

Public Proposals Report

On the Development of the

2015 National Green Building Standard

March 6, 2015

FOREWORD

This is the Public Proposals Report (PPR) on the development of the 2015 edition of the National Green Building Standard (NGBS). This report summarizes the steps of the Proposed Change phase of the development of the Draft Standard for the purpose of receiving public comments on the changes made to the 2012 edition of the NGBS. The roster of the Consensus Committee at the time of the acceptance of the Proposed Changes is included.

A formal “Call for Proposals” was released on February 1, 2014. The 66 day period for submitting Proposed Changes closed on April 7, 2014. It is noted that the NGBS is always open for comment, and Proposed Changes can be submitted at any time via web-based form posted at www.homeinnovation.com/ngbs.

After the close of the “Call for Proposals”, the Proposed Changes were grouped for review and recommendation by the seven task groups assembled to assist the Consensus Committee in advisory function. The task groups met in person and by conference call from June 2014 through September 2014. In all, 281 Proposed Changes were received from the public and 113 Proposed Changes were developed by the task groups.

The Consensus Committee held an orientation meeting on June 9-10, 2014 at the National Housing Center in Washington, DC to review the schedule and other business matter for the development of the 2015 NGBS, and for the task groups to formally meet and begin their work. On November 6-8, 2014 public hearings were held at the National Housing Center in Washington, DC. The full Consensus Committee heard public testimony, reviewed the task group recommendations, and took Formal Actions on each Proposed Change.

The Ballot Period on the Formal Actions taken at the November meeting started on December 8, 2014 and ended on January 7, 2015. All ballot comments were circulated to the committee from February 13, 2015 through February 25, 2015 to afford the voting members of the Consensus Committee an opportunity to respond, reaffirm, or change their vote. All Committee Actions taken at the November meeting were upheld through the ballot as shown in this PPR. A total of 39 ballots (out of 41) were returned. Members not returning their ballot: Michael Hodgson, Sid Koltun.

This PPR includes the following information on each Proposed Change considered by the Consensus Committee:

- 1) The name of the submitter of the Proposed Change;
- 2) The entity represented by Submitter;
- 3) The text of the Proposed Change;
- 4) The Formal Action taken by the Consensus Committee at the November 6-8 meeting;
- 5) The Final Formal Action taken by the Consensus Committee as a result of the formal letter ballot;
- 6) Any Consensus Committee reason for Formal Action;
- 7) Number of Consensus Committee members eligible to vote;
- 8) Number voting Agree and any stated reasons for their vote;
- 9) Number and identification of Disagree voters and stated reasons for each Disagree vote;
- 10) Number and identification of those who have abstained, and reasons for each abstention; and
- 11) Number and identification of those who have not returned ballots.

Release of Draft Standard. Those Proposed Changes that were Approved or Approved as Modified by the Consensus Committee have been incorporated in the Draft Standard posted at www.homeinnovation.com/ngbs. The changes shown in the Draft Standard are now open for public comment. Public comments are accepted through April 20, 2015 via a web-based form available at www.homeinnovation.com/ngbs. Instructions for submitting public comments are included with the web-based form.

Notification of Committee Action. The release of this PPR is considered notification to a submitter of a Proposed Change or related ballot comment as to the committee action on the Proposed Change. Any objection contained in a Proposed Change is considered resolved unless a public comment is submitted in accordance with Section 4.4.5 of the

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Home Innovation Research Labs “Procedures for Consensus Development Standards” (Procedures – available at www.homeinnovation.com/ngbs), or an appeal is filed in accordance with Section 5 of the Procedures.

Appeals. Persons who have directly and materially affected interests and who have been or will be adversely affected by any procedural action or inaction by the Secretariat with regard to the development of a proposed standard or the revision, reaffirmation or withdrawal of an existing standard, have the right to appeal. Appeals shall be based on compliance with or interpretation of the Home Innovation Research Labs procedures. An appeal shall be submitted by registered mail to the Standards Coordinator no later than April 6, 2015. The appeal shall identify and address the original source of the objection. The appeal shall specify the cause of the appeal, the applicable section(s) of these procedures related to the appeal, and a proposed corrective action. The appeal shall be accompanied by a filing fee of \$500.00. This fee may be waived or reduced upon sufficient evidence of hardship. Appeals will be considered by the Appeals Panel at a hearing on the premises of the Home Innovation Research Labs and shall be scheduled within 90 calendar days of receipt of the appeal by the Standards Coordinator. Please see the Home Innovation Research Labs’ Procedures for further information.

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The following were the members of the Consensus Committee on the National Green Building Standard at the time of voting on the Proposed Changes shown in this Public Proposals Report.

Chair: Robert D. Ross
Vice Chair: Shirley Ellis
Vice Chair: Christopher Mathis

Committee Staff: Vladimir Kochkin
Kevin Kauffman

ACCA (U)

Primary Rep: Donald Prather

Adams Craig (U)

Primary Rep: Stephen Adams

Air-Conditioning, Heating, and Refrigeration Institute (P)

Primary Rep: Aniruddh Roy

American Gas Association (P)

Primary Rep: Ted Arthur Williams

American Iron and Steel Institute (P)

Primary Rep: Maribeth S Rizzuto

American Wood Council (P)

Primary Rep: Kenneth Bland Alternate Rep: Sam Francis

Bayer MaterialScience (P)

Primary Rep: Jerry Phelan

Cherry Hills Village (G)

Primary Rep: Hope Medina

City and County of Broomfield Building Division (G)

Primary Rep: Tim Pate

City of Des Moines (G)

Primary Rep: Sean S. Devlin

Coconino County Community Development Department (G)

Primary Rep: Steven White

ConSol (U)

Primary Rep: Mike Hodgson

DuPont Building Innovations (P)

Primary Rep: Theresa A. Weston

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Edison Electric Institute (P)

Primary Rep: Steven Rosenstock

Environmental Solutions Group (U)

Primary Rep: Steven paul

Foster Associates (P)

Primary Rep: Charles Foster

G&R Construction Services llc (U)

Primary Rep: Robert D. Ross - Chair

Gas Technology Institute/Carbon Management Information Center (P)

Primary Rep: Neil P. Leslie

Habitat for Humanity International (U)

Primary Rep: Rob Howard

Alternate Rep: Ian Bukowski

Mathis Consulting Company (U)

Primary Rep: R Christopher Mathis

Mitchell & Best Homes (U)

Primary Rep: Chad Riedy

NAHB Multifamily (U)

Primary Rep: Miles Haber

NAHB Remoders (U)

Primary Rep: Paul Sullivan

National Institute of Standards and Technology (G)

Primary Rep: Nancy McNabb

National Multifamily Housing Council (U)

Primary Rep: Paula Marie Cino

Alternate Rep: Ron Nickson

North American Insulation Manufacturers Assoc. (P)

Primary Rep: Charles C Cottrell

Northeast Energy Efficiency Partnerships (NEEP) (G)

Primary Rep: Darren Port

Portland Cement Association (P)

Primary Rep: David Shepherd

Alternate Rep: Stephen S Szoke

Plastic Pipe and Fittings Association (PPFA) (P)

Primary Rep: Michael Cudahy

Ryan Taylor Architects LLC (U)

Primary Rep: Ryan Taylor

Ballot Results Summary

Proposal Number	LogID	Final Formal Action	Ballot Results
P001	TG1-15	Approve as Modified	39-0-0
P002	TG1-16	Approve as Modified	39-0-0
P003	5047	Approve as Modified	39-0-0
P004	739	Disapprove	38-1-0
P005	5278	Disapprove	39-0-0
P006	5150	Disapprove	39-0-0
P007	5122	Disapprove	39-0-0
P008	5123	Disapprove	39-0-0
P009	5124	Disapprove	39-0-0
P010	5125	Approve	39-0-0
P011	5126	Approve as Modified	39-0-0
P012	5263	Disapprove	39-0-0
P013	5290	Approve	39-0-0
P014	TG1-03	Approve as Modified	37-2-0
P015	TG1-04	Disapprove	39-0-0
P016	TG1-05	Approve as Modified	37-2-0
P017	TG1-12	Approve as Modified	39-0-0
P018	TG2-01	Approve	39-0-0
P019	5313	Disapprove	39-0-0
P020	5217	Approve as Modified	39-0-0
P021	5082	Disapprove	39-0-0
P022	5156	Approve as Modified	39-0-0
P023	5149	Disapprove	39-0-0
P024	5262	Approve	37-2-0
P025	TG1-01	Approve as Modified	39-0-0
P026	5189	Disapprove	39-0-0
P027	5230	Approve	39-0-0
P028	5208	Approve as Modified	39-0-0
P029	5072	Approve as Modified	39-0-0
P030	5237	Disapprove	39-0-0
P031	TG2-05	Approve as Modified	39-0-0
P032	TG2-03	Approve	39-0-0
P033	5231	Approve as Modified	39-0-0
P034	5232	Disapprove	39-0-0
P035	5233	Disapprove	39-0-0
P036	5235	Disapprove	39-0-0
P037	5236	Disapprove	39-0-0
P038	5255	Approve as Modified	39-0-0
P039	5258	Approve as Modified	39-0-0
P040	5320	Disapprove	39-0-0
P041	5206	Approve as Modified	39-0-0
P042	5264	Disapprove	39-0-0
P043	5261	Approve as Modified	39-0-0
P044	5202	Disapprove	39-0-0
P045	5190	Disapprove	39-0-0
P046	5191	Approve as Modified	39-0-0
P047	5192	Approve	39-0-0
P048	5193	Approve as Modified	39-0-0
P049	5194	Disapprove	39-0-0
P050	5195	Approve as Modified	39-0-0
P051	5196	Approve as Modified	39-0-0
P052	5197	Disapprove	39-0-0
P053	TG2-07	Approved	39-0-0
P054	5198	Approve as Modified	39-0-0
P055	5199	Approve as Modified	39-0-0
P056	5238	Approve	39-0-0

Proposal Number	LogID	Final Formal Action	Ballot Results
P057	5298	Disapprove	39-0-0
P058	5200	Approve as Modified	39-0-0
P059	5201	Approve	39-0-0
P060	5066	Approve as Modified	39-0-0
P061	TG2-02	Approve	39-0-0
P062	5273	Disapprove	39-0-0
P063	5057	Disapprove	39-0-0
P064	5130	Approve as Modified	39-0-0
P065	5127	Approve as Modified	39-0-0
P066	5239	Disapprove	39-0-0
P067	5240	Disapprove	39-0-0
P068	5241	Disapprove	39-0-0
P069	5242	Disapprove	39-0-0
P070	Tg2-04	Approve	39-0-0
P071	5321	Approve as Modified	39-0-0
P072	5243	Disapprove	39-0-0
P073	5259	Approve as Modified	39-0-0
P074	5068	Disapprove	39-0-0
P075	5129	Approve as Modified	39-0-0
P076	5207	Approve as Modified	39-0-0
P077	5209	Approve as Modified	39-0-0
P078	5069	Disapprove	39-0-0
P079	5244	Disapprove	39-0-0
P080	TG2-06	Approve as Modified	39-0-0
P081	TG6-02	Approve as Modified	39-0-0
P082	5265	Disapprove	39-0-0
P083	5260	Approve as Modified	39-0-0
P084	5305	Approve as Modified	39-0-0
P085	5245	Approve	39-0-0
P086	755	Disapprove	39-0-0
P087	5203	Disapprove	39-0-0
P088	5131	Disapprove	39-0-0
P089	TG6-01	Approve	39-0-0
P090	5279	Disapprove	39-0-0
P091	5280	Disapprove	39-0-0
P092	5281	Disapprove	39-0-0
P093	5282	Approve as Modified	39-0-0
P094	5114	Approve as Modified	39-0-0
P095	705	Disapprove	39-0-0
P096	5283	Disapprove	39-0-0
P097	TG3-11	Approve as Modified	39-0-0
P098	5218	Approve	39-0-0
P099	5135	Approve as Modified	39-0-0
P100	5054	Disapprove	39-0-0
P101	5286	Disapprove	39-0-0
P102	5284	Approve as Modified	39-0-0
P103	TG3-02	Approve	38-1-0
P104	5309	Disapprove	37-2-0
P105	5323	Approve as Modified	39-0-0
P106	TG3-06	Disapprove	38-1-0
P107	5285	Approve as Modified	38-1-0
P108	5158	Disapprove	39-0-0
P109	5306	Approve as Modified	39-0-0
P110	5246	Disapprove	39-0-0
P111	5055	Disapprove	39-0-0
P112	TG3-12	Disapprove	39-0-0
P113	TG2-08	Approve as Modified	38-1-0
P114	5159	Disapprove	39-0-0

Proposal Number	LogID	Final Formal Action	Ballot Results
P115	5136	Approve as Modified	39-0-0
P116	TG3-10	Disapprove	39-0-0
P117	5318	Disapprove	39-0-0
P118	5274	Disapprove	39-0-0
P119	708	Disapprove	39-0-0
P120	629	Disapprove	39-0-0
P121	631	Disapprove	39-0-0
P122	638	Disapprove	39-0-0
P123	628	Disapprove	39-0-0
P124	TG3-09	Approve	38-0-1
P125	5287	Disapprove	39-0-0
P126	5160	Disapprove	39-0-0
P127	5204	Approve as Modified	39-0-0
P128	5161	Disapprove	39-0-0
P129	5056	Approve	39-0-0
P130	5083	Approve	39-0-0
P131	5221	Approve as Modified	39-0-0
P132	5162	Approve	39-0-0
P133	5288	Disapprove	39-0-0
P134	5275	Disapprove	39-0-0
P135	TG3-08	Approve	39-0-0
P136	5319	Disapprove	39-0-0
P137	5137	Approve	39-0-0
P138	TG3-16	Approve	39-0-0
P139	5051	Approve	39-0-0
P140	TG3-01	Approve as Modified	36-3-0
P141	5317	Disapprove	39-0-0
P142	TG3-15	Approve	39-0-0
P143	5115	Disapprove	39-0-0
P144	5163	Disapprove	39-0-0
P145	5316	Disapprove	38-1-0
P146	5266	Disapprove	39-0-0
P147	5073	Approve	39-0-0
P148	5077	Disapprove	38-1-0
P149	TG3-13	Approve as Modified	36-3-0
P150	5310	Disapprove	39-0-0
P151	5308	Disapprove	39-0-0
P152	5157	Disapprove	39-0-0
P153	5151	Disapprove	39-0-0
P154	5078	Approve as Modified	38-1-0
P155	TG5-04	Disapprove	39-0-0
P156	5213	Disapprove	39-0-0
P157	5219	Disapprove	37-2-0
P158	5215	Disapprove	39-0-0
P159	5116	Approve as Modified	39-0-0
P160	5299	Disapprove	39-0-0
P161	TG5-01	Approve as Modified	39-0-0
P162	754	Disapprove	39-0-0
P163	5216	Disapprove	39-0-0
P164	TG5-03	Approve as Modified	39-0-0
P165	TG5-05	Disapprove	39-0-0
P166	5118	Disapprove	39-0-0
P167	5119	Disapprove	39-0-0
P168	5084	Disapprove	36-3-0
P169	5300	Approve as Modified	39-0-0
P170	5085	Approve	39-0-0
P171	5086	Approve as Modified	39-0-0
P172	TG5-06	Approve as Modified	38-1-0

Proposal Number	LogID	Final Formal Action	Ballot Results
P173	5302	Disapprove	39-0-0
P174	5312	Approve as Modified	38-1-0
P175	TG5-07	Disapprove	39-0-0
P176	5325	Approve	39-0-0
P177	5120	Approve as Modified	39-0-0
P178	TG5-08	Disapprove	39-0-0
P179	TG5-09	Disapprove	39-0-0
P180	TG5-55	Approve as Modified	39-0-0
P181	TG5-18	Disapprove	35-3-1
P182	TG5-19	Disapprove	36-3-0
P183	TG5-12	Disapprove	39-0-0
P184	5272	Disapprove	39-0-0
P185	TG5-11	Disapprove	38-1-0
P186	TG5-13	Approve as Modified	39-0-0
P187	TG5-10	Disapprove	37-2-0
P188	TG5-17	Approve	39-0-0
P189	TG5-14	Disapprove	39-0-0
P190	TG5-15	Disapprove	38-1-0
P191	TG5-16	Disapprove	37-2-0
P192	5271	Approve as Modified	36-2-1
P193	5247	Disapprove	39-0-0
P194	5301	Withdrawn	39-0-0
P195	TG5-02	Approve as Modified	38-1-0
P196	TG5-26	Approve as Modified	39-0-0
P197	TG5-20	Approve as Modified	39-0-0
P198	TG5-21	Disapprove	39-0-0
P199	TG5-22	Disapprove	35-4-0
P200	TG5-23	Disapprove	39-0-0
P201	5276	Disapprove	39-0-0
P202	5058	Disapprove	39-0-0
P203	TG5-24	Approve	39-0-0
P204	TG5-25	Approve	39-0-0
P205	5048	Disapprove	39-0-0
P206	5297	Disapprove	39-0-0
P207	5292	Approve as Modified	39-0-0
P208	5295	Approve as Modified	38-1-0
P209	5220	Approve	39-0-0
P210	5296	Approve as Modified	39-0-0
P211	5293	Approve as Modified	39-0-0
P212	5277	Disapprove	39-0-0
P213	5222	Disapprove	39-0-0
P214	5223	Disapprove	39-0-0
P215	5224	Disapprove	39-0-0
P216	TG5-27	Disapprove	39-0-0
P217	TG5-28	Approve	38-1-0
P218	TG5-29	Disapprove	39-0-0
P219	5289	Disapprove	37-2-0
P220	5087	Approve as Modified	39-0-0
P221	TG5-30	Approve	37-2-0
P222	5088	Approve as Modified	39-0-0
P223	5089	Approve as Modified	39-0-0
P224	5090	Approve as Modified	39-0-0
P225	TG5-32	Disapprove	39-0-0
P226	5070	Disapprove	39-0-0
P227	769	Approve as Modified	39-0-0
P228	TG5-33	Approve	39-0-0
P229	761	Approve as Modified	36-3-0
P230	TG5-44	Disapprove	37-2-0

Proposal Number	LogID	Final Formal Action	Ballot Results
P231	5322	Approve as Modified	39-0-0
P232	TG5-34	Approve	39-0-0
P233	TG5-31	Disapprove	39-0-0
P234	TG6-06	Approve	38-1-0
P235	5294	Approve	39-0-0
P236	TG5-35	Disapprove	39-0-0
P237	TG5-39	Disapprove	39-0-0
P238	5121	Disapprove	39-0-0
P239	TG6-04	Approve as Modified	39-0-0
P240	TG6-05	Disapprove	39-0-0
P241	TG6-03	Approve as Modified	39-0-0
P242	TG5-36	Disapprove	39-0-0
P243	TG5-37	Disapprove	39-0-0
P244	5091	Withdrawn	39-0-0
P245	5053	Approve as Modified	39-0-0
P246	TG5-38	Approve	38-1-0
P247	5092	Withdrawn	39-0-0
P248	5117	Disapprove	39-0-0
P249	5250	Disapprove	39-0-0
P250	TG5-40	Disapprove	39-0-0
P251	TG5-41	Withdrawn	39-0-0
P252	5303	Disapprove	39-0-0
P253	5128	Disapprove	39-0-0
P254	5076	Approve	39-0-0
P255	TG5-42	Approve	39-0-0
P256	5093	Approve as Modified	39-0-0
P257	TG5-43	Approve	39-0-0
P258	TG5-45	Approve	37-2-0
P259	TG5-50	Disapprove	39-0-0
P260	TG5-51	Approve as Modified	38-1-0
P261	TG5-52	Approve	39-0-0
P262	TG5-49	Disapprove	39-0-0
P263	TG5-46	Approve	39-0-0
P264	TG5-47	Approve	39-0-0
P265	5307	Approve	39-0-0
P266	TG5-48	Approve	39-0-0
P267	5071	Disapprove	39-0-0
P268	5152	Disapprove	39-0-0
P269	5324	Approve as Modified	36-3-0
P270	5249	Disapprove	39-0-0
P271	5234	Withdrawn	39-0-0
P272	TG4-01	Approve	39-0-0
P273	TG4-02	Approve	39-0-0
P274	5164	Approve	39-0-0
P275	5165	Disapprove	39-0-0
P276	5138	Disapprove	39-0-0
P277	TG4-06	Approve	39-0-0
P278	TG4-03	Disapprove	38-1-0
P279	5139	Disapprove	39-0-0
P280	5166	Disapprove	39-0-0
P281	5167	Approve as Modified	39-0-0
P282	TG4-05	Approve as Modified	39-0-0
P283	5168	Disapprove	39-0-0
P284	5169	Disapprove	39-0-0
P285	TG4-07	Disapprove	39-0-0
P286	TG4-08	Approve as Modified	39-0-0
P287	TG4-09	Approve	39-0-0
P288	5140	Approve	39-0-0

Proposal Number	LogID	Final Formal Action	Ballot Results
P289	5141	Approve	39-0-0
P290	5170	Approve as Modified	39-0-0
P291	5142	Approve	39-0-0
P292	5067	Disapprove	39-0-0
P293	5052	Disapprove	39-0-0
P294	5171	Approve as Modified	39-0-0
P295	TG4-04	Disapprove	39-0-0
P296	5153	Disapprove	39-0-0
P297	5269	Disapprove	34-5-0
P298	5252	Disapprove	34-5-0
P299	TG3-07	Disapprove	38-1-0
P300	5211	Disapprove	39-0-0
P301	5212	Approve	38-1-0
P302	5143	Approve as Modified	39-0-0
P303	5254	Disapprove	39-0-0
P304	5251	Withdrawn	39-0-0
P305	714	Disapprove	39-0-0
P306	5144	Disapprove	39-0-0
P307	5145	Disapprove	39-0-0
P308	5146	Approve	39-0-0
P309	5147	Approve as Modified	39-0-0
P310	5311	Approve	39-0-0
P311	TG3-14	Disapprove	39-0-0
P312	5229	Approve as Modified	39-0-0
P313	5210	Approve as Modified	39-0-0
P314	5063	Approve	39-0-0
P315	5094	Disapprove	39-0-0
P316	5132	Disapprove	39-0-0
P317	5248	Disapprove	39-0-0
P318	5304	Disapprove	39-0-0
P319	5095	Disapprove	39-0-0
P320	TG3-05	Approve as Modified	39-0-0
P321	TG3-03	Approve	39-0-0
P322	5079	Approve	39-0-0
P323	5172	Disapprove	39-0-0
P324	5080	Disapprove	37-2-0
P325	TG1-02	Approve	38-1-0
P326	5064	Approve	39-0-0
P327	5173	Approve	39-0-0
P328	726	Approve	39-0-0
P329	742	Disapprove	39-0-0
P330	5174	Approve	39-0-0
P331	5096	Disapprove	39-0-0
P332	5175	Disapprove	39-0-0
P333	5097	Disapprove	39-0-0
P334	5065	Approve	39-0-0
P335	744	Disapprove	39-0-0
P336	5081	Approve	39-0-0
P337	5098	Disapprove	39-0-0
P338	5154	Disapprove	39-0-0
P339	TG7-07	Approve	39-0-0
P340	TG7-08	Approve	39-0-0
P341	TG7-01	Approve	39-0-0
P342	5103	Disapprove	39-0-0
P343	5182	Approve	39-0-0
P344	5183	Approve	39-0-0
P345	5104	Disapprove	39-0-0
P346	5184	Disapprove	39-0-0

Proposal Number	LogID	Final Formal Action	Ballot Results
P347	5105	Disapprove	39-0-0
P348	5267	Disapprove	39-0-0
P349	5176	Disapprove	39-0-0
P350	5178	Disapprove	39-0-0
P351	TG7-02	Disapprove	39-0-0
P352	5179	Approve	39-0-0
P353	5205	Disapprove	39-0-0
P354	5180	Disapprove	39-0-0
P355	5181	Disapprove	39-0-0
P356	5074	Approve	39-0-0
P357	TG7-05	Approve as Modified	38-1-0
P358	5225	Approve as Modified	39-0-0
P359	5227	Approve as Modified	39-0-0
P360	5106	Disapprove	39-0-0
P361	5107	Disapprove	39-0-0
P362	5099	Disapprove	39-0-0
P363	5270	Disapprove	35-4-0
P364	TG7-06	Approved	39-0-0
P365	5101	Disapprove	39-0-0
P366	5102	Disapprove	39-0-0
P367	5155	Disapprove	38-0-1
P368	5177	Disapprove	39-0-0
P369	TG7-04	Disapprove	39-0-0
P370	5148	Approve as Modified	39-0-0
P371	TG7-09	Approve as Modified	39-0-0
P372	5185	Approve	39-0-0
P373	5075	Approve	39-0-0
P374	5228	Approve as Modified	39-0-0
P375	5226	Approve as Modified	39-0-0
P376	5108	Approve as Modified	39-0-0
P377	5186	Approve	39-0-0
P378	TG7-03	Approve as Modified	39-0-0
P379	5187	Disapprove	39-0-0
P380	5188	Disapprove	39-0-0
P381	5268	Disapprove	39-0-0
P382	5109	Withdrawn	39-0-0
P383	5110	Approve	39-0-0
P384	5111	Approve	39-0-0
P385	5112	Approve	39-0-0
P386	5214	Approve	39-0-0
P387	5113	Approve as Modified	37-2-0
P388	TG1-17	Approve	39-0-0
P389	TG5-53	Approve	39-0-0
P390	TG3-04	Approve	39-0-0
P391	5314	Disapprove	39-0-0
P392	5315	Disapprove	39-0-0
P393	TG5-54	Disapprove	39-0-0
P394	TG1-14	Approve	39-0-0

Proposed Changes with Final Formal Actions

P001 LogID TG1-15	Preface	<i>Final Formal Action: Approve as Modified</i>										
Submitter:	James M Williams, J.M. Williams and Assoc. Inc. / AE URBIA											
Proposed Change:	<p>Add to the Preface a section, "Italicized Terms," and a description of Italicized Terms. Match the Italicized Terms definition and use as found in the 2015 IECC. See 2015 IECC, Preface, page vi.</p> <p><u>Italicized Terms</u></p> <p><u>Selected terms set forth in Chapter 2, Definitions, are italicized where they appear in code text. Such terms are not italicized where the definition set forth in Chapter 2 does not impart the intended meaning in the use of the term. The terms selected have definitions that the user should read carefully to facilitate better understanding of the code.</u></p>											
Reason:	To match the format of the other I Codes, and to assist the end users in actually using and applying the standard. Without this, the user is not directed to the actual definition and may not fully understand the intent of the standard, or may apply the standard incorrectly.											
Committee Action from Meeting:	Approve as Modified											
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>Add to the Preface a section, "Italicized Terms," and a description of Italicized Terms. Match the Italicized Terms definition and use as found in the 2015 IECC. See 2015 IECC, Preface, page vi.</p> <p><u>Italicized Terms</u></p> <p><u>Selected terms set forth in Chapter 2, Definitions, are italicized where they appear in code standard text. Such terms are not italicized where the definition set forth in Chapter 2 does not impart the intended meaning in the use of the term. The terms selected have definitions that the user should read carefully to facilitate better understanding of the code standard.</u></p>											
Committee Reason:	Changed language from "code" to "standard" to make it clear that this is referring to the NGBS.											
Ballot Results on Committee Action:	<table style="width: 100%; border: none;"> <tr> <td style="padding-right: 20px;">Eligible to vote:</td> <td style="text-align: right;">41</td> </tr> <tr> <td>Agree with committee action:</td> <td style="text-align: right;">39</td> </tr> <tr> <td>Disagree with committee action:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Abstain:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Non-voting:</td> <td style="text-align: right;">2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:	<i>Darren Port:</i> Agree											
Disagree with committee action:												
Abstain:												

P002 LogID TG1-16	Preface	<i>Final Formal Action: Approve as Modified</i>
Submitter:	James M Williams, J.M. Williams and Assoc. Inc. / AE URBIA	
Proposed Change:	<p>Add to the Preface a section describing Marginal Markings, and then use the Marginal Markings as described throughout the publication. The Marginal Markings shall match the Marginal Markings used in the other I Codes (see preface page v of the 2015 IECC).</p> <p><u>Marginal Markings</u></p> <p><u>Solid vertical lines in the margins within the body of the code indicate a technical change from the requirements of the previous edition. Deletion indicators in the form of an arrow (show arrow symbol)</u></p>	

	<p>are provided in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.</p> <p><u>A single asterisk (*) placed in the margin indicates that text or table has been relocated within the code. A double asterisk (**) placed in the margin indicates that the text or table immediately following it has been relocated there from elsewhere in the code.</u></p>										
Reason:	To match the marginal markings in the other ICodes.										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>Add to the Preface a section describing Marginal Markings, and then use the Marginal Markings as described throughout the publication. The Marginal Markings shall match the Marginal Markings used in the other I Codes (see preface page v of the 2015 IECC).</p> <p><u>Marginal Markings</u></p> <p><u>Solid vertical lines in the margins within the body of the code standard indicate a technical change from the requirements of the previous edition. Deletion indicators in the form of an arrow (show arrow symbol) are provided in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.</u></p> <p><u>A single asterisk (*) placed in the margin indicates that text or table has been relocated within the code standard. A double asterisk (**) placed in the margin indicates that the text or table immediately following it has been relocated there from elsewhere in the code-standard.</u></p>										
Committee Reason:	Changed language from "code" to "standard" to make it clear that this is referring to the NGBS.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P003 LogID 5047	102 Conformance	<i>Final Formal Action: Approve as Modified</i>
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	102.5 Significant Decimals. Values used to determine compliance with minimum or maximum values or for determining point allocations shall be rounded to the same number of decimal places as specified value in the practice.	
Reason:	General industry practice is to round values to the same number of decimal places as in the specification. There is typically uncertainty associated with most values and clarifying how to interpret values would be helpful.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p>902.2.1 One of the following whole building ventilation systems is implemented and is in accordance with the specifications of Appendix B.</p>	

	<p>Mandatory where the maximum air infiltration rate is less than <u>5.0</u> ACH50</p> <p>701.4.3.2 Air sealing and insulation. Grade 3 insulation installation is not permitted. The compliance of the building envelope airtightness and insulation installation is demonstrated in accordance with Section 701.4.3.2(1) or 701.4.3.2(2).</p> <p>(1)Testing option. Building envelope tightness and insulation installation is considered acceptable when air leakage is less than seven (<u>7.0</u>) air changes per hour (ACH) when tested with a blower door at a pressure of 33.5 <u>1.04</u> psf (50 Pa). Testing is conducted after rough-in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation, and combustion appliances. Testing is conducted under the following conditions:</p>
Committee Reason:	This change will facilitate verification and certification process.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	<i>Darren Port:</i> Agree
Disagree with committee action:	
Abstain:	

P004 LogID 739	102.1 Applicability	Final Formal Action: Disapprove
Submitter:	Thomas Culp, Birch Point Consulting LLC	
Proposed Change:	<p>102.1 Applicability. The provisions of this Standard shall apply to design and construction of the residential portion(s) of any building not classified as an institutional use <u>or R-1 occupancy</u> in all climate zones. This Standard shall also be used for subdivisions, building sites, and the residential portions of alterations, additions, renovations, mixed-use residential buildings, and historic buildings, where applicable.</p> <p><i>or if you don't wish to use occupancy classes,</i></p> <p>102.1 Applicability. The provisions of this Standard shall apply to design and construction of the residential portion(s) of any building not classified as an institutional use, <u>hotel, or motel</u> in all climate zones. This Standard shall also be used for subdivisions, building sites, and the residential portions of alterations, additions, renovations, mixed-use residential buildings, and historic buildings, where applicable.</p>	
Reason:	<p>Hotels and Motels. Currently, the standard does not use the same scope for residential buildings as the IECC or ASHRAE. I understand this is from the desire to cover apartment buildings not just below 3 stories. However, the generic term "residential" can be interpreted as also containing hotels and motels, which are R-1 occupancies, although these have very different construction and use than other residential buildings. For this reason, hotels and motels are treated as commercial buildings in the IECC. As just one example, hotels commonly use commercial windows and curtain wall assemblies rather than residential windows in lobby areas, rooms, or both. HVAC and lighting are also very different. My previous comments attempted to address this in the window section by pointing to the commercial sections of the IECC for these types of buildings. They were rejected because the committee felt windows should not be treated differently than the rest, and also stated "Hotels and motels are covered under commercial building." I agree, but since hotels and motels are group R-1, I think this proposed change in the Applicability section helps clarify this.</p>	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Changing the scope is not within purview of the committee and the proposal is inconsistent with the NGBS Commentary which states that hotel/motel occupancy is permitted. Substantiation was not compelling.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<i>Frank Stanonik:</i> I do not consider this proposal a change in the scope. I believe it is a clarification. I question whether a room in a hotel or motel is considered by building code officials as a "residence." Also, I am unable to find the cited "NGBS Commentary" statement that hotel/motel occupancy is permitted
Abstain:	

P005 LogID 5278	Other for Chapter 1 (include section number and title below) <i>Final Formal Action: Disapprove</i>
Submitter:	Shelly Leonard, Green Space Consultants LLC
Proposed Change:	<u>101.6 Commentary. The National Green Building Standard(™) Commentary will be released in conjunction with the current ANSI approved National Green Building Standard(™). The Commentary expands on the compliance language in the Standard including scope and administration, compliance methods, and requirements and prescriptions for all chapters within the Standard.</u>
Reason:	Given that the Commentary is a published companion to the Standard, it should be listed along with referenced documents and appendices and noted in Chapter 1, Section 101 General. Since the Commentary provides expanded insight and details related to the intent and implementation of practices in the Standard, it should be released/published at the same time as the corresponding Standard and not several months thereafter.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The Commentary is not developed or reviewed by the Consensus Committee or part of the ANSI process and it is not referenced in the text of the NGBS.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P006 LogID 5150	202 Definitions <i>Final Formal Action: Disapprove</i>
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Submitter:	Stephen J Holzer, eM8s, LLC										
Proposed Change:	BUILDING INFORMATION MODELING (BIM) A computer generated model based process that simulates three dimensional planning, design, coordination, construction and operations for buildings.										
Reason:	Building Information Modeling (BIM) is a computer generated model based process that simulates planning, design, construction and operations for buildings. It is a single repository for both three-dimensional, two-dimensional, and material properties information that allows data interoperability of all stakeholders to better inform design and construction decisions with the goal of producing the best product possible. This information technology will increase design and construction efficiencies and decrease costs for builders and end users. BIM may also facilitate better communication, collaboration and coordination among building industry professionals and trades working on the same project. Credit should be given to Builders utilizing the open industry standards as defined in the National Building Information Modeling Standard.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Consistent with action on P025.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P007 LogID 5122	202 Definitions	<i>Final Formal Action: Disapprove</i>										
Submitter:	Robert Hill, Home Innovation Research Labs											
Proposed Change:	<u>High priority natural resources - Mature wildlife habitat, trees, shrubs, and water features that could not be quickly reestablished. Other natural features as identified as environmentally important by a licensed professional.</u>											
Reason:	Without a definition, the interpretation of what is a “High priority” resource worthy of 5 points is open to inconsistent interpretation. The proposed definition certainly needs refinement and is offered only as a starting point.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	Did not agree with the term Mature wildlife habitat, as not all high priority areas require mature habitats. The proposed language did not add clarity.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												

Disagree with committee action:	
Abstain:	

P008 LogID 5123	202 Definitions	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	MINOR COMPONENT. Building materials or systems <u>that do not meet the definition of a major component but exceed at least 0.1% of the building material cost. That are not considered a major component. (also see Major Component).</u>	
Reason:	The current definition allows any material or component earn points as a minor material regardless of how insignificant the usage is. The committee is encouraged to refine the cost percentage threshold.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Cost is not an appropriate metric and the current language is preferred.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P009 LogID 5124	202 Definitions	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	MAJOR COMPONENT. 1. All structural members and structural systems. 2. Building materials or systems that are typically applied as a part of over 50%of the surface area of the foundation, wall, floor, ceiling, or roof assemblies <u>excluding vapor barriers, WRB, architectural coatings.</u>	
Reason:	The current definition allows for claiming of the excluded materials as major elements but the impact on resources efficiency of the excluded materials is not the same magnitude as the other materials.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The proposed change can result in unintentional exclusion of applicable products or components.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P010 LogID 5125	202 Definitions	<i>Final Formal Action: Approve</i>
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	NEW CONSTRUCTION. Construction of a new building or construction that completely replaces more than 75 percent of an existing building.	
Reason:	The remodeling chapter can adequately address renovations that replace more than 75% of an existing building. If replacing 75% of an existing building must follow the new construction criteria it imposes significant burdens with regard to meeting mandatory new construction requirements in any portion of the building that is not being replaced (e.g. it would require digging up the foundation to install drain tile and removing all the existing cladding to install WRB). It is not clear how the 75% is calculated - square footage or something else. Is a gut rehab down to the studs for 100% of the building equal to 75% replacement?	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P011 LogID 5126	202 Definitions	<i>Final Formal Action: Approve as Modified</i>
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	Terrain Adaptive Architecture – Architecture where the design of the building has been specifically adapted to preserve unique features of the terrain.	
Reason:	This term is not typically understood. The definition should be refined by those knowledgeable in lot design. There has also been confusing in distinguishing 503.2(1) from 503.2(4).	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> <u>Terrain Adaptive Architecture – Architecture or landscape architecture where the design of the building or site has been specifically adapted to preserve unique features of the terrain.</u> 503.2(1) The use of terrain adaptive architecture, including terracing, retaining walls, landscaping, or other stabilization techniques.	
Committee Reason:	Clarification	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P012 LogID 5263	202 Definitions	Final Formal Action: Disapprove
Submitter:	Matt Belcher, Verdatek Solutions	
Proposed Change:	<p>Section 202 Definitions</p> <p>FLOOD HAZARD AREA. The greater of the following two areas: 1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any year. 2. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.</p> <p>RESILIENCE. The ability of buildings to take in the shock of natural disasters and better recover from these events.</p>	
Reason:	With the focus on future enhancement of the model codes to provide for enhanced "Resilient" construction, it is an opportunity to include reference in this "above code" standard to incentivise innovative practices and process that will demonstrate best practices for eventual application into the model codes.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The proposed change would allow points for implementing resilient materials in areas where they are not necessary. The proposed practice could actually be counterproductive to the goals of the NGBS. The concept of combining disaster resistance and green construction has not been adequately developed.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P013 LogID 5290	202 Definitions	Final Formal Action: Approve
Submitter:	Thomas Culp, Birch Point Consulting LLC	
Proposed Change:	<p>DYNAMIC GLAZING. Any fenestration product that has the fully reversible ability to change its performance properties, including U-factor, SHGC, or VT.</p>	
Reason:	Add definition for dynamic glazing for use in chapter 7. Definition taken from IECC.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P014	LogID TG1-03	202 Definitions	Final Formal Action: Approve as Modified
Submitter:	Craig Conner, Building Quality		
Proposed Change:	<p>2012 NATIONAL GREEN BUILDING STANDARD ICC 700-2012 NGBS</p> <p>2015 INTERNATIONAL ENERGY CONSERVATION CODE IECC</p> <p>2015 INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO- FAMILY DWELLINGS IRC</p> <p>2015 INTERNATIONAL BUILDING CODE IBC</p> <p>2012 I INTERNATIONAL GREEN CONSTRUCTION CODE IGCC</p> <p>NGBS ADDITION. An extension or increase in floor area or height of building or structure.</p> <p>IRC and IECC ADDITION. <u>An extension or increase in the conditioned space floor area or height of a building or structure.</u></p> <p>NGBS BIOBASED PRODUCT. A commercial or industrial product used in site development or building construction that is composed, in whole or in significant part, of biological products, renewable agricultural materials (including plant, animal, and marine materials), or forestry materials.</p> <p>IGCC BIO-BASED MATERIAL. <u>A commercial or industrial material or product, other than food or feed, that is composed of, or derived from, in whole or in significant part, biological products or renewable domestic agricultural materials, including plant, animal, and marine materials, or forestry materials</u></p> <p>NGBS BROWNFIELD (also EPA-Recognized Brownfield). Real property, the expansion, redevelopment, or reuse that may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant, and includes Brownfield Site as defined in Public Law 107-118(H.R.2869)- “Small Business Liability Relief and Brownfields Revitalization Act.”</p> <p>IGCC BROWNFIELD. <u>A site in which the expansion, redevelopment or reuse of would be required to address the presence or potential presence of a hazardous substance, pollutant or contaminant. Brownfield sites include:</u></p> <ul style="list-style-type: none"> . <u>EPA-recognized brownfield sites as defined in Public Law 107-118 (H.R. 2869) “Small Business Liability Relief and Brownfields Revitalization Act,” 40 CFR, Part 300; and</u> . <u>Sites determined to be contaminated according to local or state regulation.</u> 		

	<p>NGBS CONDITIONED SPACE. <u>An area or room within a building being heated or cooled, containing un insulated ducts, or with a fixed opening directly into an adjacent conditioned space</u></p> <p>IRC [RE] CONDITIONED SPACE. <u>An area, room or space that is enclosed within the building thermal envelope and that is indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate thru openings with conditioned spaces, where they are separated from conditioned spaces by un insulated walls, floors or ceilings or where they contain un insulated ducts, piping or other sources of heating or cooling.</u></p> <p>NGBS COP (COEFFICIENT OF PERFORMANCE). <u>A measure of the heating efficiency of ground and air-source heat pumps defined as the ratio of the rate of heat provided by the heat pump to the rate of energy input, in consistent units, for a complete heat pump under defined operating conditions.(see EER as a measure of the cooling efficiency of heat pumps.)</u></p> <p>IECC COEFFICIENT OF PERFORMANCE (COP) .-COOLING. <u>The ratio of the rate of heat input, in consistent units, for a complete refrigerating system of some specific portion of the system under designated operating conditions.</u></p> <p>IECC COEFFICIENT OF PERFORMANCE (COP) .-HEATING. <u>The ratio of the rate of heat delivered to the rate of energy input, in consistent units, for a complete heat pump system, including the compressor, and, if applicable, auxiliary heat, under designated operating conditions.</u></p> <p>NGBS GRAY WATER. <u>Waste discharged from lavatories, bathtubs, showers, clothes washers, and laundry trays.</u></p> <p>IGCC GRAY WATER. <u>Untreated waste water that has not come into contact with waste water from water closets, urinals, kitchen sinks, or dishwashers. Gray water includes, but is not limited to, waste water from bathtubs, showers, lavatories, clothes washers, and laundry trays.</u></p> <p>NGBS MERV (Minimum Efficiency Reporting Value). <u>The Minimum Efficiency Reporting Value or filters in accordance with criteria contained in ASHRAE 52.2.</u></p> <p>IGCC MINIMUM EFFICIENCY REPORTING VALUE (MERV). <u>Minimum efficiency-rated value for the effectiveness of air filters.</u></p> <p>NGBS REUSE. <u>To recover a material or product for use again without reprocessing.</u></p> <p>IGCC REUSE. <u>To divert a material, product, component, module, or a building from the waste stream in order to use it again.</u></p> <p>NGBS R-VALUE. <u>The inverse of the time rate of heat flow through a body from one of its bounding surfaces to the other surface for a unit temperature difference between the two surfaces, under steady state conditions, per unit area (h x ft² x F/Btu) [(m² x K)/W].</u></p> <p>IRC [RE]R-VALUE, THERMAL RESISTANCE. <u>The inverse of the time rate of heat flow through a building thermal envelope element from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady state conditions, per unit area (hXt²xF/Btu).</u></p> <p>NGBS STORY ABOVE GRADE. <u>Any story having its finished floor surface entirely above grade, except that a basement shall be considered as a story above grade where the finished surface of the floor</u></p>
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	<p>above the basement is:</p> <ul style="list-style-type: none"> — More than 6 feet (1829 mm) above grade plane. — More than 6 feet (1829) above the finished ground level for more than 50 percent of the total building perimeter. — More than 12 feet (3658 mm) above the finished ground level at any point. <p>IBC STORY ABOVE GRADE. Any story having its finished floor surface entirely above grade plane, or in which the finished surface of the floor next above is:</p> <ul style="list-style-type: none"> . <u>More than 6 feet (1829mm) above grade plane; or</u> . <u>More than 12 feet (3658 mm) above the finished ground level at any point.</u> <p>NGBS WATER FACTOR (WATER CONSUMPTION FACTOR). The quotient of the total weighted per-cycle water consumption divided by the capacity of the clothes washer.</p> <p>IGCC WATER FACTOR(WF). <u>the quantity of water, in gallons per cycle (Q), divided by a clothes washing machine clothes container capacity in cubic feet (C). The equation is: WF=Q/C</u></p> <p>NGBS WETLANDS. Areas that are saturated by the surface or ground water at frequency and the duration sufficient to support, and the under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are further defined by the EPA in the Code of Federal Regulations.</p> <p>IGCC WETLAND. <u>Areas that are inundated or saturated by the surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.</u></p>
<p>Reason:</p>	<p>Aligning NGBS definitions with the I-codes.</p>
<p>Committee Action from Meeting:</p>	<p>Approve as Modified</p>
<p>Modification of Proposed Change:</p>	<p><i>Revise proposed change as follows (substantive revisions shown in red):</i></p> <p>ADDITION. An extension or increase in floor area or height of building or structure. <u>An extension or increase in the conditioned space floor area or height of a building or structure.</u></p> <p>BIOBASED PRODUCT. A commercial or industrial product used in site development or building construction that is composed, in whole or in significant part, of biological products, renewable agricultural materials (including plant, animal, and marine materials), or forestry materials. A commercial or industrial material or product, other than food or feed, that is composed of, or derived from, in whole or in significant part, biological products or renewable domestic agricultural materials, including plant, animal, and marine materials, or forestry materials</p> <p>BROWNFIELD (also EPA-Recognized Brownfield). Real property, the expansion, redevelopment, or reuse that may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant, and includes Brownfield Site as defined in Public Law 107-118 (H.R. 2869) “Small Business Liability Relief and Brownfields Revitalization Act.” <u>A site in which the expansion, redevelopment or reuse of would be required to address the presence or potential presence of a hazardous substance, pollutant or contaminant. Brownfield sites include:</u></p>

- EPA-recognized brownfield sites as defined in Public Law 107-118 (H.R. 2869) “Small Business Liability Relief and Brownfields Revitalization Act,” 40 CFR, Part 300; and
- Sites determined to be contaminated according to local or state regulation.

CONDITIONED SPACE. ~~An area or room within a building being heated or cooled, containing un~~
~~insulated ducts, or with a fixed opening directly into an adjacent conditioned space~~ An area, room or
space that is enclosed within the building thermal envelope and that is indirectly heated or cooled.
Spaces are indirectly heated or cooled where they communicate thru openings with conditioned spaces,
where they are separated from conditioned spaces by uninsulated walls, floors or ceilings or where they
contain uninsulated ducts, piping or other sources of heating or cooling.

COP(COEFFICIENT OF PERFORMANCE). ~~A measure of the heating efficiency of ground and air source~~
~~heat pumps defined as the ratio of the rate of heat provided by the heat pump to the rate of energy~~
~~input, in consistent units, for a complete heat pump under defined operating conditions.(see EER as a~~
~~measure of the cooling efficiency of heat pumps.)~~

COEFFICIENT OF PERFORMANCE (COP) – COOLING. The ratio of the rate of heat input, in consistent
units, for a complete refrigerating system of some specific portion of the system under designated
operating conditions.

COEFFICIENT OF PERFORMANCE (COP) – HEATING. The ratio of the rate of heat delivered to the rate of
energy input, in consistent units, for a complete heat pump system, including the compressor, and, if
applicable, auxiliary heat, under designated operating conditions.

GRAY WATER. ~~Waste discharged from lavatories, bathtubs, showers, clothes washers, and laundry trays.~~
~~Untreated waste water that has not come into contact with waste water from water closets, urinals,~~
~~kitchen sinks, or dishwashers. Gray water includes, but is not limited to, waste water from bathtubs,~~
~~showers, lavatories, clothes washers, and laundry trays.~~

MERV (Minimum Efficiency Reporting Value). ~~The Minimum Efficiency Reporting Value or filters in~~
~~accordance with criteria contained in ASHRAE 52.2. Minimum efficiency-rated value for the~~
~~effectiveness of air filters.~~

REUSE. ~~To recover a material or product for use again without reprocessing. To divert a material,~~
~~product, component, module, or a building from the waste stream in order to use it again.~~

R-VALUE (THERMAL RESISTANCE). ~~The inverse of the time rate of heat flow through a body from one of~~
~~its bounding surfaces to the other surface for a unit temperature difference between the two surfaces,~~
~~under steady state conditions, per unit area (h x ft² x F/Btu) [(m² x K)/W]. The inverse of the time rate~~
~~of heat flow through a building thermal envelope element from one of its bounding surfaces to the~~
~~other for a unit temperature difference between the two surfaces, under steady state conditions, per~~
~~unit area (hXt²xF/Btu).~~

STORY ABOVE GRADE. ~~Any story having its finished floor surface entirely above grade, except that a~~
~~basement shall be considered as a story above grade where the finished surface of the floor above the~~
~~basement is:~~

- ~~— More than 6 feet (1829 mm) above grade plane.~~
- ~~— More than 6 feet (1829) above the finished ground level for more than 50 percent of the total~~
~~building perimeter.~~
- ~~— More than 12 feet (3658 mm) above the finished ground level at any point. Any story having its~~

	<p><u>finished floor surface entirely above grade plane, or in which the finished surface of the floor next above is:</u></p> <ul style="list-style-type: none"> · <u>More than 6 feet (1829 mm) above grade plane; or</u> · <u>More than 12 feet (3658 mm) above the finished ground level at any point.</u> <p>WATER FACTOR (WATER CONSUMPTION FACTOR). The quotient of the total weighted per cycle water consumption divided by the capacity of the clothes washer. The quantity of water, in gallons per cycle (Q), divided by a clothes washing machine clothes container capacity in cubic feet (C). The equation is: $WF=Q/C$</p> <p>WETLANDS. Areas that are saturated by the surface or ground water at frequency and the duration sufficient to support, and the under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are further defined by the EPA in the Code of Federal Regulations. Areas that are inundated or saturated by the surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.</p>
Committee Reason:	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 37</p> <p>Disagree with committee action: 2</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Steven Rosenstock: I agree with many of the definitions. However, I would suggest a few changes to improve the language as written in the proposal:</p> <ol style="list-style-type: none"> 1) Remove "NGBS" and "IGCC" and "IBC" from the definition terms. 2) Modify as follows: ICC COEFFICIENT OF PERFORMANCE (COP) . –COOLING. The ratio of the rate of heat removal to the rate of energy heat input, in consistent units, for a complete refrigerating system of some specific portion of the system under designated operating conditions. <p>Randall Melvin: Agree with Rosenstock comment on need for revising definition for COP cooling.</p> <p>The following revision is also recommended for the definition of "conditioned space." -----either indirectly OR DIRECTLY heated AND OR cooled-----THERMALLY insulated walls, PARTITIONS, floors---</p> <p>This change appropriately accommodates conditions where acoustical insulation is used between units - this insulation is not for thermal purposes</p>
Abstain:	

P015 LogID TG1-04	202 Definitions	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality	
Proposed Change:	<p>2012 NATIONAL GREEN BUILDING STANDARD ICC700-2012 NGBS</p> <p>2015 INTERNATIONAL ENERGY CONSERVATION CODE IECC</p> <p>2015 INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO- FAMILY DWELLINGS IRC</p>	

2015 INTERNATIONAL BUILDING CODE IBC

2012 I INTERNATIONAL GREEN CONSTRUCTION CODE IGCC

NGBS CLIMATE ZONE. Climate zones are determined based on figure 6(1).

IECC CLIMATE ZONE. A geographical region based on climatic criteria as specified in this code.

IBC [E]CLIMATE ZONE. A geographical region that has been assigned climatic criteria as specified in Chapter 3CE and 3RE at the International Energy Conservation Code.

NGBS ENGINEERED WOOD PRODUCTS. Products that are made by combining wood strand, veneers, lumber or other wood fiber with adhesive or connectors to make a larger composite structure.

IBC [BS] ENGINEERED WOOD BOARD. A full-depth structural composite lumber, wood structural panel, structural glued laminated timber or prefabricated wood I-joist member designed to transfer horizontal (shear) and vertical (compression) loads, provide attachment for diaphragm sheathing, siding and exterior deck ledgers, and provide lateral support at the ends of floor or roof joists or rafters.

IRC[RB] ENGINEERED WOOD RIM BOARD. A full-depth structural composite lumber, wood structural panel, structural glued laminated timber or prefabricated wood I- Joist member designed to transfer horizontal (shear) and vertical(compression) loads, provide attachment for diaphragm sheathing, siding and exterior deck ledgers and provide lateral support at the ends of floors or roof joists or rafters.

NGBS GRADE PLANE. A reference plane representing the average of the finished ground level adjoining the building at all exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1830 mm)from the building, between the structure and a point 6 feet (1830 mm) from the building.

IRC GRADE PLANE. A reference plane representing the average of the finished ground level adjoining the building at all exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1829 mm) from the building, between the structure and a point 6 feet(1829 mm) from the building.

NGBS HARDSCAPE. Asphalt, concrete, masonry, stone, wood, and other non-plant elements external to the building shell or landscape.

IGCC HARDSCAPE. Areas of a building site covered by man made materials.

NGBS HIGH EFFICIENCY LAMPS. Compact fluorescent lamps(CFL); light emitting diode (LED); T-8 or smaller diameter linear fluorescent lamps; or lamps with a minimum efficiency of 1) 60 lumens per watt for lamps over 40 watts, 2) 50 lumens per watt for lamps over 15 watts to 40 watts, or 3) 40 lumens per watt for lamps 15 watt or less.

IRC HIGH EFFICIENCY LAMPS. Compact fluorescent lamps(CFL); T-8 or smaller diameter linear fluorescent lamps; or lamps with a minimum efficiency of 1) 60 lumens per watt for lamps over 40 watts, 2) 50 lumens per watt for lamps over 15 watts to 40 watts, or 3) 40 lumens per watt for lamps 15 watt or less

NGBS IMPERVIOUS SURFACE. Hard-covered ground area that prevents/retards the entry of water into the soil at that location, resulting in water flowing to another location. (also see HARDSCAPE)

IGCC IMPERVIOUS SURFACE. Paved concrete or asphalt and other similar surfaces that readily accommodate the flow of water with relatively little absorption, as typically used at exterior horizontal areas including, but not limited to, parking lots, bikeways, walkways, plazas and fire lanes.

NGBS INFILL. A location including vacant or underutilized land that may apply to either a site or a lot and is located in an area served by existing infrastructure such as centralized water and sewer connections, roads, drainage, etc., and the site boundaries are adjacent to existing development on at least one side.

IGCC INFILL SITE. Infill sites are one of the following:

- A vacant lot, or collection of adjoining lots, located in an established, developed area that is already served by existing infrastructure;
- A previously developed lot or collection of previously developed adjoining lots, that is being redeveloped or is designated for redevelopment.

NGBS SITE. Any area of land that is or will be developed into two or more parcels of land intended for multiple ownership, uses, or structures and designed to be a part of an integrated whole such as a residential subdivision, mixed-use development, or master-planned community. Site, as defined, generally contains multiple lots.(also see LOT)

IBC SITE. A parcel of land bounded by a lot line or a designated portion of a public right-of-way.

NGBS SHGC (SOLAR HEAT GAIN COEFFICIENT). The ratio of the solar heat gain entering the space through the fenestration assembly to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and absorbed solar radiation which is then reradiated, conducted, or convected into the space.

IRC [RE] SOLOR HEAT GAIN COEFFICIENT (SHGC).The solar heat gain through a fenestration or glazing assembly relative to the incident solar radiation (Btu/h’ft2’F).

NGBS STEEP SLOPES. Slopes equal to or greater than 25 percent(>25%).

IBC STEEP SLOPE. A roof slope greater than two units vertical in 12 units horizontal (17-percent slope).

NGBS STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above.

IBC STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above(see “Basement,” “Building height,” “Grade plane” and “Mezzanine”). A story is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.

IGCC STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above. It is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the top of the floor

	<p><u>finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.</u></p> <p>NGBS SIP(STRUCTURAL INSULATED PANEL). A structural sandwich panel that consists of a light-weight foam plastic core securely laminated between two thin, rigid wood structural panel facings; a structural panel that consists of lightweight foam plastic and cold-formed steel sheet or structural cold-formed steel members; or other similar non-interrupted panels.</p> <p><u>IRC [RB]STRUCTURAL INSULATED PANEL (SIP). A structural sandwich panel that consists of a light-weight foam plastic core securely laminated between two thin, rigid wood structural panel facings.</u></p> <p>NGB SU-FACTOR (THERMAL TRANSMITTANCE). The coefficient of heat transmission (air to air) through a building envelope component or assembly, equal to the time rate of heat flow per unit area and unit temperature difference between the warm side and cold side air films (Btu/h’ft²F)[W/(m²K)].</p> <p><u>IRC [RE] U-FACTOR, THERMAL TRANSMITTANCE. See section N1101.6 for definition applicable in chapter 1</u></p>										
Reason:	Aligning NGBS definitions with the I-codes										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	<p>CLIMATEZONE – Compliance with climate zone requirements is clear within NGBS. The current definition is more flexible because figure 6.1 becomes dispositive.</p> <p>ENGINEERED WOOD PRODUCTS - The current NGBS definition is better and adequate. Proposed definitions do not apply to certain types of wood products.</p> <p>GRADE PLANE. - The NGBS definition is largely the same as the proposed and a change is unnecessary.</p> <p>HARDSCAPE- Current definition is better than proposed language.</p> <p>HIGHEFFICIANCY LAMPS - .Current definition is more complete including references to LED lamps.</p> <p>INFILL- Current definition is clearer and more specific.</p> <p>SITE - IBC definition of site is really a definition of lot for NGBS purposes.</p> <p>SHGC(SOLAR HEAT GAIN COEFFICIENT) - Current definition is more specific and more inclusive.</p> <p>STEEPSLOPES - These are not the same applications of the definition, the NGBS definition is for a site.</p> <p>STORY- Current definition is consistent with the IRC definition and it is simpler than proposed language.</p> <p>SIP(STRUCTURAL INSULATED PANEL) - Current definition is more inclusive of a broader range of materials than the proposed language.</p> <p>U-FACTOR (THERMALTRANSMITTANCE) – Proposed definition doesn’t define the term but refers to another source. Current definition is accurate.</p>										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											

Disagree with committee action:	
Abstain:	

P016 LogID TG1-05	202 Definitions	Final Formal Action: Approve as Modified
Submitter:	Craig Conner, Building Quality	
Proposed Change:	<p>2012 NATIONAL GREEN BUILDING STANDARD ICC 700-2012 NGBS</p> <p>2015 INTERNATIONAL ENERGY CONSERVATION CODE IECC</p> <p>2015 INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO- FAMILY DWELLINGS IRC</p> <p>2015 INTERNATIONAL BUILDING CODE IBC</p> <p>2012 I INTERNATIONAL GREEN CONSTRUCTION CODE IGCC</p> <p>NGBS EXISTING BUILDING. Building completed and occupied prior to any renovation considered under this standard.</p> <p><u>IBC EXISTING STRUCTURE.</u> <u>A structure erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued. For application of provisions flood hazard areas, an existing structure is any building or structure for which the start of construction commenced before the effective date of the community’s first flood plain management code, ordinance or standard.</u></p> <p><u>IGCC EXISTING BUILDING.</u> <u>A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.</u></p> <p><u>NGBS GROUND SOURCE HEAT PUMP.</u> <u>Space conditioning and/or water heating systems that employ a geothermal resource such as the ground, groundwater, or surface water as both a heat source and a heat sink and use a reversible refrigeration cycle to provide both heating and cooling.</u></p> <p><u>IRC GROUND SOURCE HEAT PUMP LOOP SYSTEM.</u> <u>Piping buried in horizontal or vertical excavations or placed in a body of water for the purpose of transporting heat transfer liquid to and from a heat pump. Included in this definition are closed loop systems in which the liquid is recirculated and open loop systems in which the liquid is drawn from a well or other source.</u></p> <p><u>IGCC GROUND SOURCE OR GEOEXCHANGE.</u> <u>Where the earth is used as a heat sink in air conditioning or heat pump island systems. This also applies to systems utilizing subsurface water. Ground source heating and cooling uses the relatively constant temperature of the earth below the frost line. This steady temperature profile allows the earth to be used as a heat source in the winter and as a heat sink in the summer.</u></p> <p><u>NGBS LOT.</u> <u>A single parcel of land generally containing one primary structure or use. Lot development, as defined by this Standard, may include multiple ownership (such as with a condominium building) or multiple uses (such as with a mixed use building). A lot is predominantly represented by a single family dwelling unit, a multifamily structure, or a mixed use building also containing offices and shops. Lots may be located in urban, suburban, and rural locations. A lot may be located within a site. (also see SITE)</u></p> <p><u>IRC [RB] LOT.</u> <u>A portion or parcel of land considered as a unit.</u></p> <p><u>ICC LOT.</u> <u>A single parcel of land generally containing one primary structure or use. Lot development, as defined by this Standard, may include multiple ownership (such as with a condominium building) or multiple uses (such as with a mixed use building). A lot is predominantly represented by a single-family</u></p>	

	<p><u>dwelling unit, a multifamily structure, or a mixed-use building also containing offices and shops. Lots may be located in urban, suburban, and rural locations. A lot may be located within a site. (also see SITE).</u></p> <p><u>IBC[A] LOT.</u> A portion or parcel of land considered as a unit.</p> <p><u>IGCC LOT.</u> A portion or parcel of land considered as a unit.</p>
Reason:	Aligning NGBS definitions with the I-codes
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise proposed change as follows (substantive revisions shown in red):</i></p> <p>EXISTING BUILDING. Building completed and occupied prior to any renovation considered under this standard. A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.</p> <p>IBC EXISTING STRUCTURE. A structure erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued. For application of provisions flood hazard areas, an existing structure is any building or structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard.</p> <p>GROUND SOURCE HEAT PUMP. Space conditioning and/or water heating systems that employ a geothermal resource such as the ground, groundwater, or surface water as both a heat source and a heat sink and use a reversible refrigeration cycle to provide both heating and cooling. Piping buried in horizontal or vertical excavations or placed in a body of water for the purpose of transporting heat transfer liquid to and from a heat pump. Included in this definition are closed loop systems in which the liquid is recirculated and open loop systems in which the liquid is drawn from a well or other source.</p> <p>IGCC GROUND SOURCE OR GEOEXCHANGE. Where the earth is used as a heat sink in air conditioning or heat pump island systems. This also applies to systems utilizing subsurface water. Ground source heating and cooling uses the relatively constant temperature of the earth below the frost line. This steady temperature profile allows the earth to be used as a heat source in the winter and as a heat sink in the summer.</p> <p>LOT. A single parcel of land generally containing one primary structure or use. Lot development, as defined by this Standard, may include multiple ownership (such as with a condominium building) or multiple uses (such as with a mixed use building). A lot is predominantly represented by a single family dwelling unit, a multifamily structure, or a mixed-use building also containing offices and shops. Lots maybe located in urban, suburban, and rural locations. A lot may be located within a site. (also see SITE) <u>A portion or parcel of land considered as a unit.</u></p> <p>ICC LOT. A single parcel of land generally containing one primary structure or use. Lot development, as defined by this Standard, may include multiple ownership (such as with a condominium building) or multiple uses (such as with a mixed use building). A lot is predominantly represented by a single family dwelling unit, a multifamily structure, or a mixed-use building also containing offices and shops. Lots maybe located in urban, suburban, and rural locations. A lot may be located within a site. (also see SITE).</p> <p>IBC [A] LOT. A portion or parcel of land considered as a unit.</p> <p>IGCC LOT. A portion or parcel of land considered as a unit.</p>

Committee Reason:	<p>EXISTING BUILDING - Approved the IGCC definition submitted and disapproved the IBC definition because the IGCC is more appropriate.</p> <p>GROUND SOURCE HEAT PUMP- The IRC definition is clearer than the NGBS or IGCC.</p> <p>LOT - The simple definition from the IRC is appropriate. The NGBS definition is verbose.</p>
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 37</p> <p>Disagree with committee action: 2</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p><i>Steven Rosenstock:</i> The following definitions should be modified as shown below:</p> <p>IRC GROUND SOURCE HEAT PUMP LOOP SYSTEM. Piping buried in horizontal or vertical excavations or placed in a body of water for the purpose of transporting heat transfer liquid to and from a heat pump. Included in this definition are <u>Examples include</u> closed loop systems in which the liquid is recirculated and open loop systems in which the liquid is drawn from a well or other source.</p> <p>IGCC GROUND SOURCE OR GEOEXCHANGE. Where the earth is used as a heat sink in air conditioning or <u>heat source in heating heat pump island</u> systems. This also applies to systems utilizing subsurface water.</p> <p>Ground source heating and cooling uses the relatively constant temperature of the earth below the frost line. This steady temperature profile allows the earth to be used as a heat source in the winter and as a heat sink in the summer.</p> <p>Reasons: Some of the language is not needed (IRC, IGCC), some of the language is more of a description rather than a definition, and the term "GeoExchange" (R) is a registered trademark term that should not be used in a Standard.</p> <p><i>Randall Melvin:</i> Support Rosenstock's proposed definition changes</p>
Abstain:	

P017 LogID TG1-12	202 Definitions	Final Formal Action: Approve as Modified
Submitter:	Susan Gitlin, US EPA	
Proposed Change:	<p><i>Add item to section 202 Definitions:</i></p> <p><u>INVASIVE PLANTS: Plants for which the species are not native to the ecosystem under consideration and that cause, or are likely to cause, economic or environmental harm or harm to human, animal or plant health.</u></p> <p><u>Consideration for inclusion as invasive plants shall include at a minimum those plants identified on:</u></p> <p>(1) <u>Lists created or approved by municipalities or counties, or if no such list exists then lists developed in accordance with ASTM WK40773 for the region where the building site is located or, where such a list is not available, the list published by the state or regional exotic pest plant council or invasive plant council, and</u></p> <p><u>(2) Lists created at the state and federal level.</u></p>	
Reason:	Responding to comments ID 638 and 628	

Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p>Add new item to section 202 Definitions as follows:</p> <p>INVASIVE PLANTS: Plants for which the species are not native to the ecosystem under consideration and that cause, or are likely to cause, economic or environmental harm or harm to human, animal or plant health. Consideration for inclusion as invasive plants shall include at a minimum those plants identified on lists created or approved by governmental entities as applicable.</p>										
Committee Reason:	The inclusion of the ASTM standard in the proposed change was unnecessary and restrictive. The ASTM Standard is not intended to be used to regulate the built environment and list contained within did not go through due process.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
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Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P018	LogID TG2-01	202 Definitions	Final Formal Action: Approve										
Submitter:	Don Whyte, Elevated Real Estate Solutions LLC												
Proposed Change:	GREYFIELD SITE. A previously developed site with abandoned or underutilized structures, and little or no contamination or perceived contamination.												
Reason:	Greyfields could also include abandoned parking lots or abandoned sites without sites what were partially developed before the recession and then abandoned.												
Committee Action from Meeting:	Approve												
Modification of Proposed Change:													
Committee Reason:													
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2		
Eligible to vote:	41												
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Abstain:	0												
Non-voting:	2												
Ballot Comments													
Agree with committee action:													
Disagree with committee action:													
Abstain:													

P019	LogID 5313	303.1 Green buildings	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality		
Proposed Change:	[Adjust the point levels in energy in Table 303 to represent 10%, 20%, 30% and 40% above the IECC.]		
Reason:	This is based on the presumption that the 2015 codes will become the base for the 2015 ICC 700; including the 2015 IECC becoming the base for the energy chapter. Exceeding the 2015 IECC by 50% is a		

	very tall order. At 40% the 2015 NGBS emerald energy level will exceed the 2012 NGBS emerald level by about 5%. It is not clear what the resulting points will become, but they might be 20, 40, 60, and 80.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Based on actions on proposed changes to Section 702, including P195.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
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Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P020 LogID 5217	303.1 Green buildings	<i>Final Formal Action: Approve as Modified</i>
Submitter:	Eric Lacey, RECA	
Proposed Change:	<p>303.1 Green Buildings. The threshold points required for the environmental rating levels for a green building shall be in accordance with Table 303. To qualify for one of these rating levels, all of the following shall be satisfied:</p> <p>(1) The threshold number of points, in accordance with Table 303, shall be achieved as prescribed in Categories 1 through 6 <u>7</u>. The lowest level achieved in any category shall determine the overall rating level achieved for the building.</p> <p>(2) In addition to the threshold number of points in each category, all mandatory provisions of each category shall be implemented.</p> <p>(3) In addition to the threshold number of points prescribed in Categories 1 through 6, the additional points prescribed in Category 7 shall be achieved from any of the categories. Where deemed appropriate by the Adopting Entity based on regional conditions, additional points from Category 7 may be assigned to another category (or categories) to increase the threshold points required for that category (or categories). Points shall not be reduced by the Adopting Entity in any of the six other categories <u>7</u>.</p>	
Reason:	<p>The language of current Section 303.1 is confusing, and it could be misinterpreted in a way that permits code users to satisfy some or all of the energy efficiency points with points from any other category. We do not think this was the intent of this section, so we have submitted the above changes to clarify that regardless of the distribution of points among the ICC-700 chapters, the minimum Chapter 7 point requirement must be met by requirements from Chapter 7. Chapter 7 of ICC-700 contains requirements and options that will yield measurable energy and environmental benefits over the home’s useful lifetime – potentially 70 or 100 years. A home that consumes unreasonably high amounts of energy will become a problem not only for the owner of the home, who must either perform an energy efficiency retrofit or pay higher energy costs, but will also become a long-term problem for cities and states struggling to curb increasing demand for energy. Energy conservation must be a primary consideration in any green home, and Section 303.1 should be clarified to ensure the proper application of Chapter 7 points.</p>	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i>	

	<p>303.1 Green Buildings. The threshold points required for the environmental rating levels for a green building shall be in accordance with Table 303. To qualify for one of these rating levels, all of the following shall be satisfied:</p> <p>(1) The threshold number of points, in accordance with Table 303, shall be achieved as prescribed in Categories 1 through 6. The lowest level achieved in any category shall determine the overall rating level achieved for the building.</p> <p>(2) In addition to the threshold number of points in each category, all mandatory provisions of each category shall be implemented.</p> <p>(3) In addition to the threshold number of points prescribed in Categories 1 through 6 (<u>which correspond to Chapters 5-10</u>), the additional points prescribed in Category 7 shall be achieved from any of the categories. Where deemed appropriate by the Adopting Entity based on regional conditions, additional points from Category 7 may be assigned to another category (or categories) to increase the threshold points required for that category (or categories). Points shall not be reduced by the Adopting Entity in any of the six other categories.</p>										
Committee Reason:	Adds clarification to the existing language.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P021 LogID 5082	304.1 Multi-unit buildings	Final Formal Action: Disapprove
Submitter:	Thomas Culp, Birch Point Consulting LLC	
Proposed Change:	<p>304.1 Multi-unit buildings. All residential portions of a building shall meet the requirements of this Standard. Partial compliance shall not be allowed. Unless otherwise noted, all units and residential common areas within a multi-unit building shall: 1) meet all mandatory requirements; and 2) achieve the point threshold required for the chosen environmental rating level in accordance with Table 303; and 3) achieve the same environmental rating level. Points for the green building practices that apply to multiple units shall be credited once for the entire building. Where points are credited, including where a weighted average is used, practices shall be implemented in all units, as applicable. Where application of a prescribed practice allows for a different number of points for different units in a multi-unit building, the fewer number of points shall be awarded, unless noted that a weighted average is used.</p> <p><u>Alternatively, multi-unit buildings four-stories of more in height above grade plane that comply with the ICC IgCC shall be deemed-to-comply with the Silver rating level of this Standard.</u></p> <p><i>(Note: also add 2012 IgCC International Green Construction Code to Section 1302 Referenced Documents under ICC.)</i></p>	
Reason:	Mid and highrise multi-unit buildings that comply with ICC 700 at the Silver level are deemed to comply with the 2012 IgCC (section 101.3.1). This is simply the reciprocal. Construction and equipment in higher buildings can be very different, so this will encourage those taller buildings to also seek compliance with green standards, whether the NGBS or IgCC.	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The NGBS is designed as a comprehensive green building standard for all residential construction. As such, the NGBS provides building owners and jurisdictions with a single set of residential green criteria without the need for reference to additional green building codes or standards. Further, this proposal does not accurately reflect the relationship between the NGBS and IgCC. The IgCC provides an alternative compliance path for high-rise multifamily buildings (5 stories or more) that meet the requirements of the NGBS, with a minimum Silver performance level in the energy efficiency category only. Nor, do we have information about the equivalency of IgCC requirements in addressing residential-specific design and construction issues captured by the NGBS.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P022 LogID 5156	305.3.1 Applicability	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	The Provisions of Section 305.3 shall apply to remodeling of existing buildings. In addition to the foundation, at least one major structural system (such as walls) of the existing building shall remain in place after the remodel for the building to be eligible for compliance under Section 305.3. <u>This one major structural system must be applied as part of over 50% of the surface area of the wall, floor, ceiling, or roof assemblies.</u>	
Reason:	A definition of the term “major structural system” is not provided. Considering that there are various structural systems, the extent of what needs to be preserved for section 305.3 to apply, could vary. For example, structural systems might be roof trusses or shear structures limited to cores of multilevel buildings, and neither of those would be that extensive. Other structural systems, such as complete structural floors, would constitute far greater portions of buildings. Therefore, setting target that the system must be applied as part of over 50% of the surface area of the wall, floor, ceiling or roof assemblies helps clarify what needs to be preserved for section 305.3 to be applicable.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>The Provisions of Section 305.3 shall apply to remodeling of existing buildings. In addition to the foundation, at least 50% of the one major structural systems (such as walls) of the existing building shall remain in place after the remodel for the building to be eligible for compliance under Section 305.3. This one major structural system must be applied as part of over 50% of the surface area of the wall, floor, ceiling, or roof assemblies.</p> <p><u><i>Definition for Chapter 2:</i></u></p> <p><u>STRUCTURAL SYSTEMS (Existing buildings, Section 305.3). Load-bearing elements and systems that transfer lateral and vertical loads to the foundation and may include, but are not limited to load-bearing walls (interior or exterior), roofs, and other structural elements.</u></p>	

Committee Reason:	Modification clarifies intent and adds a definition for structural systems.		
Ballot Results on Committee Action:	Eligible to vote:		41
	Agree with committee action:		39
	Disagree with committee action:		0
	Abstain:		0
	Non-voting:		2
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P023 LogID 5149	305.3.5 Energy efficiency	Final Formal Action: Disapprove	
Submitter:	Carl Seville, Seville Consulting		
Proposed Change:	A third alternate compliance path is to achieve a minimum air leakage improvement in lieu of energy consumption reduction.		
Reason:	The requirement for either before or after HERS ratings or full year of before and after utility data is excessive and I believe it will discourage projects from seeking certification under the standard. A suitable alternate would be to require blower door test at completion and a requirement that the house meet a certain ACH50 or ELR, or a minimum % improvement from a before blower door test. Points could be provided for increased air leakage improvements.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Insufficient details.		
Ballot Results on Committee Action:	Eligible to vote:		41
	Agree with committee action:		39
	Disagree with committee action:		0
	Abstain:		0
	Non-voting:		2
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P024 LogID 5262	305.3.5 Energy efficiency	Final Formal Action: Approve	
Submitter:	Neil Leslie, Gas Technology Institute		
Proposed Change:	305.3.5.1 Energy Consumption Reduction. The reduction in energy consumption result in from the remodeling shall be based on the estimated energy cost savings <u>or source energy savings</u> as determined by a third-party energy audit and analysis or utility consumption data. <u>The source energy multiplier for electricity shall be 3.16. The source energy multiplier for fuels other than electricity shall be 1.1.</u> The reduction shall be the percentage difference between the consumption per square foot before and after the remodel calculated as follows:		
Reason:	Aligns provision with IECC Section R405.3.		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			

Committee Reason:	Maintain consistency across this standard and other codes.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 37 Disagree with committee action: 2 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Steven Rosenstock: This action is inconsistent with the language approved in the first 2 versions this standard, and the new language should be deleted.</p> <p>As an alternative, the following language could be used:</p> <p>The reduction in energy consumption result in from the remodeling shall be based on the estimated energy cost savings or source site energy savings as determined by a third-party energy audit and analysis or utility consumption data. The source energy multiplier for electricity shall be 3.16. The source energy multiplier for fuels other than electricity shall be 1.1.</p> <p>Reason: The source estimates used are not consistent with estimates shown in other documents, such IGCC, EPA Portfolio Manager, EPA e-GRID, and other studies that have been produced. The estimates are backward looking and do not account for the significant variation in estimates when looking at regional or local or international supply chains.</p> <p>In addition, source estimates are not found on utility bills. Only measurable and verifiable site energy savings can be determined by a 3rd-party energy audit/analysis or utility consumption data</p> <p>Charles Foster: This is unfair to renewable energy.</p> <p>The 3.16 multiplier assumes that a btu of electricity from solar or wind is the same as a btu of electricity generated by an old coal fired plant.</p>
Abstain:	

P025 LogID TG1-01	New Chapter	Final Formal Action: Approve as Modified
Submitter:	Tim Pate and John Barrows,	
Proposed Change:	<p><u>Chapter 4 Integrated design and management</u> (project team, mission statement, and goals)</p> <p><u>401 Preliminary collaborative meeting.</u> A preliminary meeting will occur with all stakeholders for the project in order to establish the team and roles, required training, project checklist, and review the overall scope of work in order to facilitate the initial plans to meet the scope of the NGBS and the proposed rating level that is to be achieved.</p> <p><u>401.1 Intent.</u> The project is designed and constructed by a team of qualified professionals trained in green development, construction, and remodeling practices.</p> <p><u>402.2 Team.</u> A knowledgeable team is established and team member roles are identified in respect to all chapters of the NGBS. The team will consist of the owner, design team, and contractor at a minimum. (1 POINT)</p> <p>(1) <u>NGBS approved verifier is part of initial team. (1 POINT)</u></p>	

	<p><u>402.3 Mission Statement.</u> The project’s goals and objectives are written into a Project Mission Statement and distributed to all team members (MANDATORY)</p> <p><u>402.3 Training.</u> Training is provided to on-site supervisors and team members regarding the green development and construction practices to be used on the project. (1 POINT)</p> <p><u>403 Project Management Documentation</u></p> <p><u>403.1 Project checklist.</u> A checklist of green development and construction practices to be used on the project is created, followed, and completed by the project team regarding the overall scope of the project.(MANDATORY)</p> <p><u>403.2 Project Schedule.</u> A project schedule with all green tasks and inspections is created, updated on a regular basis, and distributed to all team members. (1 POINT)</p> <p><u>403.3 Project Meetings.</u> Project meetings are documented and notes are distributed to all team members. (1 POINT)</p> <p><u>404 Project Recognition and Public Education</u></p> <p><u>406.1 Intent.</u> Increasing public awareness of the National Green Building Standard and compliant projects can help increase demand for high-performance green homes.</p> <p><u>406.2 Signage.</u> Signs indicating that the project is being designed and built in compliance with the National Green Building Standard are used at all stages of construction. (Mandatory)</p> <p><u>406.2.1 Certification Plaques.</u> NGBS Certification plaques with level attained are placed in a conspicuous place near the utility area of the home or in multifamily applications in a conspicuous location near the main entrance of the building. (X points)</p> <p><u>406.3 Education.</u> Information is available on the National Green Building Standard and the green practices employed in the project.</p> <p><u>(1) Digital Information (website, videos). Aimed at public.</u></p> <p><u>(2) Print Information. Aimed at public.</u></p> <p><u>(3). Professional Information. (Digital or printed).Aimed at construction industry professionals.</u></p> <p><u>(X Points)</u></p> <p><u>406.4 Marketing.</u> Comprehensive marketing strategy is developed to promote the NGBS, the green features of the home, and the benefits to both the community and the residents.</p> <p><u>(X Points)</u></p>
<p>Reason:</p>	<p>Proposed additional chapter will serve to focus the entire team on the goals and implementation (not just the goals as currently). The added practices will reinforce cost effective planning and communication to better help the team reach the stated objectives.</p>
<p>Committee Action from Meeting:</p>	<p>Approve as Modified</p>

Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p>1004 INNOVATIVE PRACTICES PUBLIC EDUCATION (X Max Points)</p> <p>1004.1Intent. Increase public awareness of the National Green Building Standard and projects constructed in accordance with National Green Building Standard to help increase demand for high-performance homes.</p> <p>1004.2Signage. Signs showing the project is designed and built in accordance with the National Green Building Standard are posted on the construction site. (X points)</p> <p>1004.3Certification Plaques. National Green Building Standard certification plaques with rating level attained are placed in a conspicuous location near the utility area of the home or, in a conspicuous location near the main entrance of a multifamily building. (X points)</p> <p>1004.4Education. A URL for the National Green Building Standard is included on site signage and marketing materials for homes certified under the National Green Building Standard. (X points)</p> <p>1005INNOVATIVE PRACTICES</p> <p>1005.1(Reserved)</p>
Committee Reason:	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P026 LogID 5189	401 Site Selection	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Applicants should only get points for one of the categories and the points should have a greater spread, e.g., Low slope-5 points, Infill-10 points, Greyfield-17points, and Brownfield-27 points.	
Reason:	The wording “one or more of the following” is ambiguous. Are the points additive? For example, the Belmar development in Longwood CO, is an infill site, that was built on an old shopping center site so it is also a greyfield site. The former automotive repair center had some petroleum contaminants in the soils around it so it could also qualify as a brownfield. It also has low slopes. Would it get 27 points? That doesn’t seem right.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The proposed point spread is very high.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P027	LogID 5230	401.4 Low-slope site	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	401.4 Low-slope site. A site with....selected.		
Reason:	: It is not clear why it is desirable to include a section that specifically encourages the use of low-slope sites. There are environmental trade-offs whether one selects a site that is relatively flat or one selects one with steeper slopes. In the former, there is a greater likelihood that the flat land could be high-quality farm land; in the latter, there is the possibility that construction will cause erosion. The problems associated with the former cannot be mitigated, whereas the problems associated with the latter can be prevented or mitigated through a variety of practices, including using pin foundations or terraces that stabilize the slopes – and other practices for which points are available elsewhere in Chapter 4 (see 403.3). Also, if the slope is already heavily eroded, structures built on the slope may accrue a net environmental gain by reducing slope movement. Moreover, the 5 points made available through this credit seem very high. Flat areas are the easiest for a builder to build upon, so a builder may be rewarded simply for doing what comes easiest, not because it was the environmentally sound approach to take (and even when the site is quality farmland, a wetland, a surface water buffer, or other environmentally sensitive area). And, as building on a low-slope area is unlikely to provide anything close to the environmental benefits provided by building on an infill, greyfield, or brownfield site, the number of points attached to it should be much lower (with at delta of at least 10 points), if any points are attached to it at all.		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			
Committee Reason:	Agreed with the submitter's reasons for the proposed change including the fact that low slope sites could be prime farm land and that development on sites with steep slopes can be done in ways that protect those slopes. Additional points should not be awarded for the selection of low slope sites.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P028	LogID 5208	403.1 Natural resources	Final Formal Action: Approve as Modified
Submitter:	Wes Sullens, StopWaste of Alameda County		
Proposed Change:	<u>New section: Invasive plants are removed from the site.</u>		
Reason:	Invasive plants do enormous environmental and economic harm, as stated in my other comments for sections 403.6 and 503.5. The development of a site creates an opportunity to remove invasive plants from an area of land, thus removing the threat of their spread to neighboring areas and providing a service to the community and local ecosystem.		

Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Add new items to Section 403.1 Natural Resources as follows:</i></p> <p><u>(5) Developer has a plan for removal or containment of invasive plants, as identified by a qualified professional, from the disturbed areas of the site. 3 points</u></p> <p><u>(6) Developer has a plan for removal or containment of invasive plants, as identified by a qualified professional, on the undisturbed areas of the site. 6points</u></p>
Committee Reason:	Incentivize removal of invasive plants from both disturbed and undisturbed areas of the site, as removal from undisturbed areas goes above and beyond what the developer is required to do. The plan should layout a systematic approach for removing invasive species as they work through the multiple phases of development.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P029 LogID 5072	403.10 Existing and recycled materials	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	<p>Existing and recycled materials. Existing <u>pavements, curbs, and aggregates are salvaged or reincorporated into the development</u> or recycled asphalt or concrete materials are used as follows:</p> <p>(Points awarded for every 10 percent of total construction and demolition materials that are reused, deconstructed, and/or salvaged. The percentage is consistently calculated on a weight or volume or cost basis.)</p> <p>(1) Existing pavements, curbs, and aggregates are salvaged or reincorporated into the development.</p> <p>(2) Recycled asphalt or concrete is utilized in the project.</p>	
Reason:	It was not clear in the 2012 text if the percentage for recycled asphalt could be combined with the percentage or salvaged/reincorporated materials of if 10% of each type was needed for the points.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p>Existing and recycled materials. Existing <u>pavements, curbs, and aggregates are salvaged and reincorporated into the development</u> or recycled <u>asphalt or concrete</u> materials are used as follows: 3 points <u>15 Max</u></p> <p>(1) Existing pavements, curbs, and aggregates are salvaged or reincorporated into the development. <u>3 points</u></p> <p>(2) Recycled asphalt or concrete <u>with at least 50 percent recycled content</u> is utilized in the project. <u>2 points</u></p>	

	(Points awarded for every 10 percent of total construction and demolition materials that are used for pavement, curb, and aggregate that meet the criteria of this practice are reused, deconstructed, and/or salvaged. The percentage is consistently calculated on a weight, volume, or cost basis.)
Committee Reason:	This modification improves clarity and adds specificity needed to properly administer the program. The modification also accounts for the mitigation of transportation/carbon impacts.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P030 LogID 5237	403.11 Environmentally sensitive areas	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Move this section to 401 (Site Selection) and then tier the points as follows: (1) Reward the highest level of points for avoiding environmentally sensitive areas. (2) Allow a somewhat lower number of points when a site with environmentally sensitive areas is selected and any sensitive areas damaged by construction are fully restored to their pre-construction ecosystem functions and services. (No site can truly be restored to its pre-construction state, even when there is an attempt to do so; thus the lower number of points.) (3) Allow an even fewer number of points when environmentally sensitive areas on the site that are degraded or disturbed by construction are enhanced or the damage is otherwise mitigated.	
Reason:	These points pertain to an important element in site selection: avoiding environmentally important areas. Its importance should be highlighted earlier in the chapter as part of the site selection section. Moreover, restoration and mitigation achieve different results and should not be rewarded the same level of points.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	This was not submitted in the proper format. Disapproved in favor of P031.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P031 LogID TG2-05	403.11 Environmentally sensitive areas	Final Formal Action: Approve as Modified
Submitter:	Robert Goo, US EPA	

<p>Proposed Change:</p>	<p>403.11 Environmentally sensitive areas. Environmentally sensitive areas are protected as follows:</p> <p>(1) The environmentally sensitive areas of sites including steep slopes, prime farmland, critical habitats, <u>stream protection areas</u>, and wetlands are avoided as follows:</p> <p>(a) <25 percent of site <u>environmentally sensitive areas left undeveloped</u>.... 2 points</p> <p>(b) 25 percent-75 percent of site<u>environmentally sensitive areas left undeveloped</u>.4 points</p> <p>(c) >75 percent of site <u>environmentally sensitive areas left undeveloped</u>.....7 points</p> <p>(2) Compromised environmentally sensitive areas are mitigated or restored. 4 points</p> <p><u>(2) Environmentally sensitive areas are permanently protected a conservation easement or similar mechanism. 10 points</u></p> <p><u>(3) At least 50% of environmentally sensitive impacted areas are partially restored or enhanced. 4 points</u></p> <p><u>(4) Environmentally sensitive areas are restored to predevelopment (not preproject) ecosystem function... 7points</u></p>
<p>Reason:</p>	<p>Language changed to provide additional clarity. Moreover, protection, restoration and mitigation achieve different results and should not be rewarded the same level of points.</p>
<p>Committee Action from Meeting:</p>	<p>Approve as Modified</p>
<p>Modification of Proposed Change:</p>	<p><i>Revise Proposed Change as follows (in red):</i></p> <p>403.11 Environmentally sensitive areas. Environmentally sensitive areas are protected as follows:</p> <p>(1) The environmentally sensitive areas of sites including steep slopes, prime farmland, critical habitats, <u>stream protection areas</u>, and wetlands are avoided as follows:</p> <p>(a) <25 percent of site <u>environmentally sensitive areas left undeveloped</u>.... 2 points</p> <p>(b) 25 percent-75 percent of site<u>environmentally sensitive areas left undeveloped</u>. 4 points</p> <p>(c) >75 percent of site <u>environmentally sensitive areas left undeveloped</u>.....7 points</p> <p>(2) Compromised environmentally sensitive areas are mitigated or restored. 4 points</p> <p><u>(2) Environmentally sensitive areas are permanently protected by a conservation easement or similar mechanism. 10 points</u></p> <p>(3) At least 50% of environmentally sensitive impacted areas are partially restored or enhanced. 4 points</p> <p>(4) Environmentally sensitive areas are restored to predevelopment (not preproject) ecosystem function... 7points</p>
<p>Committee Reason:</p>	<p>Items (3) and (4) were not well enough defined and were deemed unnecessary.</p>
<p>Ballot Results on Committee Action:</p>	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
<p>Ballot Comments</p>	
<p>Agree with committee action:</p>	
<p>Disagree with committee action:</p>	
<p>Abstain:</p>	

<p>P032 LogID TG2-03</p>	<p>403.5 Stormwater Management</p>	<p><i>Final Formal Action: Approve</i></p>
<p>Submitter:</p>	<p>Robert Goo, US EPA</p>	
<p>Proposed Change:</p>	<p>403.5 Stormwater management. Stormwater management design includes one or more of the following low impact development techniques:</p> <p>(1) Natural water and drainage features are preserved and used. 7 points (2) Vegetative swales, French drains, wetlands, drywells, rain gardens, and similar infiltration features are used. 6 points (3) Permeable materials are selected/specified for common area roads, driveways, parking areas, walkways, and patios. — (a) 10 percent to 25 percent. 2 points — (b) 25 percent to 75 percent. 5 points — (c) greater than 75 percent. 8 points (4) Stormwater management practices are selected/specified that manage rainfall on site and prevent the off-site discharge from all storms up to and including the volume of the 95th percentile storm event. 7 points (5) A hydrologic analysis is conducted that results in the design of a stormwater management system that maintains the predevelopment (stable, natural) runoff hydrology of the site throughout the development or redevelopment process. Post construction runoff rate, volume, and duration do not exceed predevelopment rates. 7 points (6) Stormwater management features/structures are designed for the reduction of nitrogen, phosphorus, and sediment. 7 points</p> <p>403.5 Stormwater Management. The stormwater management system is designed to use low impact development/green infrastructure practices to preserve, restore or mitigate changes in site hydrology due to land disturbance and the construction of impermeable surfaces through the use of one or more of the following techniques:</p> <p>(1) <u>A site assessment is conducted and a plan prepared and implemented that identifies important existing permeable soils, natural drainage ways and other water features, e.g., depressional storage, onsite to be preserved in order to maintain site hydrology. 7 points</u></p> <p>(2) <u>A hydrologic analysis is conducted that results in the design of a stormwater management system that maintains the predevelopment (stable, natural) runoff hydrology of the site through the development or redevelopment process. Ensure that post construction runoff rate, volume and duration do not exceed predevelopment rates, volume and duration. 10 points.</u></p> <p>(3) <u>Low Impact Development/Green infrastructure stormwater management practices to promote infiltration and evapotranspiration such as, but not limited to, vegetated swales, bio-retention cells, vegetated tree boxes and planters, green roofs, and permeable pavements are used to manage rainfall on the lot and prevent the off-lot discharge of runoff from all storms up to and including the volume of following storm events:</u></p> <p>(a) <u>80th percentile storm event 5 points</u></p> <p>(b) <u>90th percentile storm event 8 points</u></p> <p>(c) <u>95th percentile storm event 10 points</u></p> <p>(4) <u>Permeable materials are used for driveways, parking areas, walkways and patios according to the following percentages:</u></p>	

	(a) less than 25 percent 2 points
	(b) 25-50 percent 5 points
	(c) greater than 50 percent 10 points
Reason:	As written 403.5 is a mix of elements that have and do not have objective performance requirements. In addition, the categories overlap and some double counting may occur. The proposed rewrite is an attempt to address these issues and provide a more practical system with which to promote the use of low impact development/green infrastructure practices in the design of the stormwater management systems for the projects.
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P033 LogID 5231	403.5 Stormwater management	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(2) Vegetative swales...infiltration features are used. (2) One or more of the following features is included on the site or structure to allow for on-site infiltration of water: vegetative swales, bioretention systems, rain gardens, wetlands, french drains, drywells, and vegetative roofs.	
Reason:	This revised language clarifies intent of the credit and includes additional practices for which builders should receive credit.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	Revise proposed change as follows (in red): (2) Vegetative swales...infiltration features are used. (2) One or more of the following systems is included on the site or structure to allow for on-site infiltration of water: vegetative swales, bioretention systems, rain gardens, wetlands, french drains, drywells, and or vegetative roofs.	
Committee Reason:	Change from AND to OR in order to provide clarity. (Staff Note: This proposed change is incorporated into Item 3 of P032, which revised Section 403.5.)	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P034 LogID 5232	403.5 Stormwater management	Final Formal Action: Disapprove										
Submitter:	Brett VanAkkeren, USEPA											
Proposed Change:	For subpart (3), increase the points associated with items (b) and (c), or at least increase them relative to item (a), e.g., 6 points for (b) and 10 points for (c).											
Reason:	The expense and effort dedicated to the much higher portions of permeable materials, as well as the significantly higher potential for reducing runoff, should be rewarded by a greater step up in the point system.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	These points are being adequately handled because they are awarded in multiple locations.											
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P035 LogID 5233	403.5 Stormwater management	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Subparts (4) and (5) should each offer a number of points significantly higher than that of any other single item under 403.5, e.g., 25 points. These points should also not be additive with each other nor with the other items under 403.5, because (4) and (5) would require an array of approaches that would likely be redundant with most of the other items.	
Reason:	Achievement of (4) or (5) is a commitment to preserving site hydrology and reducing the impact of the development on water quality. Such an investment should be rewarded with higher points as an incentive for reaching for such high levels of environmental performance. Moreover, items (4) and (5) are comprehensive for the site, whereas (3) only addresses hardscape areas and (1), (2), and (6) only address some landscape features or components that could be incorporated into the landscape design. In the current version of NGBS, items (4) and (5) are rewarded with a point less than is (3)(c), which is quite at odds with the potential benefits that could be achieved under the respective items. The environmental benefits of (4) and (5) are likely much higher than those of all the other items in 403.5, and should be rewarded proportionately.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	This will be difficult to implement without research and documentation to justify the change. It is also unclear what the submitter is requesting to be changed.	

Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P036 LogID 5235	403.5 Stormwater management	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(6) Stormwater management features/structures are designed for the reduction of nitrogen, phosphorus, and sediment, and pathogens.	
Reason:	Pathogens are of concern in many areas. Low impact development practices that use soil-based infiltration systems can reduce pathogen loadings to receiving waters.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The term pathogens is very broad and not well enough defined for inclusion in the Standard.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P037 LogID 5236	403.6 Landscape plan	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(4)(a) 0 percent or EPA WaterSense Water Budget Tool is used to determine the maximum percentage of turf areas Create a new credit that rewards points for the use of the WaterSense Budget Tool, e.g.: (#) The landscape is designed to reflect the water use budget determined through the EPA WaterSense Water Budget Tool. Suggested point value: 6	
Reason:	The WaterSense Budget Tool can be used to design a landscape that reflects local climate conditions. The components of the design that are considered need not be limited to turfgrass. Thus, it makes sense to move the WaterSense Budget Tool into its own credit, independent of choices made on turfgrass.	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:	
Committee Reason:	This section was reworded through a different proposed change and use of the Water Sense tool was addressed there.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P038 LogID 5255	403.6 Landscape plan	Final Formal Action: Approve as Modified																											
Submitter:	Greg Johnson, Greg Johnson Consulting																												
Proposed Change:	<p>403.6 Landscape plan. A landscape plan is developed to limit water and energy use in common areas while preserving or enhancing the natural environment utilizing one or more of the following. Examples of techniques may include, but are not limited to, one or more of the following:</p> <table border="1"> <tr> <td>(1)</td> <td>A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.</td> <td>5 6</td> </tr> <tr> <td>(2)</td> <td>On-site native or regionally appropriate trees and shrubs are conserved, maintained and reused for landscaping to the greatest extent possible.</td> <td>5-6</td> </tr> <tr> <td>(3)</td> <td>Turf grass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected.</td> <td>4 6</td> </tr> <tr> <td>(4)</td> <td>The percentage of all turf areas are limited as part of the landscaping.</td> <td>-</td> </tr> <tr> <td>-</td> <td>(a) 0 percent</td> <td>4-</td> </tr> <tr> <td>-</td> <td>(b) greater than 0 percent to less than 20</td> <td>3-</td> </tr> <tr> <td>-</td> <td>(c) 20 percent to less than 40 percent</td> <td>2-</td> </tr> <tr> <td>-</td> <td>(d) 40 percent to 60 percent</td> <td>1-</td> </tr> </table> <p>Duplicative proposed change to Section 503.5:</p> <p>503.5 Landscape plan. A landscape plan for the lot is developed to limit water and energy use while preserving or enhancing the natural environment. (Where "front" only or "rear" only plan is implemented, only half of the points (rounding down to a whole number) are awarded for items 1-6)</p> <table border="1"> <tr> <td>(1)</td> <td>Where a lot is less than 50% turf, a A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.</td> <td>5 6</td> </tr> </table>		(1)	A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.	5 6	(2)	On-site native or regionally appropriate trees and shrubs are conserved, maintained and reused for landscaping to the greatest extent possible.	5-6	(3)	Turf grass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected.	4 6	(4)	The percentage of all turf areas are limited as part of the landscaping.	-	-	(a) 0 percent	4-	-	(b) greater than 0 percent to less than 20	3-	-	(c) 20 percent to less than 40 percent	2-	-	(d) 40 percent to 60 percent	1-	(1)	Where a lot is less than 50% turf, a A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.	5 6
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	(2)	Turf grass species, other vegetation, and trees are selected and specified on the lot plan that are native or regionally appropriate for local growing conditions.	4 <u>6</u>
	(3)	The percentage of turf areas that is designed to be mowed is limited and shown on the lot plan. The percentage is based on the landscaped area of the lot not including the home footprint, hardscape, and any undisturbed natural areas.	-
	-	(a) 0 percent	4
	-	(b) greater than 0 percent to less than 20	3
	-	(c) 20 percent to less than 40 percent	2
	-	(d) 40 percent to 60 percent	1
		Practices 4 through 6 unchanged	-
	(6)	Vegetative wind breaks or channels are designed to protect the lot and immediate surrounding lots as appropriate for local conditions.	4 <u>5</u>
Reason:	<p>The Outdoor Power Equipment Institute recommends striking all of Sections 403.6. (4) and 503.5 (3). We additionally request that the points for turf limitations in Sections 403.6. (4) and 503.5 (3) be reallocated to other more appropriate sustainable practices within their respective sections. The inclusion of disincentives for areas of turfgrass conflict with the intent of the NGBS and aren't consistent with other trends in landscape regulation. The 'less turf-more points' formula suggests a negative environmental value to turfgrass and completely discounts its positive social, safety, and environmental attributes. Limiting turfgrass also limits builder flexibility in installing landscapes for the best site specific environmental performance and inhibits offering a green residential building able to compete on an apples-to-apples basis for curbside appeal with traditional residential buildings. There is extensive scientific documentation of the valuable environmental ecosystem services that can be provided by turfgrass; (stormwater management, biomass accumulation, replacement of hardscapes, bioremediation, carbon sequestration, environmental cooling, nitrogen and phosphorous capture, fire safe site design, atmospheric cleansing, control of water and wind erosion, oxygen production), meaning that an incentive for the limitation of its use is unwarranted. This is particularly true considering the abilities of turfgrass to go dormant in periods of drought while still providing some of its ecosystem services and to be ready to provide the balance when precipitation or wastewater is again available. Consider, for example, the cooling benefits of turfgrass. In some instances, ground level temperatures of grass-covered land areas are 30 to 40 degrees cooler than bare soil. They are also 50 to 70 degrees cooler than hardscape (asphalt or concrete) areas. FN1. Reducing turfgrass increases the 'heat island' effect which in turn increases demand for energy. In addition to its cooling properties, managed turfgrass plays a positive role in our efforts to confront climate change. A well maintained, growing lawn that is fed by nutrients from grass clippings sequesters carbon from the atmosphere and helps to minimize the property's carbon footprint. FN2. Reducing turf areas and replacing them with mulch or hardscape makes active carbon 'sinks' inactive, potentially increasing the carbon released back into the atmosphere by exposing soils or using non-growing, decaying materials such as mulch. These alternative methods can be aesthetically appealing and help control water run-off and use, but they do not share the turfgrass benefit of contributing to the reduction of greenhouse gas emissions. It should be noted that a complete absence of scientific foundation was offered when turfgrass disincentives were suggested through public comment to the initial draft of the NGBS when the commenter merely referred to a few local green building programs in arid regions and stated: "Seems reasonable to give credit for both limited grass, as well as almost or no grass." Similarly, in the last cycle of ICC-700, the EPA comment to create stronger disincentives for turfgrass installation was presented as arbitrary targets with no scientific justification. In the EPA comment the statement was made that "EPA supports the inclusion of a practice restricting turf areas in landscaping..." This conflicts with the EPA's August 12, 2011 public comment to GG 243-11 of the IgCC in which the agency asks for turf area restrictions to be eliminated, saying instead that "... a water budget approach would be preferable to guide landscape</p>		

	<p>design, irrespective of the source of irrigation...” It also conflicts with EPA’s 2012 removal of the 40% turf limitation from the WaterSense Specification as well as the White House’s Council on Environmental Quality’s October 31, 2011 Guidance for Federal Agencies on Sustainable Practices for Designed Landscapes which has no prescriptive turf limitation and in fact recommends the use of turf for certain circumstances. This philosophical approach parallels the action of the International Code Council’s membership which overwhelmingly rejected all turf limitations at the final action hearings for the 2012 IgCC on November 3, 2011. The best way to facilitate a market approach to green building demand is to offer features that the public wants while providing buildings and sites with superior environmental performance. There was extensive discussion during the development of the first edition of the NGBS about prohibiting fire places and swimming pools from green residential buildings or awarding ‘negative points’ to buildings that offered those amenities. The committee wisely rejected approaches that created disincentives to demand for green residential buildings. Turfgrass is a similar amenity. For many people the maintenance of a lawn is a hobby of choice and a matter of pride. It’s also affordable, for both installation and maintenance, which can help foster more green building demand. Simply, many people like turfgrass and many would want to own or live in a green residential building with the amenity. They should not be penalized for wanting a place for their children and pets to engage in healthy play. Beyond amenities, turfgrass has larger societal benefits as well. It is the superior vegetative surface material for athletic activity, both organized and informal. It is unparalleled as a vegetative surface for viewing performances and other outdoor assembly uses and social gatherings. It is the most accessible traveling surface, other than hardscapes, as it allows for unobstructed, omni-directional movement. Where public safety is a concern, it is an inviting feature because it doesn’t permit undesirable lurking making it a key component of crime prevention through environmental design. For fire safety purposes turfgrass serves as defensible space for compliance with the Wildland Urban Interface Code and, when used with Grasscrete or similar materials, is suitable for use as a fire access lane or to replace other hardscapes. Finally, the division of points in our proposed change doesn’t reduce the total amount of points available for providing a landscape plan designed to limit water and energy use. Instead those points are allocated to other practices that demonstrably preserve or enhance the natural environment and which can benefit from the inclusion of turfgrass as an environmentally sound landscape strategy. Note that the greatest point increase is given to providing vegetation that is native or regionally appropriate for local growing conditions which is the best option in these sections for fostering water efficiency. FN1. Beard, J.B. and R.L. Green. 1994. The Role of Turfgrasses in Environmental Protection and Their Benefits to Humans. Journal of Environmental Quality. Vol 23:3 Sahu, R. 2008. Technical Assessment of the FN.2 Carbon Sequestration Potential of Managed Turfgrass in the United States. Outdoor Power Equipment Institute (OPEI). Alexandria, VA.</p>																					
Committee Action from Meeting:	Approve as Modified																					
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p>403.6 Landscape plan. A landscape plan is developed to limit water and energy use in common areas while preserving or enhancing the natural environment utilizing one or more of the following. Examples of techniques may include, but are not limited to, one or more of the following:</p> <table border="1"> <tr> <td>(1)</td> <td>A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.</td> <td>6</td> </tr> <tr> <td>(2)</td> <td>On-site native or regionally appropriate trees and shrubs are conserved, maintained and reused for landscaping to the greatest extent possible.</td> <td>6</td> </tr> <tr> <td>(3)</td> <td>Turf grass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected <u>giving consideration to biodiversity and water use.</u></td> <td>5 <u>7</u></td> </tr> <tr> <td>(4)</td> <td>The percentage of all turf areas are limited as part of the landscaping.</td> <td>-</td> </tr> <tr> <td>-</td> <td>(a) 0 percent</td> <td>4</td> </tr> <tr> <td>-</td> <td>(b) greater than 0 percent to less than 20</td> <td>3</td> </tr> <tr> <td>-</td> <td>(c) 20 percent to less than 40 percent</td> <td>2</td> </tr> </table>	(1)	A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.	6	(2)	On-site native or regionally appropriate trees and shrubs are conserved, maintained and reused for landscaping to the greatest extent possible.	6	(3)	Turf grass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected <u>giving consideration to biodiversity and water use.</u>	5 <u>7</u>	(4)	The percentage of all turf areas are limited as part of the landscaping.	-	-	(a) 0 percent	4	-	(b) greater than 0 percent to less than 20	3	-	(c) 20 percent to less than 40 percent	2
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	-	(d) 40 percent to 60 percent	1
	(4)	<u>EPA WaterSense Water Budget Tool is used to determine the maximum percentage of turf areas.</u>	<u>2</u>
	(5)	<u>Non-potable irrigation water is available to common areas</u>	<u>2</u>
	(6)	<u>Non-potable irrigation water is available to lots.</u>	<u>4</u>
<p>503.5 Landscape plan. A landscape plan for the lot is developed to limit water and energy Use while preserving or enhancing the natural environment.(Where "front" only or "rear" only plan is implemented, only half of the points (rounding down to a whole number) are awarded for items 1-6)</p>			
	(1)	Where a lot is less than 50% turf, a A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.	6
	(2)	Turf grass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected <u>giving consideration to biodiversity and water use.</u>	6 <u>7</u>
	(3)	The percentage of turf areas that is designed to be mowed is limited and shown on the lot plan. The percentage is based on the landscaped area of the lot not including the home footprint, hardscape, and any undisturbed natural areas.	-
	-	(a) 0 percent	4
	-	(b) greater than 0 percent to less than 20	3
	-	(c) 20 percent to less than 40 percent	2
	-	(d) 40 percent to 60 percent	1
	(3)	<u>EPA WaterSense Water Budget Tool is used to determine the maximum percentage of turf areas.</u>	2
		Practices 4 through 6 unchanged	
	(6)	Vegetative wind breaks or channels are designed to protect the lot and immediate surrounding lots as appropriate for local conditions.	4 <u>5</u>
Committee Reason:	The use of turfgrass in landscape design should be appropriate to the site. Turfgrass offers environmental benefits that may be desirable on the site so disincentives for its use are not warranted. Instead, other performance objectives for consideration by the site designer like water efficiency and biodiversity should be identified in the standard.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P039 LogID 5258	403.6 Landscape plan	Final Formal Action: Approve as Modified																					
Submitter:	Greg Johnson, Greg Johnson Consulting																						
Proposed Change:	<p>403.6 Landscape plan. A landscape plan is developed to limit water and energy use in common areas while preserving or enhancing the natural environment utilizing one or more of the following. Examples of techniques may include, but are not limited to, one or more of the following:</p> <table border="1"> <tr> <td></td> <td>Practices 1-3 are unchanged</td> <td></td> </tr> <tr> <td>(4)</td> <td><u>Turfgrass is over-seeded with not less than the equivalent rate of one-half pound per acre (.22 kg/.405 ha) of white clover (trifolium repens) or similar flowering maintenance tolerant herbaceous plants.</u></td> <td><u>5</u></td> </tr> <tr> <td>(4)</td> <td>The percentage of all turf areas are limited as part of the landscaping.</td> <td>-</td> </tr> <tr> <td>-</td> <td>(a) 0 percent</td> <td>4</td> </tr> <tr> <td>-</td> <td>(b) greater than 0 percent to less than 20</td> <td>3</td> </tr> <tr> <td>-</td> <td>(c) 20 percent to less than 40 percent</td> <td>2</td> </tr> <tr> <td>-</td> <td>(d) 40 percent to 60 percent</td> <td>1</td> </tr> </table> <p>Duplicative proposed change submitted to Sec. 503.5.</p>			Practices 1-3 are unchanged		(4)	<u>Turfgrass is over-seeded with not less than the equivalent rate of one-half pound per acre (.22 kg/.405 ha) of white clover (trifolium repens) or similar flowering maintenance tolerant herbaceous plants.</u>	<u>5</u>	(4)	The percentage of all turf areas are limited as part of the landscaping.	-	-	(a) 0 percent	4	-	(b) greater than 0 percent to less than 20	3	-	(c) 20 percent to less than 40 percent	2	-	(d) 40 percent to 60 percent	1
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-	(c) 20 percent to less than 40 percent	2																					
-	(d) 40 percent to 60 percent	1																					
Reason:	<p>I propose the elimination of the questionable practice awarding of points for the limitation of areas of turfgrass and to instead award points for the inclusion of white clover to areas of turfgrass. This measure will improve the wildlife habitat value of turfgrass systems installed on ICC-700 compliant sites while maintaining the durability, carbon sequestration, environmental cooling, atmospheric cleansing, control of water and wind erosion, and oxygen production functions of the turfgrass component. The addition of white clover to turfgrass is not a new idea; it was commonly added to lawns in the first half of the 20th century. Returning to this practice is suggested as an important option for sustainable turfgrass systems where the performance of the turfgrass materials and white clover are complimentary. This approach is akin to that taken with structural building materials; we do not limit the use of steel in multi-story buildings because it yields in intense fire conditions – we install it as a component of a system with some sort of fireproofing added; we do not limit the use of concrete because of its permeability – we add water and vapor resistive barriers to create an assembly; we do not limit the use of exterior wood – we treat the wood with some other material to resist rotting. By adding flowering plants to the assembly an insect and bird friendly turfgrass system is provided. The addition of white clover to turfgrass systems is consistent with the “bee lawn” research of the University of Minnesota’s entomology and horticulture departments.^{1, 2} This research provides the basis for turfgrass systems that support pollinating arthropods and other fauna. Research in Illinois by Dr. John Hilty indicates that 53 pollinating insect species, (33 long tongued bees, 14 short tongued bees, 6 wasps,) and 35 non-pollinating insects (9 flies, 14 butterflies, 10 skippers, 2 moths) suck the nectar of white clover.³ Hilty also reports that many moth caterpillars, 4 species of butterfly caterpillars, and the Flower Thrip all use clover as a food source.⁴ In other white clover faunal associations Hilty states that “the foliage and seedheads are eaten by the Ruffed Grouse, Greater Prairie Chicken, Wild Turkey, and Ring-Necked Pheasant. Some songbirds occasionally eat the seeds, including the Horned Lark and Smith Longspur (winter only). Various small mammals find the foliage and seedpods very attractive as a source of food, including the Cottontail Rabbit, Groundhog, Thirteen-Lined Ground Squirrel, and Meadow Vole. Large hoofed animals, such as the White-Tailed Deer, cattle, horses, and sheep, also graze on the foliage of clovers.”⁵ Similarly, the USDA Forest Service identifies white clover as “an excellent forage plant for livestock and wildlife. The leaves and flowers are grazed by grizzly bear, moose, mule, white-tailed deer, and blue grouse. It comprises nearly 6 percent of the annual forage of the white-footed vole. The seeds are eaten by the northern bobwhite, bufflehead, American coot, sage grouse, ruffed grouse, sharp-tailed grouse, horned lark, mallard, gray partridge, greater prairie chicken, willow ptarmigan, American pintail, California quail, and American robin.”⁵ Given white clover’s global distribution, (widely naturalized in the temperate regions of the world; native of Europe, North Africa, and western and</p>																						

	<p>central Asia;6 present in all 50 states and provinces of Canada7) its habitat value to local wildlife is orders of magnitude beyond that identified by Dr. Hilty in Illinois or to the North American species reported by the USDA Forest Service. Besides wildlife nutrition, white clover is edible by humans with minimal preparation. It is high in protein and used for soup and salads and tea. It also can be made into flour. White clover’s potential contribution to urban agriculture furthers its sustainability quotient.8 White clover is a nitrogen fixing plant, capturing nitrogen from the atmosphere and making it available as fertilizer to other plants when it dies; a sustainability boon in addition to its habitat and urban agriculture values. According to multiple sources it remains green even during drought when turfgrass is dormant; eliminates the need for herbicides because it suppresses weeds; virtually eliminates the need for fertilizer when incorporated with turfgrass because of its nitrogen contribution; requires no pesticides; and smells good. The standard seeding recommendation by the USDA Natural Resources Conservation Service is 2 lbs. per acre (43,560 ft2) for pastures for 50% coverage.9 A rate equivalent to 1/2 pound per acre is suggested as appropriate for overseeding lawns. The offered performance alternative to white clover, “similar flowering maintenance tolerant herbaceous plants” helps address sites where white clover is not ideally suited. Adding language to the Commentary to provide guidance for the selection of white clover alternatives is strongly indicated. According to the USDA’s Natural Resources Conservation Service neither the Federal government nor any state government identifies white clover as a noxious weed or invasive plant although, as is for many beneficial plant species, proper management is recommended for control.10 1. http://blog.lib.umn.edu/efans/ygnews/2012/03/a-bee-lawn-how-to-have-an-inse-1.html 2. http://turf.umn.edu/category/bee-lawn/ 3.www.illinoiswildflowers.info/flower_insects/plants/white_clover.htm 4.http://www.illinoiswildflowers.info/weeds/plants/white_clover.htm 5.http://www.fs.fed.us/database/feis/plants/forb/trirep/all.html 6.http://www.efloras.org/florataxon.aspx?flora_id=110&taxon_id=200012344 7.http://plants.usda.gov/core/profile?symbol=TRRE3 8.http://en.wikipedia.org/wiki/Trifolium_repens 9.http://plants.usda.gov/factsheet/pdf/fs_trre3.pdf 10.http://plants.usda.gov/java/noxComposite</p>																					
Committee Action from Meeting:	Approve as Modified																					
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <table border="1"> <tr> <td></td> <td>Practices 1-3 are unchanged</td> <td></td> </tr> <tr> <td>(4)</td> <td><u>Turfgrass is integrated with maintenance tolerant, non-invasive flowering herbaceous plants in an amount to achieve not less than 10% of the groundcover. Plants should typically flower at less than 6 inches in height.</u></td> <td><u>3</u></td> </tr> <tr> <td>(4)</td> <td>The percentage of all turf areas are limited as part of the landscaping.</td> <td>-</td> </tr> <tr> <td>-</td> <td>(a) 0 percent</td> <td>4</td> </tr> <tr> <td>-</td> <td>(b) greater than 0 percent to less than 20</td> <td>3</td> </tr> <tr> <td>-</td> <td>(c) 20 percent to less than 40 percent</td> <td>2</td> </tr> <tr> <td>-</td> <td>(d) 40 percent to 60 percent</td> <td>1</td> </tr> </table>		Practices 1-3 are unchanged		(4)	<u>Turfgrass is integrated with maintenance tolerant, non-invasive flowering herbaceous plants in an amount to achieve not less than 10% of the groundcover. Plants should typically flower at less than 6 inches in height.</u>	<u>3</u>	(4)	The percentage of all turf areas are limited as part of the landscaping.	-	-	(a) 0 percent	4	-	(b) greater than 0 percent to less than 20	3	-	(c) 20 percent to less than 40 percent	2	-	(d) 40 percent to 60 percent	1
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Committee Reason:	Removed the specific mention of clover because clover may not be appropriate but other seed mixes may be appropriate. Should not award points for one specific species as that species maybe invasive in certain locations.																					
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>																					
Ballot Comments																						
Agree with committee action:																						
Disagree with committee action:																						
Abstain:																						

P040	LogID 5320	403.6 Landscape plan	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality		
Proposed Change:	403.6 (4)		
Reason:	Item 3 makes sense, when it says use appropriate vegetation; presumably including low water grass. Item 4, limiting turf areas, does not. We want to limit water use, not limit grass.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	The turf grass issue was addressed through previous comments.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P041	LogID 5206	403.6 Landscape plan	Final Formal Action: Approve as Modified
Submitter:	Wes Sullens, StopWaste of Alameda County		
Proposed Change:	"Turf grass species, other vegetation, In areas where turf grass is not used, non-invasive vegetation and trees that are native or regionally appropriate for local conditions are selected."		
Reason:	<p>1)The fourth item under 403.6 rewards points for the use of turf grass in a manner that is consistent with local water availability. Thus, the selection of a turf grass that is "regionally appropriate" in item 3 is redundant with item 4, and could lead to double-rewarding of credit points for the use of turf. Such encouragement of the use of turf grass clearly is inconsistent with the goals of this section. 2)Because turf grasses are regularly mown, they do not provide the height nor flowers that provide food and habitat for pollinators and other wildlife. Therefore, it does not make sense to group them with other types of vegetation. In addition, turf grasses have shallow root depths, and are not as effective at sequestering carbon, retaining water, creating porous soils, or fostering biota, as compared to other plant species with deeper root systems. 3)Turf grass requires a unique maintenance regime that creates a level of pollution risk that is higher than that created by other types of vegetation – yet another reason not to group it with non-turf types of vegetation. 4) The reasons to avoid invasive plants are many:</p> <ul style="list-style-type: none"> •Invasive plants produce greater amounts of waste. Invasive plants tend to grow faster, spread beyond their original planting areas, and result in greater amounts of green waste than non-invasive species. Additionally, effective eradication of invasive plants often requires the use of herbicides which are classified as hazardous waste and must be disposed of properly at end of life. Avoiding invasive plants is a waste prevention measure for cities and counties who regulate and operate hazardous waste facilities and landfills. •Invasive plants have serious environmental impacts, including increased frequency and intensity of fire regimes in certain climates, altered soil composition, lack of dissolved oxygen in waterways, changes to natural hydrologic cycles, and threaten wildlife. While the effects of invasive plants are most severely felt in the rural areas and wildlands, evidence is that most invasive plants currently causing havoc in the west started as horticultural plantings in urban areas. Therefore, land development in urban and suburban areas have a direct correlation with invasive plant exposure throughout the region. •Management of invasive plants is expensive. In California for example, the cost of control, monitoring, and outreach is conservatively estimated to be \$82 million a year (not including indirect costs associated with lost agricultural yields, increased severity of wildfires and floods, loss of 		

	productive range and timber lands, reduced land values, damage to infrastructure, and degraded recreational opportunities). •Avoiding invasive plants via building standards is effective and low-cost. Experts agree that prevention is the most effective and resource-efficient way to combat the spread of invasive plants. By requiring construction projects to avoid invasive plant species, demand for invasive plants from nurseries and suppliers will diminish over time. Further, a wide variety of alternatives to invasive plants is easily available with no cost difference, resulting in no cost increase for the design and construction industry.										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<i>Revise standard as follows:</i> Turfgrass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected <u>and specified on the lot plan. Non-invasive vegetation is selected.</u>										
Committee Reason:	Edited for consistency with change in Chapter 5. Some regionally appropriate species are in fact invasive.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P042 LogID 5264	405.0 Intent (Innovative Practices)	<i>Final Formal Action: Disapprove</i>										
Submitter:	Matt Belcher, Verdatek Solutions											
Proposed Change:	405.11 Resilience Site incorporates one or more of the following resilience options, as applicable. <u>1. The development of portions of the site(s) located within flood hazard areas is avoided as follows:</u> <u>(a) Portions of sites located within flood hazard areas are avoided.</u> <u>(b) Portions of sites located within areas subject to a 0.2% annual chance of (500-year) flood are avoided.</u>											
Reason:	With the focus on future enhancement of the model codes to provide for enhanced "Resilient" construction, It is an opportunity to include reference in this "above code" standard to incentivise innvotaive practices and process that will demonstrate best practices for eventual application into the model codes.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	Committee is not convinced of the demonstrable benefits of the proposal. The concept of combining disaster resistance and green construction has not been adequately developed.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
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Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												

Disagree with committee action:	
Abstain:	

P043 LogID 5261	405.1 Driveways and parking areas	Final Formal Action: Approve as Modified
Submitter:	Greg Johnson, Greg Johnson Consulting	
Proposed Change:	<p>405.1 Driveways and parking areas. Driveways and parking areas are minimized or mitigated by one or more of the following:</p> <p>Practices 1-3 unchanged</p> <p>(4) Closed cell grass paving systems are utilized to reduce the footprint of surface driveways, fire lanes, streets and parking areas.</p> <p>(a) 25 % to less than 50%</p> <p>(b) 50% to 75%</p> <p>(c) greater than 75%</p>	<p></p> <p></p> <p>-</p> <p><u>4</u></p> <p><u>5</u></p> <p><u>6</u></p>
Reason:	Closed cell grass paving systems offer multiple environmental benefits; being completely pervious for stormwater management and offering not just passive heat mitigation, but active cooling through transpiration. Grass paving also sequesters carbon and produces oxygen. These multiple benefits deserve recognition as an innovative practice.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Add new item to Section 405.1 Driveways and parking areas as follows:</i></p> <p>405.1 Driveways and parking areas. Driveways and parking areas are minimized or mitigated by one or more of the following:</p> <p>Practices 1-3 unchanged</p> <p>(4) Vegetative paving systems are utilized to reduce the footprint of surface driveways, fire lanes, streets or parking areas.</p> <p>(a) 10 % to less than 25%</p> <p>(b) 25% to 75%</p> <p>(c) greater than 75%</p>	
Committee Reason:	Should not be restricting which types of vegetative paving systems, but rather awarding points for their use.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		

Abstain:	
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P044 LogID 5202	405.1 Driveways and parking areas	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(1) Off-street parking area are shared or driveways are shared; ...rear-loaded garages. <u>No more than 20 percent of all single family homes shall have front-loaded garages, unless the topography prohibits rear loading. Front-loaded garages for detached homes should be placed a minimum of 15 feet behind of the front façade of the house.</u>	
Reason:	The high number of curb cuts caused by front loaded garages creates a safety hazard for pedestrians with too many car pedestrian conflicts. This makes the streetscape unwalkable; discouraging active transportation modes. Snout houses with garage doors prominently displayed create an inhospitable environment for walking. People feel safer when the design of the building façade gives the impression of more eyes on the street.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	This is an issue that is related to good community design but does not have a green component. Also, it is related to the design of the home, not the site.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P045 LogID 5190	405.2 Street widths	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(2) A waiver was secured by the developer from the local jurisdiction to allow for construction of streets below minimum width requirement. <u>(2) The subdivision has a minimum street connectivity standard of 90 intersections per square mile.</u>	
Reason:	Narrow street widths do not work if you use a dendritic street pattern. Without a grid, emergency vehicles can get trapped on streets behind large vehicles. A grid allows multiple pathways to emergency site. A grid also reduces the average walking and biking trip length encouraging active transportation. Your use of the terms collector and local access reinforce the dendritic typology. The Standard of 90 intersections is a prerequisite of LEED-ND version 2009.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	By deleting the previous language and replacing it with the proposed change you lose the points for creating a narrow street. It also makes it difficult to follow the natural contours of the land which an applicant would get points for in subsequent sections. Also, street connectivity does not belong in the street width section.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39	

	Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P046	LogID 5191	405.4 Zoning	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	(1) Innovative zoning Move the points to 405.7.		
Reason:	The innovation is zoning is not important for a green community. The design that results from the zoning changes affects how green the community is. Don't focus on process, focus on outcomes.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	Revise standard as follows: 405.4 Zoning <u>Planning</u> . Innovative zoning <u>planning</u> techniques are implemented in accordance with the following: (1) Innovative zoning ordinances or local laws <u>planning techniques</u> are used or developed for permissible adjustments to population density, area, height, open space, mixed-use, or other provisions for the specific purpose of open space, natural resource preservation or protection and/or mass transit usage. Other innovative zoning <u>planning</u> techniques may be considered on a case-by-case basis. 8 <u>10</u> points (2) An increase to the permissible density, area, height, use, or other provisions of a local zoning law for a defined green benefit. 7 points Place-based amenities such as plazas, squares, and attached greens located around civic, commercial, and mixed use property are accessible by sidewalks, on-street parking, or provide for bike racks for the purpose of promoting higher density living. 7 <u>10</u> points		
Committee Reason:	Applicants should not get points for developing in an area with progressive zoning laws, however, if an applicant takes it upon themselves to use innovative planning practices in the design of the site without being required to do so, that is worthy of receiving points under the standard and achieves the intent of the section.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P047	LogID 5192	405.4 Zoning	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	(2) An increase to the permissible . . .		
Reason:	An increase in height to promote density is redundant with section 405.7 Density.		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			
Committee Reason:	This is redundant and deleted it in a previous change.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P048	LogID 5193	405.4 Zoning	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	(3) Place based amenities such as plazas, squares, and attached greens located around civic, commercial, and mixed-use property are accessible by sidewalks....		
	<u>(3) Provide active open space of a minimum of 1/6 acre within ¼ mile walk of 90 percent of planned and existing units and entrances to no residential buildings. The open space must be accessible to the public and be clearly signed for public access. Squares, Parks, Paseos and Plazas all meet this criterion.</u>		
Reason:	The existing text is too vague. There needs to be quantitative measures on the level of amenities. Most open spaces are underused because of bad design. Preserve the social aspects of publically accessible open space. The open space must be accessible to the public and be clearly signed for public access. Joint open space should not be designed to be viewed as a continuation of existing private backyards.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<i>Revise standard as follows:</i>		
	(3) Place based amenities such as plazas, squares, and attached greens located around civic, commercial, and mixed-use property are accessible by sidewalks....		
	<u>(3) Provide common or public spaces of a minimum of 1/6 acre that are within ¼ mile walk to 80 percent of planned and existing units and entrances to non- residential buildings. Squares, parks, paseos, plazas, and similar uses qualify under this criterion.</u>		
Committee Reason:	Revised proposal for clarity.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			

Disagree with committee action:	
Abstain:	

P049 LogID 5194	405.6 Multi-modal transportation	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(1) " or within 5 miles of mass transit station with parking".	
Reason:	90% of criteria air pollutants are emitted in the first 2 minutes of a cold start of a vehicle. Driving to transit does not greatly improve air quality.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The intent of this section is to encourage development close to transit and densely populated areas. Points in this section are also given to projects within a half mile of transit access to encourage walking.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P050 LogID 5195	405.6 Multi-modal transportation	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(3) Walkways, bikeways, street crossings, and entrances designed to promote pedestrian activity are provided. New buildings...	
	<u>(3) Create a grid of sidewalks and paths that provide a minimum level of connectivity of at least 90 intersections per square mile.</u>	
Reason:	Walking as active transportation requires direct pathways and multiple routes. It is necessary to include a minimum sidewalk, path intersection connectivity to ensure multiple pathways, and short and relatively direct routes.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> (3) Walkways, bikeways, street crossings, and entrances designed to promote pedestrian activity are provided. New buildings... (3) <u>A system of walkways, bikeways, street crossings, and entrances pathways designed to promote connectivity to existing and planned community amenities pedestrian activity are provided.</u> (a) <u>Create a grid of sidewalks and paths that provide a minimum level of connectivity of at least 90 bikeway or pathway intersections per square mile. 5points</u> (b) <u>Create a grid of sidewalks and paths that provide a minimum level of connectivity of at least 140 bikeway or pathway intersections per square mile. 10points</u>	

Committee Reason:	Edited proposal for additional clarity and specificity. Points are awarded for 3 and then added for A or B.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P051 LogID 5196	405.6 Multi-modal transportation	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(4) Bicycle parking and racks are indicated on the site plan and constructed for mixed-use, multi-family buildings, and/or common areas, <u>with a minimum of 1 bicycle parking space per residential unit and 5,000 square feet of office space.</u>	
Reason:	A minimum number of spaces is essential to ensure that a sufficient number of spaces is provided for occupants and to encourage bicycling. These numbers are taken from LEED 2009.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise Standard as Follows:</i></p> <p>405.6 Multi-modal transportation.</p> <p>(4)<u>Dedicated</u> bicycle parking and racks are indicated on the site plan and constructed for mixed-use, multi-family buildings, and/or common areas:</p> <p><u>(a) Minimum of 1 bicycle parking space per 3 residential units</u></p> <p><u>(b) Minimum of 1 bicycle parking space per 2 residential units</u></p> <p><u>(c)Minimum of 1 bicycle parking space per 1 residential unit.</u></p> <p>501.2Multi-modal transportation.</p> <p>(5)<u>Dedicated</u> bicycle parking and racks are indicated on the site plan and constructed for mixed-use, multi-family buildings, and/or common areas:</p> <p><u>(a) Minimum of 1 bicycle parking space per 3 residential units</u></p> <p><u>(b) Minimum of 1 bicycle parking space per 2 residential units</u></p> <p><u>(c) Minimum of 1 bicycle parking space per1 residential unit.</u></p>	
Committee Reason:	This practice will benefit from the inclusion of a compliance metric. However, a tiered approach is appropriate to allow for increasingly higher quantities of bicycle parking for multi-family. Each tier would be voluntary and would be assigned an increasing number of points. The reference to office space was removed because it is not applicable. This practice is also applicable in Chapter 5 Section501.2.	

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P052 LogID 5197	405.6 Multi-modal transportation	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Reduce Subparts (5) and (6) to 3 points each and increase subparts (1) as revised and (2) to 6 and 10 points respectively.	
Reason:	Bike and car sharing depend on a network larger than the subdivision scale. It is difficult for the applicant to ensure an adequate size of transportation sharing system to ensure feasibility and use. Research by Ewing and Cervero demonstrate that “access to transit” is second only to “siting in a central location” in its impacts at reducing Household vehicle miles traveled.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The submitter did not make a persuasive case.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P053 LogID TG2-07	405.6 Multi-modal transportation	Final Formal Action: Approve
Submitter:	Don Whyte, Elevated Real Estate Solutions LLC	
Proposed Change:	(4) Bicycle parking and racks are indicated on the site plan and constructed for mixed-use , multi-family buildings and/or each <u>developed common areas</u> . <u>6 points</u>	
Reason:	This was revised for additional clarity. NGBS only applies to the residential portions of the project and while bike racks should be available at the developed common areas (ex: playgrounds), they do not need to be provided around passive open space.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0

	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P054	LogID 5198	405.8 Mixed-use development	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	Delete the section in its entirety and replace with the following: <u>(1) If the majority of the project is residential, provide a least 10% square footage on non-residential uses. (2) For single use sites of 20 acres or less, 80% of the units should be within ¼ mile walk of 5 non-residential units with no more than two of the same type of use being counted.</u>		
Reason:	The mix of uses is in need of better quantification.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<i>Revise standard as follows:</i> 405.8 Mixed-use development. (1) Mixed-use development is incorporated, or (2) For single use sites of 20 acres or less in size, with boundaries adjacent to a site with a minimum of two uses containing retail, services, and employment where a pedestrian network of streets, sidewalks, pathways, or plazas exists that connects the majority of lots within the site with the adjacent non-residential multi-use site. <u>80% of the units should be within ½ mile walk of 5 non-residential uses and where a system of walkways, bikeways, street crossings and pathways is designed to promote connectivity to those uses.</u>		
Committee Reason:	The distance is increased to a half mile and language is added about connectivity to make sure the residents could easily access those outside amenities to meet the intent of the section.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P055	LogID 5199	501.1 Lot	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	Applicants should only get points for one of the categories and the points should have a greater spread, e.g., (1) Certified site 12, (2) Infill-10 points, (3) Greyfield-20points, (4) Brownfield-39 points, and (5) Low slope-5 points.		
Reason:	Are the points earned in this section additive? The wording “one or more of the following” is ambiguous. For example, the Belmar development in Longwood CO, is an infill site, that was built on an old shopping center site so it is also a greyfield site. The former automotive repair center of the former shopping center had some petroleum contaminants in the soils around it so it could also qualify as a brownfield. It also has low slopes. Would a lot in that project it get 33 points? That doesn’t seem right. They should only get points for one of the categories and the points should have a greater spread as suggested.		

Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p>501.1 Lot. The lot is selected to minimize environmental impact by one or more of the following: A lot is selected within a site certified to this Standard or equivalent, 15 points</p> <p><u>Or the lot is selected to minimize environmental impact by one or more of the following:</u></p> <p>(1) A lot is selected within a site certified to this Standard or equivalent — 6 points</p> <p>(2) (1) An infill lot is selected 810 points</p> <p>(3) (2) An infill lot is selected that is a greyfield 710 points</p> <p>(4) (3) An EPA-recognized brownfield lot is selected 915 points</p> <p>(5) A lot with an average slope calculation of less than 15% is selected. — 9 points</p>
Committee Reason:	The point amounts should be increased but by a lesser degree. Also, lots would be getting double points if they were getting points for being in a certified site that was, for example, a brownfield and then points again for the lot in the already certified site being a brownfield. The modified text is clearer.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P056 LogID 5238	501.1 Lot (Lot selection)	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(5) A lot with an average slope calculation of less than 15% is selected.	
Reason:	<p>It is not clear why it is desirable to specifically encourage the use of low-slope lots. There are environmental trade-offs whether one selects a lot that is relatively flat or one selects one with steeper slopes. In the former, there is a greater likelihood that the flat land could be high-quality farm land; in the latter, there is the possibility that construction will cause erosion. The problems associated with the former cannot be mitigated, whereas the problems associated with the latter can be prevented or mitigated through a variety of practices, including using pin foundations or terraces that stabilize the slopes – and other practices for which points are available elsewhere in Chapter 5 (see 503.2). Also, if the slope is already heavily eroded, structures built on the slope may accrue a net environmental gain by reducing slope movement. Moreover, the 9 points made available through this credit seem extremely high. Flat areas are the easiest for a builder to build upon, so a builder may be rewarded simply for doing what comes easiest, not because it was the environmentally sound approach to take (and even when the site is quality farmland, a wetland, a surface water buffer, or other environmentally sensitive area). And, as building on a low-slope area is unlikely to provide anything close to the environmental benefits provided by building on an infill, greyfield, or brownfield site, the number of points attached to it should be much lower (with at delta of at least 10 points), if any points are attached to it at all.</p>	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P057	LogID 5298	501.2 Multi-modal transportation	Final Formal Action: Disapprove
Submitter:	Aaron gary, US-EcoLogic		
Proposed Change:	Add additional option under 501.2 for projects that are located near employment opportunities worth 5 points. Use metric Jobs per Square Mile (threshold to be determined). (This metric is easily verified through Walkscore Streetsmart)		
	<u>(5) A lot is selected near employment opportunities...</u>		
Reason:	Rewards walkability and access to community resources. Rewards mixed use development. Aligns with existing options 1 through 4.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Walkscore may not work in cases where there is a greenfield community.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P058	LogID 5200	501.2 Multi-modal transportation	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	In subpart (1): or within 5 miles of mass transit station with parking.		
Reason:	90% of criteria air pollutants are emitted in the first 2 minutes of a cold start of a vehicle. Driving to transit does not greatly improve air quality.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<p><i>Revise section 501.2 Multi-modal transportation as follows:</i></p> <p>1) A lot is selected within one-half mile (805 m) of pedestrian access to a mass transit system or within five miles (8,046 m) of a mass transit station with provisions for parking. 4 points</p>		

	<p><u>1) A lot is selected within one-half mile (805 m) of pedestrian access to a mass transit system. 6 points</u></p> <p><u>2) A lot is selected within five miles (8,046 m) of a mass transit station with provisions for parking. 3 points</u></p> <p><i>Renumber rest of section 501.2 Multi-modal transportation.</i></p>
Committee Reason:	The intent of this section is to encourage development close to transit and densely populated areas. In order to award more points for providing pedestrian access to transit, this section was split into 2 parts.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P059 LogID 5201	501.2 Multi-modal transportation	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(3) A lot is selected within one-half mile (805 m) of six or more... <u>No more than two each of the following use category can be counted toward the total: Recreation, Retail, Civic, and Services.</u>	
Reason:	Having only 5 parks nearby will not generate a high Walkscore™. A diversity of uses is necessary to create a genuine walkable environment.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P060 LogID 5066	503.1 Natural resources	Final Formal Action: Approve as Modified
Submitter:	Philip LaRocque, LaRocque Business Management Services, LLC	
Proposed Change:	503.1(5) All tree pruning on-site is conducted by Certified Arborist <u>or other qualified professional.</u>	
Reason:	Both the natural resource inventory and landscape plan in the standard allows for "qualified professional" reference and the same should be allowed for tree-pruning. Requiring only a Certified Arborist is simply too proprietary and anti-competitive. I have worked with many builder clients to meet this proprietary practice for 3 points with no success since it seriously limits competition.	

Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> 503.1(5) All tree pruning on-site is conducted by C ertified A arborist or other qualified professional.										
Committee Reason:	An arborist may not be available and there are other professionals who are qualified to conduct tree pruning.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P061 LogID TG2-02	503.1 Natural resources	Final Formal Action: Approve										
Submitter:	Don Whyte, Elevated Real Estate Solutions LLC											
Proposed Change:	(2) A plan is implemented to conserve the elements identified by the <u>natural</u> resource inventory as high-priority resources. (3) Items listed for protection in the <u>natural</u> resource inventory plan are protected under the direction of a qualified professional.											
Reason:	Language changed for consistency											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2	
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P062 LogID 5273	503.3 Soil disturbance and erosion	Final Formal Action: Disapprove
Submitter:	Shelly Leonard, Green Space Consultants LLC	
Proposed Change:	(1) Construction activities are scheduled to minimize length of time that soils are exposed <u>following the 14 day EPA guideline. Multifamily projects should have a schedule that minimizes time that soil is exposed and subject to erosion and is implemented during the construction process.</u>	
Reason:	Include major factors and provide as much clarity as possible in the practice description.	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:	
Committee Reason:	Part of this was previously addressed. Regarding the multifamily suggestion, all projects should have the same requirement. Multifamily projects are currently governed by federal law by the same EPA soil stabilization requirements as single family projects. The current EPA requirements already clearly provide for the flexibility necessary to accommodate the construction activities of a multifamily or single family project. No change is necessary.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P063 LogID 5057	503.3 Soil disturbance and erosion	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	(1) Construction activities are scheduled to minimize length of time that soils are exposed such that <u>disturbed soil that is to be left unworked for more than 21 days is stabilized within in 14 days.</u>	
Reason:	"Minimize" is a very non-specific term that is open to a wide range of interpretation. It does not specific to what extent the minimization is needed in order to qualify for the points. A more definitive practice is needed. The suggested revision is consistent with the practice in 504.3(6).	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The number of days is too limiting.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P064 LogID 5130	503.3 Soil disturbance and erosion	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	Soil disturbance and erosion. Soil disturbance and erosion are minimized by one or more of the following: (also see Section 504.3)(1) Construction activities are scheduled to minimize length of time that soils are exposed such that <u>disturbed soil that is to be left unworked for more than 21 days is stabilized within in 14 days.</u>	
Reason:	"Minimize" is a very non-specific term that is open to a wide range of interpretation. The current practice does not specify to what extent the minimization is needed in order to qualify for the points. A more definitive practice is needed. The suggested revision is consistent with the practice in 504.3(6).	

Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>503.3 Soil disturbance and erosion. Soil disturbance and erosion are minimized by one or more of the following: (also see Section 504.3)(1) Construction activities are scheduled to minimize length of time that soils are exposed such that disturbed soil that is to be left unworked for more than 21 days is stabilized within in 14 days.</p>
Committee Reason:	Removed "to" and "in". They were left in mistakenly.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P065 LogID 5127	503.4 Stormwater management	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	<p>Stormwater management. Stormwater management includes one or more of the following low-impact development techniques:</p> <p>(3) All or a percentage of impervious surfaces are minimized and permeable materials are used for driveways, parking areas, walkways, and patios.</p>	
Reason:	Using permeable materials reduces the impervious surface. It is not clear if the percentage applies to the "minimization" or the "permeable materials" or both and how to calculate the "minimization". How should one determine if a driveway length has been shortened enough to be considered "minimized"?	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p>503.4 Stormwater management. Stormwater management includes one or more of the following low-impact development techniques:</p> <p>(3) All or a percentage of <u>the total impervious surfaces are minimized and Permeable materials are used for of driveways, parking areas, walkways, and patios, or recreational surfaces and the like, use permeable materials.</u></p>	
Committee Reason:	Change necessary for clarity.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P066	LogID 5239	503.4 Stormwater management	<i>Final Formal Action: Disapprove</i>
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:rain gardens, <u>bioretention systems</u> , <u>vegetative roofs</u> , or similar infiltration systems.		
Reason:	This adds a couple common type of infiltration approaches for which builders should receive credit.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	In favor of P070		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P067	LogID 5240	503.4 Stormwater management	<i>Final Formal Action: Disapprove</i>
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	For subpart (3), increase the points associated with items (b) and (c), or at least increase them relative to item (a), e.g., 6 points for (b) and 10 points for (c).		
Reason:	The expense and effort dedicated to the much higher portions of permeable materials, as well as the significantly higher potential for reducing runoff, should be rewarded by a greater step up in the point system.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	In favor of P070		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P068	LogID 5241	503.4 Stormwater management	<i>Final Formal Action: Disapprove</i>
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	For subpart (4), greatly increase the point allowance, e.g., to 10 points.		
Reason:	A vegetated roof on a residence is expensive and in some ways more difficult to design and install than that on a commercial building due to the size of roof and because most homes have sloping roofs.		
Committee Action from Meeting:	Disapprove		

Modification of Proposed Change:	
Committee Reason:	Vegetated roofs receive points in multiple sections
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P069 LogID 5242	503.4 Stormwater management	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Subparts (5) and (6) should offer a number of points significantly higher than that of any other single item under 503.4, e.g., 20-25 points. These points should also not be additive with each other nor with the other items under 403.5, because (5) and (6) would require an array of approaches that would likely be redundant with most of the other items.	
Reason:	Achievement of (5) or (6) is a commitment to preserving site hydrology and reducing the impact of the development on water quality. Such an investment should be rewarded with higher points as an incentive for reaching for such high levels of environmental performance. Moreover, items (5) and (6) are comprehensive for the site, whereas (3) and (4) only address hardscape areas and (1) and (2) only address some landscape features or components that could be incorporated into the landscape design. The environmental benefits of (5) and (6) are likely much higher than those of all the other items in 403.5, and should be rewarded proportionately.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of P070	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P070 LogID TG2-04	503.4 Stormwater management	Final Formal Action: Approve
Submitter:	Robert Goo, US EPA	
Proposed Change:	503.4 Stormwater management. Stormwater management includes one or more of the following low-impact development techniques: (For lots in a development, the points for items (1), (2), and (3) may be awarded for the lot when there is a community stormwater management plan implemented and the builder does not violate	

	<p>that plan with respect to water leaving the lot.)</p> <p>(1) Natural water and drainage features are preserved and used. 6 points (2) Facilities that minimize concentrated flows and simulate flows found in natural hydrology by the use of vegetative swales, french drains, wetlands, drywells, rain gardens, or similar infiltration features. 7 points (3) All or a percentage of impervious surfaces are minimized and permeable materials are used for driveways, parking areas, walkways, and patios: — (a) less than 25 percent. 2 points — (b) 25 percent to 75 percent 4 points — (c) greater than 75 percent 6 points (4) A minimum of 50 percent of the roof is vegetated (green roof) using technology capable of withstanding the climate conditions of the jurisdiction and the microclimate conditions of the building lot. Invasive plant species are not permitted. 5 points (5) Stormwater management practices manage rainfall on the lot and prevent the off-lot discharge from all storms up to and including the volume of the 95th percentile storm event. 6 points (6) A hydrologic analysis is conducted that results in the design of a stormwater management system that maintains the pre-development (i.e., stable, natural) runoff hydrology of the lot throughout the development or redevelopment process. Post-construction runoff rate, volume, and duration cannot exceed predevelopment rates. 7 points</p> <p>503.4 Stormwater Management. The stormwater management system is designed to use low impact development/green infrastructure practices to preserve, restore or mitigate changes in site hydrology due to land disturbance and the construction of impermeable surfaces through the use of one or more of the following techniques:</p> <p>(1) A site assessment is conducted and a plan prepared and implemented that identifies important existing permeable soils, natural drainage ways and other water features, e.g., depressional storage, onsite to be preserved in order to maintain site hydrology. 7points</p> <p>(2) A hydrologic analysis is conducted that results in the design of a stormwater management system that maintains the pre-development (stable, natural) runoff hydrology of the site through the development or redevelopment process. Ensure that post construction runoff rate, volume and duration do not exceed predevelopment rates, volume and duration. 10points.</p> <p>(3) Low Impact Development/Green infrastructure stormwater management practices to promote infiltration and evapotranspiration such as, but not limited to, vegetated swales, bio-retention cells, vegetated tree boxes and planters, green roofs, and permeable pavements are used to manage rainfall on the lot and prevent the off-lot discharge of runoff from all storms up to and including the volume of following storm events:</p> <table border="0"> <tr> <td>_____ (a) 80th percentile storm event</td> <td>5 points</td> </tr> <tr> <td>_____ (b) 90th percentile storm event</td> <td>8 points</td> </tr> <tr> <td>_____ (c) 95th percentile storm event</td> <td>10 points</td> </tr> </table> <p>(4) Permeable materials are used for driveways, parking areas, walkways and patios according to the following percentages:</p> <table border="0"> <tr> <td>_____ (a) less than 25 percent</td> <td>2 points</td> </tr> <tr> <td>_____ (b) 25-50 percent</td> <td>5 points</td> </tr> <tr> <td>_____ (c) greater than 50 percent</td> <td>10 points</td> </tr> </table>	_____ (a) 80 th percentile storm event	5 points	_____ (b) 90 th percentile storm event	8 points	_____ (c) 95 th percentile storm event	10 points	_____ (a) less than 25 percent	2 points	_____ (b) 25-50 percent	5 points	_____ (c) greater than 50 percent	10 points
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_____ (b) 25-50 percent	5 points												
_____ (c) greater than 50 percent	10 points												
<p>Reason:</p>	<p>As written 503.4 is a mix of elements that have and do not have objective performance requirements. In addition, the categories overlap and some double counting may occur. The proposed rewrite is an attempt to address these issues and provide a more practical system with which to promote the use of low impact development/green infrastructure practices in the design of the stormwater management systems for the projects.</p>												
<p>Committee Action from Meeting:</p>	<p>Approve</p>												
<p>Modification of Proposed Change:</p>													

Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P071 LogID 5321	503.4 Stormwater management	Final Formal Action: Approve as Modified
Submitter:	Craig Conner, Building Quality	
Proposed Change:	503.4 (4)	
Reason:	503.4 #4 refers to “using technology capable of withstanding the climate conditions of the jurisdiction” is meaningless. For example rock and concrete are generally capable of with standing any climate conditions on the planet. Exactly what are we supposed to use more of?	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> (4) A minimum of 50 percent of the roof is vegetated(green roof)- using technology capable of withstanding the climate conditions of the jurisdiction and the microclimate conditions of the building lot. Invasive plant species are not permitted.	
Committee Reason:	Points should still be awarded for a green roof. The clause regarding climate conditions should be removed. <i>(Staff note: section 503.4 has been deleted in its entirety and replaced with new language in accordance with P070.)</i>	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P072 LogID 5243	503.5 Landscape plan	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(3)(a) 0 percent or EPA WaterSense Water Budget Tool is used to determine the maximum percentage of turf areas Create a new credit independent of (3) that rewards points for the use of the WaterSense Budget Tool, e.g.: <u>(#) The landscape is designed to reflect the water use budget determined through the EPA WaterSense Water Budget Tool.</u>	

	Suggested point value: 5
Reason:	The WaterSense Budget Tool can be used to design a landscape that reflects local climate conditions. The components of the design that are considered need not be limited to turfgrass. Thus, it makes sense to move the WaterSense Budget Tool into its own credit, independent of choices made on turfgrass.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	WaterSense tool added in P038.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P073 LogID 5259	503.5 Landscape plan	Final Formal Action: Approve as Modified
Submitter:	Greg Johnson, Greg Johnson Consulting	
Proposed Change:	503.5 Landscape plan. A landscape plan for the lot is developed to limit water and energy use while preserving or enhancing the natural environment. (Where "front" only or "rear" only plan is implemented, only half of the points (rounding down to a whole number) are awarded for items 1-6)	
	(1) Where a lot is less than 50% turf, a <u>A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.</u>	5
	(2) Turf grass species, other vegetation, and trees are selected and specified on the lot plan that are native or regionally appropriate for local growing conditions.	4
	(3) <u>Turfgrass is over-seeded with not less than the equivalent rate of one-half pound per acre (.22 kg/.405 ha) of white clover (trifolium repens) or similar flowering maintenance tolerant herbaceous plants.</u>	5
	(3) The percentage of turf areas that is designed to be mowed is limited and shown on the lot plan. The percentage is based on the landscaped area of the lot not including the home footprint, hardscape, and any undisturbed natural areas.	-
	- (a) 0 percent	4
	- (b) greater than 0 percent to less than 20	3
	- (c) 20 percent to less than 40 percent	2
	- (d) 40 percent to 60 percent	1
	Practices 4 through 6 unchanged	-
Reason:	See reason for Sec. 403.6.	

Committee Action from Meeting:	Approve as Modified																														
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>503.5 Landscape plan. A landscape plan for the lot is developed to limit water and energy use while preserving or enhancing the natural environment. (Where "front" only or "rear" only plan is implemented, only half of the points (rounding down to a whole number) are awarded for items 1-6)</p> <table border="1"> <tr> <td>(1)</td> <td>Where a lot is less than 50% turf, a A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.</td> <td>5</td> </tr> <tr> <td>(2)</td> <td>Turf grass species, other vegetation, and trees are selected and specified on the lot plan that are native or regionally appropriate for local growing conditions.</td> <td>4</td> </tr> <tr> <td>(3)</td> <td>Turfgrass is over-seeded with not less than the equivalent rate of one-half pound per acre (.22 kg/.405 ha) of white clover (trifolium repens) or similar flowering maintenance tolerant herbaceous plants.</td> <td>5</td> </tr> <tr> <td>(3)</td> <td>The percentage of turf areas that is designed to be mowed is limited and shown on the lot plan. The percentage is based on the landscaped area of the lot not including the home footprint, hardscape, and any undisturbed natural areas.</td> <td>-</td> </tr> <tr> <td>-</td> <td>(a) 0 percent</td> <td>4</td> </tr> <tr> <td>-</td> <td>(b) greater than 0 percent to less than 20</td> <td>3</td> </tr> <tr> <td>-</td> <td>(c) 20 percent to less than 40 percent</td> <td>2</td> </tr> <tr> <td>-</td> <td>(d) 40 percent to 60 percent</td> <td>1</td> </tr> <tr> <td></td> <td>Practices 4 through 6 unchanged</td> <td>-</td> </tr> <tr> <td>(3)</td> <td>Turfgrass is integrated with maintenance tolerant, non-invasive flowering herbaceous plants in an amount to achieve not less than 10% of the groundcover. Plants should typically flower at less than 6 inches in height.</td> <td>3</td> </tr> </table> <p>4-8 remain unchanged</p>	(1)	Where a lot is less than 50% turf, a A plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.	5	(2)	Turf grass species, other vegetation, and trees are selected and specified on the lot plan that are native or regionally appropriate for local growing conditions.	4	(3)	Turfgrass is over-seeded with not less than the equivalent rate of one-half pound per acre (.22 kg/.405 ha) of white clover (trifolium repens) or similar flowering maintenance tolerant herbaceous plants.	5	(3)	The percentage of turf areas that is designed to be mowed is limited and shown on the lot plan. The percentage is based on the landscaped area of the lot not including the home footprint, hardscape, and any undisturbed natural areas.	-	-	(a) 0 percent	4	-	(b) greater than 0 percent to less than 20	3	-	(c) 20 percent to less than 40 percent	2	-	(d) 40 percent to 60 percent	1		Practices 4 through 6 unchanged	-	(3)	Turfgrass is integrated with maintenance tolerant, non-invasive flowering herbaceous plants in an amount to achieve not less than 10% of the groundcover. Plants should typically flower at less than 6 inches in height.	3
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Committee Reason:	Removed the specific mention of clover because clover may not be appropriate but other seed mixes may be appropriate. Should not award points for one specific species as that species may be invasive in certain locations.																														
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2																				
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Non-voting:	2																														
Ballot Comments																															
Agree with committee action:																															
Disagree with committee action:																															
Abstain:																															

P074 LogID 5068	503.5 Landscape plan	Final Formal Action: Disapprove
Submitter:	Philip LaRocque, LaRocque Business Management Services, LLC	

Proposed Change:	503.5(2) Turf grass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected and specified on the lot plan. <u>Site observation of installation is waived in winter conditions as long as the lot plan documents these species.</u> 503..5(4) Plants with similar watering needs are grouped (hydrozoning) and shown on the lot plan. <u>Site observation of installation is waived in winter conditions as long as the lot plan documents these species.</u>
Reason:	In cold climates, at least Climate Zones 7,6,5,4, these current practice point verification requirements are very discriminatory in cases where the certification is needed in winter months for buyer contracts or incentives. The current compromise that provides a temporary certification (or equivalent) pending verification of installation is really extra work, costly for all and not necessary if this reasonable amendment is accepted.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Move reason section to commentary document.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P075 LogID 5129	503.5 Landscape plan	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	Landscape plan. A landscape plan for the lot is developed to limit water and energy use while preserving or enhancing the natural environment. (1) Where a lot is less <u>contains more</u> than 50 percent turf natural vegetation, a plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.	
Reason:	The intent is for this practice to apply to lots that have significant natural vegetation and that effort is made to restore that vegetation. The current text allows lots with minimal turf and minimal natural vegetation to get points for the practice.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> 503.5 Landscape plan. A landscape plan for the lot is developed to limit water and energy use while preserving or enhancing the natural environment. (1) Where a lot is less than 50 percent turf, a <u>A</u> plan is formulated to <u>protect,</u> restore or enhance natural vegetation <u>on the lot</u> . that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated. <u>100percent of the natural area= 4 points</u> <u>50percent of the natural area = 3 points</u>	

	<p><u>25percent of the natural area = 2 points</u></p> <p><u>12 percent of the natural area = 1 point</u></p>
Committee Reason:	Points should be awarded for protecting, restoring, or enhancing natural vegetation while providing flexibility.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P076 LogID 5207	503.5 Landscape plan	Final Formal Action: Approve as Modified
Submitter:	Wes Sullens, StopWaste of Alameda County	
Proposed Change:	"Turf grass species, other vegetation, In areas of the lot where turf grass is not used, non-invasive vegetation and trees that are native or regionally appropriate for local conditions are selected."	
Reason:	<p>1)The fourth item under 403.6 rewards points for the use of turf grass in a manner that is consistent with local water availability. Thus, the selection of a turf grass that is "regionally appropriate" in item 3 is redundant with item 4, and could lead to double-rewarding of credit points for the use of turf. Such encouragement of the use of turf grass clearly is inconsistent with the goals of this section. 2)Because turf grasses are regularly mown, they do not provide the height nor flowers that provide food and habitat for pollinators and other wildlife. Therefore, it does not make sense to group them with other types of vegetation. In addition, turf grasses have shallow root depths, and are not as effective at sequestering carbon, retaining water, creating porous soils, or fostering biota, as compared to other plant species with deeper root systems. 3)Turf grass requires a unique maintenance regime that creates a level of pollution risk that is higher than that created by other types of vegetation – yet another reason not to group it with non-turf types of vegetation. 4) The reasons to avoid invasive plants are many:</p> <ul style="list-style-type: none"> •Invasive plants produce greater amounts of waste. Invasive plants tend to grow faster, spread beyond their original planting areas, and result in greater amounts of green waste than non-invasive species. Additionally, effective eradication of invasive plants often requires the use of herbicides which are classified as hazardous waste and must be disposed of properly at end of life. Avoiding invasive plants is a waste prevention measure for cities and counties who regulate and operate hazardous waste facilities and landfills. •Invasive plants have serious environmental impacts, including increased frequency and intensity of fire regimes in certain climates, altered soil composition, lack of dissolved oxygen in waterways, changes to natural hydrologic cycles, and threaten wildlife. While the effects of invasive plants are most severely felt in the rural areas and wildlands, evidence is that most invasive plants currently causing havoc in the west started as horticultural plantings in urban areas. Therefore, land development in urban and suburban areas have a direct correlation with invasive plant exposure throughout the region. •Management of invasive plants is expensive. In California for example, the cost of control, monitoring, and outreach is conservatively estimated to be \$82 million a year (not including indirect costs associated with lost agricultural yields, increased severity of wildfires and floods, loss of productive range and timber lands, reduced land values, damage to infrastructure, and degraded recreational opportunities). •Avoiding invasive plants via building standards is effective and low-cost. Experts agree that prevention is the most effective and resource-efficient way to combat the spread of invasive plants. By requiring construction projects to avoid invasive plant species, demand for invasive plants from nurseries and suppliers will diminish over time. Further, a wide variety of alternatives to invasive plants is easily available with no cost difference, resulting in no cost increase for the design and construction industry. 	

Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<i>Revise standard as follows:</i> (2) Turfgrass species, other vegetation, and trees that are native or regionally appropriate for local growing conditions are selected and specified on the lot plan. <u>Non-invasive vegetation is selected.</u>
Committee Reason:	Some regionally appropriate species are in fact invasive. Also, modified for consistency with approved language in Chapter 4.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P077 LogID 5209	503.5 Landscape plan	Final Formal Action: Approve as Modified
Submitter:	Wes Sullens, StopWaste of Alameda County	
Proposed Change:	New section: Invasive plants are removed from the lot.	
Reason:	Invasive plants do enormous environmental and economic harm, as stated in my other comments for sections 403.6 and 503.5. The development of a lot creates an opportunity to remove invasive plants from an area of land, thus removing the threat of their spread to neighboring areas and providing a service to the community and local ecosystem.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Add new items to section 503.5 Landscape plan as follows:</i> (9) <u>Developer has a plan for removal or containment of invasive plants from the disturbed areas of the site. 3 points</u> (10) <u>Developer has a plan for removal or containment of invasive plants on the undisturbed areas of the site. 6 points</u>	
Committee Reason:	This section belongs in 503.5 as it pertains to the landscape plan for the lot. Removal of invasive plants from both disturbed and undisturbed areas of the lot should be incentivized.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P078 LogID 5069	503.6 Wildlife habitat	Final Formal Action: Disapprove
Submitter:	Philip LaRocque, LaRocque Business Management Services, LLC	

Proposed Change:	503.6 Wildlife habitat. Measures are planned to support wildlife habitat and include at least two <u>one</u> of the following:										
Reason:	The standard should encourage/reward any wildlife habitat efforts and not arbitrarily set the minimum of two specific practices to achieve any points.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Two is better than one.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P079 LogID 5244	503.7 Environmentally sensitive areas	<i>Final Formal Action: Disapprove</i>										
Submitter:	Brett VanAkkeren, USEPA											
Proposed Change:	<p>Move this section to 501.1 Lot and then tier the points as follows:</p> <p>(1) Reward the highest level of points for avoiding environmentally sensitive areas.</p> <p>(2) Allow a somewhat lower number of points when a lot with environmentally sensitive areas is selected and any sensitive areas damaged by construction are fully restored to their pre-construction ecosystem functions and services. (No site can truly be restored to its pre-construction state, even when there is an attempt to do so; thus the lower number of points.)</p> <p>(3) Allow an even fewer number of points when environmentally sensitive areas on the lot that are degraded or disturbed by construction are enhanced or the damage is otherwise mitigated.</p>											
Reason:	These points pertain to an important element in lot selection: avoiding environmentally important areas. Its importance should be highlighted earlier in the chapter as part of the lot selection section. Moreover, restoration and mitigation achieve different results and should not be rewarded the same level of points.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	In favor of P080.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P080 LogID TG2-06	503.7 Environmentally sensitive areas	Final Formal Action: Approve as Modified
Submitter:	Robert Goo, US EPA	
Proposed Change:	<p>503.7 Environmentally Sensitive Areas. The lot is in accordance with one or both of the following:</p> <p>(1) The lot does not contain any environmentally sensitive areas <u>such as steep slopes, prime farmland, critical habitats, stream protection areas or wetlands</u> that are disturbed by construction. ... 4 points</p> <p>(2) Compromised environmentally sensitive areas are mitigated or restored. <u>On lots with environmentally sensitive areas, mitigation and/or restoration is conducted to restore ecosystem functions lost through development and construction activities...</u> 4 points</p>	
Reason:	This list was included to provide additional clarity. Moreover, avoidance and mitigation/restoration achieve different results and therefore points should be awarded separately.	
Committee Action from Meeting:	Approved as Modified	
Modification of Proposed Change:	<p><i>Revise Proposed Change as follows (in red):</i></p> <p>503.7 Environmentally Sensitive Areas. The lot is in accordance with one or both of the following:</p> <p>(1) The lot does not contain any environmentally sensitive areas such as steep slopes, prime farmland, critical habitats, stream protection areas or wetlands that are disturbed by construction. 4 points</p> <p>(2) Compromised environmentally sensitive areas are mitigated or restored. <u>On lots with environmentally sensitive areas, mitigation and/or restoration is conducted to restore preserve ecosystem functions lost through development and construction activities.</u> 4 points</p>	
Committee Reason:	"Such as" language was removed to improve clarity as the Standard includes a definition of Environmentally Sensitive Areas.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P081 LogID TG6-02	505 Innovative practices	Final Formal Action: Approve as Modified
Submitter:	Susie Maglich, AvalonBay Communities, Inc.	
Proposed Change:	<p>505.6 – Multi-Unit Plug-In Electric Vehicle Charging. <u>Plug-in electric vehicle charging capability is provided for 5% of parking stalls. Electrical capacity in main electric panels supports Level 2 charging (208/240V-40 amp). Each stall is provided with conduit and wiring infrastructure from the electric panel to support Level 2 charging (208/240V-40 amp) service to the designated stalls, and stalls are equipped with either Level 2 charging AC grounded outlets (208/240V-40 amp) or Level 2 charging stations (240V/40A) by a third party charging station.</u></p>	
Reason:	Electric car charging requirements are emerging in building code requirements affecting multi-unit development. Electric vehicles are becoming more prevalent in today's market and the industry is starting to see demand for charging capabilities from multi-unit residents owning electric vehicles. Although several jurisdictions have adopted code language to require electric vehicle charging, the proposed language is intended as a non-mandatory provision and instead creates an incentive for multi-unit projects to invest in this emerging technology. This language is based on California's CalGreen	

	building code and the City of Los Angeles building code requirements. The proposal also provides property owners and builders with flexibility as to how vehicle charging is managed by allowing either hard wired outlets or third party charging stations.										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<i>Revise Proposed Change as follows (in red):</i> 505.6 – Multi-Unit Plug-In Electric Vehicle Charging. Plug-in electric vehicle charging capability is provided for 51 % of parking stalls. Electrical capacity in main electric panels supports Level 2 charging (208/240V-40 amp). Each stall is provided with conduit and wiring infrastructure from the electric panel to support Level 2 charging (208/240V-40 amp) service to the designated stalls, and stalls are equipped with either Level 2 charging AC grounded outlets (208/240V-40 amp) or Level 2 charging stations (240V/40A) by a third party charging station.										
Committee Reason:	5% can be unattainable for many developers.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P082 LogID 5265	505.0 Intent (Innovative Practices)	Final Formal Action: Disapprove										
Submitter:	Matt Belcher, Verdatek Solutions											
Proposed Change:	505.6 Resilience Lot incorporates one or more of the following resilience options, as applicable. 1. _____ The development of portions of the site(s) located within flood hazard areas is avoided as follows: (a) Portions of sites located within flood hazard areas are avoided. (b) Portions of sites located within areas subject to a 0.2% annual chance of (500-year) flood are avoided.											
Reason:	With the focus on future enhancement of the model codes to provide for enhanced "Resilient" construction, It is an opportunity to include reference in this "above code" standard to incentivise innovative practices and process that will demonstrate best practices for eventual application into the model codes.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	Committee is not convinced of the demonstrable benefits of the proposal. The concept of combining disaster resistance and green construction has not been adequately developed.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												

Disagree with committee action:	
Abstain:	

P083 LogID 5260	505.1 Driveways and parking areas	Final Formal Action: Approve as Modified
Submitter:	Greg Johnson, Greg Johnson Consulting	
Proposed Change:	505.1 Driveways and parking areas. Driveways and parking areas are minimized or mitigated by one or more of the following:	
	Practices 1-3 unchanged	
	(4) Closed cell grass paving systems are utilized to reduce the footprint of surface driveways and parking areas.	-
	(a) 25 % to less than 50%	<u>4</u>
	(b) 50% to 75%	<u>5</u>
	(c) greater than 75%	<u>6</u>
Reason:	Closed cell grass paving systems offer multiple environmental benefits; being completely pervious for stormwater management and offering not just passive heat mitigation, but active cooling through transpiration. Grass paving also sequesters carbon and produces oxygen. These multiple benefits deserve recognition as an innovative practice.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise the standard and add item to Section 505.1 Driveways and parking areas as follows:</i>	
	505.1 Driveways and parking areas. Driveways and parking areas are minimized or mitigated by one or more of the following:	
	Practices 1-3 unchanged	
	(4) Vegetative paving systems are utilized to reduce the footprint of surface driveways, fire lanes, streets or parking areas.	-
	(a) 10 % to less than 25%	<u>1</u>
	(b) 25% to 75%	<u>2</u>
(c) greater than 75%	<u>3</u>	
Committee Reason:	The Committee prefers not to limit the use of vegetative paving systems to specific types but wants to award points for their use.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

<p>P084 LogID 5305</p>	<p>505.2 Heat island mitigation <i>Final Formal Action: Approve as Modified</i></p>
<p>Submitter:</p>	<p>Lorraine Ross, L Ross Consulting Inc</p>
<p>Proposed Change:</p>	<p>505.2 Heat island mitigation. Heat island effect is mitigated by one or both of the following:</p> <p>(1) <i>no change to requirements</i></p> <p>(2) Minimum initial SRI of 78 for low-sloped roof (a slope less than or equal to 2:12) and a minimum initial SRI of 29 for a steep-sloped roof (a slope of more than 2:12). The SRI is calculated in accordance with ASTM E1980. Roof products are certified and labeled.</p> <p>602.2 Roof surfaces. A minimum of 90 percent of roof surfaces, not used for roof penetrations and associated equipment, on-site renewable energy systems such as photovoltaics or solar thermal energy collectors, or rooftop decks, amenities and walkways, are constructed of one or both <u>more</u> of the following:</p> <p>(1) <i>and (2) remain unchanged</i></p> <p><u>(3) Minimum initial SRI of 78 for low-sloped roof (a slope less than or equal to 2:12) and a minimum initial SRI of 29 for a steep-sloped roof (a slope of more than 2:12). The SRI is calculated in accordance with ASTM E1980. Roof products are certified and labeled.</u></p>
<p>Reason:</p>	<p>Reason: Chapter 5 addresses lot design, preparation, and development. Cool roofing does not fit. Cool roofing is more appropriately addressed in Chapter 6. In fact cool roofing requirements can also be found in chapter 6 in the current version (potential double counting). Therefore we have relocated the one compliance option for cool roofing that is found in chapter 5 but not in chapter 6 to section 602.2. The requirement has not been changed only relocated.</p>
<p>Committee Action from Meeting:</p>	<p>Approve as Modified</p>
<p>Modification of Proposed Change:</p>	<p><i>Revise standard as follows:</i></p> <p>505.2 Heat island mitigation. Heat island effect is mitigated by one or both of the following:</p> <p>(1) <i>no change to requirements</i></p> <p>(2) Roofs: Not less than 75 percent of the exposed surface of the roof <u>is vegetated. Invasive plant species are not permitted.</u> is in accordance with one or a combination of the following methods:</p> <p>(a) Minimum initial SRI of 78 for low-sloped roof (a slope less than or equal to 2:12) and a minimum initial SRI of 29 for a steep-sloped roof (a slope of more than 2:12). The SRI is calculated in accordance with ASTM E1980. Roof products are certified and labeled.</p> <p>(b) Roof is vegetated using technology capable of withstanding the climate conditions of the jurisdiction and the microclimate conditions of the building lot. Invasive plant species are not permitted</p> <p>602.2 Roof surfaces. A minimum of 90 percent of roof surfaces, not used for roof penetrations and associated equipment, on-site renewable energy systems such as photovoltaics or solar thermal energy collectors, or rooftop decks, amenities and walkways, are constructed of one or both <u>more</u> of the following:</p> <p>(1) <i>and (2) remain unchanged</i></p> <p><u>(3) Minimum initial SRI of 78 for low-sloped roof (a slope less than or equal to 2:12) and a minimum initial SRI of 29 for a steep-sloped roof (a slope of more than 2:12). The SRI is calculated in accordance with ASTM E1980. Roof products are certified and labeled.</u></p>
<p>Committee Reason:</p>	<p>Part of Section 505.2 belongs in Chapter 6. Other sections were edited for clarity.</p>

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P085	LogID 5245	505.3 Density	Final Formal Action: Approve
Submitter:	Jeremy Velasquez, US-EcoLogic		
Proposed Change:	<i>Request for addition of a higher density tier(s):</i> (3) 21 or greater <u>to 34</u> dwelling units per acre - 11 pts (4) <u>35 or greater</u> dwelling units per acre - 14 pts (5) <u>70+</u> dwelling units per Acre - 17 pts		
Reason:	The existing density thresholds seem low for multi-family projects. Higher density projects do have additional environmental benefits. (reduced land usage, etc)		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			
Committee Reason:			
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P086	LogID 755	601.1 Conditioned Floor Area	Final Formal Action: Disapprove
Submitter:	Derek Huetinck, BeaconCrest Homes		
Proposed Change:	[No change from 2008 language.]		
Reason:	There is insufficient scientific data to demonstrate that the building of smaller homes leads to an overall decrease in energy efficiency. Smaller homes may house fewer people than larger homes, which could potentially result in more energy consumption per person than more people living in a larger home. It is inappropriate to penalize the building of larger homes without proper data to support the concept that they will lead to greater energy consumption.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Smaller homes use less materials. This chapter is about resource efficiency, not energy.		

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P087	LogID 5203	601.1 Conditioned floor area	Final Formal Action: Disapprove
Submitter:	Wes Sullens, StopWaste of Alameda County		
Proposed Change:	601.10. Design for Deconstruction. Include construction techniques that allow for the deconstruction rather than demolition of building features.		
Reason:	Interior walls, exterior wall systems, framing, fenestration, and mechanical systems can be built such that future renovations or tear-downs can be accomplished with a high degree of materials reuse or recycling. Designing for deconstruction is not common practice, but results in less waste to landfill and a higher and better use of materials sent for recycling from remodeling or demolition projects. They also allow for green jobs by employing trades to disassemble building elements, and can help reduce the cost of future upgrades.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Specificity is not there. Proposed ideas are not possible. Language is not code-ready.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P088	LogID 5131	601.1 Conditioned floor area	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs		
Proposed Change:	Multi-Unit Building Note: For a multi-unit building, an <u>weighted-average of the individual unit sizes</u> is used for this practice <u>and calculated by dividing the total conditioned residential square footage (units plus common areas) in the building by the number of units in the building.</u>		
Reason:	Large common areas of multi-unit buildings take resources to construct, operate, and maintain. Those areas should be included in awarding the floor area points for the building.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	There is need to capture the impact of common areas in MF buildings, but proposed change corresponded more so to calculation method, rather than common space area. Possible confusion for		

	<p>developers when weighted average calculation is used for code compliance, and an alternative method is used in the NGBS. It is important to retain the original intention of this provision, which is to promote smaller dwelling unit size. Also, in rejecting this proposal, the provision provides equivalent metrics for multi-unit and single-family development (i.e. as currently written, the standard calculates the size of living space only, without including amenity spaces that serve that living space). In the single-family environment, examples of amenity spaces could include separate community centers, fitness centers, pool facilities, etc.</p>
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P089 LogID TG6-01	601.1 Conditioned floor area	Final Formal Action: Approve
Submitter:	Miles Haber, Monument Construction Inc	
Proposed Change:	<p>601.1-Conditioned floor area. Finished floor area of a dwelling unit is limited. Finished floor area is calculated in accordance with NAHBRC Z765 <u>for single family</u> and ANSI/BOMA Z65.4 <u>for multi-unit buildings</u>. Only the finished floor area for stories above grade plane is included in the calculation.</p> <p>(1) <u>less than or equal to 700 square feet(65 m2)</u></p> <p><i>Note: Renumber</i></p> <p>(2) less than or equal to 1000 square feet (93 m2)</p> <p>(3) less than or equal to 1500 square feet (139 m2)</p> <p>(4) less than or equal to 2000 square feet (186 m2)</p> <p>(5) less than or equal to 2500 square feet (232 m2)</p> <p>(6) greater than 4000 square feet (372 m2)</p>	
Reason:	The proposed change adds the proper standard for measurement of multi-unit buildings. It also recognizes the benefits of additional reductions in dwelling unit size. The inclusion of a lower square footage tier encourages building designs that can maximize resource and materials savings, as well as, energy savings.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>	
Ballot Comments		

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P090 LogID 5279	601.2 Material usage	Final Formal Action: Disapprove
Submitter:	John Woestman, Kellen Company	
Proposed Change:	<p>601.4 Framing and structural plans.</p> <p><i>This requirement should be added to section 601.2 or section 601.4 should be deleted. Potential exists for double counting.</i></p> <p>601.6 Stacked stories.</p> <p><i>This requirement should be added to section 601.2 or section 601.6 should be deleted. Potential exists for double counting.</i></p>	
Reason:	Reason: Section 601.2 Material usage, already takes into account optimized material usage of structural systems. Sections 601.4 Framing and structural plans, and 601.6 Stacked stories are already accounted for in the intent of 601.2 and should be deleted to avoid double counting. Alternatively adjustments could be made to section 601.2 to more clearly define the requirements of 601.4 and 601.6 within 601.2 if the committee feels it is needed.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	601.2 is addressing design and engineering of the structure to minimize the material necessary. 601.4 is the handling of materials on-site, based on cut-sheets, etc. The intent of the practices is distinct, and, thus, not double-counting.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P091 LogID 5280	601.4 Framing and structural plans	Final Formal Action: Disapprove
Submitter:	John Woestman, Kellen Company	
Proposed Change:	601.4 Framing and structural plans.	
Reason:	Reason: Section 601.2 Material usage, already takes into account optimized material usage of structural systems. Sections 601.4 Framing and structural plans, and 601.6 Stacked stories are already accounted for in the intent of 601.2 and should be deleted to avoid double counting. Alternatively adjustments could be made to section 601.2 to more clearly define the requirements of 601.4 and 601.6 within 601.2 if the committee feels it is needed.	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:	
Committee Reason:	601.2 is addressing design and engineering of the structure to minimize the material necessary. 601.4 is the handling of materials on-site, based on cut-sheets, etc. The intent of the practices is distinct, and, thus, not double-counting.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P092 LogID 5281	601.6 Stacked stories	Final Formal Action: Disapprove
Submitter:	John Woestman, Kellen Company	
Proposed Change:	601.6 Stacked stories.	
Reason:	Section 601.2 Material usage, already takes into account optimized material usage of structural systems. Sections 601.4 Framing and structural plans, and 601.6 Stacked stories are already accounted for in the intent of 601.2 and should be deleted to avoid double counting. Alternatively adjustments could be made to section 601.2 to more clearly define the requirements of 601.4 and 601.6 within 601.2 if the committee feels it is needed.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	There is clear evidence about benefit of stacked stories in terms of resource use. (i.e. The ceiling of the first story becomes the floor of the story above.)	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P093 LogID 5282	601.7 Site-applied finishing materials	Final Formal Action: Approve as Modified
Submitter:	John Woestman, Kellen Company	
Proposed Change:	601.7 Site-applied finishing <u>Prefinished materials. Prefinished building Building materials or assemblies listed below that do not require have no additional site-applied material for finishing material are installed incorporated in the building.</u> <i>Remaining language is unchanged.</i>	

Reason:	Reason: Changes the title to more appropriately represent this section. Also, changes to the language have been made so that purchased prefinished materials do not get credit if additional finishing material is added to them.
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p>601.7 Site-applied finishing Prefinished materials. Prefinished building materials or assemblies listed below that do not require <u>have no</u> additional site-applied material for finishing material are <u>installed</u> incorporated in the building.</p> <p><i>Remaining language is unchanged.</i></p>
Committee Reason:	Support reasoning submitted. Fixed typographical issues.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P094 LogID 5114	601.7 Site-applied finishing materials	Final Formal Action: Approve as Modified
Submitter:	Matthew Dobson, Vinyl Siding Institute	
Proposed Change:	Delete 601.7(a) and (g) and replace with <u>(a) Interior or exterior finish floor systems not requiring paint or stain.</u> <u>(g) Interior or exterior finish ceiling systems not requiring paint or stain.</u>	
Reason:	This cleans up this section by making it more performance based and also adds in ceiling systems that could qualify for this credit.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p><i>Delete items (a) and (g) in section 601.7 Site-applied finishing materials.</i></p> <p><i>Revise items (e) and (f) in section 601.7 site-applied finishing materials as follows:</i></p> <p>(e) Interior wall coverings or systems, <u>floor systems, and/or ceiling systems</u> not requiring paint or stain or other type of finishing application.</p> <p>(f) exterior wall coverings or systems, <u>floor system, and/or ceiling systems</u> not requiring paint or stain or other type of finishing application.</p>	
Committee Reason:	Reduce redundancy/further clean-up section.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		

March 6, 2015

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P095 LogID 705	601.9 Above Grade Wall Systems	Final Formal Action: Disapprove
Submitter:	Gladys Quinto Marrone, BIA Hawaii	
Proposed Change:	601.9 – Would like an additional ‘wall system’ for bamboo	
Reason:	Bamboo is starting to take hold and is good for our mild climate.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Bamboo does not share characteristics with other listed products. Bamboo already receives credit under 606.1(c).	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P096 LogID 5283	601.9 Above-grade wall systems	Final Formal Action: Disapprove
Submitter:	John Woestman, Kellen Company	
Proposed Change:	601.9 Above-grade <u>Mass</u> wall systems. One or more of the following above-grade mass wall systems that provide sufficient <u>meet applicable</u> structural and thermal <u>requirements</u> characteristics are used for a minimum of 75 percent of the gross exterior wall area of the building: <i>Other text remains unchanged.</i>	
Reason:	Reason: This section specifically addresses mass wall systems and therefore the title was changed to more accurately reflect the section. Also, “sufficient” is subjective so edits were made to more clearly define the intent of the section.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of action on P097	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		

Disagree with committee action:	
Abstain:	

P097 LogID TG3-11	601.9 Above-ground wall systems	Final Formal Action: Approve as Modified										
Submitter:	David Shepherd, Portland Cement Association											
Proposed Change:	<p>601.9 Above-Grade Wall Systems Mass Wall Systems: One or more of the above-grade wall systems mass wall systems that provide sufficient structural and thermal characteristics meeting the requirements for mass walls as defined in the NGBS are used for a minimum of 75% of the gross opaque exterior wall area of the building conditioned space:</p> <ul style="list-style-type: none"> (1) Adobe (2) Concrete and/or masonry (3) Log home (4) Rammed earth <p>(5) <u>Other wall assemblies meeting the heat capacity and R-value requirements noted in the definition of mass walls.</u></p>											
Reason:	<p>This proposed language:</p> <ul style="list-style-type: none"> · Revises the incorrect titling of this section · It provides direction to the user on the criteria defining mass walls · Clarifies the applicability of where mass walls are to be used. (no need for mass wall construction in unconditioned spaces · Point 5 Expands the option to applicable technologies that may not be listed <p>The existing NGBS definition of mass walls aligns with the requirements of both the 2012 IRC and the 2015 IECC.</p> <p>The credit addresses the necessary material requirements for supporting passive solar design (Section 703.6)</p>											
Committee Action from Meeting:	Approve as Modified											
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p>Chapter6 – RESOURCE EFFICIENCY</p> <p>601 Quality of Construction Materials and Waste</p> <p>601.9 Above-Grade Wall Systems. One or more of the following a Above-grade wall systems that, at a minimum, providesufficientthe structural and thermal characteristics <u>of mass walls and</u> are used for a minimum of 75 percent of the gross exterior wall area of the building.:</p> <ul style="list-style-type: none"> (1) adobe (2) concrete and/or masonry (3) logs (4) rammed earth 											
Committee Reason:	Original proposed language conflicts with the definition of mass wall in Chapter 2. Needed clarification that the requirement is above-grade, as some builders may overlook definitions section. Mass Walls requirements are defined in the Section 202.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P098 LogID 5218	602.1.10 Exterior Doors	Final Formal Action: Approve
Submitter:	Eric DeVito, BBR5	
Proposed Change:	<p>602.1.10 Exterior doors. Entries at exterior door assemblies, inclusive of side lights (if any), are covered by one of the following methods to protect the building from the effects of precipitation and solar radiation. <u>Either a storm door or a</u> projection factor of 0.375 minimum is provided. Eastern- and western-facing entries in Climate Zones 1, 2, and 3, as determined in accordance with Figure 6(1) or Appendix C, have <u>either a storm door or a</u> projection factor of 1.0 minimum, unless protected from direct solar radiation by other means (e.g., screen wall, vegetation).</p> <ul style="list-style-type: none"> (a) installing a porch roof or awning (b) extending the roof overhang (c) recessing the exterior door (d) <u>installing a storm door</u> 	<p>2 per Exterior door 6 Max</p>
Reason:	<p>This proposal expands the current credit for protecting exterior doors from precipitation and solar radiation to include the installation of storm doors. While recessing a door or installing awnings or overhangs may provide some protection for exterior doors against the elements, storm doors can provide the same or better protection. Moreover, because of design constraints or local conditions, overhangs or awnings may not be realistic options. This proposal would encourage the installation of storm doors to provide an additional protective barrier in projects that might otherwise leave exterior doors completely exposed to the elements. Although this proposal focuses on resource efficiency, and more specifically, moisture control for building penetrations, storm doors also provide a variety of other benefits. Storm doors with screens can be used to save energy or provide spot ventilation to improve indoor air quality if operated correctly. Although we are not proposing credits as part of this proposal for these other qualities, there are many good reasons to provide an incentive to install storm doors over exterior doors.</p>	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:	Support reasoning submitted.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P099	LogID 5135	602.1.12 Roof overhangs	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs		
Proposed Change:	602.1.12 Roof overhangs. Roof overhangs, in accordance with Table 602.2, are provided over a minimum of 90 percent of exterior walls to protect the building envelope. Table 602.2 Inches of Rainfall Precipitation⁽¹⁾		
Reason:	This will make the column heading consistent with the footnote and the figure. Unless the intent is to only be concerned with rainfall, then the footnote should be revised as well as the figure.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<i>Revise footnote (1) in Table 602.1.12 as follows:</i> (1) Annual mean total precipitation rainfall in inches is in accordance with Figure 6(2). For SI: 12 inches = 304.8 mm		
Committee Reason:	Stand on reasoning statement. Original intent of practice was for rainfall, not precipitation.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P100	LogID 5054	602.1.12 Roof overhangs	Final Formal Action: Disapprove
Submitter:	Chuck Arnold, Home Innovation		
Proposed Change:	Table 602.1.2 Inches of Rainfall Precipitation		
Reason:	The foot note (1) states precipitation and Figure 6(2) details annual precipitation which includes snow and hail, not just rainfall.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	In favor of action on P099.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P101	LogID 5286	602.1.13 Ice barrier	Final Formal Action: Disapprove
Submitter:	John Woestman, Kellen Company		
Proposed Change:	602.1.13 Ice barrier. In areas where there has been a history of ice forming along the eaves causing a backup of water, an An ice barrier is installed in accordance with the ICC IRC or IBC at roof eaves of pitched roofs and extends a minimum of 24 inches (610 mm) inside the exterior wall line of the building.		
Reason:	Reason: This section applies to new construction where there is no history. Therefore the first portion of the sentence has been deleted. Also, since there is a reference to the IRC and IBC requirements there is no reason to restate requirements that could change and become out of sync therefore the last portion of the sentence is deleted.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Existing language is already clear. Areas applies to regional geographic regions, not the construction process.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P102	LogID 5284	602.1.4.2 Crawlspace	Final Formal Action: Approve as Modified
Submitter:	John Woestman, Kellen Company		
Proposed Change:	602.1.4.2 Crawlspace that is built as a conditioned area is sealed to prevent outside air infiltration and provided with conditioned air at a rate not less than 0.02 cfm (.009 L/s) per square foot of horizontal area and one of the following is implemented: (1) a concrete slab over 6 mil polyethylene or polystyrene sheeting lapped a minimum of 6 inches (152 mm) and taped at the seams or polystyrene insulation board stapled or otherwise sealed at the seams. (2) 6 mil polyethylene sheeting lapped a minimum of 6 inches(152 mm) and taped at the seams.		
Reason:	Reason: This language is currently flawed. Polyethylene sheeting and polystyrene insulation boards are different in nature and installation. This revised language corrects the flaws.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<i>Revise Standard as follows:</i> 602.1.4.2 Crawlspace that is built as a conditioned area is sealed to prevent outside air infiltration and provided with conditioned air at a rate not less than 0.02 cfm (.009 L/s) per square foot of horizontal area and one of the following is implemented: (1) a concrete slab over 6 mil polyethylene or polystyrene sheeting lapped a minimum of 6 inches (152 mm) and taped at the seams or other Class I vapor retarder installed in accordance with Section 408.3 or Section 506 of the International Residential Code.		

	<p>(2) 6 mil polyethylene sheeting lapped a minimum of 6 inches (152 mm) and taped at the seams or other Class I vapor retarder installed in accordance with Section 408.3 or Section 506 of the International Residential Code.</p> <p>VAPOR RETARDER CLASS. A measure of the ability of a material or assembly to limit the amount of moisture that passes through that material or assembly. Vapor retarder class shall be defined using the desiccant method with Procedure A of ASTM E 96 as follows:</p> <p>Class I: 0.1 perm or less</p> <p>Class II: 0.1 < perm = 1.0 perm</p> <p>Class III: 1.0 < perm =10 perm</p>
Committee Reason:	Existing language was flawed. Not all Class I vapor retarders which may be used are polystyrene sheeting. This revised language resolves the differences, and relies on existing requirements in the IRC.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P103 LogID TG3-02	602.1.5 Termite barrier	Final Formal Action: Approve
Submitter:	Sam Francis, Theresa Weston, Maribeth Rizzuto, American Wood Council, DuPont Building Innovations, American Iron and Steel Institute	
Proposed Change:	<p>602.1.5 Termite Barrier. Continuous physical foundation termite barrier used with low toxicity treatment or with no chemical treatment is installed in geographical areas that have subterranean termite infestation potential determined in accordance with Figure 6(3) provided in accordance as follows:</p> <p><u>1. in geographic areas that have slight to moderate infestation potential in accordance with Figure 6(3) a continuous physical barrier is used.</u></p> <p><u>2. in geographic areas that have moderate to heavy or very heavy infestation potential in accordance with figure 6(3), a continuous physical barrier used with no or low toxicity treatment is installed.</u></p> <p><u>3. in geographic areas that have a moderate to heavy or very heavy a low toxicity bait and kill termite treatment plan is selected and implemented.</u></p>	
Reason:	Integrate concepts of P104	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 38</p> <p>Disagree with committee action: 1</p>	

	Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Randall Melvin: P103 is in need of additional modification. The section as currently written is too narrow and excludes some very effective eco-friendly classes of termite prevention treatments for termite infestation probabilities of moderate to heavy or less. These treatments are not ground treatments but no-low toxicity treatments such as zinc borate, which are applied to select portions of at risk wood framing components.</p> <p>Section title should be revised to "Eco friendly Termite control systems" and include an additional item; "In geographic areas with termite infestation probability of moderate to heavy or less an effective no or low toxicity ground or framing treatment system is used.</p> <p>It is not necessary to use a barrier protection in conjunction with this type of system.</p>
Abstain:	

P104 LogID 5309	602.1.5 Termite barrier	Final Formal Action: Disapprove
Submitter:	Lorraine Ross, L Ross Consulting Inc	
Proposed Change:	<p>602.1.5 Termite barrier control system. <u>One of the following termite control systems is provided in geographical areas that have subterranean termite infestation potential that is moderate to heavy or very heavy in accordance with Figure 6(3):</u></p> <p>(1) A continuous physical foundation termite barrier used with no or a low toxicity treatment or with no chemical treatment is installed in geographical areas that have subterranean termite infestation potential determined in accordance with Figure 6(3).</p> <p><u>(2) A low toxicity bait and kill termite treatment plan is selected and implemented.</u></p>	
Reason:	Reason: There are innovative and very effective methods of mitigating termite infestation and damage. This proposal recognizes another environmentally friendly method. Bait and kill treatment plans do not inject large quantities of chemicals in the ground rather they use a small quantity of solid bait that either kills the termites that eat it or returns the termites to the colony to kill the entire population. Currently the language is not clear in regard to the level of probability that determines the need for compliance with this section. Additional clarification was added.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of action on P103.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 37 Disagree with committee action: 2 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:	<p>Randall Melvin: P103 is in need of additional modification. The section as currently written is too narrow and excludes some very effective eco-friendly classes of termite prevention treatments for termite infestation probabilities of moderate to heavy or less. These treatments are not ground treatments but no-low toxicity treatments such as zinc borate, which are applied to select portions of at risk wood framing components.</p> <p>Section title should be revised to "Eco friendly Termite control systems" and include an additional item; "In geographic areas with termite infestation probability of moderate to heavy or less an effective no or</p>	

	<p>low toxicity ground or framing treatment system is used.</p> <p>It is not necessary to use a barrier protection in conjunction with this type of system.</p> <p>Ryan Taylor: Following recommendation of TG to reconsider per Randall Melvin ballot comment.</p>
Abstain:	

P105 LogID 5323	602.1.7 Moisture Control Measures	Final Formal Action: Approve as Modified
Submitter:	Rob Brooks, Rob Brooks & Associates, LLC	
Proposed Change:	<u>602.1.7.3 Moisture control and condensation potential of the building envelope that has been analyzed by hygrothermal study, practice or model representative of the local climatic conditions and building air exchange rate.</u>	
Reason:	This credit is designed to encourage builders to use assemblies that have been evaluated for their local climatic conditions.	
Committee Action from Meeting:	Approved as Modified	
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p><u>602.1.7.3</u></p> <p><u>Building envelope assemblies that are designed for moisture control based on documented hygrothermal simulation or field study analysis. Hygrothermal analysis shall incorporate representative climatic conditions, interior conditions and include heating and cooling seasonal variation.</u></p>	
Committee Reason:	Original proposal granted points based on study; modification credits implementation based on study findings. More specifics incorporated: (1) Simulations and field study are both recognized; and (2) Climatic conditions defined more specifically.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P106 LogID TG3-06	602.1.9 Flashing	Final Formal Action: Disapprove
Submitter:	Steve Easley, Steve Easley & Associates Inc.	
Proposed Change:	(5) A rainscreen wall design as follows is used for exterior wall assemblies (a) remains the same (b) A cladding material or water-resistive barrier/ <u>drainable housewrap with enhanced drainage, meeting 75 percent drainage efficiency determined in accordance with ASTM E2273 or a cladding material or water-resistive barrier/ drainable housewrap meeting 75 percent drainage efficiency determined in accordance with ASTM E2273.</u>	
Reason:	<p>IECC 2006 to present</p> <p>I believe this will help the language to be clearer to the industry as many of the “rank and file” trades and less informed builders are still a bit unclear what a weather resistive barrier really is. Also I think drainable housewrap will help clarify "enhanced drainage" The codes already requires a WRB/housewrap under ALL claddings.</p>	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Housewrap is essentially an example of water-resistive barrier. Identification of housewrap can be added in the commentary.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Steve Easley: This was a simple change intended to quantify the drainage efficiency of drainable house wraps and use a recognized standard ASTM E223 and set a minimum drainage efficiency per industry standards. See rejected P106 language below.</p> <p>A cladding material or water-resistive barrier/ drainable housewrap with enhanced drainage, meeting 75 percent drainage efficiency determined in accordance with ASTM E2273 or a cladding material or water-resistive barrier/ drainable housewrap meeting 75 percent drainage efficiency determined in accordance with ASTM E2273.</p>
Abstain:	

P107 LogID 5285	602.1.9 Flashing	Final Formal Action: Approve as Modified
Submitter:	John Woestman, Kellen Company	
Proposed Change:	602.1.9 Flashing. <i>Charging section remains unchanged.</i> <i>(1) remains unchanged</i> (2) All window Window and door head and jamb flashing is self-adhered flashing complying with AAMA 711-07 installed in accordance with fenestration and flashing manufacturer’s installation instructions. <i>(3) through(7) remain unchanged</i>	
Reason:	This section currently limits product choice unnecessarily. There are new innovative products in the market that should not be disadvantaged.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise Proposed Change as follows (in red):</i> 602.1.9 Flashing. <i>Charging section remains unchanged.</i> <i>(1) remains unchanged</i> (2) All window Window and door head and jamb flashing is either self-adhered flashing complying with AAMA 711-07 or liquid applied flashing installed in accordance with fenestration and flashing manufacturer’s installation instructions. <i>(3) through (7) remain unchanged</i>	
Committee Reason:	Both self adhered and liquid applied flashing should receive points.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1	

	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:	<i>Theresa Weston:</i> This language was modified on the fly during the committee meeting. While I voted for it at the time, on reflection I believe it is flawed. While I support the inclusion of liquid applied flashing the proposed change does not incorporate a performance metric on that liquid applied flashing material. As is this would open the door to any coating or paint that was applied according to the manufacturer's installation instructions, regardless of whether it had the properties to perform as a durable flashing.	
Abstain:		

P108	LogID 5158	602.1.9 Flashing	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	Make part (6), "Through-wall flashing is installed at transitions between wall cladding materials or wall construction types," mandatory.		
Reason:	Transitions between materials are typically continuous and present a great opportunity to insert flashing to allow for water to drain out of the walls and prevent water damage. Providing through wall flashing at transitions between wall cladding materials is just good practice and should be mandatory.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Better to incentivize flashing practices that are more innovative in nature and less likely to be implemented in the field.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P109	LogID 5306	602.2 Roof surfaces	Final Formal Action: Approve as Modified
Submitter:	Lorraine Ross, L Ross Consulting Inc		
Proposed Change:	602.2 Roof surfaces. A minimum of 90 percent of roof surfaces, not used for roof penetrations and associated equipment, on-site renewable energy systems such as photovoltaics or solar thermal energy collectors, or rooftop decks, amenities and walkways, are constructed of one or both <u>more</u> of the following: <i>(1) and (2) remain unchanged</i> <u>(3) Minimum initial SRI of 78 for low-sloped roof (a slope less than or equal to 2:12) and a minimum initial SRI of 29 for a steep-sloped roof (a slope of more than 2:12). The SRI is calculated in accordance with ASTM E1980. Roof products are certified and labeled.</u>		
Reason:	Reason: Chapter 5 addresses lot design, preparation, and development. Cool roofing does not fit. Cool roofing is more appropriately addressed in Chapter 6. In fact cool roofing requirements can also be		

	found in chapter 6 in the current version (potential double counting). Therefore we have relocated the one compliance option for cool roofing that is found in chapter 5 but not in chapter 6 to section 602.2. The requirement has not been changed only relocated.										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> (3) Minimum initial SRI of 78 for low-sloped roof (a slope less than or equal to 2:12) and a minimum initial SRI of 29 for a steep-sloped roof (a slope equal to or greater than 2:12). The SRI is calculated in accordance with ASTM E1980. Roof products are certified and labeled.										
Committee Reason:	The modifications more appropriately address the concerns of the submitters and the issue brought to light by their comment.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P110	LogID 5246	602.3 Roof water discharge	Final Formal Action: Disapprove										
Submitter:	Jeremy Velasquez, US-EcoLogic												
Proposed Change:	Remove or revise the 5' rule regarding downspout extensions.												
Reason:	This is a liability issue in MF. As they may extend to "right of way" areas. There is also potential for damage to downspouts or extensions that would reduce the designed flow rates for drainage from the downspout system. Just installing a standard G & DS system seems adequate to remove bulk water away from the buildings.												
Committee Action from Meeting:	Disapprove												
Modification of Proposed Change:													
Committee Reason:	Section 602.3 is an optional practice for points.												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2		
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Disagree with committee action:	0												
Abstain:	0												
Non-voting:	2												
Ballot Comments													
Agree with committee action:													
Disagree with committee action:													
Abstain:													

P111	LogID 5055	602.4.1 Finished grade slope minimum 6 inches over 10 feet	Final Formal Action: Disapprove
Submitter:	John Schneider, City of Moundsville		

Proposed Change:	Coordinate 2% slope requirements with the 2012 IRC R401.3. IRC allows a 2% slope only with impervious surfaces. NGBS indicates any surfaces can be a minimum of 2% slope in "tight spaces".
Reason:	Coordinate with 2012 IRC R401.3
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Intent of the standard is that there will be a 2% slope regardless of surface type. Practice is above-code.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P112	LogID TG3-12	603.2 Salvaged materials	<i>Final Formal Action: Disapprove</i>
Submitter:	Frank Stanonik, AHRI		
Proposed Change:	<u>603.2 Demolition of existing building</u> <u>A demolition waste management plan is developed, posted at the jobsite and implemented with a goal of recycling or salvaging a minimum of 50 percent of the nonhazardous demolition waste.</u>		
Reason:	Responding to comments ID 638 and 628		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	In favor of action on P113. Demolition of existing structures does not fit within the Resource Efficiency section.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P113	LogID TG2-08	603.2 Refused or salvaged	<i>Final Formal Action: Approve as Modified</i>
Submitter:	Frank Stanonik, AHRI		
Proposed Change:	<u>603.2 Demolition of existing building</u> <u>A demolition waste management plan is developed, posted at the jobsite and implemented with a goal of recycling or salvaging a minimum of 50 percent of the nonhazardous demolition waste.</u>		
Reason:	Responding to comments ID 638 and 628		

Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p><i>Add new sections to the Standard as follows:</i></p> <p><u>403.x Demolition of existing building</u></p> <p><u>A demolition waste management plan is developed, posted at the jobsite, and implemented to recycle and/or salvage with a goal of recycling or salvaging a minimum of 50 percent of the nonhazardous demolition waste.</u></p> <p><u>(One additional point awarded for every 10 percent of demolition waste recycled and/or salvaged beyond 50 percent).</u></p> <p><u>503.x Demolition of existing building</u></p> <p><u>A demolition waste management plan is developed, posted at the jobsite, and implemented to recycle and/or salvage with a goal of recycling or salvaging a minimum of 50 percent of the nonhazardous demolition waste.</u></p> <p><u>(One additional point awarded for every 10 percent of demolition waste recycled and/or salvaged beyond 50 percent).</u></p>										
Committee Reason:	This section belongs in both chapters 4 and 5 of the standard.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>38</td> </tr> <tr> <td>Disagree with committee action:</td> <td>1</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	38	Disagree with committee action:	1	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	38										
Disagree with committee action:	1										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	<i>Frank Stanonik:</i> There seems to be a redefining of waste inherent in this proposal that is confusing Section 6031 already addresses the reuse or salvaging of materials from an existing building on the site In that context waste is only the other stuff that could not be reused or salvaged So "waste" can be recycled but it cannot be salvaged. If the material, building component, etc, was salvageable it is not waste										
Abstain:											

P114 LogID 5159	603.2 Salvaged materials	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Reclaimed and/or salvaged materials and components are used <u>consistent with the requirements of local building codes</u> . The total material value and labor cost of salvaged materials is equal to or exceeds 1 percent of the total construction cost.	
Reason:	Reuse is a high-priority for materials management, but materials have to be reused in a safe and protective manner. One caution is that potentially harmful materials that had historically circulated in the construction and maintenance of buildings could be reintroduced into the building stock. Another concern is that depending on the application, the structural and energy-efficiency performance of certain recovered materials may not meet the requirements of building codes. The standard should reiterate the importance of reusing salvaged materials and components meet local code requirements.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		

March 6, 2015

Committee Reason:	Noting “consistent with the local building code” is unnecessary and implies that some materials utilized may not comply with code.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P115 LogID 5136	604.1 Recycled content	Final Formal Action: Approve as Modified													
Submitter:	Robert Hill, Home Innovation Research Labs														
Proposed Change:	revise by adding (Points awarded for only one pair of major components and one pair of minor components.)														
Reason:	It is too often assumed that this practice affords an unlimited number of points based on the number of pairs of products that a home contains.														
Committee Action from Meeting:	Approve as Modified														
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p>Table 604.1</p> <p>Recycled Content</p> <table border="1"> <thead> <tr> <th>Material Percentage Recycled Content</th> <th>Points Per For 2 Minor</th> <th>Points Per For 2 Major</th> </tr> </thead> <tbody> <tr> <td>25% to less than 50%</td> <td>1</td> <td>2</td> </tr> <tr> <td>50% to less than 75%</td> <td>2</td> <td>4</td> </tr> <tr> <td>more than 75%</td> <td>3</td> <td>6</td> </tr> </tbody> </table>			Material Percentage Recycled Content	Points Per For 2 Minor	Points Per For 2 Major	25% to less than 50%	1	2	50% to less than 75%	2	4	more than 75%	3	6
Material Percentage Recycled Content	Points Per For 2 Minor	Points Per For 2 Major													
25% to less than 50%	1	2													
50% to less than 75%	2	4													
more than 75%	3	6													
Committee Reason:	Intent of proposal was good. Above change accomplishes the same intent with fewer words.														
Ballot Results on Committee Action:	Eligible to vote:	41													
	Agree with committee action:	39													
	Disagree with committee action:	0													
	Abstain:	0													
	Non-voting:	2													
Ballot Comments															
Agree with committee action:															
Disagree with committee action:															
Abstain:															

P116 LogID TG3-10	604.1 Recycled content	Final Formal Action: Disapprove	
Submitter:	David Shepherd & Maribeth Rizzuto,		

<p>Proposed Change:</p>	<p>604.1 Recycled content. Building materials with recycled content are used for two <u>eight</u> minor and/or two <u>five</u> major components of the building, <u>with a maximum of 8 points for this credit.</u></p> <p>Table 604.1</p> <p>Recycled Content</p> <table border="1"> <thead> <tr> <th>Percentage of Recycled Content</th> <th>Points Per 2 <u>8</u> Minor Components</th> <th>Points Per 2 <u>5</u> Major Components</th> </tr> </thead> <tbody> <tr> <td>25% to less than 50%</td> <td>1</td> <td>2</td> </tr> <tr> <td>50% to less than 75%</td> <td>2</td> <td>4</td> </tr> <tr> <td>More than 75%</td> <td>3</td> <td>6</td> </tr> </tbody> </table> <p><u>The percentage of recycled content shall be based on mass or cost, and the basis of calculation shall remain consistent for all components considered within the credit.</u></p>	Percentage of Recycled Content	Points Per 2 <u>8</u> Minor Components	Points Per 2 <u>5</u> Major Components	25% to less than 50%	1	2	50% to less than 75%	2	4	More than 75%	3	6
Percentage of Recycled Content	Points Per 2 <u>8</u> Minor Components	Points Per 2 <u>5</u> Major Components											
25% to less than 50%	1	2											
50% to less than 75%	2	4											
More than 75%	3	6											
<p>Reason:</p>	<p>The inclusion of recycled content is becoming a commonplace practice for the manufacturing of construction products, especially those in the major components category. The number of products required for achieving points has been raised to award broader use of products with recycled content.</p> <p>A maximum of 8 points was added into the language, recognizing that recycling is a tertiary strategy, down from reuse and salvaging. This also addresses the confusion noted in LogID 5316</p> <p>Additional direction for the credit calculation was added to assist the user.</p>												
<p>Committee Action from Meeting:</p>	<p>Disapprove</p>												
<p>Modification of Proposed Change:</p>													
<p>Committee Reason:</p>	<p>Increasing the requirements to earn points would potentially make the higher rating levels unattainable.</p>												
<p>Ballot Results on Committee Action:</p>	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>												
<p>Ballot Comments</p>													
<p>Agree with committee action:</p>													
<p>Disagree with committee action:</p>													
<p>Abstain:</p>													

<p>P117 LogID 5318</p>	<p>604.1 Recycled content Final Formal Action: Disapprove</p>
<p>Submitter:</p>	<p>Craig Conner, Building Quality</p>
<p>Proposed Change:</p>	<p>604</p>
<p>Reason:</p>	<p>This section is hard to fail. It recognizes individual products that are recycled. However, these products are in aggregate so common as to make it difficult to build without getting at least partial points from this section. For example, consider steel. Steel averaged 88% recycled content in 2012 (http://www.recyclesteel.org/Recycling%20Resources/~/_media/Files/SRI/Releases/003%20Steel%20Recycling%20Rates%20Graphs.pdf). Common steel products, such as rebar, include more than 95% recycled content. There are products that do deserve encouragement. Cellulose insulation includes a substantial recycled component. High fly ash concrete utilizes a substantial amount of what is otherwise a waste material.</p>

	High recycled-glass content fiberglass uses waste glass that doesn't otherwise have much of a market. If not deleted this section should be reformatted to focus on products that could greatly increase the use of what is now usually a waste product.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P115.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P118 LogID 5274	604.1 Recycled content	Final Formal Action: Disapprove
Submitter:	Shelly Leonard, Green Space Consultants LLC	
Proposed Change:	<p><u>Common minor elements include, but not limited to:</u></p> <ul style="list-style-type: none"> • <u>Doors: interior and exterior</u> • <u>Trim: interior and exterior</u> • <u>Railings: interior and exterior</u> • <u>Exterior decking</u> • <u>Exterior siding/materials (e.g. wood siding, masonry, stucco, etc)</u> • <u>Roof/attic insulation</u> • <u>HVAC equipment, ductwork and water heaters</u> • <u>Appliances</u> • <u>Cabinets</u> • <u>Plumbing fixtures and pipe</u> • <u>Electrical fixtures and wiring</u> • <u>Finished flooring (hardwood, tile), carpet and padding covering <50% of floor area.</u> • <u>Driveway and walkway: base and finished surface</u> <p><u>Common major elements include, but not limited to:</u></p> <ul style="list-style-type: none"> • <u>Footings, foundation & crawlspace</u> • <u>Slab and slab base</u> • <u>Floor system structure and/or floor decking</u> • <u>Roof structure and/or decking</u> • <u>Exterior wall system structure and/or exterior sheathing</u> • <u>Exterior wall coverings (siding, masonry, stucco, etc.)</u> • <u>Interior wall system structure</u> • <u>Finished flooring (hardwood, tile), carpet and padding covering >50% of floor area.</u> • <u>All insulation excluding roof/attic insulation</u> 	
Reason:	Include major factors and provide as much clarity as possible in the practice description.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Defining via a bulleted list may result in unwieldy, cumbersome content.	

Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P119 LogID 708	605.0 Intent (Recycled Construction Waste)	Final Formal Action: Disapprove
Submitter:	Gladys Quinto Marrone, BIA Hawaii	
Proposed Change:	605 – accept builder photo documentation, or other proof, that material has been ‘donated’ for reuse or recycling rather than require proof from a certified recycler.	
Reason:	Hawaii’s recycling management is generally poor. Most builders simply “donate” to the bins at local schools for recycling, but have no receipts for doing so.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Language like this belongs in the Commentary, not in the Standard.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P120 LogID 629	605.0 Intent (Recycled Construction Waste)	Final Formal Action: Disapprove
Submitter:	Kathleen Petrie, City of Seattle, Department of Planning and Development	
Proposed Change:	RECYCLED CONSTRUCTION <u>and DEMOLITION</u> WASTE	
Reason:	The section 605 heading should be revised to include demolition.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Demolition management plan is out-of-scope for Practice 605.1. Disapproved in favor of action on P113.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P121 LogID 631	605.0 Intent (Recycled Construction Waste)	Final Formal Action: Disapprove
Submitter:	Kathleen Petrie, City of Seattle, Department of Planning and Development	
Proposed Change:	605.0 Intent. <u>Nonhazardous waste generated during construction and demolition is recycled or reused.</u> All waste classified as hazardous shall be properly handled and disposed. (Points not awarded for hazardous waste removal.)	
Reason:	All nonhazardous waste should be recycled or reused, regardless of whether it is the result of construction or demolition activity. Should the term "hazardous" be defined?	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Committee opted to steer away from defining and regulating controversial verbage, such as nonhazardous and reuse.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P122 LogID 638	605.0 Intent (Recycled Construction Waste)	Final Formal Action: Disapprove
Submitter:	Kathleen Petrie, City of Seattle, Department of Planning and Development	
Proposed Change:	None	
Reason:	General Comment: It would be good to see the waste diversion section further developed to include demolition and land-clearing diversion, higher percentages of diversion, the disallowance of alternative daily cover as diversion, and restrictions on percentage of diversion that can be used as fuel end markets.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	No specific changes proposed. These concepts were included in P112 for committees consideration. However, P112 was disapproved in favor of action on P113.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		

Disagree with committee action:	
Abstain:	

P123 LogID 628	605.1 Construction Waste Management Plan	Final Formal Action: Disapprove
Submitter:	Kathleen Petrie, City of Seattle, Department of Planning and Development	
Proposed Change:	605.1 Construction <u>and demolition</u> waste management plan. A construction <u>and demolition</u> waste management plan is developed, posted at the jobsite, and implemented with a goal of recycling or salvaging a minimum of 50 percent (by weight) of <u>nonhazardous construction and demolition waste</u> .	
Reason:	There should be an attempt to recycle or reuse all nonhazardous waste, whether it be construction or demolition. There should be an attempt to recycle or reuse all nonhazardous waste, whether it be construction or demolition. The State of California, draft IgCC, Portland, OR, Chicago, IL and Boulder, CO all have a diversion rates of 50%, or greater	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of action on P113.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P124 LogID TG3-09	605.1 Construction waste management plan	Final Formal Action: Approve
Submitter:	David Shepherd, Portland Cement Association	
Proposed Change:	605.1 Construction waste management plan. A construction waste management plan is developed, posted at the jobsite and implemented with a goal of recycling or salvaging <u>diverting, through reuse, salvage or recycling,</u> a minimum of 50 percent (by weight) of <u>nonhazardous construction and demolition waste from disposal</u> . <u>The waste management plan shall include the recycling of 95% of electronic waste components (such as printed circuit boards from computers, building automation systems, HVAC, fire and security control boards) for remodeling projects or demolition of an existing facility by a EPA certified E-Waste recycling facility.</u> <u>Exceptions:</u> <ol style="list-style-type: none"> <u>Waste materials generated from land clearing, soil and sub-grade excavation and all manner of vegetative debris shall not be in the calculations.</u> <u>A recycling facility (traditional or E-Waste) offering material receipt documentation is not available within 50 miles of the jobsite.</u>	
Reason:	The phrase "with a goal of recycling or salvaging" was deleted as this is not a new, innovative or onerous practice, thus points should only be awarded for achieving the requirement. The intent of this credit is not to attempt to achieve but actually accomplish the waste diversion rates specified in the	

	<p>requirement. Requirements with identical intent are already included in the:</p> <ul style="list-style-type: none"> ✍ IgCC 2012 (section 503.1) ✍ CalGreen (Section 4.408 - <u>MANDATORY</u> for all new residential construction) ✍ ASHRAE 189.1 (Section 9.3.1.1 – MANDATORY to receive a certificate of occupancy) ✍ LEED v4, MR Credit – Construction and Demolition Waste Management ✍ LEED Homes v4 MR Credit – Construction Waste Management <p>None of the above offer points for intent of waste diversion without actually achieving the requirement.</p> <p>Electronic components (circuit boards, HVAC and security control panels, etc) contain precious metals as well as contaminants such as lead, cadmium, beryllium and brominated flame retardants. According to the EPA, 25 states have passed legislation controlling the disposal of e-waste. E-waste should only be recycled through an EPA certified e-waste recycler.</p> <p>An exception has been provided to accommodate project locations where recycling facilities unable to provide documentation are not available.</p> <p>Waste generated from demolition is included in this credit to support the Site Redevelopment credit in Section 401.</p>										
Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>38</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>1</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	38	Disagree with committee action:	0	Abstain:	1	Non-voting:	2
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Agree with committee action:	38										
Disagree with committee action:	0										
Abstain:	1										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:	<i>Frank Stanonik:</i> I am not convinced that demolition waste should be included in this Section.										

P125 LogID 5287	605.1 Construction waste management plan	Final Formal Action: Disapprove
Submitter:	John Woestman, Kellen Company	
Proposed Change:	605.1 Construction waste management plan. A construction waste management plan is developed, posted at the jobsite, and implemented with a goal of to recycle or salvage recycling or salvaging a minimum of 50 percent (by weight) of construction waste.	
Reason:	Reason: Having a “goal” is not appropriate for point attainment. This section was edited to clarify the requirement.	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:											
Committee Reason:	In favor of action on P124.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P126 LogID 5160	605.1 Construction waste management plan	Final Formal Action: Disapprove										
Submitter:	Brett VanAkkeren, USEPA											
Proposed Change:	A construction waste management plan is developed, posted at the jobsite, and implemented with a goal of recycling or salvaging a minimum of 50 percent (by weight) of construction waste, <u>excluding land-clearing waste.</u>											
Reason:	Land-clearing waste should be excluded from the 50 percent calculation. Soil, vegetation, and rocks are heavy, bulky materials. When included in the total weight used to calculate the recycling rate, it can reduce the amount of higher-value materials, such as wood, concrete, and drywall, that is ultimately recycled.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	In favor of action on P127.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P127 LogID 5204	605.1 Construction waste management plan	Final Formal Action: Approve as Modified
Submitter:	Wes Sullens, StopWaste of Alameda County	
Proposed Change:	605.1 Construction waste management plan. A construction waste management plan is developed, posted at the jobsite, and implemented with a goal of recycling or salvaging a minimum of 50 percent (by weight) of construction waste. <u>Land clearing debris and materials that are processed for recycling but are used as alternative daily cover at landfills shall be excluded from the 50 percent requirement.</u>	
Reason:	Materials that result from land clearing activity are often heavy and can skew results for other types of higher-value recycling and salvaging. Additionally, these materials are typically not landfilled in practice because they are expensive to tip, and robust markets are available to accept and recycle those land clearing materials at a lower cost than landfilling. "Alternative Daily Cover" (ADC) is cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the	

	end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. The ADC materials that result from building are byproducts of construction and demolition waste processing facilities, yet they are not actually recycled (they do not re-enter the materials cycle) and are essentially deposited in landfills and stay there forever. Therefore, ADC should not be considered recycling in green building standards. ASHRAE 189.1, GreenPoint Rated, and LEEDv4 have all disallowed ADC to count as recycling, and so should this standard. Achieving 50% recycling by not including ADC and land clearing debris is widely available with jobsite best practices (source separation of materials on-site and sending those materials to specific recycling facilities), and by sending the remaining mixed-waste loads to facilities that sort offsite.
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<i>Revise standard as follows:</i> 605.1 Construction waste management plan. A construction waste management plan is developed, posted at the jobsite, and implemented with a goal of recycling or salvaging a minimum of 50 percent (by weight) of construction waste. <u>Land clearing debris is not considered construction waste in this requirement. Materials used as alternative daily cover are considered construction waste and do not count toward recycling or salvaging.</u>
Committee Reason:	Clarified Proposed Change related to land-clearing and daily cover.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P128 LogID 5161	605.3 Recycled construction materials	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Construction materials (e.g., wood, cardboard, metals, drywall, plastic, asphalt roofing shingles, or concrete) <u>that cannot be salvaged and reused onsite</u> are recycled offsite.	
Reason:	Onsite salvage and reuse is preferred to offsite recycling because of reduced hauling and transportation impacts; it should be emphasized that reuse is a higher priority.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Additional text is redundant. Reuse/salvage practices already receive greater point values than recycling practices.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		

Abstain:	
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P129 LogID 5056	606.1 Biobased products	Final Formal Action: Approve										
Submitter:	Robert Hill, Home Innovation Research Labs											
Proposed Change:	<p>606.1 Biobased products. The following biobased products are used:</p> <ul style="list-style-type: none"> (a) certified solid wood in accordance with Section 606.2 (b) engineered wood (c) bamboo (d) cotton (e) cork (f) straw (g) natural fiber products made from crops (soy-based, corn-based) (h) products with the minimum biobased contents of the USDA 7 CFR Part 2902 (i) other biobased materials with a minimum of 50 percent biobased content (by weight or volume) <ul style="list-style-type: none"> (1) Two types of biobased materials are used, each for more than 0.5 percent of the project's projected building material cost. (2) Two types of biobased materials are used, each for more than 1 percent of the project's projected building material cost. (3) For each additional biobased material used for more than 0.5 percent of the project's projected building material cost. 											
Reason:	<p>USDA biobased criteria is based only on the organic part of the material. Materials that are largely inorganic can qualify under the USDA as biobased when only a small fraction of the material is biobased. Items (a)-(g) are essentially 100% biobased and item (i) requires at least 50%. While it may be worth recognizing USDA biobased products they should not get the same number of points as something that is over 50% biobased.</p>											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td style="text-align: right;">41</td> </tr> <tr> <td>Agree with committee action:</td> <td style="text-align: right;">39</td> </tr> <tr> <td>Disagree with committee action:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Abstain:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Non-voting:</td> <td style="text-align: right;">2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												

Disagree with committee action:	
Abstain:	

P130 LogID 5083	606.2 Wood-based products	Final Formal Action: Approve										
Submitter:	Michael Martin, National Wood Flooring Association											
Proposed Change:	<p>606.2 Wood-based products. Wood or wood-based products are certified to the requirements of one of the following recognized programs:</p> <ul style="list-style-type: none"> (a) American Forest Foundation’s American Tree Farm System (ATFS) (b) Canadian Standards Association’s <i>Sustainable Forest Management System Standards</i> (CSA Z809) (c) <i>Forest Stewardship Council</i> (FSC) (d) <i>Program for Endorsement of Forest Certification Systems</i> (PEFC) (e) <i>Sustainable Forestry Initiative Program</i> (SFI) (f) <u>National Wood Flooring Association’s <i>Responsible Procurement Program</i> (RPP)</u> (g) other product programs mutually recognized by PEFC 											
Reason:	<p>Products certified to the requirements of the NWFA’s RPP program are domestic hardwood flooring products that are independently verified as originating from “U.S. Renewing Forests”: U.S. states whose hardwood forests are in surplus, i.e. they are producing more timber than is being removed or lost through harvest and mortality. As wood flooring is a product used on home building, the RPP is designed such that all products that are verified as being from “U.S. Renewing Forests” must gradually transition to FSC certification over time. FSC is a forest certification program already recognized under the National Green Building Standard. For all of these reasons, we believe it makes sense to recognize the NWFA RPP as a program in section 606.2 of the standard.</p>											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P131 LogID 5221	606.2 Wood-based products	Final Formal Action: Approve as Modified
Submitter:	Eric DeVito, BBRS	

Proposed Change:	606.2 Wood-based products. Wood or wood-based products are certified to the requirements of one of the following recognized product programs:		
	(a)	American Forest Foundation’s <i>American Tree Farm System</i> ® (ATFS)	
	(b)	Canadian Standards Association’s <i>Sustainable Forest management System Standards</i> (CSA Z809)	
	(c)	<i>Forest Stewardship Council</i> (FSC)	
	(d)	<i>Program for Endorsement of Forest Certification Systems</i> (PEFC)	
	(e)	<i>Sustainable Forestry Initiative</i> ® Program (SFI)	
	(f)	Other product programs mutually recognized by PEFC	
	(1)	A minimum of two certified wood-based products are used for minor elements of the building (e.g. all trim, cabinetry, <u>windows, doors,</u> or millwork).	3
	(2)	A minimum of two certified wood-based products are used in major elements of the building (e.g., walls, floors, roof).	4
Reason:	This proposal clarifies that wood-framed windows and wood doors may also receive credit for the use of certified wood. We believe that wood-framed windows and doors already qualify for credit under this section, but code officials may not be awarding credits, because windows and doors are not listed as examples under either minor or major elements. For now, we have proposed including them in the category of “minor elements” of the building, although a home with a high glazing area percentage could arguably fit into the “major elements” definition. At a minimum, the addition of these two examples will provide some direction for the code official.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p>606.2 Wood-based products. Wood or wood-based products are certified to the requirements of one of the following recognized product programs:</p> <ul style="list-style-type: none"> (a) American Forest Foundation’s <i>American Tree Farm System</i>® (ATFS) (b) Canadian Standards Association’s <i>Sustainable Forest management System Standards</i> (CSA Z809) (c) <i>Forest Stewardship Council</i> (FSC) (d) <i>Program for Endorsement of Forest Certification Systems</i> (PEFC) (e) <i>Sustainable Forestry Initiative</i>® Program (SFI) (f) Other product programs mutually recognized by PEFC <p>(1) A minimum of two certified wood-based products are used for minor elements <u>components</u> of the building (e.g. all trim, cabinetry, or millwork). 3</p> <p>(2) A minimum of two certified wood-based products are used in major elements <u>components</u> of the building (e.g., walls, floors, roof). 4</p>		
Committee Reason:	Eliminate “elements” to increase consistency within the document. Parenthetical information is redundant with information within the Definitions section.		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>		

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P132 LogID 5162	607.1 Recycling	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	607.1 Recycling and Composting. Recycling and composting by the occupant is <u>are</u> facilitated by one or more of the following methods:	
Reason:	Composting is not considered the same thing as recycling. Since the intent of the section is to facilitate composting as well as recycling, composting should be referenced by name in Section 607.1.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:	Composting is already noted within the section. This change will add consistency.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P133 LogID 5288	607.1 Recycling	Final Formal Action: Disapprove
Submitter:	John Woestman, Kellen Company	
Proposed Change:	607.1 Recycling. Recycling by the occupant is facilitated by one or more of the following methods: <i>Remaining text is unchanged.</i>	
Reason:	Reason: deleting the undefined term "occupant" as the use of the term does not help to clarify who the recycling requirement is intended to apply to.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	This section is already about recycling and composting for the occupant. This change is overly redundant.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	

Ballot Comments	
Agree with committee action:	

Disagree with committee action:	
Abstain:	

P134 LogID 5275	609.1 Regional materials	Final Formal Action: Disapprove
Submitter:	Shelly Leonard, Green Space Consultants LLC	
Proposed Change:	609.1 Regional Materials. Regional materials are used for major elements or components of the building and include materials and components that originate within 500 miles of the construction site if transported by truck, or within 1,500 miles if transported by rail.	
Reason:	Include major factors and provide as much clarity as possible in a succinct practice description.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of action on P135. New proposed language already exists in Definitions.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P135 LogID TG3-08	609.1 Regional materials	Final Formal Action: Approve
Submitter:	David Shepherd, Portland Cement Association	
Proposed Change:	609.1 Regional Materials – Regional materials are used for major and/or <u>minor</u> elements or components of the building. <u>1 credit per minor component</u> <u>For a component to comply with this credit, a minimum of 75% of all products in that component category must be sourced regionally (Example – Stone Veneer, 75% or more of the stone veneer on a project must be sources regionally to comply with the credit intent.)</u>	
Reason:	<p>The proposed change broadens the options to include minor components as well as major components. The use of regional materials offers multiple green benefits:</p> <ul style="list-style-type: none"> · Increases the likelihood that the product will be produced under U.S. Clean Air and Water Act, with stricter regulatory controls than foreign environments · Minimizes transportation impacts (traffic congestion, cost and environmental impacts) · Stimulates the local, regional and national economic base <p>This credit retains a maximum of ten points.</p> <p>This credit is found in other national green codes and rating systems.</p> <ul style="list-style-type: none"> · IgCC (Section 505.2.5) · ASHRAE SP189.1 -2011 (Section 9.4.1.2) · LEED Homes V4 (MR Credit – Environmentally Preferred Products) 	
Committee Action from Meeting:	Approve	

Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P136 LogID 5319	609.1 Regional materials	Final Formal Action: Disapprove										
Submitter:	Craig Conner, Building Quality											
Proposed Change:	609											
Reason:	<p>This is not well thought out. Consider a few cases. Concrete is typically 60% to 75% aggregate. (http://www.cement.org/cement-concrete-basics/how-concrete-is-made) The concrete aggregate, stone and sand, will always be local, certainly well within the 500 mile radius allowed for “regional” materials. Easy points. How about wood. I live a fairly treeless semi desert on the eastern and brown side of Washington state. Local trees occur in parks and landscape. However the 500 mile radius around me includes all the trees in Washington and Oregon, and most in Idaho. Most wood I would likely buy is regional? Better yet, I like the sand on the beaches of Northern California and southern British Columbia. Since those are within 1500 miles of me by boat, both are regional and I should get credit for importing them for use in local homes?? This does not make sense. In general the market will charge me for transportation and lead me to better decisions than this part of the NGBS.</p>											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	In favor of action on P135, prefer modification of the section rather than deletion.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2	
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P137 LogID 5137	609.1 Regional materials	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	Regional materials. Regional materials are used for major elements or components of the building.	
Reason:	There is no definition of a major element. It is not clear how an element differs from a component.	
Committee Action from Meeting:	Approve	

Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P138 LogID TG3-16	610 Life cycle analysis	Final Formal Action: Approve
Submitter:	Jerry Phelan, Bayer Material Science	
Proposed Change:	610 LIFE CYCLE ANALYSIS ASSESSMENT 610.1 Life cycle analysis-assessment . A life cycle analysis-assessment (LCA) tool... 610.1.1 Whole-building life cycle analysis-assessment . 610.1.2 Life cycle analysis-assessment for a product or assembly.	
Reason:	This is a presumed editorial change proposed to be consistent with convention for LCA – The terms “analysis” and “assessment” have different meaning with “assessment” more clearly describing the LCA technique/science. Assessment is consistently used in universal standards establishing framework, guidelines and requirements for conducting LCA studies and employing LCA results as well as used in IgCC and ASHRAE 189.1.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P139 LogID 5051	610.1 Life cycle analysis	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	A life cycle analysis (LCA) tool is used to select environmentally preferable products, or assemblies, or an LCA is conducted on the entire building designs. Points are awarded in accordance with Section 610.1.1	

	or 610.1.2. Only one method of analysis or tool may be utilized. The reference service life for the building is 60 years for any life cycle analysis tool. Results of the LCA are reported in the manual required in Section <u>1001.1</u> or <u>1003.1(1)</u> of this Standard in terms of the environmental impacts listed in this practice and it is stated if operating energy was included in the LCA.										
Reason:	It does not seem reasonable to award 15 point for doing an LCA for an entire building when the LCA shows that that building is environmentally terrible. It seems like a comparison should be made to appropriate alternative designs as is required for products. 1003.1 is not applicable to single family homes. Adding the reference to 1001.1 allows SF homes to comply with this practice. A similar change should be made to the chapter 11 practice.										
Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P140 LogID TG3-01	610.1.1 Whole-building life cycle analysis	<i>Final Formal Action: Approve as Modified</i>
Submitter:	Jerry Phelan, Bayer Material Science	
Proposed Change:	<p>610.1.1 Whole-building life cycle analysis assessment. A whole-building LCA is shall be performed in <u>conformance with ASTM E-2921 using a ISO 14044 compliant life cycle assessments and data compliant with ISO 14044 or other recognized standards.</u> Points: 15 Max</p> <p>(1) <u>Execute LCA at the whole building level through a comparative analysis between the final and reference building designs as set forth under Standard Practice, ASTM E-2921. The assessment criteria shall include the following environmental impact categories:</u></p> <ul style="list-style-type: none"> <u>(a) Primary energy use</u> <u>(b) Global warming potential</u> <u>(c) Acidification potential</u> <u>(d) Eutrophication potential</u> <u>(e) Ozone depletion potential</u> <u>(f) Smog potential</u> Points: 8 <p>(2) <u>Execute LCA on regulated loads throughout the building operations life cycle stage. Conduct simulated energy performance analyses in accordance with Section 702.2.1 ICC IECC analysis (IECC Section 405) in establishing the comparative performance of final versus reference building designs. Primary energy use savings and global warming potential avoidance from simulation analyses results shall be determined using EPA eGRID 2012 electricity generation and other fuels energy conversion factors and electricity generation and other fuels emission rates for the Sub-Region in which the building is located.</u> Points: 5</p>	

	(3) <u>Complete full LCA, including use-phase, through calculation of operating energy impacts (c) – (f) using EPA eGRID 2012 regional emissions factors [provide full reference to eGRID 2012 document or provide factor tables]</u> <u>Points: 2</u>										
Reason:	Need for more robust LCA/EPD proposal identified in discussion of LogID 5115. Created to replace LogID 5115										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>610.1.1 Whole-building life cycle analysis <u>assessment</u>. A whole-building LCA is <u>shall be performed in conformance with ASTM E-2921 using a ISO14044 compliant life cycle assessments and data compliant with ISO 14044 or other recognized standards.</u> Points: 15 Max</p> <p>(1) <u>Execute LCA at the whole building level through a comparative analysis between the final and reference building designs as set forth under Standard Practice, ASTM E-2921. The assessment criteria shall include the following environmental impact categories:</u></p> <ul style="list-style-type: none"> <u>(a) Primary energy use</u> <u>(b) Global warming potential</u> <u>(c) Acidification potential</u> <u>(d) Eutrophication potential</u> <u>(e) Ozone depletion potential</u> <u>(f) Smog potential</u> Points: 8 <p>(2) <u>Execute LCA on regulated loads throughout the building operations life cycle stage. Conduct simulated energy performance analyses in accordance with Section 702.2.1 ICC IECC analysis (IECC Section 405) in establishing the comparative performance of final versus reference building designs. Primary energy use savings and global warming potential avoidance from simulation analyses results shall be determined using EPA eGRID-2012 <u>NERC</u> electricity generation and other fuels energy conversion factors and electricity generation and other fuels emission rates for the Sub-Region in which the building is located.</u> Points: 5</p> <p>(3) Complete <u>Execute</u> full LCA, including use-phase, through calculation of operating energy impacts (c) – (f) using EPA eGRID-2012 <u>NERC</u> regional emissions factors [provide full reference to eGRID-2012 <u>NERC</u> document or provide factor tables]. Points: 2</p>										
Committee Reason:	More action-oriented language.										
Ballot Results on Committee Action:	<table style="width: 100%; border: none;"> <tr> <td>Eligible to vote:</td> <td style="text-align: right;">41</td> </tr> <tr> <td>Agree with committee action:</td> <td style="text-align: right;">36</td> </tr> <tr> <td>Disagree with committee action:</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Abstain:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Non-voting:</td> <td style="text-align: right;">2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	36	Disagree with committee action:	3	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	36										
Disagree with committee action:	3										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	<p>Steven Rosenstock: The references to NERC should be deleted. NERC does not publish documents relating to energy conversion factors or emissions rates. EIA publishes data on electric generation by state, region, power pool, and fuel type.</p> <p>Charles Foster: i agree with most of the proposal but disagree that primary energy is sufficient as an indicator of environmental impact as it lumps together all fuels (oil=gas=coal=solar=wind, etc).</p>										

	<p>The better approach would be to dis-aggregate inputs by fuels so that renewables would not be treated the same as oil and coal.</p> <p>Frank Stanonik: These studies do not cause any change in the construction of the building. So, it is not clear that the conduct of these analyses provides any benefit consistent with the objectives of the code.</p>
Abstain:	

P141 LogID 5317	610.1.2 Life cycle analysis for a product or assembly <i>Final Formal Action: Disapprove</i>										
Submitter:	Craig Conner, Building Quality										
Proposed Change:	<p>610.1.2 610.1.2 A minimum of 10 different permanently installed materials or products shall include an environmental product declaration. The environmental product declaration shall be based on externally verified data. The environmental product declaration shall be certified by an approved agency or third party in accordance with CAN/CSA-ISO 14025 and ISO 21930.</p> <p>Add new definition as follows:</p> <p>ENVIRONMENTAL PRODUCT DECLARATION. A report for a product or material based on a product’s life cycle and other relevant information relevant to its environmental impact.</p> <p>Add new standard(s) as follows: CSA CAN/CSA-ISO 14025-07(R2012) Environmental labels and declarations – Type III environmental declarations – Principles and procedures (Adopted ISO 14025:2006, first edition, 2006-07-01)</p> <p>ISO 21930-2007 Sustainability in building construction – Environmental declaration of building products</p>										
Reason:	<p>This change substitutes Environmental Product Declarations (EPDs) for LCAs. The concept is similar, but EPDs are better defined. EPDs are emerging as one way to compare the environmental performance of competing products, including impacts from manufacturing and ultimately disposal. EPDs would include all the product attributes in the existing section. The use of common metrics for a specific product type encourages manufacturers to reduce their environmental impacts by making it more likely that product buyers will compare competing products based on a well defined set of environmental attributes. Complying with the new section is simple. No new building level calculations are required. If there are 10 EPDs for products in the building, the criteria would be met. ANSI has begun an accreditation program for organizations that certify EPDs. As written, this is not doable or at least will yield a questionable verdict. It says to compare products. Do I get to pick the worst product I can find in a particular category and compare mine to that? That is not useful. There is no obvious base case as it is written.</p>										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P154.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											

Abstain:	
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P142 LogID TG3-15	610.1.2.1 Product LCA	Final Formal Action: Approve										
Submitter:	Jerry Phelan, Bayer Material Science											
Proposed Change:	<p>610.1.2.1 ... following: (a) Fossil fuel consumption <u>Primary energy use</u> (b) – (e) <i>no change</i> (f) <u>Smog potential</u></p> <p>610.1.2.2 ... following: (a) Fossil fuel consumption <u>Primary energy use</u> (b) – (e) <i>no change</i> (f) <u>Smog potential</u></p>											
Reason:	<p>The widely recognized impact indicator of Primary energy use better serves the intent of Section 610 than Fossil fuel consumption – Fossil fuel consumption is a reflection of the utility supplier energy mix (i.e. coal, natural gas, etc. versus hydropower, solar, etc.) and its marginal demand supply decisions than it is of the building product manufacturer or the life cycle operating efficiency and design characteristics of the building. In particular, Fossil fuel consumption does not accurately provide a holistic view of the building’s energy efficiency by limiting the operating energy considered in the WBLCA – Please note that this is consistent with TG3 approved Section 610.1.1 Whole-building life cycle analysis proposed change (LogID 5051). IgCC utilizes Primary energy use as an impact measure. Submitter’s review of many building product (predominately insulation) EPDs indicates that Primary energy is normally reported.</p> <p>In addition, Smog Potential is a highly recognized and frequently reported impact category for building products. Data are readily available for emission of NOx and VOCs associated with energy generation and supply. Please note that this is also consistent with TG3 approved Section 610.1.1 Whole-building life cycle analysis proposed change (LogID 5051). IgCC also utilizes Smog potential as an impact measure. Submitter’s review of many building product (predominately insulation) EPDs indicates that Smog potential is normally reported. Low-level ozone/smog is a highly public concern in most communities and urban areas.</p>											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P143 LogID 5115	610.1.2.1 Product LCA	Final Formal Action: Disapprove
Submitter:	Matthew Dobson, Vinyl Siding Institute	
Proposed Change:	Section should be reviewed and updated according to latest LCA accepted practices and possibly include the use of Environmental Product Declarations and Product Category Rules.	
Reason:	Since this was placed in the NGBS there has been substantial steps with this science. The standard should be cutting edge on this issue.	

Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P154.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P144 LogID 5163	610.1.2.1 Product LCA	Final Formal Action: Disapprove										
Submitter:	Brett VanAkkeren, USEPA											
Proposed Change:	Add two new impact categories: <u>(e) Material Use</u> and <u>(f) Waste</u>											
Reason:	Industry-wide efforts to promote the management of materials and products on a life-cycle basis are current. These life-cycle efforts ensure that materials are used more efficiently and effectively. To that end, the analyses need to provide us with adequate measures that capture material use and recovery. Using less material and recovering more is crucial to our economic and environmental future. Material use and waste are two additional impact categories that should be included.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	Not well-defined impact categories; items not typically utilized in practice. Material use should be addressed as “resources consumption.” Waste needs better definition. Resource consumption is already covered in sq. footage practices.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P145 LogID 5316	610.1.2.2 Building assembly LCA	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality	
Proposed Change:	610.1.2.2	
Reason:	This section is vaguely defined, and lacks a minimum or a base case to compare the report to. The requirements or consequences do not go beyond preparing a complex report that has nothing to compare to. A assembly life cycle assessment is impractical. How is the end user going to demonstrate that the assembly improved without a clear base case? The standard that has been referenced, ISO	

	14044 states in its Section 1 (Scope) "This International Standard is not intended for contractual or regulatory purposes or registration and certification." A building code is a regulation.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Tools are available that are able to do the assembly comparison.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<i>Maribeth Rizzuto:</i> Life Cycle Assessment should not be used in codes or standards until such time as <u>all</u> related impact categories are included in the assessment.
Abstain:	

P146 LogID 5266	611.1 Manufacturer's environmental practices (Innovative Practices)	Final Formal Action: Disapprove
Submitter:	Matt Belcher, Verdatek Solutions	
Proposed Change:	<p>611.4 Resilience Dwelling incorporates one or more of the following resilience options, as applicable. Points for items 1 through 4 shall be granted only where such products are not required per the applicable building code.</p> <ol style="list-style-type: none"> <u>1. High-wind resistant or impact resistant entry doors or garage doors are installed.</u> <u>2. Impact resistant glazing is installed.</u> <u>3. High-wind resistant or impact resistant wall claddings are installed.</u> <u>4. High-wind resistant or impact resistant roof coverings are installed.</u> <u>5. The building is constructed in accordance with an approved above-code mitigation program (e.g. IBHS Fortified, Resilience Star or My Safe Florida Home).</u> <p><u>Lot incorporates one or more of the following resilience options, as applicable.</u></p> <ol style="list-style-type: none"> <u>6. The entire building is constructed using flood resistant materials.</u> <u>7. The building is constructed with its lowest floor at least one foot above the elevation required by the building code or adopted by the jurisdiction, whichever is higher.</u> <u>8. The building is constructed with its lowest floor at least two feet above the elevation required by the building code or adopted by the jurisdiction, whichever is higher.</u> <u>9. The building is constructed with its lowest floor at least three feet above the elevation required by the building code or adopted by the jurisdiction, whichever is higher.</u> <u>10. The building is located in Zone A and constructed on an open foundation system (pile foundations or isolated piers).</u> <u>11. The building is constructed in accordance with an approved above-code flood mitigation program (e.g. IBHS Fortified, etc.).</u> 	
Reason:	With the focus on future enhancement of the model codes to provide for enhanced "Resilient" construction, It is an opportunity to include reference in this "above code" standard to incentivise innovative practices and process that will demonstrate best practices for eventual application into the model codes.	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:	
Committee Reason:	The proposed change would allow points for implementing resilient materials in areas where they are not necessary. The proposed practice could actually be counterproductive to the goals of the NGBS. The concept of combining disaster resistance and green construction has not been adequately developed.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P147 LogID 5073	611.2 Sustainable products	Final Formal Action: Approve
Submitter:	Josh Jacobs, UL	
Proposed Change:	(5) 50% or more of the gypsum board installed (by square feet) is certified to <u>UL 100</u> ULE-ISR-100 . (6) 50% or more of the door leafs installed (by number of door leafs) is certified to <u>UL 102</u> ULE-ISR-102 .	
Reason:	This is an update to existing references. UL 100 and 102 were finalized and published shortly after final voting for the NAHB National Green Building Standard was completed.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P148 LogID 5077	611.2 Sustainable products	Final Formal Action: Disapprove
Submitter:	Josh Jacobs, UL	
Proposed Change:	(8) All clothes washers installed prior to occupancy are certified to AHAM 7003-2013/CSA SPE 7003-13/UL 7003. Points 1 (9) All refrigeration appliances installed prior to occupancy are certified to AHAM 7001-2012/CSA SPE-7001-12/UL 7001. Points 1	
Reason:	This is an addition of two more types of multi-attribute product standards which can help to bring in more sustainable products to the home.	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:	
Committee Reason:	Multi-attribute standards are not well enough defined. The way it is worded you have to be certified to all three of the listed standards, which could be difficult. Proposed language may cause double dipping with other provisions of the standard.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	Josh Jacobs: The statement that you have to be certified to all three of the listed standards is incorrect as the listings are the name of the standards (http://www.aham.org/ht/a/GetDocumentAction/i/68439), they are simply named different things by each sponsoring organization. In terms of the multi-attribute standards no being well enough defined, many authorities having jurisdiction use multi-attribute standards to define their sustainable purchasing (including but not limited to GSA, the State of California, and the City of Washington DC). Additionally we already give credit to other multi-attribute standards in this section and multi-attribute standards are compliance pathways in the 2015 IgCC, 2014 ASHRAE 189.1 and CALGreen. Claiming that they are not useable or ready for this document is ill informed.
Abstain:	

P149 LogID TG3-13	611.3 Universal design elements	Final Formal Action: Approve as Modified
Submitter:	Ramesh Gulatee, Ryan Taylor,	
Proposed Change:	<p><i>Add the following items to section 611.3 on page 42:</i></p> <p><u>(5) All interior and exterior door handles are levers rather than knobs.</u></p> <p><u>(6) All sink faucet controls are single-handle controls of both volume and temperature. [Faucet controls might also appear in section 11.903.1 Plumbing on page 121 though it makes more sense to group these requirements because they share the same purpose.]</u></p> <p><u>(7) Power receptacles, communication connections (for cable, phone, Ethernet, etc.) and switches required by the local building codes are placed between 15" and 48" above the finished floor. Additional switches to control devices and systems(such as alarms, home theaters and other equipment) not required by the local building code may be installed as desired.</u></p> <p><u>(8) All light switches are rocker-type switches or other similar switches that can be operated by pressing them (with assistive devices) – no toggle-type switches may be used.</u></p> <p><u>(9) Anyone of the following can be controlled with a (wireless) mobile device such as a smartphone, tablet or laptop computer: HVAC, lighting, alarm system or door locks</u></p>	
Reason:	<p>These items complement the existing basic accessibility items already included in the standard. They're common in building because they're convenient to occupants regardless of their level of mobility. They're also easy and inexpensive to change if a future owner objects to the switches and faucets.</p> <p>Please consider adding these items because they'll serve as a guide for the true nature of basic accessibility. It's not just about getting around in a wheel chair. It's about living comfortably in a home. These items help remove barriers that highlight disabilities. They help create enabling spaces.</p>	
Committee Action from Meeting:	Approve as Modified	

<p>Modification of Proposed Change:</p>	<p><i>Revise proposed change as follows (in red):</i></p> <p><i>Add the following items to section 611.3 on page 42:</i></p> <p><u>(5) All interior and exterior door handles are levers rather than knobs.</u></p> <p><u>(6) All sink faucet controls are single-handle controls of both volume and temperature. [Faucet controls might also appear in section 11.903.1 Plumbing on page 121 though it makes more sense to group these requirements because they share the same purpose.]</u></p> <p><u>(7) Interior convenience Power receptacles, communication connections (for cable, phone, Ethernet, etc.) and switches required by the local building codes are placed between 15" and 48" above the finished floor. Additional switches to control devices and systems(such as alarms, home theaters and other equipment) not required by the local building code may be installed as desired.</u></p> <p><u>(8) All light switches are rocker-type switches or other similar switches that can be operated by pressing them (with assistive devices) – no toggle-type switches may be used.</u></p> <p><u>(9) Anyone of the following can be controlled with a (wireless) mobile device such as a smartphone, tablet or laptop computer: HVAC, lighting, alarm system or door locks</u></p>
<p>Committee Reason:</p>	<p>Clarify proposed language applies to interior non dedicated power receptacles, does not apply to exterior or dedicated equipment circuits.</p>
<p>Ballot Results on Committee Action:</p>	<p>Eligible to vote: 41 Agree with committee action: 36 Disagree with committee action: 3 Abstain: 0 Non-voting: 2</p>
<p>Ballot Comments</p>	
<p>Agree with committee action:</p>	
<p>Disagree with committee action:</p>	<p>Steven Rosenstock: This is good language, but I think it could be improved in the following ways:</p> <p>For 8), add some language on dimmers. For access reasons, does this mean that "slider" type units should not be used (e.g., the dimming control is built into the rocker switch)?</p> <p>For 9), take out "alarm system", as the term is an umbrella term that could cover security, fire, CO, or other safety alarms that should always be on, or have stand-alone remote controls that are designed <u>not</u> to be accessible through other devices.</p> <p>Frank Stanonik: The modification to subparagraph (7) does not make sense. The first sentence requires switches, without any exceptions, to be 15" to 48" above the floor. The second sentence states that some switches can be anywhere but this contradicts the first sentence</p> <p>Randall Melvin: Agree with Frank and Steve's comments</p> <p>"All" is a problematic word for practical real world execution of any practice</p>
<p>Abstain:</p>	

<p>P150 LogID 5310</p>	<p>Other for Chapter 6 (include section number and title below) <i>Final Formal Action: Disapprove</i></p>
<p>Submitter:</p>	<p>aaron gary, US-EcoLogic</p>
<p>Proposed Change:</p>	<p>605.4 Recycled Demolition Materials Demolition Materials (excluding Site clearing) are recycled off-site.</p>

Reason:	For projects (new construction or remodel) that are being built on Sites with existing structures substantial amounts of waste can be generated during the demolition phase of construction. Projects should be rewarded for dealing with this waste appropriately in the same way Construction Waste Diversion is rewarded.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P124.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P151 LogID 5308	Other for Chapter 6 (include section number and title below) <i>Final Formal Action: Disapprove</i>										
Submitter:	aaron gary, US-EcoLogic										
Proposed Change:	611.4 E-waste Diversion during demolishing										
Reason:	Electronic components (computers, circuit boards, HVAC controls, etc.) contain valuable precious metals as well contaminants such as lead, cadmium, beryllium, or brominated flame retardants. Such e-waste is not easily included as part of the traditional waste streams (trash or recycle) and projects should be rewarded for dealing with these products appropriately when they are encountered during demolition of existing structures (for new construction or remodel).										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P124.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P152 LogID 5157	Other for Chapter 6 (include section number and title below) <i>Final Formal Action: Disapprove</i>
Submitter:	Brett VanAkkeren, USEPA
Proposed Change:	601.10. Design for Disassembly. Incorporate in the design interior elements, such as non-load-bearing walls, partitions, lighting and electric systems, suspended ceilings, raised floors and interior air

	distribution systems that can be disassembled, re-configured, and reused. Utilize connections that allow disassembly, such as reversible connections (e.g. screws, bolts, nails, clips).
Reason:	Reason Statement: The intent of 601 is to utilize design and construction practices that minimize the environmental impact of the building materials and to incorporate environmentally efficient building systems and materials. Employing design elements that can be disassembled, re-configured and reused, and utilizing connections that are reversible are important green building practices to ensuring buildings systems are environmentally efficient.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Specificity is not there. Proposed ideas are not possible.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P153 LogID 5151	Other for Chapter 6 (include section number and title below) <i>Final Formal Action: Disapprove</i>
Submitter:	Stephen J Holzer, eM8s, LLC
Proposed Change:	611.4 Building Information Modeling(BIM) Project Team uses BIM as primary means to coordinate planning, design, construction and operations for residential buildings in order reduce material waste and errors.
Reason:	Building Information Modeling (BIM) is a computer generated model based process that simulates planning, design, construction and operations for buildings. It is a single repository for both three-dimensional, two-dimensional, and material properties information that allows data interoperability of all stakeholders to better inform design and construction decisions with the goal of producing the best product possible. This information technology will increase design and construction efficiencies and decrease costs for builders and end users. BIM may also facilitate better communication, collaboration and coordination among building industry professionals and trades working on the same project. Credit should be given to Builders utilizing the open industry standards as defined in the National Building Information Modeling Standard.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Consistent with action on P025.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	

Abstain:	
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P154 LogID 5078	Other for Chapter 6 (include section number and title below) <i>Final Formal Action: Approve as Modified</i>
Submitter:	Josh Jacobs, UL
Proposed Change:	<p>611.4 Product Declaration. A minimum of 10 different products installed in the building project, at the time of certificate of occupancy, shall comply with one of the following sub-sections: Declarations, reports, and assessments shall be submitted to the AHJ and shall contain documentation of the critical peer review by an independent third party, results from the review, the reviewer’s name, company name, contact information, and date of the review. Points 5</p> <p>611.4.1 Industry-wide Declaration. A Type III industry-wide environmental product declaration (EPD) shall be submitted for each product. Where the program operator explicitly recognizes the EPD as representative of the product group on a National level, it is considered industry-wide. In the case where an industry-wide EPD represents only a subset of an industry group, as opposed to being industry-wide, the manufacturer shall be explicitly recognized as a participant by the EPD program operator. All EPDs shall be consistent with ISO Standards 14025-and 21930 with at least a cradle-to-gate scope. Each product complying with this section shall be counted as one product for compliance with Section 611.4</p> <p>6.11.4.2 Product Specific Declaration. A product specific Type III EPD shall be submitted for each product. The product specific declaration shall be manufacturer specific for an individual product or product family. All Type III EPDs shall be certified as complying, at a minimum, with the goal and scope for the cradle-to-gate requirements in accordance with ISO Standards 14025 and 21930. Each product complying with this section shall be counted as two products for compliance with Section 611.4.</p>
Reason:	The proposal allows for rewarding the builder when they use products that have been transparent about their environmental impact. Environmental product declarations (EPD) are a tool that is gaining acceptance in green design standards as an accepted way for a manufacturer to communicate the impacts that their products and their manufacturing have on the environment. The goal of EPDs is to provide designers, purchasers, and builders with data that will inform their purchasing decisions – much the way nutritional labels on food packaging does today.
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>611.4 Product Declarations. A minimum of 10 different products installed in the building project, at the time of certificate of occupancy, shall comply with one of the following sub-sections: Declarations, reports, and assessments shall be submitted to the AHJ and shall contain documentation of the critical peer review by an independent third party, results from the review, the reviewer’s name, company name, contact information, and date of the review. Points 5</p> <p>611.4.1 Industry-wide Declaration. A Type III industry-wide environmental product declaration (EPD) shall be submitted for each product. Where the program operator explicitly recognizes the EPD as representative of the product group on a National level, it is considered industry-wide. In the case where an industry-wide EPD represents only a subset of an industry group, as opposed to being industry-wide, the manufacturer shall be explicitly recognized as a participant by the EPD program operator. All EPDs shall be consistent with ISO Standards 14025-and 21930 with at least a cradle-to-gate scope. Each product complying with this section shall be counted as one product for compliance with Section 611.4</p> <p>6.11.4.2 Product Specific Declaration. A product specific Type III EPD shall be submitted for each product. The product specific declaration shall be manufacturer specific for an individual product or product family. All Type III EPDs shall be certified as complying, at a minimum, with the goal and scope</p>

	for the cradle-to-gate requirements in accordance with ISO Standards 14025 and 21930. Each product complying with this section shall be counted as two products for compliance with Section 611.4.
Committee Reason:	Minor change: 611.4 "Product Declarations" Consider this practice during point allocation.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<i>Randall Melvin:</i> The home is not going to be NGBS verified a the time of certificate of occupancy. Delete language: "at time of certificate of occupancy." It is not necessary and problematic.
Abstain:	

P155 LogID TG5-04	701 Minimum Energy Efficiency Requirements	Final Formal Action: Disapprove
Submitter:	Randall Melvin, Winchester Homes, Inc.	
Proposed Change:	701.1.5 Alternate Compliance Path 3 Any building built and verified to meet or exceed the equivalent energy efficiency requirements of the 2006 IECC by 30% shall be deemed to comply with the requirements of this chapter. Where whole house energy efficiency is used to demonstrate equivalence, rather than heating, cooling and water heating alone, the baseline reference design for lighting, appliances and miscellaneous energy loads shall correspond with those contained with ANSI/RESNET 301-2014. Two points shall be awarded for each percent increase in energy efficiency above the equivalent efficiency of the 2006 IECC with a required minimum of 60 points.	
Reason:	The proposed change leverages existing credible energy efficient baselines, computational methodologies and software modeling programs that have widespread recognition, acceptance and use by home builders, energy raters, code officials and consumers. For those entities already using one of these established methodologies it will eliminate the need for a largely redundant, but equivalent, energy NGBS energy efficiency specific analysis, thus allowing a streamlined compliance with the National Green Building Standards Energy Chapter. Incorporating this streamlined alternative will increase the acceptance and use of the NGBS. Thirty percent equivalent energy efficiency increase over the 2006 IECC has been chosen as the baseline metric for the following reasons: First, a 30% efficiency increase over the 2006 IECC is effectively equivalent to the energy efficiency of 2015 IECC which has been proposed as the new baseline for the National Green Building Standard. Second the 2006 IECC is a more flexible code than subsequent additions with provides more choices and credit for critical items such as air tightness and equipment trade offs. The 2006 IECC aligns with the baseline 100 Index of the ANSI National HERS Index Standard and finally it is supported by many popular energy modeling software programs such as REM Design, REM Rate and Energy Gauge. This proposal is non-exclusionary in that it transparent and it allows for alternative competitive means and methodologies for calculating- demonstrating compliance from a common baseline.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of P269.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P156	LogID 5213	701.1 Mandatory requirements (Energy Efficiency)	Final Formal Action: Disapprove	
Submitter:	Eric Lacey, RECA			
Proposed Change:	701.1 Mandatory requirements. The building shall comply with the IECC and with either Section 702 (Performance Path) or Section 703 (Prescriptive Path). Items listed as “mandatory” in Section 701.4 apply to both the Performance and Prescriptive Paths.			
Reason:	This proposal helps ensure that buildings certified as “green” meet, at a minimum, the national model energy code for residential construction, the IECC. It is likely that many homes built to ICC-700 will exceed the requirements of the ICC, and for these homes, this requirement will not require any additional effort. However, this proposal would help prevent a scenario in which a home is certified as “green,” yet fails a reasonable minimum energy code. States are required, under federal law, to review the provisions of each new edition of the IECC found by DOE to be more efficient than the previous edition. As a result, the vast majority of states, counties, and cities, have adopted the IECC as the residential energy code. ICC-700 should be positioned as a natural outgrowth of the existing residential energy code, not a stand-alone standard with potentially conflicting requirements. This proposal will also make ICC-700 more adoptable and will enhance the Standard’s credibility at the state and local level. We believe that including an IECC backstop in all compliance paths will make it much easier for jurisdictions to allow ICC-700 certification as an acceptable compliance option to the IECC by removing some of the guesswork and subjectivity involved with IECC Section R102.1.1 Above Code Programs. If the home has already been certified as IECC-compliant as part of the ICC-700 certification process, this will significantly reduce the burden on the local code official to evaluate the energy efficiency qualities of the home.			
Committee Action from Meeting:	Disapprove			
Modification of Proposed Change:				
Committee Reason:	Limits flexibility and options under the performance path. No evidence presented to support the need for hard backstops. There is evidence of unintended consequences.			
Ballot Results on Committee Action:	Eligible to vote:	41		
	Agree with committee action:	39		
	Disagree with committee action:	0		
	Abstain:	0		
	Non-voting:	2		
Ballot Comments				
Agree with committee action:				
Disagree with committee action:				
Abstain:				

P157	LogID 5219	701.1 Mandatory requirements (Energy Efficiency)	Final Formal Action: Disapprove	
Submitter:	Eric Lacey, RECA			
Proposed Change:	<u>701.4.3.5 Fenestration</u> NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights and tubular daylighting devices (TDDs) on an area-weighted average basis do not exceed the values in Table 701.4.3.5. Area weighted averages are calculated separately for the categories of 1) windows		Mandatory	

	<p>and exterior doors and 2) skylights and tubular daylighting devices (TDDs). Decorative fenestration elements with a combined total maximum area of 15 square feet (1.39 m²) or 10 percent of the total glazing area, whichever is less, are not required to comply with this practice.</p> <p style="text-align: center;">Table 701.4.3.5 Fenestration Specifications</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Climate Zone</u></th> <th style="text-align: center;"><u>Window/Ext. Door U-Factor</u></th> <th style="text-align: center;"><u>Window/Ext. Door SHGC</u></th> <th style="text-align: center;"><u>Skylight and TDD U-Factor</u></th> <th style="text-align: center;"><u>Skylight and TDD SHGC</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><u>1</u></td> <td style="text-align: center;"><u>0.50</u></td> <td style="text-align: center;"><u>0.25</u></td> <td style="text-align: center;"><u>0.75</u></td> <td style="text-align: center;"><u>0.30</u></td> </tr> <tr> <td style="text-align: center;"><u>2</u></td> <td style="text-align: center;"><u>0.40</u></td> <td style="text-align: center;"><u>0.25</u></td> <td style="text-align: center;"><u>0.65</u></td> <td style="text-align: center;"><u>0.30</u></td> </tr> <tr> <td style="text-align: center;"><u>3</u></td> <td style="text-align: center;"><u>0.35</u></td> <td style="text-align: center;"><u>0.25</u></td> <td style="text-align: center;"><u>0.55</u></td> <td style="text-align: center;"><u>0.30</u></td> </tr> <tr> <td style="text-align: center;"><u>4</u></td> <td style="text-align: center;"><u>0.35</u></td> <td style="text-align: center;"><u>0.40</u></td> <td style="text-align: center;"><u>0.55</u></td> <td style="text-align: center;"><u>0.40</u></td> </tr> <tr> <td style="text-align: center;"><u>5-8</u></td> <td style="text-align: center;"><u>0.32</u></td> <td style="text-align: center;"><u>Any</u></td> <td style="text-align: center;"><u>0.55</u></td> <td style="text-align: center;"><u>Any</u></td> </tr> </tbody> </table>	<u>Climate Zone</u>	<u>Window/Ext. Door U-Factor</u>	<u>Window/Ext. Door SHGC</u>	<u>Skylight and TDD U-Factor</u>	<u>Skylight and TDD SHGC</u>	<u>1</u>	<u>0.50</u>	<u>0.25</u>	<u>0.75</u>	<u>0.30</u>	<u>2</u>	<u>0.40</u>	<u>0.25</u>	<u>0.65</u>	<u>0.30</u>	<u>3</u>	<u>0.35</u>	<u>0.25</u>	<u>0.55</u>	<u>0.30</u>	<u>4</u>	<u>0.35</u>	<u>0.40</u>	<u>0.55</u>	<u>0.40</u>	<u>5-8</u>	<u>0.32</u>	<u>Any</u>	<u>0.55</u>	<u>Any</u>		
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<u>4</u>	<u>0.35</u>	<u>0.40</u>	<u>0.55</u>	<u>0.40</u>																													
<u>5-8</u>	<u>0.32</u>	<u>Any</u>	<u>0.55</u>	<u>Any</u>																													
<p>Reason:</p>	<p>This proposal improves ICC-700 in two important ways: First, it updates the fenestration requirements of the 2015 ICC-700 to match those of the 2015 IECC. Because prescriptive residential fenestration requirements in the 2012 and 2015 IECC are identical, the table will mesh well with jurisdictions that adopt either version of the IECC. Second, it applies the baseline not only to the prescriptive compliance path, but also to the performance path. The 2008 NGBS applied a mandatory set of baseline fenestration requirements to both the performance path and the prescriptive path. As the baseline was improved in the 2012 version of the NGBS, the mandatory baseline was moved to Section 703.1.6, which applies only to the prescriptive compliance option. Code-compliant fenestration is crucial to energy efficiency, regardless of the other measures implemented in Chapter 7. The NGBS currently permits considerable flexibility in the use of fenestration, allowing design professionals to use fenestration to reduce lighting loads, improve the indoor environment, and to provide a better connection between occupants and the outdoors. Regardless of the amount of glazing, however, there must be some minimal requirements for efficiency. Even the most efficient windows currently available do not achieve the same thermal resistance as a wall with very minimal insulation. Without restricting design freedom, this proposal restores the fenestration requirements to Section 701 to ensure that the requirements specified in the base code (in this case, the 2015 IECC) will apply to both the prescriptive and performance alternatives, maintaining at least a minimum level of fenestration efficiency.</p>																																
<p>Committee Action from Meeting:</p>	<p>Disapprove</p>																																
<p>Modification of Proposed Change:</p>																																	
<p>Committee Reason:</p>	<p>Limits flexibility for overall most cost effective solutions.</p>																																
<p>Ballot Results on Committee Action:</p>	<p>Eligible to vote: 41 Agree with committee action: 37 Disagree with committee action: 2 Abstain: 0 Non-voting: 2</p>																																
<p>Ballot Comments</p>																																	
<p>Agree with committee action:</p>																																	
<p>Disagree with committee action:</p>	<p>Christopher Mathis: I disagree with the committee action and vote to approve this proposal, even with all the advances in technology over the past two decades fenestration remains the weak link in building envelope energy efficiency. This problem is amplified by the fact that in the reference code, the IECC, window area is not considered. As a result, a building with window area of 10% of the wall area is treated the same as a building having windows at 40% of the wall area. Because of this insensitivity to window area it is imperative that ICC 700 establish meaningful protection of the minimum code</p>																																

	<p>requirements. Proposal P157 establishes current code minimums as one protection for ICC 700 compliant buildings. These values are minimum code and should be embraced in section 701.1.</p> <p>Ryan Taylor: Would like to explore issue raised by Christopher Mathis ballot comment - minimum standards are helpful in preventing thermal envelope U-values being traded lower than prescriptive standards.</p>
Abstain:	

P158	LogID 5215	701.1.1 Minimum Performance Path requirements	Final Formal Action: Disapprove										
Submitter:	Eric Lacey, RECA												
Proposed Change:	<p>701.1.1 Minimum Performance Path requirements. A building complying with Section 702 shall exceed the baseline minimum performance required by the ICC 2015 IECC by 15 <u>10</u> percent and shall include a minimum of two practices from Section 704.</p> <table border="1"> <tr> <td>702.2.2 Energy cost performance analysis. Energy cost savings levels above the ICC 2015 IECC are determined through an analysis <u>consistent with Section R405 of the IECC that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</u></td> <td>POINTS</td> </tr> <tr> <td>(1) 15 <u>10</u> percent</td> <td>30</td> </tr> <tr> <td>(2) 30 <u>20</u> percent</td> <td>60</td> </tr> <tr> <td>(3) 40 <u>30</u> percent</td> <td>80</td> </tr> <tr> <td>(4) 50 <u>40</u> percent</td> <td>100</td> </tr> </table>			702.2.2 Energy cost performance analysis. Energy cost savings levels above the ICC 2015 IECC are determined through an analysis <u>consistent with Section R405 of the IECC that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</u>	POINTS	(1) 15 <u>10</u> percent	30	(2) 30 <u>20</u> percent	60	(3) 40 <u>30</u> percent	80	(4) 50 <u>40</u> percent	100
702.2.2 Energy cost performance analysis. Energy cost savings levels above the ICC 2015 IECC are determined through an analysis <u>consistent with Section R405 of the IECC that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</u>	POINTS												
(1) 15 <u>10</u> percent	30												
(2) 30 <u>20</u> percent	60												
(3) 40 <u>30</u> percent	80												
(4) 50 <u>40</u> percent	100												
Reason:	<p>This proposal updates the reference to the IECC in the performance path with the latest edition of the IECC and revises the percentage improvement required for various point levels. It also standardizes the method used for modeling energy cost by referencing the IECC performance path methodology (Section R405). This will simplify compliance verification by only requiring a single calculation for energy cost savings for the IECC and the NGBS. It will also apply a consistent baseline to both codes to ensure that the NGBS maintains pace with the IECC. The NGBS should not lag behind the national model energy code in its energy conservation requirements. While it is important to allow considerable flexibility in a voluntary, “above-code” program, great care must be taken to ensure that it remains above-code. This proposal does that by making the 2015 IECC performance path the new baseline. By updating the current reference to the 2009 IECC to the 2015 IECC, the NGBS will capture the second half of a roughly 30% improvement in the IECC since 2006, and will make the 2015 NGBS consistent by referencing the 2015 edition of the IECC. Although we would not oppose leaving the percentage improvements beyond code as they are in Section 702.2.2, we are proposing that the first level be reduced to a 10% improvement over the base code. This is generally consistent with the approach used in Section 605.1.1 of the 2012 IGCC, which requires the building thermal envelope to exceed the requirements of the IECC by 10%.</p>												
Committee Action from Meeting:	Disapprove												
Modification of Proposed Change:													
Committee Reason:	In favor of P195 to replace the levels with a formula.												
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>												
Ballot Comments													

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P159 LogID 5116	701.1.1 Minimum Performance Path requirements <i>Final Formal Action: Approve as Modified</i>										
Submitter:	Jawanda Jackson, Michigan State University										
Proposed Change:	<p>There are very few green building rating systems that require a monitoring process before certification is awarded. Monitoring tools are often expensive and require specific skill sets to analyze. I think that a credit that awarded a additional points and more importantly, a special seal of recognition in addition to certification could address the need for monitoring and reporting actual performance for energy and water usage.</p> <p>This option could be especially attractive to local governments as a condition for incentives or the maximum amount where varied levels are awarded. This would allow owners to monitor their energy and water usages as well.</p>										
Reason:	There is a need to ensure that green buildings are performing at the energy and water reduction levels that they have been designed or model.										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p><i>Add new section:</i></p> <p><u>1004 Post Occupancy Performance Assessment</u></p> <p><u>1004.0 Intent. A verification system for post occupancy assessment of the building is intended to be a management tool for the building owner to determine if energy or water usage have deviated from expected levels so that inspection and correction action can be taken.</u></p> <p><u>1004.1 A verification system plan is provided in the building owner’s manual (Sections 1001 or 1003). The verification system shall provide methods to demonstrate continued energy and water savings that are determined from the building’s initial year of occupancy of water and energy consumption as compared to annualized consumption at least every four years. (X Point)</u></p> <p><u>10045 Innovative Practices (remains unchanged)</u></p>										
Committee Reason:	Specific language was developed to implement the intent of the proposal.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P160 LogID 5299	701.1.1 Minimum Performance Path requirements <i>Final Formal Action: Disapprove</i>
Submitter:	aaron gary, US-EcoLogic

Proposed Change:	...exceed baseline performance of ICC 2012 IECC by 5%... Note: Prescriptive Path would need to be updated to align with 2012 IECC + 5% accordingly so that both paths have equal balance.
Reason:	As 2012 IECC adoption continues across the country updating to 2012 IECC becomes important so NGBS 2015 remains an "above code" program. 2012 IECC does present challenges though for many constituents. The incremental cost of improvement above each successive code (2006 to 2009 to 2012) increase substantially also because of the diminishing return of upgrades as the baseline increases. Moving to 5% in lieu of 15% responds to this reality such that 2015 NGBS remains a viable option.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Intend to use different incremental levels and need specific values for the incremental increases and the determination has been made to set the Bronze at 2015 IECC.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P161 LogID TG5-01	701.1.1 Minimum Performance Path requirements	Final Formal Action: Approve as Modified
Submitter:	Aaron Gary, US-EcoLogic	
Proposed Change:	701.1.1 Minimum Performance Path requirements. A building complying with Section 702 shall exceed the baseline minimum performance required by the ICC IECC <u>2015</u> by 15 percent and shall include a minimum of two practices from Section 704.	
Reason:	A green building is not defined only by energy efficiency but by many other metrics as well as demonstrated by Chapters 5,6,8,9 and 10 of the National Green Building Standard. Also, the 2015 IECC is an above the baseline energy code for most municipalities. Asking green buildings to exceed the 2015 IECC by an arbitrary percentage seems unnecessary and has the potential to be prohibitively expensive given the limited areas where the improvement can be captured with the heightened baseline. Complying with the 2015 IECC should qualify a project for Bronze certification. Additional points should be awarded for exceeding the 2015 IECC.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> 701.1.1 Minimum Performance Path requirements. A building complying with Section 702 shall meet or exceed the baseline minimum performance required by the ICC IECC <u>2015</u> by 15 percent and shall include a minimum of two practices from Section 704.	
Committee Reason:	Clarification	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P162 LogID 754	701.1.2 Minimum Prescriptive Path Requirements <i>Final Formal Action: Disapprove</i>
Submitter:	Matthew Dobson, Vinyl Siding Institute
Proposed Change:	703.1.2.2 (3) Exterior rigid insulationed sheathing or siding ...
Reason:	Change for further clarity.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The change as worded may not meet code requirements for some applications (ie drainage plane behind the insulated siding). Also the change is substantive, not just a clarification.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P163 LogID 5216	701.1.3 Alternative bronze level compliance <i>Final Formal Action: Disapprove</i>
Submitter:	Eric Lacey, RECA
Proposed Change:	701.1.3 Alternative bronze level compliance. As an alternative, any building that qualifies as an ENERGY STAR Version 3.0 Qualified Home or <u>that meets all mandatory practices of Chapter 7 and demonstrates a 10% improvement over either compliance with the 2015 2012 IECC or Chapter 11 of the 2012 2015 IRC is deemed to meet all mandatory practices of Chapter 7 and</u> achieves the bronze level for Chapter 7. The buildings achieving compliance under Section 701.1.3 are not eligible for achieving a rating level above bronze.
Reason:	This proposal acknowledges that if the new baseline for ICC-700 is the 2015 IECC or IRC Chapter 11, the Alternative Bronze Level Compliance option must be updated to reflect a meaningful improvement over the base code. Because the 2012 and 2015 IECC are already more energy efficient than the 2009 IECC, we believe that a 10% improvement over the code would put ICC-700 on the “leading edge” of energy conservation, while still allowing considerable flexibility to code users. The proposal also applies the mandatory requirements of Chapter 7 to the alternative bronze compliance option to ensure that key requirements of ICC-700 still apply. The mandatory requirements were selected because they are fundamental measures and practices for all modern, efficient homes. Every home certified to ICC-700 should meet these basic requirements.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	In favor of action on P195

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P164	LogID TG5-03	701.1.3 Alternative bronze level compliance	Final Formal Action: Approve as Modified
Submitter:	Aaron Gary, US-EcoLogic		
Proposed Change:	As an alternative, any building that qualifies <u>demonstrates compliance with the provisions of</u> as an ENERGY STAR Version 3.1 or ENERGY STAR Multifamily Highrise 3.0 Qualified Homes or demonstrates compliance with the 2012 IECC or Chapter 11 of the 2012 IRC is deemed to meet all the mandatory practices of Chapter 7 and achieves the bronze level for Chapter 7. The buildings achieving compliance under Section 701.1.3 are not eligible for achieving a rating level above bronze.		
Reason:			
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<i>Revise standard as follows:</i> 701.1.3 Alternative bronze and silver level compliance. As an alternative, any building that qualifies as an ENERGY STAR Version 3.0 Qualified Certified Home or ENERGY STAR Multifamily Highrise building v1.0 Rev. 02 demonstrates compliance with the 2012 IECC or Chapter 11 of the 2012 IRC is deemed to meet all mandatory practices of Chapter 7 and achieves the bronze level for Chapter 7. <u>As an alternative, any building that qualifies as an ENERGY STAR Version 3.1 Certified Home or ENERGY STAR Multifamily Highrise building v1.0 Rev. 02 (with the baseline at ASHRAE 90.1-2010) demonstrates compliance achieves the silver level for Chapter 7.</u> The buildings achieving compliance under Section 701.1.3 are not eligible for achieving a rating above bronze <u>silver</u> .		
Committee Reason:	Update reference to most recent revision of ENERGY Star version 3.0. Add reference to most recent revision of ENERGY STAR version 3.1 and ENERGY STAR Multifamily Highrise program requirements.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P165	LogID TG5-05	701.4 Mandatory practices	Final Formal Action: Disapprove
Submitter:	Craig Conner, Gary Klein,		
Proposed Change:	Revise as follows: Update mandatory section for what is now required in 2015 IECC, including at least: air tightness testing, duct testing (when required), sealed air handler, lighting, and service hot water pipe insulation. Where		

	levels were increased or new requirements were added, change points to reflect the new levels.
Reason:	Several items that were optional or non-existent in 2009 IECC are required or sometimes required in 2015 IECC. Base levels for some requirements were changed, for example fraction of lighting that must be efficient and pipe insulation requirements
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	This is addressed by other proposals.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P166 LogID 5118	701.4 Mandatory practices	Final Formal Action: Disapprove
Submitter:	Marie Nisson, TexEnergy/US-EcoLogic	
Proposed Change:	701.4.1.3 HVAC System set up. Performance of the heating and/or cooling system is verified by the HVAC contractor in accordance with manufacturer’s instructions including all of the following: <u>(1) Start up procedure is performed in accordance with the manufacturer’s instructions</u> <u>(2) Refrigerant charge is verified by the super heat and/or sub cooling method</u> <u>(3) Burner is set to fire at input level listed on nameplate</u> <u>(4) Air handler setting/fan speed is set in accordance with manufacturer’s instructions</u>	
Reason:	Recommend moving the following from 704.4.2 to mandatory practice	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Some items don’t apply to all systems and there are other approved methods for system set-up, e.g. systems that come pre-charged and refrigerant charge can be weighed-in.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P167	LogID 5119	701.4 Mandatory practices	Final Formal Action: Disapprove
Submitter:	Marie Nisson, TexEnergy/US-EcoLogic		
Proposed Change:	<u>701.4.1.4 HVAC Controls.</u> Use controls that can start and stop the system under at least two different time schedules per week.		
Reason:	A programmable thermostat promotes more efficient use of heating and cooling equipment. It is a mandatory requirement in ASHRAE 90.1 and 2012 Residential Energy code for forced air systems		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Optimizing energy efficiency by the use of programmable thermostats varies from project to project and in some cases yields little to no benefit and in some cases could result in increased energy use and therefore should not be a mandatory requirement.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P168	LogID 5084	701.4 Mandatory practices	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA		
Proposed Change:	701.4.1.X HVAC systems installation, and documentation. Space heating and cooling systems are to be installed documented in accordance with ACCA QI 5-2010		
Reason:	Other places in the document the same requirements are either awarded points or are mandatory.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	The proposal does not provide sufficient specificity to indicate which parts of QI 5 apply to the NGBS.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	36	
	Disagree with committee action:	3	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:	<p>Ted Williams: The Committee Reason for disapproval does not take into account that professional installers know what sections of QI 5-2010 would apply The Committee Reason reflects a lack of familiarity with QI 5-2010</p> <p>Frank Stanonik: The proposal is adequately worded If it is done in accordance with a referenced document, in this case ACCA Q5, it will be only to those parts that apply to the particular circumstance. In this case the installation of space heating and cooling systems. The reason for disapproval is non persuasive.</p>		

	Ryan Taylor: The committee should further consider the application of ACCA QI 5 - the comments of Ted Williams and Frank Stanonik are appropriate.
Abstain:	

P169 LogID 5300	701.4 Mandatory practices	Final Formal Action: Approve as Modified
Submitter:	aaron gary, US-EcoLogic	
Proposed Change:	Add 701.4.2.4. Duct Leakage Entire HVAC duct system...is tested by a third party...and maximum leakage is equal to or less than 6% of design flow.	
Reason:	Many multifamily projects that follow NGBS certification are not currently required to do duct testing, if the are 4 stories or taller. Duct testing is not required by Commercial IECC (which these projects will follow) nor is it an input for ASHRAE 90.1 modeling (which is how Commercial projects should be modeled per the IECC). By having duct testing called out only in the Prescriptive Path only and not as a mandatory for all projects divergent certification requirements now become the rule within the protocol.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p><i>Add new section <u>704.5.2.x HVAC</u></i></p> <p><u>For projects where duct testing is not required under the 2015 IECC, one of the following is implemented:</u></p> <p>(1) <u>Duct leakage is in accordance with 2015 IECC R403.3.3 and R403.3.4. X points</u> (2) <u>Duct leakage is in accordance with 2015 IECC R403.3.3 and R403.3.4, and testing is conducted by an independent third-party. X Points</u></p>	
Committee Reason:	<p>Duct testing even where not required by code may save energy.</p> <p>Many multifamily projects that follow NGBS certification are not required to do duct testing by Code. Duct testing is not required by Commercial IECC (if they are 4 stories or taller). These projects should be rewarded for implementing above-code energy-efficient practices.</p> <p>This version applies to all projects where Duct Leakage testing is not Mandatory under the 2015 IECC for Commercial (Multifamily 3+ stories) or Residential (when they follow the Performance or ERI paths</p>	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P170 LogID 5085	701.4.1.2 Radiant and hydronic space heating	Final Formal Action: Approve
Submitter:	Donald Prather, ACCA	
Proposed Change:	Add wording: 701.4.1.2 Radiant and hydronic space heating. Where installed as a primary heat source in the building, radiant or hydronic space heating system is designed, <i>installed, and documented</i> , using	

	industry-approved guidelines and standards (e.g., ACCA Manual j, AHRI I=B=R, ACCA 5 QI-2010, or an accredited design professional's and manufacturer's recommendation.										
Reason:	Other places in the document the same requirements are either awarded points or are mandatory. Recommend awarding points based on verification since the QI 5 represents the HVAC industry's recognized minimum requirements.										
Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P171	LogID 5086	701.4.2.2 Supply ducts	Final Formal Action: Approve as Modified										
Submitter:	Donald Prather, ACCA												
Proposed Change:	701.4.2.2 Supply and Return Ducts. Building cavities are not to be used as supply <i>and Return</i> Ducts.												
Reason:	This change is the only way that the return air path can be designed properly and the only way to meet duct insulation requirements for points in the duct insulation sections (it appears to be required in table 703.3.3 on page 58). Using pan joists and building cavities for return ducting is not a recommended practice where airflow control is desired for balancing an HVAC system. Additionally, Duct leakage can be measured and repaired but cavity space leakage has no remedy.												
Committee Action from Meeting:	Approve as Modified												
Modification of Proposed Change:	<i>Revise standard as follows:</i> 701.4.2.2 Supply Ducts. Building cavities are not used as supply ducts. Ducts and Plenums. Building framing cavities shall not be used as ducts or plenums.												
Committee Reason:	To be consistent with requirements in 2015 IRC.												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>			Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41												
Agree with committee action:	39												
Disagree with committee action:	0												
Abstain:	0												
Non-voting:	2												
Ballot Comments													
Agree with committee action:													
Disagree with committee action:													
Abstain:													

P172	LogID TG5-06	701.4.3 Insulation and air sealing	Final Formal Action: Approve as Modified
Submitter:	R. Christopher Mathis, Mathis Consulting Company		

Proposed Change:	701.4.3 Insulation and air sealing—Building Thermal Envelope	
	701.4.3.1 Building Thermal Envelope Air Sealing. The building thermal envelope is durably sealed to limit infiltration. The sealing methods between dissimilar materials allow for differential expansion and contraction. The following are caulked, gasketed, weather-stripped or otherwise sealed with an air barrier material, suitable film, or solid material:	Mandatory
	<ul style="list-style-type: none"> (a) All joints, seams and penetrations.) (b) Site-built windows, doors, and skylights.) (c) Openings between window and door assemblies and their respective jambs and framing.) (d) Utility penetrations.) (e) Dropped ceilings or chases adjacent to the thermal envelope.) (f) Knee walls.) (g) Walls and ceilings separating a garage from conditioned spaces.) (h) Behind tubs and showers on exterior walls.) (i) Common walls between dwelling units.) (j) Attic access openings.) (k) Rim joist junction.) (l) Other sources of infiltration. 	
	701.4.3.2 Air sealing verification and insulation. Grade 3 insulation installation is not permitted. The compliance of the building envelope air tightness and insulation installation shall be verified demonstrated in accordance with Section 701.4.3.2(1) or 701.4.3.2(2).	Mandatory
<p>(1) Testing option. Building envelope tightness shall be tested and demonstrated to be less than 3 and insulation installation is considered acceptable when air leakage is less than seven air changes per hour (ACH) in climate zones 3 through 8 and less than 5 ACH in climate zones 1 and 2. Testing shall be conducted in accordance with ASTM E-779 using when tested with a blower door at a test pressure of 33.5 psf (50 Pa). Testing shall be conducted after rough-in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation, and combustion appliances. Testing shall be is conducted under the following conditions:</p> <ul style="list-style-type: none"> (a) Exterior windows and doors, fireplace and stove doors are closed, but not sealed; 		

- (b) Dampers are closed, but not sealed, including exhaust, intake, makeup air, backdraft and flue dampers;
- (c) Interior doors are open;
- (d) Exterior openings for continuous ventilation systems and heat recovery ventilators are closed and sealed;
- (e) Heating and cooling systems are turned off;
- (f) HVAC duct terminations are not sealed; and
- (g) Supply and return registers are not sealed.

(2) ~~Visual inspection option. Building envelope tightness is and insulation installation are considered acceptable when the items listed in Table 701.4.3.2(2) applicable to the method of construction are~~ The following items shall be field verified via visual inspection.

Table 701.4.3.2(2)

Air Barrier and Insulation Inspection Component Criteria

COMPONENT	CRITERIA
Air barrier and thermal barrier	<ul style="list-style-type: none"> Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier. · Breaks or joints in the air barrier are filled or repaired. · Air-permeable insulation is not used as a sealing material. · Air-permeable insulation is installed with an air barrier.
Ceiling/attic	<ul style="list-style-type: none"> · Air barrier in dropped ceiling/soffit is substantially aligned with insulation <u>continuous</u> and any gaps are sealed. · Attic access (except unvented attic), knee wall door, or drop-down stair is sealed.
Exterior walls	<ul style="list-style-type: none"> Corners and headers are insulated. · Junction of foundation and sill plate is <u>air sealed</u>.
Windows and doors	<ul style="list-style-type: none"> · Space between window/door jambs and framing is <u>air sealed</u>.
Rim joists	<ul style="list-style-type: none"> · Rim joists are insulated and include an air barrier.
Floors (including above-garage and cantilevered floors)	<ul style="list-style-type: none"> Insulation is installed to maintain permanent contact with underside of subfloor decking. · Air barrier is installed at any exposed edge of insulation.

	<p>Crawlspace walls</p> <p>Shafts, penetrations</p> <p>Narrow cavities</p> <p>Garage separation</p> <p>Recessed lighting</p> <p>Plumbing and wiring penetrations</p> <p>Shower/tub adjacent to exterior wall</p> <p>Electrical/phone box in exterior walls</p> <p>Common wall</p> <p>HVAC register boots</p> <p>Fireplace</p>	<p>Where installed, insulation is permanently attached to walls.</p> <ul style="list-style-type: none"> Exposed earth in unvented crawlspaces is covered with Class I vapor retarder with overlapping joints taped. <ul style="list-style-type: none"> Duct shafts, flue shafts, and utility penetrations opening to the exterior or an unconditioned space are <u>air sealed</u>. <ul style="list-style-type: none"> Batts in narrow cavities are cut to fit, or n<u>Narrow cavities are air sealed or filled by spray foam /blown insulation.</u> <ul style="list-style-type: none"> Air sealing is provided between the garage and conditioned spaces. <ul style="list-style-type: none"> Recessed light fixtures not installed in the conditioned space are air tight, IC rated, and sealed to drywall. <ul style="list-style-type: none"> <u>Plumbing and wiring penetrations between conditioned and unconditioned space are air sealed.</u> <u>Plumbing and wiring penetrations between conditioned space and the outside are air sealed. Insulation is placed between the outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.</u> <ul style="list-style-type: none"> Showers and tubs adjacent to exterior walls have insulation and an air barrier separation <u>are air sealed from the exterior.</u> <ul style="list-style-type: none"> Air barrier extends behind boxes or air sealed-type boxes are installed. <ul style="list-style-type: none"> Air barrier is installed in common walls between dwelling units. <ul style="list-style-type: none"> HVAC register boots that penetrate building envelope are <u>air sealed</u> to subfloor or drywall. <ul style="list-style-type: none"> Fireplace walls include an air barrier. 		
	<p>701.4.3.3 Insulation Installation. Grade 3 insulation installation is not permitted. The <u>compliance of the building envelope insulation installation is demonstrated in accordance with Section 701.4.3.3(1).</u></p>	<p>Mandatory</p>		
<p>(1)</p>	<p>Insulation installation verification. Building envelope insulation installation is <u>considered acceptable when the items listed in Table 701.4.3.3(1) applicable to the method of construction are field verified.</u></p>	<p>-</p> <p>-</p>		
	<p>Table 701.4.3.2(2)</p>	<p>-</p>		
	<p>Insulation Inspection Verification Criteria</p>			
<table border="1"> <tr> <td>COMPONENT</td> <td>CRITERIA</td> </tr> </table>	COMPONENT	CRITERIA		
COMPONENT	CRITERIA			

	<table border="1"> <tr> <td><u>Exterior thermal envelope insulation</u></td> <td> <ul style="list-style-type: none"> · <u>Installed in substantial contact and continuous alignment with building envelope air barrier.</u> </td> </tr> <tr> <td><u>Ceiling/attic insulation</u></td> <td> <ul style="list-style-type: none"> · <u>Installed in accordance with manufacturers' recommendations to achieve the thickness, density, bag count and other metrics to assure U-factor/R-value compliance</u> </td> </tr> <tr> <td><u>Exterior walls</u></td> <td> <ul style="list-style-type: none"> · <u>Corners and headers are insulated.</u> </td> </tr> <tr> <td><u>Rim joists</u></td> <td> <ul style="list-style-type: none"> · <u>Rim joists are insulated.</u> </td> </tr> <tr> <td><u>Floors</u> <u>(including above-garage and cantilevered floors)</u></td> <td> <ul style="list-style-type: none"> · <u>Insulation is installed to maintain permanent contact with underside of subfloor decking.</u> · <u>Air barrier is installed at any exposed edge of insulation.</u> </td> </tr> <tr> <td><u>Crawlspace walls</u></td> <td> <ul style="list-style-type: none"> · <u>Where installed, insulation is permanently attached to walls.</u> </td> </tr> <tr> <td><u>Narrow cavities</u></td> <td> <ul style="list-style-type: none"> · <u>Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.</u> </td> </tr> <tr> <td><u>Garage separation</u></td> <td> <ul style="list-style-type: none"> · <u>Insulation is installed on/in all elements separating garages from conditioned space.</u> </td> </tr> <tr> <td><u>Plumbing and wiring</u></td> <td> <ul style="list-style-type: none"> · <u>Insulation is placed between the outside and pipes.</u> · <u>Batt insulation is cut to fit around wiring and plumbing</u> · <u>Sprayed/blown insulation extends behind piping and wiring.</u> </td> </tr> <tr> <td><u>Shower/tub adjacent to exterior wall</u></td> <td> <ul style="list-style-type: none"> · <u>Showers and tubs adjacent to exterior walls are fully insulated and air sealed from the exterior.</u> </td> </tr> </table> <p style="text-align: center;"><i>Renumber existing sections as applicable.</i></p>	<u>Exterior thermal envelope insulation</u>	<ul style="list-style-type: none"> · <u>Installed in substantial contact and continuous alignment with building envelope air barrier.</u> 	<u>Ceiling/attic insulation</u>	<ul style="list-style-type: none"> · <u>Installed in accordance with manufacturers' recommendations to achieve the thickness, density, bag count and other metrics to assure U-factor/R-value compliance</u> 	<u>Exterior walls</u>	<ul style="list-style-type: none"> · <u>Corners and headers are insulated.</u> 	<u>Rim joists</u>	<ul style="list-style-type: none"> · <u>Rim joists are insulated.</u> 	<u>Floors</u> <u>(including above-garage and cantilevered floors)</u>	<ul style="list-style-type: none"> · <u>Insulation is installed to maintain permanent contact with underside of subfloor decking.</u> · <u>Air barrier is installed at any exposed edge of insulation.</u> 	<u>Crawlspace walls</u>	<ul style="list-style-type: none"> · <u>Where installed, insulation is permanently attached to walls.</u> 	<u>Narrow cavities</u>	<ul style="list-style-type: none"> · <u>Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.</u> 	<u>Garage separation</u>	<ul style="list-style-type: none"> · <u>Insulation is installed on/in all elements separating garages from conditioned space.</u> 	<u>Plumbing and wiring</u>	<ul style="list-style-type: none"> · <u>Insulation is placed between the outside and pipes.</u> · <u>Batt insulation is cut to fit around wiring and plumbing</u> · <u>Sprayed/blown insulation extends behind piping and wiring.</u> 	<u>Shower/tub adjacent to exterior wall</u>	<ul style="list-style-type: none"> · <u>Showers and tubs adjacent to exterior walls are fully insulated and air sealed from the exterior.</u>
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<p>Reason:</p>	<p>Enter reason (required)</p> <ul style="list-style-type: none"> · This proposal separates the requirements for air sealing from the requirements for insulation. · This restructuring is consistent with a similar restructuring embraced in the 2015 IECC. · This restructuring uses the same language already in ICC 700, but more clearly identifies those aspects associated with air sealing verification versus those associated with insulation installation requirements. · This proposal embodies air leakage verification requirements included in the 2015 IECC. · This proposal will make it easier for builders seeking to comply with ICC 700 by providing easy-to-use checklists for each of these separate building thermal envelope elements. <p>This proposal will make field verification easier (whether by HERS providers, code officials and other third-party verifiers).</p>																				
<p>Committee Action from Meeting:</p>	<p>Approve as Modified</p>																				
<p>Modification of Proposed Change:</p>	<p><i>Revise Standard as follows:</i></p> <p>(Mandatory) 701.4.3.1 Building Thermal Envelope Air Sealing. The building thermal envelope is durably sealed to limit infiltration. The sealing methods between dissimilar materials allow for differential expansion and contraction. The following are caulked, gasketed, weather-stripped or otherwise sealed with an air barrier material, suitable film, or solid material:</p> <p>No changes to items in list.</p>																				

	<p>(Mandatory) 701.4.3.2 Air sealing and insulation. Grade <u>2 and 3</u> insulation installation is not permitted. The compliance of the b Building envelope air tightness and insulation installation is <u>verified to be demonstrated</u> in accordance with Section 701.4.3.2(1) or <u>and</u> 701.4.3.2(2).</p> <p>(1) Testing option. Building envelope tightness <u>shall be tested</u>, and insulation installation is considered acceptable when air leakage is less than seven air changes per hour (ACH). Testing shall be conducted in accordance with ASTM E-779 using when tested with a blower door at a <u>test</u> pressure of 33.5 psf (50 Pa). Testing is shall be conducted after rough-in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation, and combustion appliances. Testing shall be is conducted under the following conditions:</p> <p style="padding-left: 40px;">No changes to items in list.</p> <p>(2) Visual inspection option. Building envelope tightness and insulation installation are considered acceptable when the items listed in Table 701.4.3.2(2) applicable to the method of construction are The following air barrier and insulation items shall be field verified <u>by visual inspection</u>.</p> <p><i>Insert copy of 2015 IECC Table R402.4.1.1 Air Barrier and Insulation Installation and delete the current Table 701.4.3.2(2).</i></p> <p>701.4.3.3 Multiunit air leakage alternative. Multiunit buildings in compliance with IECC section C402.5 (Air leakage-thermal envelope) shall be deemed to comply with Sections 701.4.3.1 and 701.4.3.2.</p> <p>701.4.3.4 Multiunit air leakage testing. Where air tightness testing is required for multiunit buildings, testing by dwelling units, groups of dwelling units, or the building as a whole shall be acceptable.</p> <p>Re-number remaining sections.</p>										
Committee Reason:	Incorporated IECC Table R402.4.1.1 directly for consistency with the provisions of 2015 IECC. Added specific provisions for multiunit buildings. Allowed for added flexibility to trade air tightness and compliance for multiunit buildings.										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td style="text-align: right;">41</td> </tr> <tr> <td>Agree with committee action:</td> <td style="text-align: right;">38</td> </tr> <tr> <td>Disagree with committee action:</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Abstain:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Non-voting:</td> <td style="text-align: right;">2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	38	Disagree with committee action:	1	Abstain:	0	Non-voting:	2
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Disagree with committee action:	1										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	<p>Randall Melvin: There is inconsistency in this item. Part 701.4.3.3 precludes only grade 3 insulation. Part 701.4.3.2 precludes both grade 2 and 3 insulation. This provision singles out and unfairly discriminates against fiberglass batt insulation. Blown in cellulose and fiberglass can have no compression or voids yet not be of appropriate density and R-value. Spray foam cannot be mixed properly or have voids in corners behind it which are not visibly discernable and can vary in thickness from spot to spot. All of these diminish its effective R-value. Solid sheet foam can initially have or develop gaps between panels over time diminishing its effective R-value. Bottom line is all types of insulation commonly have less than perfect installation. NAIMA indicated with good air sealing, such as our standard requires, minor compressions gaps and voids allowed by grade 2 are not significant detractors. A Grade 2 is still a good insulation installation and should continue to be allowed under this standard even if no points are awarded for it.</p>										
Abstain:											

P173 LogID 5302	701.4.3.2 Air sealing and insulation	Final Formal Action: Disapprove
Submitter:	aaron gary, US-EcoLogic	

Proposed Change:	Revise (1) Testing Option to align with IECC 2012 requirements with different targets for Residential (ACH) and Commercial, i.e. 4+ story multifamily, (CFM per square foot on enclosure). Delete (2) Visual Inspection Option.
Reason:	(2) Visual Inspection is not allowed under IECC 2012 for Residential buildings but is allowed for Commercial. Requiring testing for both levels the playing field. IECC does have different targets for Residential and Commercial spaces however. Reflecting this makes sense.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	This proposal would interfere with the baseline energy provisions established by the IECC. The NGBS should maintain the distinctions established by the IECC in the commercial and residential chapters.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P174 LogID 5312	701.4.3.2 Air sealing and insulation	Final Formal Action: Approve as Modified
Submitter:	Craig Conner, Building Quality	
Proposed Change:	<p>701.4.3.2 Air sealing and insulation. Grade <u>2</u> and <u>3</u> insulation is not permitted.</p> <p>703.1.2.1 Grade <u>1</u> and <u>Grade 2</u> insulation installations is required in accordance with the following: ...[no changes to items 1 to 4]</p> <p>703.1.2.2 Grade 1 installation is in accordance with the following:...[no changes to items 1 to 6 except renumbering]</p> <p>(7) Where properly installed ICFs, SIPs, <u>spray foam</u> and other wall systems that provide integral integral insulation are deemed in compliance with Grade 1 installation installation requirements.</p> <p>(8) Grade 1 insulation meets or exceeds all requirements for Grade 2 insulation.</p> <p>Delete without substitution: 703.1.2.3</p>	
Reason:	As a basic requirement, the NGBS should require insulation to be installed correctly. To my knowledge there are no insulation manufacturers that direct their insulation to be install as poorly as Grade 2 insulation. Therefore the NGBS should not allow it. As homes get progressively more energy efficient, the major flaws allowed by Grade 2 insulation significantly undercut the energy savings.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise Proposed Change as follows (in red):</i></p> <p>701.4.3.2 Air sealing and insulation. Grade II2 and III3 insulation is not permitted.</p> <p>703.1.2.1 Grade I1 and <u>Grade 2</u> insulation installations is required in accordance with the following: [no changes to items 1 to 4]</p> <p>703.1.2.2 Grade 1 installation is in accordance with the following: [no changes to items 1 to 6 except renumbering]</p> <p>(7) Where properly installed ICFs, SIPs, <u>sprayfoam</u> and other wall systems that provide integral <u>integral</u></p>	

	<p>insulation are deemed in compliance with Grade 1 installation requirements. (8) Grade 1 insulation meets or exceeds all requirements for Grade 2 insulation.</p> <p><i>Delete Section 703.1.2.3 in its entirety without substitution.</i></p> <p>703.1.2.3 Grade 2 installation is in accordance with the following:</p> <p>(1) — A maximum of 2 percent of the surface area of insulation is missing. Compression or incomplete fill amounts to 10 percent or less, presuming the compressed or incomplete areas are a minimum of 70 percent of the intended fill thickness.</p> <p>(2) — In unconditioned basements or unconditioned crawlspaces insulation is installed insubstantial contact with the subfloor surfaces.</p> <p>— (a) — floor insulation over vented or ambient conditions is enclosed on six sides.</p> <p>— (b) — floor insulation over unconditioned basements is not required to be enclosed on six sides.</p> <p>(3) — Ceiling insulation is not required to be enclosed when the insulation is installed insubstantial contact with the drywall or plywood surfaces it is intended to insulate.</p> <p>(4) — Eavebaffles or equivalent construction is installed to prevent wind intrusion.</p> <p>(5) — Installation with occasional installation defects is permitted: gaps around wiring, electrical outlets, plumbing and other intrusions; rounded edges or shoulders.</p> <p><i>Note: Grade numbers should be roman numerals</i></p>										
Committee Reason:	<p>Spray foam is not integral to the wall system, it is installed in the field and can have field installation issues; type of spray foam is not defined.</p>										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>38</td> </tr> <tr> <td>Disagree with committee action:</td> <td>1</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	38	Disagree with committee action:	1	Abstain:	0	Non-voting:	2
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Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	<p>Jerry Phelan: The proponent proposed and the TG approved the addition of "spray foam" as part of this proposal. A CC Member brought anecdotal and unverified information to the table regarding "field installation issues" that was incorporated into the Committee Reason. This is both inaccurate in an overwhelming portion of installations and inappropriate. Spray foam is indeed integral to the wall system and other assemblies when "properly installed" - using the words of the current Standard and was not changed by the proposed and as modified versions. In fact, unlike the other product types in the current and proposed language, spray foam can be readily inspected on the job site as to it being properly installed. Furthermore, there are a myriad of materials or systems that "can have field issues". As far as "type of spray foam is not defined", the term "spray foam" is universally used to describe open and closed cell foam which are both integral to the assembly system including other proposals that were not modified by the CC.</p> <p>The proponent and the TG got this right and the CC got this wrong and the term "spray foam" must be re-inserted.</p>										

Abstain:	
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P175 LogID TG5-07	701.4.3.2 Air sealing and insulation	Final Formal Action: Disapprove										
Submitter:	Amber Wood, NORESKO/AEC											
Proposed Change:	<p>(Mandatory) 701.4.3.2 Air sealing and insulation: <u>Insulation Installation</u>. Grade 3 insulation installation is not permitted.</p> <p>(Mandatory) 701.4.3.3 Air sealing and insulation: <u>Verification</u>. The compliance of the building envelope air tightness and insulation installation is demonstrated in accordance with Section 701.4.3.23(1) or 701.4.3.23(2).</p> <p>(1) Testing option. Building envelope tightness and insulation installation is considered acceptable when air leakage is <u>less not more than seven five</u> air changes per hour (ACH) <u>in climate zones 1 and 2, and three air changes per hour (ACH) in climate zones 3 through 8</u>, when tested with a blower door at a pressure of 33.5 psf (50 Pa). Testing is conducted after rough-in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation, and combustion appliances. Testing is conducted under the following conditions:</p> <ul style="list-style-type: none"> (a) Exterior windows and doors, fireplace and stove doors are closed, but not sealed; (b) Dampers are closed, but not sealed, including exhaust, intake, makeup air, backdraft and flue dampers; (c) Interior doors are open; (d) Exterior openings for continuous ventilation systems and heat recovery ventilators are closed and sealed; (e) Heating and cooling systems are turned off; (f) HVAC duct terminations are not sealed; and (g) Supply and return registers are not sealed. <p>(2) Visual inspection option. Building envelope tightness and insulation installation are considered acceptable when the items listed in Table 701.4.3.2(2) applicable to the method of construction are field verified.</p>											
Reason:	Separate out the mandatory requirement to exclude Grade 3 installation from the testing/verification requirement to minimize confusion. Modify maximums to maintain consistency with the 2015 IECC											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	In favor of and consistent with actions on P172,P204, and P180											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
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Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												

Disagree with committee action:	
Abstain:	

P176 LogID 5325	701.4.3.2 Air sealing and insulation.	Final Formal Action: Approve										
Submitter:	Robert Hill, Home Innovation Research Labs											
Proposed Change:	(1) Testing option. Building envelope tightness and insulation installation is considered acceptable when air leakage is less than seven air changes per hour (ACH) when tested with a blower door at a pressure of 33.5 1.04 psf (50 Pa). Testing is conducted after rough-in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation, and combustion appliances. Testing is conducted under the following conditions:											
Reason:	The value of 33.5 psf does not equate to 50 PA. If psf is to be used the value should be 1.04 psf for equivalence to 50 PA.											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P177 LogID 5120	701.4.4 High-efficacy lighting	Final Formal Action: Approve as Modified
Submitter:	Marie Nisson, TexEnergy/US-EcoLogic	
Proposed Change:	<p><u>701.4.4 High-efficacy lighting. Achieve minimum lighting efficiencies through one of the following:</u></p> <p>(1) A minimum of 50 percent of the total hard-wired lighting fixtures or the bulbs in those fixtures qualify as high efficacy or equivalent</p> <p>(2) In-unit lighting power density, measured in watts/square foot, is 1.1 or less</p>	
Reason:	Provide a lighting power density alternative for mid-rise, multifamily construction	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p>701.4.4 High-efficacy lighting . A minimum of 50 percent of the total hard-wired lighting fixtures, or the bulbs in those fixtures, qualify as high efficacy or equivalent.</p>	

	<p>701.4.4 High-efficacy lighting. Lighting efficacy is in accordance with one of the following:</p> <p>(1) <u>A minimum of 75percent of the total hard-wired lighting fixtures or the bulbs in those fixtures qualify as high efficacy or equivalent</u></p> <p>(2) <u>Lighting power density, measured in watts/square foot, is 1.1 or less.</u></p>
Committee Reason:	The proposal provides a lighting density alternative. The original proposal is modified so that it is applicable to all construction types covered by the NGBS. Item (1) is also modified to be consistent with the 2015 IECC.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P178 LogID TG5-08	701.4.4 High-efficacy lighting	Final Formal Action: Disapprove
Submitter:	Wayne Stoppelmoor, Schneider Electric	
Proposed Change:	<p>701.4.4 High-efficacy lighting. A minimum of 50 percent of the total <u>For interior lighting, all hard-wired lighting fixtures or the bulbs in those fixtures shall qualify as high efficacy or equivalent.</u></p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. <u>Low voltage: High efficacy lighting shall not be required when all of the following apply:</u> <ol style="list-style-type: none"> a. <u>The lamps operate at less than 25 volts.</u> b. <u>Low voltage fixtures are controlled separately from high efficacy lighting.</u> c. <u>The low voltage fixtures are controlled by a dimmer or automatic control device.</u> 2. <u>Line voltage: Up to 25 percent of the total number of line voltage fixtures shall be allowed to be exempted where all of the following apply:</u> <ol style="list-style-type: none"> a. <u>The non-high efficacy lighting is controlled separately from high-efficacy lighting.</u> b. <u>The non-high efficacy lighting is controlled by a dimmer or automatic control device.</u> 	
Reason:	<ol style="list-style-type: none"> 1. Increases the overall requirement for high-efficiency luminaires from 50% to 100% with certain exceptions designed to save energy and provide maximum flexibility to designers, owners and code officials. 2. Changing the definitions from <i>high efficacy lamps</i> to <i>high efficiency fixtures</i> as determined by lamp efficacy. This means owners, designers, and building code officials would count luminaires (light fixtures) vs. counting light bulbs to determine the amount of high or low efficient lighting on a project. Fixtures often have multiple lamps, making counting more cumbersome for both the owner/designer as well as the code official. By counting fixtures, the code official simply has to identify lamp type, but doesn't have to count individual lamps within each fixtures. 3. Allows for an optional and more flexible energy savings approach for owners and designers by allowing up to 25%low efficiency fixtures as long as lighting controls are used to reduce or turnoff the low efficiency fixtures. 4. Clarifies the low voltage lighting exception currently in the code and adds stringency by requiring lighting controls as an energy savings approach for these light fixture types. The current code allows for the use of low voltage with no limits. They are lower in VOLTAGE not WATTAGE. Adding controls will increase the overall energy efficiency of these products. 	

Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Proposed change is redundant with current provisions on lighting in 702 and 703.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P179 LogID TG5-09	701.4.4 High-efficacy lighting	Final Formal Action: Disapprove										
Submitter:	Amber Wood, NORESCO/AEC											
Proposed Change:	701.4.4 High-efficacy lighting. A minimum of 50-75% of the total interior and exterior hard-wired lighting fixtures, or the bulb-lamps in those fixtures, qualify as high efficacy or equivalent.											
	701.4.4.1 Multifamily High-Efficacy lighting. For common spaces and outdoor lighting.....											
Reason:	Consistency with the 2015 IECC. Allowance made for special lighting requirements in MF buildings.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	In favor of action on P177.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P180 LogID TG5-55	701.4.4 High-efficacy lighting	Final Formal Action: Approve as Modified
Submitter:	Craig Conner, Building Quality	
Proposed Change:	<p>701.4.4 High-efficacy lighting...in its entirety</p> <p>DELETE</p> <p>ADD New Section</p> <p><u>703.1 Mandatory practices.</u></p>	

	<p><u>703.1.1 UA Compliance.</u> The building shall comply with one of the following.</p> <p><u>703.1.1.1 Maximum UA.</u> For IECC residential, the total building UA shall be less than or equal to the total maximum UA as computed by 2015 IECC Section R402.1.5. For IECC commercial the total UA shall be less than or equal to the sum of the UA for tables C402.1.4 and C402.4, including the U-factor times the area and C-factor or F-factor times the perimeter. The total UA proposed and baseline calculations shall be documented. REScheck or COMcheck shall be deemed to provide UA calculation documentation. The SHGC shall be in accordance with the 2015 IECC requirements.</p> <p><u>703.1.1.2 Prescriptive R-values and Window U-values.</u> The building shall comply with the insulation and fenestration requirements of 2015 IECC Tables R402.1.1 or Tables C402.1.3 and C402.4.</p> <p><u>Exception:</u> Section 703.1.1 shall not be required for the Tropical Zone.</p> <p><u>703.1.2 Building Envelope Leakage.</u> The building thermal envelope shall comply with 2015 IECC R402.4.1.2 or C402.5 as applicable.</p> <p><u>Exception:</u> Section 703.1.2 shall not be required for the Tropical Zone.</p> <p><u>703.1.3 Duct Testing.</u> The duct system, shall comply with 2015 IECC R403.3.2 through R403.3.5 as applicable.</p> <p><u>703.1.4 High-efficacy lighting.</u> Lighting is in accordance with one of the following:</p> <p>(1) A minimum of 75 percent of the total hard-wired lighting fixtures or the bulbs in those fixtures qualify as high efficacy or equivalent</p> <p>(2) Lighting power density, measured in watts/square foot, is 1.1 or less.</p>
<p>Reason:</p>	<p>This proposed change establishes the minimum mandatory items for the Prescriptive Path compliance. These requirements don't apply to Section 702 Performance Path and the newly proposed HERS index Path that address whole house performance.</p>
<p>Committee Action from Meeting:</p>	<p>Approve as Modified</p>
<p>Modification of Proposed Change:</p>	<p><i>Revise Proposed Change as follows (in red):</i></p> <p>701.4.4 High-efficacy lighting... <i>(Note: Section 701.4.4 is not deleted)</i></p> <p><i>ADD New Section</i></p> <p><u>703.1 Mandatory practices.</u></p> <p><u>703.1.1 UA Compliance.</u> The building shall comply with one of the following.</p> <p><u>703.1.1.1 Maximum UA.</u> For IECC residential, the total building UA shall be less than or equal to the total maximum UA as computed by 2015 IECC Section R402.1.5. For IECC commercial the total UA shall be less than or equal to the sum of the UA for tables C402.1.4 and C402.4, including the U-factor times the area and C-factor or F-factor times the perimeter. The total UA proposed and baseline calculations shall be documented. REScheck or COMcheck shall be deemed to provide UA calculation documentation. The SHGC shall be in accordance with the 2015 IECC requirements.</p>

	<p>703.1.1.2 Prescriptive R-values and Window U-values Fenestration Requirements. The building shall comply with the insulation and fenestration requirements of 2015 IECC Tables R402.1.1 or Tables C402.1.3 and C402.4. <u>The SHGC shall be in accordance with the 2015 IECC requirements.</u></p> <p>Exception: Section 703.1.1 shall not be required for the Tropical Zone.</p> <p>703.1.2 Building Envelope Leakage. The building thermal envelope shall comply with 2015 IECC R402.4.1.2 or C402.5 as applicable.</p> <p>Exception: Section 703.1.2 shall not be required for the Tropical Zone.</p> <p>703.1.3 Duct Testing. The duct system, shall comply with 2015 IECC R403.3.2 through R403.3.5 as applicable.</p> <p>703.1.4 High efficacy lighting. Lighting is in accordance with one of the following:</p> <p>(1) A minimum of 75 percent of the total hard-wired lighting fixtures or the bulbs in those fixtures qualify as high efficacy or equivalent</p> <p>(2) Lighting power density, measured in watts/square foot, is 1.1 or less.</p>										
Committee Reason:	Consistent with actions on P177. Further revisions for clarity and consistency.										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P181 LogID TG5-18	702 Performance Path Final Formal Action: Disapprove				
Submitter:	Neil Leslie, Gas Technology Institute				
Proposed Change:	<p>702.3 Annual direct and indirect CO₂e emissions. CO₂e emissions calculations shall be performed in accordance with Sections 702.3.1 and 702.3.2. The CO₂e emissions associated with the proposed design shall be less than or equal to the CO₂e emissions associated with the standard reference design.</p> <p>702.3.1 Electricity. Emissions associated with use of electricity shall be calculated by converting the electricity used by the building at the electric utility meter or measured point of delivery to MWh and multiplying by the CO₂e conversion factor in Table 702.3.1.</p> <p>702.3.2 Other Fuels. Emissions associated with the use of fuels other than electricity shall be calculated by the converting the fuel energy used by the building and its site at the utility meter or point of delivery to the site to MWh and multiplying by the emission factors in Table 702.3.1.</p> <p>TABLE 702.3.1 CO₂e EMISSION FACTORS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Building Project Energy Source</u></th> <th style="text-align: center;"><u>CO₂e lb/kWh (kg/kWh)</u></th> </tr> </thead> <tbody> <tr> <td style="height: 40px;"> </td> <td style="text-align: center;">-</td> </tr> </tbody> </table>	<u>Building Project Energy Source</u>	<u>CO₂e lb/kWh (kg/kWh)</u>		-
<u>Building Project Energy Source</u>	<u>CO₂e lb/kWh (kg/kWh)</u>				
	-				

	<u>Grid delivered electricity and other fuels not specified in this table</u>	<u>1.387 (0.630)</u>
	<u>LPG or propane</u>	<u>0.600 (0.272)</u>
	<u>Fuel Oil (residual)</u>	<u>0.751 (0.341)</u>
	<u>Fuel Oil (distillate)</u>	<u>0.706 (0.320)</u>
	<u>Coal</u>	<u>0.836 (0.379)</u>
	<u>Gasoline</u>	<u>0.689 (0.313)</u>
	<u>Natural Gas</u>	<u>0.483 (0.219)</u>
	<u>District Chilled Water</u>	<u>0.332 (0.151)</u>
	<u>District Steam</u>	<u>0.812 (0.368)</u>
	<u>District Hot Water</u>	<u>0.767 (0.348)</u>
Reason:	To provide Task Group 5 the opportunity to consider the single national values in the 2014 version of ASHRAE Standard 189.1, a compliance option for the IgCC.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Consistent with IECC, previous versions of NGBS, and actions on P189.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 35 Disagree with committee action: 3 Abstain: 1 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:	<p>Neil Leslie: To be consistent with 189.1 and IgCC compliance requirements that include CO2e emissions.</p> <p>Ted Williams: The proponent's reasoning for consistency with the IgCC and ASHRAE 189-1 is appropriate and consistent with the idea of a stretch code on "green" issues, over and above the IECC. Consistency with the IECC in this area defeats the intent and diminishes the value of a green code...</p> <p>Christopher Mathis: I disagree with the committee action and vote to approve this proposal as submitted. Consistency among green code metrics is essential. How energy efficiency, site energy and source energy are determined is imperative for marketplace fairness. To be consistent with the committees action on P192 and also to be consistent with the source energy calculation approach in standard 189.1, P181 should be adopted into ICC 700.</p>	
Abstain:	Frank Stanonik: This matter warrants further consideration	

P182 LogID TG5-19	702 Performance Path	Final Formal Action: Disapprove	
Submitter:	Neil Leslie, Gas Technology Institute		
Proposed Change:	TABLE 702.3.1 ELECTRICITY EMISSION RATE BY EPA eGRID SUB-REGION		
	<u>eGRID Sub-region Acronym</u>	<u>eGRID Sub-region Name</u>	<u>CO2e Rate (kg/kWh)</u>
	<u>AKGD</u>	<u>ASCC Alaska Grid</u>	<u>0.685</u>
	<u>AKMS</u>	<u>ASCC Miscellaneous</u>	<u>0.265</u>
	<u>ERCT</u>	<u>ERCOT All</u>	<u>0.698</u>
	<u>FRCC</u>	<u>FRCC All</u>	<u>0.617</u>

		<u>HIMS</u>	<u>HICC Miscellaneous</u>	<u>0.722</u>	
		<u>HIOA</u>	<u>HICC Oahu</u>	<u>0.825</u>	
		<u>MROE</u>	<u>MRO East</u>	<u>0.909</u>	
		<u>MROW</u>	<u>MRO West</u>	<u>0.964</u>	
		<u>NYLI</u>	<u>NPCC Long Island</u>	<u>0.698</u>	
		<u>NEWE</u>	<u>NPCC New England</u>	<u>0.428</u>	
		<u>NYCW</u>	<u>NPCC NYC/Westchester</u>	<u>0.391</u>	
		<u>NYUP</u>	<u>NPCC Upstate NY</u>	<u>0.369</u>	
		<u>RFCE</u>	<u>RFC East</u>	<u>0.543</u>	
		<u>RFCM</u>	<u>RFC Michigan</u>	<u>0.874</u>	
		<u>RFCW</u>	<u>RFC West</u>	<u>0.820</u>	
		<u>SRMW</u>	<u>SERC Midwest</u>	<u>0.960</u>	
		<u>SRMV</u>	<u>SERC Mississippi Valley</u>	<u>0.572</u>	
		<u>SRSO</u>	<u>SERC South</u>	<u>0.780</u>	
		<u>SRTV</u>	<u>SERC Tennessee Valley</u>	<u>0.818</u>	
		<u>SRVC</u>	<u>SERC Virginia/Carolina</u>	<u>0.581</u>	
		<u>SPNO</u>	<u>SPP North</u>	<u>0.972</u>	
		<u>SPSO</u>	<u>SPP South</u>	<u>0.873</u>	
		<u>CAMX</u>	<u>WECC California</u>	<u>0.370</u>	
		<u>NWPP</u>	<u>WECC Northwest</u>	<u>0.453</u>	
		<u>RMPA</u>	<u>WECC Rockies</u>	<u>1.149</u>	
		<u>AZNM</u>	<u>WECC Southwest</u>	<u>0.671</u>	
Reason:	Based on Task Group 5 feedback in May 2014, these tables contain the values approved by the IgCC hearing committee for inclusion in the 2015 version of the code. TG 5 members preferred factors that are consistent with the IgCC.				
Committee Action from Meeting:	Disapprove				
Modification of Proposed Change:					
Committee Reason:	Addition of CO2 requirements adds a new metric that may produce different results. Also see P181.				
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 36 Disagree with committee action: 3 Abstain: 0 Non-voting: 2				
Ballot Comments					
Agree with committee action:					
Disagree with committee action:	<p>Neil Leslie: These tables are in the 2015 IgCC. To be consistent with IgCC compliance requirements, the National Green Building Standard should have the same tables and CO2e emissions compliance requirement methodology</p> <p>Ted Williams: The Committee Reason is incorrect. The proposed regional metrics are not inconsistent with P182 and add regional carbon emissions criteria that are critical for comparing building designs on a consistent basis with a measure of regionality included</p> <p>Christopher Mathis: I disagree with the committee action and vote to approve P182. Consistency among green code metrics is essential. How energy efficiency, site energy and source energy are determined is an imperative for marketplace fairness. P182 embraces the EPA e-grid sub region designations for</p>				

	determining CO ² equivalents. This same approach is embraced by the International Green Construction Code (IgCC). If ICC 700 is to join the IgCC in technical rigor and consistency these same EPA e grid regional conversion factors should be utilized.
Abstain:	

P183 LogID TG5-12	702 Performance Path	Final Formal Action: Disapprove																																																																								
Submitter:	R. Christopher Mathis, Mathis Consulting Company																																																																									
Proposed Change:	<p>702.2 Minimum Assembly Performance. Fenestration and opaque building thermal envelope assembly U-factors shall be less than or equal to the U-factors provided in Table 702.2(a)</p> <p style="text-align: right;">Mandatory</p>																																																																									
	<p style="text-align: center;">Table 703.1.1(a) 702.2(a)</p> <p style="text-align: center;">Equivalent U-Factors Minimum U-Factor Equivalents for Performance Compliance^a</p> <table border="1"> <thead> <tr> <th>Climate Zone</th> <th>Fenestration U-Factor</th> <th>Skylight U-Factor</th> <th>Ceiling U-Factor</th> <th>Frame Wall U-Factor</th> <th>Mass Wall U-Factor^b</th> <th>Floor U-Factor</th> <th>Basement Wall U-Factor</th> <th>Crawlspace Wall U-Factor^c</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.20</td> <td>0.75</td> <td>0.035</td> <td>0.082</td> <td>0.197</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>2</td> <td>0.65</td> <td>0.75</td> <td>0.035</td> <td>0.082</td> <td>0.165</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>3</td> <td>0.50</td> <td>0.65</td> <td>0.035</td> <td>0.082</td> <td>0.141</td> <td>0.047</td> <td>0.091^c</td> <td>0.136</td> </tr> <tr> <td>4 except Marine</td> <td>0.35</td> <td>0.60</td> <td>0.030</td> <td>0.082</td> <td>0.141</td> <td>0.047</td> <td>0.059</td> <td>0.065</td> </tr> <tr> <td>5 and Marine 4</td> <td>0.35</td> <td>0.60</td> <td>0.030</td> <td>0.057</td> <td>0.082</td> <td>0.033</td> <td>0.059</td> <td>0.065</td> </tr> <tr> <td>6</td> <td>0.35</td> <td>0.60</td> <td>0.026</td> <td>0.057</td> <td>0.060</td> <td>0.033</td> <td>0.050</td> <td>0.065</td> </tr> <tr> <td>7 and 8</td> <td>0.35</td> <td>0.60</td> <td>0.026</td> <td>0.057</td> <td>0.057</td> <td>0.028</td> <td>0.050</td> <td>0.065</td> </tr> </tbody> </table> <p>a. <u>Non-fenestration U-factors shall be obtained from measurement, calculation, or an approved source.</u></p> <p>b. <u>Where more than half the insulation is on the interior, the mass wall U-factors is a maximum of 0.17 in Zone 1, 0.14 in Zone 2, 0.12 in Zone 3, 0.10 in Zone 4 except in Marine, and the same as the frame wall U-factor in Marine Zone 4 and Zone 5 through 8.</u></p> <p>c. <u>Basement wall U-factor of 0.360 in warm-humid locations.</u></p> <p><i>Renumber existing sections as applicable.</i></p>		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	Crawlspace Wall U-Factor ^c	1	1.20	0.75	0.035	0.082	0.197	0.064	0.360	0.477	2	0.65	0.75	0.035	0.082	0.165	0.064	0.360	0.477	3	0.50	0.65	0.035	0.082	0.141	0.047	0.091 ^c	0.136	4 except Marine	0.35	0.60	0.030	0.082	0.141	0.047	0.059	0.065	5 and Marine 4	0.35	0.60	0.030	0.057	0.082	0.033	0.059	0.065	6	0.35	0.60	0.026	0.057	0.060	0.033	0.050	0.065	7 and 8	0.35	0.60	0.026	0.057	0.057	0.028	0.050	0.065
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	Crawlspace Wall U-Factor ^c																																																																		
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7 and 8	0.35	0.60	0.026	0.057	0.057	0.028	0.050	0.065																																																																		
Reason:	<ul style="list-style-type: none"> The National Green Building Standard is an above code program that is intended to encourage innovation and provide flexibility in meeting performance objectives. Consistent with a similar approach in the 2015 IECC, the prescriptive values from the 2009 IECC are provided as a protective backstop against gaming any performance-based compliance mechanisms. In keeping with the industry’s emphasis on durable, cost-effective efficiency, this standard needs to ensure that short-term compliance solutions are not at the expenses of durable, long-term energy performance. 																																																																									

	<ul style="list-style-type: none"> The 2009 IECC prescriptive values are already included in the 2012 version of ICC 700 prescriptive compliance path. This proposal moves those 2009 values into section 702 to serve as protection against unintended consequences when utilizing the performance path. This proposal is consistent with the performance compliance approach employed in the 2015 IECC.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Limits flexibility and options under the performance path.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P184 LogID 5272	702.1 Point allocation (Performance Path)	Final Formal Action: Disapprove																					
Submitter:	Neil Leslie, Gas Technology Institute																						
Proposed Change:	<p>702.3 Annual direct and indirect CO_{2e} emissions. CO_{2e} emissions calculations shall be performed in accordance with Sections 702.3.1 and 702.3.2. The CO_{2e} emissions associated with the proposed design shall be less than or equal to the CO_{2e} emissions associated with the standard reference design.</p> <p>702.3.1 Electricity. Emissions associated with use of electricity shall be calculated by converting the electricity used by the building at the electric utility meter or measured point of delivery to MWhs and multiplying by the CO_{2e} conversion factor in Table 702.3.1 based on the EPA eGRID Sub-region in which the building is located.</p> <p>702.3.2 Other Fuels. Emissions associated with the use of fuels other than electricity shall be calculated by the converting the fuel energy used by the building and its site at the utility meter or point of delivery to the site to MWh and multiplying by the emission factors in Table 702.3.2.</p> <p>TABLE 702.3.1 ELECTRICITY EMISSION RATE BY EPA eGRID SUB-REGION</p> <table border="1"> <thead> <tr> <th><u>eGRID 2012 SUB-REGION ACRONYM</u></th> <th><u>eGRID 2012 SUB-REGION NAME</u></th> <th><u>NON-BASELOAD CO_{2e} RATE (lbs/MWh)</u></th> </tr> </thead> <tbody> <tr> <td><u>AKGD</u></td> <td><u>ASCC Alaska Grid</u></td> <td><u>1647</u></td> </tr> <tr> <td><u>AKMS</u></td> <td><u>ASCC Miscellaneous</u></td> <td><u>1826</u></td> </tr> <tr> <td><u>ERCT</u></td> <td><u>ERCOT All</u></td> <td><u>1449</u></td> </tr> <tr> <td><u>FRCC</u></td> <td><u>FRCC All</u></td> <td><u>1579</u></td> </tr> <tr> <td><u>HIMS</u></td> <td><u>HICC Miscellaneous</u></td> <td><u>2046</u></td> </tr> <tr> <td><u>HIOA</u></td> <td><u>HICC Oahu</u></td> <td><u>2046</u></td> </tr> </tbody> </table>		<u>eGRID 2012 SUB-REGION ACRONYM</u>	<u>eGRID 2012 SUB-REGION NAME</u>	<u>NON-BASELOAD CO_{2e} RATE (lbs/MWh)</u>	<u>AKGD</u>	<u>ASCC Alaska Grid</u>	<u>1647</u>	<u>AKMS</u>	<u>ASCC Miscellaneous</u>	<u>1826</u>	<u>ERCT</u>	<u>ERCOT All</u>	<u>1449</u>	<u>FRCC</u>	<u>FRCC All</u>	<u>1579</u>	<u>HIMS</u>	<u>HICC Miscellaneous</u>	<u>2046</u>	<u>HIOA</u>	<u>HICC Oahu</u>	<u>2046</u>
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<u>HIOA</u>	<u>HICC Oahu</u>	<u>2046</u>																					

<u>MORE</u>	<u>MRO East</u>	<u>2135</u>
<u>MROW</u>	<u>MRO West</u>	<u>2432</u>
<u>NYLI</u>	<u>NPCC Long Island</u>	<u>1678</u>
<u>NEWE</u>	<u>NPCC New England</u>	<u>1402</u>
<u>NYCW</u>	<u>NPCC NYC/Westchester</u>	<u>1408</u>
<u>NYUP</u>	<u>NPCC Upstate NY</u>	<u>1584</u>
<u>RFCE</u>	<u>RFCE East</u>	<u>1874</u>
<u>RFCM</u>	<u>RFCE Michigan</u>	<u>2084</u>
<u>RFCW</u>	<u>RFCE West</u>	<u>2243</u>
<u>SRMW</u>	<u>SERC Midwest</u>	<u>2463</u>
<u>SRMV</u>	<u>SERC Mississippi Valley</u>	<u>1504</u>
<u>SRSO</u>	<u>SERC South</u>	<u>1864</u>
<u>SRTV</u>	<u>SERC Tennessee Valley</u>	<u>2160</u>
<u>SRVC</u>	<u>SERC Virginia/Carolina</u>	<u>1923</u>
<u>SPNO</u>	<u>SPP North</u>	<u>2451</u>
<u>SPSO</u>	<u>SPP South</u>	<u>1818</u>
<u>CAMX</u>	<u>WECC California</u>	<u>1294</u>
<u>NWPP</u>	<u>WECC Northwest</u>	<u>1698</u>
<u>RMPA</u>	<u>WECC Rockies</u>	<u>2088</u>
<u>AZNM</u>	<u>WECC Southwest</u>	<u>1473</u>
<u>None</u>	<u>Not Included</u>	<u>1826</u>

TABLE 702.3.2 OTHER FUELS EMISSION RATE

<u>Fuel</u>	<u>CO₂e lb/MWh</u>
<u>Propane</u>	<u>600</u>
<u>Fuel Oil (residual)</u>	<u>751</u>
<u>Fuel Oil (distillate)</u>	<u>706</u>
<u>Coal</u>	<u>836</u>

	<table border="1"> <tr> <td><u>Gasoline</u></td> <td><u>689</u></td> </tr> <tr> <td><u>Natural Gas</u></td> <td><u>483</u></td> </tr> <tr> <td><u>Wood and Wood Waste</u></td> <td><u>64</u></td> </tr> <tr> <td><u>Agricultural Biomass</u></td> <td><u>64</u></td> </tr> <tr> <td><u>District Chilled Water</u></td> <td><u>332</u></td> </tr> <tr> <td><u>District Steam</u></td> <td><u>812</u></td> </tr> <tr> <td><u>District Hot Water</u></td> <td><u>767</u></td> </tr> <tr> <td><u>Other fuels not specified in this table</u></td> <td><u>1826</u></td> </tr> </table>	<u>Gasoline</u>	<u>689</u>	<u>Natural Gas</u>	<u>483</u>	<u>Wood and Wood Waste</u>	<u>64</u>	<u>Agricultural Biomass</u>	<u>64</u>	<u>District Chilled Water</u>	<u>332</u>	<u>District Steam</u>	<u>812</u>	<u>District Hot Water</u>	<u>767</u>	<u>Other fuels not specified in this table</u>	<u>1826</u>
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<u>Other fuels not specified in this table</u>	<u>1826</u>																
Reason:	<p>This proposal aligns with the IgCC CO2e compliance requirement. In the 2012 edition of the IgCC primary energy and CO2 equivalents were the metrics chosen to measure building compliance in the performance pathway to ensure that design choices do not inadvertently increase the building's impact on greenhouse gas emissions. CO2e emissions can be based on regional values (here EPA's eGrid for electricity) or national averages for the conversion of all fuel types to a common measurement unit. While there are advantages and disadvantages to each method, the regional method for electricity is more appropriate for this code because it better represents the actual CO2e emissions associated with electricity consumption of the building being constructed in the place where it is constructed. CO2e emissions can be represented based on the average regional generation profile or a non-baseload profile. The non-baseload conversion factors used here better reflect the actual generation impacts avoided by site energy savings proposed in the performance compliance option. ASHRAE Standard 105-2014 uses the regional non-baseload model for electricity because the non-baseload factors reflect the actual displaced generation fuel mix and associated emissions. The baseload and peak (non-baseload) generation fuel profiles will be different for most regions –more natural gas during peak, for example – and the impacts of a reduction in the building energy use will affect that non-baseload generation. For other fuels, Standard 105-2014 uses a national average value that fairly represents the emissions associated with consumption of those fuels in the building. Values for proposed Table 703.1 are from the following peer-reviewed ASHRAE paper published in January 2014: Leslie, N. and Marek Czachorski. 2014. Options for Determining Marginal Primary Energy and Greenhouse Gas Emission Factors (NY-14-C057). ASHRAE Transactions, Vol. 120, pt. 1. Atlanta: American Society of Heating, Refrigerating and Air-conditioning Engineers, Inc. Values for Table 7.3.2 are derived from ASHRAE Standard 189.1-2011 addendum an, with wood and biomass values from the wood industry assuming wood and biomass are considered renewable energy forms. The value for other fuels is the same as the "not included in eGRID" electricity factor in Table 702.3.1 to align with this proposal non-baseload methodology as well as the Standard 189.1 methodology.</p>																
Committee Action from Meeting:	Disapprove																
Modification of Proposed Change:																	
Committee Reason:	Consistent with IECC, previous versions of NGBS, and action on P189. Addition of CO2 requirements adds a new metric that may produce different results. Also see P181.																
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2						
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Ballot Comments																	
Agree with committee action:																	

Disagree with committee action:	
Abstain:	

P185 LogID TG5-11	702.2 Energy cost performance analysis	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality	
Proposed Change:	<p>Modify as follows:</p> <p>702.2 Energy cost performance levels analysis.</p> <p><u>A building with a projected energy cost savings based on a performance analysis shall receive 1 point per each 0.5% energy cost savings. The performance calculation shall include the impact of HVAC equipment efficiency, air sealing, duct sealing, water heating, appliances, and lighting.</u></p> <p>702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost performance that meets the ICC IECC. A documented analysis using software or procedures in accordance with the ICC IECC Section 405, or ICC IECC Section 506.2 through 506.5 applied as defined in the IECC is required.</p> <p>702.2.2 Energy Cost performance analysis (Delete Section)</p> <p>Either in this section or in the commentary put:</p> <p><u>The savings shall be defined as</u></p> <p><u>IECC energy = IECC (heating + cooling + service water heating)</u></p> <p><u>Base other energy = Base (lighting and appliances)</u></p> <p><u>Proposed energy (heating + cooling + service water heating + lighting + appliances)</u></p> <p><u>Savings = ((IECC energy + Base other energy)-Proposed energy) / IECC energy</u></p>	
Reason:	<p>This is intended to allow multiple programs and different calculations of energy performance based on energy cost as specified by the NGBS and the IECC. It would not allow a HERS score (specifically prohibited in the NGBS commentary), but would allow easy use of say a REMrate output . For example see the page titled "2006 Annual Energy Cost Compliance"</p> <p>IECC energy = Heating + Cooling + Water Heating + Lights and Appliances</p> <p>As Designed energy = Heating + Cooling + Water Heating +Lights and Appliances – PV</p> <p>It is very important not to restrict the NGBS to one proprietary source (RESNET) but allow any organization or program which does the energy cost calculation to use this section, provided they do the energy cost calculation specified by the IECC and the NGBS.</p>	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Does not ensure compliance with base code before determining beyond code attributes.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	38

	Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	Maribeth Rizzuto: This is worthwhile and allows for additional flexibility in the standard. Options provide benefits and we should reconsider the committee vote.
Abstain:	

P186 LogID TG5-13	702.2 Energy cost performance levels	Final Formal Action: Approve as Modified
Submitter:	Amber Wood, NORESCO/AEC	
Proposed Change:	<p>702.2 Energy cost performance levels.</p> <p>702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost performance that meets the IECC. A documented analysis using software in accordance with IECC, Section <u>R401 or R407-405, or IECC Section 506.2 through 506.</u> applied as defined in the IECC, is required.</p> <p>702.2.2 Energy cost performance analysis. Savings levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances. <u>modeling is completed building-wide through either whole building energy modeling or a building average of a unit-by-unit approach.</u></p> <p><u>For each percentage of energy savings over 15%, 2 points are awarded. The thresholds for each certification level are as follows.</u></p> <p>(1) <u>Bronze: 15.5 percent</u></p> <p>(2) <u>Silver: 30.10 percent</u></p> <p>(3) <u>Gold: 40.15 percent</u></p> <p>(4) <u>Emerald: 50.20 percent</u></p>	
Reason:	Clarification on energy modeling from the TG conference call w/ MF group. Add allowance for continuous points (allow extra points in the energy section). Update the percentages considering more stringent baseline of the 2015 IECC. .	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>702.2 Energy cost performance levels.</p> <p>702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost performance that meets the IECC. A documented analysis using software in accordance with IECC, Section R401 or R407-405, or IECC Section 506.2 through 506. R401 or R407-405, or IECC Section 506.2 through 506.5, applied as defined in the IECC, is required.</p> <p>702.2.2 Energy cost performance analysis. Savings levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</p>	

	<p><u>For multi-unit buildings, modeling is completed building-wide through either whole building energy modeling, a unit-by-unit approach, or a building average of a unit-by-unit approach.</u></p> <p><u>For each percentage of energy savings over 15%, 2 points are awarded. The thresholds for each certification level are as follows.</u></p> <p>(1) Bronze: 15.5 percent</p> <p>(2) Silver: 30.10 percent</p> <p>(3) Gold: 40.15 percent</p> <p>(4) Emerald: 50.20 percent</p>
Committee Reason:	The intent of the proposal is to address multi-family applications. The other proposed revisions are not necessary based on actions on other proposed changes.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P187 LogID TG5-10	702.2 Energy cost performance levels	Final Formal Action: Disapprove															
Submitter:	Neil Leslie, Gas Technology Institute																
Proposed Change:	<p>702.2 Energy cost performance levels</p> <p>702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost <u>or source energy</u> performance that meets the ICC IECC. A documented analysis using software in accordance with ICC IECC, Section R405, <u>or ICC IECC Section 506.2 through 506.5</u>, applied as defined in the ICC IECC, is required. <u>Source energy conversion factors for electricity shall be in accordance with Table 7.2.1. Source energy conversion factors for other fuels shall be in accordance with Table 7.2.2.</u></p> <p>702.2.2 Energy cost <u>performance</u> analysis. Energy cost savings levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</p> <p><u>TABLE 7.2.1 ELECTRICITY GENERATION ENERGY CONVERSION FACTORS BY EPA eGRID SUB-REGION</u></p> <table border="1"> <thead> <tr> <th><u>eGRID Sub-region Acronym</u></th> <th><u>eGRID Sub-region Name</u></th> <th><u>Energy Conversion Factor</u></th> </tr> </thead> <tbody> <tr> <td><u>AKGD</u></td> <td><u>ASCC Alaska Grid</u></td> <td><u>3.15</u></td> </tr> <tr> <td><u>AKMS</u></td> <td><u>ASCC Miscellaneous</u></td> <td><u>1.90</u></td> </tr> <tr> <td><u>ERCT</u></td> <td><u>ERCOT All</u></td> <td><u>3.08</u></td> </tr> <tr> <td><u>FRCC</u></td> <td><u>FRCC All</u></td> <td><u>3.26</u></td> </tr> </tbody> </table>		<u>eGRID Sub-region Acronym</u>	<u>eGRID Sub-region Name</u>	<u>Energy Conversion Factor</u>	<u>AKGD</u>	<u>ASCC Alaska Grid</u>	<u>3.15</u>	<u>AKMS</u>	<u>ASCC Miscellaneous</u>	<u>1.90</u>	<u>ERCT</u>	<u>ERCOT All</u>	<u>3.08</u>	<u>FRCC</u>	<u>FRCC All</u>	<u>3.26</u>
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<u>HIMS</u>	<u>HICC Miscellaneous</u>	<u>3.67</u>
<u>HIOA</u>	<u>HICC Oahu</u>	<u>3.14</u>
<u>MROE</u>	<u>MRO East</u>	<u>3.50</u>
<u>MROW</u>	<u>MRO West</u>	<u>3.64</u>
<u>NYLI</u>	<u>NPCC Long Island</u>	<u>3.47</u>
<u>NEWE</u>	<u>NPCC New England</u>	<u>3.03</u>
<u>NYCW</u>	<u>NPCC NYC/Westchester</u>	<u>3.21</u>
<u>NYUP</u>	<u>NPCC Upstate NY</u>	<u>2.66</u>
<u>RFCE</u>	<u>RFC East</u>	<u>3.28</u>
<u>RFCM</u>	<u>RFC Michigan</u>	<u>3.35</u>
<u>RFCW</u>	<u>RFC West</u>	<u>3.29</u>
<u>SRMW</u>	<u>SERC Midwest</u>	<u>3.40</u>
<u>SRMV</u>	<u>SERC Mississippi Valley</u>	<u>3.20</u>
<u>SRSO</u>	<u>SERC South</u>	<u>3.20</u>
<u>SRTV</u>	<u>SERC Tennessee Valley</u>	<u>3.30</u>
<u>SRVC</u>	<u>SERC Virginia/Carolina</u>	<u>3.24</u>
<u>SPNO</u>	<u>SPP North</u>	<u>3.57</u>
<u>SPSO</u>	<u>SPP South</u>	<u>3.26</u>
<u>CAMX</u>	<u>WECC California</u>	<u>2.89</u>
<u>NWPP</u>	<u>WECC Northwest</u>	<u>2.32</u>
<u>RMPA</u>	<u>WECC Rockies</u>	<u>3.82</u>
<u>AZNM</u>	<u>WECC Southwest</u>	<u>3.10</u>

TABLE 7.2.2 OTHER FUEL ENERGY CONVERSION FACTORS

<u>Fuel Type</u>	<u>Energy Conversion Factor</u>
<u>Natural Gas</u>	<u>1.09</u>
<u>Fuel Oil</u>	<u>1.19</u>
<u>LPG</u>	<u>1.15</u>
<u>Purchased Hot Water</u>	<u>1.35</u>
<u>Purchased Steam</u>	<u>1.45</u>
<u>Other</u>	<u>1.1</u>

Reason:	Based on Task Group 5 feedback in May 2014, these tables contain the values approved by the IgCC hearing committee for inclusion in the 2015 version of the code. TG 5 members preferred factors that are consistent with the IgCC.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Important to stay consistent with the specific provisions of the IECC and with previous editions of the NGBS.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 37 Disagree with committee action: 2 Abstain: 0

	Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Neil Leslie: These tables are in the 2015 IgCC. To be consistent with IgCC compliance requirements, the National Green Building Standard should have the same tables and source energy compliance requirement methodology</p> <p>Ted Williams: The Committee Reason is a step backward from the intent of a "green" code in that consistency with the IgCC should prevail over consistency with the IECC Consistency with the prior addition of the NGBS means no progress toward consistency across ICC model codes</p>
Abstain:	

P188 LogID TG5-17	702.2 Performance Path	Final Formal Action: Approve
Submitter:	Howard Wiig, Craig Conner,	
Proposed Change:	<p><u>702.2.3 Tropical standard reference design:</u></p> <p><u>For the Tropical Climate Zone the standard reference design shall use the specifications in IECC Section R401.2.1 (Tropical Zone).</u></p>	
Reason:	<p>For the tropical zone the Standard Reference Design is modified to be consistent with IECC R401.2.1 (traditional tropical home with modern equipment).</p> <p>The IECC performance calculation is not appropriate for Hawaii or tropical climates in general. Mainland homes usually want to set up a thermal barrier between the inside and outside. Tropical homes, often want to invite the outside in, to eliminate the need for conditioned rather than condition, be intentionally leaky. and can define part of their home such that it is more outside than inside. Think small home with a big covered porch.</p> <p>This tropical base-case home (standard reference design) includes many elements of traditional design. It focuses on the efficiency items that work in the tropics. Solar water heating is very effective. It uses outdoor living space as a part of the home, either as an enclosed but not conditioned space. Or a "lanai" essentially a furnished porch which probably covered but probably does not have walls. Lacking walls, the lanais not cooled except by shading and the like. Living partly outside is not a burden, rather it is a preference for many.</p> <p>The tropical base case eliminates efficiency items that are not particularly valuable where the indoor and outdoor temperatures can be very close, for example it eliminates most of the insulation. The tropical design is not concerned about air tightness, but rather about the ability of the home to invite the tropical air and prevailing winds indoors.</p> <p>One can still build a mainland style home. It will probably cost more. A number of efficiency features will need to be added to reduce its energy consumption to the level of the tropical base case home. Of course the NGBS will require further energy reductions beyond this tropical case home to get to a bronze, silver, gold or emerald level.</p> <p>Analysis (to be forwarded) shows the simple traditional tropical design home with modern equipment saves more energy than the more expensive IECC standard reference design home.</p>	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P189	LogID TG5-14	702.2.1 ICC IECC analysis	Final Formal Action: Disapprove
Submitter:	Neil Leslie, Gas Technology Institute		
Proposed Change:	702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost performance that meets the ICC IECC. A documented analysis using software in accordance with ICC IECC, Section <u>R405</u> , or ICC IECC Section <u>506.2 through 506.5</u> , applied as defined in the ICC IECC, is required. For heating systems, the standard reference design shall be an air source heat pump. For service water heating, the standard reference design shall be an electric resistance storage water heater. For cooling systems, the standard reference design shall be an air cooled split system air conditioner.		
Reason:	This proposed change splits the single baseline methodology provisions in 5271 from the conversion factor tables to permit separate consideration of each proposed change. Based on concerns expressed during the May meeting that an all-electric baseline is more equitable, this proposal provides a reasonable level of minimum performance for a green residential building based on a single energy cost budget, while retaining a consistent methodology with IgCC and ASHRAE Standard 189.1 based on ASHRAE Standard 90.1-2013 Appendix G.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Important to stay consistent with the specific provisions of the IECC and with previous editions of the NGBS.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P190	LogID TG5-15	702.2.1 ICC IECC analysis	Final Formal Action: Disapprove
Submitter:	Neil Leslie, Gas Technology Institute		
Proposed Change:	702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost performance that meets the ICC IECC. A documented analysis using software in accordance with ICC IECC, Section <u>R405</u> , or ICC IECC Section <u>506.2 through 506.5</u> , applied as defined in the ICC IECC, is required. For heating systems, the standard reference design shall be a gas furnace. For service water		

	<u>heating, the standard reference design shall be a gas storage water heater. For cooling systems, the standard reference design shall be an air cooled split system air conditioner.</u>
Reason:	This proposed change splits the single baseline methodology provisions in 5271 from the conversion factor tables to permit separate consideration of each proposed change. Based on concerns expressed during the May meeting that an all-electric baseline is not stringent enough compared to the single baselines in the IgCC and ASHRAE Standard 189.1, this proposal provides an efficient level of minimum performance for a green residential building based on a single energy cost budget, and is completely consistent with the stringency and methodology in IgCC and ASHRAE Standard 189.1 based on ASHRAE Standard 90.1-2013 Appendix G.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	In favor of action on P192.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<i>Neil Leslie:</i> Both the 2014 version of Standard 189.1 and the 2015 IgCC (as well as the new version of LEED) use a single baseline methodology that is consistent with this proposal. The single baseline is efficient and more stringent than P189 in keeping with the intent of a green building standard. The National Green Building Standard needs to include this methodology and attendant values for equity and consistency.
Abstain:	

P191 LogID TG5-16	702.2.1 ICC IECC analysis	Final Formal Action: Disapprove
Submitter:	Aaron Gary, US-EcoLogic	
Proposed Change:	<u>For MULTIFAMILY PROJECTS, the standard reference design shall for heating systems will be Electric Resistance. The standard reference design for cooling systems shall be a packaged terminal air conditioner.</u>	
Reason:	<p>Includes fuel-agnostic single source mechanical baselines for maximum consumer choice and equitable comparison across all climate zones.</p> <p>There is no available actual energy use data for multifamily projects that supports the use of heat pumps for interior units (1 to 3 unconditioned boundary conditions compared to a single family house which has 6+ unconditioned boundary conditions). The higher up-front cost associated with heat pumps (versus electric resistance heat) cannot be translated to a discernible ROI that makes business sense given the decreased heating load required by multifamily units.</p> <p>Similarly the energy modeling software available on the market does not adequately address this issue in relation to multifamily units.</p>	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Significant degradation in what the IECC provides for now. The proposed change would create a baseline different than the IECC.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 37	

	Disagree with committee action: 2 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Steven Rosenstock: According to data published by the US Census Bureau, electricity was the fuel of choice for 66% of multifamily units in 2013. Going back to 1974, electricity has been used to heat anywhere from 44% to 72% of newly completed multi-family units (to own or rent). See https://www.census.gov/construction/charts/pdf/mfu_hfuel.pdf</p> <p>In terms of heat pumps, the US Census Bureau also breaks out electric heating by use of heat pump. See https://www.census.gov/construction/charts/pdf/mfu_heatpump.pdf</p> <p>Since 1979, the percentage of units heated with electricity, but not with heat pumps, has ranged from 42 to 83%.</p> <p>Therefore, based on actual market conditions, a standard reference design for electric heating in multi-family buildings should be electric resistance.</p> <p>Other alternatives could be to allow electric resistance to be used in certain climate zones (e.g., 1-4), or to allow its used where the annual heating load is calculated to be less than a certain amount (e.g., 10 Million Btu's).</p> <p>Randall Melvin: Agree with Rizzuto comment</p>
Abstain:	

P192 LogID 5271	702.2.1 ICC IECC analysis	Final Formal Action: Approve as Modified						
Submitter:	Neil Leslie, Gas Technology Institute							
Proposed Change:	<p>702.2 Energy cost-performance levels</p> <p>702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost <u>or source energy</u> performance that meets the ICC IECC. A documented analysis using software in accordance with ICC IECC, Section <u>R405</u>, or ICC IECC Section 506.2 through 506.5, applied as defined in the ICC IECC, is required. <u>For heating systems, the standard reference design shall be an air source heat pump. For service water heating, the standard reference design shall be and electric resistance storage water heater. For cooling systems, the standard reference design shall be an air cooled split system air conditioner. Source energy conversion factors for electricity shall be in accordance with Table 7.2.1. Source energy conversion factors for other fuels shall be in accordance with Table 7.2.2.</u></p> <p>702.2.2 Energy cost-performance analysis. Energy cost savings levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</p> <p><u>7.2.1 ELECTRICITY GENERATION ENERGY CONVERSION FACTORS BY EPA eGRID SUB-REGION</u></p> <table border="1"> <thead> <tr> <th><u>eGRID 2012 SUB-REGION ACRONYM</u></th> <th><u>eGRID 2012 SUB-REGION NAME</u></th> <th><u>NON-BASELOAD ENERGY CONVERSION FACTOR</u></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		<u>eGRID 2012 SUB-REGION ACRONYM</u>	<u>eGRID 2012 SUB-REGION NAME</u>	<u>NON-BASELOAD ENERGY CONVERSION FACTOR</u>			
<u>eGRID 2012 SUB-REGION ACRONYM</u>	<u>eGRID 2012 SUB-REGION NAME</u>	<u>NON-BASELOAD ENERGY CONVERSION FACTOR</u>						

<u>AKGD</u>	<u>ASCC Alaska Grid</u>	<u>3.41</u>
<u>AKMS</u>	<u>ASCC Miscellaneous</u>	<u>3.27</u>
<u>ERCT</u>	<u>ERCOT All</u>	<u>2.89</u>
<u>FRCC</u>	<u>FRCC All</u>	<u>2.99</u>
<u>HIMS</u>	<u>HICC Miscellaneous</u>	<u>3.61</u>
<u>HIOA</u>	<u>HICC Oahu</u>	<u>3.53</u>
<u>MORE</u>	<u>MRO East</u>	<u>3.21</u>
<u>MROW</u>	<u>MRO West</u>	<u>3.63</u>
<u>NYLI</u>	<u>NPCC Long Island</u>	<u>3.57</u>
<u>NEWE</u>	<u>NPCC New England</u>	<u>2.80</u>
<u>NYCW</u>	<u>NPCC NYC/Westchester</u>	<u>3.10</u>
<u>NYUP</u>	<u>NPCC Upstate NY</u>	<u>2.82</u>
<u>RFCE</u>	<u>RFC East</u>	<u>3.11</u>
<u>RFCM</u>	<u>RFC Michigan</u>	<u>3.18</u>
<u>RFCW</u>	<u>RFC West</u>	<u>3.26</u>
<u>SRMW</u>	<u>SERC Midwest</u>	<u>3.46</u>
<u>SRMV</u>	<u>SERC Mississippi Valley</u>	<u>3.15</u>
<u>SRSO</u>	<u>SERC South</u>	<u>3.05</u>
<u>SRTV</u>	<u>SERC Tennessee Valley</u>	<u>3.23</u>
<u>SRVC</u>	<u>SERC Virginia/Carolina</u>	<u>3.14</u>
<u>SPNO</u>	<u>SPP North</u>	<u>3.69</u>
<u>SPSO</u>	<u>SPP South</u>	<u>3.31</u>
<u>CAMX</u>	<u>WECC California</u>	<u>2.99</u>
<u>NWPP</u>	<u>WECC Northwest</u>	<u>3.05</u>
<u>RMPA</u>	<u>WECC Rockies</u>	<u>3.41</u>

<u>AZNM</u>	<u>WECC Southwest</u>	<u>2.89</u>
<u>None</u>	<u>Not Included</u>	<u>3.15</u>

TABLE 7.2.2 OTHER FUEL ENERGY CONVERSION FACTORS

<u>FUEL TYPE</u>	<u>ENERGY CONVERSION FACTOR</u>
<u>Natural Gas</u>	<u>1.09</u>
<u>Fuel Oil</u>	<u>1.19</u>
<u>LPG</u>	<u>1.15</u>
<u>Purchased Hot Water</u>	<u>1.35</u>
<u>Purchased Steam</u>	<u>1.45</u>
<u>Other</u>	<u>1.1</u>

Reason:	Aligns with performance path provisions of IgCC and IECC. Includes fuel-agnostic single mechanical system baselines for maximum consumer choice and equitable societal benefits. Source energy can be based on regional values (here EPA’s eGrid) or national averages for the conversion of all fuel types to a common measurement unit. While there are advantages and disadvantages to each method as noted in ASHRAE Standard 105-2014 "Standard Methods of Determining, Expressing and Comparing Building Energy Performance and Greenhouse Gas Emissions", the regional method is more appropriate for this code because it better represents the actual primary energy use of the building being constructed in the place where it is constructed. Similarly, primary energy savings can be represented based on the average regional generation profile or a non-baseload profile. The non-baseload conversion factors used here better reflect the actual generation impacts avoided by site energy savings in the performance compliance option. ASHRAE Standard 105-2014 is using the regional non-baseload model because the non-baseload factors reflect the actual displaced generation fuel mix. The baseload and peak generation fuel profiles will be different for most regions –more natural gas during peak, for example – and the impacts of a reduction in the building energy use will affect that non-baseload generation. Values for Table 7.2.1 are from the following peer-reviewed ASHRAE paper published in January 2014. Leslie, N. and Marek Czachorski. 2014. Options for Determining Marginal Primary Energy and Greenhouse Gas Emission Factors (NY-14-C057). ASHRAE Transactions, Vol. 120, pt. 1. Atlanta: American Society of Heating, Refrigerating and Air-conditioning Engineers, Inc.
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p>702.2 Energy cost-performance levels</p> <p>702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost <u>or source energy</u> performance that meets the ICC IECC. A documented analysis using software in accordance with ICC IECC, Section <u>R405</u>, or ICC IECC Section 506.2 through 506.5, applied as defined in the ICC IECC, is required.</p> <p>702.2.2 Energy cost-performance analysis. Energy cost-savings levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</p>
Committee Reason:	Consistent with actions on P187 & P189. Committee agreed to provide added flexibility by including source energy metric.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 36</p> <p>Disagree with committee action: 2</p> <p>Abstain: 1</p> <p>Non-voting: 2</p>
Ballot Comments	

Agree with committee action:	
Disagree with committee action:	<p>Steven Rosenstock: Reason: This action is totally inconsistent with previous versions of the standard and inconsistent with the action of Task Group 5. P187 was <u>disapproved</u> by Task Group 5 by a vote of 6-4-2. It was also disapproved by the full committee. P189 was disapproved by Task Group 5 by a <u>unanimous</u> vote of 10-0-0. It was also disapproved by the full committee. Other proposals dealing with source energy estimates, such as P182 and P184, were also disapproved by Task Group 5 (by votes of 9-1-1) as well as the full committee.</p> <p>In addition, the proposed language of 702.2.2 makes it appear that only energy savings using source energy estimates, rather than cost, can be used.</p> <p>I would ask that the new language be removed, or replaced as follows:</p> <p>702.2 Energy cost <u>cost or energy savings</u> performance levels</p> <p>702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost or source site energy performance that meets the ICC IECC. A documented analysis using software in accordance with ICC IECC, Section <u>R405</u>, or ICC IECC Section 506.2 through 506.5, applied as defined in the ICC IECC, is required.</p> <p>702.2.2 Energy cost performance analysis. Energy cost savings <u>or energy cost savings</u> levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances.</p> <p>Charles Foster: Consistent with my comment for P024, i believe the use of a single, composite source energy multiplier is fundamentally unfair to renewable energy as it treats electricity from solar and wind the same as electricity generated with fossil fuels.</p>
Abstain:	<p>Frank Stanonik: I am uncertain of the value of adding an option to evaluate performance based on source energy without more details on how that is to be done</p>

P193 LogID 5247	702.2.1 ICC IECC analysis	Final Formal Action: Disapprove
Submitter:	Jeremy Velasquez, US-EcoLogic	
Proposed Change:	<p>Provide explicit clarification for approved modeling softwares and methods for energy modeling (to address different building types and scenarios)</p> <p>1. 3 stories and below is REM RATE. 2. 4 Story+ is ASHRAE 90.1 - 2007 (CARRIER HAP)</p> <p>Are there situations other than alternative bronze that we can use REM RATE for 4 or 5 story buildings?</p>	
Reason:	<p>Right now the protocol references code for modeling, but this leads to confusion and may not lead to correct and appropriate energy modeling. 1. For example - We understand that REM RATE models are appropriate for LOW-RISE, but sometimes we have 4-5 story projects that would typically require an ASHRAE 90.1-2007 model - based on our interpretation of commercial code, but RESNET, ENERGYSTAR and other entities allow REM RATE modeling for up to 5 stories.</p>	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The Standard should not require specific software packages. A list of software packages that meet the intent of the Standard can be provided in the commentary.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39

	Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P194 LogID 5301	702.2.2 Energy cost performance analysis	Final Formal Action: Withdrawn
Submitter:	aaron gary, US-EcoLogic	
Proposed Change:	Add clarification through protocol or VRG that reflects modeling requirements of Commercial IECC.	
Reason:	Though modeling per IECC 506 is mentioned all Comments and Notes currently are written to reflect 405 modeling requirements. 4+ stories multifamily projects should be modeled using ASHRAE 90.1 per IECC 506 and include all building spaces, not residential space only. NGBS 2015 protocol should reflect this such that multifamily projects can flow more easily through certification.	
Committee Action from Meeting:	Withdrawn	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P195 LogID TG5-02	702.2.2 Energy cost performance analysis	Final Formal Action: Approve as Modified
Submitter:	Aaron Gary, US-EcoLogic	
Proposed Change:	702.2.2 Energy cost performance analysis. Energy cost savings levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances. <u>Points are assigned for every 1% better than the ICC IECC2015 using the formula:</u> $\text{Points} = 30 + (\text{percent above ICC IECC 2015}) * 3.$ <p>(1) 15 percent</p> <p>(2) 30 percent</p> <p>(3) 40 percent</p> <p>(4) 50 percent</p>	

Reason:	A green building is not defined only by energy efficiency but by many other metrics as well as demonstrated by Chapters 5,6,8,9 and 10 of the National Green Building Standard. Also, the 2015 IECC is an above the baseline energy code for most municipalities. Asking green buildings to exceed the 2015 IECC by an arbitrary percentage seems unnecessary and has the potential to be prohibitively expensive given the limited areas where the improvement can be captured with the heightened baseline. Complying with the 2015 IECC should qualify a project for Bronze certification. Additional points should be awarded for exceeding the 2015 IECC										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>702.2.2 Energy cost performance analysis. Energy cost savings levels above the ICC IECC are determined through an analysis that includes improvements in building envelope, air infiltration, heating system efficiencies, cooling system efficiencies, duct sealing, water heating system efficiencies, lighting, and appliances. <u>Points are assigned for every 1% better than the ICC IECC2015 using the following formula:</u></p> <p><u>Points = 30 + (percent above ICC IECC 2015) * 32.</u></p> <p>(1) 15 percent (2) 30 percent (3) 40 percent (4) 50 percent</p>										
Committee Reason:	Clarification and maintaining a consistent point metric for energy savings in 2012 NGBS.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>38</td> </tr> <tr> <td>Disagree with committee action:</td> <td>1</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	38	Disagree with committee action:	1	Abstain:	0	Non-voting:	2
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Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	Christopher Mathis: I disagree with the committee action and vote for disapproval. Meeting the minimum energy code is a mandatory requirement and therefore should be awarded no points. However, performance beyond minimum code should be highly rewarded. P195, while well intentioned, has the unintended consequence of simultaneously rewarding minimum code requirements and disincentivizing performance beyond the minimum code. The previous point structure of an escalating scale of points as performance beyond minimum code is achieved should be retained.										
Abstain:											

P196 LogID TG5-26	703 Prescriptive Path	Final Formal Action: Approve as Modified
Submitter:	Amber Wood, NORESKO/AEC	
Proposed Change:	703.1.6.1 and 703.1.6.2 (Add note below tables as follows)	
	<u>Exception: For Sun-tempered designs meeting the requirements of Section 703.6.1, the SHGC is permitted to be 0.40 or higher.</u>	
Reason:	This exception resolves the conflict between the sun-tempered design requirements and the SHGC values in the tables in section 703.1.6.	

Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise Proposed Change as follows (in red):</i></p> <p>703.1.6.1 and 703.1.6.2 (Add note below tables as follows)</p> <p>Exception: For Sun-tempered designs meeting the requirements of Section 703.6.1, the SHGC is permitted to be 0.40 or higher on south facing glass.</p>
Committee Reason:	Clarification of intent.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P197 LogID TG5-20	703.1.1 UA improvement	Final Formal Action: Approve as Modified																																																																																										
Submitter:	Amber Wood, NORESCO/AEC																																																																																											
Proposed Change:	<p>703.1.1 UA improvement. The total building thermal envelope UA is less than or equal to the total UA resulting from the U-factors provided in Table 703.1.1(a). Where insulation is used to achieve the UA improvement, the insulation installation is in accordance with Grade 1 requirements as graded by a third-party. Total UA is documented using a RESCheck, COMCheck, or equivalent report to verify the baseline and the UA improvement.</p>																																																																																											
	<table border="1"> <thead> <tr> <th colspan="9">Table 703.1.1(a)</th> </tr> <tr> <th colspan="9">Equivalent U-Factors^a</th> </tr> <tr> <th>Climate Zone</th> <th>Fenestration U-Factor</th> <th>Skylight U-Factor</th> <th>Ceiling U-Factor</th> <th>Frame Wall U-Factor</th> <th>Mass Wall U-Factor^b</th> <th>Floor U-Factor</th> <th>Basement Wall U-Factor</th> <th>Crawlspace Wall U-Factor^c</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.200<u>0.50</u></td> <td>0.75</td> <td>0.035</td> <td>0.082<u>0.24</u></td> <td>0.197</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>2</td> <td>0.650<u>0.40</u></td> <td>0.750<u>0.65</u></td> <td>0.0350<u>0.30</u></td> <td>0.082<u>0.24</u></td> <td>0.165</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>3</td> <td>0.500<u>0.35</u></td> <td>0.650<u>0.55</u></td> <td>0.0350<u>0.30</u></td> <td>0.082<u>0.26</u></td> <td>0.141<u>0.098</u></td> <td>0.047</td> <td>0.091<u>0.08</u></td> <td>0.136</td> </tr> <tr> <td>4 except Marine</td> <td>0.35</td> <td>0.600<u>0.55</u></td> <td>0.0300<u>0.26</u></td> <td>0.082<u>0.26</u></td> <td>0.141<u>0.098</u></td> <td>0.047</td> <td>0.059</td> <td>0.065</td> </tr> <tr> <td>5 and Marine 4</td> <td>0.350<u>0.32</u></td> <td>0.600<u>0.55</u></td> <td>0.0300<u>0.26</u></td> <td>0.057<u>0.26</u></td> <td>0.082</td> <td>0.033</td> <td>0.059<u>0.050</u></td> <td>0.065<u>0.55</u></td> </tr> <tr> <td>6</td> <td>0.350<u>0.32</u></td> <td>0.600<u>0.55</u></td> <td>0.026</td> <td>0.057<u>0.24</u></td> <td>0.060</td> <td>0.033</td> <td>0.050</td> <td>0.065<u>0.55</u></td> </tr> <tr> <td>7 and 8</td> <td>0.350<u>0.32</u></td> <td>0.600<u>0.55</u></td> <td>0.026</td> <td>0.057<u>0.24</u></td> <td>0.057</td> <td>0.028</td> <td>0.050</td> <td>0.065<u>0.55</u></td> </tr> </tbody> </table> <p>Non-fenestration U-factors shall be obtained from measurement, calculation, or an approved source.</p>		Table 703.1.1(a)									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	Crawlspace Wall U-Factor ^c	1	1.200 <u>0.50</u>	0.75	0.035	0.082 <u>0.24</u>	0.197	0.064	0.360	0.477	2	0.650 <u>0.40</u>	0.750 <u>0.65</u>	0.0350 <u>0.30</u>	0.082 <u>0.24</u>	0.165	0.064	0.360	0.477	3	0.500 <u>0.35</u>	0.650 <u>0.55</u>	0.0350 <u>0.30</u>	0.082 <u>0.26</u>	0.141 <u>0.098</u>	0.047	0.091 <u>0.08</u>	0.136	4 except Marine	0.35	0.600 <u>0.55</u>	0.0300 <u>0.26</u>	0.082 <u>0.26</u>	0.141 <u>0.098</u>	0.047	0.059	0.065	5 and Marine 4	0.350 <u>0.32</u>	0.600 <u>0.55</u>	0.0300 <u>0.26</u>	0.057 <u>0.26</u>	0.082	0.033	0.059 <u>0.050</u>	0.065 <u>0.55</u>	6	0.350 <u>0.32</u>	0.600 <u>0.55</u>	0.026	0.057 <u>0.24</u>	0.060	0.033	0.050	0.065 <u>0.55</u>	7 and 8	0.350 <u>0.32</u>	0.600 <u>0.55</u>	0.026	0.057 <u>0.24</u>	0.057	0.028	0.050	0.065 <u>0.55</u>
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Reason:	Consistency with the 2015 IECC																																																																																										
Committee Action from Meeting:	Approve as Modified																																																																																										
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>703.1.1 UA improvement. The total building thermal envelope UA is less than or equal to the total UA resulting from the U-factors provided in Table 703.1.1(a) <u>or IECC Tables C402.1.4 and C402.4, as applicable</u>. Where insulation is used to achieve the UA improvement, the insulation installation is in accordance with Grade 1 requirements as graded by a third-party. Total UA is documented using a RESCheck, <u>COMCheck</u>, or equivalent report to verify the baseline and the UA improvement.</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th colspan="9">Table 703.1.1(a)</th> </tr> <tr> <th colspan="9">Equivalent U-Factors^a</th> </tr> <tr> <th>Climate Zone</th> <th>Fenestration U-Factor</th> <th>Skylight U-Factor</th> <th>Ceiling U-Factor</th> <th>Frame Wall U-Factor</th> <th>Mass Wall U-Factor^b</th> <th>Floor U-Factor</th> <th>Basement Wall U-Factor</th> <th>Crawlspace Wall U-Factor^c</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.200<u>.50</u></td> <td>0.75</td> <td>0.035</td> <td>0.082<u>4</u></td> <td>0.197</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>2</td> <td>0.650<u>.40</u></td> <td>0.750<u>.65</u></td> <td>0.0350<u>.030</u></td> <td>0.082<u>4</u></td> <td>0.165</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>3</td> <td>0.500<u>.35</u></td> <td>0.650<u>.55</u></td> <td>0.0350<u>.030</u></td> <td>0.082<u>60</u></td> <td>0.141<u>09</u> <u>8</u></td> <td>0.047</td> <td>0.091<u>0^c</u></td> <td>0.136</td> </tr> <tr> <td>4 except Marine</td> <td>0.35</td> <td>0.600<u>.55</u></td> <td>0.0300<u>.026</u></td> <td>0.082<u>60</u></td> <td>0.141<u>098</u></td> <td>0.047</td> <td>0.059</td> <td>0.065</td> </tr> <tr> <td>5 and Marine 4</td> <td>0.350<u>.32</u></td> <td>0.600<u>.55</u></td> <td>0.0300<u>.026</u></td> <td>0.057<u>60</u></td> <td>0.082</td> <td>0.033</td> <td>0.059<u>0</u></td> <td>0.065<u>5</u></td> </tr> <tr> <td>6</td> <td>0.350<u>.32</u></td> <td>0.600<u>.55</u></td> <td>0.026</td> <td>0.057<u>45</u></td> <td>0.060</td> <td>0.033</td> <td>0.050</td> <td>0.065<u>5</u></td> </tr> <tr> <td>7 and 8</td> <td>0.350<u>.32</u></td> <td>0.600<u>.55</u></td> <td>0.026</td> <td>0.057<u>45</u></td> <td>0.057</td> <td>0.028</td> <td>0.050</td> <td>0.065<u>5</u></td> </tr> </tbody> </table> <p>Non-fenestration U-factors shall be obtained from measurement, calculation, or an approved source.</p> <p>b. Where more the half the insulation is on the interior, the mass wall U-factors is a maximum of 0.17 in Zone 1, 0.14 in Zone 2, 0.12 in Zone 3, 0.10 in Zone 4 except in Marine, and the same as the frame wall U-factor in Marine Zone 4 and Zones 5 through 8.</p> <p>c. Basement wall U-factor of 0.360 in warm-humid locations.</p>	Table 703.1.1(a)									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	Crawlspace Wall U-Factor ^c	1	1.200 <u>.50</u>	0.75	0.035	0.082 <u>4</u>	0.197	0.064	0.360	0.477	2	0.650 <u>.40</u>	0.750 <u>.65</u>	0.0350 <u>.030</u>	0.082 <u>4</u>	0.165	0.064	0.360	0.477	3	0.500 <u>.35</u>	0.650 <u>.55</u>	0.0350 <u>.030</u>	0.082 <u>60</u>	0.141 <u>09</u> <u>8</u>	0.047	0.091 <u>0^c</u>	0.136	4 except Marine	0.35	0.600 <u>.55</u>	0.0300 <u>.026</u>	0.082 <u>60</u>	0.141 <u>098</u>	0.047	0.059	0.065	5 and Marine 4	0.350 <u>.32</u>	0.600 <u>.55</u>	0.0300 <u>.026</u>	0.057 <u>60</u>	0.082	0.033	0.059 <u>0</u>	0.065 <u>5</u>	6	0.350 <u>.32</u>	0.600 <u>.55</u>	0.026	0.057 <u>45</u>	0.060	0.033	0.050	0.065 <u>5</u>	7 and 8	0.350 <u>.32</u>	0.600 <u>.55</u>	0.026	0.057 <u>45</u>	0.057	0.028	0.050	0.065 <u>5</u>
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Committee Reason:	To expand the provision to make it applicable to commercial code residential occupancy buildings. Add a reference to the commercial U-factor table from the IECC: C402.1.4 and C402.4 and include language stating that these tables used as applicable per code.																																																																																										
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>																																																																																										
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Agree with committee action:																																																																																											
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Abstain:	
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P198 LogID TG5-21	703.1.1 UA improvement	Final Formal Action: Disapprove																																																																								
Submitter:	R. Christopher Mathis, Mathis Consulting Company																																																																									
Proposed Change:	<p style="text-align: center;">Table 703.1.1(a) Equivalent U-Factors^a</p> <table border="1"> <thead> <tr> <th>Climate Zone</th> <th>Fenestration U-Factor</th> <th>Skylight U-Factor</th> <th>Ceiling U-Factor</th> <th>Frame Wall U-Factor</th> <th>Mass Wall U-Factor^b</th> <th>Floor U-Factor</th> <th>Basement Wall U-Factor</th> <th>Crawlspace Wall U-Factor^c</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.20 0.50</td> <td>0.75</td> <td>0.035</td> <td>0.082 0.084</td> <td>0.197</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>2</td> <td>0.65 0.40</td> <td>0.75 0.65</td> <td>0.035 0.030</td> <td>0.082 0.084</td> <td>0.165</td> <td>0.064</td> <td>0.360</td> <td>0.477</td> </tr> <tr> <td>3</td> <td>0.50 0.35</td> <td>0.65 0.55</td> <td>0.035 0.030</td> <td>0.082 0.060</td> <td>0.141 0.098</td> <td>0.047</td> <td>0.091c</td> <td>0.136</td> </tr> <tr> <td>4 except Marine</td> <td>0.35</td> <td>0.60 0.55</td> <td>0.030 0.026</td> <td>0.082 0.060</td> <td>0.141 0.098</td> <td>0.047</td> <td>0.059</td> <td>0.065</td> </tr> <tr> <td>5 and Marine 4</td> <td>0.35 0.32</td> <td>0.60 0.55</td> <td>0.030 0.026</td> <td>0.057 0.060</td> <td>0.082</td> <td>0.033</td> <td>0.059 0.050</td> <td>0.065 0.055</td> </tr> <tr> <td>6</td> <td>0.35 0.32</td> <td>0.60 0.55</td> <td>0.026</td> <td>0.057 0.045</td> <td>0.060</td> <td>0.033</td> <td>0.050</td> <td>0.065 0.055</td> </tr> <tr> <td>7 and 8</td> <td>0.35 0.32</td> <td>0.60 0.55</td> <td>0.026</td> <td>0.057 0.045</td> <td>0.057</td> <td>0.028</td> <td>0.050</td> <td>0.065 0.055</td> </tr> </tbody> </table> <p>a. Non-fenestration U-factors shall be obtained from measurement, calculation, or an approved source.</p> <p>b. Where more than half the insulation is on the interior, the mass wall U-factors is a maximum of 0.17 in Zone 1, 0.14 in Zone 2, 0.12 in Zone 3, 0.10 in Zone 4 except in Marine, and the same as the frame wall U-factor in Marine Zone 4 and Zone 5 through 8.</p> <p>Basement wall U-factor of 0.360 in warm-humid locations.</p>		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	Crawlspace Wall U-Factor ^c	1	1.20 0.50	0.75	0.035	0.082 0.084	0.197	0.064	0.360	0.477	2	0.65 0.40	0.75 0.65	0.035 0.030	0.082 0.084	0.165	0.064	0.360	0.477	3	0.50 0.35	0.65 0.55	0.035 0.030	0.082 0.060	0.141 0.098	0.047	0.091c	0.136	4 except Marine	0.35	0.60 0.55	0.030 0.026	0.082 0.060	0.141 0.098	0.047	0.059	0.065	5 and Marine 4	0.35 0.32	0.60 0.55	0.030 0.026	0.057 0.060	0.082	0.033	0.059 0.050	0.065 0.055	6	0.35 0.32	0.60 0.55	0.026	0.057 0.045	0.060	0.033	0.050	0.065 0.055	7 and 8	0.35 0.32	0.60 0.55	0.026	0.057 0.045	0.057	0.028	0.050	0.065 0.055
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Reason:	<ul style="list-style-type: none"> The IECC 2015 prescriptive table values are proposed since that code will be the national minimum code in place when this standard is published. Since ICC 700 is an above code, green building program, the national minimum energy code should be the starting point for prescriptive compliance with the energy provisions of this standard This table provides the minimum prescriptive envelope values for builders seeking compliance under the prescriptive path. While updating this table is intended to be helpful, it is anticipated that most participants in the NGBS program will utilize the performance path to demonstrate above minimum code compliance. 																																																																									
Committee Action from Meeting:	Disapprove																																																																									
Modification of Proposed Change:																																																																										
Committee Reason:	In favor of action on P197.																																																																									

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P199 LogID TG5-22	703.1.1 UA improvement	Final Formal Action: Disapprove																																																																																
Submitter:	R. Christopher Mathis, Mathis Consulting Company																																																																																	
Proposed Change:	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th colspan="5">Table 703.1.1(a)</th> </tr> <tr> <th colspan="5">Equivalent U-Factors^a</th> </tr> <tr> <th>Climate Zone</th> <th>-</th> <th><u>Mass Wall Insulation</u> =/<u>>50% on Exterior</u></th> <th><u>Mass Wall Insulation</u> <u>>50% on Interior</u></th> <th>Mass Wall U-Factor^b</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-</td> <td><u>0.197</u></td> <td><u>0.170</u></td> <td><u>0.197</u></td> </tr> <tr> <td>2</td> <td>-</td> <td><u>0.165</u></td> <td><u>0.140</u></td> <td><u>0.165</u></td> </tr> <tr> <td>3</td> <td>-</td> <td><u>0.098</u></td> <td><u>0.120</u></td> <td><u>0.141</u></td> </tr> <tr> <td>4 except Marine</td> <td>-</td> <td><u>0.098</u></td> <td><u>0.087</u></td> <td><u>0.141</u></td> </tr> <tr> <td>5 and Marine 4</td> <td>-</td> <td><u>0.082</u></td> <td><u>0.065</u></td> <td><u>0.082</u></td> </tr> <tr> <td>6</td> <td>-</td> <td><u>0.060</u></td> <td><u>0.057</u></td> <td><u>0.060</u></td> </tr> <tr> <td>7 and 8</td> <td>-</td> <td><u>0.045</u></td> <td><u>0.057</u></td> <td><u>0.057</u></td> </tr> </tbody> </table> <p>Delete the corresponding footnote(Previously “b”) for mass wall insulation.</p> <p>Note: Rest of the table to remain unchanged.</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th colspan="4">Table 702.2(a)</th> </tr> <tr> <th colspan="4">Minimum U-Factor Equivalents for Performance Compliance^a</th> </tr> <tr> <th>Climate Zone</th> <th>Mass Wall U-Factor^b</th> <th><u>Mass Wall Insulation</u> =/<u>>50% on Exterior</u></th> <th><u>Mass Wall Insulation</u> <u>>50% on Interior</u></th> </tr> </thead> <tbody> <tr> <td>1</td> <td><u>0.197</u></td> <td><u>0.197</u></td> <td><u>0.17</u></td> </tr> <tr> <td>2</td> <td><u>0.165</u></td> <td><u>0.165</u></td> <td><u>0.14</u></td> </tr> <tr> <td>3</td> <td><u>0.141</u></td> <td><u>0.141</u></td> <td><u>0.12</u></td> </tr> <tr> <td>4 except Marine</td> <td><u>0.141</u></td> <td><u>0.141</u></td> <td><u>0.10</u></td> </tr> </tbody> </table>				Table 703.1.1(a)					Equivalent U-Factors^a					Climate Zone	-	<u>Mass Wall Insulation</u> =/ <u>>50% on Exterior</u>	<u>Mass Wall Insulation</u> <u>>50% on Interior</u>	Mass Wall U-Factor^b	1	-	<u>0.197</u>	<u>0.170</u>	<u>0.197</u>	2	-	<u>0.165</u>	<u>0.140</u>	<u>0.165</u>	3	-	<u>0.098</u>	<u>0.120</u>	<u>0.141</u>	4 except Marine	-	<u>0.098</u>	<u>0.087</u>	<u>0.141</u>	5 and Marine 4	-	<u>0.082</u>	<u>0.065</u>	<u>0.082</u>	6	-	<u>0.060</u>	<u>0.057</u>	<u>0.060</u>	7 and 8	-	<u>0.045</u>	<u>0.057</u>	<u>0.057</u>	Table 702.2(a)				Minimum U-Factor Equivalents for Performance Compliance^a				Climate Zone	Mass Wall U-Factor^b	<u>Mass Wall Insulation</u> =/ <u>>50% on Exterior</u>	<u>Mass Wall Insulation</u> <u>>50% on Interior</u>	1	<u>0.197</u>	<u>0.197</u>	<u>0.17</u>	2	<u>0.165</u>	<u>0.165</u>	<u>0.14</u>	3	<u>0.141</u>	<u>0.141</u>	<u>0.12</u>	4 except Marine	<u>0.141</u>	<u>0.141</u>	<u>0.10</u>
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	<table border="1"> <tr> <td>5 and Marine 4</td> <td></td> <td>0.082</td> <td><u>0.082</u></td> <td><u>0.057</u></td> </tr> <tr> <td>6</td> <td></td> <td>0.060</td> <td><u>0.082</u></td> <td><u>0.057</u></td> </tr> <tr> <td>7 and 8</td> <td></td> <td>0.057</td> <td><u>0.057</u></td> <td><u>0.057</u></td> </tr> </table> <p>a. Non-fenestration U-factors shall be obtained from measurement, calculation, or an approved source.</p> <p>b. Where more than half the insulation is on the interior, the mass wall U factors is a maximum of 0.17 in Zone 1, 0.14 in Zone 2, 0.12 in Zone 3, 0.10 in Zone 4 except in Marine, and the same as the frame wall U factor in Marine Zone 4 and Zone 5 through 8.</p> <p>be. Basement wall U-factor of 0.360 in warm-humid locations.</p> <p>Note: Rest of the table to remain unchanged.</p>	5 and Marine 4		0.082	<u>0.082</u>	<u>0.057</u>	6		0.060	<u>0.082</u>	<u>0.057</u>	7 and 8		0.057	<u>0.057</u>	<u>0.057</u>
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6		0.060	<u>0.082</u>	<u>0.057</u>												
7 and 8		0.057	<u>0.057</u>	<u>0.057</u>												
Reason:	<ul style="list-style-type: none"> This proposal takes an often overlooked footnote regarding the amount and location of mass wall insulation and clarifies the requirement by making a separate entry in the prescriptive table for each. The same formatting change is proposed for the compliance tables in the Prescriptive path and for the tables in the Performance path. No changes were made to code minimum efficiency levels, just clarification of the requirements in the tabular information. The revised values in Table 703.1.1(a) are intended to match the values in the referenced energy code (presumed to be the 2015 IECC as proposed in a separate proposal). 															
Committee Action from Meeting:	Disapprove															
Modification of Proposed Change:																
Committee Reason:	The footnote was not correctly implemented for exterior applications in certain Climate Zones. Overall, the Committee does not disagree with the intent of the proposed change.															
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>35</td> </tr> <tr> <td>Disagree with committee action:</td> <td>4</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	35	Disagree with committee action:	4	Abstain:	0	Non-voting:	2					
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Non-voting:	2															
Ballot Comments																
Agree with committee action:																
Disagree with committee action:	<p>Neil Leslie: This is a good proposal. Should a public comment arise to further improve it by fixing the .045 error, that is better than leaving the standard confusing and incomplete.</p> <p>Christopher Mathis: I disagree with the committee action and vote to approve P199. As noted in the committee reason statement, the committee generally accepted the change. The two typographical errors are noted and should be handled editorially. We believe the proposed table structure and removal of the footnote better serves ICC 700. We would support the editorial corrections to the two values in the table to match those in the reference code as intended. Please note no changes are made to code minimum efficiency levels. The revised table provides clarity to builders seeking alternative means of compliance.</p>															

	<p>Ryan Taylor: This got a "partially agree" in the TG response to the ballot comments from Neil Leslie and Christopher Mathis so it should have another round of review.</p> <p>Jeff Inks: Based upon the discussion by TG-5 -- that this is fundamentally a good proposal and errors can be corrected by the Committee if the vote to disapprove is overturned.</p>
Abstain:	

P200 LogID TG5-23	703.1.1 UA improvement	Final Formal Action: Disapprove
Submitter:	Howard Wiig, State Energy Office	
Proposed Change:	Add <u>New Climate Zone 0 to Equiv. U Factor Table:</u> <u>Fenestration U-Factor .40</u> <u>Skylight U-Factor: .40</u> <u>Ceiling U-Factor: .035</u> <u>Frame Wall U-Factor 0.197</u> <u>Floor U-Factor: N/A</u> <u>Basement U-Factor N/A</u> <u>Crawlspace U-Factor N/A</u> <u>Exemption fully shaded glazing and walls</u> <u>Add Definition of Tropical Climate Zone</u>	
Reason:	Building components receiving direct solar radiation must have stringent requirements to retard solar heat gain. Building components not receiving direct solar radiation do not need insulation due to very low delta T between interior and ambient exterior temperatures	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Intent of this proposal was better accomplished by of approval P389. Inconsistent with IECC & ASHRAE.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P201 LogID 5276	703.1.2 Insulation installation	Final Formal Action: Disapprove
Submitter:	Shelly Leonard, Green Space Consultants LLC	

Proposed Change:	Grade Points 1 7 <u>10</u> 2 4 <u>5</u>
Reason:	Current points seem underweighted in relation to impact on this section.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Points were developed based on analysis of energy savings.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P202 LogID 5058	703.1.2.1 Grade 1 and Grade 2 installations	<i>Final Formal Action: Disapprove</i>
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	delete the practice	
Reason:	Since 703.1.1 requires grade 1 and it contains a table for points by climate zone and % improvement in UA, it seems illogical that a home could get more points in 703.1.2.1 than for a 20% improvement in climate zone 1 or 10% improvement in climate zone 6-8. Perhaps the approach should be re-do table 703.1.1(b) to cover grade 1 when no US improvement has been demonstrated.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Based on action on P174. Valuable information in sections proposed for deletion and should remain.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P203 LogID TG5-24	703.1.3 Mass walls	<i>Final Formal Action: Approve</i>
Submitter:	Amber Wood, NORESKO/AEC	
Proposed Change:	Table 703.1.3 Exterior Mass Walls Mass wall thickness	
Reason:	Confusion exists concerning the wall thickness, e.g. if it includes the insulation for example in an ICF structure. The mass thickness referenced in the table applies only to the mass.	

Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P204 LogID TG5-25	703.1.5 Building envelope leakage	Final Formal Action: Approve																																																																							
Submitter:	Amber Wood, NORESKO/AEC																																																																								
Proposed Change:	703.1.5 Building envelope leakage. The maximum building envelope leakage rate is in accordance with Table 703.1.5 and whole building ventilation is provided in accordance with Section 902.2.1. Table 703.1.5 Building Envelope Leakage																																																																								
	<table border="1"> <thead> <tr> <th rowspan="2">Max Envelope Leakage Rate (ACH50)</th> <th colspan="8">Climate Zone</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td></td> <td colspan="8" style="text-align: center;">POINTS</td> </tr> <tr> <td>5</td> <td>2</td> <td>3</td> <td>3</td> <td>4</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> <tr> <td>4</td> <td>3</td> <td>4</td> <td>5</td> <td>7</td> <td>10</td> <td>12</td> <td>13</td> <td>14</td> </tr> <tr> <td>3</td> <td>3</td> <td>5</td> <td>6</td> <td>9</td> <td>13</td> <td>15</td> <td>17</td> <td>19</td> </tr> <tr> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>11</td> <td>15</td> <td>18</td> <td>20</td> <td>23</td> </tr> <tr> <td>1</td> <td>4</td> <td>5</td> <td>8</td> <td>12</td> <td>17</td> <td>19</td> <td>22</td> <td>24</td> </tr> </tbody> </table>		Max Envelope Leakage Rate (ACH50)	Climate Zone								1	2	3	4	5	6	7	8		POINTS								5	2	3	3	4	6	7	8	9	4	3	4	5	7	10	12	13	14	3	3	5	6	9	13	15	17	19	2	4	6	8	11	15	18	20	23	1	4	5	8	12	17	19	22	24
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Reason:	Consistency with the 2015 IECC. <i>Note – Table point values have not been adjusted.</i>																																																																								
Committee Action from Meeting:	Approve																																																																								
Modification of Proposed Change:																																																																									
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Abstain:																																																																									

P205 LogID 5048	703.1.5 Building envelope leakage	Final Formal Action: Disapprove																					
Submitter:	Carl Seville, Seville Consulting																						
Proposed Change:	Expand table 703.1.5 to include points for Envelope Leakage Ratio at 50 Pa (ELR50) as an alternate to ACH50. An example of comparable points for climate zone 3 is shown below as an example:																						
	<table border="1"> <thead> <tr> <th><u>Max.</u></th> <th></th> <th><u>Point</u></th> </tr> <tr> <th><u>ACH50</u></th> <th><u>ELR50</u></th> <th><u>CZ3</u></th> </tr> </thead> <tbody> <tr> <td><u>5</u></td> <td><u>0.33</u></td> <td><u>3</u></td> </tr> <tr> <td><u>4</u></td> <td><u>0.28</u></td> <td><u>5</u></td> </tr> <tr> <td><u>3</u></td> <td><u>0.23</u></td> <td><u>6</u></td> </tr> <tr> <td><u>2</u></td> <td><u>0.18</u></td> <td><u>8</u></td> </tr> <tr> <td><u>1</u></td> <td><u>0.13</u></td> <td><u>8</u></td> </tr> </tbody> </table>		<u>Max.</u>		<u>Point</u>	<u>ACH50</u>	<u>ELR50</u>	<u>CZ3</u>	<u>5</u>	<u>0.33</u>	<u>3</u>	<u>4</u>	<u>0.28</u>	<u>5</u>	<u>3</u>	<u>0.23</u>	<u>6</u>	<u>2</u>	<u>0.18</u>	<u>8</u>	<u>1</u>	<u>0.13</u>	<u>8</u>
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Reason:	ACH50 is a less accurate measurement than ELR and benefits larger buildings over smaller ones. Units below 1200 SF frequently have much higher ACH50 measurements than less well sealed larger buildings. An excel file showing equivalent leakage at both measurements will be sent via email.																						
Committee Action from Meeting:	Disapprove																						
Modification of Proposed Change:																							
Committee Reason:	Code uses ACH 50 and important to maintain consistency and not introduce other metrics that could result in misapplication.																						
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2																						
Ballot Comments																							
Agree with committee action:																							
Disagree with committee action:																							
Abstain:																							

P206 LogID 5297	703.1.6.1 Fenestration	Final Formal Action: Disapprove
Submitter:	Jeff Inks, Window & Door Manufacturers Assn.	
Proposed Change:	Revise the minimum fenestration specifications for the 2015 NGBS to the 2012 IECC specifications consistent with the 2012 NGBS based on the 2009 IECC.	
Reason:	This is to update the mandatory minimum fenestration requirements of the 2015 NGBS in accordance with the basis for the 2012 minimum requirements based on the 2009 IECC	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Based on action taken on P209.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		

Disagree with committee action:	
Abstain:	

P207 LogID 5292	703.1.6.1 Fenestration	Final Formal Action: Approve as Modified
Submitter:	Thomas Culp, Birch Point Consulting LLC	
Proposed Change:	<u>Dynamic glazing shall be permitted to satisfy the SHGC requirements of Table 703.1.6.1 provided the ratio of the higher to lower labeled SHGC is greater than or equal to 2.4, and the dynamic glazing is automatically controlled to modulate the amount of solar gain into the space in multiple steps. Dynamic glazing shall be considered separately from other fenestration, and area-weighted averaging with other fenestration that is not dynamic glazing shall not be permitted. Dynamic glazing is not required to comply with this section when both the lower and higher labeled SHGC already comply with the requirements of Table 703.1.6.1.</u>	
Reason:	On behalf of Dr. Helen Sanders, SAGE Electrochromics, Inc. Consistency with IECC. This adds the same language from the 2015 IECC clarifying how to determine compliance for dynamic glazing. Dynamic glazing offers the unique ability to reversibly change properties such as SHGC and VT to optimize energy performance, daylighting, and glare based on changing situations during the day, and over different seasons. As such, dynamic glazing represents a key technology on the route to zero energy buildings. The NFRC label for dynamic glazing lists two values for SHGC, representing the range over which the SHGC varies. It was previously not clear how this label should be used to determine compliance with maximum or minimum SHGC requirements, so this language was added to the 2015 IECC, including provisions for dynamic range (ratio of the high to low SHGC) and automatic control to ensure optimum performance. This should be a straightforward proposal for consistency with the IECC, but please contact me if you would like further information.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> <u>Dynamic glazing shall be permitted to satisfy the SHGC requirements of Table 703.1.6.1 provided the ratio of the higher to lower labeled SHGC is greater than or equal to 2.4, and the dynamic glazing is automatically controlled to modulate the amount of solar gain into the space in multiple steps. Dynamic glazing shall be considered separately from other fenestration, and area-weighted averaging with other fenestration that is not dynamic glazing shall not be permitted. Dynamic glazing is not required to comply with this section be automatically controlled or comply with minimum SHGC ratio when both the lower and higher labeled SHGC already comply with the requirements of Table 703.1.6.1.</u>	
Committee Reason:	Dynamic glazing is an important technology option for enhanced energy efficiency and should be recognized and encouraged.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P208 LogID 5295	703.1.6.1 Fenestration Specifications	Final Formal Action: Approve as Modified
Submitter:	Jeff Inks, Window & Door Manufacturers Assn.	
Proposed Change:		

Table 703.1.6.2(a)					
Enhanced Fenestration Specifications					
Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	POINTS
1	0.60 <u>0.40</u>	0.27 <u>0.25</u>	0.70 <u>0.60</u>	0.30 <u>0.28</u>	4 <u>TBD</u>
2	0.60 <u>0.40</u>	0.27 <u>0.25</u>	0.70 <u>0.60</u>	0.30 <u>0.28</u>	5 <u>TBD</u>
3	0.35 <u>0.35</u>	0.30 <u>0.25</u>	0.57 <u>0.53</u>	0.30 <u>0.28</u>	6 <u>TBD</u>
4	0.32 <u>0.32</u>	0.40	0.55 <u>0.53</u>	0.40 <u>0.35</u>	2 <u>TBD</u>
5	0.30 <u>0.27^{a,b}</u>	Any	0.55 <u>0.50</u>	Any	5 <u>TBD</u>
6	0.30 <u>0.27^{a,b}</u>	Any	0.55 <u>0.50</u>	Any	5 <u>TBD</u>
7	0.30 <u>0.27^{a,b}</u>	Any	0.55 <u>0.50</u>	Any	5 <u>TBD</u>
8	0.30 <u>0.27^{a,b}</u>	Any	0.55 <u>0.50</u>	Any	5 <u>TBD</u>

a.) For Climate Zones 5-8 an equivalent energy performance is permitted based on either (1) windows with a U factor = 0.31 and an SHGC = 0.35, or, a U factor = 0.32 and an SHGC = 0.40 or (2) fenestration meeting the ENERGY STAR Equivalent Energy Performance in Eligibility Criteria Version 6.0.

Effective January 1, 2016 in accorda

Reason:	In accordance with convention set for the 2012 NGBS, this first level of enhanced fenestraion is based on ENERGY STAR Version 6.0, effective 2015 & 2016 respectively.
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i>

Table 703.1.6.2(a)

Enhanced Fenestration Specifications

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	POINTS
1	0.60 0.40	0.27 0.25	0.70 0.60	0.30 0.28	4 TBD
2	0.60 0.40	0.27 0.25	0.70 0.60	0.30 0.28	5 TBD
3	0.35	0.30 0.25	0.57	0.30 0.28	6 TBD
4	0.32	0.40	0.55	0.40	2 TBD
5	0.30 0.27 ^{a,b}	Any	0.55 0.50	Any	5 TBD
6	0.30 0.27 ^{a,b}	Any	0.55 0.50	Any	5 TBD
7	0.30 0.27 ^{a,b}	Any	0.55 0.50	Any	5 TBD
8	0.30 0.27 ^{a,b}	Any	0.55 0.50	Any	5 TBD

a.) ~~For Climate Zones 5-8 an~~ An equivalent energy performance is permitted based on either (1) windows with a U-factor = 0.31 and an SHGC = 0.35, or, a U-factor = 0.32 and an SHGC = 0.40 or (2) fenestration meeting the ENERGY STAR Equivalent Energy Performance Requirements in Eligibility Criteria Version 6.0.

b.) ~~A U-factor of 0.30 or windows with a U-factor = 0.31 and an SHGC = 0.35, or, a U-factor = 0.32 and an SHGC = 0.40 is permitted for use through December 31, 2015. Effective January 1, 2016 in accordance with ENERGY STAR Version 6.0.~~

Committee Reason:	For consistency with the provisions of ENERGY STAR Version 6.0.										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>38</td> </tr> <tr> <td>Disagree with committee action:</td> <td>1</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	38	Disagree with committee action:	1	Abstain:	0	Non-voting:	2
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Disagree with committee action:	1										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	Randall Melvin: For climate zone 4 a required SHGC of 0.40 makes no sense as it will use more energy than having a none required. We are predominately a heating climate zone and reflecting the suns solar radiation away in the winter will cost more energy than it saves by the reduced cooling loads in the summer. Should modify 0.40 to "Any" or scientifically peer reviewed calculaitons to justify the 0.40 should be provided.										
Abstain:											

P209 LogID 5220	703.1.6.1 Fenestration Specifications	Final Formal Action: Approve			
Submitter:	Eric Lacey, RECA				
Proposed Change:	<table border="1"> <tr> <td>703.1.6 Fenestration</td> <td></td> </tr> <tr> <td>703.1.6.1 NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights and tubular daylighting devices (TDDs) on an area-weighted average basis do not exceed the values in are in accordance with Table 703.1.6.1. Area weighted averages are calculated separately for the categories of 1) windows and exterior doors and 2) skylights and tubular daylighting devices (TDDs). Decorative fenestration elements with a combined total maximum area of 15 square feet (1.39</td> <td>Mandatory</td> </tr> </table>	703.1.6 Fenestration		703.1.6.1 NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights and tubular daylighting devices (TDDs) on an area-weighted average basis do not exceed the values in are in accordance with Table 703.1.6.1. Area weighted averages are calculated separately for the categories of 1) windows and exterior doors and 2) skylights and tubular daylighting devices (TDDs). Decorative fenestration elements with a combined total maximum area of 15 square feet (1.39	Mandatory
703.1.6 Fenestration					
703.1.6.1 NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights and tubular daylighting devices (TDDs) on an area-weighted average basis do not exceed the values in are in accordance with Table 703.1.6.1. Area weighted averages are calculated separately for the categories of 1) windows and exterior doors and 2) skylights and tubular daylighting devices (TDDs). Decorative fenestration elements with a combined total maximum area of 15 square feet (1.39	Mandatory				

m²) or 10 percent of the total glazing area, whichever is less, are not required to comply with this practice.

**Table 703.1.6.1
Fenestration Specifications**

Climate Zones	U-Factor	SHGC
	Windows and Exterior Doors (maximum certified ratings)	
1	0.65 <u>0.50</u>	0.30 <u>0.25</u>
2	0.65 <u>0.40</u>	0.30 <u>0.25</u>
3	0.40 <u>0.35</u>	0.30 <u>0.25</u>
4 to 8	0.35	Any <u>0.40</u>
<u>5 to 8</u>	<u>0.32</u>	<u>Any</u>
	Skylights and TDDs (maximum certified ratings)	
1 and 2	0.75	0.30
<u>2-3</u>	0.65	0.30
3 4 to 8	0.60 <u>0.55</u>	Any <u>0.30</u>
<u>4</u>	<u>0.55</u>	<u>0.40</u>
<u>5 to 8</u>	<u>0.55</u>	<u>Any</u>

Reason: This proposal updates the minimum fenestration requirements for the prescriptive path from the 2009 IECC to the 2015 IECC values. The 2015 IECC residential fenestration requirements, which are identical to the 2012 IECC requirements, represent a moderate improvement over the 2009 IECC in efficiency for all climate zones. We note also that the 2012 and 2015 IECC provide an exception that allows skylight SHGC to meet a slightly higher SHGC (0.30) than vertical fenestration (0.25) in climate zones 1-3. We have made that exception part of the base requirement. The U.S. Department of Energy determined that the 2012 IECC, including the upgraded fenestration requirements, represents an energy efficiency improvement as compared to the 2009 IECC. See 77 Fed. Reg. 29322 (May 17, 2012). DOE also found the 2012 IECC residential requirements to be a cost-effective upgrade in every state it studied, and in the vast majority of cases, the cost savings were substantial. See http://www.energycodes.gov/development/residential/iecc_analysis/. Efficient fenestration, in particular, is highly cost-effective because it often requires simply selecting a climate-appropriate frame or piece of glass, and the net cost increase, if any, is generally very small. The NGBS should at least keep pace with the IECC requirements, and should go beyond the requirements wherever practicable. This simple upgrade to the fenestration table will bring consistency between the 2015 NGBS and the 2015 IECC and will yield improved comfort and substantial energy and cost savings to homeowners over the useful lifetime of the green home.

Committee Action from Meeting: Approve

Modification of Proposed Change:

Committee Reason: For the reasons stated – to update the minimum prescriptive provisions to the 2015 IECC.

Ballot Results on Committee Action:
Eligible to vote: 41
Agree with committee action: 39
Disagree with committee action: 0
Abstain: 0

	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P210 LogID 5296 703.1.6.2 Enhanced Fenestration Specifications Final Formal Action: Approve as Modified

Submitter: Jeff Inks, Window & Door Manufacturers Assn.

Proposed Change:

Table 703.1.6.2(b)
Enhanced Fenestration Specifications

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	
1	0.400 <u>0.38</u>	0.25	0.50	0.30	13 <u>TBD</u>
2	0.400 <u>0.38</u>	0.25	0.50	0.30	<u>9</u> <u>TBD</u>
3	0.30	0.25	0.50	0.35	<u>9</u> <u>TBD</u>
4	0.28	0.40	0.50	0.40	<u>4</u> <u>TBD</u>
5	0.25	Any	0.500 <u>0.49</u>	Any	8 <u>TBD</u>
6	0.25	Any	0.500 <u>0.49</u>	Any	<u>9</u> <u>TBD</u>
7	0.25	Any	0.500 <u>0.49</u>	Any	<u>9</u> <u>TBD</u>
8	0.25	Any	0.500 <u>0.49</u>	Any	<u>9</u>

Reason: Revision consistent with 2012 revisions.

Committee Action from Meeting: Approve as Modified

Modification of Proposed Change: *Revise Proposed Change as follows (in red):*

Table 703.1.6.2(b)
Enhanced Fenestration Specifications

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	POINTS
1	0.400 <u>0.38</u>	0.25	0.50 5	0.30 28	13 <u>TBD</u>
2	0.400 <u>0.38</u>	0.25	0.50 3	0.30 28	<u>9</u> <u>TBD</u>
3	0.30	0.25	0.50	0.35 28	<u>9</u> <u>TBD</u>
4	0.28	0.40	0.50	0.40 35	<u>4</u> <u>TBD</u>
5	0.25	Any	0.500 <u>0.49</u> 8	Any	8 <u>TBD</u>

		6	0.25	Any	0.500.49 8	Any	9 TBD
		7	0.25	Any	0.500.49 6	Any	9 TBD
		8	0.25	Any	0.500.49 6	Any	9
Committee Reason:	Correction of values.						
Ballot Results on Committee Action:	Eligible to vote:	41					
	Agree with committee action:	39					
	Disagree with committee action:	0					
	Abstain:	0					
	Non-voting:	2					
Ballot Comments							
Agree with committee action:							
Disagree with committee action:							
Abstain:							

P211 LogID 5293	703.1.6.2 Enhanced Fenestration Specifications	Final Formal Action: Approve as Modified
Submitter:	Thomas Culp, Birch Point Consulting LLC	
Proposed Change:	<u>Dynamic glazing shall be permitted to satisfy the SHGC requirements of Tables 703.1.6.2(a), 703.1.6.2(b), and 703.1.6.2(c) provided the ratio of the higher to lower labeled SHGC is greater than or equal to 2.4, and the dynamic glazing is automatically controlled to modulate the amount of solar gain into the space in multiple steps. Dynamic glazing shall be considered separately from other fenestration, and area-weighted averaging with other fenestration that is not dynamic glazing shall not be permitted. Dynamic glazing is not required to comply with this section when both the lower and higher labeled SHGC already comply with the requirements of Tables 703.1.6.2(a), 703.1.6.2(b), and 703.1.6.2(c).</u>	
Reason:	On behalf of Dr. Helen Sanders, SAGE Electrochromics Inc. Consistency with IECC. This adds the same language from the 2015 IECC clarifying how to determine compliance for dynamic glazing. Dynamic glazing offers the unique ability to reversibly change properties such as SHGC and VT to optimize energy performance, daylighting, and glare based on changing situations during the day, and over different seasons. As such, dynamic glazing represents a key technology on the route to zero energy buildings. The NFRC label for dynamic glazing lists two values for SHGC, representing the range over which the SHGC varies. It was previously not clear how this label should be used to determine compliance with maximum or minimum SHGC requirements, so this language was added to the 2015 IECC, including provisions for dynamic range (ratio of the high to low SHGC) and automatic control to ensure optimum performance. This should be a straightforward proposal for consistency with the IECC, but please contact me if you would like further information.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> <u>Dynamic glazing shall be permitted to satisfy the SHGC requirements of Tables 703.1.6.2(a), 703.1.6.2(b), and 703.1.6.2(c) provided the ratio of the higher to lower labeled SHGC is greater than or equal to 2.4, and the dynamic glazing is automatically controlled to modulate the amount of solar gain into the space in multiple steps. Dynamic glazing shall be considered separately from other fenestration, and area-weighted averaging with other fenestration that is not dynamic glazing shall not be permitted. Dynamic glazing is not required to comply with this section be automatically controlled or comply with minimum SHGC ratio when both the lower and higher labeled SHGC already comply with the requirements of Tables 703.1.6.2(a), 703.1.6.2(b), and 703.1.6.2(c).</u>	
Committee Reason:	Dynamic glazing is an important technology option for enhanced energy efficiency and should be recognized and encouraged.	

Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P212 LogID 5277	703.1.6.2 Fenestration	Final Formal Action: Disapprove
Submitter:	Shelly Leonard, Green Space Consultants LLC	
Proposed Change:	Table 703.1.6.2(a) Climate Zone Points 2 5 <u>6</u> 4 2 <u>4</u> Table 703.1.6.2(b) Climate Zone Points 1 13 <u>12</u> 4 4 <u>6</u> Table 703.1.6.2(c) Climate Zone Points 4 5 <u>7</u>	
Reason:	Points seem under/over weighted in climate zones listed. Streamlines points allocation. All zones not listed and other chart data remain as is.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Points are developed based on analysis of energy savings.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P213 LogID 5222	703.1.6.2 Fenestration	Final Formal Action: Disapprove
Submitter:	Eric Lacey, RECA	
Proposed Change:	703.1.6.2 The NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights, and tubular daylighting devices (TDDs) <u>do not exceed the values in accordance with</u> Table 703.1.6.2(a), (b), or (c). Decorative fenestration elements with a combined total maximum area of 15 square feet (1.39	Per Table 703.1.6.2(a)

	<p>m²) or 10 percent of the total glazing area, whichever is less, are not required to comply with this practice.</p> <p style="text-align: center;">Table 703.1.6.2(a) Enhanced Fenestration Specifications</p> <table border="1"> <thead> <tr> <th>Climate Zones</th> <th>U-Factor Windows & Exterior Doors</th> <th>SHGC Windows & Exterior Doors</th> <th>U-Factor Skylights & TDD's</th> <th>SHGC Skylights & TDD's</th> <th></th> </tr> </thead> <tbody> <tr> <td>1 and 2</td> <td>0.60 0.40</td> <td>0.27 0.25</td> <td>0.70 0.60</td> <td>0.30 0.28</td> <td>10</td> </tr> <tr> <td>2</td> <td>0.60</td> <td>0.27</td> <td>0.70</td> <td>0.30</td> <td>5</td> </tr> <tr> <td>3</td> <td>0.35 0.30</td> <td>0.30 0.25</td> <td>0.57 0.53</td> <td>0.30 0.28</td> <td>6</td> </tr> <tr> <td>4</td> <td>0.32 0.30</td> <td>0.40</td> <td>0.55 0.53</td> <td>0.40 0.35</td> <td>2</td> </tr> <tr> <td>5 to 8</td> <td>0.30 0.27</td> <td>Any</td> <td>0.55 0.50</td> <td>Any</td> <td>5</td> </tr> <tr> <td>6</td> <td>0.30</td> <td>Any</td> <td>0.55</td> <td>Any</td> <td>5</td> </tr> <tr> <td>7</td> <td>0.30</td> <td>Any</td> <td>0.55</td> <td>Any</td> <td>5</td> </tr> <tr> <td>8</td> <td>0.30</td> <td>Any</td> <td>0.55</td> <td>Any</td> <td>5</td> </tr> </tbody> </table>	Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's		1 and 2	0.60 0.40	0.27 0.25	0.70 0.60	0.30 0.28	10	2	0.60	0.27	0.70	0.30	5	3	0.35 0.30	0.30 0.25	0.57 0.53	0.30 0.28	6	4	0.32 0.30	0.40	0.55 0.53	0.40 0.35	2	5 to 8	0.30 0.27	Any	0.55 0.50	Any	5	6	0.30	Any	0.55	Any	5	7	0.30	Any	0.55	Any	5	8	0.30	Any	0.55	Any	5
Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's																																																			
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8	0.30	Any	0.55	Any	5																																																		
Reason:	<p>This proposal is intended to update table (a) of the Enhanced Fenestration Specifications tables in Section 703.1.6.2. The NGBS currently has three enhanced fenestration tables, including table (a) based on current Energy Star (Version 5.0) requirements and two tables that go beyond Energy Star. This proposal would address only table (a) and update it from the previous Energy Star requirements to the values that will go into effect in 2015-2016 (Version 6.0). These values are moderate improvements over every climate zone in the current Table 703.1.6.2(a) that have been developed by the U.S. EPA. The proposal also simplifies the requirements by creating a single simplified table (a) with four climate zone categories, consistent with the Energy Star requirements.</p>																																																						
Committee Action from Meeting:	Disapprove																																																						
Modification of Proposed Change:																																																							
Committee Reason:	In favor of action on P208.																																																						
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>																																																						
Ballot Comments																																																							
Agree with committee action:																																																							
Disagree with committee action:																																																							
Abstain:																																																							

P214 LogID 5223	703.1.6.2 Fenestration	Final Formal Action: Disapprove
Submitter:	Eric Lacey, RECA	
Proposed Change:	<p>703.1.6.2 The NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights, and tubular daylighting devices (TDDs) <u>do not exceed the values in</u> are in accordance with Table 703.1.6.2(a), (b), or (c). Decorative fenestration elements with a combined total maximum area of 15</p>	

square feet (1.39 m²) or 10 percent of the total glazing area, whichever is less, are not required to comply with this practice.

**Table 703.1.6.2(a)
Enhanced Fenestration Specifications**

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	
1	0.60	0.27	0.70	0.30	10
2	0.60	0.27	0.70	0.30	5
3	0.35	0.30	0.57	0.30	6
4	0.32	0.40	0.55	0.40	2
5	0.30	Any	0.55	Any	5
6	0.30	Any	0.55	Any	5
7	0.30	Any	0.55	Any	5
8	0.30	Any	0.55	Any	5

**Table 703.1.6.2(b)
Enhanced Fenestration Specifications**

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	
1	0.40	0.25	0.50	0.30	13
2	0.40	0.25	0.50	0.30	9
3	0.30	0.25	0.50	0.35	9
4	0.28	0.40	0.50	0.40	4
5	0.25	Any	0.50	Any	8
6	0.25	Any	0.50	Any	9
7	0.25	Any	0.50	Any	9
8	0.25	Any	0.50	Any	9

**Table 703.1.6.2(c)
Enhanced Fenestration Specifications**

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	

	4	0.25	0.40	0.40	0.40	5
	5	0.22	Any	0.40	Any	9
Reason:	This proposal is one of two options to simplify and improve the Enhanced Fenestration Specifications tables in Section 703.1.6.2 by modifying or eliminating tables (b) or (c). (A separate proposal has been submitted to update table (a).) This proposal focuses on tables (b) and (c) and does not address table (a). The NGBS currently has three enhanced fenestration tables, including a table based on current Energy Star (Version 5.0) requirements and two tables that go beyond Energy Star – one of which only applies to two climate zones. The three enhanced options are unnecessarily complicated. This proposal would eliminate tables (b) and (c) as unnecessary and confusing and focus any enhanced fenestration on the Energy Star level under table (a).					
Committee Action from Meeting:	Disapprove					
Modification of Proposed Change:						
Committee Reason:	Maintaining a provision encouraging the use of fenestration that exceeds ENERGY STAR is valuable to the NGBS.					
Ballot Results on Committee Action:	Eligible to vote:		41			
	Agree with committee action:		39			
	Disagree with committee action:		0			
	Abstain:		0			
	Non-voting:		2			
Ballot Comments						
Agree with committee action:						
Disagree with committee action:						
Abstain:						

P215 LogID 5224	703.1.6.2 Fenestration				Final Formal Action: Disapprove																																					
Submitter:	Eric Lacey, RECA																																									
Proposed Change:	<p>703.1.6.2 The NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights, and tubular daylighting devices (TDDs) <u>do not exceed the values in accordance with</u> Table 703.1.6.2(a), or (b), or (c). Decorative fenestration elements with a combined total maximum area of 15 square feet (1.39 m²) or 10 percent of the total glazing area, whichever is less, are not required to comply with this practice.</p> <p style="text-align: center;">Table 703.1.6.2(a) Enhanced Fenestration Specifications</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Climate Zones</th> <th>U-Factor Windows & Exterior Doors</th> <th>SHGC Windows & Exterior Doors</th> <th>U-Factor Skylights & TDD's</th> <th>SHGC Skylights & TDD's</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.60</td> <td>0.27</td> <td>0.70</td> <td>0.30</td> <td>10</td> </tr> <tr> <td>2</td> <td>0.60</td> <td>0.27</td> <td>0.70</td> <td>0.30</td> <td>5</td> </tr> <tr> <td>3</td> <td>0.35</td> <td>0.30</td> <td>0.57</td> <td>0.30</td> <td>6</td> </tr> <tr> <td>4</td> <td>0.32</td> <td>0.40</td> <td>0.55</td> <td>0.40</td> <td>2</td> </tr> <tr> <td>5</td> <td>0.30</td> <td>Any</td> <td>0.55</td> <td>Any</td> <td>5</td> </tr> </tbody> </table>					Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's		1	0.60	0.27	0.70	0.30	10	2	0.60	0.27	0.70	0.30	5	3	0.35	0.30	0.57	0.30	6	4	0.32	0.40	0.55	0.40	2	5	0.30	Any	0.55	Any	5	Per Table 703.1.6.2(a) or Table 703.1.6.2(b) or Table 703.1.6.2(c)
Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's																																						
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4	0.32	0.40	0.55	0.40	2																																					
5	0.30	Any	0.55	Any	5																																					

6	0.30	Any	0.55	Any	5
7	0.30	Any	0.55	Any	5
8	0.30	Any	0.55	Any	5

**Table 703.1.6.2(b)
Enhanced Fenestration Specifications**

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	
1 to 3	0.40 0.30	0.25 0.23	0.50 0.45	0.30 0.25	13
2	0.40	0.25	0.50	0.30	9
3	0.30	0.25	0.50	0.35	9
4	0.28	0.40 0.30	0.50 0.45	0.40 0.30	4
5 to 8	0.25	Any	0.50 0.40	Any	8
6	0.25	Any	0.50	Any	9
7	0.25	Any	0.50	Any	9
8	0.25	Any	0.50	Any	9

**Table 703.1.6.2(c)
Enhanced Fenestration Specifications**

Climate Zones	U-Factor Windows & Exterior Doors	SHGC Windows & Exterior Doors	U-Factor Skylights & TDD's	SHGC Skylights & TDD's	
4	0.25	0.40	0.40	0.40	5
5	0.22	Any	0.40	Any	9

Reason: This proposal is one of two options to simplify and improve the Enhanced Fenestration Specifications tables in Section 703.1.6.2 by modifying or eliminating tables (b) or (c). (Note that another proposal has been submitted to update table (a). This proposal focuses on (b) and (c) and does not address table (a).) The NGBS currently has three enhanced fenestration tables, including a table based on current Energy Star (Version 5.0) requirements and two tables that go beyond Energy Star. The three enhanced options are unnecessarily complicated. This proposal would modify table (b) and eliminate (c) as unnecessary. This proposal would modify table (b) to reduce it to three climate zone categories, with improvements that push the envelope on today's fenestration technologies. Our proposed table (b) is at least as stringent as the current table (b), and in most cases is about 10-25% more stringent than the current table.

Committee Action from Meeting: Disapprove

Modification of Proposed Change:

Committee Reason: In favor of action on P210.

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P216	LogID TG5-27	703.1.6.2(a) Enhanced Fenestration Specifications	Final Formal Action: Disapprove
Submitter:	Howard Wiig, State Energy Office		
Proposed Change:	<u>Add Tropical climate Zone 0.</u> <u>U-Factor Windows and Exterior Doors 0.40</u> <u>SHGC Windows and Exterior Doors 0.25</u> <u>U-Factor Skylights and TDD's 0.40</u> <u>SHGC Skylights and TDD's 0.25</u> <u>Exempt: Fully shaded glazing</u> <u>Points: Up to10</u>		
Reason:	Fenestration and skylight performance has improved rapidly. High performance glazing is cost competitive. Additional glazing enhances daylighting opportunities.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	The footnote was not correctly implemented for exterior applications in certain Climate Zones. Overall, Task Group does not disagree with the intent of the proposed change.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P217	LogID TG5-28	703.2 HVAC equipment efficiency	Final Formal Action: Approve
Submitter:	Amber Wood, NORESO/AEC		
Proposed Change:	703.2 HVAC equipment efficiency.		

	<p>Add the following:</p> <p><u>For multiple heating or cooling systems in one home, practices 703.2.1 through 703.2.6 apply to the system that supplies 80% or more of the total installed heating or cooling capacity. Where multiple systems each serve less than 80% of the total installed heating or cooling capacity, points under Sections 703.2.1 through 703.2.6 are awarded only for the system eligible for the fewest points.</u></p>
Reason:	Some confusion exists when a home has multiple systems of different types. This change clarifies that the main system or if multiple systems of similar capacity are used, the least efficient system applies to all.
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 38</p> <p>Disagree with committee action: 1</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	Randall Melvin: The efficiency of the more than one unit systems should be allowed to be pro-rated with points being proportionally awarded.
Abstain:	

P218 LogID TG5-29	703.2, 703.3, 703.4, 801.2, 902.1, 602.2, 1, 801.6, 801.73, 11.602.2, 11.902.1.4	Final Formal Action: Disapprove
Submitter:	Craig Conner, Gary Klein,	
Proposed Change:	<p><i>Revise as follows:</i></p> <p>Base all equipment efficiency points tables on updated federal minimums which will be in effect in 2015. Update all Energy Star and WaterSense to reflect levels that will be in effect in 2015. This affects Chapters 6, 7, 8 9 and 11. Remove words Energy Star” and “WaterSense” from NGBS, except for “Energy Star Homes”. Replace with key efficiency criteria (usually one or two numbers). Change metrics for efficiency if needed.</p> <p>Consider what to do with WaterSense Budget Approach. At the least it is significantly out of date. Note in commentary that Energy Star/ WaterSense levels change over the years.</p> <p>Added specific language:</p> <p>Section 703.5.3 put in points for</p> <p>Refrigerator:</p> <p>Refrigerator uses <= 500 kwh/yr (as listed on yellow label)</p> <p>Refrigerator uses <= 300 kwh/yr (as listed on yellow label)</p> <p>Dishwasher:</p> <p>Standard water = 3.5 gallons per cycle & energy = 270 kwh/yr</p> <p>Compact water = 3.1 gallons per cycle energy = 203 kwh/yr</p> <p>Clothes Washer: (Energy Star Version 7.0)</p> <p>Residential Clothes Washers, Front-loading(> 2.5 cu-ft) with IMEF = 2.38 & IWF = 3.7</p> <p>Residential Clothes Washers, Top-loading(> 2.5 cu-ft) IMEF = 2.06 & IWF = 4.3</p> <p>Residential Clothes Washers (= 2.5 cu-ft)IMEF = 2.07 & IWF = 4.2</p> <p>Commercial Clothes Washers MEF = 2.2 & WF = 4.5</p>	

	<p>Section 801.2 Clothes Washers as above Dishwashers as above Delete Energy Star Geothermal Heat Pumps reference, not really used in 703.2.6</p> <p>Section 703.2.7 Ceiling Fans Use: <table border="1"> <thead> <tr> <th>Fan Speed</th> <th>Minimum Airflow</th> <th>Minimum Efficiency Requirement</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>1,250 CFM</td> <td>155 CFM/watt</td> </tr> <tr> <td>Medium</td> <td>3,000 CFM</td> <td>100 CFM/watt</td> </tr> <tr> <td>High</td> <td>5,000 CFM</td> <td>75 CFM/watt</td> </tr> </tbody> </table> <p>Sections 902.1.4 & 11.902.1.4 Use: <table border="1"> <thead> <tr> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Range Hoods</td> <td>up to 600 CFM max speed and up to 200 CFM working speed</td> <td>2.8</td> <td>2.0</td> </tr> <tr> <td>Bathroom and Utility Room Fans</td> <td>50 to 89 CFM</td> <td>2.8</td> <td>2.0</td> </tr> <tr> <td>Bathroom and Utility Room Fans</td> <td>90 to 200 CFM</td> <td>3.5</td> <td>2.0</td> </tr> <tr> <td>Bathroom and Utility Room Fans</td> <td>201 to 500 CFM (max speed)</td> <td>4.0</td> <td>3.0</td> </tr> <tr> <td>In-Line (Single-port & Multi- port) Fans</td> <td>N/A</td> <td>3.8</td> <td>N/A</td> </tr> </tbody> </table> <p>Delete Section 602.2 and 11.602.2, leaving 505.2(2) – Cool Roofs. EPA WaterSense professionals not used. Delete reference.</p> <p>Section 801.6(2) Toilets Use: Toilets 1.1 1.28 gpf (uses Federal law for test 10 CFR 429.30) Tested in accordance with ASME A112.19.2/CSAB45.1</p> </p></p>	Fan Speed	Minimum Airflow	Minimum Efficiency Requirement	Low	1,250 CFM	155 CFM/watt	Medium	3,000 CFM	100 CFM/watt	High	5,000 CFM	75 CFM/watt					Range Hoods	up to 600 CFM max speed and up to 200 CFM working speed	2.8	2.0	Bathroom and Utility Room Fans	50 to 89 CFM	2.8	2.0	Bathroom and Utility Room Fans	90 to 200 CFM	3.5	2.0	Bathroom and Utility Room Fans	201 to 500 CFM (max speed)	4.0	3.0	In-Line (Single-port & Multi- port) Fans	N/A	3.8	N/A
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In-Line (Single-port & Multi- port) Fans	N/A	3.8	N/A																																		
<p>Reason:</p>	<p>Goal is to update base efficiencies and to eliminate most uses of the proprietary Energy Star and maybe WaterSense programs.</p> <p>Federal minimum equipment efficiencies have changed since the 2012 NGBS. An update is needed to adjust at least water heaters, air conditioner, heat pump, and gas furnace levels. Any other federally regulated appliances whose minimum efficiencies have changed should also change.</p> <p>The points tables should all assume the federal minimum as 0 (zero) points. Energy Star levels have also changed or are changing. The levels in future energy star products should occur in the tables as a specific item with points.</p> <p>In some cases the metric used by Energy Star will/has changed. For example Energy Star clothes washers have now gone to Version 7.0 NGBS references Version 5.1 dated January 1 2011. NGBS should try to use the same key metrics that Energy Star uses. For example, clothes washers will be IWF(water) and IMEF (energy) see:https://www.energystar.gov/products/specs/system/files/ENERGY%20STAR%20Final%20Version%2007.0%20Clothes%20Washer%20Program%20Requirements.pdf</p>																																				

	If WaterSense Water Budget Approach is retained, consider an additional prescriptive approach that accomplishes the same goal without a calculation and 2) eliminating the use of its "Option 2", which is simply a limit on the amount of turf grass, but not the amount of water. See: http://www.epa.gov/watersense/docs/home_final_waterbudget508.pdf
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Language is not ready for implementation. There are technical issues with some of the proposed levels. The proponent may want to look at revising the equivalency language to achieve the intent by including the following: "or equivalent energy efficiency". Note that the committee will discuss updating the reference documents during the public comment process.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P219 LogID 5289	703.2.2 Furnace and/or boiler efficiency	Final Formal Action: Disapprove																														
Submitter:	Neil Leslie, Gas Technology Institute																															
Proposed Change:	<p align="center"><u>GREEN BUILDING PRACTICES</u></p> <p><u>(5) Electric Furnace</u></p> <p align="center"><u>Table 703.2.2(5)</u> <u>Electric Furnace</u></p> <table border="1"> <thead> <tr> <th rowspan="2"><u>AFUE</u></th> <th colspan="6"><u>Climate Zone</u></th> </tr> <tr> <th><u>1</u></th> <th><u>2</u></th> <th><u>3</u></th> <th><u>4</u></th> <th><u>5</u></th> <th><u>6-8</u></th> </tr> </thead> <tbody> <tr> <td></td> <td align="center" colspan="6"><u>POINTS</u></td> </tr> <tr> <td><u>=100% AFUE</u></td> <td align="center"><u>-2</u></td> <td align="center"><u>-3</u></td> <td align="center"><u>-6</u></td> <td align="center"><u>-9</u></td> <td align="center"><u>-12</u></td> <td align="center"><u>-12</u></td> </tr> </tbody> </table>				<u>AFUE</u>	<u>Climate Zone</u>						<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6-8</u>		<u>POINTS</u>						<u>=100% AFUE</u>	<u>-2</u>	<u>-3</u>	<u>-6</u>	<u>-9</u>	<u>-12</u>	<u>-12</u>	<p align="center"><u>POINTS</u></p> <p align="center"><u>Per Table</u> <u>703.2.2(5)</u></p>
<u>AFUE</u>	<u>Climate Zone</u>																															
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6-8</u>																										
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Reason:	To provide a prescriptive option for electric resistance furnaces that aligns with IECC Section R405 electric heating system minimum performance requirements that are the basis of the performance requirements in Section 702.																															
Committee Action from Meeting:	Disapprove																															
Modification of Proposed Change:																																
Committee Reason:	Assigning negative points to a section is not practical. For highly efficient homes, a small electric heating device can be an appropriate option.																															

Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 37 Disagree with committee action: 2 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Neil Leslie: Prescriptive requirements in the current standard are inconsistent with the minimum requirements in the performance path. Rather than prohibiting any technology options, this proposal provides a disincentive to install by reducing overall energy points, thereby establishing consistency between the prescriptive path and the performance path.</p> <p>Ted Williams: The Committee Reason implies application of the current coverage to a narrow range of electric resistance systems, but in fact it applies to all size ranges of systems. While assigning negative points may not be practical, the Consensus Committee must determine whether electric resistance heating has any role in a green building as a primary heat source and, if not as I maintain based on fuel cycle inefficiency and carbon emission from electricity generation, find some means of explicitly restricting its use.</p>
Abstain:	

P220 LogID 5087	703.2.3 Heat pump heating efficiency	Final Formal Action: Approve as Modified
Submitter:	Donald Prather, ACCA	
Proposed Change:	703.2.3 Heat pump heating efficiency is in accordance with Table 703.2.3. Refrigerant charge is verified for compliance with manufacturer’s instructions <u>utilizing methods approved in ACCA 5 QI-2010.</u>	
Reason:	Every OEM approved method is included or accepted in the QI 5 instruction set. Later in the document this instruction is contradicted by selecting superheat and subcooling methods. ACCA will also recommend a similar change there to clarify instructions provided in this standard.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i>	
	703.2.3 Heat pump heating efficiency is in accordance with Table 703.2.3. Refrigerant charge is verified for compliance with manufacturer’s instructions <u>utilizing a methods in Section 4.3 of ACCA 5 QI-2010.</u>	
Committee Reason:	Clarification.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P221 LogID TG5-30	703.2.3 Heat pump heating efficiency	Final Formal Action: Approve		
Submitter:	Neil Leslie, Gas Technology Institute			
Proposed Change:	Add Tables 703.2.3(2) and 703.4.2(2) as follows:			
	<table border="1" style="width: 100%;"> <tr> <td style="width: 80%; text-align: center;">GREEN BUILDING PRACTICES</td> <td style="width: 20%; text-align: center;">POINTS</td> </tr> </table>	GREEN BUILDING PRACTICES	POINTS	
GREEN BUILDING PRACTICES	POINTS			

	<p>703.2.3 Heat pump heating efficiency is in accordance with Table 703.2.3(1) or Table 703.2.3(2). ...</p> <p>(1) Electric Heat Pump</p> <p style="text-align: center;">Table 703.2.3(1) Electric Heat Pump Heating</p> <p style="text-align: center;">...(table unchanged)</p> <p>(2) Gas Engine-Driven Heat Pump</p> <p style="text-align: center;">Table 703.2.3(2) Gas Engine-Driven Heat Pump Heating</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Efficiency</th> <th colspan="6" style="text-align: center;">Climate Zone</th> </tr> <tr> <th style="text-align: center;"><u>1</u></th> <th style="text-align: center;"><u>2</u></th> <th style="text-align: center;"><u>3</u></th> <th style="text-align: center;"><u>4</u></th> <th style="text-align: center;"><u>5</u></th> <th style="text-align: center;"><u>6-8</u></th> </tr> <tr> <th colspan="7" style="text-align: center;">POINTS</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">>1.3 COP at 47°F</td> <td style="text-align: center;"><u>2</u></td> <td style="text-align: center;"><u>7</u></td> <td style="text-align: center;"><u>11</u></td> <td style="text-align: center;"><u>14</u></td> <td style="text-align: center;"><u>16</u></td> <td style="text-align: center;"><u>18</u></td> </tr> </tbody> </table>	Efficiency	Climate Zone						<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6-8</u>	POINTS							>1.3 COP at 47°F	<u>2</u>	<u>7</u>	<u>11</u>	<u>14</u>	<u>16</u>	<u>18</u>	<p>Per Table 703.2.3(1) or Table 703.2.3(2)</p>
Efficiency	Climate Zone																												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6-8</u>																							
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>1.3 COP at 47°F	<u>2</u>	<u>7</u>	<u>11</u>	<u>14</u>	<u>16</u>	<u>18</u>																							
<p>Reason:</p>	<p>Allows recognition of the energy efficiency benefits of newly available gas engine-driven heat pumps with rated COP's of 1.2 to 1.4 depending on climate zone. In heating mode this is significantly higher than a condensing gas furnace, and in cooling mode on a cost or source energy basis it is equivalent to a 15 or 16 site energy SEER air conditioner.</p>																												

GREEN BUILDING PRACTICES	POINTS																											
<p>703.2.4 Cooling efficiency is in accordance with Table 703.2.4(1) or Table 703.2.4(2). ...</p> <p>(1) Electric Air Conditioner or Heat Pump</p> <p style="text-align: center;">Table 703.2.4(1) Electric Air Conditioner and Heat Pump Cooling</p> <p style="text-align: center;">...(table unchanged)</p> <p>(2) Gas Engine-Driven Heat Pump</p> <p style="text-align: center;">Table 703.2.4(2) Gas Engine-Driven Heat Pump Cooling</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Efficiency</th> <th colspan="6" style="text-align: center;">Climate Zone</th> </tr> <tr> <th style="text-align: center;"><u>1</u></th> <th style="text-align: center;"><u>2</u></th> <th style="text-align: center;"><u>3</u></th> <th style="text-align: center;"><u>4</u></th> <th style="text-align: center;"><u>5</u></th> <th style="text-align: center;"><u>6-8</u></th> </tr> <tr> <th colspan="7" style="text-align: center;">POINTS</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">>1.2 COP at 95°F</td> <td style="text-align: center;"><u>7</u></td> <td style="text-align: center;"><u>5</u></td> <td style="text-align: center;"><u>2</u></td> <td style="text-align: center;"><u>1</u></td> <td style="text-align: center;"><u>1</u></td> <td style="text-align: center;"><u>0</u></td> </tr> </tbody> </table>	Efficiency	Climate Zone						<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6-8</u>	POINTS							>1.2 COP at 95°F	<u>7</u>	<u>5</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>0</u>	<p>Per Table 703.2.4(1) or Table 703.2.4(2)</p>
Efficiency		Climate Zone																										
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	<p>Supplemental information can be found at:</p> <p>http://intellichoiceenergy.com/product-info/8-ton-multi-zone</p> <p>http://www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/swgas_heatpump.pdf</p> <p>http://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=1626608</p>
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	<i>Note: Points are subject to further revision.</i>
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 37</p> <p>Disagree with committee action: 2</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Steven Rosenstock: Based on the web site links, it appears that the vast majority of products are <u>not</u> being offered for residential applications.</p> <p>In addition, there may be many climate zones where the points will be 0 or negative, due to their low efficiency.</p> <p>Charles Foster: This proposal was unsubstantiated - the links cited do not support it!!!!</p> <p>And any suggestion that they achieve a SEER of "15 or 16" is simply wrong using an AHRI method of test.</p> <p>They are not.</p> <p>Not even close.</p>
Abstain:	

P222 LogID 5088	703.2.4 Cooling efficiency	Final Formal Action: Approve as Modified
Submitter:	Donald Prather, ACCA	
Proposed Change:	703.2.4 Cooling efficiency is in accordance with Table 703.2.3. Refrigerant charge is verified for compliance with manufacturer’s instructions <u>utilizing methods approved in ACCA 5 QI-2010.</u>	
Reason:	Every OEM approved method is included or accepted in the QI 5 instruction set. Later in the document this instruction is contradicted by selecting superheat and subcooling methods. ACCA will also recommend a similar change there to clarify instructions provided in this standard.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise Proposed Change as follows (in red):</i>	
	703.2.4 Cooling efficiency is in accordance with Table703.2.4.Refrigerant charge is verified for compliance with manufacturer’s instructions <u>utilizing a methods in Section 4.3 of ACCA 5 QI-2010.</u>	
Committee Reason:	Clarification.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p>	

	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P223 LogID 5089	703.2.5 Water source cooling and heating efficiency	Final Formal Action: Approve as Modified
Submitter:	Donald Prather, ACCA	
Proposed Change:	Add the following wording to table 703.2.5: <u>Refrigerant charge is verified for compliance with manufacturer’s instructions utilizing methods approved in ACCA 5 QI-2010.</u>	
Reason:	For consistency with previous sections, these systems are charged systems too.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> 703.2.5 Water source cooling and heating efficiency is in accordance with Table 703.2.5. <u>Refrigerant charge is verified for compliance with manufacturer’s instructions utilizing a method in Section 4.3 of ACCA 5 QI-2010.</u>	
Committee Reason:	Clarification.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P224 LogID 5090	703.2.6 Ground source heat pump installation	Final Formal Action: Approve as Modified
Submitter:	Donald Prather, ACCA	
Proposed Change:	Add the following wording to table 703.2.6: <u>Refrigerant charge is verified for compliance with manufacturer’s instructions utilizing methods approved in ACCA 5 QI-2010.</u>	
Reason:	For consistency with previous sections, these systems are charged systems too.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> 703.2.6 Ground source heat pump is installed by a Certified Geothermal Service Contractor in accordance with Table 703.2.6. <u>Refrigerant charge is verified for compliance with manufacturer’s instructions utilizing a method in Section 4.3 of ACCA 5 QI-2010</u>	
Committee Reason:	Clarification.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39

	Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P225	LogID TG5-32	703.3.2 All space cooling	Final Formal Action: Disapprove
Submitter:	Howard Wiig, State Energy Office		
Proposed Change:	Table 703.3.2 Ductless cooling system Add a Tropical Climate Zone. Ductless cooling system Points: 11		
Reason:	The Tropical Climate Zone includes a mandatory requirement no more than 50% of enclosed space shall be mechanically cooled. Cooling is therefore confined to limited areas such as bedrooms. Ductless systems are ideally suited to limited areas, reduce costs and improve efficiency.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	First part already accomplished by approval of P389. Second part already covered in section 703.3.2 and high efficiency products receive points is 703.2.4.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P226	LogID 5070	703.3.4 Duct Leakage	Final Formal Action: Disapprove
Submitter:	Philip LaRocque, LaRocque Business Management Services, LLC		
Proposed Change:	703.3.4 Duct Leakage. The entire central HVAC duct system, including air handlers and register boots, is tested by a third party for total leakage at a pressure differential of 0.1 inches w.g. (25 Pa) and maximum air leakage is equal to or less than 8 percent of the system design flow rate.		
Reason:	This change reflects the ENERGY STAR version 3 (later addendums) changes from 6% to 8% of the system design flow rate. This should have been changed in the 2012 NGBS but was not if we care to be consistent with ENERGY STAR in this regard.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	In favor of action on P169. In addition, the 2015 NGBS will be using the 2015 IECC as baseline, not ENERGY STAR for homes.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0		

	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P227 LogID 769	703.4 Water heating design, equipment, and installation	Final Formal Action: Approve as Modified
Submitter:	Gary Klein, Affiliated International Management, LLC	
Proposed Change:	<p>New Sections</p> <p>Demand recirculation system is installed in single family units. Points awarded per circulation zone 1 Maximum points per building 2</p> <p>Demand recirculation system is installed in multi-family units in place of a standard circulation pump and control. Points awarded per circulation zone 2 Maximum points per building 4</p>	
Reason:	<p>Waiting for hot water to arrive at fixtures wastes energy as well as water. In fact, the waste of energy gets worse as the flow rate goes down because the amount of water wasted goes up as the flow rate goes down. In multi-family buildings, a demand recirculation system can reduce the hours of operation of a typical system to less than 2 hours per day in retrofit applications, even lower in new buildings where the hot water piping is installed in accordance with the NGBS. There is electricity saved by reduced pumping energy, but the big savings is in the reduced heat loss in the loop. The reason for the large number of points is that water heating in multi-family buildings is equal to or larger than space heating in much of the country now and will certainly be true in buildings built in accordance with the NGBS.</p>	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i></p> <p><i>Add new Section:</i></p> <p><u>704.5.4 Potable hot water demand re-circulation system is installed in single family units.</u></p> <p><u>Points awarded per circulation zone 1</u></p> <p><u>Maximum points per building 2</u></p> <p><u>Potable hot water demand re-circulation system is installed in multi-family units in place of a standard circulation pump and control.</u></p> <p><u>Points awarded per circulation zone 2</u></p> <p><u>Maximum points per building 4</u></p>	
Committee Reason:	Additional clarification.	

Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P228 LogID TG5-33	703.4 Water heating system	Final Formal Action: Approve
Submitter:	Gary Klein, Craig Conner,	
Proposed Change:	703.4.3 Drain-water heat recovery system is installed in multi-family units.	
Reason:	Drain-water heat recovery works in single family homes too.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P229 LogID 761	703.4.1 Water Heater Energy Factor	Final Formal Action: Approve as Modified						
Submitter:	Gary Klein, Affiliated International Management, LLC							
Proposed Change:	Add a new line to Table 703.4.1(1)(b)							
	<table border="0"> <tr> <td>Size (gallons</td> <td>Energy Factor¹</td> <td>POINTS</td> </tr> <tr> <td><u>Any</u></td> <td><u>0.97</u></td> <td><u>10</u></td> </tr> </table>		Size (gallons	Energy Factor ¹	POINTS	<u>Any</u>	<u>0.97</u>	<u>10</u>
Size (gallons	Energy Factor ¹	POINTS						
<u>Any</u>	<u>0.97</u>	<u>10</u>						
	<u>1. Electric instantaneous water heaters have either an Energy Factor (capacity less than or equal to 12 kW) or a Thermal Efficiency (capacity greater than 12kW)</u>							
Reason:	Electric instantaneous water heaters come in a wide variety of sizes (kW) and can be located very close to the points of use. This can reduce the energy needed for heating water by as much as 50 percent. Even when not located closer to the points of use, they are more efficient to operate than electric storage water heaters. They should be included in the table within the standard in the same way that gas instantaneous water heaters are.							
Committee Action from Meeting:	Approve as Modified							

Modification of Proposed Change:	<p>Revise the proposed change as follows (in red):</p> <p>Add a new line to Table 703.4.1(12)(b)</p> <table border="0"> <tr> <td>Size(gallons</td> <td>Energy Factor¹</td> <td>POINTS</td> </tr> <tr> <td><u>Any</u></td> <td><u>0.97</u></td> <td><u>10</u></td> </tr> </table> <p><u>1. Electric instantaneous water heaters have either an Energy Factor (capacity less than or equal to 12 kW) or a Thermal Efficiency(capacity greater than 12 kW)</u></p>	Size(gallons	Energy Factor ¹	POINTS	<u>Any</u>	<u>0.97</u>	<u>10</u>				
Size(gallons	Energy Factor ¹	POINTS									
<u>Any</u>	<u>0.97</u>	<u>10</u>									
Committee Reason:	Corrected the table reference										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>36</td> </tr> <tr> <td>Disagree with committee action:</td> <td>3</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	36	Disagree with committee action:	3	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	36										
Disagree with committee action:	3										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	<p>Neil Leslie: There are 2 problems with this proposal: first, it limits the points to electric tankless water heaters only, even though a gas tankless water heater may also be able to be installed "close to the points of use" in many cases. Second, it asserts a level of energy savings that will not occur any time a central electric tankless water heater is installed. Further, category 2 in Table 703.4.1(2) already covers tankless electric water heaters. It is inequitable and misleading.</p> <p>Ted Williams: Electric instantaneous water heaters are nothing more than an adaption of electric resistance water heating, which is under increasing regulatory pressure to avoid due to wasteful use of primary energy and increased carbon dioxide emissions. It is not a "green" technology and does not belong in a green building standard, let alone the absurdity of awarding it points.</p> <p>Randall Melvin: Agree with Neil's comment Gas should get credit too</p>										
Abstain:											

P230 LogID TG5-44	703.5 Lighting and appliances	Final Formal Action: Disapprove
Submitter:	Steve Rosenstock, Edison Electric Institute	
Proposed Change:	<p>703.5.5 Gas Lamp /Lighting Fixtures. Gas Lamps or Gas Decorative Lighting Fixtures are installed.</p> <p>(1) <u>Gas Lamp/Fixture installed with a continuously burning pilot light -50 Points per Lamp or Fixture Installed</u></p> <p>(2) <u>Gas Lamp/Fixture installed without a continuously burning pilot light and with manual or automatic shutoff controls -10 Points per Lamp or Fixture Installed</u></p>	
Reason:	<p>The current standard is silent on the use of gas lamps in green homes. No points are added or deducted for their use. This new section will properly account for their energy usage.</p> <p>According to the latest DOE Energy Information Administration publication Residential Energy Consumption Survey (RECS 2009), the average home in the US uses about 89.6 Million Btu's per year (site energy). See http://www.eia.gov/consumption/residential/data/2009/index.cfm?view=consumption#summary</p> <p>Typical gas lighting fixtures use anywhere from 1,500 Btu/hour to 3,500 Btu/hour (examples can be found at http://www.mhpggrills.com/everglow-gas-lights/features/ and http://www.faubourglighting.com/faq.asp). A typical gas lamp with a continuous burning pilot light that</p>	

	<p>uses 2,500 Btu/hour will consume 18 therms of gas per month, or 216 therms (21.6 Million Btu’s) per year. This would be equivalent of 24.1% of the total energy used annually by a typical house in the US, and a higher percentage of the energy used annually in a green home.</p> <p>At an average US price of \$1.128 per therm (See the DOE notice in the <i>Federal Register</i>, “Representative Average Unit Costs of Energy”, March 18, 2014, page 15112), this typical gas lamp will cost \$243.65 to operate annually.</p> <p>According to the AGA publication <i>Gas Facts 2013</i>, the typical residential water heater in the US consumed 19.1 Mcf (about 196 therms) per year in 2011. According to this publication, a typical gas range used 4.3 Mcf (about 44 therms), and a typical gas clothes dryer also used 4.3 Mcf (about 44 therms). In other words, one gas light with a continuously burning pilot light will use more energy in a year than a residential gas water heater, and well over two times more energy in a year than a residential gas range and residential gas clothes dryer <u>combined</u>.</p> <p>The typical gas lamp using 2,500 Btu/hour (equivalent to 732.5 Watts) will produce about as much light as a traditional 60 Watt incandescent light bulb, which produces about 800-860 lumens of light (see http://www.washingtongasliving.com/For_Your_Home/OutdoorProducts/Lighting.xml), or a federally compliant 43 Watt halogen bulb, or a 13 Watt compact fluorescent bulb, or a 10 Watt LED bulb. In other words, the gas light will consume anywhere from 17 to 73 times more energy to produce the same amount of light.</p> <p>If installed with controls (photosensors, on/off switches, electronic ignitions, etc), the typical energy use will be reduced by 80%, but they will still be using 17 to 73 times more energy than electric lighting fixtures.</p> <p>This proposal will account for the energy usage of gas lights in green homes, consistent with the methodology used for estimated energy impacts in the standard.</p>										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Negative points are not practical and not consistent with the format of the standard										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>37</td> </tr> <tr> <td>Disagree with committee action:</td> <td>2</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	37	Disagree with committee action:	2	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	37										
Disagree with committee action:	2										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	<p>Steven Rosenstock: At the current time, there is no language in the standard that prevents the use of highly inefficient gas lights in the prescriptive path.</p> <p>As an alternative to negative points, I would suggest that gas lighting fixtures with continuously burning pilot lights not be allowed to be used in any building using the prescriptive path (Section 703), and all energy used by gas lamps must be accounted for in the performance path.</p> <p>Ryan Taylor: Gas lamps, though decorative, are a waste of energy. Negative points aren't an option and a ban seems exclusionary. If negative points aren't permitted in the standard, it seems the standard could achieve the same end by requiring an offset (more points saved) in some other area(s) as a means of discouraging gas lamps without banning them altogether.</p>										
Abstain:											

P231 LogID 5322	703.5.1 (2)	Final Formal Action: Approve as Modified
Submitter:	John M Schneider, City of Moundsville	
Proposed Change:		
Reason:	Practice 703.5.1 (2) refers to a minimum efficiency of 40 Lumens / Watt for exterior lighting. Efficiency is a unit less value (watts out / watts in). Efficacy is a measure comparing different units of measure (lumens / watt). Practice 701.4.4 uses the correct Efficacy term. I believe Efficacy should be used in Practice 703.5.1 (2) as well?????	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> (2) A minimum of 80 percent of the exterior lighting wattage has a minimum efficiency <u>efficacy</u> of 40 lumens per watt or is solar-powered.	
Committee Reason:	To use a more accurate term	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P232 LogID TG5-34	703.5.1 Hard-wired lighting	Final Formal Action: Approve																																			
Submitter:	Amber Wood, NORESCO/AEC																																				
Proposed Change:	<p>703.5.1 Hard-wired lighting. Hard-wired lighting is in accordance with one of the following:</p> <p>(1) A minimum percent of the total hard-wired <u>interior</u> luminaires <u>or lamps</u> qualify as ENERGY STAR or equivalent.</p> <p style="text-align: center;">Table 703.5.1 Hard-wired Lighting</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Minimum Percent of Fixtures</th> <th colspan="8">Climate Zone</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>75%</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>1</td> </tr> <tr> <td>95%</td> <td>9</td> <td>6</td> <td>5</td> <td>4</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> </tbody> </table> <p>(2) A minimum of 80 percent of the exterior lighting wattage has an efficiency of 40 lumens per watt minimum or be a solar-powered light fixture.</p> <p>(3) <u>In multiunit buildings, common area lighting power density (LPD) is less than 0.51 W/sqft.</u></p>		Minimum Percent of Fixtures	Climate Zone								1	2	3	4	5	6	7	8	75%	5	4	3	3	3	2	2	1	95%	9	6	5	4	4	3	2	1
Minimum Percent of Fixtures	Climate Zone																																				
	1	2	3	4	5	6	7	8																													
75%	5	4	3	3	3	2	2	1																													
95%	9	6	5	4	4	3	2	1																													
Reason:	Consistency with the 2015 IECC. Separate the exterior (2) from the interior (1) and make explicit. Add credit for common area LPD																																				
Committee Action from Meeting:	Approve																																				
Modification of Proposed Change:																																					
Committee Reason:																																					

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P233	LogID TG5-31	703.5.3 Appliances	Final Formal Action: Disapprove
Submitter:	Howard Wiig, State Energy Office		
Proposed Change:	<p>Table 703.5.3(1)</p> <p>Add Tropical Climate Zone</p> <p>ENERGY STAR or equivalent appliances are installed (points)</p> <p>Refrigerator (3)</p> <p>Washing Machine (1)</p> <p>Dishwasher (1)</p> <p>Induction Range (1)</p> <p><u>TV Cable Box (1)</u></p> <p><u>Add one point each for demand-response capability</u></p>		
Reason:	EnergyStar appliances are important in the tropics because they produce less heat. Set-top boxes have become major energy users in many homes. Demand response is an extremely effective means of shaving peak loads.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Points for ES products are not allocated by climate zone elsewhere except for refrigerators and TV cable boxes is not an appropriate category and uncertain how many points could be awarded, e.g. for multiple boxes, and, demand-response capability products are already awarded points elsewhere.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P234	LogID TG6-06	703.6.1 Sun-tempered design	Final Formal Action: Approve
Submitter:	Katrina Rosa, The EcoLogic Studio		
Proposed Change:	<u>Multi-unit Building Note:</u>		

	<p><u>Design the site such at least 40% of the multi-unit dwelling units have one wall, with at least 50% of glazing for each unit, that faces south (within 15 degrees of south). Effective shading is required for passive solar control on all south facing glazing.</u></p> <p><u>The floor area of at least 15 feet from the south facing perimeter glazing is massive and exposed to capture solar heat during the day and reradiated at night.</u></p>
Reason:	Current language is not fully applicable to multi-unit buildings. Note: definitions are recommended for “massive” and “exposed” and “effective shading.”
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 38</p> <p>Disagree with committee action: 1</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<i>Randall Melvin:</i> This item is too limited and too prescriptive for the complexity of the issue. Either a sun tempered design is done by a competent professional or not.
Abstain:	

P235 LogID 5294	703.6.2 Window shading	Final Formal Action: Approve
Submitter:	Thomas Culp, Birch Point Consulting LLC	
Proposed Change:	703.6.2 Window shading. Automated solar protection <u>or dynamic glazing</u> is installed to provide shading for windows.	
Reason:	On behalf of Dr. Helen Sanders, SAGE Electrochromics Inc. Dynamic glazing provides an equivalent method for window shading as traditional methods, by directly varying the SHGC and VT of the window rather than secondarily modifying it through an attachment. As such, dynamic glazing is already included as an alternative to exterior shading requirements in both the International Green Construction Code and ASHRAE 189.1, and its inclusion here is also appropriate.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P236	LogID TG5-35	703.6.3 Passive cooling design	Final Formal Action: Disapprove
Submitter:	Howard Wiig, State Energy Office		
Proposed Change:	<p><u>703.3.6 (7) In Tropical Climate Zone 0, attached unconditioned spaces that provide full shade (PF 1.0 or greater, including garages and lanais) of east, west and south faces shading 10-20% of enclosed wall/window area, 10 points;</u></p> <p><u>Shading 21% 30% of enclosed wall/window area: 20 points</u></p> <p><u>Shading 30% or more of enclosed wall/window area: 30 points.</u></p> <p><u>For Shading Factors of 0.5 to 0.99 assign ½ as many points</u></p>		
Reason:	Shading is the most effective means of ameliorating heat gain in the Tropics, where the typical delta T between the interior and exterior ambient is approximately 10F. The tropical climate lends itself to outdoor (low EUI) living and covered areas encourage same.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Climate zone has already been incorporated, Climate Zone 0 is not applicable, and shading is already covered in the IECC and therefore the proposed baseline.		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P237	LogID TG5-39	704 Additional Practices	Final Formal Action: Disapprove
Submitter:	Amber Wood, NORESKO/AEC		
Proposed Change:	<u>704.6 Exhaust Fans. Occupancy sensors or other automatic controls are installed on 80 percent of exhaust fans, excluding kitchen and garage exhaust fans.</u>		
Reason:	Allowance made for controls on exhaust fan to save energy.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Practice already covered in Section 902.1.2.		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P238 LogID 5121	704.2 Lighting	<i>Final Formal Action: Disapprove</i>
Submitter:	Marie Nisson, TexEnergy/US-EcoLogic	
Proposed Change:	<p><u>704.2.4 Non-unit lighting design.</u> In multi-family design interior, non-residential lighting to achieve the following lighting power density</p> <p>(1) <u>Less than or equal to 0.7 watts/sf</u></p> <p>(2) <u>Less than or equal to 0.5 watts/sf</u></p> <p>(3) <u>Less than or equal to 0.3 watts/sf</u></p>	
Reason:	Encourage efficient lighting design in MF residential associated and non-unit spaces	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Committee agrees with commenter that the NGBS would benefit from a provision addressing common area lighting in multi-unit buildings. This item is rejected in favor of P239. Some of the concerns with the proposed language included issues meeting IES minimum illumination requirements, a lack of certainty on the size of spaces, difficulty with assigning points, and potential conflict with other minimum lighting requirements of other codes (e.g., means of egress lighting requirements).	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P239 LogID TG6-04	704.2 Lighting	<i>Final Formal Action: Approve as Modified</i>
Submitter:	Shaun Taylor, Lutron Electronics	
Proposed Change:	<p><u>Automatic daylight controls or time clocks are installed for multi-unit exterior lighting.</u></p> <p>(1) <u>50 percent of lighting load</u></p> <p>(2) <u>75 percent of lighting load</u></p> <p>(3) <u>100 percent of lighting load</u></p> <p><u>Exceptions:</u></p> <p>(1) <u>Solar photovoltaic exterior lights</u></p> <p>(2) <u>Lighting required to comply with local egress and life safety code requirements.</u></p> <p>Recommended Definition:</p> <p><u>DAYLIGHT CONTROL. A device or system that provides automatic control of electric light levels based on the amount of daylight.</u></p>	
Reason:	Daylight controls are effective energy management tools that prevent energy waste where exterior lights are left on during daylight hours. This can be done using controls such as photo sensors or a time	

	clock. The proposal is crafted to specifically address multi-unit buildings. While we feel the concept is generalizable to all residential building types, the multifamily task group is deferring to the energy task group for their consideration. This recognizes that the use of these control devices may be different in multifamily and single-family buildings. For example, the percentage tiers are necessary in the multi-unit context because of the large number of devices that may be required in an apartment project, while a single-family home may only require two or three devices.
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Modify proposed change as follows (in red):</i></p> <p>Automatic daylight controls or time clocks are installed for multi-unit exterior lighting.</p> <p>(1) 50 percent of lighting load</p> <p>(2) 75 percent of lighting load</p> <p>(3) 100 percent of lighting load</p> <p><u>Exceptions:</u></p> <p>(1) Solar photovoltaic exterior lights</p> <p>(2) Lighting required to comply with local egress and life safety code requirements.</p> <p>Recommended Definition:</p> <p><u>DAYLIGHTCONTROL. A device or system that provides automatic control of electric light levels based on the amount of daylight.</u></p>
Committee Reason:	As consistent with actions on P241.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P240 LogID TG6-05	704.2.1 Occupancy sensors	Final Formal Action: Disapprove
Submitter:	Shaun Taylor, Lutron Electronics	
Proposed Change:	<p>Occupancy/Vacancy Sensors. Occupancy <u>or vacancy</u> sensors are installed on indoor lights, and photo or motion sensors are installed on outdoor lights to control lighting.</p> <p><u>Multi-unit building note:</u></p> <p><u>Occupancy sensors or vacancy sensors are installed on interior lighting.</u></p> <ol style="list-style-type: none"> <u>Occupancy or vacancy sensors are installed in dwelling units:</u> <ol style="list-style-type: none"> <u>25 percent of lighting</u> <u>50 percent of lighting.</u> <u>Vacancy sensors are installed in multi-unit common areas:</u> <p><u>EXCLUSION: Corridors and stairwells.</u></p>	

	<p>(1) <u>50 percent of lighting</u></p> <p>(2) <u>75 percent of lighting</u></p> <p>(3) <u>100 percent of lighting</u></p> <p>Recommended Definitions:</p> <p><u>OCCUPANCY SENSOR. Devices that generally use passive infrared and/or ultrasonic technology or a combination of multiple sensing technologies to automatically turn lights on and off or from one preset light level to another based on whether or not the sensor detects that a space is occupied.</u></p> <p><u>VACANCY SENSOR. Devices that generally use passive infrared and/or ultrasonic technology or a combination of multiple sensing technologies to determine if a space is occupied. If a space is unoccupied, the device will automatically turn the lights off, but the device does not automatically turn lights on.</u></p>										
Reason:	Vacancy sensors may save more energy than occupancy sensors because they do not automatically turn lights on. This proposal gives flexibility to homeowners who may want their lights to come on automatically. For common areas, lights will need to be manually turned on but will automatically turn off when a space is vacant. Multifamily corridors and exit stairwells are excluded because there is a separate proposal that allows light level reduction instead of turning the lights off that enables corridors and stairwells to meet life safety codes.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P241.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P241 LogID TG6-03	704.2.1 Occupancy sensors	<i>Final Formal Action: Approve as Modified</i>
Submitter:	Shaun Taylor, Lutron Electronics	
Proposed Change:	<p>704.2.1 Occupancy Sensors.</p> <p><u>(1) Occupancy sensors are installed on indoor lights, and photo or motion sensors are installed on outdoor lights to control lighting.</u></p> <p style="padding-left: 40px;"><u>(a)(1) 25 percent of lighting</u></p> <p style="padding-left: 40px;"><u>(b)(2) 50 percent of lighting</u></p> <p><u>(2) In a multi-unit building, occupancy controls are installed to automatically reduce light levels in interior corridors and exit stairwells when the space is unoccupied. Light levels are reduced by:</u></p> <p style="padding-left: 40px;"><u>(a) A minimum of 50 percent or to local minimum requirements</u></p>	

	(b)A minimum of 75 percent or to local minimum requirements
Reason:	Most corridor and exit stairwell lights in multifamily housing stay on 24 hours a day whether a space is occupied or not. Substantial energy savings may be achieved by reducing light levels in these areas when not in use. Although many of these areas must remain lighted 24 hours a day in order to meet life safety codes, safety requirements can be nonetheless be fulfilled, while reducing light levels and achieving as much as a 90 percent reduction in energy use relative to full-on lighting.
Committee Action from Meeting:	Approve as Modified
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p>704.2.1 <u>Lighting Controls</u></p> <p><u>This does not apply to means of egress or security lighting as defined by local building codes.</u></p> <p>Occupancy Sensors. Occupancy sensors are installed on indoor lights, and photo or motion sensors are installed on outdoor lights to control lighting.</p> <p>———— (1)25 percent of lighting – 1</p> <p>———— (2)50 percent of lighting – 2</p> <p><u>704.2.1.1 Interior Lighting. In dwelling units, permanently installed lighting fixtures shall be controlled with a vacancy sensor, occupancy sensor, or dimmer for:</u></p> <p><u>(1) 25 percent of lighting fixtures.</u></p> <p><u>(2) 50 percent of lighting fixtures.</u></p> <p><u>(3) 75 percent of lighting fixtures.</u></p> <p><u>704.2.1.2 Exterior Lighting. Photo or motion sensors are installed on outdoor lighting fixtures to control lighting.</u></p> <p><u>(1) 25 percent of lighting fixtures.</u></p> <p><u>(2) 50 percent of lighting fixtures.</u></p> <p><u>(3) 75 percent of lighting fixtures.</u></p> <p><u>704.2.1.3 Multi-unit Common Areas.</u></p> <p><u>1. Vacancy sensors, occupancy sensors, or dimmers are installed in common areas of Multi-Unit buildings except corridors and stair wells.</u></p> <p><u>(1) 25 percent of lighting fixtures.</u></p> <p><u>(2) 50 percent of lighting fixtures.</u></p> <p><u>(3) 75 percent of lighting fixtures</u></p>

	<p><u>2. In a multi-unit building, occupancy controls are installed to automatically reduce light levels in interior corridors and exit stairwells when the space is unoccupied. Light levels are reduced by:</u></p> <p><u>(1) A minimum of 50 percent or to local minimum requirements</u></p> <p><u>(2) A minimum of 75 percent or to local minimum requirements</u></p> <p><u>704.2.1.4 In a multi-unit building, occupancy controls are installed to automatically reduce light levels in garages and parking structures when the space is unoccupied. Light levels are reduced by:</u></p> <p><u>(a) A minimum of 50 percent or to local minimum requirements</u></p> <p><u>(b) A minimum of 75 percent</u></p> <p><i>Add definitions to Chapter 2 as follows:</i></p> <p><u>OCCUPANCY SENSOR. Devices that generally use passive infrared and/or ultrasonic technology or a combination of multiple sensing technologies to automatically turn lights on and off or from one preset light level to another based on whether or not the sensor detects that a space is occupied.</u></p> <p><u>VACANCY SENSOR. Devices that generally use passive infrared and/or ultrasonic technology or a combination of multiple sensing technologies to determine if a space is occupied. If a space is unoccupied, the device will automatically turn the lights off, but the device does not automatically turn lights on.</u></p>										
<p>Committee Reason:</p>	<p>There are significant energy savings opportunities utilizing occupancy sensors and controls in multi-unit buildings. Garages and parking structures are other areas that can benefit from lighting reduction technologies, but present separate challenges and involve different considerations from corridor and stairwell lighting. Therefore, it is appropriate to include a separate provision for garage and parking structure lighting. This modification offers one comprehensive revision to the standard in response to several proposed changes submitted on the same section.</p>										
<p>Ballot Results on Committee Action:</p>	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
<p>Ballot Comments</p>											
<p>Agree with committee action:</p>											
<p>Disagree with committee action:</p>											
<p>Abstain:</p>											
<p>P242 LogID TG5-36</p>	<p>704.2.1 Occupancy sensors Final Formal Action: Disapprove</p>										
<p>Submitter:</p>	<p>Wayne Stoppelmoor, Schneider Electric</p>										
<p>Proposed Change:</p>	<p>704.2.1 Occupancy Sensors. Occupancy sensors are installed on indoor lights, and photo or motion sensors are installed on outdoor lights to control lighting.</p> <p>704.2.1 Interior Lighting Controls. In dwelling units, permanently installed lighting fixtures shall be controlled with a vacancy sensor, occupancy sensor, or dimmer for:</p> <p>(1) 25-75 percent of lighting fixtures.</p>										

	(2) 50-100 percent of lighting fixtures.										
Reason:	<p>The most efficient light is the one that is off. The current standard does not effectively account for use of lighting controls as a means of energy savings. Regardless of efficacy, light sources achieve maximum energy savings when they are off or reduced to the minimum required by the task. For 120 volt incandescent/halogen sources, dimming reduces energy use, increases lamp life, and dimmers are inexpensive. Automatic controls turn lighting off when not being used. (See reference documentation listed below.).</p> <p>Several reports document savings from using controls residentially, such as:</p> <ul style="list-style-type: none"> · http://www.lrc.rpi.edu/programs/lightingTransformatio/economics/table2.asp [shows 20% to 40% savings depending on space type for using occupancy sensors] · http://www.energy.ca.gov/title24/2013standards/prerulemaking/documents/current/Reports/Residential/Lighting/ open Residential Lighting PDF and see page 32[shows 10% savings from dimmers, 30% savings from occupancy sensors] · Heschong Mahone Group Lighting Efficiency Technology Report Vol. 1, see page 83. www.energy.ca.gov/efficiency/lighting/VOLUME01.PDF [shows 20% savings from dimmers and 54% savings from occupancy sensors] 										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P241.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P243 LogID TG5-37	704.2.1 Occupancy sensors	Final Formal Action: Disapprove
Submitter:	Amber Wood, NORESKO/AEC	
Proposed Change:	<p>704.2.1 Occupancy sensors.</p> <p>704.2.1.1 Interior Lighting. Occupancy sensors are installed on <u>the interior living space</u> indoor lights</p> <p>(1) 25 percent of lighting</p> <p>(2) 50 percent of lighting</p> <p>704.2.1.2 Exterior Lighting. and pPhoto or motion sensors are installed on outdoor lights to control lighting.</p> <p>(1) 25 percent of lighting</p> <p>(2) 50 percent of lighting</p>	

	704.2.1.3 Common Areas. Occupancy sensors are installed on common area lights (excluding storage, electrical, and mechanical, & exterior lighting).										
Reason:	Consistency with the 2015 IECC. Allowance made for special lighting requirements in MF buildings.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P241.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P244 LogID 5091	704.2.1 Occupancy sensors (Lighting)	Final Formal Action: Withdrawn										
Submitter:	Donald Prather, ACCA											
Proposed Change:	<p>704.2.1 Occupancy sensors. Occupancy sensors are installed on indoor lights, and motion photo sensors are installed on outdoor lights to control lights <u>and/or occupancy sensors are installed with setback thermostats for HVAC equipment and hot water heaters.</u></p> <p>(1) 25 Percent of lighting</p> <p>(2) 50 Percent of lighting</p> <p><i>(3) HVAC System set back plus occupancy</i></p> <p><i>(4) Hot water heater occupancy</i></p>											
Reason:	Since HVAC and hot water heating use more energy they should be considered too as options for occupancy sensors. The two additional items recommended would result in a much larger energy savings than the lighting options and should be awarded more points.											
Committee Action from Meeting:	Withdrawn											
Modification of Proposed Change:												
Committee Reason:	Withdrawn by proponent on TG 5 conference call June 25, 2014.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P245	LogID 5053	704.2.2 TDDs and skylights	Final Formal Action: Approve as Modified
Submitter:	Angelo Marasco, ODL		
Proposed Change:	ENERGY STAR or equivalent tubular daylighting device (TDD) or skylight with sealed, insulated, low-E glass is installed in rooms without windows.		
Reason:	Similar to other NGBS sections that reference ENERGY STAR compliant or equivalent glazing this assures that the TDD being used meets a minimum standard of energy efficient performance.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<p><i>Revise standard as follows:</i></p> <p>704.2.2 TDDs and skylights. <u>A tubular daylighting device (TDD) or a skylight that meets the requirements of Table 703.1.6.2(a) with sealed, insulated, low-E glass</u> is installed in rooms without windows.</p>		
Committee Reason:	Specific technical requirements need to be provided with the intention for the requirements to be equivalent to ES Version 6.0.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P246	LogID TG5-38	704.2.3 Lighting outlets	Final Formal Action: Approve
Submitter:	Amber Wood, NORESCO/AEC		
Proposed Change:	704.2.3 Lighting Outlets. Occupancy sensors are installed for a minimum of 80% of hard-wired lighting outlets in <u>the interior living space</u> .		
Reason:	Confusion exists concerning the extent of the required fixtures. – exclude exterior, garages, crawlspaces etc.		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			
Committee Reason:			
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	38	
	Disagree with committee action:	1	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:	<p>Steven Rosenstock: It would be more clear if the word "outlet" was replaced with "fixture" as follows:</p> <p>704.2.3 Lighting Outlets <u>Fixtures</u>. Occupancy sensors are installed for a minimum of 80% of hard-wired lighting outlets <u>fixtures</u> in the interior living space.</p> <p>The term "outlet" is usually associated with wall receptacles that can be used for any plug-in appliance.</p>		
Abstain:			

P247	LogID 5092	704.4.2 HVAC performance verification	Final Formal Action: Withdrawn
Submitter:	Donald Prather, ACCA		
Proposed Change:	<p>Change to make this section align with mandatory requirements in other sections:</p> <p>704.4.2 Performance of the heating and/or cooling system is verified <u>by a third-party on-site inspection</u> the HVAC contractor in accordance with all of the following QI-5 2010 procedures:</p> <p>(1) Start-up procedure <u>documentations is completed and within OEM tolerances</u> is performed in accordance with the manufacturer's instructions.</p> <p>(2) Refrigerant Charge is verified by super-heat and /or sub-cooling method <u>recorded results are verified (when required)</u></p> <p>(3) <u>When required, verification that:</u> Burner is set to fire at input level listed on nameplate.</p> <p>(4) <u>Verification that:</u> Air handler setting/fan speed is set in accordance with manufacturer's instructions.</p> <p>(5) <u>Verification that:</u> Total airflow is within 10 percent of design flow. <u>The OEM required operating range at all speeds the system will operate and within 20% of the design value.</u></p> <p>(6) <u>Verification that:</u> Total external system static does not exceed equipment capability at rated airflow.</p>		
Reason:	Change to make this section align with mandatory requirements in other sections: ACCA recommends making the minimum requirements for installing an HVAC system mandatory in section 701.4.1 and providing points for 3rd party verification. That verification could be done by the builder or another subcontractor.		
Committee Action from Meeting:	Withdrawn		
Modification of Proposed Change:			
Committee Reason:	Withdrawn by proponent on TG-5 7/30/2014 conference call		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P248	LogID 5117	704.4.2 HVAC performance verification	Final Formal Action: Disapprove
Submitter:	Marie Nisson, TexEnergy/US-EcoLogic		
Proposed Change:	<p>704.4.2 HVAC System set up. Performance of the heating and/or cooling system is verified by the HVAC contractor in accordance with manufacturer's instructions including all of the following:</p> <p>(1) Start up procedure is performed in accordance with the manufacturer's instructions</p> <p>(2) Refrigerant charge is verified by the super heat and/or sub-cooling method</p>		

	(3) Burner is set to fire at input level listed on nameplate (4) Air handler setting/fan speed is set in accordance with manufacturer's instructions (1) Total airflow is within 10% of design flow (2) Total external system static does not exceed equipment capacity at rated airflow
Reason:	704.4.2 (1-4) are basic requirements and recommended to be moved to mandatory practices [701.4.1.3(1-4)]. 704.4.2 (5) and (6) would change to (1) and (2) for credit
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	In favor of LogID 5092 which also addresses the same subject matter and intent.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P249 LogID 5250	704.4.2 HVAC performance verification	Final Formal Action: Disapprove
Submitter:	Jeremy Velasquez, US-EcoLogic	
Proposed Change:	subsection (1) Start-up & subsection (2) Ref. Charge should be made Mandatory. Award the 3+ points for completions of subsections (3) through (6) - which will need to be performed by the HVAC contractor.	
Reason:	Proper refrigerant charge and start-up procedure is extremely important and affect the efficiency of the unit. Most MF teams will not choose this credit - and as a result the HVAC systems start up and charge are not properly performed or documented. subsections 3-6 will require equipment that contractors typically do not possess - and this is time consuming for a rater to self verify.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of 5092 which also addresses the same subject matter and intent.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P250 LogID TG5-40	704.5 Installation and performance verification	Final Formal Action: Disapprove
Submitter:	Amber Wood, NORESKO/AEC	
Proposed Change:	<p>704.5.1 Third party on-site inspection is conducted to verify compliance with all of the following as applicable. Minimum of two inspections are performed: one inspection after insulation is installed and prior to covering, and another inspection upon completion of the building. Where multiple buildings or dwelling units of the same model are built by the same builder, a representative sample inspection of a minimum of 15 percent of the buildings or dwelling units is permitted.</p> <p><u>Multi-Unit Building Note: For multiple buildings or dwelling units of the same model that are built by the same builder, a representative sample inspection of a minimum of 15 percent of the buildings or dwelling units is permitted</u></p>	
Reason:	Delete the direct reference to sampling for all buildings. Recommended to add a new sub-section for multi-family units to allow sampling. Sampling protocols are most effective when the same contractor is performing the same work on identical units over a limited time period – a situation that is not often the case in single family home construction today.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Continued preference to have the provision to apply to single- and multi-unit buildings.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P251 LogID TG5-41	704.5.2 Testing	Final Formal Action: Withdrawn
Submitter:	Aaron Gary, US-EcoLogic	
Proposed Change:	<p><i>Add new section:</i></p> <p><u>704.5.2.X Duct leakage testing.</u> For projects where duct testing is not required under the 2015 IECC because of Scope (R401.1) or Compliance path selected (R401.2), ducts are pressure tested to determine air leakage in accordance with the following:</p> <p>(1) <u>A total leakage test of the ducts is conducted in accordance with 2015 IECC R403.3.3 and R403.3.4.</u></p> <p>(2) <u>Testing conducted by an independent third-party.</u></p>	
Reason:	<p>Many multifamily projects that follow NGBS certification are not required to do duct testing by Code. Duct testing is not required by Commercial IECC (if they are 4 stories or taller). These projects should be rewarded for implementing above-code energy-efficient practices.</p> <p>This version applies to all projects where Duct Leakage testing is not Mandatory under the 2015 IECC for Commercial (Multifamily 3+ stories) or Residential (when they follow the Performance or ERI paths</p>	
Committee Action from Meeting:	Withdrawn	
Modification of Proposed Change:		

Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P252 LogID 5303	704.5.2 Testing	Final Formal Action: Disapprove
Submitter:	aaron gary, US-EcoLogic	
Proposed Change:	Add 704.5.2.3 Duct Leakage (for Multifamily projects ONLY). The entire HVAC duct system...to be tested by third party...maximum air leakage is equal to or less than X (to be determined based on IECC baseline of 2015 NGBS) percent of system fan flow.	
Reason:	Duct leakage is not required under IECC Commercial Code (2009 or 2012). As this testing is not required by Code, multifamily projects should be rewarded for going beyond baseline CODE requirements to improve the energy efficiency of their project.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of action on P169.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P253 LogID 5128	704.5.2 Testing	Final Formal Action: Disapprove
Submitter:	Marie Nisson, TexEnergy/US-EcoLogic	
Proposed Change:	<u>704.5.2.3 Test ventilation in accordance with design</u> <u>(1) Test spot exhaust at point of origin or termination</u> <u>(2) Test supply and/or exhaust ventilation in accordance with Appendix B</u>	
Reason:	ENERGY STAR performance compliance is tested in Ch 7, these practices should be available for testing under other paths. Testing at exhaust termination is not safe or practical for many multifamily projects	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:	
Committee Reason:	Already addressed in Chapter 9 and the proposal would lead to duplication of credit.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P254 LogID 5076	704.5.2 Testing	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	Testing above mandatory requirements is conducted to verify performance.	
Reason:	It is not clear what "above mandatory requirements" is intended to mean. If the blower door result is supposed to be less than the 7 ACH50 of 701 then that should be specified.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P255 LogID TG5-42	704.5.2.1 Building envelope leakage testing	Final Formal Action: Approve
Submitter:	Amber Wood, NORESO/AEC	
Proposed Change:	704.5.2.1 <u>Where not required by 2015 IECC, points are awarded for</u> building envelope leakage testing. (1) A blower door test and a visual inspection are performed as described in 701.4.3.2. 5-TBD (2) Third party verification is completed. 5 TBD	
Reason:	The 2015 IECC requires both visual and testing verification for residential-code buildings. Points are awarded for envelope leakage measures beyond the 2015 IECC.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39	

	Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P256	LogID 5093	704.5.2.2 HVAC airflow testing	Final Formal Action: Approve as Modified
Submitter:	Donald Prather, ACCA		
Proposed Change:	Change to make this section align with mandatory requirements in other sections: (1) Measured flow at each supply and return register is within 25 percent of design flow <u>meets or exceeds the requirements in QI-5-2010</u> Total airflow is within 10% of design flow <u>meets or exceeds the requirements in QI-5-2010</u>		
Reason:	Recommend changing the balancing verification requirements to align with QI-5. QI-5 took into account the accuracy of the tools used to measure and verify in the tolerances allowed. Thus, this third party check would be a natural fit with those requirements. For example if the contractor's tool was off by 5% when balancing to plus or minus 10% and the verifiers tool was off by 5% when verifying a properly done balance was within 10% could be given a failing grade.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<i>Revise Standard as follows:</i> (1) Measured flow at each supply and return register is within 25 percent of design flow <u>meets or exceeds the requirements in QI-5-2010, Section 5.2.</u> (2) Total airflow is within 10% of design flow <u>meets or exceeds the requirements in QI-5-2010, Section 5.2.</u>		
Committee Reason:	Because QI-5 requirements were disapproved as mandatory requirements, this modification allows the use of QI-5 for this specific purpose as an option for additional points. The addition of the specific reference to Section 5.2 was added to provide further clarification of the specific QI-5 provisions that are applicable to this option. The "Change.....in other sections" was deleted as it was included as commentary for the original proposal and has been deleted to avoid any confusion.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P257	LogID TG5-43	704.5.3 Insulating hot water pipes	Final Formal Action: Approve
Submitter:	Amber Wood, NORESKO/AEC		

<p>Proposed Change:</p>	<p>704.5.3 Insulating hot water pipes. <u>Where not required by 2015 IECC, points are awarded for insulation with a minimum thermal resistance (R-value) of at least R-3 is applied to the following:</u></p> <p>(a) piping larger than <u>3/4 in. and larger in</u> outside diameter (b) piping serving more than one dwelling unit (c) piping branches serving kitchen sinks (d) piping located outside the conditioned space (e) piping from the water heater to a distribution manifold (f) piping located under a floor slab (g) buried piping (h) <u>supply and return</u> piping in recirculation systems other than demand recirculation systems (i) all other piping except the piping that meets the length requirements of Table 704.5.3 Table 704.5.3 Maximum Pipe Run Length</p> <table border="1"> <thead> <tr> <th>Nominal Pipe Diameter of largest pipe in run (inches)</th> <th>Maximum pipe length (feet) [±]</th> </tr> </thead> <tbody> <tr> <td>3/8</td> <td>30</td> </tr> <tr> <td>1/2</td> <td>20</td> </tr> <tr> <td>3/4</td> <td>10</td> </tr> </tbody> </table> <p>1. Total length of all piping from the source of hot water (either a water heater or distribution manifold (or tee) on a trunk line or a recirculation loop) to a point of use</p>	Nominal Pipe Diameter of largest pipe in run (inches)	Maximum pipe length (feet) [±]	3/8	30	1/2	20	3/4	10
Nominal Pipe Diameter of largest pipe in run (inches)	Maximum pipe length (feet) [±]								
3/8	30								
1/2	20								
3/4	10								
<p>Reason:</p>	<p>The table was deleted in the 2015 IECC.</p>								
<p>Committee Action from Meeting:</p>	<p>Approve</p>								
<p>Modification of Proposed Change:</p>									
<p>Committee Reason:</p>									
<p>Ballot Results on Committee Action:</p>	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>								
<p>Ballot Comments</p>									
<p>Agree with committee action:</p>									
<p>Disagree with committee action:</p>									
<p>Abstain:</p>									

<p>P258</p>	<p>LogID TG5-45</p>	<p>705 Innovative practices</p>	<p>Final Formal Action: Approve</p>
<p>Submitter:</p>		<p>Steve Rosenstock, Edison Electric Institute</p>	
<p>Proposed Change:</p>		<p>Section 202:</p>	

	<p><u>GRID-INTERACTIVE ELECTRIC THERMAL STORAGE (GETS).</u><u>An energy storage system that provides electric system grid operators such as utilities, independent system operators (ISOs) and regional transmission organizations (RTOs), with variable control of a building's space heating and service water heating end uses.</u></p> <p><u>705.7 Grid-Interactive Electric Thermal Storage System.</u> A Grid-Interactive Electric Thermal Storage System is installed.</p> <p>(1) <u>Grid-Interactive Water Heating System 1 Point</u></p> <p>(2) <u>Grid-Interactive Space Heating System 2 Points</u></p>
<p>Reason:</p>	<p>Grid-Interactive Electric Thermal Storage is an innovative technology with a growing reputation among market participants as a solution to some of today's most pressing energy issues.</p> <p>1. Building owners like GETS because it provides affordable and dependable space and service water heating for their structures.</p> <p>2. Electric grid operators like GETS because it helps them balance energy supply and demand in real time, thereby increasing grid stability while simultaneously reducing costs, energy and emissions. Maintaining grid stability becomes more challenging as the output of renewable energy generation (like wind and solar) is added to electric grids which explains why grid operators across the country (as well as the Federal Energy Regulatory Commission and the U.S. Department of Energy) have expressed their support for energy storage.</p> <p>3. Renewable energy developers like GETS because it complements their projects by providing cost-effective energy storage when renewable energy production exceeds demand. Without adequate energy storage, these projects are often curtailed.</p> <p>What is a Grid-Interactive Electric Thermal System (“GETS”)?</p> <p>For building owners and operators, GETS serve as traditional space and service water heating systems. GETS provide affordable and dependable space conditioning and domestic hot water. Nonetheless, GETS have significantly different operational and energy consumption characteristics from traditional space and service water heating systems as described in more detail below.</p> <p>Thermal battery. Electric utilities dispatch their generators in the order from the most cost efficient (base load generation) to the least cost efficient (peaking load generation). GETS complements the efficient dispatch of generation by utilities by allowing the storage of energy that is produced more efficiently for use later, and by avoiding the requirement to operate less efficient generators at peak load conditions. GTS accomplishes this feat by charging (heating bricks, water, or other storage media) at times when utilities have excess capacity. Often this is at night but it can vary between utilities. Because the system is grid-interactive, a GTS can charge at times that are optimum for the utility, allowing utilities to efficiently manage their peak demands and their customer costs. Heat that is stored for later use effectively makes GETS a thermal battery.</p> <p>Renewable energy. GETS is a unique complement to the generation of electricity from renewable energy like wind and solar. Many times peak power production from renewable energy sources does not coincide with a utility’s demand for electricity. As an example, wind generation usually peaks at night when demand for energy is not usually the greatest. For that reason, the Bonneville Power Administration in the Pacific Northwest and ERCOT in Texas in past years were forced to curtail the</p>

	<p>generation from wind generators at certain times because it didn't need all the electricity the wind generators were producing. GETS is a good fit for storing excess renewable energy and has been successfully deployed in Bonneville's service territory as well as the service territory of other electric utilities.</p> <p>Reduces winter peak. When electrical demands on a utility's system grow, it may be forced to dispatch less efficient generators to meet that demand, so to the extent demand is reduced the utility avoids costs (that would ultimately be passed on to customers) and saves energy. GETS allows the storage of energy produced by more efficient and/or renewable generators.</p> <p>Replaces fossil fuel in utility grid control. When electrical demand on a utility's grid changes (up or down), the most immediate system response is for the grid's frequency to drift away from ideal (60 cycles per second). To control these frequency excursions, utilities have traditionally operated fossil fuels generators to add voltage to the grid to raise the frequency as it falls away from 60 cycles. Grid-interactive GETS can be dispatched in lieu of fossil fuel generators to remedy frequency excursions, thereby saving energy and costs. According to a Kema report, usage of a non-carbon emitting resource such as GETS for providing regulation services can reduce carbon emissions for regulation by nearly 65%. GETS offer significant benefits to customers, including the ability to store renewable energy, the ability to reduce utility costs, and the ability to reduce the consumption of fossil fuel by utilities in the regulation of system frequency.</p> <p>Bibliography:</p> <p>See article at http://www.pjm.com/~media/about-pjm/newsroom/renewables/greener-grid.ashx for information on the value of ETS in the PJM Interconnection service territory.</p> <p>See article at http://www.sustainablebusinessoregon.com/articles/2012/04/bonneville-power-calls-for-first-wind.html?page=all for information on Bonneville Power curtailment of wind generation amounting to almost 100,000 MWH's in 2011.</p> <p>See Kema Consulting report (Commissioned by the U.S. Department of Energy under the supervision of Sandia National Laboratory) noting significant reduction in carbon emissions at http://prod.sandia.gov/techlib/access-control.cgi/2008/088229.pdf .</p> <p>See http://www.steffes.com/off-peak-heating/ets.html for more information on utility benefits of WTS, including energy savings associated with thermal storage and frequency regulation.</p> <p>See Sandia National Laboratory website at http://www.sandia.gov/ess/ for information on the contributions of energy storage to electric grid stability.</p> <p>For a detailed description of frequency regulation in North America see Department of Energy / National Energy Technology Laboratory Report Frequency Instability Problems in North American Interconnections, DOE/NETL-2011/1473, Final Report dated May 1, 2011 found at http://www.netl.doe.gov/energy/analyses/pubs/TransmissionFreqProb.pdf</p>										
Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:	This may facilitate integration of renewables into the grid.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>37</td> </tr> <tr> <td>Disagree with committee action:</td> <td>2</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	37	Disagree with committee action:	2	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	37										
Disagree with committee action:	2										
Abstain:	0										
Non-voting:	2										

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Neil Leslie: Grid-interactive systems have the potential to help with grid stability. They are not a green building benefit, nor are they an environmental benefit. At any other time than during specific grid-stability periods, they add to costs and GHG emissions compared to more efficient technologies such as heat pump water heaters. The net annual benefit of this technology approach is not proven, certainly until smart grid systems are fully implemented, and likely not even then, and may have enough significant unintended consequences to be a net negative for consumers and the environment.</p> <p>Ted Williams: Grid-interactive water heaters provide no restrictions from their being operated as conventional electric resistance storage water heater, which are increasingly being restricted due to their waste of primary energy and generation of carbon dioxide emissions over the full fuel cycle. All such water heaters may have the grid interaction function overridden by the push of a button and may be installed on grids without interactive control or without being "synced" to the grid. They should be treated in the NGBS no differently than conventional electric resistance storage water heaters.</p>
Abstain:	

P259 LogID TG5-50	705 Innovative practices	Final Formal Action: Disapprove
Submitter:	Wayne Stoppelmoor, Schneider Electric	
Proposed Change:	705.7 Vampire load control. At least 25% of the receptacles in the home shall be controlled with an automatic control device. Controlled receptacles shall be marked to differentiate them from uncontrolled receptacles.	
Reason:	<p>Plug loads are one of the largest and fastest growing energy end uses in residential and commercial spaces. Vampiric load is electric power consumed by electronic appliances while they are switched off or in a standby mode.</p> <ul style="list-style-type: none"> 13% of total residential electric demand is standby load. (PIER CEC-500-2008-035) Microwave uses more energy in 24 hour period for standby than it does for cooking. (Plug load resi controls presentation from Energy Solution for CA IOU Stakeholder meeting June 1, 2011) Residential standby load in CA requires four 500 MW power plants. (Plug load resi controls presentation from Energy Solution for CA IOU Stakeholder meeting June 1, 2011) A TV with a remote, for example, can use more energy during the 20 hours it is turned off than it does the four hours you watch it. (source: ConEdison Power of Green Poster) <p>Receptacle control helps manage these vampiric loads by turning off the power to certain appliances when we don't need them.</p> <p>Additional info and studies are here: http://www.efficientproducts.org/product.php?productID=11</p>	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The energy savings are uncertain because it requires the occupant to match the receptacle with the specific appliance to make the practice effective (i.e., dependent on occupant behavior)	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P260	LogID TG5-51	705 Innovative practices	Final Formal Action: Approve as Modified
Submitter:	Wayne Stoppelmoor and Steve Rosenstock,		
Proposed Change:	<p>705.7 Electrical Vehicle Charging Station. A Level 2 (208-240 Volt) vehicle charging station is installed on the building site.</p> <p><u>Points 1</u></p>		
Reason:	<p>This proposal will promote the usage of green energy in the transportation sector. Electric vehicles reduce the amount of energy used for transportation and do not create vehicle tailpipe emissions. The following is a link to a 2007 EPRI/NRDC report on the impact of the use of electric vehicles: http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?productId=00000000001015325</p>		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<p><i>Revise Standard as follows:</i> <i>Add new text to section 705 Innovative practices as follows:</i></p> <p>705.7 Electrical Vehicle Charging Station. A Level 2 or Level 3 electric vehicle charging station is installed on the building site. Charging station shall not be included in the building energy consumption.</p> <p><u>Points 1</u></p> <p><i>Add new text to section 202 Definitions as follows:</i></p> <p>Level 2 Electric Vehicle Charging Station. A device that is used to supply electricity to a plug-in hybrid electric vehicle or a plug-in electric vehicle and is rated for use with 208 to 240 Volts AC input.</p> <p>Level 3 Electric Vehicle Charging Station. A device that is used to supply electricity to a plug-in hybrid electric vehicle or a plug-in electric vehicle and is rated for use with 208 to 500 Volts, 3 phase electric AC input.</p>		
Committee Reason:	Improved definition and clarity.		
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2</p>		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:	<p>Christopher Mathis: I disagree with the committee action and vote to disapprove P260. The presence of an electric vehicle charging station is not inherently green. Without consideration of a local fuel source from which the electricity is generated, this change undermines the intent of ICC700.</p>		
Abstain:			

P261	LogID TG5-52	705 Innovative practices	Final Formal Action: Approve
Submitter:	Wayne Stoppelmoor , Schneider Electric		

Proposed Change:	705.7 Automatic demand response. Automatic demand response system is installed that curtails energy usage upon a signal from the utility or an energy service provider. <u>Points: 2</u>
Reason:	Demand response programs and systems reduce peak demand thereby reducing utilities' need to consume greater amounts of natural resources and emit greater amounts of carbon into the atmosphere.
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	Approve with points assigned at a later date
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P262	LogID TG5-49	705 Innovative practices	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality		
Proposed Change:	<u>705.7 Controls for conditioned air, IAQ and heated water. Controls are provided that deliver conditioned air, IAQ services, humidity control, ventilation air and/or service water heating more efficiently.</u>		
Reason:	As the thermal shell and equipment get more efficient, the remaining efficiency will be found in control systems for energy using devices and in the distribution systems for air and water. This would recognize innovative devices or designs that have more efficient controls. For example, it might include systems that control when "fresh air" is added to the home so that it was only added when really needed, that are smarter about when to modify indoor humidity, more efficiently distribute conditioned air, or limit the energy and water wasted in hot water delivery.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Other proposals and other sections of the Standard address this issue. This proposed change is not fully developed for inclusion in the Standard.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P263	LogID TG5-46	705.1 Energy consumption control	Final Formal Action: Approve
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Submitter:	Wayne Stoppelmoor, Schneider Electric										
Proposed Change:	<p>705.1 Energy consumption control. A whole-building or whole-dwelling unit device <u>or system</u> is installed that controls or monitors energy consumption.</p> <p>(1) programmable communicating thermostat <u>having the capability to be controlled remotely</u></p> <p>(2) energy-monitoring device <u>or system</u></p> <p>(3) energy management control system</p> <p><u>(4) programmable thermostat having control capability based on occupant presence or usage pattern</u></p>										
Reason:	<p>1) It is not clear from the existing language in item (1) that the thermostat is required to be controlled remotely. Having a thermostat that only communicates does not necessarily reduce energy consumption. For energy reduction, it is important for the thermostat to be controlled remotely.</p> <p>2) Systems should not be excluded from utilization to satisfy the requirement. In many cases, the requirement cannot be satisfied without the use of a system.</p> <p>3) Item 4 was added because implementation of these types of technologies will provide additional energy reduction.</p>										
Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P264 LogID TG5-47	705.1 Energy consumption control	Final Formal Action: Approve
Submitter:	Wayne Stoppelmoor, Schneider Electric	
Proposed Change:	<p>705.1 Energy consumption control. A whole-building or whole-dwelling unit device is installed that controls or monitors energy consumption.</p> <p>(1) Programmable communicating thermostat</p> <p>(2) Energy monitoring device</p> <p>(3) <u>Lighting control system</u></p> <p>(4) Energy management control system</p>	
Reason:	A whole-home lighting control system reduces energy consumption by allowing home owners the ability control (turn OFF or ON or to a specific light level in between ON and OFF) and/or monitor all the lighting from one location or from a remote location. These lighting control system allow for both automatic control of the lighting (e.g. lighting turned OFF at certain times of the day or night) and manual control of the lighting. Some also control temperature, window shades, or other home systems. Many high-performance green homes have them installed.	
Committee Action from Meeting:	Approve	

Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P265 LogID 5307	705.5 Additional renewable energy options	Final Formal Action: Approve
Submitter:	Lorraine Ross, L Ross Consulting Inc	
Proposed Change:	<p>705.5 Additional On-site renewable energy system options. An on-site renewable Renewable energy system(s) is installed on the property; (e.g., solar photovoltaic panels, building integrated photovoltaic system, wind energy system, on-site micro hydro power system, active solar space heating system, solar thermal hydronic heating system, photovoltaic hybrid heating system).</p> <p>Points: 1 (Points awarded per 100 W of system rating per 2,000 square feet of total conditioned floor area of the building.)</p> <p>Points: 1 Points awarded for every 100 W of system rating installed for every 2,000 square feet of total conditioned floor area of the building.</p> <p>No points shall be awarded in this section for solar thermal or geothermal systems that provide space heating, space cooling or water heating, Points for these systems are awarded in section 703.</p> <p><u>Note: Also revise/add these definitions:</u></p> <p><u>ON-SITE RENEWABLE ENERGY SYSTEM.</u> An energy generation system located on the building or building site that derives its energy from a renewable energy source.</p> <p><u>RENEWABLE ENERGY.</u> Energy derived from renewable energy sources that are regenerative or cannot be depleted.</p> <p><u>RENEWABLE ENERGY SOURCE.</u> Source of energy (excluding minerals) Energy derived from incoming solar radiation, including natural solar radiation itself, photosynthetic processes; from phenomenon resulting therefrom, including wind, hydropower, waves, and tides, biogas, biomass, or geothermal energy, and lake or pond thermal differences; from decomposition of waste material, including methane from landfills; from processes that use regenerated materials, including wood and bio-based products; and from the internal heat of the earth, including nocturnal thermal exchanges.</p>	
Reason:	<p>Reason: Adding and revising definitions for accuracy and to be in line with the I-codes. Several editorial changes are made for clarity and accuracy. The examples of systems have been deleted. Laundry lists such as these are not appropriate. The term Renewable Energy System is defined. There is a potential conflict that exists with solar thermal and geothermal heating, cooling, and water heating systems. These systems already get points via section 703. To avoid double counting a statement has been added to point users of these systems to the correct location for obtaining credit.</p>	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		

Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P266 LogID TG5-48	705.5 Additional renewable energy options	Final Formal Action: Approve
Submitter:	Amber Wood, NORESKO/AEC	
Proposed Change:	705.5 Additional renewable energy options. Renewable energy system(s) is installed on the property (e.g., solar photovoltaic panels, building integrated photovoltaic system, wind energy system, on-site micro-hydro power system, active solar space heating system, solar thermal hydronic heating system, photovoltaic hybrid heating system). (Points awarded per 100 W of system rating per 2,000 square feet of total conditioned floor area of the building.) <u>Multi-unit note: conditioned common area and non-residential space is permitted to be excluded from the total conditioned floor area for the purpose of calculating awarded points</u>	
Reason:	Allowance made for limited roof space for MF buildings.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P267 LogID 5071	Other for Chapter 7 (include section number and title below)	Final Formal Action: Disapprove
Submitter:	Philip LaRocque, LaRocque Business Management Services, LLC	
Proposed Change:	704.6 ENERGY STAR or equivalent appliance(s) are installed: (1) refrigerator _____ 5 (2) dishwasher _____ 2 (3) washing machine _____ 4	

Reason:	This change returns to the 2008 NGBS where a builder is rewarded for ENERGY STAR appliances as an excellent energy conservation tool (more cost effective than the 705 ENERGY SMART practice -though that should be retained)and returns to consistency with ES kilowatt hours saved factors. I recognize that the NGBS REM-based cost comparison report may reflect and reward this energy savings practice but this amendment is much more instructive and promotional for greater energy efficiency with a direct practice point structure for the ES appliance investment. In addition, we give water conservation points for ES dishwashers and washing machines in Chapter 8 so we should have some consistency on direct ES appliance rewards in Chapter 7. This should be available and keep the ENERGY SMART appliance practice points under Innovative Practices to further motivate the builder/buyer to do even more.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Already included in Section 703.5.3. In addition, points are assigned based on energy savings under a separate committee task.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P268 LogID 5152	Other for Chapter 7 (include section number and title below) <i>Final Formal Action: Disapprove</i>
Submitter:	Stephen J Holzer, eM8s, LLC
Proposed Change:	705.7 Building Information Modeling (BIM) Project Team uses BIM to develop a whole house energy model, and applies the model to optimize energy efficiency.
Reason:	Building Information Modeling (BIM) is a computer generated model based process that simulates planning, design, construction and operations for buildings. It is a single repository for both three-dimensional, two-dimensional, and material properties information that allows data interoperability of all stakeholders to better inform design and construction decisions with the goal of producing the best product possible. This information technology will increase design and construction efficiencies and decrease costs for builders and end users. BIM may also facilitate better communication, collaboration and coordination among building industry professionals and trades working on the same project. Credit should be given to Builders utilizing the open industry standards as defined in the National Building Information Modeling Standard.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	In favor of action on P025.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P269 LogID 5324	Other for Chapter 7 (include section number and title below) <i>Final Formal Action: Approve as Modified</i>																																			
Submitter:	Randall Melvin, Winchester Homes, Inc.																																			
Proposed Change:	<p>701.1.4 Alternate Compliance Path 2 <u>Any building achieving a HERS Index score, corresponding to the scores shown in Table 701.1.4, shall be deemed to comply with the indicated threshold level (bronze, silver, gold or emerald) for the NGBS Energy Chapter and receive the baseline NGBS Energy Chapter points established for that threshold level. Two additional NGBS points shall be awarded for each HERS Index point below the minimum required threshold levels shown.</u></p> <p>Table 701.1.4</p> <table border="1"> <thead> <tr> <th><u>Climate Zone</u></th> <th><u>Bronze Compliance Maximum Allowable HERS Index Score and base NGBS</u></th> <th><u>Silver Compliance Maximum Allowable HERS Index Score</u></th> <th><u>Gold Compliance Maximum Allowable HERS Index Score</u></th> <th><u>Emerald Compliance Maximum Allowable HERS Index Score</u></th> </tr> </thead> <tbody> <tr> <td><u>1 and 2</u></td> <td><u>59</u></td> <td><u>55</u></td> <td><u>45</u></td> <td><u>39</u></td> </tr> <tr> <td><u>3</u></td> <td><u>59</u></td> <td><u>55</u></td> <td><u>45</u></td> <td><u>39</u></td> </tr> <tr> <td><u>4</u></td> <td><u>63</u></td> <td><u>59</u></td> <td><u>49</u></td> <td><u>43</u></td> </tr> <tr> <td><u>5</u></td> <td><u>63</u></td> <td><u>59</u></td> <td><u>49</u></td> <td><u>43</u></td> </tr> <tr> <td><u>6</u></td> <td><u>62</u></td> <td><u>58</u></td> <td><u>48</u></td> <td><u>42</u></td> </tr> <tr> <td><u>7 and 8</u></td> <td><u>60</u></td> <td><u>56</u></td> <td><u>46</u></td> <td><u>40</u></td> </tr> </tbody> </table>	<u>Climate Zone</u>	<u>Bronze Compliance Maximum Allowable HERS Index Score and base NGBS</u>	<u>Silver Compliance Maximum Allowable HERS Index Score</u>	<u>Gold Compliance Maximum Allowable HERS Index Score</u>	<u>Emerald Compliance Maximum Allowable HERS Index Score</u>	<u>1 and 2</u>	<u>59</u>	<u>55</u>	<u>45</u>	<u>39</u>	<u>3</u>	<u>59</u>	<u>55</u>	<u>45</u>	<u>39</u>	<u>4</u>	<u>63</u>	<u>59</u>	<u>49</u>	<u>43</u>	<u>5</u>	<u>63</u>	<u>59</u>	<u>49</u>	<u>43</u>	<u>6</u>	<u>62</u>	<u>58</u>	<u>48</u>	<u>42</u>	<u>7 and 8</u>	<u>60</u>	<u>56</u>	<u>46</u>	<u>40</u>
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<u>6</u>	<u>62</u>	<u>58</u>	<u>48</u>	<u>42</u>																																
<u>7 and 8</u>	<u>60</u>	<u>56</u>	<u>46</u>	<u>40</u>																																
Reason:	The HERS Index is now an approved voluntary national standard - ANSI/RESNET 301-2014 making it available as a direct reference from the NGBS. The HERS index has wide spread acceptance and use by builders, code officials, energy raters and consumers alike. Leveraging the benefits of the well established HERS Index will provide a familiar streamlined alternative for compliance with the Energy Chapter of the NGBS. The threshold HERS Index score provided for the Bronze level in Table 701.1.4, corresponds with the historical practice of the committee of making the bronze level of the Energy Chapter of the NGBS approximately 15% more stringent than the baseline energy code which in this case could be either the 2012 or 2015 IECC, as they are nearly identical in their stringencies. The Emerald threshold has been set at the “practical achievable” limit and silver and gold levels set at intermediary interpolated levels between bronze and emerald. The additional 2 NGBS points awarded for every additional point reduction in HERS Index scores, below the established threshold limit, were added to parallel a recent improvement made to the NGBS. The NGBS now recognizes and provides incentive for performance efficiency improvements beyond achieving the base threshold points.																																			
Committee Action from Meeting:	Approve as Modified																																			
Modification of Proposed Change:	<i>Revise Standard as follows:</i>																																			

	<p>701.1 Mandatory requirements. The building shall comply with either Section 702 (Performance Path), or Section 703 (Prescriptive Path), or <u>Section 704 (HERS Index Target Path)</u>. Items listed as “mandatory” in Section 701.4 apply to both Performance and Prescriptive <u>all</u> Paths.</p> <p>701.1.1 Minimum Performance Path requirements. A building complying with Section 702 shall exceed the baseline minimum performance required by the ICC IECC by 15 percent, and shall include a minimum of two practices from Section 704 <u>705</u>.</p> <p>701.1.2 Minimum Prescriptive Path requirements. A building complying with Section 703 shall obtain a minimum of 30 points from Section 703, and shall include a minimum of two practices from Section 704<u>705</u>.</p> <p>701.1.3 HERS Index Target Compliance. <u>A building complying with Section 704 shall obtain a minimum of 30 points from Section 704 and shall include a minimum of two practices from 705.</u></p> <p>(Renumber 701.1.3 Alternative bronze level compliance to 701.1.4)</p> <p>ADD NEW</p> <p><u>SECTION 704 HERS INDEX TARGET</u></p> <p><u>704.1 HERS index Target Compliance.</u> <u>Compliance with the energy chapter shall be permitted to be based on the EPA HERS Index Target Procedure for Energy Star Qualified Homes. Points from Section 704 (HERS Index Target) shall not be combined with points from Section 702 (Performance Path) or Section 703 (Prescriptive Path).</u></p> <p><u>704.2 Point calculation.</u> <u>Points shall be computed based on Steps “1a” through “1d” of the EPA HERS Index Target Procedure. Points shall be computed individually for each building as:</u></p> <p><u>Points =</u></p> <p><u>30 + (percent less than EnergyStar HERS Index Target for that building) * 2.</u></p> <p>ADD REFERENCE in Section 1302–</p> <p><u>EPA – ENERGY STAR Documents</u></p> <p><u>HERS Index Target Procedure for EnergyStar Qualified Homes, Version 3.0, Revision 07, National Program Requirements</u></p>										
Committee Reason:	The intent is to provide an additional compliance path and use a specific house-to-house reference calculation using the EPA HERS Index Target Procedure (V3.0); it also allows for the use of the existing HERS infrastructure around the country; the HERS Index metric found broad market acceptance by builders, consumers, code officials, and energy raters.										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>36</td> </tr> <tr> <td>Disagree with committee action:</td> <td>3</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	36	Disagree with committee action:	3	Abstain:	0	Non-voting:	2
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Agree with committee action:	36										
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Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											

Disagree with committee action:	<p>Steven Rosenstock: There are significant problems with the HERS methodology and how the score is calculated. There can be a lot of "game playing" that results in homes that have a good HERS score but use more energy than other homes with a higher HERS score.</p> <p>Charles Foster: I supported the original proposal but oppose the modification.</p> <p>As noted in previous proposals, the use of a single multiplier to "convert" site electricity to source is unfair to renewable energy.</p> <p>Christopher Mathis: I disagree with the committee action and vote to disapprove P269. While the use of home energy ratings is a valuable contributor to heightening public awareness of building performance and providing builders a valuable comparative tool, home energy ratings alone do not ensure compliance with the minimum and mandatory requirements of the code. If this proposal were refined to ensure compliance with the minimum and mandatory requirements of the IECC then home energy ratings could become a component of ICC 700 compliance.</p>
Abstain:	

P270	LogID 5249	Other for Chapter 7 (include section number and title below)	Final Formal Action: Disapprove										
Submitter:		Jeremy Velasquez, US-EcoLogic											
Proposed Change:		<p>Under SECTION 704 - Additional practices:</p> <ol style="list-style-type: none"> 1. Add option for "light" commissioning for unitary water heating systems - 5 pts 2. Add option for "light" commissioning for Lighting systems and controls - 5 pts <p>(this particular scope of work would have to be clearly defined at a future date - or "borrowed" from LEED-NC type commissioning for water heating and lighting systems.</p>											
Reason:		Commissioning of systems does provide some additional quality assurance that systems are installed and working properly- and therefore makes the project more energy efficient.											
Committee Action from Meeting:		Disapprove											
Modification of Proposed Change:													
Committee Reason:		This proposal is conceptual only and does not provide specific provisions for to consider. In addition, the term "light" for such provisions would need to be defined.											
Ballot Results on Committee Action:		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Eligible to vote:</td> <td style="text-align: right;">41</td> </tr> <tr> <td>Agree with committee action:</td> <td style="text-align: right;">39</td> </tr> <tr> <td>Disagree with committee action:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Abstain:</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Non-voting:</td> <td style="text-align: right;">2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Agree with committee action:													
Disagree with committee action:													
Abstain:													

P271	LogID 5234	Other for Chapter 7 (include section number and title below)	Final Formal Action: Withdrawn
Submitter:		Eric DeVito, BBRS	
Proposed Change:		Chapter 2	

	<p>DEFINITIONS</p> <p>VISIBLE TRANSMITTANCE (VT). The ratio of visible light entering the space through the fenestration product assembly to the incident visible light, Visible Transmittance, includes the effects of glazing material and frame and is expressed as a number between 0 and 1.</p> <p>Chapter 7</p> <p>ENERGY EFFICIENCY</p> <table border="1"> <tr> <td colspan="3">704.2 Lighting</td> </tr> <tr> <td colspan="3">704.2.4 Visible Light. In climate zones 1-4, windows, glazed doors (with more than 50% glazing) and skylights meet the requirements of Table 703.1.6.2(a), have a total area equal to at least 15% of conditioned floor area and, on an area-weighted average basis, have an NFRC-certified (or equivalent) VT that exceeds the following applicable minimum values:</td> </tr> <tr> <td>Windows</td> <td>0.42</td> <td>5</td> </tr> <tr> <td> Fixed</td> <td>0.32</td> <td></td> </tr> <tr> <td> Operable</td> <td>0.49</td> <td></td> </tr> <tr> <td>Skylights</td> <td></td> <td></td> </tr> </table>	704.2 Lighting			704.2.4 Visible Light. In climate zones 1-4, windows, glazed doors (with more than 50% glazing) and skylights meet the requirements of Table 703.1.6.2(a), have a total area equal to at least 15% of conditioned floor area and, on an area-weighted average basis, have an NFRC-certified (or equivalent) VT that exceeds the following applicable minimum values:			Windows	0.42	5	Fixed	0.32		Operable	0.49		Skylights		
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Windows	0.42	5																	
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Reason:	<p>Natural light provides a variety of benefits to the occupants of a green home, many of which are not credited in the current ICC-700. Aside from the potential energy savings associated with the incorporation of daylight into lighting design, more natural light can increase indoor aesthetics, improve occupant health and provide a better connection between the occupants and the outdoors. The vast majority of residential windows are labeled with an NFRC label that includes a measurement of the visible light transmittance of the window unit, but currently there is no reference to visible light transmittance in ICC-700. The proposal above adopts the IECC definition of Visible Transmittance into ICC-700 and sets a very achievable minimum VT requirement. We have limited this proposal to climate zones 1-4 to coincide with the current fenestration requirements under the IECC and ICC-700 for climate zones 1-4 that include low-SHGC requirements. Although there are many products that achieve both a low SHGC and a high VT, there are also products and methods that reduce the amount of VT to levels that do not provide adequate natural light to the indoors. This proposal simply gives a credit for: (a) installing a reasonable amount of fenestration to increase the likelihood of windows placed to provide daylight, (b) selecting fenestration products that allow a moderate amount of natural light into the living space, and (c) selecting enhanced fenestration products (table 703.1.6.2(a)) to offset the impact of any increase in installed fenestration. For reference, because VT is expressed as a measurement between 0 and 1, a window unit (including frame) with a 0.32 VT is allowing 32% of the visible light into the interior space.</p>																		
Committee Action from Meeting:	Withdrawn																		
Modification of Proposed Change:																			
Committee Reason:																			
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Ballot Comments																			
Agree with committee action:																			

Disagree with committee action:	
Abstain:	

P272 LogID TG4-01	801.1 Indoor hot water usage	Final Formal Action: Approve																																																																																																												
Submitter:	Michael Cudahy, PPFA																																																																																																													
Proposed Change:	<p>Table 801.1 (2)</p> <p style="text-align: center;">Common Hot Water Pipe Internal Volumes</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="12" style="text-align: center;">OUNCES OF WATER PER FOOT OF TUBE</th> </tr> <tr> <th style="text-align: center;">Size Nominal, Inch</th> <th style="text-align: center;">Copper Type M</th> <th style="text-align: center;">Copper Type L</th> <th style="text-align: center;">Copper Type K</th> <th style="text-align: center;">CPVC CTS SDR 11</th> <th style="text-align: center;">CPVC SCH 40</th> <th style="text-align: center;">CPVC SCH 80</th> <th style="text-align: center;">PE-RT SDR 9</th> <th style="text-align: center;">Composite ASTM F 1281</th> <th style="text-align: center;">PEX CTS SDR 9</th> <th style="text-align: center;">PP SDR 7.4 F2389</th> <th style="text-align: center;">PP SDR 9 F2389</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3/8"</td> <td 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F2389	3/8"	1.06	0.97	0.84	N/A	1.17	N/A	0.64	0.63	0.64	N/A	N/A	1/2"	1.69	1.55	1.45	1.25	1.89	1.46	1.18	1.31	1.18	<u>1.72</u>	<u>1.96</u>	3/4"	3.43	3.22	2.90	2.67	3.38	2.74	2.35	3.39	2.35	<u>2.69</u>	<u>3.06</u>	1"	5.81	5.49	5.17	4.43	5.53	4.57	3.91	5.56	3.91	<u>4.41</u>	<u>5.01</u>	1 1/4"	8.70	8.36	8.09	6.61	9.66	8.24	5.81	8.49	5.81	<u>6.90</u>	<u>7.83</u>	1 1/2"	12.18	11.83	11.45	9.22	13.20	11.38	8.09	13.88	8.09	<u>10.77</u>	<u>12.24</u>	2"	21.08	20.58	20.04	15.79	21.88	19.11	13.86	21.48	13.86	<u>17.11</u>	<u>19.43</u>
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Reason:	PP (polypropylene) is a newer hot water material for plumbing now recognized and approved in the plumbing codes and should be included here. The types commonly used in residential type plumbing applications are SDR 7.4 and SDR 9.																																																																																																													
Committee Action from Meeting:	Approve																																																																																																													
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Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P273	LogID TG4-02	801.1(2)	Final Formal Action: Approve
Submitter:	Michael Cudahy, PPFA		
Proposed Change:	<p><i>Add new section to 802 Innovative practices as follows:</i></p> <p><u>802.2 Reclaimed water, graywater, or rainwater pre-piping.</u></p> <p><u>Reclaimed, graywater, or rainwater systems are rough plumbed into buildings for future use where service is not yet available or permitted by applicable codes or by the authority having jurisdiction. 1 point per roughed in system</u></p> <p><i>(renumber following sections)</i></p>		
Reason:	<p>The NGBS could offer some points for "pre-plumbing" a home for the eventual use of alternate water sources where it may not be available.</p> <p>The NGBS already offers many points for including systems, but, why not offer points for pre-plumbing in areas where it is not yet to code, or currently available? The buildings will last many years, and installing plumbing systems after the building is complete is a serious challenge, if not too difficult to implement.</p>		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			
Committee Reason:			
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P274	LogID 5164	801.2 Water-conserving appliances	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	(3) washing machine with a water factor of 6.0 <u>4.0</u> or less		
Reason:	<p>The maximum water factor for an ENERGY STAR qualified washing machine is 6.0. (a lower value is more water efficient) It would seem that the highest number of points should go to more efficient washing machines. There are 494 labeled ENERGY STAR models of clothes washers and 360 have a water factor of 4.0 or less.</p>		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			

Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P275 LogID 5165	801.3 Showerheads	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(2) All shower compartments in the dwelling unit(s) and common areas meet the requirements of 801.3(1) and all showerheads are in accordance with one of the following: (a) 2.0 to less than 2.5 gpm. 11 Additional WaterSense labeled -- 11 points (b) 1.6 to less than 2.0 gpm WaterSense labeled and flow rate of 1.7 gpm or less -- 14 points	
Reason:	All EPACT compliant showerheads that flowed at 2.5 or less would receive points under (1). They could simplify by recognizing high efficiency showerheads labeled by WaterSense which have a maximum flow of 2.0 gpm. This would ensure that performance criteria would be met – allowing the floor of 1.6 gpm could be eliminated. Provide additional points for WaterSense labeled showerheads that flow at 1.7 gpm or less.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of action on P277. The added WaterSense label is unnecessary with the values listed. This provides protection against any performance “erosion” that could occur in any referenced third-party program.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P276 LogID 5138	801.3 Showerheads	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	801.3 (1) The total maximum combined flow rate of all showerheads controlled by a single valve at any point in time in a shower compartment is 1.6 to less than 2.45 gpm. Maximum of two valves are installed per shower compartment. The flow rate is tested at 80 psi (552 kPa) in accordance with ASME A112.18.1. Showerheads are served by an automatic compensating valve that complies with ASSE 1016 or ASME A112.18.1 and specifically designed to provide thermal shock and scald protection at the flow rate of the showerhead.	

Reason:	The federal minimum rate is 2.5 gpm. With the practice worded at "... to less than 2.5 gpm" makes it too easy for someone to quickly read it and assume that a 2.5 gpm showerhead complies. The "less than" should be defined to be substantial enough to be rewarded with points. A showerhead at 2.49 gpm would get the points but is that really worth 4 points. The upper limit of 2.4 is merely a suggestion. The committee is encouraged to set a value that represents a practical reduction over the current federal minimum worthy of the points.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	The current language is not ambiguous and the change would add confusion.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P277	LogID TG4-06	801.3 Showerheads	Final Formal Action: Approve										
Submitter:	Hope Medina and Joe Green,												
Proposed Change:	(2) All shower compartments in the dwelling unit(s) and common areas meet the requirements of 801.3(1) and all showerheads are in accordance with one of the following: (a) 2.0 to less than 2.5 gpm (b) 1.6 to less than 2.0 gpm (c) <u>Less than 1.6 gpm</u>												
Reason:	An additional line item was added to allow for those who would choose showerheads which expel water at a rate of less than 1.6 gallons per minute. The addition of this line item will allow for the opportunity for more points for those who would choose a showerhead which exceeds the previous best practice.												
Committee Action from Meeting:	Approve												
Modification of Proposed Change:													
Committee Reason:													
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>			Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41												
Agree with committee action:	39												
Disagree with committee action:	0												
Abstain:	0												
Non-voting:	2												
Ballot Comments													
Agree with committee action:													
Disagree with committee action:													
Abstain:													

P278	LogID TG4-03	801.4.1 Lavatory Faucets	Final Formal Action: Disapprove
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March 6, 2015

Submitter:	Hope Medina & Joe Green,
Proposed Change:	(2) all lavatory faucets <u>located within each the</u> dwelling unit(s) and <u>within all common areas of a multi-unit building</u>
Reason:	This section causes some confusion for when to apply it and how it is applied. This was an editorial cleanup to clarify how this section was intended to be administered.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	In favor of action on P281.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<i>Hope Medina:</i> per reason statement.
Abstain:	

P279 LogID 5139	801.4.1 Lavatory faucets	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	801.4.1 Water-efficient lavatory faucets with a maximum flow rate of 1.5 gpm (5.68 L/m), tested at 60 psi (414kPa) in accordance with ASME A112.18.1, are installed: (Points awarded for 801.4.1 or 801.4.2, not both).	
Reason:	This change is to make it consistent with the treatment for all the toilets in the home meeting 801.5.2. Or a change could be made to 801.5 to be consistent with 801.4.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	No reason to prevent acquiring points for both options because they are separate issues.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P280 LogID 5166	801.4.1 Lavatory faucets	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	<u>WaterSense labeled</u> water-efficiency lavatory faucets...	
Reason:	We recommend referencing WaterSense labeled lavatory faucets which flow at 1.5 gpm or less.	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The added WaterSense label is unnecessary with the values listed. This provides protection against any performance "erosion" that could occur in any referenced third-party program.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P281 LogID 5167	801.4.1 Lavatory faucets	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Revise: (2) all lavatory faucets in the dwelling unit(s) and common areas Replace "and common areas with" new text: <u>801.4.3 Water-efficient lavatory faucets with a maximum flow rate of 0.5 gpm (1.89 L/m), tested at 60 pst (414 kPa) in accordance with ASME A112.18.1, are installed in all common areas. — 3 points</u>	
Reason:	In a public use or common area, they should not use private use lavatory faucets (which WaterSense labels at 1.5 gpm or less). The commonly accepted flow rate for public use lavatory faucets is 0.5 gpm, so giving points for a faucet that flows at 1.5 gpm is counter to the "greening" intent of the standard.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	Revise proposed change as follows (in red): (2) all lavatory faucets in the dwelling unit(s) and common areas Replace "and common areas with" new text: 801.4.3 Water-efficient lavatory faucets with a maximum flow rate of 0.5 gpm (1.89 L/m), tested at 60 pst (414 kPa) in accordance with ASME A112.18.1, are installed in all common areas. — 3 points	
Committee Reason:	By the definition of common area this lavatory does not fall under the scope of this standard. These common area lavatory faucets are covered by federal law.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P282 LogID TG4-05	801.5 Water closets and urinals	Final Formal Action: Approve as Modified
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Submitter:	Hope Medina, Cherry Hills Village										
Proposed Change:	(2) A water closet is installed with an effective flush volume of 1.28 gallons (4.85 L) or less when tested in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14, as applicable, and is in accordance with EPA WaterSense Tank Type Toilets.										
Reason:	The values and testing standards are what should be placed in this standard. EPA's WaterSense is a governmental funded program which is subject to budget cuts or with a change of administration may no longer exist. We have no control over what direction the EPA's WaterSense program may choose to go, but we do have control over this standard with it's values. By requiring water closets and urinals to be labeled in accordance to WaterSense we may start to eliminate innovation from smaller companies that would not have the financial opportunity to acquire the WaterSense label, but have products that meet or exceed those specific requirements.										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> (2) A water closet is installed with an effective flush volume of 1.28 gallons (4.85 L) or less and meets the flush performance criteria when tested in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14, as applicable, and is in accordance with EPA WaterSense Tank Type Toilets.										
Committee Reason:	The added WaterSense label is unnecessary with the values listed. This provides protection against any performance "erosion" that could occur in any referenced third-party program. The flush performance criteria was part of the water sense program, and should be included even if the Water Sense name is removed.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P283 LogID 5168	801.5 Water closets and urinals	Final Formal Action: Disapprove										
Submitter:	Brett VanAkkeren, USEPA											
Proposed Change:	(2) A water closet is installed with an effective flush volume of 1.28 gallons (4.85 L) or less when tested in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.18.14 as applicable, and is in accordance with EPA WaterSense labeled Tank Type Toilets.											
Reason:	Simplify language to ensure that products are certified as meeting the WaterSense specification of 1.28 gpf. As currently drafted, it could suggest that a product that met the specification but had not been certified as doing so could earn the points.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	The added WaterSense label is unnecessary with the values listed. This provides protection against any performance "erosion" that could occur in any referenced third-party program.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P284	LogID 5169	801.5 Water closets and urinals	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	(4)(b) One or more <u>WaterSense</u> labeled urinals with a flush volume of 0.5 gallons (1.9L) or less when tested in accordance with ASME A112.19.2.		
Reason:	Simplify language to ensure that products are certified as meeting the WaterSense specification, which allows a maximum volume of 0.5 gpf. Although not a comment, there does not appear to be a maximum value for this subsection as there is for water closets.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	The added WaterSense label is unnecessary with the values listed. This provides protection against any performance “erosion” that could occur in any referenced third-party program.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P285	LogID TG4-07	801.6 Irrigation systems	Final Formal Action: Disapprove
Submitter:	Hope Medina, Cherry Hills Village		
Proposed Change:	801.6 Irrigation systems. <u>Irrigation system that use up to 1 inch of water for the design of the irrigation or landscape system.</u>		
Reason:	Irrigation and landscape systems are offenders of large amounts of water usage and there is no limit assigned to when points can be awarded for them in either this standard or the base codes. Because this is considered an above code program it would make sense to start regulating the amount of water that these systems are designed and installed to.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	In favor of action on P286.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	

Ballot Comments	
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Agree with committee action:	
Disagree with committee action:	
Abstain:	

P286	LogID TG4-08	801.6 Irrigation systems	Final Formal Action: Approve as Modified
Submitter:	Brent Mecham, Irrigation Association		
Proposed Change:	<p>801.6.1 Multi-stream, multi-trajectory rotating nozzles are installed in lieu of or spray head nozzles <u>with improved performance characteristics shall have a maximum precipitation rate of 1.20 inches per hour for turf or landscaping. Nozzle performance shall be tested by an accredited third party laboratory and have results posted.</u> 6 points</p>		
Reason:	<p>There have been advances in nozzle technology that improves distribution uniformity and lowers the precipitation rate from the typical 1.50-2.00 inches per hour range for spray heads nozzles, but not all of these nozzles fall into the “multi-stream, multi-trajectory rotating nozzle” category. By making this change with a cap of 1.20 inches per hour (which is a minimum 25% reduction in precipitation rate), it will encourage more innovation by manufacturers to continue improving sprinkler nozzles without limiting the technology to be used. Ultimately it is the irrigation schedule that takes into account the precipitation rate when determining runtimes, but a lower precipitation rate will mean fewer cycles to apply the required water. Having the nozzle performance validated through testing by an accredited independent third party laboratory would be similar to the process used by EPA WaterSense when they label products</p>		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>801.6.1 Multi-stream, multi-trajectory rotating nozzles are installed in lieu of or spray head nozzles with improved performance characteristics shall have a maximum precipitation rate of 1.20 inches per hour for turf or landscaping. <u>Nozzle performance shall be tested by an accredited third party laboratory and have results posted.</u> 6 points</p>		
Committee Reason:	Improved performance characteristics were not measurable.		
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2</p>		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P287	LogID TG4-09	801.6 Irrigation systems	Final Formal Action: Approve
Submitter:	Brent Mecham, Irrigation Association		
Proposed Change:	<p>801.6.6 All sprinkler irrigation zones utilize pressure regulation so sprinklers operate at manufacturers <u>recommended operating pressure.</u> 3 points</p>		
Reason:	<p>Sprinkler nozzles have a preferred or optimal operating pressure to achieve maximum performance, but most irrigation systems are operated at higher pressures than the equipment really needs. Higher pressure then increases the flow and changes the distribution pattern of the nozzle and it is seldom accounted for in the irrigation schedule. Additionally, different sprinklers work best at different pressures, for example spray heads typically work best at 30 psi while rotors or rotating nozzles will</p>		

	work best in the 40-50 psi range depending on the manufacturer. This over pressurization of sprinklers is a silent water waster but it can be regulated with currently available products that will improve irrigation efficiency. Currently EPA WaterSense program is considering labeling pressure regulating spray heads because of the potential in water savings, but pressure regulation can take place at the sprinkler head (for spray heads) or at the zone valve, (applicable to all sprinkler types) depending on the designer's preference when considering all site conditions.										
Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P288	LogID 5140	801.6.2 Drip irrigation is installed	Final Formal Action: Approve										
Submitter:	Robert Hill, Home Innovation Research Labs												
Proposed Change:	801.6.2 Drip irrigation is installed. (1) Drip irrigation is installed for <u>all</u> landscape beds. (2) Subsurface drip is installed for <u>all</u> turf grass areas. (3) Drip irrigation zones specifications show plant type by name and water use/need for each emitter (Points awarded only if specifications are implemented.)												
Reason:	Some indication of how much drip irrigation is needed for the points should be included in the practice. 801.6.4 seems out of place when it should be connected to 801.6.2. If this change is done the "8 Max" needs to be deleted.												
Committee Action from Meeting:	Approve												
Modification of Proposed Change:													
Committee Reason:													
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>			Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41												
Agree with committee action:	39												
Disagree with committee action:	0												
Abstain:	0												
Non-voting:	2												
Ballot Comments													
Agree with committee action:													
Disagree with committee action:													
Abstain:													

P289	LogID 5141	801.6.3 Landscape plan and implementation	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs		

Proposed Change:	801.6.3 Landscape plan and implementation are executed by a certified WaterSense Professional or equivalent as approved by Adopting Entity. 5 Additional.
Reason:	It is not clear what these points are in addition to. Are points required in 801.6.1 and/or 801.6.2 and if so how many are required.
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P290 LogID 5170	801.6.3 Landscape plan and implementation	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Landscape <u>irrigation</u> plan and implementation are executed by a certified WaterSense Professional or professional certified by a WaterSense labeled program or equivalent as approved by Adopting Entity.	
Reason:	WaterSense does not have a professional certification category for landscape planning – only for irrigation design, installation and audits. Language has been changed to reflect irrigation focus and also to reflect pending changes to the WaterSense program that will require changes in how we talk about certified professionals.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> Landscape Irrigation plan and implementation are executed by a certified WaterSense Professional or professional certified by a WaterSense labeled program or equivalent as approved by Adopting Entity.	
Committee Reason:	To be specific to an irrigation plan.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P291 LogID 5142	801.6.4 Drip irrigation zones specifications show plant type	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	Delete Section 801.6.4 in its entirety without replacement.	
Reason:	Another proposed change has been submitted to include this practice as part of 801.6.2.	

Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P292 LogID 5067	801.6.5 Irrigation system(s) smart controller or no irrigation is installed	Final Formal Action: Disapprove										
Submitter:	Philip LaRocque, LaRocque Business Management Services, LLC											
Proposed Change:	801.6.5 (2) No irrigation is installed and a landscape plan is developed in accordance with Section 503.5, as applicable.											
Reason:	We need to return to the 2008 NGBS on this practice. A builder should be rewarded for simply not having an irrigation system with no requirement to have a landscape plan. We should be motivating the conservation of water thru no irrigation system installation without the builder adding the expense of a landscape plan with two practices.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	Landscape plan is important for implementation of this practice. Need to retain both requirements to ensure that there is not a larger water demand based on plants installed.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P293 LogID 5052	801.6.5 Irrigation system(s) smart controller or no irrigation is installed	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	(2) No irrigation is installed and a landscape plan is developed and implemented in accordance with Section 503.5, as applicable, (1)-(4) and achieving at minimum of X points from (1)-(4).	
Reason:	The 2012 NGBS is not clear if all or only some of the 503.5 practices must be met. Some of the 503.5 practices do not really impact water usage. The task group should recommend the appropriate number of points.	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Current language is adequate for implementing the intent of the practice.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P294 LogID 5171	801.6.5 Irrigation system(s) smart controller or no irrigation is installed	Final Formal Action: Approve as Modified
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(1) Evapotranspiration (ET) based irrigation controller with a rain sensor or soil moisture sensor based irrigation controller. --- 8 points (2) <u>WaterSense labeled irrigation controller -- 10 points</u> (3) (2) No irrigation is installed....	
Reason:	EPA WaterSense now has a specification to label weather-based irrigation controllers and is in the process of developing a similar specification for soil moisture based irrigation controllers. We suggest providing points for those controllers.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> 801.6.5 The irrigation system(s) is controlled by a smart controller or no irrigation is installed. (Points for 801.6.5(2) are not additive.) with points for 801.6.5(1) (1) Evapotranspiration(ET) based irrigation controller with a rain sensor or soil moisture sensor based irrigation controller. --- 8 points (2) WaterSense labeled Irrigation controllers <i>are in accordance with WaterSense® Specification for Weather-Based Irrigation Controllers (Version 1.0, 2011)</i> -- 10 points (3) (2) No irrigation is installed....applicable	
Committee Reason:	The heading on that section needed to be clarified as to how the points should be administered, and that they were not additive.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		

Disagree with committee action:	
Abstain:	

P295	LogID TG4-04	801.7 Rainwater collection and distribution	<i>Final Formal Action: Disapprove</i>
Submitter:	Hope Medina, Cherry Hills Village		
Proposed Change:	801.7.3 Rainwater is used to supply a residential fire sprinkler system when installed by a certified professional.		
Reason:	Rainwater collection and distribution for domestic water uses is becoming a more common practice. With fire sprinklers requirements also becoming required in more jurisdictions as time goes by we should be offering innovative ideas for water “efficiency” for their supply. NFPA13 section A.24.2(7) states that captured rainwater is not generally considered a problem, since NFPA13 has allowed the use of open lakes, rivers, ponds for supply of fire sprinkler systems.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Using rainwater for a sprinkler system is a benefit of having rain water collection system, and does not need distinct points awarded.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P296	LogID 5153	Other for Chapter 8 (include section number and title below)	<i>Final Formal Action: Disapprove</i>
Submitter:	Stephen J Holzer, eM8s, LLC		
Proposed Change:	802.6 Building Information Modeling (BIM)		
	Project Team uses BIM to develop a whole house model and applies that model to optimize water efficiency requirements.		
Reason:	Building Information Modeling (BIM) is a computer generated model based process that simulates planning, design, construction and operations for buildings. It is a single repository for both three-dimensional, two-dimensional, and material properties information that allows data interoperability of all stakeholders to better inform design and construction decisions with the goal of producing the best product possible. This information technology will increase design and construction efficiencies and decrease costs for builders and end users. BIM may also facilitate better communication, collaboration and coordination among building industry professionals and trades working on the same project. Credit should be given to Builders utilizing the open industry standards as defined in the National Building Information Modeling Standard.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Consistent with action on P025.		

Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P297	LogID 5269	901.1.4 Gas fireplaces and direct heating equipment vented outdoors	Final Formal Action: Disapprove
Submitter:	Ted A. Williams, American Gas Association		
Proposed Change:	<p>901.1.4 Gas-fired fireplaces and direct heating equipment is listed and is installed in accordance with the NFPA 54, ICC IFGC, or the applicable local gas appliance installation code. Gas-fired fireplaces and direct heating equipment are vented to the outdoors.</p> <p>[a duplicative proposed change on 11.901.1.4 is submitted.]</p>		
Reason:	<p>Banning unvented or "vent-free" fireplaces, the net effect of this "mandatory" requirement, have never been justified in terms of environmental criteria consistent with a "green" standard. During deliberations on the 2012 Edition, air pollutant emissions associated with use of such products were not documented or referenced in terms of concentrations or specific effects on the indoor environment or human health. Likewise, the ban does not address positive environmental benefits associated with virtual 100% thermal efficiency of heating in the installed space and reduced need for central heating from spot heating afforded by unvented combustion heating appliances, both of which reduce overall energy demand and externalities (including total air emissions) associated with less efficient heating approaches. These positive effects should be evaluated on balance with hypothesized negative effects associated with altered indoor air concentrations of the identified contaminants. No effort is made or documented to assess this balance. While points are proposed for use of these products, their banning from green building represents unbalanced and non-technical consideration of the net effects of their installation and use. The ban appears to appeal to simplistic views of environmental acceptability based on an "additive" impact on indoor air quality from operation of unvented combustion appliances. It ignores important design and product standardization considerations. For example, appliance sizing and, most directly, heat gain beyond tolerable limits in tight buildings impose a fundamental limit on the generation of combustion products. The tighter the installation location, the lower the firing rate and duration the appliance can be operated while avoiding intolerable temperatures. This principle has been applied to gas-fired residential cooking appliances since 1921 (ANSI Standard Z21.1), which associated combustion product loadings with the tightness of kitchens, emission factors from the appliances, and heat rise tolerances for occupants. A technical review in 1994, reviewed by U. S Consumer Product Safety Commission and considering modern air change rates, combustion product exposure criteria, and ASHRAE thermal comfort requirements confirmed the continued efficacy of this approach. Unvented fireplaces are design certified in the same manner. If unvented combustion appliances represent a public health or safety hazard, they should be prohibited from all occupancies (not just "green" buildings) because to do less would imply a toleration of unequal treatment of occupants with respect to health and safety. Standards development for "green" buildings would be better conducted on technically justified grounds and not focus on banning products based on heuristic arguments. It should be noted that proposed Addendum be to ASHRAE Standard 189.1, "Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings" would have imposed a similar ban of unvented fireplaces, but the Addendum has been returned to the 189.1 Standard Project Committee following public review and receipt of negative comments.</p>		
Committee Action from Meeting:	Disapprove		

Modification of Proposed Change:	
Committee Reason:	Concerns with the IEQ ramifications, and the value of the proposed change is not demonstrated.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 34 Disagree with committee action: 5 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Neil Leslie: Prohibiting code-approved technologies is not an appropriate way to deal with perceived concerns about unintended consequences. A more defensible approach is to provide additional compliance requirements if deemed necessary to mitigate such consequences. The committee's justification statement regarding the value of the proposed change is not true. There is research data dating as far back as the 1980's showing the energy benefits of unvented heaters. It is incumbent on the committee to defend draconian actions such as prohibition, and "concerns" about IEQ ramifications without significant supporting technical data is not adequate justification.</p> <p>Ted Williams: No opponent of the proposal presented during deliberations evidence of deleterious IAQ impacts from modern unvented appliances or refuted evidence of their inherent safe and air quality standards-compliant operation The Committee Reason that "value" of the change was not demonstrated is superfluous since the proposal would be to eliminate a prohibition of these appliances, not postulating a "green" positive value for their use or points credit</p> <p>Frank Stanonik: The reason for the action was based on a recommendation from the Task Group addressing the renovation section This proposal is specific to new buildings constructed to this standard. The provisions in Section 902.2, Building ventilation systems, and Appendix B, Whole Building Ventilation System Specifications, address several different ways to provide ventilation to a residence built to this standard. It is a technical fact that some of those methods of providing ventilation to the residence will allow the operation of a gas-fired unvented heater with no detrimental effect on the air quality in the residence. Whatever concerns with IEQ ramifications were raised when renovations to an existing building are being made, those concerns have no relevance to this proposal where the buildings ventilation characteristics are known</p> <p>There is no need to demonstrate the value of the proposed change since it does not require any action to be taken Rather it simply allows another option for the builder to choose Furthermore it resolve the irrational situation that a new home that incorporates all the many and varied features, including proper ventilation, that allow it to be designated a "Green" home based on its point total, becomes disqualified because a properly installed, listed, gas-fired unvented heater or fireplace has been installed in that new home.</p> <p>Matthew Dobson: I feel adequate information to substantiate this change was provided by the proponent</p> <p>Randall Melvin: Agree with Neil's comment</p>
Abstain:	

P298 LogID 5252	901.1.4 Gas fireplaces and direct heating equipment vented outdoors	Final Formal Action: Disapprove
Submitter:	Frank A. Stanonik, AHRI	
Proposed Change:	901.1.4. Gas-fired fireplaces and direct heating equipment is listed and is installed in accordance with the NFPA 54, ICC IFGC, or the applicable local gas appliance installation code. Gas-fired fireplaces and direct heating equipment are vented to the outdoors.	

Reason:	Reference to the applicable installation code covers all aspects of the safe and proper installation of gas appliances, including provisions for combustion and ventilation air supply and venting. The last sentence as it applies to vented gas fireplaces and direct heating equipment is redundant. This deletion also removes the unjustified situation presented by the current standard that a home which has a gas-fired unvented or vent-free heater is automatically disqualified from carrying any level of "Green" designation regardless of any other aspects of the home's design or features. The provisions in Section 902.2, Building ventilation systems, and Appendix B, Whole Building Ventilation System Specifications, address several different ways to provide ventilation to a residence. It is a technical fact that some of those methods of providing ventilation to the residence will allow the operation of a gas-fired unvented heater with no detrimental effect on the air quality in the residence. This proposal does not promote the use of unvented gas heaters. Rather it allows the builder to decide whether to install such equipment and the corresponding ventilation system, as required to meet both the combustion and ventilation air requirements of the heaters installation instructions and the ventilation provisions of this Green Building Standard.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Concerns with the IEQ ramifications, and the value of the proposed change is not demonstrated.										
Ballot Results on Committee Action:	<table border="0"> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>34</td> </tr> <tr> <td>Disagree with committee action:</td> <td>5</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	34	Disagree with committee action:	5	Abstain:	0	Non-voting:	2
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Ballot Comments											
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Disagree with committee action:	<p>Neil Leslie: Prohibiting code-approved technologies is not an appropriate way to deal with perceived concerns about unintended consequences. A more defensible approach is to provide additional compliance requirements if deemed necessary to mitigate such consequences. The committee's justification statement regarding the value of the proposed change is not true. There is research data dating as far back as the 1980's showing the energy benefits of unvented heaters. It is incumbent on the committee to defend draconian actions such as prohibition, and "concerns" about IEQ ramifications without significant supporting technical data is not adequate justification.</p> <p>Ted Williams: No opponent of the proposal presented during deliberations evidence of deleterious IAQ impacts from modern unvented appliances or refuted evidence of their inherent safe and air quality standards-compliant operation The Committee Reason that "value" of the change was not demonstrated is superfluous since the proposal would be to eliminate a prohibition of these appliances, not postulating a "green" positive value for their use or points credit</p> <p>Frank Stanonik: The reason for the action was based on a recommendation from the Task Group addressing the renovation section This proposal is specific to new buildings constructed to this standard. The provisions in Section 902.2, Building ventilation systems, and Appendix B, Whole Building Ventilation System Specifications, address several different ways to provide ventilation to a residence built to this standard. It is a technical fact that some of those methods of providing ventilation to the residence will allow the operation of a gas-fired unvented heater with no detrimental effect on the air quality in the residence. Whatever concerns with IEQ ramifications were raised when renovations to an existing building are being made, those concerns have no relevance to this proposal where the buildings ventilation characteristics are known</p> <p>There is no need to demonstrate the value of the proposed change since it does not require any action to be taken Rather it simply allows another option for the builder to choose Furthermore it resolve the irrational situation that a new home that incorporates all the many and varied features, including proper ventilation, that allow it to be designated a "Green" home based on its point total, becomes disqualified</p>										

	<p>because a properly installed, listed, gas-fired unvented heater or fireplace has been installed in that new home.</p> <p>Christopher Mathis: I disagree with the committee action. I believe it is inappropriate for ICC 700 to address important life safety issues already addressed by national model codes ICC/NFPA.</p> <p>Matthew Dobson: I believe the proponent provided adequate substantiation to make the change</p>
Abstain:	

P299 LogID TG3-07	901.10 Interior adhesives and sealants	Final Formal Action: Disapprove																
Submitter:	Theresa Weston, DuPont Building Innovations																	
Proposed Change:	<p>SCAQMD Rule 1168 in accordance with Table 901.10(3), excluding products that are sold in 16 ounce containers or less and are regulated by the California Air Resources Board (CARB) Consumer Products Regulations.</p> <p>Exception:</p> <p><u>Adhesives and sealants subject to consumer product VOC regulations or products packaged as < 1 pound and < 16 fluid ounces shall comply with VOC content limits in Table XXX. VOC content and exempt compound content shall be determined by CARB Final Regulation Order Regulation for Reducing Volatile Organic Compound Emissions from Consumer Products.</u></p> <p style="text-align: center;">TABLE XXXX</p> <p style="text-align: center;">CONSUMER PRODUCT VOC LIMITS</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>ADHESIVE</th> <th>VOC LIMIT</th> </tr> </thead> <tbody> <tr> <td>Adhesives, Aerosol</td> <td style="text-align: center;"><u>75</u></td> </tr> <tr> <td>mist spray adhesives</td> <td style="text-align: center;"><u>65</u></td> </tr> <tr> <td>web spray adhesives</td> <td style="text-align: center;"><u>55</u></td> </tr> <tr> <td>construction, panel, and floor covering adhesive</td> <td style="text-align: center;"><u>7</u></td> </tr> <tr> <td>contact adhesive – general purpose</td> <td style="text-align: center;"><u>55</u></td> </tr> <tr> <td>contact adhesive – special purpose</td> <td style="text-align: center;"><u>80</u></td> </tr> <tr> <td>Sealants and Caulking Compounds</td> <td style="text-align: center;"><u>4</u></td> </tr> </tbody> </table> <p><u>The VOC limit is expressed in percent volatile organic compound by weight.</u></p> <p>Add Referenced Standards:</p> <p><u>California Air Resources Board, CARB Final Regulation Order Regulation for Reducing Volatile Organic Compound Emissions from Consumer Products</u></p>		ADHESIVE	VOC LIMIT	Adhesives, Aerosol	<u>75</u>	mist spray adhesives	<u>65</u>	web spray adhesives	<u>55</u>	construction, panel, and floor covering adhesive	<u>7</u>	contact adhesive – general purpose	<u>55</u>	contact adhesive – special purpose	<u>80</u>	Sealants and Caulking Compounds	<u>4</u>
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Sealants and Caulking Compounds	<u>4</u>																	
Reason:	Covers same area as LogID 5211. References the industry standards for consumer and small packages.																	
Committee Action from Meeting:	Disapprove																	
Modification of Proposed Change:																		
Committee Reason:	Inclusion of consumer products seems unusual or inappropriate.																	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 38</p> <p>Disagree with committee action: 1</p>																	

	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:	<i>Frank Stanonik:</i> I believe the addition of this proposal is needed. The issue is not whether these are consumer products or not; rather it is foreseeable that under certain circumstances the builder or contractor will use a small tube or can of adhesive or sealant. In such cases, the product should meet applicable VOC limits.	
Abstain:		

P300	LogID 5211	901.10 Interior adhesives and sealants	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs		
Proposed Change:	SCAQMD Rule 1168 in accordance with Table 901.10(3), excluding products that are sold in 16 ounce containers or less and are regulated by the California Air Resources Board (CARB) Consumer Products Regulations.		
Reason:	This practice is not clear regarding what is excluded. It seems like if the product does not comply with the emissions of Table 901.10(3) then it should not be excluded just because is sold in 16 oz or less containers. If the intent is to give points for 16 oz products that are CARB regulated then then "excluding" should be changed to "or".		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Consistent with action on P299.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P301	LogID 5212	901.12 Carbon monoxide alarms	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs		
Proposed Change:	901.12 Carbon monoxide (CO) alarms. Where not required by local codes, a carbon monoxide (CO) alarm is installed in a central location outside of each separate sleeping area in the immediate vicinity of the bedrooms.....		
Reason:	We get lots of questions regarding why this practice only gets points when not required by local code. It seems inconsistent that the same house could achieve a different level simply because it is on one side of a jurisdictional boundary or the other side. Other confusion arises when the home is all electric and there is no fossil fuel combustion or attached garage. Perhaps the practice should be changed to mandatory when required by the IRC. Clarification on this practice would be helpful.		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:	Accept text changes as is. Make this practice mandatory for all homes, without regard to heating source		
Committee Reason:	Eliminates "unfairness" of local code differences and ability for a home to achieve NGBS points.		

Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 38 Disagree with committee action: 1 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p><i>Steven Rosenstock:</i> If a house does not have any fossil fuel or renewable energy (wood, biomass) combustion appliances, and does not have an attached or 1st level garage, is there a need for CO alarms?</p> <p>An exception should be made for these situations.</p>
Abstain:	

P302 LogID 5143	901.2.1 Solid fuel-burning fireplaces, inserts, stoves, and heaters	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	901.2.1(2) Factory-built, wood-burning fireplaces are in accordance with the certification requirements of UL 127 and are EPA certified <u>Phase 2 Qualified</u> .	
Reason:	The EPA does not certify wood burning fireplaces.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise standard as follows:</i> 901.2.1 (2) Factory-built, wood-burning fireplaces are in accordance with the certification requirements of UL 127 and are EPA <u>certified or Phase 2 Qualified</u> .	
Committee Reason:	EPA certification does exist and is separate from Phase 2 qualification.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P303 LogID 5254	901.2.1 Solid fuel-burning fireplaces, inserts, stoves, and heaters	Final Formal Action: Disapprove
Submitter:	Thomas Stroud, HPBA	
Proposed Change:	<p>“Factory-built wood-burning fireplaces are in accordance with the certification requirements of UL 127 and are EPA certified <u>or qualified</u>.”</p> <p>The modification adds “or qualified.”</p>	
Reason:	<p>During the last revision of this code it was discussed that this language should be included. The difficulty was that this category had not been fully adopted by EPA. Now EPA has fully adopted this category and promotes it http://www.epa.gov/burnwise/fireplacelist.html. Fireplaces in the EPA’s Qualified program are specifically designed to operate as fireplaces rather than wood stoves (as are the EPA Certified Appliances). The certified products make sense for some regions that are seeking to heat with the fireplace. The EPA has created the Qualified program for new homes in warmer climates and for homes</p>	

	seeking just the ambiance of the fireplace, yet want to have that product clean-burning. Given that EPA has chosen not to regulate fireplaces in the current NSPS this classification will reinforce the use of cleaner burning EPA Qualified Fireplaces.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	In favor of action on P302.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
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Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P304 LogID 5251	901.2.1 Solid fuel-burning fireplaces, inserts, stoves, and heaters <i>Final Formal Action: Withdrawn</i>
Submitter:	Kat Benner, TexEnergy
Proposed Change:	(2) Factory-built, wood-burning fireplaces are in accordance with the certification requirements of UL 127 and are EPA certified.
Reason:	<p>•Removal of Mandatory 901.2.1(2) "EPA certified" fireplace requirement BACKGROUND: The way currently written allows no large multifamily property to afford the option of decorative wood burning fireplaces, very common in the South. Standard assumes all fireplaces are as sole heat-source of unit vs. decorative/supplemental. Traditionally, a decoration wood-burning fireplace would have no added 'Indoor Air Quality' measures-fire box flue and damper, that's it. A progressive step would be to mandate, outside combustion air and gasketed fireplace doors. (see cost comparison below). This would allow the fireplace to burn wood without using the conditioned indoor air for combustion and it would allow for the fireplace to no spill combustion byproducts into the conditioned space. EPA certification does not certify decoration wood burning fireplaces, It only certifies fireplaces that are to be used as a primary or sub-primary heat sources, for a home/dwelling; the certification is based on the ability of the fireplace to be loaded up with enough wood to burn efficiently for long hours (through the night). Moreover, the ideology for this certification is based less on 'Indoor Air Quality' as it is atmospheric or 'Outdoor Air Quality'-the more efficiently the wood burns the less byproduct exhausting up the flue. This also, seems to be misaligned with the basic principals of a green building program to be, incrementally better than a base code, with a progressive 'stair stepping' of more efficient(greener) practices. Requiring EPA certification, is not an incremental step, the market does not exist for fireplaces of this type on a multifamily production scale. I would venture to say that the market will never exist due the nature of mechanical systems typically being oversized for smaller dwelling units. The need for a primary or sub-primary wood burning fireplace heat source, in an apartment unit, is just not necessary – the most practical solution is to have the EPA certification for Decoration Fireplace (currently being lobbied by many fireplace manufacturers), but until this exists the requirement of an EPA certified wood burning fireplace will only add a design restriction associated with NGBS – No wood burning fireplaces in apartments. Traditional wood burning fireplace - \$150.00 per unit x 300 units = \$45,000.00 per project (progressive step) Indoor Air Quality appropriate wood burning fireplace with gasketed doors and outside combustion air - \$350.00-\$450.00 per unit x 300 units = \$105,000.00 - \$135,000.00 per project (unachievable requirement) EPA certified - \$750.00-\$1,000 per unit x 300 units = \$225,000.00 - \$300,000.00 per project</p>

Committee Action from Meeting:	Withdrawn										
Modification of Proposed Change:											
Committee Reason:	Withdrawn by submitter.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P305 LogID 714	901.3 Garages	<i>Final Formal Action: Disapprove</i>										
Submitter:	Gladys Quinto Marrone, BIA Hawaii											
Proposed Change:	Better definition of what constitutes a 'carport' is needed. For example, the amount of enclosed space and amount of ventilation for garages with open block walls and windows.											
Reason:	Better definition of what constitutes a 'carport' is needed.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	Lack of clarity and suggested text.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P306 LogID 5144	901.4 Wood materials	<i>Final Formal Action: Disapprove</i>
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	<p>901.4 Wood materials. A minimum of 85 percent of material within a product group (i.e., wood structural panels, countertops, composite trim/doors, custom woodwork, and/or component closet shelving) is manufactured in accordance with the following:</p> <p>(1) Structural plywood used for floor, wall, and/or roof sheathing is compliant with DOC PS 1 and/or DOC PS 2. OSB used for floor, wall, and/or roof sheathing is compliant with DOC PS 2. The panels are made with moisture-resistant adhesives. The trademark indicates these adhesives as follows: Exposure 1 or Exterior for plywood, and Exposure 1 for OSB.</p>	
Reason:	Structural use panels are almost never used for countertops, woodwork, or shelving. Structural use panels are a different product type and should not be lumped together with the other types. All	

	structural use panels should comply not just 85%. A new practice is needed to split the original one into two practices.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Existing section accomplishes the committee's intent.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P307 LogID 5145	901.4 Wood materials	Final Formal Action: Disapprove
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	<p>901.5 Wood materials. A minimum of 85 percent of material within a product group (i.e. countertops, composite trim/doors, custom woodwork, and/or component closet shelving) is manufactured in accordance with the following</p> <p>Particleboard and MDF (medium density fiberboard) is manufactured and labeled in accordance with CPA A208.1 and CPAA208.2, respectively. (Points awarded per product group.)</p> <p>Hardwood plywood in accordance with HPVAHP-1. (Points awarded per product group.)</p> <p>Particleboard, MDF, or hardwood plywood is in accordance with CPA 4. (Points awarded per product group.)</p> <p>Composite wood or agrifiber panel products contain no added urea-formaldehyde or are in accordance with the CARB <i>Composite Wood Air Toxic Contaminant Measure Standard</i>. (Points awarded per product group.)</p> <p>(5) Non-emitting products. (Points awarded per product group.)</p>	
Reason:	The original 901.4 practice lumped structural use panels in with countertop, trim, and shelving materials. These are two significantly different materials and uses. The practice should be split.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Consistent with action on P306.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		

Disagree with committee action:	
Abstain:	

P308 LogID 5146	901.6 Carpets	Final Formal Action: Approve										
Submitter:	Robert Hill, Home Innovation Research Labs											
Proposed Change:	<p>901.6 Carpets. Carpets are in accordance with the following:</p> <p>(1) Wall-to-wall carpeting is not installed adjacent to water closets and bathing fixtures.</p> <p>(2) A minimum of 10 percent of the conditioned floor space has carpet and at least 85 percent of installed carpet area and/or carpet cushion (padding) are in accordance with the emission levels of CDPH/EHLB Standard Method v1.1 except footnote b in Table 4.1 does not apply (i.e., allowable maximum formaldehyde concentration is 16.5 µg/m³(13.5 ppb)). Product is tested by a laboratory with the CDPH/EHLB Standard Method v1.1 within the laboratory scope of accreditation to ISO/IEC 17025 and certified by a third-party program accredited to ISO Guide 65, such as, but not limited to, those in Appendix D.</p>											
Reason:	Another proposed change has been submitted addressing flooring materials in total that will incorporate the deleted portion of this practice.											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P309 LogID 5147	901.7 Hard-surface flooring	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	<p>901.7 Hard surface flooring. Flooring Materials: The following types of finished flooring materials are used. The materials have emission levels in accordance with CDPH/EHLB Standard Method v 1.1 except footnote b in Table 4.1 does not apply (i.e., allowable maximum formaldehyde concentration is 16.5 µg/m³(13.5 ppb)). Product is tested by a laboratory with the CDPH/EHLB Standard Method v1.1 within the laboratory scope of accreditation to ISO/IEC 17025 and certified by a third-party program accredited to ISO Guide 65, such as, but not limited to, those in Appendix D.</p> <p>(1) Hard surface flooring: A minimum of 10 percent of the conditioned floor space has pre-finished hard-surface flooring installed and a minimum of 85 percent of all prefinished installed hard-surface flooring is in accordance with the emission concentration limits of CDPH/EHLB Standard Method v1.1 except footnote b in Table 4.1 does not apply (i.e., allowable maximum formaldehyde concentration is 16.5 µg/m³(13.5 ppb)). Emission levels are determined by a laboratory accredited to ISO/IEC 17025 and the CDPH/EHLB Standard Method v 1.1 is in its scope of accreditation. The product is certified by a third-party program accredited to ISO Guide 65, such as, but not limited to, those found in Appendix D.</p>	

	<p><u>Prefinished installed hard-surface flooring is installed.</u> Where post-manufacture coatings or surface applications have not been applied, the following hard surface flooring types are deemed to comply with the emission requirements of this practice:...</p> <p><u>(2) Carpet.</u></p> <p><u>(Points are awarded for every 10% of conditioned floor space using one of the above materials. When carpet cushion meeting the emission limits of the practice is also installed, the percentage of compliant carpet area is calculated at 1.33 times the actual installed area).</u></p>
<p>Reason:</p>	<p>It seems more logical to treat all flooring materials in a similar and connected way and give more points for more compliant flooring that just the minimum of 10% of the conditioned floor space. More points should be awarded for a home with 100% of the floor space complying compared to one that only 10% complies. Suggested point level is 1 or 2 points per 10% of conditioned floor space.</p>
<p>Committee Action from Meeting:</p>	<p>Approve as Modified</p>
<p>Modification of Proposed Change:</p>	<p><i>Revise standard as follows:</i></p> <p>901.7 Hard surface flooring. Flooring Materials: The following types of finished flooring materials are used. The materials have emission levels in accordance with CDPH/EHLB Standard Method v1.1 except footnote b in Table 4.1 does not apply (i.e., allowable maximum formaldehyde concentration is <u>16.5µg/m³(13.5 ppb).</u>Product is tested by a laboratory with the CDPH/EHLB Standard Method v1.1 within the laboratory scope of accreditation to ISO/IEC 17025 and certified by a third-party program accredited to ISO Guide 65, such as, but not limited to, those in Appendix D. Points are awarded for every 10% of conditioned floor space using one of the below materials:</p> <p>A minimum of 10 percent of the conditioned floor space has prefinished hard-surface flooring installed and a minimum of 85 percent of all prefinished installed hard-surface flooring is in accordance with the emission concentration limits of CDPH/EHLB Standard Method v1.1 except footnote b in Table 4.1 does not apply (i.e., allowable maximum formaldehyde concentration is 16.5 µg/m³ (13.5 ppb)). Emission levels are determined by a laboratory accredited to ISO/IEC 17025 and the CDPH/EHLB Standard Method v1.1 is in its scope of accreditation. The product is certified by a third-party program accredited to ISO Guide 65, such as, but not limited to, those found in Appendix D.</p> <p><u>(1) Hard surface flooring: Prefinished installed hard-surface flooring is installed.</u> Where post-manufacture coatings or surface applications have not been applied, the following hard surface flooring types are deemed to comply with the emission requirements of this practice:</p> <ul style="list-style-type: none"> (a) Ceramic tile flooring (b) Organic-free, mineral-based flooring (c) Clay masonry flooring (d) Concrete masonry flooring (e) Concrete flooring (f) Metal flooring <p><u>(2) Carpet and carpet cushion is installed.</u></p> <p><u>(When carpet cushion meeting the emission limits of the practice is also installed, the percentage of compliant carpet area is calculated at 1.33 times the actual installed area.)</u></p>

Committee Reason:	The modifications more appropriately address the concerns of the submitter's and the issue brought to light by their comment.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P310 LogID 5311	901.9 Interior architectural coatings	Final Formal Action: Approve
Submitter:	Lorraine Ross, L Ross Consulting Inc	
Proposed Change:	Add this exception to Section 901.9: <u>Exception: Interior architectural coatings that are formulated to remove formaldehyde and other aldehydes in indoor air and are tested and labeled in accordance with ISO 16000-23, "Indoor Air – Performance test for evaluating the reduction of formaldehyde concentrations by sorptive building materials".</u>	
Reason:	Reason: This proposal recognizes new technology for additives that have proven to abate, or remove, formaldehyde and other aldehydes when part of formulations for paints, coatings, acoustical ceilings and wall systems. The new proposed reference standard is the standard method used to assess the performance of these formulations.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P311 LogID TG3-14	902 Pollutant Control	Final Formal Action: Disapprove
Submitter:	Ryan Taylor, Ryan Taylor Architects LLC	
Proposed Change:	Add the following to section 902 on page 83: 902.2.4 MERV 14 filters or greater are installed on central forced air systems and are accessible. Designer or installer is to verify that the HVAC equipment is able to accommodate the pressure drop of the filter used.	

Reason:	<p>In his presentation at the 2014 RESNET Conference in Atlanta, Iain Walker of the Lawrence Berkeley National Lab stated MERV 14 and up (slide 48 of the presentation linked) is needed to filter the ultrafine particles created from cooking in homes – a significant source of indoor air pollution. As part of his presentation, Walker noted that the lab has been testing the effectiveness of kitchen exhaust performance and found that the capture efficiency is not as high as many people believe. With a capture efficiency that may be less than 50% (slide 37 of the presentation linked above), we’re contributing pollution we thought was being properly exhausted from the home.</p> <p>Please consider adding this section and adjusting the points of 902.2.3 and 902.2.4 to steer users to the higher MERV rating so we can enjoy healthier homes.</p> <p>http://www.resnet.us/blog/wp-content/uploads/2014/03/RESNET_2014_IAQinTightHomes_presentation.pdf</p>
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Uncertain of health benefits associated with higher MERV filters. Recognize higher energy demand associated.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P312 LogID 5229	902.1 Spot ventilation	Final Formal Action: Approve as Modified								
Submitter:	Eric DeVito, BBRS									
Proposed Change:	<p>Add new section to 902.1 Spot ventilation as follows:</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 80%;">902.1.5 Fenestration in dwelling areas is designed for cross-ventilation in accordance with all of the following:</td> <td style="width: 20%;"></td> </tr> <tr> <td style="padding-left: 20px;">(1) Operable windows and sliding glass doors with a total area of at least 15 percent of the conditioned floor area are provided.</td> <td style="text-align: center; vertical-align: top;">5</td> </tr> <tr> <td style="padding-left: 20px;">(2) Insect screens are provided for all operable windows and sliding glass doors.</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">(3) A minimum of two windows or sliding glass doors are placed in adjacent or opposite walls.</td> <td></td> </tr> </table>		902.1.5 Fenestration in dwelling areas is designed for cross-ventilation in accordance with all of the following:		(1) Operable windows and sliding glass doors with a total area of at least 15 percent of the conditioned floor area are provided.	5	(2) Insect screens are provided for all operable windows and sliding glass doors.		(3) A minimum of two windows or sliding glass doors are placed in adjacent or opposite walls.	
902.1.5 Fenestration in dwelling areas is designed for cross-ventilation in accordance with all of the following:										
(1) Operable windows and sliding glass doors with a total area of at least 15 percent of the conditioned floor area are provided.	5									
(2) Insect screens are provided for all operable windows and sliding glass doors.										
(3) A minimum of two windows or sliding glass doors are placed in adjacent or opposite walls.										
Reason:	<p>One often overlooked source of spot ventilation and potential energy efficiency is the proper installation of operable windows and sliding glass doors. Much of the debate over indoor environmental quality focuses on keeping outdoor air out, but a homeowner needs the flexibility to occasionally move a great deal of air through the home – whether to remove indoor air toxins or to simply take advantage of a favorable breeze in the spring or fall. The proposal above is designed to be a simple three-part design checklist that ultimately will enable homeowners to easily and quickly ventilate the main living areas of the home. While we could have designed a much more complicated set of criteria, this proposal catches</p>									

	<p>the most essential elements. The three important elements are as follows: •Enough operable windows or doors to air out the primary living areas: We have selected 15% as a reasonable amount, recognizing that not every window or door needs to be operable in a typical residential building. •Screens for each window or sliding glass door: A homeowner is much more likely to take advantage of the benefits of spot ventilation if insect screens are in place. •Windows and doors must create conditions for cross-ventilation: It is not as effective to place all operable fenestration on one side of the home. To take advantage of a favorable breeze or to efficiently ventilate a living area, windows should be located on adjacent or opposite walls. We note that although there is some likelihood of energy savings associated with proper cross-ventilation, this will depend on the user knowing when to operate the windows and doors. At least one state – Florida – provides an energy efficiency performance credit for cross ventilation, although the requirements are much more complicated than what we have proposed here. Because the energy efficiency benefit cannot be guaranteed, this proposal is probably best listed among other spot ventilation measures, such as exhaust fans, that depend on the user to operate properly.</p>										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>902.1.5 Fenestration in dwelling areas <u>spaces other than those identified in 902.1.1 through 902.1.4 are is</u> designed for cross-ventilation in accordance with all of the following:</p> <p>(1) <u>Operable windows and sliding glass doors with a total area of at least 15 percent of the conditioned floor area are provided.</u></p> <p>(2) <u>Insect screens are provided for all operable windows and sliding glass doors.</u></p> <p>(3) <u>A minimum of two windows or sliding glass doors are placed in adjacent or opposite walls. If there is only one wall surface in that space exposed to the exterior, the minimum windows or sliding glass doors may be on the same wall.</u></p>										
Committee Reason:	Modification replaces “dwelling areas,” for more specific language and clarifies Item (3).										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P313 LogID 5210	902.1.1 Spot Ventilation	Final Formal Action: Approve as Modified
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	(2) Clothes dryers (<u>including condensing dryers</u>) are vented to the outdoors.	
Reason:	We have had several requests to allow condensing dryers even though they are not vented to the outdoors. The argument is that the moisture is removed by the condensation process. But my concern is with possible out gassing from fabric softener sheets, detergents, etc. I don't know if this really is an IEQ issue or not but I wanted to raise the issue for consideration by others more knowledgeable than me. If it is not a concern please reject this proposed change.	
Committee Action from Meeting:	Approve as Modified	

Modification of Proposed Change:	<i>Revise Proposed Change as follows (in red):</i> (2) Clothes dryers (<u>including except listed and labeled condensing ductless dryers</u>) are vented to the outdoors.
Committee Reason:	Clarifying the exception of condensing ductless dryers from this practice.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P314 LogID 5063	902.2.1 Whole building ventilation system	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	One of the following whole building ventilation systems is implemented and is in accordance with the specifications of Appendix B- <u>and an explanation of the operation and importance of the ventilation system is included in either 1001.1 or 1003.2.</u>	
Reason:	Proper ventilation is important especially in tight houses. 902.2.1(a)needs more explanation about operation and importance for the typical home owner.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P315 LogID 5094	902.2.1 Whole building ventilation system	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	Recommend the following additions be made: (3) Heat-recovery ventilator (<u>HRV</u>) (4) Energy- recovery ventilator (<u>ERV</u>) (5) <u>HRV or ERV is used as exhaust fan for one or more bathrooms or for a kitchen application</u>	
Reason:	This should be provided as a 9 or 10 point option because it saves up to 45% on the energy losses caused by simple negative air pressure exhaust only outside air /make up air designs.	
Committee Action from Meeting:	Disapprove	

Modification of Proposed Change:	
Committee Reason:	Actual energy loss/gain unsubstantiated. Need evidence.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P316 LogID 5132	902.2.2 Whole building ventilation airflow is tested	Final Formal Action: Disapprove
Submitter:	Marie Nisson, TexEnergy/US-EcoLogic	
Proposed Change:	902.2.2 Ventilation airflow is tested to achieve the design fan airflow at point of exhaust in accordance with Section 902.2.1	
Reason:	Exhaust ductwork is visually inspected during predrywall for NGBS and Code. Testing at point of exhaust is not safe nor practical for many multifamily and multiple story, single family homes.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Reason suggests visual inspection in lieu of testing. Yet, section still requires testing. Information needed about how test would be run.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P317 LogID 5248	902.2.3 MERV 8 filters	Final Formal Action: Disapprove
Submitter:	Jeremy Velasquez, US-EcoLogic	
Proposed Change:	Measure should be mandatory at MERV 6 and award additional points for MERV 8+: (a) MERV Filters 6 are installed..... Mandatory (b) MERV Filters 8 are installed 3 pts (c) MERV Filter 11 or greater 6 pts	
Reason:	To address IAQ concerns, MERV filtration should be required for GREEN BUILDINGS. Many design teams will not choose this measure for MF, as it is not required, and so the indoor air quality suffers for most NGBS projects.	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	System will stipulate best filter for performance. Consideration should be given to system requirements. System with a higher MERV alone does not give you better IEQ.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P318 LogID 5304	902.3 Radon control	<i>Final Formal Action: Disapprove</i>
Submitter:	Aaron Gary, US-EcoLogic	
Proposed Change:	Radon control measures are in accordance with ICC IRC Appendix F or (insert appropriate IBC reference)...	
Reason:	Multifamily buildings are not built to the ICC IRC, they follow the ICC IBC. NGBS protocol should reflect the appropriate code requirements.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Proposed change is incomplete, lacking specific alternative code reference and does not provide information that the measures included in Appendix F would not be appropriate for multifamily building. Radon control is not required by the 2012 or 2015 IBC for any occupancy type, including multifamily. There is not an industry consensus as to the applicability or effectiveness of radon control measures in various multifamily construction types. There is no current applicable industry best practice or standard for the installation of radon mitigation and control measures in multifamily structures.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P319 LogID 5095	904.2 Kitchen exhaust	<i>Final Formal Action: Disapprove</i>
Submitter:	Donald Prather, ACCA	
Proposed Change:	904.2 Kitchen Exhaust. A kitchen exhaust unit(s) that equals or exceeds 400cfm (189 l/s) is installed and makeup air is provided	

	<u>(1) ERV or HRV is installed to temper the outside air being brought in.</u>
Reason:	Recommend making the makeup air requirement mandatory and awarding the 2 points for making it economical
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Unclear if ERV/HRV system is to be installed throughout the ventilation system or just in kitchen.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P320 LogID TG3-05	New Section 905	Final Formal Action: Approve as Modified
Submitter:	Ed Light, Building Dynamics, LLC	
Proposed Change:	<u>905. Verify acceptable IAQ by documenting:</u> <u>(a) HVAC meets specified design requirements.</u> <u>(b) Materials comply with specified emission requirements.</u> <u>(c) Sources of excess moisture encountered during the construction process have been eliminated.</u> <u>(d) Surfaces are dry, free of visible dust, suspect growth and water damage.</u>	
Reason:	NGBS currently does not consider overall IAQ. This provision would require an assessment to identify and resolve any ongoing IAQ problems. IAQ complaints in new homes are generally related to HVAC deficiencies, excess moisture and inadequate source control. Current NGBS provisions address HVAC operation, materials emissions and exhausts. If these requirements are met, this can simply be noted in the pre-occupancy assessment. Sufficient moisture control can be verified by an inspection, along with documentation that any moisture problems during the construction process have been resolved. The assessment must also verify that surfaces are clean.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise Standard as follows:</i> <u>Section 905 Indoor Air Quality</u> <u>905 Intent. IAQ is protected by best practices to control ventilation, moisture,</u>	

	<p><u>Pollutant sources and sanitation</u></p> <p><u>Section 905.1 Indoor Air Quality (IAQ) During Construction</u></p> <p><u>Points for overall IAQ are awarded if wood is dry before close-in (602.1.7(3)),</u></p> <p><u>Materials comply with emission criteria (901.4- 901.11), sources of water</u></p> <p><u>Infiltration or condensation observed during construction have been eliminated,</u></p> <p><u>Accessible interior surfaces are dry and free of visible suspect growth (per ASTM</u></p> <p><u>D7338-10 section6.3),water damage (per ASTM D7338-10 section 7.4.3), and</u></p> <p><u>visible dust</u></p> <p><u>Section 905.2 Indoor Air Quality (IAQ) Post Completion</u></p> <p><u>Verify moisture, mold, and dust issues.</u></p>
Committee Reason:	Clarity
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P321 LogID TG3-03	Chapter 9	Final Formal Action: Approve
Submitter:	Josh Jacobs, UL	
Proposed Change:	<p><i>Revise sections 901.7 Hard-surface flooring, 901.8 Wall coverings, 901.9 Architectural coatings, 901.10 Adhesives and sealants, and 901.11 Insulation as follows:</i></p> <p><u>UL GREENGUARD Gold Environmental Institute Children & Schools Certification Program</u></p> <p><u>UL 2768 EcoLogo-CCD-047</u></p>	
Reason:	This is a simple brand change to referenced programs. The requirements of the programs haven't changed since the committee put these in, it is simply a renaming to more align with the marketplace.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P322	LogID 5079	Chapter 9 (include section number and title below)	Final Formal Action: Approve
Submitter:	Josh Jacobs, UL		
Proposed Change:	For Sections 901.6, 901.7, 901.8, 901.9, 901.10, & 901.11 A minimum.....in accordance with the emission levels of CDPH/EHLB Standard Method v1.1 except footnote b in table 4.1 does not apply (i.e., allowable maximum formaldehyde concentration is 16.5 ug/m3 (13.5 ppb))		
Reason:	Formaldehyde exposure in indoor environments is one of the most prevalent indoor environmental quality issues. The referenced standard, CDPH/EHLB Standard Method v1.1 set a new limit for formaldehyde on January 1, 2012. At the last revision of this standard the committee felt that it was not enough time to ask manufacturers to comply with the lowering of the levels. As of today, the marketplace has done a good job of adjusting their levels and many products show compliance to the lower required level.		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			
Committee Reason:			
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P323	LogID 5172	Other for Chapter 9 (include section number and title below)	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	<p><u>902.7 Pest Barriers</u> <u>1) Minimize Pathways for Pest Entry</u> NOTE: Completion of the ENERGY STAR checklists now satisfies the following Indoor airPLUS requirements: <u>· Seal all penetrations and joints between the foundation and exterior wall assemblies (TES 5).</u> <u>· Air seal all sump covers (WMS 1.7).</u> No additional Indoor airPLUS Requirements <u>· Advisories:</u></p> <p><u>1. When sealing larger gaps that provide potential points of entry for rodents, copper or stainless steel wool is recommended in addition to sealant.</u></p> <p><u>2. Additional precautions should be taken in areas classified as "Moderate to Heavy" termite infestation probability (as identified by 2009 IRC Figure 301.2 [6]):</u></p>		

	<p>· Foundation walls should be solid concrete or masonry with a top course of solid block, bond beam, or concrete-filled block.</p> <p>· Interior concrete slabs should be constructed with 6 x 6 in. welded wire fabric, or the equivalent, and concrete walls should be constructed with reinforcing rods to reduce cracking.</p> <p>· Sill plates should be made of metal or preservative-treated wood.</p> <p>3. Additional precautions should be taken in areas classified as "Very Heavy" termite infestation probability (as identified by 2009 IRC Figure 301.2[6]) i.e., Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina and parts of California and Texas:</p> <p>· Foam plastic insulation should not be installed on the exterior face of below-grade foundation walls or under slabs.</p> <p>· Foam plastic insulation installed on the exterior of above-grade foundation walls should be kept a minimum of 6 in. above the final grade and any landscape bedding materials and should be covered with moisture-resistant, pest-proof material (e.g., fiber cement board or galvanized insect screen at the bottom-edge of openings).</p> <p>· Foam plastic insulation applied to the interior side of conditioned crawlspace walls should be kept a minimum of 3 in. below the sill plate.</p> <p>-</p> <p>(2) Rodent/Bird Screens for Building Openings</p> <p>Indoor airPLUS Requirements:</p> <p>· Provide corrosion-proof rodent/bird screens (e.g., copper or stainless steel mesh) for all building openings that cannot be fully sealed and caulked (e.g., ventilation system intake/exhaust outlets and attic vent openings).</p> <p>· Exception: This requirement does not apply to clothes dryer vents.</p>										
Reason:	Pest barriers are important to preventing animal-related pollutant loading of the indoor environment.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Possible conflicts with below-grade insulation requirements. Not applicable to all construction methods.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P324 LogID 5080	Other for Chapter 9 (include section number and title below) <i>Final Formal Action: Disapprove</i>
Submitter:	Josh Jacobs, UL
Proposed Change:	904.3 Total Volatile Organic Compound Emission Limit. A minimum of 50% of all installed products that comply with Sections 901.6, 901.7, 901.8, 901.9.3, 901.10 (1), and 901.11 shall demonstrate a Total Volatile Organic Compounds (TVOC) emission limit of <= 500 ug/m3 per the CDPH/EHLB Standard Method v1.1. The emission levels are determined by a laboratory accredited to ISO/IEC 17025 and the CDPH/EHLB Standard Method v1.1 is in its cope of accreditation. Points 2

Reason:	The existing product emission criteria in 901.6, 901.7, 901.8, 901.9, 901.10, & 901.11 only covers 35 individual chemicals. While this list covers some of our more well-known potentially harmful chemical, it does not cover the thousands of other chemicals that could be coming off products. With over 10,000 chemicals having been found to emit from man-made products there is a lot of uncovered area. This proposal helps us marry the coverage of the known concerns (the existing limits) with the coverage against the unknown.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Lacks disclosure language.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>37</td> </tr> <tr> <td>Disagree with committee action:</td> <td>2</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	37	Disagree with committee action:	2	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	37										
Disagree with committee action:	2										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:	<p>Josh Jacobs: The reasoning does not address what is trying to be put in the standard with this proposal. The proposal was not about disclosing the total chemicals that could potentially come off of a man made product, it was about minimizing the potential exposure to the chemicals. The standard and limits that are currently utilized in the standard for VOC product emission limits (CDPH/EHLB/Standard Method) only puts limit on 35 individual chemicals - with the potential for over 10,000 chemicals to come off of man-made products, this seems to leave a potentially harmful gap. The TVOC limit would help close that gap.</p> <p>Ryan Taylor: TG recommends reconsideration after persuasive comment from Josh Jacobs.</p>										
Abstain:											

P325 LogID TG1-02	1001.1 Building Owner's Manual for one and Two-Family Dwellings	Final Formal Action: Approve
Submitter:	Task Group 1,	
Proposed Change:	<i>Revise and renumber as follows:</i>	
	GREEN BUILDING PRACTICES	POINTS
	1001 <u>HOMEOWNERS BUILDING OWNERS' MANUAL and TRAINING FOR ONE- AND TWO-FAMILY DWELLINGS</u>	
	1001.0 Intent. Information on the building's use, maintenance, and green components is provided.	
	1001.1 A homeowners building owner's manual is provided and stored in a permanent location in the dwelling that includes the following, as available and applicable.	1 8 Max
	(Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)	

	<p>(1) <u>Detailed information about the National Green Building Standard, its requirements, and how NGBS compliance was determined, along with a A green building program certificate or completion document.</u></p>	<p>Mandatory</p>
	<p>(2) List of green building features (can include the national green building checklist).</p>	<p>Mandatory</p>
	<p>(3) Product manufacturer’s manuals or product data sheet for installed major equipment, fixtures, and appliances. If product data sheet is in the building owners’ manual, manufacturer’s manual may be attached to the appliance in lieu of inclusion in the building owners’ manual.</p>	<p>Mandatory</p>
	<p>(4) Maintenance checklist.</p>	<p>[all following are renumbered]</p>
	<p>(5) Information on local recycling programs.</p>	
	<p>(6) Information on available local utility programs that purchase a portion of energy from renewable energy providers.</p>	
	<p>(7) Explanation of the benefits of using energy-efficient lighting systems [e.g., compact fluorescent light bulbs, light emitting diode (LED)] in high-usage areas.</p>	
	<p>(8) A list of practices to conserve water and energy.</p>	
	<p>(8) <u>Information on the importance and operation of the home's fresh air ventilation system.</u></p>	
	<p>(9) Local public transportation options.</p>	
	<p>(10) A diagram showing the location of safety valves and controls for major building systems.</p>	
	<p>(11) Where frost-protected shallow foundations are used, owner is informed of precautions including:</p> <ul style="list-style-type: none"> (a) instructions to not remove or damage insulation when modifying landscaping. (b) providing heat to the building as required by the ICC IRC or IBC. (c) keeping base materials beneath and around the building free from moisture caused by broken water pipes or other water sources. 	
	<p>(12) A list of local service providers that offer regularly scheduled service and maintenance contracts to ensure proper performance of equipment and the structure (e.g., HVAC, water-heating equipment, sealants, caulks, gutter and downspout system, shower and/or tub surrounds, irrigation system).</p>	
	<p>(13) A photo record of framing with utilities installed. Photos are taken prior to installing insulation, clearly labeled, and included as part of the building owners’ manual.</p>	
	<p>(14) List of common hazardous materials often used around the building and instructions for proper handling and disposal of these materials.</p>	
	<p>(15) Information on organic pest control, fertilizers, deicers, and cleaning products.</p>	

	<p>(16) Information on native landscape materials and/or those that have low water requirements.</p> <p>(17) Information on methods of maintaining the building’s relative humidity in the range of 30 percent to 60 percent.</p> <p>(18) Instructions for inspecting the building for termite infestation.</p> <p>(19) Instructions for maintaining gutters and downspouts and importance of diverting water a minimum of 5 feet away from foundation.</p> <p>(20) A narrative detailing the importance of maintenance and operation in retaining the attributes of a green-built building.</p> <p>(21) Where stormwater management measures are installed on the lot, information on the location, purpose, and upkeep of these measures.</p> <p>(22) <u>Explanation of and benefits from green cleaning in the home</u></p> <p>(23) <u>Retrofit energy calculator that provides baseline for future energy retrofits</u></p>	
	<p>1001.2 Training of homeowners. Homeowners are familiarized with the role of occupants in achieving green goals. On-site training is provided to the responsible party(ies) regarding equipment operation and maintenance, control systems, and occupant actions that will improve the environmental performance of the building. These include:</p> <p>(1) HVAC filters</p> <p>(2) thermostat operation and programming</p> <p>(3) lighting controls</p> <p>(4) appliances operation</p> <p>(5) water heater settings and hot water use</p> <p>(6) fan controls</p> <p>(7) recycling and composting practices</p>	
	<p>1002</p> <p>TRAINING OF BUILDING OWNERS ON OPERATION AND MAINTENANCE FOR ONE- AND TWO-FAMILY DWELLINGS AND MULTI-UNIT BUILDINGS</p>	
	<p>1002.4.1 Training of building owners. Building owners are familiarized with the role of occupants in achieving green goals. On-site training is provided to the responsible party(ies) regarding equipment operation and maintenance, control systems, and occupant actions that will improve the environmental performance of the building. These include:</p> <p>(1) HVAC filters</p> <p>(2) thermostat operation and programming</p> <p>(3) lighting controls</p> <p>(4) appliances operation</p> <p>(5) water heater settings and hot water use</p>	<p>8</p>

<p>(6) fan controls</p>	
<p>(7) recycling and composting practices</p>	
<p>10023 CONSTRUCTION, OPERATION, AND MAINTENANCE MANUALS AND TRAINING FOR MULTI-UNIT BUILDINGS</p>	
<p>10023.0 Intent. Manuals are provided to the responsible parties (owner, management, tenant, and/or maintenance team) regarding the construction, operation, and maintenance of the building. Paper or digital format manuals are to include information regarding those aspects of the building’s construction, maintenance, and operation that are within the area of responsibilities of the respective recipient. One or more responsible parties are to receive a copy of all documentation for archival purposes.</p>	
<p>10023.1 Building construction manual. A building construction manual, including five or more of the following, is compiled and distributed in accordance with Section 1003.0. (Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)</p>	<p>1</p>
<p>(1) A narrative detailing the importance of constructing a green building, including a list of green building attributes included in the building. This narrative is included in all responsible parties’ manuals.</p>	<p>Mandatory</p>
<p>(2) A local green building program certificate as well as a copy of the <i>National Green Building Standard™</i>, as adopted by the Adopting Entity, and the individual measures achieved by the building.</p>	<p>Mandatory</p>
<p>(3) Warranty, operation, and maintenance instructions for all equipment, fixtures, appliances, and finishes.</p>	<p>Mandatory</p>
<p>(4) Record drawings of the building.</p>	
<p>(5) A record drawing of the site including stormwater management plans, utility lines, landscaping with common name and genus/species of plantings.</p>	
<p>(6) A diagram showing the location of safety valves and controls for major building systems.</p>	
<p>(7) A list of the type and wattage of light bulbs installed in light fixtures.</p>	
<p>(8) A photo record of framing with utilities installed. Photos are taken prior to installing insulation and clearly labeled.</p>	
<p>10023.2 Operations manual. Operations manuals are created and distributed to the responsible parties in accordance with Section 1003.0. Between all of the operation manuals, five or more of the following options are included. (Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)</p>	<p>1</p>

<p>(1) A narrative detailing the importance of operating and living in a green building. This narrative is included in all responsible parties' manuals.</p>	<p>Mandatory</p>
<p>(2) A list of practices to conserve water and energy (e.g., turning off lights when not in use, switching the rotation of ceiling fans in changing seasons, purchasing ENERGY STAR appliances and electronics).</p>	<p>Mandatory</p>
<p>(3) Information on methods of maintaining the building's relative humidity in the range of 30 percent to 60 percent.</p>	
<p>(4) Information on opportunities to purchase renewable energy from local utilities or national green power providers and information on utility and tax incentives for the installation of on-site renewable energy systems.</p>	
<p>(5) Information on local and on-site recycling and hazardous waste disposal programs and, if applicable, building recycling and hazardous waste handling and disposal procedures.</p>	
<p>(6) Local public transportation options.</p>	
<p>(7) Explanation of the benefits of using compact fluorescent light bulbs, LEDs, or other high-efficiency lighting.</p>	
<p>(8) Information on native landscape materials and/or those that have low water requirements.</p>	
<p>(9) Information on the radon mitigation system, where applicable.</p>	
<p>(10) A procedure for educating tenants in rental properties on the proper use, benefits, and maintenance of green building systems including a maintenance staff notification process for improperly functioning equipment.</p>	
<p><u>(11) Information on the importance and operation of the building's fresh air ventilation system.</u></p>	
<p>10023.3 Maintenance manual. Maintenance manuals are created and distributed to the responsible parties in accordance with Section 1003.0. Between all of the maintenance manuals, five or more of the following options are included. (Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)</p>	<p>1</p>
<p>(1) A narrative detailing the importance of maintaining a green building. This narrative is included in all responsible parties' manuals.</p>	<p>Mandatory</p>
<p>(2) A list of local service providers that offer regularly scheduled service and maintenance contracts to ensure proper performance of equipment and the structure (e.g., HVAC, water-heating equipment, sealants, caulks, gutter and downspout system, shower and/or tub surrounds, irrigation system).</p>	
<p>(3) User-friendly maintenance checklist that includes:</p> <ul style="list-style-type: none"> (a) HVAC filters (b) thermostat operation and programming (c) lighting controls (d) appliances and settings 	

	<p>(e) water heater settings</p> <p>(f) fan controls</p> <p>(4) List of common hazardous materials often used around the building and instructions for proper handling and disposal of these materials.</p> <p>(5) Information on organic pest control, fertilizers, deicers, and cleaning products.</p> <p>(6) Instructions for maintaining gutters and downspouts and the importance of diverting water a minimum of 5 feet away from foundation.</p> <p>(7) Instructions for inspecting the building for termite infestation.</p> <p>(8) A procedure for rental tenant occupancy turnover that preserves the green features.</p> <p>(9) An outline of a formal green building training program for maintenance staff.</p> <p>(10) <u>A green cleaning plan which shall include guidance on sustainable cleaning products.</u></p>
	<p>100403 INNOVATIVE PRACTICES</p>
	<p>100403.1 (Reserved)</p>
	<p>As part of this change, Chapter 11 should be reconsidered for re-formatting as well.</p>
Reason:	The proposed changes improve the requirements of Chapter 10
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 38</p> <p>Disagree with committee action: 1</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p><i>Steven Rosenstock:</i> I have the following suggestions:</p> <p>1) Delete the underline text</p> <p><u>Detailed information about the National Green Building Standard, its requirements, and how NGBS compliance was determined, along with a A green building program certificate or completion document.</u></p> <p>Reason: A copy of the NGBS will not help the homeowner save energy or operate equipment more efficiently.</p> <p>2) Modify the following:</p>

	<p>1001.2 Training of Initial homeowners. Initial Homeowners are familiarized with the role of occupants in achieving green goals. On-site training is provided to the responsible party(ies) regarding equipment operation and maintenance, control systems, and occupant actions that will improve the environmental performance of the building. These include:</p> <p>Reason: As written, this is a 50-100 year commitment to train every single homeowner (and every member of his/her family?) that buys or lives in the house. It is even more of a commitment in a condominium complex.</p>
Abstain:	

P326 LogID 5064	1001.1 Building owner's manual is provided	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	(22) Information on the importance and operation of the home's fresh air ventilation system.	
Reason:	Proper ventilation is important especially in tight homes. Most home owners do not understand the importance of this and may turn off the equipment in an attempt to save energy.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P327 LogID 5173	1001.1 Building owner's manual is provided	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(5) Information on local recycling <u>and composting</u> programs.	
Reason:	Section 1001.1 states that information be included in the owner's manual as available and applicable. Information on composting programs should be referenced in part (5).	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:	Improvement to NGBS because there are many recognized local composting programs and they should be part of the building owner information	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>	
Ballot Comments		
Agree with committee action:		

Disagree with committee action:	
Abstain:	

P328 LogID 726	1001.1 Homeowner's Manual	Final Formal Action: Approve										
Submitter:	Josh Jacobs, GREENGUARD Environmental Institute											
Proposed Change:	<p>(19) Instructions for maintaining gutters and downspouts and importance of diverting water a minimum of 5 feet away from foundation.</p> <p>(20) A narrative detailing the importance of maintenance and operation in retaining the attributes of a green-built building.</p> <p>(21) Where storm water management measures are installed on the lot, information on the location, purpose, and upkeep of these measures.</p> <p>(22) Explanation of and benefits from green cleaning in the home.</p>											
Reason:	This section discusses many things that can contribute to not only the buildings continued 'greenness', but also the sustainable footprint of the people that occupy it. One of the main things that can be detrimental to a home's sustainability following construction is the introduction of unhealthy/unsafe cleaning practices. These can directly impact not only the occupant's health, but also the natural environment around the home and even far afield. We should require information be provided to the homeowner on green cleaning practices.											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P329 LogID 742	1001.1 Homeowner's Manual	Final Formal Action: Disapprove
Submitter:	Susan Gitlin, US Environmental Protection Agency	
Proposed Change:	1001.1 (5) Information on local recycling programs, <u>including any programs to dispose of refrigerators and freezers in a manner consistent with EPA's Responsible Appliance Disposal program.</u>	
Reason:	We are glad to see that this section includes information on local recycling programs. The section should also specify information identifying local governments, utilities, retailers and manufacturers who offer proper disposal of refrigerators and freezers in partnership with EPA's Responsible Appliance Disposal (RAD) Program. RAD is an EPA partnership program that protects the ozone layer and reduces emissions of greenhouse gases (http://www.epa.gov/ozone/partnerships/rad/). The requirements of the RAD program include ensuring that: 1) refrigerant from appliances is recovered and either reclaimed or destroyed; 2) appliances' insulating foam, which contains harmful foam-blowing agents, is recovered and destroyed, or the blowing agent is recovered and reclaimed; 3) metals, plastic and glass are recycled; and 4) PCBs, mercury and used oil are recovered and properly disposed of.	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	EPA's RAD program is not recycling per the NGBS definition. The RAD program is not recycling the materials it is disposing of the products which is not the intent of the practice.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P330 LogID 5174	1002.1 Training of building owners (one- and two-family dwellings)	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(7) recycling and composting practices	
Reason:	Training on composting practices should be included in the training dealing with recycling and waste management.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:	There are many recognized local composting programs and they should be part of the building owner training	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P331 LogID 5096	1002.1 Training of building owners (one- and two-family dwellings)	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	(8) Documentation and training as required in QI-5 2010	
Reason:	QI-5 2010 designates documentation and owner training based on the type of equipment installed. Re-listing every combination in this standard would be duplicative. By adding the QI-5 requirement all HVAC system types would be covered.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		

Committee Reason:	Proposal is too complex for the NGBS.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P332 LogID 5175	1003.1 Building construction manual	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	<u>(9) A Disassembly Plan with as-built drawings and the chemical and mechanical inventory yielding information about the method of disassembly of building systems and the properties of major materials and components.</u>	
Reason:	A disassembly plan should be provided to the owner to facilitate deconstruction and disassembly of the home to maximize reuse and salvaging of materials during renovation or at the end of the building's useful life.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Plans would have to be held for 50+ years (the lifetime of the building) to be used which is unrealistic. Building likely not to be in same condition when it is time to be disassembled. Buildings are not designed to be disassembled and thus bringing in this component might drastically change the design and construction methodology of the building. We want to encourage people to build multi-unit buildings that will last forever, not to be taken apart.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P333 LogID 5097	1003.2 Operations manual	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	<u>(10) Documentation and OEM manuals as required in QI-5 2010</u>	
Reason:	QI-5 2010 designates documentation and how to highlight it for ease of usage based on the type of equipment installed. Re listing every combination in this standard would be duplicative. By adding the QI-5 requirement all HVAC system types would be covered.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		

Committee Reason:	Proposal is too complex for the NGBS.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P334 LogID 5065	1003.2 Operations manual	Final Formal Action: Approve
Submitter:	Robert Hill, Home Innovation Research Labs	
Proposed Change:	<u>(11) Information on the importance and operation of the building's fresh air ventilation system.</u>	
Reason:	Proper ventilation is important especially for tight buildings. Including this information in the operations manual is appropriate.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P335 LogID 744	1003.2 Operations Manuals	Final Formal Action: Disapprove
Submitter:	Susan Gitlin, US Environmental Protection Agency	
Proposed Change:		
Reason:	a) We are glad to see that this section includes information on local and on-site recycling and hazardous waste disposal programs. The section should specifically mention local recycling of refrigerators and freezers, which contain hazardous materials subject to proper management and storage requirements under Subtitle C of the Resource Conservation and Recovery Act. These materials include mercury, used oil, and PCBs (see 40 CFR Parts 273, 279 and 761). b) We are glad to see that this section includes a list of practices to conserve water and energy (e.g., turning off lights when not in use, switching the rotation of ceiling fans in changing seasons, purchasing ENERGY STAR appliances and electronics). The example of "purchasing ENERGY STAR® appliances and electronics" should be modified to state "replacing older, inefficient appliances and electronics with ENERGY STAR appliances and electronics" so as to capture the additional benefit associated with removing older appliances from the grid.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		

Committee Reason:	There wasn't clear enough language on how the appliances should be disposed of
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P336 LogID 5081	1003.3 Maintenance manual	Final Formal Action: Approve
Submitter:	Josh Jacobs, UL	
Proposed Change:	<u>(10) A green cleaning plan which shall include guidance on sustainable cleaning products.</u>	
Reason:	Cleaning can have a negative impact on the indoor environmental quality that a builder and occupant have tried to ensure. By providing an understanding of a green cleaning plan to the owners and occupants, you can minimize this potential risk.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P337 LogID 5098	1003.3 Maintenance manual	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	<u>(10) OEM Maintenance requirements as required in QI-5 2010</u>	
Reason:	QI-5 2010 designates information that is needed by owners with regards to maintenance. Relisting every combination in this standard would be duplicative. By adding the QI-5 requirement all HVAC system types would be covered.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Proposal is too complex for the NGBS.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P338	LogID 5154	1004.1 Reserved	Final Formal Action: Disapprove
Submitter:	Stephen J Holzer, eM8s, LLC		
Proposed Change:	1004.1 Building Information Modeling (BIM). Multifamily building owner uses BIM as primary means to operate and maintain a more efficient building.		
Reason:	Building Information Modeling (BIM) is a computer generated model based process that simulates planning, design, construction and operations for buildings. It is a single repository for both three-dimensional, two-dimensional, and material properties information that allows data interoperability of all stakeholders to better inform design and construction decisions with the goal of producing the best product possible. This information technology will increase design and construction efficiencies and decrease costs for builders and end users. BIM may also facilitate better communication, collaboration and coordination among building industry professionals and trades working on the same project. Credit should be given to Builders utilizing the open industry standards as defined in the National Building Information Modeling Standard.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	Consistent with action on P025.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P339	LogID TG7-07	11.1001 Building owner's manual	Final Formal Action: Approve														
Submitter:	Task Group 7,																
Proposed Change:	<table border="1" style="width: 100%;"> <tr> <td style="background-color: black; color: white;">11.1001</td> <td></td> </tr> <tr> <td colspan="2">Edit heading: Building owners' manual and training for one- and two-family dwellings.</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>11.1001.0 Intent. Information on the building's use, maintenance, and green components is provided.</td> <td></td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>11.1001.1 A building owner's manual is provided that includes the following, as available and applicable.</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td style="text-align: center;">8 Max</td> </tr> </table>			11.1001		Edit heading: Building owners' manual and training for one- and two-family dwellings.				11.1001.0 Intent. Information on the building's use, maintenance, and green components is provided.				11.1001.1 A building owner's manual is provided that includes the following, as available and applicable.	1		8 Max
11.1001																	
Edit heading: Building owners' manual and training for one- and two-family dwellings.																	
11.1001.0 Intent. Information on the building's use, maintenance, and green components is provided.																	
11.1001.1 A building owner's manual is provided that includes the following, as available and applicable.	1																
	8 Max																

	<p>(Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)</p>	
(1)	A green building program certificate or completion document.	Mandatory
(2)	List of green building features (can include the national green building checklist).	Mandatory
(3)	Product manufacturer’s manuals or product data sheet for newly installed major equipment, fixtures, and appliances. If product data sheet is in the building owners’ manual, manufacturer’s manual may be attached to the appliance in lieu of inclusion in the building owners’ manual.	Mandatory
(4)	Maintenance checklist.	
(5)	Information on local recycling programs.	
(6)	Information on available local utility programs that purchase a portion of energy from renewable energy providers.	
(7)	Explanation of the benefits of using energy-efficient lighting systems [e.g., compact fluorescent light bulbs, light emitting diode (LED)] in high-usage areas.	
(8)	A list of practices to conserve water and energy.	
(9)	Local public transportation options.	
(10)	A diagram showing the location of safety valves and controls for major building systems.	
(11)	Where frost-protected shallow foundations are used, owner is informed of precautions including:	
	(a) instructions to not remove or damage insulation when modifying landscaping.	
	(b) providing heat to the building as required by the ICC IRC or IBC.	
	(c) keeping base materials beneath and around the building free from moisture caused by broken water pipes or other water sources.	
(12)	A list of local service providers that offer regularly scheduled service and maintenance contracts to ensure proper performance of equipment and the structure (e.g., HVAC, water-heating equipment, sealants, caulks, gutter and downspout system, shower and/or tub surrounds, irrigation system).	
(13)	A photo record of framing with utilities installed. Photos are taken prior to installing insulation, clearly labeled, and included as part of the building owners’ manual.	
(14)	List of common hazardous materials often used around the building and instructions for proper handling and disposal of these materials.	
(15)	Information on organic pest control, fertilizers, deicers, and cleaning products.	
(16)	Information on native landscape materials and/or those that have low-water requirements.	

<p>(17) Information on methods of maintaining the building’s relative humidity in the range of 30 percent to 60 percent.</p> <p>(18) Instructions for inspecting the building for termite infestation.</p> <p>(19) Instructions for maintaining gutters and downspouts and importance of diverting water a minimum of 5 feet away from foundation.</p> <p>(20) A narrative detailing the importance of maintenance and operation in retaining the attributes of a green-built building.</p> <p>(21) Where stormwater management measures are installed on the lot, information on the location, purpose, and upkeep of these measures.</p> <p>(22) For buildings originally built before 1978, the EPA publications “Reducing Lead Hazards When Remodeling Your Home” and “Abestos in Your Home: A Homeowner’s Guide”.</p>	
<p>Change section number below to 11.1001.2 for one and two-family dwellings, and 11.1002.4 for multi-unit buildings</p>	
<p>11.1002</p> <p>TRAINING OF BUILDING OWNERS ON OPERATION AND MAINTENANCE FOR ONE- AND TWO-FAMILY DWELLINGS AND MULTI-UNIT BUILDINGS</p>	
<p>11.1002.1 Training of building owners. Building owners are familiarized with the role of occupants in achieving green goals. On-site training is provided to the responsible party(ies) regarding newly installed equipment operation and maintenance, control systems, and occupant actions that will improve the environmental performance of the building. These include:</p>	<p>Mandatory</p> <p>8</p>
<p>(1) HVAC filters</p>	
<p>(2) thermostat operation and programming</p>	
<p>(3) lighting controls</p>	
<p>(4) appliances operation</p>	
<p>(5) water heater settings and hot water use</p>	
<p>(6) fan controls</p>	
<p>(7) recycling practices</p>	
<p>11.10032</p> <p>CONSTRUCTION, OPERATION, AND MAINTENANCE MANUALS AND TRAINING FOR MULTI-UNIT BUILDINGS</p>	

<p>11.1003.0 Intent. Manuals are provided to the responsible parties (owner, management, tenant, and/or maintenance team) regarding the construction, operation, and maintenance of the building. Paper or digital format manuals are to include information regarding those aspects of the building’s construction, maintenance, and operation that are within the area of responsibilities of the respective recipient. One or more responsible parties are to receive a copy of all documentation for archival purposes.</p>	
<p>11.1003.1 Building construction manual. A building construction manual, including five or more of the following, is compiled and distributed in accordance with Section 11.1003.0.</p> <p style="text-align: center;">(Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)</p>	1
<p>(1) A narrative detailing the importance of constructing a green building, including a list of green building attributes included in the building. This narrative is included in all responsible parties’ manuals.</p>	Mandatory
<p>(2) A local green building program certificate as well as a copy of the <i>National Green Building Standard™</i>, as adopted by the Adopting Entity, and the individual measures achieved by the building.</p>	Mandatory
<p>(3) Warranty, operation, and maintenance instructions for all equipment, fixtures, appliances, and finishes.</p>	Mandatory
<p>(4) Record drawings of the building.</p>	
<p>(5) A record drawing of the site including stormwater management plans, utility lines, landscaping with common name and genus/species of plantings.</p>	
<p>(6) A diagram showing the location of safety valves and controls for major building systems.</p>	
<p>(7) A list of the type and wattage of light bulbs installed in light fixtures.</p>	
<p>(8) A photo record of framing with utilities installed. Photos are taken prior to installing insulation and clearly labeled.</p>	
<p>11.1003.2 Operations manual. Operations manuals are created and distributed to the responsible parties in accordance with Section 11.1003.0. Among all of the operation manuals, five or more of the following options are included.</p> <p style="text-align: center;">(Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)</p>	1
<p>(1) A narrative detailing the importance of operating and living in a green building. This narrative is included in all responsible parties’ manuals.</p>	Mandatory

	<p>(2) A list of practices to conserve water and energy (e.g., turning off lights when not in use, switching the rotation of ceiling fans in changing seasons, purchasing ENERGY STAR appliances and electronics).</p> <p>(3) Information on methods of maintaining the building's relative humidity in the range of 30 percent to 60 percent.</p> <p>(4) Information on opportunities to purchase renewable energy from local utilities or national green power providers and information on utility and tax incentives for the installation of on-site renewable energy systems.</p> <p>(5) Information on local and on-site recycling and hazardous waste disposal programs and, if applicable, building recycling and hazardous waste handling and disposal procedures.</p> <p>(6) Local public transportation options.</p> <p>(7) Explanation of the benefits of using compact fluorescent light bulbs, LEDs, or other high-efficiency lighting.</p> <p>(8) Information on native landscape materials and/or those that have low water requirements.</p> <p>(9) Information on the radon mitigation system, where applicable.</p> <p>(10) A procedure for educating tenants in rental properties on the proper use, benefits, and maintenance of green building systems including a maintenance staff notification process for improperly functioning equipment.</p>	<p>Mandatory</p>
	<p>11.1003.3 Maintenance manual. Maintenance manuals are created and distributed to the responsible parties in accordance with Section 11.1003.0. Between all of the maintenance manuals, five or more of the following options are included.</p> <p style="text-align: center;">(Points awarded per two items. Points awarded for both mandatory and non-mandatory items.)</p>	<p>1</p>
	<p>(1) A narrative detailing the importance of maintaining a green building. This narrative is included in all responsible parties' manuals.</p> <p>(2) A list of local service providers that offer regularly scheduled service and maintenance contracts to ensure proper performance of equipment and the structure (e.g., HVAC, water-heating equipment, sealants, caulks, gutter and downspout system, shower and/or tub surrounds, irrigation system).</p> <p>(3) User-friendly maintenance checklist that includes:</p> <ul style="list-style-type: none"> (a) HVAC filters (b) thermostat operation and programming (c) lighting controls (d) appliances and settings (e) water heater settings 	<p>Mandatory</p>

	(f) fan controls	
	(4) List of common hazardous materials often used around the building and instructions for proper handling and disposal of these materials.	
	(5) Information on organic pest control, fertilizers, deicers, and cleaning products.	
	(6) Instructions for maintaining gutters and downspouts and the importance of diverting water a minimum of 5 feet away from foundation.	
	(7) Instructions for inspecting the building for termite infestation.	
	(8) A procedure for rental tenant occupancy turnover that preserves the green features.	
	(9) An outline of a formal green building training program for maintenance staff.	
Reason:	Clarification of the requirements and options for one-and two-family dwellings as well as differentiating those for multi-unit buildings	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P340 LogID TG7-08	11.1001.1 Building owner's manual	Final Formal Action: Approve
Submitter:	Task Group 7,	
Proposed Change:	Product manufacturer's manuals or product data sheet for newly installed major equipment, fixtures, and appliances <u>including product model numbers and serial numbers</u> . If product data sheet is in the building owners' manual, manufacturer's manual may be attached to the appliance in lieu of inclusion in the building owners' manual.	
Reason:	Important information for the homeowner	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P341 LogID TG7-01	11.1001.1 Building owner's manual	Final Formal Action: Approve
Submitter:	Task Group 7,	
Proposed Change:	(3) Product manufacturer's manuals or product data sheet for newly installed major equipment, fixtures, and appliances <u>including product model numbers and serial numbers</u> . If product data sheet is in the building owners' manual, manufacturer's manual may be attached to the appliance in lieu of inclusion in the building owners' manual.	
Reason:	Important information for the homeowner	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P342 LogID 5103	11.1001.1 Building owner's manual is provided	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	<u>(23) Documentation and OEM manuals as required in QI-5 2010</u>	
Reason:	QI-5 2010 designates documentation and owner training based on the type of equipment installed. Relisting every combination in this standard would be duplicative. By adding the QI-5 requirement all HVAC system types would be covered.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The requirement for documentation already exists. QI-5 is not targeted to homeowners, and adding QI-5 as a requirement would add an excessive documentation burden.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		

Abstain:	
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P343 LogID 5182	11.1001.1 Building owner's manual is provided	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(5) Information on local recycling and composting programs.	
Reason:	11.1001.1 states that information be included in the owner's manual as available and applicable. Information on composting programs should be referenced in part (5).	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:	Local green initiative, adds to list of complimentary green programs	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P344 LogID 5183	11.1002.1 Training of building owners (1- and 2-family dwellings)	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(7) recycling and composting practices	
Reason:	Training on composting practices should be included in the training dealing with recycling and waste management.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:	Consistent with action on P343.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P345 LogID 5104	11.1002.1 Training of building owners (1- and 2-family dwellings)	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	(10) Owner training requirements as required in QI-5 2010	

Reason:	QI-5 2010 designates information that is needed by owners with regards to maintenance. Relisting every combination in this standard would be duplicative. By adding the QI-5 requirement all HVAC system types would be covered.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The current owner education requirements are sufficient.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P346 LogID 5184	11.1003.1 Building construction manual	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	<u>(9) A Disassembly Plan with as-built drawings and the chemical and mechanical inventory yielding information about the method of disassembly of building systems and the properties of major materials and components.</u>	
Reason:	A disassembly plan should be provided to the owner to facilitate deconstruction and disassembly of the home to maximize reuse and salvaging of materials during renovation or at the end of the building's useful life.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Already providing drawings and a photographic record of the renovation. Disassembly plan is beyond the scope of this section of the standard.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P347 LogID 5105	11.1003.3 Maintenance manual	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	<u>(10) OEM Maintenance requirements as required in QI-5 2010</u>	
Reason:	QI-5 2010 designates information that is needed by owners with regards to maintenance. Relisting every combination in this standard would be duplicative. By adding the QI-5 requirement all HVAC system types would be covered.	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The current maintenance information requirements are sufficient.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P348 LogID 5267	11.1004.1 Reserved - To Be Determined	Final Formal Action: Disapprove
Submitter:	Matt Belcher, Verdatek Solutions	
Proposed Change:	<p><u>11.1004 Innovative Practices</u></p> <p><u>11.1004.1 Resilience</u> Dwelling incorporates one or more of the following resilience options, as applicable. Points for items 1 through 4 shall be granted only where such products are not required per the applicable building code.</p> <ol style="list-style-type: none"> <u>1. High-wind resistant or impact resistant entry doors or garage doors are installed</u> <u>2. Impact resistant glazing is installed.</u> <u>3. High-wind resistant or impact resistant wall claddings are installed.</u> <u>4. High-wind resistant or impact resistant roof coverings are installed.</u> <u>5. The building is constructed in accordance with an approved above-code mitigation program (e.g. IBHS Fortified, Resilience Star or My Safe Florida Home).</u> <p><u>Lot incorporates one or more of the following resilience options, as applicable.</u></p> <ol style="list-style-type: none"> <u>6. The entire building is constructed using flood damage-resistant materials.</u> <u>7. The building is constructed with its lowest floor at least one foot above the elevation required by the building code or adopted by the jurisdiction, whichever is higher.</u> <u>8. The building is constructed with its lowest floor at least two feet above the elevation required by the building code or adopted by the jurisdiction, whichever is higher.</u> <u>9. The building is constructed with its lowest floor at least three feet above the elevation required by the building code or adopted by the jurisdiction, whichever is higher.</u> <u>10. The building is located in Zone A and constructed on an open foundation system (pile foundations or isolated piers).</u> <u>11. The building is constructed in accordance with an approved above-code flood mitigation program (e.g. IBHS Fortified, etc.).</u> 	
Reason:	With the focus on future enhancement of the model codes to provide for enhanced "Resilient" construction, It is an opportunity to include reference in this "above code" standard to incentivise innovative practices and process that will demonstrate best practices for eventual application into the model codes.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		

Committee Reason:	Resilience is an important concept and topic, and may be more important for new construction, but as stated the benefits are not clear and the text would require extensive review before implementation on the remodeling side.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P349 LogID 5176	11.601.2 Material usage	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	(1) Minimum structural member or element sizes necessary for strength and stiffness in accordance with advanced framing techniques <u>that are in conformance with local building codes</u> or structural design standards are selected.	
Reason:	Even though advanced framing techniques have been proven effective, in some instances because of local conditions, such as wind or seismic potential, some of the techniques are not allowed by local codes. It would be vigilant to mention possible code restrictions and recommend consulting building codes for the selection of suitable advanced framing technique options.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	This standard assumes compliance with local codes.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P350 LogID 5178	11.602.1.9 Flashing	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Make part (6), "Through-wall flashing is installed at transitions between wall cladding materials or wall construction types," mandatory.	
Reason:	Transitions between materials are typically continuous and present a great opportunity to insert flashing to allow for water to drain out of the walls and prevent water damage. Providing through wall flashing at transitions between wall cladding materials is just good practice and should be mandatory.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		

Committee Reason:	Some wall systems will not accommodate through-wall flashing, therefore this should not be made mandatory.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P351 LogID TG7-02	11.602.1.9 Flashing	Final Formal Action: Disapprove
Submitter:	Task Group 7,	
Proposed Change:	Add definition of "Through-wall flashing"	
Reason:	Clarification needed.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Proposed change did not include a definition of "Through-wall flashing" to approve. The proposed change is incomplete.	
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39
	Disagree with committee action:	0
	Abstain:	0
	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P352 LogID 5179	11.605.2 Construction waste management plan	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	A construction waste management plan is developed, posted at the jobsite, and implemented with a goal of recycling or salvaging a minimum of 50 percent (by weight) of construction waste, <u>excluding land-clearing waste</u> .	
Reason:	Land-clearing waste should be excluded from the 50 percent calculation. Soil, vegetation, and rocks are heavy, bulky materials. When included in the total weight used to calculate the recycling rate, it can reduce the amount of higher-value materials, such as wood, concrete, and drywall, that is ultimately recycled.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote:	41
	Agree with committee action:	39

	Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P353 LogID 5205	11.605.2 Construction waste management plan	Final Formal Action: Disapprove
Submitter:	Wes Sullens, StopWaste of Alameda County	
Proposed Change:	A construction waste management plan is developed, posted at the jobsite, and implemented with a goal of recycling or salvaging a minimum of 50 percent (by weight) of construction waste. <u>Land clearing debris and materials that are processed for recycling but are used as alternative daily cover at land fills shall be excluded from the 50 percent requirement.</u>	
Reason:	Materials that result from land clearing activity are often heavy and can skew results for other types of higher-value recycling and salvaging. Additionally, these materials are typically not landfilled because they are expensive to tip and robust markets are available to accept and recycled those land clearing materials. "Alternative Daily Cover" (ADC) is cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. The ADC materials that result from building are byproducts of construction and demolition waste processing facilities, yet they are not actually recycled (they do not re-enter the materials cycle) and are essentially deposited in landfills and stay there forever. Therefore, ADC should not be considered recycling in green building standards. ASHRAE 189.1, GreenPoint Rated, and LEEDv4 have all disallowed ADC to count as recycling, and so should this standard. Achieving 50% recycling by not including ADC and land clearing debris is widely available with jobsite best practices (source separation of materials on-site and sending those materials to specific recycling facilities), and by sending the remaining mixed-waste loads to facilities that sort offsite.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	In favor of action on P352.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P354 LogID 5180	11.605.4 Recycled construction materials	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Construction materials (e.g., wood, cardboard, metals, drywall, plastic, asphalt roofing shingles, or concrete) <u>that cannot be salvaged and reused onsite</u> are recycled offsite.	
Reason:	Onsite salvage and reuse is preferred to offsite recycling because of reduced hauling and transportation impacts; it should be emphasized that reuse is a higher priority.	

Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Concerned that this is not verifiable.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P355 LogID 5181	11.610.1.2.1 Product LCA	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Add two new impact categories: <u>(e) Material Use</u> and <u>(f) Waste</u>	
Reason:	Industry-wide efforts to promote the management of materials and products on a life-cycle basis are current. These life-cycle efforts ensure that materials are used more efficiently and effectively. To that end, the analyses need to provide us with adequate measures that capture material use and recovery. Using less material and recovering more is crucial to our economic and environmental future. Material use and waste are two additional impact categories that should be included.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	These variables are already considered in the LCA.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P356 LogID 5074	11.611.2 Sustainable products	Final Formal Action: Approve
Submitter:	Josh Jacobs, UL	
Proposed Change:	(5) 50% or more of the gypsum board installed (by square feet) is certified to <u>UL 100</u> ULE-ISR 100 . (6) 50% or more of the door leafs installed (by number of door leafs) is certified to <u>UL 102</u> ULE-ISR 102 .	
Reason:	This is an update to existing references. UL 100 and 102 were finalized and published shortly after final voting for the NAHB National Green Building Standard was completed.	
Committee Action from Meeting:	Approve	

Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P357 LogID TG7-05	11.611.3 Universal design elements	Final Formal Action: Approve as Modified
Submitter:	Ramesh Gulatee, Ryan Taylor,	
Proposed Change:	<p>Add the following points to section 11.611.3 on page 109:</p> <p><u>(5) All interior and exterior door handles are levers rather than knobs.</u></p> <p><u>(6) All sink faucet controls are single-handle controls of both volume and temperature. [Faucet controls might also appear in section 11.903.1 Plumbing on page 121 though it makes more sense to group these requirements because they share the same purpose.]</u></p> <p><u>(7) Power receptacles, communication connections (for cable, phone, Ethernet, etc.) and switches required by the local building codes are placed between 15” and 48” above the finished floor. Additional switches to control devices and systems (such as alarms, home theaters and other equipment) not required by the local building code may be installed as desired.</u></p> <p><u>(8) All light switches are rocker-type switches or other similar switches that can be operated by pressing them (with assistive devices) – no toggle-type switches may be used.</u></p> <p><u>(9) Anyone of the following can be controlled with a (wireless) mobile device such as a smartphone, tablet or laptop computer: HVAC, lighting, alarm system or door locks.</u></p>	
Reason:	<p>These items complement the existing basic accessibility items already included in the standard. They’re common in building because they’re convenient to occupants regardless of their level of mobility. They’re also easy and inexpensive to change if a future owner objects to the switches and faucets. Please consider adding these items because they’ll serve as a guide for the true nature of basic accessibility. It’s not just about getting around in a wheelchair. It’s about living comfortably in a home. These items help remove barriers that highlight disabilities. They help create enabling spaces.</p>	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p><i>Add the following items to section 11.611.3 on page 109:</i></p> <p><u>(5) All interior and exterior door handles are levers rather than knobs.</u></p> <p><u>(6) All sink faucet controls are single-handle controls of both volume and temperature. [Faucet controls might also appear in section 11.903.1 Plumbing on page 121 though it makes more sense to group these requirements because they share the same purpose.]</u></p>	

	<p>(7) <u>Interior convenience</u> Power receptacles, communication connections (for cable, phone, Ethernet, etc.) and switches <u>required by the local building codes</u> are placed between 15" and 48" above the finished floor. Additional switches to control devices and systems (such as alarms, home theaters and other equipment) not required by the local building code may be installed as desired.</p> <p>(8) All light switches are rocker-type switches or other similar switches that can be operated by pressing them (with assistive devices) – no toggle-type switches may be used.</p> <p>(9) Anyone of the following can be controlled with a (wireless) mobile device such as a smartphone, tablet or laptop computer: HVAC, lighting, alarm system or door locks</p>
Committee Reason:	Consistent with action on P149.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 38</p> <p>Disagree with committee action: 1</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p><i>Steven Rosenstock:</i> This is good language, but I think it could be improved in the following ways:</p> <p>For 8), add some language on dimmers. For access reasons, does this mean that "slider" type units should not be used (e.g., the dimming control is built into the rocker switch)?</p> <p>For 9), take out "alarm system", as the term is an umbrella term that could cover security, fire, CO, or other safety alarms that should always be on, or have stand-alone remote controls that are designed <u>not</u> to be accessible through other devices.</p>
Abstain:	

P358 LogID 5225	11.701.4.1.1 HVAC system sizing	Final Formal Action: Approve as Modified
Submitter:	Eric Lacey, RECA	
Proposed Change:	<p>11.701.4.0 Minimum Energy Efficiency Requirements. Additions, alterations, renovations, or repairs to an existing building, building system or portion thereof <u>comply with the provisions of the International Energy Conservation Code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. An addition complies with the IECC if the addition complies or if the existing building and addition comply with the IECC as a single building.</u></p>	Mandatory
Reason:	<p>This proposal clarifies that additions, alterations, renovations, or repairs must meet the same requirements of the IECC that apply to new buildings, to the extent that the requirements are applicable. The language is based on Section R101.4.3 of the IECC so that there is consistency between the scope of the IECC and the scope of ICC-700 with respect to additions, alterations, renovations and repairs. Sections 11.701 and 12.701 both contain many of the IECC requirements as "mandatory" requirements for all projects, and seem to imply that these projects should meet the IECC, but there is no specific requirement that outlines the scope of the requirements. As with the IECC, portions of the building that are not altered by a renovation, addition, alteration, or repair will not be required to meet the IECC.</p>	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i>	

	11.701.4.0 Minimum Energy Efficiency Requirements. Additions, alterations, or renovations, or repairs to an existing building, building system or portion thereof comply with the provisions of the International Energy Conservation Code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. An addition complies with the IECC if the addition complies or if the existing building and addition comply with the IECC as a single building.
Committee Reason:	Clarify intent.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P359 LogID 5227	11.701.4.1.1 HVAC system sizing (Mandatory practices)	Final Formal Action: Approve as Modified
Submitter:	Eric Lacey, RECA	
Proposed Change:	<p>11.701.4.X Fenestration Specifications. The NFRC-certified (or equivalent) U-factor and SHGC of newly installed windows, exterior doors, skylights, and tubular daylighting devices (TDDs) do not exceed the values in Table 703.1.6.1.</p> <p>11.701.4.X Replacement Fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the NFRC-certified (or equivalent) U-factor and SHGC of the replacement fenestration unit do not exceed the values in Table 703.1.6.1.</p>	<p>Mandatory</p> <p>Mandatory</p>
Reason:	This proposal improves the consistency of Chapter 11 by requiring fenestration to meet the same level of efficiency, whether it is installed as part of new construction, a renovation or repair, or a simple fenestration replacement. These new sections simply reference the baseline fenestration requirements that currently apply to the prescriptive compliance option. The language is modeled after existing language in ICC-700 and the IECC. In fact, the replacement fenestration requirement has been in the residential chapter of every edition of the IECC since 2000. Neither of these sections requires a code user to replace a window in a given project. However, if an addition, window replacement or a renovation is planned that will involve replacing an entire fenestration unit, these sections would simply require that window, door, or skylight to meet the prescriptive requirements specified in Chapter 7.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p>11.701.4.X Fenestration Specifications. The NFRC-certified (or equivalent) U-factor and SHGC of newly installed windows, exterior doors, skylights, and tubular daylighting devices (TDDs) do not exceed the values in Table 703.1.6.1.</p> <p>11.701.4.X Replacement Fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the NFRC-certified (or equivalent) U-factor and SHGC of the replacement fenestration unit do not exceed the values in Table 703.1.6.1.</p>	
Committee Reason:	Consistency with the IECC and the IRC.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39	

	Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P360	LogID 5106	11.701.4.1.1 HVAC system sizing (Mandatory practices)	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA		
Proposed Change:	<u>701.4.1.X HVAC systems installation, and documentation.</u> Space heating and cooling systems are to be installed documented in accordance with ACCA QI 5-2010		
Reason:	Add a new Mandatory Requirement: Other places in the document the same requirements are either awarded points or are mandatory.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	HVAC systems must already be installed in accordance with manufacturer specifications.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2		
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P361	LogID 5107	11.701.4.1.1 HVAC system sizing (Mandatory practices)	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA		
Proposed Change:	Add wording: 11.701.4.1.X Radiant and hydronic space heating. Where installed as a primary heat source in the building, radiant or hydronic space heating system is designed, installed, and documented, using industry-approved guidelines and standards (e.g., ACCA Manual j, AHRI I=B=R, ACCA 5 QI-2010, or an accredited design professional's and manufacturer's recommendation.		
Reason:	This section does not have hydronic systems listed. Other places in the document the same requirements are either awarded points or are mandatory.		
Committee Action from Meeting:	Disapprove		
Modification of Proposed Change:			
Committee Reason:	This is redundant and concerned that this proposed change will create unnecessary additional documentation requirements.		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0		

	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P362 LogID 5099	11.701.4.1.1 HVAC system sizing (Mandatory practices)	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	<u>11.701.4.1.X HVAC systems installation, and documentation. Space heating and cooling systems are to be installed and documented in accordance with ACCA QI 5-2010</u>	
Reason:	Add a new Mandatory Requirement: Other places in the document the same requirements are either awarded points or are mandatory. ACCA recommends making them mandatory and awarding points for verification.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Consistent with action on P360.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P363 LogID 5270	11.901.1.4 Gas fireplaces and direct heating equipment vented outdoors	Final Formal Action: Disapprove
Submitter:	Ted A. Williams, American Gas Association	
Proposed Change:	11.901.1.4 Newly installed gas fired fireplaces and direct heating equipment is listed and is installed in accordance with the NFPA 54, ICC IFGC, or the applicable local gas appliance installation code. Gas-fired fireplaces and direct heating equipment are vented to the outdoors. [a duplicative proposed change on 901.1.4 is submitted.]	
Reason:	Banning unvented or "vent-free" fireplaces and direct heating equipment, the net effect of this "mandatory" requirement, has never been justified in terms of environmental criteria consistent with a "green" standard. During deliberations on the 2012 Edition, air pollutant emissions associated with use of such products were not documented or referenced in terms of concentrations or specific effects on the indoor environment or human health. Likewise, the ban does not address positive environmental benefits associated with virtual 100% thermal efficiency of heating in the installed space and reduced need for central heating from spot heating afforded by unvented combustion heating appliances, in terms of environmental criteria consistent with a "green" standard. Air pollutant emissions associated with use of such products have not been documented or referenced in terms of concentrations or specific effects on the indoor environment or human health. Likewise, the ban does not address positive environmental benefits associated with virtual 100% thermal efficiency of heating in the installed space	

	<p>and reduced need for central heating from spot heating afforded by unvented combustion heating appliances, both of which reduce overall energy demand and externalities (including total air emissions) associated with less efficient heating approaches. These positive effects should be evaluated on balance with hypothesized negative effects associated with altered indoor air concentrations of the identified contaminants. No effort is made or documented to assess this balance. While points are proposed for use of these products, their banning from green building represents unbalanced and non-technical consideration of the net effects of their installation and use. The ban appears to appeal to simplistic views of environmental acceptability based on an “additive” impact on indoor air quality from operation of unvented combustion appliances. It ignores important design and product standardization considerations. For example, appliance sizing and, most directly, heat gain beyond tolerable limits in tight buildings impose a fundamental limit on the generation of combustion products. The tighter the installation location, the lower the firing rate and duration the appliance can be operated while avoiding intolerable temperatures. This principle has been applied to gas-fired residential cooking appliances since 1921 (ANSI Standard Z21.1), which associated combustion product loadings with the tightness of kitchens, emission factors from the appliances, and heat rise tolerances for occupants. A technical review in 1994, reviewed by U. S Consumer Product Safety Commission and considering modern air change rates, combustion product exposure criteria, and ASHRAE thermal comfort requirements confirmed the continued efficacy of this approach. Unvented fireplaces are design certified in the same manner. If unvented combustion appliances represent a public health or safety hazard, they should be prohibited from all occupancies (not just “green” buildings) because to do less would imply a toleration of unequal treatment of occupants with respect to health and safety. Standards development for “green” buildings would be better conducted on technically justified grounds and not focus on banning products based on heuristic arguments. It should be noted that proposed Addendum be to ASHRAE Standard 189.1, “Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings” would have imposed a similar ban of unvented fireplaces, but the Addendum has been returned to the 189.1 Standard Project Committee following public review and receipt of negative comments.</p>
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Concerned with the possible IEQ ramifications, and the value of the proposed change is in question.
Ballot Results on Committee Action:	<p>Eligible to vote: 41 Agree with committee action: 35 Disagree with committee action: 4 Abstain: 0 Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Neil Leslie: Prohibiting code-approved technologies is not an appropriate way to deal with perceived concerns about unintended consequences. A more defensible approach is to provide additional compliance requirements if deemed necessary to mitigate such consequences. The committee's justification statement regarding the value of the proposed change is not true. There is research data dating as far back as the 1980's showing the energy benefits of unvented heaters. It is incumbent on the committee to defend draconian actions such as prohibition, and "concerns" about IEQ ramifications without significant supporting technical data is not adequate justification.</p> <p>Ted Williams: No opponent of the proposal presented during deliberations evidence of deleterious IAQ impacts from modern unvented appliances or refuted evidence of their inherent safe and air quality standards-compliant operation The Committee Reason that "value" of the change was not demonstrated is superfluous since the proposal would be to eliminate a prohibition of these appliances, not postulating a "green" positive value for their use or points credit</p>

	<p>Frank Stanonik: The reasons for the proposal explain that gas unvented heaters and fireplaces can be installed in existing homes without any detrimental effect to the IAQ in the home. The vague "concerns with IEQ ramifications" does not justify this action.</p> <p>There is no need to demonstrate the value of the proposed change since it does not require any action to be taken. Rather it simply allows another option for the builder to choose. This part of the reason also ignores the fact that the reason for the proposal clearly addresses the efficiency benefit of these products. That is a value.</p> <p>Christopher Mathis: I disagree with the committee action. I believe it is inappropriate for ICC 700 to address important life safety issues already addressed by national model codes ICC/NFPA.</p>
Abstain:	

P364 LogID TG7-06	11.902 Pollutant control	Final Formal Action: Approved										
Submitter:	Ryan Taylor, Ryan Taylor Architects LLC											
Proposed Change:	Add the following to section 11.902 on page 120: <u>11.902.2.4 MERV 14 filters or greater are installed on central forced air systems and are accessible. Designer or installer is to verify that the HVAC equipment is able to accommodate the pressure drop of the filter used.</u>											
Reason:	<p>In his presentation at the 2014 RESNET Conference in Atlanta, Iain Walker of the Lawrence Berkeley National Lab stated MERV 14 and up (slide 48 of the presentation linked above) is needed to filter the ultrafine particles created from cooking in homes – a significant source of indoor air pollution. As part of his presentation, Walker noted that the lab has been testing the effectiveness of kitchen exhaust performance and found that the capture efficiency is not as high as many people believe. With a capture efficiency that may be less than 50% (slide 37 of the presentation linked above), we’re contributing pollution we thought was being properly exhausted from the home.</p> <p>Please consider adding this section and adjusting the points of 11.902.2.3 and 11.902.2.4 to steer users to the higher MERV rating so we can enjoy healthier homes.</p>											
Committee Action from Meeting:	Approved											
Modification of Proposed Change:												
Committee Reason:	Consistent with actions on P311.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P365 LogID 5101	11.902.2.1 Whole building ventilation system	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	(3) Heat-recovery ventilator (<i>HRV</i>) (4) Energy- recovery ventilator (<i>ERV</i>)	

	(5) HRV or ERV is used as exhaust fan for one or more bathrooms or for a kitchen application
Reason:	This should be provided as a 9 or 10 point option because it saves up to 45% on the energy losses caused by simple negative air pressure exhaust only outside air /make up air designs.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	Consistent with action on P315. Actual energy loss/gain unsubstantiated. Need evidence. Bathrooms and kitchens already required to exhaust outdoors and have controls. Humidity control already required. Concerns over kitchen pollutants.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P366 LogID 5102	11.904.2 Kitchen exhaust	Final Formal Action: Disapprove
Submitter:	Donald Prather, ACCA	
Proposed Change:	11.904.2 Kitchen Exhaust. A kitchen exhaust unit(s) that equals or exceeds 400 cfm (189 l/s) is installed and makeup air is provided (1) ERV or HRV is installed to temper the outside air being brought in.	
Reason:	Recommend making the makeup air requirement mandatory and awarding the 2 points for making it economical.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	Not clear on how the ERV/HRV would provide makeup air for this application. Concerned about unintended consequences (e.g., kitchen exhaust should not be introduced directly to ERV/HRV)	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P367 LogID 5155	Other for Chapter 11 (include section number and title below)	Final Formal Action: Disapprove
Submitter:	Stephen J Holzer, eM8s, LLC	

Proposed Change:	11.505.6 Building Information Modeling (BIM). Project Team uses BIM planning, design, remodeling and simulating operation in order reduce material waste and optimize performance.										
Reason:	Building Information Modeling (BIM) is a computer generated model based process that simulates planning, design, construction and operations for buildings. It is a single repository for both three-dimensional, two-dimensional, and material properties information that allows data interoperability of all stakeholders to better inform design and construction decisions with the goal of producing the best product possible. This information technology will increase design and construction efficiencies and decrease costs for builders and end users. BIM may also facilitate better communication, collaboration and coordination among building industry professionals and trades working on the same project. Credit should be given to Builders utilizing the open industry standards as defined in the National Building Information Modeling Standard.										
Committee Action from Meeting:	Disapprove										
Modification of Proposed Change:											
Committee Reason:	Consistent with action on P025.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>38</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>1</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	38	Disagree with committee action:	0	Abstain:	1	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	38										
Disagree with committee action:	0										
Abstain:	1										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:	<i>Frank Stanonik:</i> This proposal seems more specific and concrete to me than the requirements of P025. It is not clear to me why the addition of the proposals in P025 preclude the inclusion of this provision.										

P368 LogID 5177	Other for Chapter 11 (include section number and title below)	Final Formal Action: Disapprove										
Submitter:	Brett VanAkkeren, USEPA											
Proposed Change:	11.601.9 Design for Disassembly. Incorporate in the design interior elements, such as non-load-bearing walls, partitions, lighting and electric systems, suspended ceilings, raised floors and interior air distribution systems that can be disassembled, re-configured, and reused. Utilize connections that allow disassembly, such as reversible connections (e.g. screws, bolts, nails, clips).											
Reason:	The intent of 11.601 is to utilize design and construction practices that minimize the environmental impact of the building materials and to incorporate environmentally efficient building systems and materials. Employing design elements that can be disassembled, re-configured and reused, and utilizing connections that are reversible are important green building practices to ensuring buildings systems are environmentally efficient.											
Committee Action from Meeting:	Disapprove											
Modification of Proposed Change:												
Committee Reason:	Consistent with action on P152.											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P369 LogID TG7-04	12 Remodeling of Functional Areas	Final Formal Action: Disapprove
Submitter:	Task Group 7,	
Proposed Change:	<p><i>Add text and renumber as necessary:</i></p> <div style="background-color: black; color: white; padding: 5px;"> <p>12.4</p> <p>BASEMENT REMODELS</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.4.0 Applicability. In addition to the practices listed in Section 12.1, the following practices are mandatory for all basement remodels.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.4.1 Moisture inspection. Prior to any construction activity, the basement is inspected for evidence of moisture problems. Any identified moisture problems are corrected prior to covering any walls or floors.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.4.2 Kitchen. When the basement remodel includes a kitchen, the remodel shall also comply with the practices in Section 12.2.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.4.3 Bathroom. When the basement remodel includes a bathroom, the remodel shall also comply with the practices in Section 12.3.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.4.902.3 Radon control. In Radon Zone 1, passive or active radon control system is installed in accordance with ICC IRC Appendix F.</p> </div> <p>12.5 Attic Remodels</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.5.0 Applicability. In addition to the practices listed in Section 12.1, the following practices are mandatory for all attic remodels.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.5.1 Moisture inspection. Prior to any construction activity, the attic is inspected for evidence of moisture problems. Any identified moisture problems are corrected prior to covering any ceilings, walls, or floors.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.5.2 Kitchen. When the attic includes a kitchen, the remodel shall also comply with the practices in Section 12.2.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.5.3 Bathroom. When the attic includes a bathroom, the remodel shall also comply with the practices in Section 12.3.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>12.5.4 Knee walls. When the attic includes a knee wall, the remodel shall also comply with.</p> </div>	

	<p>12.56</p> <p>ADDITIONS</p> <p>12.5.0 Applicability. In addition to the practices listed in Section 12.1, the following practices are mandatory for all addition remodels.</p> <p>12.5.1 Kitchen. When the addition includes a kitchen, the remodel shall also comply with the practices in Section 12.2.</p> <p>12.5.2 Bathroom. When the addition includes a bathroom, the remodel shall also comply with the practices in Section 12.3.</p> <p><u>12.6.3 Attic.</u> When the addition includes an attic, the remodel shall also comply with the practices in Section 12.5</p> <p>12.5.503.5 Landscape plan. Where the addition disturbs more than 1,000 square feet of the lot, a landscape plan for the lot is developed to limit water and energy use while preserving or enhancing the natural environment. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.</p> <p>12.5.602.1.1.1 Capillary break. A capillary break and vapor retarder are installed at concrete slabs in the addition in accordance with IRC Sections R506.2.2 and R506.2.3 or IBC Sections 1910 and 1805.4.1.</p> <p>12.5.602.1.3.1 Exterior drain tile. Where required by the ICC IRC or IBC for habitable and usable spaces of the addition below grade, exterior drain tile is installed.</p>
Reason:	Add attic as new functional area.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	This proposal does not provide the additional clarification needed to govern “additions”.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

Submitter:	Robert Hill, Home Innovation Research Labs										
Proposed Change:	12.0 Intent. This chapter sets forth the mandatory green building practices for remodeling functional areas of buildings. The intent of Chapter 12 is to address the most common remodeling projects: complete kitchen, full bathroom, complete basement, or an addition under 400 square feet less than 50% of the original conditioned floor area. <u>An attic conversion may be considered an addition.</u> Chapter 12 is not intended to be used for rating minor alterations.										
Reason:	The limitation of under 400 ft2 is too limiting. The limit should be established such that major additions force the building to use chapter 11 but only adding a 20' x 30' room would not likely be certifiable via chapter 11 but is outside the existing scope. Also, converting an unfinished attic is a very green thing to do but it is not obviously within the scope of the current practice.										
Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<i>Revise proposed change as follows (in red):</i> 12.0 Intent. This chapter sets forth the mandatory green building practices for remodeling functional areas of buildings. The intent of Chapter 12 is to address the most common remodeling projects: complete kitchen, full bathroom, complete basement, <u>attic conversion to habitable space,</u> or an addition <u>under 400 square feet less than 50% of the existing original conditioned floor area not to exceed 800 square feet.</u> An attic conversion may be considered an addition. Chapter 12 is not intended to be used for rating minor alterations.										
Committee Reason:	Expansion of intent to include attic spaces and expand size limit of functional area.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P371 LogID TG7-09	12.00 Remodeling of Functional Areas	Final Formal Action: Approve as Modified
Submitter:	Task Group 7,	
Proposed Change:	<p><u>12.5 Attic Remodels</u></p> <p><u>12.5.0 Applicability.</u> In addition to the practices listed in Section 12.1, the following practices are mandatory for all attic remodels.</p> <p><u>12.5.1 Moisture inspection.</u> Prior to any construction activity, the attics inspected for evidence of moisture problems. Any identified moisture problems are corrected prior to covering any ceilings, walls, or floors.</p> <p><u>12.5.2 Kitchen.</u> When the attic includes a kitchen, the remodel shall also comply with the practices in Section 12.2.</p> <p><u>12.5.3 Bathroom.</u> When the attic includes a bathroom, the remodel shall also comply with the practices in Section 12.3.</p> <p><u>12.5.4 Knee walls.</u> When the attic includes a knee wall, the remodel shall also comply with <u>12.1.701.4.3.1.</u></p>	
Reason:	Add attic as new functional area	

Committee Action from Meeting:	Approve as Modified										
Modification of Proposed Change:	<p><i>Revise proposed change as follows (in red):</i></p> <p><u>12.5 Attic Remodels Conversion of Previously Unconditioned Space to Conditioned Space</u></p> <p><u>12.5.0 Applicability.</u> In addition to the practices listed in Section 12.1, the following practices are mandatory for all <u>attic remodels conversions of previously unconditioned spaces into conditioned spaces such as, but not limited to attics, garages, etc.</u></p> <p><u>12.5.1 Moisture inspection.</u> Prior to any construction activity, the <u>attic-space to be converted shall be</u> inspected for evidence of moisture problems. Any identified moisture problems are corrected prior to covering any ceilings, walls, or floors.</p> <p><u>12.5.2 Kitchen.</u> When the <u>attic-space to be converted</u> includes a kitchen, the remodel shall also comply with the practices in Section 12.2.</p> <p><u>12.5.3 Bathroom.</u> When the <u>attic-space to be converted</u> includes a bathroom, the remodel shall also comply with the practices in Section 12.3.</p> <p><u>12.5.4 Knee walls.</u> When the <u>attic-space to be converted</u> includes a knee wall, the remodel shall also comply with 12.1.701.4.3.1.</p>										
Committee Reason:	Attics needed to be identified as a separate functional area but also felt that this should be further expanded to encompass other similar remodels.										
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P372 LogID 5185	12.1(A) Product or material selection	Final Formal Action: Approve										
Submitter:	Brett VanAkkeren, USEPA											
Proposed Change:	<u>12.1 (A).605.1 Construction waste management plan.</u> A construction waste management plan that includes targets for diversion is developed, posted at the jobsite, and implemented.											
Reason:	Although renovation of functional areas may result in less waste generated, it is still prudent to develop a construction waste management plan that contains target rates for diversion of the waste from landfill.											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P373 LogID 5075	12.1(A).611.2 Sustainable products	Final Formal Action: Approve										
Submitter:	Josh Jacobs, UL											
Proposed Change:	(5) 50% or more of the gypsum board installed (by square feet) is certified to <u>UL 100</u> UL-ISR 100 . (6) 50% or more of the door leafs installed (by number of door leafs) is certified to <u>UL 102</u> UL-ISR 102 .											
Reason:	This is an update to existing references. UL 100 and 102 were finalized and published shortly after final voting for the NAHB National Green Building Standard was completed.											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P374 LogID 5228	12.1.701.4.1.1 HVAC system sizing	Final Formal Action: Approve as Modified
Submitter:	Eric Lacey, RECA	
Proposed Change:	<p>12.1.701.4.X Fenestration Specifications. The NFRC-certified (or equivalent) U-factor and SHGC of newly installed windows, exterior doors, skylights, and tubular daylighting devices (TDDs) do not exceed the values in Table 703.1.6.1.</p> <p>12.1.701.4.X Replacement Fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the NFRC-certified (or equivalent) U-factor and SHGC of the replacement fenestration unit do not exceed the values in Table 703.1.6.1.</p>	
Reason:	This proposal improves the consistency of Chapter 12 by requiring fenestration to meet the same level of efficiency, whether it is installed as part of new construction, a renovation or repair, or a simple fenestration replacement. These new sections simply reference the baseline fenestration requirements that currently apply to the prescriptive compliance option. The language is modeled after existing language in ICC-700 and the IECC. In fact, the replacement fenestration requirement has been in the residential chapter of every edition of the IECC since 2000. Neither of these sections requires a code user to replace a window in a given project. However, if an addition, window replacement or a renovation is planned that will involve replacing an entire fenestration unit, these sections would simply require that window, door, or skylight to meet the prescriptive requirements specified in Chapter 7.	
Committee Action from Meeting:	Approve as Modified	

Modification of Proposed Change:	<p>Revise proposed change as follows (in red):</p> <p>12.1.701.4.X Fenestration Specifications. The NFRC-certified (or equivalent) U-factor and SHGC of newly installed windows, exterior doors, skylights, and tubular daylighting devices (TDDs) do not exceed the values in Table 703.1.6.1.</p> <p>12.1.701.4.X Replacement Fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the NFRC-certified (or equivalent) U-factor and SHGC of the replacement fenestration unit do not exceed the values in Table 703.1.6.1.</p>
Committee Reason:	Code consistency.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P375 LogID 5226	12.1.701.4.1.1 HVAC system sizing	Final Formal Action: Approve as Modified
Submitter:	Eric Lacey, RECA	
Proposed Change:	12.701.4.0 Minimum Energy Efficiency Requirements. Additions, alterations, renovations, or repairs to an existing building, building system or portion thereof comply with the provisions of the International Energy Conservation Code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. An addition complies with the IECC if the addition complies or if the existing building and addition comply with the IECC as a single building.	
Reason:	This proposal clarifies that additions, alterations, renovations, or repairs must meet the same requirements of the IECC that apply to new buildings, to the extent that the requirements are applicable. The language is based on Section R101.4.3 of the IECC so that there is consistency between the scope of the IECC and the scope of ICC-700 with respect to additions, alterations, renovations and repairs. Sections 11.701 and 12.701 both contain many of the IECC requirements as “mandatory” requirements for all projects, and seem to imply that these projects should meet the IECC, but there is no specific requirement that outlines the scope of the requirements. As with the IECC, portions of the building that are not altered by a renovation, addition, alteration, or repair will not be required to meet the IECC.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<p>Revise proposed change as follows (in red):</p> <p>12.1.701.4.0 Minimum Energy Efficiency Requirements. Additions, alterations, or renovations, or repairs to an existing building, building system or portion thereof comply with the provisions of the International Energy Conservation Code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. An addition complies with the IECC if the addition complies or if the existing building and addition comply with the IECC as a single building.</p>	
Committee Reason:	Consistent with action on P358.	
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p>	

	Non-voting:	2
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P376	LogID 5108	12.1.701.4.5 Boiler supply piping	Final Formal Action: Approve as Modified
Submitter:	Donald Prather, ACCA		
Proposed Change:	12.1.701.4.5 Boiler supply piping. <u>Insulate all</u> Newly installed boiler supply piping in unconditioned space that is accessible during the remodel is insulated		
Reason:	New pipe will be accessible.		
Committee Action from Meeting:	Approve as Modified		
Modification of Proposed Change:	Revise standard as follows: 12.1.701.4.5 Boiler supply piping. <u>Insulate all</u> Newly installed boiler supply piping in unconditioned space that is accessible during the remodel is insulated <u>and insulate existing boiler supply piping in unconditioned space where accessible.</u>		
Committee Reason:	This proposed change represents a good practice. The modification clarifies the intent, improves energy efficiency, and is practical to implement.		
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			
Agree with committee action:			
Disagree with committee action:			
Abstain:			

P377	LogID 5186	12.2.607.1 Recycling	Final Formal Action: Approve
Submitter:	Brett VanAkkeren, USEPA		
Proposed Change:	12.2.607.1 Recycling and Composting. Recycling <u>and</u> composting by the occupants is are facilitated by means of a built-in collection space in the kitchen or an aggregation/collection space in a garage, covered outdoor space, or other area for recycling containers.		
Reason:	Composting is not considered the same thing as recycling. Since the intent of the section is to facilitate composting as well as recycling, composting should be referenced by name in Section 12.2.607.1.		
Committee Action from Meeting:	Approve		
Modification of Proposed Change:			
Committee Reason:			
Ballot Results on Committee Action:	Eligible to vote:	41	
	Agree with committee action:	39	
	Disagree with committee action:	0	
	Abstain:	0	
	Non-voting:	2	
Ballot Comments			

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P378 LogID TG7-03	12.3 Kitchen remodels	Final Formal Action: Approve as Modified
Submitter:	Task Group 7,	
Proposed Change:	Add Kitchen faucet maximum flow rate and WaterSense reference, contingent upon hearing from the water TG on this and a corresponding reference in Chapter 11 and Chapter 8.	
Reason:	TG 7 believes that the REQUIREMENTS should be included (in addition to or rather than reference to a specific program). We believe that having the flow rates clearly stated will also help enable and prioritize further water savings.	
Committee Action from Meeting:	Approve as Modified	
Modification of Proposed Change:	<i>Note: Original Proposed Change references Section 12.3, which is incorrect, Section 12.2 is correct.</i> Add language from 12.3.801.5.1 to Section 12.2 Kitchen Remodels.	
Committee Reason:	Consistency with Bathroom remodel requirements and to enable credit for similar kitchen remodels. Include performance requirements for flow rate, without WaterSense language.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P379 LogID 5187	12.3.801.5.1 Faucets	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	Newly installed lavatory faucets are WaterSense labeled and have a maximum...	
Reason:	We recommend referencing WaterSense labeled lavatory faucets.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The added WaterSense label is unnecessary with the values listed. This provides protection against any performance "erosion" that could occur in any referenced third-party program.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		

Abstain:	
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P380 LogID 5188	12.3.801.6 Water closets	Final Formal Action: Disapprove
Submitter:	Brett VanAkkeren, USEPA	
Proposed Change:	All newly installed water closets have an effective flush volume of 1.28 gallons (4.85 L) or less when tested in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.18.14 as applicable, and is in accordance with EPA WaterSense <u>labeled Tank Type Toilets</u> .	
Reason:	Simplify language to ensure that products are certified as meeting the WaterSense specification. As currently drafted, it could suggest that a product that met the specification but had not been certified as doing so could earn the points.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	The current language in the Standard functions as intended. The added WaterSense label requirement is unnecessary with the performance requirements listed. This provides protection against any performance "erosion" that could occur in any referenced third-party program.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P381 LogID 5268	Other for Chapter 12 (include section number and title below)	Final Formal Action: Disapprove
Submitter:	Matt Belcher, Verdatek Solutions	
Proposed Change:	<p>12.6 Innovative Practices</p> <p>12.6.1 Resilience Functional areas incorporate one or more of the following resilience options, as applicable. Points for items 1 through 4 shall be granted only where such products are not required per the applicable building code.</p> <ol style="list-style-type: none"> 1. <u>High-wind resistant or impact resistant entry doors or garage doors are installed.</u> <ol style="list-style-type: none"> 1. <u>Impact resistant glazing is installed.</u> 2. <u>High-wind resistant or impact resistant wall claddings are installed.</u> 3. <u>High-wind resistant or impact resistant roof coverings are installed.</u> 4. <u>The addition is constructed in accordance with an approved above-code mitigation program (e.g. IBHS Fortified, Resilience Star or My Safe Florida Home).</u> <p><u>Addition incorporates one or more of the following resilience options, as applicable:</u></p> <ol style="list-style-type: none"> 5. <u>The addition building is constructed using flood damage-resistant materials.</u> 6. <u>The addition is constructed with its lowest floor at least one foot above the elevation required by the building code or adopted by the jurisdiction, whichever is higher.</u> 7. <u>The addition is located in Zone A and constructed on an open foundation system (pile foundations or isolated piers).</u> 	

Reason:	An important component of sustainable building is mitigation of natural hazards. Integrating resilience into new construction or during remodeling of existing housing stock provides an extra layer of protection. However, building-in disaster resilience can be difficult and costly. Deciding how (and when) to improve a structure requires much thought, time and capital. With the focus on future enhancement of the model codes to provide for enhanced "Resiliant" construction, It is an opportunity to include reference in this "above code" standard to incentivise innovative practices and process that will demonstrate best practices for eventual application into the model codes.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The proposed change would allow points for implementing resilient materials in areas where they are not necessary. The proposed practice could actually be counterproductive to the goals of the NGBS. The concept of combining disaster resistance and green construction has not been adequately developed.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P382 LogID 5109	1301 General (Referenced documents)	Final Formal Action: Withdrawn
Submitter:	Donald Prather, ACCA	
Proposed Change:	Add sections as required based on accepted ACCA recommendations	
Reason:	New locations for QI -5 citations should be included	
Committee Action from Meeting:	Withdrawn	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P383 LogID 5110	1302 Referenced Documents	Final Formal Action: Approve
Submitter:	Donald Prather, ACCA	
Proposed Change:	Change Manual J to 2011 version	
Reason:	Latest update for code compliance	

March 6, 2015

Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P384 LogID 5111	1302 Referenced Documents	Final Formal Action: Approve										
Submitter:	Donald Prather, ACCA											
Proposed Change:	Change Manual D to 2014 Version											
Reason:	Latest update for code compliance											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
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Disagree with committee action:												
Abstain:												

P385 LogID 5112	1302 Referenced Documents	Final Formal Action: Approve										
Submitter:	Donald Prather, ACCA											
Proposed Change:	Change Manual S to version 2014											
Reason:	Latest update for code compliance											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P386	LogID 5214	1302 Referenced Documents		Final Formal Action: Approve										
Submitter:		Eric Lacey, RECA												
Proposed Change:		IECC	2009 2015	International Energy Conservation Code 701.1.1, 702.2.2										
Reason:		<p>This proposal updates the references to the IECC in the Energy Efficiency Chapter with the latest edition of the IECC. The 2015 National Green Building Standard should support, and be completely integrated with, the complete family of 2015 International Codes. Although the 2012 IBC, IRC, and IECC are generally consistent in requirements and cross-references, the 2012 NGBS references the 2009 IECC. This inconsistency creates a host of problems, particularly for local building officials who must apply two different baselines to the IECC and ICC-700. It has been our experience that states, counties, and cities that support the use of “green” codes such as ICC-700 are more likely to be current in their mandatory energy conservation codes, so it makes sense to reference the 2015 IECC in the 2015 ICC-700. Although this proposal would effectively move the baseline IECC ahead two editions, the 2012 and 2015 IECC residential requirements are very close in terms of overall efficiency, so states, counties, or cities that have already adopted and are applying the 2012 IECC are most likely already meeting the 2015 IECC as well. The current inconsistency between ICC-700 and the IECC editions can be easily corrected in 2015 by updating all references to the International Codes to be internally consistent. If, for some reason, the Committee is reluctant to the update to the 2015 IECC, there is no reason to fail to update the NGBS, at a minimum, to the 2012 IECC.</p>												
Committee Action from Meeting:		Approve												
Modification of Proposed Change:														
Committee Reason:														
Ballot Results on Committee Action:		<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>			Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41													
Agree with committee action:	39													
Disagree with committee action:	0													
Abstain:	0													
Non-voting:	2													

Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P387	LogID 5113	B200 Whole-building ventilation	Final Formal Action: Approve as Modified
Submitter:		Donald Prather, ACCA	
Proposed Change:		Update Information and Tables and equations to reflect 62.2 -2013 requirements	
Reason:		Tables and formulas have changed dramatically and there are different values in the table for Multifamily and single family residences.	
Committee Action from Meeting:		Approve as Modified	
Modification of Proposed Change:		Update Information and Tables and equations to reflect 62.2-2013 62.2 -2010 requirements	

Committee Reason:	The 2013 edition of ASHRAE Standard 62.2 includes significant new requirements and enhanced ventilation rates. These new provisions can negatively impact cost-effectiveness and raise technical questions concerning other building performance metrics (such as a possible energy penalty). The use of the 2010 edition of 62.2 would update the current NGBS reference without unduly burdening new multifamily development.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 37 Disagree with committee action: 2 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	<p>Neil Leslie: The proposal should have been approved without modification. As an ASHRAE representative on the committee, it is important for me to note that the ASHRAE consensus process and resulting standard updates, including the 2013 version of Standard 62.2, represent the most up-to-date expertise and information and should be the version referenced in other standards. This is especially important in this case because this is the first time the ASHRAE standard is included in the reference documents section.</p> <p>Christopher Mathis: I disagree with the committee action and vote to disapprove P387. As an ASHRAE appointed representative to the committee, I believe that it is imperative that if we are going to reference ANSI approved ASHRAE standards than it is also imperative that we reference the most up to date version of those standards. The committee was correct to embrace ASHRE Standard 62.2 as the most appropriate technical reference for minimum ventilation requirements in the homes built under ICC700. However, the most recent version of 62.2 is the 2013 edition. Its technical content is developed under continuous maintenance by the ASHRAE project committee using ANSI approved consensus procedures. No technical justification was provided to the ICC 700 committee as to why this latest version should not be used and why the 2010 version should be used. It should be standard policy for the development of ICC 700 to utilize the most recent versions of all referenced standards.</p>
Abstain:	

P388 LogID TG1-17	Appendix C	Final Formal Action: Approve
Submitter:	Tim Pate , City and County of Broomfield Building Division	
Proposed Change:	<p><i>Add new language to Colorado and delete asterisks (*) from certain Texas counties</i></p> <p>COLORADO</p> <p>5B Boulder</p> <p><u>5B Broomfield</u></p> <p>6B Chaffee</p> <p>TEXAS <i>(remove asterisks from all counties below)</i></p> <p>Bandera</p> <p>Dimmit</p> <p>Edwards</p> <p>Frio</p> <p>Kinney</p> <p>La Salle</p> <p>Maverick</p>	

	Medina Real Uvalde Val Verde Webb Zapata Zavala										
Reason:	There were two successful code changes for the recently published 2015 IECC which added Broomfield County to Colorado and removed asterisks from 14 Texas counties which effectively removed them from the warm-humid location designation. This proposed change would get the 2015 NGBS to match the 2015 IECC. I have attached copies of both of the code change proposals with their reason statements for documentation.										
Committee Action from Meeting:	Approve										
Modification of Proposed Change:											
Committee Reason:											
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>	Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41										
Agree with committee action:	39										
Disagree with committee action:	0										
Abstain:	0										
Non-voting:	2										
Ballot Comments											
Agree with committee action:											
Disagree with committee action:											
Abstain:											

P389 LogID TG5-53	Appendix C Climate Zones	Final Formal Action: Approve
Submitter:	Howard Wiig, Craig Conner,	
Proposed Change:	Revise Table C200 as follows: TABLE C200 CLIMATE ZONES,MOISTURE REGIMES, AND WARM-HUMID DESIGNATIONS BY STATE, COUNTY AND TERRITORY Key: A – Moist, B – Dry, C – Marine, T – Tropical (subset of Zone 1) Absence of moisture designation indicates moisture regime is irrelevant. Asterisk (*) indicates a warm-humid location. COLORADO <u>5B Broomfield</u> HAWAII 1A T (all)*	

	<p>TEXAS:</p> <p>2B Bandera*</p> <p>2B Dimmit*</p> <p>2B Edwards*</p> <p>2B Frio*</p> <p>2B Kinney*</p> <p>2B La Salle*</p> <p>2B Maverick*</p> <p>2B Medina*</p> <p>2B Real*</p> <p>2B Ulvalde*</p> <p>2B Val Verde*</p> <p>2B Webb*</p> <p>2B Zapata*</p> <p>2B Zavala*</p> <p>US TERRITORIES</p> <p>AMERICAN SAMOA</p> <p>1A T(all)*</p> <p>GUAM</p> <p>1A T(all)*</p> <p>NORTHERNMARIANA ISLANDS</p> <p>1A T(all)*</p> <p>PUERTO RICO</p> <p>1A T(all)*</p> <p>VIRGIN ISLANDS</p> <p>1A T(all)*</p>
Reason:	<p>Add the new Tropical Zone, a subset of Zone 1, to the climate zone table. This is the same zone that was added in the 2015 IECC. Having a named “Tropical Zone” will make it easier to assign appropriate points to the tropical climate.</p> <p>This also updates ICC 700 climate zones for consistency with other climate zones changes in the 2015 IECC. The are a change in “warm humid” in Texas and a forgotten county in Colorado.</p>
Committee Action from Meeting:	Approve
Modification of Proposed Change:	
Committee Reason:	To be consistent with IECC
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	

Agree with committee action:	
Disagree with committee action:	
Abstain:	

P390 LogID TG3-04	Appendix D Table 200(2)	Final Formal Action: Approve										
Submitter:	Josh Jacobs, UL											
Proposed Change:	<p><u>UL GREENGUARD Gold Environmental Institute Children & Schools Certification Program</u></p> <p>GREENGUARD Environmental Institute 2211 Newmarket Parkway, Suite 110 Marietta, GA 30067 http://www.greenguard.org (800) 427-9681</p> <p><u>Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 www.ul.com (877) 854-3577</u></p> <p><u>UL 2768 EcoLogo CCD-047</u></p> <p>EcoLogo Program 171 Nepean Street, Suite 400 Ottawa, ON, K2P 0B4, CANADA http://www.ecologo.org/ (800) 478-0399</p> <p><u>Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 www.ul.com (877) 854-3577</u></p>											
Reason:	This is a simple brand change to referenced programs and address' to reflect the purchase of these programs by Underwriters Laboratories. The requirements of the programs haven't changed since the committee put these in, it is simply a renaming and a new address to more align with organizational structure and marketplace.											
Committee Action from Meeting:	Approve											
Modification of Proposed Change:												
Committee Reason:												
Ballot Results on Committee Action:	<table> <tr> <td>Eligible to vote:</td> <td>41</td> </tr> <tr> <td>Agree with committee action:</td> <td>39</td> </tr> <tr> <td>Disagree with committee action:</td> <td>0</td> </tr> <tr> <td>Abstain:</td> <td>0</td> </tr> <tr> <td>Non-voting:</td> <td>2</td> </tr> </table>		Eligible to vote:	41	Agree with committee action:	39	Disagree with committee action:	0	Abstain:	0	Non-voting:	2
Eligible to vote:	41											
Agree with committee action:	39											
Disagree with committee action:	0											
Abstain:	0											
Non-voting:	2											
Ballot Comments												
Agree with committee action:												
Disagree with committee action:												
Abstain:												

P391 LogID 5314	E202 Conformance criteria	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality	
Proposed Change:	Add a new appendix that specifies procedures and guidelines for approving alternative programs that may or may not look or be formatted like NGBS or IECC, but are verified to achieve their overall energy efficiency goals.	
Reason:	This new appendix specifies procedures and guideline for approving alternative programs that may or may not look or be formatted like NGBS or IECC, but are verified to achieve their overall energy	

	efficiency goals. There are many good programs that have achieved local, state and national success. NGBS users, the NGBS support organization, or others should have the ability to recognize a variety of accomplished programs. Due to the size of the submittal, it is being sent in as a separate file.
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The NGBS already allows alternative approaches.
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P392 LogID 5315	E202 Conformance criteria	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality	
Proposed Change:	Add appendix specifies prescriptive packages that comply with the energy efficiency goals of the 10%, 20%, 30% and 40% levels in the energy chapter.	
Reason:	This appendix specifies prescriptive packages that comply with the energy efficiency goals of the 10%, 20%, 30% and 40% levels in the energy chapter. The user can select any number of choices. This provides a simpler, mostly prescriptive option that allows freedom have wider variation of choices, but does not require a simulation. The "Trades and Adds" table specifies how much a change to a component affects the total. Some "Trades and Adds" will have a negative %. "Trades and Adds" also adds additional specific options. Any combination shall be permitted provided the "Trades and Adds" yields at least the "Extra" required.	
Committee Action from Meeting:	Disapprove	
Modification of Proposed Change:		
Committee Reason:	No specific language for this proposed change.	
Ballot Results on Committee Action:	Eligible to vote: 41 Agree with committee action: 39 Disagree with committee action: 0 Abstain: 0 Non-voting: 2	
Ballot Comments		
Agree with committee action:		
Disagree with committee action:		
Abstain:		

P393 LogID TG5-54	New Appendix	Final Formal Action: Disapprove
Submitter:	Craig Conner, Building Quality	
Proposed Change:	Add a section or an appendix that is intended to translate values or level from efficiency programs into NGBS points. Include multiple programs. For HERS this would probably be a set of tables specific to the	

	<p>factors that give rise to the wide variation in HERS scores that don't seem to correlate with IECC compliance. These would probably include house size, HVAC type/efficiency, and perhaps one more variable.</p> <p>The tables would include other non-HERS programs as well. Some of the programs might translate into a specific number of points. For example the EFL (Engineered for Life) program by Masco has a specific set of requirements to all its homes. This would be a single NGBS number of points. Unlike HERS, EFL is not intended to apply to all homes.</p>
Reason:	<p>Multiple programs and organizations need to be able to easily use NGBS. With restrictions, HERS, other programs with several levels, and programs with a single set of requirements could be accommodated.</p> <p>It is very important not to restrict the NGBS to one proprietary source (RESNET) but allow any organization and programs to use NGBS. HERS represents one energy-based program. We need to accommodate other programs, including those that are broadly green programs.</p> <p>Analysis by EPA and recently PNNL, a DOE lab, show that there is wide variation in the correlation of HERS score and how they relate to the IECC. Simply put, the HERS score is not a good indicator of compliance with the IECC. This section would place limits on how the HERS score is used and allow it, with restrictions, to be used to get NGBS points. It would also allow other programs to do the same.</p> <p>The EPA analysis and the PNNL study will be forwarded as substantiating documents.</p>
Committee Action from Meeting:	Disapprove
Modification of Proposed Change:	
Committee Reason:	The proposal does not provide specific language for the standard.
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p> <p>Abstain: 0</p> <p>Non-voting: 2</p>
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	

P394 LogID TG1-14	Index	Final Formal Action: Approve
Submitter:	James M Williams, J.M. Williams and Assoc. Inc. / AE URBIA	
Proposed Change:	Add an Index at the back of the document. Follow the same format as the other I Codes. See 2015 IECC index page C-107 or R-53 for an example.	
Reason:	To match the format of the other I Codes. To assist the end users in using the standard. An index will greatly assist the end user in actually using and applying the standard.	
Committee Action from Meeting:	Approve	
Modification of Proposed Change:		
Committee Reason:		
Ballot Results on Committee Action:	<p>Eligible to vote: 41</p> <p>Agree with committee action: 39</p> <p>Disagree with committee action: 0</p>	

March 6, 2015

	Abstain: 0 Non-voting: 2
Ballot Comments	
Agree with committee action:	
Disagree with committee action:	
Abstain:	