



RESERVE STUDY STANDARDS



#WeAreCAI

Reserve Study Standards[®]™

RSS - RS052023

Contents

- Foreword3
- Acknowledgements3
- Scope and Intent of Standards4
- Purpose and Background4
- Reserve Study4
- Reserve Study Levels of Service5
 - Level I, Full5
 - Level II, Update, With Site Visit/On-Site Review5
 - Level III, Update, No Site Visit/Off-Site Review.....5
 - Level IV, Preliminary, Community Not Yet Constructed5
- Supplemental Reports6
- Reserve Study Preparation Procedure7
 - Establish Component Included in the Reserve Study8
 - Components8
 - Long-Life Component.....9
 - Key Terms Related to Components9
 - Develop a Funding Plan10
 - Funding Goals.....10
 - Baseline Funding10
 - Threshold Funding10
 - Full Funding10
- Reserve Study Report and Content.....11
- Disclosures12
- Updating the Reserve Study14
- Reserve Study Provider14
- Agreements14
 - Standard of Care14
- Terms and Definitions15
 - Funding Goals16
 - Baseline Funding16
 - Threshold Funding16
 - Full Funding16

Foreword

One of the primary responsibilities of the board of directors of a community association is to protect, maintain, and enhance the assets of the association. To accomplish this objective, associations must develop multiyear plans to help them anticipate and responsibly prepare for ongoing preventive maintenance, periodic structural inspections, as well as for the timely repair and replacement of common area components such as roofs, roads, mechanical equipment, and other portions of the community’s common elements.

Acknowledgements

Following the tragic partial collapse of Champlain Towers South condominium in Surfside, Fla., CAI convened working groups to discuss public policy solutions that would result in safer and more financially sound buildings. The working groups developed CAI’s *Condominium Safety Public Policy Manual*, found at www.condosafety.com. Following the development and advocacy of these public policy initiatives, CAI convened a task force to review and update the *Reserve Study Standards* to incorporate maintenance and structural integrity into the reserve study process. The task force worked for nearly one year, spending hundreds of volunteer hours to update the standards. The task force also engaged all members in surveys and townhall-style meetings to provide input.

Task Force Chairpersons

Robert Browning, PCAM, RS
Browning Reserve Group
Carmichael, Calif.

Mitchell Frumkin, PE, RS
Kipcon, Inc.
North Brunswick, N.J.

Peter B. Miller, AIA, RS
Miller-Dodson Associates
Annapolis, Md.

Robert Nordlund, PE, RS
Association Reserves
Westlake Village, Calif.

Task Force Members

Michelle Baldry, RS
Reserve Advisors, LLC
Arlington, Va.

Marvin Bennett
Metro Engineering Services
Rockville, Md.

Co-Lee Grev, AMS, PCAM, RS
Association Reserves
Cincinnati, Ohio

Mr. John Hershey, RS
J. Hershey Building
Consultants
Chagrin Falls, Ohio

Ms. Lisa A. Magill, Esq.
Kaye Bender Rembaum
Pompano Beach, Fla.

Edward San George, PCAM
INTEGRA Management Corp.
Mount Arlington, N.J.

Vishnu Sharma
Sharma & Associates, Inc.
Fort Lauderdale, Fla.

Kirk Watilo, LSM, PCAM
North Tustin, Calif.

J. Stewart Willis, RS
Blue Ridge Reserves, LLC,
Kilmarnock, Va.

Scope and Intent of Standards

The intent of these standards is to provide guidance and methodology in the preparation of reserve studies for all varieties of community association ownership types and physical configurations. These standards establish the procedures from conceptual development through report preparation. Consistent application of these standards will minimize the difference in component selection and funding recommendations by different [reserve study providers](#), with the result that association leaders will receive consistent, credible, and defensible reserve studies.

*Note: Since studies involve practitioner judgment and contain factors that cannot be readily defined and standardized, guidance for reserve study preparation is included throughout and is shown as **italicized**.*

Purpose and Background

The purpose of the *Reserve Study Standards* is to inform and guide the reserve study provider, such as a Reserve Specialist® (RS), with the minimum requirements necessary for the preparation of a reserve study. A reserve study can be prepared for several reasons throughout the life cycle of a community, beginning prior to construction and initial sales through community maturity. At each stage, the reserve study recommends the funding necessary to sustain the community.

Originally published in 1998, these *Reserve Study Standards* provide a consistent set of terminology, calculations, and expectations so reserve study providers and those they serve together can build a safe and successful future for millions of community association homeowners.

It is recognized that, in addition to the reserve study, a proactive preventive maintenance plan and ongoing periodic structural inspections should be incorporated into the community's long-term planning to properly evaluate and budget for the ongoing care of the common area [components](#) as well as the structural safety of the community. To keep the reserve study current and reflect the ongoing changes to the components and the financial needs of the community, the reserve study should be updated on a regular basis.

Reserve Study

A reserve study is a budget planning tool that identifies the components a community association is responsible for maintaining or replacing, the status of the reserve fund, and a stable and equitable [funding plan](#) to offset the anticipated future major [common area](#) expenditures.

This limited evaluation is conducted for budget and cash flow purposes. Tasks outside the scope of a reserve study include, but are not limited to, design review, construction evaluation, intrusive or destructive testing, preventive maintenance plans, and structural or safety evaluations.

Reserve Study Levels of Service

The following four levels of service describe the various types of reserve studies. In each case, minimum requirements are provided; definitions for each term are included within the “Terms and Definitions” section below.

Level I, Full

A reserve study in which the following five tasks are performed. This type of study includes the preparation of all five portions of the study based on both the [reserve study provider’s](#) on-site evaluation and on information provided by the client and other subject matter experts, as applicable:

- [Component inventory](#)
- [Condition assessment](#)
- Life and valuation estimates
- [Fund status](#)
- [Funding plan](#)

Level II, Update, With Site Visit/On-Site Review

A reserve study update in which the following five tasks are performed, based on both the reserve study provider’s on-site evaluation and on information provided by the client and other subject matter experts, as applicable:

- Component inventory
 - *This does not require quantities to be re-established, but it does require a review for a general conformance of the quantities in the study being updated to match the as-built conditions observed as part of the [site visit](#).*
 - *Components are to be added that were not previously included within the study being updated and which now are anticipated to occur within 30 years.*
 - *Long-life components are to be recognized as described within the definition of long-life components provided within this document.*
- Condition assessment
- Life and valuation estimates
- Fund status
- Funding plan

Level III, Update, No-Site-Visit/Off Site Review

A reserve study update with no on-site visual observations, in which the following three tasks are performed based on both the reserve study provider’s experience, as well as information provided by the client and other subject matter experts as applicable:

- Life and valuation estimates
- Fund status
- Funding plan

Level IV, Preliminary, Community Not Yet Constructed

A reserve study prepared before construction that is generally used for budget estimates. It is based on design documents such as architectural and engineering plans. The following three tasks are performed to prepare this type of study:

- Component inventory
- Life and valuation estimates
- Funding plan

Supplemental Reports

In addition to the four levels of service for the preparation of the reserve study, two supplemental reports are recommended in recognition that the [life cycle costs](#) of a community association are not only limited to reserve [components](#), and that incorporating these supplemental items will minimize the life cycle costs of the community, improving safety of the [structural system\(s\)](#) in the community. The reserve study provider should ask the client for a copy of the most current preventive maintenance manual to confirm that no overlap exists. The study also should be prepared to confirm that preventive maintenance is being performed. If preventive maintenance is not being performed, this should be disclosed within the report and be reflected, if necessary, in the remaining useful lives of the components included.

1. **A Preventive Maintenance Manual** is recommended for all associations. Although not a requirement for inclusion in the reserve study, disclosures are required regarding whether a preventive maintenance schedule is in place and being used.

Note: Some preventive maintenance projects may meet the definition of a reserve component and thus should be funded through reserves.

2. **Periodic Structural Inspections** are recommended as outlined in the CAI Building Inspection and Maintenance Public Policy (reference www.condosafety.com). Specifically, CAI supports policy that requires both initial and recurring inspections for buildings and other major structural elements owned or maintained by the association. It is a critical part of monitoring the condition of the building's structural system on an ongoing basis. The reserve study should include the estimated cost and frequency of these inspections and any others that are required by law or ordinance. If these inspections require that corrective maintenance be performed, the cost and timing for this work should be included within the reserve study.

Reserve Study Preparation Procedure

The process for preparing a reserve study consists of assembling and systematically analyzing information and data regarding the components comprising the physical assets of the community association which are to be included. A general procedure for conducting a reserve study is included in the figure below. The precise procedure for the preparation of the study shall be determined by the qualified [reserve study provider](#) and based on one of the levels of services described within this standard. This standard does not preclude the use of other procedures.



Establish Components Included in the Reserve Study

Component Inventory

The task of selecting and quantifying reserve components.

Components

The individually listed projects within the physical analysis which are determined for inclusion using the process described within the component inventory. These components form the building blocks for the reserve study. **Components are selected to be included in the reserve study based on the following three-part test:**

1. The association has the obligation to maintain or replace the existing element.
2. The need and schedule for this project can be reasonably anticipated.
3. The total cost for the project is material to the association, can be reasonably estimated, and includes all direct and related costs.

Component Selection Guidelines

In selecting the components to be included within the reserve study, the following guidelines, although not exclusive of the [reserve study provider's](#) expertise, are provided:

1. *Association maintenance/replacement responsibility is generally established by a review of governing documents as well as established association precedent.*
2. *When a project becomes "reasonably anticipated" will vary based on building age, construction type, and the judgment of the reserve study provider. This test means that component definitions should be based on some degree of certainty.*
3. *The community's budget should be reviewed, to establish the amount of maintenance planned and which projects are being funded from the operating account.*
4. *The amount and types of maintenance occurring at the community.*
5. *The community's historical pattern of expenses, helping to determine which projects in the past have been funded from the operating account, as well as to establish their inclusion within the reserve study.*
6. *Any work performed on the reserve components since the prior study was performed.*
7. *All available reports and information regarding the physical components within the community.*
8. *All maintenance contracts in place for the physical components within the community*
9. *Component definitions are not constrained by capital or non-capital state or Internal Revenue Service definitions. If desired at reserve study provider's discretion, all non-capital (per IRS or other tax authority definitions) items may be categorized separately.*
10. *Components are not restricted to physical items. Components may be projects that do not particularly involve the repair or replacement of a physical asset. In many cases, "components" may not be tangible objects or visually observable yet but should still be considered for inclusion in the study based on the expertise of the reserve study provider, a review of any available design drawings, or other subject matter experts.*
11. *Professional inspections, evaluations, or related building services qualify as reserve components if they otherwise meet the definition of "component."*

12. Common area preventive or corrective maintenance projects qualify as reserve components if they otherwise meet the definition of “component.” In other words, a “component” does not need to be a cyclical repair or replacement of a tangible physical item.
13. A reserve component is not required to be a cyclical replacement. An example may be corrective maintenance required per a periodic structural inspection.
14. In certain jurisdictions, there may be statutory requirements for or limitations to including components or groups of components in the reserve study. Those statutory requirements are to be respected with this standard, representing the minimum requirements in all cases.
15. A component replacement is not required to be with a similar component. Logical upgrades to an existing asset or system that is obsolete, inefficient, or no longer effectively serves the needs of the association can be accomplished as a reserve project. These upgrades also can be based on ongoing preventive maintenance costs and an evaluation of energy costs based on higher efficiency equipment.
16. There is no minimum or maximum limit to useful life or remaining useful life estimates used in a reserve study.
17. Selection of components, or selection of useful life and remaining useful life, may consider energy usage and ongoing maintenance costs which have an impact on total budgetary expenses and total life cycle costs.
18. No destructive testing is included in the scope of a reserve study.

Long-Life Component

Those components with an estimated remaining life of more than 30 years from the date of the study being prepared.

The reserve study provider, in coordination with the client, will determine the methodology for including these components in the study. Typical evaluation techniques for consideration include:

- Inclusion of long-life components with funding in the study.
- Addition of long-life components with funding at the time when they fall within the 30-year period from the date of study preparation.
- Identification of long-life components in the component inventory, even when they are not yet being funded in the 30-year funding plan.

Key Terms Related to Components

Establish Physical Attributes and Condition of Components/Condition Assessment

The task of evaluating the current condition of the component based on observed or reported characteristics. The assessment is limited to a visual, non-invasive evaluation.

Establish Budgetary Replacement Costs of Components/Valuation Estimates

The task of estimating the current repair or replacement costs for the reserve components.

Establish Estimated Remaining Useful Life of Each Component /Life Estimates

The task of estimating useful life and remaining useful life of the reserve components.

Develop a Funding Plan

Funding Goals

Reserve studies shall be developed based on one of the following funding goals. The funding goal shall be determined by the reserve study provider in consultation with their client to reflect the community's risk tolerance, as well as other variables explained by the reserve study provider.

Adequate funding (or adequate reserves) is defined as a replacement reserve fund and stable and equitable multiyear [funding plan](#) that together provide for the reliable and timely execution of the association's major repair and replacement projects as defined herein without reliance on additional supplemental funding.

The three funding goals listed below range from the most aggressive to the most conservative.

Baseline Funding

Establishing a reserve funding goal of allowing the reserve cash balance to approach but never fall below zero during the cash flow projection. This is the funding goal with the greatest risk of being prepared to fund future repair and replacement of major components, **and it is not recommended** as a long-term solution/plan. Baseline funding may lead to project delays, the need for a [special assessment](#), and/or a line of credit for the community to fund needed repairs and replacement of major components.

Threshold Funding

Establishing a reserve funding goal of keeping the [reserve balance](#) above a specified dollar or [percent funded](#) amount. Depending on the threshold selected, this funding goal may be weaker or stronger than "[fully funded](#)" with respective higher risk or less risk of cash problems. In determining the threshold, many variables should be considered, including things such as investment risk tolerance, community age, building type, components that are not readily inspected, and components with a [remaining useful life](#) of more than 30 years.

Full Funding

Setting a reserve funding goal to attain and maintain reserves at or near 100 percent funded. Fully funded is when the actual or projected reserve balance is equal to the fully funded balance.

It should be noted that, in certain jurisdictions, there may be statutory funding requirements that would dictate the funding requirements. In all cases, these standards are considered the minimum to be referenced.

Reserve Study Report and Contents

The following is a list of the minimum contents to be included in the reserve study:

1. A summary of the association's separate interests (number of units/lots), physical description, and current (or projected) reserve fund balance.
2. A tabular listing of the [component inventory](#), including for each component, quantities or identifying descriptions, sources utilized, [useful life](#), [remaining useful life](#), and current [replacement cost](#).

The component and useful life shall reflect all identified "Long Life Components," though the funding for components beyond a 30-year useful life does not need to occur until the remaining useful life drops to 30 years.

3. A description of methods and objectives utilized in computing the [fund status](#) and development of the [funding plan](#):
 - a) Methodology used in developing the funding plan.
 - b) Funding goal(s) used in developing the funding plan, and if threshold, the threshold goal (cash or [percent funded](#)) chosen.
 - c) Fiscal year for which the reserve study is prepared.

4. Summary of any discussion of preventive maintenance with association representatives including a description of the extent of preventive maintenance being employed.

If preventive maintenance is not being performed, the remaining useful life of components should be reduced, if applicable.

5. Summary of any discussion about periodic structural inspection reports or the lack thereof.

If a periodic structural inspection and report has been performed, a copy should be requested to include any corrective maintenance or repair and associated timing and costs into the reserve study.

6. A description of the level of service by which the reserve study was prepared.

Disclosures

The following are the minimum disclosures to be included in the reserve study:

1. General: Description of the other involvement(s) with the association, which could result in actual or perceived conflicts of interest.
2. Physical analysis: Description of how thorough the on-site observations were performed: representative samplings versus all common areas, field measurements versus drawing take-offs, etc.
3. Recommended subject matter experts to be consulted to evaluate issues outside the scope of the [reserve study provider's](#) expertise or business model.
4. [Financial analysis](#): Description of assumptions utilized for interest and inflation, tax, and other outside factors.
5. Personnel credentials: State or organizational licenses or credentials carried by the individual responsible for reserve study preparation or oversight.
6. Update reports: Disclosure of how the current work is reliant on the validity of prior reserve studies.
7. Completeness: Material issues which, if not disclosed, would cause a distortion of the association's situation.
8. Reliance on client data: Information provided by the official representative of the association regarding financial, physical, quantity, or historical issues will be deemed reliable by the consultant and assembled for the association's use, not for the purpose of performing an audit, quality/forensic analysis, or background checks of historical records.
9. [Reserve balance](#): The actual or projected total presented in the reserve study is based upon information provided and was not audited.
10. Component quantities: For update with site visit and update with no site visit levels of service, the client is considered to have deemed previously developed component quantities as accurate and reliable.
11. Reserve projects: Information provided about reserve projects will be considered reliable. Any on-site inspection should not be considered a project audit or quality inspection.
12. Periodic building inspections: Structural integrity evaluations are not included in the reserve study unless otherwise noted.
13. Maintenance:
 - A. Preventive maintenance is a critical aspect affecting a community's [life cycle costs](#) and structural safety. It is encouraged that every association have a preventive maintenance plan prepared in conjunction with the reserve study (if required). The reserve study shall include a disclosure regarding the community's preventive maintenance planning. The preventive maintenance plan should incorporate all applicable common elements, not just those components included within the reserve study.
 - B. Any information provided by the client regarding ongoing maintenance or repair being performed with any component shall be included within the notes for that component in every full or with site-visit reserve study.
 - C. The reserve study provider can only be aware of preventive maintenance plans or programs that have been disclosed by the client.

Note that an audit or evaluation of any maintenance plans or maintenance contract is outside the scope of services performed by a Reserve Specialist.

- D. The reserve study provider lacks information to incorporate necessary corrective maintenance costs and timing unless they have been provided with a copy of the most recent periodic structural inspection report. A disclosure to this effect shall be included.
- 14. Disclosure of dollar value below which projects are handled through the operational budget. Exceptions may be made for projects falling below this threshold which materially extend the [useful life](#) or [remaining useful life](#) of a component.
- 15. Disclosure of long-life but unfunded components.
 - A. *Unless specifically noted, the components included within this study have an anticipated remaining useful life within 30 years from the time the field observations used in preparing the study was performed.*
- 16. Liability disclosure: The Reserve Specialist shall incur no civil liability for performing the physical or financial portions of a reserve study performed in accordance with these standards.
- 17. Scope limitation disclosures: Clear recommendations appear within the reserve study where the association has been advised to retain outside expertise to supplement the evaluation of the Reserve Specialist.
- 18. Independence disclosure: The Reserve Specialist or other reserve study provider for this project has no familial or marital relationship with the client, no ownership interest in the client, and no ongoing business relationship with the client.
- 19. The study should include the dates that field observations were performed for use in preparing the study.
- 20. The study should include the source of all information provided to the reserve study provider of the study, including their name and relationship to the client.

Updating the Reserve Study

To keep the reserve study current and reflect the ongoing changes to the [components](#) and the financial needs of the community, the reserve study should be updated on a regular basis. Best practice is for a site inspection-based reserve study update at least every third year.

Note: Preventive maintenance evaluations and periodic structural inspections should be updated prior to the reserve study so they may be incorporated into the reserve study update.

Reserve Study Provider

Reserve studies should be prepared by a qualified professional.

- Reserve Specialist® (RS) designation. An individual with a RS designation **is the most qualified** individual to conduct reserve studies. They have prepared at least 30 reserve studies within the past three years, have the appropriate level of education and experience, and have committed to a high level of ethical and professional standards.

Other qualifications may include:

- A professional who carries nationally recognized professional credentials for reserve study providers.
- A professional with construction, accounting, architecture, engineering, community association management, or specific subject matter expertise with direct experience preparing reserve studies for community associations.

Agreements

The scope of services for the reserve study shall be defined by the qualified [reserve study provider](#) and all conditions, applicable standards, and services shall be mutually agreed upon by the client and the reserve study provider.

Standard of Care

In providing a reserve study based on these standards, the Reserve Specialist shall perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession practicing under similar circumstances at the same time and the same or similar locality. The Reserve Specialist further agrees that the work performed shall conform to the requirements of these standards.

As different community types present different challenges and levels of complexity, a Reserve Specialist should only accept engagements where they are qualified to prepare the reserve study within their experience and expertise, unless assisted by one or more subject matter experts or more qualified Reserve Specialists, as necessary.

Terms and Definitions

Adequate Reserves: A replacement reserve fund and stable and equitable multiyear [funding plan](#) that together provide for the reliable and timely execution of the association's major repair and replacement projects as defined herein without reliance on additional supplemental funding.

Capital Improvements: Additions to the association's common area that previously did not exist. While these components should be added to the reserve study for future replacement, the cost of construction or installation cannot be taken from the reserve fund.

Cash Flow Method (also known as pooling): A method of developing a reserve funding plan where funding of reserves is designed to offset the annual expenditures from the reserve fund.

To determine the selected funding plan, different reserve funding plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

Common Area: The areas identified in the community association's master deed or declarations of covenant easements and restrictions that the association is obligated to maintain and replace or based on a well-established association precedent.

Community Association: A nonprofit entity that exists to preserve the nature of the community and protect the value of the property owned by members. Membership in the community association is mandatory and automatic for all owners. All owners pay mandatory lien-based assessments that fund the operation of the association and maintain the common area or elements, as defined in the governing documents. The community association is served and lead by an elected board of trustees or directors.

Components: The individually listed projects within the physical analysis which are determined for inclusion using the process described within the component inventory. These components form the building blocks for the reserve study. **Components are selected to be included in the reserve study based on the following three-part test:**

1. The association has the obligation to maintain or replace the existing element.
2. The need and schedule for this project can be reasonably anticipated.
3. The total cost for the project is material to the association, can be reasonably estimated, and includes all direct and related costs.

Component Inventory: The task of selecting and quantifying reserve components. This task can be accomplished through on-site visual observations, review of association design and organizational documents, review of association precedents, and discussion with appropriate representative(s) of the association.

The Reserve Specialist, in coordination with the client, will determine the methodology for including these components in the study. Typical evaluation techniques for consideration include:

- Inclusion of long-life components with funding in the study.
- Addition of long-life components with funding at the time when they fall within the 30-year period from the date of study preparation.

- Identification of long-life components in the component inventory even when they are not yet being funded in the 30-year funding plan.

Component Method (also known as Straight Line): A method of developing a reserve funding plan where the total funding is based on the sum of funding for the individual components.

Condition Assessment: The task of evaluating the current condition of the component based on observed or reported characteristics. The assessment is limited to a visual, non-invasive evaluation.

Effective Age: The difference between [useful life](#) and estimated [remaining useful life](#). Not always equivalent to chronological age since some components age irregularly. Used primarily in computations.

Financial Analysis: The portion of a reserve study in which the current status of the reserves (measured as cash or [percent funded](#)) and a recommended reserve funding plan are derived, and the projected reserve income and expense over a period of time are presented. The financial analysis is one of the two parts of a reserve study. A minimum of 30 years of income and expense are to be considered.

Fully Funded: 100 percent funded. When the actual (or projected) [reserve balance](#) is equal to the fully funded balance.

Fully Funded Balance (FFB): An indicator against which the actual (or projected) reserve balance can be compared. The reserve balance that is in direct proportion to the fraction of life “used up” of the current repair or [replacement cost](#). This number is calculated for each component, and then summed for an association total.

FFB = Current Cost X Effective Age/Useful Life

Example: For a component with a \$10,000 current replacement cost, a 10-year useful life, and effective age of 4 years, the fully funded balance would be \$4,000.

Fund Status: The status of the reserve fund reported in terms of cash or [percent funded](#).

Funding Goals:

The three funding goals listed below range from the most aggressive to most conservative:

Baseline Funding

Establishing a reserve funding goal of allowing the reserve cash balance to approach but never fall below zero during the cash flow projection. This is the funding goal with the greatest risk of being prepared to fund future repair and replacement of major components, **and it is not recommended** as a long-term solution/plan. Baseline funding may lead to project delays, the need for a [special assessment](#), and/or a line of credit for the community to fund needed repairs and replacement of major components.

Threshold Funding

Establishing a reserve funding goal of keeping the [reserve balance](#) above a specified dollar or percent funded amount. Depending on the threshold selected, this funding goal may be weaker or stronger than “fully funded” with respective higher risk or less risk of cash problems. In determining the threshold, many variables should be considered, including things such as

investment risk tolerance, community age, building type, components that are not readily inspected, and components with a [remaining useful life](#) of more than 30 years.

Full Funding

Setting a reserve funding goal to attain and maintain reserves at or near 100 percent funded. Fully funded is when the actual or projected reserve balance is equal to the fully funded balance.

It should be noted that, in certain jurisdictions, there may be statutory funding requirements that would dictate the funding requirements. In all cases, these standards are considered the minimum to be referenced.

Funding Plan: An association's plan to provide income to a reserve fund to offset anticipated expenditures from that fund. The plan must be a minimum of 30 years of projected income and expenses.

Funding Principles: A funding plan addressing these principles. These funding principles are the basis for the recommendations included within the reserve study:

- Sufficient funds when required.
- Stable funding rate over the years.
- Equitable funding rate over the years.
- Fiscally responsible.

Initial Year: The first fiscal year in the financial analysis or funding plan.

Life Estimates: The task of estimating [useful life](#) and [remaining useful life](#) of the reserve components.

Life Cycle Cost: The ongoing cost of deterioration which must be offset in order to maintain and replace common area components at the end of their useful life. Note that the cost of preventive maintenance and corrective maintenance determined through periodic structural inspections (if required) are included in the calculation of life cycle costs and often result in overall net lower life cycle costs.

Maintenance: Maintenance is the process of maintaining or preserving something, or the state of being maintained. Maintenance is often defined in three ways: preventive maintenance, corrective maintenance, and deferred maintenance. Maintenance projects commonly fall short of "replacement" but may pass the defining test of a reserve component and be appropriate for reserve funding. Maintenance types are categorized below:

Preventive Maintenance: Planned maintenance carried out proactively at predetermined intervals, aimed at reducing the performance degradation of the component such that it can attain, at minimum, its estimated useful life.

Deferred Maintenance: Maintenance which is not performed and leads to premature deterioration to the common areas due to lack of preventive maintenance.

This results in a reduction in the remaining useful life of the reserve components and the potential of inadequate funding. Typically, deferred maintenance creates a need for corrective maintenance.

Corrective Maintenance: Maintenance performed following the detection of a problem, with the goal of remediating the condition such that the intended function and life of the component or system is restored, preserved, or enhanced.

Many corrective maintenance projects could be prevented with a proactive, preventive maintenance program. Note that when the scope is minor, these projects may fall below the threshold of cost significance and thus are handled through the operational budget. In other cases, the cost and timing should be included within the reserve study.

Percent Funded: The ratio, at a particular point in time clearly identified as either the beginning or end of the association’s fiscal year, of the actual (or projected) [reserve balance](#) to the fully funded balance, expressed as a percentage.

While percent funded is an indicator of an association’s reserve fund size, it should be viewed in the context of how it is changing due to the association’s reserve funding plan, in light of the association’s risk tolerance and is not by itself a measure of “adequacy.”

Periodic Structural Inspection: [Structural system](#) inspections aimed at identifying issues when they become evident.

Additional information and recommendations are included within the Condominium Safety Public Policy Report. www.condosafety.com

Physical Evaluation: The portion of the reserve study where the component inventory, condition assessment, and life and [valuation estimate](#) tasks are performed. This represents one of the two parts of the reserve study.

Preventive Maintenance Schedule: A summary of the preventive maintenance tasks included within a maintenance manual which should be performed such that the useful lives of the components are attained or exceeded. This schedule should include both the timing and the estimated cost of the task(s).

Remaining Useful Life (RUL): Also referred to as “remaining life” (RL). The estimated time, in years, that a component can be expected to serve its intended function, presuming timely preventive maintenance. Projects expected to occur in the initial year have zero remaining useful life.

Replacement Cost: The cost to replace, repair, or restore the component to its original functional condition during that particular year, including all related expenses (including but not limited to shipping, engineering, design, permits, installation, disposal, etc.).

Reserve Balance: Actual or projected funds, clearly identified as existing either at the beginning or end of the association’s fiscal year, which will be used to fund reserve component expenditures. The source of this information should be disclosed within the reserve study.

Also known as beginning balance, reserves, reserve accounts, or cash reserves. This balance is based on information provided and not audited.

Reserve Study: A reserve study is a budget planning tool which identifies the components that a community association is responsible to maintain or replace, the current status of the reserve fund, and a stable and equitable funding plan to offset the anticipated future major common area expenditures.

This limited evaluation is conducted for budget and cash flow purposes. Tasks outside the scope of a reserve study include, but are not limited to, design review, construction evaluation, intrusive or destructive testing, preventive maintenance plans, and structural or safety evaluations.

Reserve Study Provider: An individual who prepares reserve studies. In many instances, the reserve study provider will possess a specialized designation such as the Reserve Specialist® (RS) designation administered by Community Associations Institute (CAI). This designation indicates that the provider has shown the necessary skills to perform a reserve study that conforms to these standards. In some instances, qualifications in excess of the RS designation will be required if supplemental subject matter expertise is required.

Reserve Study Provider Firm: A company that prepares reserve studies as one of its primary business activities.

Responsible Charge: A Reserve Specialist (RS) in responsible charge of a reserve study shall render regular and effective supervision to those individuals' performing services that directly and materially affect the quality and competence of services rendered by the Reserve Specialist. A Reserve Specialist shall maintain such records as are reasonably necessary to establish that the Reserve Specialist exercised regular and effective supervision of a reserve study of which he or she was in responsible charge. A Reserve Specialist engaged in any of the following acts or practices shall be deemed not to have rendered the regular and effective supervision required herein:

1. The regular and continuous absence from principal office premises from which professional services are rendered; except for performance of field work or presence in a field office maintained exclusively for a specific project;
2. The failure to personally inspect or review the work of subordinates where necessary and appropriate;
3. The rendering of a limited, cursory or perfunctory review of plans or projects in lieu of an appropriate detailed review; and
4. The failure to personally be available on a reasonable basis or with adequate advance notice for consultation and inspection where circumstances require personal availability.

Site Visit: A visual assessment of the accessible areas of the components included within the reserve study.

The site visit includes tasks such as, but not limited to, on-site visual observations, a review of the association's design and governing documents, review of association precedents, and discussion with appropriate representative(s) of the association.

Special Assessment: A temporary assessment levied on the members of an association in addition to regular assessments. Note that special assessments are often regulated by governing documents or local statutes.

Special assessments, when used to make up for unplanned reserve fund shortfalls, may be an indicator of deferred maintenance, improper reserve project planning, and unforeseen catastrophes and accidents, as well as other surprises.

Structural System: The structural components within a building that, by contiguous interconnection, form a path by which external and internal forces, applied to the building, are delivered to the ground. This is generally a combination of structural beams, columns, and bracing and is not included within the reserve study, although it is reviewed as part of the recommended periodic structural inspections.

It is important to recognize that individual structural components which are not a part of the structural system, such as decks, balconies, and podium deck components may be included for reserve funding if they otherwise satisfy the three-part test.

Useful Life (UL): The estimated time, in years, that a reserve component can be expected to serve its intended function if properly constructed presuming proactive, planned, preventive maintenance.

Best practice is that a component's Useful Life should reflect the actual preventive maintenance being performed (or not performed).

Valuation Estimates: The task of estimating the current repair or [replacement costs](#) for the reserve components.