

TMR Revit to IFC Export Pack

How to Notes

Version 6.2

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1. Download and save TMR IFC export pack

- The text files in the TMR IFC export pack can be stored locally and pathed to from dialogues in the Revit Project environment

2. Open the TMR Bridge Parameters Schedule Project

3. Copy any required TMR Schedules and Paste them into a new Revit Project on a blank sheet

COPY REQUIRED SCHEDULES INTO A NEW PROJECT



4. The shared parameters in the schedules align with TMR BIM model element attribute tables for bridges. The parameters for each bridge element type have been assigned to the Revit categories below.

Bridge Element	Revit Category									
	Columns	Floors	Generic Models	Mass	Railings	Roofs	Structural Columns	Structural Foundations	Structural Framing	Walls
Headstock			x							
Abutment Protection			x	x						
RSS Walls			x							x
Pier Column	x		x				x			
Blade Wall			x							
550 Octagonal PSC Pile	x		x				x		x	
Bored Cylindrical Pile	x		x				x		x	
Driven Tubular Steel Pile	x		x				x		x	
Pile Cap			x							
Pad (Spread) Footing			x							
Steel Post and Rail Traffic Barrier			x		x					
Medium Concrete Traffic Barrier			x							
Pedestrian Balustrade			x		x					
Safety Rail			x		x					
Safety Screen / Anti Throw Screen			x		x					
Guard Rail			x		x					
Elastomeric Bearings			x							
Bearing Pedestals			x							
Restraint Angle			x							
Cast insitu Kerb		x	x			x				
Cast insitu Deck		x	x			x				
Deck Wearing Surface		x	x			x				
Footway		x	x			x				
Cross Girder			x							
Concrete Girder			x							x
Expansion Joint			x							

5. Parameter values can be assigned to families through the schedules

E	F	G	H	I	J	K	L
Family	Actual Capac	Approved Pile Pr	As-Con Drawi	Average 28	Average 28 Da	BIM Component Code	Cast in Anchor/ Hoop C
550 Octagonal PSC Pile - Structural Column - 2011	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
550 Octagonal PSC Pile - Generic Models - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
550 Octagonal PSC Pile - Column - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
550 Octagonal PSC Pile - Structural Foundation - 2	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Bored Cylindrical Pile - Column - 201125		Record	Drawing	55.5	56.4	43614-AA-F-CP-1	
Bored Cylindrical Pile - Generic Model - 201125		Record	Drawing	55.5	56.4	43614-AA-F-CP-1	
Bored Cylindrical Pile - Structural Column - 201125		Record	Drawing	55.5	56.4	43614-AA-F-CP-1	
Bored Cylindrical Pile - Structural Foundation - 2011		Record	Drawing	55.5	56.4	43614-AA-F-CP-1	
Bridge Traffic Barrier - Generic Model - 201125			Drawing			43614-S1-T-TR-1	
Cast Insitu Kerb - Generic Model - 201125			Drawing	55.5	56.000	43614-S1-D-KE-1	
Headstock - Generic Model - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Medium Concrete Barrier - Generic Model - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
PSC Deck Unit - Generic Model - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Reinforced Concrete Deck - Generic Model - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Relieving Slab - Generic Model - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Super T Girder- Generic Model - 201125	50	Record	Drawing	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
PSC Deck Unit - Structural Framing - 201125			Drawing	56	58	43614-S1-G-CG-1-A	Philipp Lifting hoop 2
Super T Girder- Generic Model - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Driven Tubular Steel Pile - Column - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Driven Tubular Steel Pile - Generic Model - 201125	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Driven Tubular Steel Pile - Structural Foundation - 2	50	Record	782774	55.5	57.5	43614-AA-F-PP-1	Phillip Article No. 4
Driven Tubular Steel Pile - Structural Foundation - 2							

6. Load TMR IFC Layers

File → Export → Export Options → IFC Options → Load → TMR IFC Layers.txt

Once loaded, this file maps the following Revit Categories to IFC Class and IFC Type

Revit Category	IFC Class	IFC Type
Columns	IfcBuildingElementProxy	IfcBuildingElementProxyType
Floors	IfcCovering	IfcCoveringType
Generic Models	IfcBuildingElementProxy	IfcBuildingElementProxyType
Mass	IfcSlab	IfcSlabType
Massing	IfcSlab	IfcSlabType
Railings	IfcRailing	IfcRailingType
Roofs	IfcCovering	IfcCoveringType
Structural Columns	IfcBuildingElementProxy	IfcBuildingElementProxyType
Structural Foundations	IfcPile	N/A
Structural Framing	IfcBeam	IfcBeamType
Walls	IfcSlab	IfcSlabType

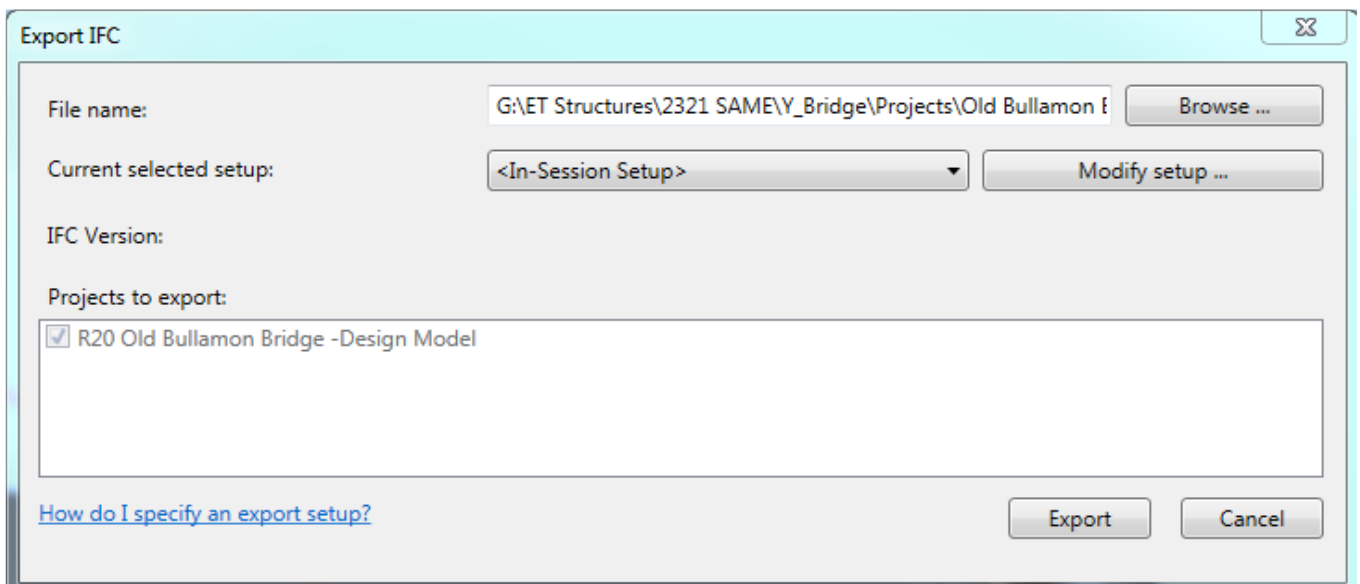
7. For import to TMR asset management systems please assign IFC Class and Type as per below

Group	Group Code	IFC Class	IFC Type
Abutment	A	IfcSlab	IfcSlabType
Pier	P	IfcMember	IfcMemberType
Foundation	F	IfcPile	N/A
Bridge Traffic Barriers	T	IfcRailing	IfcRailingType
Bearings	B	IfcPlate	IfcPlateType
Deck	D	IfcCovering	IfcCoveringType
Girders	G	IfcBeam	IfcBeamType
Miscellaneous	M	IfcBuildingElementProxy	IfcBuildingElementProxyType

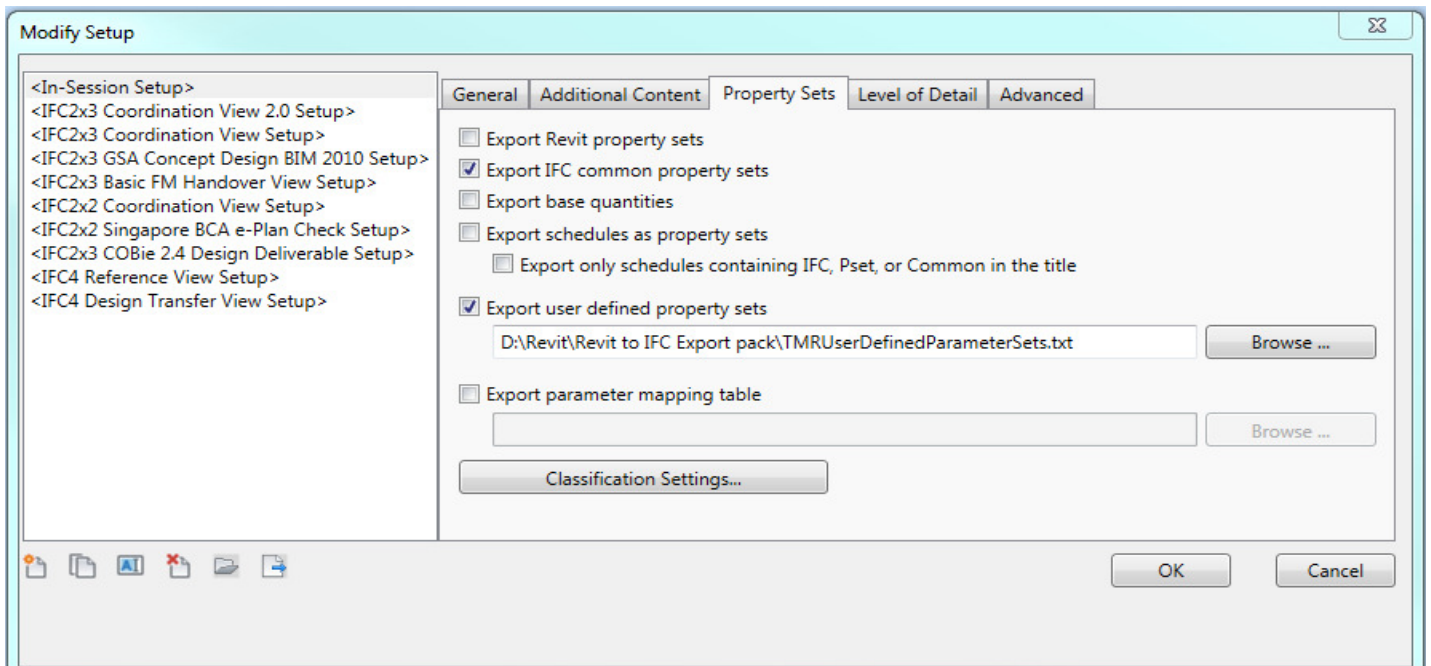
IFC export parameters can be assigned to families to overwrite IFC Layer files (point 6). IFC Class is assigned to 'IFCExportAs' parameter. IFC Type is assigned to 'IFCExportType' parameter. Both of these parameters have been included in the TMR Schedules.

8. Export to IFC

- File → Export → IFC



- Modify setup → Property sets



- Check the 'Export user defined property sets'
- Path to the 'TMR user defined parameter sets' file
- Export to IFC
- In an IFC viewer, attributes will be tabulated in property sets in accordance with the TMR 'BIM model element attribute tables' for bridges

