

Northface Resort Condominium Association

Special Meeting Flues and Fireplaces **XX July 2023**

V 3.0 Draft – As of 24 Jun 2023
*85% Product only – Awaiting critical quotes to
finalize for Board Review (To support Special
Meeting)*

Purpose - Why are we here?

- 1) Communicate the problems to ensure all understand
 - Difficult 19 month journey with many twists and turns
 - Decades long misconceptions and conflicting direction
 - Recent (6 Jun 2023) Bldg 1 and 4 thimble issue (**Still awaiting thimble photos and distance discrepancies**)
- 2) Explain Bldg 2 and 3 Chimneys resolution
 - Five (5) alternatives identified and evaluated
 - Present Board of Directors selected option
 - Give owners opportunity for questions/answers
- 3) Explain owners responsibilities prior to unit operation (i.e., what you as an owner have to do)
- 4) Present the path forward
 - Pending actions
 - Vote on how to fund (reserves, special assessment)

Special Thanks to Chimney Committee

Owner volunteers after the November 2023 Annual/Special Meeting

- Unit 06 Jessica Bessette
- Unit 18 Ben Averill (Board Member)
- Unit 19 Bob Lang (Board Member)
- Unit 20 Trish Rich (Board Member)
- Unit 20 Greg Wheeler
- Unit 24 Scot Haigh

- + FGPM Melissa Carr

1st Topic – Defining the Problems

- Majority of Bldg 1-4 stove installations do not meet code
 - Only exception seems to be some (Bldg 1 and 4) pellet stoves
 - Three problem areas (ref 2022 Annual Meeting Minutes)
 - Inadequate distance from combustibles to stove connector pipe
 - Association (If thimble (common area) too close to combustible)
 - Owner responsibility to procure suitable stove connector pipe (running from stove to thimble)
 - Installed stoves have inadequate clearance to combustibles
 - Owner Responsibility – based on individual stove specs & code
 - Bldg 2 & 3 common flues - Code requires separate flue per device
 - Association Responsibility to resolve (Common Area)

1st Topic – Defining the Problems

- Same code requirement since 1980 code but ‘experts’ interpretation changed – from ‘Live Free or Die’ to detailed enforcement e.g.,
 - Safety Sweep (Retained for Chimney cleaning)
 - ✓ Sep 2005 Report: No Issues
 - × Sep 2021 Report: Multiple code issues
 - Bldg 2 and 3: Common flues not to code
 - Bldg 1 and 4: Multiple unit code clearance issues – Led to Board issuance of Bldg 1-4 no-burn until rectified
 - North Conway Fire Department
 - ✓ Fall 2005: Signed off on repairs to Bldg 3 common flues
 - × Oct 2021: Issued ‘No-burn’ order for common flue
 - Local Stove Shops:
 - × Installed some fireplaces with inadequate clearances per code
- Pellet Stoves issues: Dependent on particular stove specifications (i.e., in owners manual), Some stoves may require 4 inch flue (Put Flue within Flue) unless venting into larger clay/ceramic flue

1st Topic – Defining the Problems

Items of Special Interest

- Despite ‘not to code’ issues, there does not appear to be any damage from 36 years sustained operation (1985-2021)
 - Never had fire or incident from fireplace operations from code issues

[Note: 2004 stove connector pipe incident – birth of mandated cleaning policy;
http://www.northfaceresort.com/Worth_Knowing/Correspondence/2004/21_jan_2004_notice_stovepipe_fire.pdf]

- 2021/2022: Association retained ‘Fire Engineer’ (Bergeron Technical Services) to evaluate situation and conduct a sample demo (Unit 29)
 - No evidence of Pyrolysis which had been the major concern



Pyrolysis: ‘Materials that have become visually charred or exposed to elevated temperature, or otherwise showed any adverse effects from elevated and/or extended high-heat exposure’

Brick removed and drywall cut showing studs and insulation

1st Topic – Defining the Problems

Items of Special Interest

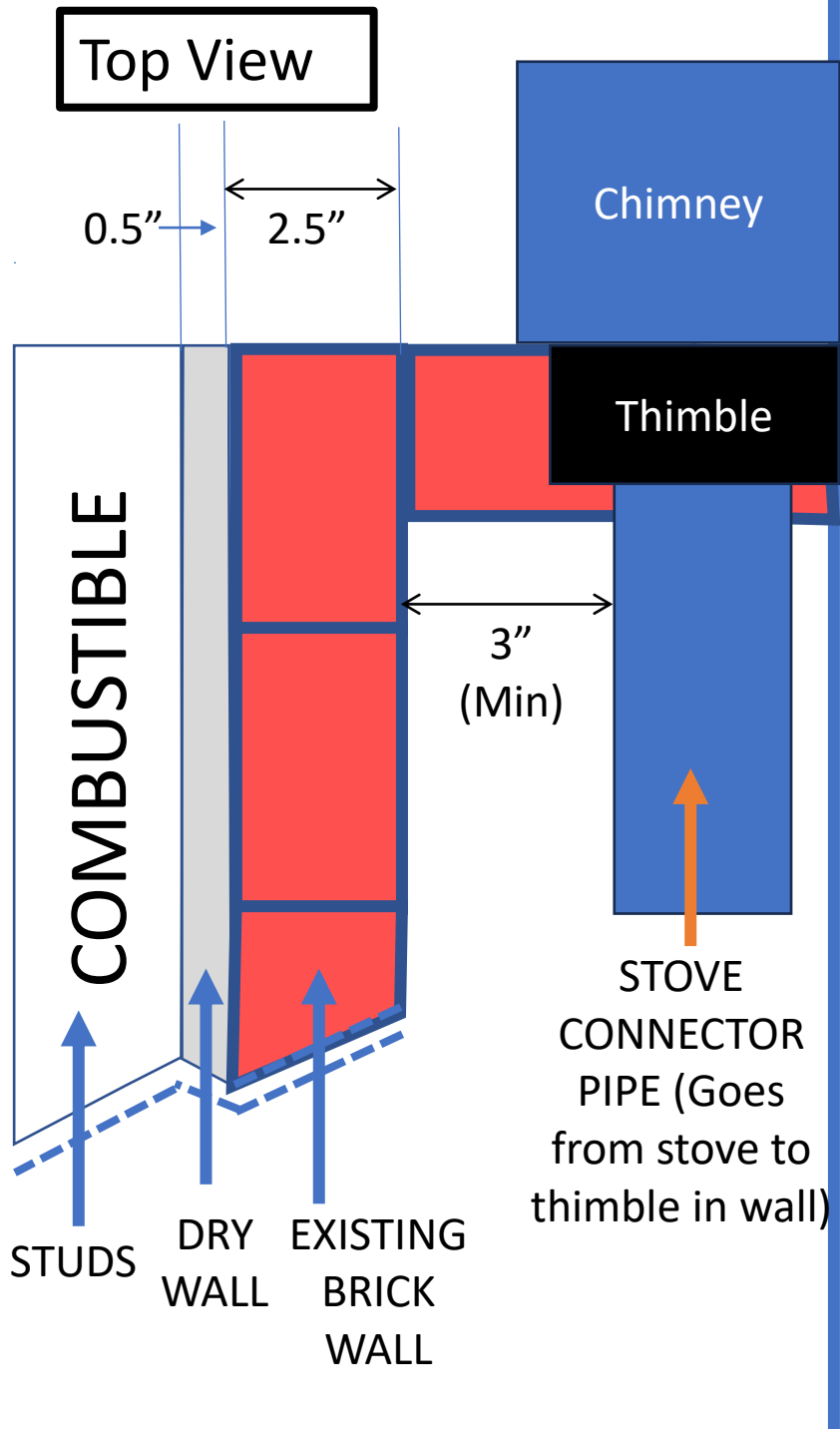
- Thimbles fine (Key component in chimney linking stove to flue)



- *‘Thimble found to be double-wall insulated double wall stainless steel.*
- *Minimum clearance to combustibles not specified in codes but always based on manufacturer's "listing,"*
- *While manufacturer can not be determined, similar materials are listed to be installed no closer than 6" to combustible materials.’*

Unit 29 (Bldg 3) Selective Investigative demo

- Despite good condition, most thimbles need to be replaced
 - Many too close to combustibles (details in later slides) to allow code required distance for stove connector pipe
 - Bldg 2 and 3 – Will be replaced as part of reconstruction
 - Bldg 1 and 4: Some were different configuration - not all are doubled walled construction (as Unit 29 sample demo)



Need 3 in minimum from existing brick wall to stove connector pipe to meet code

- 18 inches required by code (from stove connector pipe to combustibles) unless one of two mitigation techniques used:
 - 1 in air gap behind brick (no Northface unit has – would require hearth rebuild
 - Use of “Double walled” stove connector pipe
- Mitigation allows a 66 2/3% reduction in clearance or $18/3 = 6$ inches
- Drywall and existing brick = 3 inches
- Thus need 3 inches minimum between stove connector pipe and brick ($6-3 = 3$)

Units having 3 inches (pipe to brick) would not require a new thimble (to move the pipe over)

1st Topic – Defining the Problems

Items of Special Interest

Bldgs 1 and 4: 06 Jun 23 Intervale Stove Shop Inventory

Unit	Distance to side wall	Thimble size	Thimble Construction
1	2.5"	6"	?
2	1"	6"	?
3	1"	6"	?
4	1"	6"	?
5	3"	6"	?
6	1"	6"	?
7	2"	6"	?
8	1"	6"	?
33	3"	7"	?
34	1.5"	7"	?
35	1.5"	7"	?
36	5"	6"	?
37	2"	7"	?
38	1"	7"	Ceramic
39	1"	8"	?
40	2"	8"	?

Insert photos from Melissa/Intervale

Show double-walled thimble(Bldg 1?)

Show ceramic thimble (Bldg 4?)

2nd Topic - Building 2 and 3 Options



Common Flue Issue – Five (5) Alternatives considered

Building 2 and 3 Options

Option 1: Modify Existing Chimneys to house six, 6-inch steel flues

- How:

- Cut entire wall facing Thompson Road and remove material
- Insert six, 6-inch steel flues into cleared space/insert new thimbles
- Rebuild front wall



- *Ballpark construction cost:* \$150,000 (Masonry Unlimited, Sanbornville NH)

- Pros:

- Uses existing chimney – limited demo and rebuilding
- Takes advantage of what we already have – if fails, can always rebuild
- Clean appearance – same look and footprint as we currently have

- Cons:

- Cannot mandate 6” flues (vs 8”) to selected owners (condo docs)
- Steel Flues vs clay - Pellet users may need to insert 4” flue

Building 2 and 3 Options

Option 2: Use existing chimneys as is and add additional flues

- How:
 - 2nd floor to use existing flue with inserted 6 inch steel flue
 - 3rd floor to vent thru ceiling
 - 1st floor to vent thru exterior and run up along exterior of chimney
- *Ballpark construction cost: \$190,000 (Intervale Stove Shop)*
- Pros:
 - Can be done relatively quickly
- Cons:
 - 8 additional flues near chimneys – can design masking to hide
 - Cannot mandate 6” flues (vs 8”) to selected owners (condo docs)
 - Steel Flues vs clay - Pellet users may need to insert 4” flue

Building 2 and 3 Options

Option 3: Demolish chimneys and rebuild larger chimneys with six, 8-inch clay flues

- *Ballpark construction cost:* \$? [**\$225K (Ben's 9 Jun email) + chimney demo and \$7500* 4 (30K) deck mods – say \$300k until get quote**] (Szetela Masonry)
- Pros:
 - Fully compliant providing 8-inch flues
 - Clay flues – 50 year lifespan vs 25 for steel. Also, pellet users may not need to insert additional 4 inch flue (depending on stove install requirements)
- Cons:
 - Sizeable risk factor as entails deck modification (supports) in addition to chimney teardown and rebuild
 - 39 inch (3 ¼ ft) decrease in deck space
 - 20 inch depth, 49 inch width: Current Chimneys
 - 20 inch depth, 80 inch width: New chimneys

Building 2 and 3 Options

Option 4: Demolish chimneys and rebuild to same footprint with four, 8-inch clay flues, and vent 3rd floor through ceiling

- *Ballpark construction cost: \$? [TBD – but roughly this should be (from Opt 3, \$225 for chimneys, + \$0 deck mods + cost to vent 3rd floor thru attic – say \$275K until quote)]* (Szetela Masonry)
- Pros:
 - Fully compliant providing 8-inch flues
 - Same footprint – no change in deck size
 - Clay flues – 50 year lifespan vs 25 for steel. Also, pellet users may not need to insert additional 4 inch flue (depending on stove install requirements)
- Cons:
 - Expect issues with major renovations
 - *Can 8 inch be done via ceiling – word was 8” cost was prohibitive and could only do six inch* – would make this non-compliant for 8 inch users

Building 2 and 3 Options

Option 5: “Option 1+”

Clear out existing chimneys, instead of adding six, 6-inch steel flues, add four (4) 8-inch clay flues (for floor 1&2) and add two (2) 8-inch steel flues thru roof (For floor 3)

- *Ballpark construction cost:* \$? [TBD – roughly this should be (from Opt 1, \$150 for chimneys + cost to vent 3rd floor thru attic – say \$190K til quote] (Masonry Unlimited/Chimneys, Intervale/3rd floor)
- Pros:
 - Fully compliant providing 8-inch flues (Northface baseline config)
 - Clay flues – 50 year lifespan vs 25 for steel. Also, pellet users may not need to insert additional 4 inch flue (except 3rd floor w/steel flue)
 - Uses existing chimney – limited demo and rebuilding – no change in deck size
 - Takes advantage of what we already have – if fails, can always rebuild
 - Clean appearance – same look and footprint as we currently have
- Cons: ?

Building 2 and 3 Options - Summary

NORTHFACE RESORT

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BUILDING 2 & 3 CHIMNEY OPTIONS ANALYSIS

	FLUE SIZE	FLUE MATERIAL	SCHEDULE 2023	COST	RISK/ CONTINGENCY *ballparks	BUILDING IMPACTS	ADDITION OWNER COSTS Building 2 & 3
OPTION 1 Modify Existing Chimney	6"	Steel 15-20yrs	Yes	\$120,000?	*15%	None	Possibly new wood stove, 4" flue liner for pellet use
OPTION 2 Existing chimney + 4 Exterior Flues	6"	Steel 15-20yrs	Possibly?	\$190,000 + cost of wood enclosure?	*10%	Roof penetrations and deck size reduction	Possibly new wood stove, 4" flue liner for Pellet use
OPTION 3 Rebuild Larger Brick Chimney	8"	Clay 40-50 yrs	Unlikely	\$300,000?	*25%	Deck size reduction	
OPTION 4 Rebuild to match Bldg 1&4 + 3 rd floor Exterior Flue	8"	Clay/Steel 40-50yrs	Possibly	\$275,000?	*20%	Roof penetration	4" flue liner for Pellet use THIRD FLOOR ONLY
Option 5 Modify Existing Chimney to match Bldg 1&4 + 3 rd floor Exterior Flue	8"	Clay/Steel	Possibly	\$200,000?	15-20%	Roof penetration	4" flue liner for Pellet use THIRD FLOOR ONLY
NOTE: All owners will need their stove manual for final inspection							
NOTE: All owners will need to address specific unit conditions							

Building 2 and 3 Options – Board Planned way forward

TBD – Still awaiting quotes to make determination

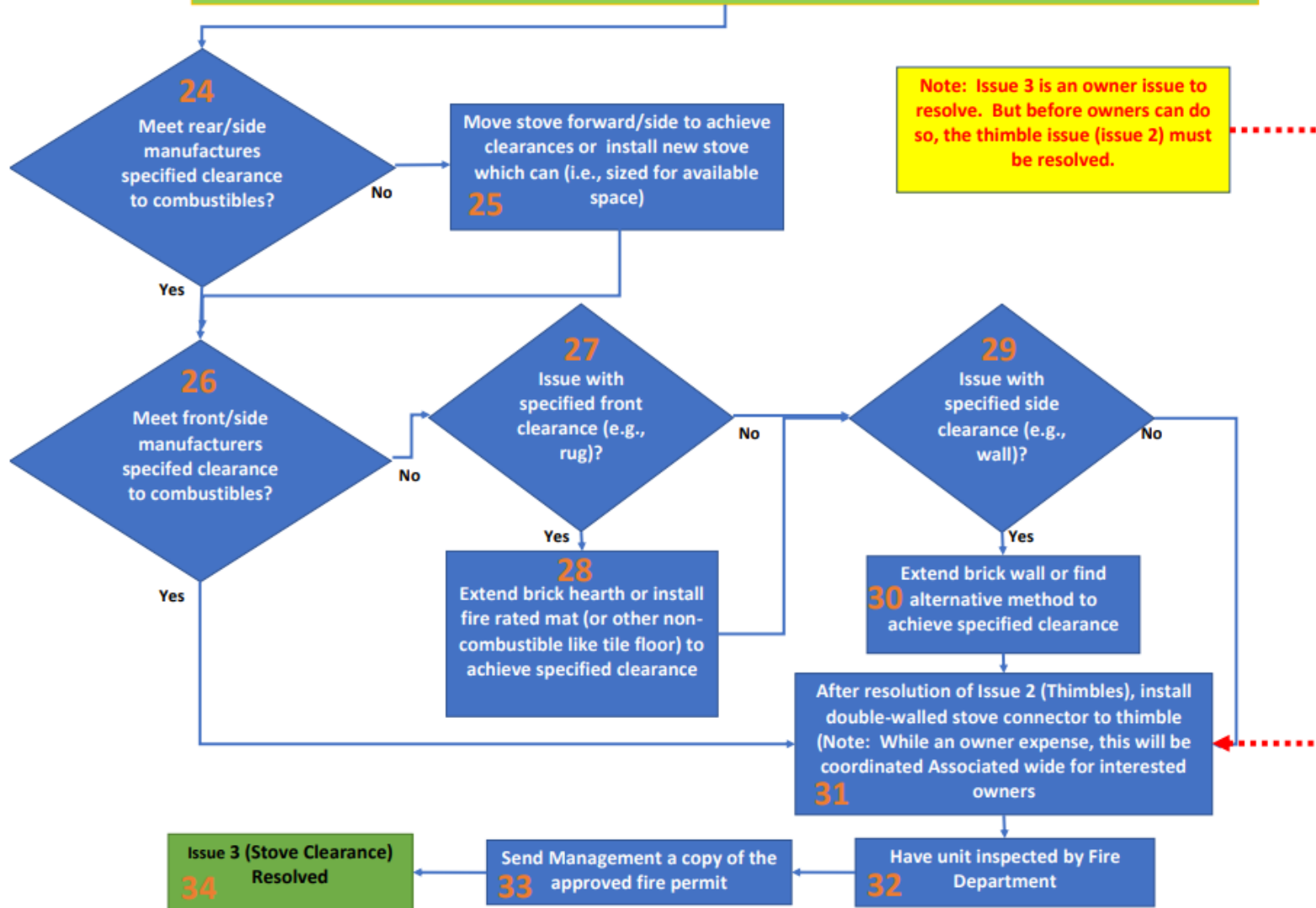
3rd Topic – Owners Responsibilities

Actions owners must accomplish (after Association flue and thimble work complete)

- Ensure stove is located within proper clearances per stove installation instructions (use following flowchart as guide)
- Install ‘double walled’ chimney pipe connector
 - Cost may vary per unit depending on stove configuration
 - **\$XXX: Approximate cost**
 - One vendor is Intervale Stove – familiar with need
- Inspection via fire department and send to management for insurance files prior to any burning
 - Currently \$60 fee

3rd Topic – Owners Responsibilities

Issue 3: Stove Clearances (see separate flowcharts for issues 1 & 2)



4th Topic – Path Forward

- Bldg 2 and 3 Common flues
 - Proceed with Option 5 (clear and reuse existing chimney with additional 3rd floor venting) with Option 4 (rebuild to same footprint) as backup in event of failure to clear existing chimneys
- Set future Association configuration
 - 8 inch Class A thimbles, 8 inch flues (unless owner declines – any future work would then be owner expense)

4th Topic – Path Forward

- Bldg 1 and 4 Thimble replacement:
 - Replace Unit 38 Thimble now as test case (owner Volunteer)
 - Current ceramic thimble has to be replaced anyway (cracked) & owner already has double walled stove connector pipe
 - Intervale stove to coord approach with Fire Department prior
 - Confirm angled thimble will meet code as current thimble is only one inch to brick wall (4 in to combustibles vs 6 required at thimble entrance)
 - When done, owner gets NCFD inspection - confirm acceptability
 - Replace remaining thimbles-gets Bldgs 1 & 4 back in operation
 - Owners can decline – each unit separately owned
 - If have pellet stove and meet code, no need replace thimble
 - New 8” thimble configuration may incur additional owner expense to connect hook up
 - Any future change (moving to wood) would be owner expense
 - Unit 6 doing this now – Pellet stove that meets all reqts as is

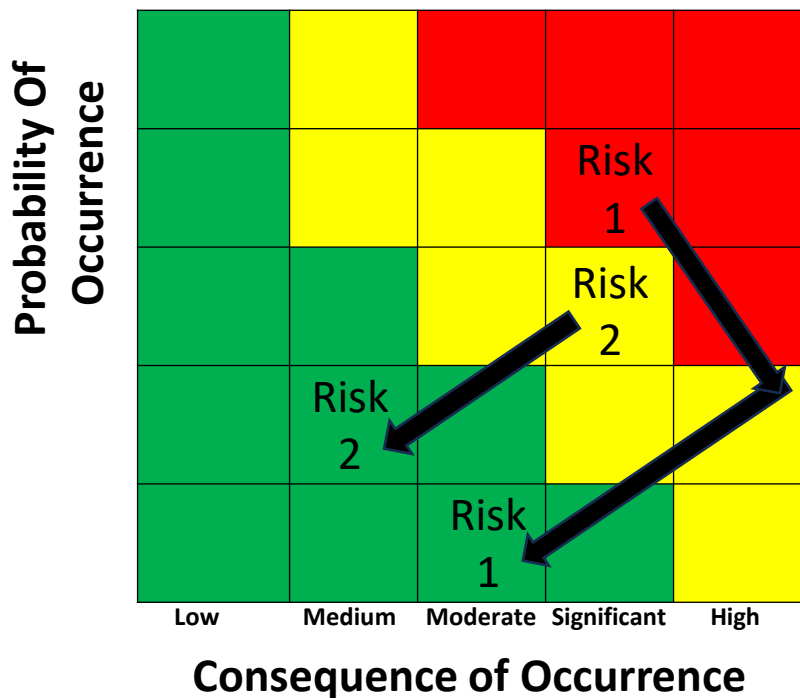
Setting the Stage – Path Forward

- Before Burning; each unit to individually get approval via Fire Department
 - \$60: Current fee
 - Will need your stove manual/Specifications as all stoves different
 - Critical for insurance liability
- Reminder: No annual self cleaning – association will arrange or you can submit receipt from professional stove shop each year

Additional info at [Northfaceresort.com](http://www.northfaceresort.com), click history, click events, click chimneys/flues or direct link at

http://www.northfaceresort.com/Northface_History/chimneys/chimneys.html 23

Risk Factors – Managing Expectations



Risk 1: If the Bldg 1 and 4 ceramic thimbles can not be replaced with Class A double walled steel in the same location, then more extensive chimney modifications will be required

Mitigation:

- 1 – Conduct inventory of thimble distances to combustibles – completed 06 Jun
- 2 – Replace one unit thimble (test case) w/worst case clearance after review with Fire Dept
- 3 – After install, get Fire Dept inspection/permit before doing remaining units

Risk 2: If the Bldg 2 and 3 chimneys can not be routed (especially with Bldg 3 concrete repairs), then chimneys will be rebuilt at higher cost

Mitigation:

- 1 – Cost includes a 20% risk factor
- 2 – Vendor confident of approach – appears to be an industry standard
- 3 – Using technique to remove front vs routing from top – higher success probability
- 4 – Will start with Bldg 2 first (no concrete filler) for learning curve

Project Costs – How best to pay

These costs are too high – need to get in the proposals – see cost slide (First backup slide)

Reserve Status

\$154,694.00	Reserves at year end (including \$250/qtr assessments)
\$42,900.00	Keeping 3 months condo fees
\$111,794.00	Amount available for Chimney Work

3 Options to pay

Option 1: Use all reserves for chimney work and keep \$250/Qtr assessment thru 2024 to replenish reserves

\$303,875.00	Total Project Cost
-\$154,694.00	Amount from reserves
\$149,181.00	Remaining amount needed
\$3,390.48	Assessment per unit (44 units)

Cost briefed last Nov was \$276,442 or \$6,283 assessment per owner

Option 2: Keep 3 months condo fees in reserve (\$42,900)

\$303,875.00	Total Project Cost
-\$111,794.00	Amount from reserves
\$192,081.00	Remaining amount needed
\$4,365.48	Assessment per unit (44 units)

Option 3: Other options?

Bldg 2 and 3 renovation includes a 20% risk factor. If project comes in at cost, that would be a \$50K savings and no \$250/Qtr assessments needed in 2024

Backup Slides

Project Costs

	Chimney modification or Rebuild cost	Class A All Fuel Chimneys	Carpentry	Buildings 2 and 3 thimbles move (interior work) (24 total)	Buildings 1 and 4 thimbles (16 total)	SubTotal	5% Mgt Fee	Contingency Opt1 @15% Opt2 @10% Opt3 @25% Opt4 @20% Opt5 @20%	Total
Option 1 – Clean Out and/or Rebuild Chimneys and Insert 6” steel flues	113,500	0	8,000	24,000	33,600	179,100	8,955	26,865	214,920
Option 2 – Use existing chimneys for one floor and add 4 external 6-inch Class A chimneys per stairwell (16 total)	0	192,800	0	24,000	33,600	250,400	12,520	25,040	287,960
Option 3 – Rebuild each chimney w/6 8-inch clay flues	145,040	0	30,000	24,000	33,600	232,640	11,632	58,160	302,432
Option 4 – Rebuild each chimney w/4 8-inch clay flues plus 2 Class A Chimneys	128,000	64,000	8,000	24,000	33,600	257,600	12,880	51,520	322,000
Option 5 – Modify existing chimneys to match Bldg 1&4 + 3rd floor Class A Chimneys	113,500	64,000	8,000	24,000	33,600	243,100	12,155	48,620	303,875

NOTES:

- Options 1 and 2 modifications reduce current flues from 8-inch to 6-inch which would require owners w/8-inch stove connectors to replace their stoves.
- Option 3 would require an expansion of the width of the current chimney footprints from 40 inches to 60 inches. This would impact deck space for some owners.
- Column 3 Buildings 2 and 3 thimble moves assumes \$1000 for interior work per hearth to move thimble openings. Assumes all options will require this work.
- Column 4 Buildings 1 and 4 thimbles includes cost of thimble replacement and thimble-related interior work per hearth at \$2100 per unit
- All options presented here are Association costs. Owners will also be responsible for required modifications to stove connector pipes and 26 possible hearth modifications in order to become code-compliant.

Bldg 2 and 3 Offset if go to 6 inch flues

Current Flue Requirement	Owners Responding to data call	Guesstimate from research*
8 Inch Flues	2	7
7 inch Flues	1	3
6 inch Flues	3	2
4 inch Flues	2	3
no stove	1	1
Don't Know	2	8
Total	11	24

*On-Line research of manuals based on stove listing per Bergeron Report

Bldg 2 and 3 Offset if go to 6 inch flues

Unit Number	Brand	Stove Pipe
09	Lopi	
10	NO STOVE	
11	PELLET STOVE	
12	Meredith	7"
13	Jotul	
14	Lopi	
15	Meredith	7"
16	Consolidated Dutchwest India / Federal Airtight	8"
17	Jotul	8"
18	Quadra-Fire Explorer	6"
19	Majestic	8"
20	Garrison	8"
21	PELLET STOVE	
22	Jotul	
23	Vermont Castings	8"
24	Jacuzzi	
25	Unknown / unmarked / no placard	
26	Lopi	
27	Jotul	
28	PELLET STOVE	
29	Vermont Castings	8"
30	Meredith Model	7"
31	Consolidated Dutchwest India / Federal Airtight	8" 6"
32	Consolidated Dutchwest India / Federal Airtight	8"

Guesstimate only – probable flue sizes based on on-line review of manuals; using stoves listed in Bergeron Report as source material – may or may not be correct – need each owner to confirm