Release Notes

In general, Allplan Bridge is updated with the regular Allplan main releases and the monthly Hotfixes. With older main releases Allplan Bridge will not always be updated with all Hotfix releases, but only if critical bugs are fixed.

In the following you can find an overview of the most important features of the Allplan Bridge versions released so far (details, small enhancements and fixes are not included). The versions are listed in reverse chronological order of their release dates.

Allplan 2024-1-2, May 2024

Minor changes and fixes

Allplan 2024-1-0, April 2024

Minor changes and fixes

Allplan 2024-0-5, March 2024

Minor changes and fixes

Allplan 2024-0-4, February 2024

Minor changes and fixes

Allplan 2024-0-3, January 2024

Minor changes and fixes

Allplan 2024-0-2, December 2023

Minor changes and fixes

Allplan 2024-0-1, November 2023

Minor changes and fixes

Allplan 2024-0-0, October 2023

General

Due to the additional implementations, the user interface was enhanced and improved in various areas.

Project Examples

The project library was enhanced by a couple of examples.

Import of Tcl script files

Now, it is also possible to execute Tcl files which are using scripts when importing

Import digital terrain model (DTM)

The import of digital terrain models directly in Allplan Bridge or from Bimplus was implemented. Not only for visualization purposes, the terrain can also be used for modelling and checking clearances. For example, it is possible to reference the substructure, like a pier or pile, relative to the terrain using a terrain axis, which is automatically generated. This definition is as well parametric, that means that e.g. when changing the girder height, the pier height is automatically adjusted. Currently, the following formats are supported: Collada (*.dae), glTF (*.gltf, *.glb) and Wavefront Object (*.obj).

Import of super-elevation data via Allplan.Cloud

In Allplan Bridge it is now possible not only to import the geometry of the axis, but also the corresponding definition(s) of cross-slope.

Accompanying polygonal axis

A new type of axis was introduced which allows modelling of longitudinal linear infrastructure objects, like noise-barriers or Jersey-like concrete barriers.

Stakeout report

It is now possible to create a stakeout report using the reference points defined in a cross-section which is assigned to a structural member.

Cross section

The functionality for defining a so-called external boundary (inserting another cross section in the current one) was enhanced, so that it is now possible to insert the cross section at the intersection of two parametric lines.

3D Modelling

A new type of body was introduced called the **extracting body**. This allows to extract a 3D body from an arbitrary structural member such as girder, pier, link girder and plate and to use it in the same way as a prism, i.e. to freely position it in space, to apply Boolean operations with other bodies (extraction bodies or prisms), etc. Hereby, the connection between the original structural member and the extracted body is kept and thus, the model remains completely parametrically.

The functionality of using **templates** was significantly enhanced. Thus, it is now possible to use and combine an arbitrary number of 3D bodies (prisms and/or extraction bodies) in a single template including the application of all types of Boolean operations (union, subtract, cut). In this way, complex, detailed templates such as abutments can be created. These can be used multiple times in one project and respectively positioned and parametrically adapted as well as be exported for later usage in other projects.

Using another neu object type, the **container**, such templates of grouped bodies can be defined in a relative coordinate system which allows to easily position and align them in the model.

Interoperability with Allplan – parametric reinforcement connection

The reinforcement sets defined in Allplan Bridge, primarily for reinforcement design and code checking, are now parametrically connected with the PythonPart technology in Allplan. Not only is the geometry of the longitudinal, shear and torsion reinforcement transferred to Allplan but also all other information, like position of bars, number of bars and bar diameters.

Visualisation of the load definition

All load types (such as point loads, line loads, area loads, temperature loads and settlement, etc.) are now graphically displayed in a detailed manner already during the input and thus can immediately be checked at the time of definition.

Specialized loads for cantilever construction method

A new task CANTILEVER was developed which allows to emulate all loads occurring in one cycle of the balanced cantilever construction. This includes applying/moving the traveler, pouring/assembling the segment, applying the self-weight, pre-stressing the tendons and properly considering creep and shrinkage during all the changing load applications. From the user's side there is only required an

object-oriented input of the geometric data of the form traveler as well as the time schedule of the particular construction steps. Based on that, all calculation actions are carried out automatically.

National Annexes

In addition to the national annexes for Germany (DIN EN), France (NF EN) and Spain (UNE EN), the design and checks according to Eurocode are now also available for the UK (BS EN), Austria (ÖNORM EN), and Poland (PN EN).

Allplan Bridge reporting tool

It is now possible to create user-defined reports for the results from the structural analysis. The basis for this is an add-in developed for MS Word which allows the user to access the results from Allplan Bridge (in the form of tables, images, 2D and 3D diagrams, and much more) while working in a freely editable Word document. This inserted result data remains linked with the project data of Allplan Bridge and can be actualized at any time in case of changes.

Summary report of design code checks

A new task DCESUMMARY was implemented for automatically creating a report with an overview of the governing results from the design and code checking for all limit states.

Structural analysis of composite bridges (Technical preview)

The global structural analysis capabilities in Allplan Bridge were enhanced to correctly consider the behaviour of composite structures.

In parallel, also the design module was enhanced with code assessment of composite concrete-to-concrete cross-sections.

Further new features and improvements

A number of further new features and improvements are available. For example, the interactive insertion of docking points for 3D bodies, the enhanced functionalities of the measuring tool in the cross section as well as in the 3D model (with reference to the terrain model), the enhanced output of axis data, the implementation of a new function for evaluating the vertical distance between two different profiles of an axis, and many more.

Allplan 2023-1-5, September 2023

Minor changes and fixes

Allplan 2023-1-4, August 2023

Minor changes and fixes

Allplan 2023-1-3, July 2023

Minor changes and fixes

Allplan 2023-1-2, June 2023

Minor changes and fixes

Allplan 2023-1-1, May 2023

Minor changes and fixes

Allplan 2023-1-0, April 2023

Connection to LUSAS via Allplan Cloud.

More flexibility in static analysis of bridge models.

Users of Allplan Bridge 2023 will now be able to synchronize analytical models over the Allplan Cloud (via Bimplus) with LUSAS finite element analysis software. In the first release of this connection, this will support concrete box girder bridges, with or without pre-stressed tendons, with more bridge types to be supported in the future. Via the Allplan Cloud, analytically relevant entities from Allplan Bridge can be transferred to various structural analysis solutions for further processing. This provides users with more flexibility to utilize external analysis software of their choosing.

New Verification Example.

Fully demonstrate Eurocode compliance.

The new verification example demonstrates and verifies the calculation methods used in Allplan Bridge for reinforcement design and code-checking. For this a simply supported single-span pedestrian bridge designed as a prestressed concrete girder with a single solid T-shaped section with haunches is used. This example will help users to fully understand the inputs and the results provided.

Allplan 2023-0-7, March 2023

General

- The US length unit US Survey Feet is now available.
- Improved the starting of Allplan Bridge via Allplan for multiuser environments.

Allplan 2023-0-5, February 2023

Minor changes and fixes

Allplan 2023-0-4, January 2023

Minor changes and fixes

Allplan 2023-0-2, December 2022

Minor changes and fixes

Allplan 2023-0-1, November 2022

Minor changes and fixes

Allplan 2023-0-0, October 2022

General

Due to the additional implementations, the user interface was enhanced and improved in various areas.

Calculation

A calculation method based on the dependencies of objects was implemented where only those parts of the model are recalculated which are affected by the changes performed, which drastically reduces the calculation time.

Partial import of TCL-files

Now, it is also possible to import TCL-files, which only contain certain parts of the project, into an existing project and thus, add them to it. In this way, respectively prepared parts of an existing project can be reused as "templates".

Axes

All data of the plan and elevation of the axis can now be output in a clear report by means of an Excel-file.

Cross Section

A new tool for creating and assigning a variable at the same time is available via the context menu of the parametric line.

Rectangular and circular cross sections can now be created directly.

3D-Modelling

The interactive modelling of the bridge model was enhanced by a new structural member of the type body. Using this, prismatic bodies with an arbitrary cross section can be created between two spatial points or at one spatial point via a certain length. After creating the bodies, they can additionally be oriented in space using various tools like moving or rotating. Moreover, these bodies can be combined using Boolean 3D-operations (see next point).

Boolean Operations

For structural members of the type body (prisms), various Boolean operations were implemented such as unifying two bodies, subtracting one body from another or slicing a body by a plane.

Link Girder

The practicality of link girders was enhanced in a way that it is now possible to also connect a link girder to another link girder.

Measure

The measuring tool for the 3D-model was enhanced, so that it is now possible to use all types of points (such as reference points, docking points, grid points, station points, points of the cross section mesh etc.) for measuring.

External tendons

External tendons, which already could be modelled, are now also considered in the static calculation.

Nonlinear temperature load

It is now possible to also define and calculate a nonlinear temperature gradient on the cross section.

Modal analysis

A new calculation task is available for changing the stiffness for certain structural elements within the calculation of eigenmodes.

National Annexes

The design and checks according to Eurocode are now available according to the national annexes for Germany (DIN EN), France (NF EN) and Spain (UNE EN).

Fatigue Check

A new task for the fatigue check according to Eurocode based on the damage accumulation method was added to the list of check functions.

Reports

A new report giving an overview of all calculation assumptions is automatically created when performing checks.

2D-Diagrams

All results of the static calculation can now be visualized by means of freely definable 2D-diagrams.

Data transfer to Allplan

When using custom trees, the assignment of particular structural members to respective drawing files can now be managed.

Convert to MIDAS

The analysis model in Allplan Bridge can now be converted to a MIDAS-file (*.mct) via Bimplus.

Project Examples

The project library was enhanced by a couple of examples.

Allplan 2022-1-6, September 2022

Minor changes and fixes

Axes

The partial import of axis was added.

Allplan 2022-1-5, August 2022

Minor changes and fixes

Allplan 2022-1-4, July 2022

Minor changes and fixes

Allplan 2022-1-3, June 2022

Minor changes and fixes

Allplan 2022-1-2, May 2022

Minor changes and fixes

Allplan 2022-1-1, April 2022

Minor changes and fixes

Allplan 2022-1-0, April 2022

Minor changes and fixes

Allplan 2022-0-7, March 2022

Minor changes and fixes

Allplan 2022-0-6, February 2022

Minor changes and fixes

Allplan 2022-0-4, January 2022

License

Fixed license issue with perpetual desktop licenses, which caused that Allplan Bridge didn't start anymore. Time limited and network licenses are working properly.

Allplan 2022-0-3, December 2021

Bimplus

Transfer of bridge analysis model to Bimplus:
- Material assignment available by GUID of catalogue material if applicable.
- Pre-stress geometry (tendons) will be exported to Bimplus for viewing and further processing.

Axes

Stabilization of axis profile calculation (numerically critical situations caused by importing foreign axis profile data are solved).

Allplan 2022-0-2, November 2021

Minor changes and fixes

Allplan 2022-0-1, October 2021

PythonParts

In Allplan, there is now available a library for bridge specific PyhtonParts which can directly be accessed from within Allplan Bridge after copying them to the project library.

Allplan 2022-0-0, October 2021

General

Due to the additional implementations the user interface was enhanced and improved in various areas, e.g.: edit function "Drag & Fill", highlighting of the structural member selected in the navigation tree in the 3D model, visualisation of PythonParts referenced from Allplan in the 3D model and many more.

Undo/Redo Function

A comprehensive undo/redo function comprising all menus was implemented, where also intermediary recalculations are considered.

Axes

The **Bloss spiral** was added as a new axis element in the plan view.

A new type "**accompanying axis**" was implemented which is used to define a concurrent axis along a main axis in a certain constant or variable distance in the plan view and in the profile.

3D Modelling

The interactive modelling of the bridge model was extensively enhanced with various functions:

Piers

The modelling of piers was comprehensively enhanced by numerous possibilities of definition. Thus, now you can position piers directly relative to one or two axes or between an axis and a reference point (e.g., pier between the terrain (axis 1) and superstructure (axis 2)).

Link girder

A new structural member of the type "link girder" was implemented which can be placed between two 3D points (reference points or station points on axes). This feature was especially developed for modelling precast girders positioned on an existing substructure.

Plate

A new structural member of the type "plate" was implemented which can be used for Boolean operations (see below). This feature was especially developed for modelling cast in situ slabs on precast girders.

Templates

Structural members of the type "pier" or "link girder" can now be defined as templates and be placed as often as wished as structural members in the 3D model by optionally adapting their geometry in various ways.

Skew / Rotated cross sections

Structural members of the type "girder" and "plate" can be cut at a certain angle by means of a master template at both ends. Further rotated cross sections can be defined within the structural member, whereat the transitions between the rotated and unrotated cross sections are geometrically properly modelled in space.

Booleans / Haunch

A Boolean operation "haunch" was implemented which can be used for cutting haunches defined as boundaries in structural members of the type "girder" or "link girder" (e.g. precast girders) with structural members of the type "plate" (e.g. cast in situ slab) when their positions/geometry change in space ("union").

Copy / Multiple Copy

All newly implemented structural members can interactively be copied. For link girders and piers there also exists a tool for multiply copying the same member to different positions.

Measure

A tool for measuring certain distances between two 3D points (reference points) of the model was implemented.

Stationing – global / local / relative / local-end

The possibility of defining local and global stations was consistently implemented for all structural members. Thus, now for example it is also possible to define piers by a global stationing (absolute heights). Moreover, there are new definition types available, such as a relative stationing related to the length of the member which allows for automatically adapting the pier length when its reference points at top and bottom change.

Variations / Tables

Now it is also possible to define the transition between two defined values via cubic splines.

Custom Trees

All items of the menu "Structural Members" can now freely be organized and arranged using customizable project navigation trees.

IFC 4.3

The standard IFC 4.3 which was enhanced regarding infrastructure and bridges is now available with its new specifications for bridge types (IfcBridge) and bride parts (IfcBridgePart) for various attributions of the bridge model.

TCL-Syntax Highlighting

The syntax-highlighting for TCL project files for Notepad++ was implemented and can be applied in the editor via the program interface.

Code-Based Design according to Eurocode

The check for brittle failure according to chapter 6.1 (109) was implemented as well as the consideration of the detailing rules for reinforcement according to 8.2, 8.10.1.3 and 9. The tasks for the checks ULSCHECK and SLSCHECK were unified into a single task CODECHECK.

Code-Based Design according to AASHTO LRFD 9

The complete code-based design according to the American standard AASHTO LRFD 9 in the strength, service and fatigue limit state was implemented. This includes flexure, brittle failure, shear, torsion, interaction, fatigue, stress limitation, crack control and reinforcement detailing rules. Further, all results are output in respective reports. As a basis for the code-based design the respective types of combinations are now also available in the combination table.

User Interface

The user interface is now also available in Spanish and Romanian.

Allplan 2021-1-9, August 2021

Minor changes and fixes

Allplan 2021-1-7, July 2021

Minor changes and fixes

Allplan 2021-1-5, June 2021

Minor changes and fixes

Allplan 2021-1-4, June 2021

Minor changes and fixes

Allplan 2021-1-2, May 2021

PythonParts

The import or update of the bridge model in Allplan failed, if a PythonPart was used in several structural members.

Tendons

In some cases, the constraints α-u and α-v for tendon points were swapped when both were given.

Beam elements

Occasionally, in the analytical model beam elements of piers with a non-vertical beam axis were additionally rotated.

Other minor changes and fixes

Allplan 2021-1-1, May 2021

Minor changes and fixes

Allplan 2021-1, April 2021

General

Due to the additional implementations the user interface was enhanced in the task cross section.

Cross section -> Placements

The functionalities of Placements (formerly Smart Placements) were extensively enhanced.

In addition to objects of type Smart Symbol (*.nmk) now also PyhtonParts (*.pyp) can be used as placements. Moreover, now there is the possibility to define the alignment of the objects in advance in Allplan Bridge. Further, the parameters of the PythonPart objects can directly be edited in Allplan Bridge and optionally be defined by variables.

Several small corrections and improvements in various areas

Allplan 2021-0-6, February 2021

Minor changes and fixes

Allplan 2021-0-5, February 2021

Minor changes and fixes

Allplan 2021-0-4, January 2021

Minor changes and fixes

Allplan 2021-0-3, December 2020

Minor changes and fixes

Allplan 2021-0-1, November 2020

Minor changes and fixes

Allplan 2021-0-0, October 2020

General

Due to the additional implementations the user interface was enhanced and improved in various areas.

3D Modelling

A new tab in the action bar with various tools for the interactive modelling of the geometric and static model was added. For a quick access, this bar comprises the tools for creating the 3D model, which are originally called up by the various menus in the project navigation tree. The functionalities of some of these tools were enhanced. Further, additional tools were added, such as inserting/moving a series of stations and the interactive view of the cross sections along a structural member.

Tendons

It is now possible to input an eccentricity in longitudinal direction when defining tendon points.

The output of a report for tendons was implemented. This comprises the tendon geometry by means of eccentricities to arbitrary user-defined reference points, as well as the forces and elongations of the tendons due to the defined tendon stressing.

Dynamic Earthquake Calculation

The dynamic earthquake calculation based on the multi-mode response spectrum method was implemented. To evaluate the effects of a seismic loading, response spectra can be defined, eigenmodes can be calculated and finally, the response spectra can be evaluated.

Calculation of Eigenvalues

The calculation of eigenvalues for evaluating the natural frequencies and eigenmodes for the dynamic earthquake calculation was implemented.

Evaluation of Response Spectrum

The evaluation of the response spectrum based on the calculated eigenmodes was implemented.

Combination Table

A clear tabular input for defining the load combinations was implemented. In this table load cases and envelopes can be superposed with their favourable and unfavourable factors and the respective superposition rules in various load combinations, which finally can be used for performing the design code checks.

Code-based design

The design code checks for ULS and SLS were enhanced and completed. This includes the design and checks due to shear, torsion, and interaction, as well as the design and checks for crack width limitation and the stress checks.

Camber calculation

The required pre-camber of the structure for all calculated construction phases can now be calculated and output in an Excel sheet.

Material and time-dependent effects

The material and time-dependent effects (creep, shrinkage, relaxation) are now also available for the American, Chinese, and Korean standard.

Allplan 2020-1-6, September 2020

Minor changes and fixes

Allplan 2020-1-5, August 2020

Minor changes and fixes

Allplan 2020-1-4, July 2020

Structural Members

It is now possible to correctly copy station tables of structural members (e.g. main girder) from an Excel-table also when using imperial units.

Allplan 2020-1-3, June 2020

Improvements and Fixes

The stability of the menu Superposition was improved: In certain cases, the product was not able to open the superposition view.

The compatibility for the cross-section calculation was extended: Cross-section properties for certain cross-sections created in the version 2019 and imported in the version 2020 were not able to be calculated.

The data transfer between Allplan Bridge and Allplan Engineering for tendons created by 3D tangents intersection points was improved.

Further smaller improvements

Allplan 2020-1-1, May 2020

Languages

Completion of Russian and Chinese language support for GUI, F1-Help and Documentation.

Allplan 2020-1-0, April 2020

General

Due to the additional implementations the user interface was enhanced.

Traffic Loads

A new task area for interactively and graphically defining traffic lanes based on the user-defined structure / cross-section (in 2D or 3D) was provided. Further, you can automatically create the lanes according to standard.

A new task area for defining load trains and for loading predefined load trains according to standard was provided.

A new tab was added in the menu Superpositions for performing an interactive, schematic evaluation and superposition of traffic loads (of the defined load trains and lanes).

A new calculation option for automatically calculating the influence lines of defined traffic load superpositions was added.

Design Code Checks

A new task area for performing various design code checks was provided including the following tasks:

ULSDESIGN: Perform the reinforcement design for the ULS for bending + normal force

ULSCHECK: Perform the check in the ULS for bending + normal force

LINSTRESS: Perform a linear normal stress check in the SLS

Respective new tasks for creating design reports (incl. graphical illustrations) in MS-Word format for each of the mentioned checks above are provided (i.e., DESIGNREPORT, CHECKREPORT, LINSTRESSREPORT).

Construction

A new task REMOVAL was implemented for deactivating temporary structural elements (such as auxiliary supports), which automatically calculates the redistribution of forces on the remaining static system.

A new task LOADREF was implemented for considering moving loads during the construction (e.g. form traveller) by referencing existing load cases without having to define them again.

Results

New tabs and task areas were added for displaying the results of influence lines and design code checks.

A new tab was added to graphically display the load definitions of defined load cases (load visualisation).

Material

A dialogue for selectively importing material from the Bimplus database was provided.

Cross sections

A new tool for drawing a parametric line parallel between two other lines with its position defined by a relative factor was implemented.

Tendons

A new method for defining tendons by tangent intersection points plus radius was developed.

Analysis

The calculation of creep, shrinkage, and relaxation according to AASHTO LRFD was implemented.

View Options

Within the view of the 3D-model additional options are available for displaying only certain parts of the structure which can interactively be defined by the user by using the "isolation box" or the "hide objects" functionalities.

Bimplus

The analysis model can now be uploaded to Bimplus to exchange it with other connected applications.

Examples

The example Getting Started and the corresponding document was revised and enhanced regarding the new functionalities.

Languages

General Availability of Russian and Chinese GUI language. Partially support of F1-Help and Documentation.

Allplan 2020-0-0, October 2019

General

Due to the additional implementations the user interface was enhanced.

Material

The connection to a material catalogue via Bimplus was established. There are several different types of material according to Eurocode at hand, such as concrete, reinforcement steel, pre-stressing steel etc. including all parameters required for static analysis.

Tendons

In Allplan Engineering you can now create drawings of tendons (developed view) from the tendons defined in the model in Allplan Bridge.

Remark: The assignment of the tendons (geometrically freely defined in space) to the beam elements for the static calculation is automatically done in consideration of the respective eccentricities.

New calculation option „Create analysis model"

The automatic generation of the analysis model from the geometrical model was implemented. This includes calculating the cross sections, creating the beam elements, assigning materials etc. By a further calculation option "Auto-Numbering" an automatic numbering of all generated beam elements and tendons is performed.

New calculation option "Autogenerate calculation tasks"

All calculation actions required for the static calculation are generated fully automatically from the defined tasks of the construction phases (i.e., activation of elements, load cases such as self-weight, prestress and creep and shrinkage).

New calculation option „Structural analysis"

A global static analysis based on the Bernoulli beam theory is performed for all automatically and manually generated calculation tasks defined previously in the construction phases. The analysis is enhanced to accurately consider the cross-section variation. Furthermore, the nonlinear calculation of time dependent effects is performed, considering design code formulas (Eurocode).

Construction

The calculation task LOADCASE with assigned load types was implemented to define all kinds of additional loads (such as temperature, wind etc.).

Additional calculation tasks for the manual input of the calculation actions were added.

Cross sections (Superimposed dead load)

A new structural unit of type load was implemented to automatically retrieve the weight and the position of superimposed dead loads (such as roadway, curbs etc.) from the geometrical definitions of the cross section.

Superpositions

In the navigation window a new submenu in the menu Analysis was added for performing an interactive, schematic superposition of load cases in envelopes.

Results

A new main menu was added to the navigation tree as well as a new tab in the action bar for the graphical and tabular display of load case results.

Examples

The example Getting Started and the corresponding document was revised and enhanced regarding the new functionalities.

Allplan 2019-1, April 2019: latest Update Allplan 2019-1-0

General

Due to the additional implementations the user interface was enhanced and reorganised.

Cross section

The tool 'external boundaries' was added. When you define cross sections, this tool allows you to include arbitrary boundaries of other already defined cross sections and to copy and arrange them in an easy manner. One practical example would be the modelling of longitudinal stiffeners in steel cross sections along the inner perimeter.

In the Property window a new option for assigning a thickness to a boundary for an easier definition of thin-walled cross sections was added.

A new option 'Auto extrusion' for boundaries for an automatic intersection with other boundaries was added.

Two additional drawing tools for parametric lines were added: 'Parallel line by direction' (the distance can be measured in an arbitrary direction (e.g., vertically), 'Line by relative angle' (angle relative to an arbitrary line).

When drawing parametric lines by angle you can now input the angle also in percent (e.g., for defining the crossfall of the cross section).

A new variable of the type 'Angle in percent' was added, so that you can now define the table to be assigned also in percent.

Constructions

A new task for defining the construction phases was added. This allows you to define and graphically simulate the construction phases of the bridge including all detailed work steps / tasks and present them in a Gantt chart (bar chart of the construction). When exporting the geometrical model to ALLPLAN the information of the defined construction phases is considered by means of separate 3D solids.

Materials

A new menu 'Materials' was added to the Project Navigation where you can define standards, materials, and material values. A connection to a database is scheduled for the version 2020-0, autumn 2019.

Structural members

An option for copying piers was added.

Bimplus

You can now import axis in LandXML format in Bimplus. These axes you can import in Allplan Bridge.

View options

In the View window of the 3D model you can now set numerous options for drawing the particular objects via the Property window.

Layer

The functionalities of Layers were enhanced by further object types of the cross section.

Examples

Three new examples were added to the program library: Reinforced plate with two circular voids, Wildlife crossing, Steel-concrete composite bridge with stiffeners

Analysis: Cross sections (Technical preview)

Calculation of the cross-section properties of the cross sections defined in the project and graphical presentation of the shear stress distribution of the cross section and in arbitrary cuts of the cross section.

Allplan 2019-0, October 2018: latest Update/Hotfix Allplan 2019-0-5

Tendons

The modelling of parametric tendons was implemented.

The definition of tendon stressing and the calculation of the prestressing losses were implemented.

Cross section

The parametric modelling was extended from Allplan Bridge to Allplan by the 'Smart placements', which you can use to reference objects of the project library in Allplan.

You can now copy cross sections.

You can now import and export cross sections.

A new tool for measuring distances between parametric lines and points was added.

A new tool for defining point grids was added, which you can use to easily define the positions of the tendons within the cross section.

Layer

The functionalities of Layers were implemented for parametric lines in the cross-section definition

Variations

You can now copy tables and formulas.

Axis / Variations / Variables

A calculation function for automatically evaluating the distance between two axes was implemented. With this you can e.g., automatically consider a variable cross section width by defining a secondary axis.

Allplan 2018-1, April 2018: latest Update/Hotfix Allplan 2018-1-5

General

First version featuring the complete modelling of the parametric bridge model

Axes

Creating parametric axes in 3D (by defining plan and elevation)

Cross sections

Constructing parametric cross sections with user-defined variables and arbitrary geometry

Structural members

Setting up a parametric 3D model created by combining axes and cross sections

Variations

Definition of the variation of cross section dimensions by tables and formulas

ALLPLAN

Full-featured data import in Allplan