

Digital Project Delivery

**Alberta Infrastructure
COBie Requirements
Appendix 001- COBie Instructions**

Change History

Date	Version	Description
March 2018	V1.0	First Release
July 2018	V1.1	Revisions to COBie Responsibilities Matrix
March 2020	V2.0	Minor Revisions, Addition of Commissioning Agent

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COBie Instructions Objective

The following document details the technical application of the appropriate COBie sheets. These instructions will facilitate the exchange of building, system, and product information through the project life cycle.

All project stakeholders shall have downloaded, read, and understood the COBie standard, Alberta Infrastructure's COBie Requirements and these instructions. Since engineering consultants and construction subcontractors have a critical role in helping designers and prime contractors meet COBie deliverable requirements, participating engineering consultants and subcontractors shall have downloaded, read, and understood the COBie standard, Alberta Infrastructure's COBie Requirements and these Instructions.

Related Requirements

Alberta Infrastructure's AIM Consultant Requirements

Alberta Infrastructure's AIM Contractor Requirements

Alberta Infrastructure's AIM Design-Builder Requirements

Alberta Infrastructure's COBie Requirements

1. COBie Instructions

This sheet contains the instructions, the required sheets per project phase and the legend indicating the color fill for field information. Field information falls into the categories in the table below.

Required	Text
Reference to another sheet or pick list	Text
External reference	Text
If specified as required	Text

Yellow = Required Input

Data must always be entered in these cells.

Salmon = Required Reference

Data is required in these cells and values must directly relate to other worksheets or pick lists.

Purple = External Reference

Optional data which indicates fields populated in order to establish the relationship between the authoring tool and COBie file. The GUID (Globally Unique Identifier) makes it possible to connect graphical elements and data elements.

Green = If Specified as Required

Indicates fields that are required as specified by the Owner. See matrix below.

2. Project Phase Responsibility Matrix

Project Phase Legend

- SD Schematic Design
- DD Design Development
- CD Construction Documents
- CA Construction Contract Administration
- IA Interim Acceptance of the Work

Responsibility Legend

- x** Indicates when the field is first populated by the Consultant
- x** Indicates when the field is updated by the Consultant
- o** Indicates when the field is first populated by the Contractor
- o** Indicates when the field is updated by the Contractor
- *** Indicates fields to be verified by the Independent Commissioning Authority

3. COBie Contact Tab

This sheet shall contain all the project contacts and shall be modified as the project progresses in order to reflect the project participants. This shall include the design-build team, sub-contractors, manufacturers and vendors. The COBie.Contact tab shall be populated by both the Consultants during the design phase and the Contractor during construction.

COBie column	Required Information	Project Phase				
		SD	DD	CD	CA	IA
Contact.Email	Email addresses of each of the project team members.	x	x	x	o	
Contact.CreatedBy	Creator's email (Reference to Contact.Email)	x	x	x	o	
Contact.CreatedOn	Date/Time created in YYYY-MM-DD"T"HH:MM:SS format	x	x	x	o	
Contact.Category	Contact's respective category (reference to PickLists)	x	x	x	o	
Contact.Company	Name of company	x	x	x	o	
Contact.Phone	Phone number of respective company	x	x	x	o	

4. COBie Facility Tab

This sheet shall contain the facility information as provided by Alberta Infrastructure. Only one facility per COBie file shall be provided. The facility sheet shall consist of one row only.

COBie column	Required Information	Project Phase				
		SD	DD	CD	CA	IA
Facility.Name	Name of the Facility	x				
Facility.CreatedBy	Creator's email (Reference to Contact.Email)	x				
Facility.CreatedOn	Date/Time created in YYYY-MM-DD"T"HH:MM:SS format	x				
Facility.Category	Facility's respective category (reference to PickLists)	x				
Facility.ProjectName	Project Name	x				
Facility.SiteName	Site Name	x				

5. COBie Floor Tab

This sheet shall list all levels that relate to rooms in a facility. The facility floors shall be outlined and populated by the Consultant. The Contractor may add or update floors or levels that contain project assets or provide access to project assets. Examples include “Roof”, “Site”, and “Foundation”. The Consultant shall update the external references with the GUID of added spaces if they are available.

COBie column	Requirement Information	Project Phase				
		SD	DD	CD	CA	IA
Floor.Name	All levels that exist within the facility (consistent with Construction Documents)	x	x	x		
Floor.CreatedBy	Creator’s email (Reference to Contact.Email)	x	x	x		
Floor.CreatedOn	Date/Time created in YYYY-MM-DD”T”HH:MM:SS format	x	x	x		
Floor.Category	Floors respective category (reference to PickLists)	x	x	x		
Floor.ExtSystem	This field is automatically populated during export	x	x	x		
Floor.ExtObject	This field is automatically populated during export	x	x	x		
Floor.ExtIdentifier	This field is automatically populated during export	x	x	x		
Floor.Description	A general text description of the Floor	x	x	x		
Floor.Elevation	Geodetic Elevation of floor in meters	x	x	x		

6. COBie Space Tab

This sheet shall list all spaces which belong to a facility. Each space shall be a row in this sheet. The COBie spaces shall include the ceiling space above finished ceilings within the space boundaries.

COBie column	Requirement Information	Project Phase				
		SD	DD	CD	CA	IA
Space.Name	Room numbers (consistent with Construction Documents)	x	x	x	o	
Space.CreatedBy	Creator’s email (Reference to Contact.Email)	x	x	x	o	
Space.CreatedOn	Date/Time created in YYYY-MM-DD”T”HH:MM:SS format	x	x	x	o	
Space.Category	Spaces respective category (reference to PickLists)	x	x	x	o	
Space.FloorName	Level the Space is located (reference to Floor.Name)	x	x	x	o	
Space.Description	Room names (consistent with Construction Documents)	x	x	x	o	
Space.ExtSystem	This field is automatically populated during export	x	x	x		x
Space.ExtObject	This field is automatically populated during export	x	x	x		x
Space.ExtIdentifier	This field is automatically populated during export	x	x	x		x
Space.GrossArea	The Gross area of each space	x	x	x		
Space.NetArea	The Net area of each space	x	x	x		

7. COBie Type Tab

This sheet shall list all the types of components. Types are components with similar attributes. For each COBie type in the facility there shall be one row in this sheet.

COBie column	Requirement Information	Project Phase				
		SD	DD	CD	CA	IA
Type.Name	Unique type tags/names (consistent with Construction Documents)		x*	x*		
Type.CreatedBy	Creator's email (Reference to Contact.Email)		x	x		
Type.CreatedOn	Date created in YYYY-MM-DD"TT"HH:MM:SS format		x	x		
Type.Category	Types respective category (reference to PickLists)		x	x		
Type.Description	A general text description of the Type		x*	x*	o	
Type.AssetType	Either "Fixed" or "Movable"		x	x		
Type.Manufacturer	Original Equipment Manufacturer (OEM) email address (Reference to Contact.Email)				o*	
Type.ModelNumber	OEM's part number				o*	
Type.WarrantyGuarParts	Parts warranty provider (Reference to Contact.Email)				o	
Type.WarrantyDurParts	Duration of Warranty in regard to parts				o	
Type.WarrantyGuarLabor	Labor warranty provider (Reference to Contact.Email)				o	
Type.WarrantyDurLabor	Duration of Warranty in regard to Labor				o	
Type.WarrantyDurUnit	Unit of time for above warranty durations				o	
Type.ExtSystem	This field is automatically populated during export		x	x		x
Type.ExtObject	This field is automatically populated during export		x	x		x
Type.ExtIdentifier	This field is automatically populated during export		x	x		x
Type.ReplacementCost	Replacement cost per unit				o	
Type.ExpectedLife	Manufacturer or industry recommended life cycle				o	
Type.DurationUnit	Unit of time for above Expected Life duration				o	
Type.WarrantyDescription	A general text description of the warranty				o	
Type.NominalLength	Nominal Length of Type in mm				o*	
Type.NominalWidth	Nominal Width of Type in mm				o*	
Type.NominalHeight	Nominal Height of Type in mm				o*	

8. COBie Components Tab

This sheet shall list all components in the facility by unique name and identifier. This sheet is used to create an entry for each instance of a type in the facility. For each COBie component in the facility, there shall be one row in this sheet.

COBie column	Requirement Information	Project Phase				
		SD	DD	CD	CA	IA
Component.Name	Unique component tags (consistent with Construction Documents)			x*		
Component.CreatedBy	Creator's email (Reference to Contact.Email)			x		
Component.CreatedOn	Date created in YYYY-MM-DD"T"HH:MM:SS format			x		
Component.TypeName	Type of each component (Reference to Type.Name)			x*		
Component.Space	Location of component (Reference to Space.Name)			x*	o*	
Component.Description	A general text description of the component			x		
Type.ExtSystem	This field is automatically populated during export			x		x
Type.ExtObject	This field is automatically populated during export			x		x
Type.ExtIdentifier	This field is automatically populated during export			x		x
Component.SerialNumber	OEM's serial number				o*	
Component.InstallationDate	Installation date in YYYY-MM-DD"T"HH:MM:SS format				o*	
Component.WarrantyStartDate	Warranty start date in YYYY-MM-DD"T"HH:MM:SS format				o*	

9. COBie System Tab

This sheet shall list the building systems. A COBie component shall be listed only once for each system but may be listed in multiple systems.

COBie column	Requirement Information	Project Phase				
		SD	DD	CD	CO	IA
System.Name	Facility system (consistent with Construction Documents)		x	x	o	
System.CreatedBy	Creator's email (Reference to Contact.Email)		x	x	o	
System.CreatedOn	Date created in YYYY-MM-DD"T"HH:MM:SS format		x	x	o	
System.Category	Systems respective category (reference to PickLists)		x	x	o	
System.ComponentNames	Components found on each respective system (Reference to Component.Name)			x	o	
System.ExtSystem	This field is automatically populated during export		x	x		x
System.ExtObject	This field is automatically populated during export		x	x		x
System.ExtIdentifier	This field is automatically populated during export		x	x		x
System.Description	A general text description of the system		x	x	o	

10. COBie Document Tab

This sheet shall list all pertinent documents to be associated with the facility and its assets.

COBie column	Requirement Information	Project Phase				
		SD	DD	CD	CO	IA
Document.Name	Document identifier (ID number or name)				o	
Document.CreatedBy	Creator's email (Reference to Contact.Email)				o	
Document.CreatedOn	Date created in YYYY-MM-DD"THH:MM:SS format				o	
Document.Category	Documents respective category (reference to PickLists)				o	
Document.ApprovalBy	Approver (Reference to Contact.Email)				o	
Document.Stage	Stage of the Document (reference to PickLists)				o	
Document.SheetName	COBie sheet the document applies to				o	
Document.RowName	Specific row on the COBie sheet the document applies to				o	
Document.Directory	File path within the COBie folder structure				o	
Document.File	Exact name of the file found at the path above				o	
Document.ExtSystem	This field is automatically populated during export					
Document.ExtObject	This field is automatically populated during export					
Document.ExtIdentifier	This field is automatically populated during export					
Document.Description	Description of the document and/or contents				o	
Document.Reference	Specification Section				o	

11. COBie Attribute Tab

This sheet shall contain any required attributes defined by the project team, in collaboration with the Province. Required attributes may include room finishes, performance data and design information.

COBie column	Requirement Information	Project Phase				
		SD	DD	CD	CO	IA
Attribute.Name	Name of the attribute field		x	x		
Attribute.CreatedBy	Creator's email (Reference to Contact.Email)		x	x		
Attribute.CreatedOn	Date created in YYYY-MM-DD"TT"HH:MM:SS format		x	x		
Attribute.Category	Attribute's respective category		x	x		
Attribute.SheetName	COBie sheet the attribute applies to		x	x		
Attribute.RowName	Specific row on the COBie sheet the attribute applies to		x	x		
Attribute.Value	The value given for this attribute field		x	x	o	
Attribute.Unit	Specified units for the attribute value (or n/a)		x	x		
Attribute.ExtSystem	This field is automatically populated during export		x	x		x
Attribute.ExtObject	This field is automatically populated during export		x	x		x
Attribute.ExtIdentifier	This field is automatically populated during export		x	x		x
Attribute.Description	Description of the source of the attribute		x	x	o	
Attribute.AllowedValues	a comma delimited list of one or more allowed values					