

CGS Labs Civil Solutions

ver. 2024

- / DESIGN
- / SIMULATE
- / OPTIMIZE



CGSLABS

What is new in CGS Labs Civil Solutions 2024

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1. Supported CAD platforms

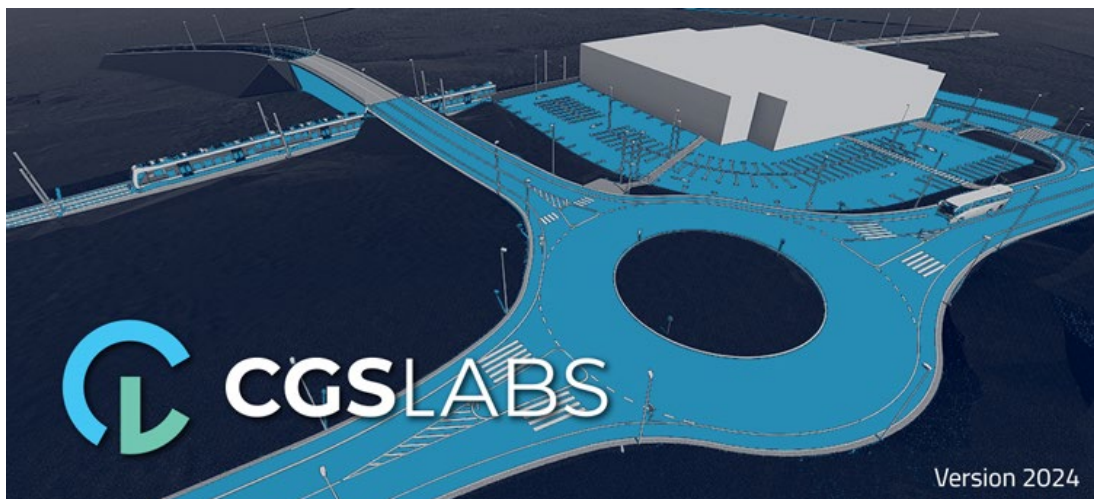
CGS Labs Civil Solutions 2024 are compatible with the latest Autodesk AutoCAD & Civil 3D 2024 version.



With CGS Labs Civil Solutions 2024 the support now covers the following CAD platforms:

Autodesk AutoCAD/Civil 3D	BricsCAD
2024	V23
2023	V22
2022	V21
2021	
2020	
2019	
2018	

CGS Labs Civil Solutions 2024 is a major version upgrade, allowing users to install it alongside previous versions (e.g. 2023, 2022 or older...), thus preserving settings for existing versions of CGS Labs software. All future updates will only be applied to the latest version.



2. AUTOPATH

2.1. New AUTOPATH Intralogistics license package

A new AUTOPATH Intralogistics license has been introduced to cover demanding intralogistics swept path analysis requirements for logistics tigger trains and more. With this new license introduction, AUTOPATH now offers three different license packages:

- **AUTOPATH Professional**
- **AUTOPATH Ultimate (3D)**
- **AUTOPATH Intralogistics**, which provides the highest level of features and content.

AUTOPATH by license type		
Professional	Ultimate	Intralogistics
National vehicle libraries Manufactures vehicle libraries	National vehicle libraries Manufactures vehicle libraries	National vehicle libraries Manufactures vehicle libraries Intralogistics vehicle libraries
2D swept path analysis	2D swept path analysis	2D swept path analysis
	3D swept path analysis	3D swept path analysis
		Advanced vehicle steering options are available to support the needs of intralogistics.

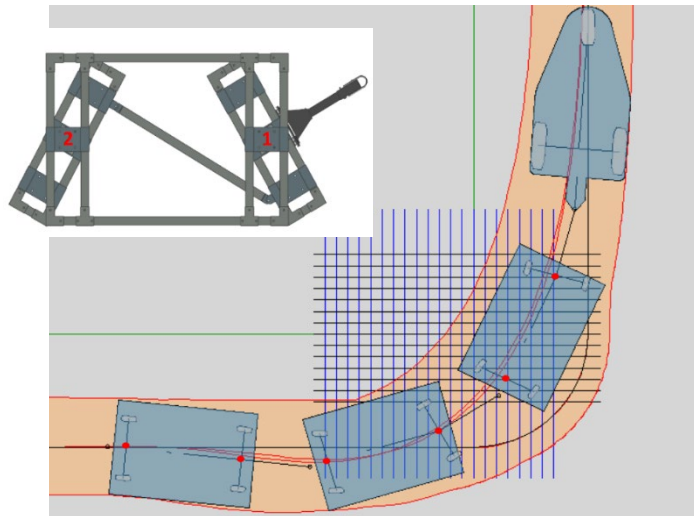


(Image is for internal use only! Not for release & publishing)

2.2. Support for Double Ackerman steering

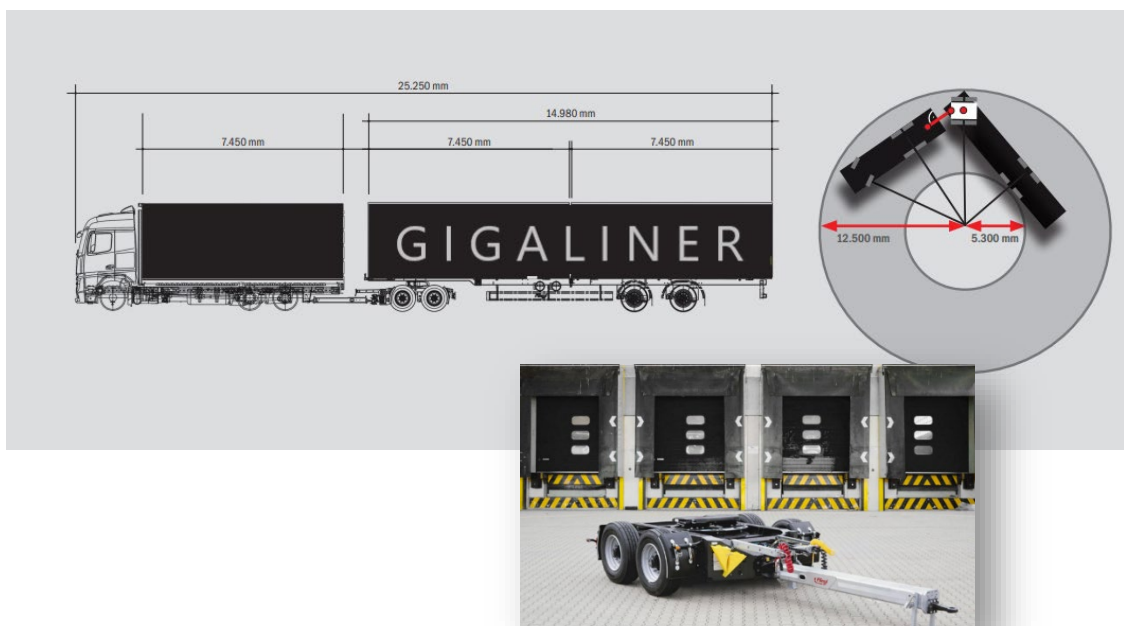
Logistics trains / Tugger trains may feature specific trailers with rear-end back-axle steering options. This steering option was best described by Ackerman and is known as double Ackerman steering, which is fully supported in AUTOPATH 2024 version.

A number of field tests were conducted before introducing this feature to AUTOPATH swept path analysis options, to ensure that the AUTOPATH analysis for such configurations of tugger trains is most accurate.



2.3. Support for Gigaliner | EuroCombi | Road Train

AUTOPATH 2024 now supports "Gigaliner" trucks, EuroCombis, and road trains, exceeding the normal 18m maximum length for transportation vehicles. Gigaliner trucks feature an additional sub-trailer – also known as a "dolly" – to which a semitrailer is attached. This configuration allows Gigaliner vehicles to maintain the turning radii usually obtained by standard 18m trucks. To try out the Gigaliner vehicle library, search for it in the latest version of AUTOPATH 2024.



2.4. AUTOPATH enhancements

- Reverse drive path has been smoothed, resulting in smoother transitions in areas of radius-counter-radius change and radius-tangents points.
- EWB (effective wheel base) on trailers rear wheels is now automatically defined and added when steering is defined on rear axle wheels. Rear steering on trailers is also supported and follow the double Ackerman principle as described above.
- If vehicles have different wheel sizes, like tractors or harvesters, the vertical analysis of the trailer is now accurately displayed.

2.5. New vehicle libraries

New manufacturer vehicle libraries were added or updated for the 2024 version of AUTOPATH:

- Motor Grader
- Soil compactor
- Nootboom trailers
- Broshuis trailers
- Concrete Mixer

- Wind Blades Transportation configuration vehicles
- Gigaliner_Fliegl

3. PLATEIA / FERROVIA / AQUATERRA

3.1. New Profile Views labels

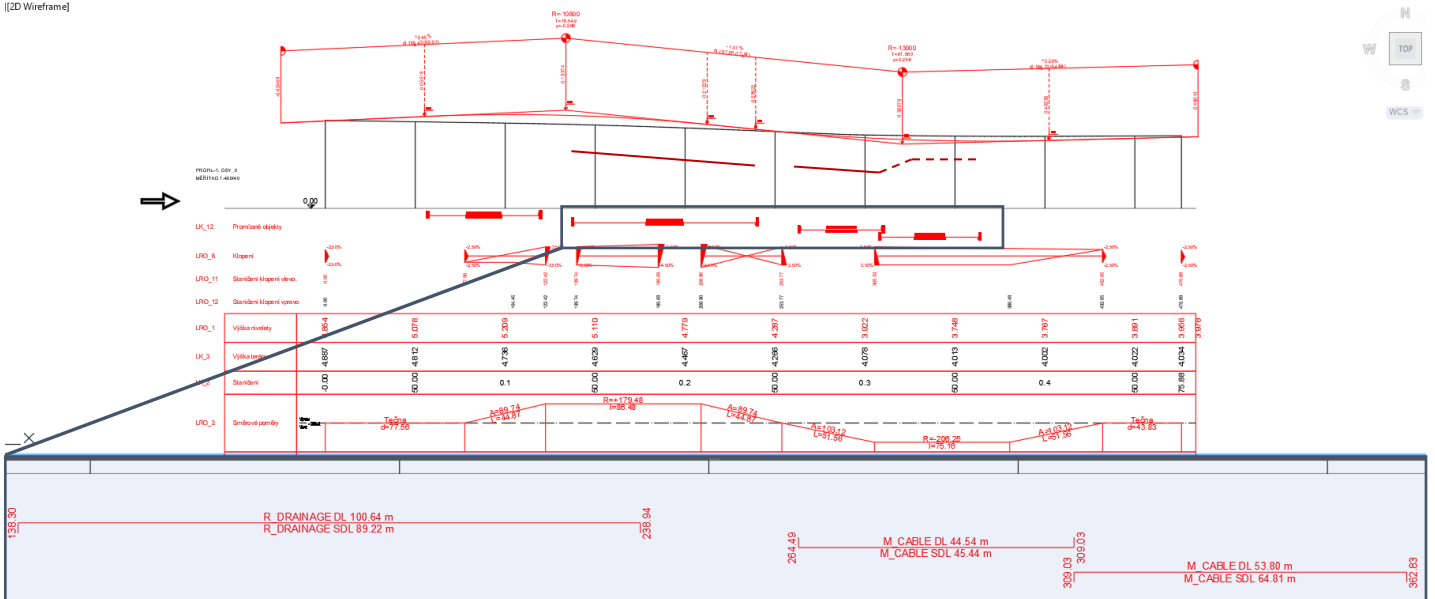
Projection lines labelling options in profile view band

Projection Lines now have new labeling options in a dedicated band underneath the graphical view of the Profile.

With this new option, when drawing Projection Lines from the Layout to the Profile View, users can define which Projection Lines to label in the dedicated Projection Lines Labeling Band. Labeled Projection Lines in the band indicate the length of the projected lines, the side of the lines relative to the alignment, the start and end stations, the projection line length, and the name.

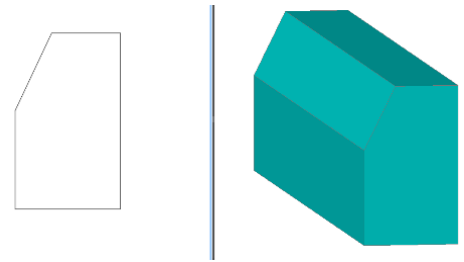
This new Projection Lines Band has a self-adjustable table height option, which is a great addition to Profile View dynamic adjustments. The band can be moved to a different position in the table through the "Edit Current Table" command. Furthermore, Profile View table templates can be set, saved, and preserved for future use.

[[2D Wireframe]



3.3. Infrastructure assembly elements added

PLATEIA includes localized content for various markets. For the 2024 versions, we've significantly updated the content for infrastructure typical cross-section elements added to Cross-Section Views as blocks. This content includes new curbs, gutters, canals and other elements. PLATEIA 2024 offers new updated typical cross-section content for Slovenian, Croatian, Serbian and English versions. Other localized versions are going to feature these elements with further updates.

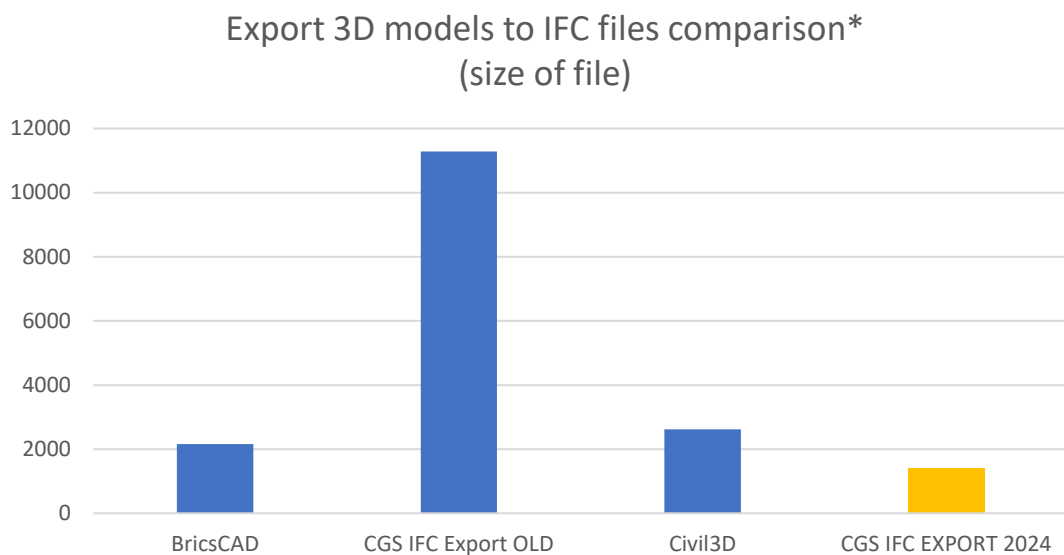


3.4. IFC Export & Imports enhancements and optimization

CGSLABS IFC Export and Import functionality faced significant optimization work for the latest release, with many enhancements provided resulting in:

- Improved geometry of exported data
- Decreased final IFC file size
- Improved IFC data export or/and import speed

Infrastructure 3D models are getting more and more detailed and accurate, and clients are requesting high level of geometrical coherence when exporting complex curved 3D models to external file formats like IFC.



**Results based on IFC export tests using same DWG model and various vendors IFC export tools.*

Same complex 3D model export to IFC file comparison using various IFC Export tools available by CAD providers (in this example AutoCAD IFC export functionality or BricsCAD IFC export) and CGS Labs proprietary IFC file exporting functionality available across all CGSLABS solutions. Lower value the better (same 3D model exported with various vendors IFC Export tools).

Smaller IFC files with same or improved exported geometry and information enable easier collaboration, data sharing and data manipulation while creating your own Digital Twin.

4. SOLVED ISSUES

For a complete list of solved issues updated features and enhancements in CGS Labs Civil Solutions 2024 please refer to: https://cgs-labs.com/release_notes/.

