

ARMATURA LONGITUDINALE  
delle nervature  
esistenti Ø10

130

140

88

154

AREA DA DEMOLIRE  
PARZIALMENTE MANTENENDO  
UNA PARTE DELLE  
ARMATURE DEL SOLAIO

TRAVE 55x21 cm

88

CORRADO 25x21 cm

CORRADO 25x21 cm

VISTA IN PIANTA – SEZIONE D-D

Area da demolire per consentire l'appoggio della trave HEB-200

Trave HEB-200 in acciaio S235

Rivestimento in lastre di acciaio sikkato di spessore 25 mm, resistenza al fuoco R60

[illegible]

The diagram illustrates a cross-section of a reinforced concrete slab labeled "SOLAI IN LATEROCEMENTO 16+5". It shows two vertical columns supporting the slab. The reinforcement includes top bars (red) and bottom bars (black). Key dimensions include a total width of 22.5m, column widths of 0.75m and 1.0m, and various clearances and lap lengths such as 1.17m, 0.30m, 0.90m, 1.00m, and 1.08m. Annotations specify the use of UNP-180 profiles, M16 bars with a minimum length of 300mm, and existing cables with a diameter of 25x21cm. A note at the bottom left mentions a steel plate reinforcement with a thickness of 25mm and fire resistance of R60.

[illegible]

SEZIONE B-B

210

134 55

1A

1

3

TRAVE ESISTENTE  
55x21 cm

SEZIONE A-A

TRAVE ESISTENTE  
25x21 cm

150

130 20

25 30 30 30

1

3

1

3

1

Technical drawing of a reinforced concrete slab with a central opening. The drawing includes the following labels and dimensions:

- Trave esistente in calcestruzzo armato 55x21 cm**: Existing reinforced concrete beam, 55x21 cm.
- Matta fittissima a ritiro controllato con resistenza a compressione > 50 MPa**: Very dense, controlled shrinkage concrete with compressive strength > 50 MPa.
- Rivestimento in lastre di calcio silicato di spessore 25 mm, resistenza al fuoco R60**: Silicate calcium board, 25 mm thick, fire resistance R60.
- Trave HEB-200, in acciaio S235**: HEB-200 steel beam, S235.

**Dimensions:**

- Overall width:** 445 cm.
- Overall height:** 270 cm.
- Beam height:** 60 cm.
- Slab thickness:** 195 cm.
- Opening width:** 210 cm.
- Opening height:** 200 cm.
- Distances from beam centerline to slab edges:** 155 cm (top), 195 cm (bottom).
- Distances from beam centerline to opening edges:** 115 cm (left), 115 cm (right).
- Distances from opening centerline to slab edges:** 175 cm (left), 175 cm (right).

The drawing is a detailed architectural floor plan of a building's ground floor. It shows a complex arrangement of rooms and corridors. Key structural elements are labeled, including reinforced concrete beams (CORDOLO), composite slabs (SOLAI LATEROCORRENTO), and transverse beams (TRAVE). Two specific details are highlighted with red lines and labels:

- PARTICOLARE 1:** This detail shows the reinforcement of central beams in a concrete slab using two steel profiles (UPN-180) placed on top of the beams. The reinforcement is intended for the removal of existing masonry walls.
- PARTICOLARE 2:** This detail shows the reinforcement of central beams in a concrete slab using two steel profiles (HEB-200) placed on top of the beams. The reinforcement is intended for the removal of existing masonry walls.

The plan also includes dimensions for various elements, such as the width of corridors (CORDOLO) and the spacing of slabs (SOLAI). The overall layout shows a central corridor system connecting various rooms of different sizes.

The drawing is a detailed architectural floor plan of a building, likely a school or institutional structure, showing structural reinforcement details. The plan includes several corridors (CORRIDOIO) and rooms (SALONE). The dimensions of the corridors and rooms are specified. Two specific reinforcement details are highlighted with red circles and labels: 'PARTICOLARE 1' and 'PARTICOLARE 2'. Particolare 1 shows a cross-section of a beam (TRAVE) with reinforcement bars (PROFILO UPN-180) and a note about the removal of the central part of the beam for the intervention. Particolare 2 shows a cross-section of a beam (TRAVE) with reinforcement bars (PROFILO UPN-180) and a note about the removal of the central part of the beam for the intervention.

**Particolare 1:** Rinvio delle travi centrali in c.a. tramite posa di due profili in acciaio UPN-180, previa demolizione nella muratura per il passaggio dei profili INTERVENTO STRUTTURALE 1.

**Particolare 2:** Rinvio delle travi centrali in c.a. tramite posa all'introduzione di trave in acciaio HEB-200, previa demolizione nella muratura per il passaggio della trave INTERVENTO STRUTTURALE 2.

Architectural floor plan showing structural reinforcement details. The plan includes a central staircase and several rooms. Key dimensions and labels include: CORRIDOIO 40x21 cm, SOLAIO LATEROCCO 16+5 cm INTERASSE 38 cm, CORRIDOIO 25x21 cm, TRAVE 25x21 cm, TRAVE HEB-200, and TRAVE 25x40 cm. Two specific reinforcement details are highlighted: 'PARTICOLARE 1' showing the reinforcement of central beams with UPN-180 profiles, and 'PARTICOLARE 2' showing the reinforcement of central beams with HEB-200 profiles. The plan also indicates the removal of masonry for the passage of the beams and the intervention of structural reinforcement.

ACCIAIO STRUTTURALE TIPO S235 (secondo DM 14.01.08)	
<ul style="list-style-type: none"> <li>Tensione caratteristica di rottura</li> <li>Tensione caratteristica allo snervamento</li> <li>Modulo elastico</li> </ul>	$f_y = 360 \text{ N/mm}^2$ $f_{yk} = 235 \text{ N/mm}^2$ $E_s = 210 \text{ kN/cm}^2$
BULLONI M16 e BARRI FILETTATE	
<ul style="list-style-type: none"> <li>Classe di resistenza</li> </ul>	8,8
Cassaforzo classe C25/30 (secondo DM 14.01.08)	
<ul style="list-style-type: none"> <li>Resistenza a compressione cubico caratteristico</li> <li>Resistenza a compressione cilindrica caratteristico</li> <li>Resistenza a trazione media</li> <li>Modulo elastico sezione medio</li> </ul>	$R_{ck}: 30 \text{ N/mm}^2$ $f_{cdk}: 25 \text{ N/mm}^2$ $f_{ctk}: 1,8 \text{ N/mm}^2$ $E_{cm}: 31 \text{ kN/mm}^2$
Acciaio per armatura classe B450C (secondo DM 14.01.08)	
<ul style="list-style-type: none"> <li>Resistenza a trazione caratteristica</li> <li>Tensione di snervamento caratteristica</li> <li>Modulo elastico medio</li> </ul>	$f_y = 540 \text{ N/mm}^2$ $f_{yk} = 450 \text{ N/mm}^2$ $E_s = 210 \text{ kN/mm}^2$



**Geom. Umberto Caso**

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