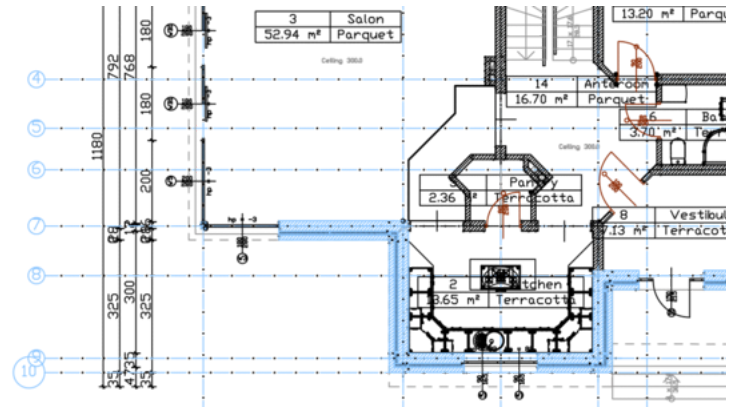


## ArCADia ARCHITECTURE

New approach to CAD drawing.

Object drawing, rapid creation of architectural documentation.



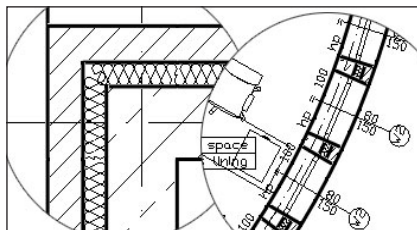
Intended for architects and all who shape and create building forms.

ArCADia-ARCHITECTURE contains specialized architectural functions and options to accelerate the creation of documentation, including: automatic cross-sections, automatic dimensioning or lists creation. Thanks to the BIM technology used, the designer creating the architectural design automatically receives a digital model of the building. Because to that, the design process can be controlled on the interactive 3D preview at all times.

ArCADia-ARCHITECTURE is a module that expands the capabilities of the ArCADia BIM program with advanced architectural functions, which means that part of the building modelling options are in the basic version of the program:

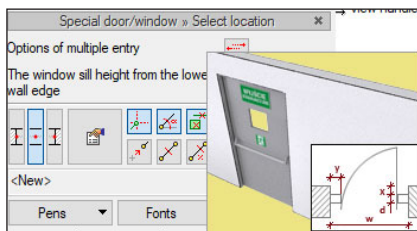
**ArCADia LT, ArCADia, ArCADia PLUS**

Advanced features of the ArCADia-ARCHITECTURE module:



### WALLS

- The insertion of arch, single- and multi-layer walls.
- The possibility to transform a 2D drawing created from polylines or lines into the plan of single- or multi-layer walls, virtual walls or a foundation plan.

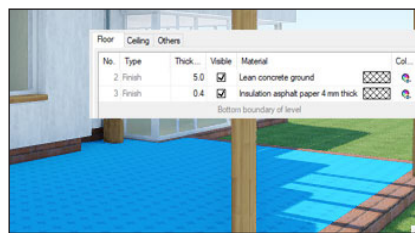


### SCRIPT WINDOWS AND DOORS

- The insertion of windows of various shapes (circular, triangular, with an arch, etc.), including the possibility of setting horizontal and vertical divisions and defining the visibility of windowsills or cutting the opening itself in a wall in the shape of a special window.
- The insertion of single and double arched doors, including additional side or top lighting, revolving, sliding, swinging, and evacuation doors/emergency exit doors

### WALL OPENINGS

- The insertion of an opening of a set width and height in a wall from the left and right side (insertion at any height).
- The possibility to insert a recess of a predetermined depth.

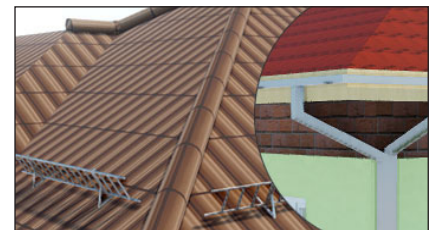


### FLOORS/CEILINGS

- The insertion of any floor/ceiling by indicating its shape.
- Entering openings in the ceiling automatically or by hand.
- The insertion of a floor on the ground in rooms of the lowest level.

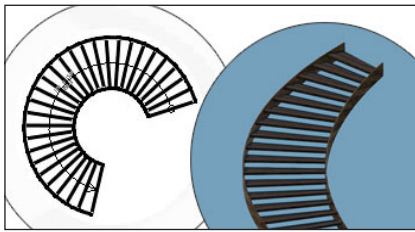
### SUSPENDED CEILINGS

- The insertion of suspended ceilings of any shape or an automatically adapting one to a given room. The ceiling can be finished with a board or consist of a set of modules determined by the beam and panel spacing placed between them.
- The insertion of any suspended ceiling with individual elements: main and cross beams, external rack and opening finishing, panels and hangers.



### ROOFS

- Inserting multispan roofs with full editing capabilities (changes to pitched or monopitched roofs, changes in knee wall height and inclination for each roof slope separately).
- The insertion of windows and openings in the roof.
- The insertion of dormer roofs (dormer windows).
- The insertion of a timber structure from the R3D3-Frame 3D program (roof slopes exported to R3D3-Frame 3D are structurally calculated, while the roof framework is returned to ArCADia-ARCHITECTURE).
- The insertion of roof hatches.
- Automatic or manual insertion of roof gutters.
- The insertion of drain pipes which automatically detect the gutter and the level of the terrain.
- Automatic or manual insertion of ridge tiles.
- The insertion of chimney cowl, ventilation cowl and fume cowl.
- The insertion of snow guards: snow fences, snow crushers and stoppers.
- The possibility to define the type of a roof before inserting.
- The possibility to insert a solar collector on the roof.



## STAIRS

- The creation of a spiral staircase inserted with or without a construction pillar.
- The insertion of single ramps or ramps with a landing and spot footing together with monolithic columns.

## BALUSTRADES

- The insertion of balustrades on terraces and stairs by drawing them in on the view.
- Automatic insertion of the balustrade on the stairs.

## BAR ELEMENTS

- The insertion of vertical and inclined steel columns.
- The insertion of a horizontal steel object.
- The insertion of a bar frame from a .f3d file, which is seen as one element but can be exploded and viewed as a single bar element (to be moved and edited separately).
- The multi-insertion of bar elements with defined quantity, spacing and the direction of insertion.

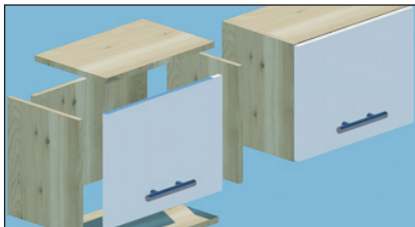
## FOUNDATIONS

- The insertion of a strip footing or any spot footing
- Default strip footing is inserted along with the walls, and spot footing together with monolithic columns.



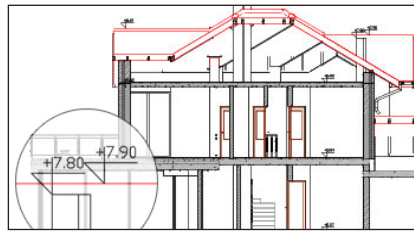
## SUN EXPOSURE AND SHADING

- Possibility to create a report on the length of the sun exposure time of all or selected rooms in the building.
- Possibility to show the shading of buildings by creating a film made with any camera from the list, showing the transition of the shadow on a designated day or days.



## SOLID

- Drawing any shape of a solid with a set height. The solid can be further used as a terrace, platform, mezzanine, and similar elements.
- The insertion of a solid of a specified width and height, e.g. as binding joists and beams, including the possibility to select an insertion axis or edge.
- Solids are inserted by a rectangular outline.
- Edition of solids by dividing them and creating any openings.



## CROSS-SECTION

- The automatic creation of a cross-section by indicating the cut line of a building, including the possibility to define elements visible in the cross-section.
- Defining a stepped cross-section with any number of folds.
- The automatic insertion of ring beams, locating them above the load-carrying layer of a wall (with set types of wall layers) in the floor void.
- Lintels visible in the cross-section are automatically inserted with the window and door joinery.
- The cross-section can be automatically or manually refreshed to accelerate the work on the design.
- Views can be exploded, maintaining element groups and support for the Project Manager.
- The possibility of showing a cross-section of 3D objects. The option is turned off by default, which can be changed from the Project Manager window after switching on the light bulb.

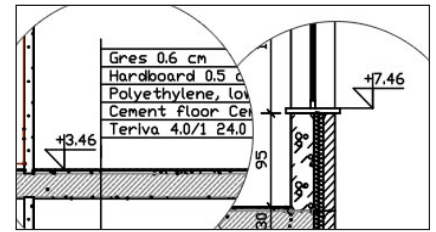


## RENDERING

- Defining materials for each element in its properties.
- Simple (fast and easy to use) or advanced rendering, including the possibility to define all necessary settings (lighting type and position, shadow softening, etc.).
- The new rendering method for outdoors and indoors (Photon mapping).
- The possibility of rendering in different views: daylight and night-time views.
- The rendering window is independent of the ArcADia-ARCHITECTURE program, which makes it possible to continue working on a design, as the visualisation is calculated.
- Multi-rendering, which is recording the views from predefined cameras.
- Saving of the building view with rendering as a single scene or from selected cameras as defined in the program.
- The ability to turn off the computer after a multi-record of rendering from the cameras introduced into the design.
- Daylight analysis with a date and time setting, thereby rendering a scene on the days that interest us.

## COMMUNICATION WITH OTHER SYSTEMS

- Object-oriented data exchange with the ArCon program (two-directional transfer of the whole building together with 3D objects from the ArCon program and saving them to the ArcADia program library).
- Export of the design underlay to R3D3-Rama 3D, the possibility to transfer all the roofs of the design at the same time with all the modular axes joined in one grid.
- Import of the structure frame from R3D3-Rama 3D from a f3d file.
- Export of the project (with all materials and textures) to the OBJ format.



## DESCRIBING ITEMS

### DIMENSIONING

- The automatic dimensioning of the entire floor plan by selecting dimensioning lines (total external, external for protruding elements, rooms and walls, windows and frames, as well as openings).
- The assignment of dimensioning to objects, which enables automatic modification after each edit.
  - The angular and radial dimensioning of walls.
  - Dimensioning that indicates arch wall lengths.
  - The possibility to insert a spot height in the floor plan and cross-section.
  - The possibility to insert an element description (roof, floor, wall) both in the plan and cross-section. Full modification of the elements of the list, adding and subtracting materials and changes to the existing materials.
  - Automatic description of the structure of the roof truss, element numbering with the cross-sectional size and length of the element shown.

I	User profile 300x400	33	14
*	User profile 100x100	34	34
I	User profile 300x400	35	14
I	User profile 220x600	36	8
I	User profile 220x600	37	4
*	User profile 22x22	38	8
*	User profile 100x100	39	4
*	User profile 100x100	40	4
z	User profile 200x200	41	8
z	User profile 200x200	42	4
*	User profile 100x100	43	4

### LISTS

- Automatically created lists of timber from the roof construction inserted in the R3D3-Rama 3D program.
- Area and cubic capacity count. The List automatically adds up the surfaces of: gross covered area, net and gross storey and building surfaces, as well as the cubic volume. The lists also include: the minimum plot area and roof data: inclination and ridge height.
- The list of roof surfaces, in which the lengths of eaves, corners, roof valleys, ridges and roof edges will also be included, apart from the roof outlay and calculations of the size and inclination of the roof slopes.
- Automatic list of roof accessories: lengths of gutters, ridge tiles and drainpipes, the number of caps and connectors for pipes and ridge tiles, as well as the number of chimney cowls and snow guards. The possibility to choose which elements are to be shown in the list.
- List of roof materials.
- The list of materials used in the design of ArcADia BIM system objects. A count of the number of pieces, e.g. bricks, with the possibility of selecting packaging (pallets, packages, rolls), the ability to select the elements for which the list is inserted. Export of a single table of a list or several ones at the same time in a single file.
- An inserted bar elements list, both the ones defined in the design, and those imported from the R3D3-Rama 3D program.
- Lists of suspended ceiling elements, separately for the rack, panels and hangers.

### WIND ROSE

- The possibility to insert the symbol and the direction of the north arrow onto the ground level projection.
- The wind rose depends on the sun analysis, the coordinates of the project location are given or the city is indicated on the list, thanks to which rendering is calculated in the indicated location and time data..