



**ICC 1210-202X edition
Public Input Agenda
based on Sept 23, 2022 input received
on initial draft edition of the
ICC 1210 Standard**

**For September 28, 2022
and subsequent Meetings –
Teleconference**

Matrix for ICC 1210 proposals

Proposal #	Section Number	Date of meeting proposal considered	Committee Action	Notes
Chapter 1 ADMINISTRATION PROVISIONS				
IS-OSMEP 01-01-22	101.3	9/28/22	D	
IS-OSMEP 01-02-22	101.4	9/28/22	AS	
IS-OSMEP 01-03-22	102	9/28/22		WITHDRAWN
IS-OSMEP 01-04-22	104.3	9/28/22	AS	
IS-OSMEP 01-05-22	104.4	9/28/22	AS	
Chapter 2 DEFINITIONS				
IS-OSMEP 02-01-22	202	9/28/22	AS	
IS-OSMEP 02-02-22	202	9/28/22	AS	
IS-OSMEP 02-03-22	202	9/28/22	D	
Chapter 3 DESIGN				
IS-OSMEP 03-01-22	301.2	9/28/22	AM	
IS-OSMEP 03-02-22	306	9/28/22		WITHDRAWN
Chapter 4 OFF-SITE INSTALLATION OF THE MEP SYSTEM COMPONENTS				
IS-OSMEP 04-01-22	401.2	9/28/22	AM	
IS-OSMEP 04-02-22	402	9/28/22	D	
IS-OSMEP 04-03-22	402, 403, 404	9/28/22		Not actionable
Chapter 5 OFF-SITE TESTING AND INSPECTION				
IS-OSMEP 05-01-22	504		AM	
IS-OSMEP 05-02-22	504		AM	
Chapter 6 OFF-SITE STORAGE				
Chapter 7 TRANSPORTATION AND STORAGE				

2022 ICC 1210 - Standard Comment and Proposals

Proposal #	Section Number	Date of meeting proposal considered	Committee Action	Notes
Chapter 8 ON-SITE INSTALLATION				
IS-OSMEP 08-01-22	805.1		AM	
Chapter 9 REFERENCED STANDARDS				
Multi-chapter proposals				

Revisions to the text are in legislative format – strikeout of what is to be removed, and underlined for new. Revised text in the proposals in red is to highlight the changes that were modified by the committee.

Staff notes located in this document after a proponents reason are provided to indicate proposals that may require coordination; technical information; or terminology that is not good code language (e.g. “may” or “guarantee”, the use of “when” where the use is not a function of time). Staff notes are provided to assist the committee or proponent for possible modification. It is not intended to provide an opinion.

Chapter 1 ADMINISTRATION PROVISIONS

IS-OSMEP 01-02-22 ICC 1210 Section 101.3

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

101.3 Provisions for Compliance. Where requirements are not provided by this standard, the applicable provisions of the construction codes adopted by the authority having jurisdiction (AHJ) for the location where the construction will be installed shall apply to the off-site construction. (first sentence)

Reason: It needs to be clarified which AHJ this is talking about, the AHJ where the off-site construction is taking place, or the AHJ where the construction is to be installed.

Staff note:

Committee Action: Disapproved

Committee Reason: May create conflict between different states AHJs with local jurisdictions.

IS-OSMEP 01-02-22
ICC 1210 Section 101.4

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

101.4 Compliance alternative. (last sentence)

Listed and labeled modular components shall be installed in accordance with ~~its~~ their listing, the manufacturer's installation instructions, and the applicable requirements of the construction codes adopted by the AHJ.

Reason: Propose for grammar. "Components" is plural

Staff note: Editorial at staff level, committee motion to approve

Committee Action: Approved as submitted

Committee Reason:

IS-OSMEP 01-03-22
ICC 1210 Section 102

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

No specific proposal, but a new section would be helpful to describe who the AJH that is specified throughout the document actually is.

Reason: Similar to my comment on 101.3, I think this document needs clarification on who the AJH that is described in all these section is. It could be the AHJ where the off-site construction is taking place, the AHJ where the construction is to be installed, or it could be the State-wide modular program. If that is clarified then my comment to 101.3 would be addressed.

Staff note: Withdrawn by proponent.

Committee Action:

Committee Reason:

IS-OSMEP 01-04-22

ICC 1210 Section 104.3, items 3 & 4

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

104.3 On-site inspections and testing. On-site inspections of off-site MEP system components shall verify installation is compliant with approved manufacturer's installation instructions and connections performed on site are compliant with approved construction documents. When on-site inspections and testing are conducted by the AHJ, inspection procedures prescribed by the AHJ shall be followed. When on-site inspections and testing are conducted by other than the AHJ, scope of such inspections shall be consistent with Section 102.4 *Responsible Parties*.

On-site connections which require inspections shall include:

1. Inter-connections between off-site components installed at site.
2. Connections between off-site MEP system components and adjoining site-built MEP system components, including the building structure.
3. Other connections involving off-site built MEP system components which require inspections by the AHJ.
4. Connections or installation of "shipped loose off-site items" installed at site.

Reason:

#3, I think the word "site" is missing in the text.

#4, I'm not sure but there might have to be items "installed" that are not "connected".

Staff note:

Committee Action: Approved as submitted.

Committee Reason:

IS-OSMEP 01-05-22

ICC 1210 Section 104.4

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

104.4 Off-Site Inspections. Mechanical piping shall be tested in accordance with the IRC, International Mechanical Code (IMC) and applicable standards. This testing shall be witnessed by the inspector. All mechanical systems shall be inspected in accordance with the ~~manufactured home~~ off-site construction rules of the AHJ.

Reason: The words “manufactured home” have a particular connotation, and are not covered by this document. So maybe “off-site construction” is a better description.

Staff note:

Committee Action: Approved as submitted.

Committee Reason:

Chapter 2 DEFINITIONS

IS-OSMEP 02-01-22 ICC 1210 Section 202

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

Add "AHJ" to list of Abbreviations

Reason: This is probably the most common abbreviation used in this document so it might be helpful, even though I do see it is defined later in this section.

Staff note:

Committee Action: Approved as submitted.

Committee Reason:

IS-OSMEP 02-02-22

ICC 1210 Section 202

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

APPLICABLE CODES AND STANDARDS. The versions of the building code and standards that have been adopted by the state or jurisdiction in which an industrialized house or building is to be ~~constructed~~ installed.

Reason: Would the applicable codes of the location where the building is installed apply, not the codes where the off-site construction is constructed. The “construction” is happening off-site, possibly in another state that has different adopted codes from where the building is to be ultimately installed.

Staff note:

Committee Action: Approved as submitted.

Committee Reason:

IS-OSMEP 02-03-22

ICC 1210 Section 202

Proponent: Gahl Spanier, RMI/Advanced Building Construction Collaborative,
Representing Advance Building Construction Collaborative

Revise as follows:

Serviceable Under-floor Crawl Space. The space between the bottom of the floor joists under volumetric modules requires ventilation only if the cavity meets the requirements of a confined space that may be occupied for any reason in accordance with OSHA Section 5157.

Reason:

We ask that the committee provides a definition of serviceable under-floor crawl spaces for volumetric modular buildings by size that require ventilation. The code for underfloor ventilation is based on the building code (section 1202.4) and referenced in the mechanical code (section 406) and is intended for serviceable crawl spaces under framed floors. The current building and mechanical codes do not recognize any distinction between underfloor crawl spaces for buildings manufactured off-site. However, given that volumetric modular units have negligible space under the module floor framing, we ask the committee to define serviceable crawl spaces under framed floors that require ventilation. OSHA Section 5157 defines serviceable crawl spaces as those that are large enough and so configured that an employee can bodily enter and perform assigned work. In volumetric modular construction, where the subsurface cavity is non-serviceable by entry size, underfloor ventilation should not be required. In these interstitial cavities, a vapor barrier on the ground surface with effective modular floor system insulation and air sealing is sufficient.

Staff note:

Committee Action: Disapproved.

Committee Reason: Requirements are mentioned in the definition which should be described in the body of the standard.

Chapter 3 DESIGN

IS-OSMEP 03-01-22 ICC 1210 Section 301.2

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

301.2 Alternative materials, design and methods of construction and equipment. The provisions of this standard are not intended to prevent the use of alternate materials and methods permitted by Section 104.11 of the IBC or as permitted by the adopted codes of the AHJ or the IRC.

Reason: If it is a residential off-site building, wouldn't the IRC apply? Or you could even say "as permitted by the adopted codes of the AJH".

Staff note:

Committee Action: Approved as modified

Committee Reason: This can apply to other codes.

IS-OSMEP 03-02-22

ICC 1210 Section 306

Proponent: Gahl Spanier, RMI/Advanced Building Construction Collaborative,
Representing Advance Building Construction Collaborative

Revise as follows:

306.5 Modular Data Centers. Modular data centers shall be designed and installed in accordance with ASHRAE 90.4-2016.

Reason: For modular data centers, the IECC requires compliance with ASHRAE 90.4-2016. ICC Standard 1210 should uphold this recommendation and require modular data centers to comply with ASHRAE 90.4-2016 to improve the energy efficiency of these buildings.

Staff note: Withdrawn by proponent.

Committee Action:

Committee Reason:

Chapter 4

OFF-SITE INSTALLATION OF THE MEP SYSTEM COMPONENTS

IS-OSMEP 04-01-22

ICC 1210 Section 401.2

Proponent: Gahl Spanier, RMI/Advanced Building Construction Collaborative,
Representing Advance Building Construction Collaborative

Revise as follows:

401.2 Concealed System Components. MEP components that shall be concealed prior to delivery to the on-site location, shall be tested in accordance with the manufacturer's installation instructions or inspections and testing including but not limited to sections of NFPA 70, the IECC, IMC, and IPC to detect leaks and defects.

Reason: Many parts of the HVAC duct distribution network will be concealed during the construction process in a factory setting. Once concealed, it will be disruptive and difficult if not impossible to seal them once they arrive on-site. Leaky duct systems are likely to consume more energy, or may not be able to achieve design air flows. Similar to the IMC, IPC and NFPA, the IECC requires testing to verify duct tightness meets the maximum on-site leakage threshold. To ensure ducts are sealed according to the specifications in the IECC before they arrive on-site and avoid costly and disruptive modifications, ducts that are concealed should be pressure tested to detect leaks.

Staff note:

Committee Action: Approved as modified

Committee Reason: Existing text was not inclusive of all relevant codes & standards.

IS-OSMEP 04-02-22

ICC 1210 Section 402

Proponent: Gahl Spanier, RMI/Advanced Building Construction Collaborative,
Representing Advance Building Construction Collaborative

Revise as follows:

402.4 Dual Hoods for Ventilation and Exhaust Systems. Where dual hoods for ventilation and exhaust systems are desired, they shall be designed and installed in accordance with the IMC.

Reason: Given that the IRC is silent on the use of dual hoods for ventilation/exhaust systems while the IMC allows for the technology, ICC Standard 1210 should refer to the IMC. Referring to the IMC in the modular energy/mechanical code enables modular projects to more easily integrate a complete HRV/ERV and associated air distribution system into the modular factory-installed mechanical system, which often struggles to locate a separated ventilation intake from the general exhaust with the minimal exterior envelope available. This simplifies ductwork, eliminates central air distribution systems, and reduces the number of envelope penetrations needed while providing unitized, energy efficient and compartmentalized mechanically filtered ventilation air.

Staff note:

Committee Action: Disapproved.

Committee Reason: Additional work is needed. Better resolved first in the ASHRAE 62.2

IS-OSMEP 04-03-22
ICC 1210 Sections 402, 403 & 404

Proponent: Randall Shackelford, Simpson Strong-Tie Co.

Revise as follows:

403 and 404 are incomplete. 402 contains the requirements and referenced standards required to properly install mechanical systems. 403 just has some specific requirements for certain things. It should reference the applicable standard. 404 should reference the IRC, where applicable.

Reason: IRC should be included for residential structures. 403 should have parallel structure to 402 and 404.

Staff note: Not actionable by committee due to lack of proposed verbiage.

Committee Action:

Committee Reason:

Chapter 5 OFF-SITE TESTING AND INSPECTION

IS-OSMEP 05-01-22 ICC 1210 Section 504

Proponent: Gahl Spanier, RMI/Advanced Building Construction Collaborative,
Representing Advance Building Construction Collaborative

Revise as follows:

504.1.1 Air Leakage QA/QC. ~~Where mechanical elements penetrate or are part of~~ To ensure the ~~air building thermal envelope barrier, is constructed to limit air leakage in accordance with the IECC,~~ a visual inspection ~~and or, where applicable,~~ air leakage testing shall be incorporated into the manufacturing plant QA/QC plan. Testing shall be conducted as specified in the referenced IECC.

Reason: The draft standard does not mention air leakage even though many mechanical modules assume operation within an air-sealed enclosure and most air sealing needs to occur in the factory before the exterior walls are cladded or covered. Clarification should be added to the standard to ensure air sealing approaches consistent with IECC or ASHRAE Standard 90.1 specifications are incorporated during the factory construction process and inspected prior to covering areas where air sealing occurs and before the component is shipped to site. This important clarification and requirement to add air sealing verifications to the manufacturer QA/QC Plan will help ensure the building constructed on-site can achieve maximum leakage rates verified through on-site testing and/or visual air leakage as outlined in the IECC or ASHRAE Standard 90.1 specifications.

Staff note:

Committee Action: As Modified

Committee Reason: Strictly for MEP components.

IS-OSMEP 05-02-22

ICC 1210 Section 504

Proponent: Gahl Spanier, RMI/Advanced Building Construction Collaborative,
Representing Advance Building Construction Collaborative

Revise as follows:

~~**504.1.2 Duct Testing.** Ducts and air handlers that are concealed prior to delivery to the on-site location, shall be tested in accordance with testing sections in the IECC to detect leaks and defects.~~

504.1.2 Duct Testing. Ducts and air handlers that are concealed prior to delivery to the on-site location, shall be tested in accordance with applicable standards including but not limited to the testing sections in the IECC to detect leaks and defects.

Reason: Many parts of the HVAC duct distribution network will be concealed during the construction process in a factory setting. Once concealed, it will be disruptive and difficult, if not impossible, to seal them once they arrive on-site. Leaky duct systems are likely to consume more energy, or may not be able to achieve design air flows. Similar to the IMC, IPC and NFPA, the IECC requires testing to verify duct tightness meets the maximum on-site leakage threshold. To ensure ducts are sealed according to the specifications in the IECC before they arrive on-site and avoid costly and disruptive modifications, ducts that are concealed should be pressure tested to detect leaks.

Staff note:

Committee Action: As Modified

Committee Reason: Air handlers should not be concealed and be visible. IMC requires adequate access.

Chapter 6 OFF-SITE STORAGE

IS-OSMEP 06-01-22 ICC 1210 Section

Proponent:

Revise as follows:

Reason:

Staff note:

Committee Action:

Committee Reason:

Chapter 7 TRANSPORTATION AND STORAGE

IS-OSMEP 07-01-22 ICC 1210 Section

Proponent

Revise as follows:

Reason:

Staff note

Committee Action:

Committee Reason:

Chapter 8 ON-SITE INSTALLATION

IS-OSMEP 08-01-22 ICC 1210 Section 805.1

Proponent: Gahl Spanier, RMI/Advanced Building Construction Collaborative,
Representing Advance Building Construction Collaborative

Revise as follows:

805.1 On-Site Testing and Commissioning of Mechanical Systems. On-site testing and commissioning shall be conducted by the licensed mechanical contractor. Commissioning shall be in accordance with the manufacturer's start-up and testing requirements, ensure proper to include integration of off-site and on-site assembled components, and, where applicable, follow the commissioning guidelines in the referenced IECC.

Reason: Mechanical systems require a continuous and consistent end-to-end quality to achieve design-specified performance. To take advantage of the superior quality available through off-site construction of the mechanical systems, similar quality and continuity should be applied to any on-site assembled components and to the connection between them and the off-site assembly.

Staff note:

Committee Action: Approved as Modified.

Committee Reason: Editorial.

Chapter 9 REFERENCED STANDARDS

IS-OSMEP 09-01-22 ICC 1210 Section

Proponent:

Revise as follows:

Reason:

Staff note:

Committee Action:

Committee Reason:

Multi-chapter proposals

IS-OSMEP 10-01-22

ICC 1210 Sections

Proponent:

Revise as follows:

Reason:

Committee Action:

Committee Reason: