# FULL RESERVE STUDY
# FUNDING ANALYSIS PLAN
# Level I
# QUALCHAN HILLS HOMEOWNER'S ASSOCIATION

*Prepared by:*

**CRITERIUM – PFAFF ENGINEERS**
**12128 N. DIVISION ST. #200**
**(509)467-8554**

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## 1.0 INTRODUCTION

Qualchan Hills Homeowner's Association, through Don Wilhelm-Manager, authorized Criterium – Pfaff Engineers to conduct a Property Evaluation and Reserve Fund Study for the Qualchan Hills Homeowner's Association. 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 thirty (30) years. The first ten years are the most reliable. According to Washington State Law, this study should be updated annually.

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

The Qualchan Hills Homeowners Association serves 96 homes. It is a residential development located in south Spokane, Washington in the Latah Valley. We understand that the development was constructed in 1993.

Qualchan Hills includes as common elements private streets – Keyes Court, Winder Lane, Kip Lane, and Pender Lane. Keyes Ct. and Kip Lane include rolled concrete gutters along the streets. Common concrete sidewalks are provided along Kip Lane (north side), Keyes Court (north side), the front of and inside Qualchan Park, and portions along Lincoln Blvd. Also included as common areas are the main entry monuments at Lincoln Blvd., Qualchan Park, (including the water feature) and the water, sewer and drainage systems at the private streets.

In this section of the report, we will address those issues that, in our opinion, will require immediate repair or replacement. For a more detailed discussion of all of our findings and any other material deficiencies that will require repair or replacement over the term of this study, refer to the appropriate sections of this report.

The roads in fair to good condition. The asphalt is weathered, aging, and in need of maintenance. A damaged area at a drain in Pender Lane should be repaired this year to help prevent further erosion. The dip at the upper end of Kip Lane appears to be due to movement of the adjacent hillside. We recommend establishing the boundary with the adjacent properties, and consulting with a geotechnical engineer regarding the stability and possible remediation of this hillside. Due to the unknown nature of the responsibility and scope of work, we have not included this cost in our forecast. Another dip in Winder Lane has been patched. We have assumed that this will serve until the road can be resurfaced in year 10.

Water seeping from Pender Lane below the park should be investigated in the near term as this can cause damage to the street and potential icy spots. This may be due to groundwater, but may also be the result of a leaking pipe in the water, water feature, or irrigation system.

The sidewalks are in generally good condition with some areas that have been replaced. An area of significant settlement at Keyes Ct could be a tripping hazard and should be repaired this year. Another area of settlement at the upper end of Kip Lane should be repaired as soon as further investigation is performed (discussed above). We have scheduled this for year 2.

There are currently no regular contributions being made to the capital repair and replacement reserves. Based on our evaluation, **the current level of funding of the reserve for the common areas is not adequate, and a funding increase is recommended.** A more detailed analysis of the reserve funds has been provided in Appendix A.

There are, of course, other capital expenditures to be expected over the next thirty years. Those items that will require attention are discussed in detail in this report and can be found in their appropriate sections.

## 3.0 PURPOSE & SCOPE

### 3.1 Purpose

The purpose of this study is to perform a reserve fund analysis. It is intended to be used as a tool for the Qualchan Hills Homeowner's 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 thirty 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 often, in order to reflect the most accurate needs and obligations of the community. According to Washington State Law, this study should be updated annually**.

### 3.2 Scope

This study has been performed according to the scope as generally defined by the association manager and Criterium – Pfaff Engineers. The findings and recommendations are based on interviews with the community's management personnel; a review of available documents; and an investigation of the site.

The scope of work meets the requirements presented by the State of Washington. According to the State of Washington, RCW 64.34.380, "…an association shall prepare and update a reserve study..." According to the State, the terminology for this Scope of Work is "Level I: Full reserve study funding analysis and plan".

This study was prepared by a Reserve Study Professional, as defined by State of Washington, RCW 64.34.380.

The guidelines used to determine which physical components within the community are to be included in the component inventory are based on the following general criteria:

1. The component must be a common element, or otherwise noted to be the responsibility of the Association to replace.
2. The component must have an estimated remaining useful life of thirty years or less. As the site ages, additional components may need to be added.
3. The funding for replacement should be from one source only, not funded from another area of the budget or through a maintenance contract.
4. The cost of replacement should be high enough to make it financially unsound to fund it from the operating budget.
5. Components, such as painting, which are considered deferred maintenance, are most appropriately funded from the Operating Budget instead of Reserves.

Our reserve study analysis included evaluating the following association property:

- **Site and Grounds:** The site common elements include the entry

monument, Qualchan Park, and underground sewer, drainage and water piping.

- **Private Streets, Sidewalks and Curbs:** The association maintains private asphalt paved streets and concrete sidewalks.

- For a complete inventory, please see Appendix B. The common element inventory was obtained from Don Wilhelm as well as our inspection of the site.

This study estimates the funding levels required for maintaining the long term viability of the facility. Our approach involves:

1. Examining association managed equipment, buildings and site facilities.
2. Predicting their remaining service life and, approximating how frequently they will require repair or replacement.
3. Estimating repair or replacement costs (in 2012 dollars) for each capital item.
4. Using data developed in Steps 1, 2 and 3 to project Capital Reserve balances for Years 1 through 30.

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 8.0.

### 3.3 Sources of Information

Onsite inspection of the property occurred on the following date:
- 17 July 2012.

The following people were interviewed during our study:
- Don Wilhelm-Manager.

The following documents were made available to us and reviewed:
- Inventory list (provided by Mr. Wilhelm)
- Map and aerial photos (provided by Mr. Wilhelm)

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

This homeowners association serves 96 homes. It is a residential development located in south Spokane, Washington in the Latah Valley. We understand that the development was constructed in 1993.

Qualchan Hills includes as common elements private streets – Keyes Court, Winder Lane, Kip Lane, and Pender Lane. Keyes Ct. and Kip Lane include rolled concrete gutters along the streets. Common concrete sidewalks are provided along Kip Lane (north side), Keyes Court (north side), the front of and inside Qualchan Park, and portions along Lincoln Blvd. Also included as common areas are the main entry monuments at Lincoln Blvd., Qualchan Park, (including the water feature) and the water, sewer and drainage systems at the private streets.

The development is situated on a steep hillside and is characterized by several areas of cuts and fills.

## 5.0 OBSERVATIONS

The following key observations were made about the current condition of the common elements of the property.

In general for all of the asphalt surfaces, preventative maintenance includes regular crack repair, drainage maintenance, patching of damaged areas and regular sealing. For a residential road, we recommend sealcoating every 7 years. This helps seal small cracks, reduce moisture penetration, and UV sun damage. Both crack sealing and sealcoating provide best results when the sealants are "squeegeed" into the surface. Proper repair of asphalt cracks includes routing the crack, and pneumatically cleaning it out, then injection of a quality asphalt emulsion sealant into the crack. The roads should be observed and any open cracks or damaged areas should be repaired annually.

Water is the major cause of street deterioration. Water should drain away from the asphalt. Areas with water found to be "ponding" on the streets should be built-up, sloped, or otherwise drained to prevent destabilizing the sub-base.

The asphalt paved streets are in fair to good condition. Some typical cracking and some patching was noted. Most cracks have been sealed. These should be sealed on a yearly basis.

Keyes Court has several areas of sealed cracking and patching. The asphalt is weathered. Significant settlement of the sidewalk at the north end of the street was observed. This is a potential safety issue and we have planned for repair of this area the first year.

A significant dip was noted around a storm drain in Winder Lane. It appears that there may have been some past settlement and erosion. A patch in the asphalt indicates this was repaired, however the dip remains. We have budgeted for backfilling and compacting this dip in year nine when the asphalt overlay is planned.

Kip Lane is also weathered and has several patches. A large dip near the upper boundary indicates settlement and apparent movement of the adjacent slope. The sidewalk is also distorted and the fence is leaning outward indicating movement of the top of the slope. Much of the street distortion appears to occur at the adjacent development as indicated by the difference in street and sidewalk configuration, however we cannot be sure. We recommend determining the boundary with the adjacent property and consulting with a qualified geotechnical engineer to determine the condition and stability of the slope. We have not included this cost or the cost of any remediation of the slope in our budget. Following this investigation and any needed remediation, we recommend that the sidewalk and fence be repaired. We have budgeted this for year 2.

Another area of sidewalk along the north side of Kip Lane has settled, with repairs planned for year 2. The concrete sidewalks across the entry to Kip Lane and Pender Lane are broken up. We have planned for these repairs in year 7 along with the asphalt overlays of these streets.

At Pender Lane, we observed water seeping from the street. This may be to be due to groundwater, but may also indicate a leak in the water system, irrigation system or water feature. We recommend that this be further investigated. Water records should be checked for an indication of excessive flows which would indicate leakage. We have not included this investigation or repair as a capital cost.

A storm drain at the center of Pender Lane has some erosion occurring around the drain that is causing the asphalt to crack and fail. This will need to be excavated and repaired within the next year. Portions of the edges of the street are exposed with a small amount of raveling and undermining of the edges. To help prevent further damage, these areas should have soil or gravel backfilled along the path edges within 2 years.

With good maintenance, paved roads have an expected useful life (EUL) of 25 years. Sealing is important to achieve this life. We have planned for sealing the roads in year 2 and every 7 years thereafter. As the roads reach the end of their expected lives, an overlay will be needed. To help offset the costs, we have planned an asphalt overlay of Keyes Ct, and Kip Lane for year 7 and the balance of the streets for year10.

We have based our asphalt repair estimates on current local estimates and those published by RS Means. With asphalt pricing based on oil prices and extremely volatile, these estimates may vary widely from the actual cost at the time of the work.

The 5 foot wide concrete sidewalks are in generally good condition with the exceptions as noted above. Some damaged areas have been recently replaced. "Rolled curbs" provided along Keyes Ct and Kip Lane and are in good condition with some typical cracking.

Concrete flatwork has a published expected useful life (EUL) of 30 years, however, we believe in this area and this situation, the sidewalks and curbs can last indefinitely with regular maintenance. This places their replacement outside of the 30 year analysis. We have allowed for spot repairs and replacement of damaged or deteriorated sections (5% of the total) in year 15 of the analysis.

The exposed aggregate sidewalks and patio around the park are in good condition with some minor cracking observed. These should be kept under observation as any continued cracking would require repairs. As with the other concrete flat work, we have allowed for spot repairs in year 15 of the analysis.

The park gazebo building has a relatively new asphalt composition shingle roof surface and wood support columns and railings. It is in good condition with an expected life of 25 years. We have planned for re-roofing the structure in year 20. A small concrete bridge over the water feature in the park is in good condition. The wood railings are in good condition. To help prevent deterioration, it is very important to clean and stain the wood columns and railings every 5 years or so. This cost is not included in our

analysis.

The water feature appeared to be in good condition, although little of the piping and pump were visible. This equipment as well as the irrigation systems are typically maintained from the operating budget and are not included in this analysis.

The entrance gate monuments appear to be concrete structures with mortared stone and stucco veneer. Wood siding is provided at the upper structures. The monuments have metal shingle roof surfaces. The monuments are attractive and well maintained. The mortar and stones are in good condition. Annual inspections and needed repairs to the stone and mortar, roof, siding, and paint should be carried out. Most repairs and maintenance should be relatively low cost items from the operations budget. The metal roofing has an expected life of 40 years. We have budgeted for re-roofing the structures in year 21. With regular maintenance, these monuments should last indefinitely.

A small sign at the park is in good condition. We have planned for its replacement in year 15.

The common underground sewer, drainage, and water piping was not visible or accessible. These have an expected life of 50+ years, which places them outside the analysis period.

Our study does not include the landscaping, water feature, irrigation systems, and electrical equipment which we assume to be maintained from the operating budget.

## 6.0 RESERVE FUND ANALYSIS

Using software developed by Criterium Engineers and KPMG Peat Marwick, we have analyzed capital reserves draw-down for the projected capital expenditures to determine the amount needed. **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 as directed by your board. 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 Association and are derived from documents provided by your board. 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 Qualchan Hills Homeowner's Association should confirm that the items listed should be financed by the 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 that represents end of year balances and capital expenditures based on your current funding program and reserve balances, and alternatives to your current program.

- Since none of the Associations have any current funding, increases are recommended in each case.

- 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 suggest and have assumed maintaining a minimum reserve balance of $5,000.00.

We have considered three alternatives to compare to your current funding program and recommend that the board adopt an alternative that best reflects the objectives of the community. Please keep in mind that there are a myriad of possible alternatives. As advised by your manager, we have assumed a .40% return on investment and a 3.0% inflation rate. We have shown three different types of possibilities. In summary they are as follows:

**Current Funding Rate:** We have used a $0.00 balance at the time of the analysis with no contributions being made at this time.

- **Alternative 1:** Set the contribution to $250.00 per unit per year on September 1, 2012, and reduce it by $175 to $75.00 per unit per year in 2023. This alternative will maintain the minimum balance.

- **Alternative 2:** Set the contribution amount $150.00 per unit per year on September 1, 2012. Levy a special assessment of $1042.00 per unit in 2019. Decrease the contribution 50% in year 2023 to $75.00 per unit per year. This alternative will maintain the minimum balance.

- **Alternative 3:** Set the contribution amount immediately to $95.00 per unit per year on September 1, 2012 and levy a special assessment of $1,563.00 per unit in 2019. This alternative will maintain the minimum balance.

Addendum A lists estimated capital reserves over the analysis period.

## 7.0 CONCLUSION

Since we have assumed no current funding, the development is underfunded.

In summary, the common elements are in generally fair to good condition and with good maintenance, should provide adequate service throughout

their useful lives. Some near term repairs are needed to remediate safety issues or the possibility of further damage.

**The association needs to begin contributing to the reserve accounts to maintain these common elements.** Three suggested alternatives and contribution levels are provided for each development.

## 8.0 LIMITATIONS

Per the State of Washington, RCW 64.34.380, the following disclosure has been included herein:
*"This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a reserve component."*

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 Qualchan Hills Homeowner's Association. Criterium – Pfaff 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 – Pfaff 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 roadways or the underlying 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
- Concealed and underground portions of the water feature.

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,

Kenneth Pfaff, P.E.
Criterium – Pfaff Engineers

## Appendix A: RESERVE FUND PROJECTIONS

**Appendix B: PROJECT INVENTORY**

**Appendix C: PROJECT PHOTOGRAPHS**

**Appendix D: PROFESSIONAL QUALIFICATIONS**