CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE 1 OF			
			IECC R40)2.4.1.3	
CODE: GA En	ergy Code 2020 Amendments	SECTION:	(GA Ame	ndments)	
	Mike Barcik, Southface, Abe Kruger, SK			·	
	Collaborative, Diana Burk, New Buildings				
	Institute, Eric Lacey, Responsible Energy				
PROPONENT:	Codes Alliance	DATE:	12/10/202	.2	
<u>m</u>	ikeb@southface.org; diana@newbuildings.org	; abe@skcollab	orative.com	n; <u>eric@reca</u> -	-
EMAIL: <u>co</u>	des.com				
ADDRESS: 24	1 Pine St NE Atlanta GA 30308				
TELEPHONE N	UMBER: (404) 604-3620	FAX N	UMBER:	(404) 872-:	5009
CHECK 🗵	Revise section to read as follows:	Add ne	w section to r	ead as follows:	
ONE:	Delete section and substitute the following:	Delete	without substi	itution:	
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE	MATERIA	L TO BE A	<u>DDED</u>
Approve	Approve as amended (DCA STAFF O	NLY) 🗌 Dis	sapprove	Withdra	wn

DESCRIPTION:

R402.4.1.3 Low-rise R-2 multifamily testing (<u>Mandatory</u>). Low-rise R-2 multifamily dwellings shall be tested to less than 7.0 <u>5.0</u> air changes per hour at 50 Pascals (ACH50).

As an alternative to ACH50, compliance for Low-rise R-2 dwellings may be attained by achieving an Envelope Leakage Ratio at 50 Pascals (ELR50) of less than $0.35 \ 0.30 \ (ELR50 < 0.35 \ 0.30)$, where ELR50 = CFM50 / Envelope Shell Area, in square feet).

REASON/INTENT:

This amendment would lower the blower door testing threshold from < 7 ACH50 to < 5.0 ACH50. Currently in Georgia, single family and duplexes must confirm air sealing was properly performed as per code via a blower door test of < 5 ACH50. This amendment brings low-rise multifamily construction into alignment with current residential construction and still allows optional compliance with an ELR50 approach.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

Blower door testing is currently required on low-rise multifamily buildings. This amendment would simply require those testing thresholds align with the current GA 2020 thresholds for 1&2 family homes. There is no additional testing cost associated with this reduced passing threshold. Since the industry is currently absorbing the cost on low-rise developments and since 1 in 4 sampling is permitted, the added cost per dwelling unit is minimal.

The significant benefits of this testing include further energy savings and reduced risk of moisture failure and comfort problems.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

CODE AMENDMENT FORM INSTRUCTION SHEET

- 1. Do not complete the line entitled "Item No.____".
- 2. Use a separate form for each proposed code amendment.
- 3. "Sheet _____ of ____" indicates the number of sheets for each individual proposed code amendment, not the number of sheets for all the amendments submitted.
- 4. Identify the code and code section that is the subject of the proposed amendment.
- 5. The proponent's name, address, telephone number and fax number must be filled out completely.
- 6. Be sure to indicate the type of recommended action in the space referred to as "Check One".
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- 8. Under the "Reason" section, provide the reasoning behind the proposed code amendment. The reason should be clear and concise. Test reports, standards or other supporting information and documentation may be submitted with the proposed amendment and must be attached to the amendment form.
- 9. A Statement of Financial Impact must accompany all proposed code amendments. The statement should be clear and concise. Test reports, standards or other supporting information and documentation may be submitted with the proposed amendment and must be attached to the amendment form.
- 10. All proposed amendments must be typed and completed in full and the original submitted to the Codes and Industrialized Buildings Section of the Department of Community Affairs NO LATER THAN DECEMBER 15TH. The proposed code change shall be submitted for review to the State Codes Advisory Committee at their quarterly meeting in January. An incomplete form will be sent back to the proponent for completion. An amendment submitted after the submittal deadline date will be returned to the proponent.
- 11. The proponent will be notified when the proposed amendment will be considered by the State Codes Advisory Committee.
- 12. Information concerning submittal of code amendments, including deadline dates for submittal, can be obtained by contacting the Codes and Industrialized Buildings Section at (404) 679-3118. All proposed code amendments should be submitted to:

CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE 1 OF				
CODE: GA En	ergy Code	SECTION:	IECC C40	02.5 & C401.	.2	
	Mike Barcik, Southface, Abe Kruger, SK					
	Collaborative, Diana Burk, New Buildings					
	Institute, Eric Lacey, Responsible Energy					
PROPONENT:	Codes Alliance	DATE:	12/10/202	2		
<u>m</u>	ikeb@southface.org; diana@newbuildings.org	; abe@skcollabo	orative.com	; eric@reca-		
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Approve	Approve as amended (DCA STAFF O	NLY) Dis	approve	Withdra	wn	

DESCRIPTION:

Amend this section of 2015 IECC:

C402.5 Air leakage—thermal envelope (Mandatory). The *thermal envelope* of buildings shall comply with Sections C402.5.1 through C402.5.8-9, or the building *thermal envelope* shall be tested in accordance with ASTM E 779 at a pressure differential of 0.3 inch water gauge (75 Pa) or an equivalent method approved by the code official and deemed to comply with the provisions of this section when the tested air leakage rate of the building thermal envelope is not greater than 0.40 cfm/ft² (0.2 L (a + m²)). Where compliance is based on such testing, the building shall also comply with Sections C402.5.5 cf402.5.6 and

 $(0.2 \text{ L/s} \cdot \text{m}_2)$. Where compliance is based on such testing, the building shall also comply with Sections C402.5.5, C402.5.6 and C402.5.7.

*Add new section of 2015 IECC: <u>C402.5.9 Air leakage—thermal envelope for Mid- and High-rise multifamily (Mandatory).</u> The *thermal* <u>envelope for buildings classified as R-2 Mid- and High-rise shall comply with Sections C402.5.9.1 and</u> <u>C402.5.9.2</u>

C402.5.9.1 All commercial type R-2 multifamily dwellings (regardless of number of stories of dwelling units) shall be tested to less than 5.0 air changes per hour at 50 Pascals (ACH50). As an alternative to ACH50, compliance for commercial type R-2 dwellings may be attained by achieving an Envelope Leakage Ratio at 50 Pascals (ELR50) of less than 0.30 (ELR50 < 0.30, where ELR50 = CFM50 / Envelope Shell Area, in square feet).

C402.5.9.2 Commercial type R-2 multifamily dwellings (regardless of number of stories of dwelling units) may (optionally) employ either one or both of the following testing protocols:

<u>1. Utilize multiple fans in adjacent units (commonly referred to as Guarded Blower Door testing) to minimize effect of leakage to adjacent units (not required).</u>

2. Envelope testing of less than 100 percent shall be acceptable assuming a maximum sampling protocol of 1 in 4 dwelling units per floor (if sampled unit passes, the remaining up to three units are deemed to comply; if sampled unit fails, it must be sealed and retested and the remaining up to three units shall also be tested).

*Amend this section of IECC 2015: C401.2 Application Commercial buildings shall comply with one of the following: 1. The requirements of ANSI/ASHRAE/IESNA 90.1 and Section C402.5.9 (Air leakage—thermal envelope for Mid- and High-rise multifamily (Mandatory))

REASON/INTENT:

This amendment would require blower door testing to confirm air sealing was properly performed as per code requirements on all mid-rise and high-rise multifamily (type R-2) construction. Currently, this testing is required for low-rise multifamily construction; this amendment would mimic that testing requirement for all commercial multifamily units regardless of height. This requirement would also apply when using ASHRAE 90.1 instead of IECC for compliance.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

Blower door testing is currently required on low-rise multifamily buildings. This amendment would continue that requirement for taller multifamily projects. Since the industry is currently absorbing the cost on low-rise developments and since 1 in 4 sampling is permitted, the added cost per dwelling unit is relatively small.

The significant benefits of this additional testing include energy savings and reduced risk of moisture failure and comfort problems.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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<u>m</u>	ikeb@southface.org; diana@newbuildings.org	; abe@skcollabo	orative.com	; eric@reca-		
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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY	()	PAGE	1 OF	9		
CODE: Interna	ational Building Code 2018	SECTION:	1511.1 – F	Exception 1			
PROPONENT:	Christian N. Dawkins, P.E.	DATE:	12/12/202	2			
EMAIL: <u>ct</u>	nris.dawkins@beechconsulting.com						
ADDRESS: S	ADDRESS: Suite 401A, 3883 Rogers Bridge Road, Duluth, GA 30097						
TELEPHONE NUMBER: 770-476-2362 FAX NUMBER: 770-476-1047)47		
CHECK X Revise section to read as follows:			w section to re	ead as follows:			
ONE:	Delete section and substitute the following:	owing: Delete without substitution:					
LINE THROUG	LINE THROUGH MATERIAL TO BE DELETED: UNDERLINE MATERIAL TO BE ADDED						
Approve	Approve as amended (DCA	STAFF ONLY) Dis	approve	Withdra	wn		

DESCRIPTION:

1511.1 General.

Materials and methods of application for recovering or replacing an existing *roof covering* shall comply with the requirements of Chapter 15.

Exceptions:

- Roof replacement or roof recover of existing low-slope roof coverings shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide positive roof drainage and meet the requirements of Section 1608.3 and Section 1611.2.
- 2. Recovering or replacing an existing *roof covering* shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1502.2 for roofs that provide for *positive roof drainage*. For the purposes of this exception, existing secondary drainage or *scupper systems* required in accordance with this code shall not be removed unless they are replaced by secondary drains or *scuppers* designed and installed in accordance with Section 1502.2.

REASON/INTENT:

This amended language regarding meeting requirements of Sections 1608.3 and 1611.2, has been approved by the ICC for inclusion in this section of the IBC 2024, and is necessary to ensure public life-safety and to emphasize the IBC requirement that susceptible bays be analyzed for ponding instability during structural design/loads analyses that are required incidental to the recovering or replacement of existing *roof coverings* that add new dead-loads to existing roof structures.

REASON/INTENT (continued):

As the IBC has evolved through periodic updates, there have been fundamental changes in its requirements related to roof drainage, structural requirements for ponding instability, and, with climate change, significant increases in design rain loads (both rainfall intensity and duration). Annually, re-roofing projects comprise about three-quarters of U.S. low-sloped roofing projects. This additional language is needed to reduce the likelihood of catastrophic roof collapses that that occur from uncontrolled ponding and/or inadequate drainage that is directly related to new dead-loads imposed onto existing roof structures from re-roofing.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

Most buildings that will be reroofed already meet IBC requirements, and there will be no increased costs resulting from the proposed additional language. Most residential and multi-family buildings' roofs (typically steep-slope) and commercial buildings with roofs that drain over the edge and buildings with rigid structures will not be affected.

There will be increased costs to buildings with flexible structural elements that are susceptible to ponding instability, which leads to roof structure overloading and catastrophic roof collapse. These buildings would fall into the "Dangerous Condition" category, as defined in IEBC Section 302.2 (however, since the IEBC is a permissive code in Georgia, this issue needs to be fully discussed in the mandatory IBC). For these "Dangerous Condition" buildings, additional cost would involve a structural engineering evaluation to determine that the building structure with new, added dead-loading is safe. In most cases, it is presumed that structural engineering evaluation would be the extent of the additional costs, since building structures are typically designed with sufficient margin-of-safety factors.

In cases where a structural engineering evaluation indicates a building/roof structure is unsafe, there would be additional costs to strengthen, supplement, replace or otherwise alter the structure, as required to carry the additional loads. These costs would vary from building-to-building depending upon the extent of the discovered issues. In most cases, overflow drains or scuppers could be added or resized to limit the amount of water that would accumulate on the new roof. Overflow scupper costs vary from \$500 to \$1,500 depending on their complexity and overflow drains vary from \$1,500 to \$3,000.

Regardless, the costs to evaluate and/or modify a structure that has been found to be unsafe from additional loading caused by re-roofing, is necessary to protect public life-safety.

Additional Detailed Discussions Supporting the "REASON/INTENT" Section Above:

The following dialogue and case studies, prepared by the Codes and Standards Committee of the International Institute of Building Enclosure Consultants (IIBEC), further support, in much greater detail, justification for the proposed additional language to Exception 1.

Fundamental Changes Related to Drainage

A 2012 study, titled "Flow Rate Through Roof Drains" (see Ref. 1), published by the American Society of Plumbing Engineers (ASPE) and the International Association of Plumbing and Mechanical Officials concluded: "The research produced stunning results that verified that the sizing method for storm drainage systems, as required in the plumbing codes, is inaccurate." In summary, the roof drains design criteria the engineering/construction industry has been using for more than 70 years is flawed. Drainage assemblies' flow rates are based on the head of water over the drains and their geometry.

FLOW RATE THROUGH ROOF DRAINS

by Julius Ballanco, PE, CPD, FASPE

The American Society of Plumbing Engineers Research Foundation conducted research on the flow rates through various manufacturers' roof drains. The research produced stunning results that verified that the sizing method for storm drainage systems, as required in the plumbing codes, is inaccurate. A new approach to sizing storm drainage systems was developed based on the research test results.

This research led to significant changes to the *IPC*. As of 2015, the *IPC* no longer publishes flow rates through drains. The *IPC* requires the designer to use "the published roof drain flow rate" for drainage design. The problem is that, at the time of this writing, there is only one drain manufacturer that publishes flow rates for their roof drains. The only published data on flow through drains is *FM Global Property Loss Prevention Data Sheets 1-54: Roof Loads for New Construction,* which essentially addresses only one type of drain. As a result of these code changes, the IIBEC/RCI Foundation recently published the book titled *Roof Drainage* (Second Edition, 2021) (see Ref. 2), which provides an in-depth explanation of the new drainage design criteria and a guide for roof drainage designers. Accordingly, roof drainage systems that were designed per plumbing code requirement prior to IPC 2015 should be re-evaluated as part of roof recovering or replacement over an existing *roof covering*.

Structural Requirements for Ponding Instability

The second major change to codes involves structural requirements for ponding instability. Currently Section 1512.1, Exception 1 allows slopes less than ¹/₄ inch per foot for re-roofing projects. By definition, (IBC Section 202), a *susceptible bay* is "a roof or portion thereof with a slope less than ¹/₄ inch per foot." Sections 1608.3 and 1611.2 require that *susceptible bays* be evaluated for ponding instability in accordance with Chapters 7 and 8 of ASCE 7. This proposed change allows a slope of less than ¹/₄ inch per foot only if the roof is not susceptible to ponding instability.

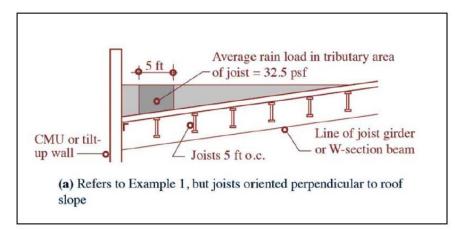
ASCE 7-16 significantly revised its "Chapter 8: Rain Loads." Historically, ASCE and the model codes have required ponding instability to be investigated when a roof slope is less than 1/4 inch per foot. Ponding instability is a serious life-safety and structural issue for roofs. We have also learned that ponding instability is not just an issue on roofs with slopes less than 1/4-inch per foot, but can also an issue on many more roof configurations. In other words, the potential for roof collapse resulting from ponding instability is significant, and many roofs constructed before the 2016 design standards were adopted, have never been analyzed for ponding instability.

The most significant change in the evaluation of ponding instability addressed in ASCE 7-16 is structural orientation. The load on the joists is much greater if the joists are oriented parallel to the wall to which the water drains than if the joists are perpendicular to the wall. Below is example of a collapse in Dallas, TX, where ponding instability and structural orientation was an issue. The accumulation of water on the 1st and 2nd joists that were parallel to the wall was much greater than if the joists had been perpendicular to the wall. This condition resulted in excessive rainwater load on the joists. The photograph below, left shows the roof collapse, and the photograph below, right shows the joists' structural orientation.





Below is an excerpt from "Roof Drainage Design, Roof Collapses, and the Code" (Patterson and Mehta, 2018) (see Ref. 4) that illustrates rainwater load distribution on a roof with joists running parallel to the drainage wall. In many cases these joists were designed using a live-load of 16 psf, so the rainwater live-load is double the design live-load.



In a paper by Coffman and Williamson (2019) (see Ref. 7), they discuss that ponding can occur due to differences between "design slope" found in IBC, Chapter 15 and "roof slope" used in ASCE 7. Their concluding recommendation is: "When design constraints necessitate a 1/4 inch per 12 design slope be used, the framing members should be cambered or investigated for ponding."

Increases in Design Rain Loads

ASCE 7-16 also recognized another important roof drainage design issue in "Section 8.2 Roof Drainage." There have been two rainfall rates used for the design of secondary drainage systems. Currently, the *IPC* requires a 1-hour, 100-year rainfall rate for designing the secondary drainage system, while the *National Standard Plumbing Code* requires a 15-minute, 100-year rainfall rate for designing the secondary drainage system. The original *IPC* also included the requirement to use a 15-minute, 100-year rainfall rate for designing the secondary drainage system. The original *IPC* also included the requirement to use a 15-minute, 100-year rainfall rate for designing the secondary drainage system, which was also in the *Standard Plumbing Code* before the *IPC* replaced it.

ASCE 7-16 added the requirement that the secondary drainage systems be designed based on the 15-minute, 100-year rainfall rate, which is contrary to current *IPC* requirements. The *IPC* requirements are also in conflict in the current *IBC*. The 15-minute, 100-year rainfall rate is double (two times) the 1-hour, 100-year rainfall rate. In other words, to comply with ASCE 7 and Section 1608.3 and Section 1611.2 of the *IBC*, secondary drainage systems must be designed using twice the design rainfall rate than is required in the *IPC*.

As a result, the secondary drainage system design can meet the requirements of the IPC and not meet the requirements of ASCE 7 and the IBC. Chapter 3, Sections 3.4, and 3.5 of *Roof Drainage* (see Ref. 2) provides an in-depth discussion of the use and importance of the 15-minute, 100-year design standard for secondary drainage systems. In summary, ASCE 7 has doubled the "Rainwater Loads" on roofs.

In addition, Jeffrey Levine (see Ref. 6) conducted a review of US rainfall intensity data reports and various plumbing codes from 1935 to the present. He found that "plumbing codes have remained relatively static, rarely contain current rainfall intensity data, and truly represent a minimum standard with regard to the design of roof drainage systems."

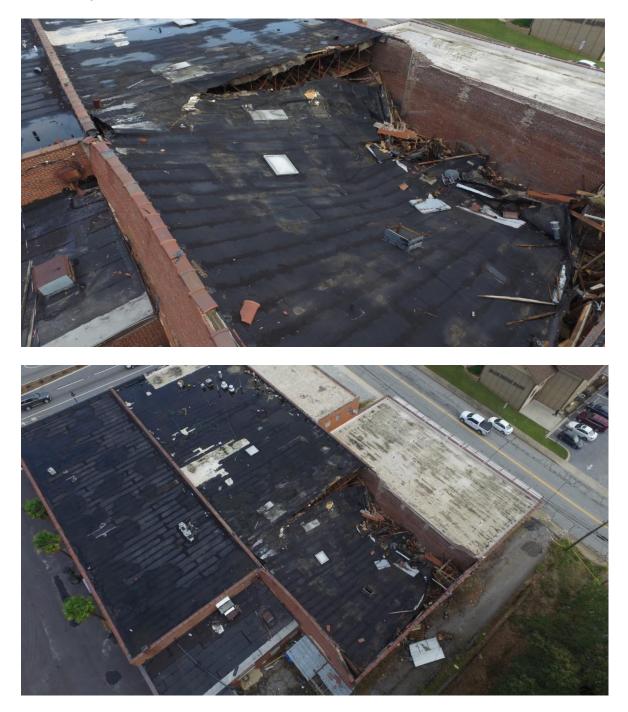
Catastrophic Failures Due to Ponding

Ponded water on roofs, the accumulation of water on roofs before it drains, or ponding instability have the potential to cause serious structural/life safety issues, including roof collapses. There is a precedent for the ICC recognizing the significance of changes in design standards based upon new inputs, especially when related to life-safety issues. IEBC 2021 Section 403.5 "Bracing for unreinforced masonry parapets upon reroofing" and Section 403.8 "Roof diaphragms resisting wind loads in high-wind regions" require the correction of potentially hazardous conditions from seismic and wind forces. When reroofing a building in a high-wind region, an analysis of the structural diaphragms and correction of the identified deficiencies are required.

IEBC 2018 "Section 302.2 "Dangerous Conditions" gives the building official "the authority to require the elimination of conditions deemed *dangerous*." *IEBC* 2018 "Section 706.2 "Addition or replacement of roofing or replacement of equipment" requires replacement or alteration to structural elements when the structural element's design dead, live or snow load, including snow drift effects, is increased by 5 percent. In re-cover roof situations, the additional load from the re-cover roof is not the only increase in gravity loads, because the changes in the *IBC* and *ASCE 7*, as discussed above, have doubled the gravity load from rainwater. These "Rain Loads" changes in ASCE 7 were made to address significant life-safety structural issues related to water accumulation on roofs. Michael O'Rourke, PhD, PE and Aaron Lewis, PE have published an excellent monograph regarding Rain Loads, as discussed further in Reference 5.

Case Studies of Failures

Case Study 1: Roof Failure in Walhalla, South Carolina on October 8, 2017



Background:

Construction Science and Engineering, Inc. of Westminster, SC (CS&E) performed an investigation following the collapse of a roof structure in Walhalla, SC in October of 2017. Research was limited, due to the number of weather recording stations proximate to the subject building; however, a private weather station within three (3) miles of the building reported 4.3" of rainfall on the day of the event.

Findings:

CS&E determined the primary cause of the roof collapse was excessive and rapid water accumulation on the roof during a significant rain event on October 8, 2017. The reported five inches (5") of rainfall reported by an adjacent resident was similar to the reported 4.3" of rainfall measured from the closest private weather station. Additionally, a measured 3.5" ponded water-depth on the rear roof area of an adjacent building, three (3) days following the rain event, corroborated the reported rainfall amounts.

A twenty pounds-per-square-foot (20 psf) unreduced roof design load was specified as the standard in the applicable building code. An accumulation of five inches (5") of rainwater equates to approximately twenty-six (26) psf load on a roof structure. This 26 psf roof load represented approximately thirty percent (30%) higher loading than the applicable code-prescribed design load. Incidental to the installation of a granular cap sheet below the tile parapet cap, the weight of the accumulated water on the roof is believed to have initiated a steel truss collapse by pulling a portion of the masonry brick parapet wall onto the roof. This impact-force was consistent with the damage observed at the subject property.

IBC's Figure 1106.1(3), "1-Hour, 100-Year Rainfall (inches) for the Eastern United States" indicates the 100-year hourly rainfall rate as 4.0-inches for Walhalla, South Carolina.

Case Study 2: Roof Failure in Kinston, North Carolina on August 1, 2020



Background:

REI Engineers, Inc. (REI) of Greenville, NC performed an investigation following the collapse of a roof structure in Kinston, NC in August of 2020.

Findings:

REI determined the cause of the collapse was overloading of the roof framing system. Investigation of the roof's drainage system indicated that the primary drainage scuppers were obstructed by debris. Additionally, the roof did not include secondary (emergency) drainage. The combined factors of blockage of the primary drainage system and lack of a secondary/overflow drainage system led to excessive water accumulation on the roof, as it was contained by the roof's adjoining parapet wall. This accumulated rainwater load exceeded the framing's structural capacity and a failure of the framing occurred by collapse.

References

- 1. *System Research Project: Flow Rate Through Roof Drains* by Julius Ballanco, PE, CPD, FASPE, IAPMO/ASPE (2012).
- 2. *Roof Drainage*, Second Edition by Stephen L. Patterson, PE RRC & Madan Mehta, PhD, PE, IIBEC/RCI Foundation (2021).
- 3. ASCE 7 -16: American Society of Civil Engineers (2016)
- 4. "Roof Drainage Design, Roof Collapses, and the Code" by Stephen L. Patterson, PE RRC & Madan Mehta, PhD, PE, IIBEC (2018).
- 5. Rain Loads: Guide to the Rain Load Provisions of ASCE 7-16, ASCE Press, (2020).
- 6. Levine, Jeffrey "Rainfall Intensity Changes Over Time: Have the Codes Kept Pace?" *IIBEC Interface*, October2021.
- 7. Coffman, Scott D., and Thomas Williamson. 2019. "Low-Slope Roofs: Design Solutions for Building Code-Permitted Low-Slope Applications that Cause Ponding Water." *Civil + Structural Engineering*.

CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE	<u>1</u> OF	2	
CODE: Interna	ational Building Code 2018	SECTION:	1511.1 – E	Exception 2		
PROPONENT:	Christian N. Dawkins, P.E.	DATE:	12/12/202	2		
EMAIL: <u>cr</u>	nris.dawkins@beechconsulting.com					
ADDRESS: SI	uite 401A, 3883 Rogers Bridge Road, Duluth, G	A 30097				
	TELEPHONE NUMBER: 770-476-2362 FAX NUMBER: 770-476-1047					
		171211	CINIDEIX.	770 170 10	, , , ,	
	Revise section to read as follows:	Add nev	w section to re	ead as follows:		
ONE:	Delete section and substitute the following:	Delete without substitution:		tution:		
LINE THROUG	LINE THROUGH MATERIAL TO BE DELETED: UNDERLINE MATERIAL TO BE ADDED					
Approve	Approve as amended (DCA STAFF ON	NLY) 🗌 Dis	approve	Withdra	wn	

DESCRIPTION:

1511.1 General.

Materials and methods of application for recovering or replacing an existing *roof covering* shall comply with the requirements of Chapter 15.

Exceptions:

- 1. *Roof replacement* or *roof recover* of existing low-slope *roof coverings* shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide *positive roof drainage*.
- Recovering or replacing an existing *roof covering* shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section <u>1503.4</u> <u>1502.2</u> for roofs that provide for *positive roof drainage* and meet the requirements of Section 1608.3 and Section 1611.2. For the purposes of this exception, existing secondary drainage or *scupper systems* required in accordance with this code shall not be removed unless they are replaced by secondary drains or *scuppers* designed and installed in accordance with Section <u>1503.4</u> <u>1502.2</u>.

REASON/INTENT:

This amended language regarding meeting requirements of Sections 1608.3 and 1611.2, has been approved by the ICC for inclusion in this section of the IBC 2024. The edited language regarding Section 1502.2 corrects a typographical error in the IBC 2018. This amended language is necessary to ensure public life-safety and to clarify specifically when Exception 2 is applicable and to prevent roof collapses/structural overload failures from: a) uncontrolled ponding, incidental to new dead-loads imposed onto existing roof structures during re-roof projects; b) inadequate or missing secondary drainage assemblies at existing roofs that should have such secondary/emergency overflow drainage, as required by earlier adopted building codes; and/or c) alteration of drainage assemblies during re-roofing projects.

REASON/INTENT (continued):

This amended language is also needed to ensure preservation of physical assets and/or operations that are covered by existing roofs that are subject to re-roofing. If during a low-slope re-roofing project, an owner discovers that their as-presently-constructed roof has defective or missing code-required emergency overflow/secondary drainage assemblies, the existing roof was likely not building code-compliant at the time of its installation and, until properly remediated, remains a threat/danger to public life-safety from catastrophic collapse.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

Most buildings that will be re-roofed already meet IBC requirements, and there will be no increased costs resulting from the proposed additional language. Most residential and multi-family buildings' roofs (typically steep-slope) and commercial buildings with roofs that drain over the edge and buildings with rigid structures will not be affected. The cost of adding parapet wall emergency through-wall scuppers or other secondary drainage measures at low-slope roofs that require such assemblies, should have been borne at the time of the existing low-slope roof's original construction, based on requirements of earlier adopted building codes.

If found to missing, parapet wall through-wall scuppers or other secondary drainage measures are typically of nominal cost to retrofit into existing buildings/roofs. The costs to add or modify an emergency overflow drainage system varies. In many cases, all that is required is to add overflow drains or scuppers to control the volume of water that would accumulate on the roof. Overflow scupper costs vary from \$500 to \$1,500 depending on their complexity and overflow drains vary from \$1,500 to \$3,000.

There will be increased costs to buildings with flexible structural elements that are susceptible to ponding instability, which leads to roof structure overloading and catastrophic roof collapse. These buildings would fall into the "Dangerous Condition" category, as defined in IEBC Section 302.2 (however, since the IEBC is a permissive code in Georgia, this issue needs to be fully discussed in the mandatory IBC). For these "Dangerous Condition" buildings, additional cost would involve a structural engineering evaluation to determine that the building structure with new, added dead-loading is safe and additionally, that the new dead-loading will not alter the function of in-place secondary drainage systems. In most cases, it is presumed that structural engineering evaluation would be the extent of the additional costs, since building structures are typically designed with sufficient margin-of-safety factors.

In cases where a structural engineering evaluation indicates a building/roof structure is unsafe, there would be additional costs to strengthen, supplement, replace or otherwise alter the structure, as required to carry the additional loads. These costs would vary from building-to-building depending upon the extent of the discovered issues.

Regardless, the costs to evaluate and/or modify a structure that has been found to be unsafe from additional loading caused by re-roofing or from inadequate or missing secondary drainage systems, is necessary to protect public life-safety and property/operations below existing roofs.

CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
	International Mechanical Code	SECTION.	008		
CODE. W/GA	Amendments	SECTION:	908		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: R	obert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	UMBER: (205)759-9638	FAX N	UMBER:	() -	
CHECK X	Revise section to read as follows:	Add ne	ew section to re	ad as follows:	
ONE:	Delete section and substitute the following:	Delete without substitution:			
LINE THROUG	H MATERIAL TO BE DELETED:	<u>UNDERLINE</u>	MATERIAI	L TO BE AI	DDED
Approve	Approve as amended (DCA STAFF	ONLY) 🗌 Dis	sapprove	Withdra	wn

DESCRIPTION:

Section 908 Cooling Towers, Evaporative Condensers and Fluid Coolers

908.1 General

A cooling tower used in conjunction with an air-conditioning appliance shall be installed in accordance with the manufacturer's instructions. Factory-built cooling towers shall be listed in accordance with UL 1995 or <u>UL/CSA 60335-2-40</u>. The standards related to high efficiency cooling towers shall include without limitation the minimum standards prescribed by ASHRAE 90.1.

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories use the latest version of the UL 60335-2-40 safety standard for certification testing. This update has been approved by ICC for the 2024 IMC.

The American Innovation and Manufacturing (AIM) Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate Low GWP refrigerants in air conditioning and refrigeration systems. The current lists of refrigerants in the Mechanical Code that comply with the Low GWP requirements of the AIM Act fall into the classification of Group A2L, B2L, A2, and A3. For high probability systems, manufacturers will be switching to Group A2L refrigerants from the current A1. Therefore, the Mechanical Code needs to be updated to address the use of Group A2L refrigerants in high probability (direct) systems.

The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to the UL 60335-2-40 standard.

The 2020 Georgia State Minimum Standard One- and Two-Family Dwelling Code already includes equivalent references to UL/CSA 60335-2-40 for UL 1995 and this should be done in the Georgia State Minimum Standard Mechanical Code also.

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements and to head off the anticipated R-410A shortage that will be created as part of the phase down of the AIM Act. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which are starting to be sold.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

- 1. Do not complete the line entitled "Item No._____".
- 2. Use a separate form for each proposed code amendment.
- 3. "Sheet _____ of _____" indicates the number of sheets for each individual proposed code amendment, not the number of sheets for all the amendments submitted.
- 4. Identify the <u>code and code section</u> that is the subject of the proposed amendment.
- 5. The proponent's name, address, telephone number and fax number must be filled out completely.
- 6. Be sure to indicate the type of recommended action in the space referred to as "Check One".
- 7. If the proposed amendment revises the language of the code section, deletes the entire code section, or deletes the entire code section and offers substitute language, include the language of the present code section and line through the language to be deleted and underline the language of the proposed amendment.

- 8. Under the "Reason" section, provide the reasoning behind the proposed code amendment. The reason should be clear and concise. Test reports, standards or other supporting information and documentation may be submitted with the proposed amendment and must be attached to the amendment form.
- 9. A Statement of Financial Impact must accompany all proposed code amendments. The statement should be clear and concise. Test reports, standards or other supporting information and documentation may be submitted with the proposed amendment and must be attached to the amendment form.
- 10. All proposed amendments must be typed and completed in full and the original submitted to the Codes and Industrialized Buildings Section of the Department of Community Affairs NO LATER THAN DECEMBER 15TH. The proposed code change shall be submitted for review to the State Codes Advisory Committee at their quarterly meeting in January. An incomplete form will be sent back to the proponent for completion. An amendment submitted after the submittal deadline date will be returned to the proponent.
- 11. The proponent will be notified when the proposed amendment will be considered by the State Codes Advisory Committee.
- 12. Information concerning submittal of code amendments, including deadline dates for submittal, can be obtained by contacting the Codes and Industrialized Buildings Section at (404) 679-3118. All proposed code amendments should be submitted to:

CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
	nternational Mechanical Code Amendments	SECTION:	918		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: <u>R</u>	obert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	UMBER: (205)759-9638	FAX N	UMBER:	() -	
CHECK X	Revise section to read as follows:	Add ne	w section to rea	ad as follows:	
ONE:	Delete section and substitute the following:	Delete	without substit	ution:	
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE	MATERIAL	. TO BE AI	<u>DDED</u>
Approve	Approve as amended (DCA STAFF	ONLY) 🗌 Dis	sapprove	Withdra	wn

DESCRIPTION:

Section 918 Forced-Air Warm-Air Furnaces

918.1 Forced-air furnaces

Oil-fired furnaces shall be tested in accordance with UL 727. Electric furnaces shall be tested in accordance with UL 1995 <u>or UL/CSA 60335-2-40</u>. Solid fuel furnaces shall be tested in accordance with UL 391. Forcedair furnaces shall be installed in accordance with the listings and the manufacturer's instructions.

918.2 Heat pumps

Electric heat pumps shall be tested in accordance with UL 1995 or UL/CSA 60335-2-40.

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories will use the latest version of the UL 60335-2-40 safety standard for certification testing. These updates have already been approved by ICC for the 2024 IMC.

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The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to the UL 60335-2-40 – standard.

The 2020 Georgia State Minimum Standard One- and Two-Family Dwelling Code already includes equivalent references to UL/CSA 60335-2-40 for UL 1995 and this should be done in the Georgia State Minimum Standard Mechanical Code also.

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements and to head off the anticipated R-410A shortage that will be created as part of the phase down of the AIM Act. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which are starting to be sold.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
	nternational Mechanical Code Amendments	SECTION:	918		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: <u>R</u>	obert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	UMBER: (205)759-9638	FAX N	UMBER:	() -	
CHECK X	Revise section to read as follows:	Add ne	w section to rea	ad as follows:	
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FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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- 2. Use a separate form for each proposed code amendment.
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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE <u>1</u> OF <u>3</u>	
	nternational Mechanical Code Amendments	SECTION: 1101	
PROPONENT:	Robert Glass	DATE: <u>12/1/2022</u>	
EMAIL: R	obert.Glass@daikincomfort.com		
ADDRESS: 12	2680 Lock 15 Road, Tuscaloosa, AL 35406		
TELEPHONE N	UMBER: (205)759-9638	FAX NUMBER: () -	
	Revise section to read as follows:	Add new section to read as follows:	
ONE:	Delete section and substitute the following:	Delete without substitution:	
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE MATERIAL TO BE ADDED	<u>)</u>
Approve	Approve as amended (DCA STAFF	ONLY) Disapprove Withdrawn	

DESCRIPTION:

Section	1101	General
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1101.2 Factory-built equipment and appliances

Listed and labeled self-contained, factory-built equipment and appliances shall be tested in accordance with UL 207, 412, 471, or 1995, UL/CSA 60335-2-40 or UL/CSA 60335-2-89. Such equipment and appliances are deemed to meet the design, manufacture and factory test requirements of this code if installed in accordance with their listing and the manufacturer's instructions.

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories will use the latest version of the UL 60335-2-40 safety standard for certification testing. This update has been approved by ICC for the 2024 IMC.

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The 2020 Georgia State Minimum Standard One- and Two-Family Dwelling Code already includes equivalent references to UL/CSA 60335-2-40 for UL 1995 and this should be done in the Georgia State Minimum Standard Mechanical Code also.

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will need to be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, Group A2L refrigerant products which are beginning to hit the market.

FINANCIAL IMPACT OF PROPOSED AMENDMENT: The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

- 1. Do not complete the line entitled "Item No.____".
- 2. Use a separate form for each proposed code amendment.
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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
2018 I CODE: <u>w/GA</u>	nternational Mechanical Code Amendments	SECTION:	1103		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: <u>R</u>	obert.Glass@daikincomfort.com				
ADDRESS: 12	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	UMBER: (205)759-9638	FAX N	UMBER:	() -	
CHECK X ONE:	Revise section to read as follows: Delete section and substitute the following:		ew section to rea		
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE			<u>DDED</u>
Approve	Approve as amended (DCA STAFF	ONLY) 🗌 Dis	sapprove	Withdra	wn
DESCRIPTION:					

TABLE 1103.1 REFRIGERANT CLASSIFICATION, AMOUNT AND OEL

Footnote:

f. The ASHRAE Standard 34 flammability classification for this refrigerant is 2L, which is a subclass of Class 2.

REASON/INTENT:

The change to Table 1103.1 footnote f is to note that A2L is a classification in ASHRAE 34 by itself. It is no longer identified as a subclass of 2. ASHRAE 34 changed the classification of 2Ls in 2018 to a full group resulting in A2L and B2L classification of refrigerants. This is a simplified version from what has been done in the 2024 IMC but retains the same information. This update to Table 1103.1 has been approved by ICC for the 2024 IMC (Group A Item M74-21).

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

- 1. Do not complete the line entitled "Item No.____".
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- 11. The proponent will be notified when the proposed amendment will be considered by the State Codes Advisory Committee.
- 12. Information concerning submittal of code amendments, including deadline dates for submittal, can be obtained by contacting the Codes and Industrialized Buildings Section at (404) 679-3118. All proposed code amendments should be submitted to:

CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
2018 CODE: <u>w/GA</u>	International Mechanical Code Amendments	SECTION:	1104		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: R	obert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	IUMBER: (205)759-9638	FAX N	UMBER: () -	
CHECK X ONE:	Revise section to read as follows: Delete section and substitute the following:		ew section to read without substitu		
LINE THROUG	H MATERIAL TO BE DELETED:	<u>UNDERLINE</u>	MATERIAL	TO BE AI	<u>)DED</u>
Approve	Approve as amended (DCA STAFF	ONLY) 🗌 Dis	sapprove	Withdra	wn
DESCRIPTION					

SECTION 1104 SYSTEM APPLICATION REQUIREMENTS

1104.3.1 Air conditioning for human comfort.

<u>High probability systems used for human comfort shall use Group A1 or A2L refrigerant.</u> In other than industrial occupancies where the quantity in a single independent circuit does not exceed the amount in Table 1103.1, Group B1, B2 and B3 refrigerants shall not be used in high-probability systems for air conditioning for human comfort.

REASON/INTENT:

The proposed change is necessary to fully recognize the use of A2L refrigerants in high probability (direct) air conditioning systems for human comfort. This update has been approved by ICC for the 2024 IMC (Group A Item M75-21).

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE <u>1</u> OF <u>4</u>
2018 International Me CODE: <u>w/GA Amendments</u>	echanical Code	SECTION: Chapter 15
PROPONENT: Robert Glass		DATE: <u>12/1/2022</u>
EMAIL: <u>Robert.Glass@da</u>	ikincomfort.com	
ADDRESS: 12680 Lock 15 R	oad, Tuscaloosa, AL 35406	
TELEPHONE NUMBER: (2	05)759-9638	FAX NUMBER: () -
CHECK X Revise section to ONE: Delete section an LINE THROUGH MATERIAL	d substitute the following:	Add new section to read as follows: Delete without substitution: NDERLINE MATERIAL TO BE ADDED
Approve Approve as	amended (DCA STAFF ON	LY) Disapprove Withdrawn
DESCRIPTION: ASHRAE 15— 2016 <u>2022</u>	Safety Standards for	ASHRAE 1791 Tullie Circle, NE Atlanta, GA 30329 1105.3, 1106.6, 1106.7, GA
34— 2016	Refrigeration Systems Designation and Safety Classification of Refrigerants	Amendments 202, 1102.2.1, 1103.1
UL		UL LLC 333 Pfingsten Road Northbrook, IL 60062-2096
1995— 2011 <u>2015</u>	Heating and Cooling Equipment – with revisions through July 2015	908.1, 911.1, 916.1, 918.1, 918.2, 1101.2

UL/CSA 60335-2-40-2022	Household And Similar Electric	<u>908.1, 916.1, 918.1, 918.2,</u>
	<u> Appliances - Safety - Part 2-40:</u>	<u>1101.2</u>
	Particular Requirements for	
	<u>Electric Heat Pumps, Air-</u>	
	Conditioners and	
	<u>Dehumidifiers</u>	
<u>UL/CSA 60335-2-89-2021</u>	Household And Similar Electric	1101.2
	Appliances - Safety - Part 2-89:	
	Particular Requirements for	
	Commercial Refrigerating	
	Appliances with an	
	Incorporated or Remote	
	Refrigerant Units or	
	<u>Compressor</u>	

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories use the latest version of the UL 60335-2-40 safety standard for certification testing. The update to UL 60335-2-40-2022 has been approved by ICC for the 2024 IMC.

The 2020 Georgia State Minimum Standard One- and Two-Family Dwelling Code already includes equivalent references to UL/CSA 60335-2-40 for UL 1995 and this should be done in the Georgia State Minimum Standard Mechanical Code also.

ASHRAE 34-2022 includes many new Low GWP refrigerants that do not appear in previous editions of the standard. ASHRAE 15-2022 incorporates ASHRAE 15-2019 and its Addenda. ASHRAE 15 requires an A2L appliance or equipment to be listed to UL/CSA 60335-2-40-2019 or later editions. It should be noted that the 2024 ICC International Mechanical Code references the 2022 edition of ASHRAE 15 and ASHRAE 34.

The American Innovation and Manufacturing (AIM) Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate Low GWP refrigerants in air conditioning and refrigeration systems. The current lists of refrigerants in the Mechanical Code that comply with the Low GWP requirements of the AIM Act fall into the classification of Group A2L, B2L, A2, and A3. For high probability systems, manufacturers will be switching to Group A2L refrigerants from the current A1. Therefore, the Mechanical Code needs to be updated to address the use of Group A2L refrigerants in high probability (direct) systems. ASHRAE 15-2022 addresses all of the safety issues regarding the use of Group A2L refrigerants.

The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to the UL 60335-2-40 standard.

The deletion of 911.1 from the sections referenced by UL 1995 is simply clean-up work. Section 911.1 Duct Furnaces references UL 1996 and not UL 1995. This reference is in error. UL 1996 correctly references Section 911.1.

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements and to head off the anticipated R-410A shortage that will be created as part of the phase down of the AIM Act. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which are starting to be sold.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
2018 CODE: <u>w/GA</u>	International Residential Code Amendments	SECTION:	M1402		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: <u>F</u>	Robert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	IUMBER: (205)759-9638	FAX N	UMBER: () -	
CHECK X ONE:	Revise section to read as follows: Delete section and substitute the following:		ew section to read without substituti		
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE	MATERIAL 7	TO BE AI	<u>DDED</u>
Approve	Approve as amended (DCA STAFF	FONLY) Dis	sapprove [Withdra	wn
DESCRIPTION	:				

Section M1402 Central Furnaces

M1402.1 General

Oil-fired central furnaces shall conform to ANSI/UL 727. Electric furnaces shall conform to UL 1995 or UL/CSA/ANCE 60335-2-40.

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories will use the latest version of the UL 60335-2-40 safety standard for certification testing. The addition of UL/CSA 60335-2-40-2022 was approved by ICC for the 2024 IRC.

The American Innovation and Manufacturing (AIM) Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate Low GWP refrigerants in air conditioning and refrigeration systems.

The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to the UL 60335-2-40

standard.

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard have been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion has been approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
2018 CODE: w/GA	International Residential Code A Amendments	SECTION: 1	M1403		
PROPONENT:		DATE:			
EMAIL: <u>I</u>	Robert.Glass@daikincomfort.com				
ADDRESS:	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	NUMBER: (205)759-9638	FAX NU	MBER:	() -	
$\begin{array}{c} \text{CHECK} & \underline{X} \\ \text{ONE:} & \Box \end{array}$	_ Revise section to read as follows: Delete section and substitute the following:		section to re	ead as follows tution:	:
LINE THROUG	GH MATERIAL TO BE DELETED:	UNDERLINE M			<u>DDED</u>
Approve	Approve as amended (DCA STAFF	ONLY) Disaj	pprove	Withdra	awn

DESCRIPTION:

Section M1403 Heat Pump Equipment

M1403.1 Heat pumps

Electric heat pumps shall be listed and labeled in accordance with UL 1995 or UL/CSA/ANCE 60335-2-40.

REASON/INTENT:

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion was approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE <u>1</u> OF <u>3</u>	
	International Residential Code Amendments	SECTION: M1412	
PROPONENT:	Robert Glass	DATE: <u>12/1/2022</u>	
EMAIL: R	obert.Glass@daikincomfort.com		
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406		
TELEPHONE N	IUMBER: (205)759-9638	FAX NUMBER: () -	
	Revise section to read as follows:	Add new section to read as follows:	
ONE:	Delete section and substitute the following:	Delete without substitution:	
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE MATERIAL TO BE ADDE	<u>D</u>
Approve	Approve as amended (DCA STAFF	ONLY) Disapprove Withdrawn	

DESCRIPTION:

Section M1412 Absorption Cooling Equipment

M1412.1 Approval of equipment

Absorption systems shall be installed in accordance with the manufacturer's instructions. Absorption equipment shall comply with UL 1995 or UL/CSA/ANCE 60335-2-40.

REASON/INTENT:

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion has been approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE <u>1</u> OF <u>3</u>
	International Residential Code Amendments	SECTION: M1413
PROPONENT:	Robert Glass	DATE: 12/1/2022
EMAIL: <u>F</u>	Robert.Glass@daikincomfort.com	
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406	
TELEPHONE N	NUMBER: (205)759-9638	FAX NUMBER: () -
CHECK X	Revise section to read as follows:	Add new section to read as follows:
ONE:	_ Delete section and substitute the following:	Delete without substitution:
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE MATERIAL TO BE ADDED
Approve	Approve as amended (DCA STAFF	ONLY) Disapprove Withdrawn

DESCRIPTION:

Section M1413 Evaporative Cooling Equipment

M1413.1 General

Evaporative cooling equipment and appliances shall comply with UL 1995 or UL/CSA/ANCE 60335-2-40 and shall be installed:

REASON/INTENT:

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion was approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
	International Residential Code Amendments	SECTION:	M2006		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: <u>R</u>	obert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	UMBER: (205)759-9638	FAX N	UMBER:	() -	
CHECK X	Revise section to read as follows:	Add ne	ew section to rea	d as follows:	
ONE:	Delete section and substitute the following:	Delete	without substitu	tion:	
LINE THROUG	H MATERIAL TO BE DELETED:	<u>UNDERLINE</u>	MATERIAL	TO BE A	<u>DDED</u>
Approve	Approve as amended (DCA STAFF	ONLY) Dis	sapprove	Withdra	ıwn

DESCRIPTION:

Section M2006 Central Furnaces

M2006.1 General

Pool and spa heaters shall be installed in accordance with the manufacturer's installation instructions. Oilfired pool heaters shall comply with UL 726. Electric pool and spa heaters shall comply with UL 12161. Pool and spa heat pump water heaters shall comply with UL 1995, UL/CSA/ANCE 60335-2-40 or CSA C22.2 No. 236.

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories will use the latest version of the UL 60335-2-40 safety standard for certification testing. The addition of UL/CSA 60335-2-40-2022 was approved by ICC for the 2024 IRC.

The American Innovation and Manufacturing (AIM) Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate Low GWP refrigerants in air conditioning and refrigeration systems. The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to the UL 60335-2-40 standard. The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard have been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion has been approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

- 1. Do not complete the line entitled "Item No.____".
- 2. Use a separate form for each proposed code amendment.
- 3. "Sheet _____ of _____" indicates the number of sheets for each individual proposed code amendment, not the number of sheets for all the amendments submitted.
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- 10. All proposed amendments must be typed and completed in full and the original submitted to the Codes and Industrialized Buildings Section of the Department of Community Affairs NO LATER

THAN DECEMBER 15TH. The proposed code change shall be submitted for review to the State Codes Advisory Committee at their quarterly meeting in January. An incomplete form will be sent back to the proponent for completion. An amendment submitted after the submittal deadline date will be returned to the proponent.

- 11. The proponent will be notified when the proposed amendment will be considered by the State Codes Advisory Committee.
- 12. Information concerning submittal of code amendments, including deadline dates for submittal, can be obtained by contacting the Codes and Industrialized Buildings Section at (404) 679-3118. All proposed code amendments should be submitted to:

CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
2018 CODE: <u>w/GA</u>	International Residential Code Amendments	SECTION:	M1402		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: <u>F</u>	Robert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	IUMBER: (205)759-9638	FAX N	UMBER: () -	
CHECK X ONE:	Revise section to read as follows: Delete section and substitute the following:		w section to read		
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE	MATERIAL 7	TO BE AI	<u>DDED</u>
Approve	Approve as amended (DCA STAFF	FONLY) Dis	sapprove [Withdra	wn
DESCRIPTION	:				

Section M1402 Central Furnaces

M1402.1 General

Oil-fired central furnaces shall conform to ANSI/UL 727. Electric furnaces shall conform to UL 1995 or UL/CSA/ANCE 60335-2-40.

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories will use the latest version of the UL 60335-2-40 safety standard for certification testing. The addition of UL/CSA 60335-2-40-2022 was approved by ICC for the 2024 IRC.

The American Innovation and Manufacturing (AIM) Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate Low GWP refrigerants in air conditioning and refrigeration systems.

The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to the UL 60335-2-40

standard.

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard have been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion has been approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
2018 CODE: w/GA	International Residential Code A Amendments	SECTION: 1	M1403		
PROPONENT:		DATE:			
EMAIL: <u>I</u>	Robert.Glass@daikincomfort.com				
ADDRESS:	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	NUMBER: (205)759-9638	FAX NU	MBER:	() -	
$\begin{array}{c} \text{CHECK} & \underline{X} \\ \text{ONE:} & \Box \end{array}$	_ Revise section to read as follows: Delete section and substitute the following:		section to re	ead as follows tution:	:
LINE THROUG	GH MATERIAL TO BE DELETED:	UNDERLINE M			<u>DDED</u>
Approve	Approve as amended (DCA STAFF	ONLY) Disaj	pprove	Withdra	awn

DESCRIPTION:

Section M1403 Heat Pump Equipment

M1403.1 Heat pumps

Electric heat pumps shall be listed and labeled in accordance with UL 1995 or UL/CSA/ANCE 60335-2-40.

REASON/INTENT:

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion was approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE <u>1</u> OF <u>3</u>	
	International Residential Code Amendments	SECTION: M1412	
PROPONENT:	Robert Glass	DATE: <u>12/1/2022</u>	
EMAIL: R	obert.Glass@daikincomfort.com		
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406		
TELEPHONE N	IUMBER: (205)759-9638	FAX NUMBER: () -	
	Revise section to read as follows:	Add new section to read as follows:	
ONE:	Delete section and substitute the following:	Delete without substitution:	
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE MATERIAL TO BE ADDE	<u>D</u>
Approve	Approve as amended (DCA STAFF	ONLY) Disapprove Withdrawn	

DESCRIPTION:

Section M1412 Absorption Cooling Equipment

M1412.1 Approval of equipment

Absorption systems shall be installed in accordance with the manufacturer's instructions. Absorption equipment shall comply with UL 1995 or UL/CSA/ANCE 60335-2-40.

REASON/INTENT:

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion has been approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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- 6. Be sure to indicate the type of recommended action in the space referred to as "Check One".
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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE <u>1</u> OF <u>3</u>
	International Residential Code Amendments	SECTION: M1413
PROPONENT:	Robert Glass	DATE: 12/1/2022
EMAIL: <u>F</u>	Robert.Glass@daikincomfort.com	
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406	
TELEPHONE N	NUMBER: (205)759-9638	FAX NUMBER: () -
CHECK X	Revise section to read as follows:	Add new section to read as follows:
ONE:	_ Delete section and substitute the following:	Delete without substitution:
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE MATERIAL TO BE ADDED
Approve	Approve as amended (DCA STAFF	ONLY) Disapprove Withdrawn

DESCRIPTION:

Section M1413 Evaporative Cooling Equipment

M1413.1 General

Evaporative cooling equipment and appliances shall comply with UL 1995 or UL/CSA/ANCE 60335-2-40 and shall be installed:

REASON/INTENT:

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion was approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

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GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)		PAGE 1	OF	3
	International Residential Code Amendments	SECTION:	M2006		
PROPONENT:	Robert Glass	DATE:	12/1/2022		
EMAIL: <u>R</u>	obert.Glass@daikincomfort.com				
ADDRESS: 1	2680 Lock 15 Road, Tuscaloosa, AL 35406				
TELEPHONE N	UMBER: (205)759-9638	FAX N	UMBER:	() -	
CHECK X	Revise section to read as follows:	Add ne	ew section to rea	d as follows:	
ONE:	Delete section and substitute the following:	Delete	without substitu	tion:	
LINE THROUG	H MATERIAL TO BE DELETED:	<u>UNDERLINE</u>	MATERIAL	TO BE A	<u>DDED</u>
Approve	Approve as amended (DCA STAFF	ONLY) Dis	sapprove	Withdra	ıwn

DESCRIPTION:

Section M2006 Central Furnaces

M2006.1 General

Pool and spa heaters shall be installed in accordance with the manufacturer's installation instructions. Oilfired pool heaters shall comply with UL 726. Electric pool and spa heaters shall comply with UL 12161. Pool and spa heat pump water heaters shall comply with UL 1995, UL/CSA/ANCE 60335-2-40 or CSA C22.2 No. 236.

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories will use the latest version of the UL 60335-2-40 safety standard for certification testing. The addition of UL/CSA 60335-2-40-2022 was approved by ICC for the 2024 IRC.

The American Innovation and Manufacturing (AIM) Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate Low GWP refrigerants in air conditioning and refrigeration systems. The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to the UL 60335-2-40 standard. The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard have been removed as ANCE in Mexico withdrew from the trinational standard and is no longer associated with this standard after the 2nd Edition. This deletion has been approved by ICC for the 2024 IRC (Group A Item RM6-21).

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

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GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONLY)	PAGE <u>1</u> OF <u>4</u>				
2018 International res CODE: w/GA Amendments	sidential Code	SECTION: Chapter 44				
PROPONENT: Robert Glass		DATE: <u>12/1/2022</u>				
EMAIL: Robert.Glass@daikincomfort.com						
ADDRESS: 12680 Lock 15 Road, Tuscaloosa, AL 35406						
TELEPHONE NUMBER: (2	05)759-9638	FAX NUMBER: () -				
CHECK X Revise section to ONE: Delete section ar LINE THROUGH MATERIAL	ad substitute the following:	Add new section to read as follows: Delete without substitution: NDERLINE MATERIAL TO BE ADDED				
Approve Approve as	amended (DCA STAFF ONI	LY) Disapprove Withdrawn				
DESCRIPTION: ANCE NMX-J-521/2-40- ANCE-2014/ CAN/CSA- 22.2 No. 60335-2-40-12/ UL 60335-2-40	Av. La Col. N	iation of the Electric Sector ázaro Cardenas No. 869 Iueva Industrial Vallejo 7700 México D.F. M1403.1, M1412.1, M1413.1				
ASHRAE 34— 2016 <u>2022</u>	Designation and Safety Classification of Refrigerants	ASHRAE 1791 Tullie Circle NE Atlanta, GA 30329 M1411.1				

UL		UL LLC 333 Pfingsten Road Northbrook, IL 60062
1995— 2011 2015	Heating and Cooling Equipment — with revisions through July 2015	M1402.1, M1403.1, M1407.1, M1412.1, M1413.1, M2006.1
UL/CSA /ANCE 60335-2-40— 2012 2022	Standard for Household and Similar Electrical Appliances <u>–</u> <u>Safety</u> Part 2 <u>-40</u> : Particular Requirements for Motor compressors <u>Electrical Heat</u> <u>Pumps, Air-Conditioners and</u> <u>Dehumidifiers</u>	<u>M1402.1,</u> M1403.1, M1412.1, M1413.1 <u>,</u> <u>M2006.1</u>

REASON/INTENT:

Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 4th edition of UL 60335-2-40, published December 2022, has many new requirements for electrical and refrigerant safety. Certification laboratories will use the latest version of the UL 60335-2-40 safety standard for certification testing.

The American Innovation and Manufacturing (AIM) Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate Low GWP refrigerants in air conditioning and refrigeration systems.

The EPA SNAP Rule 23, which lists requirements for the use of noted alternate A2L refrigerants, specifies that air-conditioning equipment using these alternate refrigerants MUST be listed to UL 60335-2-40.

The references to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the trinational standard is no longer associated with this standard after the 2nd Edition. This deletion was approved by ICC as part of the 2024 IRC development (Group A Item RM6-21).

ASHRAE 34-2022 includes updated new Low GWP refrigerants. It should be noted that the 2024 IRC references the 2022 edition of ASHRAE 34.

The titles shown in Chapter 44 – Referenced Standards for UL/CSA 60335-2-40 have been updated to reflect the current title of the standards. The UL/CSA 60335-2-40 is being updated to the 2022 edition. This change was approved by ICC as part of the 2024 code process.

The reference to M1407.1 is being deleted from UL 1995 as M1407.1 addresses Duct Furnaces which comply with UL 1996. The reference to UL 1995 in Chapter 44 is in error. M1407.1 is properly referenced under UL 1996.

UL 1995 is being updated to the current 2015 edition. It should be noted that the 2021 IRC references the 2015 edition of UL 1995.

The normal code cycle for Georgia will not be addressed again until 2025 (using the 2024 ICC codes). Before that date, products using Low GWP, Group A2L refrigerants will be sold to meet market requirements. As such, this proposal needs to be addressed on an off-cycle basis to update the code to make allowance for Low GWP, A2L refrigerant products which will be used.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

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GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

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- 3. "Sheet _____ of _____" indicates the number of sheets for each individual proposed code amendment, not the number of sheets for all the amendments submitted.
- 4. Identify the <u>code and code section</u> that is the subject of the proposed amendment.
- 5. The proponent's name, address, telephone number and fax number must be filled out completely.
- 6. Be sure to indicate the type of recommended action in the space referred to as "Check One".
- 7. If the proposed amendment revises the language of the code section, deletes the entire code section, or deletes the entire code section and offers substitute language, include the language of the present code section and line through the language to be deleted and underline the language of the proposed amendment.
- 8. Under the "Reason" section, provide the reasoning behind the proposed code amendment. The reason should be clear and concise. Test reports, standards or other supporting information and documentation may be submitted with the proposed amendment and must be attached to the amendment form.
- 9. A Statement of Financial Impact must accompany all proposed code amendments. The statement should be clear and concise. Test reports, standards or other supporting information and documentation may be submitted with the proposed amendment and must be attached to the amendment form.
- 10. All proposed amendments must be typed and completed in full and the original submitted to the Codes and Industrialized Buildings Section of the Department of Community Affairs NO LATER THAN DECEMBER 15TH. The proposed code change shall be submitted for review to the State Codes Advisory Committee at their quarterly meeting in January. An incomplete form will be sent back to the proponent for completion. An amendment submitted after the submittal deadline date will be returned to the proponent.

- 11. The proponent will be notified when the proposed amendment will be considered by the State Codes Advisory Committee.
- 12. Information concerning submittal of code amendments, including deadline dates for submittal, can be obtained by contacting the Codes and Industrialized Buildings Section at (404) 679-3118. All proposed code amendments should be submitted to:

CODE AMENDMENT FORM

ITEM NO:	(DCA USE ONL)	<i>(</i>)	PAGE OF			
CODE: ISPSC		SECTION:	305.6			
PROPONENT: Ibrahim Maslamani		DATE:	11/7/2022			
EMAIL: M	aslamani01@outlook.com					
ADDRESS: 505 Robinson Ave SE, Atlanta GA 30315						
TELEPHONE N	UMBER: (706)910-4219	FAX N	UMBER: () -			
CHECK 🛛	Revise section to read as follows:	Add ne	w section to read as follows:			
ONE:	Delete section and substitute the following:	e section and substitute the following:				
LINE THROUG	H MATERIAL TO BE DELETED:	UNDERLINE	MATERIAL TO BE ADD	ED		
Approve	Approve as amended (DCA	STAFF ONLY) 🗌 Dis	approve Withdrawn			

DESCRIPTION:

305.6 Natural Barriers.

In the case where the pool or spa area abuts <u>and within 100 feet</u> of the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches (457mm), a barrier is not required between the natural body of water shoreline and the pool or spa.

REASON/INTENT:

In the cases where a property abuts a lake or ocean, such lake or body of water poses much more danger to the public that a pool abutting such body of water. Most of the public recognize such fact and are forced to provide a temporary fence to comply with the code for the inspection process. Then the fence is removed and "rented" to other future pool owners.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:

Home owners are required to provide a barrier to protect the public from their pool which is understandable when a property is not within a vicinity of lakes or natural bodies of water. But in the case of waterfront properties, a pool poses much less danger that the body of water it abuts. The impact is about \$10,000 in fencing that is most likely will be removed once the pool inspections are completed.

CODE AMENDMENT FORM INSTRUCTION SHEET

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UL 1995 Transition to UL 60335-2-40

JULY 31 2019

Existing products impacted by, but do not yet comply with the new Electric Heat Back-up Protection requirements or the Ultraviolet Light (UV) requirements noted in UL 1995, 5th edition must be evaluated for compliance

UL 60335-2-40 3rd edition is out for ballot. DECEMBER This edition contains A2L refrigerant specific requirements. The scope now aligns with UL 1995

SEPTEMBER 15 2017

UL 60335-2-40, 2nd edition published

- Includes requirements for air-conditioners rated up to 15kV, partial units, and revised electric heat requirements.
- Includes requirements for the use of A2 and A3 (flammable) refrigerants.

2012 UL 60335-2-40, 1st

NOVEMBER 30

edition published

- Covers products rated less than 600 Volts.
- Does not include requirements for the use of A2 and A3 (flammable)
- refrigerants.

FEBRUARY 6 2019

60335-2-40 ballot closes

2015 UL 1995, 5th edition published The 5th Edition covers all products.

JULY 15

Currently, manufacturers may have UL 1995 Certified products evaluated to UL 60335-2-40. UL 1995 will remain a valid certification standard through January 1, 2024, when it will be effectively obsoleted. At that time, UL 1995 will no longer be used to certify new products.

JANUARY 1

All products shall comply with UL 60335-2-40 3rd edition by January 1, 2024. Today, products may be listed to either UL 1995 or UL 60355-2-40. However, with minimum equipment efficiency changes scheduled for 2023 and 2024, coupled with Low GWP refrigerant requirements expected in several states, all equipment within the scope of UL 1995 shall be retested to the requirements in the 3rd edition UL 60335-2-40

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