

## **NN – TORRE VILANA I**



### **TECHNICAL SPECIFICATIONS**

**Residential blocks, car park and communal area**

***c/ Bellesguard, 61-73 – c/ Carles Riba, 1-5 and c/ Gaziel, 36-50***  
**MARCH 2006**

## **GENERAL CHARACTERISTICS**

This project involves the construction of **six residential blocks (B2, C1, C2, D3, E1, E2)** in our **TORRE VILANA** development, located in the upper area of Barcelona, between **Carrer de Bellesguard, 61-73, Carrer de Carles Riba, 1-5 and Carrer de Gaziol, 36-48**. The Collserola Natural park borders the northern part of these three streets.

The location, together with the orography of the land, its communal garden, the area between blocks of approximately 17,438 m<sup>2</sup>, the distance between blocks (more than 50 m.) as well as its position on the land, offers the properties commanding views over the city of Barcelona and the Tibidabo mountain.

Blocks B2, C1 and C2 located in Calle de Gaziol and blocks D3, E1 and E2 located in Calle de Bellesguard, are joined in the central part by a communal garden area which has a swimming pool, sports centre and children's area.

The composition of the blocks includes: **basement floors** for exclusive parking for the dwellings; the **first basement floor** for storage units or cellar. The **ground floor** is for housing and is connected to the first basement floor via an interior staircase, with garden and private swimming pool. The **upper floors (1st, 2nd and 3rd)** are intended for dwellings and have large terraces with landscaped railings on all their façades. **(As Blocks C1, C2, E1 and E2 are staggered the top floor properties are corner type dwellings with terraces of over 200 m<sup>2</sup>, and a private swimming pool of approx. 3.0 x 5.0 m<sup>2</sup> and 1.0 m deep).** In each block, all floors are connected by communal stairs and lift.

The functional programme consists of: three, four and five bedrooms, living-dining room, kitchen, laundry area **(the ground floor and four-bedroom properties have two bathrooms and a toilet room, and the five-bedroom properties have 3 bathrooms and 2 toilet rooms. The rest have two bathrooms).** The terraces of the dwellings are 2.0 m and 3.80 m

in size, with planters on the front with drip irrigation or automatic watering.

On some floors of the buildings, two flats have been joined to make one, with a functional programme of: living-dining room of 53m<sup>2</sup> usable space, and large landscaped terraces for part of its perimeter; kitchen-dining room joined to a service bedroom that has a combined shower and toilet room; a bedroom-suite with dressing room and full bathroom (double washbasin, bathtub and shower); double bedroom with full bathroom; two double bedrooms; full bathroom and a guest toilet.

This composition has been planned for:

- 2nd and 3rd floors BLOCK B2 Staircase A - Door 1.
- 2nd and 3rd floors BLOCK C1 Staircase B - Door 1.
- 2nd and 3rd floors BLOCK C2 Staircase B - Door 1.
- 2nd Floor BLOCK D3 Staircase A - 1st Door.
- 2nd and 3rd floors BLOCK E1 Staircase B - Door 1.
- 3rd Floor BLOCK E1 Staircase A - 1st Door.

In BLOCK E2 - Ground Floor and 1st Floor - 1st door - Staircase B: the properties have a functional programme of a 66m<sup>2</sup> living room, 22m<sup>2</sup> dining room, kitchen-diner connected to a service bedroom with a combined shower and toilet room; bedroom-suite with full bathroom (double washbasin, bathtub and shower) and dressing room; two double bedrooms; full bathroom and a guest toilet.

In BLOCK E2 - Ground Floor and 1st Floor - 1st door - Staircase A: the properties have a functional programme of a 54m<sup>2</sup> living room; 28m<sup>2</sup> dining room; kitchen-diner connected to a service bedroom with a combined shower and toilet room; bedroom-suite with full bathroom (double washbasin, bathtub and shower) and dressing room; double bedroom with full bathroom; two double bedrooms; full bathroom and a guest toilet.

## **TECHNICAL SPECIFICATIONS**

### **STRUCTURE**

The vertical structure of the building will be made of reinforced concrete pillars.

The horizontal structure will be made of lightened waffle slabs using hollow concrete blocks. The structure will be self-supporting on each floor, with the enclosures being built at a later date.

The pillars and slabs of the structure will be made of **(H-25)** concrete with a minimum dosage of 250 Kg/m<sup>3</sup> of Portland cement.

The entire structure will be built in accordance with the "***Instrucción de Hormigón Estructural EHE***" (Instruction on Structural Concrete EHE). Similarly, the commissioning, control and tests will be carried out by specialised and approved laboratories.

### **FAÇADES**

The opaque parts of the façades will include brickwork, air chamber, thermal insulation, laminated plasterboard partitioning and will be finished on the exterior with NATURAL STONE. On the terraces of the dwellings, a polyester planter will be placed at the level of the metal railing. **(In order for the façade to have a uniform design, landscaping and drip or automatic irrigation have been planned).**

The transparent parts of the building will have lacquered aluminium joinery, CLIMALIT-type glazing and roller shutters of SUPER-GRADHERMETIC type aluminium façades, which will be electrically operated.

## **TERRACES**

All terraces facing the garden will be equipped with electric awnings and wind control.

## **FLOORING**

Floating parquet flooring made of SUCUPIRA natural varnished wood with a satin finish or similar will be laid over the entire surface of the floor, except for wet areas, kitchen and terraces.

Porcelain stoneware floor tiles will be laid in the kitchen, to combine with furniture and worktops.

In the bathrooms, the same flooring will be laid as in vertical surfaces.

Ceramic flooring will be laid on the terraces.

## **CLADDING AND TILING**

In the bathrooms, the countertop, bathtub front, vertical cladding and flooring will be in WHITE PALOMA marble.

Characteristics of the bathrooms:

- The worktop and skirting shall be joined at a 45° bevel.
- According to the characteristics of the dwelling, the toilet area is separated from the bathroom area by an opaque laminated glass door.
- According to the characteristics of the house, one of the bathrooms will have a unique characteristic: a 7cm gap between the worktop and the vertical cladding will house an indirect light, which will give an aesthetic shadow of half-light.

## **SANITARY WARE**

ROCA sanitary ware, MERIDIAN model in white **(The toilet and bidet in some bathrooms will be suspended).**

In the bathrooms, the washbasin shall be rectangular, ARQUITECT or similar.

The bathrooms will consist of: bathtub, bidet, toilet and washbasin to be recessed under the worktop. **(In bathroom 1, the bathtub will be a ROCA SURESTE or similar).**

## **TAPS**

HANS GROHE single lever mixer tap, METROPOL model will be fitted in: washbasins, bidets and baths, with hand shower and single lever mixer tap VARIARC model in the sink.

## **KITCHEN FURNITURE**

The kitchen furniture will consist of wall and base units with 19 mm thick doors, drawers and pull-out modules for kitchenware with stainless steel runners for total extraction, allowing 100% of the contents to be seen.

The exterior finish of the doors and drawers is high resistance textured matt colour, which creates a harmonious blend with the vertical walls and flooring.

The interiors of these units are manufactured with a synthetic laminate finish and adjustable shelves in the same material.

The concealed cup hinges, door and drawer handles are made of stainless steel.

Worktops shall be white CORIAN type or similar. There will be vertical surfaces in the work area up to a height of 70cm of CORIAN type or similar. In areas where there are no wall units, the wall will also be lined above the

worktop, up to 70 cm in height, in order to unify and protect the walls and facilitate cleaning.

## **DOMESTIC APPLIANCES**

- Corian sink integrated in the worktop.
- Built-in electric oven with glass front and electric programmer, SIEMENS brand HB434540E or similar.
- Stainless steel extractor hood, brand SIEMENS model LC46956 or similar.
- SIEMENS Gas hob, model ER17153EU or similar.
- SIEMENS Built-in microwave oven with glass front, model HF23556EU or similar.
- Provision for water intake for refrigerator.
- Provision for water, electricity and plumbing for dishwasher and washing machine.
- Provision for electrical socket for tumble dryer.

**Note: The brands and models indicated above may be substituted by others with similar characteristics.**

## **INTERIOR CARPENTRY**

### **DOORS:**

The doors of the house are veneered in natural varnished MAPLE wood.

All door frames are clad with the same type of wood as the doors.

The locks and hinges are made of matt steel.

The handles are ARCON PBA model or similar in matt steel.

**The main characteristic of this carpentry is: The doors are flush on the main face, with a closing rebate on the leaf itself, to fold against the fixed leaf (in this way a single plane is achieved between the leaf and the exterior moulding).**

The entrance door is made of solid wood, with lock and security hinges.

### **CUPBOARDS:**

The cupboards are lined on the inside with ARCE MELAMINE plywood, with a top shelf and chrome bar.

The cupboard doors are made of lacquered wood, satin finish, in ecru colour.

The handles are matt steel and the inner hinges are chrome-plated cup hinges.

The interior skirting of the dwellings is made of semi-lacquered wood, the same as the vertical walls.

### **PARTITIONS / INTERIOR CLADDING**

The dividing walls between the dwellings will be 171 mm thick and will be made using a double structure of galvanised steel profiles between which a laminated plasterboard and a galvanised steel safety sheet will be placed. They will be covered on the outside with double laminated plasterboard on each side and filled with sound-absorbent fibreglass to achieve a high acoustic insulation of 60 dBA.



The interior partitions will be made with laminated plasterboard partitions, which will then be painted in smooth plastic paint.

The vertical and horizontal walls of the dwellings will be lined with laminated plasterboard which will then be painted in smooth plastic paint.

The false ceilings in the corridors will be made of laminated plaster and painted in smooth plastic paint.

The horizontal walls of the bathrooms will be made of laminated plaster or Staff type plasterboard (**The bathrooms where air conditioning units are housed will have a register for their maintenance**).

## **ELECTRICAL INSTALLATION**

**The electrical installation shall comply with *the "Reglamento de Baja Tensión y a las Normas Complementarias"*(Low Voltage Regulations and Complementary Standards).**

The dwellings will have a control and protection panel, with the corresponding **I.C.P.**, differentials and **P.I.A.S.** from where the different circuits will start.

Each dwelling will contain the following independent circuits:

1. Lighting circuit.
2. Socket circuit.
3. Dishwasher circuit.
4. Washing machine circuit.
5. Tumble dryer circuit.
6. Oven and microwave circuit.
7. Air-conditioning circuit.

## **SOLAR ENERGY INSTALLATION**

A solar collection system will be installed using flat-plate collectors, which will be fitted on the ground floor and suitably oriented.

Heat exchangers located in the laundry room or kitchen area of each dwelling will store the energy from the collectors, which will provide a free service for heating water in the home.

This is a free energy contribution towards the heating of domestic hot water and saves on primary energy sources.

## **PLUMBING INSTALLATION**

The plumbing installation shall comply with the "**Basic standards for indoor water supply installations**".

All interior installation will use copper, polypropylene or polyethylene plastic pipes, in accordance with Project Management.

The cold water installation shall start from the individual stanchion and will supply the sinks, boiler, washbasins, bathtubs, toilets and bidets.

The gas boiler will supply the hot water system for the sinks, washbasins, bathtubs, shower trays and bidets.

The boiler is the link to the supply source installations: one from the solar collectors and the other as a support when collection is reduced by the gas boiler.

There will be a separate shut-off valve in all of the wet rooms.

Piping will be embedded in the false ceiling.

## **AIR CONDITIONING INSTALLATION**

The following system will be installed in each dwelling:

**Heat:** via a combi boiler located in the laundry room or kitchen, from where the installation of copper or polyethylene pipes will go to the radiators located in each room.

**Cooling:** via a condensing unit located on the roof. The evaporator unit, will be fitted in the false ceiling of the bathroom or lobby for easy maintenance, with the corresponding registers.

Each unit will be powered independently from the electrical panel in the dwelling.

Each dwelling will be air-conditioned except for the kitchen.

The ducts will run through the false ceilings in the laundry room and bathrooms.

## **GAS INSTALLATION**

The gas installation shall comply with the "**Basic rules for indoor gas installations**".

The entire installation will be carried out using copper pipes with capillary soldering, which will run from the meters and individual stanchions to each dwelling to supply the boiler and kitchen hob.

## **LIGHTING**

Interior installation of recessed spotlights in kitchens and bathrooms. Matt aluminium finish.

The mechanisms are BTICINO brand, LIGHT series, light titanium-coloured frame and white key.

## **PAINT**

The vertical and horizontal walls of the dwellings will be painted in smooth plastic paint, following preparation of the substrate.

Locks and bolts shall be painted with electrolytic lead plating for protection and finished with a coat of enamel or similar.

## **AUDIOVISUAL INSTALLATION**

Audio visual installations shall be installed in compliance with current "I.C.T." communications regulations.

The dwellings are equipped with TV, FM and satellite dish sockets, located in the living-dining room, kitchen and bedrooms. The installation of wiring for the reception of digital TV channels is also planned.

**Telephone:** Telephone sockets will be fitted in the living-dining room, kitchen and bedrooms.

**Video intercom:** Installation of video intercom by means of a call plate and camera located at the entrance to the main lobby of the block and a monitor will be fitted inside each dwelling.

## **HOME AUTOMATION INSTALLATION**

The property will be equipped with a home automation and security system. This will achieve a secure domestic environment due to the central anti-intrusion system and comfort through the automatisms which facilitate daily tasks.

The system consists of a micro processed alarm centre with radio keypad, volumetric security detectors and the inclusion of a domotic system for the radio control of the boiler, air conditioning, centralised control of the shutters and the control of technical alarms for water and gas leaks as well as fire control.

The system includes a free maintenance service from the alarm centre for the first nine months, after which the customer may choose to prolong the service or operate it without connecting to the alarm centre.

### **CELLARS (Linked to dwellings)**

Cellars linked to dwellings will have the same finishes as the dwellings.

Its facilities shall be linked to the dwelling.

It is connected by an interior spiral staircase with wooden steps.

Ventilation through zenithal windows connected to an English-style courtyard, located in the garden area.

In the cellar there is a washroom with toilet, separate shower tray, washbasin on marble worktop and laundry area, with all the provisions, under worktop cabinets with postformed worktop, stainless steel sink built into the worktop.

The flooring in the cellar will be parquet flooring in the same way as in the dwelling, except for wet areas.

### **STORAGE UNITS (Not linked to dwellings)**

Storage units not attached to dwellings will have the following finishes:

- Ceramic flooring.

- Painted walls.
- Ceilings with metallic delgae.
- Ceiling light point.
- Ventilation and air renewal.
- Toilet with marble worktop, BLANCO PALOMA type and white ROCA toilet, MERIDIAN model. Walls and floors with ceramic tiles which combine with the mirrors.

## **QUALITY CONTROL**

In order to guarantee the quality of the building during the construction process, **specialised companies** and **engineering firms** are contracted to control and manage the installations.

This shall be carried out in the following stages:

- Structural management (walls, pillars and slabs).
- Management of water, electricity, gas and air conditioning installations.
- Management of façade sealing, aluminium and glass profiles.
- Management of lift construction and installation.

## **DELIVERY OF THE HOUSES**

The property will be delivered in a clean condition in all of its components, so that it can be occupied immediately.

Barcelona, March 2006

***Note: The brands, qualities and design indicated in this report may be substituted by the Architect Director for others of the same or similar characteristics (the distribution of sanitary ware in bathrooms and kitchen cupboards may also be changed by the Architect Director).***