



Reliable Systems for the Long Run

Why preventative maintenance is critical to your bottom line

It's no secret that a well-executed preventive maintenance program can go a long way toward reducing the overall costs associated with operating a condominium building. In fact, some experts believe that preventing problems before they occur can extend a building's annual operating budget by a significant amount per year.

One of those experts is Jonathan Rebelo, Project Engineer with RJC Engineers. Rebelo, who's executed countless building upgrades in his career, says a solid planned maintenance program will ensure the building systems remain reliable, while limiting the risk of sudden disruption—both of which are important considerations in multi-residential settings.

"Typically, a planned maintenance program includes the replacement or repair of low-cost sacrificial building systems that are intended to degrade over time so that the more expensive systems can continue to operate without

disruption," he explains. "Much like owning a vehicle, if your break pads aren't replaced after so many kilometres, you run the risk of them failing at the worst possible moment, resulting in catastrophic and costly repairs."

Building envelope, parking garages, and underground facilities are the main areas Rebelo recommends property managers routinely inspect. He says, "Water staining and active leaks within a building space should always be reviewed immediately, as over time what could have been a small patch job can likely turn into a more costly and avoidable full replacement program."

Mechanical and electrical systems should also be routinely reviewed.

"You want to ensure they continue to operate at their intended efficiency level, and are serviced at regular intervals," he says. "And these days it goes without saying that energy upgrades should also be considered."

COMMON PROBLEMS, EASY SOLUTIONS

As simple as it may seem, Rebelo says routinely removing clogged debris from area drains is the type of thing that can significantly improve the lifespan of some building systems.



"Pipe penetration and expansion joints through your building envelope are typically the weak points in these systems and should be reviewed," he says. "Additionally, the use of de-icing chloride salts can cause corrosion of your concrete and steel systems so avoiding the use of these salts can help reduce structural costs in the future."

And for those concerned about the toll of disruption, Rebelo says these days regular maintenance can be executed in such a way that building occupants are minimally hassled.

"Rapid setting materials and advancement in construction technology has come a long way," he says. "Routine preventative maintenance on your building systems can heavily extend their service lives, and in turn, avoid the need for heavily disruptive replacement costs."

CHALLENGES & BENEFITS

No one wants to needlessly spend money or upset residents without due cause. To put it in perspective, here are a few of the general pros and cons:

The pros

- A maintenance strategy can be readily budgeted and planned for, meaning unbudgeted capital costs will be limited;
- Typically, it is less expensive and less disruptive to maintain systems yearly than to replace a system once it has fully failed;

Top 3 Maintenance Tips to Stave off Costly Repairs

1. Ensure your waterproofing systems (joint sealants, expansion joint seals, traffic deck coatings, roofing membranes, building facades) are working as intended.

"As soon as these systems start to fail, they allow water to penetrate into the more expensive systems behind them. This could result in water damage to finished and conditioned spaces," says Rebelo. "Concrete and structural steel damage is very disruptive to repair, as are mechanical and electrical system failures which can cause operational nightmares. Regularly replacing or locally repairing these waterproofing systems allow the systems beneath to be well protected and ensure they continue to perform without the fear of outside damage."

2. Ensure building condition assessments are performed regularly and capital expenditure plans are continuously updated.

"Deferring work due to an outdated plan or budget constraints typically results in cost escalations as these systems tend to worsen overtime," he points out. "Furthermore, work not completed per their routine schedule can overstress the surrounding systems they support, which may result in more repair costs for systems not scheduled for repair."

3. Hire the right team and be thorough.

"Nothing is worse than unaccounted surprises," he says. "When hiring a building consultant to develop a 10- to 20-year capital expenditure plan, you want to ensure they are thorough and perform a complete review of all your building systems. An unexpected capital cost in year six of your plan that forces other maintenance programs to be deferred or cancelled is something you want to avoid."

- Proactive measures can protect the integrity of complementary building systems.

(However, this is still likely better than all the coordination needed when the work inevitably has to happen);

The cons

- Planned maintenance requires more yearly coordination and operational costs.

- A maintenance strategy requires a team to execute and monitor. ■

For more information on how to plan and execute a preventative maintenance program, contact Jonathan Rebelo directly (jonathan.rebelo@rjc.ca) or please visit www.rjc.ca.



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– Jonathan Rebelo, Project Engineer, RJC Engineers



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