to be addressed.

If management does not maintain a “leak” log, it would be recommended to send out a survey to the tenants asking them about any ongoing issues in their space, how often they occur, how severe they believe it to be, and if it is a recent or long-standing problem.

With this information, the team can compile a list of the types and locations of issues occurring throughout the building façade. With this information in hand, it becomes a matter of choosing the best locations to conduct water tests and exploratory test cuts to identify the cause of leaks, air infiltration, staining, or other façade related issues.

They can also utilize this information to establish if the deficiency is a "typical" problem that will be expected to develop everywhere over time, is just a symptom of a larger issue such as a construction defect or a poorly selected material not performing as long as anticipated, or is a localized problem with a specific building element that was not installed correctly in this one location.

Out of the building survey and investigation, the team should also develop a repair and maintenance program. As part of the program, a priority list should be established. Those priorities can address life safety issues, ongoing tenant/resident issues, building functionality issues, and ADA compliance (if applicable.) Along with the repair and maintenance program, a realistic budget of the costs associated with addressing the building's issues should be drawn up to assist management in addressing the repairs. The budget should provide different options for the project:

- What work needs to be completed immediately due to life safety issues, code compliance, or tenant occupancy issues?
- Can the work be phased over a few years to alleviate the fiscal impact or does it need to be completed all at once?
- What is the potential added cost if the work is phased over a few years versus completing it all at one time?
- Depending on the building size, height, and location, a large part of the project cost can be associated with setting up, staging, and accessing the building façades.
- Work should be sequenced to minimize moving or relocating staging and trying to complete all the work in one area without going back or bouncing around unnecessarily.

This process can happen under new building ownership or with a new management company taking over the property and looking to establish a baseline of the buildings' condition. Another common situation in condominium associations is that the current board of trustees or the property management company has not been very responsive to the unit owners' complaints resulting in a change of leadership that takes over and begins addressing the ongoing problems.

The final step for ownership, once they decide what work they want to do and how they will finance it, is to determine who they want to handle the project. Do they want to bid the work out to multiple different companies, or to negotiate a contract with a trusted contractor? In either case, after following the suggestions above, ideally ownership will have a good set of documents detailing the scope of work they want to complete and a good understanding of the costs to expect.

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A few final items that building owners should be cognizant of would be:

1. Get “Apples” to “Apples” proposals.
2. Contractor proposals should be specific. What are you going to get?
   - How many square feet of repair are they doing?
   - How much repointing are they doing?
   - How many lintels are they fixing, etc.?
   - Is this a “Permanent Repair” or a “Temporary Repair?”
   - What are the unit prices if more of a work item needs to be added or deducted?
3. If one contractor is 25% – 30% less than everyone else and he is fixing “everything” that should raise a red flag that something is wrong.
4. “Everything” means very different things to a contractor and to an owner when the building still leaks or they repointed half the building when it all needed reporting.

Building façades are comprised of a complicated group of different materials meant to give your building its identity; unfortunately, they are often taken for granted until you have a puddle of water on the floor or come out the front door and find a chunk of stone or concrete on the sidewalk.

Pictured: Emergency shoring required after years of concrete deck deterioration and failed pothole repairs in a second-floor parking garage.

Hopefully, this article will give you some insight into making the right decisions in planning for and maintaining your building exterior. After 35 years in the building restoration business, I can promise you that deferring it or ignoring it will never be cheaper than trying to repair it correctly in the first place.

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