

SFJ6 102 SOCIAL HOUSING IN MADRID

"SFJ6" FIRST PRIZE **EMVS**.

Location: Puente de Vallecas District, Madrid

Competition: 1st Prize EMVS, 2008

Architects: Marina del Mármol and Mauro Bravo **MARMOLBRAVO**

Daniel Bergman and Miguel Herráiz **MADhel**

Contributor in competition and Design Development: Michael Becker

Technical architect: Germán Gómez Measurements: Alfonso Saenz

Photographer: José Hevia

Developer: EMVS de Madrid. Empresa Municipal de la Vivienda y Suelo de Madrid

Current situation: **Built, 2023**

Real estate programme: 102 dwellings, 109 parking places y 4 commercial premises

BUDGET: 9.731.009 euros Built surface: 13.267,87 m²



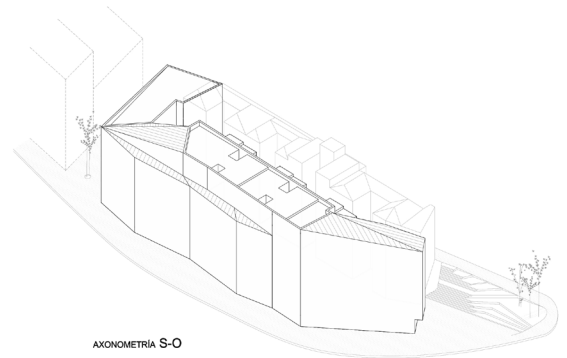
Party walls previous project execution

TO MAKE CITY

SFJ6 is a project of **102 dwellings** designed to adapt to the complexity of the city, **solving several urban problems** and generating **quality public spaces** in its surroundings. The building is integrated into the city as a **folded volume** that embraces the disparate existing buildings that presented unfortunate party walls that together have been for more than 20 years one of the main facades of the Puente de Vallecas neighbourhood.

The folding of the façade, the change of heights and the setback of the last two floors provide urban diversity. In addition, by unifying the window openings, which are perceived as larger than they really are, **the perceptual scale of the whole is reduced, achieving a friendlier scale.**

SFJ6 **adapts to the scale** of the buildings it embraces at its ends. To do this, it changes its **materiality** and, as if they were other buildings, these façades harmonise with the surroundings both to the south and north of the project, giving **volumetric continuity to the city.**



Main facade



South facade



North facade

GROUND FLOOR AND STREET

Special care has been taken with the **contact areas**, adapting the ground floor to the **complex topography** of the site in order to generate the **greatest points of contact with the city and revitalise the public space** by dividing the entrances into four doorways coinciding with each courtyard.

The **commercial use** of the ground floor at both ends of the building seeks to **improve the urban conditions** of the surroundings, introducing commerce and, therefore, activity into the surrounding public spaces. In urban terms, **new public spaces** are generated, such as the **new pedestrian street** to the north and the **stepped plaza** to the south of the project.



N Ground floor



Portal 1 entry



Main facade and urbanization



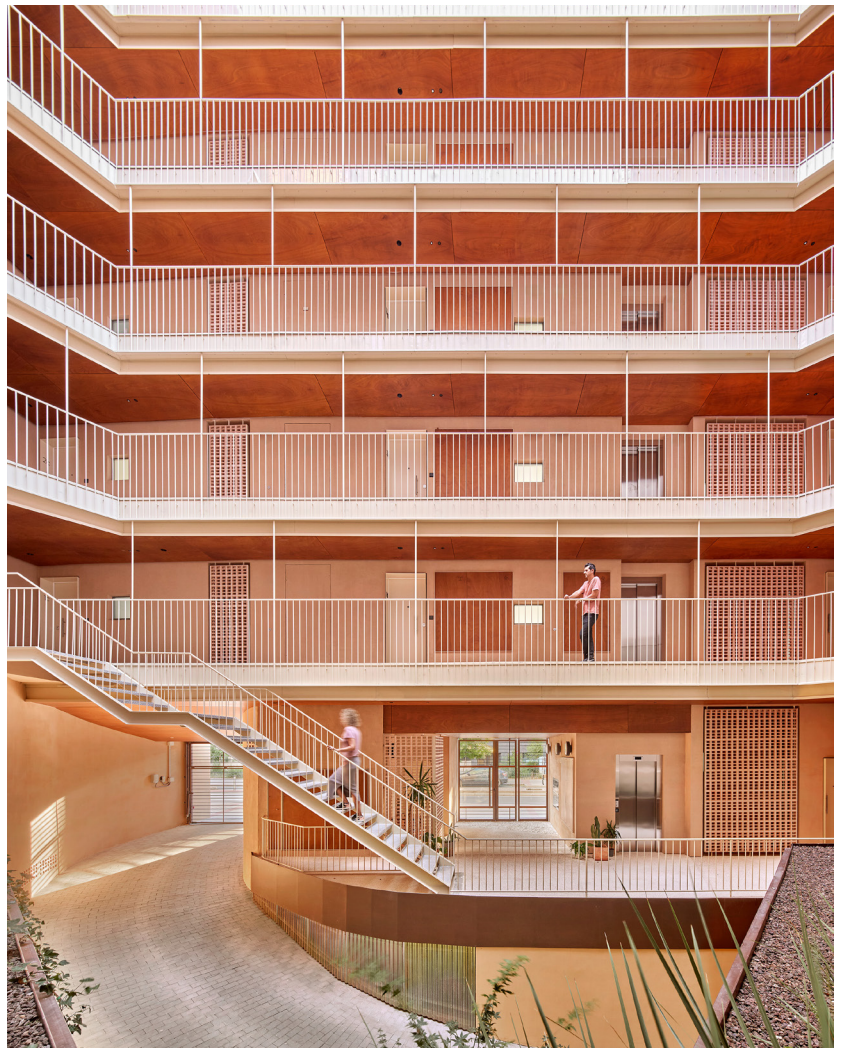
Main facade



Portal 1 detailing

THE PATIOS AND THE EMOTIONAL ATMOSPHERE

The building is between **5 and 8 storey high**, with **4 courtyards that are located next to the party wall** courtyards of the 4 existing buildings. This project decision generates **large interior courtyards**, which double in size when added to those of the adjoining buildings. Each of the courtyards constitutes an **independent portal** with its own access from the outside and its own vertical communication nucleus, although they are **united on the parking floor**. Each courtyard has its own **particular atmosphere**, enhanced by the ochre colours of the façades in contrast with the **abundant vegetation** of the project's landscaping, which helps to create a **microclimate in the city centre**.



Portal 1 interior facade



Third floor



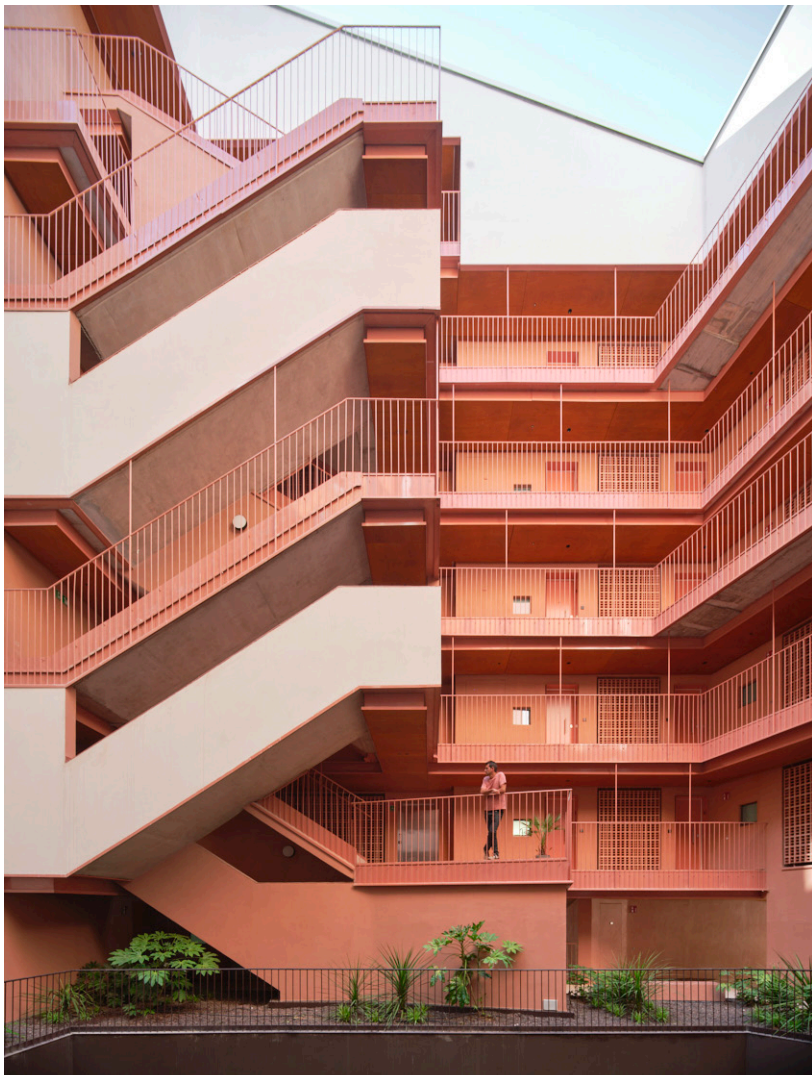
Interior Portal 4



Top view of Portal 4 and garage



Dwelling interior



Portal 4 interior facade

HOUSING AND OUTDOOR SPACE

The solution for the floor plan of the 102 dwellings is conditioned by the search for **cross ventilation** and by the desire to give each dwelling **views of the street space** from its day area.

The building programme comprises **one-, two-, three- and four-bedroom dwellings**. The aim has been to ensure that all of them **have an outdoor space or openings large enough** to allow the living rooms to be opened up like large balconies, **expanding the dwelling with the horizon**.



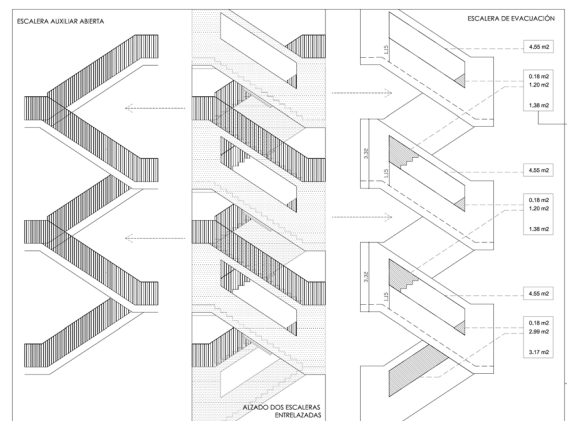
Dwelling interior



Top view of Portal 2

THE DOUBLE STAIRCASE AND CROSS VENTILATION

In order to achieve **cross ventilation** of the intermediate dwellings in each nucleus, a **double staircase** has been designed: one of them is protected and the other, intertwined with it, is open and allows ventilation.



Ladder operation diagram



Parking floor -1

THE CAR PARK A RETHINKABLE SPACE

The vehicle access has been designed as an additional entrance to the project. The building has between **two and three basement floors** to accommodate the necessary parking spaces, which are **naturally lit** by large openings to the **courtyards with abundant vegetation**.

These spaces have been designed in such a way that in the future, if there are changes in mobility, **they can be rethought with new uses**.



Longitudinal section of the patios



Detalle fachada sur

LOW CONSUMPTION AND ECO NEIGHBOURHOOD

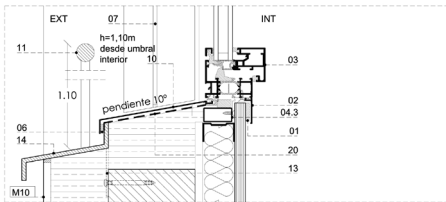
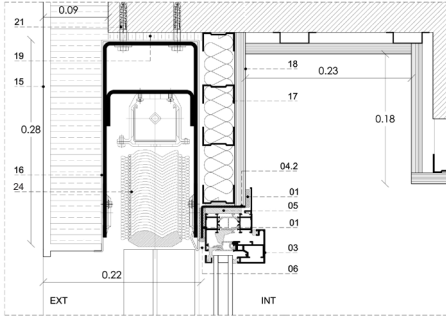
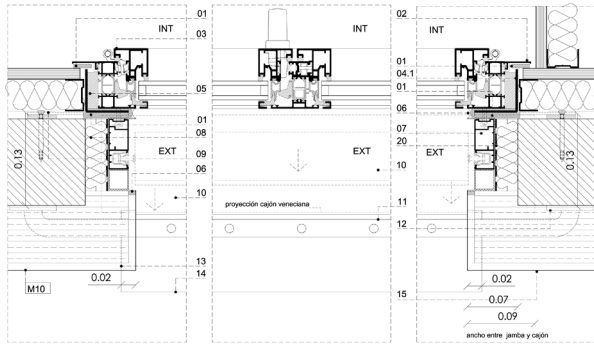
The building is designed as a **low-energy building**. Demand reduction is achieved thanks to **passive strategies** such as cross ventilation and the design of a high performance **thermal facade**, with **ITICS** and **thermally broken carpentry** as well as **adjustable external protection** in all openings.

It also has **heat recovery systems** and ECOBARRIO's **Distric Heating** for DHW and heating (**underfloor heating and cooling**), as active systems, in combination.

Finally, as a contribution from renewable sources, there is **aerothermal energy** supported by **photovoltaic panels**, giving the complex an **A energy classification**.



Main facade detailing

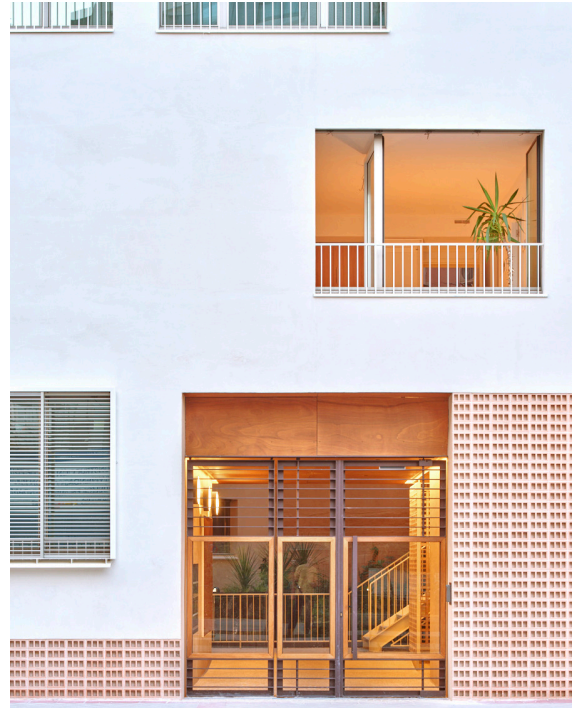


- 01 JUNTA TIPO ILLBRUCK TP600
- 02 PERCERCO PERFIL L (65.90.03) GALVANIZADO
- 03 CARPINTERIA DE ALUMINIO CORREDERA DOS HOJAS
- 04 PERCERCO PERFIL 40.20.02 GALVANIZADO
- 05 FOAM
- 06 SELLADO
- 07 ESPUMA DE POLIURETANO PROYECTADO
- 08 ANCLAJE DE PERCERCO A FORJADO
- 09 LUMINARIA
- 10 FALSO TECHO PANEL FENOLICO PARKLEX
- 11 LÁMINA IMPERMEABILIZANTE

- 01 JUNTA TIPO ILLBRUCK TP600
- 02 PERFIL DE ALUMINIO REMATE REVESTIMIENTO
- 03 CARPINTERIA DE ALUMINIO PRACTICABLE DE HOJA OCULTA MÍNIMA S0EAL 65
- 04 PERCERCO:
- 04.1 LATERALES: PERFIL L (60.60.3) GALVANIZADO
- 04.2 INFERIOR: TUBO 40.20.3 GALVANIZADO
- 04.3 SUPERIOR: PERFIL L (60.60.3) GALVANIZADO
- 05 FOAM
- 06 SELLADO EXTERIOR PERIMETRAL COLOR A DEFINIR POR D.F.
- 07 CARRILES GUÍA DE ALUMINIO EXTRUÍDO CON CORTES INFERIOR SEGÚN PENDIENTE CON SUPLEMENTO OCULTACIÓN LATERAL DE LAMA
- 08 AISLAMIENTO DE LANA MINERAL
- 09 ANCLAJE DE PERCERCO A FÁBRICA
- 10 VERTICUALES DE ALUMINIO LACADO COLOR A DEFINIR POR D.F.
- 11 BARANDILLA DE ACERO GALVANIZADO ESMALTADO COLOR A DEFINIR POR D.F. PERFIL D=25mm
- 12 PLACA DE ANCLAJE DE BARANDILLA A FÁBRICA EN 4 PUNTOS
- 13 ANCLAJE DE VERTICUALES BARANDILLA
- 14 6mm CHAPA PLEGADA DE ACERO GALVANIZADO ESMALTADO COLOR A DEFINIR. SOPORTE BARANDILLA
- 15 FACHADA SATE
- 16 VENECIANA EXTERIOR WAREMA MODELO C734W
- 17 REFUERZOS PERIFERÍA DE PLADUR
- 20 TRASDOSADO DE PLADUR
- 21 MEMBRANA TIXOTROPICA TIPO ILLBRUCK SP25
- 22 BANCAL IMPERMEABLE CON MORTERO BALMIT SOCKELSHUTZ FLEXIBEL SUBE 20cm POR JAMBA
- 23 ANCLAJE MECÁNICO DE VENECIANA CON FORJADO
- 24 LAMAS PARA OSCURECIMIENTO DE ALUMINIO PERFILADO DE 73mm

The principle of the façade and window meeting detail is that the façade insulation "shelters" the building, finishing off against the aluminium joinery. The insulation board returns through the jambs to die against the frame. This reduces thermal bridges, resulting in energy savings and improved comfort in the home.

The use of the L-shaped frame makes it possible to delay the installation of carpentry, thus avoiding the risk of its deterioration on site. It also has the advantage that the communication between the interior and the exterior, as it is not linear, helps to hinder the entry of air in the event of poor sealing. This is an extra insurance against seals and sealing tape. In addition, the frame, which is the thermally weakest point of the façade, if the U values of the different materials are compared, is protected, both in terms of transmittance and radiation (the absorptivity factor contemplated in the CTE-HE). And finally, it improves the value of the thermal bridge in the jamb by 2/3 compared to the traditional solution. This improvement means avoiding the absorptivity of the aluminium frame as it is protected.

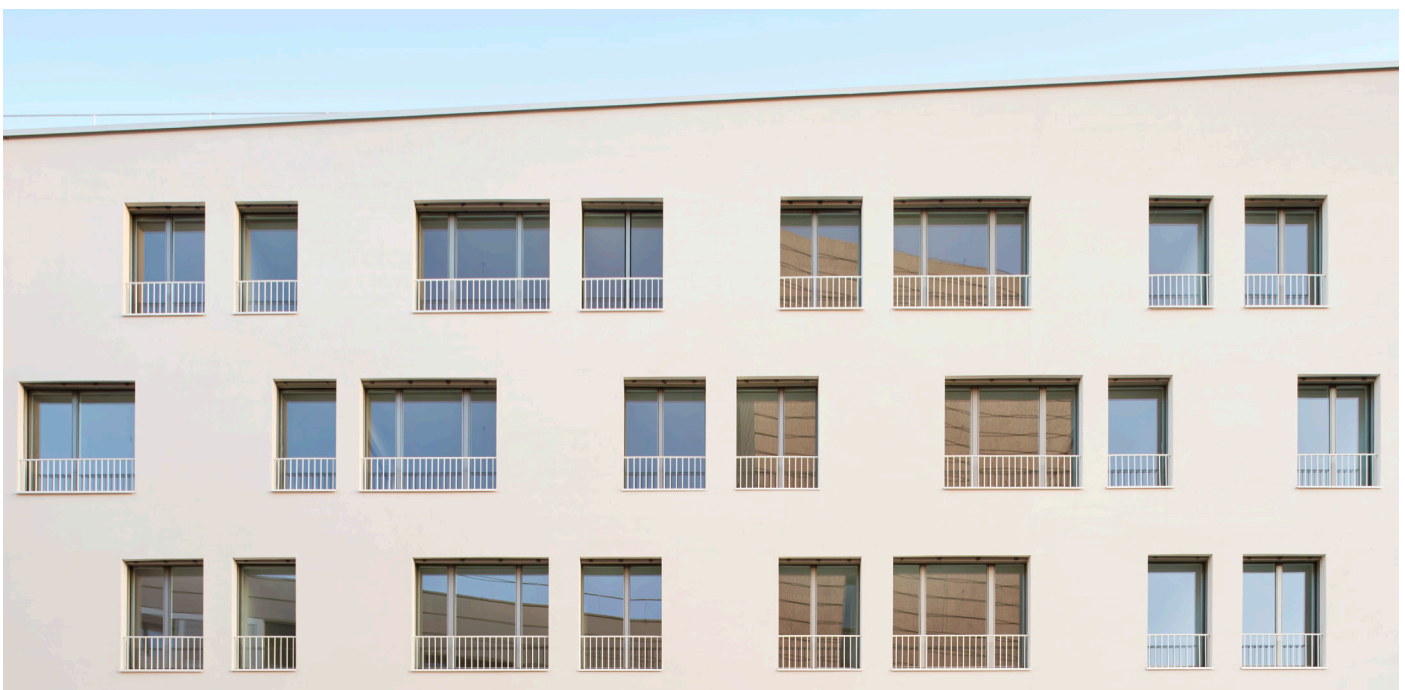


Entry way detailing

THE HOLE AND THE BALCONY

With the intention of enhancing the spatial feel of the house, we have **enlarged the size of the openings** so that the house **blends harmoniously with the surrounding landscape**. This approach allows the house to merge with its surroundings, becoming a **natural extension of the landscape**. From the inside, the illusion of an outdoor space is created by the **presence of a balcony-like railing**, establishing a **direct connection between the residents and their surrounding environment**, as if the room itself were transformed into an **outdoor space**.

In addition, we have implemented an **efficient solar protection system**. This system uses **adjustable louvres on the outside** of the openings, allowing precise control of sunlight entry throughout the seasons. This enables **optimal sun shading management without compromising the panoramic visibility** from the inside. In short, this passive shading architecture not only suits the project, but also optimises climate control and enhances the residents' experience.



Main facade detailing