

# CAMPO GRANDE 70 RESIDENTIAL BUILDING

2016-(2019)

## Location

Lisbon, Portugal

## Client

A1V2 Imobiliária, Lda.

## Estimated Cost

5 500 000 EUR

## Services Rendered

Concept Design

Developed Design

Developed Architectural Design

Developed Specialist Design

Located in Campo Grande, in a 358 m<sup>2</sup> land plot, the Campo Grande 70 apartment building is a new construction intended to replace two pre-existing buildings in advanced state of degradation.

Its privileged location in one of the noblest central areas of Lisbon determined a conceptual exercise that privileged the proper integration and contextualisation of the building in its urban surroundings. On the other hand, the location influenced the promotion and establishment of the building as a contemporary architectural piece that improves and upgrades its surroundings.

Following the applicable Portuguese legislation, the adjacent buildings determined the general shape and implantation of the new building. Considering the surroundings and the dimensions of the land plot available, the formal characterisation stands out especially for the plasticity of its facade, for its balconies and incorporated decorative elements.

The building develops along fifteen floors, twelve above ground and three below ground, accommodating a total of ten apartments – namely, two-, three- and four-bedroom apartments.

## Data

Gross construction area:  
4550 m<sup>2</sup>

Floors above ground: 12

Basement levels: 3

No of apartments: 10

MAIN FRONT



MAIN FRONT





FLOOR 0  
ENTRANCE HALL OF THE BUILDING



FLOOR -1  
CAR PARKING

The ground floor includes a shop and access to the three underground floors, dedicated to car parking for the residents with a car lift system.

Facing the gardens of Campo Grande, the main front stands out for its wide balconies featuring a custom steel grid, whose formal and material design sought to streamline and highlight the facade. More than just decorative, this grid enables sunshine control for the balconies and social areas of the apartments in the building (kitchens and living and dining rooms).

The exterior of the ground floor is characterised by a cover of white limestone cubes that pick up and extend the effect of the street pavement. This effect is meant to be a differentiating, original element that takes advantage of a typical Portuguese construction element – the Portuguese pavement. Its application on the street pavement and on the walls of the main front at the ground floor thus pays homage to the art and materiality of these elements.

On the tenth floor, the top residential floor, the steel grid on the exterior walls was prolonged, strengthening this materiality and setting this floor apart from the others.

FLOOR 1  
FOUR-BEDROOM HOUSE PLAN



FLOOR 9  
TWO-BEDROOM DUPLEX LIVING ROOM



# CAMPO GRANDE 70 RESIDENTIAL BUILDING

2016

## Location

Lisbon, Portugal

## Client

Private

## Estimated Cost

3 320 000 EUR

## Stage

Concept Design

## Area

4550 m<sup>2</sup>

The building to be constructed is characterised by a reinforced concrete solution and has a floor area of 320 m<sup>2</sup>. It consists of three underground parking floors, one ground floor with a shop, ten floors above ground and roof.

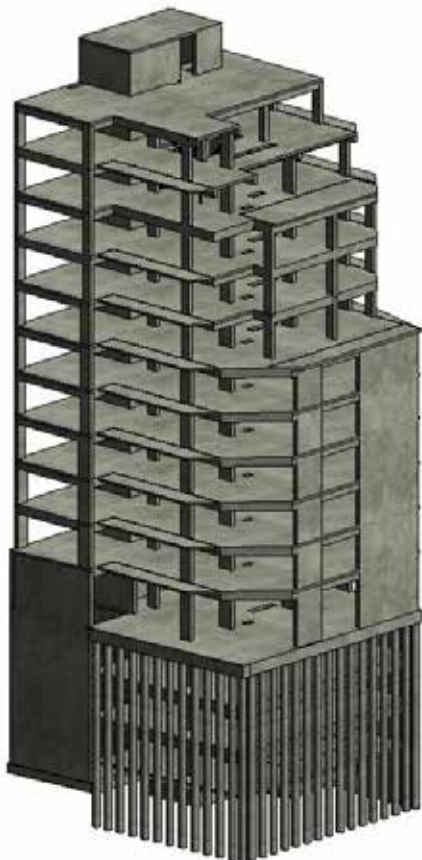
The intervention site is currently occupied by two vacant buildings, with a total floor area of approximately 200 m<sup>2</sup>.

To the north and south, the building adjoins the blank walls of the neighbouring buildings. It faces the Campo Grande garden to the west,

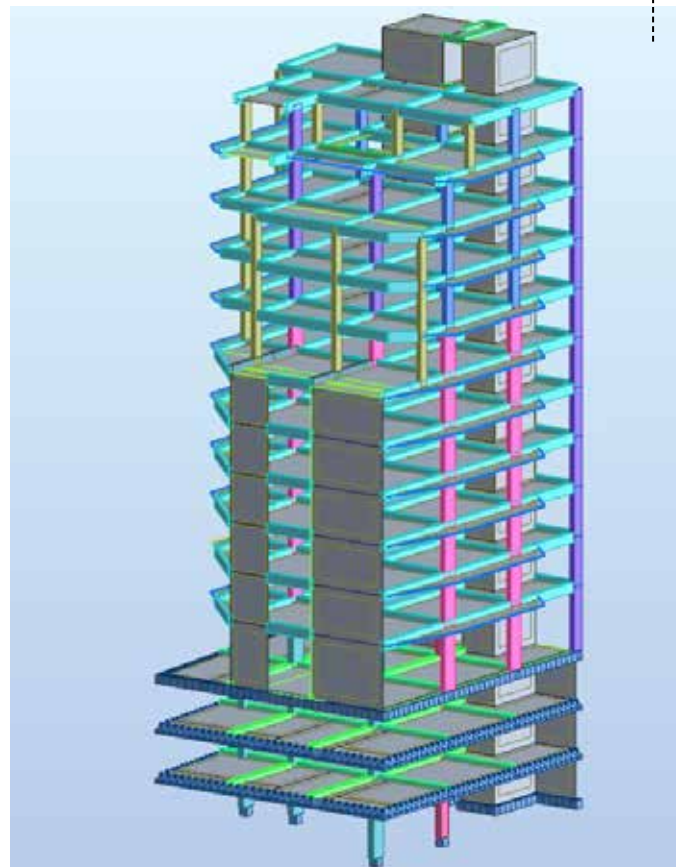
and common areas and constructions that occupy the interior of the city block to the east. The retaining solution for the walls consists of a bored pile wall, with 0.5 m diameter piles set 1.0 m apart, with a total length of 12 m.

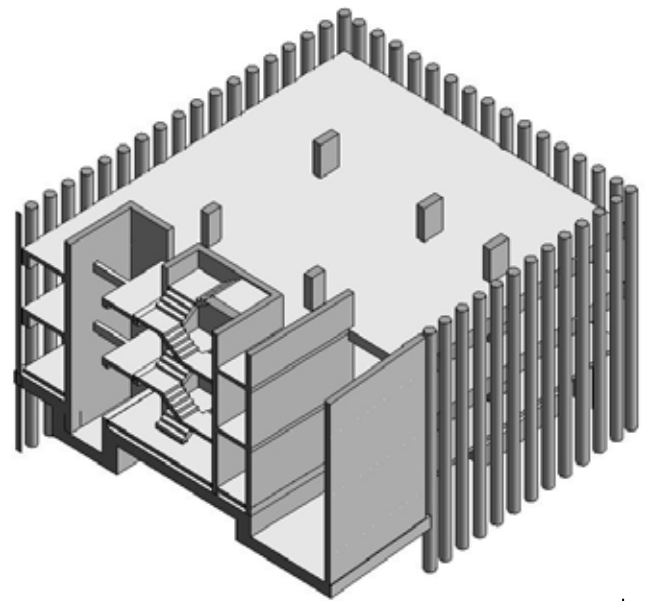
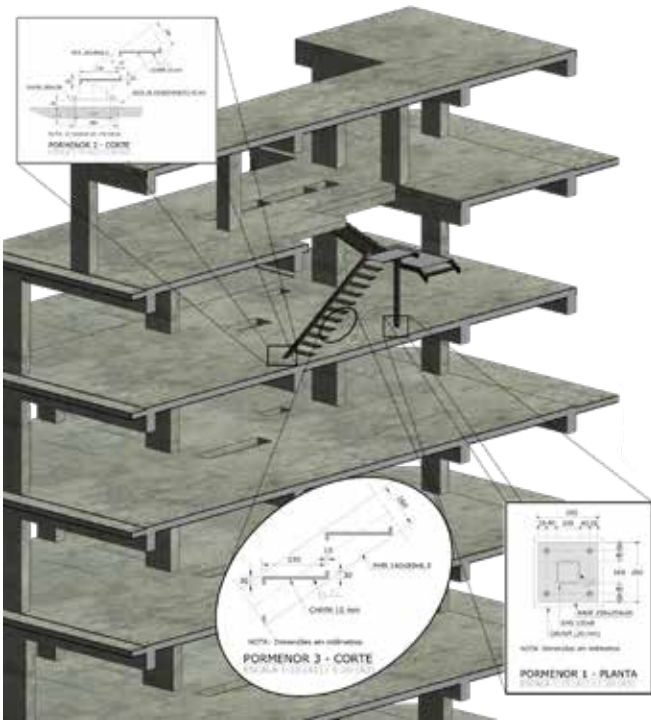
The variety of constraints present at the site led to the adoption of a retaining solution braced on the interior of the excavation through slab strips on the level of floor -1. The slab strips correspond to stretches of the underground floor slab to be integrated in the final structure.

BIM MODEL (REVIT)



BIM MODEL (ROBOT)





STRUCTURAL DETAILS (REVIT)

Structurally, the building to be constructed is characterised by a wall-equivalent dual system, including walls and frame systems in two orthogonal directions.

The floor solution is a conventional slab-beam system of thickness varying between 0.15 m and 0.20 m. The beams present a 0.30 x 0.60 m<sup>2</sup> section and discharge loads on vertical elements (walls and cores) that are spread over a regular grid.

The concrete columns have trapezoidal and rectangular sections, to adapt to the architectural configurations. In general, they are 0.30 m/0.40

m wide, with lengths that vary between 0.40 m and 1.00 m. The thickness of the walls and cores is of 0.30 m and it is constant along the full height of the element.

The foundations, as recommended by the geologic and geotechnical report, consist of shallow footings.

Additional 15 cm seismic joints were designed, placed between the building and the adjoining constructions, to absorb displacements related to seismic actions, thus preventing impacts against the neighboring buildings.

STRUCTURAL DETAILS (ROBOT)

