Canadian Annex

NA.1 General

The role of a national annex is to clarify the implementation within the country but should not preclude international cooperation and agreement.

A national annex should clarify any regional, language or country specific usage. For international collaborative projects an international or other country specific national annex may be selected.

This national annex will assist the user in understanding the Canadian implementation of this standard by translating the key terms and expanding on its requirements. Recommendations contained within this Annex accommodate the potential use of English or French terms as well as language-agnostic coding based on published classification systems.

The recommended fields for the information container and meta-data are standardized, but flexibility has been extended to allow project-specific coding methods to be used on individual projects. Coding methods should identify data on projects for effective storage and retrieval as well as exchange, regardless whether the data is file-based or data-based.

Users of file-based data should be wary of overly long coding which might surpass file length limits of software. Where code length may be an issue, consider removing delimiter characters or using a shorter (higher level) classification code.

Refer to NA.6.2 for a list of decisions required at the inception of a project before any information exchanges occur. These decisions are intended to aid in development of the Asset Information Requirements (AIR) and Project Information Requirements (PIR), and should be used throughout a project.
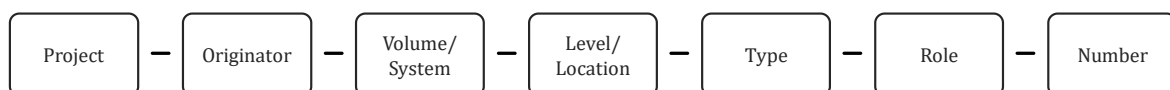
NA.2 Information container identification (ID)

NA.2.1 Clarification

ISO 19650-2 (5.1.7.a) states that '*The common data environment shall enable each information container to have a unique ID, based upon an agreed and documented convention comprised of a number of fields separated by a delimiter*'.

NA.2.2 Information containers

In Canada, the unique ID for information containers within a common data environment should be defined using the following fields separated by a delimiter, in accordance with the following convention:

Figure 2 — Identification of information containers within a common data environment

NOTE 1   If an information container is removed or exported from the common data environment, then the additional fields 'suitability' and 'revision', separated by a delimiter, should be added to its ID as a suffix.

NOTE 2   Field values that contain spaces shall instead substitute space characters with the underscore "_" character.

NA.2.3   Delimiters

In Canada, the following delimiter is to be used:

Hyphen-Minus   Unicode Reference U+002D

NA.3 Field codification

NA.3.1   Clarification

ISO 19650-2 (5.1.7.b) states that '*The common data environment shall enable each field to be assigned a value from an agreed and documented codification standard'.*

In Canada, the codification for each field should be defined from the following codifications.

NA.3.2   Project

A single common project identifier should be defined at the initiation of the project; independent and recognizably distinct from any individual organization's internal job number and fixed within the project's information standard. The codes for the project field are recommended to be between **two and six** characters in length.

NOTE 1   There are no standard codes for the project field.

NOTE 2   A project can be divided into sub-projects.

NOTE 3   Where a project involves several elements or one element with several phases, each element or phase can be assigned an identifier.

NA.3.3   Originator

A unique identifier should be defined for each organization on joining the project, to identify the organization responsible for producing the information within the container and fixed within the project's information standard. The codes for originator field are recommended to be between **three and six** characters in length.

NOTE   There are no standard codes for the originator field.

NA.3.4   Volume

A unique identifier should be defined for each Volume and fixed within the project's information standard. The codes for Volume field are recommended to be **three** characters in length.

The following standard codes shall be used:

ZZZ   all volumes

XXX   no volumes applicable

NOTE   This list can be expanded with project specific codes.

NA.3.5 Location

A unique identifier should be defined for each location and fixed within the project's information standard. Such codes could refer to building storeys, spaces, GPS coordinates, or other as relevant to the information exchange. The codes for location field are recommended to be **three** characters in length.

The following standard codes should be used in conjunction with project-specific codes for assets:

ZZZ	multiple locations
XXX	no location applicable
L##	Level codes (building floors)
S##	Space codes (including room spaces)
Q##	Quadrant codes
Z##	Zone codes
A##	Area codes (buildings, sites, etc.)

NOTE 1   This list is intended to be expanded with project-specific codes, or adopted codes published in a CAD standard or other standard.

NOTE 2   The location codes for assets other than buildings are likely to require project specific codes.

NA.3.6 Type

A unique identifier should be defined for each type of information, to identify the type of information held within the information container and fixed within the project's information standard.

NOTE: Either Omniclass codes *or* Uniclass codes should be used, not both.

Code	Uniclass Type Codes	(Fr)
REF	Reference	Référence
LEG	Legal	Légal
STD	Standards	Normes
PRJ	Project	Projet
GEN	General	Général

Code	Omniclass Type Codes	(Fr)
COM	Communication	Communication
CON	Contractual	Contractuel
DAT	Data	Données
DES	Design	Conception
FIN	Financial	Financier
GRA	Graphical	Graphique
AID	Guidance (aid, assistance)	Orientation (aide, asssistance)
REC	Record	Record

References:

- OmniClass Table 36 - Information
- UniClass 2015: Form of information

NA.3.7   Role

A unique identifier should be defined for each role on the project that an organization is assigned and fixed within the project's information standard.

NOTE: Either Omniclass codes *or* Uniclass codes should be used, not both.

Code	Uniclass	(Fr)
MGT	Management	Gestion
DLV	Delivery	Livraison
DSN	Design	Conception
SIT	Site	Site

Code	Omniclass	(Fr)
PLN	Planning	Planification
DSN	Design	Conception
PM	Project Management	Gestion de projet
SUR	Surveying	Arpentage
CON	Construction	Construction
USE	Facility Use	Utilisation des installations
SUP	Support	Soutien
OTH	Other	Autre

NOTE   This list can be expanded with project specific codes.

References:

- OmniClass Table 33 – Disciplines.
- UniClass 2015 – Roles
- Architectural or Engineering rate tables

NA.3.8   Number

A sequential number should be assigned to each information container when it is one of a series, not distinguished by any other of the fields.

The numbering for standard coding should be fixed within the project's information standard and is recommended to be between four and six integer numeric digits in length.

NOTE   Leading zeros should be used and care should be taken not to embody information present in other fields.

NA.4 Information container meta-data

NA.4.1   Clarification

ISO 19650-2 (5.1.7.c) states that '*The common data environment shall enable each information container to have the following attributes (meta-data) assigned: status (suitability); revision (and version); and classification (in accordance with ISO 12006-2)'*.

In Canada, attributes (meta-data) for information containers within a common data environment should be defined from the following codification tables.

NA.4.2 Revision

Preliminary revisions of information containers should be two integers, prefixed with the letter 'P' e.g. P01.

Preliminary revisions of information containers in the 'work in progress' state, should also have a two integer suffix to identify the version of the preliminary revision e.g. P02.05.

The initial revision of information containers should be P01.01.

Contractual revisions of information containers should be two integers, prefixed with the letter 'C' e.g. C01.

NA.4.3 Status

The appropriateness of status codes may be different based on the project delivery method used.

Code	Description	Revision
Work in progress (WIP)		
S0	Initial state	Preliminary revision and version
Shared (non-contractual)		
S1	Suitable for coordination	Preliminary revision
S2	Suitable for information	Preliminary revision
S3	Suitable for review and comment	Preliminary revision
S4	Suitable for stage approval	Preliminary revision
S5	Suitable for PIM authorization	Preliminary revision
S6	Suitable for AIM authorization	Preliminary revision
Published (contractual)		
A1, A*n*, etc.	Authorized and accepted	Contractual revision
B1, B*n*, etc.	Partial sign-off (with comments)	Preliminary revision
Published (for AIM acceptance)		
CR	As constructed record document	Contractual revision

Table 1 — Status codes for information containers within a common data environment

NOTE 1   '*n*' relates to the primary work stages defined within OmniClass Table 31 - Phases.

NOTE 2   This list can be expanded for project specific codes and fixed within the Project's Information Standard.

NA.4.4   Classification

Classification of information within information containers should be agreed at the outset of the project and may vary depending on the subject. Classifications must comply with ISO 12006-2). Common classifications include:

- CSC/CSI MasterFormat (OmniClass Table 22)
- CSC/CSI UniFormat (Omniclass Table 21)
- UniClass 2015

NOTE : In cases where coding strategies involve more than one classification, the classification statement may be made at the PIR stage and this field omitted.

NA.5 Information model exchange

NA.5.1   Clarification

ISO 19650-2 (5.2.1) states that '*The appointing party shall establish their exchange information requirements to be met by the prospective lead appointed party during the appointment'.*

In Canada, information models exchanged with the Appointing Party, unless specified to the contrary within the Project Information Requirements, should include:

a)   geometrical information in proprietary formats and open data formats;

b)   non-geometrical information in open data formats, structured in accordance with an agreed data exchange definition such as COBie, and contained within a single information container; and

c)   documentation in open data formats.

NOTE 1   Open data formats recommended for information containers containing geometrical information include ISO 16739 (IFC) schema files in ISO 10303-21 and ISO 10303-28 edition 2.

NOTE 2   Open data formats recommended for information containers containing non-geometrical information include ISO/IEC-29500-1 (xlsx) and ISO 16739 (IFC) schema files in ISO 10303-21 or ISO 10303-28 edition 2.

NOTE 3   Open data formats recommended for information containers containing documentation include ISO 32000 (PDF)

NA.6 Project's information requirements

NA.6.1   Clarification

ISO 19650-2 (5.1.2) states that '*The appointing party shall establish the project's information requirements, as described in ISO 19650-1:5.3, to address the questions to which the appointing party needs answer(s) at each of the key decision points throughout the project.*

In Canada, the appointing party's defined information exchange points (key decision points) within each of the principal work stages are to be used in defining the Project's Information Requirements.

NA.6.2 Declaration of project coding

Prior to any information exchange, and as part of the Project Information Requirements document, Canadian users need to identify coding intended to be used on the project. Specifically:

- Project code length: Limited (2, 3, 6 characters) or Unlimited
- Originator codes: Assign specific codes for known parties, updated over time as required
- Location code: Establish & identify code strategy for the project; user-defined building storeys, GIS coordinates, etc.
- Type: Identify which coding system will be used; values derived from coding standard.
- Role: Identify which coding system will be used; values derived from coding standard.
- Classification: Identify which classification system will be used to generate codes.