

**BUILDING EVALUATION AND  
RESERVE FUND STUDY**

**MARINER'S VILLAGE  
SMITH MOUNTAIN LAKE  
HUDDLESTON, VA**

*Prepared for:*

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**DATE**

**April 15, 2006**

Project Number: 05-063

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## 1.0 INTRODUCTION

Mariner's Village, through its Treasurer, Mr. Skip Lowman, Jr., authorized Criterium – Moring Engineers to conduct a Building Evaluation and Reserve Fund Study for Mariner's Village, located at Route 626, Huddleston, Virginia. Studies of this nature are important to ensure that a community has sufficient funds for long-term, periodic capital expenditure requirements. Anticipating large expenditures over an extended period of time through a structured analysis and scheduling process assists the Association in meeting financial requirements without increasing the service fees above permitted maximums, borrowing the funds, or levying special financial assessments to the owners.

Typically, a community association has two broad cash requirements: the general operating reserves and the capital repair and replacement reserves. In this report, we will focus on those items falling under the capital repair and replacement reserve criteria. We have projected a capital repair and replacement reserve for twenty (20) years. The first ten years are the most reliable. Such a study should be updated every three to five years.

This report is structured to analyze components of the community for which the Association is responsible and to assess a useful expected life and useful remaining life to those components. The anticipated scheduled repair or replacement of the component and the anticipated expense for the activity are then analyzed in conjunction with the current capital reserves funding program for the community. Funding program recommendations are made with the objective of limiting substantial cash excesses while minimizing financial burdens that can result from significant cash inadequacies.

This report is intended to be used as a tool to determine reserve fund allocation requirements for the community, to manage future Association obligations, and to inform the community of future financial needs in general. The report that follows has been prepared from the perspective of what an owner of this property would benefit from knowing. Some items, beyond those of immediate concern, may be discussed. Therefore, the report should be read in its entirety in order to fully understand all of the information that has been obtained.

## 2.0 EXECUTIVE SUMMARY

This is a 72 unit, six building condominium located between Route 626 and a cove of Smith Mountain Lake. The parking area, buildings, and green space occupy 7.728 Acres.

The building and grounds are, generally, in good condition. Based on our evaluation, the current level of funding of the reserve for this project is not adequate. A more detailed analysis of the reserve fund has been provided in Appendix A.

Based on our observations, there are immediate material deficiencies. Those items are as follows:

- Deficiencies in the electrical system
- Moisture problems around the lower level units
- Moisture problems around the central lower storage units
- Weathered wood trim
- Exposed nail holes in building number 6
- Parking lot cracks
- Tripping hazard at entrance to one basement unit

There are, of course, other capital expenditures to be expected over the next ten to twenty years. Those items that will require attention are discussed later in this report. For your convenience, we have prepared the following summary of the condition of the major systems of the property.

PROPERTY SUMMARY			
SYSTEM	CONDITION	ACTIVITY REQUIRED	ANTICIPATED YEAR OF ACTIVITY
<b>SITE</b>			
Pedestrian walkways	G	Seal coat timbers	2006
Drives and parking	G	Repair & seal coat	2005, 2006, & following
Exterior electrical deficiencies	F	Repair	2005
Stepped rear sidewalk	F-G	Replace	2006
Re-grade around 5 buildings	F	Grade	2006
<b>BUILDING EXTERIOR</b>			
Deck wood	G	Seal coat	2005, every 2 years
Building 1/ Wood decking	F-G	Replace	2007
Roofing	G	Replace	2020-2025
Gutters and downspouts	G	Repair/maintain	2005, every 2 years
Holes - Building 6 Siding	F-G	Seal holes	2005
Painting	G-F	Repaint	2005, 2008, & following
Dryer Vents	G	Replace	2015
Pressure Wash Soffits	G	Wash	2005, every year

**Table 2.1: Summary**

### **3.0 PURPOSE & SCOPE**

#### **3.1 Purpose**

The purpose of this study is to perform a reserve fund analysis and to determine a capital needs plan. It is intended to be used as a tool for the Mariner's Village Condominium Owners' Association in determining the allocation requirements into the reserve fund in order to meet future anticipated capital expenditures for the community.

This report forecasts obligations for the community twenty years into the future. It should be noted that events might occur that could have an effect on the underlying component or system useful life assumptions used in this study. Likewise, inevitable market fluctuations can have an impact on component or system replacement and repair costs. Therefore, a study such as this should be updated from time to time, usually on a three to five-year cycle, in order to reflect the most accurate needs and obligations of the community.

#### **3.2 Scope**

This study has been performed according to the scope as generally defined by Mr. Skip Lowman and Criterium –Moring Engineers. The findings and recommendations are based on interviews with the community's management personnel and residents; a review of available documents; and an investigation of the buildings and site. The investigation involved, in particular, the foundation and/or slab-on-grade (to the extent visible), the roof, the exterior walls, the steel and wood framing (when visible), paved areas, utilities (to the extent visible), and common amenities.

We have also inspected the interior of 2 units. While this study is focused only on the components for which the association is responsible, by reviewing a sampling of interiors, we are able to gather information that might be relevant to our evaluation of the common area elements.

The report contains the following:

- A description of the overall condition of building components and systems that are the responsibility of the Association, and conditions that may limit the expected useful life of the buildings and their components.
- Information about significant deficiencies, deferred maintenance items, and material code violations based on a visual survey of the building and grounds, research of documents, and conversations with people who have knowledge about the community.
- A reserve fund analysis including a component inventory, anticipated remaining component useful life, anticipated component repair or replacement costs, and forecasted fund levels as a result of those anticipated costs.

The statements in this report are opinions about the present condition of the subject community. They are based on visual evidence available during a diligent investigation of all reasonably accessible areas falling under the responsibility of the Association. We did not remove any surface

materials, perform any destructive testing, or move any furnishings. This study is not an exhaustive technical evaluation. Such an evaluation would entail a significantly larger scope than this effort. For additional limitations, see Section 11.0.

### 3.3 Sources of Information

Onsite inspections of the property occurred on the following dates:

- June 1, 2005
- June 23, 2005

The following people were interviewed during our study:

- Skip Lowman, Jr., Treasurer
- Ernie Hoch, Trinity Property Services Inc.
- Jeff Burdett, M & J Developers
- Donald Jackson, resident
- Female resident, unit 9
- H. Julius Hackett, P. E., Southside Electric Cooperative

The following documents were made available to us and reviewed:

- General building construction documents

We based our cost estimates on some or all of the following:

- R.S. Means
- Our data files on similar projects
- Local contractors

### 3.4 Standards of Reference

For your reference, the following definitions may be helpful:

*Excellent:* Component or system is in "as new" condition, requiring no rehabilitation and should perform in accordance with expected performance.

*Good:* Component or system is sound and performing its function, although it may show signs of normal wear and tear. Some minor rehabilitation work may be required.

*Fair:* Component or system falls into one or more of the following categories: a) Evidence of previous repairs not in compliance with commonly accepted practice, b) Workmanship not in compliance with commonly accepted standards, c) Component or system is obsolete, d) Component or system approaching end of expected performance. Repair or replacement is required to prevent further deterioration or to prolong expected life.

*Poor:* Component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its expected performance, excessive deferred maintenance, or state of disrepair. Present condition could contribute to or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.

*Adequate:* A component or system is of a capacity that is defined as enough for what is required, sufficient, suitable, and/or conforms to standard construction practices.

All ratings are determined by comparison to other buildings of similar age and construction type. Further, some details of workmanship and materials will be examined more closely in higher quality buildings where such details typically become more relevant.

All directions (left, right, rear, etc.), when used, are taken from the viewpoint of an observer standing in front of a building and facing it.

*Repair/Replacement Reserves* - Non-annual maintenance items that will require significant expenditure over the life of the buildings. Included are items that will reach the end of their estimated useful life during the course of this forecast, or, in the opinion of the investigator, will require attention during that time.

#### 4.0 DESCRIPTION

Mariner's Village was constructed between 2000 and 2004. The community consists of six buildings each three stories high and having 12 units per building for a total of 72 units. The development is located adjacent to other Mariner's Landing sections and the rear of the property overlooks a finger of Smith Mountain Lake. The main access is from Route 626 via Mariner's Village Way. Parking facilities are located along the front of the buildings.

A paved road (Boat Landing Road) is to the left of Building 6. There is a boat landing and docking facility to the rear of the property. Also behind the buildings are a sewage pump station and a pump station for the golf course irrigation system. These facilities are owned and maintained by others.

Each unit is approximately 1200 square feet and has two bedrooms, kitchen, living area, laundry area, and rear porches.

The Association is responsible for maintenance and capital improvements to the exterior components of all buildings as well as the grounds and parking areas. A series of catch basins and subgrade collection systems collect storm water and discharge into Smith Mountain Lake. Does the Association have an easement for the pipes across the dock service road and facility?

Per the plans provided, each building rests on twelve inch by twenty-four inch concrete footers with exterior foundation walls being poured concrete and interior walls being concrete masonry units. The second and third floors of the buildings are conventional timber construction. The footings and interior foundation walls were not visible. Roof surfaces consist of asphalt/fiberglass shingles and an aluminum gutter and downspout system. Attic ventilation is provided by ridge and soffit vents.

The exterior siding is fiber/cement planking with painted wood or synthetic

trim at the corner boards, fascias, eaves, doors, and windows. Windows are double casement, thermal pane, vinyl clad units. Steel six-panel entry doors and sliding aluminum rear patio doors provide access in and out of the residence

Electrical service is underground and metered individually at each residence. Gas (propane) is provided on the property, and individually metered at each residence. Water is metered per each of three vertically combined residences. There are at least two freeze-proof yard hydrants located on the property for the use of the community members but do not appear to be metered. This metering arrangement may lead to conflict in the future.

The property does not have a clubhouse or other common amenity.

The property is served by the following utilities and providers:

COMMUNITY UTILITY PROVIDERS	
Potable Water	M&J Developers
Sewer	M&J Developers
Storm Sewer	None
Electricity	Southside Electric Cooperative
Gas	Propane, Purchased by HOA and resold to units
Oil	None
Phone	Verizon
Trash	Municipal collection

**Table 4.1: Utility Providers**

**5.0 SITE IMPROVEMENTS**

**5.1 Topography  
Description**

The ground is gently to steeply sloping down to the rear of the property. One retaining wall is constructed of stackable landscape blocks at the front of the property creating 13 parking spaces. At the rear of the property is a finger of Smith Mountain Lake with boat docks and a boat launching ramp. Between the property and the boat dock is an access road for the docks.

Land in front of the development is owned by the developer. It is the developer's responsibility to control run off and erosion. Some run off flows onto Mariner's Village property. There is ongoing erosion that needs to be addressed.

**Evaluation &  
Recommendations**

In general the grounds are well maintained. There is some erosion around parts of the rear sidewalks.

If maintained, the stackable block retaining wall has a life exceeding the period for this report. Should any deformation in the wall occur or blocks become displaced, corrective action should be taken. Therefore, no money is allocated in this analysis in association with maintenance of this wall.

**5.2 Storm Drainage**

**Description**

Storm drainage on the property is directed to Smith Mountain Lake behind the property. Storm water either sheet drains or is collected by catch basins and a subsurface system of drainage pipes.

**Evaluation & Recommendations**

There did not appear to be any issues of concern regarding capital expenditures in reference to storm drainage on the property except around the stepped sidewalk at the right rear of the property. This is discussed below.

**5.3 Paving & Curbing**

COMMUNITY PAVING & CURBING	
Type of Paving	Asphalt service drives and parking areas
Type of Curbing	Cast-in-place concrete curbing
Number of Parking Spaces	154 including 8 handicapped spaces

**Table 5.1: Parking Area**

**Description**

There are two entrances serving the property. Access to the property is by an asphalt paved road known as Mariner’s Village Way at the front center of the property. A secondary access road, locally known as Boat Dock Road, connects to the left of the parking areas in front of the buildings.

Curbing is cast in place concrete.

**Evaluation & Recommendations**

The asphalt paving is original to construction, and appears to have never been sealed, although there is evidence that cracks have been patched. Typically, we recommend the application of an oil resistant sealant to all asphalt paved surfaces on a five-year cycle. This cycle is scheduled to begin in the second year.

There are several cracks in the parking lot. All cracks should be properly filled, patched, and sealed as soon as practicable and whenever the paving is sealcoated.

There is some erosion occurring at the small parking area near the left end of unit six. This should also be fixed now.

Asphalt paving typically has an estimated useful life of approximately twenty years. We have not anticipated the need for re-surfacing as it is dependent on maintenance and is close to the end of the analysis period. Resurfacing will need to be re-evaluated based on the condition of the pavement when this report is periodically updated.

The concrete curbing is in relatively good condition at present. No repairs have been included in the budget.

**5.4 Flatwork Description**

Flatwork consists of an integral concrete sidewalk along one side of the parking lot and a series of concrete pedestrian walkways providing connection to the buildings and down to the lake. Additionally, concrete stoops, and patios are found throughout the community on the lower level. Sidewalks adjacent to the building have 6 X 6 landscape timbers built into the sides and the steps.

**Evaluation & Recommendations**

Some of the concrete flatwork, such as patios and pedestrian walkways, are showing a limited amount of distress typically due to differential settlement.

Whenever the exposed wood of the buildings is sealcoated, all of the landscape and sidewalk timbers should also be sealcoated. The cost for this labor is included in the sealcoating of the exterior treated lumber activity.

Approximately 120 feet of the sidewalk behind units 1 and 2 at the steps are showing signs of erosion and shifting. This sidewalk will need repair within the year. The other sidewalks without wood trim which head toward the lake do not appear to need any repairs in the near future.

At one of the stairways to an end lower level unit there is a significant trip hazard. This is a safety hazard which should be repaired immediately.

At one of the stairways to an end lower level unit there is a significant spalling of the concrete. This should be repaired within the year.

**5.5 Landscaping & Appurtenances Description**

Landscaping on the site is well established. Most consists primarily of ornamental trees and shrubs throughout the property, with foundation plantings surrounding the building footprints.

Light posts are placed along the walkways throughout the property.

At each end of the development there is a two inch diameter fire hose connection located in an underground vault.

Scattered throughout the property are five electric utility meters for the landscape lighting and the sprinkler controls.

**Evaluation & Recommendations**

Landscaping on the site is typically maintained through a service contract with an outside servicing company. Seasonal lawn treatment and maintenance, annual plantings, and pruning should be addressed in a general operating budget.

Property signage is in good condition. This component on the property should provide years of relatively trouble-free service. We have not anticipated the need to update the signage or lighting in this analysis.

Install signs indicating location of underground fire department connections.

The incorrect wire type has been used for exterior wiring such as the walkway lights. There are a number of improper wiring elements such as open holes in the lighting meter panels and unglued conduit at meter panels. Rewire walkway lights and bury wire 24 inches deep, add GFCIs for walkway lights, and correct installation errors.

**6.0 STRUCTURE**

**6.1 Structure  
Description**

The structural construction documents were available for review.

According to the plans provided, each building rests on twelve inch by twenty-four inch poured in place concrete footers with exterior walls being poured concrete and interior walls being supported by concrete masonry units. The second and third floors of the buildings are of conventional timber frame construction. The footings were not visible. Roofing surfaces consist of asphalt/fiberglass shingles and an aluminum gutter and downspout system. Attic ventilation is provided by ridge and soffit vents.

The exteriors is fiber/cement planking with painted wood or synthetic trim at the corner boards, fascias, eaves, doors, and windows. Windows are double casement, thermal pane, vinyl clad units. Steel six-panel entry doors and sliding aluminum rear patio doors provide access in and out of the residence

Propane is provided on the property with an underground tank for each building, and individually metered at each residence.

The ground adjacent to the front and sides of the first building is poured concrete while at the other buildings it is graded and landscaped to the sidewalks.

**Evaluation &  
Recommendations**

There did not appear to be any issues of concern regarding capital expenditures for the structural systems for these buildings at the time of the investigation.

There is an ongoing drainage and water problem associated with all of the lower units and especially the end units. The basic problem stems from improper contouring of the ground around the units and possibly with inadequate original installation of drainage pipe. A compounding factor is that below each of the front walkways or decks just above the entrance to the lower units is a semi-functional water shield which makes the moisture issue even greater.

The specific recommendations in the area are:

1. Regrade all ground so that it slopes away from the units for at least six feet and that the drop in this distance is a minimum of three inches. All grading should provide a continuous drainage path away from the building. Be sure all window wells are sealed along the walls and that there is positive drainage away from the window well.
2. Below the decks, slope the ground away from the building and away from the retaining wall. At the low point created by this regrading, install a four inch drain line which discharges to daylight at least 15 feet away from the unit.
3. According to the plans, there should be a drain pipe at the base of each foundation wall. These drains should discharge to daylight or an adequate storm drain. This means that you should be able to see the pipe exiting on the surface of the ground. An inspection

for all of these pipes should be performed and all openings kept clear.

**6.2 Ventilation  
Description**

Attic ventilation is provided by ridge and soffit vents.

**Evaluation &  
Recommendations**

One attic was inspected. No problems were found in this attic. The quantity and location of vents appears to be adequate.

*The Environmental Protection Agency (EPA) has determined that some buildings may be affected by unhealthy indoor air contamination. We do not test for this and cannot provide you with an opinion about the indoor air quality of the buildings on this property as this is beyond the scope of this analysis. However, there are experts who test for indoor air contamination, and we recommend you enlist the services of such a professional should a concern over indoor air quality arise. In order to aid in healthy interior building environments, it is important that attic ventilation be adequate, bathroom, kitchen, and laundry exhausts discharge air directly to the outside, and moisture problems be immediately rectified.*

**7.0 EXTERIOR SYSTEMS**

**7.1 Roofing Systems  
Description**

The pitched roof surfaces are covered in asphalt/fiberglass shingles, minimum class C according to drawing. There were no visible areas of exposed flashing to determine the material used for flashing. An aluminum gutter and downspout system that predominately discharges storm water directly to an underground diversion system is in place on each of the buildings. Roof surfacing is applied over roof sheathing.

**Evaluation &  
Recommendations**

Typically, roofing surfaces will last twenty years or more. It is our opinion that the expected useful life of the roofs in this community will provide approximately twenty years of service. Growing evidence suggests that materials used on other similar construction projects, techniques used during installation of the surfaces, inadequate attic ventilation, and other substandard practices has played a part in shortening the expected useful life of the roof surfaces. We strongly recommend that any re-roofing project closely follow procedures outlined by the National Roofing Contractors Association's *Roofing and Waterproofing Manual*, Fourth Edition.

Downspouts are in generally good condition and should not require replacement until the year 2025 as this component typically provides twenty-five years of relatively trouble free service.

However, there has been a complaint that the gutters at the front corner of building three, where the gable and main roof meet, do not catch the rain. Information from a guttering website indicates that the guttering should be capable of handling the water volume. However, the water could be splashing over the gutter because of velocity as it approaches the eave of the building. One fix has been to run a gutter all the way across the front of the building so that two downspouts are available for the flow. This

solution has some merit especially if buildings such as number 3 (1019) are close to trees and likely to be loaded with debris. An additional approach would be to install a splash guard so that the rushing water will not overpower the drain which also, from a calculation standpoint, should be able to handle the flow from the section of roof in question. Thus, to assure the performance of the guttering system, the following recommendations are being presented:

1. Have all gutters serviced, inspected, and cleaned from top to bottom.
2. Run guttering across front of building 3 so that the capacity of two downspouts can be relied upon to handle the flow.
3. Install overflow splash guards on all corner gutters so that overflowing is prevented.

**7.2 Exterior Finishes  
Description**

The exteriors of the buildings are clad in Hardy plank (cement/fiber siding) with painted wood (buildings one and two) or synthetic (other buildings) trim around windows and doors, and at fascias, corner boards, and porch soffits. Windows are vinyl clad, casement, thermal pane units. Front entrance doors are steel, insulated, six-panel units, while the rear patio doors are aluminum, full glass, sliding units.

Wood balconies with exposed treated lumber are in place on the second and third stories of each building.

**Evaluation &  
Recommendations**

Since these buildings are relatively new, no painting has been required to date. The trim on buildings one and two are wood and demonstrate significant paint failures. This trim should be caulked and painted immediately. All of the buildings require a total caulking and painting program on an eight-year cycle. The trim on buildings one and two should be monitored between paintings to assure performance.

The siding and synthetic trim in place on the buildings is very durable. A complete replacement schedule is not recommended at this time. However the trim on buildings one and two might require replacement towards the end of the analysis program. This will depend on the maintenance program and has not been included in the financial analysis and should be reevaluated when the study is updated.

Plastic dryer vent caps and exhaust caps are used on the exterior of these buildings. These components historically are susceptible to deterioration when exposed to ultra-violet rays and clogging under normal usage. We recommend a complete replacement of the vents in the tenth year.

While the structural and decking components of the balconies are in generally good condition at present, we anticipate that the decking and wood walkways of building one will need replacement in two years. There is corrosion on some of the wood deck joist hangers. Develop a monitoring and repair program for these fittings. No funds have been included for this activity as the cost should be minimal. Do not permit the use of salt on the decking as a means of melting ice.

Likewise, all of the exposed treated lumber needs an aggressive sealcoating

program. This program should be started immediately and repeated on a two-year cycle.

On building six, a significant number of the nail holes at the ends of the planking have not been caulked. These need immediate caulking and painting.

Also on building six, the stairway at the left end needs a safety rail on the right side. Install safety rail on right side of steps.

On the lower level at the front is a series of six small storage units. These units, for the most part, are showing significant rust on the doors and degradation of the roofs on the units. These eaves for these storage units extend a maximum of 2 inches past the unit wall. This situation probably contributes to the rusted doors. An inspection of the units shows inconsistencies in construction. In order to resolve the problems associated with these units, all of them should be rebuilt. In order to complete this task, the decking above the storage will have to be removed so that the ground can be contoured and the proper flashing installed. During this construction vents should be installed in each storage unit and all interfaces of the roofing with other parts of the building such as deck posts should be properly sealed.

In addition, the drainage system in these lower areas needs maintenance. Some of the drains were clogged while other floor areas did not drain to the drain and left standing water in the area. These problems should be repaired. This item should also be on a regular maintenance program.

There is a tripping hazard at the entrance stairway to one of the basement units. Repair this hazard.

The concrete is spalling on the stairs of one basement unit. This spalling should be repaired.

**8.0 MECHANICAL SYSTEMS**

**8.1 Electrical Systems**

COMMUNITY ELECTRICAL SYSTEMS	
Amperage	Unknown capacity at units
Voltage/Phase	120/240 volt, single phase
Service Entrance	Underground
Branch Wiring	Not investigated

**Table 8.1: Electrical System Summary**

**Description**

Underground electrical wires feed exterior, pad-mounted transformers and subsequent meters at each of the units to accomplish electrical distribution in the community.

A dish satellite receiver on each building provides service for that building.

**Evaluation & Recommendations**

During the inspection of the clustered storage units, two electrical problems were noted. The supports for the rigid nonmetallic conduit were

rusting and were not properly fastened. These problems should be corrected to assure future performance. On one building, there was a run of white cable next to the gray conduit. This white cable (interior) denotes improper installation in wire type, support, and protection. This wire should be installed in protective conduit.

At least one of the front meter boxes had a conduit slipping out of its connector because it was not glued properly.

During the first visit, a weed was pulled up exposing white wire supposedly powering one of the external landscape lamps. This wire was less than 2 inches below the surface and of the wrong type. According to the National Electric Code, 300-5, direct burial cable not otherwise protected should be 24 inches below grade. If a GFCI is provided, the required minimum depth is reduced to 12 inches. Thus, it appears that the wiring for the outside landscape lights uses the incorrect cable and is not buried at a safe depth. This is an important safety hazard and requires immediate correction.

There are several meter boxes located on wooden backboards and supported by timber buried in the ground. These meters were added as the buildings were built to power the sewage pumps. Now, the meters power the controls for the sprinkler system and the outside lighting. All of these units were unstable. Probably the posts are not properly seated in the ground. Each power panel has one or more improper exterior fittings such as non water proof connections or open holes in the boxes. All boxes need to be secured with a lock and key to keep unauthorized individuals from turning off important components. Although the outlets mounted on these meter stands [have retractable covers] making them protected when no plug is inserted in the outlet, because of how low these panels are to the ground, current practice is to install a weatherproof cover which will protect the outlet and plug when there is a plug in the outlet.

A number of the outdoor electrical boxes had missing seals on open holes or incorrect connections between boxes. Most of the stands holding the outside boxes were wobbly and needed more firmly anchored support posts. According to H. Julius Hackett of Southside Electric Cooperative, their standard meter height is 5 feet plus or minus six inches above finished grade. Although the outlets mounted on these meter stands [have retractable covers] making them protected when no plug is inserted in the outlet, because of how low these panels are to the ground, current practice is to install a weatherproof cover which will protect the outlet and plug when there is a plug in the outlet.

Above the lower central storage areas in one of the buildings is a gray electrical conduit. This conduit is not properly fastened to the floor joists above. Should some of these fasteners fail, there is a risk that the conduit could collapse.

As there were no drawings available for review, the size of the domestic water distribution piping systems and the wastewater collection piping systems, and their locations, could not be determined. It appears that there

## **8.2 Plumbing Systems Description**

**Evaluation &  
Recommendations**

**9.0 MISCELLANEOUS AMENITIES  
Description**

**Evaluation &  
Recommendations**

**10.0 CONCLUSION**

**11.0 LIMITATIONS**

are four water meters for each building. Thus, each vertical section consisting of three tenant areas is supplied by one meter.

There are freeze-free lawn spigots located throughout the development. They are intended for watering lawns and other such appropriate activities for members of the community.

There did not appear to be any issues of significance regarding the plumbing systems at the community at the time of the investigation.

There are no amenities, per se, for the community.

Behind building 6 at the edge of the shrubby there is a small metal pipe joining two plastic pipes. This is approximately one inch below the surface. So that landscape workers do not puncture this pipe, it should be buried deeper.

In Summary, we consider these buildings to be in generally good condition when compared to others of similar age and construction type. While some components are in need of a repair and replacement program, the program can be prioritized and planned in conjunction with reserve strategies. It is extremely important that a comprehensive maintenance program be implemented to protect the owners' investment in Mariner's Village.

We feel that the reserve financials included with this report outline several possible strategies for the community to adopt given the current condition of the project as a whole. As time passes, it may become necessary to re-establish financial priorities and capital expenditure schedules given any unforeseen circumstances. We recommend and encourage this activity.

The observations described in this study are valid on the date of the investigation and have been made under the conditions noted in the report. We prepared this study for the exclusive use of Mariner's Landing Condominium Owners' Association. Criterium – Moring Engineers does not intend any other individual or party to rely upon this study without our express written consent. If another individual or party relies on this study, they shall indemnify and hold Criterium –Moring Engineers harmless for any damages, losses, or expenses they may incur as a result of its use.

This study is limited to the visual observations made during our inspection. We did not remove surface materials, conduct any destructive or invasive testing, move furnishings or equipment, or undertake any digging or excavation. Accordingly, we cannot comment on the condition of systems that we could not see, such as buried structures and utilities, nor are we responsible for conditions that could not be seen or were not within the scope of our services at the time of the investigation. We did not undertake to completely assess the stability of the buildings or the underlying foundation soil since this effort would require excavation and destructive testing. Likewise, this is not a seismic assessment.

We did not investigate the following areas:

- Buried utilities or infrastructure
- Concealed structural members or systems
- Attic areas
- All interior spaces

We do not render an opinion on uninvestigated portions of the community.

We did not perform any computations or other engineering analysis as part of this evaluation, nor did we conduct a comprehensive code compliance investigation. This study is not to be considered a warranty of condition, and no warranty is implied. The appendices are an integral part of this report and must be included in any review.

In our Reserve Fund Analysis, we have provided estimated costs. These costs are based on our general knowledge of building systems and the contracting and construction industry. When appropriate, we have relied on standard sources, such as Means Building Construction Cost Data, to develop estimates. However, for items that we have developed costs (e.g.: structural repairs), no standard guide for developing such costs exists. Actual costs can vary significantly, based on the availability of qualified contractors to do the work, as well as many other variables. We cannot be responsible for the specific cost estimates provided.

We have performed no design work as part of this study, nor have we obtained competitive quotations or estimates from contractors as this also is beyond the scope of the project. The actual cost to remedy deficiencies and deferred maintenance items that we have identified may vary significantly from estimates and competitive quotations from contractors.

If you have any questions about this study or the reserve fund analysis, please feel free to contact us. Thank-you for the opportunity to be of assistance to you.

Respectfully submitted,

\_\_\_\_ David Pearce \_\_\_\_\_ (Project Engineer  
\_\_\_\_ Criterium – Moring Engineers \_\_\_\_ (Company Name)

**Appendix A: RESERVE FUND PROJECTIONS**

## INTRODUCTION

The following is a projected reserve fund analysis for non-annual items as discussed in the report. This projection takes into consideration a reasonable return on invested moneys and inflation. Please review this thoroughly and let us know of any changes that may be desired.

The intent of this reserve fund projection is to help the Association develop a reserve fund to provide for anticipated repair or replacements of various system components during the next thirty years.

The capital items listed are those that are typically the responsibility of the condominium association and are derived from a list provided by the property manager. A copy of this list is provided in Appendix C. However, Association by-laws vary and, therefore, which components are the responsibility of the owner and which are the responsibility of the Association can vary. The Association should confirm that the items listed should be financed by the Association reserve fund.

This projection provides the following:

- An input sheet that defines all the criteria used for the financial alternatives, including the assumed inflation rate and rate of return on deposited reserve funds.
- A table that lists anticipated replacement and/or repair items complete with estimated remaining life expectancies, projected costs of replacement and/or repair, a frequency in years of when these items require replacement and/or repair, and a projection based on this frequency.
- A table and graph that represent end of year balances versus capital expenditures based on your current funding program and reserve balances, and alternatives to your current program. The provided graphs illustrate what effects the funding methods will have over the presented thirty-year period versus the anticipated capital expenditures. Care should be taken in analyzing the graphs due to varying graphic scales that occur within each graph and between graphs.
- Note that based on our developed list of capital items and taking inflation into account, the current funding is not adequate.
- The Association should bear in mind that unanticipated expenditures can always arise and maintenance of a significant reserve fund balance can be viewed as a way to avoid special assessments.

We have included six alternatives to your current funding program and recommend that the board adopt an alternative that best reflects the objectives of the community:

- **Alternative 1:** Increase the contribution to \$34.00 per unit per month immediately and increase this contribution amount by \$4 per month every 3 years over the next twenty years. This alternative produces an estimated balance of \$61,464.

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- **Alternative 2:** Increase the contribution to \$34.00 per unit per month immediately and increase this contribution amount by 3% annually over the next twenty years. This alternative produces an estimated balance of \$67,910.
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- **Alternative 3:** Increase the contribution to \$34.00 per unit per month immediately. A special assessment of 3,000 per unit is levied in 2021. This alternative produces an estimated balance of \$77,732.
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- **Alternative 4:** Increase the contribution to \$34.00 per unit per month immediately and increase this contribution amount by \$4 per month every 3 years over the next twenty years. This alternative produces an estimated balance of \$73,554.
- 
- **Alternative 5:** Increase the contribution to \$34.00 per unit per month immediately and increase this contribution amount by 3% annually over the next twenty years. This alternative produces an estimated balance of \$80,356.
- 
- **Alternative 6:** Increase the contribution to \$34.00 per unit per month immediately. A special assessment of 3,000 per unit is levied in 2021. This alternative produces an estimated balance of \$88,782.
- 

Alternatives 1 thru 3 are for a rate of return on investment of 3 percent while alternatives 4 thru 6 are for a rate of return on investment of 3.5 percent.

Please note that the reserve fund study does not include typical annual maintenance items. Our assumption is that you already have an annual operating budget that provides for these typical, repetitive items. This includes miscellaneous repairs, lawn and grounds maintenance, routine minor painting, etc. We have focused on those significant, non-annual items where careful financial planning is important.

Finally, please note that the estimates we have developed are based on 2006 dollars. Our reserve fund study does adjust for an estimated annual inflation and a given return on investment assuming that the indicated fund balances are maintained.

Attached files contain details of the above analysis.

**Appendix B: PROJECT PHOTOGRAPHS**

**Appendix C: PROFESSIONAL QUALIFICATIONS**

