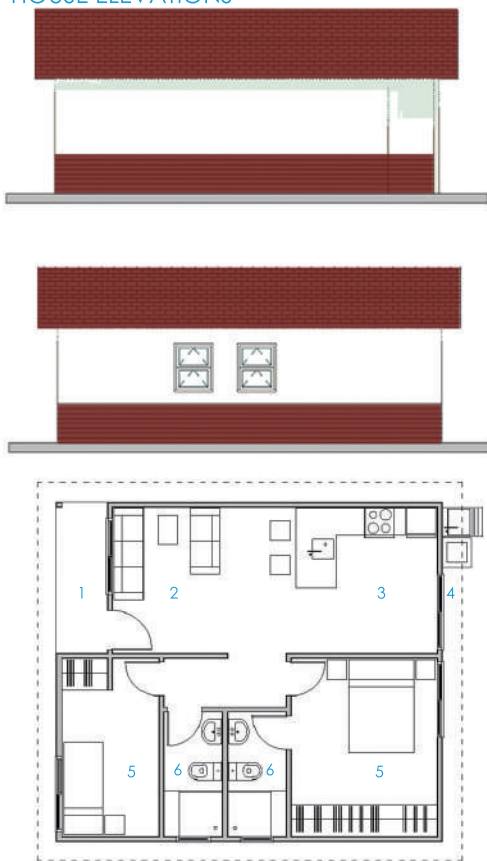


# STEEL FRAME HOME PROJECT $65m^2$

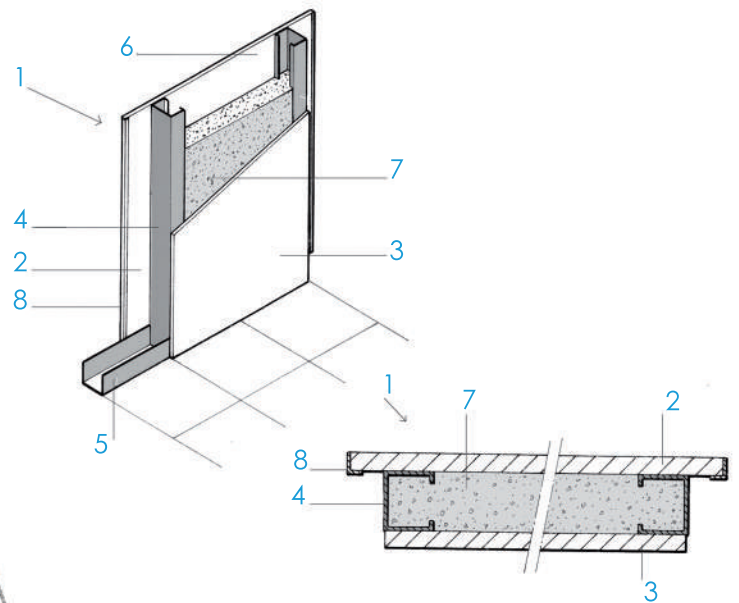
65 m<sup>2</sup> housing, Steel Frame construction system, with structure of cold formed lightened galvanized profiles.



## HOUSE ELEVATIONS



## SYSTEM COMPONENTS:



- |                                |                                   |
|--------------------------------|-----------------------------------|
| 1. Vertical exterior enclosure | 5. Profiles - slab                |
| 2. Exterior - Calcium silicate | 6. Interior profile space         |
| 3. Interior - Calcium silicate | 7. Lightweight concrete + perlite |
| 4. Profiles - studs            | 8. Profiles - angular (corners)   |

URBAN SYSTEM (fits on request)

## FUNCTIONAL DISTRIBUTION:

1. Access porch
2. dining room and living room
3. Kitchen
4. Exterior laundry
5. Bedroom
6. Bathroom



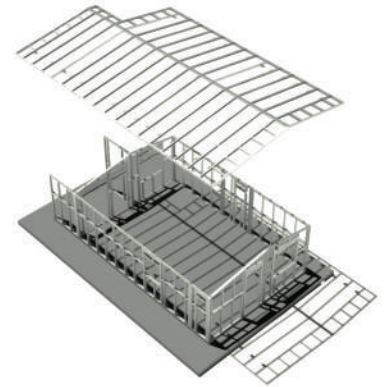
# COMPONENT DESCRIPTION

## SYSTEM GENERAL FEATURES

Steel frame is a constructive system whose main feature is a structure which consists in cold-formed profiles of galvanized steel. This system is basically formed by upright-profiles in C form (installed in vertical position separated 40-60 centimeters). On the borders, the profiles are screwed down to the track profiles (U form). These U form-profiles form the inferior and superior border of the whole grid.

The profiles are used to form structural and non-structural panels, secondary beams, ground beams, rafters and other components. These profile grids are later covered by different layers of panels. That is why we can talk about a Dry Construction system.

The profiles present reduced thickness and have drillings to let the electric and plumbing installation system go through them.



### CONSTRUCTIVE PROCESS



ASSEMBLY - MAIN STRUCTURE



RESTRAINT SYSTEM



PANEL INSTALLATION (calcium silicate)



PARTITION WALLS (panels + lightweight concrete)



PUTTY APPLICATION (joints and screws)



FINISHED HOUSE MODEL (exterior)

### SYSTEM ADVANTAGES

Main advantages:

- Faster ( almost 80% faster than traditional systems)
- lower construction costs ( around 40% cheaper)
- Easier to handle

We can also emphasize and group the system advantages into 3 types:

#### 1. ADVANTAGES OF THE CONSTRUCTIVE SYSTEM ITSELF:

- Earthquake-proof system
- Fire proof system
- Light system
- Recyclable and environmental system
- Modular and panel based system
- adequacy and benefits not only in big but also in small projects
- Durability (profile sheet galvanization)
- Easy transport everywhere
- Investment in plants or models not needed
- Flexible to all kinds of design

#### 2. ON SITE ADVANTAGES:

- More cost-effective
- Faster
- Easier (easier assembly)
- Better thermic and acoustic insulation
- Dry system
- Cleaner construction site
- The system does not need high qualified workers
- Increases the usable floor area regarding to traditional systems
- Avoids overrun and setting-out on site
- Eliminates heavy machinery and reduces auxiliar construction elements
- Reduces the number of trades on site
- Simplification of the electrical and plumbing installations.

#### 3. ADVANTAGES POST - WORK

- Flexibility and simplicity in building extensions and renovations
- Easier, cleaner, faster and cheaper maintenance and repair works