





The proposed system is a holistic wood-steel-concrete hybrid system. The main principle is the combination of interior room building elements (massive timber-concrete composite, massive timber and concrete walls) and a building envelope with a more flexible post-and-beam-structure filled with individually arrangerable lightweight, non-loadbearing walls and non-loadbearing exterior walls. The concept of the structure allows the arrangement of stiffening inner elements (staircase, installation shaft, bracing walls) as core elements and a less restricted and therefore individual arrangement of the outer structure of the building. The system therefore is suitable for dwellings as well as offices and public buildings and serves also different architectural approaches. The main structure follows a grid of 2,40 m x 2,40 m, with regard to the typical system modular grid of 1,20 m in Finland. Underground garage, cellar and shelter facilities are designed in reinforced concrete, as well as the 1st floor (ground floor) and the elevator and staircase walls. The concrete structures will be prefabricated as much as possible according to Finnish BES system. Balcony structures and the additional „storage boxes“ are designed as areas with lowered indoor temperatures, consisting of a massive timber structure without additional insulation. In principle the structures are very clearly and simply designed, with predominant constructional systematic. In contrast the additive elements like balconies etc. try to break with the strictness in a playful manner and indicate that constructional systematic does not necessarily lead to monotonous and boring buildings, but may yield creative freedom for design. Inside the buildings the configuration of dwellings can be done in many different ways. A high share of wooden surfaces can be offered as well as a neutral white or colored wall and ceiling finish. Furthermore the choice of flooring material is not limited by the construction system but includes all popular materials. At the given location the urbanistic pattern of the vicinity with its open, punctual housing is pursued. Different building layouts are offered to suit the specific urban development. Therefore the backbone of the building development is realized by two L-shaped, eight storey multi units with linear circulation on the North side. A central building type in between and shifted towards the river, the so-called „house in the park“, is aligned in a way so that the dwelling units are oriented either directly towards the water front or indirectly in its depth. On the narrow area of the building site a linear maisonette type is offered with definite southward orientation. The buildings are designed to support industrialization of building process and erection of multi-storey timber buildings in Finland. The energy efficiency of the buildings is oriented at Central Europe Passive House design. In addition an alternative fire safety concept is proposed.

