AGENDA

UNIFORM BUILDING CODE COMMISSION

Wednesday, October 7, 2015

9:00 AM
Sandy City Hall, 10000 Centennial Pkwy Sandy, UT
Room 341

This agenda is subject to change up to 24 hours prior to the meeting.

Public Hearing for Title 15A

Administrative Business:
Call meeting to order
Sign per diem sheet

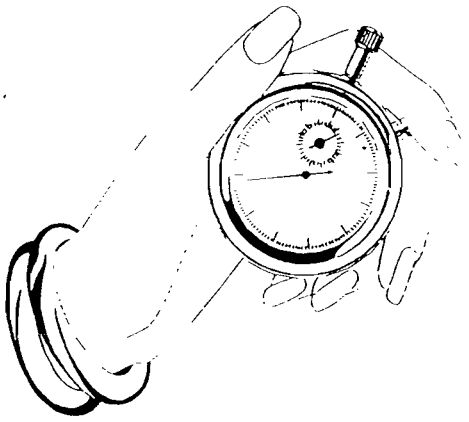
Discussion Items:
1. Approve minutes from August 12, 2015 meeting
2. Review public comments
3. Make a final recommendation for the Business & Labor Interim Committee
4. Advisory Committee reports -
    a. Architectural Advisory Committee – no meeting
    c. Education Advisory Committee – no meeting
    d. Electrical Advisory Committee – no meeting
    e. Unified Code Analysis Council – no meeting
    f. International Mechanical Advisory Committee – no meeting
    g. Plumbing /Health Advisory Committee – no meeting
    h. Structural Advisory Committee – no meeting
5 Info Items
    a. IBC Amendment status log
    b. IRC Amendment status log
    c. IPC Amendment status log
    d. IECC Amendment status log
    e. NEC Amendment status log
    f. IEBC Amendment status log
    g. Education Committee Combined Balance & Income Sheet

Next Scheduled Meeting: to be determined

Please call Sharon at 530-6163, email at ssmalley@utah.gov or dansjones@utah.gov if you do not plan on attending the meeting.

In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting should notify Dave Taylor, ADA Coordinator, at least three working days prior to the meeting. Division of Occupational and Professional Licensing, 160 East 300 South, Salt Lake City UT 84115, 801-530-6628 or toll-free in Utah only 866-275-3675.

AGENDA
ITEM # 1



MINUTES

MINUTES

UTAH
UNIFORM BUILDING CODE COMMISSION
MEETING

August 12, 2015

Sandy City Hall – 9:00 am
Room 341
Sandy, UT

STAFF:
Dan S. Jones, Bureau Manager
Sharon Smalley, Board Secretary

COMMISSIONERS:
Ron McArthur
Justin Naser
Bryant Pankratz
Alex Butwinski (excused)
Patrick Tomasino
Christopher Jensen
Richard Butz
Chris Joyal
Casey Vorwaller
Kevin Emerson

VISITORS:
David Wilson, Utah Energy Conservation Coalition
Brent Ursenbach SLCO
Mitch Richardson, STS
Ross Ford, Utah HBA
Dianna Gethers, OED
Scott Marsell, Sandy City

MINUTES

A motion was made by Casey Vorwaller to approve the minutes from the July 22, 2015 meetings as written. The motion was seconded by Richard Butz and passed unanimously.

REVIEW RECOMMENDATIONS FROM THE ADVISORY COMMITTEES FOR THE 2015 ENERGY CODES

Those present reviewed the proposed amendments for the residential energy code. Brent Ursenbach spoke on behalf of the advisory committees and reviewed the changes that have been proposed.

Following the review and discussion, it was noted that several changes needed to be made to the current amendments:

In the current amendment for Section 15A-3-203 (1), the section number needs to be changed from N1101.8 to N1101.5.

In the current amendment for 15A-3-203 for Section N1102.4.1.2, the word Climate needs to be added in two places before the word "Zones" and the number 3 needs to be spelled out.

In the current amendment for 15A-3-203 for Section M1307.2, "D_0" needs to be added before "D_1", the words "and in townhouses in Seismic Design Category C," need to be added after D_2 and the last sentence in subparagraph 1 needs to be deleted.

A motion was made by Ron McArthur to make the recommended changes for M1307.2. The motion was seconded by Chris Joyal and passed unanimously.

A motion was made by Chris Joyal accept the changes and move forward the recommendations from the Architectural and Mechanical Advisory Committees for the 2015 residential energy code with the corrections pointed out by Justin Naser. The motion was seconded by Richard Butz and passed unanimously.

Dan Jones discussed when the public hearing will be and it was decided that the meeting should be scheduled for October 7th, if possible.

REVIEW SUMMARY OF RECOMMENDED CODE & AMENDMENT CHANGES

The Commission reviewed the summary of recommended changes. A motion was made by Ron McArthur to modify the language in the overall summary to state "As to the residential energy code provisions of the 2015 IECC and Chapter 11 of the 2015 IRC, this subject has been discussed at great length. These recommendations are a compromise solution among the interested parties. Persons interested in the full discussion or material may review the committee's minutes, recordings and material which are located on DOPL's website". The motion was seconded by Chris Jensen and passed unanimously.

A motion was made by Chris Jensen to accept the summary of recommended changes with the modifications that were previously approved and move

forward to the State Bulletin and on to the public hearing. The motion was seconded by Casey Vorwaller and passed unanimously.

The meeting adjourned at 10:41.

Advisory Committee Reports

IBC AMENDMENT STATUS LOG
PENDING
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Section to Amend	Proponent & Agency	Approved/Denied by Committee	Commission Appr/Deny for Hearing	Published	Public Hearing	Commission Appr/Deny Amendment	Effective Date
307.1	Architectural - Unified	10-7-14			10-7-15		
308.2	Architectural - Unified	10-7-14			10-7-15		
(F)908.7	Scott Marsell	2-3-15 approved			10-7-15		
Wasatch Fire District local amendment	Wasatch County	2-3-15 tabled					
907.2.3	Deanne Mousley	2-3-15 approved			10-7-15		

MINUTES

UTAH
UBCC EDUCATION ADVISORY COMMITTEE MEETING
August 15, 2015

Room 402 Fourth Floor – 1:00 p.m.
Heber M. Wells Building
Salt Lake City, UT 84111

CONVENED: 1:04 p.m. **ADJOURNED: 1:44 p.m.**

Construction CE Manager: Robyn Barkdull

Board Secretary: Boyce Barnes

Division Director: Mark Steinagel (excused)

Committee Members Present:
Rob Allen
Craig Browne
John Chase
Kevin Phillips
Patrick Tomasino

Committee Members Absent:
Shane Honey
James Thomas
Jennifer Saunders
Kathy LeMay

Guests:
Carey Maedgen – Utah Chapter ICC
Greg Anderson – ICC Beehive Chapter

DECISIONS AND RECOMMENDATIONS

MINUTES:

Patrick Tomasino made a motion to approve the minutes from the June 16, 2015 meeting. Rob Allen seconded the motion. The motion passed unanimously.

BUDGET REPORT FOR FY 2015

The budget reports were presented and reviewed by the Committee. Questions were asked and answered.

COMMITTEE BUSINESS

Kevin Phillips made a motion to reelect Craig C. Browne as the committee chairperson. Rob Allen seconded the motion. The motion was approved unanimously.

UBCC APPLICATION FOR FUNDING GRANT REVIEW FY 2016:

The committee considered an application from the Beehive Chapter of ICC for a total of $27,500.00. Patrick Tomasino made a motion to approve the funding request. Kevin Phillips seconded the motion. The motion passed unanimously.

The committee considered an application from the Uintah Basin ATC for a total of $760.00 Rob Allen made a motion to approve the funding request. John Chase seconded the motion. The motion passed unanimously.

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UBCC REQUEST FOR REIMBURSEMENTS

The committee considered a request for reimbursement from Utah Chapter ICC for a total of $36,810.14. Rob Allen made a

UBCC REQUEST FOR REIMBURSEMENTS (continued)

motion to approve the request for reimbursement. John Chase seconded the motion. The motion passed unanimously.

The committee considered a request for reimbursement from Utah Chapter ICC for a total of $865.07. Patrick Tomasino made a motion to approve the request for reimbursement. Kevin Phillips seconded the motion. The motion passed unanimously.

The committee considered a request for reimbursement from Southern Utah HBA for a total of $706.73. The committee discussed that the course was a Storm Water Prevention Plan training which is not code-related instruction. It was determined that the course does not meet rule for acceptable reimbursable education. Kevin Phillips made a motion to deny the request for reimbursement. Rob Allen seconded the motion. The motion passed unanimously, so the reimbursement request was denied.

DISCUSSION

MADCAD Update
Tom Peterson is working on a mailer which will be sent to all licensed architects and engineers throughout the state informing them of the availability of the MADCAD subscription. He has obtained both physical and email addresses to send the mailers out. No new updated information on the current usage of MADCAD. It was suggested that one year may not be enough time to test the usage of MADCAD.

NEXT MEETING:

The next committee meeting is scheduled for Tuesday, September 15, 2015; 1:00 p.m.; in Room 402 (Fourth Floor) of the Heber M. Wells Building, Salt Lake City, Utah.

ADJOURN: 1:44 p.m.

Adjourned at p.m. (no motion required)

Note: These minutes are not intended to be a verbatim transcript but are intended to record the significant features of the business conducted in this meeting. Discussed items are not necessarily shown in the chronological order they occurred.

_____
Signature & Date Approved

Chairperson, Craig Browne
Chairperson, UBCC Education Advisory Committee

_____
Signature & Date Approved

Robyn Barkdull
Construction CE Manager, Division of Occupational and Professional Licensing

IRC AMENDMENT STATUS LOG
PENDING

Section to Amend	Proponent & Agency	Approved/Denied by Committee	Commission Appr/Deny for Hearing	Published	Public Hearing	Commission Appr/Deny Amendment
E3901.9	Electrical Committee	4-9-15			10-7-15	

IPC AMENDMENT STATUS LOG
PENDING
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Section to Amend	Proponent & Agency	Approved/Denied by Committee	Commission Appr/Deny for Hearing	PUBLIC HEARING	BUSINESS & LABOR INTERIM		Effective Date
312	Jeff Park	5-1-14 approved	6-11-14 approved	10-7-15			
307.5		8-7-14 committee approved the deletion of new section					
403.1		9-4-14 modify		10-7-15			
412.5		9-4-14 modify		10-7-15			
502.4		9-4-14 modify		10-7-15			
608.1.2 & 608.1.3	Michael Moss	12-4-14 approved		10-7-15			
314.2.4.1 and .2	Ray Moore	Tabled No changes recommended 5-7-15					
1002.1, .3 and .4 15A-3-314	Plumb-Tech Design	1-8-15 tabled 2-5-15 denied	7-8-15 no action taken				
705.11.2	Kevin Bell	5-7-15 denied Stay with current wording	7-8-15 no action taken				
802.1.1	Committee	4-2-15 approved		10-7-15			
608.16.7	Ron Lord	Denied 5-7-15	7-8-15 no action taken				
IBC Table [P] 2902.1	Alithia Zamantakis	denied	7-18-15 no action taken				

IEBC AMENDMENT STATUS LOG
PENDING

Section to Amend	Proponent & Agency	Approved/Denied by Committee	Commission Appr/Deny for Hearing	Published	Public Hearing	Commission Appr/Deny Amendment	Effective Date
Section 202 - existing building	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by Architectural and Unified			10-7-15		
301.1	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by Architectural and Unified			10-7-15		
403.5	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by Architectural and Unified			10-7-15		
705.1	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by Architectural and Unified			10-7-15		
707.3.1	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by Architectural and Unified			10-7-15		
1007.3.1	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by Architectural and Unified			10-7-15		
1012.7.3	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by Architectural and Unified			10-7-15		
1012.8.2	Structural Advisory Committee	Approved 5-7-15 Approved 6-2-15 by			10-7-15		

Section to Amend	Proponent & Agency	Approved/Denied by Committee	Commission Appr/Deny for Hearing	Published	Public Hearing	Commission Appr/Deny Amendment	Effective Date
		Architectural and Unified					

Info Items

FY July 1, 2015 - June 30, 2016 UBC
COMBINED BALANCE SHEET & INCOME STATEMENT
For August 1-31, 2015 (Period 2)

REVENUE	BUDGET	RECEIVED	ACTUAL YTD	
Surcharge Fees Projected (estimated only)	$ 419,323.17	$ 15,475.10	$ 121,219.61	
Carryover Credit from Previous Years (after all payments)	$ 1,081,524.00			
Total	$ 1,500,847.17			
ADMINISTRATIVE ENCUMBRANCES	**BUDGET**	**PAID**	**ACTUAL YTD**	**BALANCE**
Salary and Benefits	$63,705.86	$ 4,708.11	$ 7,918.58	$55,787.28
Communication Services	$500.00	$ 39.53	$ 78.63	$421.37
Miscellaneous/Office Supplies & Printing/Library	$50.00	$ -	$ -	$50.00
Total	**$64,255.86**	**$ 4,747.64**	**$ 7,997.21**	**$56,258.65**
EDUCATIONAL GRANTS TO SCHOOLS		**PAID**	**ACTUAL YTD**	**BALANCE**
Bridgerland Applied Tech College	$ 42,025.25	$ -	$ -	$ 42,025.25
Davis Applied Tech College	$ -	$ -	$ -	$ -
Dixie State College (Dixie Applied Tech College)	$ -	$ -	$ -	$ -
Salt Lake Community College	$ 11,124.00	$ -	$ -	$ 11,124.00
Southwest Applied Technology College	$ -	$ -	$ -	$ -
Uintah Basin ATC	$ 3,800.00	$ -	$ -	$ 3,800.00
Utah Electrical JATC/IBEW	$ -	$ -	$ -	$ -
TOTAL	**$ 56,949.25**	**$ -**	**$ -**	**$ 56,949.25**
ASSOCIATION FUNDING GRANTS		**PAID**	**ACTUAL YTD**	
ACI Intermountain Chapter	$ 3,000.00	$ -	$ -	$ 3,000.00
AIA Utah Chapter	$ -	$ -	$ -	$ -
ASHRAE	$ -	$ -	$ -	$ -
Associated General Contractors - Utah / AGC-Utah	$ -	$ -	$ -	$ -
Associated Builders & Contractors of Utah	$ -	$ -	$ -	$ -
Beehive Chapter ICC	$ 27,500.00	$ -	$ -	$ 27,500.00
Bonneville Chapter ICC	$ 73,343.84	$ -	$ -	$ 73,343.84
Construction Specifications Institute Inc / CSI	$ -	$ -	$ -	$ -
Fire Marshal's Association of Utah	$ 7,400.00	$ -	$ -	$ 7,400.00
IEC of Utah (Independent Electrical Contractors)	$ 13,357.69	$ -	$ -	$ 13,357.69
Iron County Home Builders Association	$ 7,600.00	$ -	$ -	$ 7,600.00
Northern Utah Building Inspectors	$ -	$ -	$ -	$ -
Park City Area Home Builders Associaiton/PCAHBA	$ -	$ -	$ -	$ -
Rocky Mountain Gas Association	$ 51,048.00	$ -	$ -	$ 51,048.00
Salt Lake Home Builders Association / SLHBA	$ -	$ -	$ -	$ -
SEAU (Structural Engineers Association)	$ 38,054.00	$ -	$ -	$ 38,054.00
Southern Utah Home Builders Association / SUHBA	$ 43,985.00	$ -	$ -	$ 43,985.00
Southern Utah Division IAEI	$ 5,200.00	$ -	$ -	$ 5,200.00
UAPMO	$ 27,600.00	$ -	$ -	$ 27,600.00
Utah Chapter IAEI	$ 33,825.00	$ -	$ -	$ 33,825.00
Utah Chapter ICC	$ 83,000.00	$ -	$ -	$ 83,000.00
Utah Construction Suppliers Association	$ -	$ -	$ -	$ -
Utah Plumbing & Heating Contractors Association	$ 22,000.00	$ -	$ -	$ 22,000.00
Utah Homebuilders Association	$ -	$ -	$ -	$ -

Utah Division of Occupational and Professional Licensing	$ -	$ -	$ -	$ -
Utah Valley Homebuilders Association	$ -	$ -	$ -	$ -
TOTAL	**$ 436,913.53**	**$ -**	**$ -**	**$ 436,913.53**
TOTAL ENCUMBRANCES	**$ 558,118.64**	**$ 4,747.64**	**$ 7,997.21**	**$550,121.43**
REVENUES (LESS ACTUAL EXPENDITURES)		**PAID**	**ACTUAL YTD**	
Total Revenue (Surcharges plus carryovers)			$ 1,202,743.61	
Less Actual Expenditures			$ 7,997.21	
SUBTOTAL (ACTUAL)			**$ 1,194,746.40**	
Less Approved Unpaid Encumbrances			$550,121.43	
TOTAL RESERVES			**$ 644,624.97**	

Recommended Changes to Construction Codes
Under Title 15A State Construction and Fire Code Act
Proposed by the Uniform Building Code Commissions

"15A-2-101. Title -- Adoption of code.

15A-2-102. Definitions.
As used in this chapter and Chapter 3, Statewide Amendments Incorporated as Part of State Construction Code, and Chapter 4, Local Amendments Incorporated as Part of State Construction Code:

(1) "HUD Code" means the Federal Manufactured Housing Construction and Safety Standards Act, as issued by the Department of Housing and Urban Development and published in 24 C.F.R. Parts 3280 and 3282 (as revised April 1, 1990).

(2) "IBC" means the edition of the International Building Code adopted under Section 15A-2-103.

(3) "IECC" means the edition of the International Energy Conservation Code adopted under Section 15A-2-103.

(4) "IFGC" means the edition of the International Fuel Gas Code adopted under Section 15A-2-103.

(5) "IMC" means the edition of the International Mechanical Code adopted under Section 15A-2-103.

(6) "IPC" means the edition of the International Plumbing Code adopted under Section 15A-2-103.

(7) "IRC" means the edition of the International Residential Code adopted under Section 15A-2-103.

(8) "NEC" means the edition of the National Electrical Code adopted under Section 15A-2-103.

(9) "UWUI" means the edition of the Utah Wildland Urban Interface Code adopted under Section 15A-2-103.

(10) "IEBC" means the edition of the International Existing Building Code adopted under Section 15A-2-103.

15A-2-103. Specific editions adopted of construction code of a nationally recognized code authority.

(1) Subject to the other provisions of this part, the following construction codes are incorporated by reference, and together with the amendments specified in Chapter 3, Statewide Amendments to International Plumbing Code, and Chapter 4, Local Amendments Incorporated as Part of State Construction Code, are the construction standards to be applied to building construction, alteration, remodeling, and repair, and in the regulation of building construction, alteration, remodeling, and repair in the state:

(a) the [~~2012~~] 2015 edition of the International Building Code, including Appendix J, issued by the International Code Council;

(b) the [~~2012~~] 2015 edition of the International Residential Code, issued by the International Code Council;

(c) the [~~2012~~] 2015 edition of the International Plumbing Code, issued by the International Code Council;

(d) the [~~2012~~] 2015 edition of the International Mechanical Code, issued by the International Code Council;

(e) the [~~2012~~] 2015 edition of the International Fuel Gas Code, issued by the International Code Council;

(f) the [~~2011~~] 2014 edition of the National Electrical Code, issued by the National Fire Protection Association;

(g) the [~~2012~~] 2015 edition of the International Energy Conservation Code, issued by the International Code Council;

(h) the 2015 edition of the International Existing Building Code, issued by the International Code Council;

[~~(h)~~] (i) subject to Subsection 15A-2-104(2), the HUD Code;

[~~(i)~~] (j) subject to Subsection 15A-2-104(1), Appendix E of the [~~2012~~] 2015 edition of the International Residential Code, issued by the International Code Council; and

[~~(j)~~] (k) subject to Subsection 15A-2-104(1), the 2005 edition of the NFPA 225 Model Manufactured Home Installation Standard, issued by the National Fire Protection Association.

(2) Consistent with Title 65A, Chapter 8, Management of Forest Lands and Fire Control, the Legislature adopts the 2006 edition of the Utah Wildland Urban Interface Code, issued by the International Code Council, with the alternatives or amendments approved by the Utah Division of Forestry, as a construction code that may be adopted by a local compliance agency by local ordinance or other similar action as a local amendment to the codes listed in this section.

15A-2-104. Installation standards for manufactured housing.

(1) The following are the installation standards for manufactured housing for new installations or for existing manufactured or mobile homes that are subject to relocation, building alteration, remodeling, or rehabilitation in the state:

(a) The manufacturer's installation instruction for the model being installed is the primary standard.

(b) If the manufacturer's installation instruction for the model being installed is not available or is incomplete, the following standards apply:

(i) Appendix E of the [~~2012~~]2015 edition of the IRC, as issued by the International Code Council for installations defined in Section AE101 of Appendix E; or

(ii) if an installation is beyond the scope of the [~~2012~~] 2015 edition of the IRC as defined in Section AE101 of Appendix E, the 2005 edition of the NFPA 225 Model Manufactured Home Installation Standard, issued by the National Fire Protection Association.

(c) A manufacturer, dealer, or homeowner is permitted to design for unusual installation of a manufactured home not provided for in the manufacturer's standard installation instruction, Appendix E of the [~~2012~~] 2015 edition of the IRC, or the 2005 edition of the NFPA 225, if the design is approved in writing by a professional engineer or architect licensed in Utah.

(d) For a mobile home built before June 15, 1976, the mobile home shall also

comply with the additional installation and safety requirements specified in Chapter 3, Part 8, Installation and Safety Requirements for Mobile Homes Built Before June 15, 1976.

(2) Pursuant to the HUD Code Section 604(d), a manufactured home may be installed in the state that does not meet the local snow load requirements as specified in Chapter 3, Part 2, Statewide Amendments to International Residential Code, except that the manufactured home shall have a protective structure built over the home that meets the IRC and the snow load requirements under Chapter 3, Part 2, Statewide Amendments to International Residential Code.

15A-2-105. Scope of application.
15A-3-101. General provision.

15A-3-102. Amendments to Chapters 1 through 3 of IBC.

(1) IBC, Section 106, is deleted.

(2) (a) In IBC, Section 110, a new section is added as follows: "110.3.5.1, Weather-resistant exterior wall envelope. An inspection shall be made of the weather-resistant exterior wall envelope as required by Section 1403.2, and flashing as required by Section 1405.4 to prevent water from entering the weather-resistive barrier."

~~[(b) The remaining sections of IBC, Section 110, are renumbered as follows: 110.3.6, Lath or gypsum board inspection; 110.3.7, Fire and smoke-resistant penetrations; 110.3.8, Energy efficiency inspections; 110.3.9, Other inspections; 110.3.10, Special inspections; and 110.3.11, Final inspection.]~~

(3) IBC, Section 115.1, is deleted and replaced with the following: "115.1 Authority. Whenever the building official finds any work regulated by this code being performed in a manner either contrary to the provisions of this code or other pertinent laws or ordinances or is dangerous or unsafe, the building official is authorized to issue a stop work order."

(4) In IBC, Section 202, the following definition is added for Ambulatory Surgical Center: "AMBULATORY SURGICAL CENTER. A building or portion of a building licensed by the Utah Department of Health where procedures are performed that may render patients incapable of self preservation where care is less than 24 hours. See Utah Administrative Code R432-13."

(5) In IBC, Section 202, the definition for Foster Care Facilities is modified by changing the word "Foster" to "Child."

(6) In IBC, Section 202, the definition for "[F]Record Drawings" is modified by deleting the words "a fire alarm system" and replacing them with "any fire protection system".

(7) In IBC, Section 202, the following definition is added for Residential Treatment/Support Assisted Living Facility: "RESIDENTIAL TREATMENT/SUPPORT ASSISTED LIVING FACILITY. See Section 308.1.2."

(8) In IBC, Section 202, the following definition is added for Type I Assisted Living Facility: "TYPE I ASSISTED LIVING FACILITY. See Section 308.1.2."

(9) In IBC, Section 202, the following definition is added for Type II Assisted

Living Facility: "TYPE II ASSISTED LIVING FACILITY. See Section 308.1.2."

~~[(10) In the list in IBC, Section 304.1, the following words are added after the words "Ambulatory care facilities": "where four or more care recipients are rendered incapable of self preservation."]~~

~~[(11)]~~ (10) In IBC, Section 305.2, the words "child care centers," are inserted after the word "supervision," and the following sentence is added at the end of the paragraph: "See Section ~~[425]~~427 for special requirements for Day Care."

~~[(12)]~~ (11) In IBC, Section 305.2.2 and 305.2.3, the word "five" is deleted and replaced with the word "four" in both places.

~~[(13)]~~ (12) A new IBC Section 305.2.4 is added as follows: "305.2.4 Child Day Care Residential Certificate or a Family License. Areas used for child day care purposes with a Residential Certificate R430-50 or a Family License, as defined in Utah Administrative Code, R430-90, Licensed Family Child Care, may be located in a Group R-2 or R-3 occupancy as provided in Section 310.5 or shall comply with the International Residential Code in accordance with Section R101.2."

~~[(14)]~~ (13) A new IBC Section 305.2.5 is added as follows: "305.2.5 Child Care Centers. Areas used for Hourly Child Care Centers, as defined in Utah Administrative Code, R430-60, Child Care Center as defined in Utah Administrative Code, R430-100, or Out of School Time Programs, as defined in Utah Administrative Code, R430-70, may be classified as accessory occupancies."

(14) In IBC, Table 307.1(1), footnote "d" is added to the row for Consumer fireworks in the column titled STORAGE - Solid Pounds (cubic feet).

(15) In IBC, Section 308.2, the word "FOSTER" is deleted and replace with "CHILD".

~~[(15)]~~ (16) A new IBC Section 308.2.1 is added as follows: "308.2.1 Assisted living facilities and related occupancies. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

TYPE I ASSISTED LIVING FACILITY. A residential facility licensed by the Utah Department of Health that provides a protected living arrangement for ambulatory, non-restrained persons who are capable of achieving mobility sufficient to exit the facility without the assistance of another person. Occupancies. Limited capacity, type I assisted living facilities with two to five residents shall be classified as R-3 occupancies. Small, type I assisted living facilities with six to sixteen residents shall be classified as R-4 occupancies. Large, type I assisted living facilities with over sixteen residents shall be classified as I-1 occupancies.

TYPE II ASSISTED LIVING FACILITY. A residential facility licensed by the Utah Department of Health that provides an array of coordinated supportive personal and health care services to residents who meet the definition of semi-independent.

Semi-Independent. A person who is:

A. Physically disabled but able to direct his or her own care; or

B. Cognitively impaired or physically disabled but able to evacuate from the facility with the physical assistance of one person.

Occupancies. Limited capacity, type II assisted living facilities with two to five residents shall be classified as R-4 occupancies. Small, type II assisted living facilities with six to sixteen residents shall be classified as I-1 occupancies. Large, type II assisted living facilities with over sixteen residents shall be classified as I-2 occupancies.

RESIDENTIAL TREATMENT/SUPPORT ASSISTED LIVING FACILITY. A residential treatment/support assisted living facility which creates a group living environment for four or more residents licensed by the Utah Department of Human Services, and provides a protected living arrangement for ambulatory, non-restrained persons who are capable of achieving mobility sufficient to exit the facility without the physical assistance of another person."

[~~(16)~~] (17) In IBC, Section 308.3, the words "(see Section 308.2.1)" are added after the words "assisted living facilities".

[~~(17)~~] (18) In IBC, Section 308.3.[~~1~~]4, all of the words after the first International Residential Code are deleted.

[~~(18)~~] (19) In IBC, Section 308.4, the following changes are made:

(a) The words "five persons" are deleted and replaced with the words "three persons."

(b) The words "foster care facilities" are deleted and replaced with "child care facilities."

(c) The words "(both intermediate care facilities and skilled nursing facilities)" are added after "nursing homes."

[~~(d) The words "Ambulatory Surgical Centers with five or more operating rooms" are added to the list.~~]

[~~(19)~~] (20) In IBC, Section 308.4.[~~1~~]2, the word "five" is deleted and replaced with the word "three" in both places.

[~~(20)~~] (21) In IBC, Section 308.6, the word "five" is deleted and replaced with the word "four".

[~~(21)~~] (22) In IBC, Section 308.6.1, the following changes are made:

(a) The word "five" is deleted and replaced with the word "four".

(b) The words "2 ½ years or less of age" are deleted and replaced with "under the age of two".

(c) The following sentence is added at the end: "See Section [~~425~~] 427 for special requirements for Day Care."

[~~(22)~~] (23) In IBC, Sections 308.6.3 and 308.6.4, the word "five" is deleted and replaced with the word "four" in both places and the following sentence is added at the end: "See Section ~~425~~ [427] for special requirements for Day Care."

[~~(23)~~] (24) In IBC, Section 310.5, the words "and single family dwellings complying with the IRC" are added after "Residential occupancies".

[~~(24)~~] (25) In IBC, Section 310.5.1, the words "other than Child Care" are inserted after the word "dwelling" in the first sentence and the following sentence is added at the end: "See Section ~~425~~ [427] for special requirements for Child Day Care."

[~~(25)~~] (26) A new IBC Section [~~310.5.2~~] 310.5.3 is added as follows: "[~~310.5.2~~] 310.5.3 Child Care. Areas used for child care purposes may be located in a residential dwelling unit under all of the following conditions and Section [~~425~~] 427:

1. Compliance with Utah Administrative Code, R710-8, Day Care Rules, as enacted under the authority of the Utah Fire Prevention Board.
2. Use is approved by the Utah Department of Health, as enacted under the authority of the Utah Code, Title 26, Chapter 39, Utah Child Care Licensing Act, and in any of the following categories:
   a. Utah Administrative Code, R430-50, Residential Certificate Child Care.
   b. Utah Administrative Code, R430-90, Licensed Family Child Care.
3. Compliance with all zoning regulations of the local regulator."

[~~(26)~~] (27) In IBC, Section 310.6, the words "(see Section 308.2.1)" are added after "assisted living facilities".

15A-3-103. Amendments to Chapters 4 through 6 of IBC.

(1) IBC Section 403.5.5 is deleted.

~~[(2) IBC Section (F)406.5.8 is deleted and replaced with the following: "(F)406.5.8 Standpipe system. An open parking garage shall be equipped with an approved Class I manual standpipe system when fire department access is not provided for firefighting operations to within 150 feet of all portions of the open parking garage as measured from the approved fire department vehicle access.~~

~~Exception: Open parking garages equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and a standpipe system is not required by Section 905.3.1."]~~

~~[(3) A new IBC Section (F)406.5.8.1 is added as follows: "(F)406.5.8.1 Installation requirements. Class I manual standpipe shall be designed and installed in accordance with Section 905 and NFPA 14. Class I manual standpipe shall be accessible throughout the parking garage such that all portions of the parking structure are protected within 150 feet of a hose connection."]~~

[~~(4)~~] (2) In IBC, Section 422.2, a new paragraph is added as follows: "422.2 Separations: Ambulatory care facilities licensed by the Utah Department of Health shall be separated from adjacent tenants with a fire [~~barrier~~] partition having a minimum one hour fire-resistance rating. Any level below the level of exit discharge shall be separated from the level of exit discharge by a horizontal assembly having a minimum one hour fire-resistance rating.

Exception: A fire barrier is not required to separate the level of exit discharge when:

1. Such levels are under the control of the Ambulatory Care Facility.
2. Any hazardous spaces are separated by horizontal assembly having a minimum one hour fire-resistance rating."

[~~(5)~~] (3) A new IBC Section [~~425~~] 427, Day Care, is added as follows: "[~~425.1~~] 427.1 Detailed Requirements. In addition to the occupancy and construction

requirements in this code, the additional provisions of this section shall apply to all Day Care in accordance with Utah Administrative Code R710-8 Day Care Rules.

[~~425.2~~] 427.2 Definitions.

[~~425.2.1~~] 427.2.1 Authority Having Jurisdiction (AHJ): State Fire Marshal, his duly authorized deputies, or the local fire enforcement authority code official.

[~~425.2.2~~] 427.2.2 Day Care Facility: Any building or structure occupied by clients of any age who receive custodial care for less than 24 hours by individuals other than parents, guardians, relatives by blood, marriage or adoption.

[~~425.2.3~~] 427.2.3 Day Care Center: Providing care for five or more clients in a place other than the home of the person cared for. This would also include Child Care Centers, Out of School Time or Hourly Child Care Centers licensed by the Department of Health.

[~~425.2.4~~] 427.2.4 Family Day Care: Providing care for clients listed in the following two groups:

[~~425.2.4.1~~] 427.2.4.1 Type 1: Services provided for five to eight clients in a home. This would also include a home that is certified by the Department of Health as Residential Certificate Child Care or licensed as Family Child Care.

[~~425.2.4.2~~] 427.2.4.2 Type 2: Services provided for nine to sixteen clients in a home with sufficient staffing. This would also include a home that is licensed by the Department of Health as Family Child Care.

[~~425.2.5~~] 427.2.5 R710-8: Utah Administrative Code, R710-8, Day Care Rules, as enacted under the authority of the Utah Fire Prevention Board.

[~~425.3.~~] 427.3 Family Day Care.

[~~425.3.1~~] 427.3.1 Family Day Care units shall have on each floor occupied by clients, two separate means of egress, arranged so that if one is blocked the other will be available.

[~~425.3.2~~] 427.3.2 Family Day Care units that are located in the basement or on the second story shall be provided with two means of egress, one of which shall discharge directly to the outside.

[~~425.3.2.1~~] 427.3.2.1 Residential Certificate Child Care and Licensed Family Child Care with five to eight clients in a home, located on the ground level or in a basement, may use an emergency escape or rescue window as allowed in IFC, Chapter 10, Section [~~1029~~] 1030.

[~~425.3.3~~] 427.3.3 Family Day Care units shall not be located above the second story.

[~~425.3.4~~] 427.3.4 In Family Day Care units, clients under the age of two shall not be located above or below the first story.

[~~425.3.4.1~~] 427.3.4.1 Clients under the age of two may be housed above or below the first story where there is at least one exit that leads directly to the outside and complies with IFC, Section [~~1009~~] 1011 or Section [~~1010~~] 1012 or Section [~~1026~~] 1027.

[~~425.3.5~~] 427.3.5 Family Day Care units located in split entry/split level type homes in which stairs to the lower level and upper level are equal or nearly equal, may have clients housed on both levels when approved by the AHJ.

[~~425.3.6~~] 427.3.6 Family Day Care units shall have a portable fire extinguisher on each level occupied by clients, which shall have a classification of not less than 2A:10BC, and shall be serviced in accordance with NFPA, Standard 10, Standard for Portable Fire Extinguishers.

[~~425.3.7~~] 427.3.7 Family Day Care units shall have single station smoke detectors in good operating condition on each level occupied by clients. Battery operated smoke detectors shall be permitted if the facility demonstrates testing, maintenance, and battery replacement to insure continued operation of the smoke detectors.

[~~425.3.8~~] 427.3.8 Rooms in Family Day Care units that are provided for clients to sleep or nap, shall have at least one window or door approved for emergency escape.

[~~425.3.9~~] 427.3.9 Fire drills shall be conducted in Family Day Care units quarterly and shall include the complete evacuation from the building of all clients and staff. At least annually, in Type I Family Day Care units, the fire drill shall include the actual evacuation using the escape or rescue window, if one is used as a substitute for one of the required means of egress.

[~~425.4~~]427.4 Day Care Centers.

[~~425.4.1~~] 427.4.1 Day Care Centers shall comply with either I-4 requirements or E requirements of the IBC, whichever is applicable for the type of Day Care Center.

[~~425.4.2~~] 427.4.2 Emergency Evacuation Drills shall be completed as required in IFC, Chapter 4, Section 405.

[~~425.4.3~~] 427.4.3 Location at grade. Group E child day care centers shall be located at the level of exit discharge.

[~~425.4.3.1~~] 427.4.3.1 Child day care spaces for children over the age of 24 months may be located on the second floor of buildings equipped with automatic fire protection throughout and an automatic fire alarm system.

~~[425.4.4]~~ 427.4.4 Egress. All Group E child day care spaces with an occupant load of more than 10 shall have a second means of egress. If the second means of egress is not an exit door leading directly to the exterior, the room shall have an emergency escape and rescue window complying with Section [~~1029~~] 1030.

[~~425.4.5~~] 427.4.5 All Group E Child Day Care Centers shall comply with Utah Administrative Code, R430-100 Child Care Centers, R430-60 Hourly Child Care Centers, and R430-70 Out of School Time.

[~~425.5~~] 427.5 Requirements for all Day Care.

[~~425.5.1~~ 427.5.1 Heating equipment in spaces occupied by children shall be provided with partitions, screens, or other means to protect children from hot surfaces and open flames.

[~~425.5.2~~] 427.5.2 A fire escape plan shall be completed and posted in a conspicuous place. All staff shall be trained on the fire escape plan and procedure."

~~[(6)~~] (4) In IBC, Section [~~504.2~~] 504.4, a new section is added as follows: "[~~504.2.1~~]504.4.1

[~~Notwithstanding the exceptions to Section 504.2,~~] Group I-2 Assisted Living Facilities shall be allowed on each level of a [~~to be~~] two [~~stories~~] story building of Type V-A construction when all of the following apply:

1. All secured units are located at the level of exit discharge in compliance with Section [~~1008.1.9.3~~] 1010.1.9.3 as amended;
2. The total combined area of both stories shall not exceed the total allowable area for a one-story building; and
3. All other provisions that apply in Section 407 have been provided."

15A-3-104. Amendments to Chapters 7 through 9 of IBC.

(1) IBC, Section (F)901.8, is deleted and replaced with the following: "(F)901.8 Pump and riser room size. Fire pump and automatic sprinkler system riser rooms shall be designed with adequate space for all installed equipment necessary for the installation and to provide sufficient working space around the stationary equipment. Clearances around equipment shall be in accordance with manufacturer requirements and not less than the following minimum elements:

901.8.1 A minimum clear and unobstructed distance of 12-inches shall be provided from the installed equipment to the elements of permanent construction.

901.8.2 A minimum clear and unobstructed distance of 12-inches shall be provided between all other installed equipment and appliances.

901.8.3 A clear and unobstructed width of 36-inches shall be provided in front of all installed equipment and appliances, to allow for inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly.

901.8.4 Automatic sprinkler system riser rooms shall be provided with a clear and unobstructed passageway to the riser room of not less than 36-inches, and openings into the room shall be clear and unobstructed, with doors swinging in the outward direction from the room and the opening providing a clear width of not less than 34-inches and a clear height of the door opening shall not be less than 80-inches.

901.8.5 Fire pump rooms shall be provided with a clear and unobstructed passageway to the fire pump room of not less than 72-inches, and openings into the room shall be clear, unobstructed and large enough to allow for the removal of the largest piece of equipment, with doors swinging in the outward direction from the room and the opening providing a clear width of not less than 68-inches and a clear height of the door opening shall not be less than 80-inches."

(2) In IBC, Section (F)903.2.2, the words "the entire floor" are deleted and replaced with "a building" and the last paragraph is deleted.

(3) IBC, Section (F)903.2.4, condition 2, is deleted and replaced with the following: "2. A Group F-1 fire area is located more than three stories above the lowest level of fire department vehicle access."

(4) IBC, Section (F)903.2.7, condition 2, is deleted and replaced with the

following: "2. A Group M fire area is located more than three stories above the lowest level of fire department vehicle access."

(5) IBC, Sections (F)903.2.8, (F)903.2.8.1, [~~and~~] (F)903.2.8.2, and (F)903.2.8.4 are deleted and replaced with the following: "(F)903.2.8 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) constructed in accordance with the International Residential Code For One- and Two-Family Dwellings.
2. Single story Group R-1 occupancies with fire areas not more than 2,000 square feet that contain no installed plumbing or heating, where no cooking occurs, and constructed of Type I-A, I-B, II-A, or II-B construction.

(6) IBC, Section (F)903.2.8.3 and (F)903.2.8.3.1 are renumbered to (F)903.2.8.1 and (F) 903.2.8.1.1.

(7) IBC, Section (F)903.2.8.3.2 is renumbered to (F)903.2.8.1.2 and the following exception is added.

[~~3.~~] (1) Group R-4 fire areas not more than 4,500 gross square feet and not containing more than 16 residents, provided the building is equipped throughout with an approved fire alarm system that is interconnected and receives its primary power from the building wiring and a commercial power system."

(8) IBC, Section (F) 903.2.8.4 is deleted.

[~~(6)~~] (9) IBC, Section (F)903.2.9, condition 2, is deleted and replaced with the following: "2. A Group S-1 fire area is located more than three stories above the lowest level of fire department vehicle access."

[~~(7)~~] (10) IBC, Section [~~(F)904.11~~] (F)904.12, is deleted and replaced with the following: [~~(F)904.11~~] (F)904.12 Commercial cooking systems. The automatic fire-extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust systems. Pre-engineered automatic extinguishing systems shall be tested in accordance with UL 300 and listed and labeled for the intended application. The system shall be installed in accordance with this code, its listing and the manufacturer's installation instructions.

Exception: Factory-built commercial cooking recirculating systems that are tested in accordance with UL 710B and listed, labeled, and installed in accordance with Section 304.1 of the International Mechanical Code."

[~~(8)~~] (11) IBC, Sections [~~(F)904.11.3, (F)904.11.3.1, (F)904.11.4, and (F)904.11.4.1~~] (F)904.12.3, (F)904.12.3.1, (F)904.12.4, and (F)904.12.4.1 are deleted.

(12) In IBC, Section (F)905.3.9, a new subsection is added as follows: "Open Parking Garages. Open parking garages shall be equipped with an approved Class 1 manual standpipe system when fire department access is not provided for firefighting operations to within 150 feet of all portions of the open parking garage as measured from the approved fire department vehicle access. Class 1 manual standpipe shall be accessible throughout the parking garage such that all portions of the parking structure are protected within 150 fee of a hose connection."

(13) In IBC, Section (F)905.8, the exception is deleted and replaced with the following:

"Exception: Where subject to freezing conditions and approved by the fire code official."

[~~(9)~~] (14) IBC, Section (F)907.2.3 Group E:

[~~(a)~~] The first sentence is deleted and rewritten as follows: "A manual fire alarm system that [~~initiates~~] activates the occupant notification system in accordance with Section (F)907.5 and installed in accordance with Section (F)907.6 and Utah Administrative Rule R710-4, shall be installed in Group E occupancies."

[~~(b) In Exception number 3, starting on line five, the words "emergency voice/alarm communication system" are deleted and replaced with "occupant notification system".~~]

[~~(10) In IBC, Section (F)908.7, the first sentence is deleted and replaced as follows: "Groups R-1, R-2, R-3, R-4, I-1, and I-4 occupancies"; the exceptions are deleted and the following sentence is added after the first sentence: "A minimum of one carbon monoxide alarm shall be installed on each habitable level."~~]

[~~(11) In IBC, Section (F)908.7, the following new subsections are added:~~

~~"(F)908.7.1 Interconnection. Where more than one carbon monoxide alarm is required to be installed within Group R or I-1 occupancies, the carbon monoxide alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.~~

~~(F)908.7.2 Power source. In new construction, required carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Carbon monoxide alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Carbon monoxide alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.~~

~~Exception: Carbon monoxide alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system."~~]

[~~(12) IBC, Section (F)908.7.1, is renumbered to 908.7.3.~~]

(15) IBC Sections (F)915 through (F)915.6 are deleted and replaced with the following:

(F) 915 Where required. Group I-1, I-2, I-4 and R occupancies located in a building containing a fuel-burning appliance or in a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 or UL 2075 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2, or an enclosed parking garage ventilated in accordance with Section 404 of the International Mechanical Code shall not be considered an attached garage. A minimum of one carbon monoxide alarm shall be installed on each habitable level.

(F)915.1 Interconnection. Where more than one carbon monoxide alarm is required to be installed within Group I-1, I-2, I-4 or R occupancies, the carbon monoxide alarm shall be interconnected in such a manner that the activation of one alarm will

active all of the alarms. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

(F)915.2 Power Source. In new construction, required carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Carbon monoxide alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Carbon monoxide alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. Exceptions.

1. Carbon monoxide alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system.
2. Hard wiring of carbon monoxide alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring, without the removal of interior finishes.

(F) 915.3 Group E. A carbon monoxide detection system shall be installed in new buildings that contain Group E occupancies in accordance with IFC Chapter 9, Section 915. A carbon monoxide detection system shall be installed in existing buildings that contain Group, E occupancies in accordance with IFC, Chapter 11, Section 1103.9.

(F)915.3.1 Where required. In Group E occupancies, a carbon monoxide detection system shall be provided where a fuel-burning appliance, a fuel-burning fireplace, or a fuel-burning forced air furnace is present.

(F)915.3.2 Detection equipment. Each carbon monoxide detection system shall be installed in accordance with NFPA 720 and the manufacturer's instructions, and be listed as complying with UL 2034 for single station and UL2075 for system detectors.

(F)915.3.3 Locations. Each carbon monoxide detection system shall be installed in the locations specified in NFPA 720.

(F)915.3.4 Combination detectors. A combination carbon monoxide/smoke detector is an acceptable alternative to a carbon monoxide detection system if the combination carbon monoxide/smoke detector is listed in accordance with UL 2075 and UL 268.

(F)915.3.5 Power source. Each carbon monoxide detection system shall receive primary power from the building wiring if the wiring is served from a commercial source. If primary power is interrupted, each carbon monoxide detection system shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for over-current protection.

(F)915.3.6 Maintenance. Each carbon monoxide detection system shall be maintained in accordance with NFPA 720. A carbon monoxide detection system that becomes inoperable or begins to produce end of life signals shall be replaced.

15A-3-105. Amendments to Chapters 10 through 12 of IBC.

(1) In IBC, Section [~~1008.1.9.6~~] 1010.1.9.6, [~~the words "Group I-1 and" are added in the title and in the first sentence before the words "Group I-2" and~~ a] A new number [~~8~~] 9 is added as follows: "[~~8~~]9. The secure area or unit with special egress locks shall be located at the level of exit discharge in Type V construction."

[~~(2) In IBC, Section 1008.1.9.7, a new number 7 is added as follows: "7. The secure area or unit with delayed egress locks shall be located at the level of exit discharge in Type V construction."~~]

[~~(3)~~] (2) In IBC, Section [~~1009.7.2~~] 1011.5.2 exception [~~5~~] 3 is deleted and replaced with the following: "[~~5~~] 3. In Group R-3 occupancies, within dwelling units in Group R-2 occupancies, and in Group U occupancies that are accessory to a Group R-3 occupancy, or accessory to individual dwelling units in Group R-2 occupancies, the maximum riser height shall be 8 inches (203 mm) and the minimum tread depth shall be 9 inches (229 mm). The minimum winder tread depth at the walk line shall be 10 inches (254 mm), and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 10 inches (254 mm)."

[~~(4)~~] (3) In IBC, Section [~~1009.15~~] 1011.11, a new exception [~~6~~] 5 is added as follows: "[~~6~~]5. In occupancies in Group R-3, as applicable in Section 101.2 and in occupancies in Group U, which are accessory to an occupancy in Group R-3, as applicable in Section 101.2, handrails shall be provided on at least one side of stairways consisting of four or more risers."

[~~(5)~~] (4) In IBC, Section [~~1011.5~~] 1013.5, the words ", including when the building may not be fully occupied." are added at the end of the sentence.

[~~(6)~~] (5) IBC, Section [~~1024~~] 1025, is deleted.

[~~(7)~~] (6) In IBC, Section [~~1028.12~~] 1029.14 exception 2 is deleted.

[~~(8)~~] (7) In IBC, Section 1109.8, the following words "shall be capable of operation without a key and" are inserted in the second sentence between the words "lift" and "shall".

[~~(9)~~] (8) In IBC, Section 1208.4, subparagraph 1 is deleted and replaced with the following: "1. The unit shall have a living room of not less than 165 square feet (15.3 m_2) of floor area. An additional 100 square feet (9.3 m_2) of floor area shall be provided for each occupant of such unit in excess of two."

15A-3-106. Amendments to Chapters 13, ~~and~~ 14, and 15 of IBC.

IBC, Chapters 13, [~~and~~] 14, and 15 are not amended.

[~~15A-3-106.5. Amendments to Chapter 15 of IBC.~~]

[~~(1) IBC, Section 1505.8 is deleted.~~]

[~~(2) IBC, Section 1509.7.2 is deleted.~~]

[~~(3) IBC, Section 1509.7.4 is deleted and rewritten as follows:~~

~~"Photovoltaic panels and modules that are mounted on top of a roof shall:~~

~~1. Regardless of the roof assembly classification, be listed and labeled with at least a class C fire classification;~~

~~2. Be listed and labeled in accordance with UL 1703; and~~

~~3. Be installed in accordance with the manufacturer's installation instructions."~~]

[~~(4) Subsections (1) through (3) do not apply if the Legislature adopts, with or without amendment, an edition of the IBC that is more recent than the 2012 edition.~~]

15A-3-107. Amendments to Chapter 16 of IBC.

(1) In IBC, Table 1604.5, Risk Category III, in the sentence that begins "Group I-2," a new footnote c is added as follows: "c. Type II Assisted Living Facilities that are I-2 occupancy classifications in accordance with Section 308 shall be Risk Category II in this table."

(2) In IBC, Section 1605.2, in the portion of the definition for the value of f_2, the words "and 0.2 for other roof configurations" are deleted and replaced with the following: "$f_2 = 0.20 + .025(A-5)$ for other configurations where roof snow load exceeds 30 psf; $f_2 = 0$ for roof snow loads of 30 psf (1.44kN/m2) or less. Where A = Elevation above sea level at the location of the structure (ft./1,000)."

(3) In IBC, Sections 1605.3.1 and 1605.3.2, exception 2 in each section is deleted and replaced with the following: "2. Flat roof snow loads of 30 pounds per square foot (1.44 kNm2) or less need not be combined with seismic loads. Where flat roof snow loads exceed 30 pounds per square foot (1.44 kNm2), the snow loads may be reduced in accordance with the following in load combinations including both snow and seismic loads. W_s as calculated below, shall be combined with seismic loads.
$W_s = (0.20 + 0.025(A-5))P_f$ is greater than or equal to $0.20\ P_f$.
Where:
W_s = Weight of snow to be included in seismic calculations
A = Elevation above sea level at the location of the structure (ft./1,000)
P_f = Design roof snow load, psf.
For the purpose of this section, snow load shall be assumed uniform on the roof footprint without including the effects of drift or sliding. The Importance Factor, I, used in calculating P_f may be considered 1.0 for use in the formula for W_s".

(4) IBC, Section 1608.1, is deleted and replaced with the following: "1608.1 General. Except as modified in Sections 1608.1.1, 1608.1.2, and 1608.1.3, design snow loads shall be determined in accordance with Chapter 7 of ASCE 7, but the design roof load shall not be less than that determined by Section 1607."

(5) A new IBC, Section 1608.1.1, is added as follows: "1608.1.1 Section 7.4.5 of Chapter 7 of ASCE 7 referenced in Section 1608.1 of the IBC is deleted and replaced with the following: Section 7.4.5 Ice Dams and Icicles Along Eaves. Where ground snow loads exceed 75 psf, eaves shall be capable of sustaining a uniformly distributed load of $2p_f$ on all overhanging portions. No other loads except dead loads shall be present on the roof when this uniformly distributed load is applied. All building exits under down-slope eaves shall be protected from sliding snow and ice."

(6) In IBC, Section 1608.1.2, a new section is added as follows: "1608.1.2 Utah Snow Loads. The snow loads specified in Table 1608.1.2(b) shall be used for the jurisdictions identified in that table. Otherwise, the ground snow load, P_g, to be used in the determination of design snow loads for buildings and other structures shall be

determined by using the following formula: $P_g = (P_{o2} + S_2(A-A_o)_2)_{0.5}$ for A greater than A_o, and $P_g = P_o$ for A less than or equal to A_o.

WHERE:

P_g = Ground snow load at a given elevation (psf);

P_o = Base ground snow load (psf) from Table No. 1608.1.2(a);

S = Change in ground snow load with elevation (psf/100 ft.) From Table No. 1608.1.2(a);

A = Elevation above sea level at the site (ft./1,000);

A_o = Base ground snow elevation from Table 1608.1.2(a) (ft./1,000).

The building official may round the roof snow load to the nearest 5 psf. The ground snow load, P_g, may be adjusted by the building official when a licensed engineer or architect submits data substantiating the adjustments. Where the minimum roof live load in accordance with Section 1607.[~~11~~]12 is greater than the design roof snow load, such roof live load shall be used for design, however, it shall not be reduced to a load lower than the design roof snow load. Drifting need not be considered for roof snow loads less than 20 psf."

(7) IBC, Table 1608.1.2(a) and Table 1608.1.2(b), are added as follows:

"TABLE NO. 1608.1.2(a)

STATE OF UTAH - REGIONAL SNOW LOAD FACTORS

COUNTY	P_o	S	A_o
Beaver 43	63	6.2	
Box Elder	43	63	5.2
Cache	50	63	4.5
Carbon43	63	5.2	
Daggett	43	63	6.5
Davis	43	63	4.5
Duchesne	43	63	6.5
Emery	43	63	6.0
Garfield	43	63	6.0
Grand	36	63	6.5
Iron	43	63	5.8
Juab	43	63	5.2
Kane	36	63	5.7
Millard	43	63	5.3
Morgan	57	63	4.5
Piute	43	63	6.2
Rich	57	63	4.1
Salt Lake	43	63	4.5
San Juan	43	63	6.5
Sanpete	43	63	5.2
Sevier	43	63	6.0
Summit	86	63	5.0
Tooele	43	63	4.5
Uintah	43	63	7.0
Utah	43	63	4.5
Wasatch	86	63	5.0

Washington	29	63	6.0
Wayne 36	63	6.5	
Weber	43	63	4.5

TABLE NO. 1608.1.2(B)
REQUIRED SNOW LOADS FOR SELECTED UTAH CITIES AND TOWNS[1,2]
The following jurisdictions require design snow load values that differ from the Equation in the Utah Snow Load Study.

County	City	Elevation	Ground Snow Load (psf)	Roof Snow Load (psf)[6]
Carbon	Price[3]	5550	43	30
	All other county locations[5]	--	--	--
Davis	Fruit Heights[3]	4500 – 4850	57	40
Emery	Green River[3]	4070	36	25
Garfield	Panguitch[3]	6600	43	30
Rich	Woodruff[3]	6315	57	40
	Laketown[4]	6000	57	40
	Garden City[5]	--	--	--
	Randolph[4]	6300	57	40
San Juan	Monticello[3]	6820	50	35
Summit	Coalville[3]	5600	86	60
	Kamas[4]	6500	114	80
Tooele	Tooele[3]	5100	43	30
Utah	Orem[3]	4650	43	30
	Pleasant Grove[4]	5000	43	30
	Provo[5]	--	--	--
Wasatch	Heber[5]	--	--	--
Washington	Leeds[3]	3460	29	20
	Santa Clara[3]	2850	21	15
	St. George[3]	2750	21	15
	All other county locations[5]	--	--	--
Wayne	Loa[3]	7080	43	30

[1]The IBC requires a minimum live load - See 1607.[~~11.~~2]12.
[2]This table is informational only in that actual site elevations may vary. Table is only valid if site elevation is within 100 feet of the listed elevation. Otherwise, contact the local Building Official.
[3]Values adopted from Table VII of the Utah Snow Load Study.
[4]Values based on site-specific study. Contact local Building Official for additional information.

[5]Contact local Building Official.
[6]Based on C_e=1.0, C_t=1.0 and I_s=1.0"

(8) A new IBC, Section 1608.1.3, is added as follows: "1608.1.3 Thermal Factor. The value for the thermal factor, C_t, used in calculation of P_f shall be determined from Table 7.3 in ASCE 7.
Exception: Except for unheated structures, the value of C_t need not exceed 1.0 when ground snow load, P_g is calculated using Section 1608.1.2 as amended."

(9) IBC, Section 1608.2, is deleted and replaced with the following: "1608.2 Ground Snow Loads. The ground snow loads to be used in determining the design snow loads for roofs in states other than Utah are given in Figure 1608.2 for the contiguous United States and Table 1608.2 for Alaska. Site-specific case studies shall be made in areas designated CS in figure 1608.2. Ground snow loads for sites at elevations above the limits indicated in Figure 1608.2 and for all sites within the CS areas shall be approved. Ground snow load determination for such sites shall be based on an extreme value statistical analysis of data available in the vicinity of the site using a value with a 2-percent annual probability of being exceeded (50-year mean recurrence interval). Snow loads are zero for Hawaii, except in mountainous regions as approved by the building official."

(10) A new IBC, Section 1613.1.1, is added as follows: "1613.1.1 ASCE 12.7.2 and 12.14.8.1 of Chapter 12 of ASCE 7 referenced in Section 1613.1, Definition of W, Item 4 is deleted and replaced with the following:

4. Where the flat roof snow load, P_f, exceeds 30 psf, the snow load included in seismic design shall be calculated, in accordance with the following formula: $W_s = (0.20 + 0.025(A-5))P_f$ is greater than or equal to 0.20 P_f.
   WHERE:
   W_s = Weight of snow to be included in seismic calculations
   A = Elevation above sea level at the location of the structure (ft./1,000)
   P_f = Design roof snow load, psf.

For the purposes of this section, snow load shall be assumed uniform on the roof footprint without including the effects of drift or sliding. The Importance Factor, I, used in calculating P_f may be considered 1.0 for use in the formula for W_s."

(11) A new IBC, Section [~~1613.5~~] 1613.7, is added as follows: " [~~1613.5~~] 1613.7 ASCE 7, Section 13.5.6.2.2 paragraph (e) is modified to read as follows: (e) Penetrations shall have a sleeve or adapter through the ceiling tile to allow for free movement of at least 1 inch (25 mm) in all horizontal directions.
Exceptions:

1. Where rigid braces are used to limit lateral deflections.
2. At fire sprinkler heads in frangible surfaces per NFPA 13."

15A-3-108. Amendments to Chapters 17 through 19 of IBC.

(1) A new IBC, Section 1807.1.6.4, is added as follows: "1807.1.6.4 Empirical concrete foundation design. Group R, Division 3 Occupancies three stories or less in height, and Group U Occupancies, which are constructed in accordance with Section 2308, or with other methods employing repetitive wood-frame construction or repetitive

cold-formed steel structural member construction, shall be permitted to have concrete foundations constructed in accordance with Table 1807.1.6.4."

(2) A new IBC, Table 1807.1.6.4 is added as follows:

"TABLE 1807.1.6.4
EMPIRICAL FOUNDATION WALLS (1,7,8)

"TABLE 1807.1.6.4

EMPIRICAL FOUNDATION WALLS (1,7,8)

Max. Height	Top Edge Support	Min. Thickness	Vertical Steel (2)	Horizontal Steel (3)	Steel at Openings (4)	Max. Lintel Length	Min.[~~Lintel~~] Bearing Length
2'(610 mm)	None	6"	(5)	2- #4 Bars	2- #4 Bars above 1- #4 Bar each side 1- #4 Bar below	2'(610 mm)	2" for each foot of opening width; min. 6"
3'(914 mm)	None	6"	#4@32"	3- #4 Bars	2- #4 Bars above 1- #4 Bar each side 1- #4 Bar below	2'(610 mm)	2" for each foot of opening width; min. 6"
4'(1,219 mm)	None	6"	#4@32"	4- #4 Bars	2- #4 Bars above 1- #4 Bar each side 1- #4 Bar below	3'(914 mm)	2" for each foot of opening width; min. 6"
6'(1,829 mm)	Floor or roof Diaphragm (6)	8"	#4@24"	5- #4 Bars	2- #4 Bars above 1- #4 Bar each side 1- #4 Bar below	6'(1,829 mm)	2" for each foot of opening width; min. 6"
8'(2,438 mm)	Floor or roof Diaphragm (6)	8"	#4@24"	6- #4 Bars	2- #4 Bars above 1- #4 Bar each side 1- #4 Bar below	6'(1,829 mm)	2" for each foot of opening width; min. 6"
9'(2,743 mm)	Floor or roof Diaphragm (6)	8"	#4@16"	7- #4 Bars	2- #4 Bars above 1- #4 Bar each side 1- #4 Bar below	6'(1,829 mm)	2" for each foot of opening width; min. 6"

Over 9'(2,743 mm), Engineering required for each column

Footnotes:

(1) Based on 3,000 psi (20.6 Mpa) concrete and 60,000 psi (414 Mpa) reinforcing steel.

(2) To be placed in the center of the wall, and extended from the footing to within three inches (76 mm) of the top of the wall; dowels of #4 bars to match vertical steel placement shall be provided in the footing, extending 24 inches (610 mm) into the foundation wall.

(3) One bar shall be located in the top four inches (102 mm), one bar in the bottom four inches (102 mm) and the other bars equally spaced between. Such bar placement satisfies the requirements of Section 1805.9. Corner reinforcing shall be provided so as to lap 24 inches (610 mm).

(4) Bars shall be placed within two inches (51 mm) of the openings and extend 24 inches (610 mm) beyond the edge of the opening; vertical bars may terminate three inches (76 mm) from the top of the concrete.
(5) Dowels of #4 bar at 32 inches on center shall be provided in the footing, extending 18 inches (457 mm) into the foundation wall.
(6) Diaphragm shall conform to the requirements of Section 2308.
(7) Footing shall be a minimum of nine inches thick by 20 inches wide.
(8) Soil backfill shall be soil classification types GW, GP, SW, or SP, per Table 1610.1. Soil shall not be submerged or saturated in groundwater."

[~~(3) In IBC, Section 1904.2, a new exception 1 is added as follows and the current exception is modified to be number 2.~~
~~Exceptions:~~
~~"1. In ACI Table 4.3.1, for Exposure Class F1, change Maximum w/cm from 0.45 to 0.5 and Minimum f'c from 4,500 psi to 3,000 psi."~~]

[~~(4)~~] (3) A new IBC, Section [~~1905.1.11~~] 1905.1.9, is added as follows: "[~~1905.1.11~~] 1905.1.9 ACI 318, Table [~~4.2.1~~] 19.3.1.1." Modify ACI 318, Table [~~4.2.1~~] 19.3.1.1 to read as follows: In the portion of the table designated as "Conditions", the following Exposure [~~categories~~] category and classes [~~are~~] is deleted and replaced with the following:
"F0: Concrete [~~elements~~] not exposed to freezing and thawing cycles to include footing and foundation elements that are completely buried in soil.
[~~F1: Concrete elements exposed to freezing and thawing cycles and are not likely to be saturated or exposed to deicing chemicals.~~
~~F2: Concrete elements exposed to freezing and thawing cycles and are likely to be saturated, but not exposed to deicing chemicals.~~
~~F3: Concrete elements exposed to freezing and thawing cycles and are likely to be saturated and exposed to deicing chemicals."~~]

15A-3-109. Amendments to Chapters 20 through 22 of IBC.

15A-3-110. Amendments to Chapters 23 through 25 of IBC.

(1) A new IBC, Section 2306.1.5, is added as follows: "2306.1.5 Load duration factors. The allowable stress increase of 1.15 for snow load, shown in Table 2.3.2, Frequently Used Load Duration Factors, Cd, of the National Design Specifications, shall not be utilized at elevations above 5,000 feet (1,524 M)."

(2) In IBC, Section [~~2308.6~~] 2308.3.1, a new exception 3 is added as follows: [~~"Exception:~~] 3. Where foundation plates or sills are bolted or anchored to the foundation with not less than 1/2 inch (12.7 mm) diameter steel bolts or approved anchors, embedded at least 7 inches (178 mm) into concrete or masonry and spaced not more than 32 inches (816 mm) apart, there shall be a minimum of two bolts or anchor straps per piece located not less than 4 inches (102 mm) from each end of each piece. A properly sized nut and washer shall be tightened on each bolt to the plate."

(3) IBC, Section 2506.2.1, is deleted and replaced with the following: "2506.2.1

Other materials. Metal suspension systems for acoustical and lay-in panel ceilings shall conform with ASTM C635 listed in Chapter 35 and Section 13.5.6 of ASCE 7, as amended in Section [~~1613.8~~] 1613.5, for installation in high seismic areas."

15A-3-111. Amendments to Chapters 26 through 28 of IBC

15A-3-112. Amendments to Chapters 29 through 31 of IBC.

(1) In IBC [P] Table 2902.1 the following changes are made:

(a) The title for [P] Table 2902.1 is deleted and replaced with the following: "[P] Table 2902.1, Minimum Number of Required Plumbing Facilities [a, h]".

(b) In the row for "E" occupancy in the field for "OTHER" a new footnote i is added.

(c) In the row for "I-4" occupancy in the field for "OTHER" a new footnote i is added.

(d) A new footnote h is added as follows: "FOOTNOTE: h. When provided, in public toilet facilities there shall be an equal number of diaper changing facilities in male toilet rooms and female toilet rooms."

(e) A new footnote i is added to the table as follows: "FOOTNOTE i: Non-residential child care facilities shall comply with additional sink requirements of Utah Administrative Code R430-100-4."

(2) A new section IBC, Section [P]2902.7, is added as follows: "[P]2902.7 Toilet Facilities for Workers. Toilet facilities shall be provided for construction workers and such facilities shall be maintained in a sanitary condition. Construction worker toilet facilities of the nonsewer type shall conform to ANSI Z4.3.

[~~(2)~~] (3) In IBC, Section 300[~~6~~]5.5, a new exception is added as follows: "Exception: Hydraulic elevators and roped hydraulic elevators with a rise of 50 feet or less."

15A-3-113. Amendments to Chapters 32 through 35 of IBC.

~~[(1) A new section IBC, Section 3401.7, is added as follows: " 3401.7 Parapet bracing, wall anchors, and other appendages. Until June 30, 2014, a building constructed before 1975 shall have parapet bracing, wall anchors, and appendages such as cornices, spires, towers, tanks, signs, statuary, etc. evaluated by a licensed engineer when the building is undergoing structural alterations, which may include structural sheathing replacement of 10% or greater, or other structural repairs. Reroofing or water membrane replacement may not be considered a structural alteration or repair for purposes of this section. Beginning July 1, 2014, a building constructed before 1975 shall have parapet bracing, wall anchors, and appendages such as cornices, spires, towers, tanks, signs, statuary, etc. evaluated by a licensed engineer when the building is undergoing a total reroofing. Parapet bracing, wall anchors, and appendages required by this section shall be evaluated in accordance with 75% of the seismic forces as specified in Section 1613. When allowed by the local building official, alternate methods of equivalent strength as referenced in an approved code under Utah Code, Subsection 15A-1-204(6)(a), will be considered when accompanied by engineer-sealed drawings, details, and calculations. When found to be deficient because of design or deteriorated condition, the engineer's recommendations to anchor, brace, reinforce, or remove the deficient feature shall be implemented.~~

~~Exceptions:~~

~~1. Group R-3 and U occupancies.~~

~~2. Unreinforced masonry parapets need not be braced according to the above stated provisions provided that the maximum height of an unreinforced masonry parapet above the level of the diaphragm tension anchors or above the parapet braces shall not exceed one and one-half times the thickness of the parapet wall. The parapet height may be a maximum of two and one-half times its thickness in other than Seismic Design Categories D, E, or F."]~~

[~~(2) IBC, Section 3408.4, is deleted and replaced with the following: "3408.4 Seismic. When a change in occupancy results in a structure being reclassified to a higher Risk Category (as defined in Table 1604.5), or when such change of occupancy results in a design occupant load increase of 100% or more, the structure shall conform to the seismic requirements for a new structure.~~

~~Exceptions:~~

~~1. Specific seismic detailing requirements of this code or ASCE 7 for a new structure shall not be required to be met where it can be shown that the level of performance and seismic safety is equivalent to that of a new structure. A demonstration of equivalence analysis shall consider the regularity, overstrength, redundancy, and ductility of the structure. Alternatively, the building official may allow the structure to be upgraded in accordance with referenced sections as found in an approved code under Utah Code, Subsection 15A-1-204(6)(a).~~

~~2. When a change of use results in a structure being reclassified from Risk Category I or II to Risk Category III and the structure is located in a seismic map area where SDS is less than 0.33, compliance with the seismic requirements of this code and ASCE 7 are not required.~~

~~3. Where design occupant load increase is less than 25 occupants and the Risk Category does not change."]~~

[~~(3)~~] (1) In IBC, Chapter 35, the referenced standard ICCA117.1-09, Section 606.2, Exception 1 is modified to include the following sentence at the end of the exception: "The minimum clear floor space shall be centered on the sink assembly."

[~~(4)~~] (2) The following referenced standard is added under UL in IBC, Chapter 35:

"Number	Title	Referenced in code section number
2034-2008	Standard of Single- and Multiple-station Carbon Monoxide Alarms	907.9"

15A-3-201. General provision.

15A-3-202. Amendments to Chapters 1 through 5 of IRC.

(1) In IRC, Section R102, a new Section R102.7.2 is added as follows:
"R102.7.2 Physical change for bedroom window egress in legal nonconforming rental housing use. A structure classified as a legal nonconforming rental housing use, whose egress bedroom window is smaller than required by this code, is not required to

undergo a physical change to conform to this code if the change would compromise the structural integrity of the building or could not be completed in accordance with other applicable requirements of this code, including setback and window well requirements."

(2) In IRC, Section 109:

(a) A new IRC, Section 109.1.5, is added as follows: "R109.1.5 Weather-resistant exterior wall envelope inspections. An inspection shall be made of the weather-resistant exterior wall envelope as required by Section R703.1 and flashings as required by Section R703.8 to prevent water from entering the weather-resistive barrier."

(b) The remaining sections are renumbered as follows: R109.1.6 Other inspections; R109.1.6.1 Fire- and smoke-resistance-rated construction inspection; R109.1.6.2 Reinforced masonry, insulating concrete form (ICF) and conventionally formed concrete wall inspection; and R109.1.7 Final inspection.

(3) IRC, Section R114.1, is deleted and replaced with the following: "R114.1 Notice to owner. Upon notice from the building official that work on any building or structure is being prosecuted contrary to the provisions of this code or other pertinent laws or ordinances or in an unsafe and dangerous manner, such work shall be immediately stopped. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent or to the person doing the work; and shall state the conditions under which work will be permitted to resume."

(4) In IRC, Section R202, the following definition is added: "CERTIFIED BACKFLOW PREVENTER ASSEMBLY TESTER: A person who has shown competence to test Backflow prevention assemblies to the satisfaction of the authority having jurisdiction under Utah Code, Subsection 19-4-104(4)."

(5) In IRC, Section R202, the definition for "CONDITIONED SPACE" is modified by deleting the words at the end of the sentence "being heated or cooled by any equipment or appliance" and replacing them with the following: "enclosed within the building thermal envelope that is directly heated or cooled, or indirectly heated or cooled by any of the following means:

1. Openings directly into an adjacent conditioned space.
2. An un-insulated floor, ceiling or wall adjacent to a conditioned space.
3. Un-insulated duct, piping or other heat or cooling source within the space."

(6) In IRC, Section R202, the definition of "Cross Connection" is deleted and replaced with the following: "CROSS CONNECTION. Any physical connection or potential connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other either water of unknown or questionable safety or steam, gas, or chemical, whereby there exists the possibility for flow from one system to the other, with the direction of flow depending on the pressure differential between the two systems (see "Backflow, Water Distribution")."

(7) In IRC, Section 202, in the definition for gray water a comma is inserted after the word "washers"; the word "and" is deleted; and the following is added to the end: "and clear water wastes which have a pH of 6.0 to 9.0; are non-flammable; non-combustible; without objectionable odors; non-highly pigmented; and will not interfere with the operation of the sewer treatment facility."

(8) In IRC, Section R202, the definition of "Potable Water" is deleted and

replaced with the following: "POTABLE WATER. Water free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming to the Utah Code, Title 19, Chapters 4, Safe Drinking Water Act, and 5, Water Quality Act, and the regulations of the public health authority having jurisdiction."

(9) IRC, Figure R301.2(5), is deleted and replaced with Table R301.2(5a) and Table R301.2(5b) as follows:

"TABLE NO. R301.2(5a)

STATE OF UTAH - REGIONAL SNOW LOAD FACTORS

COUNTY	P_o	S	A_o
Beaver	43	63	6.2
Box Elder	43	63	5.2
Cache	50	63	4.5
Carbon	43	63	5.2
Daggett	43	63	6.5
Davis	43	63	4.5
Duchesne	43	63	6.5
Emery	43	63	6.0
Garfield	43	63	6.0
Grand	36	63	6.5
Iron	43	63	5.8
Juab	43	63	5.2
Kane	36	63	5.7
Millard	43	63	5.3
Morgan	57	63	4.5
Piute	43	63	6.2
Rich	57	63	4.1
Salt Lake	43	63	4.5
San Juan	43	63	6.5
Sanpete	43	63	5.2
Sevier	43	63	6.0
Summit	86	63	5.0
Tooele	43	63	4.5
Uintah	43	63	7.0
Utah	43	63	4.5
Wasatch	86	63	5.0
Washington	29	63	6.0
Wayne 36	63	6.5	
Weber	43	63	4.5

TABLE NO. R301.2(5b)

REQUIRED SNOW LOADS FOR SELECTED UTAH CITIES AND TOWNS1,2

The following jurisdictions require design snow load values that differ from the Equation in the Utah Snow Load Study.

County	City	Elevation	Ground Snow	Roof Snow

			Load (psf)	Load (psf) [6]
Davis	Fruit Heights[3]	4500 – 4850	57	40
Emery	Green River[3]	4070	36	25
Garfield	Panguitch[3]	6600	43	30
Rich	Woodruff[3]	6315	57	40
	Laketown[4]	6000	57	40
	Garden City[5]	--	--	--
	Randolph[4]	6300	57	40
San Juan	Monticello[3]	6820	50	35
Summit	Coalville[3]	5600	86	60
	Kamas[4]	6500	114	80
Tooele	Tooele[3]	5100	43	30
Utah	Orem[3]	4650	43	30
	Pleasant Grove[4]	5000	43	30
	Provo[5]	--	--	--
Wasatch	Heber[5]	--	--	--
Washington	Leeds[3]	3460	29	20
	Santa Clara[3]	2850	21	15
	St. George[3]	2750	21	15
	All other county locations[5]	--	--	--
Wayne	Loa[3]	7080	43	30

[1]The IRC requires a minimum live load – SeeR301.6

[2]This table is informational only in that actual site elevations may vary. Table is only valid if site elevation is within 100 feet of the listed elevation. Otherwise, contact the local Building Official.

[3]Values adopted form Table VII of the Utah Snow Load Study

[4]Values based on site-specific study. Contact local Building Official for additional information.

[5]Contact local Building Official.

[6]Based on C_e =1.0, C_t =1.0 and I_s =1.0"

(10) IRC, Section R301.6, is deleted and replaced with the following: "R301.6 Utah Snow Loads. The snow loads specified in Table R301.2(5b) shall be used for the jurisdictions identified in that table. Otherwise, the ground snow load, P_g, to be used in the determination of design snow loads for buildings and other structures shall be determined by using the following formula: $P_g = (P_{o2} + S_2(A-A_o)_2)_{0.5}$ for A greater than A_o, and $P_g = P_o$ for A less than or equal to A_o.

WHERE:

P_g = Ground snow load at a given elevation (psf);

P_o = Base ground snow load (psf) from Table No. R301.2(5a);

S = Change in ground snow load with elevation (psf/100 ft.) From Table No. R301.2(5a);
A = Elevation above sea level at the site (ft./1,000);
A_o = Base ground snow elevation from Table R301.2(5a) (ft./1,000).

The building official may round the roof snow load to the nearest 5 psf. The ground snow load, P_g, may be adjusted by the building official when a licensed engineer or architect submits data substantiating the adjustments.

Where the minimum roof live load in accordance with Table R301.6 is greater than the design roof snow load, such roof live load shall be used for design, however, it shall not be reduced to a load lower than the design roof snow load. Drifting need not be considered for roof snow loads less than 20 psf."

~~[(11) In IRC, Section R302.2, the words "Exception: A" are deleted and replaced with the following:~~

~~"Exceptions:~~

~~1. A common 2-hour fire-resistance-rated wall is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. Electrical installation shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.~~

~~2. In buildings equipped with an automatic residential fire sprinkler system, a".~~]

~~[(12) In IRC, Section R302.2.4, a new exception 6 is added as follows: "6. Townhouses separated by a common 2-hour fire-resistance-rated wall as provided in Section R302.2."~~]

[~~(13)~~] (11) In IRC, Section R302.5.1, the words "self-closing device" are deleted and replaced with "self-latching hardware".

(12) IRC, Section R302.13, is deleted.

[~~(14)~~] (13) In IRC, Section R303.4, the number "5" is changed to "3" in the first sentence.

[~~(15)~~] (14) IRC, Sections R311.7.[4]5through R311.7.[4]5.3, are deleted and replaced with the following:

"R311.7.[4]5 Stair treads and risers. R311.7.[4]5.1 Riser height. The maximum riser height shall be 8 inches (203 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

R311.7.[4]5.2 Tread depth. The minimum tread depth shall be 9 inches (228 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Winder treads shall have a minimum tread depth of 10 inches (254 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point. Within any flight of stairs, the greatest winder tread depth at the 12-inch (305 mm) walk line shall not exceed the smallest by more than 3/8 inch (9.5 mm).

R311.7.[4]5.3 Profile. The radius of curvature at the leading edge of the tread shall be no greater than 9/16 inch (14.3 mm). A nosing not less than 3/4 inch (19 mm) but not

more than 1 1/4 inches (32 mm) shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inch (9.5 mm) between two stories, including the nosing at the level of floors and landings. Beveling of nosing shall not exceed 1/2 inch (12.7 mm). Risers shall be vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted, provided that the opening between treads does not permit the passage of a 4-inch diameter (102 mm) sphere.

Exceptions.

1. A nosing is not required where the tread depth is a minimum of 10 inches (254 mm).
2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less."

~~[(16) In IRC, Section R312.1.2, the words "adjacent fixed seating" are deleted.]~~

[~~(17)~~] (15) IRC, Section R312.2, is deleted.

[~~(18)~~] (16) IRC, Sections R313.1 through R313.2.1, are deleted and replaced with the following: "R313.1 Design and installation. When installed, automatic residential fire sprinkler systems for townhouses or one- and two-family dwellings shall be designed and installed in accordance with Section P2904 or NFPA13D."

(17) In IRC, Section 315.3, the following words are added to the first sentence after the word "installed": "on each level of the dwelling unit and".

[~~(19)~~] (18) In [~~A new~~] IRC, Section R315.5, a new exception 3 is added as follows: [~~"R315.5 Power source.~~

~~Carbon monoxide alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for over-current protection.~~

~~Exceptions:~~

~~1. Carbon monoxide alarms shall be permitted to be battery operated when installed in buildings without commercial power.~~]

[~~2.~~] "3. Hard wiring of carbon monoxide alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring, without the removal of interior finishes."

[~~(20)~~] (19) A new IRC, Section R315.[~~6~~]7, is added as follows: "R315.[~~6~~]7 Interconnection. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section R315.1, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Exception: Interconnection of carbon monoxide alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or

basement available which could provide access for interconnection without the removal of interior finishes."

[~~(21)~~] (20) In IRC, Section R403.1.6, a new Exception [4]3is added as follows: "[4]3. When anchor bolt spacing does not exceed 32 inches (813 mm) apart, anchor bolts may be placed with a minimum of two bolts per plate section located not less than 4 inches (102 mm) from each end of each plate section at interior bearing walls, interior braced wall lines, and at all exterior walls."

[~~(22)~~] (21) In IRC, Section R403.1.6.1, a new exception is added at the end of Item 2 and Item 3 as follows: "Exception: When anchor bolt spacing does not exceed 32 inches (816 mm) apart, anchor bolts may be placed with a minimum of two bolts per plate section located not less than 4 inches (102 mm) from each end of each plate section at interior bearing walls, interior braced wall lines, and at all exterior walls."

[~~(23)~~] (22) In IRC, Section R404.1, a new exception is added as follows: "Exception: As an alternative to complying with Sections R404.1 through R404.1.5.3, concrete and masonry foundation walls may be designed in accordance with IBC Sections 1807.1.5 and 1807.1.6 as amended in Section 1807.1.6.4 and Table 1807.1.6.4 under these rules."

[~~(24) IRC, Section R501.3, is deleted.~~]

15A-3-203. Amendments to Chapters 6 through 15 of IRC.

(1) In IRC, Section N1101.[~~8~~]5 (R103.2), all words after the words "herein governed." are deleted and replaced with the following: "Construction documents include all documentation required to be submitted in order to issue a building permit."

(2) In IRC, Section N1101.[~~14~~]12 (R303.3), all wording after the first sentence is deleted.

(3) In IRC, Section N1101.13 (R401.2) a new number 4. is added as follows:

4. "Compliance may be shown by using the RESCheck "2012 Utah Energy Conservation Code" and showing compliance "10 percent better than code" as shown by the above referenced software."

([~~3~~]4) In IRC, Table N1102.1.[~~1~~]2 (R402.1.[~~1~~]2) in the column entitled MASS WALL R-VALUE [~~and Table N1102.1.3 (R402.1.3), the rows for "climate zone 3", "climate zone 5 and Marine 4", and "climate zone 6" are deleted and replaced and~~] a new footnote j is added as follows: "j. Log walls complying with ICC400 and with a minimum average wall thickness of 5" or greater shall be permitted in Zones 5-8 when overall window glazing is .31 U-factor or lower, minimum heating equipment efficiency is 90 AFUE (gas) or 84 AFUE (oil), and all other component requirements are met."

[~~"TABLE N1102.1.1 (R402.1.1)~~
~~INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENTa~~

~~"TABLE N1102.1.1 (R402.1.1)~~										
~~INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENTa~~										
~~CLIMATE ZONE~~	~~FENESTRATION U-FACTOR b~~	~~SKYLIGHT b U-FACTOR~~	~~GLAZED FENESTRATION SHGC b,e~~	~~CEILING R-VALUE~~	~~WOOD FRAME WALL R-VALUE~~	~~MASS WALL R-VALUE i,j~~	~~FLOOR R-VALUE~~	~~BASEMENT e WALL R-VALUE~~	~~SLAB d R-VALUE & DEPTH~~	~~CRAWL SPACE e WALL R-VALUE~~

3	0.65	0.65	0.40	30	15	5	19	0	0	5/13
5 and Marine 4	0.35	0.60	NR	38	19 or 13 + 5h	13	30 g	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13 + 5h	15	30 g	10/13	10, 4 ft	10/13]

j. Log walls complying with ICC400 and with a minimum average wall thickness of 5" or greater shall be permitted in Zones 5-8 when overall window glazing is .31 U-factor or lower, minimum heating equipment efficiency is 90 AFUE (gas) or 84 AFUE (oil), and all other component requirements are met."

[TABLE N1102.1.3 (R402.1.3)

EQUIVALENT U-FACTORSa

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR b	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
3	0.65	0.65	0.035	0.082	0.141	0.047	0.360	0.136
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.033	0.059	0.065
6	0.35	0.60	0.026	0.060	0.060	0.033	0.059	0.065]

[(4) In IRC, Section N1102.2.1 (R402.2.1), the last sentence is deleted.]

[(5) In IRC, Section N1102.2.2 (R402.2.2), the last sentence is deleted.]

[(6) In IRC, Section N1102.3.3 (R402.3.3), the last sentence is deleted.]

[(7) In IRC, Section N1102.3.4 (R402.3.4), the last sentence is deleted.]

[(8)] (5) In IRC, Section N1102.4.1 (R402.4.1), in the first sentence, the word "and" is deleted and replaced with the word "or".

[(9)] (6) In IRC, Section N1102.4.1.1 (R402.4.1.1), the last sentence is deleted and replaced with the following: "Where allowed by the [building] code official, the builder may certify compliance to components criteria for items which may not be inspected during regularly scheduled inspections."

[(10)] (7) In IRC, Section N1102.4.1.2 (R402.4.1.2), the following changes are made:

(a) In the first sentence, the words "in Climate Zones 1 and 2, and [3]three air changes per hour in Climate Zones 3 through 8" are deleted.

(b) In the third sentence, the [words "Where required by the building official," and the] word "third" [are]is deleted.

(c) The following sentence is inserted after the third sentence: "The following parties shall be approved to conduct testing: Parties certified by BPI or RESNET, or licensed contractors who have completed training provided by Blower Door Test equipment manufacturers or other comparable training."

[~~(11) In IRC, Section N1102.4.4 (R402.4.4), the last sentence is deleted.~~]

[~~(12) In IRC, Section N1103.2.2 (R403.2.2), the requirements for total leakage testing are deleted and replaced with the following:~~

~~"1. Postconstruction test: Total leakage shall be less than or equal to 10 cfm (283 L/min) per 100 square feet (9.29 m2) of conditioned floor space when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.~~

~~2. Rough-in test: Total leakage shall be less than or equal to 10 cfm (283 L/min) per 100 square feet (9.29 m2) of conditioned floor area when tested at a pressure differential of at least 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 7.5 cfm (212 L/min) per 100 square feet (9.29 m2) of conditioned floor area."~~]

~~(13)~~ (8) In IRC, Section N1103.[~~2.2~~]3.3 (R403.[~~2.2~~]3.3), the exception for [~~total~~]duct air leakage testing is deleted and replaced with the following: "Exception: The [~~total~~]duct air leakage test is not required for systems with all air handlers and at least [~~50~~]65% of all ducts (measured by length) located entirely within the building thermal envelope."

(9) In IRC, Section N1103.3.3 (R403.3.3), the following is added after the exception: "The following parties shall be approved to conduct testing: Parties certified by BPI or RESNET, or licensed contractors who have completed training provided by Duct Test equipment manufacturers or other comparable training."

(10) In IRC, Section N1103.3.4 (R403.3.4), in subsection 1, the number 4 is changed to 6, the number 113.3 is changed to 170, the number 3 is changed to 5, the number 85 is changed to 114.6 and in subsection 2, the number 4 is changed to 8 and the number 113.3 is changed to 226.5.

([~~14~~](11)) In IRC, Section N1103.[~~2.3~~]3.5 (R403.[~~2.3~~]3.5), the words "or plenums" are deleted.

[~~(15) In IRC, Section N1103.4.2 (R403.4.2), the sentences f or "3.", "9.", and the last sentence are deleted.~~]

[~~(16) In IRC, Section N1103.5 (R403.5), the first sentence is deleted.~~]

[~~(17) IRC, Section N1104.1 (R404.1) and the exception are deleted, and N1104.1.1 (R404.1.1) becomes N1104.1 (R404.1).~~]

[~~(18) In IRC, Table N1105.5.2(1) (R405.5.2(1)), the following changes are made under the column STANDARD REFERENCE DESIGN:~~

~~(a) In the row "Air exchange rate", the words "in Zones 1 and 2, and 3 air changes per hour in Zones 3 through 8" are deleted.~~

~~(b) In the row "Heating systems[, g]", the standard reference design is deleted and replaced with the following:~~

~~"Fuel Type: same as proposed design Efficiencies:~~
~~Electric: air source heat pump with prevailing federal minimum efficiencies~~
~~Nonelectric furnaces: natural gas furnace with prevailing federal minimum efficiencies~~
~~Nonelectric boilers: natural gas boiler with prevailing federal minimum~~

~~efficiencies~~

~~Capacity: sized in accordance with Section N1103.6"~~

~~(c) In the row "Cooling systems[f, h]" the words "As proposed" are deleted and replaced with the following:~~

~~"Fuel Type: Electric~~

~~Efficiency: in accordance with prevailing federal minimum standards"~~

~~(d) In the row "Service water heating[f, g, h, i]", the words "As proposed" are deleted and replaced with the following:~~

~~"Fuel Type: same as proposed design~~

~~Efficiency: in accordance with prevailing federal minimum standards~~

~~Tank Temperature: 120° F"~~

~~(e) replaced with the following: "Thermal distribution system efficiency (DSE) of .080 shall be applied to both the heating and cooling system efficiencies."~~]

[~~(19) In Table N1105.5.2(2) (R405.5.2(2)), the number "0.80" is inserted under "Forced air systems" for "Distribution system components located in unconditioned space".~~]

(12) In IRC, Section N1106.2 (R406.2), the last sentence and exception are deleted.

(13) In IRC, Section N1106.4 (R406.4) the table is deleted and replaces as follows:

TABLE N1106.4 (R406.4)
MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
1	59
2	59
3	65
4	63
5	69
6	68
7	60
8	60

[~~(20)~~](14) In IRC, Section M1307.2, the words "In Seismic Design Categories D_0, D[~~1~~]$_1$ and D[~~2~~]$_2$", and in townhouses in Seismic Design Category C, are deleted and in subparagraph 1. the last sentence is deleted.

[~~(21)~~] ~~The RESCheck Software adopted by the United States Department of Energy and modified to meet the requirements of this section shall be used to verify compliance with this section. The software shall address the Total UA alternative approach and account for Equipment Efficiency Trade-offs when applicable per the standard reference design as amended.~~

[~~(22)~~](15) IRC, Section [~~M1411.6~~] M1411.8, is deleted.

15A-3-204. Amendments to Chapters 16 through 25 of IRC.

[~~(1) In IRC, Table M1601.1.1(2), in the section "Round ducts and enclosed rectangular ducts", the word "enclosed" is deleted; the words "14 inches or less" are deleted and replaced with "over 8 inches but less than 15 inches"; the wording "8 under equivalent gage no., and "0.0159" under aluminum minimum thickness (in.), are added; and the section "Exposed rectangular ducts" is deleted.~~]

[~~(2) In IRC, Section M1901.3, the word "only" is inserted between the words "labeled" and "for".~~]

[~~(3)~~] (1) A new IRC, Section G2401.2, is added as follows: "G2401.2 Meter Protection. Fuel gas services shall be in an approved location and/or provided with structures designed to protect the fuel gas meter and surrounding piping from physical damage, including falling, moving, or migrating ice and snow. If an added structure is used, it must provide access for service and comply with the IBC or the IRC."

15A-3-205. Amendments to Chapters 26 through 35 of IRC.

(1) A new IRC, Section P2602.3, is added as follows: "P2602.3 Individual water supply. Where a potable public water supply is not available, individual sources of potable water supply shall be utilized, provided that the source has been developed in accordance with Utah Code, Sections 73-3-1 and 73-3-25, as administered by the Department of Natural Resources, Division of Water Rights. In addition, the quality of the water shall be approved by the local health department having jurisdiction."

(2) A new IRC, Section P2602.4, is added as follows: "P2602.4 Sewer required. Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer where the sewer is accessible and is within 300 feet of the property line in accordance with Utah Code, Section 10-8-38; or an approved private sewage disposal system in accordance with Utah Administrative Code, Chapter 4, Rule R317, as administered by the Department of Environmental Quality, Division of Water Quality."

(3) In IRC, Section P2801.[~~7~~]8, all words in the first sentence up to the word "water" are deleted.

(4) A new IRC, Section P2902.1.1, is added as follows: "P2902.1.1 Backflow assembly testing. The premise owner or his designee shall have backflow prevention assemblies operation tested in accordance with Utah Administrative Code, R309-305 at the time of installation, repair, and relocation and at least on an annual basis thereafter, or more frequently as required by the authority having jurisdiction. Testing shall be performed by a Certified Backflow Preventer Assembly Tester. The assemblies that are subject to this paragraph are the Spill Resistant Vacuum Breaker, the Pressure Vacuum Breaker Assembly, the Double Check Backflow Prevention Assembly, the Double Check Detector Assembly Backflow Preventer, the Reduced Pressure Principle Backflow Preventer, and Reduced Pressure Detector Assembly.~~"~~

Third-party certification for backflow prevention assemblies will consist of any combination of two certifications, laboratory or field. Acceptable third-party laboratory certifying agencies are ASSE, IAPMO, and USC-FCCCHR. USC-FCCCHR currently provides the only field testing of backflow protection assemblies. Also see www.drinkingwater.utah.gov and Division of Drinking Water Rule, Utah Administrative Code, R309-305-6."

[~~(5) IRC, Table P2902.3, is deleted and replaced with the following:~~

~~"DEVICE~~	~~DEGREE OF HAZARD[a]~~	~~APPLICATION[b]~~	~~APPLICABLE STANDARDS~~

~~BACKFLOW PREVENTION ASSEMBLIES:~~			
~~Double check backflow prevention assembly and double check fire protection backflow prevention assembly~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 3/8" – 16"~~	~~ASSE 1015, AWWA C510, CSA B64.5, CSA B64.5.1~~
~~Double check detector fire protection backflow prevention assemblies~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 3/8" – 16"~~	~~ASSE 1048~~
~~Pressure vacuum breaker assembly~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2" – 2"~~	~~ASSE 1020, CSA B64.1.2~~
~~Reduced pressure principle backflow prevention assembly and reduced pressure principle fire protection backflow assembly~~	~~High or low hazard~~	~~Backpressure or backsiphonage Sizes 3/8" – 16"~~	~~ASSE 1013, AWWA C511, CSA B64.4, CSAB64.4.1~~
~~Reduced pressure detector fire protection backflow prevention assemblies~~	~~High or low hazard~~ **15A-3-701160**	~~Backpressure or backsiphonage (Fire Sprinkler Systems)~~	~~ASSE 1047~~
~~Spill-resistant vacuum breaker assembly~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2" – 2"~~	~~ASSE 1056~~
~~BACKFLOW PREVENTER PLUMBING DEVICES:~~			
~~Antisiphon-type fill valves for gravity water closet flush tanks~~	~~High hazard~~	~~Backsiphonage only~~	~~ASSE 1002, CSA B125.3~~
~~Backflow preventer~~	~~Low hazard~~	~~Backpressure or~~	~~ASSE 1022~~

~~for carbonated beverage machines~~		~~backsiphonage Sizes 1/4" – 3/8"~~	
~~Backflow preventer with intermediate atmospheric vents~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 1/4" – 3/8"~~	~~ASSE 1012, CSA B64.3~~
~~Dual check valve type backflow preventers~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 1/4" – 1"~~	~~ASSE 1024, CSA B64.6~~
~~Hose connection backflow preventer~~	~~High or low hazard~~	~~Backsiphonage only Sizes1/2" – 1"~~	~~ASSE 1052, CSA B64.2, B64.2.1~~
~~Hose connection vacuum breaker~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2", 3/4", 1"~~	~~ASSE 1011, CAN/CSA B64.1.1~~
~~Atmospheric type vacuum breaker~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2" – 4"~~	~~ASSE 1001, CSA B64.1.1~~
~~Vacuum breaker wall hydrants, frost resistant, automatic draining type~~	~~High or low hazard~~	~~Backsiphonage only Sizes 3/4", 1"~~	~~ASSE 1019, CSA B64.2.2~~
~~OTHER MEANS or METHODS:~~			
~~Air gap~~	~~High or low hazard~~	~~Backsiphonage only~~	~~ASME A112.1.2~~
~~Air gap fittings for use with plumbing fixtures, appliances and appurtenances~~	~~High or low hazard~~	~~Backpressure or backsiphonage~~	~~ASME A112.1.3~~
~~For SI: 1 inch = 25.4 mm~~			
~~a. Low Hazard - See Pollution (Section 202), High Hazard - See Contamination (Section 202)~~			

~~b. See Backpressure (Section 202), See Backpressure, low head (Section 202), See Backsiphonage Section 202)~~

~~Installation Guidelines: The above specialty devices shall be installed in accordance with their listing and the manufacturer's instructions and the specific provisions of this chapter."~~
]

(5) In IRC, Section P2902.1, the following subsections are added as follows:
"P2902.1.1 General Installation Criteria. Assemblies shall not be installed more than five feet above the floor unless a permanent platform is installed. The assembly owner, where necessary, shall provide devices or structures to facilitate testing, repair, and/or maintenance and to insure the safety of the backflow technician.
P2902.1.2 Specific installation criteria:

P2902.1.2.1 Reduced Pressure Principle Blackflow Prevention Assembly. The reduced pressure principle backflow prevention assembly shall be installed as follows:

a. Shall NOT be installed in a pit.
b. The relief valve of the reduced pressure principle backflow prevention assembly shall not be directly connected to any waste disposal line, including sanitary sewer, storm drains, or vents.
c. The assembly shall be installed in a horizontal position only unless listed or approved for vertical installation in accordance with Section 303.4
d. The bottom of each RP assembly shall be installed a minimum of 12 inches above the floor or ground.
e. The body of the RP assembly shall be a minimum of 12 inches from any walls, ceiling, or obstacle and shall be readily accessible for testing, repair and maintenance.

P2902.1.2.2 Double Check Valve Backflow Prevention Assembly. Double check valve backflow prevention assembly shall be installed as follows:

a. Shall be installed in a horizontal position only unless listed or approved for vertical installation.
b. The bottom of the DC assembly shall be a minimum of 12 inches above the ground or floor. The body of the DC assembly shall be a minimum of 12 inches from any walls, ceilings, or obstacle and shall be readily accessible for testing, repair and maintenance.
c. If installed in a pit, the DC assembly shall be installed with a minimum of 12 inches of clearance between all sides of the vault including the floor and roof or ceiling with adequate room for testing and maintenance.

P2902.1.2.3 Pressure Vacuum Break Assembly and Spill Resistant Pressure Vacuum Breaker Assembly. Pressure vacuum break assemblies and spill resistant pressure vacuum breaker assemblies shall be installed as follows:

a. Shall not be installed in an area that could be subjected to backpressure or back drainage conditions.
b. Shall be installed a minimum of 12 inches above all downstream piping and the highest point of use.

c. The PVB or SVB shall be a minimum of 12 inches from walls. ceiling, or obstacle and shall be readily accessible for testing, repair and maintenance.

d. Shall not be installed below ground or in a vault or pit.

e. Shall be installed in a vertical position only."

(6) IRC, Section P2910.5, is deleted and replaced with the following: "P2910.5 Potable water connections. When a potable system is connected to a nonpotable water system, the potable water system shall be protected against backflow by a reduced pressure backflow prevention assembly or an air gap installed in accordance with Section 2901."

(7) IRC, Section P2910.9.5, is deleted and replaced with the following: " Makeup water. Where an uninterrupeted nonpotable water supply is required for the intended application, potable or reclaimed water shall be provided as a source of makeup water for the storage tank. The make-up water supply shall be protected against backflow by means of an air gap not less than 4 inches (102 mm) above the overflow or by a reduced pressure backflow prevention assembly installed in accordance with Section 2902."

(8) In IRC, Section P2911.12.4, the following words are deleted: "and backwater valves".

(9) In IRC, Section P2912.15.6, the following words are deleted: "and backwater valves".

(10) In IRC, Section P2913.4.2, the following words are deleted: "and backwater valves".

(11) IRC, Section P3009 is deleted and replaced with the following: "P3009 Connected to nonpotable water from on-site water reuse systems. Nonpotable systems utilized for subsurface irrigation for single family residences shall comply with the requirements of R317-401, UAC, Gray Water Systems.

[~~(6) In IRC, Section P3009.1, all words after the word "urinals" are deleted and the following sentence is added at the end: "Gray water recycling systems for subsurface landscape irrigation shall conform with UAC R317-401 Gray Water Systems."~~]

[~~(7) A new IRC, Section P3009.1.1, is added as follows: "P3009.1.1 Recording. The existence of a gray water recycling system shall be recorded on the deed of ownership for that property. The certificate of occupancy shall not be issued until the documentation of the recording required under this section is completed by the owner."~~]

[~~(8) In IRC, Section P3009.2, the words "and systems for subsurface landscape irrigation shall comply with Section P3009.14" are deleted.~~]

[~~(9) IRC, Section P3009.6, is deleted and replaced with the following: "P3009.6 Potable water connections. The potable water supply to any building utilizing a gray water recycling system shall be protected against backflow by a reduced pressure backflow prevention assembly installed in accordance with Section P2902."~~]

[~~(10) In IRC, Section P3009.7, the following is added at the end of the sentence: "and other clear water wastes which have a pH of 6.0 to 9.0; are non-flammable, non-combustible; without objectionable odor; non-highly pigmented; and will not interfere with the operation of the sewer treatment facility."~~]

[~~(11) In IRC, Section P3009.13.3, in the second sentence, the following is added between the words "backflow" and "in": "by a reduced pressure backflow prevention assembly or an air gap installed".~~]

[~~(12) IRC, Section P3009.14, is deleted and replaced with the following: "Section P3009.14 LANDSCAPE IRRIGATION SYSTEMS. Gray water recycling systems utilized for subsurface irrigation for single family residences shall comply with the~~

~~requirements of UAC R317-401, Gray Water Systems. Gray water recycling systems utilized for subsurface irrigation for other occupancies shall comply with UAC R317-3, Design Requirements for Wastewater Collection, Treatment and Disposal and UAC R317-4, Onsite Waterwaste Systems."~~]

[~~(13)~~] (12) In IRC, Section P3103.6, the following sentence is added at the end of the paragraph: "Vents extending through the wall shall terminate not less than 12 inches from the wall with an elbow pointing downward."

[~~(14)~~] (13) In IRC, Section P3104.4, the following sentence is added at the end of the paragraph: "Horizontal dry vents below the flood level rim shall be permitted for floor drain and floor sink installations when installed below grade in accordance with Chapter 30, and Sections P3104.2 and P3104.3. A wall cleanout shall be provided in the vertical vent."

15A-3-206. Amendments to Chapters 36 and 44 of IRC.

(1) In IRC Section E3901.9 the following exception is added: "Exception: Receptacles or other outlets adjacent to the exterior walls of the garage or outlets in storage rooms with entry from the garage shall be permitted to be connected to the garage branch circuit."

[~~(1)~~] (2) In IRC, Section E3902.[~~12~~]16, the following words are deleted: "family rooms, dining rooms, living rooms, parlors, libraries, dens, sunrooms, recreation rooms, closets, hallways, and similar rooms or areas.
Exception: This section does not apply for a simple move or an extension of a branch circuit or an outlet which does not significantly increase the existing electrical load. This exception does not include changes involving remodeling or additions to a residence."

[~~(2)~~] (3) IRC, Chapter 44, is amended by adding the following reference standard:

"Standard reference number	Title	Referenced in code section number
USC-FCCCHR 10th Edition Manual of Cross Connection Control	Foundation for Cross-Connection Control and Hydraulic Research University of Southern California Kaprielian Hall 300 Los Angeles CA 90089-2531	Table P2902.3"

15A-3-301. General provision.

15A-3-302. Amendments to Chapters 1 and 2 of IPC.

(1) A new IPC, Section [~~101.2~~] 101.2.1, is added as follows: "For clarification, the International Private Sewage Disposal Code is not part of the plumbing code even though it is in the same printed volume."

(2) In IPC, Section 202, the definition for "Backflow Backpressure, Low Head" is deleted.

(3) In IPC, Section 202, the following definition is added: "Certified Backflow

Preventer Assembly Tester. A person who has shown competence to test Backflow prevention assemblies to the satisfaction of the authority having jurisdiction under Utah Code, Subsection 19-4-104(4)."

(4) In IPC, Section 202, the following definition is added: "Contamination (High Hazard). An impairment of the quality of the potable water that creates an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids or waste."

(5) In IPC, Section 202, the definition for "Cross Connection" is deleted and replaced with the following: "Cross Connection. Any physical connection or potential connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other either water of unknown or questionable safety or steam, gas, or chemical, whereby there exists the possibility for flow from one system to the other, with the direction of flow depending on the pressure differential between the two systems (see "Backflow")."

(6) In IPC, Section 202, the following definition is added: "Deep Seal Trap. A manufactured or field fabricated trap with a liquid seal of 4" or larger."

(7) In IPC, Section 202, the definition for "Essentially Nontoxic Transfer Fluid" is deleted and replaced with the following: "Essentially Nontoxic Transfer Fluid. Fluids including propylene glycol or mineral oil."

(8) In IPC, Section 202, the definition for Essentially Toxic Transfer Fluid" is deleted and replaced with the following: "Essentially Toxic Transfer Fluid. Soil, waste or gray water and fluids not defined by this code as an essentially nontoxic transfer fluid."

[~~(7) In IPC, Section 202, in the definition for gray water a comma is inserted after the word "washers"; the word "and" is deleted; and the following is added to the end: "and clear water wastes which have a pH of 6.0 to 9.0; are non-flammable; non-combustible; without objectionable odors; non-highly pigmented; and will not interfere with the operation of the sewer treatment facility."~~]

[~~(8)~~] (9) In IPC, Section 202, the following definition is added: "High Hazard. See Contamination."

[~~(9)~~] (10) In IPC, Section 202, the following definition is added: "Low Hazard. See Pollution."

[~~(10)~~] (11) In IPC, Section 202, the following definition is added: "Pollution (Low Hazard). An impairment of the quality of the potable water to a degree that does not create a hazard to the public health but that does adversely and unreasonably affect the aesthetic qualities of such potable water for domestic use."

[~~(11)~~] (12) In IPC, Section 202, the definition for "Potable Water" is deleted and replaced with the following: "Potable Water. Water free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming to the Utah Code, Title 19, Chapters 4, Safe Drinking Water Act, and 5, Water Quality Act, and the regulations of the public health authority having jurisdiction."

15A-3-303. Amendments to Chapter 3 of IPC.

(1) In IPC, Section 303.4, the following exception is added:
"Exception: Third-party certification for backflow prevention assemblies will consist of any combination of two certifications, laboratory or field. Acceptable third party laboratory certifying agencies are ASSE, IAPMO, and USC-FCCCHR. USC-

FCCCHR currently provides the only field testing of backflow protection assemblies. Also see www.drinkingwater.utah.gov and Division of Drinking Water Rule, Utah Administrative Code, R309-305-6."

[~~(2) IPC, Section 304.3, Meter Boxes, is deleted.~~]

(2) IPC, Section 307.5, Protection of footings, is deleted.

(3) IPC, Section 311.1, is deleted. "See IBC"

(4) In IPC, Section 312.3, the following is added at the end of the paragraph: "Where water is not available at the construction site or where freezing conditions limit the use of water on the construction site, plastic drainage and vent pipe may be permitted to be tested with air. The following procedures shall be followed:

1. Contractor shall recognize that plastic is extremely brittle at lower temperatures and can explode, causing serious injury or death.
2. Contractor assumes all liability for injury or death to persons or damage to property or for claims for labor and/or material arising from any alleged failure of the system during testing with air or compressed gasses.
3. Proper personal protective equipment, including safety eyewear and protective headgear, should be worn by all individuals in any area where an air or gas test is being conducted.
4. Contractor shall take all precautions necessary to limit the pressure within the plastic piping.
5. No [~~water supply~~] drain and vent system shall be pressurized in excess of 6 psi as measured by accurate gauges graduated to no more than three times the test pressure.
6. The pressure gauge shall be monitored during the test period, which should not exceed 15 minutes.
7. At the conclusion of the test, the system shall be depressurized gradually, all trapped air or gases should be vented, and test balls and plugs should be removed with caution."

(5) In IPC, Section 312.5, the following is added at the end of the paragraph: "Where water is not available at the construction site or where freezing conditions limit the use of water on the construction site, plastic water pipes may be permitted to be tested with air. The following procedures shall be followed:

1. Contractor shall recognize that plastic is extremely brittle at lower temperatures and can explode, causing serious injury or death.
2. Contractor assumes all liability for injury or death to persons or damage to property or for claims for labor and/or material arising from any alleged failure of the system during testing with air or compressed gasses.
3. Proper personal protective equipment, including safety eyewear and protective headgear, should be worn by all individuals in any area where an air or gas test is being conducted.
4. Contractor shall take all precautions necessary to limit the pressure within the plastic piping.
5. Water supply systems shall be pressure tested to a minimum of 50 psi but not more than 80 psi as measured by accurate gauges graduated to no more than three times the test pressure.

6. The pressure gauge shall be monitored during the test period, which should not exceed 15 minutes.
7. At the conclusion of the test, the system shall be depressurized gradually, all trapped air or gases should be vented, and test balls and plugs should be removed with caution."

(6) A new IPC, Section 312.10.3, is added as follows: "312.10.3 Tester Qualifications. Testing shall be performed by a Utah Certified Backflow Preventer Assembly Tester in accordance with Utah Administrative Code, R309-305."

15A-3-304. Amendments to Chapter 4 of IPC.

(1) In IPC, Table 403.1, the following changes are made:
(a) The title for Table 403.1 is deleted and replaced with the following: "Table 403.1, Minimum Number of Required Plumbing [~~Facilities~~] Fixtures[a, h]";
(b) In [~~the~~] row number "3" for "E" occupancy in the field for "OTHER" a new footnote [~~i~~]g is added.
(c) In the row number "5" for "I-4 Adult day care and child day care" occupancy in the field for "OTHER" a new footnote [~~i~~] g is added.
(d) A new footnote [~~h~~]f is added as follows: "FOOTNOTE: [~~h~~]f. When provided, in public toilet facilities there shall be an equal number of diaper changing facilities in male toilet rooms and female toilet rooms. Diaper changing facilities shall meet the requirements of ASTM F2285-04 (2010) Standard Consumer Safety Performance Specifications for Diaper Changing Tables for Commercial Use".
(e) A new footnote [~~i~~] g is added to the table as follows: "FOOTNOTE [~~i~~] g: Non-residential child care facilities shall comply with the additional sink requirements of Utah Administrative Code R430-100-4."

(2) A new IPC, Section 406.3, is added as follows: "406.3 Automatic clothes washer safe pans. Safe pans, when installed under automatic clothes washers, shall be installed in accordance with Section 504.7."

(3) A new IPC, Section 412.5, is added as follows: "412.5 Public toilet rooms. All public toilet rooms in A & E occupancies and M occupancies with restrooms having multiple water closets or urinals shall be equipped with at least one floor drain."

(4) IPC, Section 423.3 is deleted.

15A-3-305. Amendments to Chapter 5 of IPC.

(1) IPC, Section 502.4, is deleted and replaced with the following: "502.4 Seismic supports. [~~Appliances designed to be fixed in position shall be fastened or anchored in an approved manner.~~] As a minimum requirement, [~~W~~]water heaters shall be anchored or strapped to resist horizontal displacement caused by earthquake motion. 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) In IPC, Section 504.7.2, the following is added at the end of the section: "When permitted by the code official, the pan drain may be directly connected to a soil stack, waste stack, or branch drain. The pan drain shall be individually trapped and vented as required in Section 907.1. The pan drain shall not be directly or indirectly

connected to any vent. The trap shall be provided with a trap primer conforming to ASSE 1018 or ASSE 1044, a barrier type floor drain trap seal protection device meeting ASSE 1072, or a deep seal p-trap."

(3) A new IPC, Section 504.7.3, is added as follows: "504.7.3 Pan Designation. A water heater pan shall be considered an emergency receptor designated to receive the discharge of water from the water heater only and shall not receive the discharge from any other fixtures, devises, or equipment."

15A-3-306. Amendments to Chapter 6 of IPC.

(1) IPC, Section 602.3, is deleted and replaced with the following: "602.3 Individual water supply. Where a potable public water supply is not available, individual sources of potable water supply shall be utilized provided that the source has been developed in accordance with Utah Code, Sections 73-3-1, 73-3-3, and 73-3-25, as of Natural Resources, Division of Water Rights. In addition, the quality of the water shall be approved by the local health department having jurisdiction. The source shall supply sufficient quantity of water to comply with the requirements of this chapter."

(2) IPC, Sections 602.3.1, 602.3.2, 602.3.3, 602.3.4, 602.3.5, and 602.3.5.1, are deleted.

(3) A new IPC, Section 604.4.1, is added as follows: "604.4.1 Manually operated metering faucets <u>for food service establishments</u>. Self closing or manually operated metering faucets shall provide a flow of water for at least 15 seconds without the need to reactivate the faucet."

(4) IPC, Section 606.5, is deleted and replaced with the following: "606.5 Water pressure booster systems. Water pressure booster systems shall be provided as required by Section 606.5.1 through 606.5.11."

(5) A new IPC, Section 606.5.11, is added as follows: "606.5.11 Prohibited installation. In no case shall a booster pump be allowed that will lower the pressure in the public main to less than the minimum water pressure specified in Utah Administrative Code R309-105-9."

(6) In IPC, Section 608.1, the words "and pollution" are added after the word "contamination."

(7) ~~[IPC, Table 608.1, is deleted and replaced with the following:~~

~~"TABLE 608.1~~

~~Application of Backflow Preventers~~

~~"DEVICE~~	~~DEGREE OF HAZARDa~~	~~APPLICATIONb~~	~~APPLICABLE STANDARDS~~
~~BACKFLOW PREVENTION ASSEMBLIES:~~			

~~Double check backflow prevention assembly and double check fire protection backflow prevention assembly~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 3/8" – 16"~~	~~ASSE 1015, AWWA C510, CSA B64.5, CSA B64.5.1~~
~~Double check detector fire protection backflow prevention assemblies~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 3/8" – 16"~~	~~ASSE 1048~~
~~Pressure vacuum breaker assembly~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2" – 2"~~	~~ASSE 1020, CSA B64.1.2~~
~~Reduced pressure principle backflow prevention assembly and reduced pressure principle fire protection backflow assembly~~	~~High or low hazard~~	~~Backpressure or backsiphonage Sizes 3/8" – 16"~~	~~ASSE 1013, AWWA C511, CSA B64.4, CSAB64.4.1~~
~~Reduced pressure detector fire protection backflow prevention assemblies~~	~~High or low hazard~~	~~Backpressure or backsiphonage (Fire Sprinkler Systems)~~	~~ASSE 1047~~
~~Spill resistant vacuum breaker assembly~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2" – 2"~~	~~ASSE 1056~~
~~BACKFLOW PREVENTER PLUMBING DEVICES:~~			
~~Antisiphon type fill valves for gravity water closet flush tanks~~	~~High hazard~~	~~Backsiphonage only~~	~~ASSE 1002, CSA B125.3~~

~~Backflow preventer for carbonated beverage machines~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 1/4" – 3/8"~~	~~ASSE 1022~~
~~Backflow preventer with intermediate atmospheric vents~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 1/4" – 3/8"~~	~~ASSE 1012, CSA B64.3~~
~~Dual check valve type backflow preventers~~	~~Low hazard~~	~~Backpressure or backsiphonage Sizes 1/4" – 1"~~	~~ASSE 1024, CSA B64.6~~
~~Hose connection backflow preventer~~	~~High or low hazard~~	~~Backsiphonage only Sizes1/2" – 1"~~	~~ASSE 1052, CSA B64.2, B64.2.1~~
~~Hose connection vacuum breaker~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2", 3/4", 1"~~	~~ASSE 1011, CAN/CSA B64.1.1~~
~~Atmospheric type vacuum breaker~~	~~High or low hazard~~	~~Backsiphonage only Sizes 1/2" – 4"~~	~~ASSE 1001, CSA B64.1.1~~
~~Vacuum breaker wall hydrants, frost resistant, automatic draining type~~	~~High or low hazard~~	~~Backsiphonage only Sizes 3/4", 1"~~	~~ASSE 1019, CSA B64.2.2~~
~~OTHER MEANS or METHODS:~~			
~~Air gap~~	~~High or low hazard~~	~~Backsiphonage only~~	~~ASME A112.1.2~~
~~Air gap fittings for use with plumbing fixtures, appliances and appurtenances~~	~~High or low hazard~~	~~Backpressure or backsiphonage~~	~~ASME A112.1.3~~
~~For SI: 1 inch = 25.4 mm~~			

~~a. Low Hazard - See Pollution (Section 202), High Hazard - See Contamination (Section 202)~~

~~b. See Backpressure (Section 202), See Backpressure, low head (Section 202), See Backsiphonage Section 202)~~

~~Installation Guidelines: The above specialty devices shall be installed in accordance with their listing and the manufacturer's instructions and the specific provisions of this chapter."~~]

In IPC, Section 608.1, the following subsections are added as follows:

608.1.1 General Installation Criteria. Assemblies shall not be installed more than five (5) feet above the floor unless a permanent platform is installed. The assembly owner, where necessary, shall provide devices or structures to facilitate testing, repair, and/or maintenance and to insure the safety of the backflow technician.

608.1.2 Specific installation criteria:

608.1.2.1 Reduced Pressure Principle Blackflow Prevention Assembly. The reduced pressure principle backflow prevention assembly shall be installed as follows:

a. Shall NOT be installed in a pit.

b. The relief valve of the reduced pressure principle backflow prevention assembly shall not be directly connected to any waste disposal line, including sanitary sewer, storm drains, or vents.

c. The assembly shall be installed in a horizontal position only unless listed or approved for vertical installation in accordance with Section 303.4

d. The bottom of each RP assembly shall be installed a minimum of 12 inches above the floor or ground.

e. The body of the RP assembly shall be a minimum of 12 inches from any walls, ceiling, or obstacle and shall be readily accessible for testing, repair and maintenance.

608.1.2.2 Double Check Valve Backflow Prevention Assembly. Double check valve backflow prevention assembly shall be installed as follows:

a. Shall be installed in a horizontal position only unless listed or approved for vertical installation.

b. The bottom of the DC assembly shall be a minimum of 12 inches above the ground or floor. The body of the DC assembly shall be a minimum of 12 inches from any walls, ceilings, or obstacle and shall be readily accessible for testing, repair and maintenance.

c. If installed in a pit, the DC assembly shall be installed with a minimum of 12 inches of clearance between all sides of the vault including the floor and roof or ceiling with adequate room for testing and maintenance.

608.1.2.3 Pressure Vacuum Break Assembly and Spill Resistant Pressure Vacuum Breaker Assembly. Pressure vacuum break assemblies and spill resistant pressure vacuum breaker assemblies shall be installed as follows:

a. Shall not be installed in an area that could be subjected to backpressure or back drainage conditions.

b. Shall be installed a minimum of 12 inches above all downstream piping and the highest point of use.

c. The PVB or SVB shall be a minimum of 12 inches from walls, ceiling, or obstacle and shall be readily accessible for testing, repair and maintenance.

d. Shall not be installed below ground or in a vault or pit.

e. Shall be installed in a vertical position only.

(8) In IPC, Section 608.3, the word "and" after the word "contamination" is deleted and replaced with a comma and the words "and pollution" are added after the word "contamination" in the first sentence.

(9) In IPC, Section 608.5, the words "with the potential to create a condition of either contamination or pollution or" are added after the word "substances".

(10) In IPC, Section 608.6, the following sentence is added at the end of the paragraph: "Any connection between potable water piping and sewer-connected waste shall be protected by an air gap in accordance with Section 608.13.1."

(11) IPC, Section 608.7, is deleted and replaced with the following: "608.7 Stop and Waste Valves installed below grade. Combination stop-and-waste valves shall be permitted to be installed underground or below grade. Freeze proof yard hydrants that drain the riser into the ground are considered to be stop-and-waste valves and shall be permitted. Stop and waste valves shall be installed in accordance with manufacture's recommended installation instructions."

(12) In IPC, Section 608.11, the following sentence is added at the end of the paragraph: "The coating and installation shall conform to NSF Standard 61 and application of the coating shall comply with the manufacturer's instructions."

(13) IPC, Section 608.13.3, is deleted and replaced with the following: "608.13.3 Backflow preventer with intermediate atmospheric vent. Backflow preventers with intermediate atmospheric vents shall conform to ASSE 1012 or CSA CAN/CSA-B64.3. These devices shall be permitted to be installed on residential boilers only, without chemical treatment, where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged."

(14) IPC, Section 608.13.4, is deleted.

(15) IPC, Section 608.13.9, is deleted and replaced with the following: "608.13.9 Chemical dispenser backflow devices. Backflow devices for chemical dispensers shall comply with Section 608.16.7."

(16) IPC, Section 608.15.3, is deleted and replaced with the following: "608.15.3 Protection by a backflow preventer with intermediate atmospheric vent. Connections to residential boilers only, without chemical treatment, shall be protected by a backflow preventer with an intermediate atmospheric vent."

(17) IPC, Section 608.15.4, is deleted and replaced with the following: "608.15.4 Protection by a vacuum breaker. Openings and outlets shall be protected by atmospheric-type or pressure-type vacuum breakers. Vacuum breakers shall not be installed under exhaust hoods or similar locations that will contain toxic fumes or vapors. Fill valves shall be set in accordance with Section 425.3.1.

Atmospheric Vacuum Breakers - The critical level of the atmospheric vacuum breaker shall be set a minimum of 6 inches (152 mm) above the flood level rim of the fixture or device. Pipe-applied vacuum breakers shall be installed not less

than 6 inches (152 mm) above the flood level rim of the fixture, receptor, or device served. No valves shall be installed downstream of the atmospheric vacuum breaker.

Pressure Vacuum Breaker - The critical level of the pressure vacuum breaker shall be set a minimum of 12 inches (304 mm) above the flood level of the fixture or device."

(18) In IPC, Section 608.15.4.2, the following is added after the first sentence: "Add-on-backflow prevention devices shall be non-removable. In climates where freezing temperatures occur, a listed self-draining frost proof hose bibb with an integral backflow preventer shall be used."

(19) IPC, Section 608.16.2, is deleted and replaced as follows: "608.16.2 Connections to boilers. The potable supply to a boiler shall be protected by an air gap or a reduced pressure principle backflow preventer, complying with ASSE 1013, CSA B64.4 or AWWA C511.

Exception: The potable supply to a residential boiler without chemical treatment may be equipped with a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012 or CSA CAN/CSA-B64.3."

[~~(20) IPC, Section 608.16.3, is deleted and replaced with the following: "608.16.3 Heat exchangers. Heat exchangers shall be separated from potable water by double-wall construction. An air gap open to the atmosphere shall be provided between the two walls.~~

~~Exceptions:~~

~~1. Single wall heat exchangers shall be permitted when all of the following conditions are met:~~

~~a. It utilizes a heat transfer medium of potable water or contains only substances which are recognized as safe by the United States Food and Drug Administration (FDA);~~

~~b. The pressure of the heat transfer medium is maintained less than the normal minimum operating pressure of the potable water system; and~~

~~c. The equipment is permanently labeled to indicate only additives recognized as safe by the FDA shall be used.~~

~~2. Steam systems that comply with paragraph 1 above.~~

~~3. Approved listed electrical drinking water coolers."~~]

[~~(21)~~] (20) In IPC, Section 608.16.4.1, a new exception is added as follows: "Exception: All class 1 and 2 systems containing chemical additives consisting of strictly glycerine (C.P. or U.S.P. 96.5 percent grade) or propylene glycol shall be protected against backflow with a double check valve assembly. Such systems shall include written certification of the chemical additives at the time of original installation and service or maintenance."

[~~(22)~~] (21) IPC, Section 608.16.7, is deleted and replaced with the following: "608.16.7 Chemical dispensers. Where chemical dispensers connect to the water distribution system, the water supply system shall be protected against backflow in accordance with Section 608.13.1, Section 608.13.2, Section 608.13.5, Section 608.13.6 or Section 608.13.8. Installation shall be in accordance with 608.1.2. Chemical dispensers shall connect to a separate dedicated water supply line, not a [~~separate from any~~] sink faucet."

[~~(23)~~] (22) IPC, Section 608.16.8, is deleted and replaced with the following: "608.16.8 Portable cleaning equipment. Where the portable cleaning equipment connects to the water distribution system, the water supply system shall be protected against backflow in accordance with Section 608.13.1[~~,~~] or Section 608.13.2 [~~or Section 608.13.8~~]."

[~~(24)~~] (23) A new IPC, Section 608.16.11, is added as follows: "608.16.11 Automatic and coin operated car washes. The water supply to an automatic or coin operated car wash shall be protected in accordance with Section 608.13.1 or Section 608.13.2."

[~~(25)~~] (24) IPC, Section 608.17, is deleted and replaced with the following: "608.17 Protection of individual water supplies. See Section 602.3 for requirements."

15A-3-307. Amendments to Chapter 7 of IPC.

15A-3-308. Amendments to Chapter 8 of IPC.

[~~IPC, Chapter 8, is not amended.~~]

(1) In IPC, Section 802.1.1, the last sentence is deleted.

15A-3-309. Amendments to Chapter 9 of IPC.

15A-3-310. Amendments to Chapter 10 of IPC.

IPC Chapter 10 is not amended.

[~~In IPC, Section 1002.4, the following is added at the end of the paragraph:~~]

[~~"Approved Means of Maintaining Trap Seals. Approved means of maintaining trap seals include the following, but are not limited to the methods cited:~~

~~1. A listed trap seal primer conforming to ASSE 1018 and ASSE 1044.~~

~~2. A hose bibb or bibbs within the same room.~~

~~3. Drainage from an untrapped lavatory discharging to the tailpiece of those fixture traps which require priming. All fixtures shall be in the same room and on the same floor level as the trap primer.~~

~~4. Barrier type floor drain trap seal protection device meeting ASSE Standard 1072.~~

~~5. Deep seal p-trap".~~]

15A-3-311. Amendments to Chapter 11 of IPC.

[~~(1) IPC, Section 1104.2, is deleted and replaced with the following: "1104.2 Combining storm and sanitary drainage prohibited. The combining of sanitary and storm drainage systems is prohibited."~~]

(1) A new IPC, Section 1106.1.1, is added as follows: "1106.1.1 Alternate Methods. Approved alternate storm drain sizing methods may be allowed."

(2) IPC, Section 1109, is deleted.

15A-3-312. Amendments to Chapter 12 of IPC.

15A-3-313. Amendments to Chapter 13 of IPC.

[~~(1) In IPC, Section 1301.1, all words after the word "urinals" are deleted and the following sentence is added at the end: "Gray water recycling systems for subsurface landscape irrigation shall conform with UAC R317-401 Gray Water Systems."~~]

[~~(2) A new IPC, Section 1301.1.1, is added as follows: "1301.1.1 Recording. The existence of a gray water recycling system shall be recorded on the deed of ownership for that property. The certificate of occupancy shall not be issued until the documentation of the recording required under this section is completed by the owner."~~]

[~~(3) In IPC, Section 1301.2, the words "and systems for subsurface landscape irrigation shall comply with Section 1303" are deleted.~~]

[~~(4) IPC, Section 1301.6, is deleted and replaced with the following: "1301.6 Potable water connections. The potable water supply to any building utilizing a gray water recycling system shall be protected against backflow by a reduced pressure backflow prevention assembly installed in accordance with Section 608."~~]

[~~(5) In IPC, Section 1301.7, the following is added at the end of the sentence: "and other clear water wastes which have a pH of 6.0 to 9.0; are non-flammable, non-combustible; without objectionable odor; non-highly pigmented; and will not interfere with the operation of the sewer treatment facility."~~]

[~~(6) In IPC, Section 1302.3, in the second sentence, the following is added between the words "backflow" and "in": "by a reduced pressure backflow prevention assembly or an air gap installed".~~]

[~~(7) IPC, Section 1303, is deleted and replaced with the following: "Section 1303 SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS. Gray water recycling systems utilized for subsurface irrigation for single family residences shall comply with the requirements of UAC R317-401, Gray Water Systems. Gray water recycling systems utilized for subsurface irrigation for other occupancies shall comply with UAC R317-3, Design Requirements for Wastewater Collection, Treatment and Disposal and UAC R317-4, Onsite Waterwaste Systems."~~]

(1) A new IPC, Section 1301.4.1 is added as follows: "1301.4.1 Recording. The existence of a non-potable water system shall be recorded on the deed of ownership for the property. The certificate of occupancy shall not be issued until the documentation for the recording required under this section is completed by the property owner.

(2) IPC, Section 1301.5, is deleted and replaced with the following: 1301.5 Potable water connections. Where a potable system is connected to a non-potable water system, the potable water supply shall be protected against backflow by a reduced pressure backflow prevention assembly or an air gap installed in accordance with Section 608.

(3) IPC, Section 1301.9.5, is deleted and replaced with the following: 1301.9.5 Makeup water. Where an uninterrupted supply is required for the intended application, potable or reclaimed water shall be provided as a source of makeup water for the storage tank. The makeup water supply shall be protected against backflow by a reduced pressure backflow prevention assembly or an air gap installed in accordance with Section 608. A full-open valve located on the makeup water supply line to the storage tank shall be provided. Inlets to the storage tank shall be controlled by fill valves or other automatic supply valves installed to prevent the tank from overflowing and to prevent the water level from dropping below a predetermined point. Where makeup water is provided, the water level shall not be permitted to drop below the source water inlet or the intake of any attached pump.

(4) IPC, Section 1302.12.4, is deleted and replaced with the following: 1302.12.4 Inspection and testing of backflow prevention assemblies. The testing of backflow preventers shall be conducted in accordance with Section 312.10.1, 312.10.2, and 312.10.3.

(5) IPC, Section 1303.15.6, is deleted and replaced with the following: Inspection and testing of backflow prevention assemblies. The testing of backflow preventers shall be conducted in accordance with Section 312.110.1, 312.10.2. and 312.10.3.

(6) IPC, Section 1304.4.2, is deleted and replaced with the following: The testing of backflow preventers and backwater valves shall be conducted in accordance with Section 312.10.1, 312.10.2, and 312.10.3.

15A-3-314. Amendments to Chapter 14 of IPC.

(1) IPC, Chapter 14, is deleted and replaced with the following"

"Section 1401. SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS. Gray water recycling systems utilized for subsurface irrigation for single family residences shall comply with the requirements of UAC R317-401, Gray Water Systems. Gray water recycling systems utilized for subsurface irrigation for other occupancies shall comply with UAC R317-3, Design Requirements for Wastewater Collection, Treatment and Disposal and UAC R317-4, Onsite Waterwaste Systems."

15A-3-315. Amendments to Chapter 15 of IPC.

[~~(1) In IPC, Chapter 14, the following referenced standard is added under ASSE:~~

~~"Standard reference number~~	~~Title~~	~~Referenced in code section number~~
~~1072-2007~~	~~Performance Requirements for Barrier Type Floor Drain Trap Seal Protection Devices~~]	~~1004.2"~~

[~~(2)~~] (1) In IPC, Chapter [~~14~~] 15, the following referenced standard is added:

"Standard reference number	Title	Referenced in code section number
USC-FCCCHR 10th Edition Manual of Cross Connection Control	Foundation for Cross-Connection Control and Hydraulic Research University of Southern California Kaprielian Hall 300 Los Angeles CA 90089-2531	Table 608.1"

[~~(3) IPC, Appendix C, is deleted and replaced with the following Appendix C, Gray Water Recycling~~]

15A-3-401. General provisions.

The following are adopted as amendments to the IMC to be applicable statewide:

[~~(1) In IMC, Section 202, the definition for "CONDITIONED SPACE" is deleted and replaced with the following: "CONDITIONED SPACE. An area, room, or space enclosed within the building thermal envelope that is directly heated or cooled, or indirectly heated or cooled by any of the following means:~~

~~1. Openings directly into an adjacent conditioned space.~~

~~2. An un-insulated floor, ceiling or wall adjacent to a conditioned space.~~

~~3. Un-insulated duct, piping or other heat or cooling source within the space."~~]

[~~(2) In IMC, Section 403.2.1, Item 3, is deleted and replaced with the following: "Except as provided in Table 403.3, Note h, where mechanical exhaust is required by Note b in Table 403.3, recirculation of air from such spaces is prohibited. All air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3."~~]

[~~(3) In IMC, Table 403.3, Note b, is deleted and replaced with the following: "Except as provided in Note h, mechanical exhaust required and the recirculation of air from such spaces is prohibited (see Section 403.2.1, Item 3)."~~]

[~~(4) In IMC, Table 403.3, Note h is deleted and replaced with the following:~~

~~"1. For a nail salon where a nail technician files or shapes an acrylic nail, as defined by rule by the Division of Occupational and Professional Licensing, in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, each nail station where a nail technician files or shapes an acrylic nail shall be provided with:~~

~~a. a source capture system capable of filtering and recirculating air to inside space not less than 50 cfm per station; or~~

~~b. a source capture system capable of exhausting not less than 50 cfm per station."~~

~~2. Except as provided in paragraph 3, the requirements described in paragraph 1 apply beginning on July 1, 2020.~~

~~3. The requirements described in paragraph 1 apply beginning on July 1, 2014 if the nail salon is under or begins new construction or remodeling on or after July 1, 2014.~~]

[~~(5) In IMC, Section 403, a new Section 403.8 is added as follows: "Retrospective effect. Removal, alteration, or abandonment shall not be required, and continued use and maintenance shall be allowed, for a ventilation system within an existing installation that complies with the requirements of this Section 403 regardless of whether the ventilation system satisfied the minimum ventilation rate requirements of prior law."~~]

[~~(6) In IMC, Table 603.4, in the section "Round ducts and enclosed rectangular ducts", the word "enclosed" is deleted; the words "14 inches or less" are deleted and replaced with "over 8 inches but less than 15 inches"; the wording "8 inches or less" under duct size, "0.013" under minimum thickness (in.), "30" under equivalent gage no., and "0.0159" under aluminum minimum thickness (in.), are added; and the section "Exposed rectangular ducts" is deleted.~~]

[~~(7)~~] (1) In IMC, Section 1004.2, the first sentence is deleted and replaced with the

following: "In accordance with Utah Code Annotated, Title 34A, Chapter 7, and Utah Administrative Code, Title R616, Chapter 2, [~~B~~]boilers and pressure vessels in Utah are regulated by the Utah Labor Commission, Division of Boiler, Elevator and Coal Mine Safety, except those located in private residences or in apartment houses of less than five family units. Boilers shall be installed in accordance with their listing and labeling, with minimum clearances as prescribed by the manufacturer's installation instructions and the state boiler code, whichever is greater."

[~~(8)~~] (2) In IMC, Section 1004.3.1, the word "unlisted" is inserted before the word "boilers".

[~~(9)~~] (3) IMC, Section 1101.10, is deleted.

(4) In IMC, Section 1209.3, the following words are added at the end of the section: "or other methods approved for the application."

15A-3-501. General provisions.

The following are adopted as an amendment to the IFGC to be applicable statewide:

(1) In IFGC, Section 404.9, a new Section 404.9.1, is added as follows: "404.9.1 Meter protection. Fuel gas services shall be in an approved location and/or provided with structures designed to protect the fuel gas meter and surrounding piping from physical damage, including falling, moving, or migrating ice and snow. If an added structure is used, it must still provide access for service and comply with the IBC or the IRC."

(2) IFGC, Section 409.5.3, is deleted.

(3) In IFGC, Section 631.2, the following sentence is inserted before the first sentence: "In accordance with Utah Code Annotated, Title 34A, Chapter 7, and Utah Administrative Code, Title R616, Chapter 2, [~~B~~]boilers and pressure vessels in Utah are regulated by the Utah Labor Commission, Division of Boiler, Elevator and Coal Mine Safety, except those located in private residences or in apartment houses of less than five family units. Boilers shall be installed in accordance with their listing and labeling, with minimum clearances as prescribed by the manufacturer's installation instructions and the state boiler code, whichever is greater."

15A-3-601. General provision.

The following are adopted as amendments to the NEC to be applicable statewide:

(1) The IRC provisions are adopted as the residential electrical standards applicable to installations applicable under the IRC. All other installations shall comply with the adopted NEC.

[~~(2) In NEC, Section 310.15(B)(7), the second sentence is deleted and replaced with the following: "For application of this section, the main power feeder shall be the feeder(s) between the main disconnect and the panelboard(s)."~~]

(2) NEC Section 240.87(B) is modified to add the following as an additional approved equivalent means:

6. An instantaneous trip function set at or below the available fault current.

15A-3-701. General provisions.

The following is adopted as an amendment to the IECC to be applicable statewide:

[~~(1) In IECC, Section C202, the definition for "CONDITIONED SPACE" is deleted and replaced with the following: "CONDITIONED SPACE. An area, room or space enclosed within the building thermal envelope that is directly heated or cooled, or indirectly heated or cooled by any of the following means:~~

~~1. Openings directly into an adjacent conditioned space.~~

~~2. An un-insulated floor, ceiling or wall adjacent to a conditioned space.~~

~~3. Un-insulated duct, piping or other heat or cooling source within the space."~~]

[~~(2) In IECC, Section C404.4, a new exception is added as follows: "Exception: Heat traps, other than the arrangement of piping and fittings, shall be prohibited unless a means of controlling thermal expansion can be ensured as required in the IPC Section 607.3."~~]

(1) In IECC, Section C403.2.9.1.3, the words "by the designer" are deleted.

([~~3~~]2) In IECC, Section R103.2, all words after the words "herein governed." Are deleted and replaced with the following: "Construction documents include all documentation required to be submitted in order to issue a building permit."

[~~(4) In IECC, Section R202, the definition for "CONDITIONED SPACE" is deleted and replaced with the following: "CONDITIONED SPACE. An area, room or space enclosed within the building thermal envelope that is directly heated or cooled, or indirectly heated or cooled by any of the following means:~~

~~1. Openings directly into an adjacent conditioned space.~~

~~2. An un-insulated floor, ceiling or wall adjacent to a conditioned space.~~

~~3. Un-insulated duct, piping or other heat or cooling source within the space."~~]

([~~5~~]3) In IECC, Section R303.3, all wording after the first sentence is deleted.

(4) In IECC, Section R401.2, a new number 4. is added as follows:

4. "Compliance may be shown by using the RESCheck "2012 Utah Energy Conservation Code" and showing compliance "10 percent better than code" as shown by the above referenced software."

([~~6~~]5) In IECC, Table R402.1.[~~1~~]2 ~~and Table R402.1.3, the rows for "climate zone 3", "climate zone 5 and Marine 4, and climate zone 6" are deleted and replaced and~~] in the column entitled MASS WALL R-VALUE a new footnote j is added as follows: "j. Log walls complying with ICC400 and with a minimum average wall thickness of 5" or greater shall be permitted in Zones 5-8 when overall window glazing is .31 U-factor or lower, minimum heating equipment efficiency is 90 AFUE (gas) or 84 AFUE (oil), and all other component requirements are met."

[~~"TABLE R402.1.1~~

~~INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]~~

~~CLIMATE ZONE~~	~~FENESTRATION U-FACTOR[b]~~	~~SKYLIGHT[b] U-FACTOR~~	~~GLAZED FENESTRATION SHGC[b,e]~~	~~CEILING R-VALUE~~	~~WOOD FRAME WALL R-VALUE~~	~~MASS WALL R-VALUE[i,j]~~	~~FLOOR R-VALUE~~	~~BASEMENT[c] WALL R-VALUE~~	~~SLAB[d] R-VALUE~~	~~CRAWL SPACE[c] WALL R-VALUE~~
~~3~~	~~0.65~~	~~0.65~~	~~0.40~~	~~30~~	~~15~~	~~5~~	~~19~~	~~0~~	~~0~~	~~5/13~~

5 and Marine 4	0.35	0.60	NR	38	19 or 13 + 5[h]	13	30[g]	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13 + 5[h]	15	30[g]	10/13	10, 4 ft	10/13

j. Log walls complying with ICC400 and with a minimum average wall thickness of 5" or greater shall be permitted in ones 5-8 when overall window glazing is .31 U-factor or lower, minimum heating equipment efficiency is 90 AFUE gas) or 84 AFUE (oil), and all other component requirements are met.

TABLE R402.1.3 EQUIVALENT U-FACTORS[a]

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR[b]	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
3	0.65	0.65	0.035	0.082	0.141	0.047	0.360	0.136
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.033	0.059	0.065
6	0.35	0.60	0.026	0.060	0.060	0.033	0.059	0.065]

[(7) In IECC, Section R402.2.1, the last sentence is deleted.]

[(8) In IECC, Section R402.2.2, the last sentence is deleted.]

[(9) In IECC, Section R402.3.3, the last sentence is deleted.]

[(10) In IECC, Section R402.3.4, the last sentence is deleted.]

([11]6) In IECC, Section R402.4.1, in the first sentence, the word "and" is deleted and replaced with the word "or".

([12]7) In IECC, Section R402.4.1.1, the last sentence is deleted and replaced with the following: "Where allowed by the [building]code official, the builder may certify compliance to components criteria for items which may not be inspected during regularly scheduled inspections."

([13]8) In IECC, Section R402.4.1.2, the following changes are made:

(a) In the first sentence, the words "in Climate Zones 1 and 2, and [3]three air changes per hour in Climate Zones 3 through 8" are deleted.

(b) In the third sentence, the [words "Where required by the building official," and the] word "third" [are]is deleted.

(c) The following sentence is inserted after the third sentence: "The following parties shall be approved to conduct testing: Parties certified by BPI or RESNET, or licensed contractors who have completed training provided by Blower Door Test equipment manufacturers or other comparable training."

[(14) In IECC, Section R402.4.4, the last sentence is deleted.]

[(15) In IECC, Section R403.2.2, the requirements for duct tightness testing are deleted and replaced with the following:

~~"1. Postconstruction test: Total leakage shall be less than or equal to 10 cfm (283 L/min) per 100 square feet (9.29 m2) of conditioned floor space when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.~~

~~2. Rough-in test: Total leakage shall be less than or equal to 10 cfm (283 L/min) per 100 square feet (9.29 m2) of conditioned floor area when tested at a pressure differential of at least 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 7.5 cfm (212 L/min) per 100 square feet (9.29 m2) of conditioned floor area."~~]

([~~16~~]9) In IECC, Section R403.[~~2.2~~]3.3, the exception for [~~total~~]duct air leakage testing is deleted and replaced with the following: "Exception: The total leakage test is not required for systems with all air handlers and at least [~~50~~]65% of all ducts (measured by length) located entirely within the building thermal envelope."

(10) In IECC, Section R403.3.3 the following is added after the exception: "The following parties shall be approved to conduct testing: Parties certified by BPI or RESNET, or licensed contractors who have completed training provided by Duct Test equipment manufacturers or other comparable training."

(11) In IECC, Section R403.3.4, in subsection 1, the number 4 is changed to 6, the number 113.3 is changed to 170, the number 3 is changed to 5, the number 85 is changed to 114.6 and in subsection 2, the number 4 is changed to 8 and the number 113.3 is changed to 226.5.

([~~17~~]12) In IECC, Section R403.[~~2.3~~]3.5, the words "or plenums" are deleted.

[~~(18) In IECC, Section R403.4.2, the sentences for "3." and "9." and the last sentence are deleted.~~]

[~~(19) In IECC, Section R403.5, the first sentence is deleted.~~]

[~~(20) IECC, Section R404.1 and the exception are deleted, and R404.1.1becomes R404.1.~~]

[~~(21) In IECC, Table R405.5.2(1), the following changes are made under the column STANDARD REFERENCE DESIGN:~~

~~(a) In the row "Air exchange rate", the words "in Zones 1 and 2, and 3 air changes per hour in Zones 3 through 8" are deleted.~~

~~(b) In the row "Heating systems[f, g]", the standard reference design is deleted and replaced with the following:~~

~~"Fuel Type: same as proposed design Efficiencies:~~
~~Electric: air source heat pump with prevailing federal minimum efficiencies~~
~~Nonelectric furnaces: natural gas furnace with prevailing federal minimum efficiencies~~
~~Nonelectric boilers: natural gas boiler with prevailing federal minimum efficiencies~~
~~Capacity: sized in accordance with Section N1103.6"~~

~~(c) In the row "Cooling systems[f, h]" the words "As proposed" are deleted and replaced with the following:~~

~~"Fuel Type: Electric~~

~~Efficiency: in accordance with prevailing federal minimum standards"~~

~~(d) In the row "Service water heating[f, g, h, i]", the words "As proposed" are deleted and replaced with the following~~

~~"Fuel Type: same as proposed design~~

~~Efficiency: in accordance with prevailing federal minimum standards~~

~~Tank Temperature: 120° F"~~

~~(e) In the row "Thermal distribution systems" the word "none" is deleted and replaced with the following: "Thermal distribution system efficiency (DSE) of .080 shall be applied to both the heating and cooling system efficiencies."~~]

[~~(22) In IECC, Table R405.5.2(2), the number "0.80" is inserted under "Forced air systems" for "Distribution system components located in unconditioned space".~~]

[~~(23) The RESCheck Software adopted by the United States Department of Energy and modified to meet the requirements of this section shall be used to verify compliance with this section. The software shall address the Total UA alternative approach and account for Equipment Efficiency Trade-offs when applicable per the standard reference design as amended.~~]

(13) In IECC, Section R406.2, the last sentence and exception are deleted.

(14) In IECC, Section R406.4 the table is deleted and replaces as follows:

TABLE R406.4

MAXIMUM ENERGY PATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
1	59
2	59
3	65
4	63
5	69
6	68
7	60
8	60

15A-3-801. General provisions.

The following are adopted as amendments to the IEBC to be applicable statewide:

(1) In Section 202 the following definition is added: "BUILDING OFFICIAL. See Code Official."

(2) In Section 202 the definition for code official is deleted and replaced with the following:
"CODE OFFICIAL. The officer or other designated authorities having jurisdiction (AHJ) charged with the administration and enforcement of this code."

(3) In Section 202 the definition for existing buildings is deleted and replaced with the following:
EXISTING BUILDING. A building lawfully erected under a prior adopted code, or one which is deemed a legal non-conforming building by the code official, and one which is not a dangerous building.

(4) In Section 301.1 the exception is deleted.

(5) Section 403.5 is deleted and replaced with the following" 403.5 Bracing for Unreinforced masonry parapets and other appendages upon reroofing. Where the intended alteration requires a permit for reroofing and involves removal of roofing materials from more than 25 percent of the roof area of a building assigned to Seismic Design Category, D, E, or F that has parapets constructed of unreinforced masonry or appendages such as cornices, spires, towers, tanks, signs, statuary, etc, the work shall include installation of bracing to resist out-of-plane seismic forces, unless an evaluation demonstrates compliance of such items. For purposes of this section, design seismic forces need not be taken greater than 75 percent of those that would be required for the design of similar nonstructural components in new buildings of similar purpose and location.

(6) In Section 705.1, Exception number 3, the following is added at the end: "This exception does not apply if the existing facility is undergoing a change of occupancy classification."

(7) Section 707.3.1 is deleted and replaced with the following" 707.3.1 Bracing for unreinforced masonry bearing wall parapets and other appendages. Where a permit is issued for reroofing more than 25 percent of the roof area of a building assigned to Seismic Design Category, D, E, or F that has parapets constructed of unreinforced masonry or appendages such as cornices, spires, towers, tanks, signs, statuary, etc, the work shall include installation of bracing to resist the reduced International Building Code level seismic forces as specified in Section 301.1.4.2 of this code unless an evaluation demonstrates compliance of such items.

(8) Section 1007.3.1 is deleted and replaced with the following:
1007.3.1 Compliance with the International Building Code Level Seismic Forces. When a building or portion thereof is subject to a change of occupancy such that a change in the nature of the occupancy results in a higher risk category based on Table 1604.5 of the International Building Code or when such change of occupancy results in a design occupant load increase of 100% or more, the building shall conform to the seismic requirements of the International Building Code for the new risk category.
Exceptions 1- 3 remain unchanged.
4. Where the design occupant load increase is less than 25 occupants and the occupancy category does not change.

(9) In Section 1012.7.3 exception 2 is deleted.

(10) In Section 1012.8.2 number 7 is added as follows:
7. When a change of occupancy in a building or portion of a building results in a Group R-2 occupancy, not less than 20 percent of the dwelling or sleeping units shall be Type B dwelling or sleeping units. These dwelling or sleeping units may be located on any floor of the building provided with an accessible route. Two percent, but not less than one unit, of the dwelling or sleeping units shall be Type A dwelling units.

15A-3-[~~801~~]901. General provision.

Mobile homes built before June 15, 1976 that are subject to relocation, building alteration, remodeling, or rehabilitation shall comply with the following:

(1) Related to exits and egress windows:

(a) Egress windows. The home has at least one egress window in each bedroom, or a window that meets the minimum specifications of the U.S. Department of Housing and Urban Development's (HUD) Manufactured Homes Construction and Safety Standards (MHCSS) program as set forth in 24 C.F.R. Parts 3280 and 3282, MHCSS 3280.106 and 3280.404 for manufactured homes. These standards require the window to be at least 22 inches in the horizontal or vertical position in its least dimension and at least five square feet in area. The bottom of the window opening shall be no more than 36 inches above the floor, and the locks and latches and any window screen or storm window devices that need to be operated to permit exiting shall not be located more than 54 inches above the finished floor.

(b) Exits. The home is required to have two exterior exit doors, located remotely from each other, as required in MHCSS 3280.105. This standard requires that single-section homes have the doors no less than 12 feet, center-to-center, from each other, and multisection home doors no less than 20 feet center-to-center from each other when measured in a straight line, regardless of the length of the path of travel between the doors. One of the required exit doors must be accessible from the doorway of each bedroom and no more than 35 feet away from any bedroom doorway. An exterior swing door shall have a 28-inch-wide by 74-inch-high clear opening and sliding glass doors shall have a 28-inch-wide by 72-inch-high clear opening. Each exterior door other than screen/storm doors shall have a key-operated lock that has a passage latch; locks shall not require the use of a key or special tool for operation from the inside of the home.

(2) Related to flame spread:

(a) Walls, ceilings, and doors. Walls and ceilings adjacent to or enclosing a furnace or water heater shall have an interior finish with a flame-spread rating not exceeding 25. Sealants and other trim materials two inches or less in width used to finish adjacent surfaces within these spaces are exempt from this provision, provided all joints are supported by framing members or materials with a flame spread rating of 25 or less. Combustible doors providing interior or exterior access to furnace and water heater spaces shall be covered with materials of limited combustibility (i.e., 5/16-inch gypsum board, etc.), with the surface allowed to be interrupted for louvers ventilating the space. However, the louvers shall not be of materials of greater combustibility than the door itself (i.e., plastic louvers on a wooden door). Reference MHCSS 3280.203.

(b) Exposed interior finishes. Exposed interior finishes adjacent to the cooking range (surfaces include vertical surfaces between the range top and overhead cabinets, the ceiling, or both) shall have a flame-spread rating not exceeding 50, as required by MHCSS 3280.203. Backsplashes

not exceeding six inches in height are exempted. Ranges shall have a vertical clearance above the cooking top of not less than 24 inches to the bottom of combustible cabinets, as required by MHCSS 3280.204(e).

(3) Related to smoke detectors:

(a) Location. A smoke detector shall be installed on any ceiling or wall in the hallway or space communicating with each bedroom area between the living area and the first bedroom door, unless a door separates the living area from that bedroom area, in which case the detector shall be installed on the living-area side, as close to the door as practicable, as required by MHCSS 3280.208. Homes with bedroom areas separated by anyone or combination of common-use areas such as a kitchen, dining room, living room, or family room (but not a bathroom or utility room) shall be required to have one detector for each bedroom area. When located in the hallways, the detector shall be between the return air intake and the living areas.

(b) Switches and electrical connections. Smoke detectors shall have no switches in the circuit to the detector between the over-current protection device protecting the branch circuit and the detector. The detector shall be attached to an electrical outlet box and connected by a permanent wiring method to a general electrical circuit. The detector shall not be placed on the same branch circuit or any circuit protected by a ground-fault circuit interrupter.

(4) Related to solid-fuel-burning stoves/fireplaces:

(a) Solid-fuel-burning fireplaces and fireplace stoves. Solid-fuel-burning, factory-built fireplaces, and fireplace stoves may be used in manufactured homes, provided that they are listed for use in manufactured homes and installed according to their listing/manufacturer's instructions and the minimum requirements of MHCSS 3280.709(g).

(b) Equipment. A solid-fuel-burning fireplace or fireplace stove shall be equipped with an integral door or shutters designed to close the fire chamber opening and shall include complete means for venting through the roof, a combustion air inlet, a hearth extension, and means to securely attach the unit to the manufactured home structure.

(i) Chimney. A listed, factory-built chimney designed to be attached directly to the fireplace/fireplace stove and equipped with, in accordance with the listing, a termination device and spark arrester, shall be required. The chimney shall extend at least three feet above the part of the roof through which it passes and at least two feet above the highest elevation of any part of the manufactured home that is within 10 feet of the chimney.

(ii) Air-intake assembly and combustion-air inlet. An air-intake assembly shall be installed in accordance with the terms of

listings and the manufacturer's instruction. A combustion-air inlet shall conduct the air directly into the fire chamber and shall be designed to prevent material from the hearth from dropping on the area beneath the manufactured home.

(iii) Hearth. The hearth extension shall be of noncombustible material that is a minimum of 3/8-inch thick and shall extend a minimum of 16 inches in front and eight inches beyond each side of the fireplace/fireplace stove opening. The hearth shall also extend over the entire surface beneath a fireplace stove and beneath an elevated and overhanging fireplace.

(5) Related to electrical wiring systems:

(a) Testing. All electrical systems shall be tested for continuity in accordance with MHCSS 3280.810, to ensure that metallic parts are properly bonded; tested for operation, to demonstrate that all equipment is connected and in working order; and given a polarity check, to determine that connections are proper.

(b) 5.2 Protection. The electrical system shall be properly protected for the required amperage load. If the unit wiring employs aluminum conductors, all receptacles and switches rated at 20 amperes or less that are directly connected to the aluminum conductors shall be marked CO/ALA. Exterior receptacles, other than heat tape receptacles, shall be of the ground-fault circuit interrupter (GFI) type. Conductors of dissimilar metals (copper/aluminum or copper-clad aluminum) must be connected in accordance with NEC, Section 110-14.

(6) Related to replacement furnaces and water heaters:

(a) Listing. Replacement furnaces or water heaters shall be listed for use in a manufactured home. Vents, roof jacks, and chimneys necessary for the installation shall be listed for use with the furnace or water heater.

(b) Securement and accessibility. The furnace and water heater shall be secured in place to avoid displacement. Every furnace and water heater shall be accessible for servicing, for replacement, or both as required by MHCSS 3280.709(a).

(c) Installation. Furnaces and water heaters shall be installed to provide complete separation of the combustion system from the interior atmosphere of the manufactured home, as required by MHCSS.

(i) Separation. The required separation may be achieved by the installation of a direct-vent system (sealed combustion system) furnace or water heater or the installation of a furnace and water heater venting and combustion systems from the interior atmosphere of the home. There shall be no doors, grills, removable access panels, or other openings into the enclosure from the inside of the manufactured home.

All openings for ducts, piping, wiring, etc., shall be sealed.

(ii) Water heater. The floor area in the area of the water heater shall be free from damage from moisture to ensure that the floor will support the weight of the water heater.

15A-4-101. General provision.

15A-4-102. Amendments to IBC applicable to Brian Head Town.

[~~15A-4-103. Amendments to IBC applicable to City of Farmington.~~
~~The following amendments are adopted as amendments to the IBC for the City of Farmington:~~]

[~~(1) A new IBC, Section (F) 903.2.13, is added as follows: "(F) 903.2.13 Group R, Division 3 Occupancies. An automatic sprinkler system shall be installed throughout every dwelling in accordance with NFPA 13D, when any of the following conditions are present:~~

~~1. The structure is over two stories high, as defined by the building code;~~

~~2. The nearest point of structure is more than 150 feet from the public way;~~

~~3. The total floor area of all stories is over 5,000 square feet (excluding from the calculation the area of the basement and/or garage); or~~

~~4. The structure is located on a street constructed after March 1, 2000, that has a gradient over 12% and, during fire department response, access to the structure will be gained by using such street. (If the access is intended to be from a direction where the steep gradient is not used, as determined by the Chief, this criteria shall not apply). Such sprinkler system shall be installed in basements, but need not be installed in garages, under eves or in enclosed attic spaces, unless required by the Chief."~~]

[~~(2) A new IBC, Section 907.9, is added as follows: "907.9 Alarm Circuit Supervision. Alarm circuits in alarm systems provided for commercial uses (defined as other than one- and two-family dwellings and townhouses) shall have Class "A" type of supervision. Specifically, Type "B" or End-of-line resistor and horn supervised systems are not allowed."~~]

[~~(3) In NFPA Section 13-07, new sections are added as follows: "6.8.6 FDC Security Locks Required. All Fire Department connections installed for fire sprinkler and standpipe systems shall have approved security locks.~~
~~6.10 Fire Pump Disconnect Signs. When installing a fire pump, red plastic laminate signs shall be installed in the electrical service panel, if the pump is wired separately from the main disconnect. These signs shall state: "Fire Pump Disconnect ONLY" and "Main Breaker DOES NOT Shut Off Fire Pump".~~
~~22.1.6 Plan Preparation Identification. All plans for fire sprinkler systems, except for manufacturer's cut sheets of equipment shall include the~~

~~full name of the person who prepared the drawings. When the drawings are prepared by a registered professional engineer, the engineer's signature shall also be included.~~
~~22.2.2.3 Verification of Water Supply:~~
~~22.2.2.3.1 Fire Flow Tests. Fire flow tests for verification of water supply shall be conducted and witnessed for all applications other than residential unless directed otherwise by the Chief. For residential water supply, verification shall be determined by administrative procedure.~~
~~22.2.2.3.2 Accurate and Verifiable Criteria. The design calculations and criteria shall include an accurate and verifiable water supply.~~
~~24.2.3.7 Testing and Inspection of Systems. Testing and inspection of sprinkler systems shall include, but are not limited to:~~
~~Commercial:~~
~~FLUSH Witness Underground Supply Flush;~~
~~ROUGH Inspection Installation of Riser, System Piping, Head Locations and all Components, Hydrostatic Pressure Test;~~
~~FINAL Inspection Head Installation and Escutcheons, Inspectors Test Location and Flow, Main Drain Flow, FDC Location and Escutcheon, Alarm Function, Spare Parts, Labeling of Components and Signage, System Completeness, Water Supply Pressure Verification, Evaluation of Any Unusual Parameter."~~]

15A-4-[~~104~~] 103. Amendments to IBC applicable to City of North Salt Lake.
The following amendment is adopted as an amendment to the IBC for the City of North Salt Lake, a new IBC, Section (F)903.2.13, is added as follows: "(F)903.2.13 Group R, Division 3 Occupancies. An automatic sprinkler system shall be installed throughout every dwelling in accordance with NFPA 13D, when the following condition is present:

1. The structure is over 6,200 square feet. Such sprinkler system shall be installed in basements, but need not be installed in garages, under eves, or in enclosed attic spaces, unless required by the fire chief."

15A-4-[~~105~~]104. Amendments to IBC applicable to Park City Corporation or Park City Fire District.

(1) The following amendment is adopted as an amendment to the IBC for the Park City Corporation, in IBC, Section 3409.2, exception 3, is modified to read as follows: "3. Designated as historic under a state or local historic preservation program."

(2) The following amendments are adopted as amendments to the IBC for the Park City Corporation and Park City Fire District:

(a) IBC, Section (F)903.2, is deleted and replaced with the following: "(F)903.2 Where required. Approved automatic sprinkler systems in

new buildings and structures shall be provided in the location described in this section.

All new construction having more than 6,000 square feet on any one floor, except R-3 occupancy.

All new construction having more than two (2) stories, except R-3 occupancy.

All new construction having three (3) or more dwelling units, including units rented or leased, and including condominiums or other separate ownership.

All new construction in the Historic Commercial Business zone district, regardless of occupancy.

All new construction and buildings in the General Commercial zone district where there are side yard setbacks or where one or more side yard setbacks is less than two and one half (2.5) feet per story of height.

All existing building within the Historic District Commercial Business zone."

(b) In IBC, Table 1505.1, new footnotes d and e are added as follows:

"d. Wood roof covering assemblies are prohibited in R-3 occupancies in areas with a combined rating of more than 11 using Tables 1505.1.1 and 1505.1.2 with a score of 9 for weather factors.

e. Wood roof covering assemblies shall have a Class A rating in occupancies other than R-3 in areas with a combined rating of more than 11 using Tables 1505.1.1 and 1505.1.2 with a score of 9 for weather factors. The owner of the building shall enter into a written and recorded agreement that the Class A rating of the roof covering assembly will not be altered through any type of maintenance process.

TABLE 1505.1.1		
WILDFIRE HAZARD SEVERITY SCALE		
RATING	SLOPE	VEGETATION
1	less than or equal to 10%	Pinion-juniper
2	10.1 - 20%	Grass-sagebrush
3	greater than 20%	Mountain brush or softwoods

TABLE 1505.1.2		
PROHIBITION/ALLOWANCE OF WOOD ROOFING		
Rating	R-3 Occupancy	All Other Occupancies

Less than or equal to 11	Wood roof covering assemblies per Table 1505.1 are allowed	Wood roof covering assemblies per Table 1505.1 are allowed
Greater than or equal to 12	Wood roof covering is prohibited	Wood roof covering assemblies with a Class A rating are allowed"

(c) IBC, Appendix C, is adopted.

15A-4-[~~106~~]105. Amendments to IBC applicable to Salt Lake City.
The following amendment is adopted as an amendment to the IBC for Salt Lake City, in IBC, Section 1008.1.9.7, a new exception is added as follows: "Exception: In International Airport areas designated as Group "A" Occupancies where national security interests are present, the use of panic hardware with delayed egress is allowed when all provisions of Section 1008.1.9.7 are met and under item #4 1 second is changed to 2 seconds."

15A-4-[~~107~~]106. Amendments to IBC applicable to Sandy City.
The following amendments are adopted as amendments to the IBC for Sandy City:

(1) A new IBC, Section (F)903.2.13, is added as follows: "(F)903.2.13 An automatic sprinkler system shall be installed in accordance with NFPA 13 throughout buildings containing all occupancies where fire flow exceeds 2,000 gallons per minute, based on Table B105.1 of the [~~2009~~] 2015 International Fire Code. Exempt locations as indicated in Section 903.3.1.1.1 are allowed.

Exception: Automatic fire sprinklers are not required in buildings used solely for worship, Group R Division 3, Group U occupancies and buildings complying with the International Residential Code unless otherwise required by the International Fire Code.

(2) A new IBC, Appendix L, is added and adopted as follows: "Appendix L BUILDINGS AND STRUCTURES CONSTRUCTED IN AREAS DESIGNATED AS WILDLAND-URBAN INTERFACE AREAS AL 101.1 General. Buildings and structures constructed in areas designated as Wildland-Urban Interface Areas by Sandy City shall be constructed using ignition resistant construction as determined by the Fire Marshal. Section 502 of the 2006 International Wildland-Urban Interface Code (IWUIC), as promulgated by the International Code Council, shall be used to determine Fire Hazard Severity. The provisions listed in Chapter 5 of the 2006 International Wildland-Urban Interface Code, as modified herein, shall be used to determine the requirements for Ignition Resistant Construction.

(i) In Section 504 of the IWUIC Class I IGNITION-RESISTANT CONSTRUCTION a new Section 504.1.1 is added as follows: "504.1.1 General. Subsections 504.5, 504.6,

and 504.7 shall only be required on the exposure side of the structure, as determined by the Fire Marshal, where defensible space is less than 50 feet as defined in Section 603 of the 2006 International Wildland-Urban Interface Code.

(ii) In Section 505 of the IWUIC Class 2 IGNITION-RESISTANT CONSTRUCTION Subsections 505.5 and 505.7 are deleted."

15A-4-201. General provision.

15A-4-202. Amendments to IRC applicable to Brian Head Town.

~~**[15A-4-203. Amendments to IRC applicable to City of Farmington.**~~
~~The following amendments are adopted as amendments to the IRC for the City of Farmington:~~

~~(1) In IRC, R324 Automatic Sprinkler Systems, new IRC, Sections R324.1 and R324.2 are added as follows: "R324.1 When required. An automatic sprinkler system shall be installed throughout every dwelling in accordance with NFPA 13D, when any of the following conditions are present:~~

~~1. the structure is over two stories high, as defined by the building code;~~

~~2. the nearest point of structure is more than 150 feet from the public way;~~

~~3. the total floor area of all stories is over 5,000 square feet (excluding from the calculation the area of the basement and/or garage); or~~

~~4. the structure is located on a street constructed af ter March 1, 2000 that has a gradient over 12% and, during fire department response, access to the structure will be gained by using such street. (If the access is intended to be from a direction where the steep gradient is not used, as determined by the Chief, this criteria shall not apply).~~

~~R324.2 Installation requirements and standards. Such sprinkler system shall be installed in basements, but need not be installed in garages, under eves or in enclosed attic spaces, unless required by the Chief. Such system shall be installed in accordance with NFPA 13D."]~~

~~[(2) In IRC, Chapter 44, the following NFPA referenced standards are added as follows:~~

	~~"TABLE~~
~~ADD~~	

13D-07	Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes, as amended by these rules
13R-07	Installation of Sprinkler Systems in Residential Occupancies Up to and Including Four Stories in Height"]

[(3) In NFPA, Section 13D-07, new sections are added as follows: "1.15 Reference to NFPA 13D. All references to NFPA 13D in the codes, ordinances, rules, or regulations governing NFPA 13D systems shall be read to refer to "modified NFPA 13D" to reference the NFPA 13D as amended by additional regulations adopted by Farmington City.

4.9 Testing and Inspection of Systems. Testing and inspection of sprinkler systems shall include, but are not limited to:

Residential:

ROUGH Inspection-Verify Water Supply Piping Size and Materials, Installation of Riser, System Piping, Head Locations and all Components, Hydrostatic Pressure Test.

FINAL Inspection-Inspectors Test Flow, System Completeness, Spare Parts, Labeling of Components and Signage, Alarm Function, Water Supply Pressure Verification.

5.2.2.3 Exposed Piping of Metal. Exposed Sprinkler Piping material in rooms of dwellings shall be of Metal.

EXCEPTIONS:

a. CPVC Piping is allowed in unfinished mechanical and storage rooms only when specifically listed for the application as installed.

b. CPVC Piping is allowed in finished, occupied rooms used for sports courts or similar uses only when the ceiling/floor framing above is constructed entirely of non-combustible materials, such as a concrete garage floor on metal decking.

5.2.2.4 Water Supply Piping Material. Water Supply Piping from where the water line enters the dwelling adjacent to and inside the foundation to the fire sprinkler contractor point-of-connection shall be metal, suitable for potable plumbing systems. See Section 7.1.4 for valve prohibition in such piping. Piping down stream from the point-of-connection used in the fire sprinkler system, including the riser, shall conform to NFPA 13D standards.

5.4 Fire Pump Disconnect Signs. When installing a Fire Pump, Red Plastic Laminate Signs shall be installed in the electrical service panel, if the pump is wired separately from the main disconnect. These signs shall state: "Fire Pump Disconnect ONLY" and "Main Breaker DOES NOT Shut Off Fire Pump".

~~7.1.4 Valve Prohibition. NFPA 13D, Section 7.1 is hereby modified such that NO VALVE is permitted from the City Water Meter to the Fire Sprinkler Riser Control.~~

~~7.6.1 Mandatory Exterior Alarm. Every dwelling that has a fire sprinkler system shall have an exterior alarm, installed in an approved location. The alarm shall be of the combination horn/strobe or electric bell/strobe type, approved for outdoor use.~~

~~8.1.05 Plan Preparation Identification. All plans for fire sprinkler systems, except for manufacturer's cut sheets of equipment, shall include the full name of the person who prepared the drawings. When the drawings are prepared by a registered professional engineer, the engineer's signature shall also be included.~~

~~8.7 Verification of Water Supply:~~

~~8.7.1 Fire Flow Tests: Fire Flow Tests for verification of Water Supply shall be conducted and witnesses for all applications other than residential, unless directed otherwise by the Chief. For residential Water Supply, verification shall be determined by administrative procedure.~~

~~8.7.2 Accurate and Verifiable Criteria. The design calculations and criteria shall include an accurate and verifiable Water Supply.~~]

15A-4-[~~204~~]203. Amendments to IRC applicable to Morgan City Corporation or Morgan County.

(1) The following amendment is adopted as an amendment to the IRC for the Morgan City Corporation, in IRC, Section R105.2, Work Exempt From Permit, a new list item number 11 is added as follows: "11. Structures intended to house farm animals, or for the storage of feed associated with said farm animals when all the following criteria are met:

a. The parcel of property involved is zoned for the keeping of farm animals or has grandfathered animal rights.

b. The structure is setback not less than 50 feet from the rear or side of dwellings, and not less than 10 feet from property lines and other structures.

c. The structure does not exceed 1,000 square feet of floor area, and is limited to 20 feet in height. Height is measured from the average grade to the highest point of the structure.

d. Before construction, a site plan is submitted to, and approved by the building official. Electrical, plumbing, and mechanical permits shall be required when that work is included in the structure."

(2) The following amendment is adopted as an amendment to the IRC for Morgan County, in IRC, Section R105.2, a new list item number 11 is added as follows:

"11. Structures intended to house farm animals, or for the storage of feed associated with said farm animals when all the following criteria are met:

a. The parcel of property involved is zoned for the keeping of farm animals or has grandfathered animal rights.

b. The structure is set back not less than required by the Morgan County Zoning Ordinance for such structures, but not less than 10 feet from property lines and other structures.

c. The structure does not exceed 1,000 square feet of floor area, and is limited to 20 feet in height. Height is measured from the average grade to the highest point of the structure.

d. Before construction, a Land Use Permit must be applied for, and approved, by the Morgan County Planning and Zoning Department. Electrical, plumbing, and mechanical permits shall be required when that work is included in the structure."

15A-4-[~~205~~]204. Amendments to IRC applicable to City of North Salt Lake.
The following amendment is adopted as an amendment to the IRC for the City of North Salt Lake, a new IRC, Section R324, is added as follows: "Section R324 Automatic Sprinkler System Requirements. R324.1 When Required. An automatic sprinkler system shall be installed throughout every dwelling when the following condition is present:

1. The structure is over 6,200 square feet.
R324.2 Installation requirements and standards. Such sprinkler system shall be installed in basements, but need not be installed in garages, under eves, or in enclosed attic spaces, unless required by the fire chief. Such system shall be installed in accordance with NFPA 13D."

15A-4-[~~206~~]205. Amendments to IRC applicable to Park City Corporation or Park City Fire District.

(1) The following amendment is adopted as an amendment to the IRC for the Park City Corporation, Appendix P, of the 2006 IRC is adopted.

(2) The following amendments are adopted as amendments to the IRC for Park City Corporation and Park City Fire District:

(a) IRC, Section R905.7, is deleted and replaced with the following: "R905.7 Wood shingles. The installation of wood shingles shall comply with the provisions of this section.
Wood roof covering is prohibited in areas with a combined rating of more than 11 using the following tables with a score of 9 for weather factors.

TABLE		
WILDFIRE HAZARD SEVERITY SCALE		
RATING	SLOPE	VEGETATION
1	less than or equal to 10%	Pinion-juniper
2	10.1 - 20%	Grass-sagebrush
3	greater than 20%	Mountain brush or softwoods
PROHIBITION/EXEMPTION TABLE		

RATING	WOOD ROOF PROHIBITION
less than or equal to 11	wood roofs are allowed
greater than or equal to 12	wood roofs are prohibited"

(b) IRC, Section R905.8, is deleted and replaced with the following: "R905.8 Wood Shakes. The installation of wood shakes shall comply with the provisions of this section. Wood roof covering is prohibited in areas with a combined rating of more than 11 using the following tables with a score of 9 for weather factors.

TABLE		
WILDFIRE HAZARD SEVERITY SCALE		
RATING	SLOPE	VEGETATION
1	less than or equal to 10%	Pinion-juniper
2	10.1 - 20%	Grass-sagebrush
3	greater than 20%	Mountain brush or softwoods

PROHIBITION/EXEMPTION TABLE	
RATING	WOOD ROOF PROHIBITION
less than or equal to 11	wood roofs are allowed
greater than or equal to 12	wood roofs are prohibited"

(c) Appendix K is adopted.

15A-4-[~~207~~]206. Amendments to IRC applicable to Sandy City.
The following amendment is adopted as an amendment to the IRC for Sandy City, a new IRC, Section R324, is added as follows: "Section R324 IGNITION RESISTANT CONSTRUCTION

R324.1 General. Buildings and structures constructed in areas designated as Wildland-Urban Interface Areas by Sandy City shall be constructed using ignition resistant construction as determined by the Fire Marshal. Section 502 of the 2006 International Wildland-Urban Interface Code (IWUIC), as promulgated by the International Code Council, shall be used to determine Fire Hazard Severity. The provisions listed in Chapter 5 of the 2006 IWUIC, as modified herein, shall be used to determine the requirements for Ignition Resistant Construction.

(i) In Section 504 of the IWUIC Class I IGNITION-RESISTANT CONSTRUCTION a new Section 504.1.1 is added as follows: 504.1.1 General. Subsections 504.5, 504.6, and 504.7 shall only be required on the exposure side of the structure, as determined by the Fire Marshal, where defensible space is less than 50 feet as defined in Section 603 of the 2006 IWUIC.

(ii) In Section 505 of the IWUIC Class 2 IGNITION-RESISTANT CONSTRUCTION

Subsections 505.5 and 505.7 are deleted."

15A-4-301. General provision.

15A-4-303. Amendments to IPC applicable to South Jordan.

15A-4-401. General provision.

15A-4-501. General provision.

15A-4-601. General provision.

15A-4-701. General provision.

#1

REScheck Software Version 4.6.2

Compliance Certificate

Basic 1200 sq.ft. rambler with basement walls insulated-

-Insulation R-values and fenestration U-factor per 2015 prescriptive table.

-1.5' exposed foundation above grade on the exterior of the home

-Passes by 0% as expected

Project 1200 sq ft Rmblr+bsmt- 2015

Energy Code:	**2015 IECC**
Location:	**Sandy City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 0 deg. from North**
Conditioned Floor Area:	**2,400 ft2**
Glazing Area	**13%**
Climate Zone:	**5 (6521 HDD)**
Permit Date:	
Permit Number:	

Construction Site: Owner/Agent: Designer/Contractor:

Compliance: Passes using UA trade-off

Compliance: **0.0% Better Than Code** Maximum UA: **200** Your UA: **200**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	1,200	49.0	0.0	0.026	31
Wall 1: Wood Frame, 16" o.c. Orientation: Front	320	20.0	0.0	0.059	15
Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	50			0.320	16
Door 1: Solid Orientation: Unspecified	20			0.320	6
Wall 2: Wood Frame, 16" o.c. Orientation: Left side	240	20.0	0.0	0.059	13
Door 2: Solid Orientation: Unspecified	20			0.320	6
Wall 3: Wood Frame, 16" o.c. Orientation: Right side	240	20.0	0.0	0.059	14
Wall 4: Wood Frame, 16" o.c. Orientation: Back	320	20.0	0.0	0.059	19
Basement Wall 1: Solid Concrete or Masonry Orientation: Front Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	14
Window 2: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	32			0.320	10

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Basement Wall 2: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	240	0.0	15.0	0.048	12
Basement Wall 3: Solid Concrete or Masonry Orientation: Unspecified Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	240	0.0	15.0	0.048	10
Window 3: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	32			0.320	10
Basement Wall 4: Solid Concrete or Masonry Orientation: Unspecified Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	14
Window 4: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	32			0.320	10

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2015 IECC requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title _____ Signature _____ Date _____

#2

REScheck Software Version 4.6.2

Compliance Certificate

Basic 1200 sq.ft. rambler with basement walls insulated-

-Insulation R-values and fenestration U-factor per 2015 prescriptive table.

-1.5' exposed foundation above grade on the exterior of the home.

-Passes 2012 Utah by 9.9%, a difference of 9.9%.

Project 1200 sq ft Rmblr+bsmt- utah 2012

Energy Code:	**Utah Energy Conservation Code**
Location:	**Sandy City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 0 deg. from North**
Conditioned Floor Area:	**2,400 ft2**
Glazing Area	**13%**
Climate Zone:	**5 (6521 HDD)**
Permit Date:	
Permit Number:	

Construction Site: Owner/Agent: Designer/Contractor:

Compliance: Passes using UA trade-off

Compliance: **9.9% Better Than Code** Maximum UA: **222** Your UA: **200**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	1,200	49.0	0.0	0.026	31
Wall 1: Wood Frame, 16" o.c. Orientation: Front	320	20.0	0.0	0.059	15
Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	50			0.320	16
Door 1: Solid Orientation: Unspecified	20			0.320	6
Wall 2: Wood Frame, 16" o.c. Orientation: Left side	240	20.0	0.0	0.059	13
Door 2: Solid Orientation: Unspecified	20			0.320	6
Wall 3: Wood Frame, 16" o.c. Orientation: Right side	240	20.0	0.0	0.059	14
Wall 4: Wood Frame, 16" o.c. Orientation: Back	320	20.0	0.0	0.059	19
Basement Wall 1: Solid Concrete or Masonry Orientation: Front Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	14
Window 2: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	32			0.320	10

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Basement Wall 2: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	240	0.0	15.0	0.048	12
Basement Wall 3: Solid Concrete or Masonry Orientation: Unspecified Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	240	0.0	15.0	0.048	10
Window 3: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	32			0.320	10
Basement Wall 4: Solid Concrete or Masonry Orientation: Unspecified Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	14
Window 4: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Unspecified	32			0.320	10

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the Utah Energy Conservation Code requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title | Signature | Date

#3

REScheck Software Version 4.6.2

Compliance Certificate

Ron's Example- Home Style? Room above garage?

R-values and fenestration U-factors have been change to mirror the 2015 prescriptive table.

1.5' exposed foundation above grade on the exterior of the home.

Insulated basement walls with 143' of exposed floor slab on grade creates a unusual envelope.

Passes by 1.1%

Project CZ5 - 2015 UA Tradeoff

Energy Code:	**2015 IECC**
Location:	**Salt Lake City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 0 deg. from North**
Conditioned Floor Area:	**3,427 ft2**
Glazing Area	**12%**
Climate Zone:	**5 (5765 HDD)**
Permit Date:	
Permit Number:	

Construction Site:
2015 UA Tradeoff
Use to Compare 2015 to Utah 2012

Owner/Agent:
UT

Designer/Contractor:
UT

Compliance: Passes using UA trade-off

Compliance: **1.1% Better Than Code** Maximum UA: **438** Your UA: **433**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss Comment: 0	1,329	49.0	0.0	0.026	35
Front Wall: Wood Frame, 16" o.c. Orientation: Front	489	20.0	0.0	0.059	23
Window 1: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -1	25			0.320	8
Window 2: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -2	55			0.320	18
Door 1: Solid Orientation: Front	20			0.283	6
Left Wall: Wood Frame, 16" o.c. Orientation: Left side	426	20.0	0.0	0.059	24
Window 3: Vinyl Frame:Double Pane with Low-E Orientation: Left side Comment: Left 1	20			0.320	6
Back Wall: Wood Frame, 16" o.c. Orientation: Back	614	20.0	0.0	0.059	30
Window 4: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back -1	79			0.320	25
Window 5: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back 2	24			0.320	8

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Right Wall: Wood Frame, 16" o.c. Orientation: Right side	558	20.0	0.0	0.059	32
Window 6: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 1	10			0.320	3
Window 7: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 2	4			0.320	1
Garage: Wood Frame, 16" o.c. Orientation: Front	286	20.0	0.0	0.059	16
Door 2: Solid Orientation: Front	18			0.283	5
Basement Front: Solid Concrete or Masonry Orientation: Front Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	15
Basement Wall Left: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	13
Basement Wall Back: Solid Concrete or Masonry Orientation: Back Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	13
Window 8: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Basement Back	40			0.340	14
Basement Wall Right: Solid Concrete or Masonry Orientation: Right side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	12
Window 9: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Basement Right	20			0.340	7
Floor 1: Slab-On-Grade:Unheated Insulation depth: 2.0'	143		10.0	0.767	110
Floor 2: All-Wood Joist/Truss:Over Unconditioned Space	282	30.0	0.0	0.033	9

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2015 IECC requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title _____ Signature _____ Date _____

#4

REScheck Software Version 4.6.2
Compliance Certificate

Ron's Example- same as #3 with the exception of ran on the 2012 Utah REScheck.

Includes the 143' of exposed floor slab on grade, creating an unusal envelope.

Passes by 6.5%- a difference of 5.4%

Project CZ5 - 2015 UA Tradeoff

Energy Code:	**Utah Energy Conservation Code**
Location:	**Salt Lake City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 0 deg. from North**
Conditioned Floor Area:	**3,427 ft2**
Glazing Area	**12%**
Climate Zone:	**5 (5765 HDD)**
Permit Date:	
Permit Number:	

Construction Site:
2015 UA Tradeoff
Use to Compare 2015 to Utah 2012

Owner/Agent:
UT

Designer/Contractor:
UT

Compliance: Passes using UA trade-off

Compliance: **6.5% Better Than Code** Maximum UA: **463** Your UA: **433**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss Comment: 0	1,329	49.0	0.0	0.026	35
Front Wall: Wood Frame, 16" o.c. Orientation: Front	489	20.0	0.0	0.059	23
Window 1: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -1	25			0.320	8
Window 2: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -2	55			0.320	18
Door 1: Solid Orientation: Front	20			0.283	6
Left Wall: Wood Frame, 16" o.c. Orientation: Left side	426	20.0	0.0	0.059	24
Window 3: Vinyl Frame:Double Pane with Low-E Orientation: Left side Comment: Left 1	20			0.320	6
Back Wall: Wood Frame, 16" o.c. Orientation: Back	614	20.0	0.0	0.059	30
Window 4: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back -1	79			0.320	25
Window 5: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back 2	24			0.320	8

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Right Wall: Wood Frame, 16" o.c. Orientation: Right side	558	20.0	0.0	0.059	32
Window 6: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 1	10			0.320	3
Window 7: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 2	4			0.320	1
Garage: Wood Frame, 16" o.c. Orientation: Front	286	20.0	0.0	0.059	16
Door 2: Solid Orientation: Front	18			0.283	5
Basement Front: Solid Concrete or Masonry Orientation: Front Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	15
Basement Wall Left: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	13
Basement Wall Back: Solid Concrete or Masonry Orientation: Back Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	13
Window 8: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Basement Back	40			0.340	14
Basement Wall Right: Solid Concrete or Masonry Orientation: Right side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	12
Window 9: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Basement Right	20			0.340	7
Floor 1: Slab-On-Grade:Unheated Insulation depth: 2.0'	143		10.0	0.767	110
Floor 2: All-Wood Joist/Truss:Over Unconditioned Space	282	30.0	0.0	0.033	9

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the Utah Energy Conservation Code requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title _____ Signature _____ Date _____

#5

REScheck Software Version 4.6.2

Compliance Certificate

Ron's Example- similiar to #4, ran on the 2015 IECC REScheck.

-The 143' of exposed slab on grade floor slab has been deleted.

-Passes by 1.5%

Project CZ5 - 2015 UA Tradeoff

Energy Code:	**2015 IECC**
Location:	**Salt Lake City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 0 deg. from North**
Conditioned Floor Area:	**3,427 ft2**
Glazing Area	**12%**
Climate Zone:	**5 (5765 HDD)**
Permit Date:	
Permit Number:	

Construction Site:
2015 UA Tradeoff
Use to Compare 2015 to Utah 2012

Owner/Agent:
UT

Designer/Contractor:
UT

Compliance: Passes using UA trade-off

Compliance: **1.5% Better Than Code** Maximum UA: **328** Your UA: **323**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss Comment: 0	1,329	49.0	0.0	0.026	35
Front Wall: Wood Frame, 16" o.c. Orientation: Front	489	20.0	0.0	0.059	23
Window 1: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -1	25			0.320	8
Window 2: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -2	55			0.320	18
Door 1: Solid Orientation: Front	20			0.283	6
Left Wall: Wood Frame, 16" o.c. Orientation: Left side	426	20.0	0.0	0.059	24
Window 3: Vinyl Frame:Double Pane with Low-E Orientation: Left side Comment: Left 1	20			0.320	6
Back Wall: Wood Frame, 16" o.c. Orientation: Back	614	20.0	0.0	0.059	30
Window 4: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back -1	79			0.320	25
Window 5: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back 2	24			0.320	8

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Right Wall: Wood Frame, 16" o.c. Orientation: Right side	558	20.0	0.0	0.059	32
Window 6: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 1	10			0.320	3
Window 7: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 2	4			0.320	1
Garage: Wood Frame, 16" o.c. Orientation: Front	286	20.0	0.0	0.059	16
Door 2: Solid Orientation: Front	18			0.283	5
Basement Front: Solid Concrete or Masonry Orientation: Front Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	15
Basement Wall Left: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	13
Basement Wall Back: Solid Concrete or Masonry Orientation: Back Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	13
Window 8: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Basement Back	40			0.340	14
Basement Wall Right: Solid Concrete or Masonry Orientation: Right side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	12
Window 9: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Basement Right	20			0.340	7
Floor 2: All-Wood Joist/Truss:Over Unconditioned Space	282	30.0	0.0	0.033	9

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2015 IECC requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title _____ Signature _____ Date _____

#6

REScheck Software Version 4.6.2

Compliance Certificate

Ron's Example- similiar to #4, ran on the 2012 Utah REScheck.

-The 143' of exposed slab on grade floor slab has been deleted.

Passes by 8.5%- a difference of 7.4%

Project CZ5 - 2015 UA Tradeoff

Energy Code:	**Utah Energy Conservation Code**
Location:	**Salt Lake City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 0 deg. from North**
Conditioned Floor Area:	**3,427 ft2**
Glazing Area	**12%**
Climate Zone:	**5 (5765 HDD)**
Permit Date:	
Permit Number:	

Construction Site:
2015 UA Tradeoff
Use to Compare 2015 to Utah 2012

Owner/Agent:
UT

Designer/Contractor:
UT

Compliance: Passes using UA trade-off

Compliance: **8.5% Better Than Code** Maximum UA: **353** Your UA: **323**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss Comment: 0	1,329	49.0	0.0	0.026	35
Front Wall: Wood Frame, 16" o.c. Orientation: Front	489	20.0	0.0	0.059	23
Window 1: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -1	25			0.320	8
Window 2: Vinyl Frame:Double Pane with Low-E Orientation: Front Comment: Front -2	55			0.320	18
Door 1: Solid Orientation: Front	20			0.283	6
Left Wall: Wood Frame, 16" o.c. Orientation: Left side	426	20.0	0.0	0.059	24
Window 3: Vinyl Frame:Double Pane with Low-E Orientation: Left side Comment: Left 1	20			0.320	6
Back Wall: Wood Frame, 16" o.c. Orientation: Back	614	20.0	0.0	0.059	30
Window 4: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back -1	79			0.320	25
Window 5: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Back 2	24			0.320	8

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Right Wall: Wood Frame, 16" o.c. Orientation: Right side	558	20.0	0.0	0.059	32
Window 6: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 1	10			0.320	3
Window 7: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Right 2	4			0.320	1
Garage: Wood Frame, 16" o.c. Orientation: Front	286	20.0	0.0	0.059	16
Door 2: Solid Orientation: Front	18			0.283	5
Basement Front: Solid Concrete or Masonry Orientation: Front Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	15
Basement Wall Left: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	13
Basement Wall Back: Solid Concrete or Masonry Orientation: Back Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	320	0.0	15.0	0.048	13
Window 8: Vinyl Frame:Double Pane with Low-E Orientation: Back Comment: Basement Back	40			0.340	14
Basement Wall Right: Solid Concrete or Masonry Orientation: Right side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	272	0.0	15.0	0.048	12
Window 9: Vinyl Frame:Double Pane with Low-E Orientation: Right side Comment: Basement Right	20			0.340	7
Floor 2: All-Wood Joist/Truss:Over Unconditioned Space	282	30.0	0.0	0.033	9

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the Utah Energy Conservation Code requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title _____ Signature _____ Date _____

#7

REScheck Software Version 4.6.2

Compliance Certificate

2400 sq.ft. example used in earlier discussions within the Advisory Committees.

-Insulation R-values and fenestration U-factors have been set to match the 2015 prescriptive table.

-Exposed foundation set at 1.5'

-Passes by 1.4%

Project UA trade off

Energy Code:	**2015 IECC**
Location:	**Salt Lake City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Unspecified**
Conditioned Floor Area:	**2,400 ft2**
Glazing Area	**18%**
Climate Zone:	**5 (5765 HDD)**
Permit Date:	
Permit Number:	

Construction Site: Owner/Agent: Designer/Contractor:

Compliance: Passes using UA trade-off

Compliance: **1.4% Better Than Code** Maximum UA: **346** Your UA: **341**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	2,400	49.0	0.0	0.026	62
Wall 1: Wood Frame, 16" o.c. Orientation: Front	489	20.0	0.0	0.059	23
Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Front	80			0.320	26
Door 1: Solid Orientation: Front	20			0.320	6
Wall 2: Wood Frame, 16" o.c. Orientation: Right side	489	20.0	0.0	0.059	26
Window 2: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Right side	41			0.320	13
Wall 3: Wood Frame, 16" o.c. Orientation: Left side	489	20.0	0.0	0.059	28
Window 3: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Left side	22			0.320	7
Wall 4: Wood Frame, 16" o.c. Orientation: Back	489	20.0	0.0	0.059	24
Window 4: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Back	41			0.320	13
Door 2: Glass Orientation: Back	40			0.320	13
	350	0.0	15.0	0.048	15

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Window 5: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Front	32			0.320	10
Basement Wall 2: Solid Concrete or Masonry Orientation: Right side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	350	0.0	15.0	0.048	15
Window 6: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Right side	32			0.320	10
Basement Wall 3: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	350	0.0	15.0	0.048	16
Window 7: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Left side	16			0.320	5
Basement Wall 4: Solid Concrete or Masonry Orientation: Back Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	350	0.0	15.0	0.048	14
Window 8: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Back	48			0.320	15

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2015 IECC requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title _____ Signature _____ Date _____

#8

REScheck Software Version 4.6.2

Compliance Certificate

Same 2400 sq.ft example used in #7

Code changed from 2015 IECC to 2012 Utah

Passes by 10.3%- a difference of 8.9%

Project UA trade off

Energy Code:	**Utah Energy Conservation Code**
Location:	**Salt Lake City, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Unspecified**
Conditioned Floor Area:	**2,400 ft2**
Glazing Area	**18%**
Climate Zone:	**5 (5765 HDD)**
Permit Date:	
Permit Number:	

Construction Site: Owner/Agent: Designer/Contractor:

Compliance: Passes using UA trade-off

Compliance: **10.3% Better Than Code** Maximum UA: **380** Your UA: **341**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	2,400	49.0	0.0	0.026	62
Wall 1: Wood Frame, 16" o.c. Orientation: Front	489	20.0	0.0	0.059	23
Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Front	80			0.320	26
Door 1: Solid Orientation: Front	20			0.320	6
Wall 2: Wood Frame, 16" o.c. Orientation: Right side	489	20.0	0.0	0.059	26
Window 2: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Right side	41			0.320	13
Wall 3: Wood Frame, 16" o.c. Orientation: Left side	489	20.0	0.0	0.059	28
Window 3: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Left side	22			0.320	7
Wall 4: Wood Frame, 16" o.c. Orientation: Back	489	20.0	0.0	0.059	24
Window 4: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Back	41			0.320	13
Door 2: Glass Orientation: Back	40			0.320	13
	350	0.0	15.0	0.048	15

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Window 5: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Front	32			0.320	10
Basement Wall 2: Solid Concrete or Masonry Orientation: Right side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	350	0.0	15.0	0.048	15
Window 6: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Right side	32			0.320	10
Basement Wall 3: Solid Concrete or Masonry Orientation: Left side Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	350	0.0	15.0	0.048	16
Window 7: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Left side	16			0.320	5
Basement Wall 4: Solid Concrete or Masonry Orientation: Back Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	350	0.0	15.0	0.048	14
Window 8: Vinyl/Fiberglass Frame:Double Pane with Low-E Orientation: Back	48			0.320	15

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the Utah Energy Conservation Code requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title _____ Signature _____ Date _____

American Chemistry Council

October 6, 2015

Justin D. Naser
Chairman, Uniform Building Codes Commission
Utah Department of Commerce
P.O. Box 146741
Salt Lake City, UT 84114-6741

RE: Comments of the American Chemistry Council on proposed adoption of the 2015 *IRC* and *IECC*

Dear Chairman Naser,

The American Chemistry Council (ACC) is writing to express our views on the proposed changes to the Utah State Construction Code, and more specifically, the changes proposed to the International Residential Code (*IRC*) and International Energy Conservation Code (*IECC*) published in the September 15, 2015 issue of the Utah State Bulletin.[1] While generally supportive of the improvements to Utah's energy efficiency requirements proposed in the Special Notice, we offer the following specific recommendations:

- **We support the proposed improvements that would align Utah's State Construction Code for commercial buildings with the requirements of the 2015 *IRC/IECC* and are encouraged by the consideration of the 2015 *IRC/IECC* for residential buildings;**

- **We strongly urge the Commission to adopt the ERI as published in the 2015 *IRC/IECC*, for residential construction; and**

- **We strongly urge the Commission to adopt Section N1106.2 (R406.2), the ERI thermal envelope backstop, as it is published in the 2015 *IRC/IECC*. If this section is eliminated, as proposed in the Special Notice, all of the purported energy savings from adopting the 2015 *IRC/IECC* provisions could be eliminated; and**

- **We would strongly urge the commission to remove the compliance path that allows for the continued use of equipment tradeoffs.**

ACC member companies manufacture the raw materials for a myriad of industries, including products that help make buildings and homes more energy efficient. The business of chemistry employs over 800,000 workers, making it one of the largest US industries in terms of employment. In Utah, the business of chemistry provides over 7,800 direct jobs and 23,000 related jobs, generating approximately $30 million in state and local taxes. We have been an active supporter of the Energy Efficient Codes Coalition (EECC), a collective effort of business interests, architects, affordable housing advocates, utilities and environmental organizations working together promote energy efficiency building codes.

ACC advocates for the adoption of the latest energy efficiency codes for both residential and commercial construction. Energy savings resulting from the up-front investment in energy efficient technology benefits the homebuyer monetarily from the moment they move into their home. Homeowners promptly recoup their investment as the realized savings on their energy bills quickly offsets any additional construction costs related to the installation of energy efficient products.

[1] Utah State Bulletin, Vol. 2015, No. 18.

ACC supports efforts to improve the efficiency of residential and commercial buildings through the adoption of the latest editions of the *IRC* and *IECC*. Utah's citizens stand to reap significant benefits from the adoption of these codes:

- **Residential** – The adoption of the 2015 *IRC/IECC* for residential construction would yield substantial savings for Utah's homeowners. The U.S. Department of Energy found that an improvement from the 2006 *IECC* to the 2012 *IECC* (roughly the same increment between the current Utah residential energy code and the 2015 *IRC/IECC*) would yield a net savings of $4,879 over the first 30 years of the home's useful lifetime.[2] Homeowners would achieve a net positive cash flow within the first two years, and the improvements would completely pay for themselves within the first 6-7 years.
- **Commercial** – In the most recent update cycle, Utah adopted the 2012 *IECC* for commercial construction with no significant weakening amendments. The adoption of the 2015 *IECC* could yield an additional 11.5% savings in energy costs as compared to the 2012 *IECC*, according to a recent U.S. DOE analysis.[3] These savings will contribute to a better business climate in Utah by lowering operation and maintenance costs for building owners and renters of commercial buildings, and will provide more comfortable places of work for Utah citizens.

While the changes proposed in the Special Notice would provide some of the benefits outlined above, we believe there are additional energy and cost savings that would result from straightforward adoption of the *IRC* and *IECC* for the residential construction code with no weakening amendments. The following are our recommendations on specific changes proposed to the residential energy efficiency requirements outlined in the Special Notice.

1. **We support the proposed improvements that would align Utah's State Construction Code with the requirements of the 2015 *IRC/IECC*.**
    - First, as we understand the Special Notice, Chapter 13 of the International Building Code (Energy Conservation) would be adopted with no amendment. This would result in the 2015 *IECC* being adopted for commercial construction. For the reasons outlined above, we support the adoption of the 2015 *IECC* for commercial construction with no weakening amendment.
    - Second, we support the residential provisions of the 2015 *IRC/IECC* that have been proposed for adoption in the Special Notice. While the Notice does not propose adopting all of the provisions, the proposed updates to the prescriptive table and other basic provisions from current levels to the 2015 *IRC/IECC* will bring substantial savings to homeowners for years to come. The most cost-effective time to improve the building thermal envelope is at construction, and we support this crucial update.
2. **We also recommend adopting the ERI score requirement as published in the 2015 IRC/IECC; 51/54/55/54 in climate zones 3/4/5/6.** Under the ERI option, each home must achieve a specified Energy Rating Index score based on the proposed homes performance compared to a baseline reference home. These scores are intended to ensure that in most cases, a home that is built to the ERI would also meet the prescriptive requirements of the 2015 IECC. However, we would consider accepting the commissions proposed ERI scores 59/63/63/62 for climate zones 3/4/5/6 if the accompanying section N1106.2 (R406.2), which includes the 2009 thermal envelope backstop, was adopted with the ERI in this update (see 3.).
3. **We strongly urge the Commission to adopt the ERI as published in the 2015 *IRC/IECC*, including Section N1106.2 (R406.2), the ERI thermal envelope backstop.** The 2015 *IRC/IECC* includes a new Energy Rating Index (ERI) compliance option, which will allow additional flexibility for Utah builders to achieve energy efficiency gains. The ERI option, as outlined in Section N1106 (R406), bases energy code compliance on a combination of specific requirements and also an index score based on the expected overall energy use of the home compared to a single baseline. **In order for the ERI to work properly, it is crucial that it be adopted without weakening individual provisions. However, if Section N1106.2 (R406.2) is eliminated, as proposed in 15A-3-203**

[2] See U.S. Dep't of Energy, *Utah Energy and Cost Savings for New Single- and Multifamily Homes: 2009 and 2012 IECC as Compared to the 2006 IECC*, at 3 (Apr. 2012).

[3] *See* U.S. Dep't of Energy, *Energy and Energy Cost Savings Analysis of the 2015 IECC for Commercial Buildings*, at v (Aug. 2015).

Amendment 12 of the Special Notice, all of the purported energy savings from adopting the 2015 *IRC/IECC* provisions could be eliminated. Homes must also be built with permanent thermal envelope requirements that meet or exceed the prescriptive envelope requirements of the 2009 *IECC*. Although the ERI provides an unprecedented level of flexibility for code users, these two requirements serve as essential backstops to help ensure that all homes maintain at least a reasonable level of efficiency in the permanent thermal envelope.

4. **We strongly urge the commission to remove the compliance path that allows for the continued use of equipment tradeoffs in Utah.** This trade-off allows reductions to the efficiency of the thermal envelope if more efficient heating and cooling equipment is used. While this proposed compliance path requires homes to exceed the amended 2012 energy code by 10% over the Utah –specific REScheck, it will still allow for this trade-off to continue. If eliminated, the *2015 IRC/IECC* being considered in Utah would be consistent with the 2009 IECC, as well as the 2015 IECC. Allowing for mechanical tradeoffs will significantly undermine the efficiency gains in the *2015 IRC/IECC*.

ACC supports efforts to create a more secure energy future by updating residential and commercial building energy codes. We encourage the Uniform Building Code Commission to amend its proposal to incorporate the above suggested changes. Thank you for your careful consideration of our comments. If you have any questions, please do not hesitate to contact me at 916-448-2581 or via email at Lindsay_Stovall@americanchemistry.com.

Sincerely,

Lindsay Stovall

Lindsay Stovall
Manager, State Affairs

American Chemistry Council

October 6, 2015

Justin D. Naser
Chairman, Uniform Building Codes Commission
Utah Department of Commerce
P.O. Box 146741
Salt Lake City, UT 84114-6741

RE: Comments of the American Chemistry Council on proposed adoption of the 2015 *IRC* and *IECC*

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- **We support the proposed improvements that would align Utah's State Construction Code for commercial buildings with the requirements of the 2015 *IRC/IECC* and are encouraged by the consideration of the 2015 *IRC/IECC* for residential buildings;**

- **We strongly urge the Commission to adopt the ERI as published in the 2015 *IRC/IECC*, for residential construction; and**

- **We strongly urge the Commission to adopt Section N1106.2 (R406.2), the ERI thermal envelope backstop, as it is published in the 2015 *IRC/IECC*. If this section is eliminated, as proposed in the Special Notice, all of the purported energy savings from adopting the 2015 *IRC/IECC* provisions could be eliminated; and**

- **We would strongly urge the commission to remove the compliance path that allows for the continued use of equipment tradeoffs.**

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ACC advocates for the adoption of the latest energy efficiency codes for both residential and commercial construction. Energy savings resulting from the up-front investment in energy efficient technology benefits the homebuyer monetarily from the moment they move into their home. Homeowners promptly recoup their investment as the realized savings on their energy bills quickly offsets any additional construction costs related to the installation of energy efficient products.

[1] Utah State Bulletin, Vol. 2015, No. 18.

ACC supports efforts to improve the efficiency of residential and commercial buildings through the adoption of the latest editions of the *IRC* and *IECC*. Utah's citizens stand to reap significant benefits from the adoption of these codes:

- **Residential** – The adoption of the 2015 *IRC/IECC* for residential construction would yield substantial savings for Utah's homeowners. The U.S. Department of Energy found that an improvement from the 2006 *IECC* to the 2012 *IECC* (roughly the same increment between the current Utah residential energy code and the 2015 *IRC/IECC*) would yield a net savings of $4,879 over the first 30 years of the home's useful lifetime.[2] Homeowners would achieve a net positive cash flow within the first two years, and the improvements would completely pay for themselves within the first 6-7 years.
- **Commercial** – In the most recent update cycle, Utah adopted the 2012 *IECC* for commercial construction with no significant weakening amendments. The adoption of the 2015 *IECC* could yield an additional 11.5% savings in energy costs as compared to the 2012 *IECC*, according to a recent U.S. DOE analysis.[3] These savings will contribute to a better business climate in Utah by lowering operation and maintenance costs for building owners and renters of commercial buildings, and will provide more comfortable places of work for Utah citizens.

While the changes proposed in the Special Notice would provide some of the benefits outlined above, we believe there are additional energy and cost savings that would result from straightforward adoption of the *IRC* and *IECC* for the residential construction code with no weakening amendments. The following are our recommendations on specific changes proposed to the residential energy efficiency requirements outlined in the Special Notice.

1. **We support the proposed improvements that would align Utah's State Construction Code with the requirements of the 2015 *IRC/IECC*.**
    - First, as we understand the Special Notice, Chapter 13 of the International Building Code (Energy Conservation) would be adopted with no amendment. This would result in the 2015 *IECC* being adopted for commercial construction. For the reasons outlined above, we support the adoption of the 2015 *IECC* for commercial construction with no weakening amendment.
    - Second, we support the residential provisions of the 2015 *IRC/IECC* that have been proposed for adoption in the Special Notice. While the Notice does not propose adopting all of the provisions, the proposed updates to the prescriptive table and other basic provisions from current levels to the 2015 *IRC/IECC* will bring substantial savings to homeowners for years to come. The most cost-effective time to improve the building thermal envelope is at construction, and we support this crucial update.
2. **We also recommend adopting the ERI score requirement as published in the 2015 IRC/IECC; 51/54/55/54 in climate zones 3/4/5/6.** Under the ERI option, each home must achieve a specified Energy Rating Index score based on the proposed homes performance compared to a baseline reference home. These scores are intended to ensure that in most cases, a home that is built to the ERI would also meet the prescriptive requirements of the 2015 IECC. However, we would consider accepting the commissions proposed ERI scores 59/63/63/62 for climate zones 3/4/5/6 if the accompanying section N1106.2 (R406.2), which includes the 2009 thermal envelope backstop, was adopted with the ERI in this update (see 3.).
3. **We strongly urge the Commission to adopt the ERI as published in the 2015 *IRC/IECC*, including Section N1106.2 (R406.2), the ERI thermal envelope backstop.** The 2015 *IRC/IECC* includes a new Energy Rating Index (ERI) compliance option, which will allow additional flexibility for Utah builders to achieve energy efficiency gains. The ERI option, as outlined in Section N1106 (R406), bases energy code compliance on a combination of specific requirements and also an index score based on the expected overall energy use of the home compared to a single baseline. **In order for the ERI to work properly, it is crucial that it be adopted without weakening individual provisions. However, if Section N1106.2 (R406.2) is eliminated, as proposed in 15A-3-203**

[2] See U.S. Dep't of Energy, *Utah Energy and Cost Savings for New Single- and Multifamily Homes: 2009 and 2012 IECC as Compared to the 2006 IECC*, at 3 (Apr. 2012).

[3] *See* U.S. Dep't of Energy, *Energy and Energy Cost Savings Analysis of the 2015 IECC for Commercial Buildings*, at v (Aug. 2015).

Amendment 12 of the Special Notice, all of the purported energy savings from adopting the 2015 *IRC/IECC* provisions could be eliminated. Homes must also be built with permanent thermal envelope requirements that meet or exceed the prescriptive envelope requirements of the 2009 *IECC*. Although the ERI provides an unprecedented level of flexibility for code users, these two requirements serve as essential backstops to help ensure that all homes maintain at least a reasonable level of efficiency in the permanent thermal envelope.

4. **We strongly urge the commission to remove the compliance path that allows for the continued use of equipment tradeoffs in Utah.** This trade-off allows reductions to the efficiency of the thermal envelope if more efficient heating and cooling equipment is used. While this proposed compliance path requires homes to exceed the amended 2012 energy code by 10% over the Utah –specific REScheck, it will still allow for this trade-off to continue. If eliminated, the *2015 IRC/IECC* being considered in Utah would be consistent with the 2009 IECC, as well as the 2015 IECC. Allowing for mechanical tradeoffs will significantly undermine the efficiency gains in the *2015 IRC/IECC*.

ACC supports efforts to create a more secure energy future by updating residential and commercial building energy codes. We encourage the Uniform Building Code Commission to amend its proposal to incorporate the above suggested changes. Thank you for your careful consideration of our comments. If you have any questions, please do not hesitate to contact me at 916-448-2581 or via email at Lindsay_Stovall@americanchemistry.com.

Sincerely,

Lindsay Stovall

Lindsay Stovall
Manager, State Affairs

Dan S. Jones <dansjones@utah.gov>

ACC Comments - UBCC Hearing 10-7-15

3 messages

Stovall, Lindsay <Lindsay_Stovall@americanchemistry.com> Tue, Oct 6, 2015 at 3:29 PM
To: "dansjones@utah.gov" <dansjones@utah.gov>

Dan,

Attached you will find ACC's comments to the UBCC on the proposed changes to Utah's building codes. Thank you for considering our comments.

Best,

Lindsay

Lindsay Stovall | American Chemistry Council

Manager, State Affairs

Lindsay_Stovall@americanchemistry.com

1121 L Street, Suite 609 | Sacramento, CA | 95814

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ACC Comments - Utah UBCC Hearing 10-7.pdf
522K

Dan S. Jones <dansjones@utah.gov> Tue, Oct 6, 2015 at 3:44 PM
To: Sharon Smalley <ssmalley@utah.gov>

[Quoted text hidden]

ACC Comments - Utah UBCC Hearing 10-7.pdf
522K

Dan S. Jones <dansjones@utah.gov> Tue, Oct 6, 2015 at 3:45 PM
To: "Stovall, Lindsay" <Lindsay_Stovall@americanchemistry.com>

Thanks,
We will forward to the Commission.

Dan S. Jones
Bureau Manager
Phone Number (801) 530-6720
E-mail dansjones@utah.gov
Dopl internet site www.dopl.utah.gov
[Quoted text hidden]

American Chemistry Council

October 6, 2015

Justin D. Naser
Chairman, Uniform Building Codes Commission
Utah Department of Commerce
P.O. Box 146741
Salt Lake City, UT 84114-6741

RE: Comments of the American Chemistry Council on proposed adoption of the 2015 *IRC* and *IECC*

Dear Chairman Naser,

The American Chemistry Council (ACC) is writing to express our views on the proposed changes to the Utah State Construction Code, and more specifically, the changes proposed to the International Residential Code (*IRC*) and International Energy Conservation Code (*IECC*) published in the September 15, 2015 issue of the Utah State Bulletin.[1] While generally supportive of the improvements to Utah's energy efficiency requirements proposed in the Special Notice, we offer the following specific recommendations:

- **We support the proposed improvements that would align Utah's State Construction Code for commercial buildings with the requirements of the 2015 *IRC/IECC* and are encouraged by the consideration of the 2015 *IRC/IECC* for residential buildings;**

- **We strongly urge the Commission to adopt the ERI as published in the 2015 *IRC/IECC*, for residential construction; and**

- **We strongly urge the Commission to adopt Section N1106.2 (R406.2), the ERI thermal envelope backstop, as it is published in the 2015 *IRC/IECC*. If this section is eliminated, as proposed in the Special Notice, all of the purported energy savings from adopting the 2015 *IRC/IECC* provisions could be eliminated; and**

- **We would strongly urge the commission to remove the compliance path that allows for the continued use of equipment tradeoffs.**

ACC member companies manufacture the raw materials for a myriad of industries, including products that help make buildings and homes more energy efficient. The business of chemistry employs over 800,000 workers, making it one of the largest US industries in terms of employment. In Utah, the business of chemistry provides over 7,800 direct jobs and 23,000 related jobs, generating approximately $30 million in state and local taxes. We have been an active supporter of the Energy Efficient Codes Coalition (EECC), a collective effort of business interests, architects, affordable housing advocates, utilities and environmental organizations working together promote energy efficiency building codes.

ACC advocates for the adoption of the latest energy efficiency codes for both residential and commercial construction. Energy savings resulting from the up-front investment in energy efficient technology benefits the homebuyer monetarily from the moment they move into their home. Homeowners promptly recoup their investment as the realized savings on their energy bills quickly offsets any additional construction costs related to the installation of energy efficient products.

[1] Utah State Bulletin, Vol. 2015, No. 18.

ACC supports efforts to improve the efficiency of residential and commercial buildings through the adoption of the latest editions of the *IRC* and *IECC*. Utah's citizens stand to reap significant benefits from the adoption of these codes:

- **Residential** – The adoption of the 2015 *IRC/IECC* for residential construction would yield substantial savings for Utah's homeowners. The U.S. Department of Energy found that an improvement from the 2006 *IECC* to the 2012 *IECC* (roughly the same increment between the current Utah residential energy code and the 2015 *IRC/IECC*) would yield a net savings of $4,879 over the first 30 years of the home's useful lifetime.[2] Homeowners would achieve a net positive cash flow within the first two years, and the improvements would completely pay for themselves within the first 6-7 years.
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ACC supports efforts to create a more secure energy future by updating residential and commercial building energy codes. We encourage the Uniform Building Code Commission to amend its proposal to incorporate the above suggested changes. Thank you for your careful consideration of our comments. If you have any questions, please do not hesitate to contact me at 916-448-2581 or via email at Lindsay_Stovall@americanchemistry.com.

Sincerely,

Lindsay Stovall

Lindsay Stovall
Manager, State Affairs

Dan S. Jones <dansjones@utah.gov>

Comments - Public Hearing - proposals for IECC

2 messages

Jim Meyers <jmeyers@swenergy.org> Mon, Oct 5, 2015 at 5:20 PM
To: dansjones@utah.gov

October 5, 2015

Uniform Building Code Commission

c/o Dan S. Jones, Bureau Manager

Division of Occupational & Professional Licensing

160 East 300 South Salt Lake City, UT 84111

Transmitted via email: Dan S. Jones (dansjones@utah.gov)

Dear Commissioners,

Please accept these comments as part of your October 7th public hearing about the Uniform Building Code Commission's proposals to adopt updated building codes for the State of Utah.

The Southwest Energy Efficiency Program (SWEEP) is a non-profit organization with the mission to leverage benefits of energy efficiency into economies in the southwestern U.S. The Building Project Team works to educate the building industry on the benefits of the newer energy codes and standards. We are also participate in the ICC development process and one team member currently sits on a code action committee of the ICC.

Cost effective analyses for updated energy codes in Utah: The Pacific Northwest National Laboratory (PNNL) reports that adopting the 2015 International Energy Conservation Code for homes and the ASHRAE 90.1-2013 for commercial buildings is "cost-effective" for the State of Utah. Specifically, the PNNL analyses found the following:

For residential buildings:

- The incremental cost to build new homes in Utah to the 2015 IECC ranges between $1,089 and $3,332 depending on the home plan and location,
- Each new home built to the updated code will realize energy costs reductions of $297/year or 23.9% on average,
- Home buyers will recoup the incremental cost increase and experience "positive cash flow" through lowered energy costs within 2 years after accounting for the higher down payment and mortgage costs.

For commercial buildings:

- The increased construction cost for commercial buildings is estimated to be $0.128/ft^2 on average
- The resulting energy cost savings for commercial buildings is estimated to be $0.109/ft^2 on average
- The updated commercial building code results in an average simple payback of 1.2 years
- The average life cycle cost savings over 30 years for commercial buildings is $1.65/ft^2 for private buildings and $1.93/ft^2 for public buildings

SWEEP strongly supports the Commission's recommendation to adopt the updated commercial energy code in full. In addition, SWEEP supports the Commission's adoption of the full prescriptive requirements in the residential portion of the 2015 IECC. However, SWEEP is concerned about the Commissions proposed recommendations for the residential energy code.

New REScheck compliance path (R401.2): The Commission is proposing to create a new fifth compliance path based on the current modified version of the REScheck software modified by the U.S. Department of Energy. This proposal allows homes to continue being constructed using the "equipment tradeoff" which was allowed under the energy code through the 2006 version of the IECC. The equipment tradeoff was removed from the IECC beginning with the 2009 version since it allowed energy efficiency measures with shorter lifetimes (i.e. HVAC systems) to be installed instead of energy efficiency measures that last for the life of the home (i.e., exterior wall insulation). Exterior walls can't practically be retrofitted after the home is built and therefore increase the energy costs that home buyers must bear for the life of the home. Alternatively, homeowners can upgrade HVAC systems at the 10- to 15-year life. While the proposed fifth compliance path also requires that homes using this path exceed the amended 2012 energy code by 10%, it will still allow this tradeoff to continue. Given the long-term energy savings that result from permanent energy efficiency measure, such as better insulated floors and walls, SWEEP does not support the new REScheck compliance path.

Duct leakage (403.3.4): A post-construction leakage rate of 8 CFM per 100 ft^2 as proposed by the Commission allows a very large amount of air leakage out of air ducts. Best practices using simple and affordable duct sealing strategies, such as applying mastic to duct seams on the ground prior to installation, are proven to reduce duct leakage significantly. SWEEP recommends a post-construction duct leakage rate of no more than 6 CFM per 100 ft^2.

Energy Rating Index (R406): The Commission is proposing two significant changes to the Energy Rating Index compliance path. First, it proposes to raise the ERI scores (allowing a lower level of efficiency to pass). Second, the Commission proposed to eliminate the requirement that homes built using the ERI compliance path comply with the insulation and fenestration requirements of the 2009 IECC. SWEEP recommends that if the ERI scores are raised to values proposed, then the 2009 IECC prescriptive requirements should be retained. This ensures that a basic level of building envelop energy efficiency is met in homes, which is especially important given that the ERI path accounts for non-building envelop efficiency measures such as efficient appliances and rooftop solar photo voltaic (PV) arrays, which may not be permanently located in/on the homes. For example, leased solar PV systems are becoming increasingly common across the Nation. This model allows building contractors to lease PV systems on their homes, without a guarantee that the PV system will remain a permanent part of the home. In contrast building envelope measures are guaranteed to provide reduced energy costs since they are permanent.

Thank you for considering these comments. Please feel free to contact me should you have any questions.

Sincerely,

Jim Meyers

Jim Meyers

Director Buildings Efficiency Program

Southwest Energy Efficiency Project (SWEEP)

O: 303-974-7243, M: 303-947-8010

Follow us at: @energymeyers, @SouthwestEE

Dan S. Jones <dansjones@utah.gov> Tue, Oct 6, 2015 at 10:15 AM
To: Jim Meyers <jmeyers@swenergy.org>
Cc: Sharon Smalley <ssmalley@utah.gov>

Thank you, we will forward your comment to the Commission.

Dan S. Jones
Bureau Manager
Phone Number (801) 530-6720
E-mail dansjones@utah.gov
Dopl internet site www.dopl.utah.gov
[Quoted text hidden]