## 2015 Mechanical Proposals

Number	Submitter	Code	Section	Subject	Editorial / Policy / Technical / Correlation	TAG Date / Action	Committee Date / Action
15-M00	Larry Andrews	IMC / IRC	(4 props/sections)	UPC/IPC correlation	E*	*Staff already di	rected to correlate
15-M01	Eric Vander Mey	IMC	306.6	Access above ceiling	Т		
15-M02	Eric Vander Mey	IMC	403.3.1.1	Min. Ventilation rates-refr	Т		
15-M03	Eric Vander Mey	IMC	403.3.1.1	Min. Ventilation rates-kitch	Т		
15-M04	Eric Vander Mey	IMC	403.3.1.1	Min. Ventilation rates-gar lob	Т		
15-M05	Eric Vander Mey	IMC	403.3.1.1	Min. Ventilation rates-res cor	Т		
15-M06	Eric Vander Mey	IMC	403.3.1.1	MVR - copier	Т		
15-M07	Eric Vander Mey	IMC	403.3.2	Residential ventilation	E / C		
15-M08	Eric Vander Mey	IMC	403.8	Distribution-adjoining spaces	Т		
15-M09	Luke Howard	IMC / IRC	403.8 / M1507.3.1	ASHRAE 62.2	E / T		
15-M10	Luke Howard	IMC / IRC	403.8 / M1507.3	Outdoor air distribution	Т		
15-M11	Luke Howard	IMC / IRC	403.8.2 / M1507	Whole house vent controls	E / T		
15-M12	John Williams	IMC	407	Group I-2/ASHRAE 170	Т/С		
15-M13	Eric Vander Mey	IMC	504.4	Dryer exhaust	E / T		
15-M14	Eric Vander Mey	IMC	505.1	Range exhaust	Т		
15-M15	Eric Vander Mey	IMC	515	Chute venting`	Т		
15-M16	Eric Vander Mey	IMC	601.2	Corridor supply	Т		
15-M17	Eric Vander Mey	IMC	606.1	Return smoke detectors	Т		
15-M18	Maureen Traxler	IMC	1107.2	Refrigerant piping	E / T		
15-M19	Larry Andrews	IMC	1209.5.1	Slab insulation	С		
15-M20	Larry Andrews	IMC	1210.7.6	Expansion tanks	Т		
15-M21	Dave Cantrell	IRC	M1307.2	WH Strapping	E / C		
15-M22	Larry Andrews	IRC	M2101.7	Prohibited tee	Т		
15-M23	Larry Andrews	IRC	M2105.25	Labeling and marking	Т		
15-M24	Larry Andrews	IRC	M2105.28	Testing	Т		
15-M25	, Dave Cantrell	NFPA 54	5.6.1.1	Pipe identification	E / C		
15-M26	Dave Cantrell	IFGC	401.9	Pipe identification	E/T/C		
15-M27	Dave Cantrell	IRC	G2412.9 (401.9)	Pipe identification	E/C		
15-M28	Dave Cantrell	IRC	M1301.2	Pipe identification	E/T		
15-M29	Dave Cantrell	IMC	301.3	Pipe identification	E / T /C		
15-M30	Jeff Peterson	IRC	M1505.1	BBQ hoods	E/T		
15-M31	Lou Malattia	IRC	M1507	Outdoor air inlets	Т		





# 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
- Uniform Plumbing Code

State Energy Code
 International Mechanical Code
 International Fuel Gas Code
 NFPA 54 National Fuel Gas Code
 NFPA 58 Liquefied Petroleum Gas Code
 Wildland Urban Interface Code

# Section(s): M2101.3

(e.g.: Section: R403.2)

# **Title: Protection of potable water**

(e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s) _	_M2101.3	Section(s)
Code(s)	_M2101.5	

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Make the people know which code to go to. Remove Section P2902 insert present UPC

# 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

7. Is there an economic impact:  $\Box$  Yes X $\Box$  No

Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



## 1. State Building Code to be Amended:

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 NFPA 54 National Fuel Gas Code
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 Wildland Urban Interface Code

# **Section(s): 908.5**

(e.g.: Section: R403.2)

**Title: Water supply** (e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s) 908.5	Section(s)

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

- **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Remove International Plumbing Code insert <u>UPC</u>
- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
  - The amendment is needed to address a specific state policy or statute.
  - The amendment is needed for consistency with state or federal regulations.
  - The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

7. Is there an economic impact:  $\Box$  Yes X No

Explain: Cost for the wire and installation

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	\$	\$1	0	\$0	0	\$1
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

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 NFPA 58 Liquefied Petroleum Gas Code
 Wildland Urban Interface Code

# Section(s): 1206.2

(e.g.: Section: R403.2)

**Title: System drain down** (e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s)1206.2	Section(s)

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

- **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Remove International Plumbing Code insert <u>UPC</u>
- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
  - The amendment is needed to address a specific state policy or statute.
  - The amendment is needed for consistency with state or federal regulations.
  - The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

7. Is there an economic impact:  $\Box$  Yes X No

Explain: Cost for the wire and installation

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	\$	\$1	0	\$0	0	\$1
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



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- International Building Code
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- International Fire Code
- Uniform Plumbing Code



# Section(s): 1206.3

(e.g.: Section: R403.2)

# **Title: Protection of potable water**

(e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s)1206.2	Section(s)

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

- **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Remove International Plumbing Code insert <u>UPC</u>
- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
  - The amendment is needed to address a specific state policy or statute.
  - The amendment is needed for consistency with state or federal regulations.
  - The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

7. Is there an economic impact:  $\Box$  Yes X No

Explain: Cost for the wire and installation

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	\$	\$1	0	\$0	0	\$1
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 15-M19

# STATE OF WASHINGTON STATE BUILDING CODE COUNCIL

## 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

State Energy Code
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 Wildland Urban Interface Code

# Section(s): 1209.5.1

(e.g.: Section: R403.2)

## Title: Slab on grade installation

(e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s)1209.5.1	Section(s)

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

- **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Remove R-valve5 insert <u>R-valve10</u>
- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
  - The amendment is needed to address a specific state policy or statute.
  - The amendment is needed for consistency with state or federal regulations.
  - The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

7. Is there an economic impact:  $\mathbf{X}$  Yes  $\square$  No

Explain: If you had installed the foam board and found out it was not to code and had to remove it.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	\$	\$10	0	\$0	0	\$10
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

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State Energy Code
 X International Mechanical Code
 International Fuel Gas Code
 NFPA 54 National Fuel Gas Code
 NFPA 58 Liquefied Petroleum Gas Code
 Wildland Urban Interface Code

Section(s): 1210.7.6

(e.g.: Section: R403.2)

**Title: Expansion Tanks** (e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s)1210.7.6	Section(s)

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Add insert: <u>Shutoff valve then drain and expansion tank</u> shall be installed at connection to all expansion tanks.

# 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

7. Is there an economic impact: X Yes No

Explain: Cost for tee and boiler drain

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	\$.05	\$.10	0	\$0	0	\$.10
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

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 International Mechanical Code
 International Fuel Gas Code
 NFPA 54 National Fuel Gas Code
 NFPA 58 Liquefied Petroleum Gas Code
 Wildland Urban Interface Code

# Section(s): M2101.7

(e.g.: Section: R403.2)

# **Title: Prohibited tee application**

(e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s) _	_M2101.7	Section(s)

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Remove the whole section won't allow primary secondary pumping not in touch with modern piping.

# 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

7. Is there an economic impact:  $\Box$  Yes X  $\Box$  No

Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 15-M23

# STATE OF WASHINGTON STATE BUILDING CODE COUNCIL

## 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
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State Energy Code
 International Mechanical Code
 International Fuel Gas Code
 NFPA 54 National Fuel Gas Code
 NFPA 58 Liquefied Petroleum Gas Code
 Wildland Urban Interface Code

# Section(s): M2105.25

(e.g.: Section: R403.2)

# Title: Labeling and marking

(e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s)M2105.25	Section(s)
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Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

- 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Add to the section <u>14 gage underground rated tracing wire to all underground plastic piping for tracing ability for the system.</u>
- 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

X The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

7. Is there an economic impact:  $\mathbf{x}$  Yes  $\square$  No

Explain: Cost for the wire and installation

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	\$1	\$10	0	\$10	0	\$10
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

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 International Fuel Gas Code
 NFPA 54 National Fuel Gas Code
 NFPA 58 Liquefied Petroleum Gas Code
 Wildland Urban Interface Code

# Section(s): M2105.28

(e.g.: Section: R403.2)

# Title: Labeling and marking

(e.g: Footings for wood foundations)

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Edwin L. Andrews II Title: President Date:3-1-2015
- 3. Designated Contact Person: Name: Edwin L. Andrews II Title: President Address: 1503 E. Wabash Spokane, WA 99207

Code(s)M2105.28 Sect	ion(s)
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Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

- 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required. Remove: Flow and pressure----- to action taken. Add blow out each circuit before connecting to the manifold then test with 80 psi dry nitrogen for 24 hours without any gauge loss. This works in all weather condition also will find even the smallest leaks. Nitrogen is less dense then water and even the smallest leaks can be found before back filling would happen. This way you can add the antifreeze at later point in construction. Antifreeze when put into a system can take a month to remove all the air out of the system.
- 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

X The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

7. Is there an economic impact:  $\Box$  Yes x  $\Box$  No

Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	0	\$10	0	\$10	0	\$10
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.

Please send your completed proposal to: <u>sbcc@ga.wa.gov</u>



# 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

State Energy Code

International Mechanical Code

International Fuel Gas Code

NFPA 54 National Fuel Gas Code

- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

Section: 407.1 New Page: 35 Title: AMBULATORY CARE FACILITIES AND GROUP I-2 OCCUPANCIES

2. Proponent Name (Specific local government, organization or individual): Proponent: John Williams Title: Manager, Department of Health, Construction Review Services Date: 2/2015

3. Designated Contact Person: Name: John Williams Title: Manager Address: 111 Israel Rd. Tumwater WA 98501

> Office Phone: 360-236-2950 Cell: E-Mail address: john.williams@doh.wa.gov

Code(s) _IMC	<b>Section(s)</b> 407.1
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#### SECTION 407 AMBULATORY CARE FACILITIES AND GROUP I-2 OCCUPANCIES

**407.1 General.** <u>Mechanical ventilation for health care facilities licensed by Washington state shall be designed and installed in accordance with this code and the following provisions of the Washington Administrative Code (WAC).</u>

1. Mechanical ventilation in ambulatory care facilities shall comply with WAC chapter 246-330;

2. Mechanical ventilation for acute care hospitals shall comply with WAC chapter 246-320;

3. Mechanical ventilation for nursing homes shall comply with WAC chapter 388-97.

Mechanical ventilation for <u>unlicensed</u> ambulatory care facilities and Group I 2 occupancies shall be designed and installed in accordance with this code and ASHRAE 170.

#### 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

The section being modified is a new requirement in the 2015 IMC. It was added to specifically address the special ventilation requirements for healthcare facilities. The state of Washington has specific ventilation requirements for hospitals, nursing homes and most ambulatory care facilities are equivalent but different from the base ASHRAE 170 document. Adopting this section would create potential conflicting regulations for DOH licensed facilities. Furthermore, proper use of ASHRAE 170 requires sophisticated understanding of the clinical functions and goals of each room in a facility. Many jurisdictions would not have the experience to appropriately deal with those questions.

The base language is left in to deal with unlicensed facilities. We don't know of any unlicensed Group I-2 facilities, but there are many unlicensed ambulatory care facilities. This standard is appropriate for unlicensed ambulatory care. Most mechanical designers for these facilities would be familiar with this standard and be able to certify compliance for the local AHJs.

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state: Washington state licenses

most healthcare facilities and provides specific requirements that may conflict with this section.

The amendment corrects errors and omissions.

# 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Licensed facilities are required to comply with ventilation requirements that are very similar to the referenced standard. Substitution of the licensing standard will not result in any cost impact.

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>



# 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
- International Mechanical Code
- X International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

**Section(s):** 401.9

Title: Identification

 2. Proponent Name (Specific local government, organization or individual): Proponent: Dave Cantrell
 Title: Chief Plumbing Inspector, Public Health – Seattle & King County

**Date:** February 26, 2015

# 3. Designated Contact Person:

Name: Dave Cantrell Title: Chief Plumbing Inspector, Public Health – Seattle & King County Address: 401 5<sup>th</sup> Avenue, Suite 1100, Seattle, WA 98104

Office Phone: (206) 263-8493 Cell: (206) 510-4378 E-Mail address: dave.cantrell@kingcounty.gov

#### 4. Proposed Code Amendment.

Code(s) 2015 International Fuel Gas Code Section(s) 401.9

Amend section to read as follows:

**401.9 Identification.** Each length of pipe and tubing and each pipe fitting utilized in a mechanical <u>fuel</u> gas system shall bear the identification of the manufacturer.

**Exception:** The manufacturer identification for fittings and nipples shall be on each piece or shall be printed on the fitting or nipple packaging or provided documentation. <u>Markings shall not be required on nipples created from cutting and threading of approved pipe.</u>

# 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

Piping of various lengths, including short nipples, are most often cut and threaded at the job site or off site prior to installation. Therefore, markings will not be available on the short sections of such material. Further, packaging of short nipples is generally a package that the retail outlet provides, which may only provide a description and price for the product, not something directly from the manufacturer. The manufacturer of the full length of pipe will not provide packaging or identification of piping that is cut and threaded by a retailer or installer, yet the current amendment erroneously mandates the manufacturer's identification for something they have no control over once it has been purchased. Additionally, the term "fuel gas system" applies here as opposed to "mechanical system".

# 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

**X** The amendment corrects errors and omissions.

# 7. Is there an economic impact: Yes X No Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
- X International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

**Section(s):** 301.3

Title: Identification

 2. Proponent Name (Specific local government, organization or individual): Proponent: Dave Cantrell
 Title: Chief Plumbing Inspector, Public Health – Seattle & King County

**Date:** February 26, 2015

# 3. Designated Contact Person:

Name: Dave Cantrell Title: Chief Plumbing Inspector, Public Health – Seattle & King County Address: 401 5<sup>th</sup> Avenue, Suite 1100, Seattle, WA 98104

Office Phone: (206) 263-8493 Cell: (206) 510-4378 E-Mail address: dave.cantrell@kingcounty.gov

#### 4. Proposed Code Amendment.

Code(s)2015 Mechanical CodeSection(s)301.3

Amend section to read as follows:

**301.3 Identification.** Each length of pipe and tubing and each pipe fitting utilized in a mechanical system shall bear the identification of the manufacturer.

**Exception:** Markings shall not be required on nipples created from cutting and threading of approved pipe.

#### 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

This proposed amendment is to be consistent with similar amendments being proposed or modified in the International Residential Code and the International Fuel Gas Code (IRC 1301.2 & G2412.9, IFGC 409.1, NFPA 54 5.6.1.1).

## 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

**X** The amendment corrects errors and omissions.

# 7. Is there an economic impact: Yes X No Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

Section(s): 1301.2

Title: Identification

2. Proponent Name (Specific local government, organization or individual): Proponent: Dave Cantrell Title: Chief Plumbing Inspector, Public Health – Seattle & King County

**Date:** February 26, 2015

# 3. Designated Contact Person:

Name: Dave Cantrell **Title:** Chief Plumbing Inspector, Public Health – Seattle & King County **Address:** 401 5<sup>th</sup> Avenue, Suite 1100, Seattle, WA 98104

Office Phone: (206) 263-8493 Cell: (206) 510-4378 E-Mail address: dave.cantrell@kingcounty.gov

#### 4. Proposed Code Amendment.

Code(s) 2015 International Residential Code Section(s) 1301.2

Amend section to read as follows:

**M1301.2 Identification.** Each length of pipe and tubing and each pipe fitting utilized in a mechanical system shall bear the identification of the manufacturer.

**Exception:** The manufacturer identification of fittings and pipe nipples shall be on each piece or shall be printed on the fitting or nipple packaging or provided documentation. Markings shall not be required on nipples created from cutting and threading of approved pipe.

# 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

Piping of various lengths, including short nipples, are most often cut and threaded at the job site or off site prior to installation. Therefore, markings will not be available on the short sections of such material. Further, packaging of short nipples is generally a package that the retail outlet provides, which may only provide a description and price for the product, not something directly from the manufacturer. The manufacturer of the full length of pipe will not provide packaging or identification of piping that is cut and threaded by a retailer or installer, yet the current amendment erroneously mandates the manufacturer's identification for something they have no control over once it has been purchased.

# 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

**X** The amendment corrects errors and omissions.

# 7. Is there an economic impact: Yes X No Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
   Wildland Udon Interfere Code
- Wildland Urban Interface Code

**Section(s):** 1307.2

Title: Anchorage of appliances

 2. Proponent Name (Specific local government, organization or individual): Proponent: Dave Cantrell
 Title: Chief Plumbing Inspector, Public Health – Seattle & King County

**Date:** February 26, 2015

# 3. Designated Contact Person:

Name: Dave Cantrell Title: Chief Plumbing Inspector, Public Health – Seattle & King County Address: 401 5<sup>th</sup> Avenue, Suite 1100, Seattle, WA 98104

Office Phone: (206) 263-8493 Cell: (206) 510-4378 E-Mail address: dave.cantrell@kingcounty.gov

#### 4. Proposed Code Amendment.

Code(s) 2015 International Residential Code

Section(s) 1307.2

Amend section to read as follows:

## M1307.2 Anchorage of appliances.

Appliances designed to be fixed in position shall be fastened or anchored in an approved manner. In Seismic Design Catefories D0, D1 and D2, and in townhouses in Seismic Design Category C, water heaters and thermal storage units shall be anchored or strapped to resist horizontal displacement caused by earthquake motion in accordance with one of the following:

- Anchorage and strapping shall be designed to resist a horizontal force equal to one-third of the operating weight of the water heater storage tank, acting in any horizontal direction. Strapping shall be at points within the upper one-third and lower one-third of the appliance's vertical dimensions. At the lower point, the strapping shall maintain a minimum distance of 4 inches (102 mm) above the controls.
- 2. The anchorage strapping shall be in accordance with the appliance manufacturer's recommendations.

Seismic anchorage and strapping of water heaters shall be in accordance with Section 507.2 of the Plumbing Code.

## 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

Seismic strapping is covered in Section 507.2 of the Uniform Plumbing Code.

- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
  - The amendment is needed to address a specific state policy or statute.
  - The amendment is needed for consistency with state or federal regulations.
  - The amendment is needed to address a unique character of the state.
  - **X** The amendment corrects errors and omissions.

# 7. Is there an economic impact: Yes X No Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



# 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

**Section(s):** G2412.9

Title: Identification

 2. Proponent Name (Specific local government, organization or individual): Proponent: Dave Cantrell
 Title: Chief Plumbing Inspector, Public Health – Seattle & King County

Date: February 26, 2015

# 3. Designated Contact Person:

Name: Dave Cantrell Title: Chief Plumbing Inspector, Public Health – Seattle & King County Address: 401 5<sup>th</sup> Avenue, Suite 1100, Seattle, WA 98104

Office Phone: (206) 263-8493 Cell: (206) 510-4378 E-Mail address: dave.cantrell@kingcounty.gov

#### 4. Proposed Code Amendment.

Code(s) 2015 International Residential Code Section(s) G2412.9

Amend section to read as follows:

**G2412.9 (401.9) Identification.** Each length of pipe and tubing and each pipe fitting, utilized in a fuel gas system, shall bear the identification of the manufacturer.

**Exception:** Markings shall not be required on nipples created from cutting and threading of approved pipe.

#### 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

Similar state amendments are found in Section 401.9 of the International Fuel Gas Code and Section 1301.2 of the International Residential Code. These amendments are also being recommended for modification with the wording of this proposed exception.

## 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

**X** The amendment corrects errors and omissions.
# 7. Is there an economic impact: Yes X No Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforce	Enforcement <sup>2</sup>		<sup>2</sup> Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
- International Mechanical Code
- International Fuel Gas Code
- X NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

**Section(s):** 5.6.1.1

Title: Identification

 2. Proponent Name (Specific local government, organization or individual): Proponent: Dave Cantrell
 Title: Chief Plumbing Inspector, Public Health – Seattle & King County

Date: February 26, 2015

#### **3. Designated Contact Person:**

Name: Dave Cantrell **Title:** Chief Plumbing Inspector, Public Health – Seattle & King County **Address:** 401 5<sup>th</sup> Avenue, Suite 1100, Seattle, WA 98104

Office Phone: (206) 263-8493 Cell: (206) 510-4378 E-Mail address: dave.cantrell@kingcounty.gov

#### 4. Proposed Code Amendment.

Code(s) 2015 National Fuel Gas Code, NFPA 54 Section(s) 5.6.1.1

Amend section to read as follows:

**5.6.1.1 Acceptable Materials.** Materials used for piping systems shall either comply with the requirements of this chapter or be acceptable to the authority having jurisdiction. Each length of pipe and tubing and each pipe fitting utilized in a fuel gas system shall bear the identification of the manufacturer.

**Exception:** Markings shall not be required on nipples created from cutting and threading of approved pipe.

#### 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

This proposed amendment is to be consistent with similar amendments being proposed or modified in the International Residential Code, the International Fuel Gas Code, and the International Mechanical Code (IRC 1301.2 & G2412.9, IFGC 409.1, IMC 301.3).

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

**X** The amendment corrects errors and omissions.

# 7. Is there an economic impact: Yes X No Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforce	Enforcement <sup>2</sup>		<sup>2</sup> Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
  - Wildland Urban Interface Code

**Section(s):** Table 403.3.1.1

**Title:** Minimum Ventilation Rates

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericv@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC **Section(s)** Table 403.3.1.1

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY 2a #/1000 FT	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, <i>R</i> <sub>p</sub> CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R <sub>a</sub> 2a CFM/FT	EXHAUST AIRFLOW RATE <sub>2a</sub> CFM/FT
Workrooms				
Bank vaults/safe deposit	5	5	0.06	
Computer (without printing)	4	5	0.06	
Copy, printing rooms <u>k</u>	4	5	0.06	0.5
Darkrooms	—	—	—	1.0
Meat processing <sup>c</sup>	10	15	—	_
Pharmacy (prep. area)	10	5	0.18	_
Photo studios	10	5	0.12	—

#### **TABLE 403.3.1.1 MINIMUM VENTILATION RATES**

For SI: 1 cubic foot per minute =  $0.0004719 \text{ m}^3/\text{s}$ , 1 ton = 908 kg, 1 cubic foot per minute per square foot =  $0.00508 \text{ m}^3/(\text{s} \cdot \text{m}^2)$ ,

 $^{\circ}C = [(^{\circ}F) - 32]/1.8, 1 \text{ square foot} = 0.0929 \text{ m}^2.$ 

- a. Based upon net occupiable floor area.
- b. Mechanical exhaust required and the recirculation of air from such spaces is prohibited (see Section 403.2.1, Item 3).
- c. Spaces unheated or maintained below 50°F are not covered by these requirements unless the occupancy is continuous.
- d. Ventilation systems ((in enclosed parking garages)) shall comply with Section 404.
- e. Rates are per water closet or urinal. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.
- f. Rates are per room unless otherwise indicated. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.

g. Mechanical exhaust is required and recirculation is prohibited.

- h. For nail salons, each nail station shall be provided with a *source capture system* capable of exhausting not less than 50 cfm per station.
- i. A laundry area within a kitchen or bathroom is not required to have local exhaust. For the laundry area to qualify as being within the kitchen, the laundry room door must open directly into the kitchen and not into an adjacent corridor. Where there are doors that separate the laundry area from the kitchen or bathroom the door shall be louvered.
- j. When combustion equipment is intended to be used on the playing surface, additional dilution ventilation and/or source control shall be provided.
- <u>k. Copy, printing rooms are defined as rooms that are used for commercial production copy and printing.</u> These are not rooms within an office building that have convenience copiers and/or printers.

#### 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

Convenience copiers and printers in office buildings do not require exhaust for suitable indoor air quality. It is very hard to get exhaust out of an office building. These ventilation category is intended for commercial production copying and printing facilities that do a high volume of copies.

LEED INTERPRETATION

See below how USGBC applies the similar section in ASHRAE 62.1 for LEED projects:

PREREQUISITE/CREDIT: EQC5 - INDOOR CHEMICAL & POLLUTANT SOURCE CONTROL RATING SYSTEM: LEED BD+C: NEW CONSTRUCTION, LEED BD+C: SCHOOLS, LEED ID+C: COMMERCIAL INTERIORS, LEED BD+C: CORE AND SHELL RATING SYSTEM VERSION: V2 - LEED 2.2, V2 - SCHOOLS 2007, V2 - LEED 2.0

#### Inquiry

ID#1938 MADE ON 01/07/2008

On the 2nd floor of our building (62,000 sf), there are 10 multi-function copy/printer machines shared by approximately 350 employees. The machines are scattered across the floor plan with no more than two machines adjacent to each other. Does this equipment meet the criteria to be considered convenience copier/printer?

#### Ruling

he LEED Reference Guide notes that "convenience" copiers and printers are acceptable within occupied spaces, provided they are not used for high volume printing or copying (more than 40,000 pages (20,000 double-sided) per month). In your submittal, provide information on the size and amount of copies produced by the machines, and explain how the project design meets the intent of the credit. Include any information on how high volume printing or copying jobs are handled, for example by printing to larger machines located in separately ventilated areas or by outsourcing larger projects. It is recommended that the project consider the intent of the credit to "avoid exposure of building occupants to potentially hazardous chemicals that adversely impact air quality" when selecting the equipment, estimating the equipment's usage and designing the spaces. Applicable Internationally.

Internationally applicable

- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
  - The amendment is needed to address a specific state policy or statute.
  - $\boxtimes$  The amendment is needed for consistency with state or federal regulations.
    - The amendment is needed to address a unique character of the state.
  - $\boxtimes$  The amendment corrects errors and omissions.

# 7. Is there an economic impact: $\square$ Yes $\square$ No

Explain: Clarifies code and reduces cost.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforce	Enforcement <sup>2</sup>		Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	None	None	None	None	None	None
Single family	None	None	None	None	None	None
Multi-family	None	None	None	None	None	None
Commercial/Retail	Lower	Lower	Lower	Improves	Lower	Lower
Industrial	None	None	None	None	None	None
Institutional	None	None	None	None	None	None

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

Section(s): 306

Title: Access

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericy@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC Section(s) 306 Enforceable code language must be used; see an example by clicking here. Amend section to read as follows:

# Add definition to Chapter 2

PERMANENT CONSTRUCTION. Construction that if removed would disturb the structural integrity of the building or the fire-resistance rating of a building assembly.

#### **SECTION 306**

ACCESS AND SERVICE SPACE

306.1 Access. Appliances, controls devices, heat exchangers and HVAC system components that utilize energy shall be accessible for inspection, service, repair and replacement without disabling the function of a fire-resistance-rated assembly or removing permanent construction, other appliances, venting systems or any other piping or ducts not connected to the appliance being inspected, serviced, repaired or replaced. A level working space not less than 30 inches deep and 30 inches wide (762 mm by 762 mm) shall be provided in front of the control side to service an appliance.

<u>306.6 Appliances above ceilings. Appliances that are located above ceiling shall be</u> accessible from a minimum of a 24" x 24" access panel or removal a 24" x 24" ceiling tile for inspection, service, and repair without disabling the function of a fire-resistance-rated assembly or removing permanent construction. Additionally, the appliance shall be able to be removed and replaced without disabling the function of a fire-resistance-rated assembly.

Exception:

 <u>1. This section shall not apply to replacement</u> appliances installed in existing compartments and alcoves where the working space clearances are in accordance with the equipment or appliance manufacturer's installation instructions.
 <u>2. A smaller access panel or removal ceiling shall be permitted</u> when allowed by the equipment or appliance manufacturer installation instructions. **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Clarify requirements for installation of appliances above ceilings.

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

 $\boxtimes$  The amendment corrects errors and omissions.

#### 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Amendments to clarify code intent and how it has typically been applied.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforc	Enforcement <sup>2</sup>		Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

**Section(s):** Table 403.3.1.1

**Title:** Minimum Ventilation Rates

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericv@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC website)

**Code(s)** 2015 IMC **Section(s)** Table 403.3.1.1

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY <sup>2</sup> a #/1000 FT	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, <i>R</i> <sub>p</sub> CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, Ra 2a CFM/FT	EXHAUST AIRFLOW RATE 2a CFM/FT
Offices				
Conference rooms	50	5	0.06	_
Kitchenettes <u>m</u>	_	—	_	0.30
Office spaces	5	5	0.06	—
Reception areas	30	5	0.06	—
Telephone/data entry	60	5	0.06	—
Main entry lobbies	10	5	0.06	—

#### **TABLE 403.3.1.1 MINIMUM VENTILATION RATES**

For SI: 1 cubic foot per minute =  $0.0004719 \text{ m}^3/\text{s}$ , 1 ton = 908 kg, 1 cubic foot per minute per square foot =  $0.00508 \text{ m}^3/(\text{s} \cdot \text{m}^2)$ ,

 $^{\circ}C = [(^{\circ}F) - 32]/1.8, 1 \text{ square foot} = 0.0929 \text{ m}^2.$ 

a. Based upon net occupiable floor area.

- b. Mechanical exhaust required and the recirculation of air from such spaces is prohibited (see Section 403.2.1, Item 3).
- c. Spaces unheated or maintained below 50°F are not covered by these requirements unless the occupancy is continuous.
- d. Ventilation systems ((in enclosed parking garages)) shall comply with Section 404.
- e. Rates are per water closet or urinal. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.
- f. Rates are per room unless otherwise indicated. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.
- g. Mechanical exhaust is required and recirculation is prohibited.
- h. For nail salons, each nail station shall be provided with a *source capture system* capable of exhausting not less than 50 cfm per station.
- i. A laundry area within a kitchen or bathroom is not required to have local exhaust. For the laundry area to qualify as being within the kitchen, the laundry room door must open directly into the kitchen and not into an adjacent corridor. Where there are doors that separate the laundry area from the kitchen or bathroom the door shall be louvered.
- j. When combustion equipment is intended to be used on the playing surface, additional dilution ventilation and/or source control shall be provided.
- m. Kitchenettes require exhaust when they contain a domestic cooking appliance range or oven that is installed in accordance with Table 507.2.2. Kitchenettes that only contain a microwave oven are not required to have mechanical exhaust. A kitchenette may not contain commercial cooking appliances that require Type I or Type II exhaust as these occupancies are required to be exhausted to the Kitchen category in Table 403.1.1.

#### 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

Add footnote to table to clarifies what the definition of a kitchenette is.

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

 $\boxtimes$  The amendment corrects errors and omissions.

7. Is there an economic impact:  $\square$  Yes  $\square$  No

Explain: Clarifies Code and potentially reduces cost.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforce	Enforcement <sup>2</sup>		Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	None	None	None	None	None	None
Single family	None	None	None	None	None	None
Multi-family	None	None	None	None	None	None
Commercial/Retail	Lower	Same	Lower	Improves	None	None
Industrial	None	None	None	None	None	None
Institutional	None	None	None	None	None	None

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

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<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

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   International Mechanical Code
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   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

# Section(s):

Table 403.3.1.1

## Title: Minimum Ventilation Rates

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericv@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

Code(s) 2015 IMC Section(s) Table 403.3.1.1

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY <sup>2a</sup> #/1000 FT	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, <i>R</i> <sub>p</sub> CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, Ra 2a CFM/FT	EXHAUST AIRFLOW RATE <sub>2a</sub> CFM/FT
Public spaces				
Corridors	—	—	0.06	
Courtrooms	70	5	0.06	—
Elevator car	—	—	—	1.0
<u>Elevator lobbies in parking</u> garage	=	=	<u>1.0</u>	=
Legislative chambers	50	5	0.06	_
Libraries	10	5	0.12	
Museums (children's)	40	7.5	0.12	—
Museums/galleries	40	7.5	0.06	—
Places of religious worship	120	5	0.06	—
Shower room (per shower head) <sup>g, k</sup>			_	50/20 <sup>†</sup>
Smoking lounges <sup>b</sup>	70	60	—	—
Toilet rooms — public <sup>g, k</sup>				50/70 <sup>°</sup>

#### **TABLE 403.3.1.1 MINIMUM VENTILATION RATES**

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Add elevator lobbies in parking garages to clarify that these are required to be ventilated. This is needed to keep the lobby positive to the adjacent parking garage so that carbon monoxide and nitrogen dioxide fumes are not drawn into the occupied space above.

- 6. Specify what criteria this proposal meets. You may select more than one.
  - $\boxtimes$  The amendment is needed to address a critical life/safety need.
    - The amendment is needed to address a specific state policy or statute.
    - The amendment is needed for consistency with state or federal regulations.
  - The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

7. Is there an economic impact:  $\square$  Yes  $\square$  No

Explain: Minimal cost impact as most projects currently already due this. This just defines the minimum ventilation rate for consistency.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforce	Enforcement <sup>2</sup>		Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	Minimal	Better IAQ	Same	Better	Minimal	Better IAQ
Single family	None	None	None	None	None	None
Multi-family	Minimal	Better IAQ	Same	Better	Minimal	Better IAQ
Commercial/Retail	Minimal	Better IAQ	Same	Better	Minimal	Better IAQ
Industrial	Minimal	Better IAQ	Same	Better	Minimal	Better IAQ
Institutional	Minimal	Better IAQ	Same	Better	Minimal	Better IAQ

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<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

**Section(s):** Table 403.3.1.1

**Title:** Minimum Ventilation Rates

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericv@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC website)

**Code(s)** 2015 IMC **Section(s)** Table 403.3.1.1

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY <sup>2a</sup> #/1000 FT	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, <i>R</i> <sub>p</sub> CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, Ra 2a CFM/FT	EXHAUST AIRFLOW RATE 2a CFM/FT
Public spaces				
Corridors, serving other than		_	0.06	
Group R occupancies				
Corridors, serving Group R	—	—	0.24	—
occupancies				
Courtrooms	70	5 5	0.06	
Courtrooms	70	5	0.06	—
Elevator car	—	—	—	1.0
Legislative chambers	50	5 5	0.06	—
Libraries	10		0.12	
Museums (children's)	40	7.5	0.12	—
Museums/galleries	40	7.5	0.06	
Places of religious worship	120	5	0.06	<u> </u>
Shower room (per shower head) <sup>g, k</sup>				50/20 <sup>°</sup>
Smoking lounges <sup>b</sup>	70	60	—	—
Toilet rooms — public <sup>g, <u>k</u></sup>				50/70 <sup>°</sup>

#### **TABLE 403.3.1.1 MINIMUM VENTILATION RATES**

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Residential corridors need a higher rate of ventilation for several reasons:

- 1. Prevent odors and smells from migrating between residential units. This include smoke and cooking odors. If the corridors are more positive this leads to fewer complaints between residence occupants.
- 2. Most multi-family residential projects utilize wholehouse ventilation so there is the only tempered make-up air to the building.

Current ventilate rate makes sense for an office building or other building that is mechanically ventilated. For a multi-family building this ventilation rate only equates to around 3-4 CFM per residential door in the corridor so this is very little air to keep the corridor positive to each residence. About 16-25 CFM per residential door is required to maintain the corridor positive to each residence.

With 2012 and 2015 WSEC requiring reduction to minimum ventilation rates per IMC corridors are not allowed to be over-ventilated as they have been under previous code cycles.

#### 6. Specify what criteria this proposal meets. You may select more than one.

 $\boxtimes$  The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

 $\boxtimes$  The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

# 7. Is there an economic impact: $\square$ Yes $\square$ No

Explain: Minimal cost impact as most projects have utilized higher than code minimum ventilation rates in the past before the 2012 WSEC required reduction to code minimum ventilation rate.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforce	ement <sup>2</sup>	Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	Minimal	Better IAQ	Same	None	None	Better IAQ
Single family	None	None	None	None	None	None
Multi-family	Minimal	Better IAQ	Same	None	None	Better IAQ
Commercial/Retail	None	None	None	None	None	None
Industrial	None	None	None	None	None	None
Institutional	None	None	None	None	None	None

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

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<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

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- State Energy Code
   International Mechanical Code
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  - Wildland Urban Interface Code

**Section(s):** Table 403.3.1.1

**Title:** Minimum Ventilation Rates

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericv@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

Code(s) 2015 IMC Section(s) Table 403.3.1.1

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY 2a #/1000 FT	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, <i>R</i> <sub>p</sub> CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, Ra 2a CFM/FT	EXHAUST AIRFLOW RATE 2a CFM/FT
Workrooms				
Bank vaults/safe deposit	5	5	0.06	—
Darkrooms	—	—	—	1.0
Copy, printing rooms	4	5	0.06	0.5
Freezer and refrigerated	<u>0</u>	<u>10</u>	<u>0</u>	<u>0</u>
spaces (<50°F)				
Meat processing	10	15	—	—
Pharmacy (prep. area)	10	5	0.18	—
Photo studios	10	5	0.12	—
Computer (without printing)	4	5	0.06	—

#### **TABLE 403.3.1.1 MINIMUM VENTILATION RATES**

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Occupancy classification added to maintain consistency with ASHRAE 62.1-2013.

#### 6. Specify what criteria this proposal meets. You may select more than one.

] The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

# 7. Is there an economic impact: $\square$ Yes $\square$ No

Explain: Minimal cost impact as it would only include ventilation of refrigeration spaces that are occupied normally.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	None	None	None	None	None	None
Single family	None	None	None	None	None	None
Multi-family	None	None	None	None	None	None
Commercial/Retail	Minimal	Better Vent	Same	None	Minimal	Better Vent
Industrial	Minimal	Better Vent	Same	None	Minimal	Better Vent
Institutional	Minimal	Better Vent	Same	None	Minimal	Better Vent

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code International Mechanical Code International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

#### **Section(s):**

403.3.2

# Title:

Multi-Family Residential Ventilation

- 2. Proponent Name (Specific local government, organization or individual): **Proponent:** Eric Vander Mey, PE **Title:** Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE **Title:** Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

**Office Phone: 285-785-7100** Cell: 206-321-1677 E-Mail address: ericv@rushingco.com **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC **Section(s)** 403.3.2

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2 inch water column (50 Pa) in accordance with Section R402.4.1.2 of the International Energy Conservation Code, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403. Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407.

401.2 Ventilation required. Every occupied space other than enclosed parking garages and buildings used for repair of automobiles shall be ventilated in accordance with Section 402.2.1, 401.2.2, or 401.2.3. Enclosed parking garages and buildings used for the repair of automobiles shall be ventilated by mechanical means in accordance with Sections 403 and 404. 401.2.1 Group R occupancies. Ventilation in Group R occupancies shall be provided in accordance with Section 403.8. 401.2.2 Ambulatory care facilities and Group I-2 occupancies. Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407. 401.2.3 All other occupancies. Ventilation in all other occupancies shall be provided by natural means in accordance with Section 402 or by mechanical means in accordance with Sections 403.1 to 403.7.

401.3 When required. <u>Group R occupanices shall be ventilated continuously or intermittently in accordance</u> with Section 403.8. Ventilation in all other occupancies shall be provided during the periods that the room or space is occupied.

403.1 Ventilation system. Mechanical ventilation shall be provided by a method of supply air and return or exhaust air except that mechanical ventilation air requirements for Group R-2, R-3 and R-4 occupancies three stories and less in height

above grade plane shall be provided by an exhaust system, supply system or combination thereof. The amount of supply air shall be approximately equal to the amount of return and exhaust air. The system shall not be prohibited from producing negative or positive pressure. The system to convey ventilation air shall be designed and installed in accordance with Chapter 6.

403.3 Outdoor air and local exhaust airflow rates. Group R-2, R-3 and R-4 occupancies three stories and less in height above grade plane shall be provided with outdoor air and local exhaust in accordance with Section 403.8 403.3.2. All other buildings intended to be occupied shall be provided with outdoor air and local exhaust in accordance with Section 403.3.1.

403.3.2 Group R-2, R-3 and R-4 occupancies, three stories and less. The design of local exhaust systems and ventilation systems for outdoor air in Group R-2, R-3 and R-4 occupancies three stories and less in height above grade plane shall comply with Sections 403.3.2.1 through 403.3.2.3.

403.3.2.1 Outdoor air for dwelling units. An outdoor air ventilation system consisting of a mechanical exhaust system, supply system or combination thereof shall be installed for each dwelling unit. Local exhaust or supply systems, including outdoor air ducts connected to the return side of an air handler, are permitted to serve as such a system. The outdoor air ventilation system shall be designed to provide the required rate of outdoor air continuously during the period that the building is occupied. The minimum continuous outdoor airflow rate shall be determined in accordance with Equation 4-9.

(Equation 4-9) where: QOA = outdoor airflow rate, cfm Afloor = floor area, ft

2

Nbr = number of bedrooms; not to be less than one Exception: The outdoor air ventilation system is not required to operate continuously where the system has controls that enable operation for not less than 1 hour of each 4 hour period. The average outdoor air flow rate over the 4 hour period shall be not less than that prescribed by Equation 4-9.

403.3.2.2 Outdoor air for other spaces. Corridors and other common areas within the conditioned space shall be provided with outdoor air at a rate of not less than 0.06 cfm per square foot of floor area. 403.3.2.3 Local exhaust. Local exhaust systems shall be provided in kitchens, bathrooms and toilet rooms and shall have the capacity to exhaust the minimum airflow rate determined in accordance with Table 403.3.2.3. TABLE 403.3.2.3 MINIMUM REQUIRED LOCAL EXHAUST RATES FOR GROUP R-2, R-3, AND R-4 OCCUPANCIES For SI: 1 cubic foot per minute = 0.0004719 m3/s.

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Strikethrough new three stories and less residential ventilation section and utilize the existing section for residential ventilation per Washington State amendments Section 403.8.

Correct sections at beginning of chapter to refer to the correct section.

6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

 $\boxtimes$  The amendment is needed to address a unique character of the state.

 $\boxtimes$  The amendment corrects errors and omissions.

#### 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Amendments are needed to keep Washington State Mechanical Code residential ventilation as it currently is written.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>4</sup> Measurable benefit.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
- International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

# Section(s):

403.8

## **Title:** Multi-Family Residential Ventilation

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericv@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

Code(s) 2015 IMC Section(s) 403.8

403.8.6.1 Outdoor air. Exhaust fan only ventilation

systems shall provide outdoor air to each occupiable space

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

through one of the following methods: 1. Outdoor air may be drawn through air inlets installed in exterior walls or windows. The air inlets shall comply with all of the following: 1.1 Inlets shall have controllable, secure openings and shall be designed to not compromise the thermal properties of the building envelope. 1.2. Inlets shall be accessible to occupants, including compliance with Section 1109.13 of the International Building Code for designated accessible units, Type A units and Type B units. 1.3. Inlets shall be screened or otherwise protected from entry by insects, leaves, or other material. 1.4. Inlets shall provide not less than 4 square inches of net free area of opening for each 10 cfm of outdoor air required in Table 403.3 or Table 403.8.1. 1.5. Any inlet or combination of inlets which provide 10 cfm at 10 Pascals as determined by the Home Ventilation Institute Air Flow Test Standard (HVI 901 (November 1996)) are deemed equivalent to 4 square inches of net free area. 1.6. Each occupiable space shall have a minimum of one air inlet that has a minimum of 4 square inches of net free area. 2. In high-rise buildings, outdoor air may be drawn in through operable windows, doors, louvers or other operable openings to the outdoors. Exterior spaces shall have a minimum openable area of 4 percent of the total floor area being ventilated. Doors exiting to

a corridor, court or public way shall not be used to provide outdoor air. The operable openings shall comply with the following: 2.1. Openings shall be controllable, securable, and

2.1. Openings shall be controllable, securable, and shall be designed to not compromise the thermal properties of the building envelope.

2.2. Openings shall be accessible to occupants, including compliance with Section 1109.13 of the International Building Code for designated accessible units, Type A units and Type B units.

3. For interior adjoining spaces without outdoor air openings, one of the following two options shall be used to ventilate the interior adjoining space: 3.1 Provide a whole house transfer fan at the interior adjoining space sized to provide a minimum of the ventilation rate required per Section 403.8.5.1. The transfer fan shall circulate air between the interior room or space and the adjacent habitable space. The transfer fan may operate continuously or intermittently using controls per Section 403.8.2.

3.2 Provide a permanent opening to the interior adjoining space. Opening shall be unobstructed and shall have an area of not less than 8 percent of the floor area of the interior adjoining space, but not less than 25 square feet

403.8.7 Whole house ventilation integrated with forcedair systems. This section establishes minimum requirements for mechanical whole house ventilation systems using forced-air system fans.

403.8.7.1 Outdoor air. Forced-air system fan ventilation systems shall provide outdoor air through one of the following methods:

1. A dedicated outdoor air louver and outdoor air duct for each dwelling unit or sleeping unit shall supply outdoor air to the return side of the forced-air system fan; or

2. A central outdoor air delivery system that supplies multiple dwelling units or sleeping units shall supply outdoor air to the return side of the forced air system fan.

For interior adjoining spaces without supply air from the forced-air system, one of the following two options shall be used to ventilate the interior adjoining space: 3.1 Provide a whole house transfer fan at the interior adjoining space sized to provide a minimum of the ventilation rate required per Section 403.8.5.1. The transfer fan shall circulate air between the interior room or space and the adjacent habitable space. The transfer fan may operate continuously or intermittently using controls per Section 403.8.2. 3.2 Provide a permanent opening to the interior adjoining space. Opening shall be unobstructed and shall have an area of not less than 8 percent of the floor area of the interior adjoining space, but not less than 25 square feet

403.8.7.2 Whole house forced-air system. Where outdoor air is provided to each habitable dwelling unit or sleeping unit by a forced-air system, the outdoor air duct shall be connected to the return air stream at a point within 4 feet upstream of the forced-air unit. It shall not be connected directly to the forced-air unit cabinet in order to prevent thermal shock to the heat exchanger. At a minimum, filtration of the outdoor air shall be provided at the forcedair unit. The filter shall be accessible for regular maintenance and replacement. The filter shall have a Minimum Efficiency Rating Value (MERV) of at least 6.

403.8.8 Whole house ventilation with supply fan systems. This section establishes minimum requirements for mechanical whole house ventilation systems using supply fan systems.

403.8.8.1 Outdoor air. Supply fan ventilation systems shall provide outdoor air through one of the following methods: 1. A dedicated outdoor air louver and outdoor air duct for each dwelling unit or sleeping unit shall supply outdoor air to a supply fan; or 2. A central outdoor air supply fan system shall distribute unconditioned or conditioned air to multiple dwelling units or sleeping units.

For interior adjoining spaces without supply air from the supply fan system, one of the following two options shall be used to ventilate the interior adjoining space: 3.1 Provide a whole house transfer fan at the interior adjoining space sized to provide a minimum of the ventilation rate required per Section 403.8.5.1. The transfer fan shall circulate air between the interior room or space and the adjacent habitable space. The transfer fan may operate continuously or intermittently using controls per Section 403.8.2. 3.2 Provide a permanent opening to the interior adjoining space. Opening shall be unobstructed and shall have an area of not less than 8 percent of the floor area of the interior adjoining space, but not less than 25 square feet

403.8.8.2 Whole house supply system. Where outdoor air is provided to each habitable dwelling unit or sleeping unit by supply fan systems the outdoor air shall be filtered.

The system filter may be located at the intake device or inline with the fan. The filter shall be accessible for regular maintenance and replacement. The filter shall have a Minimum Efficiency Rating Value (MERV) of at least 6.

403.8.9 Whole house ventilation with heat recovery or energy recovery ventilation systems. This section establishes minimum requirements for mechanical whole house ventilation systems using heat recovery or energy recovery ventilation systems.

403.8.9.1 Outdoor air. Heat recovery or energy recovery ventilation systems shall provide outdoor air through one of the following methods:

1. A dedicated outdoor air louver and outdoor air duct for each dwelling unit or sleeping unit shall supply outdoor air to the heat recovery or energy recovery ventilator; or

2. A central outdoor air heat recovery or energy recovery unit shall distribute conditioned air to multiple dwelling units or sleeping units.

For interior adjoining spaces without supply air from the heat recovery or energy recovery ventilation system, one of the following two options shall be used to ventilate the interior adjoining space: 3.1 Provide a whole house transfer fan at the interior adjoining space sized to provide a minimum of the ventilation rate required per Section 403.8.5.1. The transfer fan shall circulate air between the interior room or space and the adjacent habitable space. The transfer fan may operate continuously or intermittently using controls per Section 403.8.2. 3.2 Provide a permanent opening to the interior adjoining space. Opening shall be unobstructed and shall have an area of not less than 8 percent of the floor area of the interior adjoining space, but not less than 25 square feet

403.8.9.2 Whole house heat recovery ventilator system. Where outdoor air is provided to each habitable dwelling unit or sleeping unit by heat recovery or energy recovery ventilator the outdoor air shall be filtered. The filter shall be located on the upstream side of the heat exchanger in both the intake and exhaust airstreams with a Minimum Efficiency Rating Value (MERV) of at least 6. The system filter may be located at the intake device or inline with the fan. The filter shall be accessible for regular maintenance and replacement. **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

All four residential ventilation methods should be allowed to utilize the same ventilation method for interior adjoining spaces.

This amendment is needed to provide consistency between methods to not but an undue cost burden on some of the methods.

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- $\boxtimes$  The amendment is needed to address a unique character of the state.
- $\boxtimes$  The amendment corrects errors and omissions.

# 7. Is there an economic impact: $\square$ Yes $\square$ No

Explain: Will lower the costs for three of the four ventilation methods. There is no proposed change to the fourth method.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>1</sup>		Enforcement <sup>2</sup>		Operations & Maintenance <sup>3</sup>	
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family	None	None	None	None	None	None
Multi-family	Lower	Same	Same	Same	Lower	Same
Commercial/Retail	None	None	None	None	None	None
Industrial	None	None	None	None	None	None
Institutional	None	None	None	None	None	None

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

# Section(s):

504.4

# **Title:** Dyer Exhaust

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericy@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC Section(s) 504.4 Enforceable code language must be used; see an example by clicking here. Amend section to read as follows:

504.4 Exhaust installation. Dryer exhaust ducts for clothes dryers shall terminate on the outside of the building and shall be equipped with a backdraft damper. Backdraft damper shall be located at penetration of the building exterior termination. Dryer exhaust ducts may terminate at exterior wall louvers with not less than 1" spacing openings in any direction. Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the exhaust flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or chimney. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums.

Domestic dryer exhaust ducts may terminate at a common exhaust plenum behind exhaust hood or louver with other domestic range exhaust and residential local exhaust ducts as long as each duct connecting to the exhaust plenum has an independent back-draft damper.

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Clarify that louvers can be used for clothes dryer exhaust and clarify that a common plenum can be used to terminate domestic dryer, domestic range, and residential local exhaust systems. This is necessary to clarify the code and match current practice.

6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

 $\boxtimes$  The amendment corrects errors and omissions.

#### 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Amendments to clarify code intent and how it has been consistently applied.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.
	Constru	uction <sup>1</sup>	Enforce	ement <sup>2</sup>	Operations &	Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

# Section(s):

505.1

## Title: Domestic Range Exhaust

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericv@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC Section(s) 504.4 Enforceable code language must be used; see an example by clicking here. Amend section to read as follows:

505.1 Domestic systems. Where domestic range hoods and domestic appliances equipped with downdraft exhaust are provided, such hoods and appliances shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be air tight, shall be equipped with a backdraft damper, and shall be independent of all other exhaust systems.

Domestic range exhaust ducts may terminate at a common exhaust duct behind exhaust hood or louver with other domestic dryer exhaust and residential local exhaust ducts as long as each duct connecting to the common exhaust duct has an independent back-draft damper.

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Clarify that a common plenum can be used to terminate domestic dryer, domestic range, and residential local exhaust systems.

This is necessary to clarify the code and match current practice.

- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
  - The amendment is needed to address a specific state policy or statute.
  - The amendment is needed for consistency with state or federal regulations.
  - The amendment is needed to address a unique character of the state.
  - $\boxtimes$  The amendment corrects errors and omissions.

## 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Amendments to clarify code intent and how it has been consistently applied.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Constr	uction <sup>1</sup>	Enforc	ement <sup>2</sup>	Operations &	Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <u>sbcc@ga.wa.gov</u>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

# Section(s):

515

**Title:** Trash Chute Venting

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericy@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC Section(s) 515 Enforceable code language must be used; see an example by clicking here. Amend section to read as follows:

#### **SECTION 515**

WASTE OR LINEN CHUTE VENTING

515.1 General. Waste or linen chutes shall be gravity vented per NFPA 82.

Exception: Waste or linen chutes may be mechanically ventilated by an exhaust fan. Exhaust fan to be located outside the building at the top of the chute.

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Clarify that trash chutes are required to be gravity vented per NFPA 82.

Allows that in lieu of gravity venting mechanical venting from an exhaust fan is permitted. In low-rise and mid-rise building the gravity venting is ineffective to discharge odors per most waste chute manufacturers and installers. This is because there is not enough height for a gravity stack effect to ensure upward airflow.

Excerpt from NFPA 82-2014:

#### 6.2.2.4 Chute Venting.

6.2.2.4.1 Awaste orlinen chute shall extend (full size) at least 0.92 m (3 ft) above the roof of a building of Type II-000, Type III, Type IV, or Type V construction. (See NFPA 5000, Building Construction and Safety Code.)

6.2.2.4.2 The chute shall be permitted to extend less than 0.92 m (3 ft) above the roof of a building of Type I, Type II-222, or Type II-111 construction subject to the approval of the authority having jurisdiction. (See NFPA 5000.)

6.2.2.4.3 The chute shall be open to the atmosphere, with the opening being the same cross-sectional area as the chute.

**6.2.2.4.4** The portion of chute between the highest intake door and the top of the chute vent shall be permitted to be offset a maximum of 45 degrees from the plumb, subject to the approval of the authority having jurisdiction.

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

## 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Amendments to clarify code intent and how it has been consistently applied.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Constr	uction <sup>1</sup>	Enforc	ement <sup>2</sup>	Operations &	Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <u>sbcc@ga.wa.gov</u>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

# Section(s):

601.2

### **Title:** Corridor Supply Air

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericy@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC Section(s) 601.2 Enforceable code language must be used; see an example by clicking here. Amend section to read as follows:

601.2 Air movement in egress elements. Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts.

**Exceptions:** 

1. Use of a corridor as a source of makeup air for exhaust systems in rooms that open directly onto such corridors, including toilet rooms, bathrooms, dressing rooms, smoking lounges and janitor closets, shall be permitted provided that each such corridor is directly supplied with outdoor air at a rate greater than the rate of makeup air taken from the corridor.

2. Where located within a dwelling unit, the use of corridors for conveying return air shall not be prohibited.

3. Where located within tenant spaces of 1,000 square feet (93 m2) or less in area, utilization of corridors for conveying return air is permitted.

4. Incidental air movement from pressurized rooms within health care facilities, provided that the corridor is not the primary source of supply or return to the room.

5. Where such air is part of an engineered smoke control system..

6. Air supplied to corridors serving residential occupancies shall not be considered as providing ventilation air to the dwelling units and sleeping units subject to the following:

6.1 The air supplied to the corridor is 100% outside air, and

6.2 The units served by the corridor have conforming ventilation air independent of the air supplied to the corridor, and

6.3 For other than high-rise buildings, the supply fan will automatically shut off upon activation of corridor smoke detectors which shall be spaced at no more than 30 feet (9144 mm) on center along the corridor, or

6.4 For high-rise buildings, corridor smoke detector activation will close required smoke/fire dampers at the supply inlet to the corridor at the floor receiving the alarm.

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Clarify that the Washington State amendment for air supplied to residential corridors can be utilized for both dwelling and sleeping units.

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

 $\boxtimes$  The amendment is needed to address a unique character of the state.

 $\boxtimes$  The amendment corrects errors and omissions.

#### 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Amendments to clarify code intent and how it has been consistently applied.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Constr	uction <sup>1</sup>	Enforce	ement <sup>2</sup>	Operations &	Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   International Mechanical Code
   International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

## Section(s):

606.1

**Title:** Return Air Smoke Detectors

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Eric Vander Mey, PE Title: Principal Date: 2/28/2015
- 3. Designated Contact Person: Name: Eric Vander Mey, PE Title: Principal Address: 1725 Westlake Ave N, Ste 300, Seattle, WA 98109

Office Phone: 285-785-7100 Cell: 206-321-1677 E-Mail address: <u>ericy@rushingco.com</u> **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

**Code(s)** 2015 IMC Section(s) 606.1 Enforceable code language must be used; see an example by clicking here. Amend section to read as follows:

606.2 Where required. Smoke detectors shall be installed where indicated in Sections 606.2.1 through 606.2.3. Exception: Smoke detectors shall not be required where air distribution systems are incapable of spreading smoke beyond the enclosing walls, floors and ceilings of the room or space in which the smoke is generated. 606.2.1 Return air systems. Smoke detectors shall be installed in return air systems with a design capacity greater than 2,000 cfm (0.9 m3/s), in the return air duct or plenum upstream of any filters, exhaust air connections, outdoor air connections, or decontamination equipment and appliances.

#### Exception:

<u>1.</u> Smoke detectors are not required in the return air system where all portions of the building served by the air distribution system are protected by area smoke detectors connected to a fire alarm system in accordance with the International Fire Code. The area smoke detection system shall comply with Section 606.4.

2. Smoke detectors are not required in the return air system where all of the return air is exhausted and not recirculated back to any portion of the building. additionally, smoke detectors are not required in the supply system that provide the make-up air for the exhaust system. **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Clarify that smoke detectors are not required on the supply or return/exhaust air on dedicated outside air systems (100% outside air and return/exhaust air energy recovery systems). Per the code commentary this is because air is not recirculated back from one portion of the building to another portion of the building.

Based on the definition of return air and exhaust system it is confusing as to whether or not smoke detectors are required on a dedicated outside air system.

The proposed code amendment clarifies this.

**RETURN AIR.** Air removed from an *approved* conditioned space or location and recirculated or exhausted.

**RETURN AIR SYSTEM.** An assembly of connected ducts, plenums, fittings, registers and grilles through which air from the space or spaces to be heated or cooled is conducted back to the supply unit (see also "Supply air system").

EXHAUST SYSTEM. An assembly of connected ducts, plenums, fittings, registers, grilles and hoods through which air is conducted from the space or spaces and exhausted to the outdoor atmosphere.

6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

 $\boxtimes$  The amendment corrects errors and omissions.

## 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

Explain: Amendments to clarify code intent and how it has typically been applied.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Constru	uction <sup>1</sup>	Enforce	ement <sup>2</sup>	Operations &	<sup>2</sup> Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

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<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
   X International Mechanical Code
   International Fuel Gas Code
   NFPA 54 National Fuel Gas Code
   NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

#### Section(s):

State amendments to the IRC M1507.3.3, 1507.3.4.4, 1507.3.5.1, 1507.3.6.1 and IMC 403.8.6.1

#### Title:

System Design (2012 IRC amendments) Alternative Systems (2012 IMC amendments)

 2. Proponent Name (Specific local government, organization or individual): Proponent: Luke Howard, WSU Energy Program Title: Building Science Specialist Date: 02/23/2015

#### **3. Designated Contact Person:**

Name: Luke Howard Title: Building Science Specialist Address: 905 Plum St, Olympia WA, 98501

Office Phone: 360-956-2043 Cell: E-Mail address: howardl@energy.wsu.edu **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC website)

Code(s) State amendments to the IMC and IRC Section(s) 403.8.11 (IMC) and 1507.3.1 (IRC)

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

M1507.3.3 Mechanical ventilation rate. The whole-house mechanical ventilation system shall provide outdoor air to each habitable space dwelling unit at a continuous rate of not less than that determined in accordance with Table M1507.3.3(1).

**M1507.3.4.4 Outdoor air inlets.** Outdoor air introduced into a space through infiltration induced by an exhaust system shall be considered as contributing to the outdoor airflow required by Table M1507.3.3(1). Outdoor air shall be distributed to each habitable space by individual outdoor air inlets. Where outdoor air supplies habitable spaces are separated from exhaust points by doors, provisions shall be made to ensure air flow by installation of distribution ducts, undercutting doors, installation of grilles, transoms, or similar means. Doors shall be undercut to a minimum of 1/2 inch above the surface of the finish floor covering. Individual room outdoor air inlets shall:

1 Have controllable and secure openin

- 1. Have controllable and secure openings;
- 2. Be sleeved or otherwise designed so as not to compromise the thermal properties of the wall or window in which they are placed;
- 3. Provide not less than 4 square inches of net free area of opening for each habitable space. Any inlet or combination of inlets which provide 10 cfm at 10 Pascals are deemed equivalent to 4 square inches net free area.

Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

- 1. Closer than 10 feet from an appliance vent outlet, unless such vent outlet is 3 feet above the outdoor air inlet.
- 2. Where it will pick up objectionable odors, fumes or flammable vapors.
- 3. A hazardous or unsanitary location.
- 4. A room or space having any fuel burning appliances therein.
- 5. Closer than 10 feet from a vent opening of a plumbing drainage system unless the vent opening is at least 3 feet above the air inlet.
- 6. Attic, crawl spaces, or garages.

**M1507.3.5.1 Integrated whole-house ventilation systems.** Integrated whole-house ventilation systems shall provide outdoor air at the rate calculated using Section M1507.3.3. Integrated forced-air ventilation systems shall distribute outdoor air to each habitable space dwelling unit through the forced-air system ducts. Integrated forced-air ventilation systems shall have an outdoor air inlet duct connecting a terminal element on the outside of the building to the return air plenum of the forced-air system, at a point within 4 feet upstream of the air handler. The outdoor air inlet duct connection to the return air stream shall be located upstream of the forced-air system blower and shall not be connected directly into a furnace cabinet to prevent thermal shock to the heat exchanger. The system will be equipped with a motorized damper connected to the automatic ventilation control as specified in Section M1507.3.2. The required flow rate shall be verified by field testing with a flow hood or a flow measuring station.

#### M1507.3.6.1 Outdoor air. Supply fan ventilation systems shall distribute outdoor air to each habitable space dwelling

<u>unit</u> through the forced-air system ducts or through dedicated ducts. to each habitable space. Supply fans shall have the capacity to provide the amount of outdoor air specified in Table M1507.3.3(1) at 0.40 inches water gauge as per HVI 916. The outdoor air must be filtered before it is delivered to habitable spaces. The filter may be located at the intake device, in line with the fan, or, in the case of a connection to the return plenum of the air handler, using the furnace filter. An outdoor air inlet shall be connected to either the supply or return air stream.

**403.8.6.1 Outdoor air.** Exhaust fan only ventilation systems shall provide outdoor air to each occupiable space through <u>infiltration</u>. one of the following methods:

- Outdoor air may be drawn through operable windows and skylights or air inlets installed in exterior walls or windows. The air inlets shall comply with all of the following:
   Inlets shall have controllable secure openings and shall be designed to not compromise the thermal properties of the building.
  - 1.1 Inlets shall have controllable, secure openings and shall be designed to not compromise the thermal properties of the building envelope.
  - 1.2. Inlets shall be accessible to occupants, including compliance with Section 1109.13 of the International Building Code for designated accessible units, Type A units and Type B units.
  - 1.3. Inlets shall be screened or otherwise protected from entry by insects, leaves, or other material.
  - 1.4. Inlets shall provide not less than 4 square inches of net free area of opening for each 10 cfm of outdoor air required in Table 403.3 or Table 403.8.1.
  - 1.5. Any inlet or combination of inlets which provide 10 cfm at 10 Pascals as determined by the Home Ventilation Institute Air Flow Test Standard (HVI 901 (November 1996)) are deemed equivalent to 4 square inches of net free area.

#### 1.6. Each occupiable space shall have a minimum of one air inlet that has a minimum of 4 square inches of net free area.

- 21. In high rise buildings, oOutdoor air may be drawn in through operable windows, doors, louvers or other operable openings to the outdoors. Exterior spaces shall have a minimum openable area of 4 percent of the total floor area being ventilated. Doors exiting to a corridor, court or public way shall not be used to provide outdoor air. The operable openings shall comply with the following:
  - 21.1. Openings shall be controllable, securable, and shall be designed to not compromise the thermal properties of the building envelope.
  - 21.2. Openings shall be accessible to occupants, including compliance with Section 1109.13 of the International Building Code for designated accessible units, Type A units and Type B units.
- **3.2** For interior adjoining spaces without outdoor air openings, one of the following two options shall be used to ventilate the interior adjoining space:
  - 32.1 Provide a whole house transfer fan at the interior adjoining space sized to provide a minimum of the ventilation rate required per Section 403.8.5.1. The transfer fan shall circulate air between the interior room or space and the adjacent habitable space. The transfer fan may operate continuously or intermittently using controls per Section 403.8.2.
  - <u>32</u>.2 Provide a permanent opening to the interior adjoining space. Opening shall be unobstructed and shall have an area of not less than 8 percent of the floor area of the interior adjoining space, but not less than 25 square feet
- **5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

This change will remove the requirement for trickle vents or supply registers at each habitable space for whole house ventilation. A recent study by WSU and funded by the Northwest Energy Efficiency Alliance has shown that trickle vents in habitable spaces have no measurable impact on improving the ventilation effectiveness of exhaust only whole house ventilation systems. Additionally, Washington is the only state requiring trickle vents in each habitable space when using exhaust only whole house ventilation. Regional and national experts on ventilation and indoor air quality agree that these trickle vents do not contribute to increased effectiveness of ventilation systems in single family/ duplex and townhome occupancies. Removing this requirement from the code would relieve some burden on builders and would also reduce the homes natural infiltration rate. This proposal would also reduce inspection burden.

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

X The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

#### 7. Is there an economic impact: $\Box$ Yes X $\Box$ No

Explain:

➔

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Constru	uction <sup>1</sup>	Enforce	ement <sup>2</sup>	Operations &	Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family	-	+	-	+	-	+

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>4</sup> Measurable benefit.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

Multi-family	
Commercial/Retail	N/A
Industrial	IN/A
Institutional	

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>



#### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
- Uniform Plumbing Code



#### Section(s):

 $\mbox{IRC}$  M1507.3.2 and IMC 403.8.2

#### Title:

Control and Operation

# 2. Proponent Name (Specific local government, organization or individual):

**Proponent:** Luke Howard, WSU Energy Program **Title:** Building Science Specialist **Date:** 02/23/2015

#### 3. Designated Contact Person:

Name: Luke Howard Title: Building Science Specialist Address: 905 Plum St, Olympia WA, 98501

Office Phone: 360-956-2043 Cell: E-Mail address: howardl@energy.wsu.edu **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

Code(s) State amendments to the IRC and IMCSection(s) IRC - M1507.3.2 & IMC - 403.8.2Enforceable code language must be used; see an example by clicking here.Amend section to read as follows:

4. Continuous whole house ventilation systems.

Continuous whole house ventilation systems shall operate continuously and be equipped with an override control. A "fan on" switch shall be permitted as an override control. Exhaust fans, forced air system fans, or supply fans shall be equipped with "fan on" as override controls. Controls shall be capable of operating the ventilation system without energizing other energy-consuming appliances. A readily accessible label shall be affixed to the controls or control cover that reads "Whole House Ventilation (see operating instructions)."

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Current language requires "fan on" switches for all but HRV/ERV systems as an override control. This control must also be labeled in order to notify occupants of the purpose of the fan. This label is almost never present, especially when the whole house fan is located in a bathroom and serves dual purpose as a local exhaust fan. If this requirement is changed as proposed the builders will have more flexibility as to what kind of controls they can install. For example, an override switch behind the grill of a dual purpose fan mounted in a bathroom may increase operation of the whole house fan because the control would more likely be labeled and less likely to be switched of due to lack of understanding of the fans purpose.

#### 6. Specify what criteria this proposal meets. You may select more than one.

X The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

7. Is there an economic impact:  $\Box$  Yes X $\Box$  No

Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Constru	uction <sup>1</sup>	Enforce	ement <sup>2</sup>	Operations &	Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	-	+	-	+	-	+

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.

Single family	-	+	-	+	-	+
Multi-family	-	+	-	+	-	+
Commercial/Retail						
Industrial				N/A		
Institutional						

Please send your completed proposal to: <u>sbcc@ga.wa.gov</u>



### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- X International Residential Code
- International Fire Code
- Uniform Plumbing Code



- X International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

#### Section(s):

State amendments to the IRC M1507.3.1 and IMC 403.8 and 403.8.11

#### Title:

System Design (2012 IRC amendments) Ventilation systems for Group R occupancies (2012 IMC amendments) Alternative Systems (2012 IMC amendments)

#### 2. Proponent Name (Specific local government, organization or individual):

**Proponent:** Luke Howard, WSU Energy Program **Title:** Building Science Specialist **Date:** 02/23/2015

#### 3. Designated Contact Person:

Name: Luke Howard Title: Building Science Specialist Address: 905 Plum St, Olympia WA, 98501

Office Phone: 360-956-2043 Cell: E-Mail address: howardl@energy.wsu.edu **4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert <u>new</u> sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC <u>website</u>)

Code(s) <u>State amendments to the IMC and IRC</u> (IRC) Section(s) 403.8 and 403.8.11 (IMC) and 1507.3.1

Enforceable code language must be used; see an example <u>by clicking here</u>. Amend section to read as follows:

**403.8 Ventilation systems for Group R occupancies**. Each dwelling unit or sleeping unit shall be equipped with local and whole house ventilation systems and shall comply with Sections 403.8.1 through 403.8.11. All public corridors and other than Group R occupied spaces that support the Group R occupancy shall meet the ventilation requirements of Section 402 or Sections 403.1 to 403.7. <u>Compliance is also permitted to be demonstrated through compliance with ASHRAE Standard 62.2</u>.

**403.8.11** Alternate systems. When approved by the code official, systems designed in accordance with ASHRAE Standard 62.2 shall be permitted.

**M1507.3.1 System design**. Each dwelling unit or guestroom shall be equipped with a ventilation system complying with Section M1507.3.4, M1507.3.5, M1507.3.6 or M1507.3.7. Compliance is also permitted to be demonstrated through compliance with the International Mechanical Code or ASHRAE Standard 62.2.

5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

The biggest differences between the Washington States ventilation requirements and ASHRAE Standard 62.2 are the states requirement for trickle vents in each habitable space for exhaust whole house ventilation systems. If the requirement for trickle vents is dropped there will be little different between the two standards. The most notable differences will be the new ventilation flow rate tables in the current version of 62.2 and the 62.2's allowance for an infiltration credit. These differences make 62.2 a bit more complicated to use than our state requirements but provide builders the ability to further dial in the ideal ventilation rate for the homes they build based upon a post construction leakage rate test (blower door test).

#### 6. Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

X The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

#### 7. Is there an economic impact: $\Box$ Yes X $\Box$ No

Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

Construction Enforcement Operations & Maintenance
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<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family	-	+	-	+	-	+
Multi-family						
Commercial/Retail				N/A		
Industrial				1N/A		
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.

<sup>4</sup> Measurable benefit.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.



### 1. State Building Code to be Amended:

- International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- State Energy Code
- X International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

Section(s): 1107.2

**Title: Piping location** 

- 2. Proponent Name (Specific local government, organization or individual): Proponent: City of Seattle Dept of Planning & Development Title: Date: February 25, 2015
- 3. Designated Contact Person: Name: Maureen Traxler Title: Code development manager Address: 700 5<sup>th</sup> Ave, #2000 PO Box 34019 Seattle, WA 98124-4019 Office Phone: 206-233-3892 Cell: E-Mail address: maureen.traxler@seattle.gov

#### 4. Proposed Code Amendment.

#### Code(s) International Mechanical Code Section(s) 1107.2

Amend section to read as follows:

**1107.2 Piping location.** Refrigerant piping that crosses an open space that affords passageway in any building shall be not less than 7 feet 3 inches (2210 mm) above the floor unless the piping is located against the ceiling of such space. Refrigerant piping shall not be placed in: any

1. a fire-resistance-rated exit access corridor;

2. an interior exit stairway or ramp;

3. an exit passageway;

4. elevator, dumbwaiter or other shaft containing a moving object: or in any

5. a shaft that has openings to a dwelling unit or sleeping unit; living quarters or

<u>6.</u> a shaft that has openings to means of egress. Refrigerant piping shall not be installed in an enclosed public <u>a fire-resistance-rated exit access corridor</u>, interior exit stairway <u>or ramp</u>, or exit passageway stairway landing or means of egress.

#### Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

The current code prohibits refrigerant piping in "means of egress" and in shafts with openings into "means of egress." The IBC definition of that term is "A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way...." In other words, the means of egress includes all occupied spaces in a building. Prohibiting refrigerant piping in the means of egress means it's prohibited almost everywhere.

IMC Section 1107.2 is copied from ASHRAE 15; this proposal coordinates it with terms used in the International Codes. This proposal gives a reasonable interpretation that identifies specific locations where refrigerant piping is prohibited, and allows it to be installed in occupied buildings. This proposal is meant as an interpretation of the term "means of egress" as used in the ASHRAE language, without changing the intended meaning of the term.

#### Specify what criteria this proposal meets. You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

X The amendment corrects errors and omissions.

#### 5. Is there an economic impact: Yes X No

Explain:

This proposal clarifies how existing code language can be applied, and coordinates the IMC with the terms used in the IBC.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

Construction <sup>1</sup> Enforcement <sup>2</sup> Operations & Maintenance <sup>3</sup>
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<sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>2</sup> Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>4</sup> Measurable benefit.



#### 1. State Building Code to be Amended:

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State Energy Code
 International Mechanical Code
 International Fuel Gas Code
 NFPA 54 National Fuel Gas Code
 NFPA 58 Liquefied Petroleum Gas Code
 Wildland Urban Interface Code

Section(s): M1505.1 General.

Title: General

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Jeff Peterson Title: Construction Consultant, MN Custom Homes Date: 2/27/15
- 3. Designated Contact Person:

Name: Jeff Peterson Title: Construction Consultant, MN Custom Homes Address: 1412 112<sup>th</sup> Ave NE STE #104 Bellevue, WA 98004

Office Phone: 425.829.6039 Cell: 425.829.6039 E-Mail address: Jeff@mncustom.com

#### 4. Proposed Code Amendment.

Highlighted text is the proposed amendment.

**M1505.1 General.** Domestic open-top broiler units shall have a metal exhaust hood, having a minimum thickness of 0.0157-inch (0.3950 mm) (No. 28 gage) with 1/4 inch (6.4 mm) clearance between the hood and the underside of combustible material or cabinets. A clearance of not less than 24 inches (610 mm) shall be maintained between the cooking surface and the combustible material or cabinet. The hood shall be not less than the width of the broiler unit, extend over the entire unit, and when located inside the building envelope, shall discharge to the outdoors and be equipped with a backdraft damper or other means to control infiltration/ exfiltration when not in operation. Broiler units incorporating an integral exhaust system, and *listed* and *labeled* for use without an exhaust hood, or broiler units permanently installed outside the building envelope and having the cooking surface at least 5'-0" below a 1 hour fire resistance rated ceiling, need not have an exhaust hood.

- 5. There is currently no code language appropriate for outdoor, built-in bar-b-q units attached to or under a covered portion of a residential building. These units are becoming more prevalent in this state. Jurisdictions are regulating these devices through highly variable policies, some under and some over-regulating. In one instance a city inspector required removal of a permanent unit and the buyer purchased an equivalent portable unit that was inherently less safe and installed it in the same location, at significant cost to all involved. Many of these devices were intended for fully uncovered use, and have no instructions for safely installing them under a ceiling or roof. This additional language allows the use of a recirculating hood (non-exhausting) for outdoor application, and deletes hood requirements entirely when significant space exists above the cooktop and the ceiling is constructed of non-combustible materials. This amendment would require corresponding language in the fuel-gas code, but is only submitted here for clarity, as this is intended for IRC (residential applications) only.
- 6. Specify what criteria this proposal meets. You may select more than one.
  - The amendment is needed to address a critical life/safety need.
    - The amendment is needed to address a specific state policy or statute.
  - The amendment is needed for consistency with state or federal regulations.
  - $\boxtimes$  The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

## 7. Is there an economic impact: $\Box$ Yes $\boxtimes$ No

This clarification would give clarification to inspectors, builders, and the public as to what constitutes a safe installation. It may increase or decrease costs based on policies in effect in each jurisdiction.

		Construction <sup>1</sup>	Enforcement <sup>2</sup>	Operations & Maintenance <sup>3</sup>
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<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential						
Single family						
Multi-family						
Commercial/Retail						
Industrial						
Institutional						

Please send your completed proposal to: <a href="mailto:sbcc@ga.wa.gov">sbcc@ga.wa.gov</a>

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.



#### 1. State Building Code to be Amended:

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- Uniform Plumbing Code

- State Energy Code
- International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

## Section(s):

M1507.3.4.4 M1507.3.5.3 M1507.3.6.5 M1507.3.7.3

**Title:** Outdoor air inlets

- 2. Proponent Name (Specific local government, organization or individual): Proponent: Lou Malattia, Clark County Building Safety Title: Lead Plans Examiner Date: 12/31/14
- 3. Designated Contact Person: Name: Lou Malattia Title: Lead Plans Examiner

Address: 1300 Franklin Street, Vancouver, WA 98660

Office Phone: 360-397-2375 ext 4086 Cell: 360-607-3345 E-Mail address: Lou.Malattia@clark.wa.gov

### 4. Proposed Code Amendment.

Code(s) IRC

Section(s) M1507.3.4.4, M1507.3.5.3, M1507.3.6.5, M1507.3.7.3

**Code Sections:** 

**M1507.3.4.4 Outdoor air inlets.** Outdoor air shall be distributed to each habitable space by individual outdoor air inlets. Where outdoor air supplies are separated from exhaust points by doors, provisions shall be made to ensure air flow by installation of distribution ducts, undercutting doors, installation of grilles, transoms, or similar means. Doors shall be undercut to a minimum of 1/2 inch above the surface of the finish floor covering.

Individual room outdoor air inlets shall:

1. Have controllable and secure openings;

2. Be sleeved or otherwise designed so as not to compromise the thermal properties of the wall or window in which they are placed;

3. Provide not less than 4 square inches of net free area of opening for each habitable space. Any inlet or combination of inlets which provide 10 cfm at 10 Pascals are deemed equivalent to 4 square inches net free area.

Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

All prohibited locations (1 through 6) would remain unchanged. Add # 7.

# 7. Closer than 2-feet from the roof surface measured from the closest location.

**M1507.3.5.3 Outdoor air inlets**. Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

All prohibited locations (1 through 6) would remain unchanged. Add # 7.

# 7. Closer than 2-feet from the roof surface measured from the high side of vent penetration through the roof.

**M1507.3.6.5 Outdoor air inlets.** Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

All prohibited locations (1 through 6) would remain unchanged. Add # 7.

# 7. Closer than 2-feet from the roof surface measured from the high side of vent penetration through the roof.

**M1507.3.7.3** Outdoor air inlets. Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

All prohibited locations (1 through 6) would remain unchanged. Add # 7.

# 7. Closer than 2-feet from the roof surface measured from the high side of vent penetration through the roof.

**5.** Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

The current language is confusing and does not specifically prohibit Fresh Air inlets from being installed directly above the roof deck. This can allow off gassing from asphalt roofing to be brought directly into the house which adversely affects indoor air quality. Having specific language that prohibits roof deck mounted vents would simplify enforcement. If it is clear to builders and mechanical contractors that this is not allowed the rework required to relocate the vents can be eliminated.

#### Specify what criteria this proposal meets. You may select more than one.

- X The amendment is needed to address a critical life/safety need.
- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- The amendment is needed to address a unique character of the state.
- X The amendment corrects errors and omissions.

#### 6. Is there an economic impact: X Yes 🗌 No

Explain: This is a minor change in the location of the fresh air inlet that is easily accomplished. Having the location clearly spelled out in the code would make enforcement much easier while helping improve indoor air quality (IAQ).

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Constru	uction <sup>1</sup>	Enforce	ement <sup>2</sup>	Operations &	Maintenance <sup>3</sup>
Building Type	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>
Residential	Minimal	Improved indoor air quality / less rework	None	Easy Enforcement	None	Easier access to clean screens
Single family	Minimal	Improved indoor air quality / less rework	None	Easy Enforcement	None	Easier access to clean screens
Multi-family	Minimal	Improved indoor air quality / less rework	None	Improved indoor air quality	None	Easier access to clean screens

<sup>&</sup>lt;sup>1</sup> \$ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost to building owner/tenants over the life of the project.

<sup>&</sup>lt;sup>4</sup> Measurable benefit.

Commercial/Retail			
Industrial			
Institutional			

Please send your completed proposal to: <u>sbcc@ga.wa.gov</u>