KIPCON

# Detailed Reserve Study

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December 3, 2021

Mr. Frank Boyer
The Galman Group
261 Old York Road
Jenkintown, Pennsylvania 19046

Reference: **Valley Forge Towers South Condominium Association**
**Detailed Reserve Study**
**Kipcon Project No. 14132-01**

Dear Mr. Frank Boyer:

Attached please find Kipcon's Detailed Reserve Study, which has been prepared for the Valley Forge Towers South Condominium Association.

As you know, the Reserve Study is a major part of your community's operating budget and a very important tool to help plan for future common area replacements. This study provides a variety of funding plans, including a proposed plan for your community. It is important for the Board to review this report in order to finalize a Funding Plan that works for your community.

To help you in the evaluation of what is presented we include a step-by-step process for reviewing the study. At Kipcon, we are committed to developing a funding plan that works for you!!

As always, if you have any questions or comments, please do not hesitate to contact us. Thank you again for selecting Kipcon to provide these services.

Very truly yours,

**KIPCON INCORPORATED**

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Project Manager

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# Purpose of Study

A **Reserve Study** is a budget planning tool which identifies the common area components that the association is responsible to replace and provides a funding plan to offset the anticipated future major common area replacement expenditures. The Study consists of two parts, the Physical Analysis, and the Financial Analysis.

The Physical Analysis includes the Component Inventory, Condition Assessment and the Life and Valuation estimates. This is provided on Page **12** of this report.

The Financial Analysis includes the current status of reserves and a recommended Funding Plan including the projected reserve income and expense over a period of time. This is provided on Page **10** of this report.

The National Reserve Study Standards of the Community Associations Institute provides the level of service for a Reserve Study. As these are minimum standards, Kipcon also offers an upgraded study, the **Kipcon Detailed Reserve Study**.

This report prepared by Kipcon is a **Kipcon Detailed Reserve Study** in excess of the National Standards.

In preparing the Physical Analysis:

a. **Kipcon** determined which components should be included within the Study. This determination was based on the description of the common elements of the community provided to us and includes the following: roofing, balconies, façade, common area hallways, lobby, elevators, lighting, fire safety equipment, electrical equipment, HVAC equipment, water heaters, a generator, and a trash compactor, among others.

b. **Kipcon** calculated the quantities of the common area components included within the study. This was based on a combination of design drawings, field measurements, and aerial imagery.

c. **Kipcon** performed a site visit to determine the condition of all observable components. Our site visit consisted of visual observations of all accessible common elements and limited common elements. The visual observations are the basis for the estimated remaining useful lives and replacement costs used in the study.

d. **Kipcon** determined the replacement costs of each component. These costs include both the removal of the existing component as well as the installation of a replacement component of similar quality.

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The Financial Analysis portion of the report is based upon the results of the Physical Analysis and includes the following:

a. **Kipcon** will prepare multiple projected 30-year funding plans. These include Full Funding, and Baseline Funding analysis as well as Existing Funding based on continuing to set aside the same amount in the future as is currently being set aside. All plans will include estimated inflationary increase in replacement costs of 2% and interest on the Reserve Funds of 1%. Different rates can be use if requested.

b. **Kipcon** will prepare a Threshold Funding plan. This will be based on an inflationary rate of 2% and an interest rate of 1%. It will also be based on maintaining the current annual contributions and increasing them yearly based on the rate of inflation. If this scenario results in a deficit in the 30-year projection period Kipcon will include recommendations based on the specific conditions of your community. It is recommended that the Association meet with Kipcon to finalize the proposed plans prior to proceeding.

In addition to the above outlined scope of work, your community has retained Kipcon to upgrade this study to a Kipcon Detailed Reserve Study as described below.

- A detailed description of each component as well as representative photographs of their condition with recommendations for necessary maintenance, upgrades or remedial work based on our visual observations.

- The separation of the applicable components into categories reflecting partial replacements which have taken place as well as wide varieties in the conditions.

- A review of the components with recommendations for alternative replacement components which would provide a reduction in life cycle maintenance and/or energy costs. This information would be included within the descriptions of the components if applicable. If the Association would like to have this information analyzed in greater detail to determine the estimated long-term savings, a proposal for this service can be provided on request.

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# How to Use This Study

A Reserve Study is an excellent budgeting and planning tool for your community. While the primary use of this study is to establish a recommendation of how much to set aside in your budget each year to provide adequate funding of common area replacements, it is also an excellent tool for planning upcoming common area replacements.

The first step in using this study is to review the information used as a basis for the results.

It is recommended that the following information be reviewed in the study. We have included a check box to confirm that each item has been reviewed.

1. In the Key Figures section on page **5** of the report confirm the following information
    a. □ Reserve Balance and the projected date which is the beginning of the community's budget year which typically is the same as the calendar year.
    b. □ Current annual contribution
2. In the Physical Analysis section which starts on page **12** of the study review the following for each component
    a. □ The list of components reflects the common elements of the community as described within the study being updated.
    b. □ The list of components included and their Estimated Remaining Useful Life to confirm that this reflects both components recently replaced as well as any components which are planned to be replaced. If any of the components have recently been replaced and it is not reflected in this list, please provide both the replacement year as well as the actual replacement cost.
    c. □ If there is a maintenance contract for any of the components which was not provided as this may have an impact on the Reserve Requirements and should be provided for our review.

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# Key Figures

**Level of Service Provided:** Kipcon Detailed Reserve Study

**Community Description**

| | |
|---|---|
| Number of Units: | 250 Residential units |
| Number of Buildings | 1 buildings, 15 stories |
| Age of Community: | Approximately 47 years |

**Financial Information**

| | |
|---|---|
| Beginning Reserve Balance: | $398,000 |
| Source of Beginning Reserve Balance: | Mr. Jeff Rath |
| Current Annual Contribution: | $645,000 |

**Inspection Information**

| | |
|---|---|
| Date of Inspection | July 8, 2021 |
| Client Contact | Mr. Frank Boyer and Mr. Jeff Rath |

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# Executive Summary

The Financial Analysis portion of this study is based on providing the results of multiple Funding Analyses as previously discussed in order to develop a specific funding plan for your community. The results can be seen in the following graphical presentation and explained in greater detail in the Financial Analysis portion of this report.

In each case we have taken the Physical Analysis results which can be found in the Physical Analysis portion of this report and projected the cash flow requirements for each component 30 years into the future. We have then added all the costs together to determine what annual contributions to the Reserve Fund would be needed to fund all component replacements when they are anticipated to occur. While in each line of the graph the replacement costs and timing stay the same, the annual contributions to fund them change as described below.

Summary of Annual Contributions and Minimum Fund Balance for Each Plan

| | **Per Year** | **Minimum Amount in Fund During 30 Year Projection Period** |
|---|---|---|
| **Current Funding** | $645,000 | -$4,425,060 |
| **Full Funding** | $966,785 | $1,160,663 |
| **Baseline Funding** | $770,634 | **$0** |
| **Threshold Funding** | First year $645,00/year increasing 5% per year for 8 years<br><br>$952,959 (2029-2050) | $847,267 |

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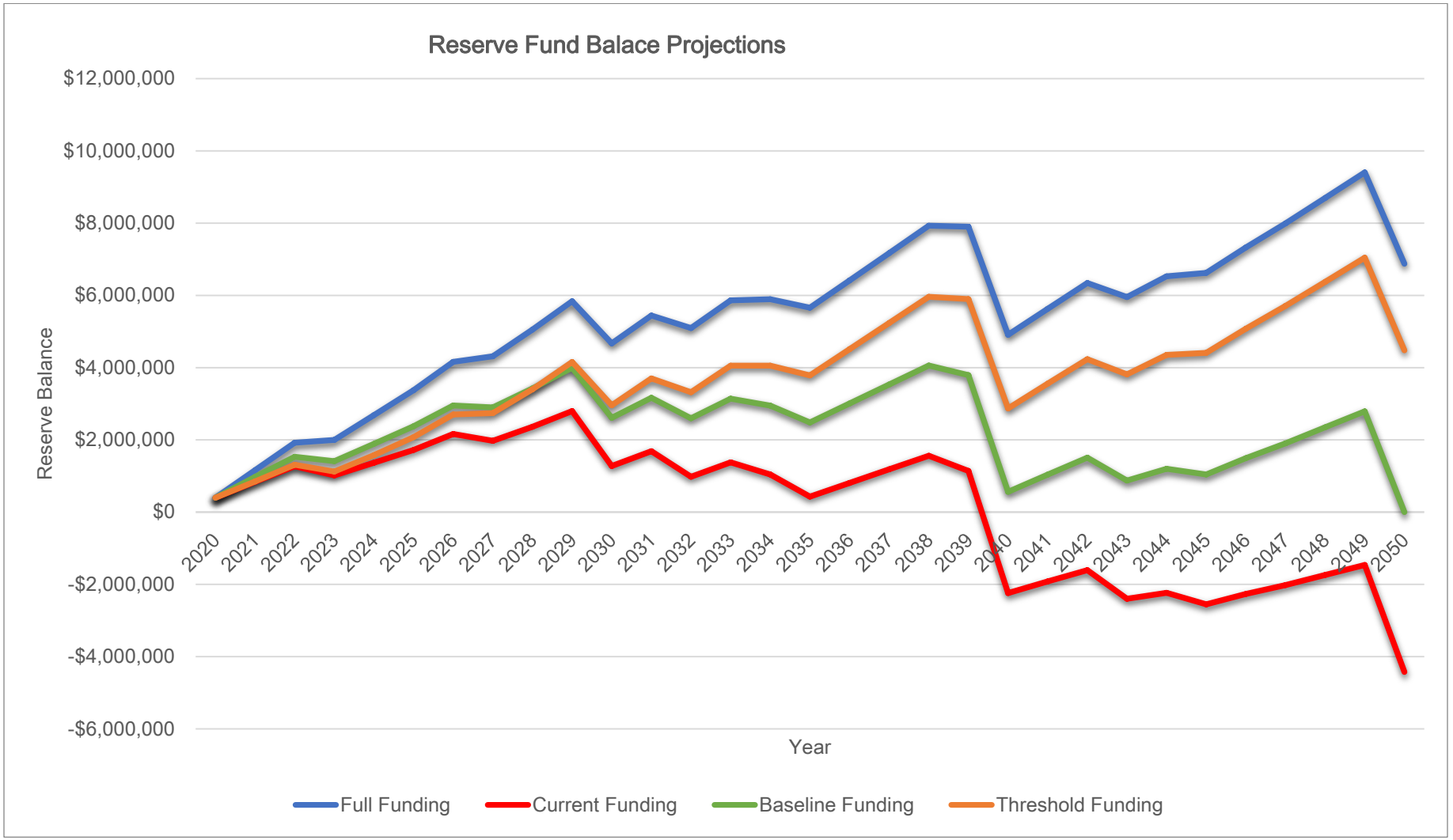
# Funding Plan Cash Flow Projections

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**Full Funding Analysis** is based on fully funding each component and adding the results. For example, a component with a $100,000 replacement cost and a 10-year life would be funded at $10,000/year ($100,000/10 years). This type of evaluation would be performed for each component and the yearly costs would be added together to determine the annual funding required. This methodology is also known as the Component Method. This funding goal is the most conservative.

Full Funding is also the basis for the Fund Status which is based on the relationship between the Fund Balance and the Fully Funded Balance which in this case would be $966,785. This Fund Status is a part of the national standards and is provided for informational purposes only and as discussed, is not indicative of adequate funding.

**Baseline Funding Analysis is** based on all the same information as Full Funding although the annual contributions are reduced so that the cash balance becomes $0 at some point along the cash flow projection. This is the funding goal with the most risk as changes in replacements costs and timing can result in a deficit occurring.

**Current Funding Analysis** is based on maintaining the current annual funding to determine if a deficit will occur at some time during the cash flow period. In the case of Valley Forge Towers South Condominium Association if the Association continues to fund at their current level, the reserve fund balance may reach a deficit by the year 2040.

The fourth funding scenario, entitled **Threshold Funding**, is based on keeping the Reserve Fund Balance above a specified threshold value at all times over the 30 year time frame.

*In all cases, Kipcon has incorporated a 2% inflationary rate which has been applied to the future replacement costs as well as an annual 1% interest received on the Reserve Fund Balance.*

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# Conclusions and Recommendations

This Reserve Study indicates the Association's reserves are not adequately funded. Should the Association continue funding at their current level, the reserve fund balance may reach a deficit by the year 2040. Should the Association choose to immediately jump into a Full funding plan, the recommended annual contribution would jump to $966,785 per year. As this is such a large increase for one year, Kipcon has shown a projected Threshold analysis which recommends increasing the annual contribution 5% per year for the next 8 years. This results in an ultimate annual contribution of $952,959 in 2029 and beyond, which is on par with the Full funding recommendation of $966,785 per year.

To maintain funding at an adequate level it is recommended that this report be updated every 3 years. This is based on a combination of factors including the buildings age, type of building and current funding level. It is also recommended that a maintenance schedule be proactively employed for each of the components to assure that full useful lives are attained.

This study is based on the replacement of each component with a similar component to what currently exists. To operate a building in the most efficient manner, it is important to consider life cycle costs in addition to replacement costs. This would include an evaluation of maintenance and energy costs along with replacement costs. If requested, Kipcon can upgrade this study to include these types of life cycle cost evaluations as well as in the development of a maintenance plan.

We can also provide design services when replacements become necessary.

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# The Financial Analysis

The Cash Flow Graph which is provided in the Summary portion of this report and Cash Flow Chart which is provided below contain the Projected Thirty (30) Year Cash Flow of the reserve requirements for the Valley Forge Towers South Condominium Association.

All Funding Plans are based on the Beginning Balance provided by Mr. Frank Boyer and the calculated expenditures.

Because expenditures vary from year to year, the Annual Contributions to the Reserve Fund change over the projection period. Since it is impractical for the Association to adjust the amount of its contribution to the reserve fund on a yearly basis, a cash flow analysis based on an average contribution amount is used for all Funding Plans. Although the averaging periods can be changed, we have used a 30-year average.

In the case of the Valley Forge Towers South Condominium Association, if averaging is not used, the Full Funding Annual Contribution amount varies for Years 2022 through 2050. Towards the end of the cash flow period after the components are being replaced and the replacement costs are being spread out over the full useful life of each component, it increases to $1,282,984 in the final year of the projection.

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# Funding Plan Projections

| | | CURRENT FUNDING ANALYSIS | | FULL FUNDING ANALYSIS | | | BASELINE FUNDING ANALYSIS | | THRESHOLD FUNDING ANALYSIS | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year Beginning | Annual Expenditure | Annual Contribution | Reserve Fund Balance | Required Annual Contribution | Adjusted Required Annual Contribution | Reserve Fund Balance | Annual Contribution | Reserve Fund Balance | Annual Contribution | Reserve Fund Balance |
| | Pooling Factor: | | | | | 100% | | 79.71% | | 93.52% |
| | Begin Balance: | | $398,000 | | | $398,000 | | $398,000 | | $398,000 |
| 2021 | $204,122 | $645,000 | $838,878 | $975,904 | $966,785 | $1,160,663 | $770,634 | $974,157 | $645,000 | $847,267 |
| 2022 | $226,627 | $645,000 | $1,269,823 | $1,022,394 | $966,785 | $1,919,829 | $770,634 | $1,533,345 | $677,250 | $1,310,869 |
| 2023 | $909,436 | $645,000 | $1,015,440 | $1,134,760 | $966,785 | $1,996,949 | $770,634 | $1,408,489 | $711,113 | $1,123,671 |
| 2024 | $306,818 | $645,000 | $1,367,158 | $862,144 | $966,785 | $2,683,485 | $770,634 | $1,891,028 | $746,668 | $1,579,156 |
| 2025 | $307,542 | $645,000 | $1,721,662 | $867,759 | $966,785 | $3,376,155 | $770,634 | $2,377,661 | $784,002 | $2,076,172 |
| 2026 | $225,367 | $645,000 | $2,162,707 | $884,083 | $966,785 | $4,158,748 | $770,634 | $2,952,157 | $823,202 | $2,700,746 |
| 2027 | $852,915 | $645,000 | $1,974,339 | $977,367 | $966,785 | $4,315,344 | $770,634 | $2,898,574 | $864,362 | $2,739,315 |
| 2028 | $280,419 | $645,000 | $2,362,309 | $873,896 | $966,785 | $5,051,727 | $770,634 | $3,422,677 | $907,580 | $3,400,140 |
| 2029 | $239,161 | $645,000 | $2,795,829 | $925,921 | $966,785 | $5,837,144 | $770,634 | $3,993,692 | $952,959 | $4,155,078 |
| 2030 | $2,178,799 | $645,000 | $1,274,650 | $1,062,512 | $966,785 | $4,671,381 | $770,634 | $2,611,382 | $952,959 | $2,958,530 |
| 2031 | $248,823 | $645,000 | $1,687,535 | $834,230 | $966,785 | $5,443,236 | $770,634 | $3,164,524 | $952,959 | $3,699,292 |
| 2032 | $1,364,990 | $645,000 | $977,220 | $917,361 | $966,785 | $5,095,481 | $770,634 | $2,595,870 | $952,959 | $3,320,134 |
| 2033 | $258,876 | $645,000 | $1,376,977 | $829,588 | $966,785 | $5,861,423 | $770,634 | $3,138,704 | $952,959 | $4,054,358 |
| 2034 | $991,707 | $645,000 | $1,040,572 | $898,513 | $966,785 | $5,894,866 | $770,634 | $2,946,807 | $952,959 | $4,055,766 |
| 2035 | $1,260,169 | $645,000 | $429,657 | $898,573 | $966,785 | $5,657,496 | $770,634 | $2,481,845 | $952,959 | $3,786,042 |
| 2036 | $274,721 | $645,000 | $807,935 | $839,276 | $966,785 | $6,413,055 | $770,634 | $3,007,535 | $952,959 | $4,508,922 |
| 2037 | $280,215 | $645,000 | $1,184,447 | $878,082 | $966,785 | $7,170,621 | $770,634 | $3,532,934 | $952,959 | $5,233,483 |
| 2038 | $285,820 | $645,000 | $1,559,063 | $930,543 | $966,785 | $7,930,101 | $770,634 | $4,057,925 | $952,959 | $5,959,628 |
| 2039 | $1,074,562 | $645,000 | $1,140,796 | $1,018,883 | $966,785 | $7,900,547 | $770,634 | $3,791,537 | $952,959 | $5,896,405 |
| 2040 | $4,006,284 | $645,000 | ($2,242,692) | $1,103,912 | $966,785 | $4,909,658 | $770,634 | $561,446 | $952,959 | $2,871,510 |
| 2041 | $303,314 | $645,000 | ($1,920,016) | $890,678 | $966,785 | $5,628,860 | $770,634 | $1,039,053 | $952,959 | $3,556,366 |
| 2042 | $316,959 | $645,000 | ($1,607,894) | $929,219 | $966,785 | $6,341,472 | $770,634 | $1,507,655 | $952,959 | $4,234,290 |
| 2043 | $1,413,214 | $645,000 | ($2,399,869) | $997,169 | $966,785 | $5,953,993 | $770,634 | $873,726 | $952,959 | $3,811,775 |
| 2044 | $455,916 | $645,000 | ($2,232,892) | $955,274 | $966,785 | $6,529,510 | $770,634 | $1,200,328 | $952,959 | $4,351,906 |
| 2045 | $939,523 | $645,000 | ($2,552,689) | $997,394 | $966,785 | $6,622,339 | $770,634 | $1,041,753 | $952,959 | $4,408,995 |
| 2046 | $334,883 | $645,000 | ($2,264,997) | $982,801 | $966,785 | $7,326,783 | $770,634 | $1,492,279 | $952,959 | $5,077,342 |
| 2047 | $379,242 | $645,000 | ($2,019,231) | $1,023,069 | $966,785 | $7,993,469 | $770,634 | $1,902,508 | $952,959 | $5,707,569 |
| 2048 | $348,413 | $645,000 | ($1,739,870) | $1,069,231 | $966,785 | $8,697,959 | $770,634 | $2,347,976 | $952,959 | $6,375,236 |
| 2049 | $355,381 | $645,000 | ($1,464,753) | $1,140,033 | $966,785 | $9,402,456 | $770,634 | $2,790,861 | $952,959 | $7,042,542 |
| 2050 | $3,561,495 | $645,000 | ($4,425,060) | $1,282,984 | $966,785 | $6,875,823 | $770,634 | $0 | $952,959 | $4,478,346 |
| TOTAL | | $19,350,000 | | $29,003,553 | $29,003,550 | | $23,119,016 | | $27,124,268 | |

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# Physical Analysis

The following tables represent the Physical Analysis portion of the Reserve Study. This analysis is based on the Component Inventory which incorporates a Condition Assessment of each specific component. The Condition Assessment is presented as the Estimated Remaining Life of each Component with the accompanying Notes. Also included is the estimated replacement cost for each Component. These costs are derived as outlined within this study.

**Component Schedule**
**Summary of Replacement Reserve Needs**
**Effective Date: August 1, 2021**

| CATEGORY | RESERVE REQUIREMENT PRESENT DOLLARS | BEGINNING BALANCE | BALANCE REQUIRING FUNDING | ANNUAL RESERVE FUNDING REQUIRED | FULL FUNDING BALANCE | PERCENT FUNDED |
|---|---|---|---|---|---|---|
| Waterproofing totals | $2,877,000 | $110,795 | $2,766,205 | $192,118 | $993,490 | The Percent Funded and Funding Goal are based on fully funding each component within the schedule. Please review the report for various funding strategies |
| Exterior totals | $2,192,400 | $112,078 | $2,080,322 | $175,099 | $1,005,000 | |
| Interior totals | $785,008 | $35,308 | $749,700 | $97,536 | $316,608 | |
| Electrical totals | $915,000 | $77,024 | $837,976 | $226,260 | $690,667 | |
| Mechanical totals | $1,659,896 | $62,794 | $1,597,101 | $284,892 | $563,074 | |
| **GRAND TOTALS** | **$8,429,304** | **$398,000** | **$8,031,304** | **$975,905** | **$3,568,838** | **11.15%** |

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# Waterproofing

| Component | Quantity | Unit Cost | Reserve Requirement Present Dollars | Beginning Balance | Estimated Useful Life | Estimated Remaining Useful Life | Annual Reserve Funding Required | Full Funding Balance | Notes |
|---|---|---|---|---|---|---|---|---|---|
| EPDM Roofing (Main Roof) | 400 SQ | $1,875.00 | $750,000 | $0 | 20 | 20 | $37,500 | $0 | 1 |
| Modified Bitumen Roofing (Lower Roof) | 85 SQ | $1,000.00 | $85,000 | $7,583 | 20 | 4 | $19,354 | $68,000 | 2 |
| Ballasted Roofing (Garages) | 375 SQ | $1,500.00 | $562,500 | $18,819 | 20 | 14 | $38,834 | $168,750 | 3 |
| Brick Repointing (50%) | 43,000 SF | $19.00 | $817,000 | $47,379 | 25 | 12 | $64,135 | $424,840 | 4 |
| Brick Repointing (Garages) (50%) | 2,500 SF | $13.00 | $32,500 | $1,885 | 25 | 12 | $2,551 | $16,900 | 5 |
| Exposed Aggregate Facade (50%) | 21,000 SF | $30.00 | $630,000 | $35,129 | 40 | 20 | $29,744 | $315,000 | 6 |
| **TOTALS** | | | **$2,877,000** | **$110,795** | | | **$192,118** | **$993,490** | |

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# Exterior

| Component | Quantity | Unit Cost | Reserve Requirement Present Dollars | Beginning Balance | Estimated Useful Life | Estimated Remaining Useful Life | Annual Reserve Funding Required | Full Funding Balance | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Balcony Contingency Fund | 270 EA | $5,000.00 | $1,350,000 | $75,277 | 20 | 10 | $127,472 | $675,000 | 7 |
| Balcony Railings | 5,500 LF | $120.00 | $660,000 | $36,802 | 30 | 15 | $41,547 | $330,000 | 8 |
| Rooftop Railing | 1 LS | $125,000.00 | $125,000 | $0 | 30 | 30 | $4,167 | $0 | 9 |
| Privacy Fencing (15th Floor Units) | 1 LS | $57,400.00 | $57,400 | $0 | 30 | 30 | $1,913 | $0 | 34 |
| Decks (15th Floor Units) | 1 LS | $0.00 | $0 | $0 | 50 | 50 | $0 | $0 | 34 |
| **TOTALS** | | | **$2,192,400** | **$112,078** | | | **$175,099** | **$1,005,000** | |

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# Interior

| Component | Quantity | Unit Cost | Reserve Requirement Present Dollars | Beginning Balance | Estimated Useful Life | Estimated Remaining Useful Life | Annual Reserve Funding Required | Full Funding Balance | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Carpeting | 4,250 SY | $70.17 | $298,243 | $13,858 | 12 | 7 | $40,626 | $124,268 | 10 |
| Porcelain Tile | 3,100 SF | $39.37 | $122,053 | $4,537 | 30 | 20 | $5,876 | $40,684 | 11 |
| Vinyl Tile | 1,100 SF | $9.94 | $10,929 | $305 | 20 | 15 | $708 | $2,732 | 12 |
| Tile Flooring | 1,800 SF | $13.21 | $23,783 | $530 | 25 | 20 | $1,163 | $4,757 | 13 |
| Common Area Furnishings | 1 LS | $50,000.00 | $50,000 | $2,788 | 10 | 5 | $9,442 | $25,000 | 14 |
| Elevator Cab Refurbishment | 3 EA | $10,000.00 | $30,000 | $1,673 | 10 | 5 | $5,665 | $15,000 | 15 |
| Wallpaper | 1 LS | $250,000.00 | $250,000 | $11,617 | 12 | 7 | $34,055 | $104,167 | 16 |
| **TOTALS** | | | **$785,008** | **$35,308** | | | **$97,536** | **$316,608** | |

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# Electrical

| Component | Quantity | Unit Cost | Reserve Requirement Present Dollars | Beginning Balance | Estimated Useful Life | Estimated Remaining Useful Life | Annual Reserve Funding Required | Full Funding Balance | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Interior Lighting | 1 LS | $85,000.00 | $85,000 | $4,740 | 20 | 10 | $8,026 | $42,500 | 17 |
| Exterior Lighting | 1 LS | $10,000.00 | $10,000 | $558 | 20 | 10 | $944 | $5,000 | 18 |
| Fire Safety Equipment | 1 LS | $110,000.00 | $110,000 | $6,134 | 20 | 10 | $10,387 | $55,000 | 19 |
| Security System | 1 LS | $25,000.00 | $25,000 | $1,301 | 15 | 8 | $2,962 | $11,667 | 20 |
| Intercom System | 1 LS | $15,000.00 | $15,000 | $781 | 15 | 8 | $1,777 | $7,000 | 21 |
| Breaker Closet Replacement Fund | 268 EA | $2,500.00 | $670,000 | $63,511 | 20 | 3 | $202,163 | $569,500 | 22 |
| **TOTALS** | | | **$915,000** | **$77,024** | | | **$226,260** | **$690,667** | |

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# Mechanical

| Component | Quantity | Unit Cost | Reserve Requirement Present Dollars | Beginning Balance | Estimated Useful Life | Estimated Remaining Useful Life | Annual Reserve Funding Required | Full Funding Balance | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Elevator (Passengers) | 2 EA | $306,990.43 | $613,981 | $22,824 | 30 | 20 | $29,558 | $204,660 | 23 |
| Elevator (Service) | 1 EA | $309,161.68 | $309,162 | $11,493 | 30 | 20 | $14,883 | $103,054 | 23 |
| Heat Pump (1st Floor) | 6 EA | $7,364.88 | $44,189 | $1,971 | 20 | 12 | $3,518 | $17,676 | 24 |
| Heat Pumps (Units) | 25 EA | $7,364.88 | $184,122 | $0 | 1 | 1 | $184,122 | $0 | 25 |
| Hot Water Heater | 25 EA | $800.00 | $20,000 | $0 | 1 | 1 | $20,000 | $0 | 26 |
| Trash Compactor | 1 EA | $22,505.73 | $22,506 | $2,309 | 25 | 2 | $10,098 | $20,705 | 27 |
| Portable A/C Units | 1 LS | $5,000.00 | $5,000 | $297 | 15 | 7 | $672 | $2,667 | 28 |
| Transformers | 1 LS | $300,000.00 | $300,000 | $16,728 | 50 | 25 | $11,331 | $150,000 | 29 |
| Generator | 1 LS | $96,936.18 | $96,936 | $3,603 | 30 | 20 | $4,667 | $32,312 | 30 |
| Entry Air Curtain | 1 EA | $4,000.00 | $4,000 | $223 | 20 | 10 | $378 | $2,000 | 31 |
| Sprinkler System | 1 LS | $20,000.00 | $20,000 | $1,115 | 20 | 10 | $1,888 | $10,000 | 32 |
| Rooftop Unit | 1 EA | $40,000.00 | $40,000 | $2,230 | 20 | 10 | $3,777 | $20,000 | 33 |
| **TOTALS** | | | **$1,659,896** | **$62,794** | | | **$284,892** | **$563,074** | |

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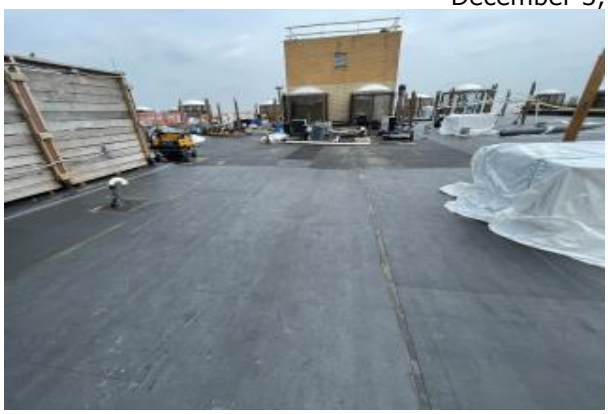
1. The unit cost shown represents the removal and replacement of the ethylene propylene diene monomer (EPDM) roofing membrane found on the main portion of the roof and the smaller section found on the elevator tower. The roofing project is an ongoing project and was being removed and replaced at the time of our site visit. The cost shown was provided by Mr. Jeff Rath.



2. Modified bitumen roofing is installed at the lower level roof of the building. The unit cost shown represents the removal and replacement of the roofing. It also includes 6% for engineering and 15% for any additional work that is typically seen in these types of projects. The roofing was observed to be in poor condition and looks to be nearing the end of its useful life. The flashing should be inspected annually to ensure it is properly attached.

3. The unit cost shown represents the removal and replacement of the ballasted with stone EPDM roofing. At the time of our site visit, Kipcon was not able to walk these roofs ourselves, but no issues were reported regarding the roofing by the Association. According to the Association, the garage roofs were last replaced about 6 years ago.

4. The unit cost shown represents the cost of repointing the brick facades found throughout the exterior of the building. Included in this quantity is the exterior facade of the main building and the brick found on the elevator tower. No obvious signs of mortar deterioration or brick disrepair were observed during our site visit. No issues regarding the brick facade were reported by the Association. A cursory inspection of the brick should be performed annually to determine if any areas of concern are evident.

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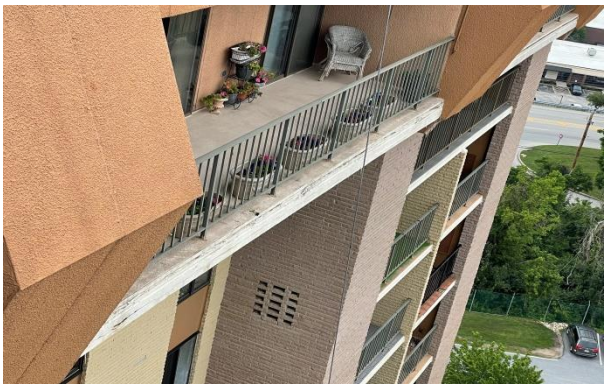
5. The unit cost shown represents the cost of repointing the brick facades found throughout the exterior of the three garage buildings. No obvious signs of mortar deterioration or brick disrepair were observed during our site visit. No issues regarding the brick facade were reported by the Association. A cursory inspection of the brick should be performed annually to determine if any areas of concern are evident.

6. The unit cost shown represents the removal and replacement of the exposed aggregate facade found along the exterior of the building. According to the Association, the community has been suffering with some issues regarding this component. Aggregate has begun to break and fall off the facade. This poses both an aesthetic and safety problem, as the aggregate that falls off can possibly cause damage falling from such great heights. It is recommended that a more detailed structural review be performed regarding the exterior facade.

7. The cost shown represents a contingency amount for the balcony replacement work. The cost shown is based on a quote received by the Association from the Harmon Group. According to the Association, there are plans to repair and replace various concrete balconies. Our observations confirmed that the concrete balconies were in poor condition, suffering from cracking and spalling in some areas. This component should be monitored closely and addressed soon, as loose concrete can pose a major safety concern. It is recommended that a more detailed inspection of all the balconies is performed so a replacement schedule can be determined. See the supplementary section at the end of the report for more information.



8. The unit cost shown represents the removal and replacement of the aluminum railing found on the concrete balconies. It was observed in the units visited (14X & 14Q) that the railing may have been a bit loose which can pose a safety concern. No signs of deterioration to the aluminum railing were observed among the balcony railings observed. The estimated remaining useful life shown represents removing and replacing the railings on an as-needed basis. The railings should be inspected annually to determine if any corrosion is evident. The estimated remaining useful life shown represents replacing the railing on an as needed basis.

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9. The unit cost shown represents the removal and replacement of the aluminum railing found at unit owner terraces at the roof of the building. At the time of our site visit, this was an ongoing project where the roof and unit owned terraces are being replaced. The quantity shown was taken from the drawings provided by the Association. The cost shown was provided by Mr. Jeff Rath. The railings should be inspected annually to determine if any corrosion is evident.

10. The unit cost shown represents the removal and replacement of the carpeting found throughout the building. The carpeting can mainly be found on floors 2nd through 15th, as well as some sections on the main 1st floor. According to the Association, the carpeting was last replaced 5 years ago. The carpeting was observed to be in fair condition, with no major or consistent signs of deterioration observed.

11. The unit cost shown represents the removal and replacement of the porcelain tile found in the 1st Floor of the building. The tile flooring was observed to be in good condition overall with no signs of disrepair or deterioration. The tile should be cleaned regularly.

12. The unit cost shown represents the removal and replacement of the vinyl tile found near the stairwell entrances on the 1st Floor of the building as well as at the trash rooms on each floor. The tile flooring was observed to be in fair condition, with minor signs of scratches and scuffing.

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13. The unit cost shown represents the removal and replacement of the tile flooring found on the hallways of the 1st Floor of the building. The flooring was observed to be in good condition overall with no signs of deterioration or disrepair to the tile flooring.

14. The lump sum cost shown represents the removal and replacement of the interior furnishings found throughout the building. This component includes the furnishings found in the main lobby area, office areas, and 1st floor hallways. The furnishings were observed to be in fair to good condition with no signs of deterioration observed. The estimated remaining useful life shown represents replacing the furnishings on an as-needed basis.

15. The unit cost shown represents the cost for the interior refurbishment of the elevator cabs found within the building. Included in this component are the two passenger elevators, as well as the service elevator. This component includes the flooring, walls, and lighting. The estimated remaining useful life shown is based on refurbishment being done on an as needed basis.

16. Wallpaper is installed throughout the common hallways of the building. The lump sum cost shown represents the removal and replacement of the wallpaper. The wallpaper was observed to be in fair to good condition overall.

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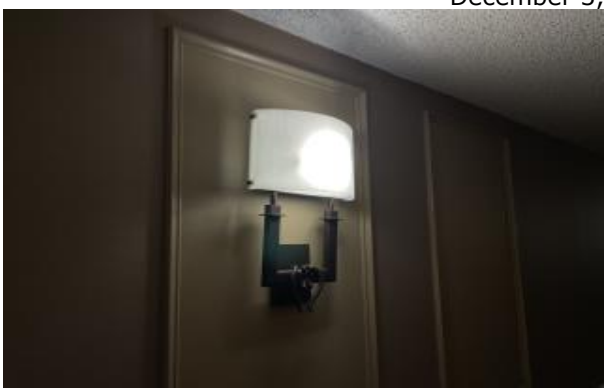
17. The lump sum cost shown represents the removal and replacement of the interior lighting found within the building. Included in this component are the sconce lighting, recessed lighting, chandelier lighting, ceiling mounted lighting, and fluorescent tube lighting. The lighting fixtures were observed to be in fair condition overall. No problems were reported at time of observations. The estimated remaining useful life shown represents replacing the light fixtures on an as needed basis.



18. The lump sum cost shown represents the removal and replacement of the exterior lighting found throughout the Building and garages. Included in this component are the wall mounted lighting found on the garage bays, recessed lighting found near the three entrances to the main building and ceiling mounted lighting found on the shade structures near the garage bays. The lighting fixtures were observed to be in fair and operable condition. The lighting should be checked periodically to determine which bulbs have burned out.

19. The lump sum cost shown represents the removal and replacement of the fire safety equipment found throughout the building. Included in this component are the fire extinguishers, pull stations, detectors, horn/strobes, and the fire panel systems found on each floor. According to the Association, the fire panels on each were replaced about two years ago. The components were observed to be in fair and operable condition. No problems reported at the time of observations. The estimated remaining useful life shown is based on replacements being done on an as needed basis. The panel and system should be tested annually to ensure they are working properly.


20. The lump sum cost shown represents the removal and replacement of the security camera system that services the building. According to the Association, there are 16 cameras in the security system. The system and cameras were observed to be in fair and operable condition with no signs of disrepair.

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21. The lump sum cost shown represents the removal and replacement of the intercom system that services the building. The master station was observed to be in fair and operable condition. The lump sum cost shown only includes the master station on the main floor of the building.


22. The unit cost shown represents the removal and replacement of the breakers found in the breaker closets on each floor of the building. According to the Association, there are 253 (one per unit) 100 AMP breakers, as well as one 60 AMP breaker per each floor hallway. It was brought to our attention that breakers would require replacement within the next few years. According to the Association, each breaker costs +/- $1900. An additional 30% has been added for demolition and installation of the new breakers. The breakers should be exercised annually and the cabinets should be kept clear of any debris.

23. The unit costs shown represent the removal and replacement of the 2 passenger and 1 service elevator found within the building. The elevator mechanical equipment, as well as the cabins themselves were observed to be in fair and operable condition with no obvious signs of deterioration or disrepair observed. No issues regarding the elevator or elevator equipment were reported by the Association. The emergency phone system should be tested quarterly. The elevators should be inspected comprehensively each year by the elevator maintenance contractor.

24. The unit cost shown represents the removal and replacement of the heat pumps (indoor & outdoor units) that serves the 1st Floor, including hallways, manager's office, and lobby only. No problems were reported at the time of observations. The Association may choose to replace the existing heat pumps with higher efficient equipment, which will help to save on long term energy costs. The air filters should be inspected monthly to determine if they require replacement. Any condensate drain lines should be inspected regularly to ensure no leaks or clogs are evident. The motors should be inspected twice annually to ensure proper operation.

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25. The unit cost shown represents the removal and replacement of the heat pumps found in the individual home owner units. According to the Association, there are a total of 253 heat pumps found throughout the building. Also according to the Association, about 25 heat pumps are replaced per year. The Association may choose to replace the existing heat pumps with higher efficient equipment, which will help to save on long term energy costs. The air filters should be inspected monthly to determine if they require replacement. Any condensate drain lines should be inspected regularly to ensure no leaks or clogs are evident. The motors should be inspected twice annually to ensure proper operation.

26. The unit cost shown represents the removal and replacement of the water heaters found throughout the building. According to the Association, there are a total of 283 50-gallon water heaters which follow a 10 year cycle of replacement. Also according to the Association, about 25 water heater units are replaced per year. The water heaters observed at the time of our site visit were observed to be in fair condition. The Association may choose to replace the water heaters with more efficient models which may potentially lead to lower energy costs. Water heaters should be inspected quarterly to ensure no leaks are evident, valves are operable, and hot water temperature is acceptable.


27. The unit cost shown represents the removal and replacement of the trash compactor found in the lower level of the building. According to the Association and through our own visual observations, it was observed the trash compactor was in poor condition. The fluid level and hydraulic hoses should be inspected regularly to ensure no leaks are present. The hydraulic oil should be drained and replaced annually and the filters should also be replaced annually.

28. The lump sum cost shown represents a contingency fund for the removal and replacement of the portable A/C units founds within the building. At the time of our site visit, several of these units were put away in a storage closet on the 2nd Floor of the building. The estimated remaining useful life shown is based on repairs and replacements being done on an as needed basis.

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29. The unit costs shown represent the removal and replacement of the transformers found in the lower level of the building. The transformers were observed to be in fair and operable condition. No issues regarding this component were reported by the Association. The estimated remaining useful life shown is based on repairs and replacements being done on an as needed basis.

30. The unit cost shown represents the removal and replacement of the diesel generator found around the exterior of the building. According to the Association, the component is a 50HP generator which was last replaced approximately 10 years ago. The generator was observed to be in fair and operable condition with no signs of disrepair observed or reported by the Association. The generator should be exercised at least monthly. The fuel/oil levels and battery charge should also be checked monthly. All filters should be replaced annually as well as coolant levels checked.

31. The unit cost shown represents the removal and replacement of the entry air curtain found near the main entrance of the building. The air curtain was observed to be in fair and operable condition with no signs of disrepair. No issues were reported regarding this component by the Association.

32. The lump sum cost shown is a contingency fund for the removal and replacement of the major components of the sprinkler system that serves the 1st floor only. The estimated remaining useful life shown is based on repairs and replacements being done on an as needed basis.

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33. The cost shown represents the removal and replacement of the rooftop mechanical unit and includes a percentage for mobilization. The rooftop unit was observed to be in fair and operable condition with no signs of disrepair. No issues regarding this component were reported by the Association. The Association may choose to replace the equipment with a more efficient unit in order to potentially lower the energy costs. The air filters should be inspected monthly to determine if they require replacement. Any condensate drain lines should be inspected regularly to ensure no leaks or clogs are evident. The motors should be inspected twice annually to ensure proper operation.

34. According to Mr. Jeff Rath, new decking and privacy fencing is being installed at the 15th floor units as part of the overall roofing replacement project. The decking has been excluded as part of this reserve study as it has an extended useful life. The cost shown for the privacy fencing was provided by Mr. Jeff Rath.

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# EXPENDITURES BY YEAR

| | | |
|---|---|---|
| **2021** | Heat Pumps (Units) | $184,122 |
| | Hot Water Heater | $20,000 |
| | **TOTALS** | **$204,122** |
| **2022** | Heat Pumps (Units) | $184,122 |
| | Hot Water Heater | $20,000 |
| | Trash Compactor | $22,506 |
| | **TOTALS** | **$226,628** |
| **2023** | Breaker Closet Replacement Fund | $697,068 |
| | Heat Pumps (Units) | $191,561 |
| | Hot Water Heater | $20,808 |
| | **TOTALS** | **$909,437** |
| **2024** | Modified Bitumen Roofing (Lower Roof) | $90,203 |
| | Heat Pumps (Units) | $195,392 |
| | Hot Water Heater | $21,224 |
| | **TOTALS** | **$306,819** |
| **2025** | Common Area Furnishings | $54,122 |
| | Elevator Cab Refurbishment | $32,473 |
| | Heat Pumps (Units) | $199,300 |
| | Hot Water Heater | $21,649 |
| | **TOTALS** | **$307,543** |
| **2026** | Heat Pumps (Units) | $203,286 |
| | Hot Water Heater | $22,082 |
| | **TOTALS** | **$225,367** |
| **2027** | Carpeting | $335,870 |
| | Wallpaper | $281,541 |
| | Heat Pumps (Units) | $207,351 |
| | Hot Water Heater | $22,523 |
| | Portable A/C Units | $5,631 |
| | **TOTALS** | **$852,916** |
| **2028** | Security System | $28,717 |
| | Intercom System | $17,230 |
| | Heat Pumps (Units) | $211,498 |
| | Hot Water Heater | $22,974 |
| | **TOTALS** | **$280,419** |
| **2029** | Heat Pumps (Units) | $215,728 |
| | Hot Water Heater | $23,433 |
| | **TOTALS** | **$239,161** |
| **2030** | Balcony Contingency Fund | $1,613,375 |
| | Interior Lighting | $101,583 |
| | Exterior Lighting | $11,951 |
| | Fire Safety Equipment | $131,460 |
| | Heat Pumps (Units) | $220,043 |
| | Hot Water Heater | $23,902 |
| | Entry Air Curtain | $4,780 |
| | Sprinkler System | $23,902 |
| | Rooftop Unit | $47,804 |
| | **TOTALS** | **$2,178,800** |
| **2031** | Heat Pumps (Units) | $224,444 |
| | Hot Water Heater | $24,380 |
| | **TOTALS** | **$248,824** |
| **2032** | Brick Repointing (50%) | $1,015,837 |
| | Brick Repointing (Garages) (50%) | $40,410 |
| | Heat Pump (1st Floor) | $54,944 |
| | Heat Pumps (Units) | $228,933 |
| | Hot Water Heater | $24,867 |
| | **TOTALS** | **$1,364,990** |
| **2033** | Heat Pumps (Units) | $233,511 |
| | Hot Water Heater | $25,365 |
| | **TOTALS** | **$258,876** |
| **2034** | Ballasted Roofing (Garages) | $727,654 |
| | Heat Pumps (Units) | $238,181 |
| | Hot Water Heater | $25,872 |
| | **TOTALS** | **$991,707** |
| **2035** | Balcony Railings | $870,856 |
| | Vinyl Tile | $14,421 |
| | Common Area Furnishings | $65,974 |
| | Elevator Cab Refurbishment | $39,584 |
| | Heat Pumps (Units) | $242,945 |
| | Hot Water Heater | $26,390 |
| | **TOTALS** | **$1,260,170** |
| **2036** | Heat Pumps (Units) | $247,804 |
| | Hot Water Heater | $26,917 |
| | **TOTALS** | **$274,721** |
| **2037** | Heat Pumps (Units) | $252,760 |
| | Hot Water Heater | $27,456 |
| | **TOTALS** | **$280,216** |
| **2038** | Heat Pumps (Units) | $257,815 |
| | Hot Water Heater | $28,005 |
| | **TOTALS** | **$285,820** |
| **2039** | Carpeting | $425,964 |
| | Wallpaper | $357,062 |
| | Heat Pumps (Units) | $262,972 |
| | Hot Water Heater | $28,565 |
| | **TOTALS** | **$1,074,562** |
| **2040** | EPDM Roofing (Main Roof) | $1,092,608 |
| | Exposed Aggregate Facade (50%) | $917,791 |
| | Porcelain Tile | $177,808 |
| | Tile Flooring | $34,647 |
| | Elevator (Passengers) | $894,454 |
| | Elevator (Service) | $450,390 |
| | Heat Pumps (Units) | $268,231 |
| | Hot Water Heater | $29,136 |
| | Generator | $141,218 |
| | **TOTALS** | **$4,006,285** |
| **2041** | Heat Pumps (Units) | $273,596 |
| | Hot Water Heater | $29,719 |
| | **TOTALS** | **$303,315** |
| **2042** | Heat Pumps (Units) | $279,068 |
| | Hot Water Heater | $30,313 |
| | Portable A/C Units | $7,578 |
| | **TOTALS** | **$316,959** |
| **2043** | Security System | $38,649 |
| | Intercom System | $23,190 |
| | Breaker Closet Replacement Fund | $1,035,806 |
| | Heat Pumps (Units) | $284,649 |
| | Hot Water Heater | $30,920 |
| | **TOTALS** | **$1,413,214** |
| **2044** | Modified Bitumen Roofing (Lower Roof) | $134,036 |
| | Heat Pumps (Units) | $290,342 |
| | Hot Water Heater | $31,538 |
| | **TOTALS** | **$455,916** |
| **2045** | Common Area Furnishings | $80,422 |
| | Elevator Cab Refurbishment | $48,253 |
| | Heat Pumps (Units) | $296,149 |
| | Hot Water Heater | $32,169 |
| | Transformers | $482,531 |
| | **TOTALS** | **$939,524** |
| **2046** | Heat Pumps (Units) | $302,072 |
| | Hot Water Heater | $32,812 |
| | **TOTALS** | **$334,884** |
| **2047** | Heat Pumps (Units) | $308,113 |
| | Hot Water Heater | $33,468 |
| **2048** | Heat Pumps (Units) | $314,275 |
| | Hot Water Heater | $34,138 |

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| | | |
|---|---|---|
| | Trash Compactor | $37,661 |
| | **TOTALS** | **$379,243** |
| 2049 | Heat Pumps (Units) | $320,561 |
| | Hot Water Heater | $34,820 |
| | **TOTALS** | **$355,381** |

| | | |
|---|---|---|
| | **TOTALS** | **$348,413** |
| 2050 | Balcony Contingency Fund | $2,397,390 |
| | Rooftop Railing | $221,981 |
| | Privacy Fencing (15th Floor Units) | $101,933 |
| | Interior Lighting | $150,947 |
| | Exterior Lighting | $17,758 |
| | Fire Safety Equipment | $195,343 |
| | Heat Pumps (Units) | $326,972 |
| | Hot Water Heater | $35,517 |
| | Entry Air Curtain | $7,103 |
| | Sprinkler System | $35,517 |
| | Rooftop Unit | $71,034 |
| | **TOTALS** | **$3,561,496** |

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# Supplementary Information

Please note that no structural or invasive engineering evaluation was performed as part of this Reserve Study and that the structural system of the building is not included as a component within the Reserve Study. Kipcon's observations as part of this project were cursory in nature as a Reserve Study is meant to be a budgetary tool only. It is recommended that a more detailed evaluation of the common element structural components be reviewed periodically. Although Kipcon has not been retained to perform an engineering evaluation of the building, the Association notified us of current problems at the balconies. The Association also provided Kipcon with inspection reports and a repair quote proposal by the Harmon Group and Watts Restoration Company, Inc.

As part of our evaluation, the Building's Maintenance personal provided us access to units 14Q & 14X to observe the current problems. We have noted and confirmed at our site visit the existence problems at the balconies' slabs/planks and cantilever beams. Efflorescence was also observed. Efflorescence is a chalky white salt residue that occurs as moisture migrates through the surface of a material in which cement is a part of the composition. While efflorescence itself is not dangerous it is indicative of moisture which can cause damage to the building structure. These conditions are shown in the photos below. It is recommended that a more detailed evaluation of these conditions be performed.

It should also be recognized that Preventive Maintenance should be included within the budgetary planning as well as Corrective Maintenance that is observed to be required during the periodic inspections.

Kipcon takes no responsibility for the evaluation of any part of this community as the Reserve Study is for budgetary purposes only.

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# Disclosures

In accordance with the *National Reserve Study Standards* of the Community Associations Institute, the following disclosures are provided regarding the preparation of this Reserve Study.

**General.** Kipcon Incorporated is not aware of any involvement with the Valley Forge Towers South Condominium Association which could result in any actual or perceived conflicts of interest which would influence the preparation of this study.

**Physical Analysis.** The on-site observations which were performed in the preparation of this study were cursory in nature and only included the accessible common and limited common elements. In addition, no field measurements were taken to confirm or provide quantities unless specifically outlined within this report.

**Financial Analysis.** Unless specifically noted within this report, Kipcon Incorporated has not utilized any assumptions in regard to interest, inflation, taxes, or any other outside economic factors.

**Personnel Credentials.** This study has been prepared under the direction of Mitchell H. Frumkin, P.E., R.S. Comprehensive curriculum vitae can be provided on request.

**Completeness.** Kipcon Incorporated is not aware of any material issues, which if not disclosed, would cause a distortion of the Association's situation.

**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 Kipcon Incorporated.

**Replacement Costs.** The replacement costs used within this study are based on commonly used cost estimated guides. They are budgetary in nature and Kipcon does not accept responsibility for replacement costs which do not match with actual replacement costs when the work is performed.

**Scope.** This Reserve Study will be a reflection of information provided to Kipcon Incorporated and assembled for the Association’s use, not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.

**Reserve Balance.** The actual or projected total presented in this Reserve Study is based upon the information provided and was not audited.

**Reserve Projects.** Information provided to Kipcon Incorporated about the reserve project will be considered reliable. Any on-site inspection should not be considered a project audit or quality inspection.

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# Glossary of Abbreviations

| Abbreviation | Definition | Abbreviation | Definition |
|---|---|---|---|
| Avg. | Average | Lg. | Long, Length |
| B.F. | Board Feet | L.S. | Lump Sum |
| Bit/Bitum. | Bituminous | Maint. | Maintenance |
| Bldg. | Building | Mat., Mat'l. | Material |
| Brk. | Brick | Max. | Maximum |
| Calc. | Calculated | MBF | Thousand Board Feet |
| C.C.F. | Hundred Cubic Feet | M.C.F. | Thousand Cubic Feet |
| C.F. | Cubic Feet | Min. | Minimum |
| C.L.F. | Hundred Lineal Feet | Misc. | Miscellaneous |
| Col. | Column | M.L.F. | Thousand Lineal Feet |
| Conc. | Concrete | M.S.F | Thousand Square Feet |
| Cont. | Continuous, Continued | M.S.Y. | Thousand Square Yards |
| C.S.F. | Hundred Square Feet | NA | Not Available/Applicable |
| Cu. Ft. | Cubic Feet | No. | Number |
| C.Y. | Cubic Yard | O.C. | On Center |
| DHW | Domestic Hot Water | P.E. | Professional Engineer |
| Diam. | Diameter | Ply. | Plywood |
| Ea. | Each | Pr. | Pair |
| Est. | Estimated | PVC | Polyvinyl Chloride |
| Ext. | Exterior | Pvmt. | Pavement |
| Fig. | Figure | Quan., Qty. | Quantity |
| Fin. | Finished | R.C.P. | Reinforced Concrete Pipe |
| Fixt. | Fixture | Reinf. | Reinforced |
| Flr. | Floor | Req'd | Required |
| FRP | Fiberglass Reinforced Plastic | Sch., Sched. | Schedule |
| Ft. | Foot, Feet | S.F. | Square Feet |
| Galv. | Galvanized | Sq. | Square |
| Ht. | Height | Std. | Standard |
| Htrs. | Heaters | S.Y. | Square Yards |
| HVAC | Heating, Ventilation and AC | Sys. | System |
| HW | Hot Water | T & G | Tongue and Groove |
| In. | Inch | Th., Thk. | Thick |
| Int. | Interior | Tot. | Total |
| Inst. | Installation | Unfin. | Unfinished |
| Insul. | Insulation | V.C.T. | Vinyl Composition Tile |
| lb. | Pound | Vent. | Ventilator |
| L.F. | Lineal Feet | Yd. | Yard |

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