



National BIM Standard - United States® Version 3

2 Reference Standards

2.4 OmniClass™

2.4.1 Scope

The OmniClass™ Construction Classification System (known as OmniClass™ or OCCS) is a means of organizing and retrieving information specifically designed for the construction industry. OmniClass™ is useful for many applications in the area of Building Information Modeling (BIM), from organizing reports and object libraries to providing a way to roll up or drill down through data to get the information that meets your needs. OmniClass™ draws from other extant systems in use to form the basis of its Tables wherever possible — MasterFormat™ for work results, UniFormat™ for elements, and EPIC (Electronic Product Information Cooperation) for products

OmniClass™ is designed to provide a standardized basis for classifying information created and used by the North American architectural, engineering and construction (AEC) industry, throughout the full facility life cycle from conception to demolition or reuse, and encompassing all of the different types of construction that make up the built environment. OmniClass™ is intended to be the means for organizing, sorting, and retrieving information and deriving relational computer applications.

OmniClass™ consists of fifteen (15) hierarchical tables, each of which represents a different facet of construction information. Each table can be used independently to classify a particular type of information, or entries on it can be combined with entries on other tables to classify more complex subjects. Thirteen (13) of these tables were incorporated by consensus in the NBIMS-US™.

2.4.2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- ISO Technical Report 14177, *Classification of Information in the Construction Industry*, July 1994
- ISO 12006-2:2001, *Organization of Information about Construction Works - Part 2: Framework for Classification of Information*

2.4.3 Terms, definitions, symbols, units and abbreviated terms

See OmniClass™ tables

2.4.4 The 13 inter-related OmniClass™ tables approved by NBIMS-US™ consensus are:

Table	Status	Release Date
2.4.4.1 Table 11 – Construction Entities by Function Construction Entities by Function are significant,	Pre Consensus Approved Draft	2013-02-26

<p>definable units of the built environment comprised of elements and interrelated spaces and characterized by function.</p>		
<p>2.4.4.2 Table 12 – Construction Entities by Form</p> <p>Construction Entities by Form are significant, definable units of the built environment comprised of elements and interrelated spaces and characterized by form.</p>	Pre Consensus Approved Draft	2012-10-30
<p>2.4.4.3 Table 13 – Spaces by Function</p> <p>Spaces by Function are basic units of the built environment delineated by physical or abstract boundaries and characterized by function.</p>	National Standard	2011-05-23
<p>2.4.4.4 Table 21 - Elements (includes Designed Elements)</p> <p>An Element is a major component, assembly, or "construction entity part which, in itself or in combination with other parts, fulfills a predominating function of the construction entity" (ISO 12006-2). Predominating functions include, but are not limited to, supporting, enclosing, servicing, and equipping a facility. Functional descriptions can also include a process or an activity.</p> <ul style="list-style-type: none"> • A Designed Element is an "Element for which the work result(s) have been defined." (ISO 12006-2). 	National Standard	2011-02-11
<p>2.4.4.5 Table 22 – Work Results</p> <p>Work Results are construction results achieved in the production stage or phase or by subsequent alteration, maintenance, or demolition processes and identified by one or more of the following: the particular skill or trade involved; the construction resources used; the part of the construction entity which results; the temporary work or other preparatory or completion of work which is the result.</p>	Pre Consensus Approved Draft	2013-08-25
<p>2.4.4.6 Table 23 – Products</p> <p>Products are components or assemblies of components for permanent incorporation into construction entities.</p>	National Standard	2010-06-24

<p>2.4.4.7 Table 31 – Phases</p> <p>Life cycle phases are often represented by two terms used somewhat interchangeably in our industry. For the purposes of clarity and standardization, OmniClass™ defines these terms:</p> <ul style="list-style-type: none"> • Stage: A categorization of the principal segments of a project. Stages usually are: Conception, Project Delivery Selection, Design, Construction Documents, Procurement, Execution, Utilization, and Closure. • Phase: A portion of work that arises from sequencing work in accordance with a predetermined portion of a Stage. <p>For purposes of usage in OmniClass™ classifications, a Stage is a higher-level of categorization and a Phase is a subordinate level of titling within a Stage.</p>	<p>Pre Consensus Approved Draft</p>	<p>2012-10-30</p>
<p>2.4.4.8 Table 32 – Services</p> <p>Services are the activities, processes and procedures relating to the design, construction, maintenance, renovation, demolition, commissioning, decommissioning, and all other functions occurring in relation to the life cycle of a construction entity.</p>	<p>National Standard</p>	<p>2010-06-24</p>
<p>2.4.4.9 Table 33 – Disciplines</p> <p>Disciplines are the practice areas and specialties of the actors (participants) that carry out the processes and procedures that occur during the life cycle of a construction entity.</p>	<p>Pre Consensus Approved Draft</p>	<p>2012-10-30</p>
<p>2.4.4.10 Table 34 – Organizational Roles</p> <p>Organizational Roles are the functional positions occupied by the participants, both individuals and groups that carry out the processes and procedures which occur during the life cycle of a construction entity. Table 34 can be combined with Table 33 – Disciplines, to provide a full classification of each participant in the creation and support of a facility.</p>	<p>Pre Consensus Approved Draft</p>	<p>2012-10-30</p>
<p>2.4.4.11 Table 36 – Information</p> <p>Information is data referenced and utilized during the process of creating and sustaining the built</p>	<p>National Standard</p>	<p>2010-06-24</p>

environment.		
2.4.4.12 Table 41 – Materials	Pre Consensus Approved Draft	2012-10-30
Materials are substances used in construction or to manufacture products and other items used in construction. These substances may be raw materials or refined compounds, and are considered subjects of this table irrespective of form.		
2.4.4.13 Table 49 – Properties	Pre Consensus Approved Draft	2012-10-30
Properties are measurable or definable characteristics of construction entities.		

2.4.5 Bibliography

1. American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE); *Ventilation for Acceptable Indoor Air Quality* (ASHRAE 62.1-2007); Atlanta: ASHRAE, 2007
2. The Appraisal Institute; *Appraisal Institute Commercial Data Standard*; Chicago: Appraisal Institute, 2001
3. Building Owners and Managers Association International (BOMA); *Office Buildings: Standard Methods of Measurement (ANSI/BOMA Z65.1 – 2010)*; Washington, DC: BOMA International, 2010
4. Building Owners and Managers Association International (BOMA); *Gross Areas of a Building: Standard Methods of Measurement (ANSI/BOMA Z65.3 – 2009)*; Washington, DC: BOMA International, 2009
5. Construction Project Information Committee; *Uniclass: Unified Classification for the Construction Industry*, Table F, Spaces; RIBA Publications, 1997
6. International Code Council (ICC); *International Building Code*; Washington, DC: ICC, 2006
7. ISO 12006-2, Table 4.5 Spaces (by function or user activity); Geneva: ISO, 2001
8. Open Standards Consortium for Real Estate (OSCRE); *OSCRE Space Classification Standard*, v1.0; OSCRE, 2007
9. United States Department of Defense (DOD); *Real Property Classification System (RPCS)*; Washington, DC: DOD, 2006
10. United States Department of Education, Institute of Education Sciences, National Center for Education Statistics; *U.S. Postsecondary Education Facilities Inventory and Classification Manual*; Washington, DC: National Center for Education Statistics, 2006
11. United States Department of Veterans Affairs (VA); *VA Space and Equipment Planning System (VASEPS)*; Washington, DC: VA, 2009
12. United States General Services Administration (GSA); *Public Buildings Service (PBS) National Business Space Assignment Policy*; Washington, DC: GSA, May 2009