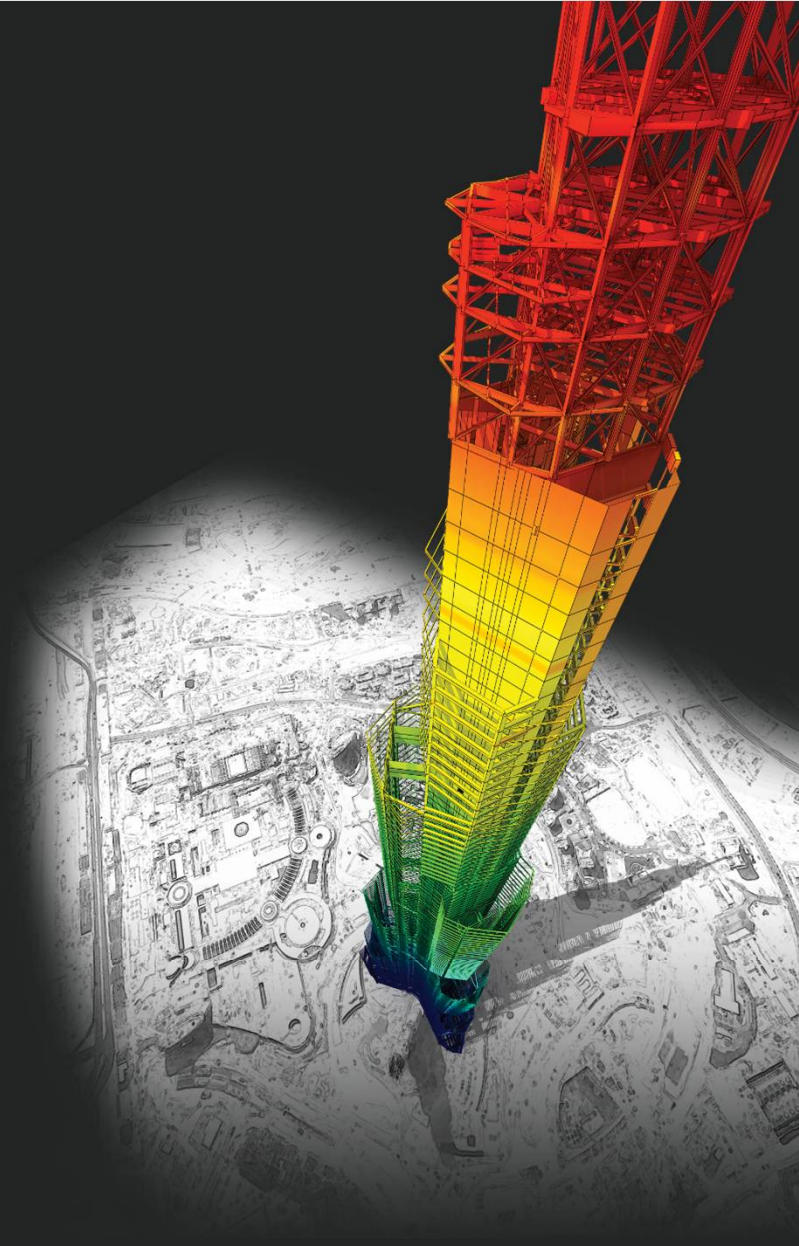
Release Note

Release Date : October. 2022

Product Ver. : midas Gen 2023 (v1.1) and Design+2023(v1.1)



DESIGN OF General Structures

Integrated Design System for Building and General Structures

Enhancements

- ***midas Gen***

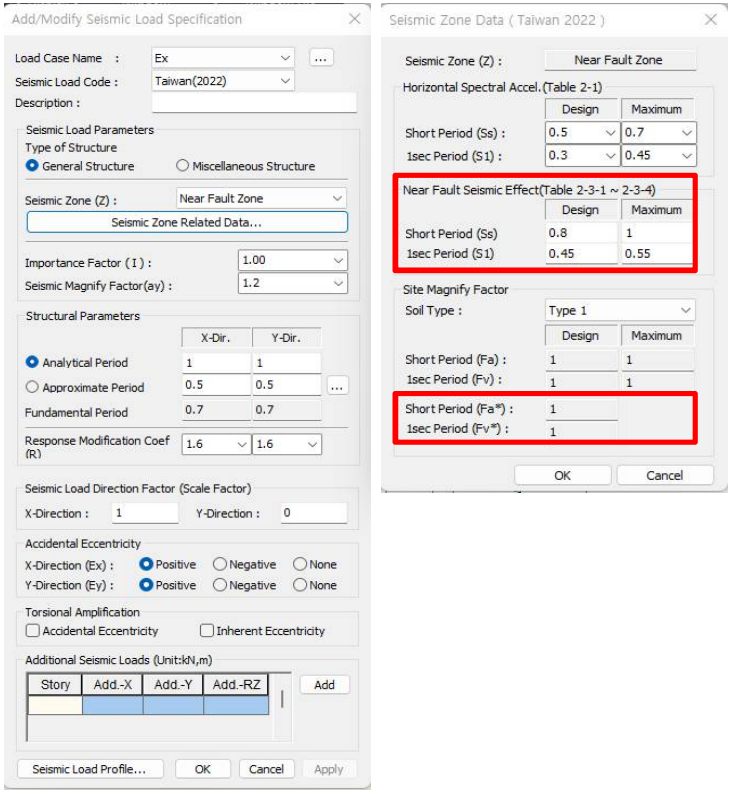
midas Gen

1. New Seismic Code for Taiwan : Static & Response Spectrum

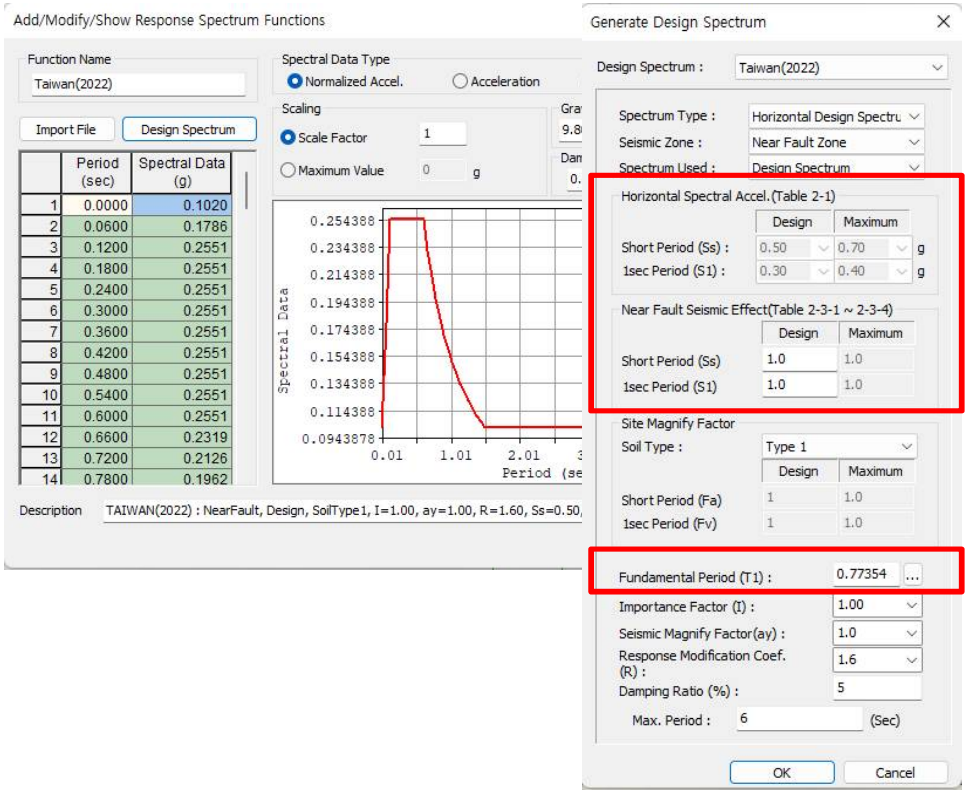
Added Seismic Load for Taiwan Engineers

- ***Static Seismic Load (Taiwan 2022) : Generate Seismic Zone data considering Near fault seismic effect***
- ***Support for Miscellaneous Structure type***

Static Seismic Load



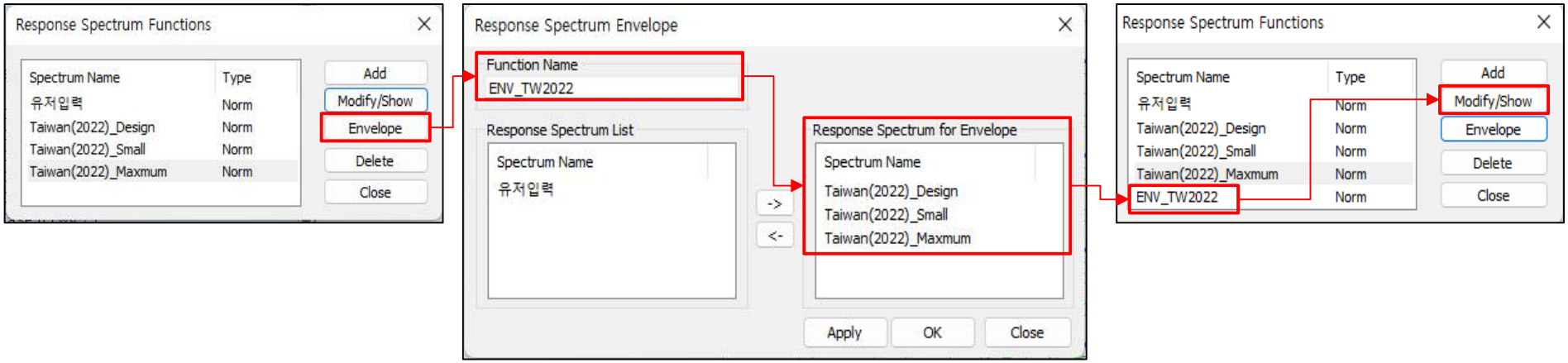
Response Spectrum & Demand Spectrum (Pushover)



2. Response Spectrum Envelope functions for Taiwan Seismic Load

Envelopment of Response Spectrum

- ***To apply the largest ground acceleration among Design Spectrum, Small-Medium Spectrum, and Maximum Spectrum using envelope functions.***

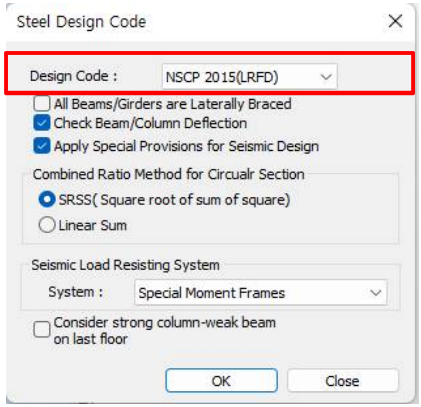


"Click Envelope"	Input Name and Select Spectrum for Envelope	Check of enveloped functions

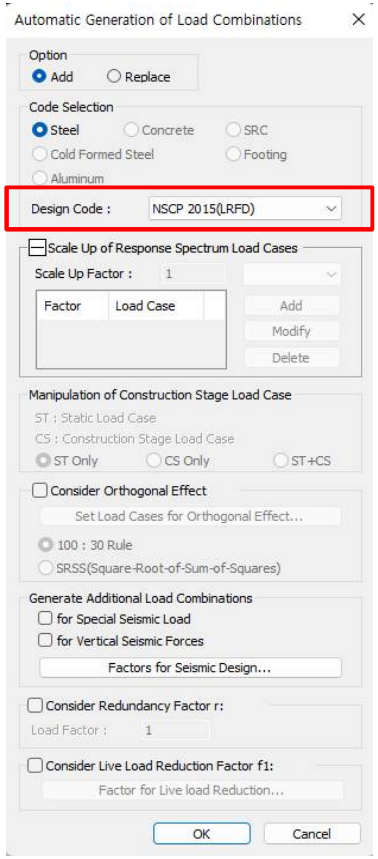
3. Steel Design Code as per NSCP 2015 (Philippine)

Added LRFD & ASD Method for Steel Design

NSCP 2015 (LRFD)

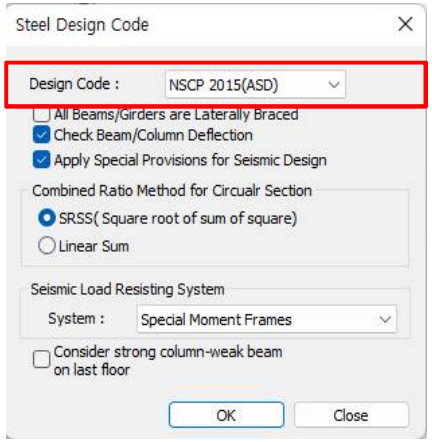


Design Code

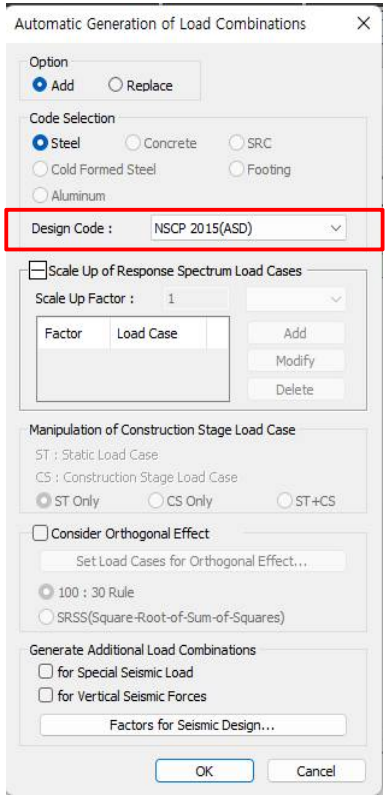


Load combination

NSCP 2015 (ASD)



Design Code



Load combination

4. Safety Verification & Cyclic Shear Resistance check for wall member as per EC8-3(2005), NTC 2018

- ***Safety Verification and Cyclic Shear Resistance tables are provided for seismic safety evaluation of wall members (Strong Axis).***

Pushover – Safety Verification Table

Start Page | MIDAS/Gen | Safety Verification

	Wall ID	Story	Location	Seismic Element	Load	Verify Ductile Mechanism						Verify Brittle Mechanism					
						My			Mz			Fy			Fz		
						Demand	Capacity	Remark	Demand	Capacity	Remark	Demand (N)	Capacity (N)	Remark	Demand (N)	Capacity (N)	Remark
	Step for Demand = USER (Step 30), Confidence factor = 1.00																
	Press right mouse button and click 'Set Safety Parameters' menu to change step or loadcase																
▶	1	1F	Bottom	Primary	1	0.0000	0.0070	OK	-	-	-	-	-	-	716136.00	1216830.0	OK
	1	1F	Top	Primary	1	0.0042	0.0070	OK	-	-	-	-	-	-	716136.00	1216830.0	OK
	1	2F	Bottom	Primary	1	0.0000	0.0071	OK	-	-	-	-	-	-	467874.00	1216830.0	OK
	1	2F	Top	Primary	1	0.0000	0.0071	OK	-	-	-	-	-	-	467874.00	1216830.0	OK

Safety Verification | Wall

Concrete Design – Safety Verification Table

Start Page | MIDAS/Gen | Cyclic Shear Resistance

	Wall ID	Story	Location	Seismic Element	Load	Cyclic Shear Resistance					
						VRy			VRz		
						Demand	Capacity	Remark	Demand	Capacity	Remark
	Confidence Factor = 1.00, qd = 3.00, Ie = 1.00										
	Press right mouse button and click 'Set Cyclic Shear Resistance Parameters' menu to change Load Case/Combination/Confidence Factor/Displacement Behavior Factor/Importance Factor										
▶	1	1F	Bottom	Primary		-	-	-	56049.000	1827030.0	OK
	1	1F	Top	Primary		-	-	-	56049.000	1616140.0	OK
	1	2F	Bottom	Primary		-	-	-	34486.000	11956200.	OK
	1	2F	Top	Primary		-	-	-	34486.000	1610890.0	OK

Beam & Column | Wall

Pushover – Safety Verification Table

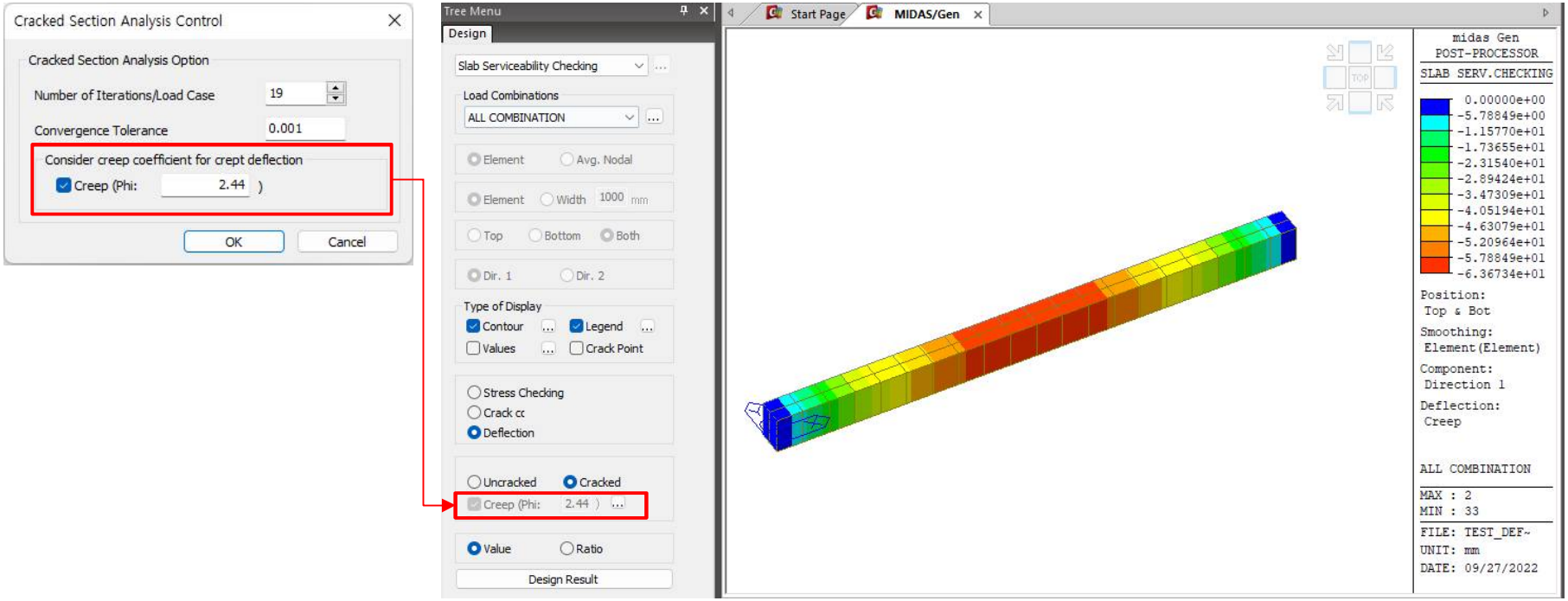
Start Page | MIDAS/Gen | Cyclic Shear Resistance

	Wall ID	Story	Location	Seismic Element	Load	Cyclic Shear Resistance					
						VRy			VRz		
						Demand	Capacity	Remark	Demand	Capacity	Remark
	Confidence Factor = 1.00, qd = 1.00, Ie = 1.00										
	Press right mouse button and click 'Set Cyclic Shear Resistance Parameters' menu to change Load Case/Combination/Confidence Factor/Displacement Behavior Factor/Importance Factor										
▶	1	1F	Bottom	Primary	1	-	-	-	716136.00	1491770.0	OK
	1	1F	Top	Primary	1	-	-	-	716136.00	1329410.0	OK
	1	2F	Bottom	Primary	1	-	-	-	467874.00	1511530.0	OK
	1	2F	Top	Primary	1	-	-	-	467874.00	1478240.0	OK

Beam & Column | Wall

5. Improvement for Long-term Deflection of Slabs Considering Creep Coefficient (EC2, 2004)

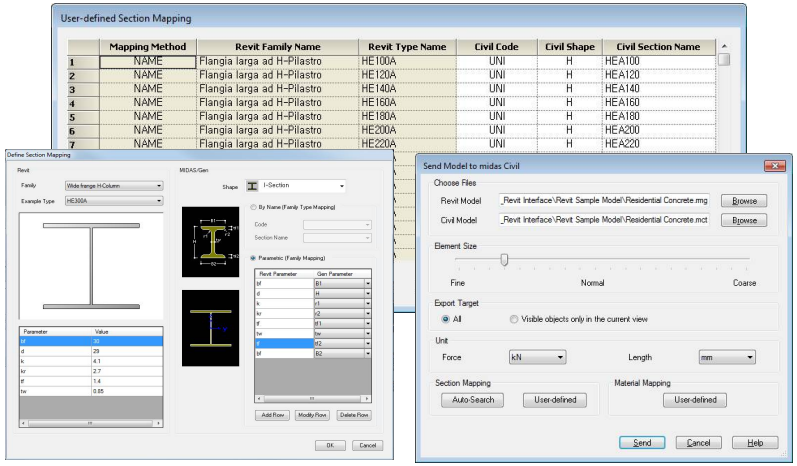
- ***User can input the creep coefficient in the dialog box for slab design serviceability check.***



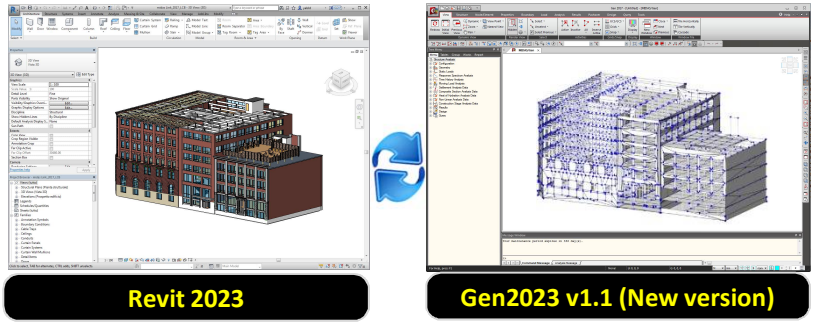
6. Revit 2023 Interface

Gen-Revit Link

- ***File > Import > midas Gen MGT File***
- ***File > Export > midas Gen MGT File***



Send Model to midas Gen



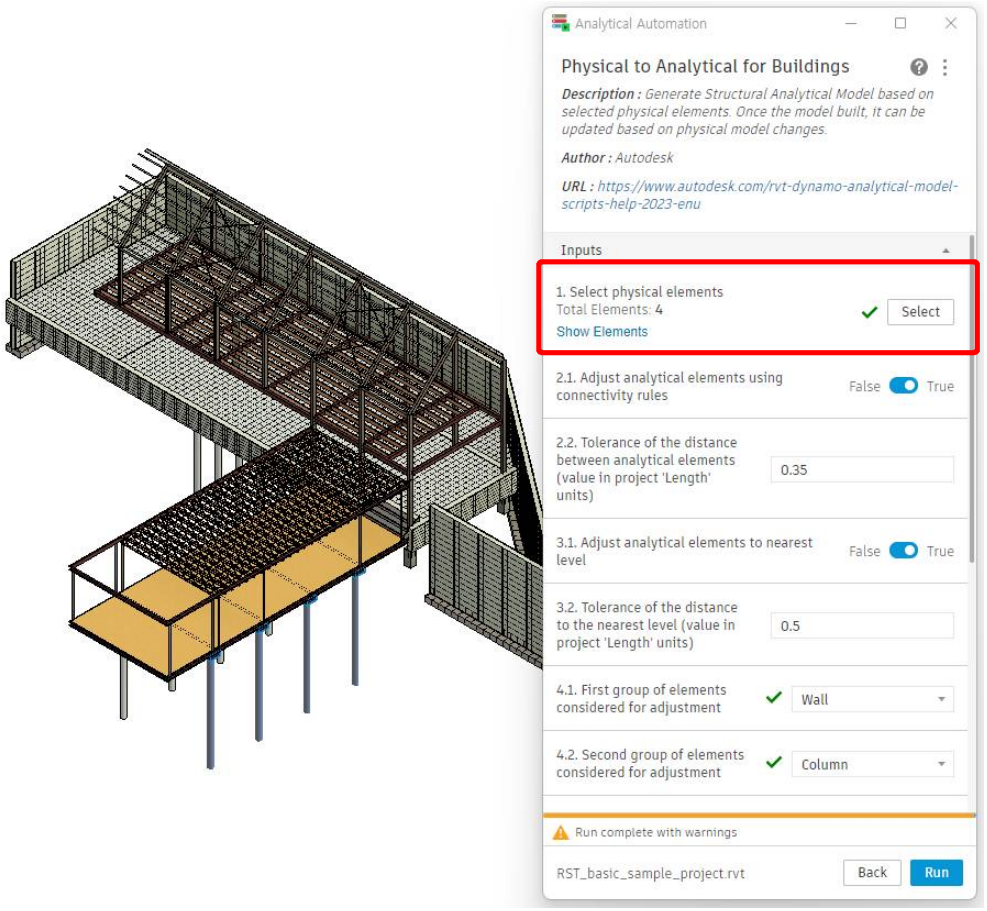
Revit 2023 | **Gen2023 v1.1 (New version)**

	Functions	Revit <> Gen
Linear Elements	Structural Column	<>
	Beam	<>
	Brace	<>
	Curved Beam	>
	Beam System	>
	Truss	>
Planar Elements	Foundation Slab	<>
	Structural Floor	<>
	Structural Wall	<>
	Wall Opening & Window	>
	Door	>
	Vertical or Shaft Opening	>
Boundary	Offset	>
	Rigid Link	>
	Cross-Section Rotation	>
	End Release	>
	Isolated Foundation Support	>
	Point Boundary Condition	>
	Line Boundary Condition	>
	Wall Foundation	>
	Area Boundary Condition	>
Load	Load Nature	>
	Load Case	>
	Load Combination	>
	Hosted Point Load	>
	Hosted Line Load	>
	Hosted Area Load	>
Other Parameters	Material	<>
	Level	>

6. Revit 2023 Interface

Gen-Revit Link

- ***User can export to Gen after setting up structural elements through the Analytical Automation function in Revit 2023.***



7. Added to Rebar DB for Philippine (Design+)

- ***User can do reinforcement concrete member design using Philippine rebar code in the Design+ software.***