

MFC #: 2.01

Short Claim: **Window Units Leak**

MFC #: 2.01

Location: Exterior **Room/Area:** Windows

Claim:

The window units failed multiple tests for water penetration resistance. Testing was performed by [REDACTED]. The tests were performed in accordance with:

AAMA 502-02, "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors."

ASTM E 1105, "Field Determination of Water Penetration of Installed Exterior Windows, Curtain Walls, and Doors by Uniform or Cyclic Air Pressure Difference" (procedure B - cyclic static air pressure difference was applied, four 5-minute pressure cycles per test).

See attached "Field Test Report," by [REDACTED] Testing, Report Date 8/4/10, consisting of 15 pages.

MFC tested the south Living Room window by spraying water on the window. Water was seen flowing through joints and openings in the window unit.

During water testing performed by [REDACTED] of additional windows, water intrusion was observed. See attached Site Inspection Memorandum 1.

Additional window defects have been identified during the repairs. These additional defects include:

Water intrusion through units of mulled units. Evidence of this defect is observable at the interior frame of the window, where the mulled units are connected. The wood frames are stained and fasteners are rusting. Evidence of water intrusion at the connection of mulled units was observed at 12 of 13 mulled windows.

Water intrusion through window units as evidenced by water staining on the interior of the window. Water staining was observed on the interior of 11 of 25 windows.

The top flange of the arched window units is perforated. This allows for water intrusion at the top of the window. Evidence of this defect is observed at the top interior frame of the window. The wood frame is water stained and damaged. Water staining and damage was observed as a result of this issue at 6 out of 8 arched-top windows.

Fasteners for the window hardware are not water resistant (not corrosion resistant). The mechanism for cranking the window open and closed is attached to the bottom of the window frame with screws. This is a location where water accumulates. The fasteners, which are screws, have corroded (rusted). This is a problem because, once rusted, they allow water intrusion at the fasteners' penetration of the window's metal cladding. The screws are rusted at 15 of 25 windows.

In addition to the window units' water intrusion issues, the existing window units would not have been able to be reused due to code compliance issues. It is a code violation to re-use windows that do not meet the requirements for new installations. The Town of Woodside Municipal Code requires that all window glass be tempered. Because most of the existing windows do not have tempered glass, they could not be reused. MFC verified this code enforcement with [REDACTED] Town of Woodside Building Inspector.

MFC Repair:

Replace window units.

The BiltBest units are replaced with Marvin windows for the following reasons:

BiltBest Windows is out of business.

The Marvin Windows are wood-framed windows clad with aluminum on the exterior, similar to the existing units.

The Marvin Windows match the design requirements. The windows have matching simulated divided lites and operation.

The Marvin Windows are available in custom sizes to fit the existing rough opening sizes. This will reduce the amount of work and costs associated with replacing these windows. This will eliminate the need to reframe openings and to increase the interior sheetrock, sheetrock texture, and paint.

Costs to install units are included in this claim, per RMG Schedule of Values.

MFC Photos:

10-22

Disclosure:

Water leaking through the windows may have been visible before the time of sale. During our testing of the windows, we observed water running down the interior of the windows. Checking and splitting of the paint on the interior of the windows is a sign of water intrusion.

Within the "PRDS Supplemental Seller's Checklist" the Sellers state that they are not aware of any past or present leaks. The Sellers also state in this document that they are occupying the property.

Repair Cost Notes:

RMG Schedule of Values Amount: \$151,111.09

Change Order #1: \$12,914.57

Cost increase for all tempered glass.

Repair Group: Window Replacement

MFC Allow: \$210,888.90

MFC #: 2.11

Short Claim: Improper Use of Bituminous Flashing

MFC #: 2.11

Location: Exterior **Room/Area:** Master Bedroom Rear Window

Claim:

Bituminous, self-adhesive flashing is incorporated with the roof-to-wall flashing. It is in contact with copper flashing. Copper flashing conducts heat from the sun and causes the bituminous flashing to melt. This manifests as a maintenance issue, having to clean the tar-like material from the copper flashings. Eventually, voids will form in the bituminous flashing and allow moisture intrusion.

The bituminous, self-adhesive flashing here may also be incorporated with the window's flashing.

MFC Repair:

The stucco and window will be removed as necessary to resolve the stucco's quality issues and window's installation issues. While exposed, remove the bituminous self-adhesive flashing. Replace with a copper window pan that laps over the roof-to-wall flashing.

Our allowance here does not include any stucco work as that is included in MFC# 2.05.

Codes and Standards:

CBC 2001 1402.2

MFC Photos:

77-79

Repair Group: Window Replacement

MFC Allow: \$4,404.54

MFC #: 4.15

Short Claim: The Gas Vent System From the Furnace is too Short

MFC #: 4.15

Location: Furnace **Room/Area:** Attic Furnace

Claim:

HQA: "The gas vent termination height is approximately 12" from the roof line to the termination cap whereas the minimum height requirement is 39" to the bottom of the termination cap for a 10 on 12 pitch roof."

MFC Repair:

HQA: "Remove the copper vent cap (code assembly top), extend the gas vent another 27" minimum, add stainless steel sleeve to isolate the copper from the galvanized steel gas vent, install a storm collar and high wind termination cap of the same manufacturer as the gas vent and caulk water tight."

Codes and Standards:

C.M.C. Page 90 Table 8-1

MFC Photos:

H.Q.A. Photo 4.15 A-C

Repair Group: Mechanical Repairs

MFC Allow: \$1,339.20

MFC #: 6.11

Short Claim: Missing or Inadequately Installed Insulation

MFC #: 6.11

Location: Interior **Room/Area:** Throughout

Claim:

Insulation is missing and not performing due to its installation in various locations. Our observations with an infrared camera have identified these areas where temperature differentials illustrate the insulation is either missing or not in contact with the air barrier, as necessary for proper performance.

MFC Repair:

Remove sheetrock as necessary to properly install insulation. Install insulation. Replace sheetrock. Finish sheet rock and paint to extends of the plane of the wall.

In the Stairway Hall, remove and reinstall 90 square feet of sheetrock. Finish sheetrock and Paint 237 square feet.

In the Living Room, remove and reinstall 20 square feet of sheetrock. Finish sheetrock and paint 252 square feet.

In the Family Room, remove and reinstall 32 square feet of sheetrock. Finish sheetrock and paint 95 square feet.

In Bedroom #3, remove and reinstall 48 square feet of sheetrock. Finish sheetrock and paint 182 square feet.

In the Master Bedroom, remove and reinstall 40 square feet of sheetrock. Finish sheetrock and paint 336 square feet.

In the Exercise Room, remove and reinstall 150 square feet of sheetrock. Finish sheetrock and paint 300 square feet.

Codes and Standards:

2005 CEC 150 (a) and (c)

MFC Photos:

182-184

Repair Cost Notes:

RMG Schedule of Values Amount: \$6,553.40

Change Order #11: -\$817.00

This insulation work was performed by [REDACTED], not by RMG. This credit, from RMG, is for that work.

Repair Group: Insulation Completion

MFC Allow: \$7,229.72

Limits as per Section I of this Report

Summary of Claims

The following table is not the MFC report. These limited fields, taken from our full report, are intended as a quick-reference summary, not as a stand-alone report.

MFC #	Room/Area	Short Claim
1.00		SITE
1.01	Southern Area of Property	Buried Asphalt
1.02	Eastern Area of Property at Rear	Landslide
1.03	South East at Edge of Patios	Detention Basin Installation Incomplete
2.00		EXTERIOR
2.01	Windows	Window Units Leak
2.02	Windows	Window Installations Leak
2.03	Windows	Lack of Paint/Primer on Raw Wood
2.04	Windows	Alarm Sensors in Sills
2.05	Stucco	Stucco Quality Issues
2.06	Dining Room Patio	Location of Steam Shower Pressure Relief and Overflow Wrong
2.07	Multiple	Lack of Full Adhesion of Stonework
2.08	Stone Stairways and Flatwork	Abundant Efflorescence
2.09	Stone Stairways	Hazardous Tread and Riser Variations
2.10	Master Bathroom Balcony	Balcony Door/Deck/Wall Leak
2.11	Master Bedroom Rear Window	Improper Use of Bituminous Flashing
2.12	Master Bath Deck and Ground Level Patios	Premature Railing Deterioration
2.13	Master Bath Deck and Ground Level Patios	Incomplete Welding at Railings
2.14	Patios	Buried Weep Scream
3.00		ROOF
3.01	Soffit Returns	Water Infiltration at Penetrations
3.02	Barge Rafters	No Drip Edge/Plywood Exposed
3.03	Gutters	Gutters Have no Counter Flashing/Not Integrated With Roofing

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Woodside, California**

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MFC #	Room/Area	Short Claim
3.04	Gutters, Copper Flashing, and Chimney	Corroded Gutter Fasteners
3.05	Gutters	Gutter Incomplete
3.06	Barge Rafter Terminations on Roof	Fascia Not Back-Primed and in Contact With Roofing
3.07	Gutter Termination at Roof	Inadequate Flashing Where Gutters Interface With Roof
3.08	Low Slope Valleys and Dormers	Leaking Copper Solder Joints
3.09	Low Slope Valleys	Too Narrow at Outlets for Volume of Water
3.10	Low Slope Valley	Reverse Slope
3.11	Low Slope Copper Roofs	Standing Seams Open at Ends
3.12	Low Slope Copper Roofs	Lack of Counter Flashing
3.13	Low Slope Copper Roofs	Un-soldered and Inappropriate Fasteners
3.14	Attic/Various	Ridge Flashing
3.15	Roof Sheathing	No Gaps Between Plywood
3.16	Both Chimneys	Chimney Caps Leaking
3.17	Fireplace Chimney	Inadequate Chimney Flashing
3.18	Master Bathroom Balcony and Exercise Room	No Ventilation
4.00		MECHANICAL
4.01	Attic & Garage Furnace	Furnaces Are Not Seismically Restrained
4.02	Attic & Garage Furnace	Primary Condensate Drains Have Reverse/No Slope
4.03	Attic & Garage Furnace	No P-Trap or Vent on the Existing A/C Evaporator Coils
4.04	Attic & Garage Furnace	Supply and Return Air Metal Fittings Are Missing Vapor Barrier
4.05	Attic & Garage Furnace	Register Boxes Not Insulated
4.06	Attic & Garage Furnace	Supply Air Wye Branches Not Properly Insulated
4.07	Attic & Garage Furnace	Refrigerant Suction Lines Not Properly Insulated
4.08	Attic & Crawlspace	Rubber Backed Cloth Duct Tape Not Title 24-Compliant
4.09	Attic & Garage	Gas Lines Not Properly Supported
4.10	Attic & Garage	No Sediment Trap on Gas Piping to Furnaces and Water Heater Gas Piping
4.11	Attic Furnace	Overflow Drain Not Piped From Evaporator Coil
4.12	Attic Furnace	Supply and Return Air Plenums Not Sealed Properly

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4.13	Attic Furnace	Supply Air Plenum and Return Air Plenum Are Not Supported
4.14	Attic Furnace	Wire Flex Duct Joints Spliced Without Metal Sleeves
4.15	Attic Furnace	The Gas Vent System From the Furnace is too Short
4.16	Attic Furnace	Gas Vent Has Inadequate Clearances to Combustibles
4.17	Attic Furnace	Access Opening to the Furnace Is Inadequate
4.18	Garage Furnace	Condensate Drain Piped Into Water Heater Safety Valve Piping
4.19	Garage Furnace	Condensate Drain Size Reduced and Not Mechanically Connected
4.20	Garage Furnace	Return Air Ducting Is Not Insulated
4.21	Garage Furnace	Return Air Ducting Is Not Sealed
4.23	Garage Furnace	Building Cavity/Sheetrock Used for Return Air
4.24	Garage Furnace	Return Air Opening too Large for Return Grille
4.25	Garage Furnace	Refrigerant Line is Not Adequately Supported in Crawl Space
4.26	Garage Furnace	Refrigerant Line Insulation Damaged
4.27	Garage Furnace	Unprotected Openings in Fire Rated Wall and Ceiling
4.28	Crawlspace	Single Wall Vent Connector too Close to Wall
4.29	Crawlspace	Ductwork Is Lying on Ground
4.30	Crawlspace	Ductwork Is Smashed
4.31	Crawlspace	Ductwork Has Numerous Holes
4.32	Crawlspace	Inappropriate Duct Support Straps in Crawl Space
4.33	Crawlspace	Ducts Pinched/Restricted
4.34	Water Heater Issues	Gas Vent Leaks Gases Into Garage and Return Air Ducting
4.35	Water Heater Issues	Gas Vent too Close to Combustibles
4.36	Water Heater Issues	Gas Vent Not Properly Supported
4.38	Water Heater Issues	Gas Vent Termination too Close to Eave and Eave Vent
4.40	West Elevation	Opening in Stucco for A/C Lines Not Protected/Sealed
4.41	Crawlspace	Condensate Drain Empties Onto Crawl Space Vent
4.42	Downstairs Bedrooms Bathrooms	Bathroom Exhaust Vents too Close to Operable Windows
4.43	Downstairs Bedrooms Bathrooms	Bathroom Exhaust Back Draft Dampers Screwed Closed
4.44	Crawlspace	Gas Piping in/on Ground Without Required Conduit
4.46	Attic	Steamer Unit Not Seismically Restrained
4.47	Attic	Steamer Safety Pan Drain Has Reverse/No Slope
4.48	Crawlspace	Refrigerant Lines in Contact With Concrete Foundations
4.49	Crawlspace	Opening From Crawl Space Not Protected at Dryer Vent Penetration
4.50	Crawlspace	Inappropriate Couplings on ABS Plumbing Drain

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4.51	Attic	Bath Fan Exhaust Duct Smashed
4.52	Master Bedroom Laundry Closet	Washer Dryer Pan Undersized, Broken at Corner & Appears to Lack Drain
4.53	Attic	Condensate Water Leak at Evaporator Causing Mold
4.54	Exercise Room	Inadequate Clearance of Furnace Vent
5.00		ELECTRICAL
5.01	Main Panel	Not-Allowed Panel Box Installation
5.02	Main Panel	Electrical Conduit Not Fastened to Panel
5.03	Main Panel	Missing Expansion Fitting
5.04	Main Panel	Splices Within Panel
5.05	Main Panel	Raceway Not Sealed
5.06	Main Panel	Bonding Jumper Not Protected
5.07	Main Panel	Improper Location of Conductors
5.08	Main Panel	Improper Bending of Conductors
5.09	Main Panel	Conductors Not Secured
5.10	Main Panel	Poor Application of Anti-Oxidant Compound
5.11	Switches & Plugs	Excessive Gaps and Setbacks
5.12	Low Voltage	Wires Run Over Steel Edges
6.00		INTERIOR
6.01	Interior Stairways	Hazardous Riser Variation
6.02	Stairway to Den	Opening Between Tread and Wall
6.03	Gas Fireplaces	Hazardous Gas Fire Insert Installation
6.04	Downstairs Bedroom	Floor Out of Level
6.05	Living Room	Mantel Is Cracked
6.06	Various Doors	Multiple Interior Door Installation Defects
6.07	Exercise Room	Large Gap at Ceiling Light Fixture
6.08	Master Bathroom	Lack of Seal at Shower Fixtures
6.09	Exterior Bath	Toilet Escucheon Poorly Fit
6.10	Bath #5	Shower Enclosure Collapsing
6.11	Throughout	Missing or Inadequately Installed Insulation
6.12	Master Bedroom	Hump in Flooring
6.13	Entry	Unacceptable Entry Door Operation
6.14	Dining Room	No Access to Attic Space
7.00		
7.01	Various	Crawlspace Openings Inadequate
7.02	Throughout	Inadequate Ventilation
7.03	Post Bases	Inadequate Post Base Installation
7.04	Steel Post	No Grout Beneath Post/Post Fasteners Rusted

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MFC #	Room/Area	Short Claim
7.05	Cripple Walls	No Solid Blocking Where Required
7.06	North Stem Wall	Framing Incomplete
7.07	Various	Insulation Damaged
7.08	Subarea	Foundation Stem Walls Altered for Ductwork
7.09	Subarea	Cellulose Debris

Sum(MFC Allow): \$871,473.92



Micah Rodler
Senior Inspector/Consultant



Myles F. Corcoran, CEO