

BEST PRACTICES

Community Association Maintenance

A regularly applied maintenance plan and program combined with a properly prepared and funded reserve study can lead to safe, desirable, financially secure community associations. This report highlights:

Building Maintenance Programs

Roles & Responsibilities of the Developer and Homeowners

The Intersection of Reserve Studies and Maintenance

Sample Maintenance Checklists

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- The Intersection of Reserve Studies and Maintenance
- Sample Maintenance Checklists



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The Foundation for Community Association Research is dedicated to conducting research and acting as a clearinghouse for information on innovations and best practices in community association creation and management. As part of the Best Practices project, operations related to various functional areas of community associations—community harmony and spirit; community security; energy efficiency; ethics; financial operations; governance; green communities; maintenance; natural disasters; reserve studies/management; strategic planning; and transition from developer control—have been developed since 2001.

WHAT ARE BEST PRACTICES?

The Foundation for Community Association Research is proud to offer function-specific Best Practices Reports in the community association industry. The Foundation has developed best practices in select topic areas using a variety of sources, including, but not limited to, recommendations from industry experts and various industry-related publications.

The outcomes of the Best Practices project include:

- Documented criteria for function-specific best practices.
- Case studies of community associations that have demonstrated success.
- The development of a showcase on community excellence.

The benefits of benchmarking and best practices include: improving quality; setting high performance targets; helping to overcome the disbelief that stretched goals are possible; strengthening cost positions; developing innovative approaches to operating and managing practices; accelerating culture change by making an organization look outward rather than inward; and bringing accountability to the organization because it is an ongoing process for measuring performance and ensuring improvement relative to the leaders in the field.

The Foundation's entire catalog of Best Practices Reports is available at foundation.caionline.org as free downloads. Some printed versions are for sale at cost in Community Associations Institute's bookstore at www.caionline.org/shop.

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INTRODUCTION TO MAINTENANCE

The primary purpose of this Foundation for Community Association Research Best Practices Report is to outline the importance of regularly applied maintenance plan and program for community association board members, community managers, and service providers. It is imperative that board members not only understand their essential obligation to maintain their communities but to also have the education, resources, and tools necessary to succeed.

Without maintenance, your community will begin a process of degradation until each building and common area ultimately deteriorates and eventually becomes uninhabitable. The key to fighting this process of building and common area degradation is to apply maintenance in a thoughtful and planned manner which would result in a safe, healthy, fully functioning community where property values are maintained or even increased year to year. The planned application of maintenance through an ongoing maintenance program is the best way for a community association board to achieve its mandate to maintain, protect, and enhance their community.

The idea for this Best Practice Report on maintenance arose from the work of many industry experts who helped create Community Association Institute's (CAI's) Condominium Safety Public Policy Report in October 2021. The report was a proactive response to the Champlain Towers South collapse and tragic death of 98 people in June 2021 in Surfside, Fla. During task force meetings for the development of the report, CAI smartly recognized that greater clarity was required about the role of maintenance planning and programming in communities around the world.

The Foundation assembled a dynamic team of professionals from across the country to write this Best Practices Report. The team includes a national developer of new communities. It also includes two authoritative Reserve Analysts (both of whom are past CAI past presidents), one with a specialty in structural inspections and the other with a specialty in capital budgets. The final team members include an attorney and a fellow in CAI's College of Community Association Lawyers (CCAL) who has been practicing community association law for almost 40 years as well as a licensed maintenance contractor and consultant who has worked in the industry for over 30 years.

Before we look at the maintenance of buildings and common areas, let's first look at maintenance from a broad perspective. Everything from our bodies to our cars and our homes are constantly tending toward disintegration over time—a movement often called entropy.

To avoid buildings from breaking down, we must apply a countervailing energy called maintenance—the work of keeping something in proper condition, care, or upkeep including taking steps to avoid something breaking down (preventive maintenance) and bringing something back to working order (corrective maintenance).

COMMUNITY ASSOCIATION MAINTENANCE

We are familiar with maintaining our bodies by going to the gym and our teeth by visiting the dentist and our car by taking it to a mechanic. All these activities take time, energy, and resources of varying degrees; they require work.

Maintenance is a common term, but it has a special meaning for community associations. Maintenance is at the core of a board's mission to "maintain, protect, and enhance" their communities. To expand on that mission, a board should apply maintenance (maintain), apply preventive maintenance (protect), and increase or improve in value, quality, desirability, or attractiveness (enhance).

Why is maintenance an essential element of a board's mission? If a board fails to maintain its community, it will quickly fall into disrepair and begin a downward spiral that is hard to reverse. The usual outcome is special assessments, board recalls, bank borrowing, and political upheaval leading to more chaos. Look no further than news reports on significant special assessments community associations are imposing for deferred maintenance and the struggles the owners are having to pay increased assessments.

On the other hand, if maintenance is applied intelligently with a maintenance plan and a maintenance program accompanied by a properly prepared and funded reserve study, the community will enjoy desirable common areas and thrive at reasonable expense. There are three reasons or pillars of a well-maintained community all auguring for regularly applied maintenance: financial; environmental; and community stability. These cascade from one to the other in succession.

Financial. According to a report by [Jones Lang LaSalle](#)¹, you can achieve a 545% return on investment by performing preventive maintenance. The exact savings are difficult to enumerate in all cases because they are largely unseen. But you can imagine that the wood-framed deck that has its surface coated on a regular basis with deck coating doesn't have to have its wood joists or pickets replaced. Nor does the wood refuse need to be sent to the landfill. The savings when a deck doesn't fail and injure its owners can be immeasurable; a few years ago, a deck collapse in Berkeley, Calif., killed seven college students. These are just the most visible examples of how regularly scheduled inspections coupled with regularly applied maintenance can save a community millions of dollars.

Environmental. There are few things more important to society than lowering our carbon emissions. If every community association in the U.S. adopted maintenance, those emissions would be sizably reduced. One of the primary causes of environmental degradation is the premature replacement of building components such as wood, stucco, and concrete. A maintenance plan, maintenance program, and funding through a reserve study reduces premature failure of these components. That means there is less need for materials to be buried in a landfill.

Community stability. A community preventive maintenance plan and maintenance program to implement the plan, and a regularly updated reserve study funded in conformance with its recommendations will save the community significant amounts of money. Those financial savings quickly translate into community stability and maximize property values. This also will reduce the probability of special assessments or borrowing to fund capital replacements or repairs. Boards can adopt a much more positive demeanor since they are maintaining their community by the book; they are doing everything they can do to maintain, protect, and enhance their community. There is also less management turnover since there is less board turnover.

1. Jones Lang LaSalle, Determining the Economic Value of Preventive Maintenance, <http://cdn.ifma.org/sfcdn/docs/default-source/default-document-library/determining-the-economic-value-of-preventative-maintenance.pdf?sfvrsn=2>

DEFINITION AND TYPES OF MAINTENANCE

Maintenance is the process of maintaining or preserving something, or the state of being maintained. Maintenance is often referenced in three ways: preventive maintenance; corrective maintenance; and deferred maintenance. Each approaches property preservation differently. These distinctions are very important to understand.

Preventive maintenance. This is the art and science of proactively preserving buildings, equipment, and grounds from premature deterioration through a cyclical process of recurring inspections and key tasks. It is the method used to reduce component deterioration, resulting in no increases in costs, a reduction in the potential for accidents, and maximizing the useful life of the community asset. There are two tracks used to approach preventive maintenance methodology:

- **Time based:** You inspect and maintain components on a standardized schedule such as weekly, monthly, quarterly, or annual basis.
- **Usage cycle based:** You inspect and maintain based on an asset's usage or projected usage, such as through historical data, to determine when an asset will achieve a specified amount of usage.

For community associations, common preventive maintenance examples include:

- Lubricating gate and door hardware or any other moving parts to prevent wear and tear.
- Cleaning drain lines, roof gutters, downspouts, roof decks, or anything else that flows to prevent blockages.
- Touch-up painting all exterior wood and metal surfaces or anything else that must be protected from water and ultraviolet light damage.
- Checking ground-fault circuit interrupter (GFCI) breakers or any other life-safety components for proper function.
- Inspecting and adjusting lighting, irrigation, or any other controls as needed to improve performance or efficiency.
- Routine cleaning of buildings and landscaping of community grounds.
- Applying waterproof sealants to decks and balconies.

Predictive, prescriptive, and seasonal maintenance are three subtypes of preventive maintenance that have unique features:

- **Predictive maintenance** is a strategy that utilizes technology, data analysis, or sensor devices to predict when an asset will need to be maintained or repaired. This is a strategy wherein common area components will be consistently monitored through sensors that provide warning signs when failure is about to occur and when maintenance should be done; or it seeks to leverage current and previous data to determine when preventive maintenance should occur.

COMMUNITY ASSOCIATION MAINTENANCE

- **Prescriptive maintenance** is a process of prescribing a date of anticipated component failure. This strategy is the most modern form of preventive maintenance as it utilizes machine learning and takes predictive maintenance one step further. Maintenance is prescribed before expected failure. Prescriptive maintenance also provides information that can be used to maximize operational efficiency.
- **Seasonal maintenance** is based upon the time of year. For example, part of your fall seasonal maintenance plan would be to clean all roof gutters, downspouts, and flat-roofs, and mastic all roof penetrations. This subset of preventive maintenance helps highlight those components that need extra attention prior to specific weather conditions or seasons throughout the year and should not be a stand-alone approach to preventive maintenance.

Corrective maintenance. This is the repairing of common area components that have prematurely deteriorated due to a lack of preventive maintenance and are no longer operating to their intended purpose. It also minimizes or stops progressive deterioration. Examples of corrective maintenance would include:

- Replacing sidewalks buckled or lifted by tree roots.
- Replacing missing asphalt shingles or roof tiles.
- Adjusting the grade around buildings to eliminate ponding water at foundations.
- Removing graffiti.
- Repairing broken water lines.
- Replacing smoke and carbon monoxide sensors.
- Repairing mechanical equipment (boilers, supply, and exhaust fans, etc.).
- Repairing structural elements to minimize progressive deterioration as well as potential safety issues.
- Repairing immediately due to emergency situations such as a hurricane, tornado, flood, or a car hitting a structural column.

Deferred maintenance. This is the act of postponing needed preventive and corrective maintenance. This approach will lead to premature failure of building components and can potentially create serious safety and health issues. Deferring maintenance is much more expensive than applying corrective or preventive maintenance; deferred repairs can quickly turn into safety hazards or expensive building component replacements.

COMMUNITY MAINTENANCE PLANS

A maintenance plan is often referred to as a maintenance schedule. They are not the same thing. A maintenance plan has a schedule, but it is much more.

A *schedule* is “a plan or procedure, usually written, for a proposed objective, especially with reference to the sequence of and time allotted for each item or operation necessary to its completion; a timetable.” A *“plan”* is “a method of acting, doing, proceeding, making, etc., developed in advance; a specific project or definite purpose.” The maintenance plan is a schedule of property-related inspections. But it also assumes that the inspections are recurring and that action in the form of repairs and preventive maintenance is the result.

A maintenance plan to oversee and ensure the maintenance of a community association is essential for its correct operation. The board’s mission is to maintain, protect, and enhance the community, especially the common areas. That mission is quite difficult to achieve without a maintenance plan and program in place.

Community associations typically include three types of areas: separate interest; common area; and exclusive use common area. Condominiums, especially mid-rise and high-rise buildings, differ from planned unit developments and master associations in that they have common walls and common ownership of a large magnitude of building and common area components. These associations are designed to have common construction features such as central mechanical, electrical, plumbing, and fire suppression systems as well as decks, patios, trash chutes, swimming pools, spas, etc.

Residents are using these common areas at all times of the day and night resulting in very high usage; and the areas are often abused. With the reliance of so many residents, there is a need for extra precautions due to health and life safety. Taken together, life safety, health concerns, and the general overall wear and tear on building components create a significant need that these buildings be well maintained and clean. This results in a much higher need for maintenance planning and programming.

“Before anything else, preparation is the key to success.”

– Alexander Graham Bell

COMMUNITY ASSOCIATION MAINTENANCE

Maintenance plans are so vital that several states have mandated maintenance plans for condominiums, including California ([CALGreen Section 4.410](#)), Oregon ([ORS 94.595-4](#)), and Minnesota ([515B.3-106](#)). What do California, Minnesota, and Oregon legislators know that other states don't?

The statutes presume that without the "minimum" guidance of a maintenance plan, the board is naturally hesitant to spend money on maintenance. Legislators likewise recognize that without a plan that identifies what common area components to inspect, when to inspect them, and how to put a preventive maintenance program in place, the common areas will quickly deteriorate, leading to extremely expensive building and common area component replacement. These states understand the importance of maintenance and how vital these tools are for the success of community associations in their state.

"By failing to prepare, you are preparing to fail."

– Ben Franklin

What is a maintenance plan? Simply put, a maintenance plan outlines each common area component the association is responsible for maintaining and provides a schedule to inspect each component at least once per year.

There are different types of maintenance plans ranging from a simple spreadsheet listing the common areas that require periodic inspections, all the way to a comprehensive preventive maintenance manual. Let's first examine the simple plan, which is a plan that anyone can prepare with little effort.

Simple Plan: Spreadsheet and Schedule

To prepare your own maintenance plan, first check your governing documents (covenants, conditions, and restrictions, or CC&Rs) for a maintenance matrix listing the common areas, separate interest areas, and the exclusive use common areas of your community. If a maintenance matrix was created for your community, it is usually found in the association plan or the CC&Rs. Then, review the reserve study and add those major components to your list.

Identify which building components are manufactured products that have their own operating manual or care and maintenance instructions. Extract the maintenance recommendations from those manuals. Also, make sure that you note what warranties those components carry and make sure the maintenance is done to honor those warranty dates.

Create a spreadsheet from your completed list. Walk the community to make sure you're not missing anything. Then, talk to your community manager, your landscape and building maintenance contractors, and your reserve analyst. Ask them how often each common area component should be inspected; is it once a year, month, or quarter? Identify which components may require preventive maintenance and list what that entails and then list what month that maintenance should be performed.

Next, hire a general contractor or inspector who is licensed and insured with both general liability (without a homeowners association exclusion), and errors and omission insurance, since they will be acting as a consultant. Task that contractor with completing the inspections and require that they provide the board with a sign-off sheet as to which inspections were performed and the results of the inspection. The sign-off sheet should disclose whether any building component failures or deferred-maintenance issues were found, and if so, what is required to make corrections.

The community manager, if you have one, then needs to have any preventive maintenance or corrective maintenance performed. After each inspection cycle, make changes to the schedule of inspections and required work, as appropriate.

“Always plan ahead. It wasn’t raining when Noah built the Ark.”

– Richard Cushing

Comprehensive Plan: The Preventive Maintenance Manual

The most comprehensive maintenance plan is generally included within a community association preventive maintenance manual. Few boards are familiar with preventive maintenance manuals. They are commonly used in California, Minnesota, and Oregon (see statutes above). The manual includes a maintenance plan that is specific to each community and contains inspection checklists and maintenance information. A comprehensive manual should include the following:

- Photos and maintenance information for structures, landscape, hardscape, and amenities.
- Biweekly, monthly, quarterly, semiannual, and annual inspection schedules.
- Site plans.
- Maintenance exhibits.
- Care and maintenance information for manufactured products.

The manual provides information on the common area building components and other common areas, even those often not listed in the reserve study, such as retaining walls, drainage swales, structural concrete, waterproofing, sewer laterals, concrete and paver flatwork, specific stormwater devices, and other long-lived building components.

Mid-rise and high-rise buildings are usually provided with “operations manuals” for their mechanical equipment. The maintenance manual preparer will include the key inspection routines from these operation manuals in the preventive maintenance manual. Then, when an inspection identifies a component requiring maintenance or if an inspection or maintenance protocol is due, the correct mechanical, electrical, or plumbing vendor is called in to service the equipment.

Mid- and high-rise manuals are more complex because they include inspection and maintenance information for the regular building components and common areas, but also specialty mechanical equipment and systems such as:

- Heating, ventilation, and air conditioning system (HVAC).
- Water supply and treatment system.
- Fire suppression system.
- Emergency power system (backup generators, invertors).
- Garage carbon monoxide sensor system.
- Common domestic hot water system.
- Elevators.
- Stormwater and sewage pumps and alarms.
- Automatic vehicle and pedestrian gates.
- Access control systems.

Just like the manual in your car, the preventive maintenance manual is only a plan and will not ensure the community performs important inspections and maintenance. It's simply a tool that provides the information needed to make good decisions regarding maintenance. You will need to implement the maintenance manual through a maintenance program.

"The time to repair the roof is when the sun is shining."

— John F. Kennedy

Why Does a Community Need a Preventive Maintenance Manual?

Ensuring protection of health and safety, increasing financial savings, reducing risk, and preserving the lifestyle of the community are just a few very important reasons to follow a maintenance plan.

The goal of your plan is to ensure that inspections and subsequent maintenance or repairs are completed. This results in maximizing the life of each of your building components and common areas and may result in a reduction of reserve funding, thereby stalling assessment increases.

A maintenance plan, like a savings account, can yield savings each month. Over the long term, the savings can become substantial. So, if you are a board member or community manager, look carefully at your reserve study to get an idea of the cost of replacement funding. Your maintenance plan, when used in conjunction with your reserve study, should help you extend the time necessary to collect the funds needed for the replacement of all those components.

Financial Savings: Increase Property Values

One of the most important reasons to have a plan is to save money. Saving money leads to community stability, which is defined as greater homeowner involvement and a reduction in board turnover. It's a domino effect. It is certain that the absence of a maintenance manual will reduce the useful life of building components and common areas.

CASE STUDY:

Master Association in San Diego

The master association is in coastal California, situated just above an estuary about 1 mile from the beach. Ocean breezes bathe the community in moist salt air. The developer of the master association, with 19 subassociations built by merchant builders, never gave the management company a maintenance manual for its common areas. Seven years after the first homeowners moved into the community, the master association commissioned an inspection of its 9 miles of metal fencing that surrounded the golf course and separated the subassociations from the golf course. Not surprisingly, that moist salt air combined with the constant recycled irrigation water coming off the golf course settled on the fencing, which literally disintegrated in whole 8-foot metal sections. Landscaping, which had grown through the metal fencing, also caused disintegration of the fence. Moisture was trapped against the metal, emitting pure oxygen that led to quicker degradation.

Ultimately, the master association ended up spending hundreds of thousands of dollars to replace the 8-foot sections of fencing. It painted the entire fence with an epoxy mastic polyurethane paint that was much better at protecting the metal from the moist salty air and the golf course irrigation. A simple one-page plan recommending an annual inspection of the fence would have saved the master association hundreds of thousands of dollars.

Have a maintenance manual in place so that you can identify problems quickly and then make the repairs. That is the real beauty of a maintenance manual: The inspections identify problems to be fixed before they turn into a disaster.

"A man who does not plan long ahead will find trouble at his door."

– Confucius

Healthy Environment

Water intrusion is the enemy of buildings. Water can cause fires by causing electrical shorts. It can cause structural problems when wood is compromised by rot. Wet wood is much more prone to termite damage as termites prefer to eat it over dry wood.

Water intrusion and the resulting dampness also are adverse to human health. Damp or moldy buildings increase the chances of respiratory problems like asthma and bronchitis as well as hay fever, sneezing, stuffy nose, sore throat, wheezing, breathing difficulty, or cough. Mold can affect people differently. How much a person is affected depends on how sensitive they are and on how much they are exposed.

The critical warning signs of water intrusion are visible mold, water damage, damp materials, soft wood on horizontal surfaces, or the smell of mold. Dampness and organic material cause mold to grow. So, if you can mitigate the dampness, you can control the mold. The dampness that is necessary for indoor mold to grow can come from either inside or outside a building.

Some indoor water intrusion sources include leaking or burst water pipes (under sinks or inside walls); not enough venting to the outside by open windows or exhaust fans in places where water is used or moisture is produced (for example, bathrooms, laundry areas, kitchens, and water heaters); and condensation on cold surfaces including windows.

Some outdoor water intrusion sources include leaky roofs, poorly sealed windows, or from flooding. Outdoor surfaces that slope and drain water toward a building, including from a downspout (negative slope toward the building), also can lead to water intrusion.

Safety and Risk Reduction: Reducing Accidents and Insurance Premiums

A maintenance manual and program are critical tools for reducing accidents in communities. Walking the community on a regular basis and looking at each common area component will disclose what needs to be fixed prior to it becoming a liability. There are potential accidents waiting to happen to residents and guests. Such accidents could include raised concrete sidewalks due to tree roots, broken light posts with exposed electrical wiring, broken pool gates allowing unmonitored access to children, and tot lots/playgrounds not in compliance with current safety standards. The reduction of accidents alone is reason enough to have a maintenance plan and program.

Condominiums have garnered a litigious reputation. Each year, new laws are promulgated across the country that address yet another problem or issue pertaining to attached communities. Construction defect litigation is big business with many attorneys specializing in costly lawsuits against community builders. A maintenance plan and program can help reduce construction defect litigation by making sure building components are well maintained and not mistaken for defects or warranty

items. A lack of maintenance is often seen by boards as the reason to start construction defect litigation even though the board is responsible to perform the maintenance in the first place.

“Good fortune is what happens when opportunity meets with planning.”

– Thomas Edison

Preserving and Enhancing Lifestyle

Proactive inspections and repairs not only save money but also assist the community in avoiding regularly raising assessments and special assessments. A well-maintained community is appreciated by its members and results in higher values from real estate and insurance appraisers who must report on the common area conditions. This leads to less board member recalls, more people willing to serve on the board, and less community management turnover. Ultimately, the consequential savings result in community stability and harmony.

A community that has a maintenance manual implemented through a maintenance program not only enhances its balance sheet, maintains real estate values, safety, and health but also the spirit of the homeowner members. When a parent takes their toddler to the playground, and the equipment is painted without sharp edges and has been properly cleaned and fall protection is in place, they are happy. The elderly couple who take evening walks through the common area park and aren't challenged by sidewalk trip hazards or graffiti-stained common area landscape elements are happy. During the summer when children are using the common area pool and amenities, they neither suffer from the effects of mold in a dingy, dimly lit bathroom or get hurt by upended concrete or damaged pool coping. Families are proud of their community and happy to bring their friends over to enjoy the common area amenities with them.

Reducing Carbon Emissions

Few things are as important to society as lowering our carbon emissions. If every community association in the country were to adopt preventive maintenance through a maintenance plan and program, that footprint would be substantially reduced. One of the primary causes of environmental degradation is the premature replacement of building components such as wood, stucco, and concrete. With a maintenance plan, there is much less, if any, premature failure of these components.

Consider concrete, one of the largest emitters of greenhouse gasses on the planet. When concrete or stucco (which is a cement-based product) is not replaced and sent to the landfill due to a lack of maintenance, the benefits are twofold. First, the concrete doesn't have to be trucked to the landfill at great cost in labor, fuel, and landfill space. Second, new concrete doesn't have to be produced, eliminating the harm that's caused through its extremely high heat production methodology.

Do All Communities Need a Maintenance Manual?

The answer is a resounding yes. But the more common area that a community has, the greater the need. A planned unit development (PUD), also known as a single-family community, may only need a simple plan if it has few common area amenities. However, if it has a pool, park, entry gate, fences and, especially, a recreation facility, then it needs a more robust plan. A condominium, mid-rise or high-rise, or a master association absolutely require a maintenance manual and program.

The familiar quandary with common areas lies in the fact that most developers throughout the country do not provide their new communities with a maintenance manual, simple maintenance plan, or program at turnover. Without a list of common area components and without any indication from the developer when to inspect them and how to maintain them, these common areas are simply forgotten and left to chance; some problems often aren't noticed until they fail. Having a maintenance plan in place can prevent that loss.

How Do You Implement Your Maintenance Manual?

You implement your maintenance manual (or simple maintenance plan) through a common area maintenance program. There are two types of common area maintenance programs. One program is designed for mid-rise and high-rise buildings which have abundant mechanical, electrical, and plumbing systems, and a high level of complexity. At these communities, your building engineer will oversee the community's maintenance plan. The program for all other communities, including single-family home communities, master associations, and horizontal condominiums, is driven by your maintenance contractor. Here, without mechanical systems, the focus is on common areas built primarily of wood, concrete, and other building materials.

BUILDING MAINTENANCE PROGRAMS

Your community's building maintenance program is the vehicle by which the information outlined in your maintenance plan or maintenance manual is implemented. At the heart of your building maintenance program, you have a skilled maintenance technician who performs corrective and preventive maintenance on a regularly scheduled basis—one day per month, per week, or full-time, based on the size and maintenance needs of your community.

Your maintenance program requires a maintenance manager who implements your maintenance plan and coordinates all the maintenance requirements (see "The Maintenance Manager," p. 17). He or she advises the board and community manager when certain inspections and repairs are needed, per the maintenance plan.

Based on the size, type, and nature of the community, there are usually some combination of these programs. Your building maintenance program is the hub at the center of the maintenance wheel, effectively overseeing and coordinating the implementation of these programs. It provides all the other programs a structure for information to be shared, coordinated, and acted upon.

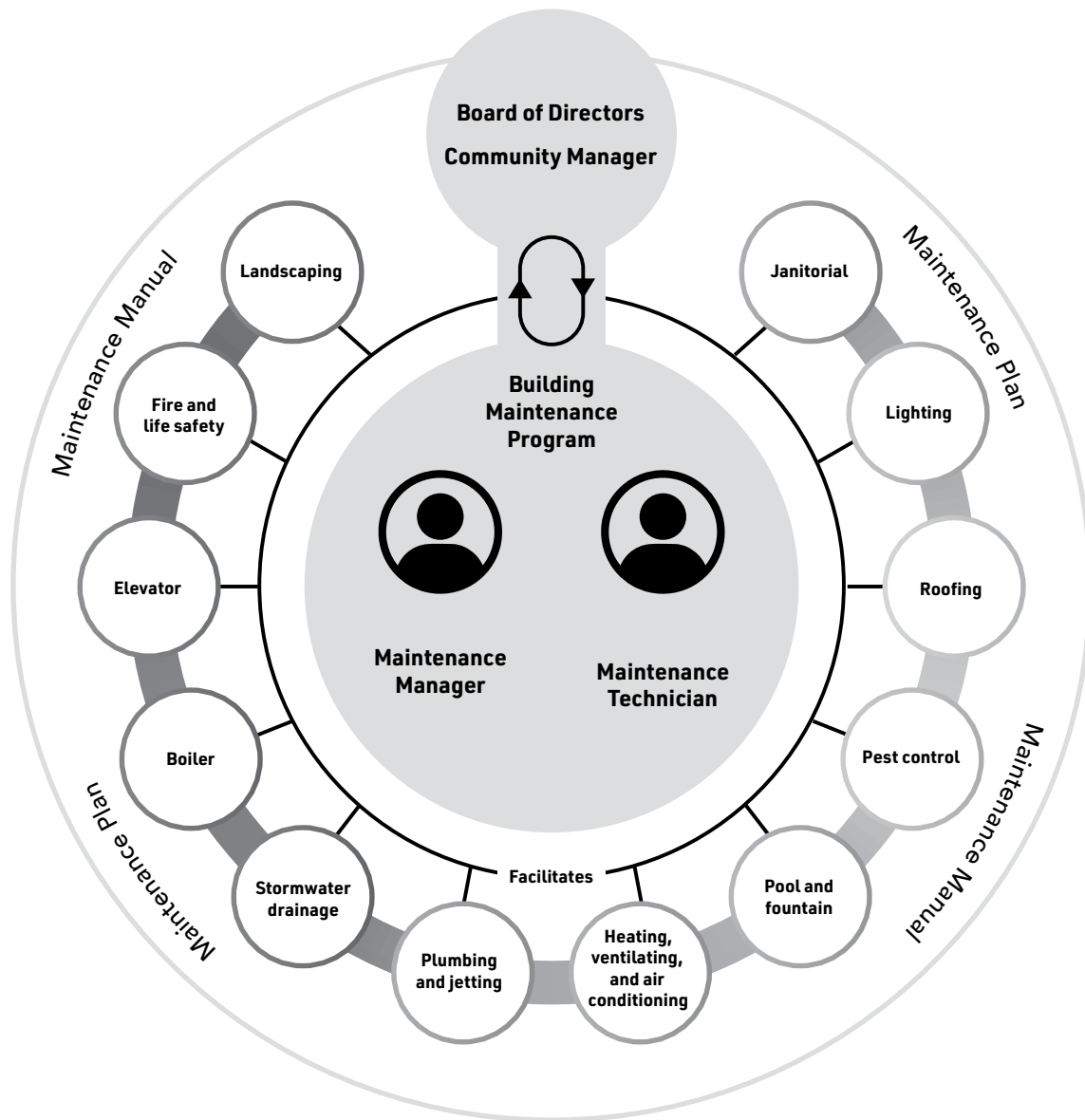
For example, if your pest control company encounters extensive termite damage, it will provide a report to the community manager. The manager will then pass the report to the maintenance manager who will add that issue to the community's wood replacement needs. If your janitorial company finds the gate to the pool is broken, that information is given to the community manager to contact the maintenance manager or technician directly to immediately repair the gate.

The job of a community manager is very difficult due to its broad scope. He or she assists the board in overseeing the financials, navigating the legal challenges of the community, monitoring the landscaping, and attending and assisting the board at meetings. They field calls daily from homeowners about pools, pets, parking, and many other things. But in addition to everything else, the community manager must oversee the maintenance of the community. Having a building maintenance program with a maintenance manager is the best way to manage the largest assets of the community: the buildings, grounds, and common areas. The maintenance manager critically assists the community manager and is a liaison and facilitator between the technician(s) working in the field.

The Maintenance Manager

The individual in this job assists the community manager and the board on the various specialty maintenance programs such as:

- Landscaping
- Janitorial
- Lighting
- Roofing
- Pest control
- Pool and fountain
- Heating, ventilating, and air conditioning
- Plumbing and jetting
- Stormwater drainage
- Boiler
- Elevator
- Fire and life safety



3 Keys to a Successful Building Maintenance Program

The first step in creating a successful building maintenance program is having a maintenance plan or manual and performing the accompanying inspections. The second is to make the repairs or corrective maintenance discovered during the inspections or those that are reported by other vendors and homeowners. Third: Perform preventive maintenance in addition to these repairs so that over time there are fewer building components breaking down, thus resulting in less costly repairs.

1. **Inspections:** Inspections are the first key ingredient. By completing the inspections outlined in your maintenance plan or maintenance manual, you are ensuring awareness of asset conditions as well as identifying any maintenance needs.
2. **Corrective maintenance:** This maintenance corrects any problems that have been identified during the inspections or by residents. Corrective maintenance is simply the repair of common areas that have been damaged by use, age, or function.
3. **Preventive maintenance:** This is the act of preserving buildings, equipment, and grounds through a process of recurring tasks such as lubricating gates or anything else that moves; cleaning drain lines or anything else that flows; touch-up painting on all exterior wood and metal surfaces or anything else that must be protected from water and ultraviolet damage; checking ground fault circuit interrupter (GFCI) breakers or any other life-safety components, etc.

Why Communities Need a Building Maintenance Program

Without an active and ongoing building maintenance program to proactively address the maintenance needs of the community, safety issues will likely develop.

Additionally, the financial savings can be immense. Your buildings and grounds are the community's largest asset. Having a dedicated maintenance team working each day, week, or month, proactively maintaining components, completing corrective maintenance, and remedying any other issues that may occur while they are on-site will result in huge financial savings. However, it can sometimes be difficult to quantify the savings because you can't put a cost on something until it's broken or fully deteriorated.

One measure of the savings is through the community's insurance costs. A well-maintained community substantially reduces insurance premiums because there is less accident risk. Insurance companies will outline these risks for associations and should counsel the community manager and board that a building maintenance program is an important tool for reducing risks and lowering premiums. The other way to quantify financial savings is by reducing the need to replace common area components as frequently, thus lowering the necessary reserve funds for replacement.

As an example, consider a 30-year roof that is valued at \$9 million. The annualized cost is \$300,000 per year (\$9 million divided by 30). Therefore, if roof maintenance is performed every year to extend the life of the roof by just five years, the annualized cost of the roof is reduced by roughly \$43,000 per year. On the other hand, if no maintenance is performed on the roof, and it fails after 25 years, the new annualized cost of the roof jumps to \$360,000 (\$60,000 more per year)—a huge financial burden that could have been avoided.

Not only can the useful life of your components be extended through effective maintenance, but the utility of some building components can be extended indefinitely. As an example, consider the Disneyland method of preventive maintenance on its over 50-year-old, very expensive, wrought iron fencing along Main Street. Because touch-up paint is added almost every night, Disney will most probably never need to replace the fence. In that example, the year-over-year impact on reserve funds would be \$0. If a community takes the same approach, inspecting and touching up ornamental iron fencing regularly, then the reserve analyst has a re-set expectation that the fence won't have to be replaced for another 30 or more years.

Like the Main Street fence at Disneyland, many building components within communities can last forever if properly maintained. As a result, budgeting for reserves can be lowered as failure becomes less prevalent. The old saying "pay me now or pay me more later" can be turned on its head and become "maintenance today equals savings tomorrow."

Why Building Maintenance Programs Aren't Widespread

Some boards fall into the "penny-wise and pound-foolish" trap, thinking that it is their job to "save money." They are reluctant to raise assessment levels to pay for the always-increasing cost of ongoing corrective and preventive maintenance or even make repairs because the financial backlash may result in unhappy neighbors.

The common mistake that some boards make is to believe that buildings and common areas don't require a building maintenance program. They operate on the "fix-it-when-it-breaks" method, which is flawed and extremely costly. That method results in damaged or unsafe building components remaining in place and getting worse every day until they break altogether. At that point, the fix is much more expensive than before—sometimes by a factor of 10.

Every common area component requires preventive maintenance—some more often than others. Even concrete requires periodic maintenance. The difficulty lies in the fact that deterioration occurs gradually over longer periods of time and is not always visible to residents, board members, or community managers. It takes a trained eye by a maintenance general contractor, architect, or structural engineer to know what common area components require more attention. And that is why it is so important to have a building maintenance program in place: To ensure professionals are frequently monitoring and inspecting common area components.

What Are the Specific Benefits of a Building Maintenance Program?

Homeowner benefits. One of the benefits homeowners enjoy from well-maintained common areas is increased property values. Every time a home sale escrow takes place, an appraiser visits the community and reviews the overall condition of the common areas, the reserve study numbers, and the amount of deferred maintenance on common area assets.

An example of this occurred in San Diego. Two separate homeowners associations were built by the same builder side by side. The homes in both communities were identical, and exterior building maintenance was the association's responsibility. Home prices in the area averaged \$400,000 at the time. One community implemented the manual provided by the builder and an accompanying building maintenance program. The other did not.

After 10 years, homes in the well-maintained community were selling for up to \$150,000 more than the other because of actual and perceived problems with building exteriors and common areas. The association that failed to implement their manual saw the success of its neighbors and started the expensive process of corrective and remedial maintenance. Eventually, its property values equalized. But in the process, the second community expended all its reserve funds and needed an additional special assessment to catch up. Now, it too has a manual, maintenance program, and reserve study.

Community manager benefits. They benefit by knowing they have the tools that support the most professional job possible. Having a maintenance plan or manual in hand, a manager has the tools to guide the board to implement its plan through a building maintenance program. These tools save the manager time. Preventive maintenance reduces failures, reducing the need to request and follow up on repair and replacement bids. These tools also eliminate many late-night emergency phone calls and emails because effective maintenance is being performed on a consistent basis.

What Community Types Require a Maintenance Program

Any community with common areas should have a building maintenance program. The frequency and needs of the building maintenance program depend on the amount of common area components maintained by the association. For instance, in a planned unit development, there is typically less common area, sometimes only consisting of landscaping, streets, entry gates, and perimeter fencing. However, even this small amount of common area needs to be inspected and will have corrective and preventive maintenance needs.

Next on the scale in complexity and scope is an attached condominium community which often has a much greater magnitude of common area. In addition to the landscaping, streets, entry gates, and perimeter fencing, there also is common area roofing, siding, plumbing system, exterior lighting and electrical system, sewer system, pool area, clubhouse, and mini parks, among other things. With this scale of common area, it is very easy to forget or overlook the maintenance of components.

High-Rise Buildings Require Two Levels of Maintenance Programming

In addition to your standard maintenance program outlined above, mid-rise, and high-rise communities require a second, more comprehensive level of maintenance for their mechanical systems and equipment. It helps to look at a high-rise building more like a large self-contained ship than a typical residential condominium community. Like a ship, there are sophisticated systems for water supply and

Community benefits

There are six major benefits the community enjoys by implementing a building maintenance program:

1. **Safety and risk reduction.**
Reducing accidents and insurance premiums.
2. **Healthy environment.**
3. **Financial savings.** Increasing property values and community harmony.
4. **Preserving and enhancing lifestyle.**
5. **Reducing carbon footprint.**
6. **Reduction of lawsuits—not only from less accidents but also from some types of construction defect litigation that are precipitated by the lack of maintenance.**

treatment, air conditioning systems, fire suppression systems including backup generators to power the security and alarm systems, carbon monoxide handling systems in the garage areas, and many more.

Each piece of mechanical equipment comes with an operations manual provided by the equipment manufacturer. Among other things, it outlines when inspections and maintenance should take place. In a larger high-rise building or a mixed-use building that contains residential and commercial units, there could often be 15 or more mechanical, electrical, and plumbing (MEP) systems with accompanying operating manuals. That's why it's critical to have one comprehensive preventive maintenance manual that provides the overarching schedule of required inspections and maintenance. By having a maintenance manual, your building engineer, maintenance committee, reserve analyst, community manager, and board can all easily see the inspection and maintenance schedule, not only for the mechanical equipment but for all the common areas of the high-rise community.

The Duty to Maintain, Protect, and Enhance the Community

Just as your real-estate agent and attorney have a fiduciary duty to work in your best interests, so too does a board. There is a fiduciary duty to the community, and the board is held to a higher level of trust. This is a duty to act for their members' benefit while subordinating their own interests. It is among the highest standards of duty implied by law. Board members have a "duty of loyalty" and a "duty of care," which could be imposed by statute or the association's governing documents.

Boards must be careful in performing these duties. They must always attend board meetings, review reports, ask questions, and rely on professionals such as attorneys, accountants, reserve analysts, and other consultants. If board members perform accordingly and follow the duties of loyalty and care, their decisions will be protected by the "business judgment rule," limiting their liability. Ultimately, board members must be reasonable and use common sense.

Under their duties of loyalty and care, a board must seek to maintain, protect, and enhance their communities. There is no better way to achieve this mission than through implementing a maintenance plan and program.

INSPECTIONS FIRST

Why inspections? The tragic collapse of Champlain Towers South in Surfside, Fla., awakened the world to the importance of inspections and the dangers created by deferred maintenance. Aging infrastructure associated with a lack of inspections and preventive maintenance isn't just a high-rise problem. There are thousands of condominium communities throughout the U.S. facing challenges similar to Champlain Towers South.

30-Year Structural Inspections Too Late

Structural inspections are vital for the long-term health of any building. But by age 30, water intrusion may have already caused extensive damage to covered or difficult-to-inspect structural components.

No building should wait 30 years for a structural inspection. To be sure, no building should ever wait more than one year before beginning inspections designed to protect the building from water and ultraviolet light damage. Buildings near saltwater have additional challenges because of the corrosive nature of salt-laden air. Building surfaces are protected by paint, stain, waterproof membranes, caulks, and sealants. These materials degrade over time and must be replaced. The key is to monitor and maintain them from the very beginning of building occupancy through inspections and preventive maintenance. In theory, structural components could last forever if they are not affected by the damaging effects of water, salt air, and sunlight.

During the first few years of a new building, builder and manufacturer warranties are in place. But, how well trained is the board and community manager in determining what is a maintenance requirement and what is a warranty issue? This challenging question is often left to the builder's customer service representative who may be skilled in providing corrective maintenance but usually has little or no experience in preventive maintenance.

TYPES OF INSPECTIONS

1. NONSTRUCTURAL INSPECTIONS

Fire and Life-Safety Inspections

These inspections are important to ensure the safety and code compliance of your community. They are typically conducted once a year to examine the safety systems and safety devices and ensure all safety requirements are met.

- Emergency power (generators and batteries)
- Fire door automatic closing
- Fire curtains automatic operation
- Fire sprinkler systems and fire stopping
- Fire extinguishers

- Fire pumps
- Fire alarm control panels
- Fire and smoke sensors
- Carbon monoxide sensors
- Water flow sensors

General Maintenance Inspections (Nonstructural)

These inspections are typically conducted by the building engineer or corresponding specialty vendor. They are designed to check the current condition of each of the building components. They will identify and report any areas needing maintenance, allowing the board to properly plan, budget, and address those issues.

- Waterproof envelope inspections (including roofing and deck coatings)
- Trash chute doors and pistons
- Security inspections (including access controls and voltage of components)
- Garage gates and motors
- Surface condition inspections

Mechanical, Electrical, and Plumbing (MEP) Component Inspections

These inspections are important to ensure the mechanical, electrical, and plumbing components and infrastructure are operating efficiently and should be conducted at least once per year.

- Domestic and closed loop boilers (plumbing)
- Pipes (domestic water (copper); waste/storm/vent (cast iron); shut-off valves)
- Fire sprinkler system pipes and heads
- Pumps for plumbing and heating, ventilation, and air conditioning systems
- Cooling towers and chillers
- Supply and exhaust fans

Specialty Inspections

Specific state-mandated inspections

- In California, SB 326 went into effect in January 2020. A structural engineer or architect is required to visually inspect exterior elevated elements and load-bearing components 6 feet above ground, including: balconies, decks, patios, and elevated walkways. The inspection must be done on a regular basis, and the results must be added to the reserve study.

STRUCTURAL INSPECTIONS

A structural inspection of a building relates to the structural components of the building which, if compromised, can result in either localized or global structural deterioration and ultimately failure.

There are two types of structural components. The first are components that are structural in nature but are not relied upon to support the building. An example would be either concrete balconies or wood decks. The second is the primary load-bearing system that provides the support of the building and transfers the loads into the ground. Typical examples are the columns and beams.

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The inspection of the structure of a building is generally based on industry standards such as the one published by the American Society of Civil Engineers (ASCE), the *Guideline for Structural Condition Assessment of Existing Buildings*², and *Guideline for Condition Assessment of Existing Buildings*³.

This type of inspection is conducted under the direction of a licensed engineer with special expertise in existing buildings and is typically conducted in a two-step process.

In step one, known as a preliminary evaluation, visual observations are performed on all accessible structural elements to evaluate their condition as well as the overall building for potential underlying conditions indicative of structure problems that cannot be seen. Two examples would be moisture or settlement.

The second step, known as a detailed evaluation, is performed in any localized areas identified in the preliminary evaluation where concerns are identified. The detailed evaluation may include tasks such as invasive testing to review structural components that cannot be seen or material testing of structural components coupled with design calculations to determine structural adequacy. In some cases, the detailed evaluation may include temporary shoring of a building in areas of severe deterioration as additional investigations are performed.

In all cases, the evaluation reports should be retained for future use as structural deterioration is a progressive condition that should be evaluated based on the most recent inspections.

As for frequency of these inspections, the reports include a recommended inspection frequency based on the observed conditions with a general guideline being a maximum of every 10 years for buildings up to 20 years of age and every five years for buildings older than 20 years.

BUILDING ENVELOPE INSPECTIONS

As discussed, moisture infiltration is a common cause of underlying damage to a building structure as well as other underlying components. The portions of a building that prevent this from occurring are the exterior walls (facades) and the roof. The combination of these is known as the building envelope.

The inspection of a building envelope is generally based on industry standards such as the *Guideline for Condition Assessment of the Building Envelope* published by ASCE. While a critical concern of this type of inspection relates to the condition of the facade that becomes detached and falls due to aging, sources of potential moisture infiltration also should be identified and corrected.

2. ASCE Standard SEI/ASCE 11-99

3. ASCE Standard ASCE/SEI 30-14

ROLES AND RESPONSIBILITIES: MAINTENANCE FOR DEVELOPING COMMUNITY ASSOCIATIONS

What Is a Developing Community Association?

For the purposes of this chapter, a “developing community association” is defined as a community that has had its first settlement or sale (conveyance to a homeowner) but not its last. In addition, some (but not necessarily all) of its common and limited common areas have been substantially completed. A community association is no longer “developing” once all the homes have been settled and sold, and all the common and limited common areas are substantially completed.

Developing community associations most likely have new or nearly new common and limited common areas. It is human nature to assess the need for maintenance based on the appearance of a particular component. Naturally, it does not occur to many professionals that maintenance may be necessary when everything appears to be reasonably new. This underscores the need for professionals who specialize in both long- and short-term maintenance planning at the very earliest stages of a community association’s life.

Special Needs for New Components

New components often have specific needs in the early stages of their lives, especially the first year. For example, in the Northeastern United States, developers spend tremendous amounts of money every year replacing “new” concrete that was damaged by the application of sodium-based chemicals from snow removal operations. New concrete is especially susceptible to damage from these chemicals. In the Northeast, concrete should go through four seasons of curing before any such chemicals are applied, and even then, their application will likely cause damage.

Interior surfaces of pools and spas are another good example. Most pools are finished with a plaster material that is very high in calcium. It takes a few months for this material to cure, and during that time, the pool’s water chemistry must be very carefully monitored. If “calcium hardness” levels are not maintained during this crucial period, the surface will likely fail prematurely. When the surface fails, the debate begins over who is at fault. Engaging with professionals in the business of advising as to “break-in” maintenance protocols for new components is a critical step in the planning of a new community.

Transitioning Amenities to Homeowner Use and Control

Sometime before the board turns over to homeowner control, most if not all of the association’s amenities will be constructed. Those amenities should be used by residents and maintained by the association as soon as they are substantially complete. Because the developer usually controls the board at that time, there is often conflict after the homeowner board is seated. The big question is whether the amenities were ever properly completed. To complicate things even further, the purported completion may have been several years ago. This question gives rise to the need for a process by which responsibility for the amenities is transferred to the association.

One such process involves the association contracting with a professional engineer or architect to inspect the completed facilities right when they are opened. The inspection would be memorialized by a form called a "certificate of substantial completion." The form is very simple (usually one page) and is essentially a statement made by a licensed, qualified person indicating that they have reviewed the plans, and they certify that the amenity is "substantially complete." Ideally, the certificate would be accompanied by a punch list of everything the inspector found "wrong," such as deviations from the plans, incomplete items, or construction defects. The deficiencies should be corrected (or explained), and the corrections or explanations should be noted. The punch list, certificate, and record of any corrections or explanations should be maintained in the association's records as evidence that the amenity was properly completed and when that happened. These documents are extremely helpful years later when, understandably, none of the current management team has any recollection.

Selecting Board Members

It is normal for homeowners to want representation on the board, even if that representation is in a "minority" role. Representation means that the homeowner is an actual voting member of the board, not an advisor. Developers should seriously consider appointing homeowner representatives to the board early, especially in states that do not require election meetings before 50% of the units are conveyed.

If you believe an early appointment is warranted, consider a mock election meeting, which would be conducted exactly as future election meetings. Homeowners would select someone from the membership to serve on the board, following which, the developer will appoint that individual. Developers often resist this process. However, having a dissenting party on the board who represents the interests of homeowners is vital to truly gain the perspective of the homeowners, and they will place much more faith in the value of the appointment if they are permitted to choose the individual. Developers should be cautious not to handpick homeowner board members who may appear to have been appointed to serve their needs.

Setting Up Committees

Early in the life of most community associations, there is commonly only one standing committee, which is the architectural control or architectural review committee. Often, homeowners express an interest in other things, such as the association's finances, facilities, social programming, etc. Effective committees are created based on need. In other words, if there aren't any homeowners with an interest in social programming, it may not make sense to set up that committee. All associations should have a clear charter that is adopted by the board. The charter should delineate exactly what the committee will do, limit the number of members serving on the committee, dictate how members are appointed to the committee and how they can be removed, etc. Without a charter, among other things, the members of the committee may not have coverage under the association's directors' and officers' liability insurance or workers compensation insurance. When establishing committees, the board also should decide whether the committee is set up for a limited purpose (e.g., paint color selection committee) or a standing committee (e.g., finance committee). The board also should appoint a board member to act as a liaison to report to the board at meetings.

Maintenance vs. Construction Defects

Community associations are well advised to engage with third-party engineering firms to evaluate the association's physical plant following transition of the board to homeowner control.⁴ A transition engineer will evaluate whether the community is constructed in general conformance with the plans and good workmanship. A construction defect is present when a component is not built in general conformance with the plans or if it has been constructed with poor workmanship resulting in additional maintenance being required or failure to perform its intended use. It is easy to label the premature deterioration of any component in a developing community association as a construction defect, especially in a community with a very long development period.

By way of example: The expected useful life of the surface of an asphalt tennis court is commonly about 10 years. If the association performs a transition engineering study when the court is 9 years old, chances are the engineer will note that the surface of the court is deteriorating due to a lack of preventive maintenance and in need of resurfacing. A reputable engineer will also note that the court is nearing the end of its useful life. If the study were performed at 3 years and the same deterioration is noted, the court would have realized just under one third of its useful life. The engineer would certainly note that and would hopefully opine as to what specifically caused the premature deterioration. It is possible that a lack of preventive maintenance contributed to the premature failure, and equally possible that construction defects are present.

Warranties for Developing Communities

It is critical that community association managers understand the actual warranties for specific components owned by their association. Like auto manufacturers, most builders/developers offer some sort of short-term warranty that covers virtually everything in terms of function and perhaps even fit and finish. The duration is often one year from closing, or in the case of common areas, one year from substantial completion or in-service date. Additionally, there is often a warranty for major structural components. This warranty is commonly dictated by state statute and is often in the neighborhood of 10 years in duration (from substantial completion).

For major mechanical components (such as air handlers and water heaters), warranties are generally offered by the manufacturer. The duration of these warranties varies greatly. This is why it is important to obtain documentation for these components when the home or building is delivered. Building materials such as roof shingles and siding generally have longer-term warranties such as 25 or even 50 years. Like mechanical components, these warranties are offered by their manufacturers. Warranties can range from material product only warranties to labor and material product warranties. Managers should note that warranties for mechanical components and building materials almost never cover installation costs—only the cost of the component material itself. It is important to obtain documentation from the manufacturer about material warranties when the home or building is delivered.

The Care and Feeding of Expectations

Overselling your own personal abilities can be very dangerous. Whether accurate or not, both developer and homeowner board members often see their managing agent as an expert in all facility related matters. Let that statement be a wake-up call if you are unaware of this phenomenon. Obviously, some community managers have a higher level of experience and expertise than others. The proper man-

4. Best Practices Report: Transition From Developer Control, <https://foundation.caionline.org/wp-content/uploads/2017/06/bptransition.pdf>

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agement of expectations is of paramount importance from the managing agent's perspective. While you may not be the facilities expert, you should be a good resource for your clients. While you may not have specific knowledge of certain systems, you have the knowledge of and ability to recommend appropriate professionals.

It is very common for managers to assume that developer board members do not need their advice or the advice of any outside professionals. Like managers, many developer board members have no actual expertise in the systems and components the association is responsible for. They will certainly rely on the community manager for that, so the management of their expectations is critical.

Start with a Plan

Every great operation starts with a plan. Community managers have the resources through the community association industry to be the "quarterback" in creating this plan for developing communities. There are hundreds of professionals in the industry who focus on drafting critical components like maintenance manuals, preliminary reserve studies, etc. Managers should assume that clients do not know these professionals exist. If clients believe the manager will give them the same work product for "free," they will of course relay that as an expectation. Carefully managing that expectation is critical to a manager's success, and ultimately, the success of community associations.

COMMUNITY TRANSITION ISSUES AFFECTING MAINTENANCE

Over the life of most communities, changes in board and committee members, a manager or a management company, maintenance supervisor, employees, and service providers can result in a lack of historical knowledge and the continuity of maintenance plans. This can negatively impact the effectiveness of maintenance, resulting in increased costs and a decrease in property values.

Each of these changes affect the continuity of maintenance because there could be a failure to transfer knowledge from one party to its successor.

The community association industry is unique in that it lacks the internal continuity that generally exists in commercial business operations. The owners of businesses normally develop “institutional memory” because of their long-term involvement. In contrast in the community association industry, it is difficult for associations to develop institutional memory because of continual change.

This lack of continuity disrupts the transfer of knowledge from those who have gained knowledge to their successors. Lack of documentation and the failure to properly retain or turn over documentation are the primary reasons for this knowledge transfer void. Further contributing to the documentation issue is that accounting systems are geared toward the annual cycle. Accounting systems generally don't retain multiyear data or information in a meaningful form to assist the long-term maintenance process.

Creating a maintenance plan provides the guidelines but does not provide documentation of the program. It creates the plan and shows how the plan should be implemented but does not document if the planned maintenance procedures were actually performed.

Maintenance documentation. Documentation of maintenance procedures and work performed represents the knowledge about the maintenance process that has accumulated over time. This documentation can be passed from one person to another during any change in project oversight and represents the institutional knowledge that is lost in too many situations. The collection and transfer of maintenance procedures and work performed is a critical step that should not be overlooked. There are two methods documenting maintenance activities planned and completed:

1. Paper-based checklist.
2. A digital approach using computerized maintenance management system software.

The paper-based checklist approach is used by many because it is both simple and inexpensive. However, it can be cumbersome, inflexible, and difficult to store.

The software approach is more powerful and flexible as changes can be made on the fly but also is more expensive. Maintenance software is widely used outside the community association industry but has not gained any visibility within it. Maintenance software has existed for decades. While there are still some versions available for individual computers, the majority have moved into cloud-based versions.

Associations must consider the legal consequences of documenting or failing to document maintenance procedures performed. A question has been raised that if a maintenance plan exists, but the association then fails to perform the maintenance procedures indicated, that it has created a liability for failure to perform the duties of a prudent businessperson. That is a question that the lawyers must answer, but there is a recent situation of board members being sued by homeowners for failing to perform certain maintenance procedures that had a direct, material, negative impact on property values and safety.

What to Include

Documentation of maintenance procedures should include:

- **Procedures performed**
- **Date performed**
- **Who performed the procedures**
- **Notes or results of procedures**

RESERVE STUDIES AND MAINTENANCE: THE INTERSECTION

A reserve study is a budget planning tool that identifies the components that a community association is responsible to maintain or replace.⁵

The preparation of a reserve study is based on the International Reserve Study Standards of the Community Associations Institute (CAI-RSSTD 12-22), which have a number of references to the need for maintenance.

While a reserve study is not a maintenance plan, the replacement of various common area components that may be included within a maintenance plan may be included within the reserve study for funding. The selection of these components is described in detail within these standards.

The importance of maintenance is included within these standards in the following ways:

1. The preparation of a preventive maintenance plan is not typically included within the scope of a reserve study.
2. The standards confirm that “in addition to the reserve study, in order to properly evaluate and budget for the ongoing care of the common area components as well as the structural safety of the community, a proactive preventive maintenance plan as well as ongoing periodic structural inspections must be incorporated into the community’s long-term planning.”
3. The standards recommend that in addition to the reserve study, a community have a preventive maintenance schedule prepared as a supplementary report.
4. The standards include definitional information for preventive, deferred, and corrective maintenance along with the benefits (or detriment) of each.

The standards require that the reserve study include disclosures in regard to whether the community has a preventive maintenance plan and that the establishment of the remaining useful lives of the components included within the study be adjusted to reflect the existence of this plan. The grid below is an attempt to graphically illustrate that reserves represent only one fourth of maintenance activities but a much more significant portion of maintenance dollars.

	Low cost assets/Components ▼	High cost assets/Components ▼
Operating Maintenance Activities ►	Operating Budget \$	Operating Budget \$\$\$
Major Repairs or Replacements Activities ►	Operating Budget \$\$	Reserve Budget Reserve Study \$\$\$\$\$\$

5. International Reserve Study Standards of Community Associations Institute

FINANCIAL IMPACT OF MAINTENANCE PLANS

A maintenance program that implements the maintenance procedures of a professionally prepared maintenance plan will reduce life cycle costs. As you can see from the grid above, the issue that we face is trying to capture the total life cycle cost of the common elements. The way for any organization to begin to capture its cost of operations is to first start with clear and consistent data.

One. The asset inventory is the first step in understanding and capturing cost data. In the community association industry, the reserve study is a good first step in identifying assets. However, as indicated in the grid above, identifying reserve assets may capture only half of the assets you need to identify. It is important that from a life cycle cost perspective that you also identify assets that are not included in the reserve study. If the association has a maintenance plan, it should identify the additional components that are not included in the reserve study, such as the structure of the building. This asset inventory is only the first step.

Two. Now you have to identify and estimate costs associated with each of these assets. From a total cost of operation standpoint, you may consider costs such as energy, janitorial, and equipment rental of certain items. However, from a maintenance perspective, you simply need to identify the preventive maintenance activities and the major repair or replacement activities. This step is referred to as the measurement step because you were measuring the cost that you need to know for evaluating total life cycle costs.

The measurement information you accumulate in this process is data, and that data is very valuable to the association. Without that data, you are simply guessing. Accumulating this data also allows you to establish benchmarks to evaluate efficiency of maintaining versus replacing. A professionally prepared maintenance plan should help identify all the maintenance procedures that are necessary for each asset or group of assets. Identifying the cost of these procedures is what will help you measure your life cycle costs.

The association may want to first evaluate whether any changes could or should be made that would affect current costs and allow for savings. The association also may want to consider the location of the various assets as that can have an impact on life cycle costs.

Cost Factors

When analyzing preventive maintenance costs, a number of factors come into play, including:

- Age
- Moisture
- Original construction defects
- Prior maintenance failures
- Wind damage
- Deferred maintenance
- Excessive penetrations in roofing or siding

Three. Asking the right questions is the best way to determine the association’s carbon footprint, financial, maintenance, and lifestyle goals. These goals will have a significant impact on cost measurement. Several examples of this are:

- The association may be very interested in evaluating energy consumption to meet its carbon footprint goals. This may lead the association to use different equipment than what presently exists. Heating, ventilation, and air conditioning systems are a perfect example of this analysis as different systems have significantly different energy profiles. There also are significant savings by using high-efficiency equipment. Reserves may be higher, but the energy savings will significantly offset increases.
- The association may have a goal of maintaining threshold cash balances for the purpose of maintaining and replacing their assets.
- Maintenance goals may include replacing security vehicles on a very short life cycle simply because of the image they present to the entire community and what that communicates to members.
- Lifestyle goals likewise affect maintenance and the frequency of maintenance activities.

Life-Cycle Costs and the Importance of Preventive Maintenance

While many people understand the basic concepts of maintenance, some also feel that by implementing a proactive preventive maintenance plan, it will cost more. The reality is that it will cost them less, and the sooner it is implemented, the sooner this reduction will be realized.

The most important concept in connecting the cost of maintenance to how much it costs you as a homeowner is that of life-cycle costing. Simply put, this is the cost of your physical assets over their entire life. In a community association, this would be for the common elements from the time they are built until they are no longer used.

If you were to take the total life-cycle cost of a community, approximately 30% of these costs occur before turnover. They include the design and construction of the new community. The majority of these costs, or approximately 70%, take place after turnover and are paid by the homeowners. This cost is paid through reserves as well as maintenance.

According to national data provided in the 2021-2022 *Community Association Fact Book*⁶, there are 358,000 community associations in the United States that put \$26.6 billion into their reserve funds over that period.

While the concept of reserve funding has been around for many years and, in many states, it is a requirement, the establishment and implementation of preventive maintenance is only now beginning to be recognized as a critical part of an association’s long-term planning. As a result of the tragic collapse of Champlain Towers South, CAI issued a public policy report⁷ to be used by legislators as guidance to help prevent this from happening again. In this report, it discusses how building safety is not only reliant on the reserve study and funding but also maintenance and periodic inspections. The

6. Foundation for Community Association Research 2021-2022 U.S. National and State Statistical Review. <https://foundation.caionline.org/wp-content/uploads/2022/09/2021-2CAIStatsReviewWeb.pdf>

7. Condominium Safety Public Policy Report, Reserve Studies and Funding, Maintenance and Structural Integrity, October 2021. <https://www.caionline.org/HomeownerLeaders/DisasterResources/Documents/CAI%20Condo%20Safety%20Public%20Policy%20Report%2010%2029%2021old.pdf>

planning and implementation of maintenance is recommended to begin when a community is first built and continue throughout its life.

So, the question of how much it will cost and how much it will save, is a critical part of the community's budgeting and planning process. The definitions of preventive and corrective maintenance are important to understand.

According to the article, "Preventive and corrective maintenance-cost comparison and cost-benefit analysis,"⁸ preventive maintenance represents 10%–30% of total maintenance costs while corrective maintenance represents the remaining 70%–90%. This clearly shows that if corrective maintenance is avoided by the implementation of preventive maintenance, a significant savings will be realized.

Maintenance Definitions

Preventive maintenance is ongoing and planned in advance with the intent of making sure that the useful lives of the components in the reserve study are attained.

Corrective maintenance is something that cannot be anticipated and is used to fix components that deteriorate and is not anticipated. In many instances, the cost of corrective maintenance can be avoided by the implementation of a preventive maintenance program.

Research shows that the cost of preventive maintenance is significantly less than the cost of corrective maintenance.

Unfortunately, when not implemented, proactive, preventive maintenance leads to reactive corrective maintenance in many cases. If preventive maintenance is not employed, the cost of corrective maintenance, when it occurs, can be 30 or more times the cumulative cost of the preventive maintenance ("The Real Cost of Deferred Maintenance").⁹

From the perspective of the reserve study, the savings are straightforward. References have shown that the cost of preventive maintenance as compared to the replacement cost of a component ranges from 2%–5% of the replacement cost.⁹ To give an example of the savings, let's look at one component of a reserve study. It has a replacement cost of \$200,000 and a useful life of 20 years, resulting in an annual cost of \$10,000.

In the first scenario, we add 5% to the cost to account for preventive maintenance, which becomes \$210,000 with the same useful life, and the annual cost becomes \$10,500 or an annual cost of preventive maintenance of \$500.

Now, let's assume that since no preventive maintenance is used, the useful life is reduced by 10% to 18 years. The annual cost now becomes \$11,111 (\$200,000 divided by 18 years) or an increase of 6% as compared to the cost including preventive maintenance.

8. Preventive and corrective maintenance-cost comparison and cost benefit analysis, Structure and Infrastructure Engineering Journal, Volume 12, Issue 5. <https://www.tandfonline.com/doi/abs/10.1080/15732479.2015.1032983>

9. UPKeep Technologies, Inc. <https://www.upkeep.com/learning/budget-for-equiPreventive Maintenanceent-maintenance#:~:text=You%20should%20budget%20approximately%20, your%20facility's%20value%20and%20spending.>

This increase in cost becomes even more significant if the result of the lack of preventive maintenance is not discovered until a problem occurs, and the cost of correcting the condition cannot wait and totals 30 times the amount of the preventive maintenance.

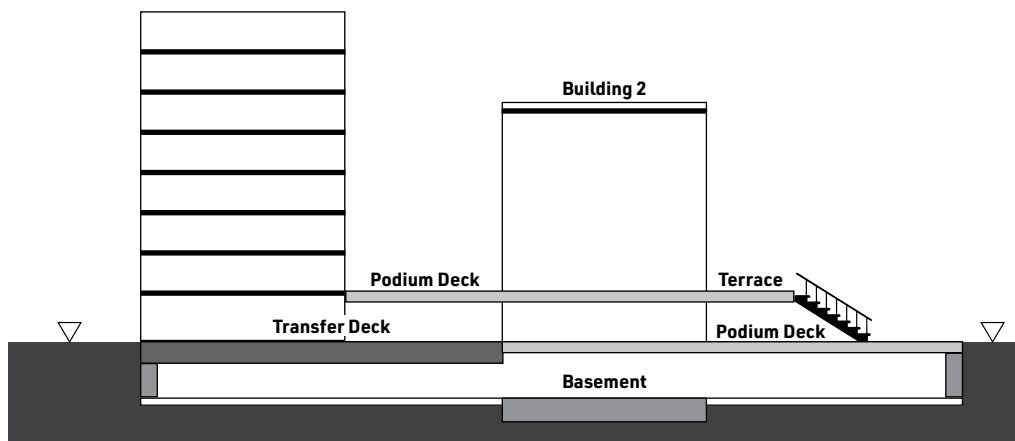
An example of this type of cost, using the above parameters, results in a problem being discovered in year 10 that requires corrective maintenance. The preventive maintenance that was not employed at that time would have been \$500 per year x 10 years = \$5,000. To correct the condition would be approximately 30 times that amount or approximately \$150,000, resulting in either a special assessment or borrowing.

If we now take this example and apply it to a full reserve study, the costs of preventive maintenance as compared to corrective maintenance becomes higher and higher.

A critical item that is missing from this type of evaluation is the structure of the building, which is not included in the reserve study. This is the purpose of the ongoing periodic inspection recommendations in CAI's public policy report. These periodic inspections are used to identify deterioration of the structure to confirm the structural adequacy of the building and its safety. It also can result in significant savings in corrective maintenance if deterioration is corrected when identified rather than when it progressively gets worse and ultimately becomes a safety issue and must be addressed.

Another area to be aware of is that, in a community association, the responsibility for the components is divided between the homeowners and the association in the form of the common elements. An example of where a problem could occur is a building where the windows are the responsibility of the homeowner to maintain and replace, and the façade is the responsibility of the community association. In this scenario, a lack of maintenance to the window may allow moisture to enter the façade and cause damage, which is then the responsibility of the association to fix.

Also, what should be recognized is the relationship between reserves, maintenance, and structure. For example, a common type of construction is a podium deck (shown below)¹⁰.



10. Diagram from Premier Guarantee Surveyors. <https://www.premierguarantee.com/resource-hub/podium-deck-warranty-guidance/>

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While the podium deck is not a part of the primary building structure which supports it, the podium deck replacement is included within the reserve study and requires ongoing preventive maintenance to attain its full useful life. It also requires preventive maintenance to prevent water infiltration from damaging the underlying structure, resulting in significant corrective maintenance costs.

In conclusion, the financial impact resulting from the implementation of a preventive maintenance program can be significant when viewed from a life-cycle cost evaluation. The proactive implementation of this type of program begins with proper planning. In a community association, this should integrate reserves, maintenance, and periodic inspections.

To implement this type of plan, a starting point can be your current reserve study. It should include preventive maintenance for each of the components, a recognition of the type of structure and the need for periodic inspections, and the cost of these periodic inspections. It also requires updating both the preventive maintenance plan as well as the reserve study on a regular basis (best practices suggest three-year updates).

THE LEGAL OBLIGATIONS

Everything starts with the governing documents.

Governing Documents

The association's governing body (board of directors) has an obligation to be knowledgeable of the communities' governing documents. These documents, such as the declaration of restrictions (also known as the covenants, conditions, and restrictions, or declaration), bylaws, condominium plan, and articles of incorporation, often contain nuggets as to an association's duty to perform inspections, maintenance, repairs, and replacement of property components.

The declaration often separates the obligations for the inspection, maintenance, and repairs by distinguishing between the owner's responsibilities and the association's responsibility. Oftentimes, the declaration will require the association governance or hired professionals to perform annual and even quarterly inspections of the property and report those written findings to its members. Some governing documents may even require the board to follow a prescribed maintenance manual oftentimes supplied by the developer to the association.

In the context of maintenance, the bylaws help direct the association as to how to fund the repairs and maintenance. Whether that funding is by way of a regular, special, or emergency assessment or borrowing. Always keep in mind that the governing documents may be supplemented by the laws in your state or municipality. Furthermore, the bylaws may set forth the procedures for financial reporting to the membership. Don't overlook or minimize your reporting requirements to the members. You may be surprised to learn that well informed owners can lead to more participation and new and different ideas that are beneficial to your association.

Condominium plans, often overlooked as a governing document, define the unit boundaries and common areas which may be important in defining maintenance responsibilities between the association and its owners. Even articles of incorporation may be important; often, they mention the governance obligations of the community. For example, the articles of incorporation may state one of the purposes of the association is to preserve the health, safety, and welfare of its residents and may authorize the governing body to borrow money which may be necessary to undertake maintenance, repairs or undergo capital improvements.

It is not always prudent for the governance body to rely solely on its own interpretation of the governing documents. Rather, the board should consider collaborating with other professionals such as an attorney, a reserve analyst, and professional management in developing maintenance plans, performing repairs, or undertaking replacements of common area components.

By way of an example, the governing body determines, without consulting any professionals, that 15 years prior to a lawsuit being filed, the declaration required the owners to maintain the outside of their condominium. Fifteen years later, a court ruled that the responsibility belongs to the association. The association is forced to impose a special assessment of over \$1 million as it has not maintained any reserves for the roof replacements, building painting, or siding replacement. Evidence showed

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that the board never consulted legal counsel and, in fact, ignored the management company's recommendation to have legal counsel review the board's initial decision.

In addition to reviewing the governing documents, the association must be mindful that there are governmental requirements that may affect the association's responsibility to maintain and inspect the common areas. For example, there may be inspection requirements mandated by state and local laws. Some local municipalities have developed strict building inspection requirements.

State Statutes

In some states and localities, there are mandatory inspections laws and ordinances. A current list of these laws may be found at www.condosafety.com. These inspections, much to the surprise of some board members, have discovered problems that were not readily apparent by a visual inspection and, in some instances, are costing hundreds of thousands to properly repair.

Many states have or are moving toward mandatory reserve study and funding laws, which require a reasonably competent and diligent visual inspection of accessible areas of major components that the association is obligated to repair, maintain, or replace. Using a qualified reserve specialist is important as establishing reserve components and replacement costs can be a complicated process. Reserve funding recommendations by an association's professional should never be ignored or swept under the rug by the board. A qualified reserve analyst is not just giving the board a reserve study to check a box, but rather has provided a road map of what's in store for the reserve funding going forward, which directly impacts the board's ability to perform its maintenance, repair, and replacement of components. Some states may not have mandatory reserve study requirements. If your state does not have the mandatory reserve study requirement, the board should consider undertaking its own reserve study in conjunction with utilizing a reserve specialist. State laws may be found at www.condosafety.com.

Maintenance Manuals

Maintenance manuals are discussed in some length above. The association needs to be diligent in reviewing, and if necessary, updating its maintenance manual on a regular basis.

These manuals should be fluid documents. Maintenance and the building components change over time. From a legal perspective, an association should adhere to the maintenance manual, but if the board elects not to follow it, that reason should be documented. As explained above, a maintenance manual is a good tool for your association, but it becomes your enemy if it is not followed. While the maintenance manual is not a governing document, owners will use it as a sword when they are

PRACTICE POINTER: An owner living in a 50-year-old building is having continuous plumbing waste line backups. No defects were identified in the plumbing system. The maintenance manual commissioned by the board 20 years prior specified the cleaning of the waste lines every two years. Since the adoption of the manual, the waste lines have been cleaned out four times. When deposed, a board member of six years testified he had never heard of or reviewed the maintenance manual despite it being referenced in a covenants, conditions, and restrictions amendment years before his deposition.

This example stresses the importance of governance education and board training. Has your board thought about a session with its consultants and vendors just to review the maintenance manual?

allegedly harmed by the association's failure to maintain the property. Treat the manual as a fluid document and review and update it on a regular basis.

Don't overlook the owner maintenance manual that addresses their maintenance responsibilities for their separate interests. It is usually the developer who prepares and provides it to the initial buyer. A well drafted set of covenants should reference the owner maintenance manual in the maintenance responsibility matrix.

In a perfect world, each successive owner receives a copy of the manual. Unfortunately, this is rarely the case. With the technology today, the association should post all maintenance manuals on its website, as it not only assists the owner in understanding their maintenance responsibilities but is also a good preventive maintenance tool. If an association cannot locate maintenance manuals or one was never provided to the owners, the board should consider developing one and making it available to all.

PRACTICE POINTER #1: An owner maintenance manual can save an association and the owners millions of dollars. A high-rise condominium had an owner leave the condominium and go shopping while his washing machine was running. When the owner returned home, he learned that the washing machine water supply valve failed and flooded 19 units below his, causing more than \$1 million in damages. The owner denied knowledge that the valves were his responsibility and denied ever receiving the owner maintenance manual referenced in the declaration. Had the owner received the manual, he would have read that he is responsible for the washing machine hoses and valves and should have them checked annually by a licensed plumber. It was learned during the forensic investigation that the valve had been leaking for more than a year.

PRACTICE POINTER #2: Aside from fire, water damage is one of the costliest catastrophic losses an association will face. Insurance companies will oftentimes not renew an association's insurance policy based upon water losses even with significant deductibles. The board and management must be proactive and remind owners of the necessity of checking the plumbing within their condominium, paying particular attention to plumbing fixtures that are prone to fail such as tubing supplying water and ice lines in refrigerators, washing machine hoses and valves, unit shut-off valves, angle stops, toilet supply lines, and toilet wax rings. Associations should consider a process where a qualified plumbing contractor offers annual inspection and service work to owners at a discount, if scheduled in bulk.

Identifying the obligations to maintain, repair, and replace the property components is key to a successful maintenance and common area preservation plan. It's step one, and many boards that are successful in the first step falter in subsequent steps.

For example, a painter was hired after a rigorous bidding process by a board. After months of planning, interviews, and contracting, a bid to paint the buildings was awarded. During the painting work, it was discovered that an intersection between the building wall and the roof fascia was allowing water

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to enter the building. Since the painter was out on the site and in fact discovered the problem, the board hastily approved the painter to do the repair. Twelve months later, during a rainstorm, several of the buildings suffered water intrusion resulting from the painter's shoddy repair. Lesson learned: The planning went fine, the expectation failed, but the painting job looks great.

Boards often rely on their management company to recommend reputable service providers. That practice often works well as management companies have experience with businesses in the niche area of working with associations. That said, the board is ultimately accountable for that contractor's malfeasance. While the board is justified in relying on its experts to avoid liability, the board should consider inserting itself into the process, rather than simply signing off on a contract based upon somebody else's recommendation, especially on larger contracts.

HIRING CONTRACTORS

Community associations need to hire the right person (or company) for the job. Follow these steps.

1. Verifying the contractor's license.

In most states, a contractor's license specific to the job is required when that work is over a threshold amount. Typically, the state contractor's license agency will define on its website the work that a contractor can perform under its license. Unfortunately, some contractors don't fully understand what work they cannot do.

There is a significant risk in hiring a contractor who is not properly licensed. For example, a contractor unlicensed to perform a particular job may not have workers compensation insurance to cover an employee's injury. In some states, an employee of an unlicensed contractor (or a contractor who did not hold the proper license to perform the work) may be considered the association's employee. If injured, the association, not the contractor, may be primarily liable for that employees' injuries.

The question often arises, how does the association protect itself from contractors who are unlicensed or do not hold the proper license to perform the work? Follow the checklist below:

- Check to make sure there is a license in the contracting party's name with the state board of contractors.
- Is the contractor's license active?
- Does the license designation allow the contractor to perform all the work that contractor will be performing?
- Has the contractor had a violation registered against its license?
- Has the board met the employee, officer, or director who holds the license?
- Is that employee, officer, or director actively involved in the company?
- Have a process in place during the work to check the contractor's license to make sure that the license is active throughout the job.
- Make sure you have certificates of insurance for the contractor and, in some cases, additionally insured endorsements naming the association. Consult with legal counsel on whether having the association named is advisable.
- Check with the agency in your state to confirm that the contractor's legal status as a business entity is active.
- Add provisions in the construction contract that state that the contractor warrants that it is properly licensed to perform the work and indemnifies and holds harmless the association from any and all liability arising from the contractor's failure to hold a proper license for the work being performed.

2. Interviewing the candidates.

It's important for the board and management to identify and interview the candidates bidding on the construction work. Boards consist of people from many walks of life, and you may find that some board members have an innate ability to spot issues (good and bad) with contractors that may be missed

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by others. During construction, the association may be “living” with a particular contractor for weeks, months, or years. It is important for the association to know who it is hiring.

Boards oftentimes do not have the time needed to interview contractors because they were too busy with other association business. If that is the case, boards should consider establishing a committee to conduct the initial interview and make recommendations. Leave the legal issues to the attorneys or other professionals. Interviewing qualified candidates, checking references, and cementing a solid contract are the keys to a successful project.

Recommendations for interviewing contractors:

- Limit the time for the interview, and stick with it.
- Have a list of questions circulated to the contractors prior to the interview:
 - a) Why are you qualified to do this work?
 - b) What similar jobs have you performed in the past two years?
 - c) Who will be in charge of our job from your company?
 - d) Will you be performing the work or subcontracting the work to others?
 - e) Do you have a list of projects that are available for us to see, and could we contact other communities that have hired you?
 - f) Do you have the staff to complete this work within the proposed time frame?
 - g) Is the project too large (or small) for you to give it your utmost attention?
 - h) Do you have a homeowner liaison?
 - i) Are you willing to attend board meetings and provide regular updates on the work to the board and members?
 - j) Is your company able to obtain a bond for its estimate and for its work, if asked?

PRACTICE POINTER: Contracted work may take some time to complete. During the work, board member turnover is inevitable. Board continuity and cohesiveness is important for a successful project. As board members turn over, no matter the reason, it is prudent to arrange a meeting between the outgoing and incoming board members and the contractors.

Oftentimes, incoming board members may be running for a board position based upon issues related to a particular construction project and may have misunderstandings or questions pertaining to the construction or work. It is important to bridge any communication gaps early to prevent problems moving forward. Don't forget that a contractor may be agreeing to do the work under the board regime that hired the contractor, and any change in that regime may be unsettling. It is not unheard of to have disagreements arise under a new board regime that can bring a project to an abrupt halt.

3. Developing a scope of work.

Aside from payment issues, where do projects usually start to go bad? An inadequate scope of work. Defining a scope of work is incredibly important to a successful project. Whether it is a small maintenance contract or a large project, having a clear definition of the scope of work is critical.

By way of an example, an association contracts to have its balcony decks rebuilt. The contract specifies that balcony decks will be rebuilt to meet building code. A quarter of the way through the project, the association receives a progress billing in excess of the total contract price. The board objects, and the contractor responds that there was more dry rot in the balcony decks than originally thought, resulting in more labor and material. The association replied, "But your contract said you would rebuild the decks for \$150,000, and we understood that to mean your price included anything that needed to be done." The contractor replied, "I can't be responsible for unforeseen conditions." Litigation ensued, the contractor walked off the job, and the board completed the job with another contractor for \$500,000. The board who hired the contractor was recalled. How could this situation have been avoided?

PRACTICE POINTER: While having a good specification is important, the board has other readily available resources to educate itself on the process. The internet has a number of construction dictionaries that provide basic definitions and diagrams of building components. Also, most reputable manufacturers have websites about the products they sell and oftentimes will provide technical support to answer questions.

- The association should have hired a professional to develop specifications for the scope of work. Specifications that describe the work to be performed, the products to be used, and pricing for the work, including unit costs for unforeseen conditions, likely would have prevented the misunderstanding described in the example above.
- A prototype repair could have been undertaken prior to the work being performed to determine the extent of the problems and the costs.
- A hired professional (preferably an owner's construction representative such as an architect or engineer) should have been present at certain intervals during the work to look at site conditions and modify or adjust work and pricing early in the project.

Ultimately, the board of directors should rely on independent paid consultants. Some board members call upon the expertise of their fellow board members to provide advice on construction, which is fine, provided it is clear that the director is acting as a board member and not as the consultant on the matter. Be cautious, and know that if you have a board member acting as a consultant and litigation over the work ensues, directors and officers insurance may not be available for any errors or omissions that director may be accused of making.

By way of an example, a board is contemplating a roofing replacement project. They hire an engineer or architect to provide detailed roofing specifications. One of the board members is a semiretired architect and with board approval, that board member makes significant changes to the specifications and does not resubmit them to the retained architect for review.

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The board member's changes resulted in the association entering into a roofing contract (against the retained architect's advice) for a roofing material that was ultimately determined to be substandard. After five years the roof failed, the roofing contractor had provided a two-year warranty, and the roof manufacturer provided a three-year warranty. Litigation followed, and the board member was sued along with others. The board member (semiretired architect) was not covered by the directors and officers insurance since there was a policy exclusion for board members who provided professional services to the association.

4. Hiring consultants to assist with contracted work.

It probably goes without saying that some contracted work is not complicated and does not require the expertise of a professional engineer or architect. However, the cost of the actual construction work should not dictate whether you need a professional to assist with the project. Professionals can be expensive, but often it's better to err on the side of caution and hire a consulting professional, even if the association can only afford a limited scope. In most states, a board that consults and delegates to knowledgeable professionals mitigates association liability if something goes wrong.

Follow the checklist below when determining when a professional consultant should be considered for a construction project for the repair, replacement, or maintenance of common area components:

1. Does the work involve correcting a building code violation or does it require building permits?
2. Does the work entail an upgrade to any mechanical or structural components (i.e., seismic and plumbing work)?
3. Does the work involve life and safety issues?
4. Does the work being performed affect or need to be integrated with other building components?
5. Are there manufacturer specifications that must be complied with to assure the materials are warranted?
6. Does the scope of work need to be sorted out?
7. Does the work require residents to vacate the property for a period of time?
8. Is the work an emergency requiring an immediate repair?

Hiring a consultant may be prudent if you answer affirmatively to any of the questions.

Not hiring a professional consultant can be catastrophic. Consider the following: The association hired a draftsman (not a professional engineer or architect) to design a decorative metal sunshade around a portion of the pool area. A bid was obtained to have a structural engineer review the plans for \$2,500. The total cost of the construction work was \$15,000. The board determined that the cost of the work, only being \$15,000, did not warrant a structural review. After all, it was just a sunshade. Legal counsel advised the structural review. Three weeks after the structure was installed, it collapsed during an early summer windstorm. No permits were obtained for the sunshade. There were no injuries or related property damage, but the possible troubles would be endless if the pool was occupied.

5. Refining the scope of work and considering destructive testing.

Boards need to be careful to contain the cost of the contracted work. To accomplish cost containment, a scope needs to be defined—even with such seemingly simple matters such as painting.

Where you have concealed conditions, it may be advisable to open some of the areas up prior to bidding the work. For example, a condominium project had over 50 exterior staircases leading from the first to the second floor. The board and the general contractor, after performing a walkthrough of the staircases, noted about half showed signs of dry rot and the others could be recaulked. The contractor bid on these observations. Unfortunately, all 50 staircases had to be replaced. Had destructive testing been done when developing the scope, there is no doubt the extent of the problem would have been realized. The board had a lot of explaining to do when the cost escalated to twice the amount of the initial contract.

Oftentimes, the scope of the repair can only be better defined by conducting destructive testing. Destructive testing also offers another opportunity—a *prototype repair*. Once the component is torn apart, the contractor can bid on and perform the prototype repair. The prototype repair resolves several problems. First, it helps determine whether the proposed fix is proper. Secondly, it can help the contractor establish the repair cost more accurately.

6. Obtaining permits.

Building permits from the municipality where the work is being performed can be expensive and result in substantial delays.

To avoid having to obtain building permits, general contractors and boards look for loopholes or exceptions to the permit requirements. For example, a municipality may not require a permit if the construction is like for like (e.g., rebuilding a deteriorated fence).

The requirement to have building permits does serve a purpose. In theory, when a building permit is issued, there is oversight by the municipality's building department to assure the work is being done per the building code, resulting in a safer and a more habitable building. For the most part, that process works, but it can be time consuming and expensive. It is not uncommon that a building permit fee is so expensive and time consuming that the project has to be reworked to bring it within budget. Working with professionals, it is possible to legally navigate around the need for building permits.

If building permits are required, the permits need to be obtained. Building without permits has significant risks. One risk is that the area of construction has to be restored to the condition it was in prior to the work. Should there be property losses (e.g., building collapse) or a personal injury resulting from unpermitted work, the legal stakes are increased and could result in uninsured losses.

7. Documenting work and retaining the records.

It is important to document the work as it progresses in all circumstances. Many construction sites are photo documented by a designated person at specific times. Photo (and video) documentation is essential during and after construction for many obvious reasons, including satisfying a building inspector who may question what work has been done and may assist in tracing a construction problem and provide verification as to who is on-site during certain stages of the work.

As a result of management and board turnover, association records are oftentimes prematurely destroyed, lost, or simply never retained. Boards need to develop a record retention program that can be carried forward to future management and community leaders. Records that cannot be easily recreated such as original building plans should be immediately digitized with copies kept by the association, management and, in some cases, with legal counsel. Developing a record retention program can be a daunting task; consider establishing a committee to develop a sustainable program.

8. Understanding when to hire legal counsel for construction projects.

Retain legal counsel to prepare or review all significant construction-related contracts. There is no easy answer as to which contracts require counsel's review. The cost of the construction work should not determine whether to retain counsel. It is best to start the discussion with your attorney. Obtain legal counsel's opinion on the risk factors that need legal counsel input. Typically, those risk considerations involve indemnification, insurance, and warranties provisions which are found in most construction contracts. Should the board retain legal counsel, it should be with someone knowledgeable in association law, construction law, and construction litigation.

PRACTICE POINTER: Be cautious of contracts where the contractor shifts the risks to the association. Examples of this include: limiting the contractor's maximum liability to a certain amount (e.g., cost of services) stated in the contract; specifying the association's insurance is primary in the event of a claim; and requiring the association to indemnify the contractor from any and all liability.

9. Handling disputes with the contractor.

Occasionally during construction, disputes with the contractor arise. Provisions need to be added in the contract that anticipate such disputes may occur and provide a mechanism that allows for a quick resolution so the construction doesn't stop while the dispute is being resolved. The most common contract provision facilitating a resolution during construction is a provision for mediation between the parties. A quick, relatively inexpensive mediation oftentimes can result in an early resolution while allowing construction to continue. Mediation services, such as American Arbitration Association, JAMS (formerly known as Judicial Arbitration and Mediation Services), and other resolution services are available to handle these types of disputes and have construction mediation rules that control the process.

PRACTICE POINTER: When disputes occur during construction, it is important to involve the association's professionals and attempt to quickly resolve the matter informally. Time is money. If a project is delayed because of a dispute between the association and the contractor, such delay could likely result in increased labor and material costs, expiration of permits, delay penalties, and additional insurance premiums.

10. Reviewing insurance.

Insurance is the key to making sure the work results in a successful conclusion. Follow the checklist below to help the association start the process of navigating the complex area of insurance for maintenance, remodeling, or reconstruction projects:

1. Involve the association’s insurance agent or broker or other insurance professionals early in the process.
2. Identify the exclusions in the association’s policy that may not afford protection during work (e.g., for structural repairs or defects in the contractor’s work).
3. Obtain information pertaining to the contractor’s insurance. The insurance should likely include construction insurance, property and liability insurance, workers compensation, and professional liability coverage.
4. Identify the contractor’s policy exclusions. Does the contractor’s coverage exclude any work being performed (e.g., condominium work)?
5. Identify gaps in coverage and look for insurance to cover them, if necessary.
6. Consider wrapping the project contractors (and owner) under one policy, referred to as an owner-controlled insurance policy or a contractor-controlled insurance policy. If those policies are not desired or not available, consider a project policy.
7. Consider whether there is a need to obtain contractor bonds for various aspects of the property.
8. Discuss the pros and cons of having the association named on the contractor’s insurance (e.g., insured vs. insured exclusions). If named in a lawsuit, the association needs to be certain it obtains the appropriate endorsements verifying the addition of the association on the contractor’s policies and request certificates of insurance.
9. Identify somebody at the association who oversees the insurance programs during the work such as renewal and expiration dates, making sure the property information is correct, obtaining evidence of insurance of subcontractors, and monitoring claims made under the policies.
10. Consult with an insurance coverage lawyer or insurance expert if necessary. Identify that person at the outset of the project.

Additional Considerations

Pay particular attention to insurance, handling of change orders, payment retention, and commencement and completion dates for the work. For some projects, the solvency of the contractor may need to be considered.

1. Keep owners in the loop. Let them know what is going on and what to expect. Be transparent.
2. Consider oversight by a third party (e.g., architect, engineer, or construction manager).
3. Make sure lien releases are obtained and payments are made per the contract.
4. Maintain a file of all contract documents, including warranties.
5. Separate product warranties from labor and other material warranties in the contract.
6. Develop checklists for uncompleted work.
7. Do an “official” close out of the project upon completion and calendar warranty time periods.

Maintenance Contractor Requirements

All associations require routine and emergency maintenance services, such as painting, changing light bulbs and fixtures, cleaning drainage swales, electrical work, plumbing repairs, roof leak patching, drywall repairs, and emergency services. A maintenance contractor, who is always accessible and oftentimes the go-to-person in the event of an emergency, is the professional equipped to carry out these tasks.

Maintenance contractors are the ideal choice for small to medium-sized jobs that require bidding and completion. These contractors specialize in tasks that are not part of the larger reconstruction projects and typically cost less than \$5,000. Many large-scale “paper” contractors do not take on these smaller projects and may not have the necessary staff to perform them. Instead, they often subcontract the work to trade specialists.

A maintenance contractor helps with the day-to-day management of an association. He or she also can be the eyes and ears of the board and management, observing and reporting. Your maintenance contractor understands the mechanics of homeowners associations, including the difference between separate interest, common interest, and exclusive-use common interest. They also understand how a board of directors and community association manager interact.

Your maintenance contractor can perform vital tasks such as:

- Perform most of the inspections required by your maintenance plan or preventive maintenance manual.
- Develop and implement a preventive maintenance program.
- Perform scheduled routine maintenance tasks.
- Respond to maintenance requests from residents, as directed by the board and manager, and complete necessary repairs.
- Maintain accurate records of maintenance activities and report them to the board and manager.
- Retain property knowledge such as paint colors, gate codes, history of repairs, important homeowner aspects, and more.
- Retain the knowledge of common building component issues/problems and also common building and common area defects.
- Retain knowledge of systems and shutoffs, including those for water, electrical and gas.
- Have a working knowledge of other vendor issues and status, including the maintenance programs of:
 - Landscaping
 - Janitorial
 - Lighting
 - Roofing
 - Pest control
 - Pool and fountain
 - Heating, ventilation, and air conditioning
 - Plumbing and jetting
 - Stormwater drainage
 - Boiler
 - Elevator
 - Fire and life safety

COMMUNITY ASSOCIATION MAINTENANCE

A maintenance contractor is not your handyman neighbor, your friend's teenage son, or a transient worker that just needs a few hours of work. A maintenance contractor needs to be qualified, licensed, insured, and well-staffed. He or she should be able to attend board meetings when necessary and can communicate well with management and the board.

To safeguard the association in the event of an injury or accident, it is essential for the maintenance contractor, like all contractors, to have workers compensation insurance, general liability insurance, vehicle insurance, and various other insurance that protects both themselves and the community association.

Having a properly licensed maintenance contractor is crucial. Without it, poor workmanship or faulty work cannot be remedied, and the community is left without recourse. The contractor's license serves as their primary valuable asset and protection. If they lack a license, they may abandon the job and the client with no consequences.

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MAINTENANCE COST SAVINGS

Many articles discuss the cost savings—sometimes ranging from three times to 30 times—attributed to preventive maintenance. Unfortunately, we have yet to discover the actual studies and data sets. We don't doubt that they exist, but we can't verify the nature of the assets included in the study to provide insight into the widely varying results.

Based on some commonly encountered association common area assets, we can easily see that different physical components will produce demonstrably different cost savings multiples. Below are some examples that demonstrate this.

Metal Fencing

In one community, soil had accumulated against and over the bottom rail of a metal fence. The bottom railing rotted out, resulting in a requirement to prematurely replace the entire fence at a cost of approximately \$7,000. This fence could have lasted 40 years but was instead replaced in approximately 20 years. Simply removing the soil could have prevented this early replacement.

The preventive maintenance activity for this fence should have required a monthly visual inspection to look for any soil accumulation, vegetation encroaching into the fence, signs of rust, and general condition of the paint. The maintenance cost in this instance was so small as to almost defy measurement. The failure to maintain resulted in a replacement cost factor many multiples of the maintenance cost.

To calculate a cost savings multiplier the following assumptions are made. Monthly inspection time is 15 minutes for this 100 lineal foot stretch of fence at a fully absorbed hourly cost of \$18, making the annual maintenance inspection cost \$54. The 20-year maintenance cost of \$1,080 could have saved a \$7,000 expenditure, resulting in a cost savings multiplier of 6.48.

Dryer Vent Cleaning

Not many condominium associations think about this; many push off the maintenance activity to members. However, due to fires in several condominium associations over the years, a number of communities have added this as an every-three-years maintenance activity to reduce fire risk. At an approximate cost of only \$150 per vent every three years versus a potential substantial repair, the cost savings multiplier is very high.

Deck Resurface

Small piercings of deck surfaces may seem insignificant, but the damage caused by water intrusion can cause structural damage and endanger the entire building. Repairing damaged deck surfaces or replacing the deck coating represents a very small cost compared to the damage that could result if not repaired.

SAMPLE INSPECTION CHECKLISTS

Comprehensive preventive maintenance manuals include a maintenance plan that is specific to each community and contains inspection checklists and maintenance information. Depending on the community element, inspection checklists can be biweekly, monthly, quarterly, semiannual, and annual

BIWEEKLY

A biweekly inspection checklist can be appropriate for automatic gates and doors (below), exterior and interior lighting, and security systems.

Date _____

Initials _____

Automatic Gates & Doors

Automatic entry gates and doors to and from grounds and buildings should be inspected biweekly. They are critical points of vehicular and pedestrian security and safety. Routine maintenance is the best method to ensure operational integrity.

Use this checklist as a guide for auditing building elements and performing appropriate preventive maintenance. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and when any necessary preventive maintenance has been performed.

Automatic vehicular gates

- Binding integrity
- Parts condition
- Hinge and bracket condition
- Security
- Stability
- Lubrication of wheels and pulleys
- Track alignment
- Security of fence fabric
- Motors
 - Cleanliness
 - Lubrication
 - Stability
 - Structural integrity
 - Shaft condition
 - Bearing condition
 - Overload and other relay condition

- Circuit breaker condition
- Chain and/or belt condition
- Overall condition

Automatic doors for Americans with Disabilities Act-compliant entrance, overhead doors (e.g., shipping, receiving), or garages

- Nut, bolt, and fastener condition
- Operating devices (motors), pneumatic powering
 - Cleanliness
 - Lubrication
 - Stability
 - Structural integrity
 - Shaft condition
 - Cable condition
 - Bearing condition
 - Overload and other relay condition
 - Circuit breaker condition
- Overall appearance for damage or vandalism
- Reversing mechanism operation
- Overall operation
- Weatherproofing/caulking condition
- Lubrication of guides, hinges, and locks
- Roller alignment
- Glazing integrity
- Hinge condition
- Lock condition and security
- Alignment
- Plumb
- Building settlement
- Straightness of guides
- Overall condition for deficiencies such as water intrusion and corrosion
- Other

Date _____

Initials _____

Automatic Gates & Doors

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- Automatic vehicular gates
- Automatic doors for Americans with Disabilities Act-compliant entrance, overhead doors, or garages
- Other

MONTHLY

A monthly inspection checklist can be appropriate for alarm systems, doors and windows, gas connections, building entryways, restrooms, fitness and recreation centers (below), laundry facilities, swimming pools, play areas, tennis courts, landscaping, paved areas, signage, and exterior stairs.

Date _____

Initials _____

Fitness & Recreation Areas

Many communities feature a fitness or recreation area. These areas may experience heavy traffic that can have a dramatic impact on the life expectancy of the equipment. Monthly preventive maintenance is critical. Consult the manufacturers of exercise and weight equipment for additional maintenance requirements.

Use this checklist as a guide for auditing building elements and performing appropriate preventive maintenance procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and when any necessary preventive maintenance has been performed.

Fire safety

- Electrical outlet load per manufacturer's specifications and code
- Positioning of flammable materials away from heat sources
- Accessible route
- Emergency exit visibility

Floors and mats

- Surface integrity
- Overall condition for deficiencies such as excessive wear, stains, tears, and tripping hazards

Walls/ceiling

- Paint condition
- Plaster/drywall condition
- Overall condition

Sound/speaker system

- Operation
- Clarity

Television and mounting/support

- Overall function and condition

Lighting fixture protection condition

Exercise/weight equipment

- Bolt condition
- Fastener condition
- Cable condition
- Electrical connection condition
- Pad condition
- Runner condition
- Cleanliness
- Positioning
- Member integrity
- Condition of electrical cords
- Overall condition and cleanliness

Weight benches and racks

- Stability
- Condition of surface for deficiencies such as excessive wear, rough areas, or protruding hardware
- Cleanliness
- Positioning
- Overall condition

Signage

- Currency of message
- ADA compliance, if applicable
- Location
- Overall condition

Fire extinguishers

- Tag currency
- Placement in correct proximity to potential hazards per code
- Housing condition
- Hose condition
- Overall condition

Trash receptacles

- Location
- Overall condition

COMMUNITY ASSOCIATION MAINTENANCE

Clock operation

Closets/equipment storage area

- Door/lock operation
- Cleanliness
- Appearance, interior and exterior
- Overall condition for debris and safety hazards and sharp protrusions

Water fountain and/or cooler

- Cleanliness
- Appliance operation and condition
- Furniture and cleanliness
- Floor condition and cleanliness

Mirrors and other glass surfaces

- Cleanliness
- Absence of cracked/broken surfaces or rough edges

Overall condition for deficiencies such as mold/mildew or rough surfaces

Other

Date _____

Initials _____

Fitness & Recreation Areas

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- Fire safety
- Floors and mats
- Walls/ceiling
- Sound/speaker system
- Television and mounting
- Lighting protection
- Exercise/weight equipment
- Weight benches and racks
- Signage
- Fire extinguishers
- Trash receptacles
- Clock
- Closets/equipment storage area
- Water fountain and/or cooler
- Mirrors and other glass surfaces
- Overall condition
- Other

SEMIANNUAL

A semiannual inspection checklist can be appropriate for fences (below), heating, ventilation, and air conditioning systems, fire alarm water flow testing, smoke and carbon monoxide detectors, and structural members.

Date _____

Initials _____

Fences

Fences surrounding the facility's grounds are usually made of aluminum, steel, concrete block, brick, wood, or durable plastic. Metal fences, such as chain link, require regular inspection of paint condition, rust and other corrosion, and vegetation and trash buildup. Wood fences are additionally susceptible to rot and loose components. Perimeter and boundary fences should be checked semiannually.

Use this checklist as a guide for auditing building elements and performing appropriate preventive maintenance procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary preventive maintenance has been performed.

Alignment

Structural stability

- Post integrity and alignment
- Foundation integrity
- Overall condition

Paint condition

Hardware condition and lubrication

Gate and latch/lock function and condition

Safety for deficiencies such as sharp edges, large gaps, and splintering

Overall condition for deficiencies such as vegetation encroachment, debris buildup, holes, sagging areas, missing segments, rot, fungus, termites, rust, splintering, or vandalism

Other

Date _____

Initials _____

COMMUNITY ASSOCIATION MAINTENANCE

Fences

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- Alignment
- Structure
- Paint
- Hardware
- Gates and latches/locks
- Safety
- Overall condition
- Other

ANNUAL

An annual inspection checklist can be appropriate for emergency generators, backflow devices, electrical systems, fire extinguishers, hot water heaters, roofing (below), gutters and roof drains, sewer laterals, irrigation controllers, storm drains, and special requirements.

Date _____

Initials _____

Roofing

The roof tends to be the most costly component of the facility, subject to a variety of weather conditions and temperature fluctuations. The early discovery and preventive maintenance of minor deficiencies extends its life and reduces the chance of premature failure, costly repairs, and damage to interior spaces below.

Annual inspections of both membrane and building components should be conducted for roofs of any age, including newly installed ones. Adequate time should be allotted to properly perform the many tasks involved in inspection. A roof should be surveyed completely, either by carefully walking it in its entirety where accessible (wearing soft shoes), or by visual inspection with binoculars where inaccessible. Visual inspection from the attic side is also important.

Attention should be paid to southern and northern exposures, weather-generated problems, horizontal lines, peak areas, and areas of sagging. Ventilation areas should also be examined for obstructions.

Use this checklist as a guide for auditing building elements and performing appropriate preventive maintenance procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary preventive maintenance has been performed.

- Supporting structural integrity for deficiencies such as cracks, moisture stains, and potential failure
- Flashing condition for deficiencies such as water penetration, displacement, oxidation, excessive stretching, delamination, and tearing
- Surface condition for deficiencies such as contaminants (such as exhaust or vegetation buildup)
- Subsurface condition (including insulation) for signs of moisture penetration
- Membrane condition
- Chimney condition
- Parapet integrity
- Plumbing stack vent and roof
- Connection condition
- Roof ventilation condition
- Skylight condition for deficiencies such as broken glass or frames and flashing corrosion or rust
- Structural condition for deficiencies such as settling of the deck, membrane splits, or cracks in walls
- Roof edging condition for deficiencies such as deterioration and loose fasteners
- Expansion joint condition for punctures, splits, and insecure fasteners

COMMUNITY ASSOCIATION MAINTENANCE

- Shingle condition
- Asphalt roof condition for deficiencies such as brittle or missing shingles, cracking, curled edges, erosion, or exposed wood
- Tile roof condition for deficiencies such as deteriorating mortar joints, exposed felt, missing wind locks, or missing or cracked tiles
- Wood shingle roof condition for deficiencies such as bare spots, curled or missing shingles, decay, dry rot, or mildew
- Flat roof condition for evenness across the horizontal plane and deficiencies such as bare areas, blisters, cove areas abutting parapets, cracks, curling, exposed nail heads, or ponding
- Overall condition
- Other

Date _____

Initials _____

Roofing

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- Supporting structure
- Flashing
- Surfaces
- Subsurfaces
- Membranes
- Chimneys
- Parapets
- Plumbing stack vents
- and roof connections
- Roof ventilation
- Skylights
- Structural changes
- Roof edging
- Expansion joints
- Shingles
- Asphalt roofs
- Tile roofs
- Wood shingle roofs
- Flat roofs
- Overall condition
- Other

EVERY 5 YEARS

An every-five-years inspection checklist can be appropriate for fire system certification (below).

Date _____

Initials _____

Fire System Certification

Comprehensive servicing and certification of the entire fire suppression system is generally done every five years. Check current local, state, and federal requirements, including National Fire Protection Association guidelines. A licensed state contractor must perform the services, and this work should be validated by local fire authorities.

The following items should be inspected by the contractor during this process:

- Signal initiation
- Manual alarm operation
- Water flow system components including valves, piping, pressure regulators, gauges, sprinkler heads, and shut-off operation
- Smoke detection systems
- Voice systems
- Automatic extinguishing systems
- Signage, visual notifications
- Supervisory signals
- Maintenance testing and protocol
- Central station monitoring
- Code compliance

Use this checklist as a guide for auditing building elements and performing appropriate preventive maintenance procedures. Note deficiencies and required maintenance and repair at the end of this checklist. Check each box when the item has been inspected and any necessary preventive maintenance has been performed.

- Fire system certification (should be tested only by a certified contractor)
- Other

Date _____

Initials _____

Fire System Certification

Deficiency Report

Check any categories that have deficiencies. Note specific issues and planned maintenance or repair tasks to address them.

- Fire system certification
- Other

SAMPLE OPERATION AND MAINTENANCE MANUALS

An operation and maintenance manual defines for a community association, its board, community manager, and business partners what components need to be maintained, how to maintain them, and when to maintain them.

Maintenance manuals should be designed so that those with a limited construction background can easily understand them. The manual focuses on inspection routines and preventive maintenance. It helps community associations by offering operation checklists, service history, and details on manufactured products. Every component in your community should be included in the manual—from air conditioning condensation drain lines and address numbers to water heaters and windows.

A few examples of the maintenance manuals for condominiums, high-rises, and single-family home communities follow.

CONDOMINIUMS

Building Access Entry Panels

Suggested service provider for inspections and preventive maintenance: General Maintenance

Guest entry into the individual buildings is controlled by remote building access entry panels. Guests use these panels to contact the individual residents. Residents can allow access by pressing the proper button on their telephone to unlock an entry door.



Maintenance suggestions

Check surface of panels for damage or corrosion. Check continuity of buttons and wiring. Check door release mechanisms. Immediately repair problems so guest access to the building is not compromised.

When performing any maintenance or inspection, follow all requirements of the product manufacturer. This information can be found on the digital media included with this manual, or by visiting the website of the product manufacturer or a recognized trade authority.

INSPECTION FREQUENCY	
WEEKLY	<input type="text"/>
MONTHLY	
INSPECT PANELS FOR DAMAGE	<input type="text"/>
CHECK OPERATIONS	<input type="text"/>
QUARTERLY	<input type="text"/>
TWICE ANNUALLY	<input type="text"/>
ANNUALLY	<input type="text"/>
LONG-TERM	<input type="text"/>

HIGH-RISE

Elevators

Suggested service provider for inspections and preventive maintenance: Elevator maintenance

The elevators provide residents easy access to their residences. Periodic inspections are performed by local authorities to assure minimum standards are being maintained. Periodic maintenance is a required part of elevator use and should be performed by your elevator maintenance contractor.



Maintenance suggestions

Required tests and inspections of the elevator and related components are required by the American Society of Mechanical Engineers (ASME) and the Occupational Safety and Health Administration (OSHA), as adopted by the state. The elevators maintenance contractor will be aware of all requirements.

INSPECTION FREQUENCY	
WEEKLY	<input type="text"/>
MONTHLY	<input type="text"/>
QUARTERLY	
VERIFY EMERGENCY PHONE AND FIRE RECALL RESTING.	<input type="text"/>
INSPECTION OF SAFETY COMPONENTS BY CERTIFIED CONTRACTOR.	<input type="text"/>
TWICE ANNUALLY	
VERIFY ELECTRICAL AND HYDRAULIC COMPONENT TESTING.	<input type="text"/>
ANNUALLY	
VERIFY ANNUAL COMPREHENSIVE INSPECTION	<input type="text"/>
LONG-TERM	<input type="text"/>

SINGLE-FAMILY HOME COMMUNITY

Pool and Spa Equipment

Suggested service provider for inspections and maintenance: Pool and spa maintenance

Water heating and filtering for both the pool and spa are managed by specialized equipment. Skimming operations, chemical distributions, spa jet operation, and water circulation all depend on the pumps, chlorinators, electric valves, and filters working adequately.



Maintenance suggestions

Schedule and perform periodic inspections of the pump and filtering equipment and spa jet controls to detect any malfunctions and make repairs as necessary. Clean pumps and skimmer baskets. Backwash pool and spa filters. Manually clean the filters with bottlebrush and appropriate detergent. When checking for leaks, check piping and pipe supports. Replace the pumps and motors when necessary.

When performing any maintenance or inspection, follow all requirements of the product manufacturer. This information can be found on the digital media included with this manual, or by visiting the website of the product manufacturer or a recognized trade authority.

INSPECTION FREQUENCY	
WEEKLY	<input type="text"/>
MONTHLY	
CLEAN PUMP AND SKIMMER BASKETS	<input type="text"/>
BACKWASH FILTERS	<input type="text"/>
QUARTERLY	
LUBRICATE BACKWASH VALVES	<input type="text"/>
TWICE ANNUALLY	
DISASSEMBLE AND CLEAN FILTERS	<input type="text"/>
ANNUALLY	<input type="text"/>
LONG-TERM	<input type="text"/>

ADDITIONAL RESOURCES

The Foundation and CAI provides many guides, articles, and resources on maintenance, including:

- *Breaking Point: Examining Aging Infrastructure in Community Associations*
<https://foundation.caionline.org/research/aging-infrastructure/>
- CAI's Research Library. The members-only resource contains more than 3,000 articles on community association issues.
www.caionline.org/ResearchLibrary
- CAI's library of on-demand webinars, including many maintenance-specific programs.
www.caionline.org/webinars
- CAI's M-201: Facilities Management. The course provides an overview and analysis of association maintenance. www.caionline.org/m201
- *Bids & Contracts: How to Find the Right Community Association Professional.*
www.caionline.org/shop.

BEST PRACTICES REPORTS

The Best Practices Reports, published by the Foundation for Community Association Research, cover the following topics and are available for sale in the CAI online bookstore at www.caionline.org/shop and as a free download at <https://foundation.caionline.org>.

- *Community Harmony & Spirit*
- *Community Security*
- *Energy Efficiency*
- *Ethics*
- *Financial Operations*
- *Governance*
- *Green Communities*
- *Maintenance*
- *Natural Disasters*
- *Reserve Studies*
- *Strategic Planning*
- *Transition*

**About the Foundation for
Community Association Research**

Our mission—with your support—is to provide research-based information for homeowners, association board members, community managers, developers and other stakeholders. Since the Foundation’s inception in 1975, we’ve built a solid reputation for producing accurate, insightful and timely information, and we continue to build on that legacy. Visit foundation.caionline.org.



About Community Associations Institute (CAI)

Since 1973, Community Associations Institute (CAI) has been the leading provider of resources and information for homeowners, volunteer board leaders, professional managers, and business professionals in 358,000 community associations, condominiums, and co-ops in the United States and millions of communities worldwide. With more than 44,000 members, CAI works in partnership with 64 affiliated chapters within the U.S, Canada, United Arab Emirates, and South Africa, as well as with housing leaders in several other countries including Australia, Spain, Saudi Arabia, and the United Kingdom.



A global nonprofit 501(c)(6) organization, CAI is the foremost authority in community association management, governance, education, and advocacy. Our mission is to inspire professionalism, effective leadership, and responsible citizenship—ideals reflected in community associations that are preferred places to call home. Visit us at www.caionline.org and follow us on Twitter and Facebook @CAISocial.

COMMUNITY ASSOCIATION MAINTENANCE

DEVELOPING FUNCTION-SPECIFIC BEST PRACTICES in the community association industry has been a goal of Community Associations Institute and the Foundation for Community Association Research for several years. The Foundation has developed best practices in select topic areas using a variety of sources, including, but not limited to, recommendations from industry experts and various industry-related publications. The outcomes of the Best Practices project include:

- Documented criteria for function-specific best practices.
- Case studies of community associations that have demonstrated success in specific areas.
- A showcase on community excellence.



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