

The background of the entire cover is a white architectural section drawing of a school building on a solid red background. The drawing shows a cross-section of a large, open-plan space with a high ceiling supported by a complex steel truss system. The structure includes multiple levels, with a prominent cantilevered upper section. The drawing uses fine white lines to delineate structural elements like beams, columns, and floor slabs. The overall style is technical and precise, typical of architectural blueprints.

SCHOOL BUILDINGS

Spaces
for
Learning
and
the
Community

Edition **DETAIL**

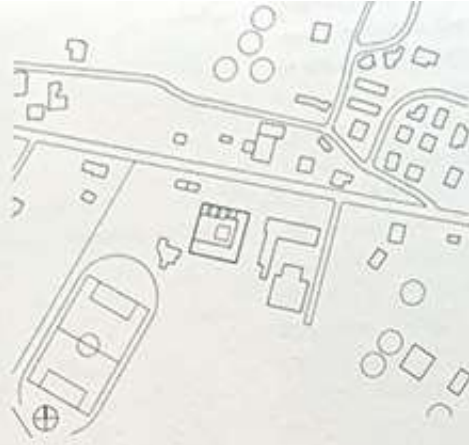
Primary
School
in
Chiarano



Resembling a compact block on the outside, the new primary school in Chiarano, a municipality north-east of Venice, surprises with its light-flooded interior. The building by architects Carlo Cappel and Maria Alessandra Segantini responds to the plot's location on an arterial road. Punctuated solid facades shield the structure from the road and the parking spaces. Their different colours – anthracite grey facing the street and a warm red tone to the west and east – are reminiscent of the facades of the country estates in Veneto and create a strong sense of place that expresses the school's significance for the municipality. Different window sizes and colour-contrasted borders enliven the facade surfaces, while the building's south side opens towards the surroundings with its glazed front in broad iroko frames, protected by a large roof overhang and delicate columns. The almost square ground plan was designed to be transparent and permeable. Its centre comprises a spacious two-storey atrium around which all the spaces are grouped, making it possible to dispense with further corridors. The walls facing the classrooms are glazed above 1.20 m, creating visual links to all rooms as well as to the outside. The atrium itself is flooded with daylight that enters through the glazed facades of the courtyard. As a central light source, positioned in the building like a lantern, it isn't on the ground floor but at the height of the first floor, on a concrete platform standing in the atrium like a large table. Beneath the platform and hence in the centre of the school building, sunken by a couple of steps, lies the library. It is lit from above by glass domes as well as spotlights. Distinctive lighting also accentuates the three spaces for the specialist classes on the upper floor, which are arranged on the north side and have a double ceiling height. The various different designs of the punctuated facade partly extend down to the floor, while additional light enters through the raised, south-facing ribbon windows. After winning the competition, the architects discussed the further design process with the municipality but also with citizens and associations, in order to use the school as a focus of social life in this area of urban sprawl. As a result of this, the municipal children's library was integrated into the building, which is why it also remains open after school hours. During this time, the gym, the art room and the music room as well as the multi-functional dining hall are available for public use, with a view to more strongly interlinking the school with community life. The ground floor was designed with this potential in mind, effectively converting the school building into a covered public space.

Location	Chiarano, IT
Construction period	2010–2013
Type of school	Primary school
School concept	Classrooms grouped around a glazed atrium with a school garden; below the atrium a public library is integrated into the school building.
Pedagogical concept	Maximising the intervisibility among all the spaces where natural light comes from the glazed windows as well as from a skylight.
Additional room uses	The integration of the communal children's library within the school allows the building to be kept open after school hours. The covered public area enables the ground floor to be used as a meeting place for the general public.
Gross floor area	5,192 m ²
Effective floor area	2,435.50 m ²
No. of classrooms	10
No. of pupils	250
Structure	Concrete; timber trusses across the atrium; south-west front glazing in iroko frames; brickwork facades with a composite system of thermal insulation and colored rendering.
Lighting	Natural light through inner suspended courtyard; via openings in the north facade, roof lights to the south and glazed south-west front; glazed partitions between classrooms and the circulation zones above the parapet height of 1.20 m.
Ventilation	Natural ventilation
Energy aspects	Thick insulation, good orientation, geothermal energy, photovoltaic and solar panels, NZEB building.

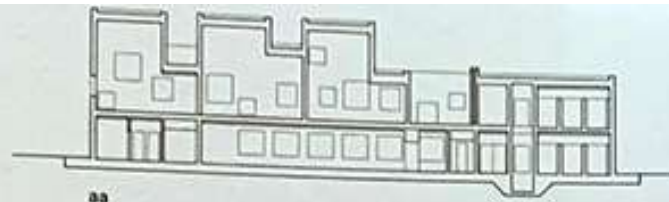
Site plan
Scale 1:5,000



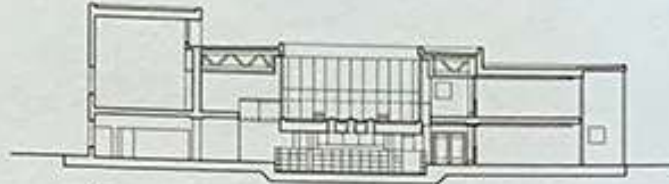
Facing the street, the building has a solid punctuated facade with differently sized windows and colour-contrasting borders. In contrast, the south side has a glazed front which opens onto the surroundings.

Sections
Floor plans
Scale 1:500

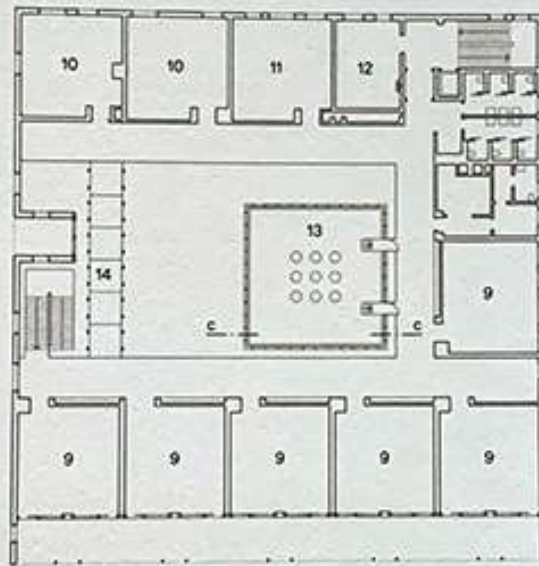
- 1 Main entrance
- 2 Discussion space
- 3 Refectory/Multipurpose space
- 4 Recreation area
- 5 Library
- 6 Mechanical services
- 7 Music room
- 8 Common room
- 9 Classroom
- 10 Classroom for natural sciences
- 11 Computer room
- 12 Ventilation plant
- 13 School garden
- 14 Bridge



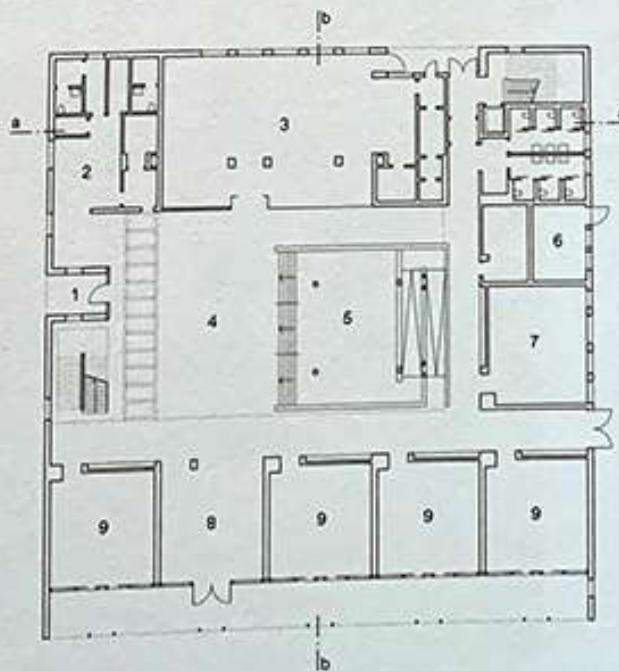
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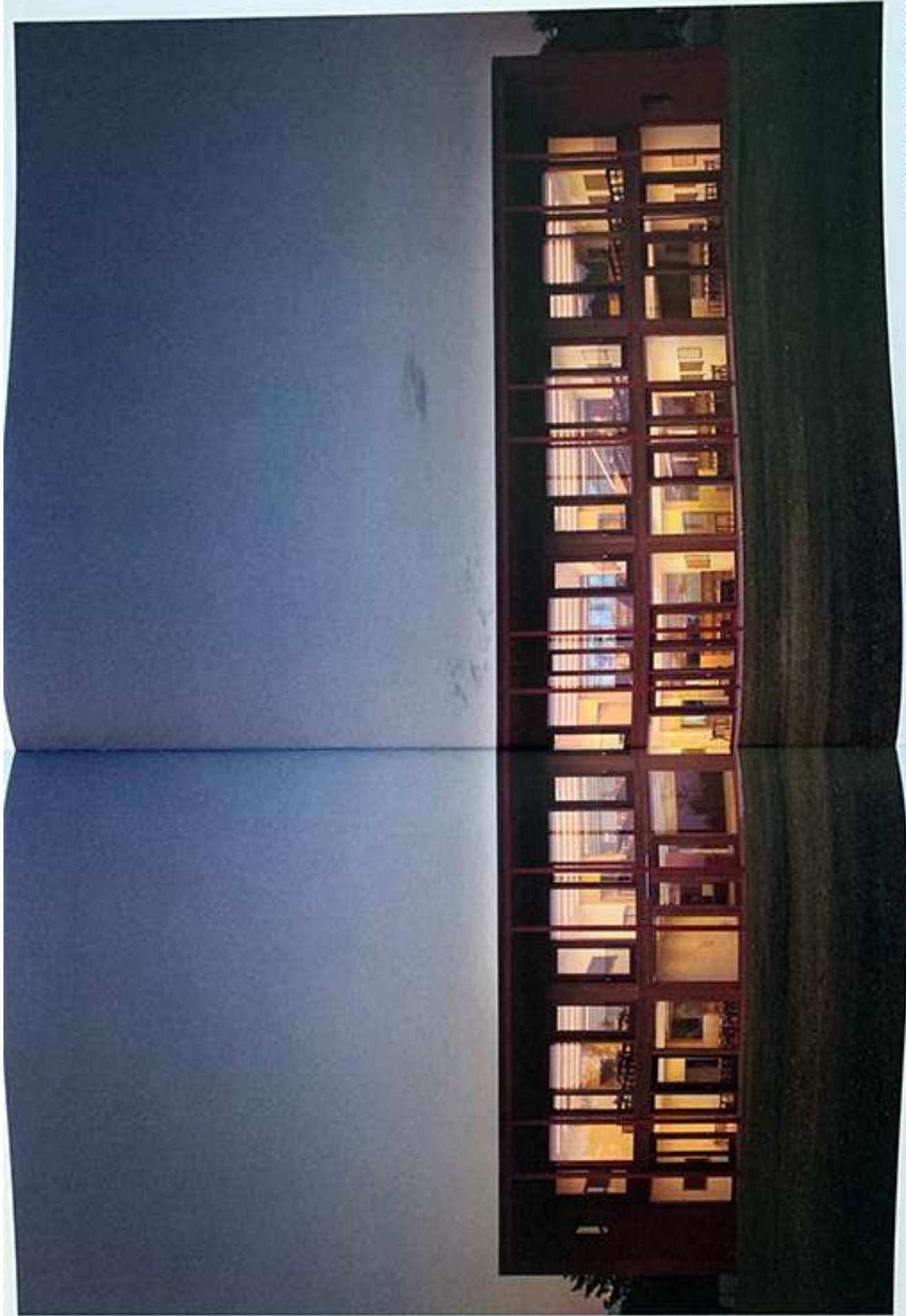
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Upper floor



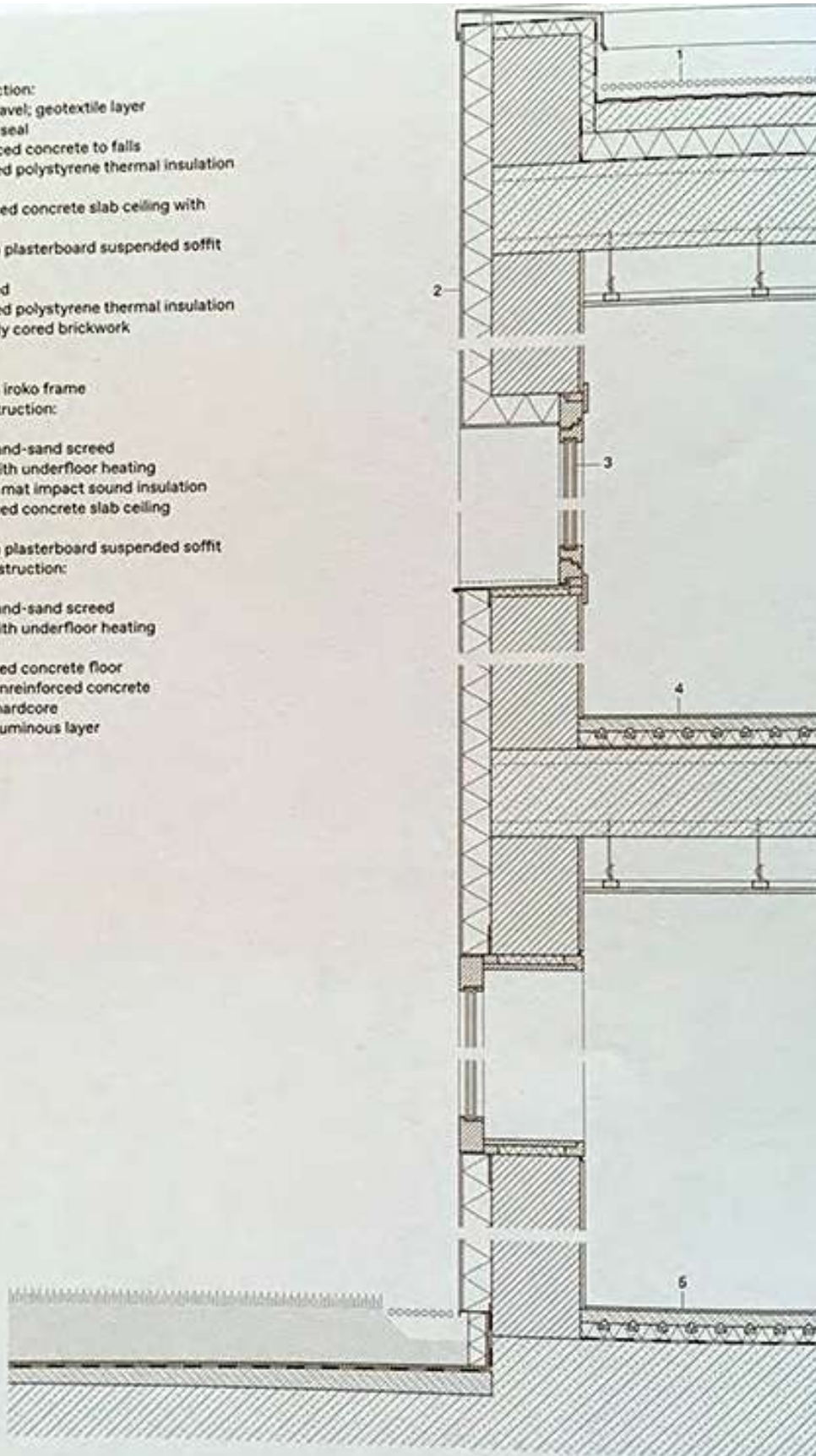
Ground floor



PRIMARY SCHOOL IN CHIARANO, IT

Vertical section
Scale 1:20

- 1 flat roof construction:
50 mm bed of gravel; geotextile layer
two-layer EPDM seal
≥ 50 mm reinforced concrete to falls
100 mm expanded polystyrene thermal insulation
vapour barrier
300 mm reinforced concrete slab ceiling with
EPS core
12.5 mm gypsum plasterboard suspended soffit
- 2 external wall:
rendering, painted
100 mm expanded polystyrene thermal insulation
300 mm vertically cored brickwork
15 mm plaster
- 3 window:
double glazing in iroko frame
- 4 upper floor construction:
5 mm linoleum
45 mm cement-and-sand screed
50 mm screed with underfloor heating
10 mm polyester mat impact sound insulation
300 mm reinforced concrete slab ceiling
with EPS core
12.5 mm gypsum plasterboard suspended soffit
- 5 ground floor construction:
5 mm linoleum
45 mm cement-and-sand screed
50 mm screed with underfloor heating
vapour barrier
700 mm reinforced concrete floor
100 mm bed of unreinforced concrete
300 mm bed of hardcore
root-resistant bituminous layer





The plastered, bright red and anthracite grey facades are reminiscent of the traditional country estates of Veneto, creating a link with the regional building culture.

1. 1.8 mm sheet steel, white coating
planned EPDM roofing felt
80 mm expanded polystyrene thermal insulation
500 (3) mm laminated timber slatted beam
Kaf roof construction
2. 80 mm bed of gravel, geotextile layer
flexible EPDM seal
800 mm dry polypropylene thermal insulation
adhesive layer, 80 mm concrete topping
40 mm wood boarding
50 mm glasswool preformed suspended ceiling
insulation
3. 80 mm dry polypropylene thermal insulation
2x 10/8 mm rebar reinforced plaster board
40 mm precast steel sandwich insulation
double glazing 2x 5 mm low E safety glass
+ 18 mm cavity + 2x 5 mm low E safety glass
Kaf seal system for window frame
50-100 mm bed of gravel, flex layer, EPDM seal
200-300 mm concrete topped to 1%
800 mm dry polypropylene thermal insulation
200 mm reinforced concrete slab
120 mm perforated suspended ceiling
4. 80 mm dry polypropylene thermal insulation
2x 10/8 mm rebar reinforced plaster board
40 mm precast steel sandwich insulation
double glazing 2x 5 mm low E safety glass
+ 18 mm cavity + 2x 5 mm low E safety glass
Kaf seal system for window frame
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200-300 mm concrete topped to 1%
800 mm dry polypropylene thermal insulation
200 mm reinforced concrete slab
120 mm perforated suspended ceiling
5. 80 mm dry polypropylene thermal insulation
2x 10/8 mm rebar reinforced plaster board
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800 mm dry polypropylene thermal insulation
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6. 80 mm dry polypropylene thermal insulation
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double glazing 2x 5 mm low E safety glass
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200 mm reinforced concrete slab
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7. 80 mm dry polypropylene thermal insulation
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