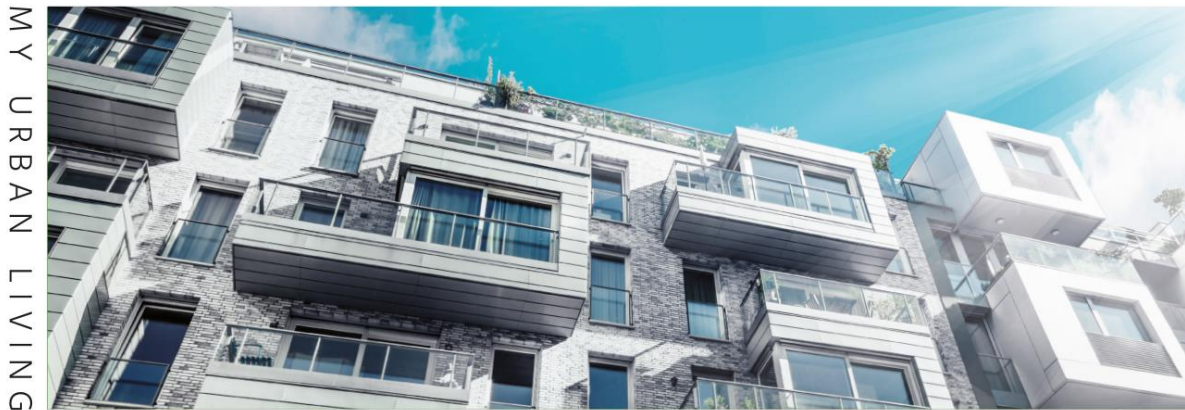


General Technical Description of the Multifunctional Building “Haller 11”



1. General description

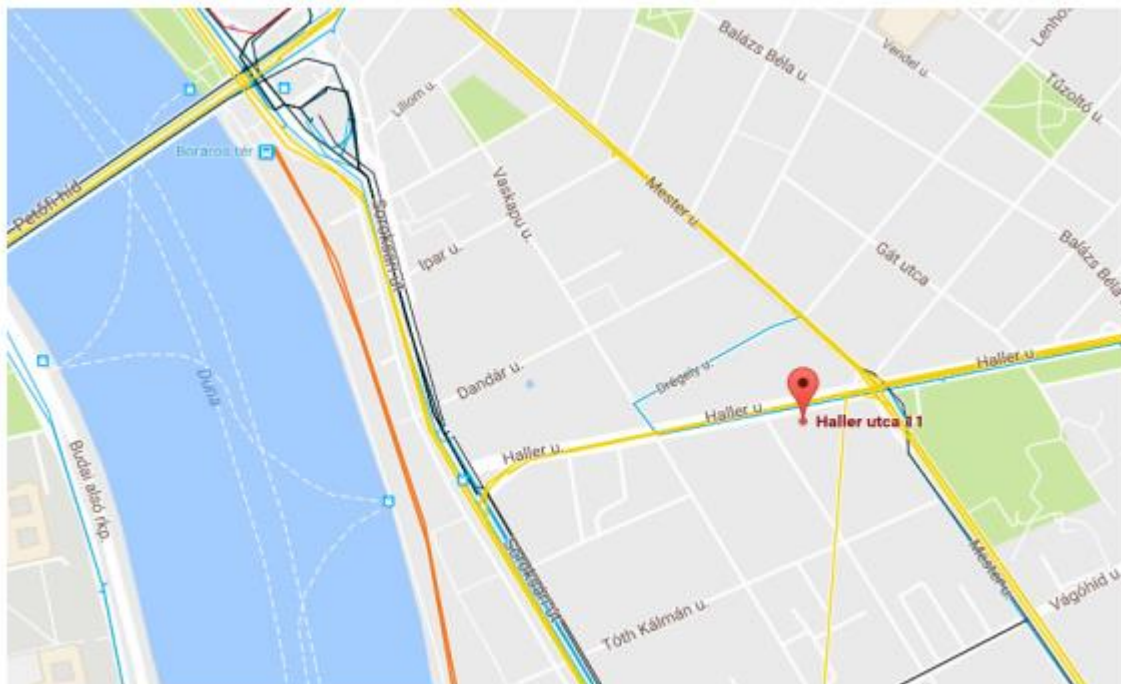
Location, surroundings

The planning area is located in the 9th district in Budapest, between Soroksári út and Mester utca, in the neighbourhood of the Páli Szent Vince Church. The size of development area is 14.587 sqm, situated on a corner lot, provided with all public utilities. It is bordered by Haller utca to the north, by Nádasy utca to the west and by Tóth Kálmán utca to the south. There is an unbroken row of buildings on the neighbouring lot.

The area is part of a unit which is recognized as being in a state of transformation, development, which has good transport connections. The central transport hubs of the capital are within reach. In addition to the possibility to approach it by car, public transport is also available in the area. There is a boat terminal in the neighbourhood and bus lines, tram lines and a suburban railway line run nearby.

In addition to analyzing the inner-city transport, the proximity to Boráros tér, Egyetemek should be stressed. Therefore the location of the area is also advantageous in terms of the connections within the catchment area of Budapest. These connections are of major importance both for the prospective residents and for the people who are going to work here.

Public transport network of the area



*A terület tömegközlekedési hálózata
(kék- autóbusz; sárga- villamos; narancs- hév; szagatott- hajó)*

*Public transport network of the area
(blue – bus; yellow – tram; orange – suburban railway; dashed line – boat)*

Architectural design / Building in

The purpose of the development is the construction of a multifunctional, long-term sustainable facility, with commercial and residential functions. The total investment will be built in three stages; in the first stage there will be a total of 228 apartments with storage areas, common areas on the floors. The building is designed to have an underground car park, ground floor and 4-9 floors. There will be parking spaces, storage area and technical area on the underground car park level, commercial units on the ground floor and residential units on the floors. The levels of the building are connected by three staircases (stairs and lifts), for the use of the residents. A lift and a moving walkway will provide access between the underground car park and the commercial area. Parking spaces will be constructed in the underground car park for the shops and the residents, and a temporary parking area will be constructed on the surface (it will cease to exist when the total investment is completed). In addition to the underground car park, there will be further parking areas constructed on the surface.

The lot can be opened up from Haller utca and Nádasdy utca. Access to the underground car park is from Nádasdy utca. Main access to the part of the building on the surface is from Haller utca. Due to the functions, there will be no fence on the street side boundary. In conformity with the regulations, the building on the neighbouring lot will be covered with the obligatory fire wall covering (with the planned building).

Character

When designing the character of the building, we have set out architectural directives which combine the practical values and the economic aspects. Due to its sizes, a statue-like appearance of the building is required. The selected architectural language provides a framework for the heavy character of the building: the building is defined by the play, the change of surfaces of two different characters. One of them has a solid effect, it is clear, simple, plastered; however, the other one has a playful, more articulated, coloured façade.

As the future total investment consists of three main stages, it is important that the selected architectural language will be reflected throughout the building complex. Upon the realization of the total investment, four higher, block-like structures will be created almost parallel with Haller utca, showing a similar picture towards the neighbouring larger buildings on Haller and Nádasdy utca's side, whereas a more intersected picture will be shown towards the smaller buildings on the other side of Nádasdy utca. The two different façade designs are joined with a moulding appearing on and running along the parapet and the corners of the building.



Látványterv a Haller utca Nádasdy utca sarka felől nézve

Visual design from the corner of Haller utca – Nádasdy utca

2. Technical Description of the Building

Construction, Materials to be used

Support Structure

Foundation: the load of the building will be transmitted by ground piles to the load bearing soil.

Rising Structures: There will be a single-level underground garage in the building, the side-walls and the base slab thereof will be made of water-tight concrete, the front walls will be made of monolithic reinforced concrete. The wall construction will be traditional monolithic reinforced concrete pillar frame with reinforced concrete and frame-filling front walls. The superstructure will be braced by reinforced concrete staircases and elevator cores separated flexibly from the ceilings.

Ceilings: Intermediate ceilings are made of monolithic reinforced concrete slabs. Heavy duty ceilings made of reinforced concrete will be built beneath the lodgings situated on the ground floor. The roofing panels of the building are normally flat roofs made of reinforced concrete ceilings.

Roof

A walkable flat roof and a roof garden will be formed on the top of the building. Generally the roofs are accessible from the staircases or rather from the hallways; the uppermost roofs can be accessed by using a steel ladder. Protection against falling down will be ensured by handrails on terraces developed for personal use, whereas guardrails and fall-arrest systems providing the possibility to use lanyards or harnesses are being planned on the mechanical levels.

Drainage of rainwater on the flat roofs will take place by an inner drainage system, whilst edges, balconies, smaller terraces have a slope and the rainwater drains freely off them.

Waterproofing

The building will typically be insulated against soil moisture (in case of dries: insulated against groundwater), which will be provided by watertight concrete boundaries and base slabs.

Waterproofing will be applied against domestic water in wet rooms in the following heights: 220 cm over the tub, in case of wash-basin at 150 cm height, in 80 cm width, in other places turned up at 20 cm height as footing.

When roof insulation is carried out in the case of flat roofs, PVC insulation will be applied against rainwater, whilst in the case of green roofs root resistant PVC plates will be applied.

Thermal Insulation

Generally the walls will be covered by a 16 cm thick thermal insulation along with an 0,5 cm exterior thin plaster in colours corresponding to the façade plan. The exterior walls of the building will be covered by thermal insulating type plaster in a thickness according to heating technology calculations designed in accordance with manufacturer's instructions for layer structure and technology. In the footing section by thermal insulating slabs and plaster.

Interior Walls

The interior partition walls are generally made of 2x2 ply 12,5 cm thick plasterboard, with mineral wool insulation. The walls of the engineering and electricity shafts will be made of 10 cm thick ceramic partition wall element plastered on one side. The partition walls of apartments will be made of 25 cm, the walls separating corridors and apartments will be made of 20 cm thick sand-lime bricks. The walls of the common spaces and the apartments will be painted with white dispersion wall paint in two layers.

Wall Coating

The inner side of the exterior walls and the interior partitioning walls will be coated with smooth plaster. Wall tiles will be between the kitchen counters and the upper cabinets. The wall surfaces in other interior places will be texture coated in 2 layers and painted with white plastic base dispersion wall paint. The ceiling will be texture coated and thereafter painted with dispersion paint. Washable wall surfaces will be provided in the waste storage rooms.

Flooring

The flooring shall be put on with glue technology on the duly prepared underlying surface. There will be different flooring in certain rooms according to the room list and layer structure.

Doors and Windows

On the commercial level of the building aluminium curtain wall systems will be applied. The exterior doors and windows on the upper floors will be made of plastic profiles. The glazing will be heat insulated; the profiles will be heat bridge free. The internal doors of apartments will be subsequently equipped with wooden doorframes; the door panels will be made with paper grid lining. The doors will be manufactured with normal door locks, with 1 key, separate door handle and escutcheon in matt chrome finish, with rubber seal around.

Tinsmith Structures

The structural edges and connections, roof edges of the building will be trimmed with tin.

Building Engineering

The size and location of the planned engineering service rooms are in accordance with the functions required. The main engineering rooms are situated on the basement level.

Public Utilities

Water supply: the utility water supply of the property will be provided from a connection being built newly at the Haller utca standpipe. The water reception room is situated at the Haller utca Nádasdy corner.

Sewerage: the communal sewage water will be diverted by gravity to the drainage system in Haller utca.

Rainwater: the rainwater falling on the roof will be lead down within the building, by inserting a rainwater retention tank on the basement level, and then it will be diverted beneath the joist from the building towards Haller utca.

Natural gas supply: natural gas will not be used in the building.

Water Supply – Drainage

Water supply system: The potable water supply will be supplied for the facility through the basement level from the connection being established at the Haller utca public utility network. The tariff meter will be located at the basement level of the building. In addition to the supply of the

potable water network of the buildings, it is necessary to satisfy the need for inner firewater for the buildings, too. After establishing connections into the buildings, the mains pipe will be distributed on basement level and on the ground floor. The apartments will be provided with common standpipes. Individual cold water connection will be installed for each apartment, with meters for each apartment. After having established connection to the apartments, cold- and hot water meters will be built in; thereafter the sanitary fittings will be supplied through distribution units.

Sanitary installations, fittings: The designed sanitary equipment consists of semi-porcelain washbasins, toilets, stainless kitchen sinks, corresponding to Alföldi quality. The shower trays are made of enamelled sheet steel. Toilets are mounted on consoles, with built-in reservoir, push pad, the washbasins and shower trays are equipped with ceramic single-lever mixer taps.

Heating-Cooling

The heating-cooling is based on an up-to-date, environmentally friendly technology: a geothermal probe system using geothermal energy will be installed. On the basement level 1 heat receiving station will be installed in each stage. Control is being operated by a room-thermostat or by a thermostatic head mounted radiator-valve.

The heating-cooling consumption will be measured by apartments. Meters will be fitted in boxes in front of the apartments. Calorimetry and reading of hot-cold water consumption is done by remote reading through the M-BUS system. The system centre will be located in the low voltage room.

Ventilation

Mechanical exhaust is planned for the bathrooms, lavatories and kitchens. A fan operated exhaust system will be installed for the baths and lavatories. The equipment for ventilation as well as heat- and smoke control will be located on the roof. The air supply takes place through the ventilation holes built in the external doors and windows of the building, or by tilting the external doors and windows for ventilation. Comfortable indoor ventilation system will be created in the closed hallways on the residential levels. Every staircase has a forefront; they are pressurized and smoke free. The smoke extraction of the staircases and forefronts will be carried out by a separate blower system. The fans will be located on the roof level; the blower wind channels will be located in shafts beside the staircases.

Solution for Exhausting Combustion Products

The heating-cooling is based on an up-to-date, environmentally friendly technology, thus no combustion product that needs to be exhausted arises during the operation of the building.

Electric system

The high and low voltage networks will be created by taking account of the requirements of the modern electric energy supply. The lighting systems are prepared in compliance with the function of the premises; the lamps are equipped with modern, energy saving light sources.

Separate high voltage branching will be provided for each building engineering equipment.

The unmeasured mains of the apartments will be connected to the meters on each floor, through the planned electric risers, guided vertically.

Common electrical equipment

We have planned one tariff metering for the community consumers in the 0,4kV switch room on the ground floor. The common consumption meters will be placed in the main distribution equipment.

The staircase lighting can be switched on automatically from the staircase automatic switch, by push-buttons; the corridor lighting will be switched on by motion sensors. Lamps with opal cover, installed with LED light source will be used in the staircases and the corridors.

The general lighting in the garage is provided by fluorescent lamps, with automatic delayed shutdown, with push-buttons, or with motion sensors that can be operated in several phases.

Low voltage:

The following conduits and cable holder device and systems related to the low voltage systems are planned to be installed in the residential block:

There will be a so-called low current box in the hallway cabinet in each apartment (beside the consumer high voltage main distributor). The conduit is connected through this box to the termination point installations:

Phone network: The termination point elements of the individual service providers can be installed in the low voltage rooms to be constructed on the ground floor. One connection is planned for the building. From here, conduits or cable tray tracks will be provided for the low voltage risers of the apartments.

Entry-phone network: black and white entry-phone system, with integrated doorbell for the apartment entrance, too (with separate tone of voice). The entrance door of the residential building can be opened from the appliance in the apartment.

Cable TV: One connection is planned for the building. The distribution and the conduits will be planned on the assumption that the nature of the installation will be star point coaxial cable network. The termination point elements of the individual service providers can be installed in the low voltage rooms to be constructed on the ground floor. From here, conduits or cable tray tracks will be provided to the low voltage risers of the apartments. One termination point will be installed in each room.

Electrical equipment of the apartments

We plan to install distribution boards with circuit breakers for the apartments. The distribution boards will normally be placed into the built-in cabinets beside the entrance doors, outside the wall.

Fire protection

We plan to install back-up lighting (battery powered safety lights and guide lights (showing the exit)) on the escape routes in the building. The back-up lamps are provided with built-in battery.

Accessibility

By virtue of their functions, accessibility is not required for the buildings; however, the buildings are suitable for wheelchair users: beside the steps there are lifts designed also for wheelchair use and free access ramps for overcoming differences in level. The dimensions of the ground floor entrance door and the main doors on the ground floor are suitable for obstacle-free traffic.

Lifts

Each one of the three staircases of the building has two passenger lifts, one of which is suitable for moving furniture, too. Obstacle-free traffic is provided by the lifts in each staircase. There will be a separate lift and a moving walkway between the underground car park and the ground floor for commercial traffic.

3. Technical content of common areas

Staircase, corridors

Floor: coloured, non-slip gres floor tiles, frost resistant outdoor tiles.

Wall: plastered and/or textured coating (on steel reinforced aerated concrete wall surfaces), with white dispersion wall paint in two layers.

Ceiling: textured coating (on steel reinforced aerated concrete wall surfaces), with white dispersion wall paint in two layers.

Building entrance doors: metal portal structures, with automatic door closers. Internal common doors: metal, in accordance with the building permit.

Dustbin area

Floor: coloured, non-slip gres floor tiles.

Wall: wall tiles up to 2,1 meters, plastered and/or textured coating (on steel reinforced aerated concrete wall surfaces), with white dispersion wall paint in two layers.

Ceiling: textured coating (on steel reinforced aerated concrete wall surfaces), with white dispersion wall paint in two layers.

Door: metal, in accordance with the building permit.

Garage area

Floor: synthetic resin flooring.

Wall: plastered and/or textured coating (on steel reinforced aerated concrete wall surfaces), with white dispersion wall paint in two layers.

Ceiling: heat insulated or textured coating (on steel reinforced aerated concrete wall surfaces), in this case with white dispersion wall paint in two layers.

Lifts

Number of lifts: there is one duplex lift group without machine room, with counterweight in each staircase, each group has Kone type lifts with a smaller and a larger cabin which are suitable for moving furniture, too.

Capacity: 1 lift per staircase for 8 persons, with a load capacity of 630 kg and 1 lift for 13 persons, with a load capacity of 1000 kg, suitable for transporting goods, too.

Technical content of apartments

Walls

General fitted partitions:

12,5 cm gypsum plasterboard partition system with 2x2 layers of RB 12,5 sheathing
with 50 mm mineral wool fill, 75 mm CW/UW profile system

Typical fitted partitions between wet rooms and dry areas:

12,5 cm gypsum plasterboard partition system
2 layers of RB 12,5 + 2 layers of RBI 12,5 sheathing
with 50 mm mineral wool fill, 75 mm and 100 mm CW/UW profile system

Typical fitted partitions between wet rooms and dry areas:

12,5 cm gypsum plasterboard partition system
2 layers of RBI 12,5 + 2 layers of RBI 12,5 sheathing
with 50 mm mineral wool fill, 75 mm and 100 mm CW/UW profile system

Masonry walls between apartments:

25 cm thick solid calcium silicate masonry block, thin bed mortar

Masonry walls between apartments and common corridor:

20 cm thick solid calcium silicate masonry blocks, thin bed mortar

Ceiling

White dispersion wall paint in two layers on steel reinforced concrete surface with textured coating.

Balcony and terrace floor

frost-resistant through-body ceramic tile – gres floor tile

Doors and windows

Entrance door: veneer security door panel, with solid particle board lining, multiple-point locking device, protection against unhinging.

Internal doors: Laminated surface, paper grid/particle board, size according to the architectural plans, in optional colours.

Windows/balcony doors: plastic doors and windows with tilting-opening fittings, with 6 air chamber profile system, the balcony door with multiple-point security fittings.

Floor covering

Living room, bedroom, wardrobe: laminated parquet floor with skirting board, in optional colours.

Entrance hall, hallway, kitchen, dining room, pantry: ceramic-gres floor tiles, with skirting, laying with mesh.

Bathroom, lavatory: ceramic-gres floor tiles, with skirting, laying with mesh.

Balcony, terrace: frost resistant, non-slip ceramic-gres floor tiles, with skirting, laying with mesh.

Wall covering/wall surface

Walls, ceiling: textured coating with white dispersion wall paint in two layers.

Bathroom, lavatory: ceramic tiles up to the height of the door frame in the bathroom and up to 1,5 m height in the lavatory, in optional colours, laying with mesh.

Kitchen: ceramic wall tile can in optional colours between 90 cm and 150 cm height, in a 60 cm strip, in optional colours, laying with mesh.

Heating-cooling, water supply

Heating-cooling pipes: The heating-cooling system is distributed to the flats through the main pipeline led through the shaft. The heating-cooling main pipeline led through the shaft is made of seamless steel pipe, with welded joints. The heating-cooling is accomplished by thermal construction component activation (ceiling), by building plastic pipelines within the structure (the cold water circulated in the pipes provides the air-conditioning in summer).

Water pipes: In case of cold water, the main lines for the drinking water are made from galvanized steel pipes, or stainless steel pipes, or PP plastic flow pipes and their fittings; in case of hot water and circulation network, they are made from stainless steel pipes, or PP plastic flow pipes and their fittings.

Sewerage: The gravity sewer network to be built within the building is built from plastic pipes. Stench-traps will be built into the sewer pipe connection of all installations.

Metering cabinets: The meters of the apartments (heat meter, water meters: cold and hot water) will be placed in metering cabinets on the corridors.

Ventilation

Ventilated rooms: enclosed spaces (without natural ventilation) bathroom and lavatory, pantry and wardrobe.

Pipe: exhaust ventilation system, mechanical exhaust, with metal ventilation pipes in the ventilation shafts. The exhaust ventilators are operated by the light switch in the lavatories; in the bathrooms they can be operated by separate switches.

Air supply: through the ventilation holes built in the external doors and windows of the building, or by tilting the external doors and windows for ventilation.

Sanitary appliances and fittings

Washbasin: white, semi porcelain, 60cm wide, Alföldi or equivalent

Bathtub: white acrylic bathtub, 160-175 cm long, built in, with tiled side panel, with chrome drainage and overflow fittings.

Tap: chrome, single-lever bath and basin mixer tap. Hand shower set with fixed wall mount holder for the bath tap.

Lavatory: semi porcelain, white wall mounted dual flush rear outlet toilet bowl, with in-wall hidden cistern.

Washing machine connection: in-wall connection to the drainage and access point to take cold water.

Dishwasher connection: water intake possibility through the combined valve of the dishwasher and connection to the drainage through the combined siphon of the dishwasher (sink and siphon are not part of the technical content).

High voltage electric network

Metering cabinet: type approved by the Electric Board, the electric meters of the apartments will be installed in groups in a box which can be opened from the corridor.

(We plan to install distribution boards with circuit breakers for the apartments. The distribution boards will normally be placed into the built-in cabinets beside the entrance doors, outside the wall).

Capacity, installation: installation according to the Hungarian Standard in force, 1*32A

High voltage electrical fittings

Sockets, switches: white plastic fittings

Sockets

<u>Room:</u>	in rooms larger than 15 sqm	5 pcs
	in rooms smaller than 15 sqm	4 pcs
<u>Kitchen:</u>	single	3 pcs
	for dishwasher – single	1 pc
	for fridge – single	1 pc
	for extractor hood – single	1 pc
	hob connection	1 pc
	for oven – single	1 pc
	(Only electric cookers may be installed in the apartments!)	
<u>Terrace:</u>	above 20 sqm, and ground-floor ap. with garden access	1 pc – single

Lighting-only connection and the **switch** belonging to it

<u>Room:</u>	chandelier connection on the ceiling	1 pc
<u>Dining room:</u>	chandelier connection on the ceiling	1 pc
<u>Kitchen:</u>	chandelier connection on the ceiling	1 pc
	wall lamp (direct supply on 130 cm height)	1 pc
<u>Bathroom:</u>	connection on the ceiling	1 pc
	above the washbasin	1 pc
<u>Lavatory:</u>	lamp connection on the ceiling	1 pc
<u>Entrance hall/hallway:</u>	Thermostat	

Installation heights: wall mounted switch 1,1 m, thermostat on side wall: 1,4 m, socket on side wall normally: 0,3 m, socket in kitchenette on side wall: 0,6-1,3 m

Low voltage electric network and installations

Phone: Cat-5e UTP will be installed to the termination point installations; there will be one termination point in each living-bedroom.

Cable TV: RG-6 triple screened cabling will be installed to the termination point installations; there will be one termination point in each living-bedroom.

Entry-phone: There will be one appliance in the entrance hall, external unit beside the staircase entrance door.

Optional black and white entry-phone system, with integrated doorbell for the apartment entrance, too (with separate tone of voice). The entrance door of the residential building can be opened from the appliance in the apartment.

Mailbox

4. Size tolerance

The sizes on the apartment floor plans have been calculated with raw brick and concrete walls and pillars, without plastering and tiling; the quantity of plastering, tiling will be reduced on these sizes and floor spaces.