

Les Vergers School

Sylla Widmann Architectes



Concrete frames wooden buildings in an eco-sensitive school complex

Les Vergers is a new eco-district of Meyrin, a Swiss municipality between Geneva, its airport and the CERN particle accelerator research center. The district's new school complex was completed in 2018 and designed by Geneva-based Syl-la Widmann architectes. Its four rectangular-plan volumes, with a total of 12,271m² of floor, form an ensemble on a site face countryside on two sides and new high-density housing blocks on the other sides.

The complex has four buildings, which are a primary school, an after-school care and auditorium, a sports building and a special needs school. They share the same orientation and the spaces between them form courtyards and passages that are give the complex a self-contained urbanity. Three of the four volumes are linked at basement level, and there is synergy between all them above ground. A hybrid construction system lends the project a dual architectural identity which integrates it into its context while also creating a distinctive and peaceful interior atmosphere.

The ground floor and basement house the main entrances, as well as spaces to accommodate the various groups that make use of the sports hall, restaurant, auditorium, specialised rooms and meeting areas. Classrooms and school premises are located on the upper floors, which receive ample natural light, and have an expansive visual link with the landscape, including views towards France and the Jura mountains. Wide balconies on all sides of the buildings, can

제네바 전원 지대에 들어선 지속가능한 학교 캠퍼스

스위스 제네바의 전원 도시 메링. 제네바 국제공항과 유럽 입자물리연구소 사이에 새로 조성된 환경친화지역 '레베르쥐'가 있다. 2018년, 이곳에 제네바에서 활동하는 실라 뷔드만 아키텍트가 설계를 맡은 학교 캠퍼스가 새로이 들어섰다.

초등학교, 방과후 돌봄 교실과 강당, 스포츠 건물, 특수 학교 이렇게 네 동의 건물이 단지를 이룬다. 두 면은 인근 전원 지대를, 나머지 두 면은 최근 들어선 주택 밀집지역을 마주보고 있다.

건물들은 사이사이에 놓인 정원과 통로를 공유하며 작은 도시 캠퍼스를 이룬다. 그 중 세 동의 건물은 지하에서 연결되고, 지상에서도 어우러지며 서로 시너지 효과를 낸다. 목재와 콘크리트를 혼합한 설계가 두 가지 건축 특색을 드러내며 주변 환경과 녹아들고, 개성과 편안함이 느껴지는 실내 분위기를 조성한다.

지하와 1층에는 주출입구와 더불어 대규모 인원을 수용할 수 있는 스포츠 강당, 식당, 오디오리움, 특별활동교실, 회의실이 자리한다. 상층부에 위치한 교실과 행정실에서는 풍부한 자연광과 함께 프랑스와 쥐라 산맥을 비롯한 인근의 드넓은 경치가 시야에 들어온다. 건물 모든 면에는 넓은 발코니가 설치되어 있어 여름에 야외 교실로도 활용된다.

be used as teaching space in summer.

The primary school is the dominant volume, one story higher than the others and with a capacity for 320 children. The two sports halls in the sports building are sunk to basement level. The buildings have terrazzo flooring, making a gentle contrast with the wood of other interior surfaces. However, the special needs school has white walls and coloured doors.

The structure of the buildings combines the qualities of concrete and timber. Inside, a timber frame serves to partition spaces, and supports landings and stairs, which are also timber structures. On the facades, reinforced concrete porticos form a durable framework. Tapering concrete perimeter columns are spaced regularly on the perimeter of each building, and are repeated on the upper floors. The balconies cantilevering beyond the columns provide covered access and escape routes while also providing shade and removing the need for blinds. By reinforcing the stability of the buildings, the perimeter structure also frees up the interior spaces, generating a wide range of design possibilities.

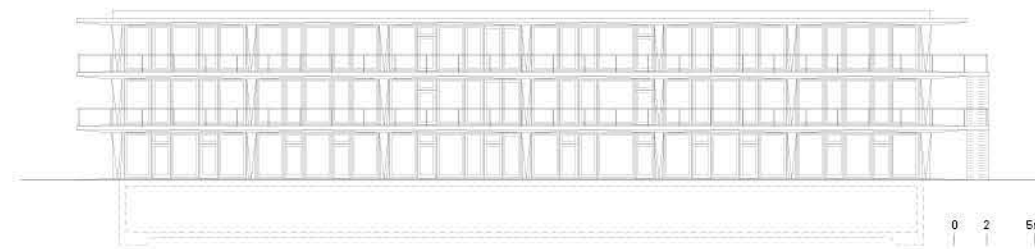
The school complex has strong environmental credentials, appropriate for the municipality's eco-designation. Buildings require almost no mechanical ventilation, and their roofs carry photovoltaics which also supply nearby housing, and collect rainwater to supply the toilets.

가장 큰 건물은 초등학교로서, 다른 건물보다 한 층이 높고 총 320명의 학생들을 수용할 수 있다. 스포츠 건물에 있는 두 개의 강당은 지하에 자리잡고 있다. 테라조 타일로 마감한 바닥이 목재 소재의 인테리어와 은은한 대조를 이룬다. 특수 학교는 흰 벽과 색깔 있는 문으로 차별화를 두었다.

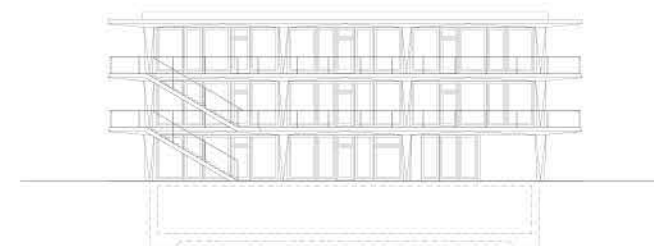
건물 뼈대는 콘크리트와 목재를 혼합해 사용했다. 내부 공간을 나누는 벽, 계단과 난간 역시 목재를 썼다. 건물 표면과 현관은 강화 콘크리트를 사용하여 내구성이 뛰어난 구조를 완성했다. 각 건물마다 폭이 점점 좁아지는 기둥이 아래, 위층 모두에 규칙적으로 배열되어 있다. 기둥 위에 캔틸레버 식으로 놓인 발코니가 입구와 통로의 지붕이 되는 동시에, 블라인드가 필요 없는 그늘을 드리워 준다. 이렇게 주변부에 기둥을 배열한 구조는 건물의 안정성을 높이고 내부 공간을 확 트이게 만들으로써 다양한 실내 디자인을 가능케 한다.

환경친화지역이라는 도시의 타이틀에 걸맞도록, 레베르쥐 학교 역시 지속가능성을 염두에 두고 설계되었다. 건물은 기계식 환기 시스템이 거의 필요 없고, 지붕에는 태양열 패널을 달아 인근 주택까지 에너지 공급이 가능하며, 화장실에서는 모아놓은 빗물을 활용한다.





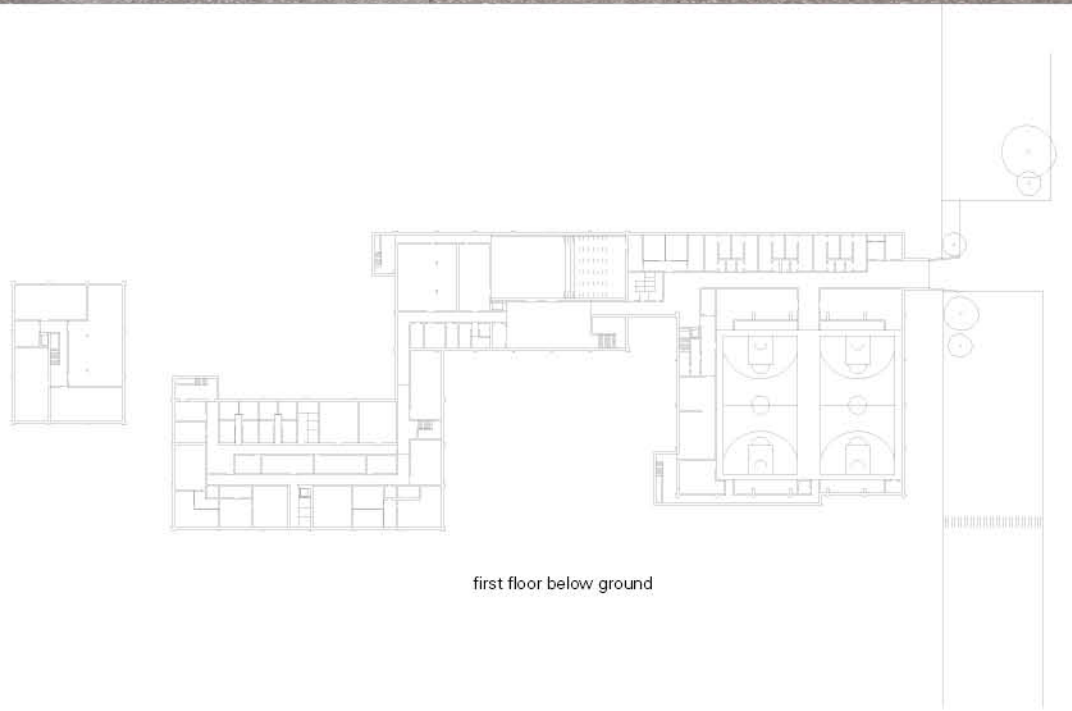
primary school_south-east elevation



primary school_north-east elevation

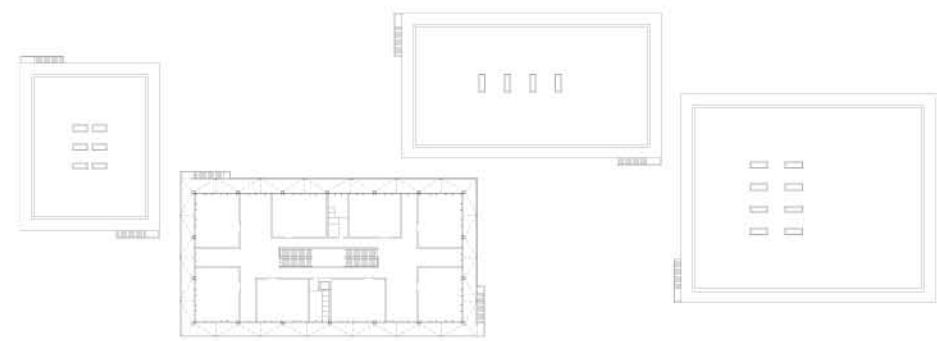






first floor below ground

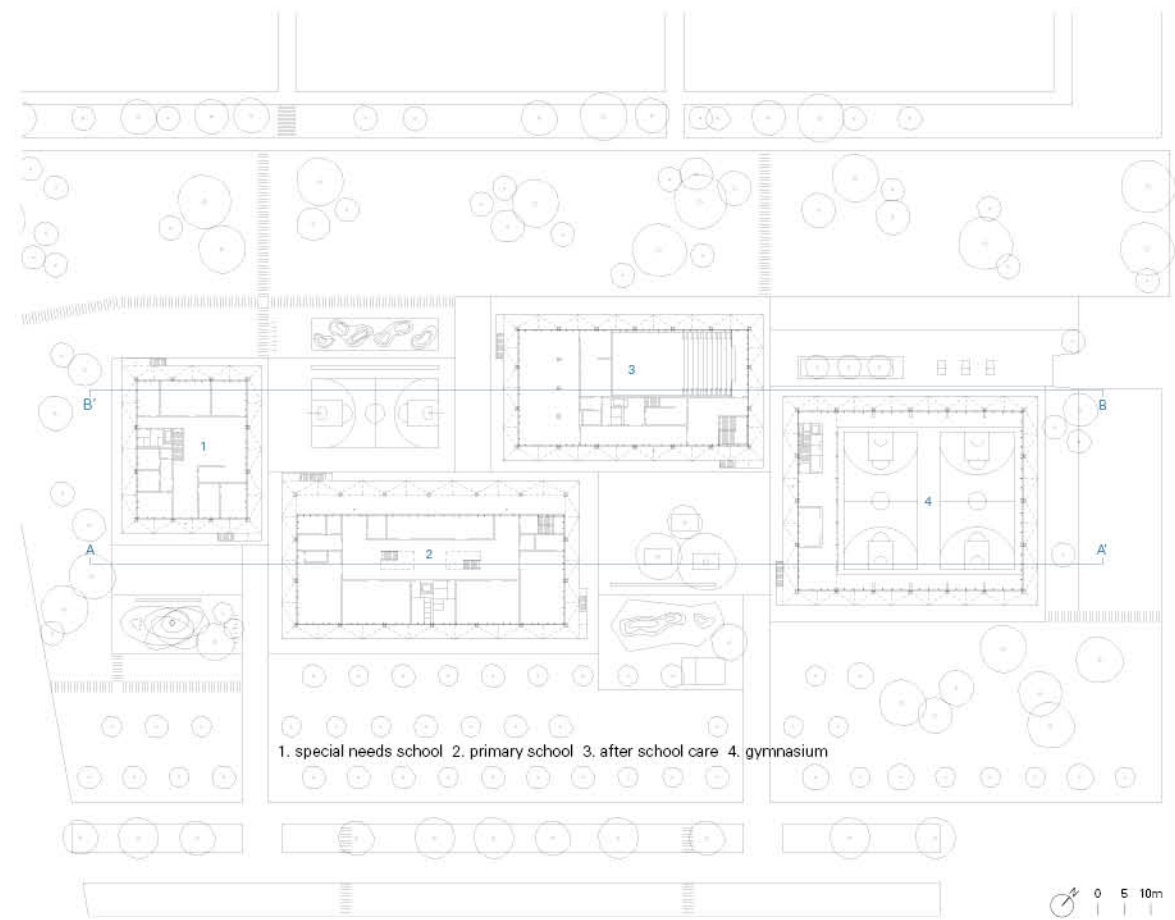
Project: Public Facilities in the Eco-District of Les Vergers / Location: rue des Arpenteurs 7-9-11-13, Meyrin, Switzerland / Architect: sylla widmann architectes / Project team: Nuno Costa (project manager), Joachim Fritschy, Vanessa Munoz, Teresa Ferreira, Mathilde Brenner, Daniel Medina, Yves Beetschen, Michele Capatori, Tomás de Riba / Construction management: M Architecture / Civil engineer: B+S Consulting Engineers Ltd. / Specialist engineers: EGC Chuard Ingénieurs conseils SA(CV), Zanetti Ingénieurs conseils (E + safety), Zanini-Baechli & Associés SA(S), Sorane SA(energy), EcoAcoustique SA(acoustics), BCS SA(façade engineer) / Signage: CCHE Design, Axel Jaccard / Game design: alfred / Client: Commune de Meyrin and Association La Voie Lactée / Site area: 12,277m² / Bldg. area: 5,866m² / Gross floor area: 12,271m² / Competition: 2014 / Construction: 2016-2018 / Photograph: ©Rasmus Norlander (courtesy of the architect)-p.190-191, p.193, p.195, p.196-197, p.200*, p.201, p.202, p.203, p.205; ©Yves André (courtesy of the architect)-p.194, p.200^{bottom}, ©Roger Frei(courtesy of the architect)-p.198



second floor



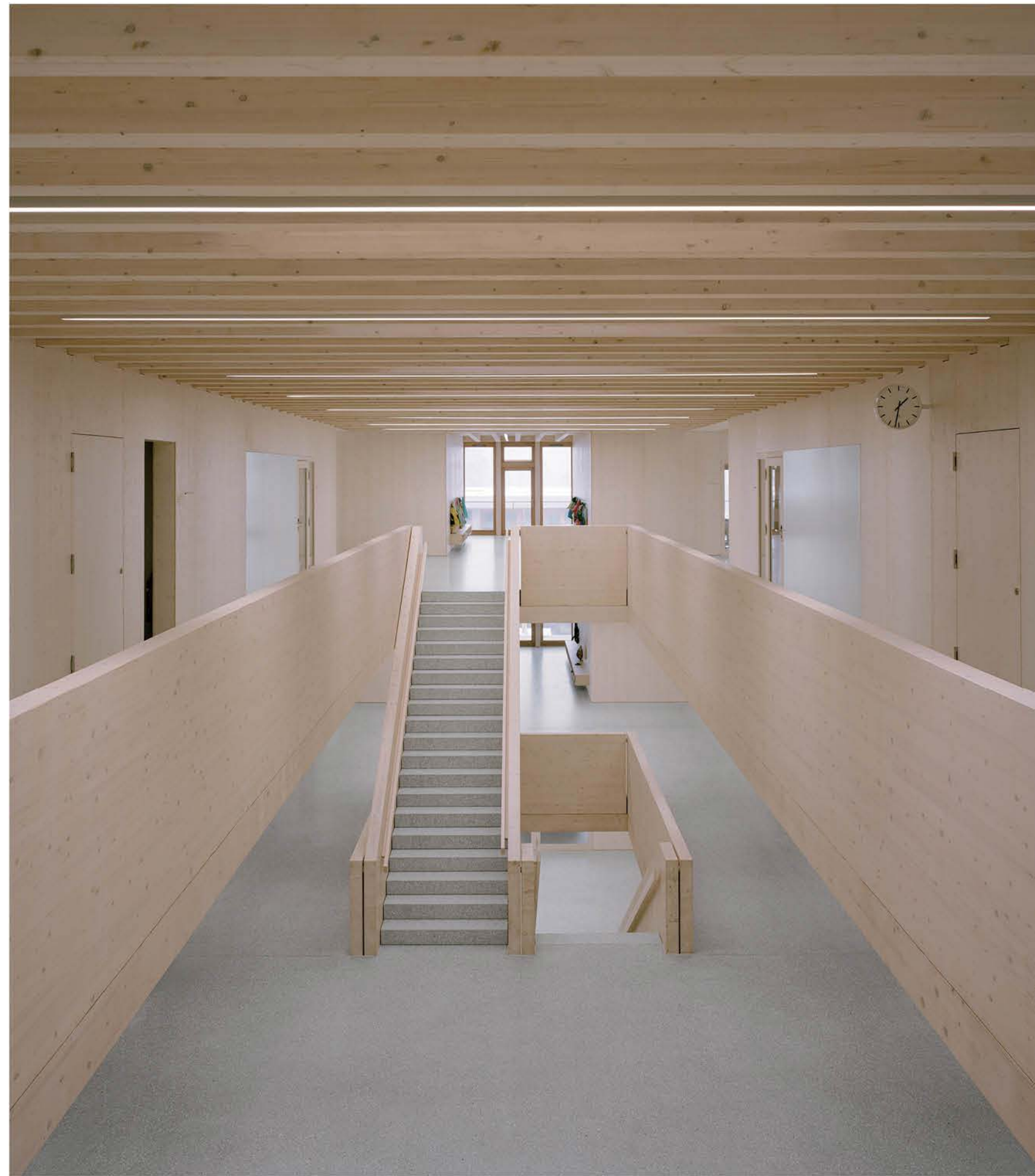
first floor

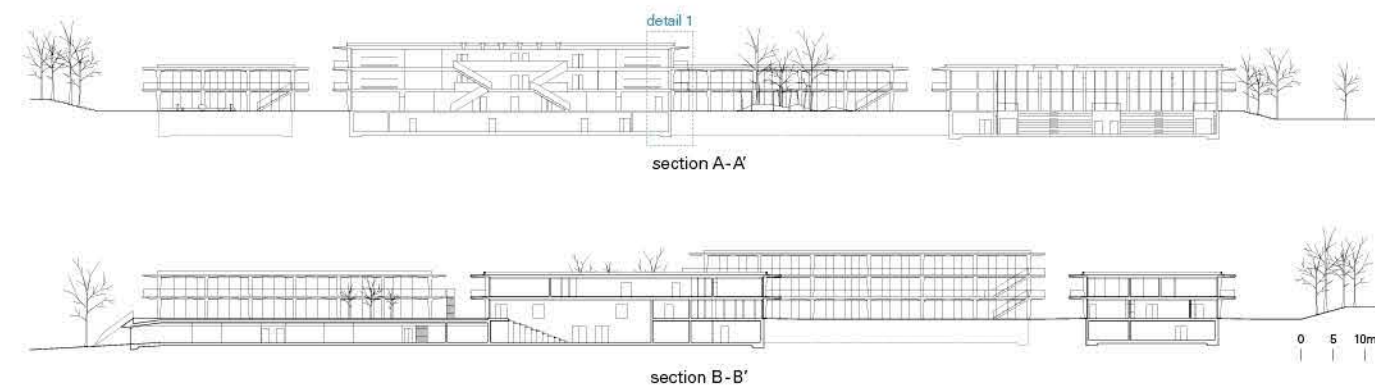


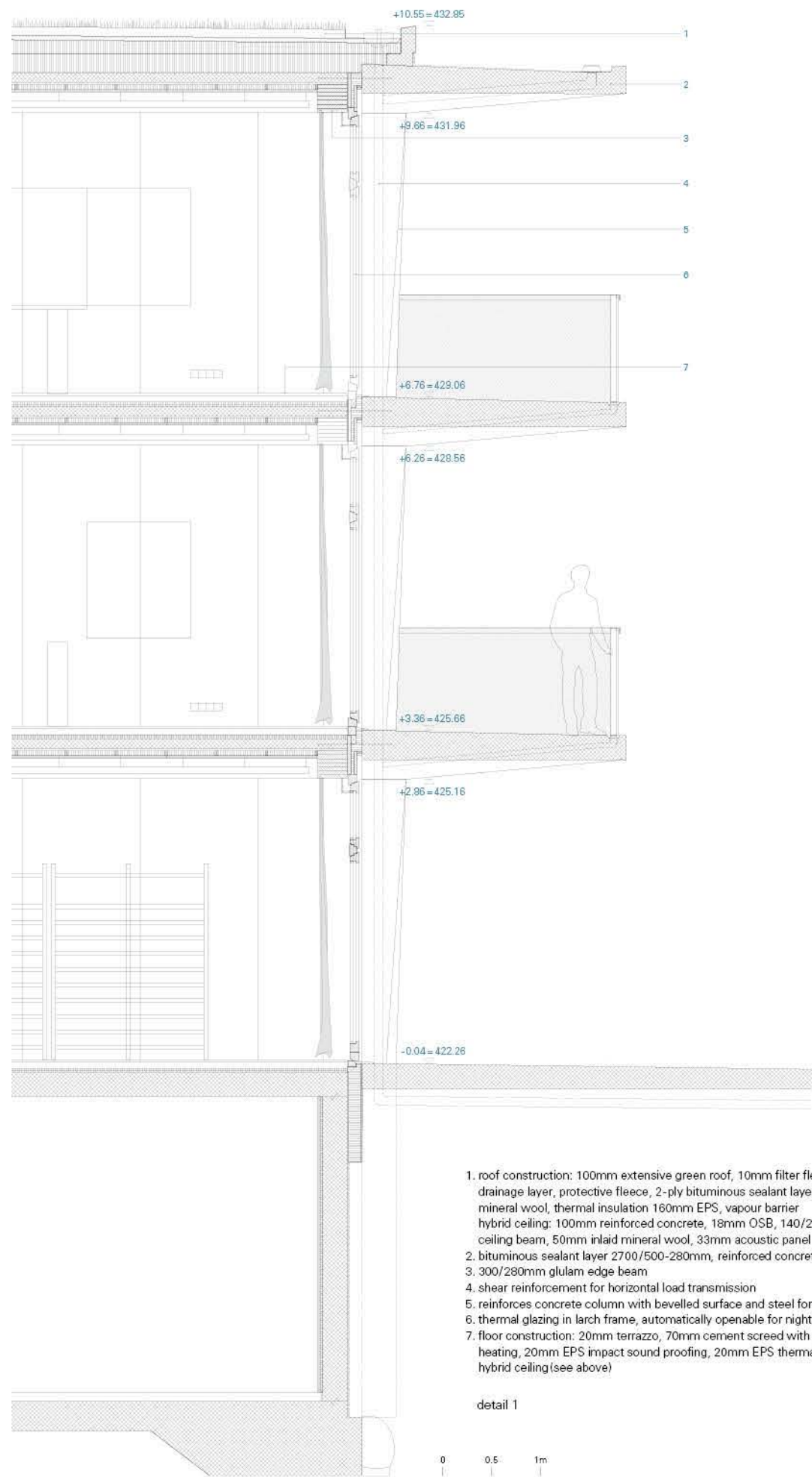
1. special needs school 2. primary school 3. after school care 4. gymnasium

ground floor









- 1. roof construction: 100mm extensive green roof, 10mm filter fleece, 20mm drainage layer, protective fleece, 2-ply bituminous sealant layer, 60mm mineral wool, thermal insulation 160mm EPS, vapour barrier
- hybrid ceiling: 100mm reinforced concrete, 18mm OSB, 140/280 glulam ceiling beam, 50mm inlaid mineral wool, 33mm acoustic panel
- 2. bituminous sealant layer 2700/500-280mm, reinforced concrete balcony slab
- 3. 300/280mm glulam edge beam
- 4. shear reinforcement for horizontal load transmission
- 5. reinforces concrete column with bevelled surface and steel formwork
- 6. thermal glazing in larch frame, automatically openable for nighttime cooling
- 7. floor construction: 20mm terrazzo, 70mm cement screed with underfloor heating, 20mm EPS impact sound proofing, 20mm EPS thermal insulation, hybrid ceiling (see above)

detail 1

