



## Reserve Study Project No. 10014.2

Prepared for  
**Miller Ranch Condominium Association**  
Edwards, Colorado

Prepared by  
**Bornengineering**  
8310 South Valley Highway, 3<sup>rd</sup> Floor  
Englewood, Colorado 80112

December 9, 2010

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**Miller Ranch Condominium Association**

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December 9, 2010

Mr. Steve Stafford  
Miller Ranch Condominium Association  
c/o Slifer Management Company, Inc.  
P.O. Box 2264  
Edwards, Colorado 81632  
E-mail: sstafford@slifermgmt.com  
Phone: 970-926-7911

Re: Miller Ranch Condominium Association, Edwards, Colorado  
Reserve Study – Project No. 10014.2

Dear Members of the Board of Directors:

Bornengineering has been commissioned by Slifer Management Company, Inc. to prepare a Reserve Study. The purpose of this Reserve Study is to evaluate the common-area components for major repair, maintenance and replacement items that are the responsibility of the Miller Ranch Condominium Association. This Study provides a limited-scope evaluation of the existing condition and remaining life of the common-area components. The Study also includes estimated costs for the major repair, maintenance and replacement items to enable the Association to establish an adequate level of reserve funds for the upkeep of the property.

## Community Description

Miller Ranch Condominium Association consists of 10 buildings that house 100 condominium residences that were built between 2003 and 2005. The Association maintenance responsibilities consist of asphalt drives and parking areas, concrete sidewalks, concrete stairs, concrete curb and gutter, concrete drain pans, concrete dumpster/garage slabs, hallway foundation concrete, handrails, hallway stairs, guard railing, patio fencing, balconies, wood decking/landings, façade, wood features, and roofs.

## Approach

To prepare this Reserve Study, Bornengineering has completed the necessary research, the component report, the cost estimates, the financial projections, and the projection interpretation.

The Study identifies each reserve component, estimates the quantities of the reserve components and assigns major action items to those components. A major action item is defined as anything estimated to be over \$1,000. Reserve cost estimates were determined from bids received from similar projects, unit costs obtained from projects of similar size and scope, past expenditures on similar work and cost estimating guides (RS Means, Walkers Builders Estimators Reference Book, Dodge Unit Cost Guide). We use typical useful lives and unit costs, presuming the systems were properly installed in compliance with local code requirements, manufacturer installation requirements and original construction documents. This Reserve Study

is not intended to be a construction compliance assessment or maintenance manual. The Study was prepared based on visual observations. The Study comments on the locations, physical description, the component condition, age, expected useful life, effective useful life, recommendations, and assigns action items to the components during the term of the Study.

The projections were assembled using the cash flow method. This method develops a reserve funding plan where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until a desired funding program is achieved.

The assigned action items and replacement costs for the component items are entered into our in-house projection software and the reserve projections include the following information:

- A summary page with general information about the Association and the projection summary results.
- The starting reserve fund balance and a projection starting date.
- Inflation factor, interest rate, tax rate (on interest earned), and loan rate if applicable.
- Monthly, bi-annual, annual, or special assessment contributions to the fund.
- A 30-year projection graph that displays the reserve fund balance and incorporates the assessment contribution, future estimated expenditures, inflation, interest, tax (on interest earned if applicable).
- A report detailing the estimated expenditures assigned to the individual reserve items.
- A chronological breakdown of the estimated reserve items in a calendar format.

There are three different reserve projections in the Study that were prepared in the following ways:

### Existing Reserve Projection

The existing reserve projection is based upon current reserve fund contribution levels.

### Preliminary Reserve Projection

The preliminary reserve projection is identical to the existing reserve projection except the reserve fund contributions are modified to allow the funds to cover the expenses over the term of the Study.

### Final Reserve Projection

The final reserve projection is produced after the board of directors and/or management has had the opportunity to review and comment on the existing and preliminary reserve projections. Since the Study is to be a working plan that the Association will endorse and utilize, input is requested on the following items:

- Reserve items or estimated expenditures listed in the existing and preliminary projections.
- Timing of estimated expenditures listed in the existing and preliminary projections.
- Homeowner contributions, either through special assessments or regular assessments.

Note: Although costs for projects are beyond the control of Bornengineering, suggestions can be made for alternative materials or repair methods as requested by the Board of Directors or the Property Management Company.

Bornengineering recommends updating the Reserve Study annually or at least every two years to account for changes in inflation, reserve account interest rates, product life and other variables.

## Reference Material

The following references were provided to Bornengineering for this Reserve Study by the Management Company and/or the Board of Directors:

- March 2010 financial balance sheet and income statement
- Interest rate earned on invested capital funds
- Historical expense and past capital project information

## Exclusions

Items not included in this Study are:

- Non-common or non-limited common area components.
- Association components with work that have estimated costs below the reserve component threshold amount of \$1,000.
- Long lasting items with estimated economic lives exceeding 30 years, such as sanitary sewers or building structural components. However, these items are included if they are known to have a fairly predictable anticipated useful life that falls within the span of the projection.
- Normal monthly operating items, i.e., taxes, insurance, snow plowing, utilities, cleaning and landscape maintenance, etc., are typically not funded by the reserve account.

## Disclaimer

This Reserve Study was prepared specifically for Miller Ranch Condominium Association. The information contained within this document has been assembled in conjunction with the client and is intended to assist the client with its reserve planning and funding. Bornengineering has performed visual site observations of the project to identify components and action items. These observations are non-invasive in nature and do not include any testing, verification of the original intent of the designer, or compliance with industry standards. Bornengineering does not guarantee, either explicitly or implied, that all repair and replacement items have been identified, the accuracy of the probable costs or the product lives associated with these items.

In providing the opinions of probable replacement costs, the client understands that Bornengineering has no control over costs or the price of labor, equipment or materials, or over the contractor's method of pricing, and that the opinions of probable replacement costs provided herein are made on the basis of Bornengineering's qualifications and experience. Bornengineering makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to bid or actual costs.

All comments made are based on conditions seen at the time of this visual observation. We do not accept any responsibility for unknown or unknowable conditions within the existing site or structures.

If you have any questions regarding this report, please do not hesitate to contact our office.

Sincerely,

Bornengineering

A handwritten signature in black ink, appearing to read 'NLM', followed by a large, stylized circular flourish.

Neil L. Mekelburg, P.E., R.S.  
Principal

# Reserve Study Component Report

## A. Paving

### A1. Asphalt Drive and Parking Areas

**Location:** Drives and parking areas adjacent to condo buildings.

**Description:** Estimated 45,950 square feet of presumed recycled bituminous asphalt pavement.

**Condition:** Good to fair condition. We noted low grade transverse cracking, longitudinal cracking, raveling/weathering, rutting, and distortion throughout the asphalt drives and parking areas. We also noted edge cracking adjacent to concrete pans and curb and gutters.

#### Preventative Maintenance

Seal Coating protects asphalt from ultraviolet rays and water, which helps to slow the process of oxidation and raveling. The goal of seal coat is create a waterproof, protective coating that can increase the life of an Associations pavement and improve appearance. *Source: Rocky Mountain Pavement*

Crack seal is a long term, cost effective way to maintain the life of an Associations pavement. It seals the cracks from water intrusion and other damaging factors. Material is applied hot to crate a bond with the existing pavement as a defense against pavement deterioration. *Source: Rocky Mountain Pavement*

#### Corrective Maintenance

Asphalt overlays are an application of a layer of bituminous material to an existing surface. The benefits of asphalt overlays is that it adds structural strength to the existing surface, can improve drainage, re-establishes proper grade and smooth ride, and can be less expensive than complete removal and replacement. Asphalt milling may be needed in areas where curb and gutters are present. *Source: Rocky Mountain Pavement*

Conventional Patching repairs sub-grade failures by removing existing asphalt, possible excavation of subgrade material, possible addition of compacted fill material, and replacement of asphalt. The benefits to patchwork is that it stabilizes sub-grade material, re-establish proper drainage, and permanent and long lasting. *Source: Rocky Mountain Pavement*

**Age:** Varies.

**Expected Useful Life:** Indefinite with preventative and corrective maintenance.

**Effective Useful Life:** Indefinite with preventative and corrective maintenance.

#### Action(s):

- Cyclically seal coat and crack fill the asphalt surface every 3 years, starting in 2012.
- Mill and overlay and/or full depth patch the asphalt associated with the parking areas every 18 years, starting in 2027. Prior to this work, we recommend contacting an engineer to recommend the most cost-effective way to perform the work, i.e., some areas of the asphalt may need full depth patch replacement; and other areas may need to be milled and overlaid. Engineer evaluation fees have been included in this component.



## B. Flatwork

### B1. Concrete Walkways

**Location:** Throughout the condominium community.

**Description:** Estimated 10,930 square feet of walkways presumed to be on-grade, non-reinforced slabs.

**Condition:** Fair condition with extensive cracking and/or deterioration noted. Some of the cracked areas have settled or heaved resulting in differential edges, which can be a tripping hazard if not corrected.

**Age:** Varies.

**Expected Useful Life:** Indefinite, with cyclical, sectional replacement. Most communities typically replace damaged sections of concrete walkways as needed rather than 100% replacement.

**Effective Useful Life:** Indefinite, with cyclical, sectional replacement.

**Action(s):**

- Cyclically remove and replace damaged sections of the concrete walkways every 3 years, starting in 2011.
- Inspect the surface and repair any cracks or deteriorating concrete walkways every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.





## B2. Concrete Stairs

**Location:** Breezeway entrances for the majority of the condo buildings along areas adjacent to the buildings on the east side of the property.

**Description:** Estimated 410 square feet of presumed, on-grade, reinforced concrete stairs.

**Condition:** Good to fair condition with visual signs of deterioration and/or cracking noted.

**Age:** Varies.

**Expected Useful Life:** Indefinite, with cyclical, sectional replacement. Most communities typically replace damaged sections of concrete walkways as needed rather than 100% replacement.

**Effective Useful Life:** Indefinite, with cyclical, sectional replacement.

### Action(s):

- Cyclically remove and replace damaged sections of the concrete stairs every 6 years, starting in 2015.
- Inspect the surface and repair any cracks or deteriorating concrete stairs every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



### B3. Concrete Drain Pan

**Location:** Within the asphalt drives behind the condominium buildings.

**Description:** Estimated 2,520 square feet of 3-foot wide, reinforced concrete pan, sloped to convey stormwater runoff.

**Condition:** Good to fair condition with minor cracking and moderate deterioration noted.

**Age:** Varies.

**Expected Useful Life:** Indefinite, with cyclical, sectional replacement.

**Effective Useful Life:** Indefinite, with cyclical, sectional replacement.

**Action(s):**

- Cyclically remove and replace of the damaged sections of the concrete pan every 6 years, starting in 2011.
- Inspect the surface and repair any cracks or deteriorating concrete pan every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



## B4. Curb and Gutter

**Location:** Adjacent to parking areas and driveways associated with the condo buildings.

**Description:** Estimated 2,070 linear feet of 6 inch tall, spill and catch barrier concrete curbs with 1- and 2-foot wide gutters.

**Condition:** Good to fair condition with areas of significant cracking, deterioration, and damaged sections noted. Generally, most of the damage to the curb and gutters within the Miller Ranch community are mainly from the heavy use of snow-traction aggregate and chemicals along with snow plowing operations.

**Age:** Varies.

**Expected Useful Life:** Indefinite, with cyclical sectional replacement.

**Effective Useful Life:** Indefinite, with cyclical sectional replacement.

### Action(s):

- Cyclically remove and replace of the damaged sections of the concrete curb and gutter every 6 years, starting in 2011.
- Inspect the surface and repair any cracks or deteriorating concrete curb and gutter every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



## B5. Concrete Dumpster Slab

**Location:** Concrete surface of the dumpster enclosures.

**Description:** Estimated 462 square feet of concrete, presumed to be 4 inches thick and reinforced.

**Condition:** Good to fair condition with significant cracking and/or deterioration noted in areas.

**Age:** Varies.

**Expected Useful Life:** Indefinite, with cyclical, sectional replacement.

**Effective Useful Life:** Indefinite, with cyclical, sectional replacement.

### Action(s):

- Cyclically remove and replace of the damaged concrete dumpster slabs every 6 years, starting in 2011.
- Inspect the surface and repair any cracks or deteriorating concrete dumpster/garage slabs every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



## B6. Concrete Breezeways

**Location:** Concrete located within the condo entry breezeways.

**Description:** Estimated 7,200 square feet of concrete approaches, presumed to be 6 inches thick and reinforced.

**Condition:** Overall in good condition with minor cracking and/or deterioration noted in areas.

**Age:** Varies.

**Expected Useful Life:** Indefinite, with cyclical, sectional replacement.

**Effective Useful Life:** Indefinite, with cyclical, sectional replacement.

### Action(s):

- Cyclically remove and replace of the damaged sections of the concrete breezeways every 6 years, starting in 2017.
- Inspect the surface and repair any cracks or deteriorating concrete breezeways every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



## C. Landscaping and Appurtenances

### C1. Metal Railings

**Location:** Railings along the concrete stairways associated with the condo buildings.

**Description:** Estimated 530 linear feet of metal railings embedded into the concrete surface, adjacent to the concrete stairs.

**Condition:** Good condition with no visual signs of failure.

**Age:** Estimated 5 years old.

**Expected Useful Life:** 20 to 25 years.

**Effective Useful Life:** 15 to 20 years.

#### Action(s):

- Cyclically scrape, rust proof and paint the metal railings every 6 years, starting in 2011. The costs associated with this action are not funded in the Study, as we were informed it is part of the operating budget.
- Remove and replace the metal railings in 2029.



## C2. Block Retaining Walls

**Location:** Adjacent to patio fence adjacent to condo buildings A and B.

**Description:** Estimated 320 linear feet of block retaining walls with an average height of 4 to 5 feet.

**Condition:** Fair condition. The block retaining wall along the west side of Building A is noted to be failing due to the large separation/gaps between blocks and bowing of the blocks. The most common reasons for failing retaining walls are incorrect installation and poor subgrade preparation. It should be noted that retaining walls higher than 4 feet are typically required to be designed and approved by a licensed engineer.

**Age:** Estimated 7 years old.

**Expected Useful Life:** 50+ years.

**Effective Useful Life:** Based on current condition, 1 to 2 years.

### Action(s):

- Have a professional Structural Engineer evaluate, analyze, and determine the course of action to repair the structural integrity of the block retaining walls in 2011, or sooner. Engineering fees are included in this action component. Major repair of the block retaining wall associated with the west of Building A will most likely be needed. The cost associated with repair has been included in this action component.



### C3. Boulder Retaining Walls

**Location:** Adjacent to the majority of the condominium patios.

**Description:** Estimated 910 linear feet of stacked boulder retaining walls at a range of 3 to 7 feet in height.

**Condition:** Presumed to be in good condition. We noted several areas where large boulders are stacked on top of small boulders and this can cause instability over time. We also noted that subgrade material is visually evident between gaps of the boulder which leads to the assumption that the boulder retaining walls do not incorporate landscape fabric to mitigate the amount of fines penetrating through the face of the wall and the assist in the erosion of the backfill. We were informed by the Association that the concrete patios of the condos are floating slabs and without adequate stabilization of the soils behind the retaining walls, it can cause the slabs to move and thus, cause movement in the patio fencing.

**Age:** Estimated 5 years old.

**Expected Useful Life:** 50 years.

**Effective Useful Life:** To be determined by the Structural Engineer's inspection and evaluation.

#### Action(s):

- Have a professional Structural Engineer evaluate the structural integrity of the boulder retaining walls and the soil stability behind the boulder retaining walls in 2011. The Structural Engineer should determine the course of action to repair (if needed) the structural integrity of the block retaining walls and/or soils behind the retaining walls. Engineering fees are included in this action component.





## D. Façade

### D1. Siding and Trim

**Location:** Exterior and common breezeways of the condo units.

**Description:** Estimated total of 152,700 square feet of cementitious lap siding and hard board products installed as fascia, soffit, paneling, and window and door trim.

**Condition:** Good to fair condition. We noted several areas where the paint has deteriorated due to snow accumulation during the winter season.

**Age:** Estimated 5 to 7 years.

**Expected Useful Life:** 30 to 40 years.

**Effective Useful Life:** 23 to 35 years.

#### Action(s):

- Cyclically prep and paint the siding and trim and replace any damaged or deteriorated sections for condo buildings every 7 years by Phase with Phase 1 (Buildings A, B, C, and D) starting in 2014, Phase 2 (Buildings E, F, and G) starting in 2015 and Phase 3 (Buildings H, I and J) starting in 2016.



## D2. Wood Building Features

**Location:** Exterior openings of the breezeways associated with the condo buildings.

**Description:** Estimated total of 8,875 square feet of 2" x 4" boards that frame within the opening of breezeway common areas that vary in horizontal and vertical lengths.

**Condition:** Fair condition. We noted that the paint associated with a majority of the wood features is peeling and/or fading.

**Age:** Estimated 5 to 7 years.

**Expected Useful Life:** 20 to 25 years with maintenance.

**Effective Useful Life:** 13 to 20 years with maintenance.

### Action(s):

- Cyclically prep and paint the wood features and replace any damaged or deteriorated boards for condo buildings every 7 years by Phase with Phase 1 (Buildings A, B, C, and D) starting in 2011, Phase 2 (Buildings E, F, and G) starting in 2012 and Phase 3 (Buildings H, I and J) starting in 2013.
- Inspect and replace the 2" x 4" boards for rotting, deterioration, and cracking every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



### D3. Garages

**Location:** Adjacent to the condo parking areas.

**Description:** Five garage buildings that incorporate cementitious lap siding, hard board products installed as fascia, soffit, paneling, and window and door trim, and wood features at varying lengths of horizontal and vertical 2" x 4" boards. The roofing material used on the garages is laminated asphalt shingling and stormwater runoff conveyed over the roofing edges since no gutters are present on the garages. We were informed by the Association the garages are not their responsibility, yet to retain the garages and their associated costs in the study for informational purposes only.

**Condition:** The lap siding and hard board products are in good condition while the wood features and trash enclosure hinged doors are in fair condition. We noted that the paint associated with garages is in fair to poor condition due to significant areas of peeling and/or fading.

**Age:** Estimated 5 to 7 years old.

**Expected Useful Life:** Varies, depending on maintenance.

**Effective Useful Life:** Varies, depending on maintenance.

#### Action(s):

- Cyclically prep and paint the garages and replace any damaged or deteriorated sections every 7 years, starting in 2011.
- Cyclically remove and replace damaged sections of the concrete garage slabs every 6 years, starting in 2017.
- Cyclically remove and replace the asphalt shingled roofs for garages every 20 years, starting in 2025.
- Inspect and replace the 2" x 4" boards for rotting, deterioration, and cracking every year. This cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



## D4. Entry Decking

**Location:** 2<sup>nd</sup> floor common breezeway entries of the condo buildings.

**Description:** 2<sup>nd</sup> floor breezeway entries are constructed with 2" x 10" deck joists, attached to the condo buildings, spanned with 2" x 6" deck floor boards and 3.5 feet high guard rail protection around the open drop-offs.

**Condition:** Good to fair condition. We noted that there are a few cracked and/or loose floor boards. We also noted a few cracked joists that should be continually monitored.

**Age:** Estimated 5 to 7 years old.

### Expected Useful Life:

- Wood floor boards – 20 to 25 with cyclical replacement.
- Balustrades/Guard railing – 40 to 50 years.

### Effective Useful Life:

- Wood floor boards – 13 to 20 with cyclical replacement.
- Balustrades/Guard railing – 33 to 45 years.

### Action(s):

- Cyclically apply a new top coat of waterproof sealant and replace damaged and/or deteriorated wood boards every 5 years, starting in 2015.
- Cyclically scrape, rust proof, and paint the guard railing every 5 years, starting in 2015.
- Inspect and replace damaged and/or deteriorated wood boards every year along with inspecting, maintaining, and repairing the guard rail protection. The cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



## D5. Stairs and Landing

**Location:** Common breezeways of the condo buildings.

**Description:** Typical breezeway stairs consist of structural wood framing, 2" x 6" wood floor board landing area, attached 3.5 feet high guard railing, attached drainable metal treads, and a detached handrail (single bar) anchored to the condo building.

**Condition:** Good condition with visual signs of cracking on wood floor boards associated with the landings and stress cracks on the framing joists.

**Age:** Estimated 5 to 7 years old.

### Expected Useful Life:

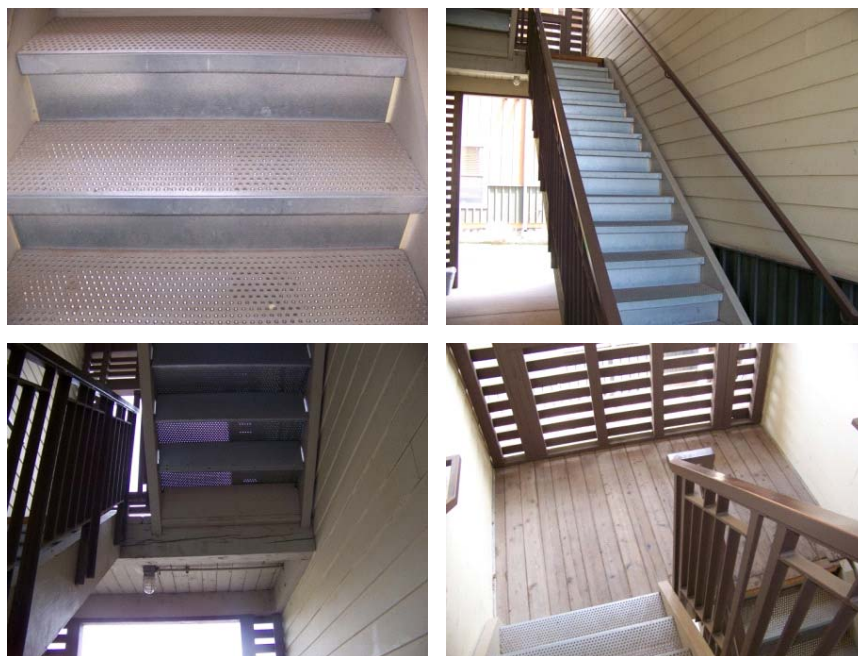
- Wood floor boards – 20 to 25 with cyclical replacement.
- Handrails – 25 to 35 years.
- Balustrades/Guard railing – 40 to 50 years.
- Metal Treads – 40 to 50 years.

### Effective Useful Life:

- Wood floor boards – 13 to 20 with cyclical replacement.
- Handrails – 18 to 30 years.
- Balustrades/Guard railing – 33 to 45 years.
- Metal Treads – 33 to 45 years.

### Action(s):

- Cyclically apply a new top coat of waterproof sealant and replace damaged and/or deteriorated wood boards every 5 years, starting in 2015.
- Cyclically scrape, rust proof, and paint the guard railing and handrails every 5 years, starting in 2015.
- Remove and replace handrails in 2040.
- Inspect and replace damaged and/or deteriorated wood boards every year along with inspecting, maintaining, and repairing the guard railing, handrails, and metal treads. The cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



## E. Roofing

### E1. Asphalt Shingled Roofs

**Location:** On the roofs of all the condo buildings and garages associated with the condo buildings.

**Description:** Estimated total of 656 squares of laminated asphalt shingles over a membrane.

**Condition:** The roofs appeared to be in good condition, based only on the visual characteristics of the shingle material.

**Age:** Estimated 5 to 7 years old.

**Expected Useful Life:** 15 years due to mountainous climate.

**Effective Useful Life:** 8 to 10 years due to mountainous climate.

#### Action(s):

- Cyclically remove and replace the asphalt shingled roofs for the condo buildings every 15 years by Phase with Phase 1 (Buildings A, B, C, and D) starting in 2020, Phase 2 (Buildings E, F, and G) starting in 2026 and Phase 3 (Buildings H, I and J) starting in 2027.



## E2. Gutters, Downspouts and Extensions

**Location:** At the roof edges of all the condo buildings and detached garages associated with the townhomes.

**Description:** Estimated 5,400 linear feet of aluminum gutters, downspouts, and extensions.

**Condition:** Good to fair condition overall. We noted some areas where the layout of the downspout extensions is unsatisfactory for effectively conveying the stormwater discharge from the downspouts. We also noted a significant amount of downspouts that are no longer supported to the condo buildings which seemingly allows the downspouts to move freely, especially during windy conditions. It should be noted that there are a few downspouts that are not connected and/or connected incorrectly to the downspouts extensions and/or non-perforated pipe. We recommend additional non-perforated and/or perforated piping be installed in order to effectively convey stormwater discharge at least 5 feet away from the foundations of the condo buildings and retaining walls. We also recommend that gutters and downspouts be installed on the garages to help reduce asphalt and landscape erosion from stormwater runoff from the roofs. However, we were informed the garages are a limited common element and the gutters, downspouts and extensions are not the responsibility of the Association.

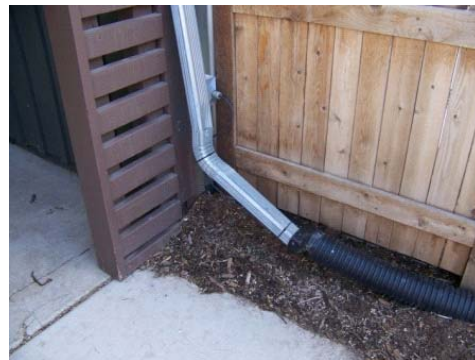
**Age:** Estimated 5 to 7 years old.

**Expected Useful Life:** 15 years due to mountainous climate.

**Effective Useful Life:** 8 to 10 years due to mountainous climate.

### Action(s):

- Install additional non-perforated and/or perforated piping at downspout connections in 2011. The cost is not included in the Study because it falls below the minimum fund threshold.
- Install gutters and downspouts at the garages in 2011. The cost for this action is not included in the Study because it is the responsibility of the individual homeowner.
- Cyclically remove and replace the gutters, downspouts and extensions for the condo buildings every 15 years by Phase with Phase 1 (Buildings A, B, C, and D) starting in 2020, Phase 2 (Buildings E, F, and G) starting in 2021 and Phase 3 (Buildings H, I and J) starting in 2022.
- Inspect and maintain gutters, downspouts, and extensions every year. This includes, but not limited to, connections, attachments, stormwater conveying, and downspout securing. The cost is not included in the Study because normally associations perform this as a maintenance item and the cost is considered an operating expense.



### E3. Heat Tape

**Location:** Within the gutters and downspouts of the condo buildings.

**Description:** Estimated 5,940 linear feet of heat tape cabling of unknown brand and phasing.

**Condition:** Presumed to be in good condition.

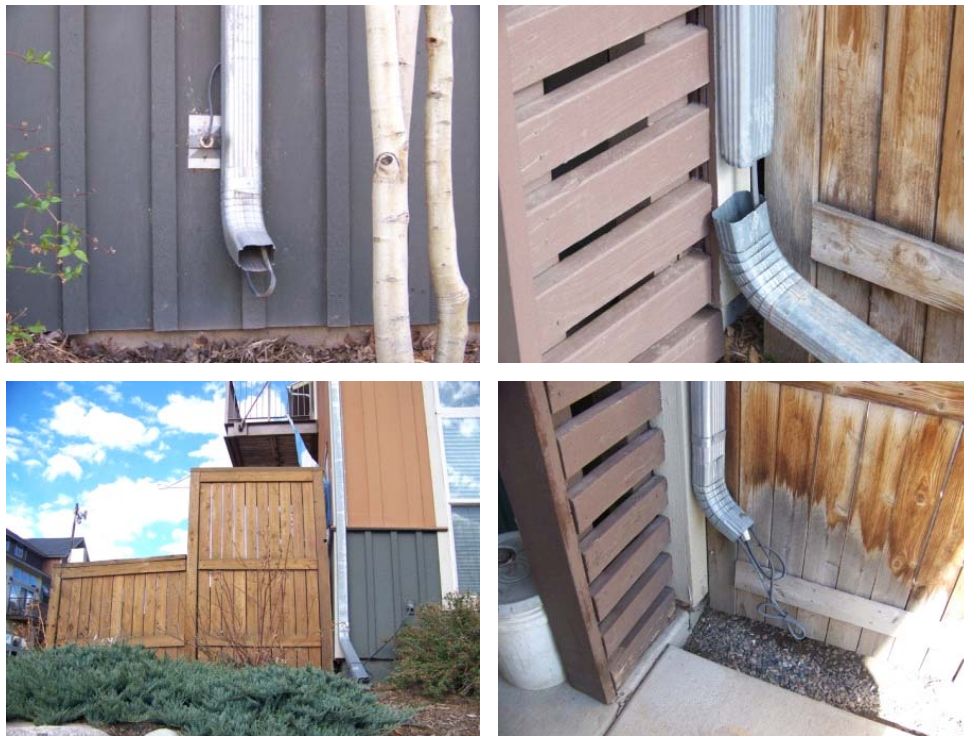
**Age:** Estimated 5 to 7 years old.

**Expected Useful Life:** 20 to 25 years.

**Effective Useful Life:** 13 to 20 years.

**Action(s):**

- Remove and replace heat tape cables in 2030.





**Miller Ranch Condominium Association  
Reserve Component Detail**

Description	Date in Service	Replacement Year	Useful	Adjustment	Remaining	Units	Unit Cost	Current Cost
<b>Asphalt Drive and Parking Areas</b>								
Engineering fees for asphalt evaluation	2005	2024	15	4	13	1 UT	5,000.00	5,000
Mill and overlay and/or full depth patch..	2005	2027	18	4	16	22,975 SF	1.79	41,125
Seal coat and crack fill	2012	2012	3	0	1	45,950 SF	0.26	<u>11,947</u>
Asphalt Drive and Parking Areas - Total								\$58,072
<b>Concrete Walkways</b>								
Remove and replace damaged sections	2011	2011	50	0	0	655 SF	11.00	<u>7,214</u>
Concrete Walkways - Total								\$7,214
<b>Concrete Stairs</b>								
Remove and replace damaged sections	2017	2017	50	0	6	49 SF	15.00	<u>738</u>
Concrete Stairs - Total								\$738
<b>Concrete Drain Pan</b>								
Remove and replace damaged sections	2011	2011	50	0	0	302 LF	31.00	<u>9,374</u>
Concrete Drain Pan - Total								\$9,374
<b>Curb and Gutter</b>								
Remove and replace damaged sections	2011	2011	50	0	0	248 LF	30.00	<u>7,452</u>
Curb and Gutter - Total								\$7,452
<b>Concrete Dumpster Slabs</b>								
Remove and replace damaged slabs	2011	2011	6	0	0	92 SF	13.00	<u>1,201</u>
Concrete Dumpster Slabs - Total								\$1,201
<b>Concrete Breezeways</b>								
Remove and replace damaged sections	2017	2017	50	0	6	864 SF	11.00	<u>9,504</u>
Concrete Breezeways - Total								\$9,504
<b>Metal Railings</b>								
Remove and replace metal railings	2005	2029	24	0	18	510 LF	38.42	<u>19,594</u>
Metal Railings - Total								\$19,594
<b>Block Retaining Walls</b>								
Engineering evaluation of wall	2011	2011	1	0	0	1 UT	3,500.00	3,500
Engineering evaluation of wall	2011	2011	1	0	0	1 UT	3,500.00	3,500
Repair and refurbish wall west of buildi..	2011	2011	40	0	0	108 LF	100.00	<u>10,800</u>
Block Retaining Walls - Total								\$17,800
<b>Boulder Retaining Walls</b>								
Engineering evaluation	2011	2011	1	0	0	1 UT	5,000.00	<u>5,000</u>
Boulder Retaining Walls - Total								\$5,000

**Miller Ranch Condominium Association  
Reserve Component Detail**

Description	Date in Service	Replacement Year	Useful	Adjustment	Remaining	Units	Unit Cost	Current Cost
<b>Siding and Trim</b>								
Buildings A,B, C, and D - Prep and paint	2005	2014	7	2	3	64,630 SF	1.13	73,032
Buildings E, F, and G - Prep and paint	2005	2015	7	3	4	45,241 SF	1.13	51,122
Buildings H, I, and J - Prep and paint	2005	2016	7	4	5	51,704 SF	1.13	<u>58,426</u>
Siding and Trim - Total								\$182,580
<b>Wood Building Features</b>								
Phase 1 - prep and paint	2011	2011	7	0	0	2,958 SF	2.50	7,395
Phase 2 - prep and paint	2012	2012	7	0	1	2,958 SF	2.50	7,395
Phase 3 - prep and paint	2013	2013	7	0	2	2,958 SF	2.50	<u>7,395</u>
Wood Building Features - Total								\$22,185
<b>Garages</b>								
Prep and paint								<i>unfunded</i>
Remove and replace asphalt shingled r..								<i>unfunded</i>
Replace damaged sections								<i>unfunded</i>
<b>Entry Decking</b>								
Apply waterproof sealant	2005	2015	5	5	4	3,500 SF	1.10	3,850
Rust proof and paint guardrails	2005	2015	5	5	4	313 LF	6.78	<u>2,122</u>
Entry Decking - Total								\$5,972
<b>Stairs and Landing</b>								
Apply waterproof sealant	2005	2015	5	5	4	1,100 SF	1.10	1,210
Remove and replace metal handrails	2005	2040	35	0	29	850 LF	37.86	32,181
Rust proof and paint guardrails and ha..	2005	2015	5	5	4	1,175 LF	6.78	<u>7,966</u>
Stairs and Landing - Total								\$41,357
<b>Asphalt Shingled Roofs</b>								
Buildings A, B, C, and D - remove and ..	2005	2025	20	0	14	234 SQ	400.00	93,600
Buildings E, F, and G - remove and rep..	2005	2026	20	1	15	164 SQ	400.00	65,600
Buildings H, I, and J - remove and repl..	2005	2027	20	2	16	187 SQ	400.00	<u>74,800</u>
Asphalt Shingled Roofs - Total								\$234,000
<b>Gutters, Downspouts and Extensions</b>								
Buildings A, B, C, and D - remove and ..	2005	2020	15	0	9	2,160 LF	8.55	18,468
Buildings E, F, G - remove and replace	2005	2021	15	1	10	1,512 LF	8.55	12,928
Buildings H, I, and J - remove and repl..	2005	2022	15	2	11	1,728 LF	8.55	14,774
Install gutters and downspouts on gara..								<i>unfunded</i>
Gutters, Downspouts and Extensions - Total								<u>\$46,170</u>
<b>Heat Tape</b>								
Remove and replace	2005	2030	25	0	19	5,940 LF	5.82	<u>34,571</u>
Heat Tape - Total								\$34,571

**Miller Ranch Condominium Association  
Reserve Component Detail**

Description	Date in Service	Replacement Year	Useful	Adjustment Remaining	Units	Unit Cost	Current Cost
Total Asset Summary							\$702,785

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

<b>Description</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Asphalt Drive and Parking Areas</b>										
Engineering fees for asphalt evaluation										
Mill and overlay and/or full depth patch..										
Seal coat and crack fill		12,305			13,446			14,693		
<b>Asphalt Drive and Parking Areas Total:</b>		<b>12,305</b>			<b>13,446</b>			<b>14,693</b>		
<b>Concrete Walkways</b>										
Remove and replace damaged sections	7,214			7,883			8,614			9,412
<b>Concrete Walkways Total:</b>	<b>7,214</b>			<b>7,883</b>			<b>8,614</b>			<b>9,412</b>
<b>Concrete Stairs</b>										
Remove and replace damaged sections							881			
<b>Concrete Stairs Total:</b>							<b>881</b>			
<b>Concrete Drain Pan</b>										
Remove and replace damaged sections	9,374						11,194			
<b>Concrete Drain Pan Total:</b>	<b>9,374</b>						<b>11,194</b>			
<b>Curb and Gutter</b>										
Remove and replace damaged sections	7,452						8,898			
<b>Curb and Gutter Total:</b>	<b>7,452</b>						<b>8,898</b>			
<b>Concrete Dumpster Slabs</b>										
Remove and replace damaged slabs	1,201						1,434			
<b>Concrete Dumpster Slabs Total:</b>	<b>1,201</b>						<b>1,434</b>			
<b>Concrete Breezeways</b>										
Remove and replace damaged sections							11,348			
<b>Concrete Breezeways Total:</b>							<b>11,348</b>			
<b>Metal Railings</b>										
Remove and replace metal railings										
<b>Metal Railings Total:</b>										
<b>Block Retaining Walls</b>										
Engineering evaluation of wall	3,500									

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<i>Block Retaining Walls continued...</i>										
Engineering evaluation of wall	3,500									
Repair and refurbish wall west of buildi..	10,800									
<b>Block Retaining Walls Total:</b>	<b>17,800</b>									
<b>Boulder Retaining Walls</b>										
Engineering evaluation	5,000									
<b>Boulder Retaining Walls Total:</b>	<b>5,000</b>									
<b>Siding and Trim</b>										
Buildings A,B, C, and D - Prep and paint				79,804						
Buildings E, F, and G - Prep and paint					57,539					
Buildings H, I, and J - Prep and paint						67,731				
<b>Siding and Trim Total:</b>				<b>79,804</b>	<b>57,539</b>	<b>67,731</b>				
<b>Wood Building Features</b>										
Phase 1 - prep and paint	7,395							9,095		
Phase 2 - prep and paint		7,617							9,368	
Phase 3 - prep and paint			7,845							9,649
<b>Wood Building Features Total:</b>	<b>7,395</b>	<b>7,617</b>	<b>7,845</b>					<b>9,095</b>	<b>9,368</b>	<b>9,649</b>
<b>Garages</b>										
Prep and paint	<i>unfunded</i>									
Remove and replace asphalt shingled r..	<i>unfunded</i>									
Replace damaged sections	<i>unfunded</i>									
<b>Entry Decking</b>										
Apply waterproof sealant					4,333					5,023
Rust proof and paint guardrails					2,388					2,769
<b>Entry Decking Total:</b>					<b>6,722</b>					<b>7,792</b>
<b>Stairs and Landing</b>										
Apply waterproof sealant					1,362					1,579
Remove and replace metal handrails										
Rust proof and paint guardrails and ha..					8,966					10,394
<b>Stairs and Landing Total:</b>					<b>10,328</b>					<b>11,973</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

<b>Description</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Asphalt Shingled Roofs</b>										
Buildings A, B, C, and D - remove and ..										
Buildings E, F, and G - remove and rep..										
Buildings H, I, and J - remove and repl..										
<b>Asphalt Shingled Roofs Total:</b>										
<b>Gutters, Downspouts and Extensions</b>										
Buildings A, B, C, and D - remove and ..										24,097
Buildings E, F, G - remove and replace										
Buildings H, I, and J - remove and repl..										
Install gutters and downspouts on gara..			<i>unfunded</i>							
<b>Gutters, Downspouts and Extensions Total:</b>										<b>24,097</b>
<b>Heat Tape</b>										
Remove and replace										
<b>Heat Tape Total:</b>										
<b>Year Total:</b>	<b>55,436</b>	<b>19,922</b>	<b>7,845</b>	<b>87,687</b>	<b>88,035</b>	<b>67,731</b>	<b>42,369</b>	<b>23,788</b>	<b>9,368</b>	<b>62,923</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

<b>Description</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
<b>Asphalt Drive and Parking Areas</b>										
Engineering fees for asphalt evaluation				7,343						
Mill and overlay and/or full depth patch..							65,994			
Seal coat and crack fill	16,056			17,545						20,949
<b>Asphalt Drive and Parking Areas Total:</b>	<b>16,056</b>			<b>24,887</b>			<b>65,994</b>			<b>20,949</b>
<b>Concrete Walkways</b>										
Remove and replace damaged sections			10,285			11,239			12,281	
<b>Concrete Walkways Total:</b>			<b>10,285</b>			<b>11,239</b>			<b>12,281</b>	
<b>Concrete Stairs</b>										
Remove and replace damaged sections			1,052						1,256	
<b>Concrete Stairs Total:</b>			<b>1,052</b>						<b>1,256</b>	
<b>Concrete Drain Pan</b>										
Remove and replace damaged sections			13,366						15,959	
<b>Concrete Drain Pan Total:</b>			<b>13,366</b>						<b>15,959</b>	
<b>Curb and Gutter</b>										
Remove and replace damaged sections			10,625						12,687	
<b>Curb and Gutter Total:</b>			<b>10,625</b>						<b>12,687</b>	
<b>Concrete Dumpster Slabs</b>										
Remove and replace damaged slabs			1,713						2,045	
<b>Concrete Dumpster Slabs Total:</b>			<b>1,713</b>						<b>2,045</b>	
<b>Concrete Breezeways</b>										
Remove and replace damaged sections			13,550						16,180	
<b>Concrete Breezeways Total:</b>			<b>13,550</b>						<b>16,180</b>	
<b>Metal Railings</b>										
Remove and replace metal railings									33,358	
<b>Metal Railings Total:</b>									<b>33,358</b>	
<b>Block Retaining Walls</b>										
Engineering evaluation of wall										

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Block Retaining Walls continued...</b>										
Engineering evaluation of wall										
Repair and refurbish wall west of buildi..										
<b>Block Retaining Walls Total:</b>										
<b>Boulder Retaining Walls</b>										
Engineering evaluation										
<b>Boulder Retaining Walls Total:</b>										
<b>Siding and Trim</b>										
Buildings A,B, C, and D - Prep and paint	98,149							120,711		
Buildings E, F, and G - Prep and paint		70,765							87,032	
Buildings H, I, and J - Prep and paint			83,301							102,450
<b>Siding and Trim Total:</b>	<b>98,149</b>	<b>70,765</b>	<b>83,301</b>					<b>120,711</b>	<b>87,032</b>	<b>102,450</b>
<b>Wood Building Features</b>										
Phase 1 - prep and paint					11,186					
Phase 2 - prep and paint						11,521				
Phase 3 - prep and paint							11,867			
<b>Wood Building Features Total:</b>					<b>11,186</b>	<b>11,521</b>	<b>11,867</b>			
<b>Garages</b>										
Prep and paint										<i>unfunded</i>
Remove and replace asphalt shingled r..										<i>unfunded</i>
Replace damaged sections										<i>unfunded</i>
<b>Entry Decking</b>										
Apply waterproof sealant					5,823					6,751
Rust proof and paint guardrails					3,210					3,721
<b>Entry Decking Total:</b>					<b>9,033</b>					<b>10,472</b>
<b>Stairs and Landing</b>										
Apply waterproof sealant					1,830					2,122
Remove and replace metal handrails										
Rust proof and paint guardrails and ha..					12,050					13,969
<b>Stairs and Landing Total:</b>					<b>13,880</b>					<b>16,091</b>



**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

<b>Description</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
<b>Asphalt Shingled Roofs</b>										
Buildings A, B, C, and D - remove and ..					141,578					
Buildings E, F, and G - remove and rep..						102,203				
Buildings H, I, and J - remove and repl..							120,032			
<b>Asphalt Shingled Roofs Total:</b>					<b>141,578</b>	<b>102,203</b>	<b>120,032</b>			
<b>Gutters, Downspouts and Extensions</b>										
Buildings A, B, C, and D - remove and ..										
Buildings E, F, G - remove and replace	17,374									
Buildings H, I, and J - remove and repl..		20,451								
Install gutters and downspouts on gara..	<i>unfunded</i>									
<b>Gutters, Downspouts and Extensions Total:</b>	<b>17,374</b>	<b>20,451</b>								
<b>Heat Tape</b>										
Remove and replace										60,620
<b>Heat Tape Total:</b>										<b>60,620</b>
<b>Year Total:</b>	<b>131,578</b>	<b>91,216</b>	<b>133,892</b>	<b>24,887</b>	<b>175,678</b>	<b>124,963</b>	<b>197,893</b>	<b>120,711</b>	<b>180,798</b>	<b>210,582</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

<b>Description</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>
<b>Asphalt Drive and Parking Areas</b>										
Engineering fees for asphalt evaluation									11,440	
Mill and overlay and/or full depth patch..										
Seal coat and crack fill			22,892			25,014			27,334	
<b>Asphalt Drive and Parking Areas Total:</b>			<b>22,892</b>			<b>25,014</b>			<b>38,774</b>	
<b>Concrete Walkways</b>										
Remove and replace damaged sections		13,420			14,664			16,024		
<b>Concrete Walkways Total:</b>		<b>13,420</b>			<b>14,664</b>			<b>16,024</b>		
<b>Concrete Stairs</b>										
Remove and replace damaged sections					1,500					
<b>Concrete Stairs Total:</b>					<b>1,500</b>					
<b>Concrete Drain Pan</b>										
Remove and replace damaged sections					19,056					
<b>Concrete Drain Pan Total:</b>					<b>19,056</b>					
<b>Curb and Gutter</b>										
Remove and replace damaged sections					15,148					
<b>Curb and Gutter Total:</b>					<b>15,148</b>					
<b>Concrete Dumpster Slabs</b>										
Remove and replace damaged slabs					2,442					
<b>Concrete Dumpster Slabs Total:</b>					<b>2,442</b>					
<b>Concrete Breezeways</b>										
Remove and replace damaged sections					19,320					
<b>Concrete Breezeways Total:</b>					<b>19,320</b>					
<b>Metal Railings</b>										
Remove and replace metal railings										
<b>Metal Railings Total:</b>										
<b>Block Retaining Walls</b>										
Engineering evaluation of wall										

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

Description	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
<b>Block Retaining Walls continued...</b>										
Engineering evaluation of wall										
Repair and refurbish wall west of buildi..										
<b>Block Retaining Walls Total:</b>										
<b>Boulder Retaining Walls</b>										
Engineering evaluation										
<b>Boulder Retaining Walls Total:</b>										
<b>Siding and Trim</b>										
Buildings A,B, C, and D - Prep and paint					148,459					
Buildings E, F, and G - Prep and paint						107,039				
Buildings H, I, and J - Prep and paint							126,000			
<b>Siding and Trim Total:</b>					<b>148,459</b>	<b>107,039</b>	<b>126,000</b>			
<b>Wood Building Features</b>										
Phase 1 - prep and paint		13,757						16,919		
Phase 2 - prep and paint			14,170						17,427	
Phase 3 - prep and paint				14,595						
<b>Wood Building Features Total:</b>		<b>13,757</b>	<b>14,170</b>	<b>14,595</b>				<b>16,919</b>	<b>17,427</b>	
<b>Garages</b>										
Prep and paint										<i>unfunded</i>
Remove and replace asphalt shingled r..										<i>unfunded</i>
Replace damaged sections										<i>unfunded</i>
<b>Entry Decking</b>										
Apply waterproof sealant					7,826					9,073
Rust proof and paint guardrails					4,314					5,001
<b>Entry Decking Total:</b>					<b>12,140</b>					<b>14,074</b>
<b>Stairs and Landing</b>										
Apply waterproof sealant					2,460					2,851
Remove and replace metal handrails										75,837
Rust proof and paint guardrails and ha..					16,194					18,774
<b>Stairs and Landing Total:</b>					<b>18,654</b>					<b>97,462</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Spread Sheet**

<b>Description</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>
<b>Asphalt Shingled Roofs</b>										
Buildings A, B, C, and D - remove and ..										
Buildings E, F, and G - remove and rep..										
Buildings H, I, and J - remove and repl..										
<b>Asphalt Shingled Roofs Total:</b>										
<b>Gutters, Downspouts and Extensions</b>										
Buildings A, B, C, and D - remove and ..					37,542					
Buildings E, F, G - remove and replace						27,068				
Buildings H, I, and J - remove and repl..							31,862			
Install gutters and downspouts on gara..				<i>unfunded</i>						
<b>Gutters, Downspouts and Extensions Total:</b>					<b>37,542</b>	<b>27,068</b>	<b>31,862</b>			
<b>Heat Tape</b>										
Remove and replace										
<b>Heat Tape Total:</b>										
<b>Year Total:</b>		<b>27,177</b>	<b>37,061</b>	<b>14,595</b>	<b>288,925</b>	<b>159,121</b>	<b>157,862</b>	<b>16,024</b>	<b>55,693</b>	<b>128,962</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<b>Replacement Year 2011</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	7,214
<b>Concrete Drain Pan</b>	
Remove and replace damaged sections	9,374
<b>Curb and Gutter</b>	
Remove and replace damaged sections	7,452
<b>Concrete Dumpster Slabs</b>	
Remove and replace damaged slabs	1,201
<b>Block Retaining Walls</b>	
Engineering evaluation of wall	3,500
Engineering evaluation of wall	3,500
Repair and refurbish wall west of building A	10,800
<b>Boulder Retaining Walls</b>	
Engineering evaluation	5,000
<b>Wood Building Features</b>	
Phase 1 - prep and paint	7,395
<b>Total for 2011</b>	<b>\$55,436</b>
<b>Replacement Year 2012</b>	
<b>Asphalt Drive and Parking Areas</b>	
Seal coat and crack fill	12,305
<b>Wood Building Features</b>	
Phase 2 - prep and paint	7,617
<b>Total for 2012</b>	<b>\$19,922</b>
<b>Replacement Year 2013</b>	
<b>Wood Building Features</b>	
Phase 3 - prep and paint	7,845
<b>Total for 2013</b>	<b>\$7,845</b>
<b>Replacement Year 2014</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	7,883
<b>Siding and Trim</b>	
Buildings A,B, C, and D - Prep and paint	79,804
<b>Total for 2014</b>	<b>\$87,687</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<b>Replacement Year 2015</b>	
<b>Asphalt Drive and Parking Areas</b>	
Seal coat and crack fill	13,446
<b>Siding and Trim</b>	
Buildings E, F, and G - Prep and paint	57,539
<b>Entry Decking</b>	
Apply waterproof sealant	4,333
Rust proof and paint guardrails	2,388
<b>Stairs and Landing</b>	
Apply waterproof sealant	1,362
Rust proof and paint guardrails and handrails	8,966
<b>Total for 2015</b>	<b>\$88,035</b>
<b>Replacement Year 2016</b>	
<b>Siding and Trim</b>	
Buildings H, I, and J - Prep and paint	67,731
<b>Total for 2016</b>	<b>\$67,731</b>
<b>Replacement Year 2017</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	8,614
<b>Concrete Stairs</b>	
Remove and replace damaged sections	881
<b>Concrete Drain Pan</b>	
Remove and replace damaged sections	11,194
<b>Curb and Gutter</b>	
Remove and replace damaged sections	8,898
<b>Concrete Dumpster Slabs</b>	
Remove and replace damaged slabs	1,434
<b>Concrete Breezeways</b>	
Remove and replace damaged sections	11,348
<b>Total for 2017</b>	<b>\$42,369</b>
<b>Replacement Year 2018</b>	
<b>Asphalt Drive and Parking Areas</b>	
Seal coat and crack fill	14,693

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<b><i>Replacement Year 2018 continued...</i></b>	
<b>Wood Building Features</b>	
Phase 1 - prep and paint	9,095
<b>Total for 2018</b>	<u><b>\$23,788</b></u>
<b>Replacement Year 2019</b>	
<b>Wood Building Features</b>	
Phase 2 - prep and paint	9,368
<b>Total for 2019</b>	<u><b>\$9,368</b></u>
<b>Replacement Year 2020</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	9,412
<b>Wood Building Features</b>	
Phase 3 - prep and paint	9,649
<b>Entry Decking</b>	
Apply waterproof sealant	5,023
Rust proof and paint guardrails	2,769
<b>Stairs and Landing</b>	
Apply waterproof sealant	1,579
Rust proof and paint guardrails and handrails	10,394
<b>Gutters, Downspouts and Extensions</b>	
Buildings A, B, C, and D - remove and replace	24,097
<b>Total for 2020</b>	<u><b>\$62,923</b></u>
<b>Replacement Year 2021</b>	
<b>Asphalt Drive and Parking Areas</b>	
Seal coat and crack fill	16,056
<b>Siding and Trim</b>	
Buildings A,B, C, and D - Prep and paint	98,149
<b>Gutters, Downspouts and Extensions</b>	
Buildings E, F, G - remove and replace	17,374
<b>Total for 2021</b>	<u><b>\$131,578</b></u>
<b>Replacement Year 2022</b>	
<b>Siding and Trim</b>	
Buildings E, F, and G - Prep and paint	70,765

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<b><i>Replacement Year 2022 continued...</i></b>	
<b>Gutters, Downspouts and Extensions</b>	
Buildings H, I, and J - remove and replace	20,451
<b>Total for 2022</b>	<b><u>\$91,216</u></b>
 <b>Replacement Year 2023</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	10,285
<b>Concrete Stairs</b>	
Remove and replace damaged sections	1,052
<b>Concrete Drain Pan</b>	
Remove and replace damaged sections	13,366
<b>Curb and Gutter</b>	
Remove and replace damaged sections	10,625
<b>Concrete Dumpster Slabs</b>	
Remove and replace damaged slabs	1,713
<b>Concrete Breezeways</b>	
Remove and replace damaged sections	13,550
<b>Siding and Trim</b>	
Buildings H, I, and J - Prep and paint	83,301
<b>Total for 2023</b>	<b><u>\$133,892</u></b>
 <b>Replacement Year 2024</b>	
<b>Asphalt Drive and Parking Areas</b>	
Engineering fees for asphalt evaluation	7,343
Seal coat and crack fill	17,545
<b>Total for 2024</b>	<b><u>\$24,887</u></b>
 <b>Replacement Year 2025</b>	
<b>Wood Building Features</b>	
Phase 1 - prep and paint	11,186
<b>Entry Decking</b>	
Apply waterproof sealant	5,823
Rust proof and paint guardrails	3,210
<b>Stairs and Landing</b>	
Apply waterproof sealant	1,830



**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<b><i>Replacement Year 2025 continued...</i></b>	
Rust proof and paint guardrails and handrails	12,050
<b>Asphalt Shingled Roofs</b>	
Buildings A, B, C, and D - remove and replace	141,578
<b>Total for 2025</b>	<u><b>\$175,678</b></u>
 <b>Replacement Year 2026</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	11,239
<b>Wood Building Features</b>	
Phase 2 - prep and paint	11,521
<b>Asphalt Shingled Roofs</b>	
Buildings E, F, and G - remove and replace	102,203
<b>Total for 2026</b>	<u><b>\$124,963</b></u>
 <b>Replacement Year 2027</b>	
<b>Asphalt Drive and Parking Areas</b>	
Mill and overlay and/or full depth patching	65,994
<b>Wood Building Features</b>	
Phase 3 - prep and paint	11,867
<b>Asphalt Shingled Roofs</b>	
Buildings H, I, and J - remove and replace	120,032
<b>Total for 2027</b>	<u><b>\$197,893</b></u>
 <b>Replacement Year 2028</b>	
<b>Siding and Trim</b>	
Buildings A,B, C, and D - Prep and paint	120,711
<b>Total for 2028</b>	<u><b>\$120,711</b></u>
 <b>Replacement Year 2029</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	12,281
<b>Concrete Stairs</b>	
Remove and replace damaged sections	1,256
<b>Concrete Drain Pan</b>	
Remove and replace damaged sections	15,959

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<i>Replacement Year 2029 continued...</i>	
<b>Curb and Gutter</b>	
Remove and replace damaged sections	12,687
<b>Concrete Dumpster Slabs</b>	
Remove and replace damaged slabs	2,045
<b>Concrete Breezeways</b>	
Remove and replace damaged sections	16,180
<b>Metal Railings</b>	
Remove and replace metal railings	33,358
<b>Siding and Trim</b>	
Buildings E, F, and G - Prep and paint	87,032
<b>Total for 2029</b>	<b>\$180,798</b>
<b>Replacement Year 2030</b>	
<b>Asphalt Drive and Parking Areas</b>	
Seal coat and crack fill	20,949
<b>Siding and Trim</b>	
Buildings H, I, and J - Prep and paint	102,450
<b>Entry Decking</b>	
Apply waterproof sealant	6,751
Rust proof and paint guardrails	3,721
<b>Stairs and Landing</b>	
Apply waterproof sealant	2,122
Rust proof and paint guardrails and handrails	13,969
<b>Heat Tape</b>	
Remove and replace	60,620
<b>Total for 2030</b>	<b>\$210,582</b>
<i>No Replacement in 2031</i>	
<b>Replacement Year 2032</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	13,420
<b>Wood Building Features</b>	
Phase 1 - prep and paint	13,757
<b>Total for 2032</b>	<b>\$27,177</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<b>Replacement Year 2033</b>	
<b>Asphalt Drive and Parking Areas</b>	
Seal coat and crack fill	22,892
<b>Wood Building Features</b>	
Phase 2 - prep and paint	14,170
<b>Total for 2033</b>	<b>\$37,061</b>
<b>Replacement Year 2034</b>	
<b>Wood Building Features</b>	
Phase 3 - prep and paint	14,595
<b>Total for 2034</b>	<b>\$14,595</b>
<b>Replacement Year 2035</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	14,664
<b>Concrete Stairs</b>	
Remove and replace damaged sections	1,500
<b>Concrete Drain Pan</b>	
Remove and replace damaged sections	19,056
<b>Curb and Gutter</b>	
Remove and replace damaged sections	15,148
<b>Concrete Dumpster Slabs</b>	
Remove and replace damaged slabs	2,442
<b>Concrete Breezeways</b>	
Remove and replace damaged sections	19,320
<b>Siding and Trim</b>	
Buildings A,B, C, and D - Prep and paint	148,459
<b>Entry Decking</b>	
Apply waterproof sealant	7,826
Rust proof and paint guardrails	4,314
<b>Stairs and Landing</b>	
Apply waterproof sealant	2,460
Rust proof and paint guardrails and handrails	16,194
<b>Gutters, Downspouts and Extensions</b>	
Buildings A, B, C, and D - remove and replace	37,542
<b>Total for 2035</b>	<b>\$288,925</b>

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<b>Replacement Year 2036</b>	
<b>Asphalt Drive and Parking Areas</b>	
Seal coat and crack fill	25,014
<b>Siding and Trim</b>	
Buildings E, F, and G - Prep and paint	107,039
<b>Gutters, Downspouts and Extensions</b>	
Buildings E, F, G - remove and replace	27,068
<b>Total for 2036</b>	<b>\$159,121</b>
<b>Replacement Year 2037</b>	
<b>Siding and Trim</b>	
Buildings H, I, and J - Prep and paint	126,000
<b>Gutters, Downspouts and Extensions</b>	
Buildings H, I, and J - remove and replace	31,862
<b>Total for 2037</b>	<b>\$157,862</b>
<b>Replacement Year 2038</b>	
<b>Concrete Walkways</b>	
Remove and replace damaged sections	16,024
<b>Total for 2038</b>	<b>\$16,024</b>
<b>Replacement Year 2039</b>	
<b>Asphalt Drive and Parking Areas</b>	
Engineering fees for asphalt evaluation	11,440
Seal coat and crack fill	27,334
<b>Wood Building Features</b>	
Phase 1 - prep and paint	16,919
<b>Total for 2039</b>	<b>\$55,693</b>
<b>Replacement Year 2040</b>	
<b>Wood Building Features</b>	
Phase 2 - prep and paint	17,427
<b>Entry Decking</b>	
Apply waterproof sealant	9,073
Rust proof and paint guardrails	5,001

**Miller Ranch Condominium Association  
Reserve Study Annual Expenditure Detail**

Description	Expenditures
<i>Replacement Year 2040 continued...</i>	
<b>Stairs and Landing</b>	
Apply waterproof sealant	2,851
Remove and replace metal handrails	75,837
Rust proof and paint guardrails and handrails	18,774
<b>Total for 2040</b>	<b>\$128,962</b>

## Miller Ranch Condominium Association Final Reserve Study Summary

Report Date	December 09, 2010
Account Number	10014.2
Budget Year Beginning	January 01, 2011
Budget Year Ending	December 31, 2011
Total Units	100

<i>Report Parameters</i>	
Inflation	3.00%
Interest Rate on Reserve Deposit	0.67%
Tax Rate on Interest	0.00%
Contingency	0.00%
2011 Beginning Balance	\$178,400.00

Year	Annual Contribution	Ave. Monthly Per Member	Percentage Increase
2011	20,000	34.01	125%
2012	45,000	76.53	125%
2013	70,000	119.05	56%
2014	72,100	122.62	3%
2015	74,263	126.30	3%
2016	76,491	130.09	3%
2017	78,786	133.99	3%
2018	81,149	138.01	3%
2019	83,584	142.15	3%
2020	86,091	146.41	3%
2021	88,674	150.81	3%
2022	91,334	155.33	3%
2023	94,074	159.99	3%
2024	96,896	164.79	3%
2025	99,803	169.73	3%
2026	102,797	174.82	3%
2027	105,881	180.07	3%
2028	109,058	185.47	3%
2029	112,329	191.04	3%
2030	115,699	196.77	3%
2031	119,170	202.67	3%
2032	122,745	208.75	3%
2033	126,428	215.01	3%

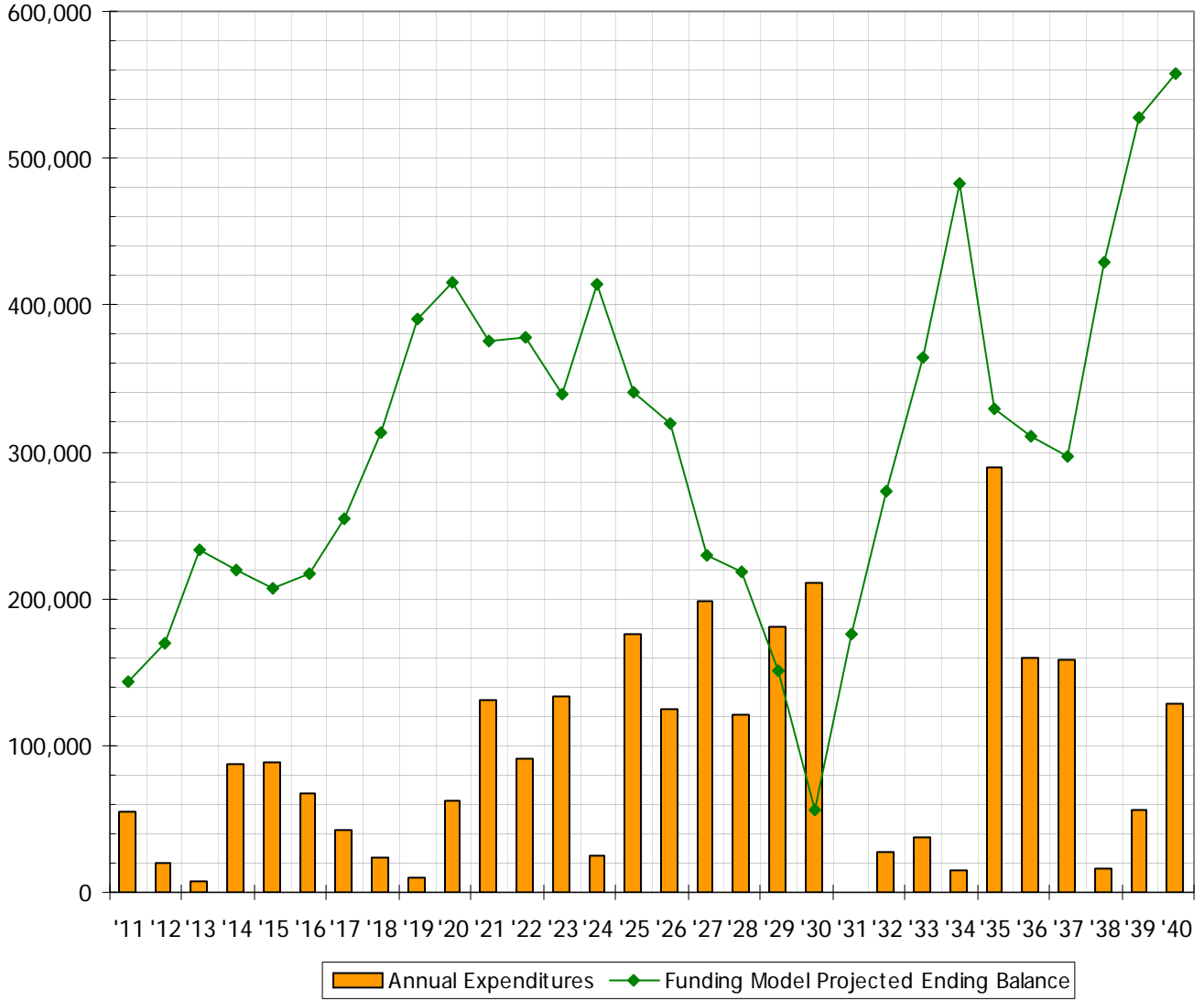
**Miller Ranch Condominium Association  
Final Reserve Study Summary**

2034	130,221	221.46	3%
2035	134,127	228.11	3%
2036	138,151	234.95	3%
2037	142,296	242.00	3%
2038	146,564	249.26	3%
2039	150,961	256.74	3%
2040	155,490	264.44	3%

***Final Funding Model Summary of Calculations***

Required Monthly Contribution	\$1,666.67
<i>\$16.67 per unit monthly</i>	
Average Net Monthly Interest Earned	<u>\$74.93</u>
Total Monthly Allocation to Reserves	\$1,741.59
<i>\$17.42 per unit monthly</i>	

## Miller Ranch Condominium Association Final Reserve Study Projection Graph





**Miller Ranch Condominium Association  
Final Reserve Study Projection**

Beginning Balance: \$178,400

Year	Current Cost	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves
2011	702,785	20,000	899	55,436	143,863
2012	711,509	45,000	997	19,922	169,937
2013	732,854	70,000	1,344	7,845	233,435
2014	754,840	72,100	1,242	87,687	219,090
2015	777,485	74,263	1,151	88,035	206,469
2016	800,810	76,491	1,211	67,731	216,440
2017	824,834	78,786	1,456	42,369	254,312
2018	849,579	81,149	1,844	23,788	313,518
2019	875,066	83,584	2,348	9,368	390,081
2020	901,318	86,091	2,512	62,923	415,761
2021	928,358	88,674	2,232	131,578	375,089
2022	956,208	91,334	2,240	91,216	377,447
2023	984,895	94,074	1,979	133,892	339,608
2024	1,014,442	96,896	2,467	24,887	414,085
2025	1,044,875	99,803	1,965	175,678	340,175
2026	1,076,221	102,797	1,820	124,963	319,830
2027	1,108,508	105,881	1,205	197,893	229,023
2028	1,141,763	109,058	1,125	120,711	218,495
2029	1,176,016	112,329	662	180,798	150,688
2030	1,211,296	115,699	18	210,582	55,823
2031	1,247,635	119,170	809		175,802
2032	1,285,064	122,745	1,445	27,177	272,816
2033	1,323,616	126,428	2,044	37,061	364,226
2034	1,363,325	130,221	2,823	14,595	482,676
2035	1,404,224	134,127	1,790	288,925	329,668
2036	1,446,351	138,151	1,649	159,121	310,347
2037	1,489,742	142,296	1,542	157,862	296,322
2038	1,534,434	146,564	2,417	16,024	429,280
2039	1,580,467	150,961	3,060	55,693	527,608
2040	1,627,881	155,490	3,245	128,962	557,380