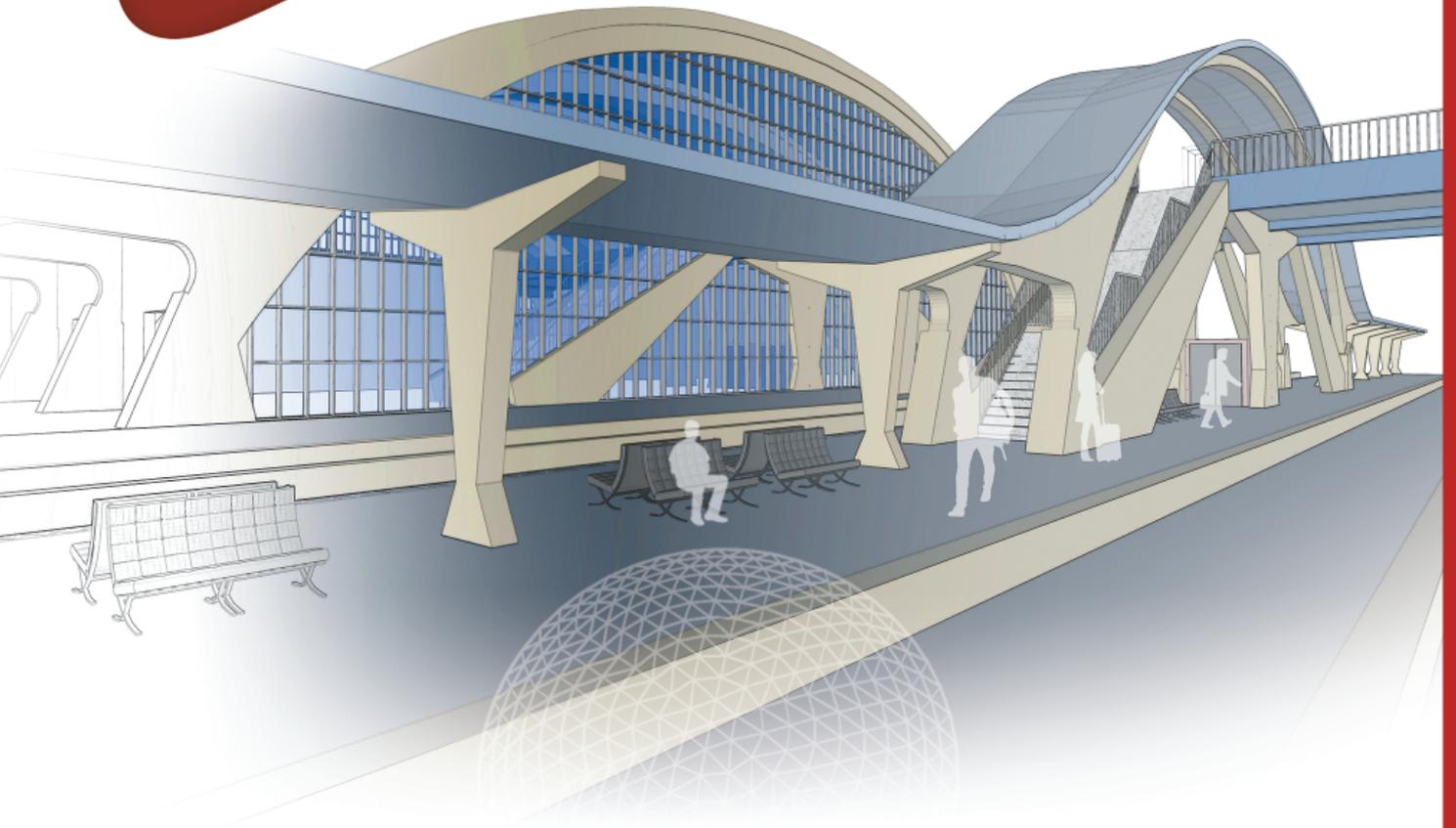
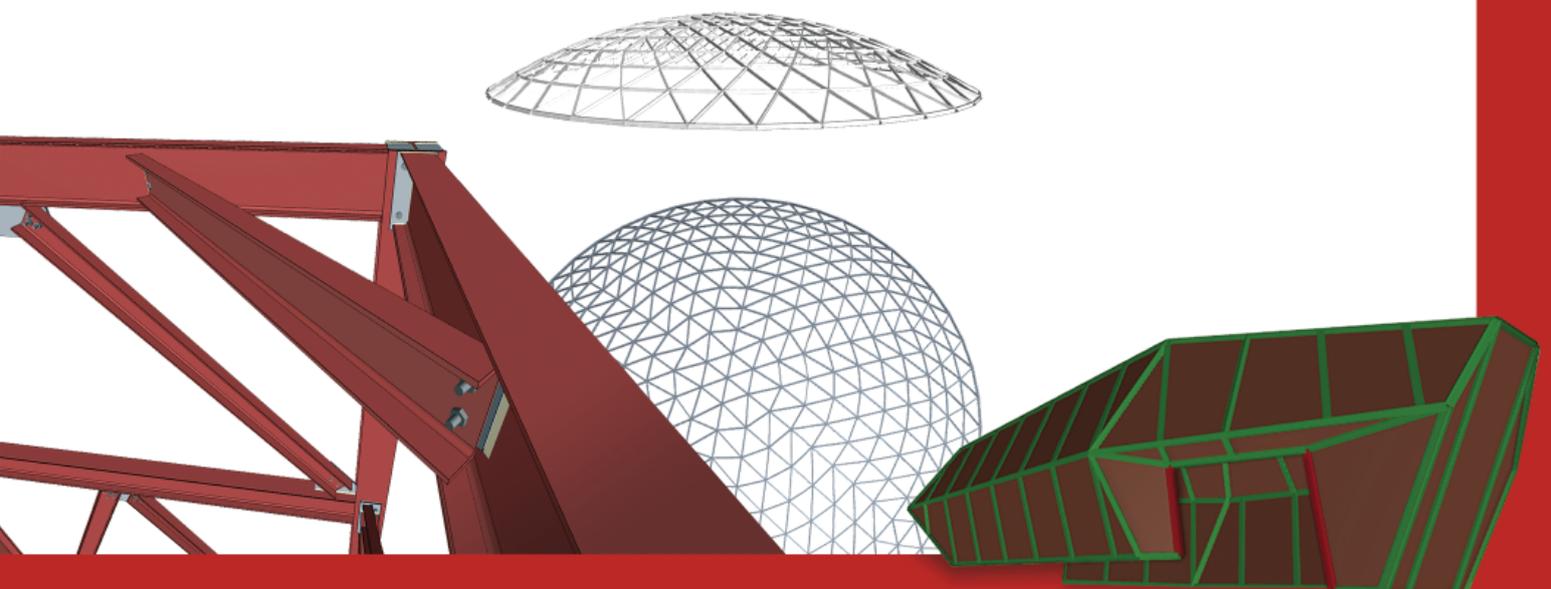




[www.cype.com](http://www.cype.com) 



## Software for **Architecture**, **Engineering** and **Construction**



# What is CYPE?

**CYPE develops and distributes technical software for Architecture, Engineering and Construction professionals.**

CYPE's journey began in 1983 with an intense activity in the field of engineering and structural analysis, which motivated the computer development of applications to cover its own needs and those of its clients. The success of these programs led the company to concentrate its activity in the development, commercialisation and distribution of technical software.

As a result of this work, CYPE occupies a leading position within the sector, offering a variety of programs that stand out due to the wide range of casuistry that is dealt with, the reliability of the results and the ease with which they can be managed.

**120.000 users** throughout Europe, Latin America, Africa, Oceania and Asia have already acquired over **520.000 programs**. Amongst our clients are town councils and ministries, as well as technical control organisations, universities and professional offices.

## Software within everyone's reach

**Program development** begins with analysing professional needs and the reality of the sector; then continues with the productive process, which incorporates the direct contact experience with users and the most innovative software technology.

**Highly reliable analyses** are guaranteed; precise check reports are provided with the added security that these analyses are updated to the latest **national and international design codes**.

## Specialised technical service

The team of qualified experts that make up the Technical support department guarantees the software is implemented and adequately performs within our clients' professional environment, resolving their queries in an agile and efficient manner.

Moreover, CYPE also offers **exclusive customer and post-sales services** to our clients to respond to orders, claims, deliveries and courses.

## Courses and training

We offer **quality and up-to-date training and courses** of CYPE programs in the national and international scene so users can make the best use of our products.

## Active participation

By **collaborating** with the most important professional studios, technical control organisms and construction companies, with the added suggestions from our users, we are constantly up-to-date on new work methods to then **update our programs** periodically and effectively.

We also participate in projects with associations of renown prestige such as the Instituto Eduardo Torroja, Asociación Científico-Técnica del Hormigón Estructural (ACHE), Tecnalia, Centre Scientifique et Technique du Bâtiment (CSTB-France), Comitato Termotecnico Italiano (CTI), Agência para a energia (ADENE-Portugal), Agence Nationale pour le Développement des Energies Renouvelables et de l'Efficacité Energétique (ADEREE-Morocco), BuildingSmart Spanish Chapter (as founding member), Green Building Council de España, (GBCe), Instituto Español del Cemento y sus Aplicaciones (IECA), Cámara Peruana de la Construcción (CAPECO), Builders' Association of India (BAI), EDIBATEC (France), Arquitectos Sin Fronteras, Plataforma Tecnológica de la Construcción (PTEC), UPONOR and REPSOL.

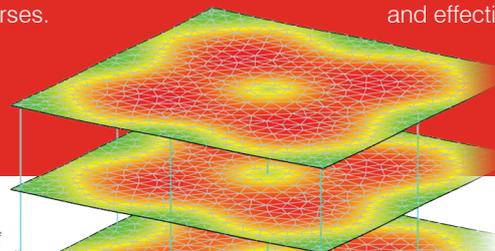
## R+D+I Projects

Our vision of the future and the objective analysis of the situation of the sector are two factors which lead us to participate in diverse **R+D+I projects**, several of which are financed by the Centre for the Development of Industrial Technology (CDTI) and by the European Regional Development Fund (ERDF).

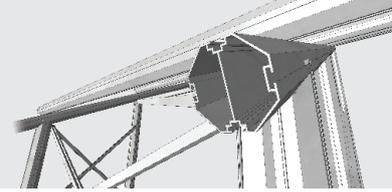
Since we began our journey, we have acquired great experience in the development of European and national investigation projects, and have created quality performance tools, especially aimed at professionals.

## To Summarise, CYPE is...

A **leading firm**, composed of a team of over **140 professionals**, which believes specialisation and integration are the best formulae for its development within the professional field, by providing agile and effective services to its clients.

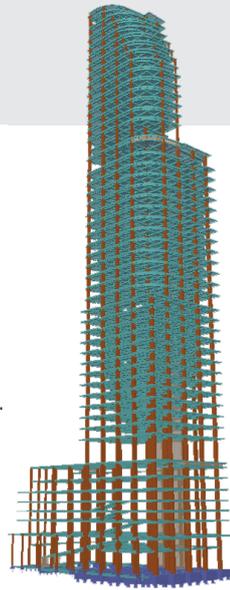


# Structures

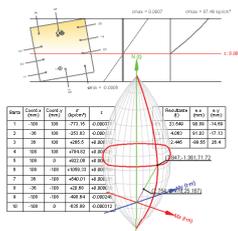
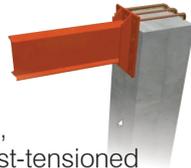


## CYPECAD

Analysis and design of reinforced concrete and steel structures, exposed to horizontal and vertical loads. For buildings and civil works.



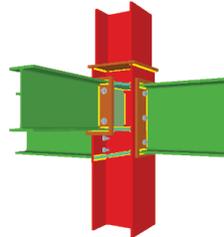
- **Foundations** consisting of pad footings, combined footings, piles with their corresponding pile caps, mat foundations and foundation beams.
- **Vertical supports** composed of reinforced concrete columns, steel columns, reinforced concrete walls and shear walls, and masonry walls.
- **Beams:** reinforced concrete, steel and composite.
- **Floor slabs:** slabs (joist floor, waffle, flat, hollow core, composite) and post-tensioned slabs (concrete, waffle, joist floor) for buildings.
- **Analysis of the results** with graphics and detailed U.L.S. reports.
- **Design and edition** of all the reinforced concrete and steel structural elements. Seismic analysis with capacity design criteria and interaction of the structure with the construction elements.
- **Joints:** design of welded and bolted connections of rolled and welded steel I sections and hollow sections.
- **Drawings** containing the geometry and reinforcement of the structural elements.
- **Reports:** complete with all the data, analysis results, reinforcements, and takeoff of the materials and formwork.
- **Design Codes** national and international.
- Integration with **CYPE 3D**.
- Import/export using **IFC 2X3, IFC4** format files (CAD/BIM models).



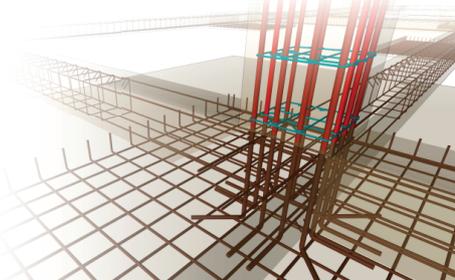
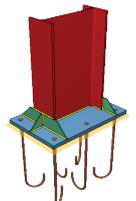
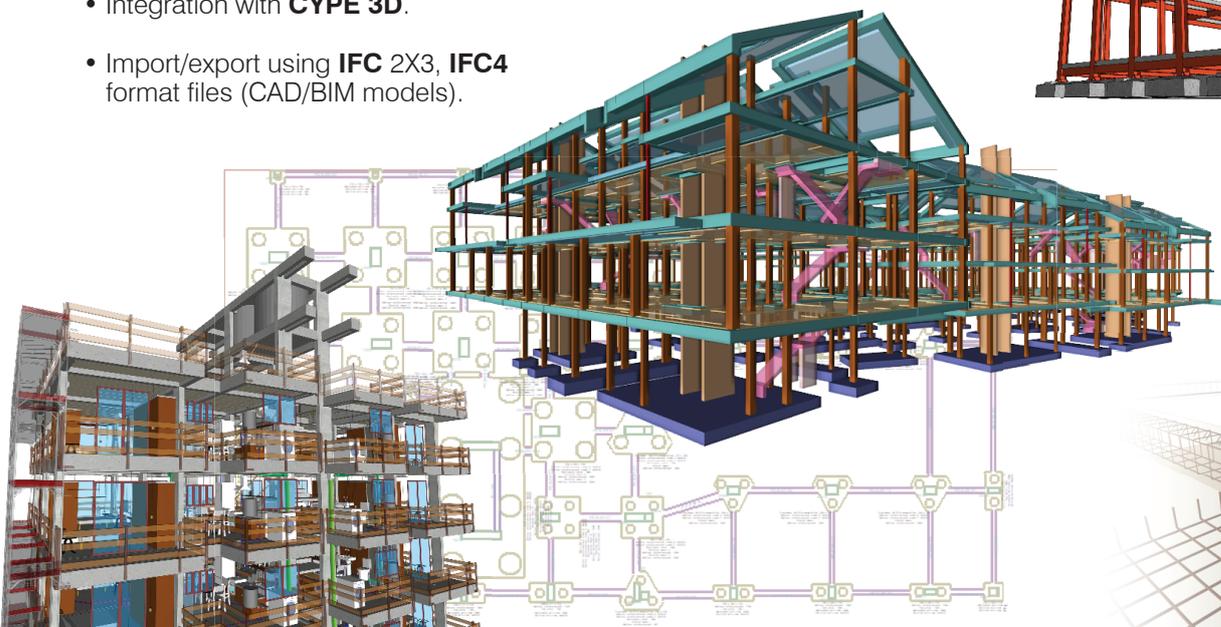
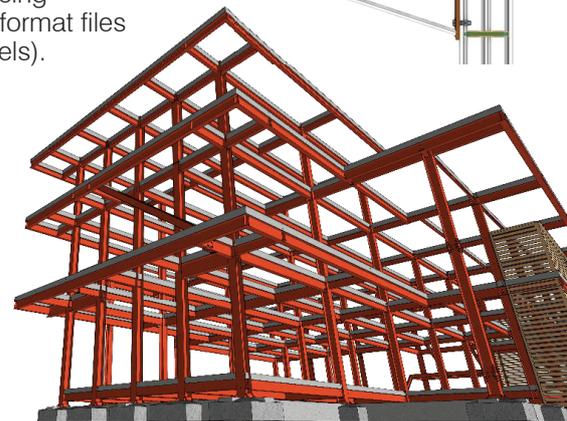
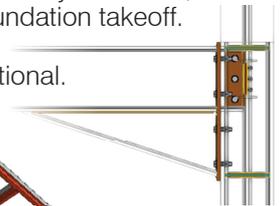
## CYPE 3D

Analysis and design of three dimensional steel, aluminium and timber bars (including foundation), exposed to horizontal and vertical loads.

The program also carries out the analysis of bars composed of any material.



- **Foundations** consisting of pad footings, combined footings, piles with their corresponding pile caps and baseplates.
- **Shells:** flat two-dimensional polygonal elements whose properties can be defined.
- **Analysis of the results** with graphics and detailed U.L.S. reports for steel, aluminium and timber bars.
- **Design and edition** of steel, aluminium and timber bars, and the foundations.
- **Joints:** design of welded and bolted connections of rolled and welded steel I sections and hollow sections.
- **Drawings:** precise and with detailing of the joints.
- **Reports:** complete with all the data, analysis results, and steel, aluminium, timber and foundation takeoff.
- **Design Codes** national and international.
- Import/export using **IFC 2X3, IFC4** format files (CAD/BIM models).



## Embedded retaining walls

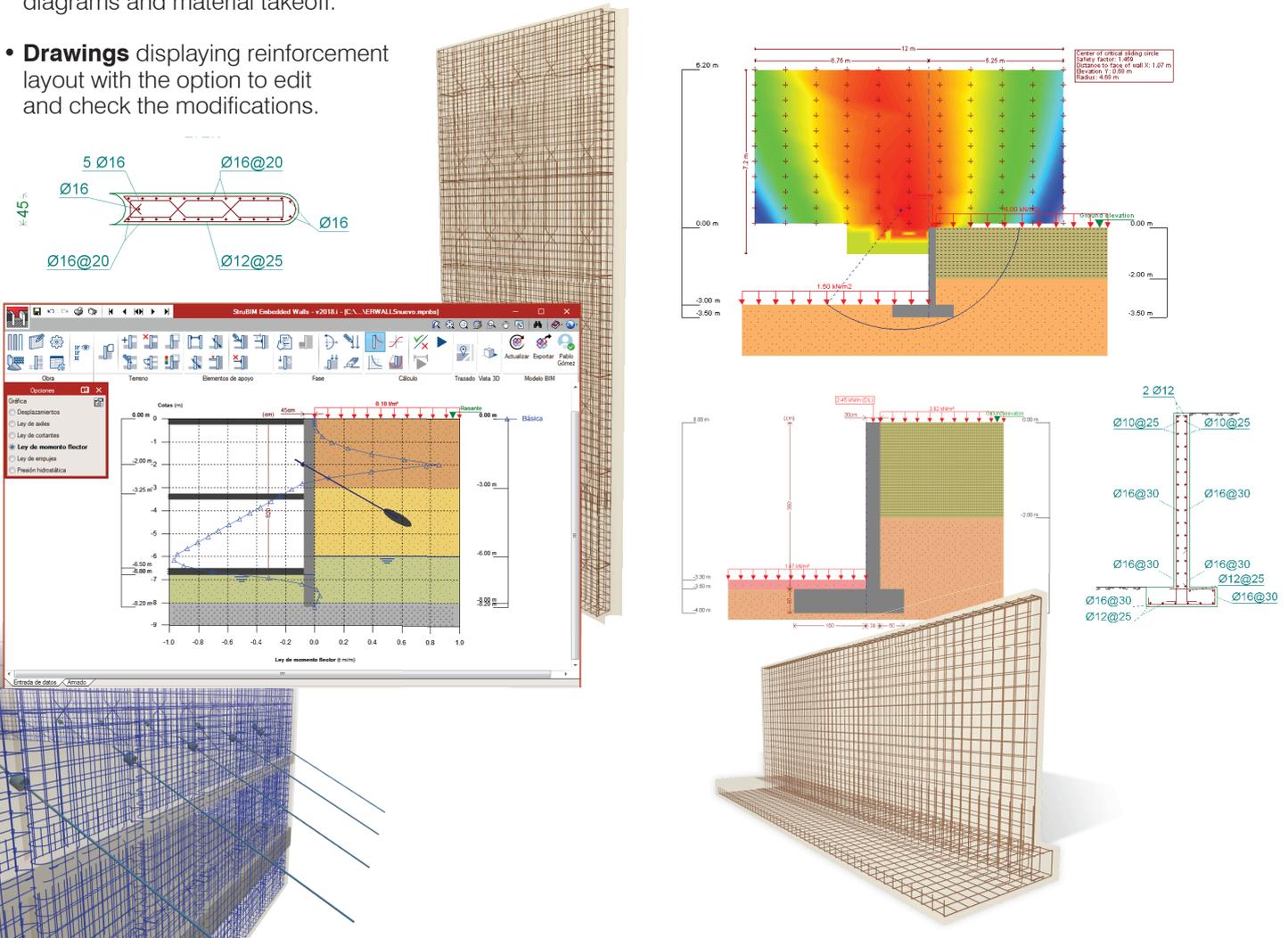
Analysis, design and check of retaining walls composed or reinforced concrete, concrete in-situ piles, steel sheet piles and mini pile screens.

- Possibility of defining different **soil layers**, berms at the infill and excavations at the backfill by phases.
- Active and passive **anchors**, struts, slabs, etc.
- **Floor slabs** at different levels.
- Option to consider **seismic action**.
- **Non-linear analysis**, considering elastoplastic behaviour for the soil and support elements.
- **Global stability analysis**. Ratio between the balancing moment of the passive pressure at the infill; safety factor of the passive pressure at the infill; and worst case slip circle.
- **Design** for the different construction phases.
- **Reports**: data, drawings of the construction phases, design results, force and deformation diagrams and material takeoff.
- **Drawings** displaying reinforcement layout with the option to edit and check the modifications.

## Reinforced concrete cantilever walls

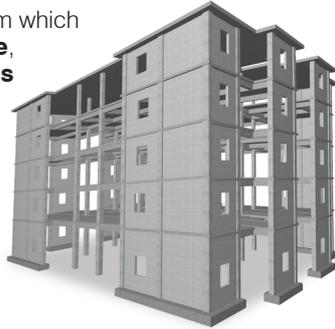
Analysis and design of reinforced concrete walls for soil retention and its corresponding foundation (footing or pile cap with piles).

- Possibility of defining different **soil layers**.
- Automatic **pre-design** of the geometry of the wall and the foundation.
- **Design** of the elevation reinforcement and foundation of the wall.
- **Phase analysis** and consideration of **seismic action**.
- **Global stability analysis** (turning, sliding and worst case slip circles).
- **Reports**: data, analysis results and material takeoff.
- **Drawing of the phases** and force diagrams and deformations for each phase.
- **Drawings** displaying reinforcement layout with the option to edit and check the modifications.

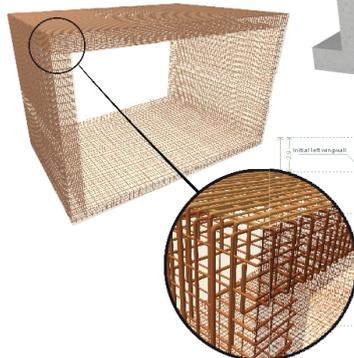
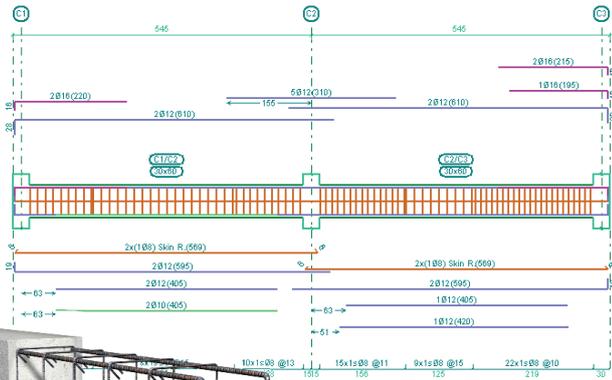


# Continuous beams

Continuous beams is a program which has been conceived to **analyse, design and check continuous beam** alignments of frames made out of concrete and rolled, welded and cold-formed steel (with various floor slab arrangements) based on the introduced geometry of the alignment and loadcase of the acting forces. The program offers:

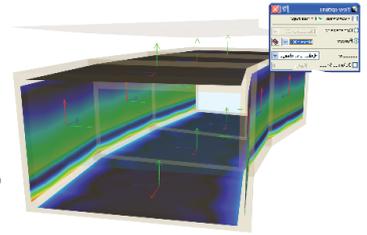


- **Data introduction assistant** and complete editor for the data that has been introduced.
- **Detailed Ultimate Limit State (U.L.S.)** check reports and detailed drawings containing the corresponding reinforcement detailing.
- A design process which is adapted to **a large number of standards:** Eurocode 2 (EU), IS 456: 2000 (India), ACI 318M-14 (USA), Eurocode 3 (EU), IS 800: 2007 (India)...

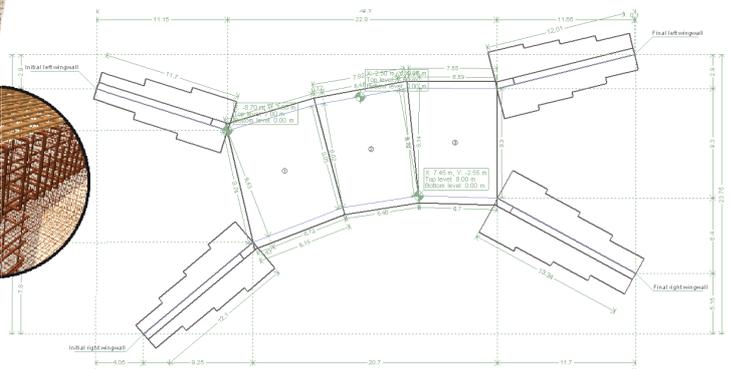
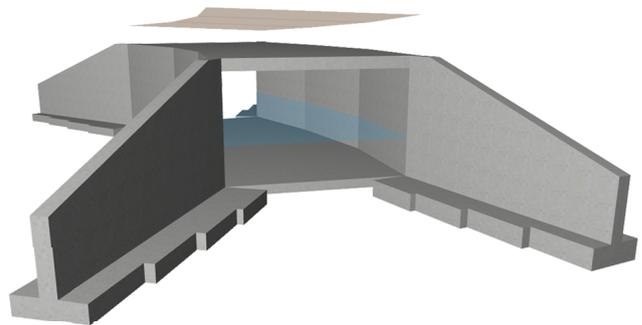


# Box culverts

Analysis, design and check of reinforced concrete box culverts used as underpasses, subways and drainage works.



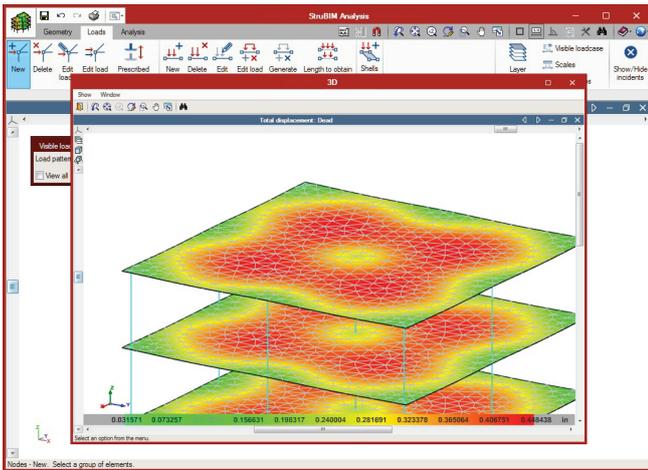
- **Geometry:** rectangular or trapezoidal (single or multi-cell and several types of wingwalls), with unlimited polygonal arrangement on plan and elevation.
- **Truck loads** at any position (vast vehicle library) with graphical indication of their axis path and the distance between the sequential load acting positions. Strip loads on slabs, etc.
- Force calculation by means of thick shell triangular **finite elements**, which take into account shear deformation.
- 3D view consultation of force and displacement **contour diagrams**, and display of the deformed shape for any loadcase.
- **Design and provision** of the reinforcement of all the elements of the culvert (top and bottom slabs, intermediate cell, lateral and wing walls (which can be divided in to spans so to vary the height and geometry of the footings). Any changes carried out can be edited and checked.
- **Drawings and reports** containing the data that has been introduced and the design results, the detailing of all the elements of the culvert and material takeoff.
- National and international **design codes**.



## StruBIM Analysis

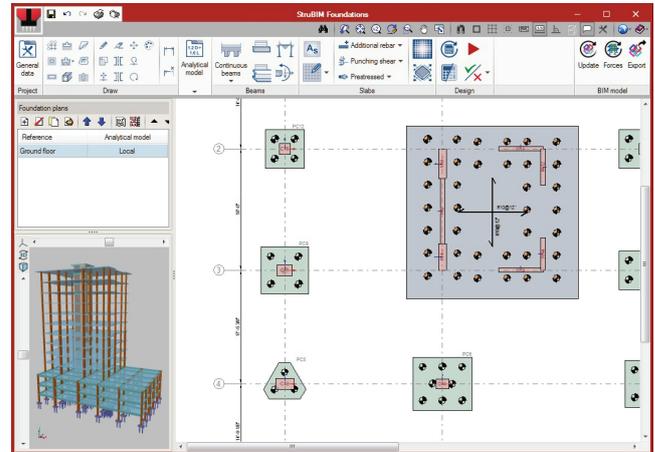


StruBIM Analysis is a tool destined to generate, edit and analyse an analytical model that has been developed based on a structural model (imported using an IFC or XML format file). The analysis of the building demands is carried out by a spatial 3D analysis using stiffness matrices. Users can choose the analysis engine (OpenSees™ or CYPE Frontal Solver).



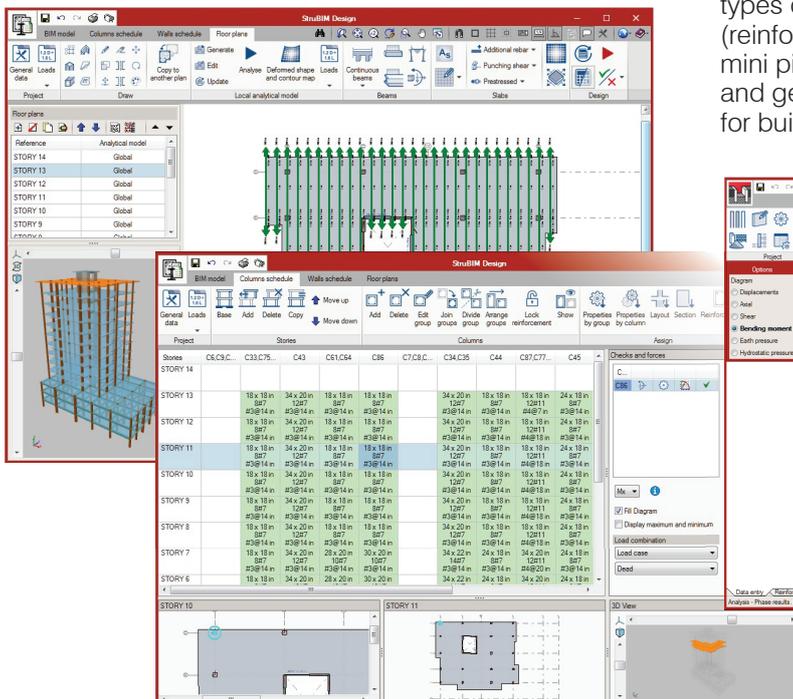
## StruBIM Foundations

StruBIM Foundations is a tool to design foundations. With the supports of the structure, users can generate, design and check foundation elements. The supports of the structure can be imported using an IFC format file, generated using IFC Builder, CYPE or any other BIM-modelling programs. Users can also import files in XML format. The analytical model which contains the forces reaching the base of columns and walls can be imported from StruBIM Analysis or from an XML file, if it contains the required information.



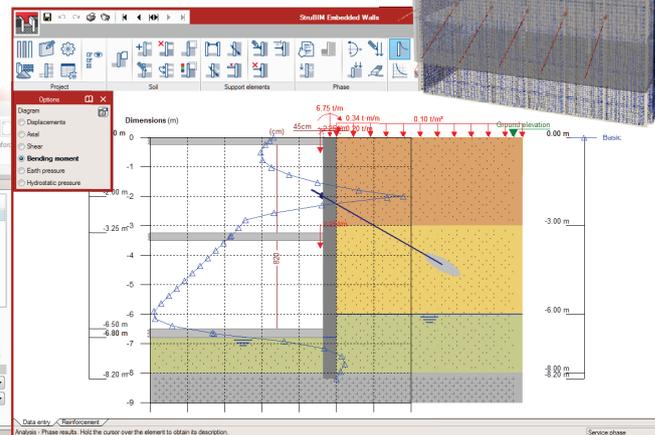
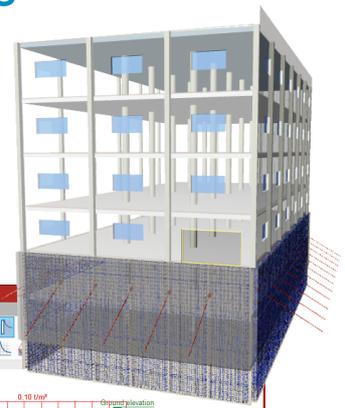
## StruBIM Design

StruBIM Design is a tool destined to design, check and edit reinforced concrete or steel structural elements, based on a structural model (imported using an IFC or XML format file) and an analysed analytical model (imported from StruBIM Analysis or from an XML file).



## StruBIM Embedded Walls

StruBIM Embedded Walls designs and checks different types of embedded walls (reinforced concrete, pile, mini pile, steel sheet pilings and generic embedded walls) for building and civil works.



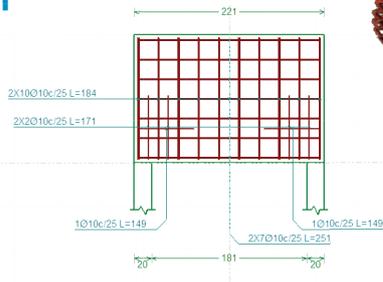
# StruBIM Anchors ACI 318



StruBIM Anchors ACI 318 is a program to check anchors used in concrete elements based on the ACI code (ACI 318-11 Appendix D or ACI 318-14 Article 17). Checks cast-in-place and post-installed anchors.

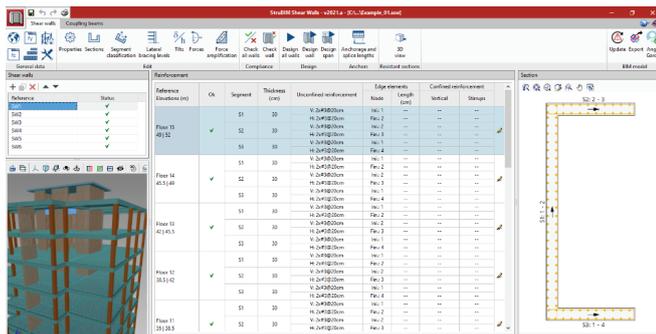
# StruBIM Deep Beams

Design and check of reinforced concrete deep beams with rectangular sections. This application is integrated in the Open BIM workflow using the IFC standard.



# StruBIM Shear Walls

“StruBIM Shear Walls” is a program with which users can design and check shear walls in accordance with the ACI 318-14 code. The program imports shear walls from the Open BIM project to which they are connected, as well as the analysis results. Using this data, users can design, edit and check the reinforcement of the different shear wall sections, and once the reinforcement design process has finished, they can generate and export the results.

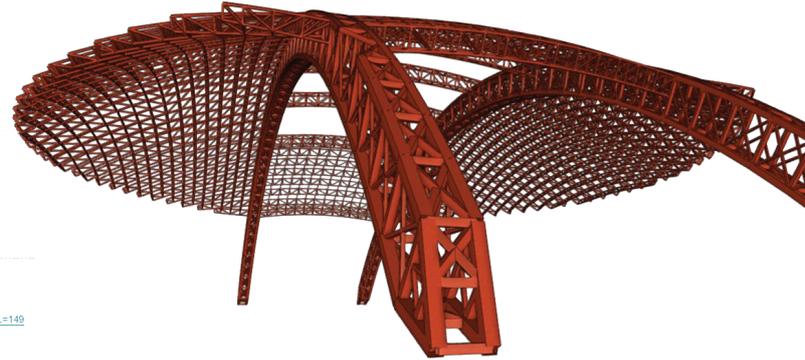
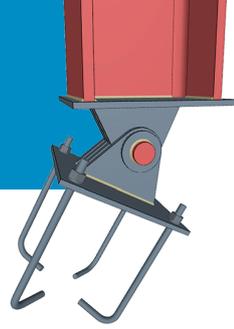


# StruBIM Rebar Core

StruBIM Rebar is a program with which users can model the reinforcement of reinforced concrete structural elements in the BIM model. The program currently imports information from shear walls and rectangular footings with constant depth. The geometry of the shear walls is imported from the structural model that is generated by CYPECAD and the description of its reinforcement from the model that is generated by “StruBIM Design Shear Walls”. The geometry and description of reinforcement for rectangular footings is imported from the model that is generated in CYPECAD.

# StruBIM CYPE 3D

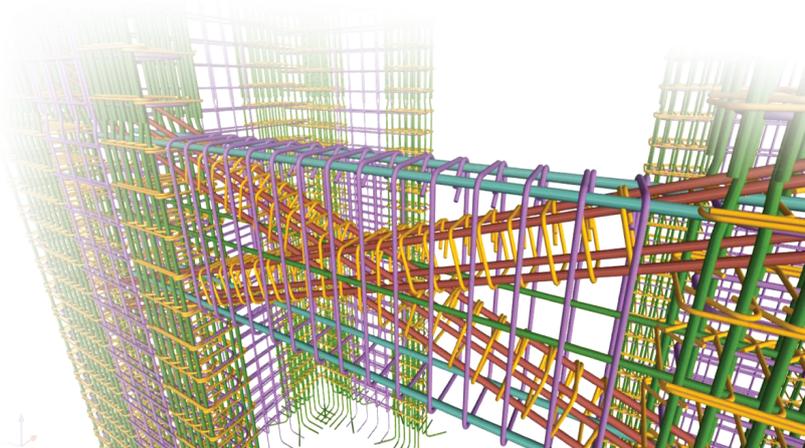
Three dimensional bar structure project with steel, aluminium and timber sections, including foundations (pad footings, pile caps, strap and tie beams) and bracing systems against lateral loads, allowing ties that work only in tension. Joint and baseplate design for metallic structures.

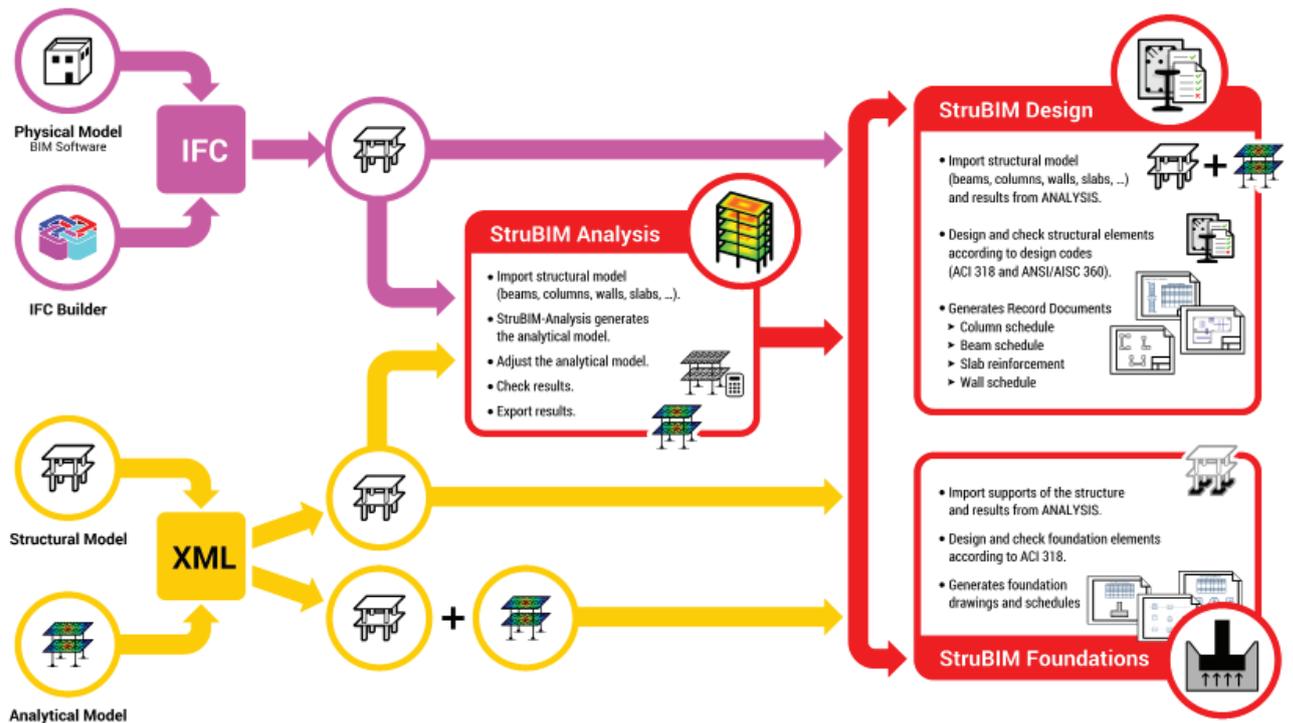


# StruBIM Steel (Free Launch Edition)

StruBIM Steel (Free Launch Edition) is a program developed for the creation and maintenance of BIM models for structural steel detailing.

This program allows users to create a precise BIM model that includes the necessary elements (sections, plates, bolts, butt welds and anchorage) to define the structure. For the results output the program provides shop drawings in DSTV format.





## Some of our clients

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 Abengoa  
 Acciona  
 Aguirre Newman  
 Applus Norcontrol  
 Asea Brown Boveri  
 Bouygues  
 Bureau Veritas  
 Carlos Fernández Casado  
 Cemex  
 Cepsa  
 CH2MHILL  
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Daugson Hispana  
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