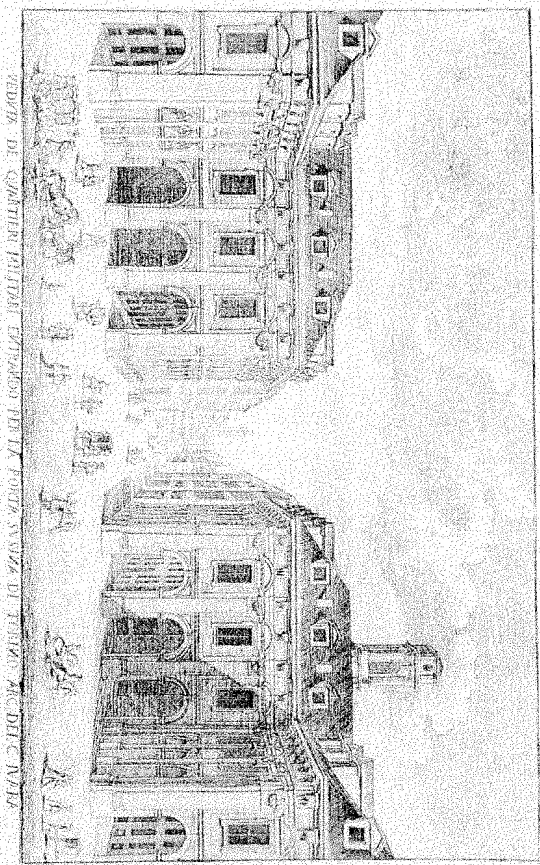


RECUPERO FUNZIONALE

DELL'EDIFICIO DI VIA DEL CARMINE 14

AD USO ARCHIVI ED ATTIVITA' CULTURALI



PROGETTO ESECUTIVO

|                                                                    |                             |
|--------------------------------------------------------------------|-----------------------------|
| Responsabile Unico di Procedimento e Dirigente del Settore         | Arch. Rosalba Stura         |
| Progettista opere architettoniche                                  | Arch. Emanuela Lavezzo      |
| Progettista opere strutturali                                      | Ing. Gianfranco Giovagnetti |
| Progettista opere impiantistiche                                   | Ing. Alfonso Famà           |
| Progettista della sicurezza – Collaboratore alle opere strutturali | Ing. Flavio Aquilano        |
| Supporto al R.U.P. per le opere strutturali                        | Ing. Elena Grillone         |
| Collaboratore progetto opere architettoniche e strutturali         | Geom. Bartolo Saulio        |
| Collaboratore progetto opere architettoniche e sicurezza           | Geom. Fabrizio Passantino   |
| Collaboratore progetto opere architettoniche                       | Arch. Michellina Pirrone    |
| Collaboratori progetto opere impiantistiche                        | P.I. Francesco Ferrari      |
|                                                                    | P.I. Maurizio Genovese      |

PROGETTO OPERE STRUTTURALI

| PROGETTO OPERE STRUTTURALI |                                                                 |            |                                         |
|----------------------------|-----------------------------------------------------------------|------------|-----------------------------------------|
| SCALA                      | ARMATURA TRAVI E SOLAI TERZO PIANO<br>(copertura piano Secondo) |            | S 22                                    |
| SCALA PLOT                 |                                                                 |            |                                         |
| REV                        | MODIFICHE                                                       | DATA       | DISEGNATORE                             |
|                            | Revisione                                                       | 18/11/2010 | Ing. G. GIOVAGNETTI/Ing. L. GIOVAGNETTI |

MATERIALI DA UTILIZZARE PER LE NUOVE TRAVI E I NUOVI SOLAI

Calcestruzzo classe di resistenza minima C25 / 30

Consistenza S3 per rampe scale e strutture inclinate e S4 per setti, travi e solai

Granulometria inerti :

sabbia da 0 a 3 mm / ghiaia da 0 a 16 mm.

Acciaio B450 C

MATERIALI DA UTILIZZARE PER IL RINFORZO DELLE TRAVI ESISTENTI

Calcestruzzo speciale auto compattante (SCC) a prestazione garantita, in accordo alla UNI EN 206-1 e UNI 11040 per strutture in elevazione confezionato con aggregati ben lavati, privi di impurità, non reattivi con gli alcali, aventi diametro massimo 16 mm. Consistenza S5 UNI EN 12350 / 2, resistenza a compressione a 28 gg. > 40 MPa (Classe 32/40)

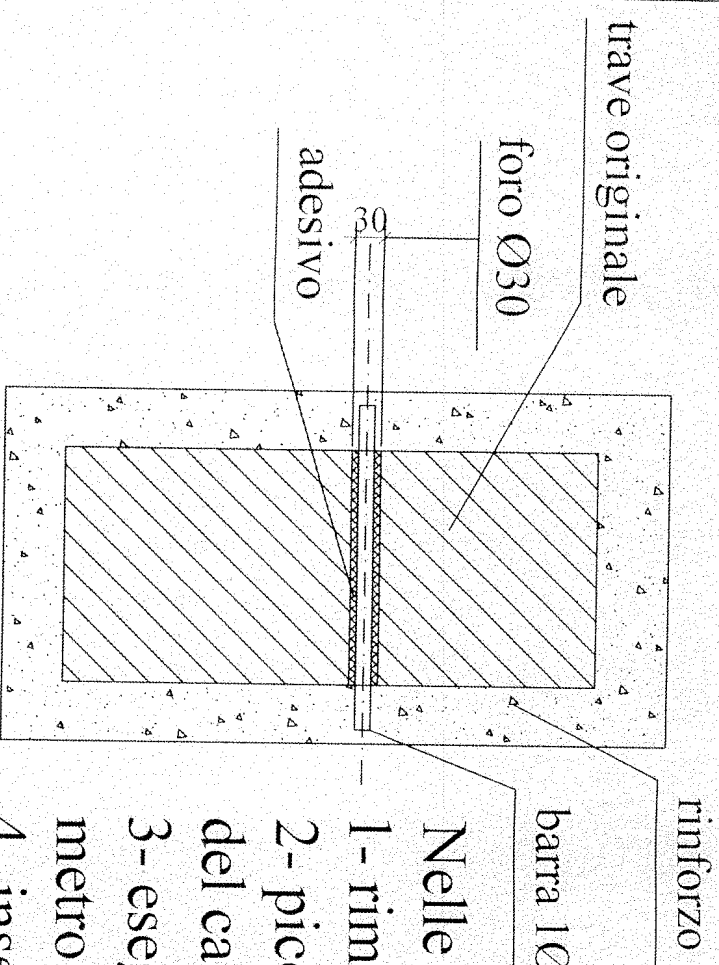
Acciaio armature lente: B450C

Acciaio piastre e profili: S275 Uni 10025-2

Bulloni e tasselli classe 8.8

Saldature classe I

Le piastre per supporto delle travi rinforzate, dovranno essere poste in opera sopra gli interventi di placcaggio delle murature.



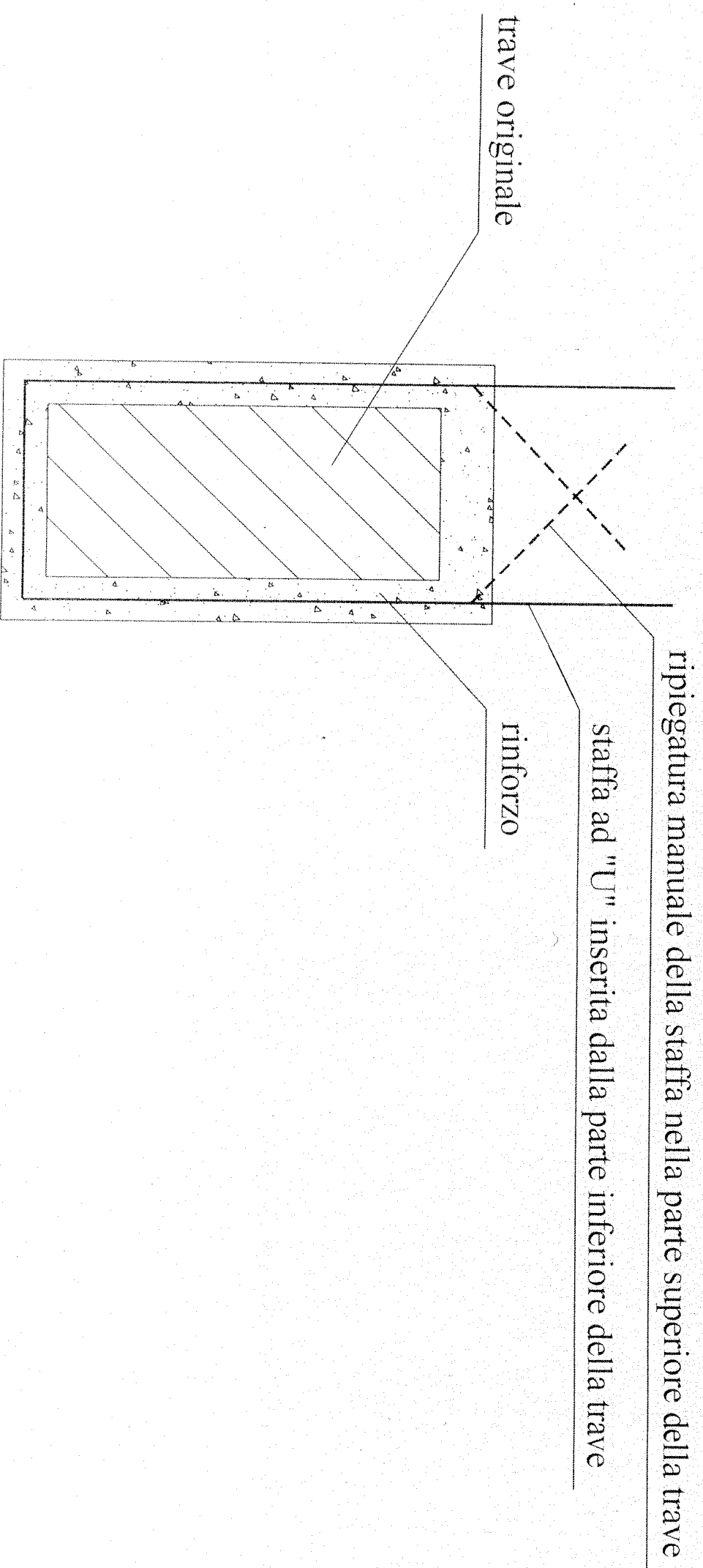
## Preparazione travi esistenti

barra Ø16 ogni metro

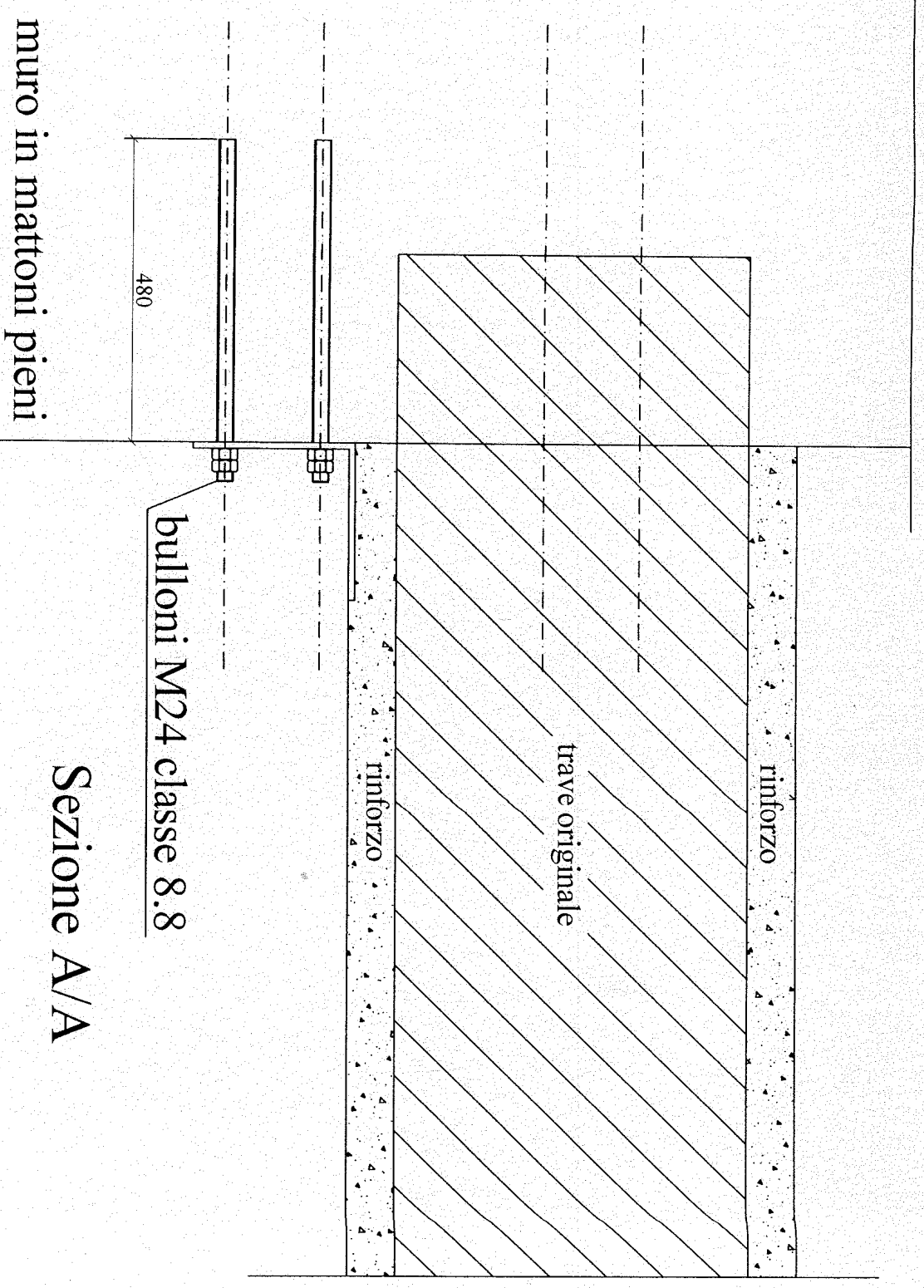
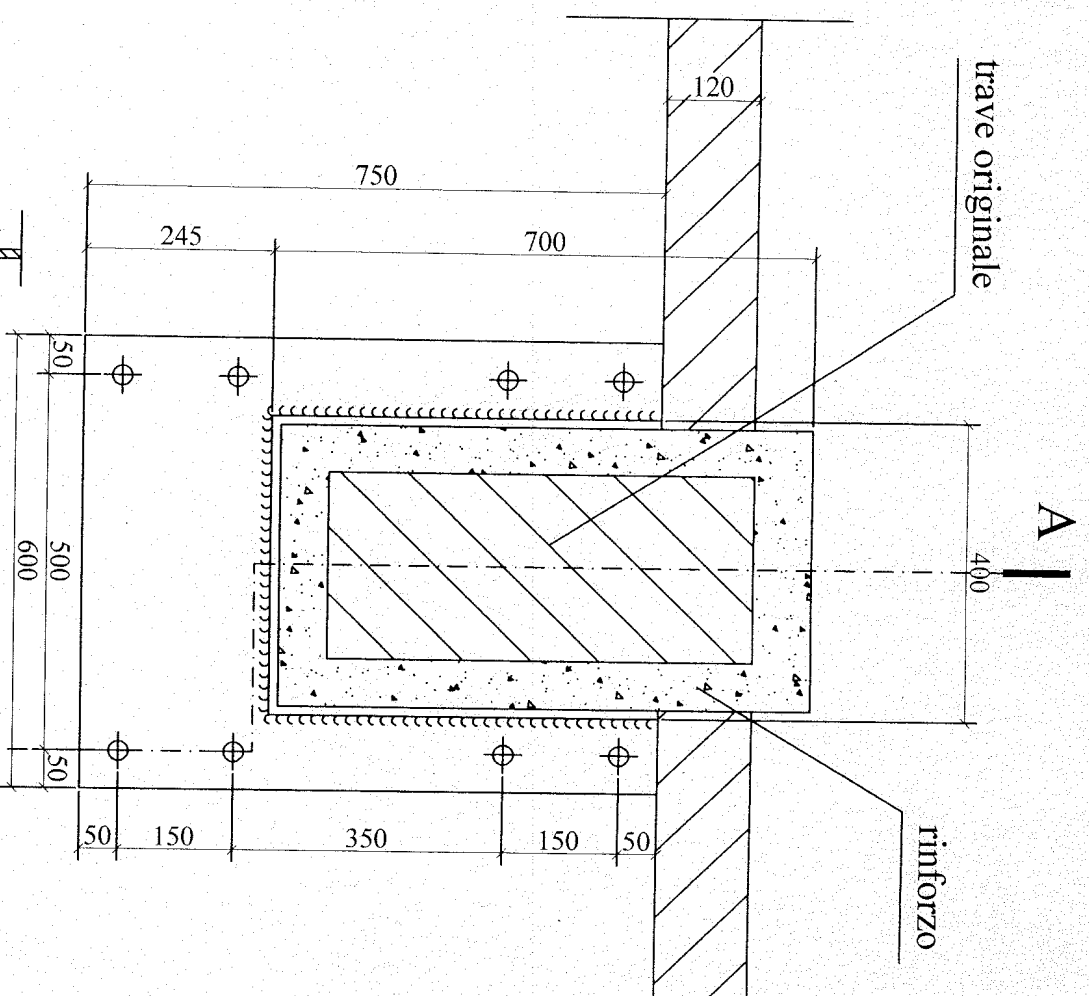
Nelle travi esistenti si devono eseguire la seguenti lavorazioni :

- 1- rimuovere l'intonaco dalla trave;
- 2- picchettare la trave con la martellina per un migliore aggrappo del calcestruzzo di rinforzo;
- 3- eseguire un foro Ø30 mm passante a metà altezza trave ogni metro;
- 4- inserire una barra Ø16 in ogni foro
- 5- iniettare, nel foro in cui è stata inserita la barra Ø16, adesivo epossidico bicomponente fluido, leggermente tixotropico, privo di solventi.

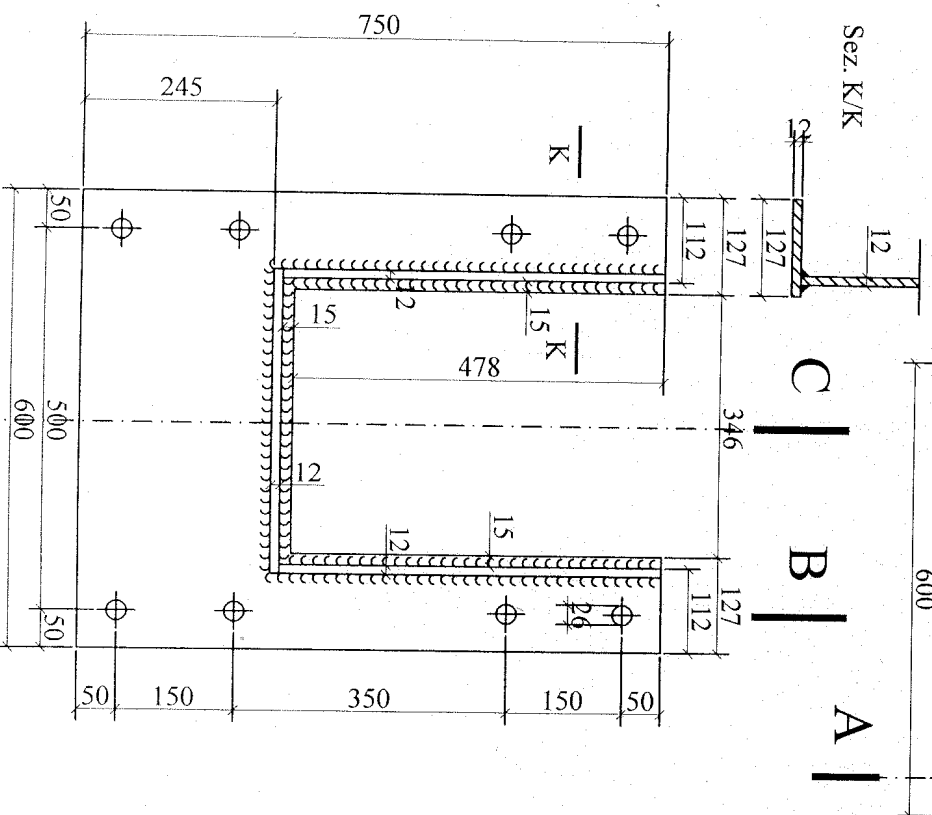
## Particolare staffatura delle travi esistenti



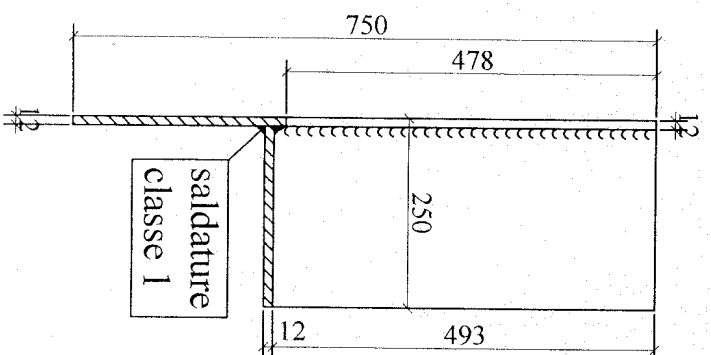
# 1 - Particolare piastre per supporto travi 40x70



Sezione A/A



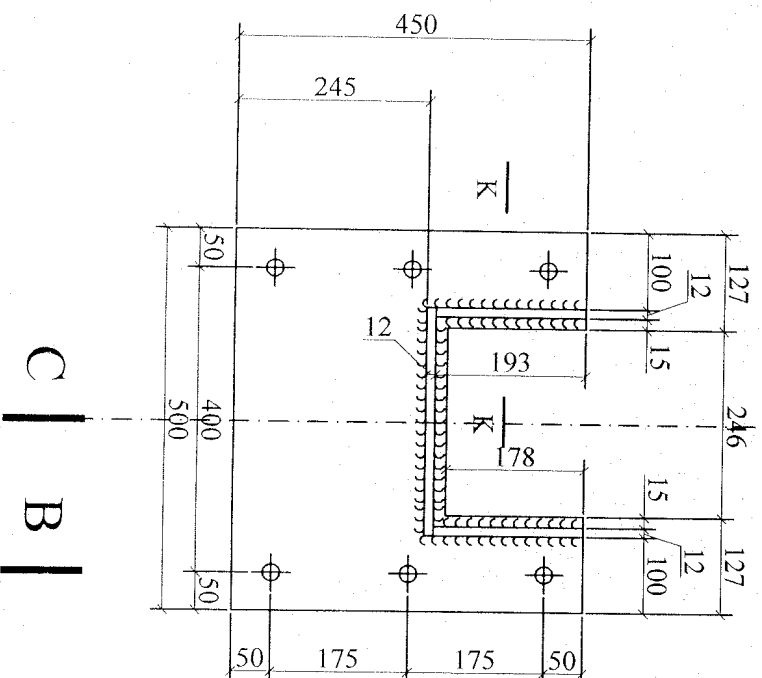
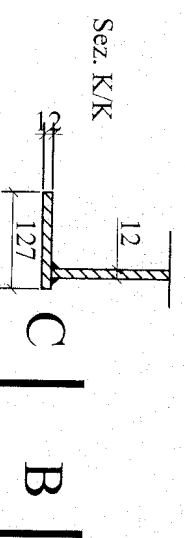
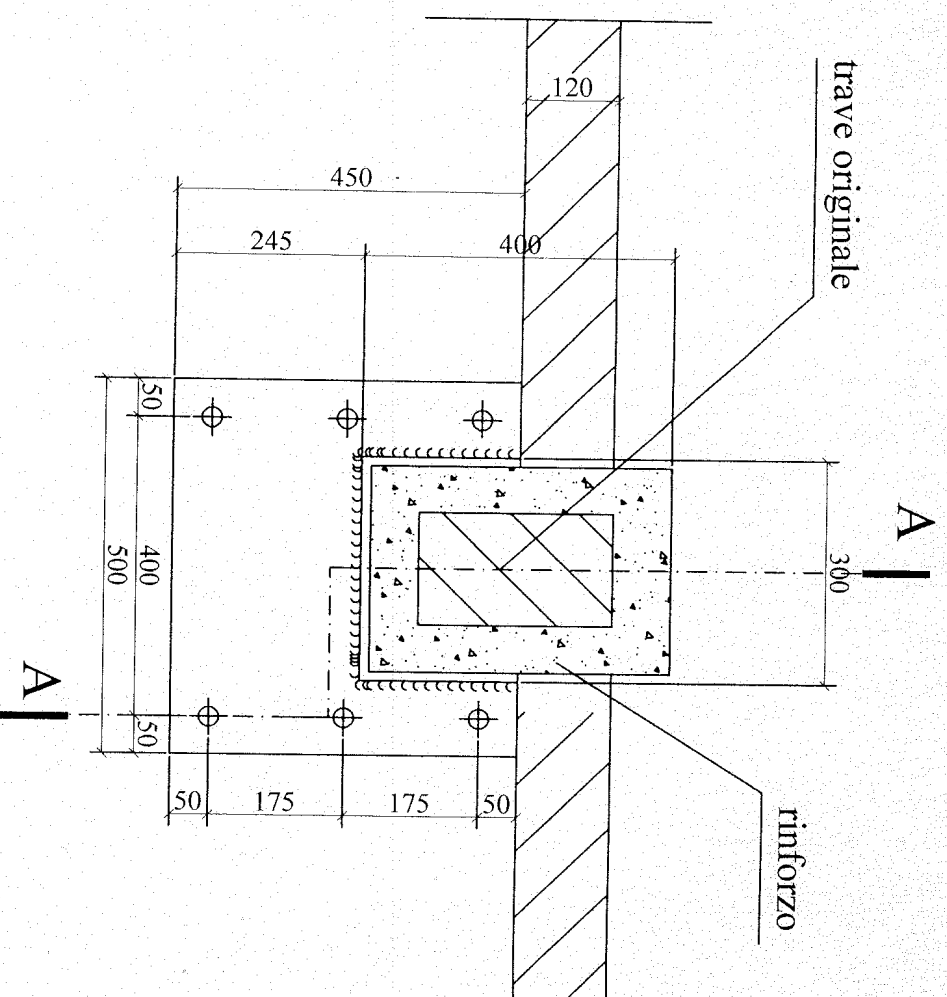
sezione C/C



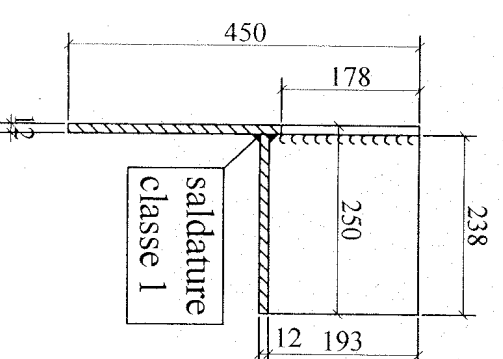
sezione B/B

L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una miscela indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

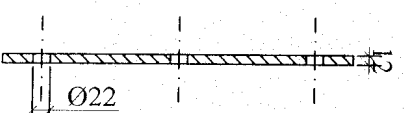
## 2 - Particolare piastre per supporto travi 30x40



C | B |



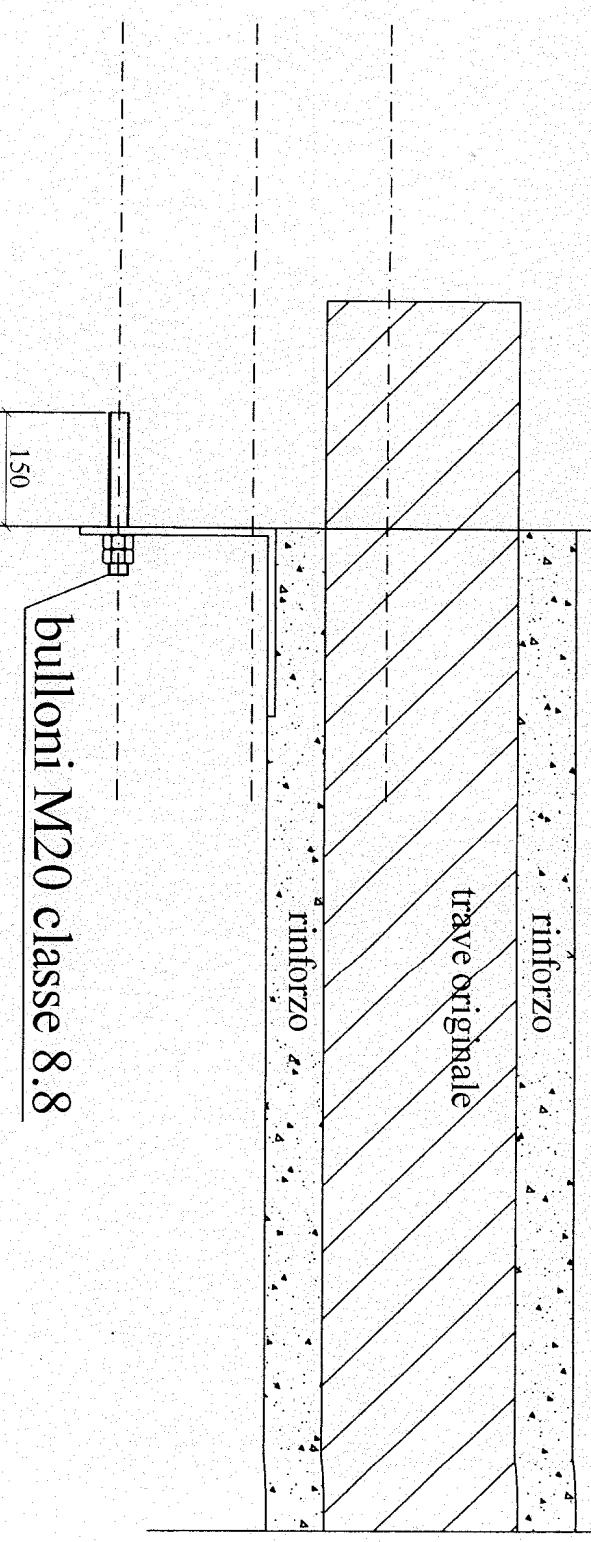
sezione C/C



sezione B/B

muro in mattoni pieni

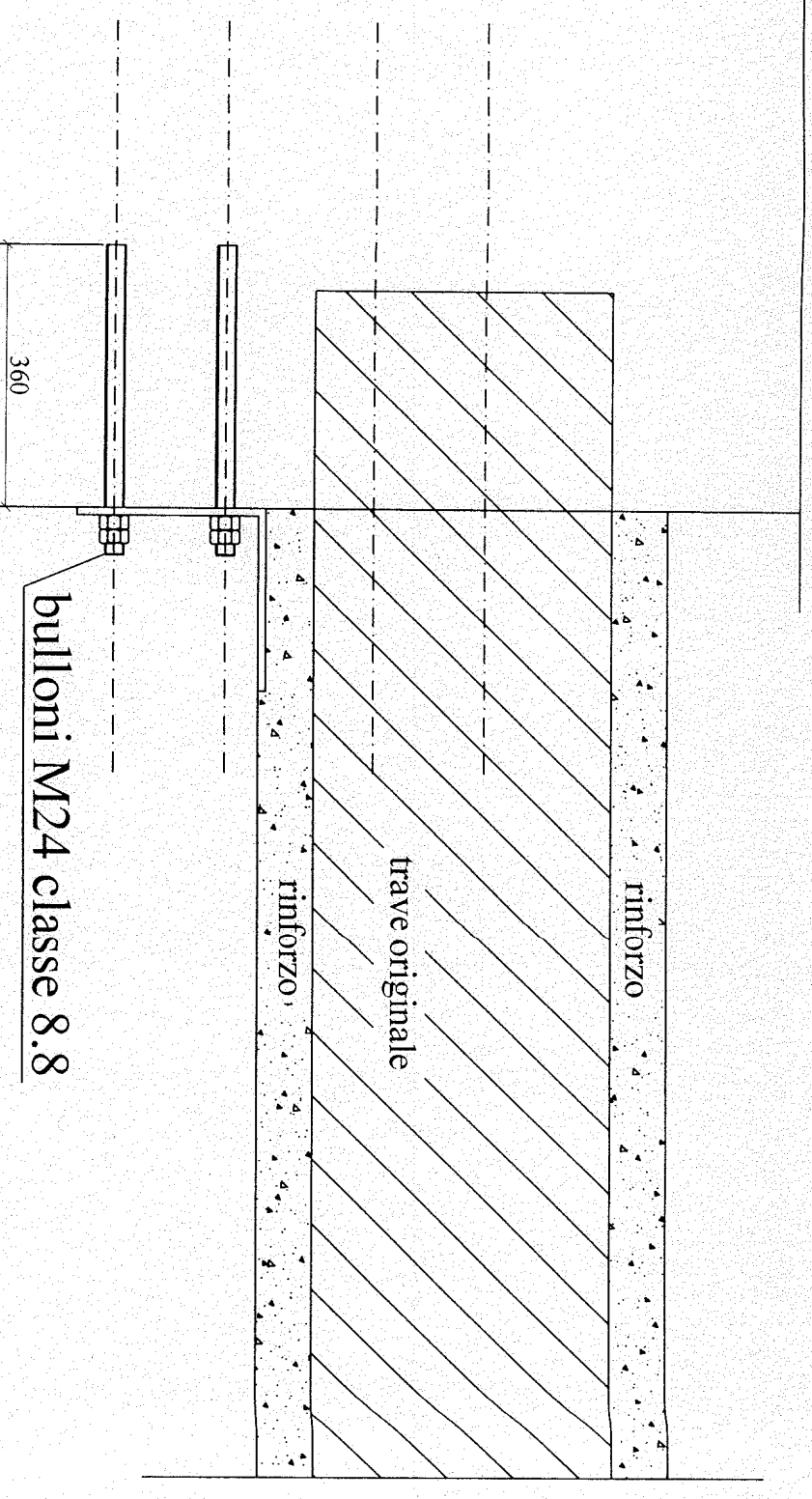
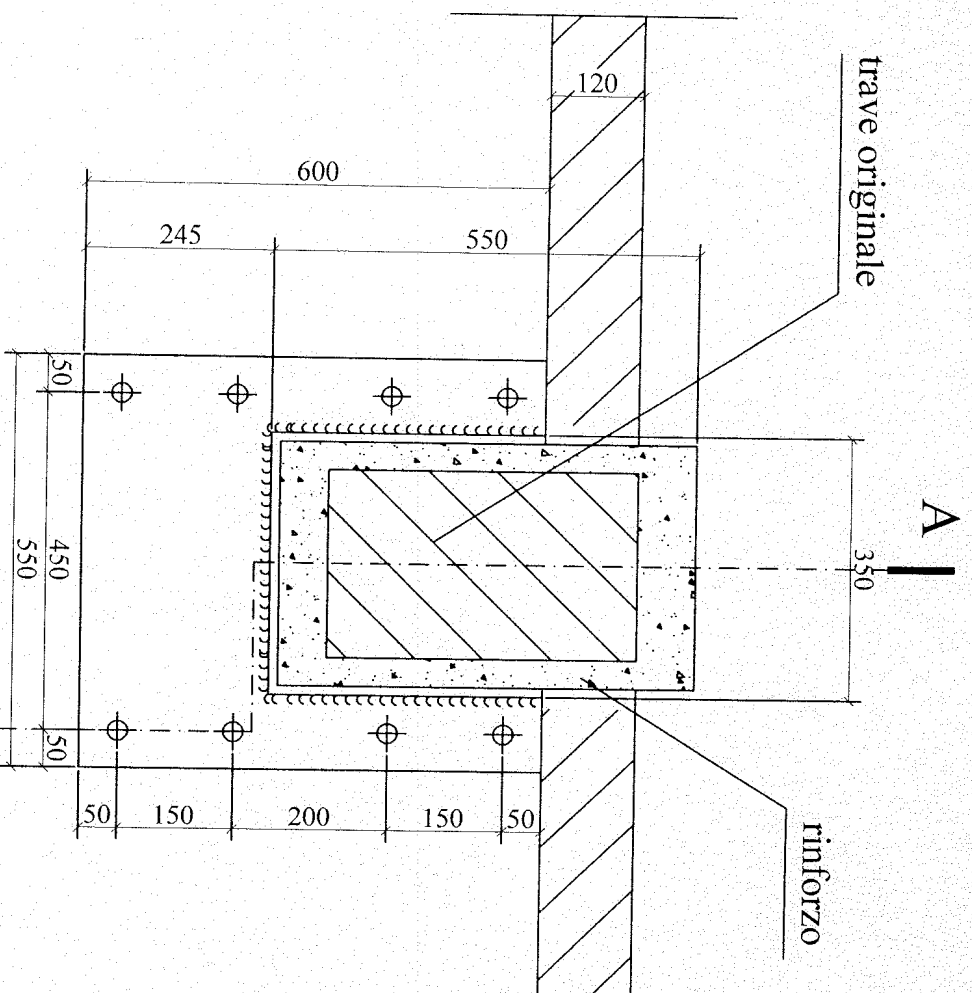
Sezione A/A



bulloni M20 classe 8.8

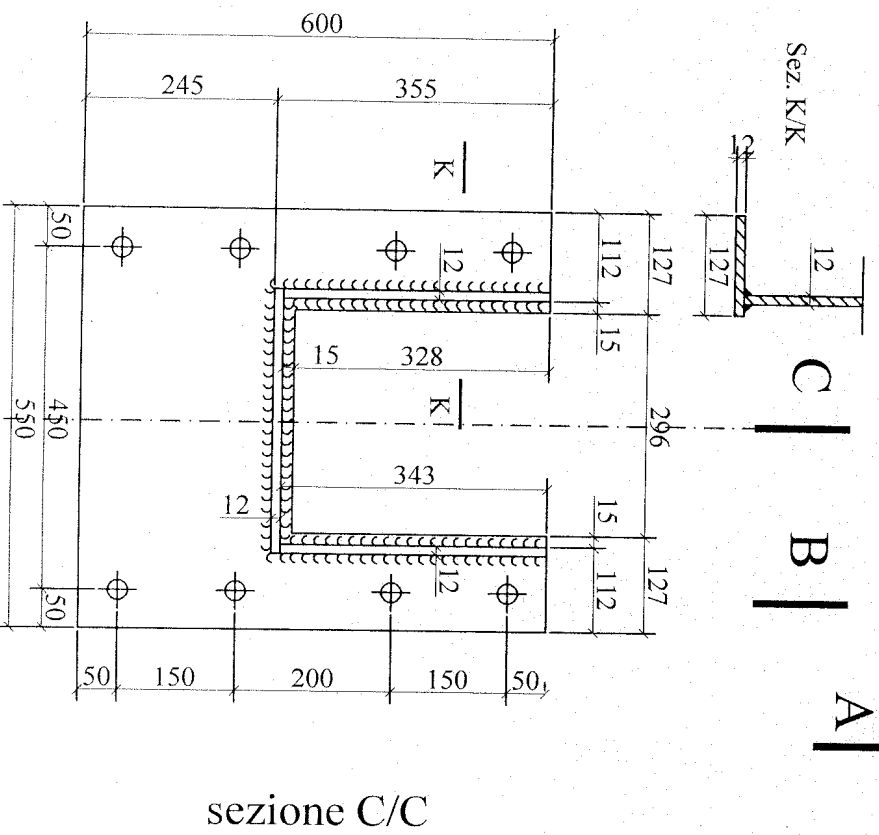
L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una miscela indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

### 3 - Particolare piastre per supporto travi 35x55

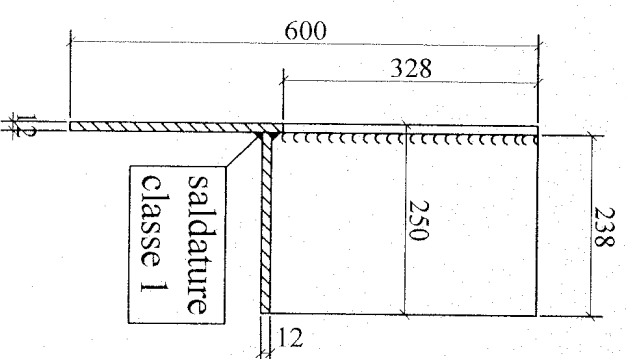


muro in mattoni pieni

Sezione A/A



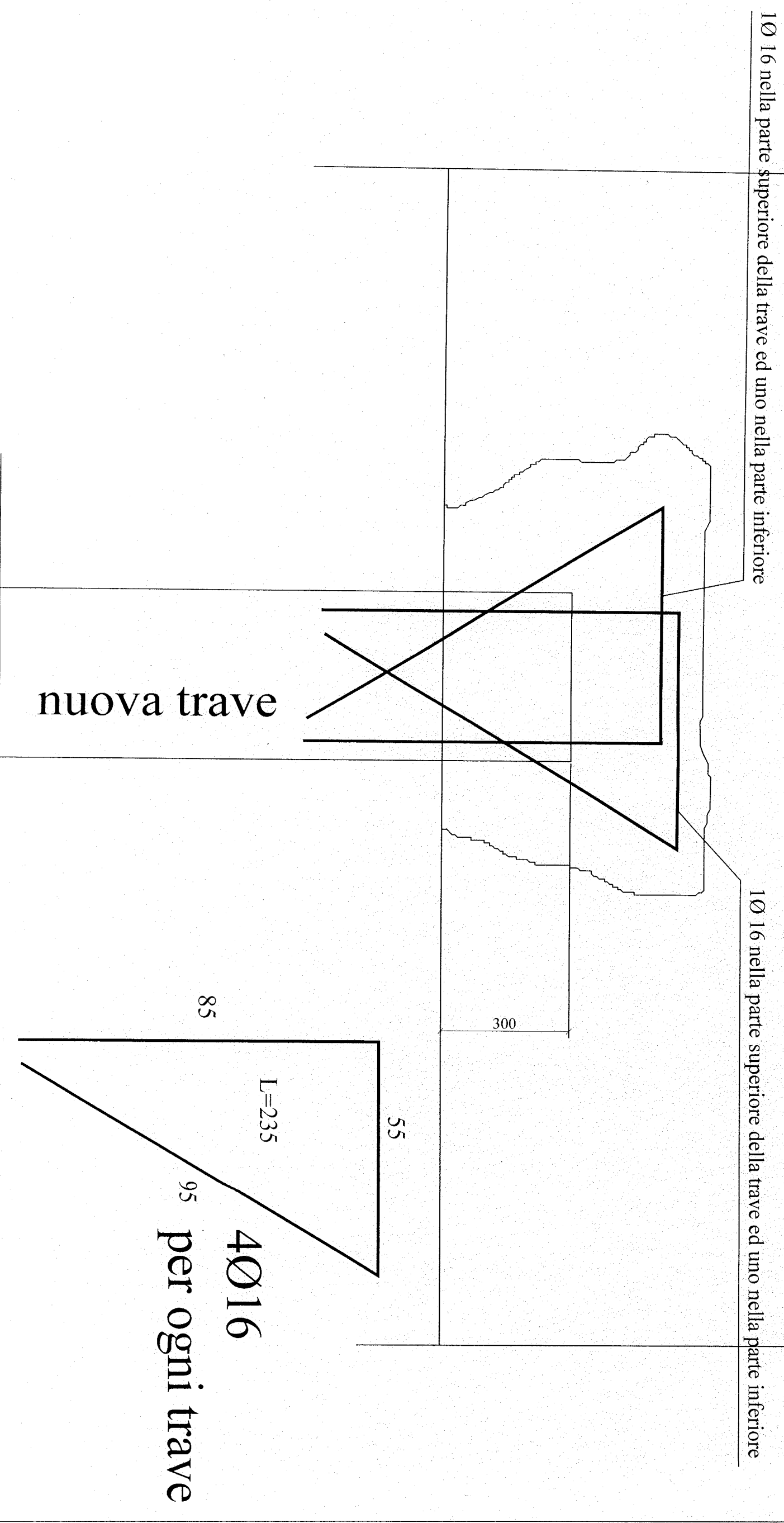
sezione C/C



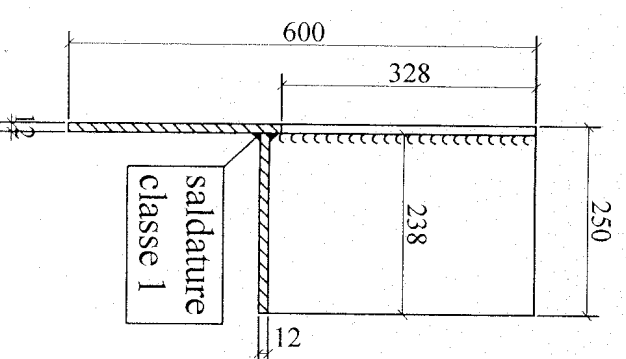
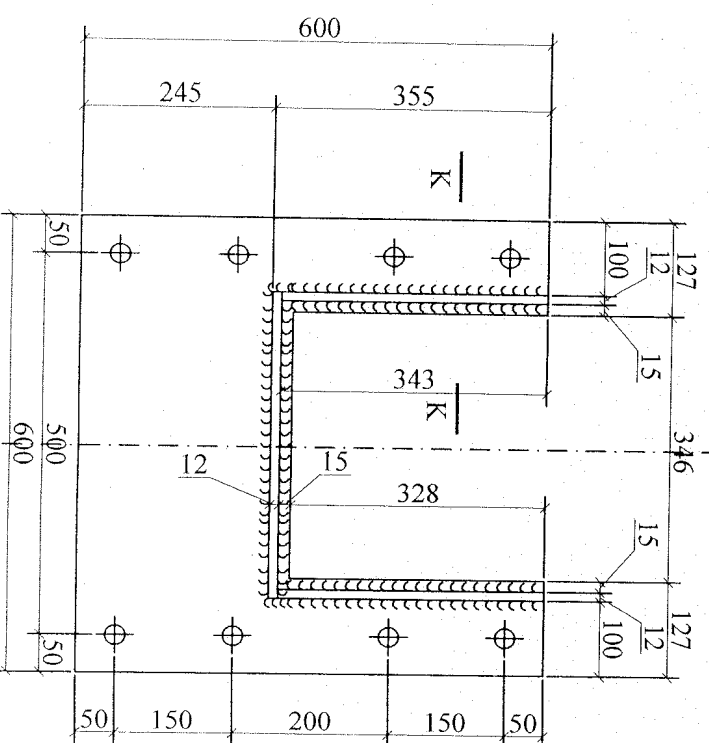
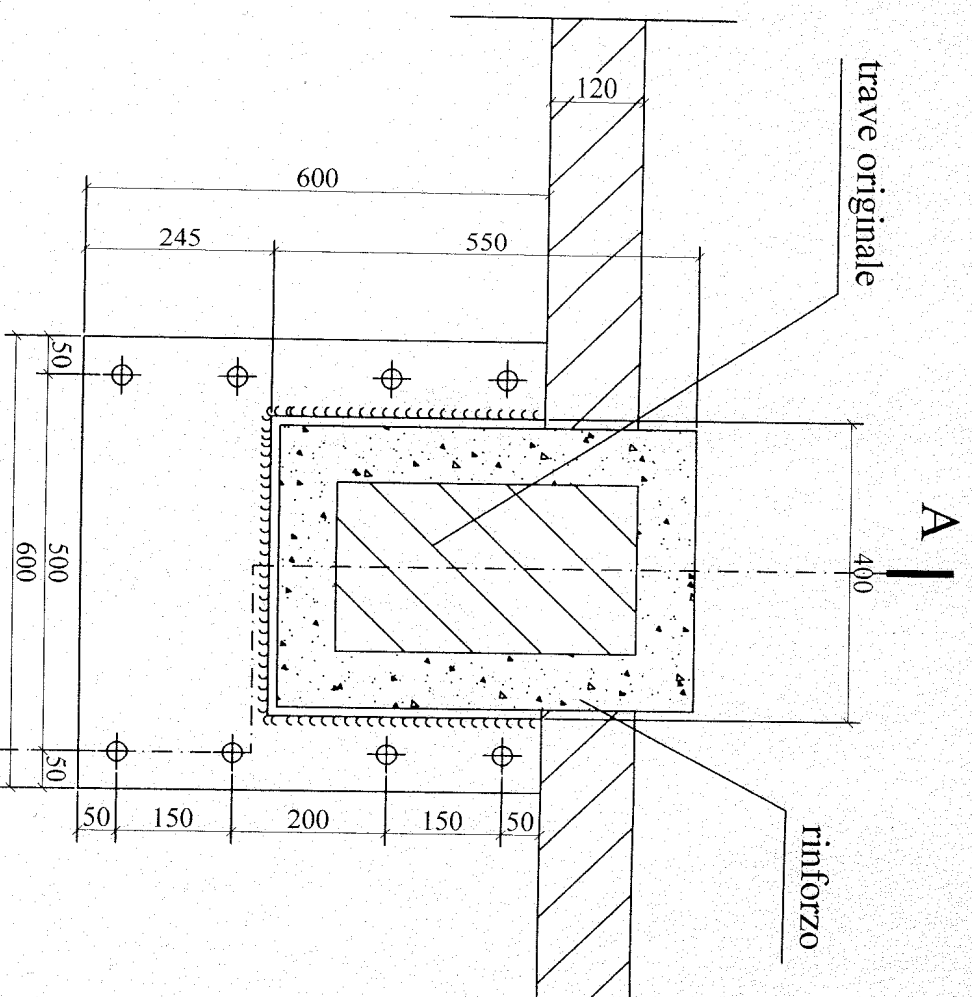
sezione B/B

L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una miscela indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

## 4 - Particolare ancoraggio nuove travi alla muratura



## 9 - Particolare piastre per supporto travi 40x55



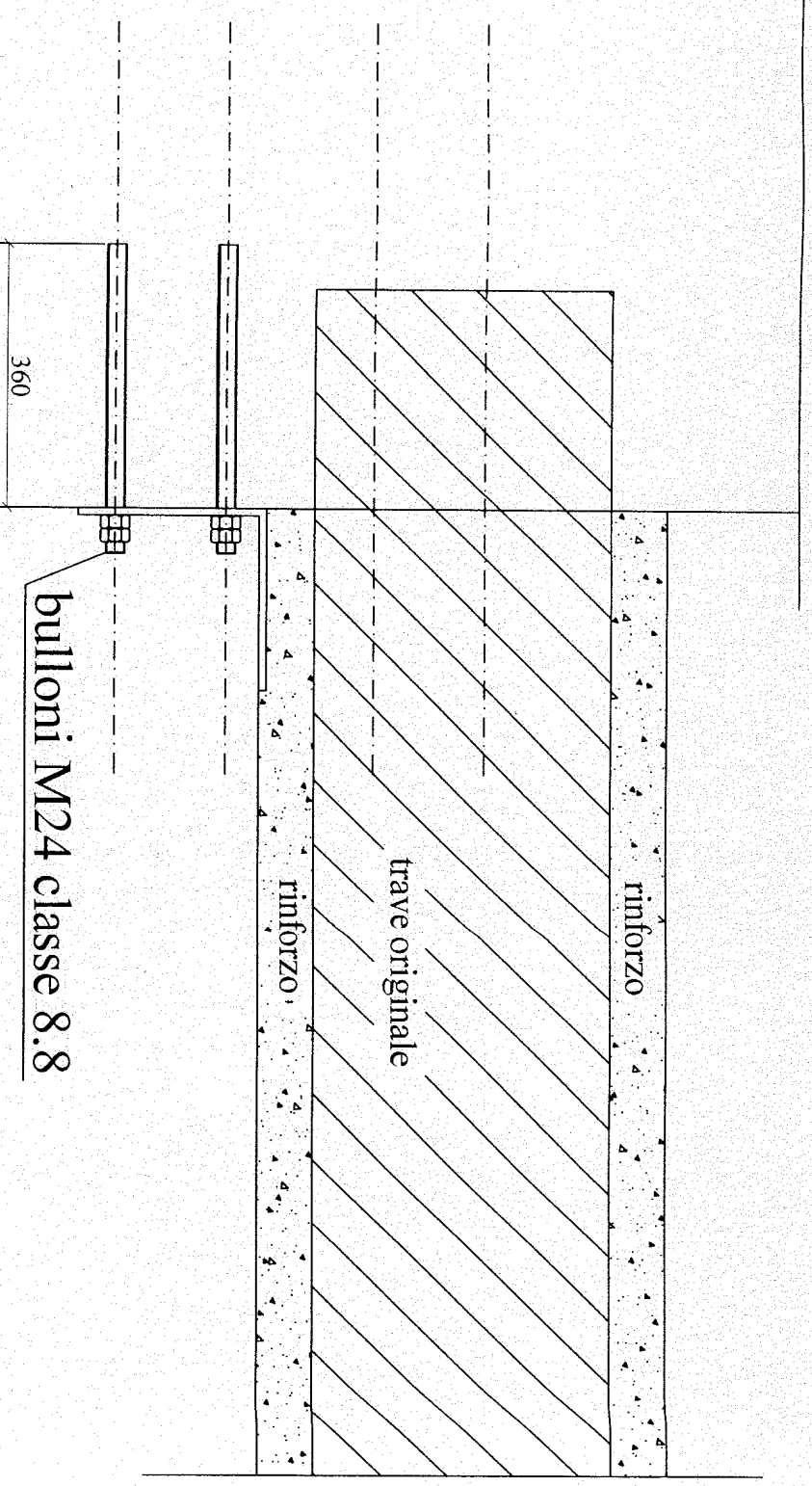
sezione C/C



sezione B/B

muro in mattoni pieni

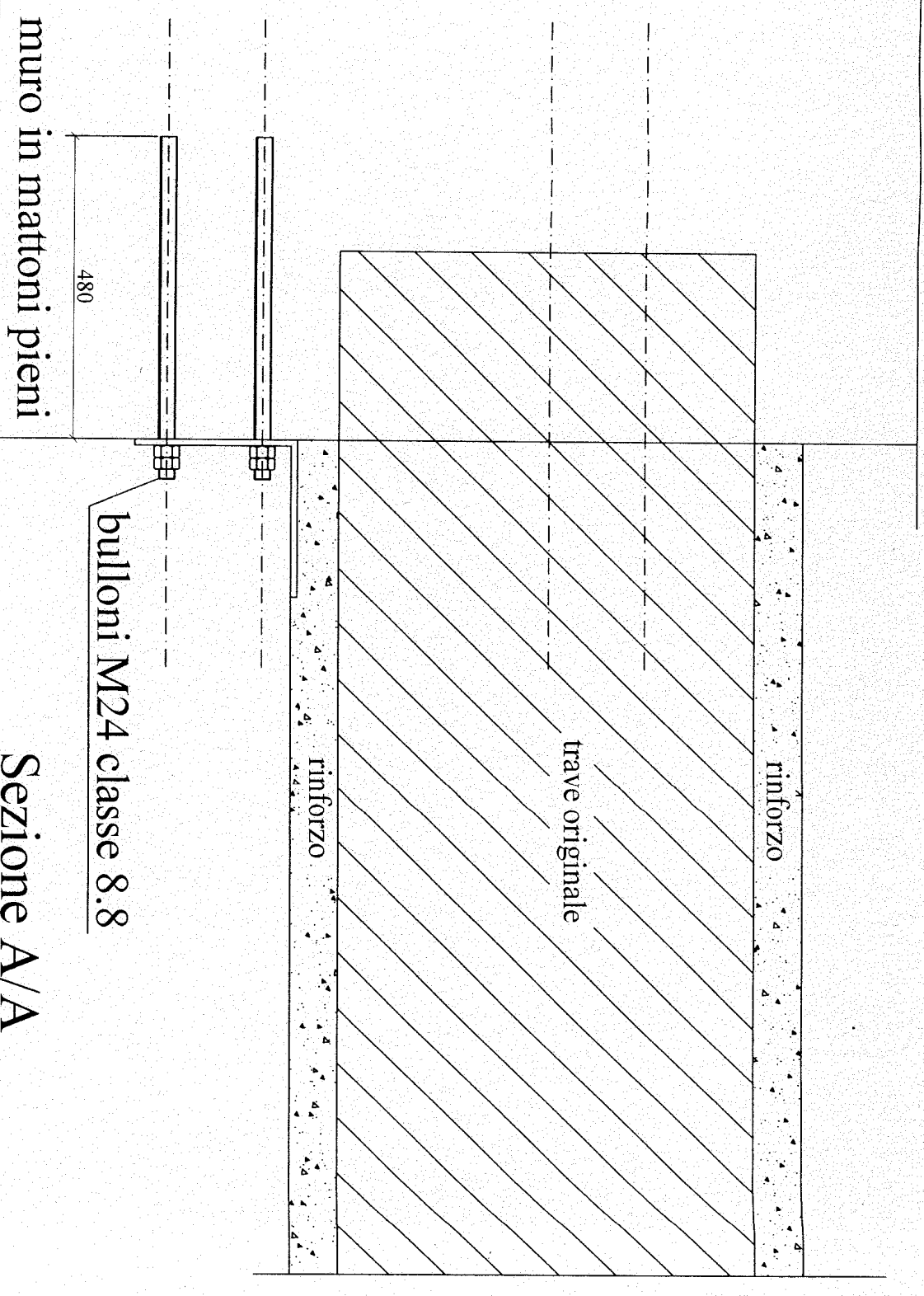
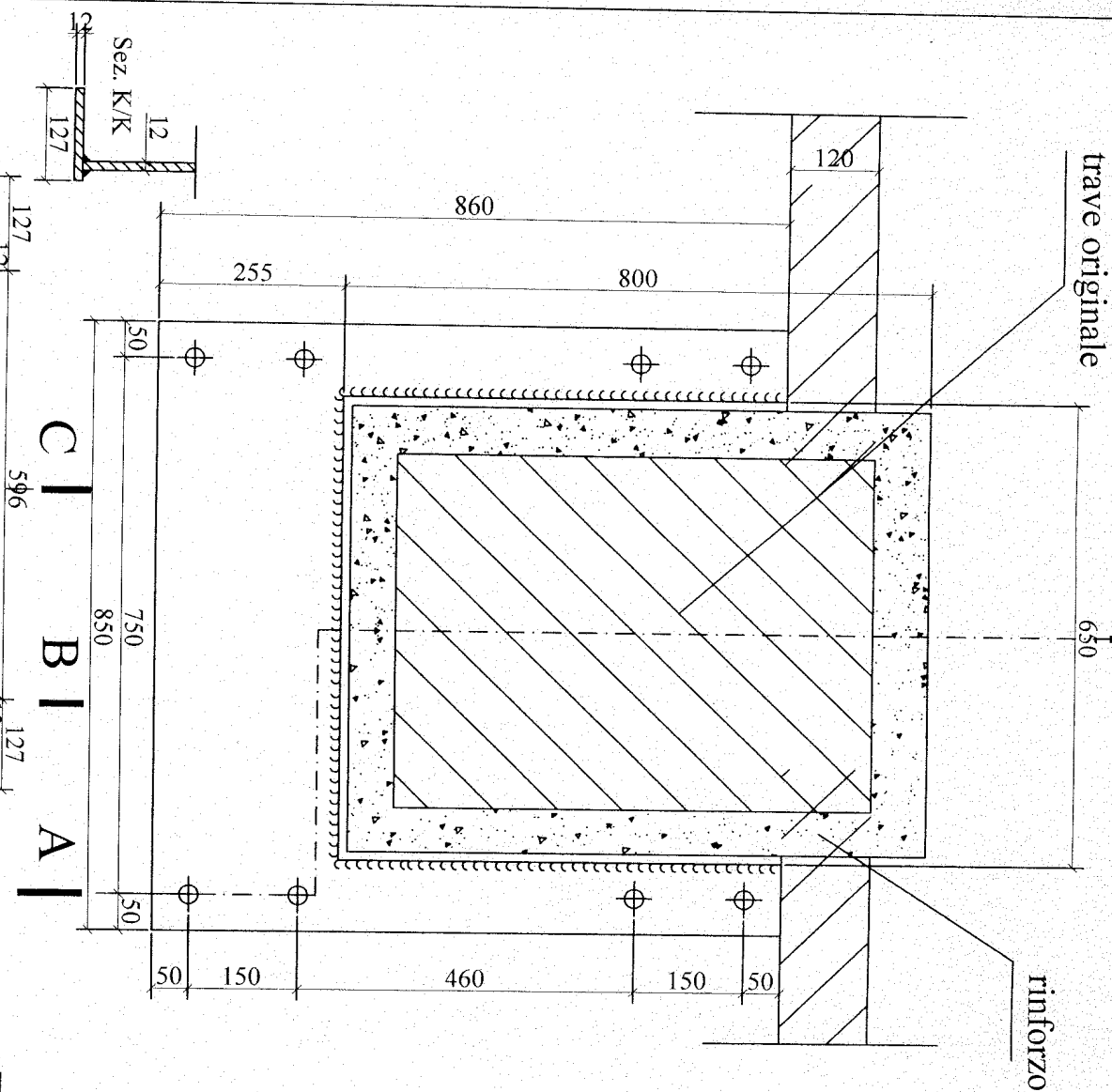
### Sezione A/A



L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una miscela indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

A |

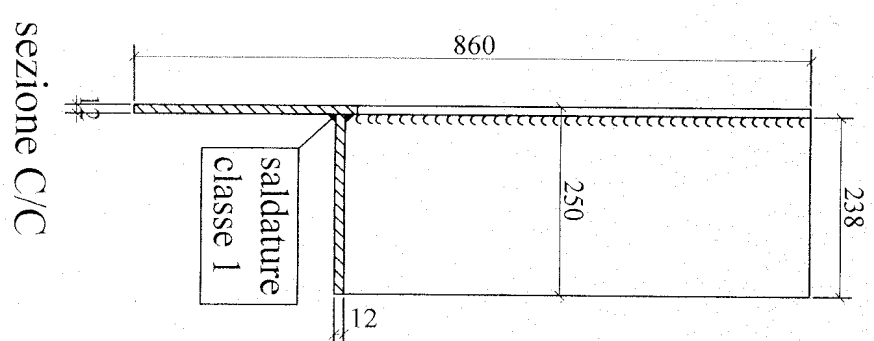
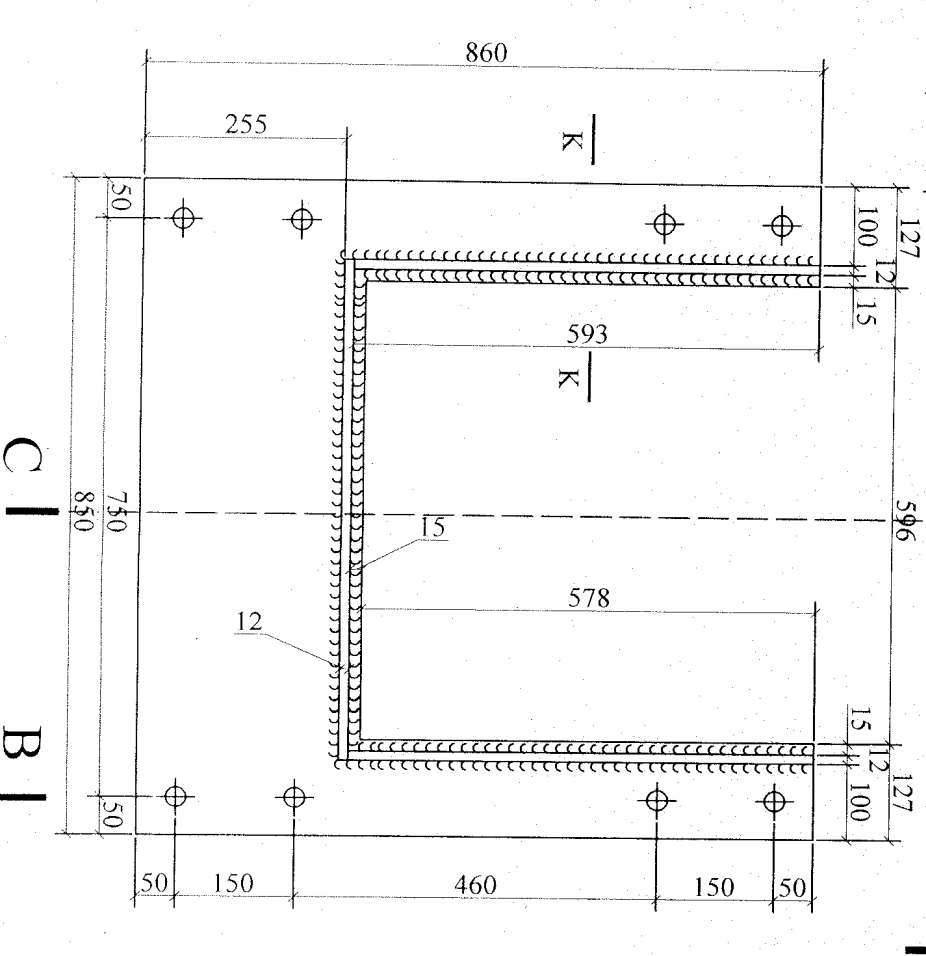
# 10 - Particolare piastre per supporto travi 65x80



muro in mattoni pieni

## Sezione A/A

bulloni M24 classe 8.8



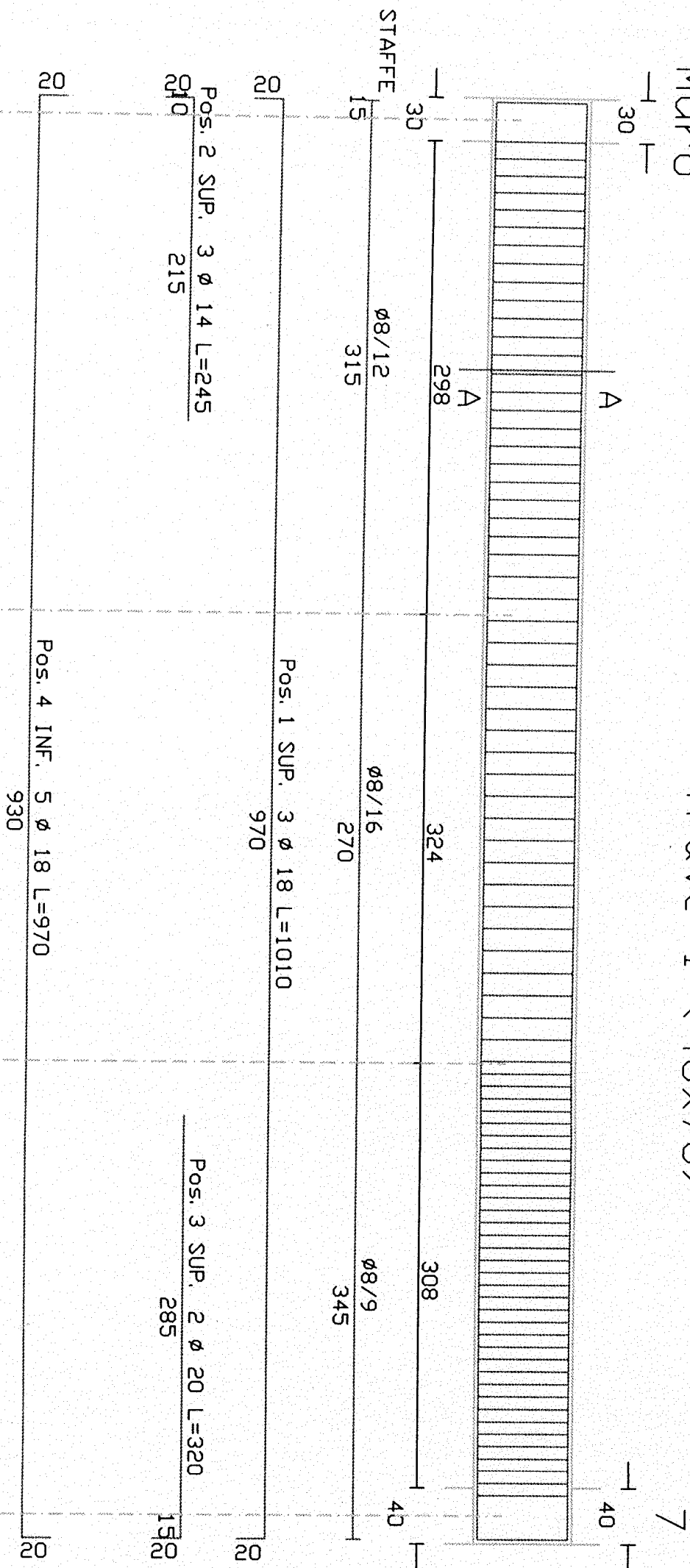
sezione B/B

L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una miscela indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

|                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>SOLAIO 1 IN TUTTO N° 5 TRAVETTI</b></p> <p><math>h = 16 + 4 = 20 \text{ cm}</math></p> <p>10 <math>\overline{\hspace{1.5cm}}</math> 10 Lato trave<br/> <math>\hspace{1.5cm}</math> 95 <math>\hspace{1.5cm}</math> T45<br/> 10 <math>\overline{\hspace{1.5cm}}</math> 1Ø8 L= 95<br/> <math>\hspace{1.5cm}</math> 85</p> <p>Tassellare il ferro alla trave esistente</p>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| <p><b>SOLAIO 2 IN TUTTO N° 5 TRAVETTI</b></p> <p><math>h = 16 + 4 = 20 \text{ cm}</math></p> <p>10 <math>\overline{\hspace{1.5cm}}</math> 10 Lato trave<br/> <math>\hspace{1.5cm}</math> 340 <math>\hspace{1.5cm}</math> T60<br/> 10 <math>\overline{\hspace{1.5cm}}</math> 1Ø10 L= 300<br/> <math>\hspace{1.5cm}</math> 300</p> <p>Tassellare il ferro alla trave esistente</p>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| <p><b>SOLAIO 3 IN TUTTO N° 4 TRAVETTI</b></p> <p><math>h = 16 + 4 = 20 \text{ cm}</math></p> <p>10 <math>\overline{\hspace{1.5cm}}</math> 10 Lato trave<br/> <math>\hspace{1.5cm}</math> 130 <math>\hspace{1.5cm}</math> T45<br/> 10 <math>\overline{\hspace{1.5cm}}</math> 1Ø8 L= 130<br/> <math>\hspace{1.5cm}</math> 120</p> <p>Tassellare il ferro alla trave esistente</p>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| <p><b>SOLAIO 4 IN TUTTO N° 5 TRAVETTI</b></p> <p><math>h = 16 + 4 = 20 \text{ cm}</math></p> <p>10 <math>\overline{\hspace{1.5cm}}</math> 10 Lato trave<br/> <math>\hspace{1.5cm}</math> 205 <math>\hspace{1.5cm}</math> Muro esistente<br/> 10 <math>\overline{\hspace{1.5cm}}</math> 1Ø10 L= 215<br/> <math>\hspace{1.5cm}</math> 205</p> <p>Tassellare il ferro al muro esistente</p> | <p><b>SOLAIO 5 IN TUTTO N° 5 TRAVETTI</b></p> <p><math>h = 16 + 4 = 20 \text{ cm}</math></p> <p>15 <math>\overline{\hspace{1.5cm}}</math> 15 Lato trave<br/> <math>\hspace{1.5cm}</math> 60 60 <math>\hspace{1.5cm}</math> 15<br/> <math>\hspace{1.5cm}</math> 300 <math>\hspace{1.5cm}</math> Muro esistente<br/> 15 <math>\overline{\hspace{1.5cm}}</math> 1Ø10 L= 275<br/> <math>\hspace{1.5cm}</math> 275</p> <p>Tassellare il ferro al muro esistente</p> |  |
| <p><b>SOLAIO 6 IN TUTTO N° 4 TRAVETTI</b></p> <p><math>h = 16 + 4 = 20 \text{ cm}</math></p> <p>10 <math>\overline{\hspace{1.5cm}}</math> 10 Lato trave<br/> <math>\hspace{1.5cm}</math> 205 <math>\hspace{1.5cm}</math> Muro esistente<br/> 10 <math>\overline{\hspace{1.5cm}}</math> 1Ø10 L= 215<br/> <math>\hspace{1.5cm}</math> 205</p> <p>Tassellare il ferro al muro esistente</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| <p><b>SOLAIO 7 IN TUTTO N° 6 TRAVETTI</b></p> <p><math>h = 18 + 4 = 22 \text{ cm}</math></p> <p>10 <math>\overline{\hspace{1.5cm}}</math> 10 Lato trave<br/> <math>\hspace{1.5cm}</math> 250 <math>\hspace{1.5cm}</math> T65<br/> 10 <math>\overline{\hspace{1.5cm}}</math> 1Ø10 L= 260<br/> <math>\hspace{1.5cm}</math> 250</p>                                                         | <p><b>SBALZO 1 IN TUTTO N° 6 TRAVETTI</b></p> <p><math>h = 18 + 4 = 22 \text{ cm}</math></p> <p>18 <math>\overline{\hspace{1.5cm}}</math> 10 Lato trave<br/> <math>\hspace{1.5cm}</math> 210 <math>\hspace{1.5cm}</math> T65<br/> 18 <math>\overline{\hspace{1.5cm}}</math> 1Ø10 L= 358<br/> <math>\hspace{1.5cm}</math> 130</p>                                                                                                                               |  |

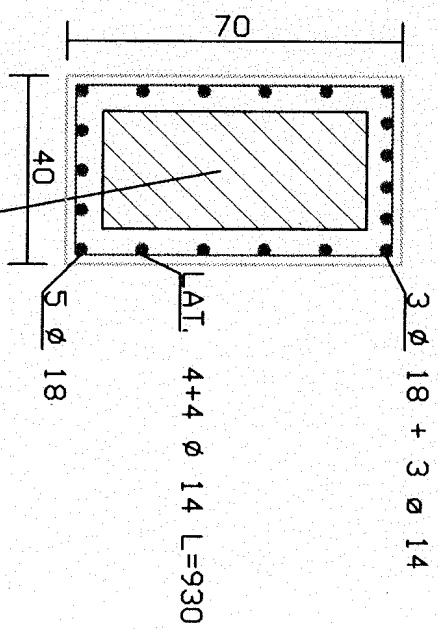
Muro

Trave 1 (40x70)

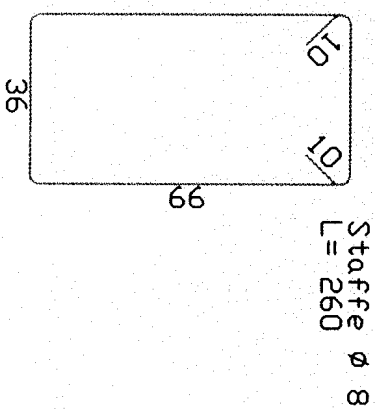


| PDS    | DIAM $\emptyset$<br>(mm) | LUNGH<br>(cm) |
|--------|--------------------------|---------------|
| 1 SUP. | 3 $\emptyset$ 18         | L=1010        |
| 2 SUP. | 3 $\emptyset$ 14         | L=245         |
| 3 SUP. | 2 $\emptyset$ 20         | L=320         |
| 4 INF. | 5 $\emptyset$ 18         | L=970         |
| 5 LAT. | 4 + 4 $\emptyset$ 14     | L=930         |

Sez. A-A

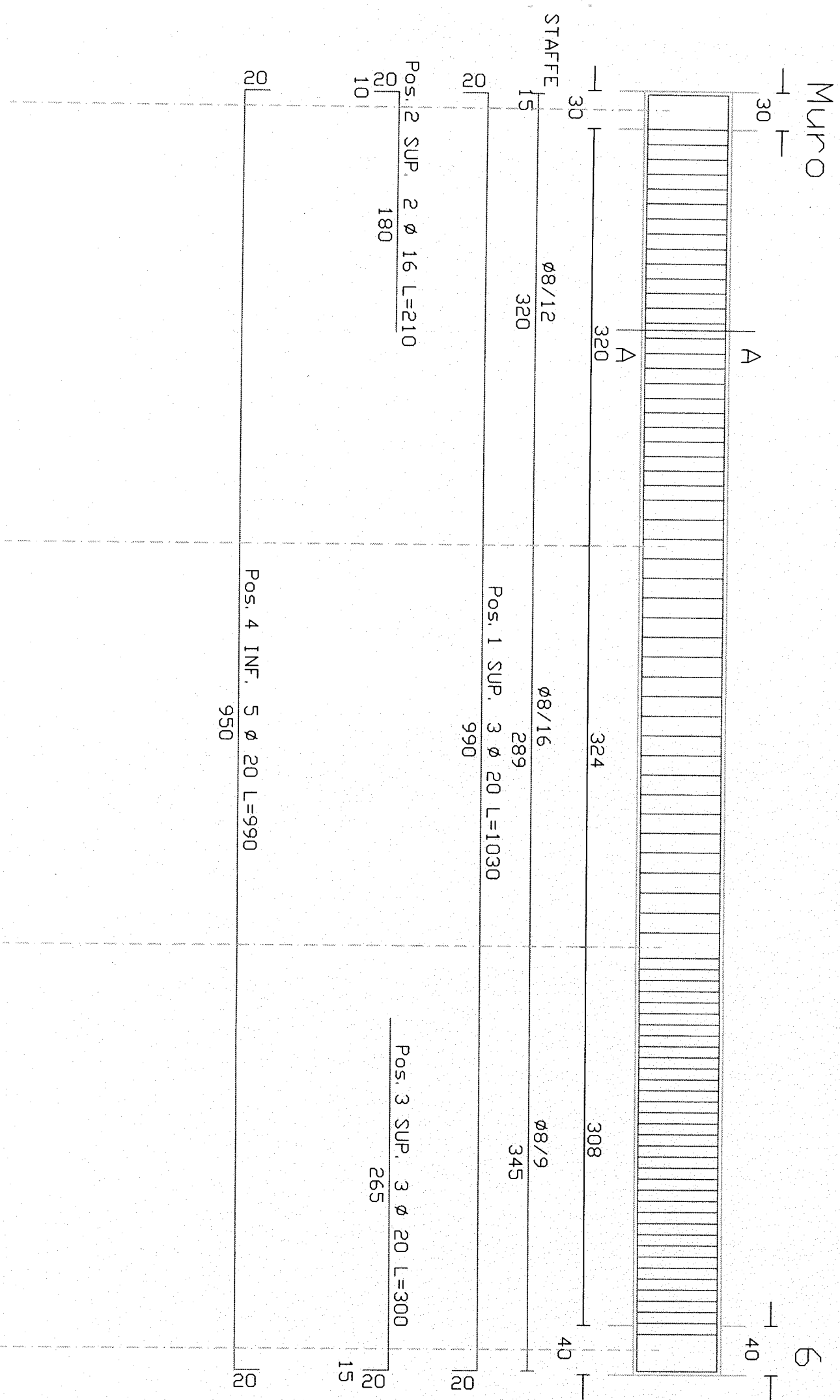


Trave esistente



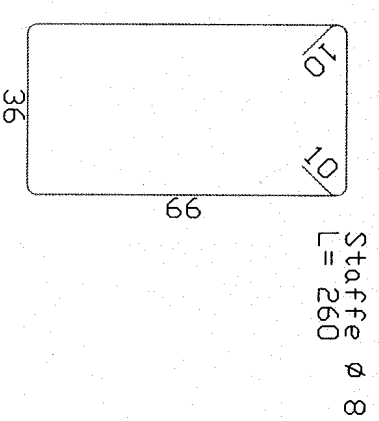
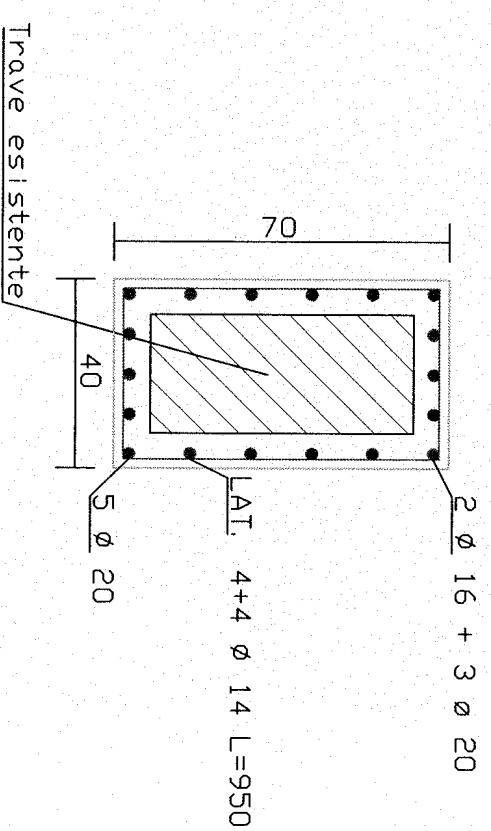


# Trave 3 (40x70)

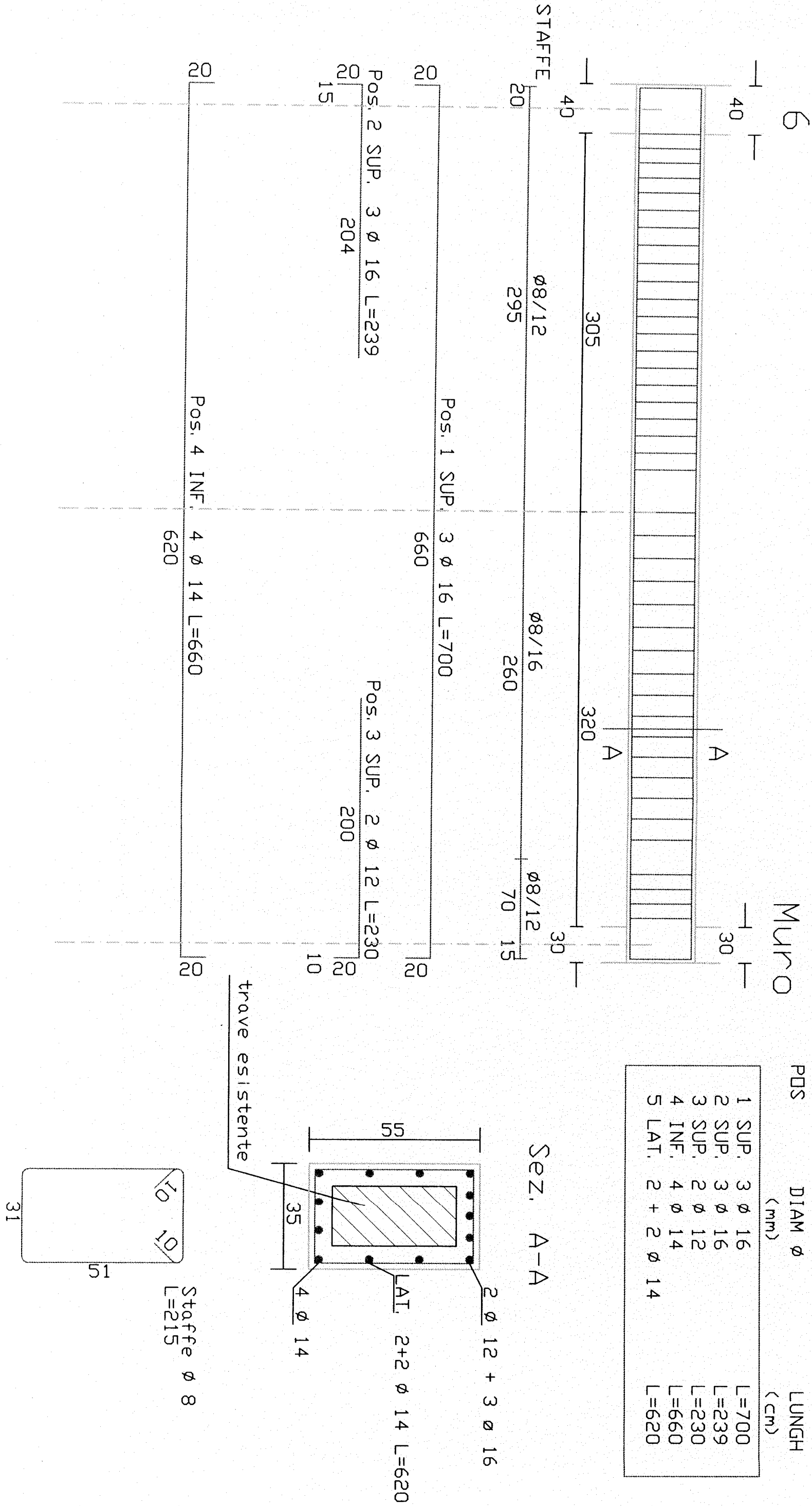


| PDS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 3 Ø 20         | L=1030        |
| 2 SUP. | 2 Ø 16         | L=210         |
| 3 SUP. | 3 Ø 20         | L=300         |
| 4 INF. | 5 Ø 20         | L=990         |
| 5 LAT. | 4 + 4 Ø 14     | L=950         |

Sez. A-A



Trave 4 (35x55)



130

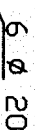
5

POS

DIAM Ø  
(mm)

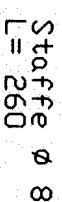
LUNGH  
<cm>

14

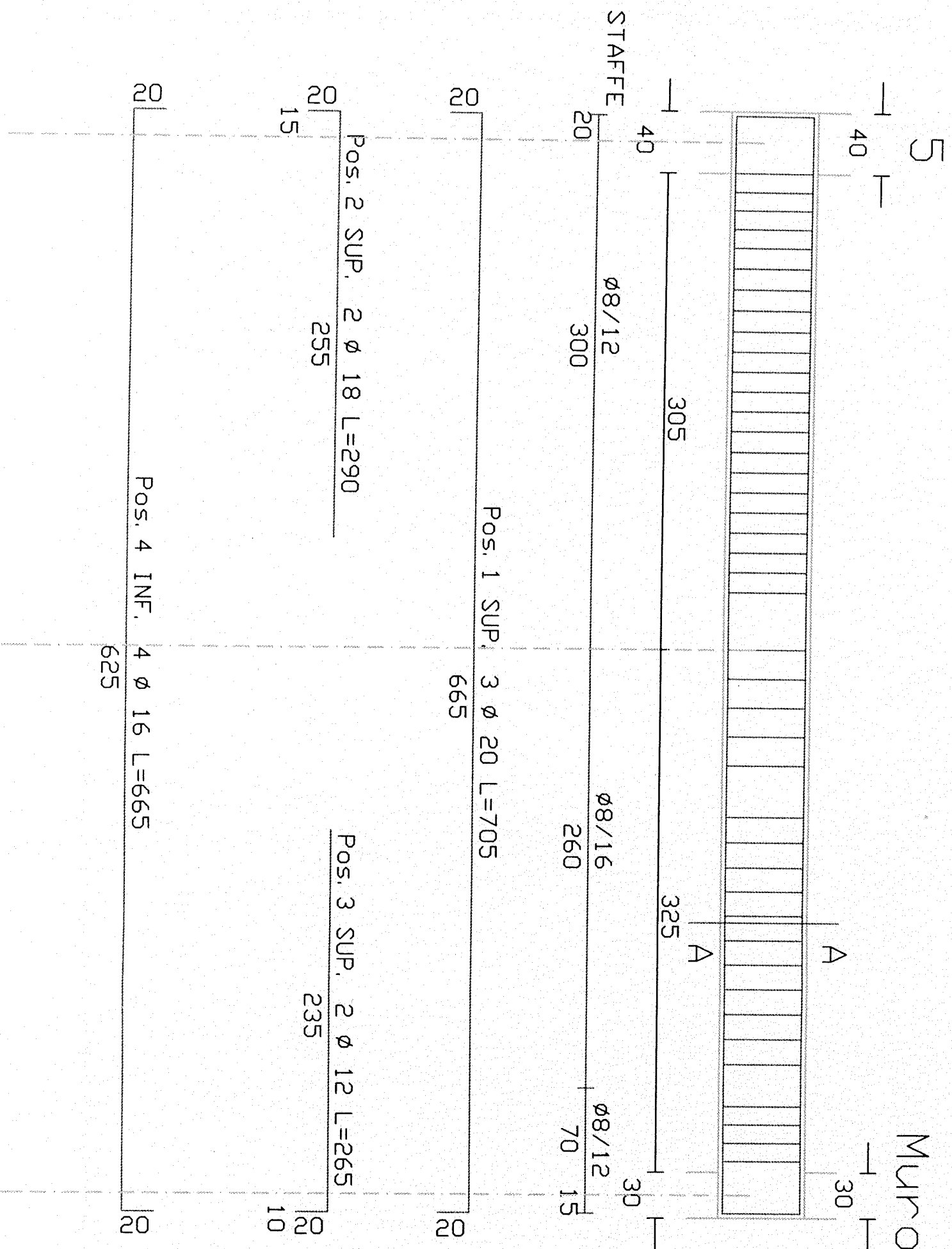


LAT. 4+4 Ø 14 L=935

5820

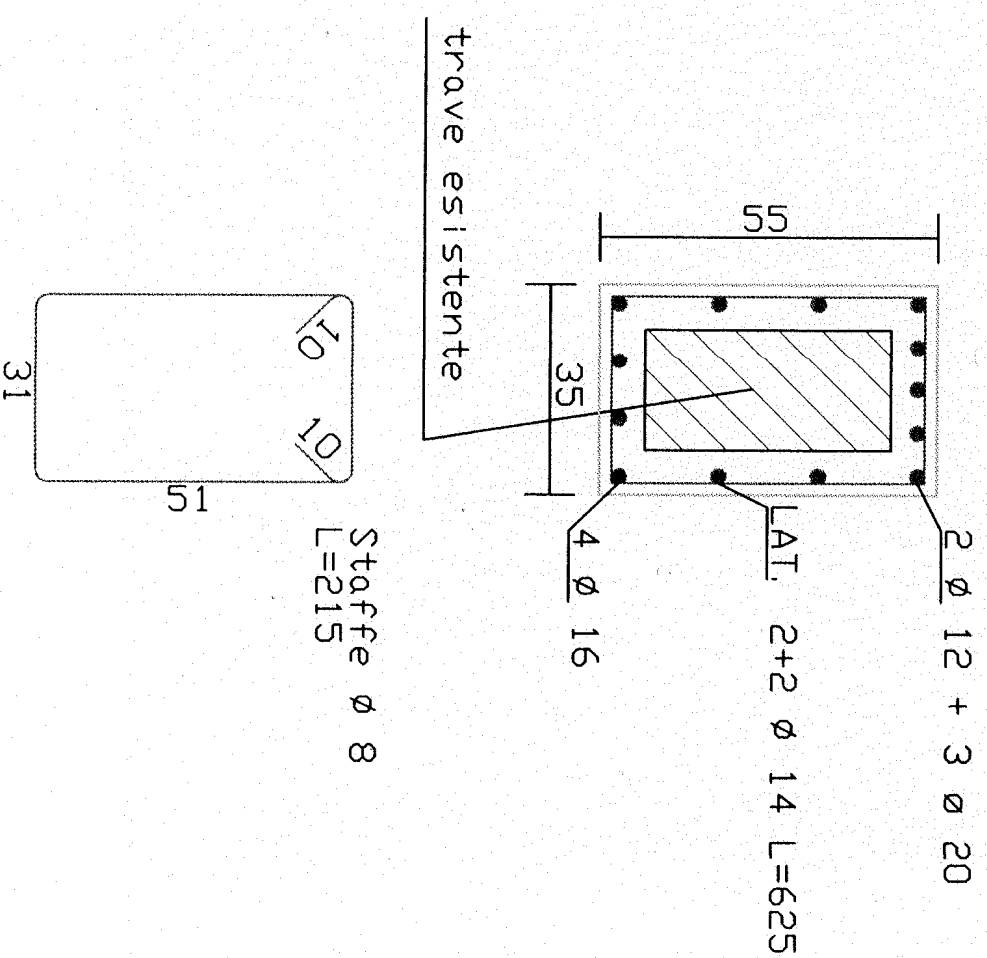
Trave esistente

# Trave 6 (35x55)

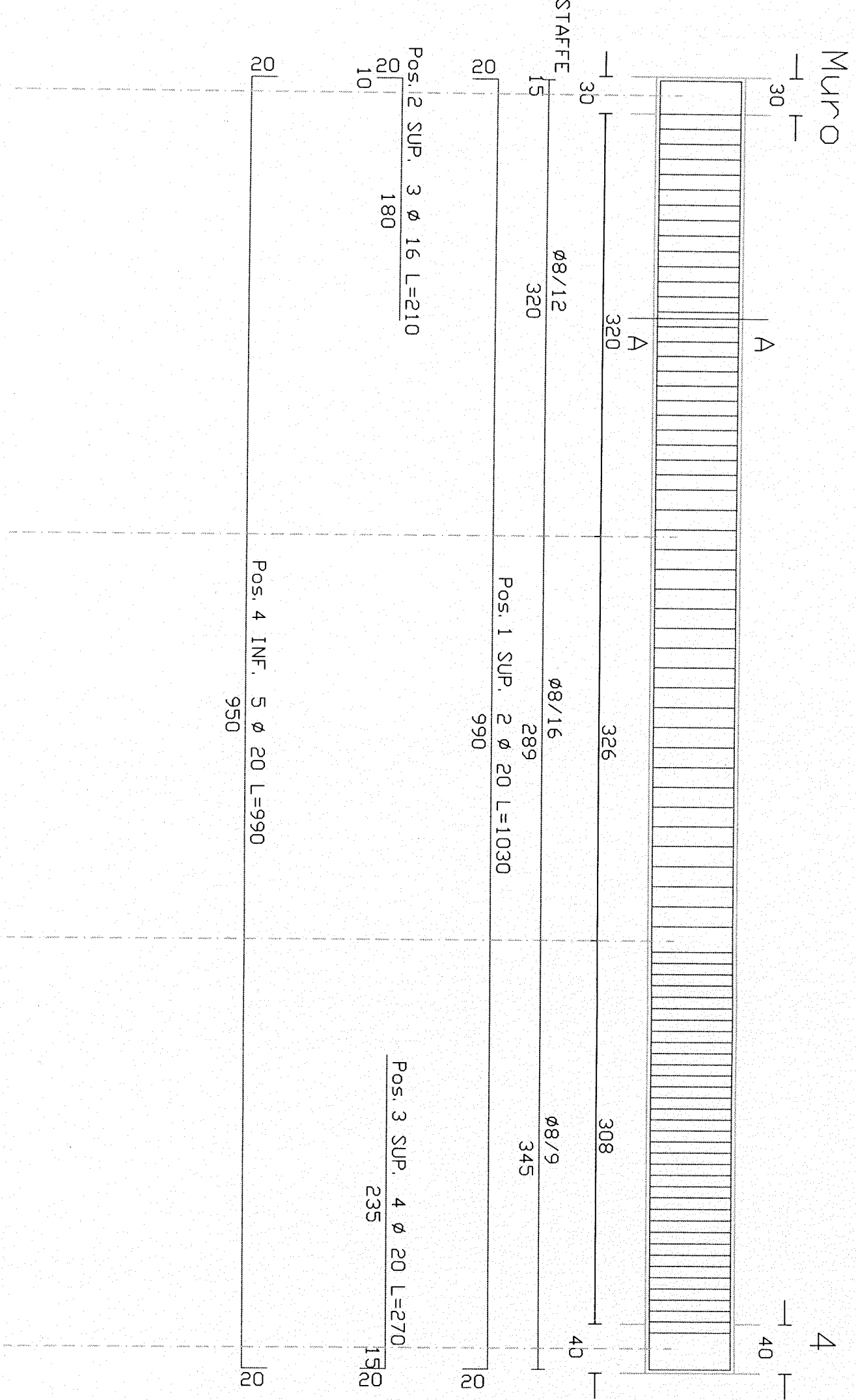


| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 3 Ø 20         | L=705         |
| 2 SUP. | 2 Ø 18         | L=290         |
| 3 SUP. | 2 Ø 12         | L=265         |
| 4 INF. | 4 Ø 16         | L=665         |
| 5 LAT. | 2 + 2 Ø 14     | L=625         |

## Sez. A-A

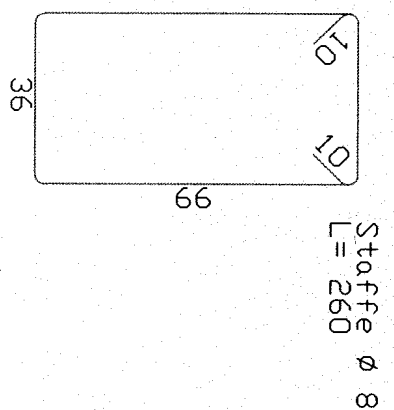
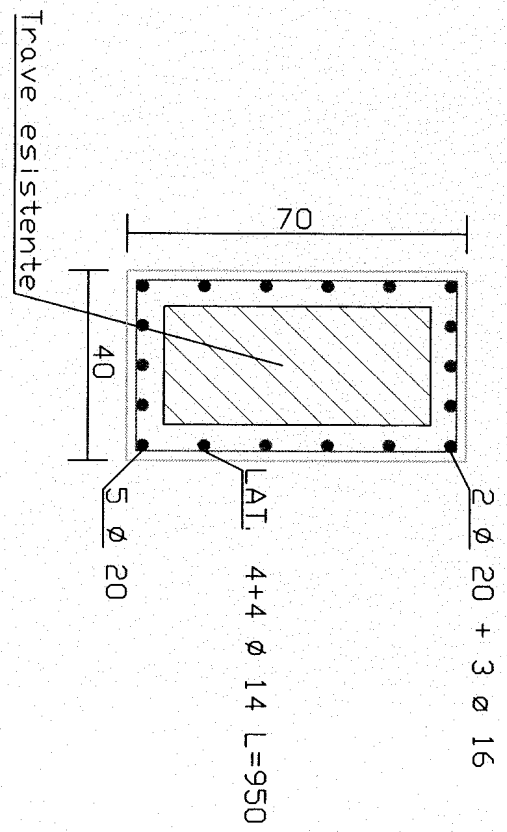


Trave 7 (40x70)

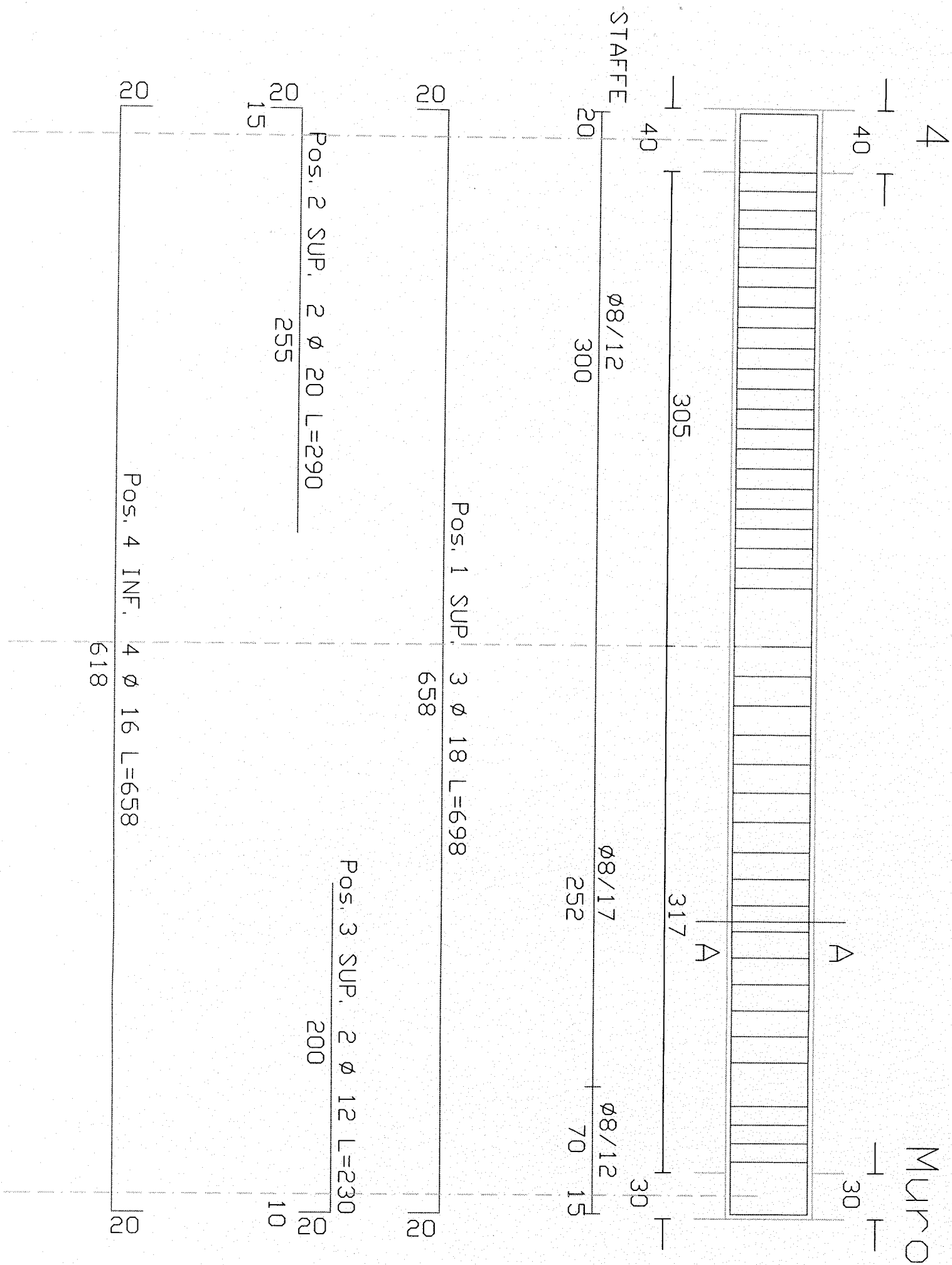


| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 2 Ø 20         | L=1030        |
| 2 SUP. | 3 Ø 16         | L=210         |
| 3 SUP. | 4 Ø 20         | L=270         |
| 4 INF. | 5 Ø 20         | L=990         |
| 5 LAT. | 4 + 4 Ø 14     | L=950         |

Sez. A-A

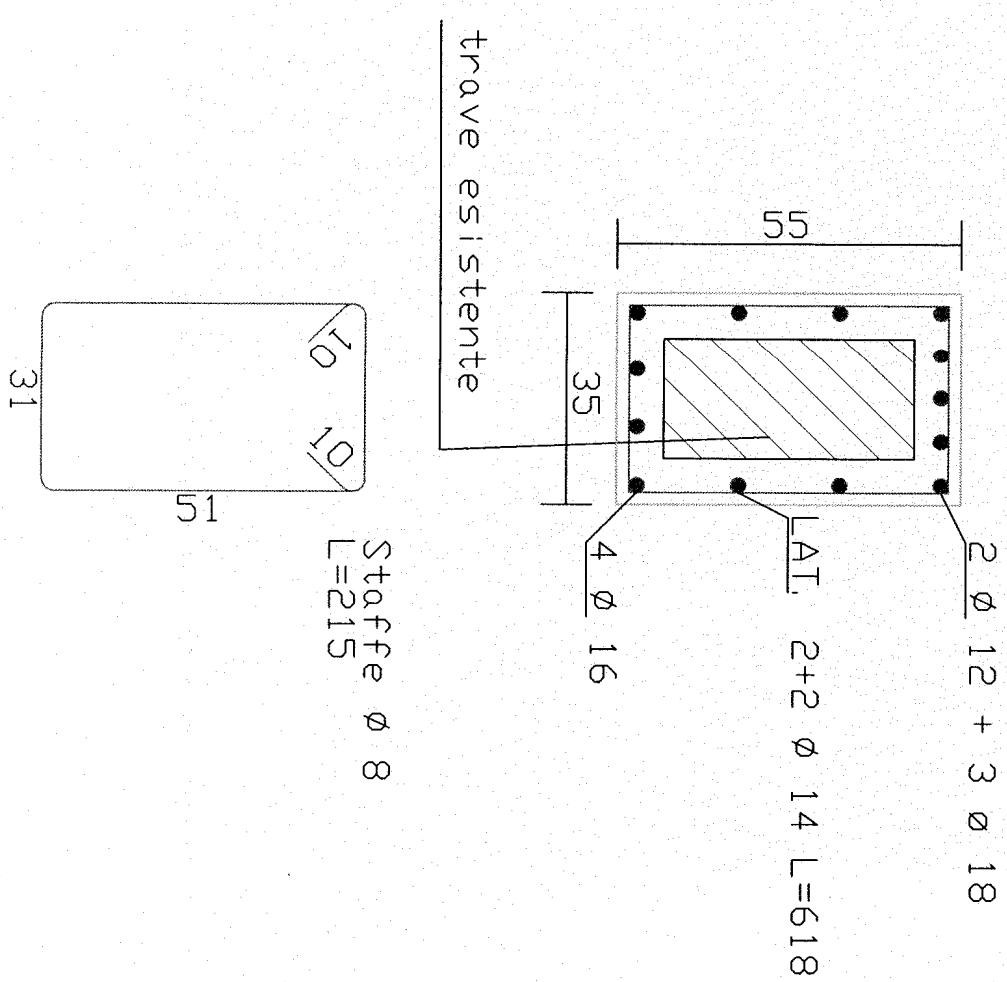


# Trave 8 (35x55)

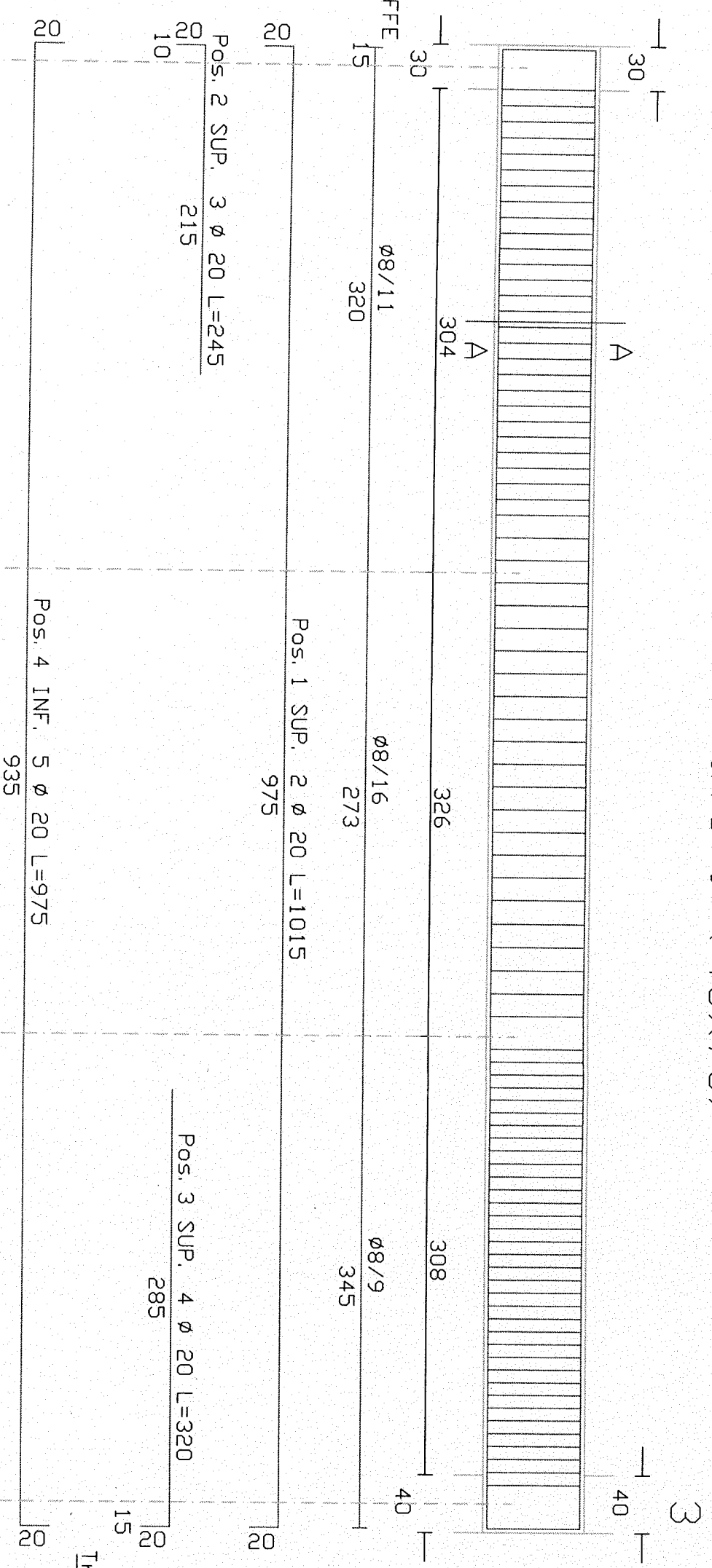


| POS    | DIAM $\varnothing$<br>(mm) | LUNGH<br>(cm) |
|--------|----------------------------|---------------|
| 1 SUP. | 3 $\varnothing$ 18         | L=658         |
| 2 SUP. | 2 $\varnothing$ 20         | L=290         |
| 3 SUP. | 2 $\varnothing$ 12         | L=230         |
| 4 INF. | 4 $\varnothing$ 16         | L=658         |
| 5 LAT. | 2 + 2 $\varnothing$ 14     | L=618         |

Sez. A-A

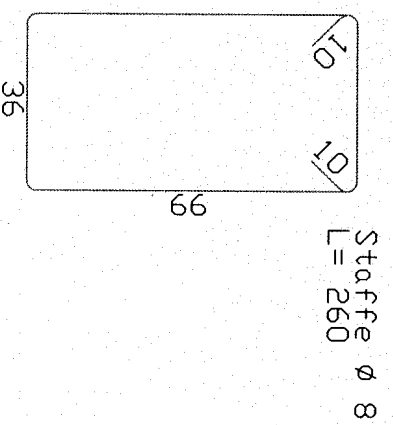
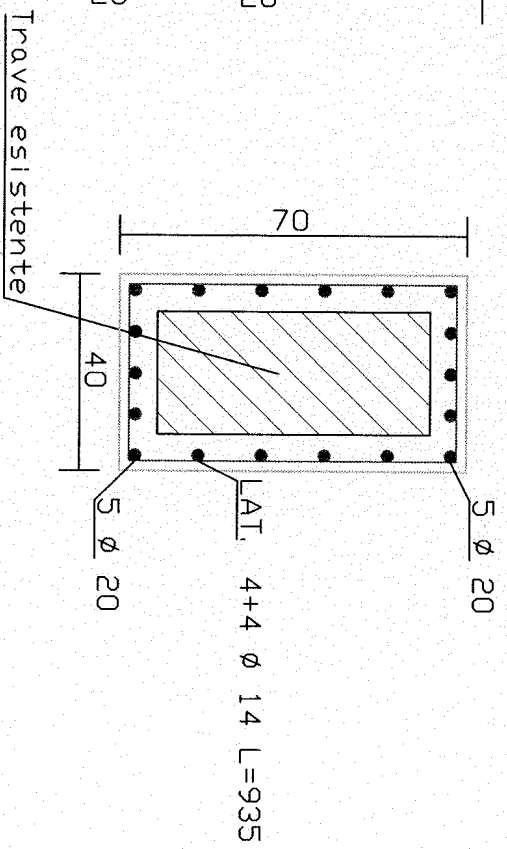


# Trave 9 (40x70)



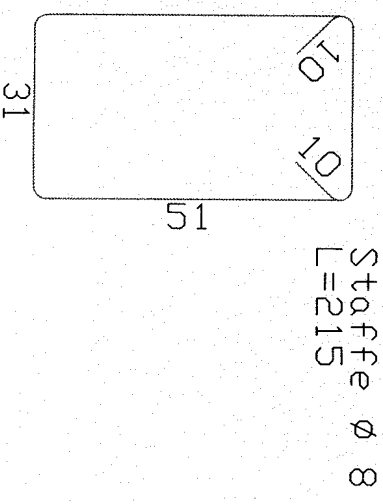
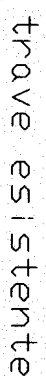
| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 2 Ø 20         | L=1015        |
| 2 SUP. | 3 Ø 20         | L=245         |
| 3 SUP. | 4 Ø 20         | L=320         |
| 4 INF. | 5 Ø 20         | L=975         |
| 5 LAT. | 4 + 4 Ø 14     | L=935         |

## Sez. A-A

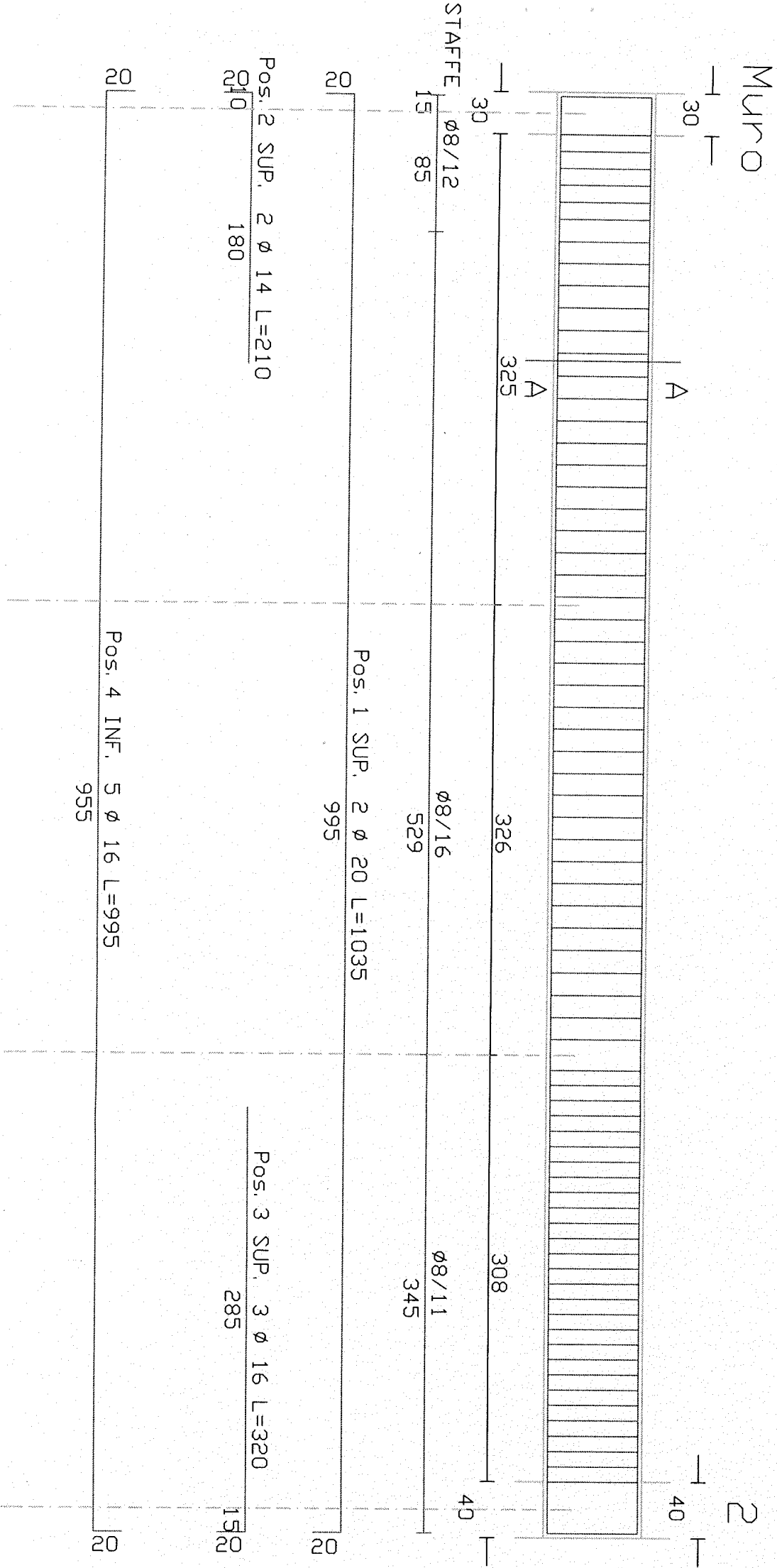




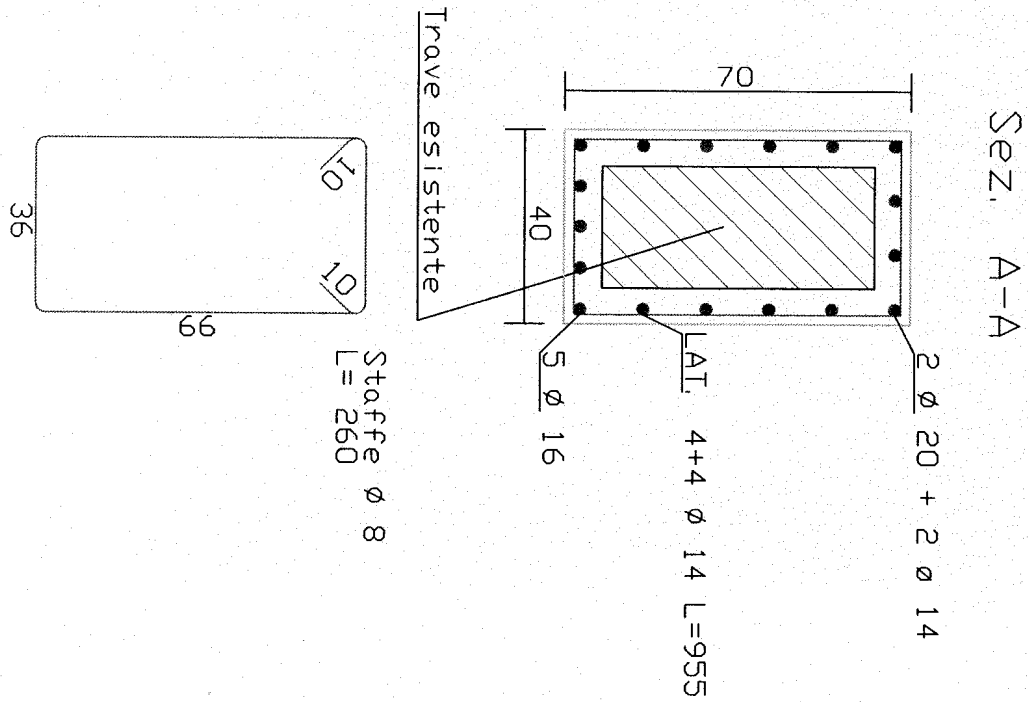
17



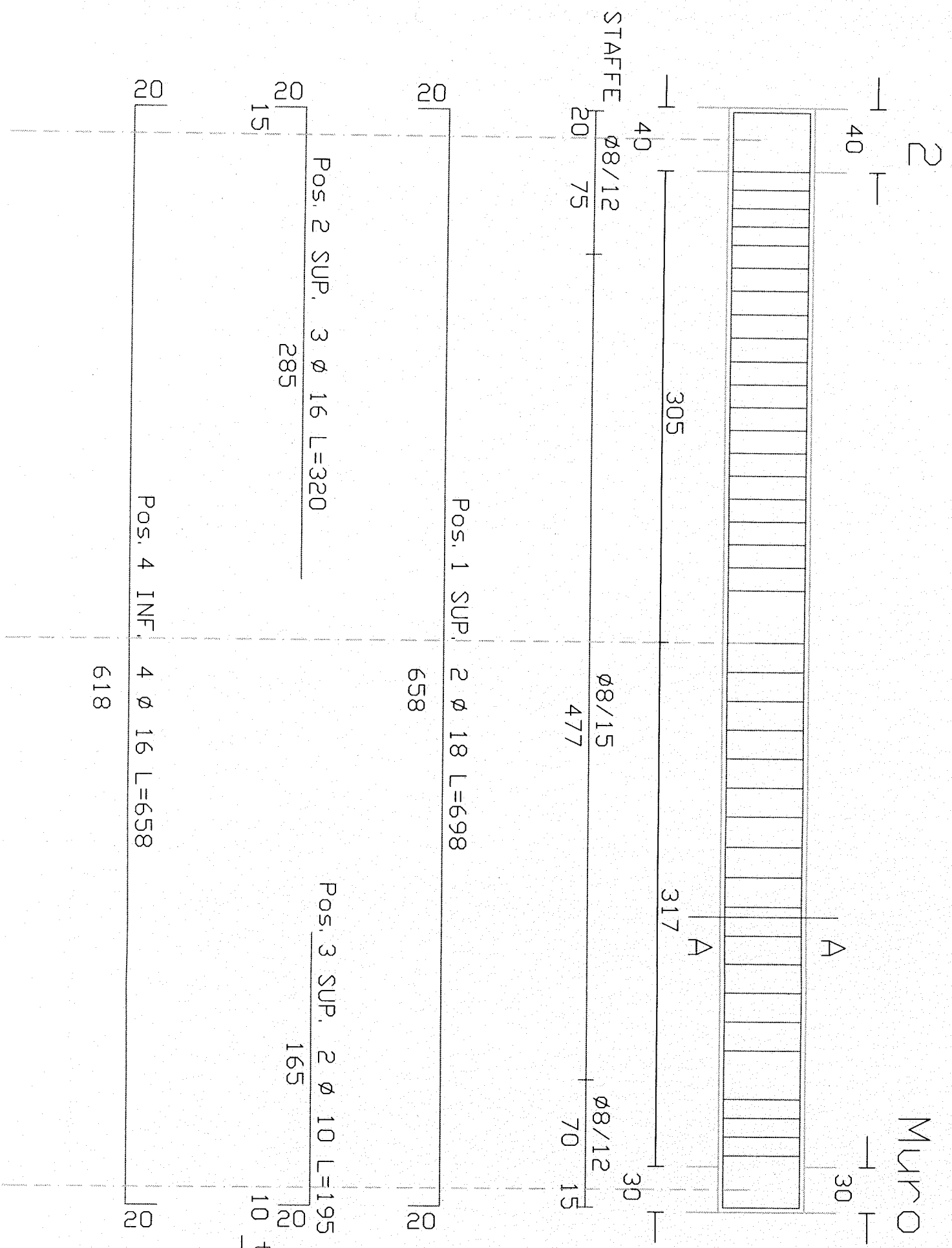
Trave 11 (40x70)



| POS    | DIAM Ø<br>(mm) |  | LUNGH<br>(cm) |
|--------|----------------|--|---------------|
| 1 SUP. | 2 Ø 20         |  | L=1035        |
| 2 SUP. | 2 Ø 14         |  | L=210         |
| 3 SUP. | 3 Ø 16         |  | L=320         |
| 4 INF. | 5 Ø 16         |  | L=995         |
| 5 LAT. | 4 + 4 Ø 14     |  | L=955         |

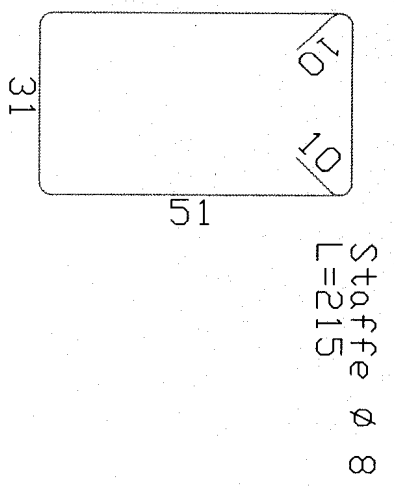
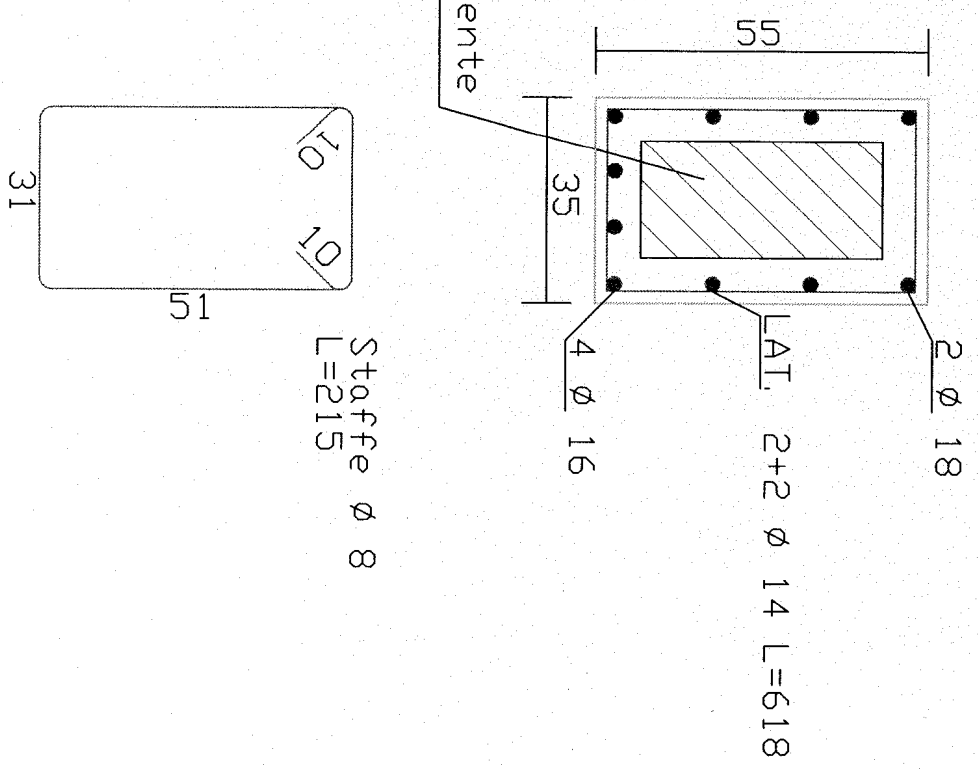


# Trave 12 (35x55)

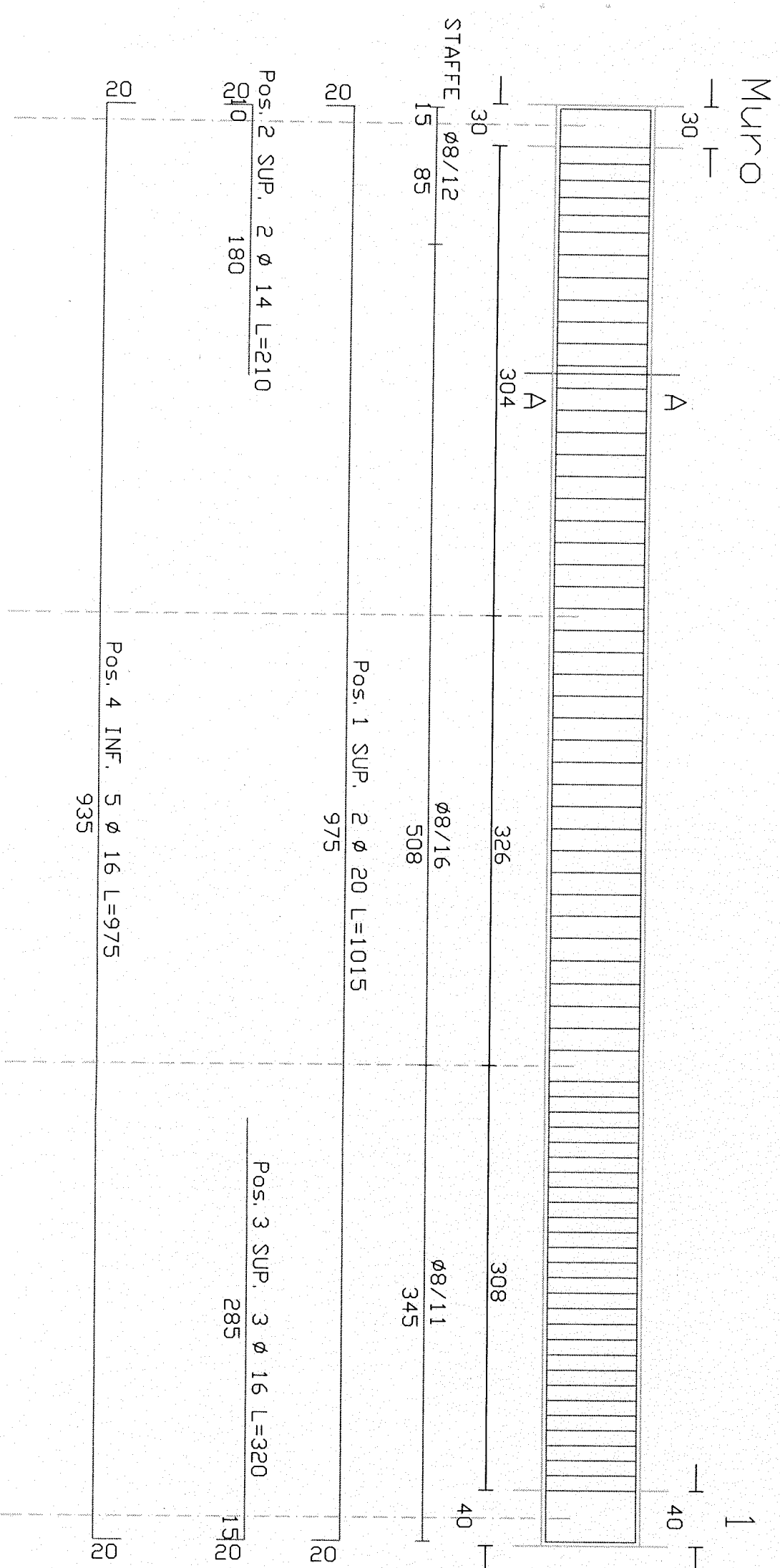


| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 2 Ø 18         | L=698         |
| 2 SUP. | 3 Ø 16         | L=320         |
| 3 SUP. | 2 Ø 10         | L=195         |
| 4 INF. | 4 Ø 16         | L=658         |
| 5 LAT. | 2 + 2 Ø 14     | L=618         |

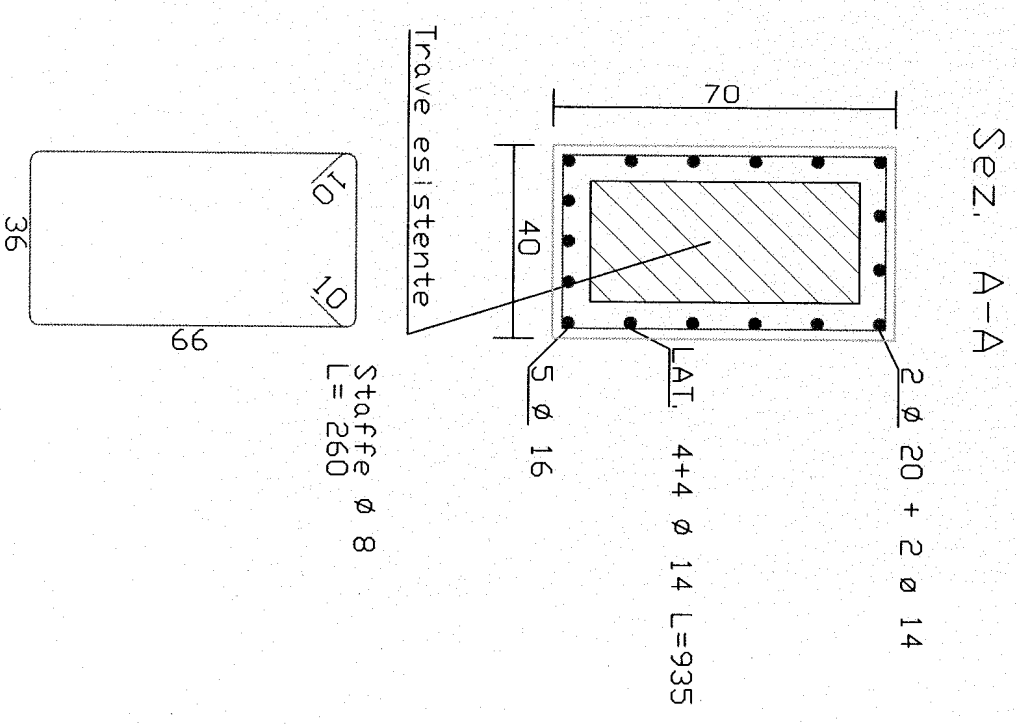
## Sez. A-A



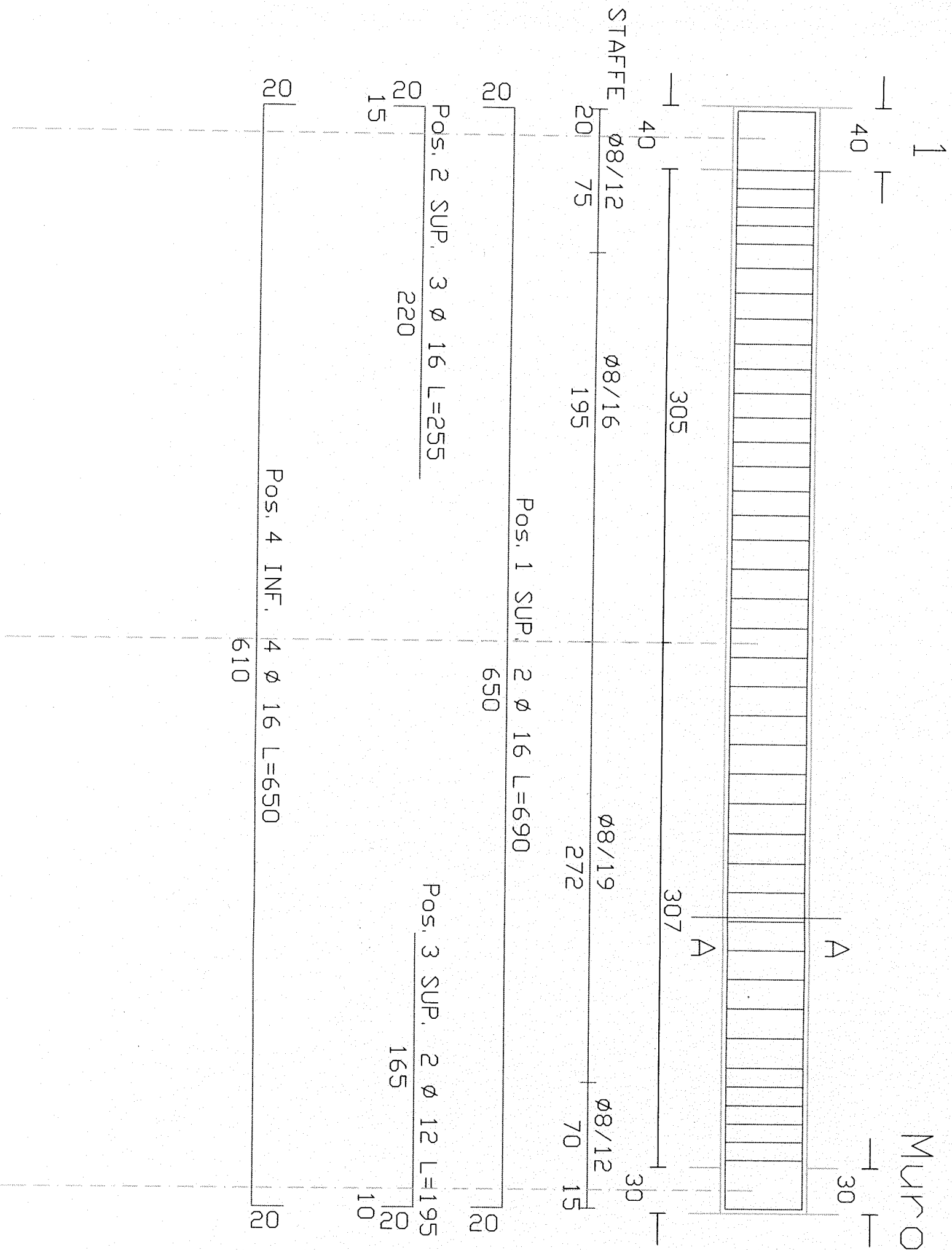
## Travel 13 (40x70)



| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 2 Ø 20         | L=1015        |
| 2 SUP. | 2 Ø 14         | L=210         |
| 3 SUP. | 3 Ø 16         | L=320         |
| 4 INF. | 5 Ø 16         | L=975         |
| 5 LAT. | 4 + 4 Ø 14     | L=935         |

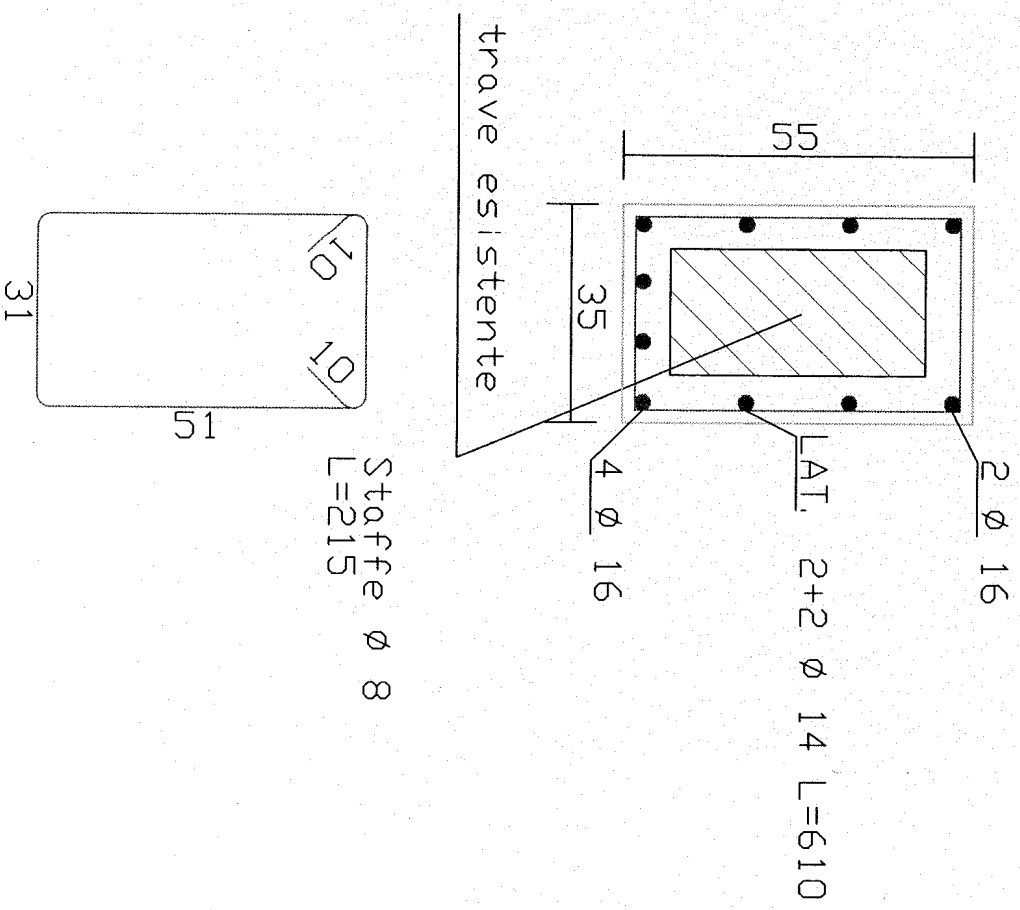


# Trave 14 (35x55)



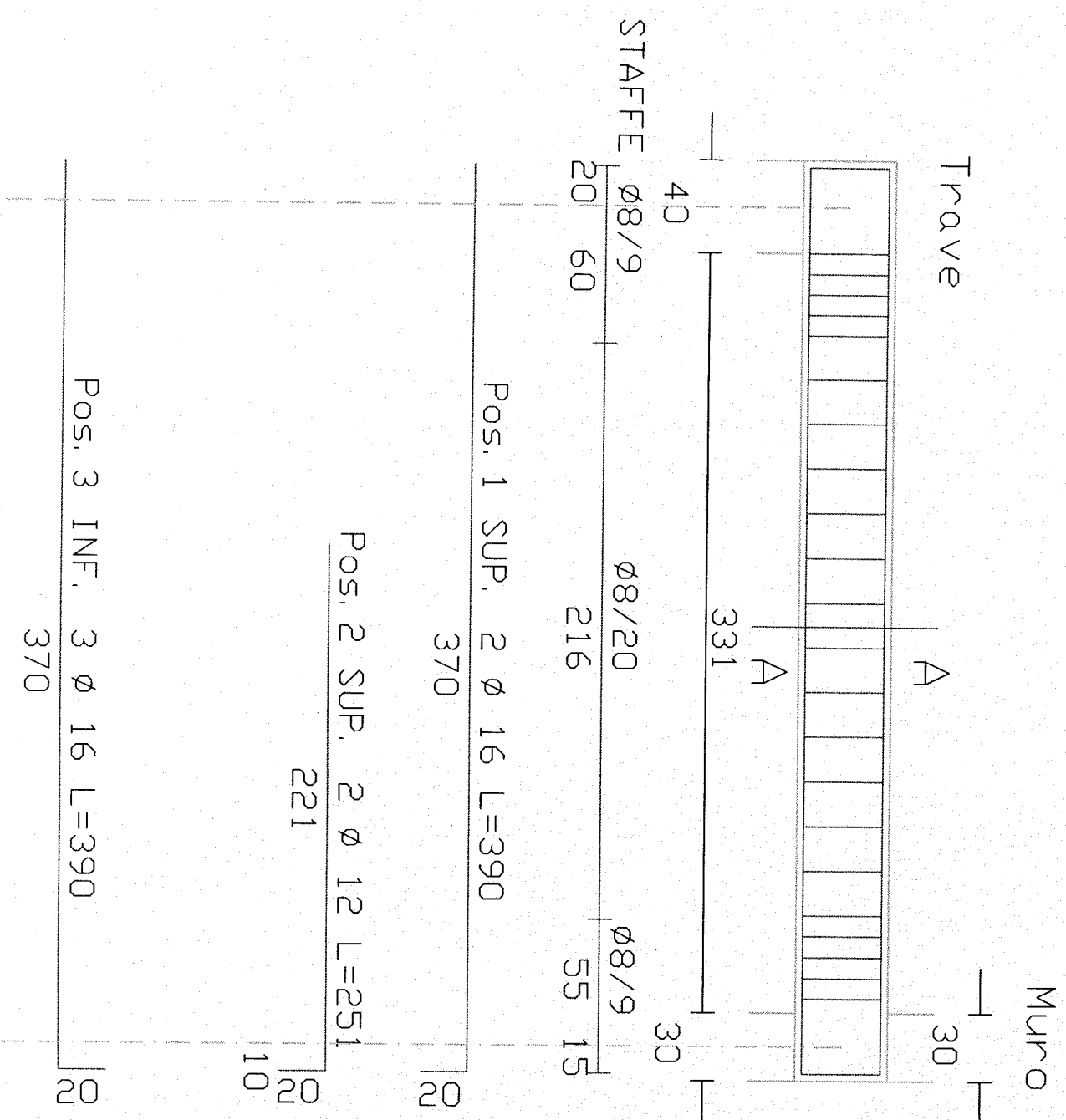
| POS    | DIAM $\varnothing$<br>(mm) | LUNGH<br>(cm) |
|--------|----------------------------|---------------|
| 1 SUP. | 2 $\varnothing$ 16         | L=690         |
| 2 SUP. | 3 $\varnothing$ 16         | L=255         |
| 3 SUP. | 2 $\varnothing$ 12         | L=195         |
| 4 INF. | 4 $\varnothing$ 16         | L=650         |
| 5 LAT. | 2 + 2 $\varnothing$ 14     | L=610         |

## Sez. A-A



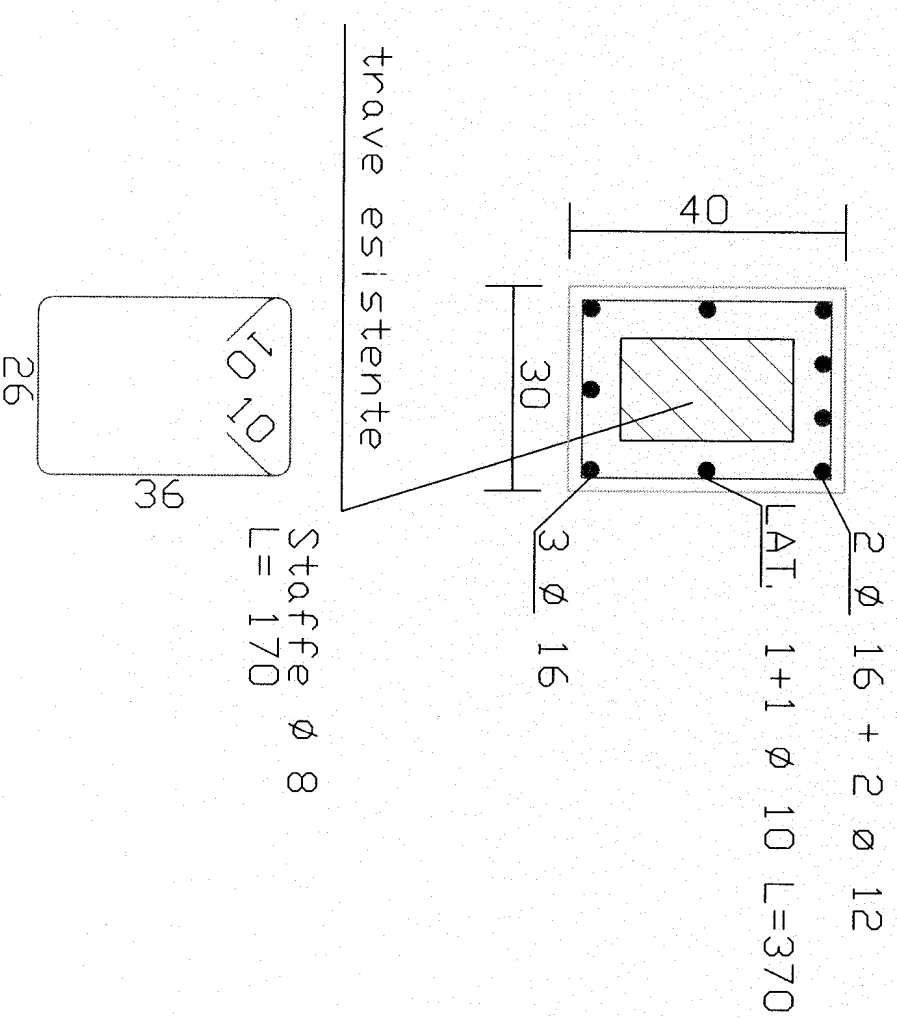
Trave 15/16/41/42 (30x40)

N.b. : Lunghezze variabili. Verificare in cantiere con la D.L.

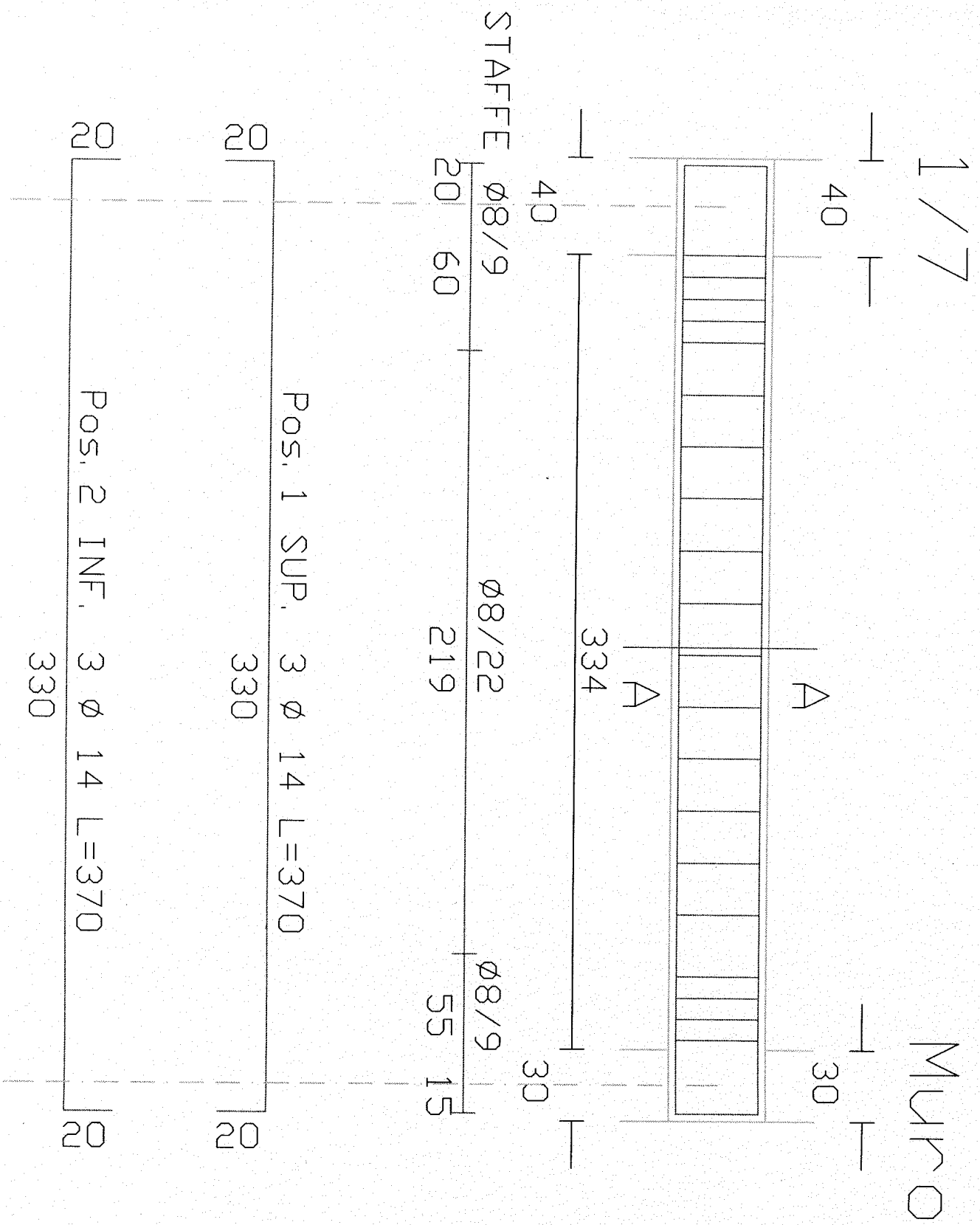


| PDS               | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|-------------------|----------------|---------------|
| 1 SUP. 2 Ø 16     |                | L=390         |
| 2 SUP. 2 Ø 12     |                | L=251         |
| 3 INF. 3 Ø 16     |                | L=390         |
| 4 LAT. 1 + 1 Ø 10 |                | L=370         |

Sez. A-A

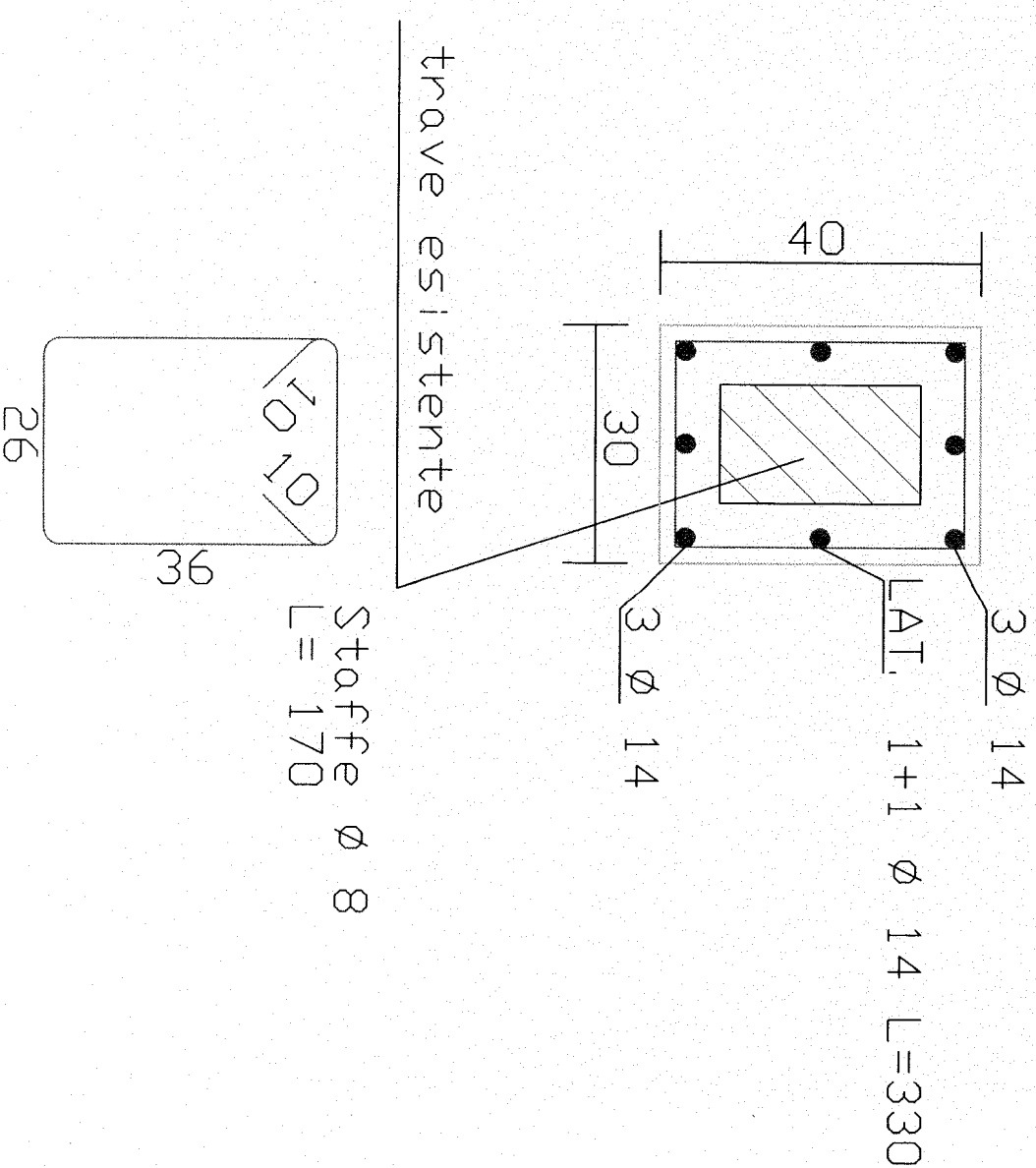


# Trave 17/43 (30x40)



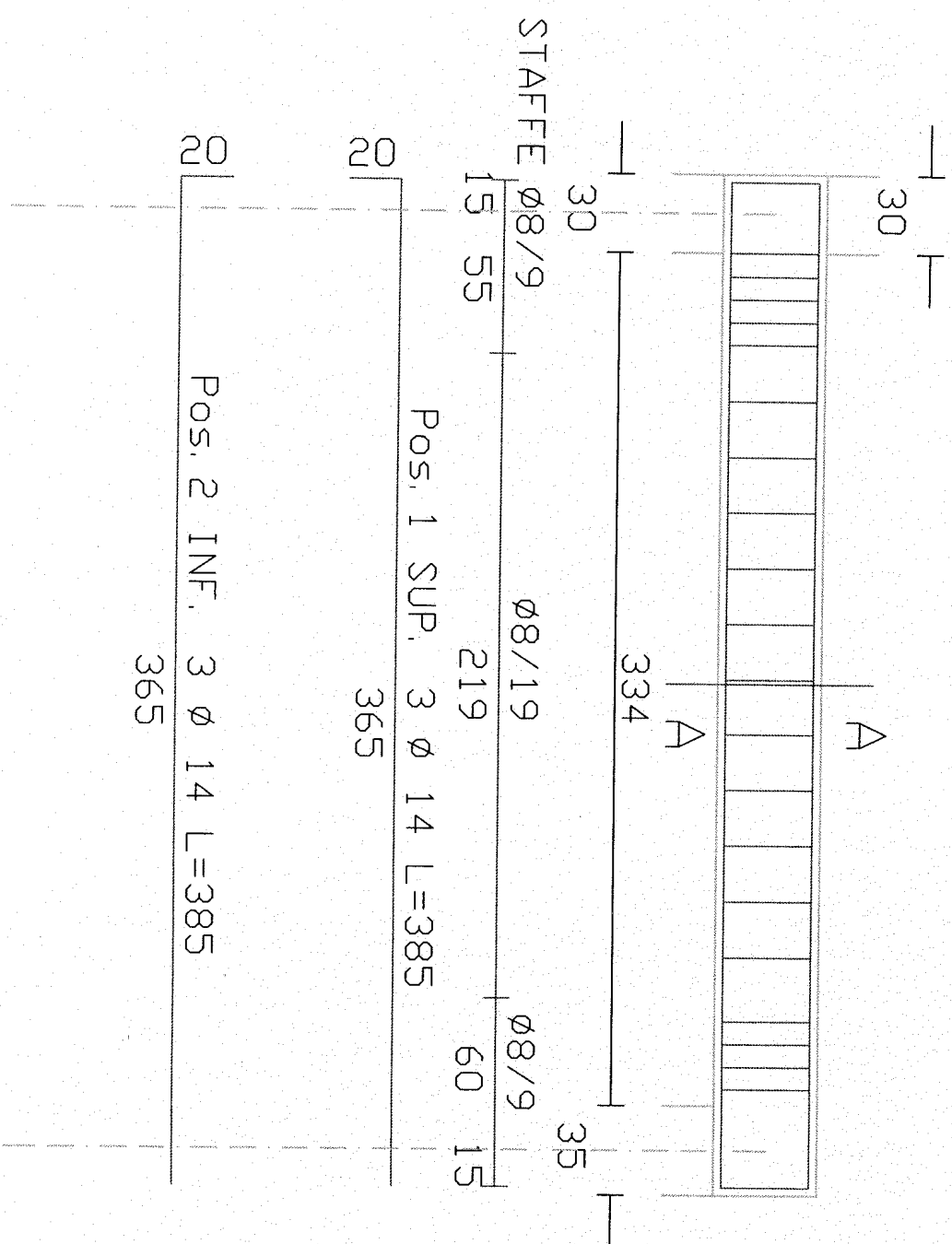
| POS               | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|-------------------|----------------|---------------|
| 1 SUP. 3 Ø 14     |                | L=370         |
| 2 INF. 3 Ø 14     |                | L=370         |
| 3 LAT. 1 + 1 Ø 14 |                | L=330         |

Sez. A-A



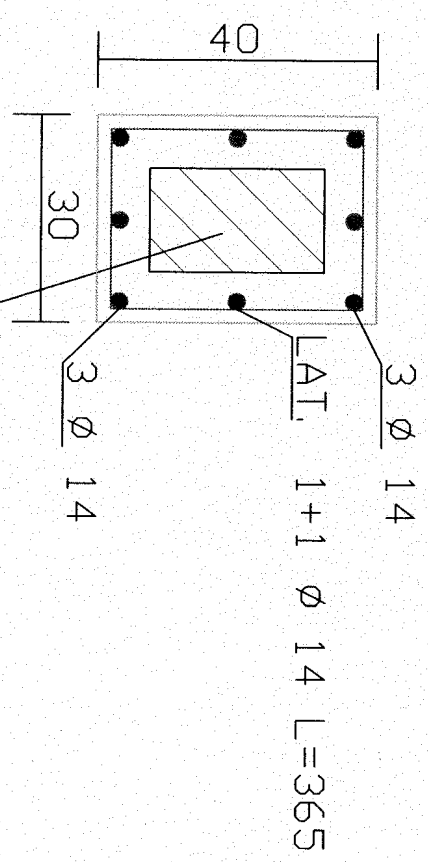
N. k.: Lunghezze variabili. Verificare in cantiere con la D.L.

Trave 18/44 (30x40)

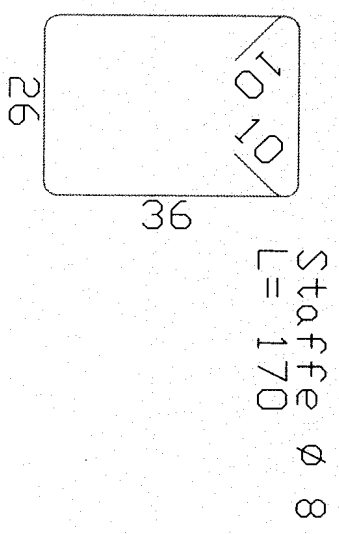


| POS               | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|-------------------|----------------|---------------|
| 1 SUP. 3 Ø 14     |                | L=385         |
| 2 INF. 3 Ø 14     |                | L=385         |
| 3 LAT. 1 + 1 Ø 14 |                | L=365         |

Sez. A-A

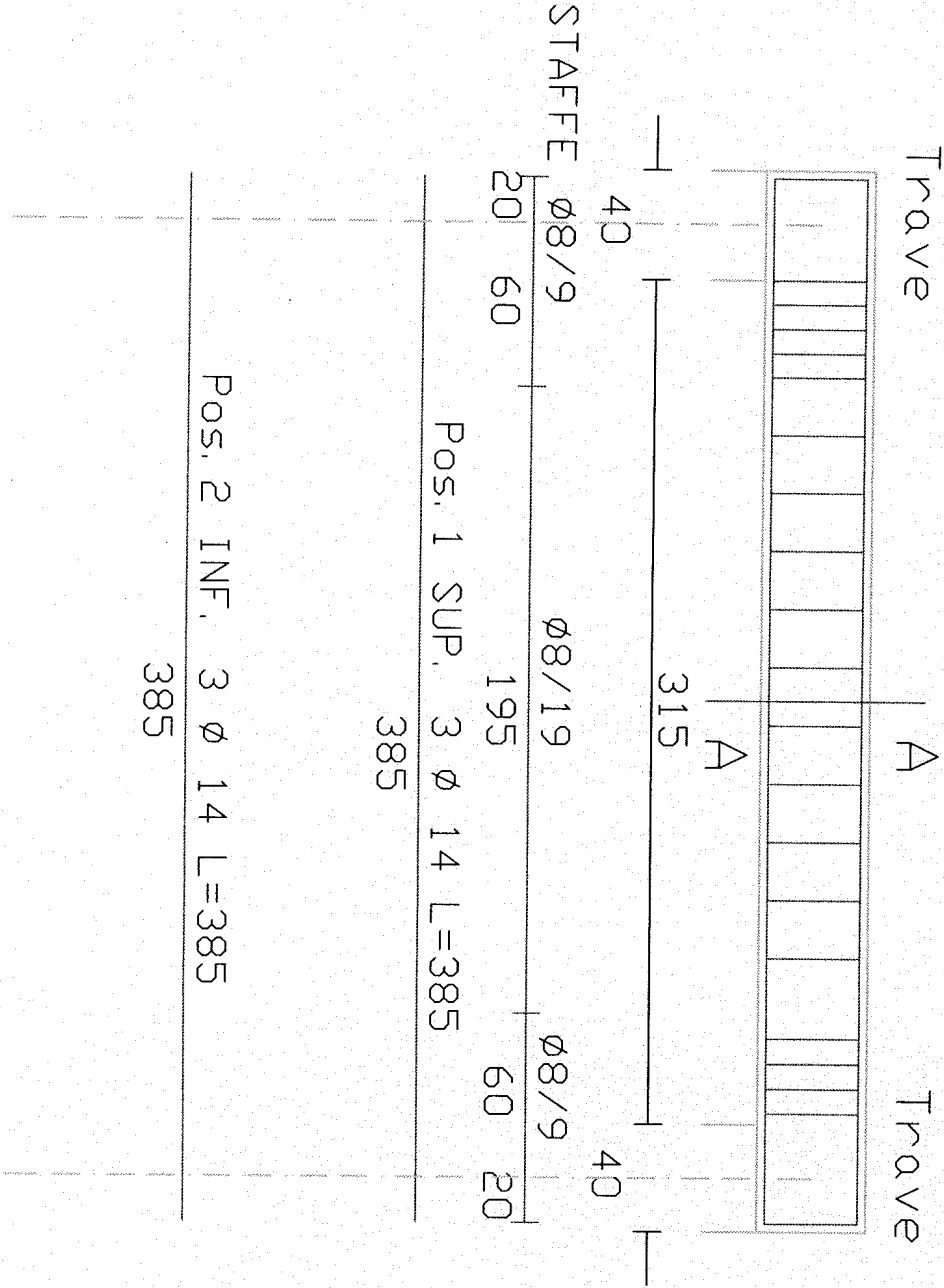


trave esistente



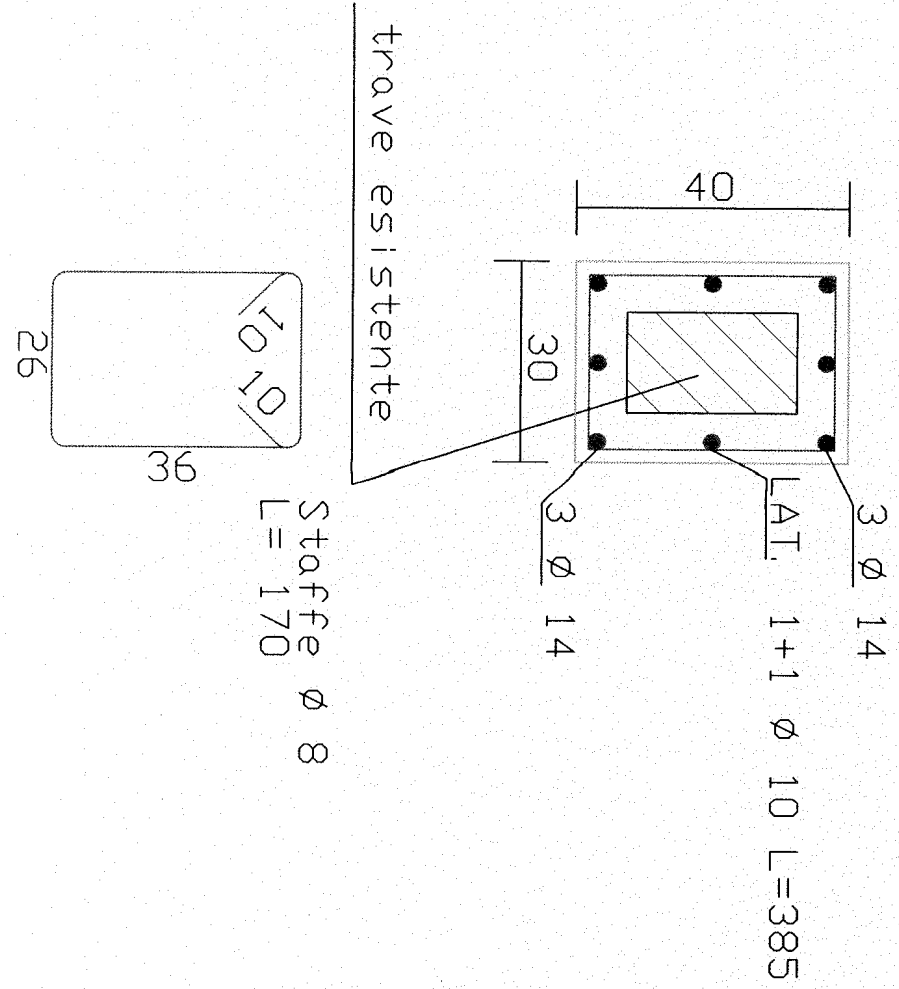
Trave 19/20/23/24/27/28/31/32/35/36 (30x40)

N. b. : Lunghezze variabili. Verificare in cantiere con la D.L.



| POS               | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|-------------------|----------------|---------------|
| 1 SUP. 3 Ø 14     |                | L=385         |
| 2 INF. 3 Ø 14     |                | L=385         |
| 3 LAT. 1 + 1 Ø 10 |                | L=385         |

Sez. A-A



Trave 21/25/29/33/37/39 (30x40)

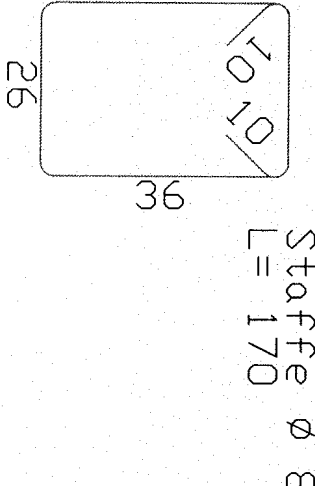
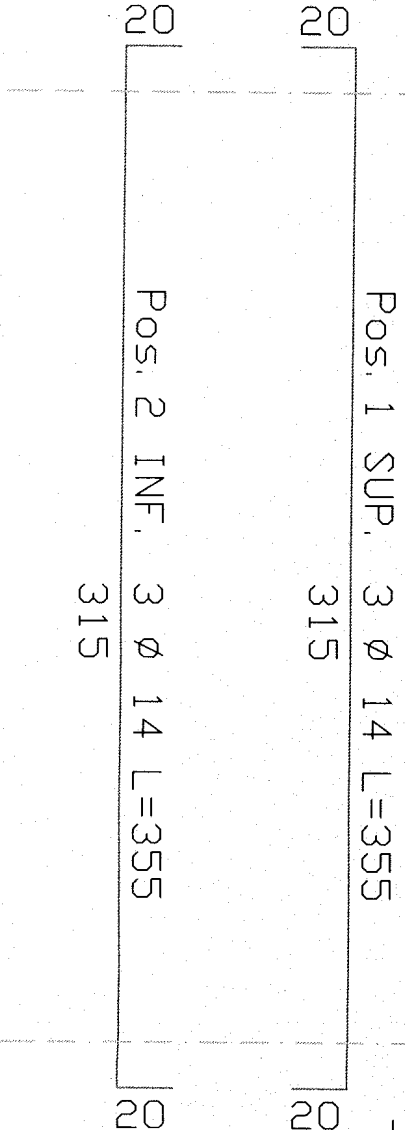
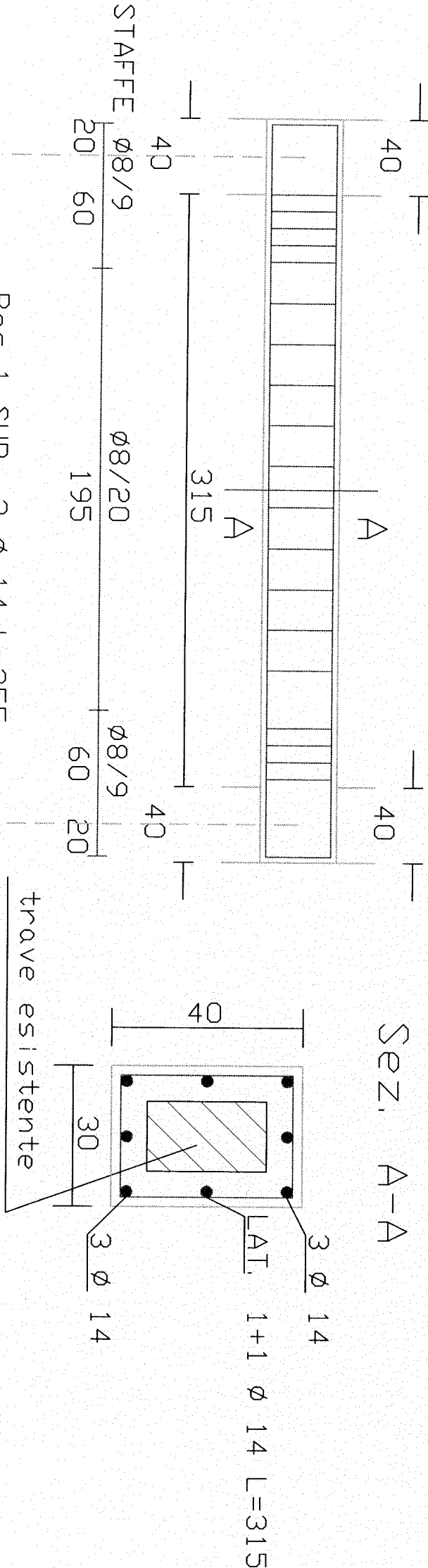
N. k. : Lunghezze variabili. Verificare in cantiere con la D.L.

6/5/4/3/2/1

7/6/5/4/3/2

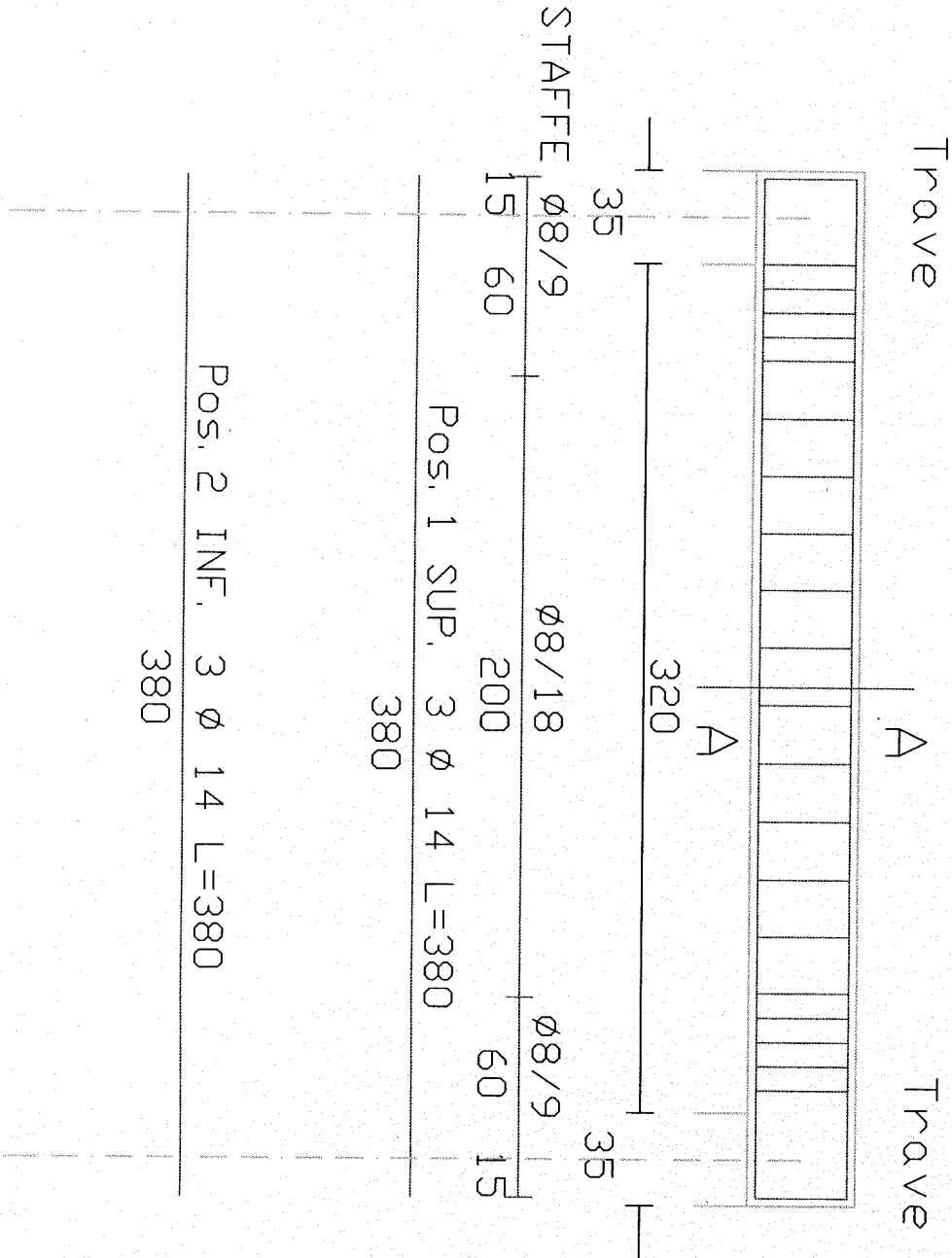
| PDS    | DIAM $\varnothing$<br>(mm) | LUNGH<br>(cm) |
|--------|----------------------------|---------------|
| 1 SUP. | 3 $\varnothing$ 14         | L=355         |
| 2 INF. | 3 $\varnothing$ 14         | L=355         |
| 3 LAT. | 1 + 1 $\varnothing$ 14     | L=315         |

Sez. A-A



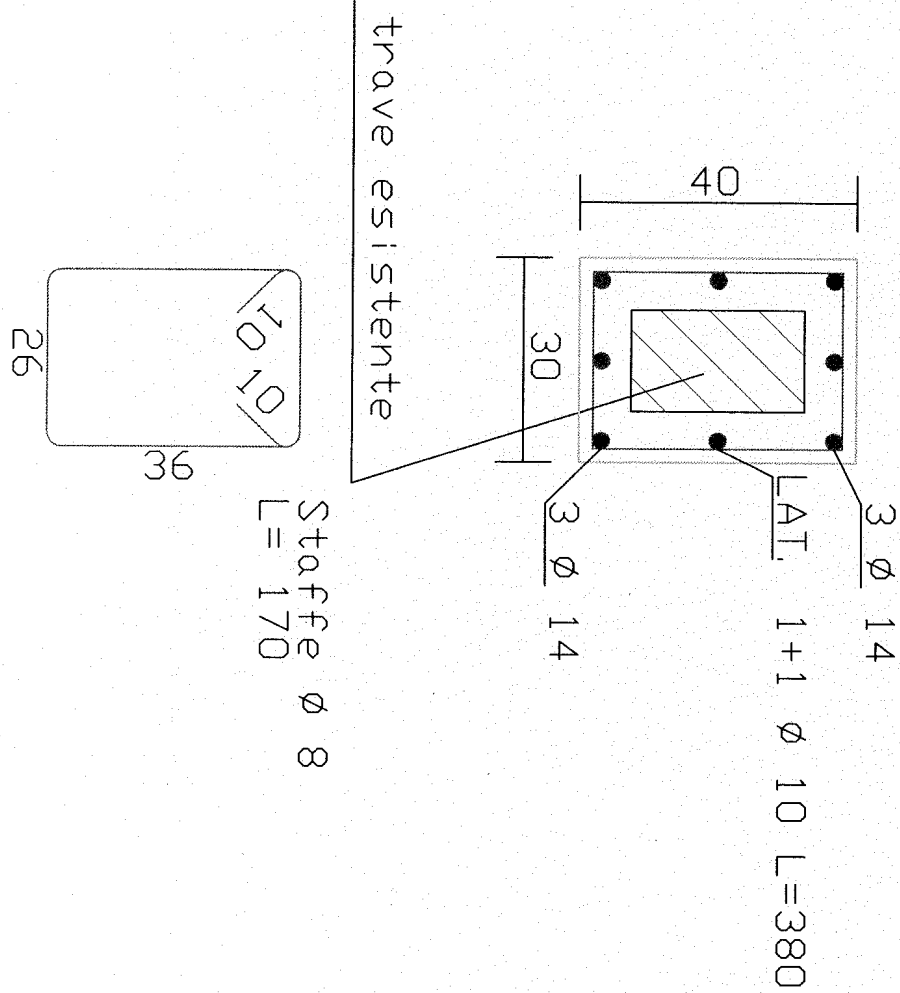
Trave 22/26/30/34/38/40 (30x40)

N. b. : Lunghezze variabili. Verificare in cantiere con la D. L.

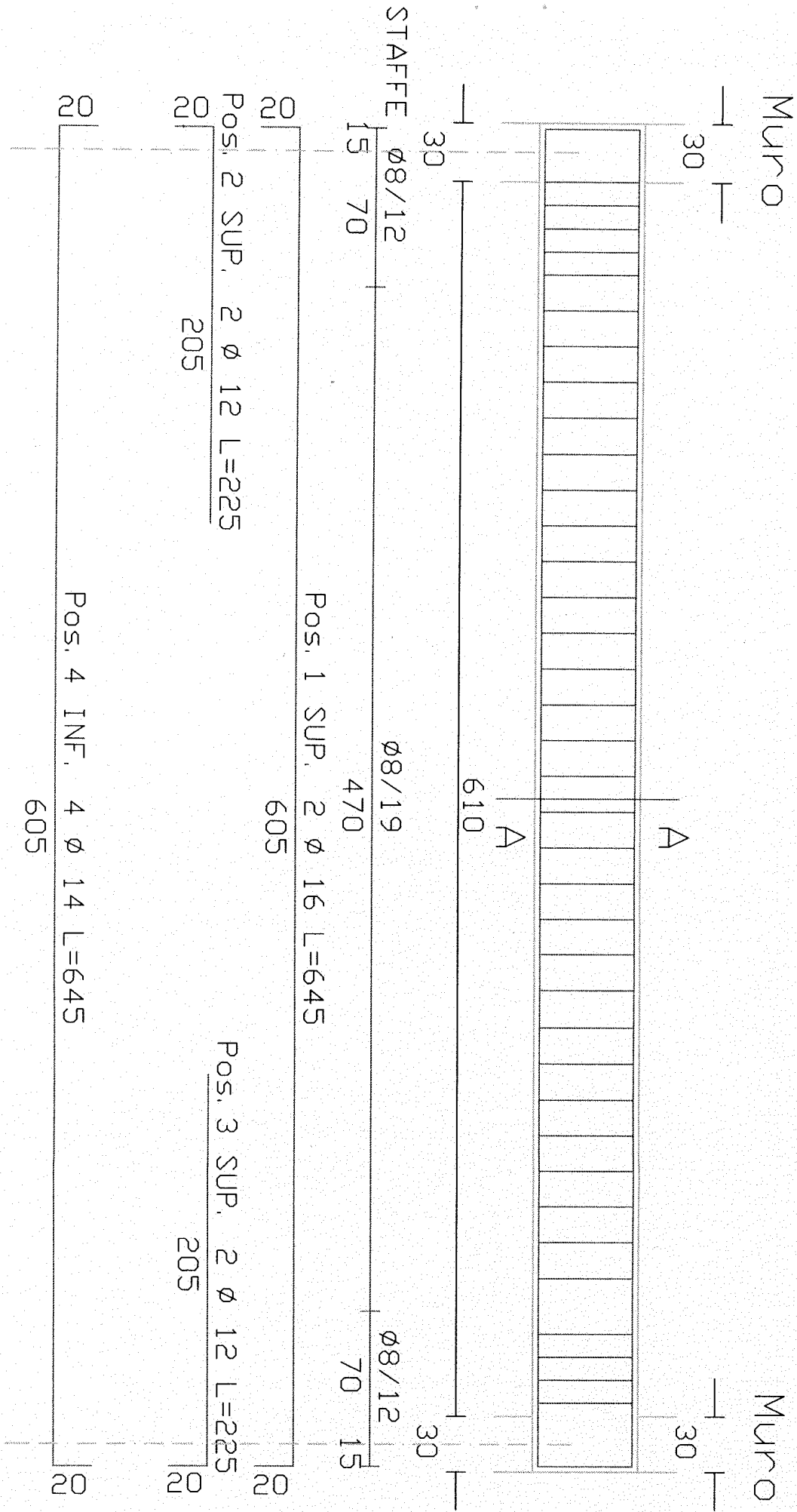


| POS                           | DIAM $\varnothing$<br>(mm) | LUNGH<br>(cm) |
|-------------------------------|----------------------------|---------------|
| 1 SUP. 3 $\varnothing 14$     |                            | L=380         |
| 2 INF. 3 $\varnothing 14$     |                            | L=380         |
| 3 LAT. 1 + 1 $\varnothing 10$ |                            | L=380         |

Sez. A-A

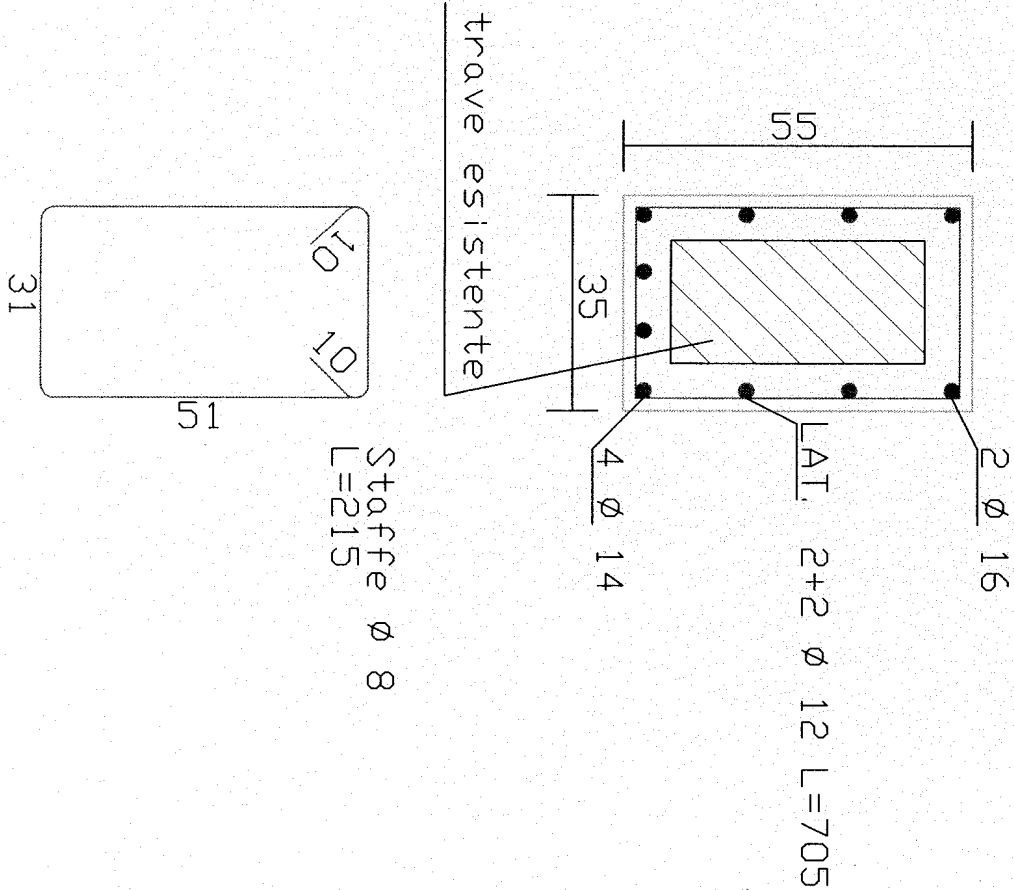


Trave 45 (35x55)



| POS                    | DIAM $\phi$<br>(mm) | LUNGH<br>(cm) |
|------------------------|---------------------|---------------|
| 1 SUP. 2 $\phi$ 16     |                     | L=645         |
| 2 SUP. 2 $\phi$ 12     |                     | L=225         |
| 3 SUP. 2 $\phi$ 12     |                     | L=225         |
| 4 INF. 4 $\phi$ 14     |                     | L=645         |
| 5 LAT. 2 + 2 $\phi$ 12 |                     | L=605         |

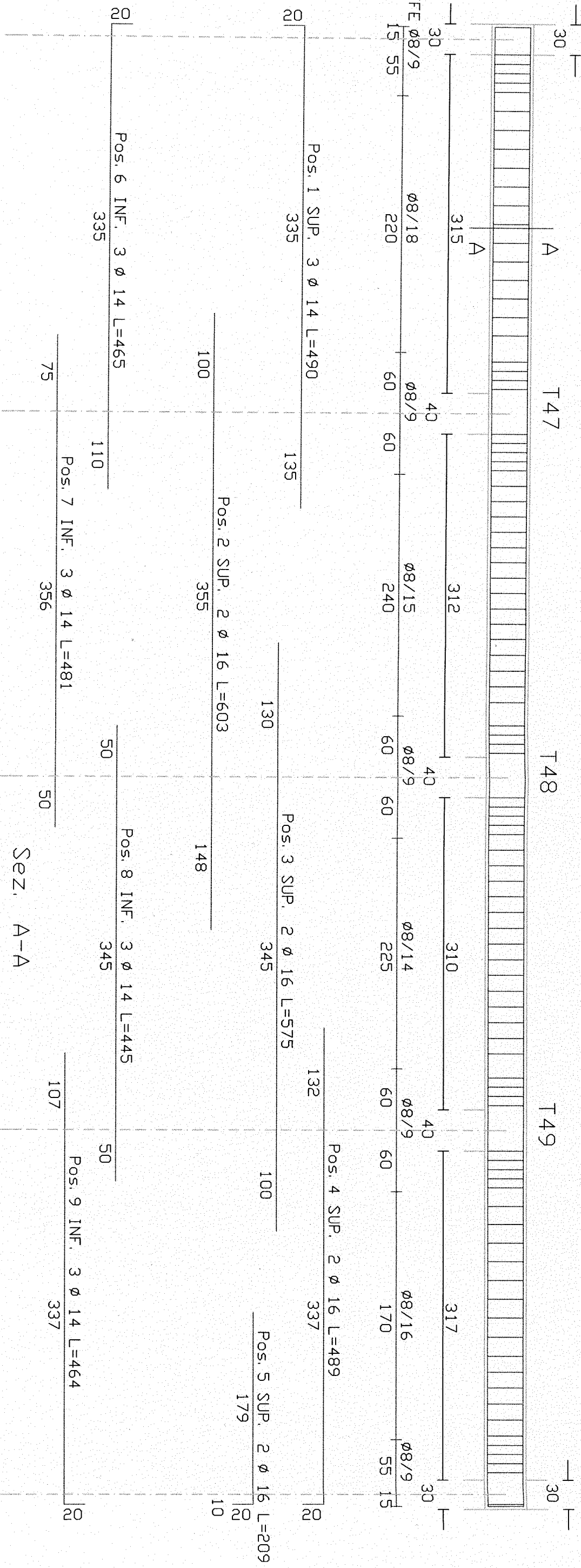
Sez. A-A



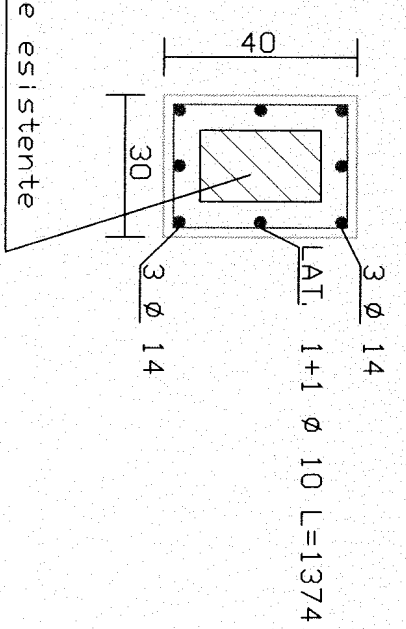
# Trave 46 (30x40)

Muro

Muro

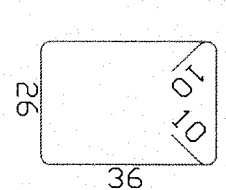


Sez. A-A

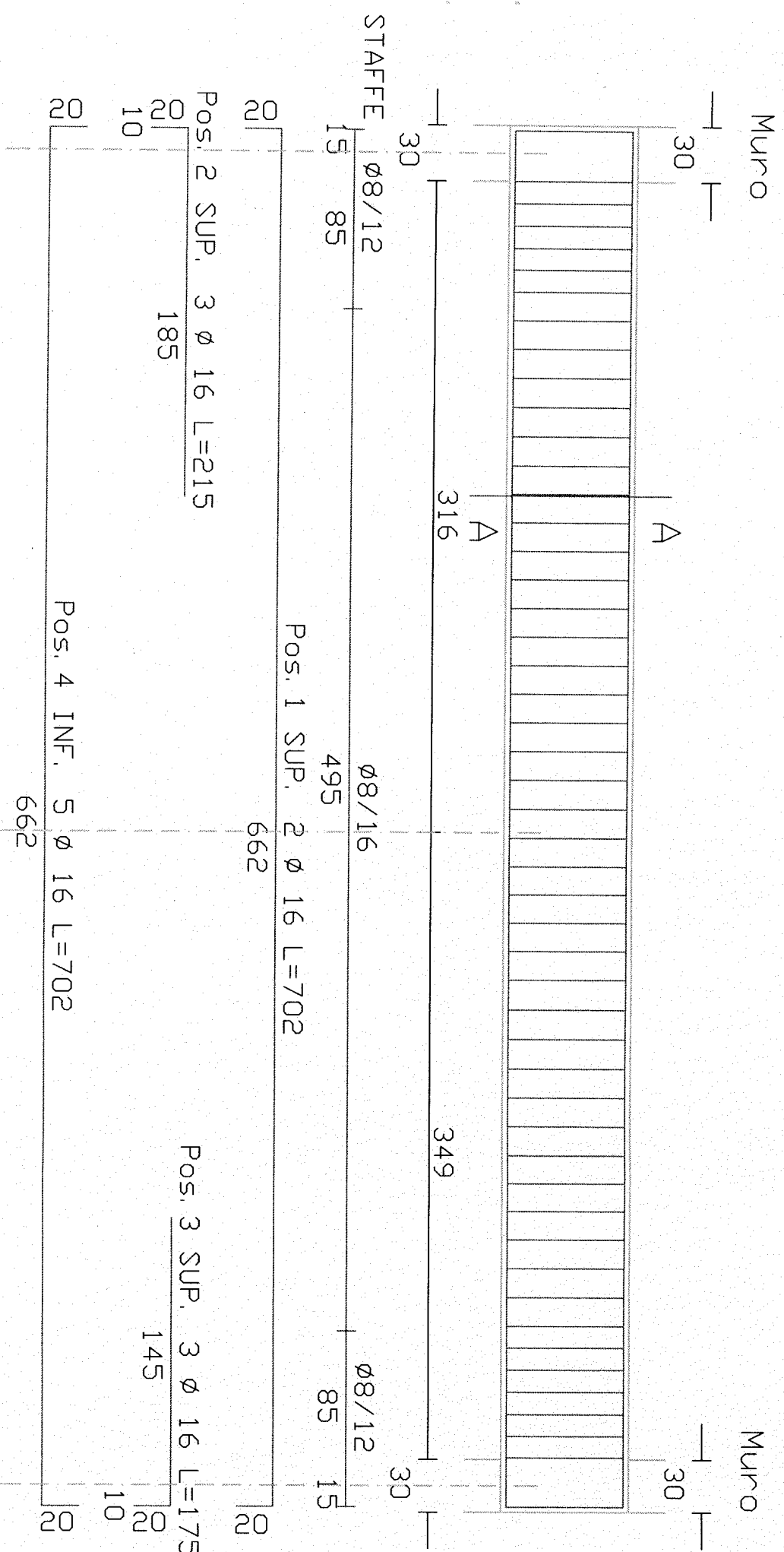


trave esistente

Staffe Ø 8  
L=170

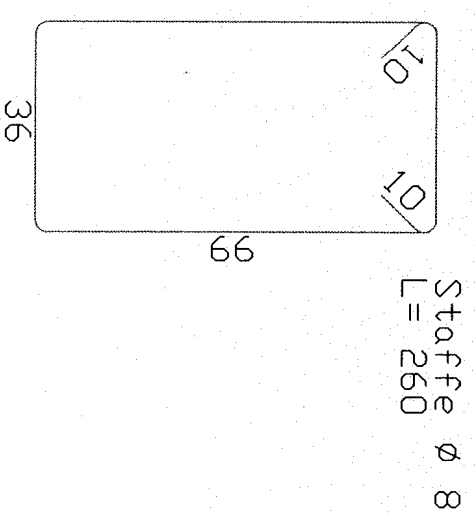
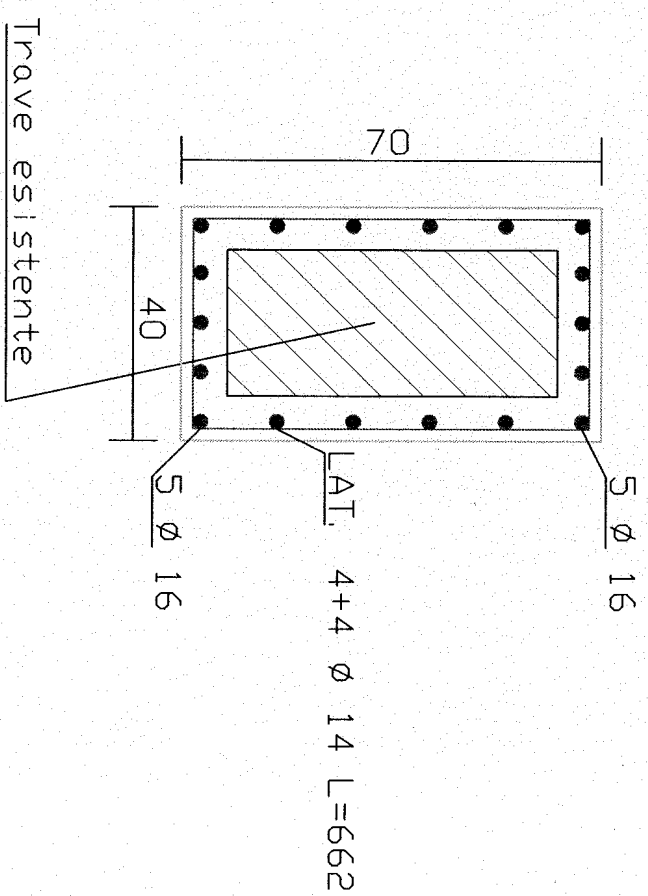


# Trave 47 (40x70)



| POS               | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|-------------------|----------------|---------------|
| 1 SUP. 2 Ø 16     |                | L=702         |
| 2 SUP. 3 Ø 16     |                | L=215         |
| 3 SUP. 3 Ø 16     |                | L=175         |
| 4 INF. 5 Ø 16     |                | L=702         |
| 5 LAT. 4 + 4 Ø 14 |                | L=662         |

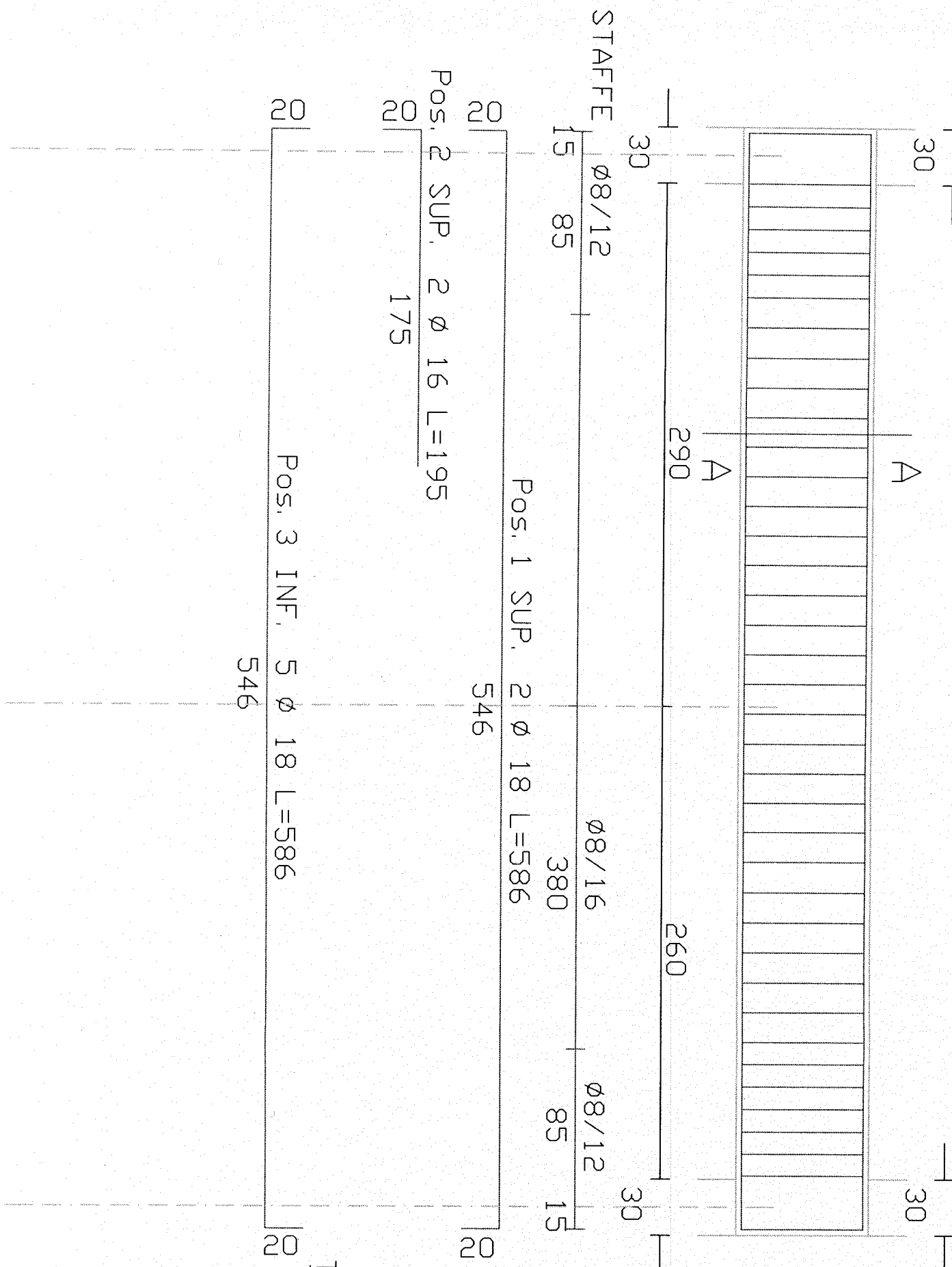
Sez. A-A



# Trave 48 (40x70)

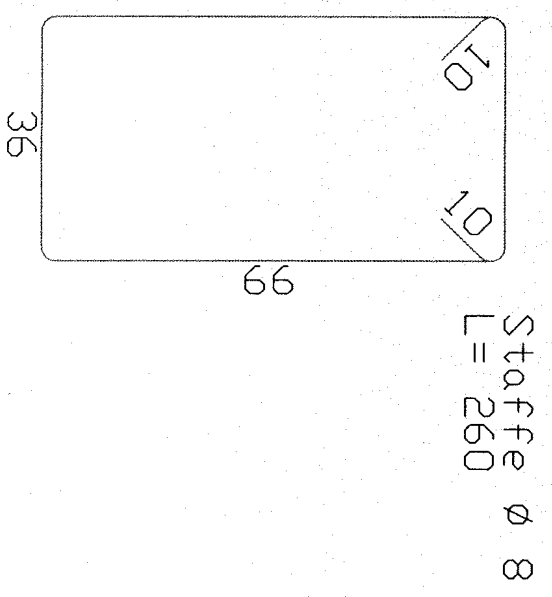
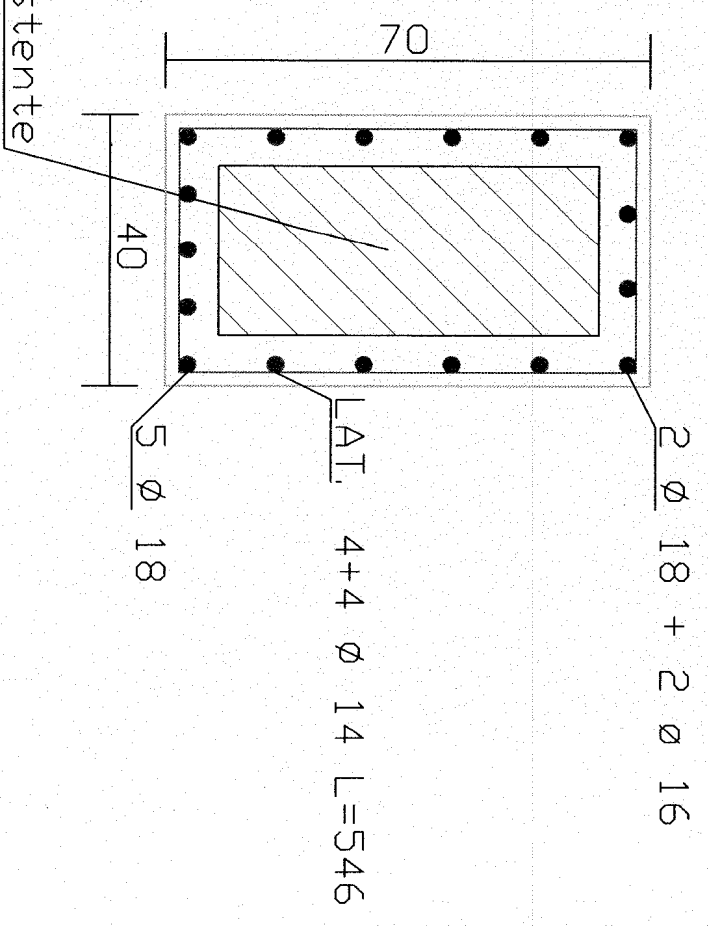
Muro (via San Domenico)

Muro

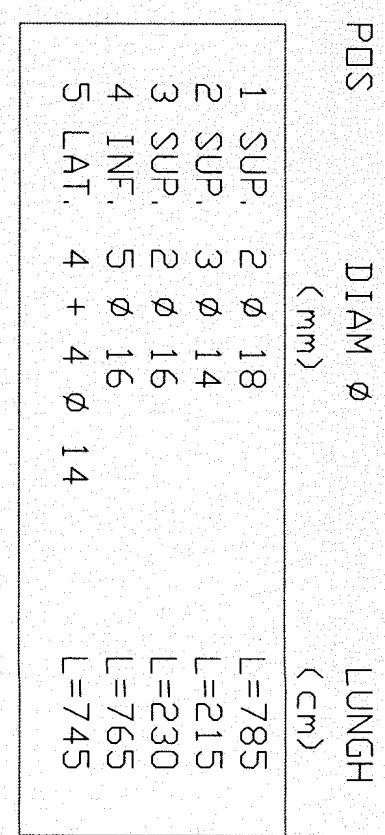
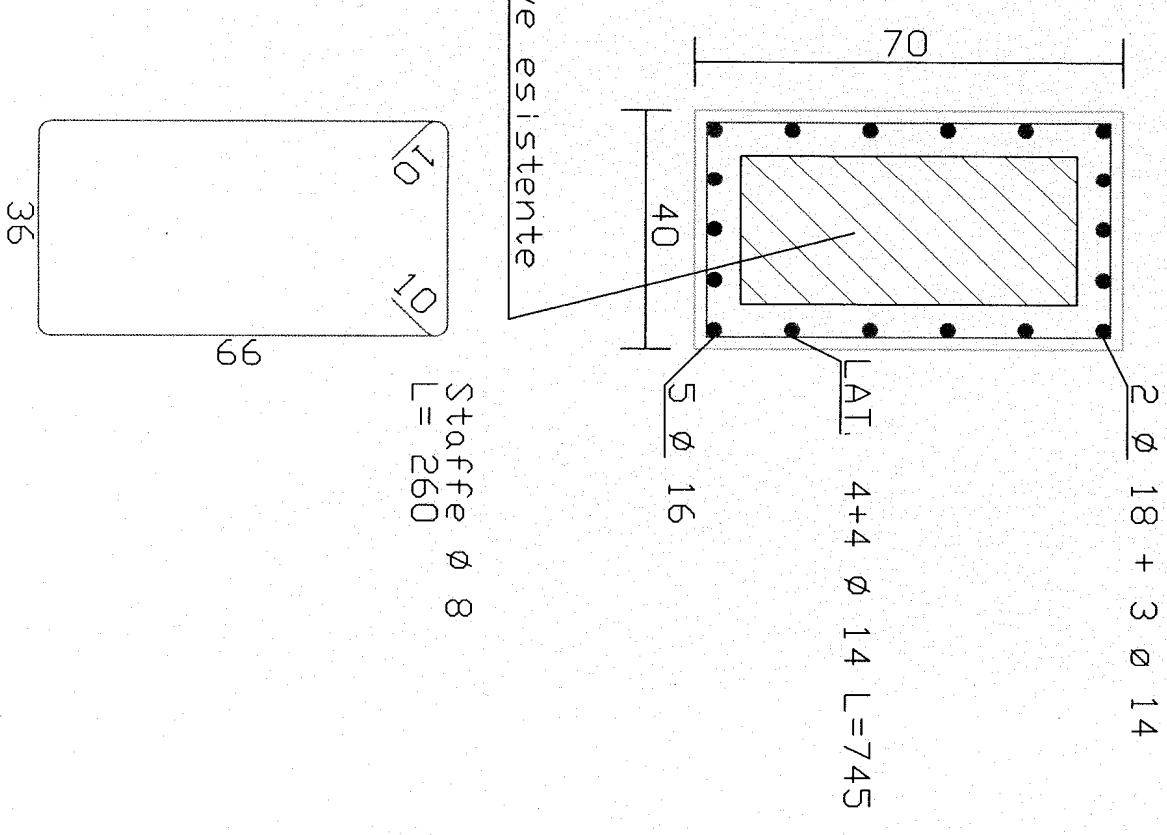


| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 2 Ø 18         | L=586         |
| 2 SUP. | 2 Ø 16         | L=195         |
| 3 INF. | 5 Ø 18         | L=586         |
| 4 LAT. | 4 + 4 Ø 14     | L=546         |

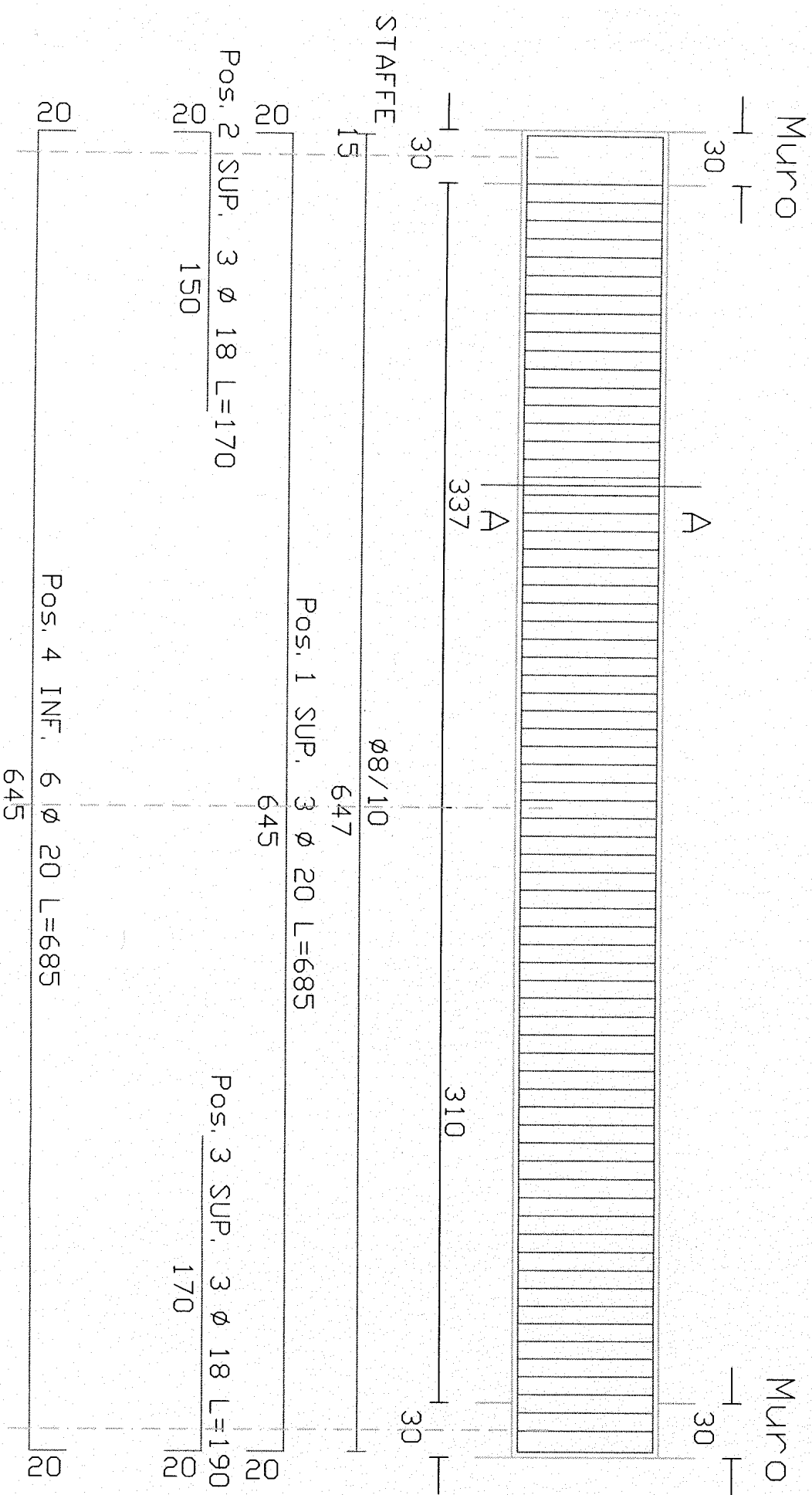
Sez. A-A



MURDO

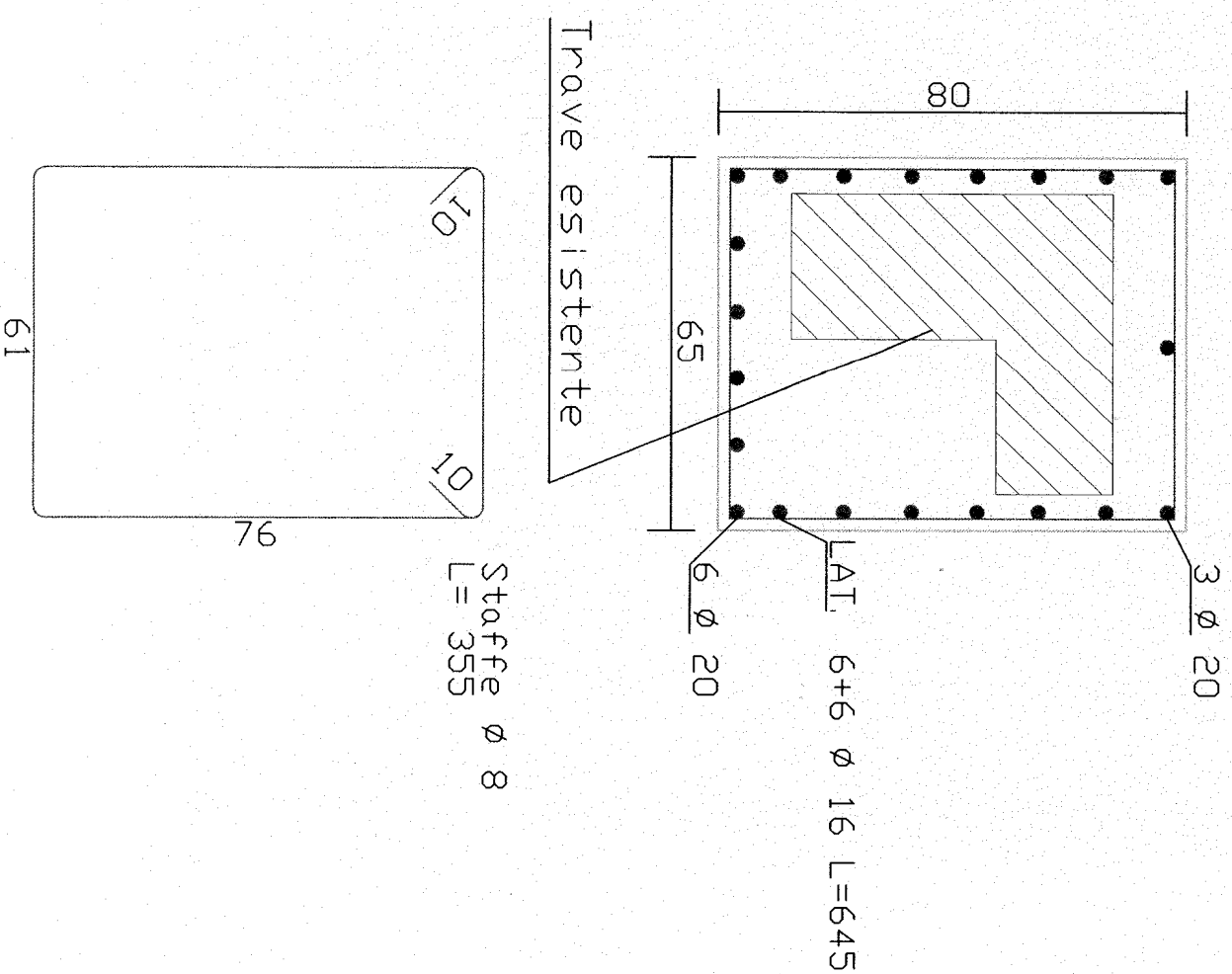
Trave esistente

Trave 50 (65x80)

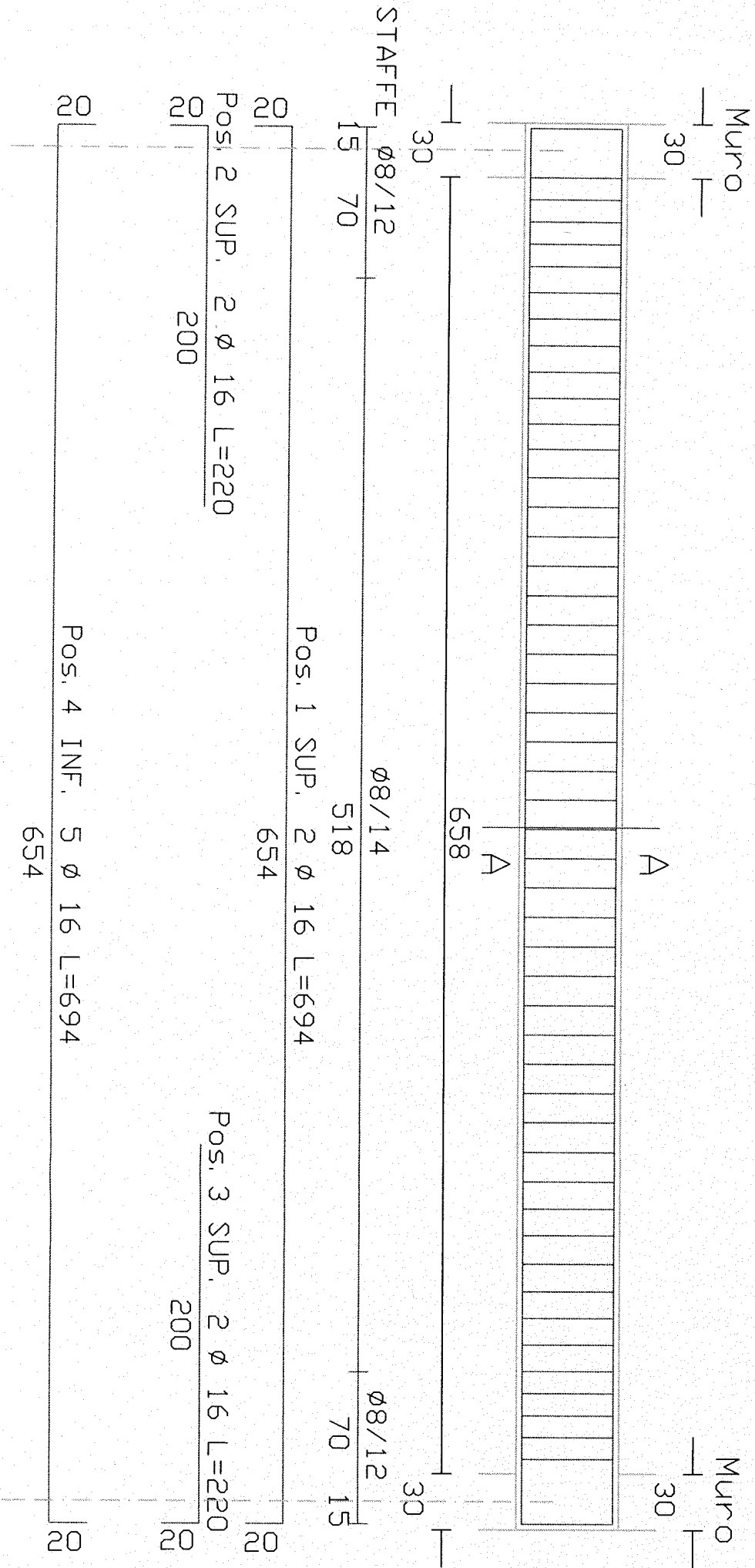


| POS    | DIAM $\varnothing$<br>(mm) | LUNGH<br>(cm) |
|--------|----------------------------|---------------|
| 1 SUP. | 3 $\varnothing$ 20         | L=685         |
| 2 SUP. | 3 $\varnothing$ 18         | L=170         |
| 3 SUP. | 3 $\varnothing$ 18         | L=190         |
| 4 INF. | 6 $\varnothing$ 20         | L=685         |
| 5 LAT. | 6 + 6 $\varnothing$ 16     | L=645         |

Sez. A-A

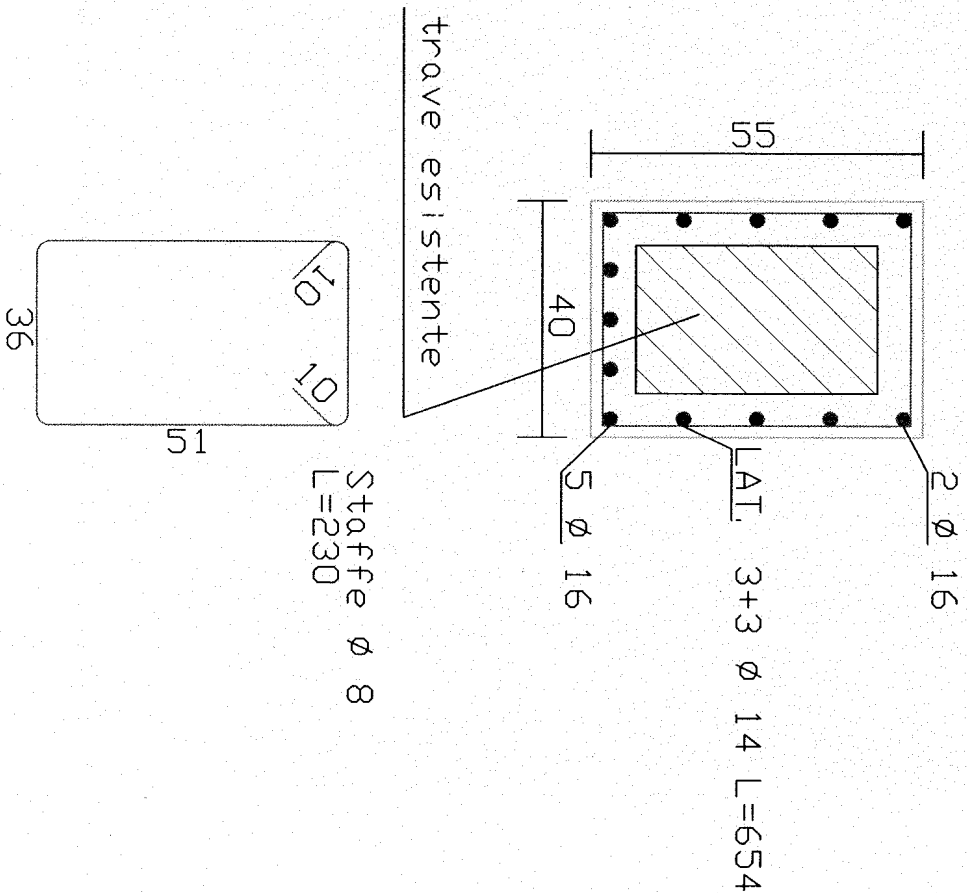


Trave 51/52 ( 40x55)

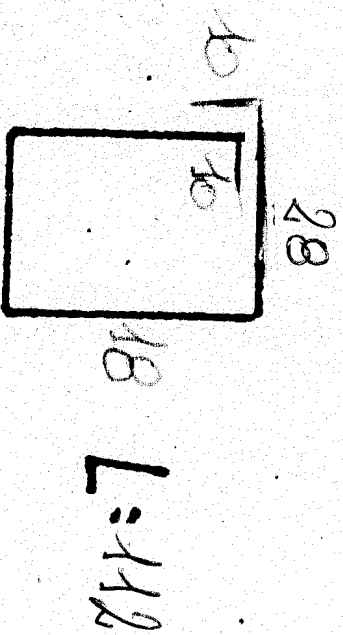
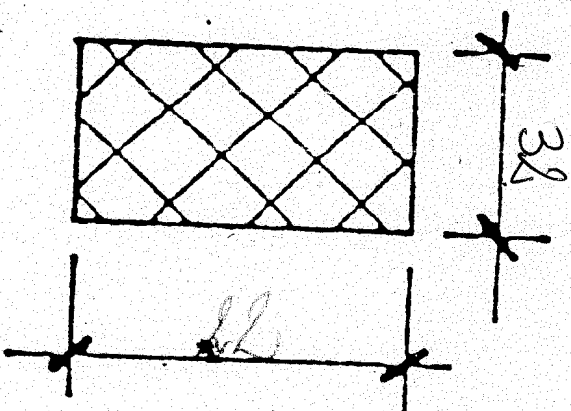
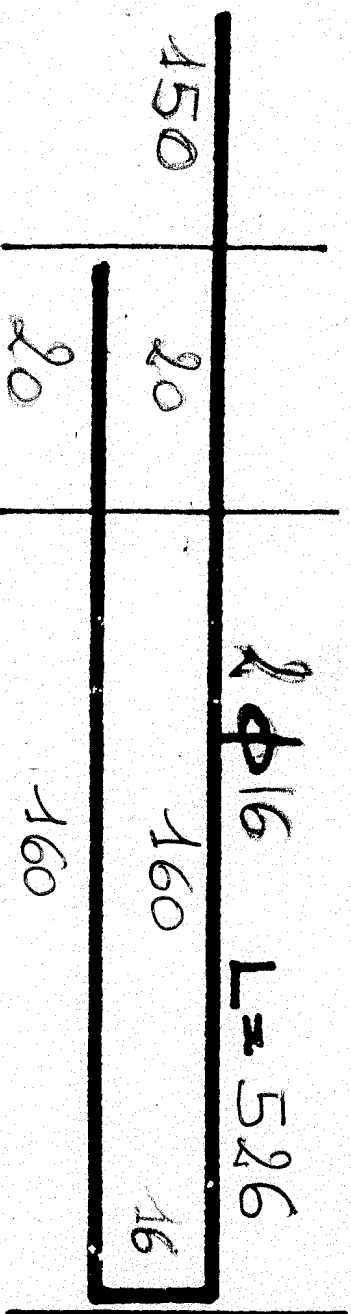
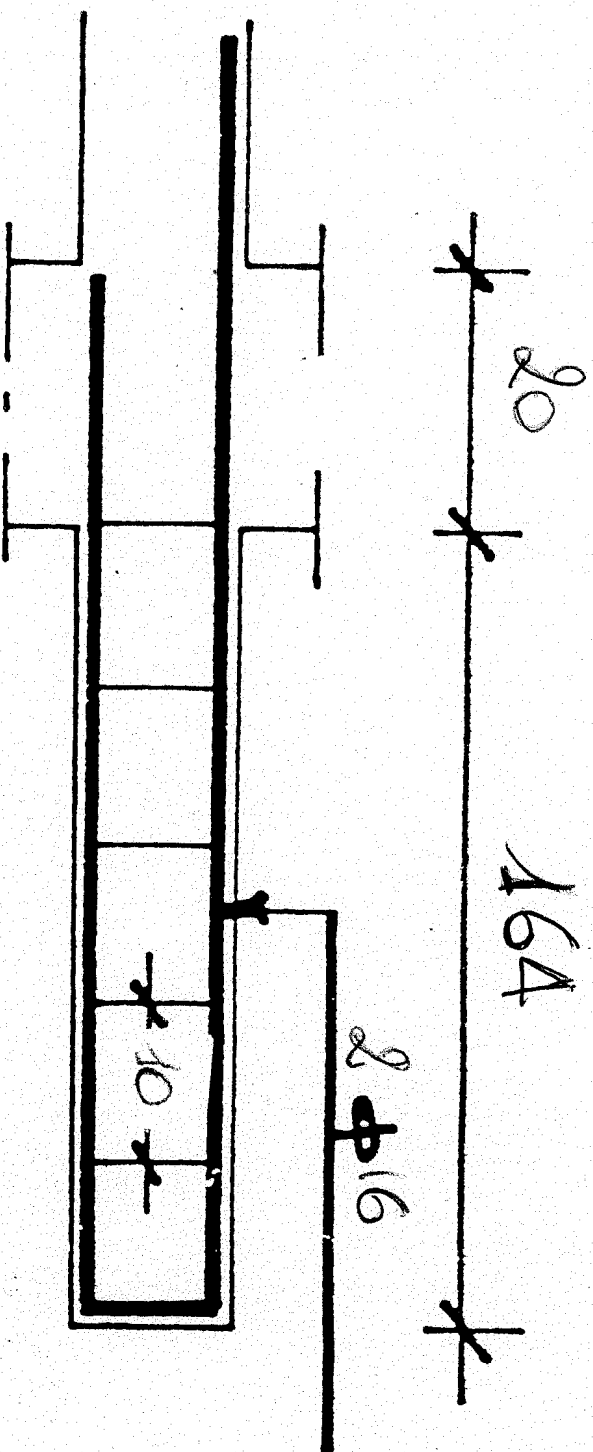


| POS    | DIAM Ø<br>( mm ) | LUNGH<br>( cm ) |
|--------|------------------|-----------------|
| 1 SUP. | 2 Ø 16           | L=694           |
| 2 SUP. | 2 Ø 16           | L=220           |
| 3 SUP. | 2 Ø 16           | L=220           |
| 4 INF. | 5 Ø 16           | L=694           |
| 5 LAT. | 3 + 3 Ø 14       | L=654           |

Sez. A-A

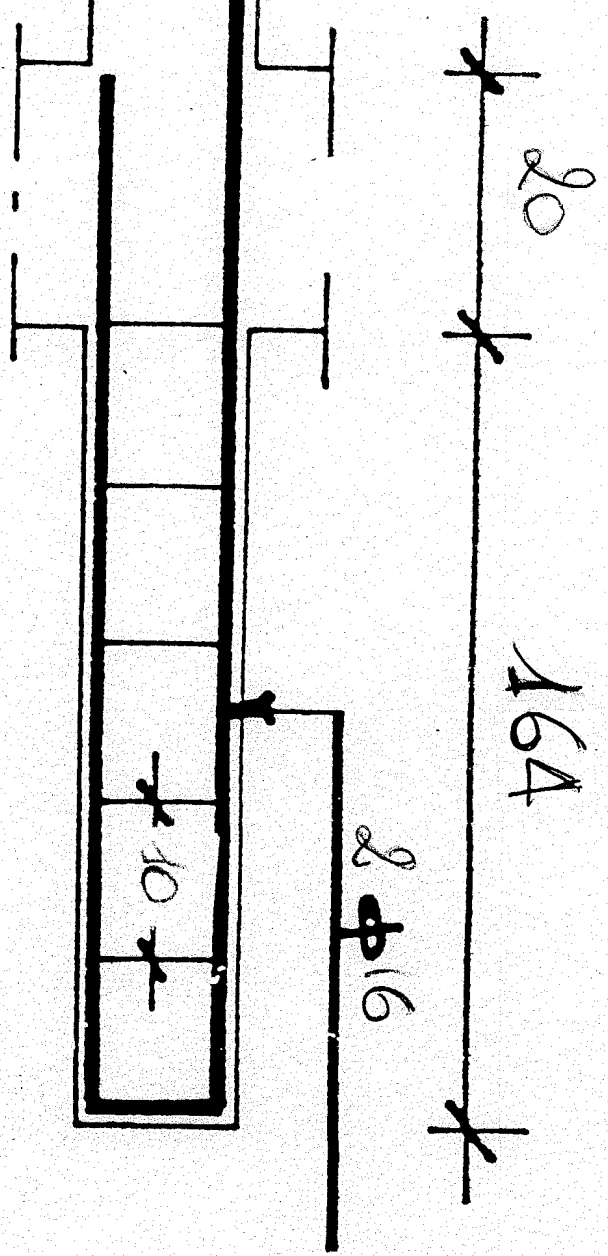


Setback T 54 (32 x 22)

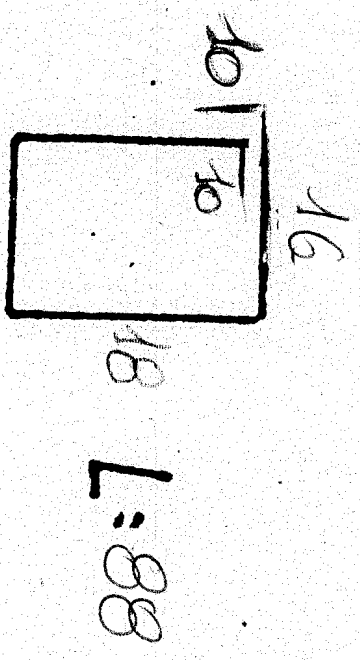
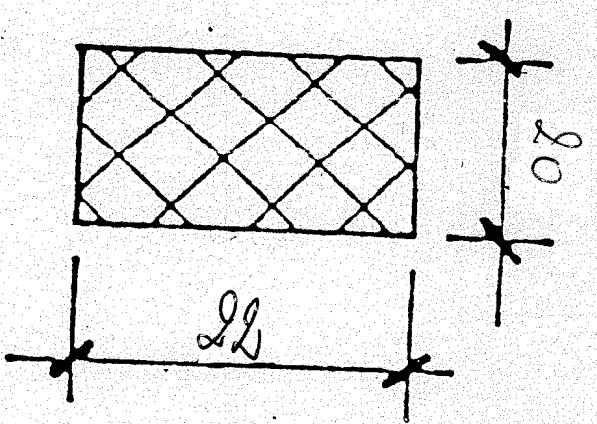


U. 18 staffe φ8  
passo 10 cm.

Setback T 55 (10x12)

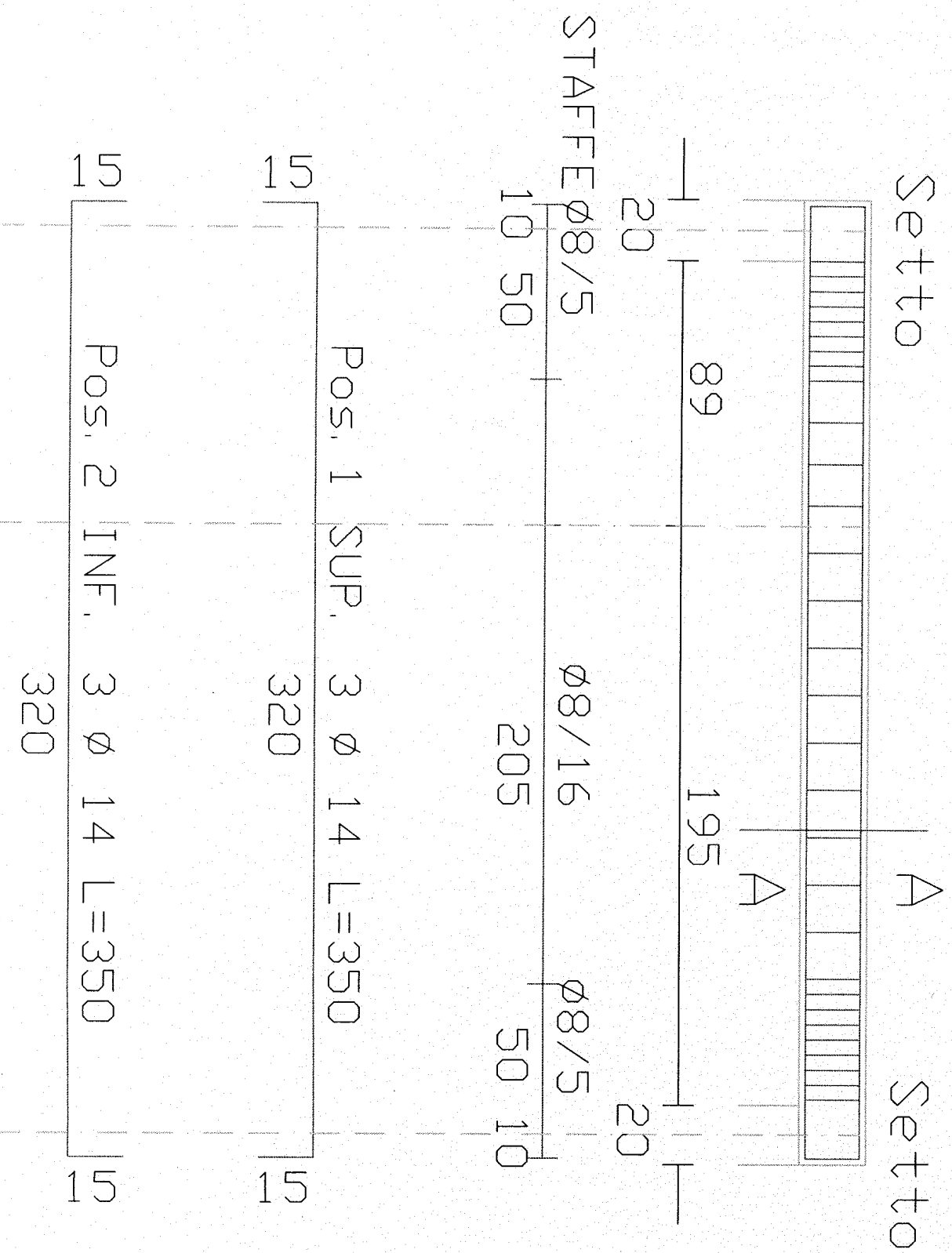


|     |    |  |      |       |    |
|-----|----|--|------|-------|----|
| 450 |    |  | 2Φ16 | L=526 |    |
|     | 20 |  |      | 160   | 16 |
|     | 20 |  |      | 160   |    |



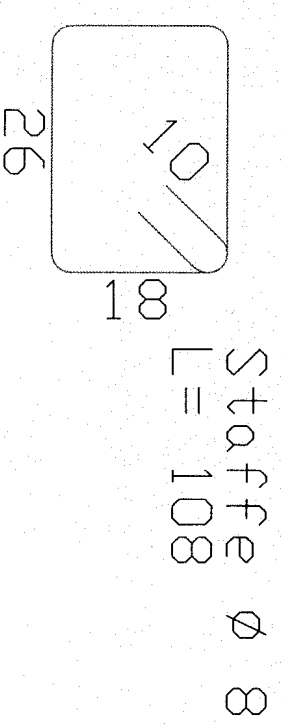
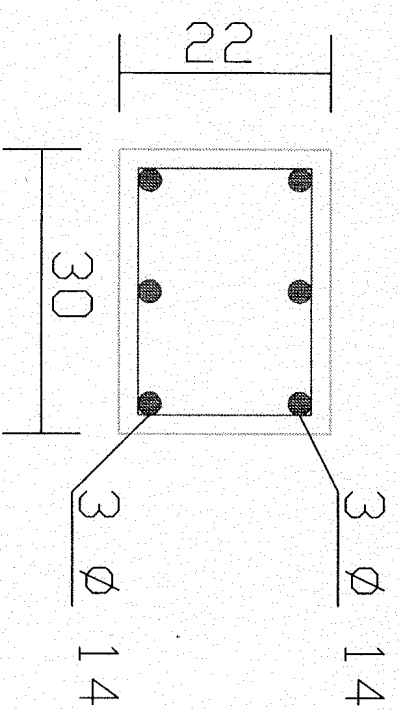
H. 18 staffs Φ8  
passo 10 cm.

# Trave 56 (30x22)

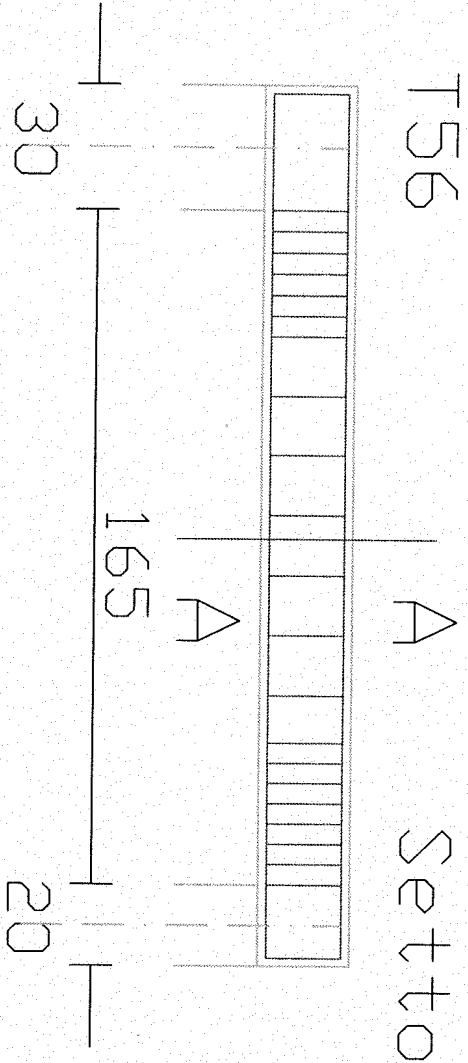


| POS    | DIAM $\varnothing$<br>(mm) |                  | LUNGH<br>(cm) |
|--------|----------------------------|------------------|---------------|
| 1 SUP. | 3                          | $\varnothing$ 14 | L=350         |
| 2 INF. | 3                          | $\varnothing$ 14 | L=350         |

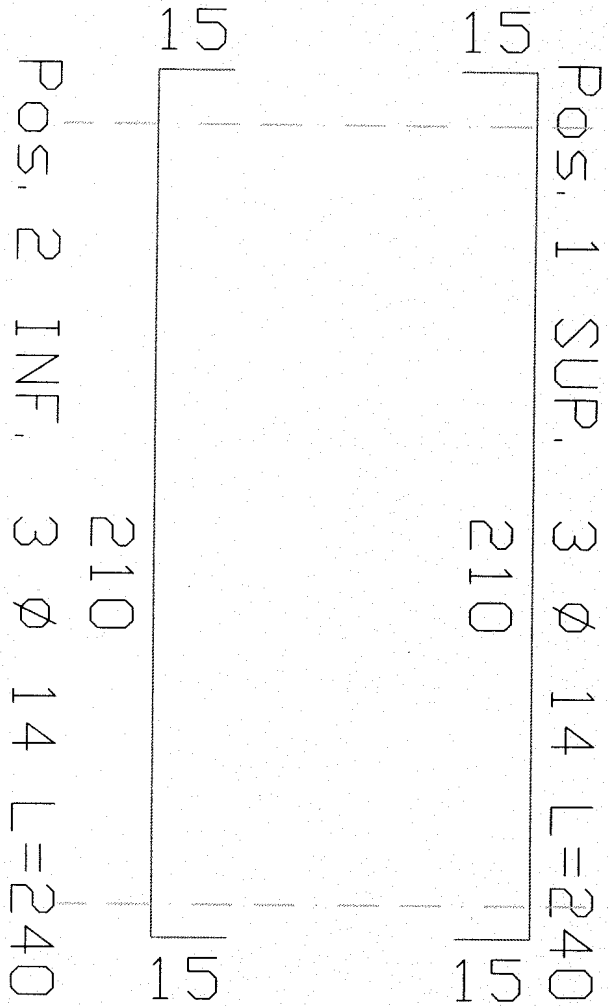
Sez. A-A



Trave 57 (30x22)

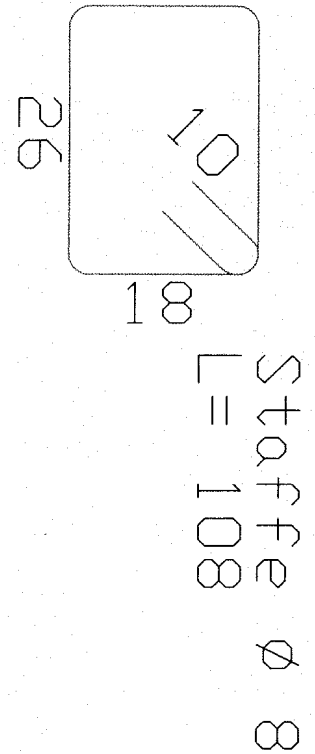
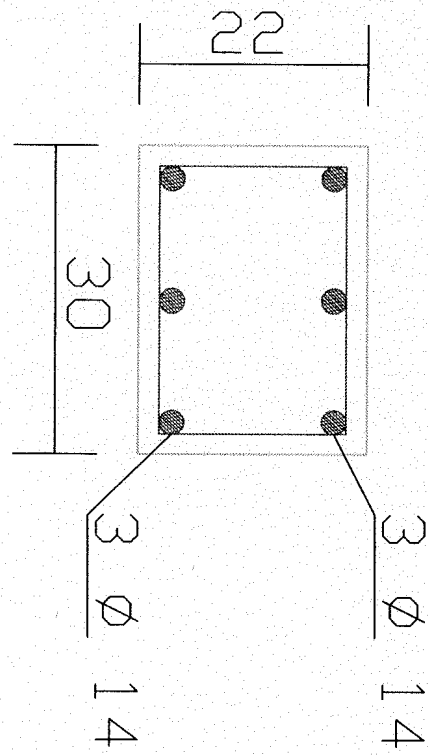


STAFFE Ø8/5    Ø8/11    Ø8/5  
15 50 90 50 10



| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 3 Ø 14         | L=240         |
| 2 INF. | 3 Ø 14         | L=240         |

Sez. A-A



Trave 58 (20x22)

POS

DIAM  $\varnothing$

LUNGH

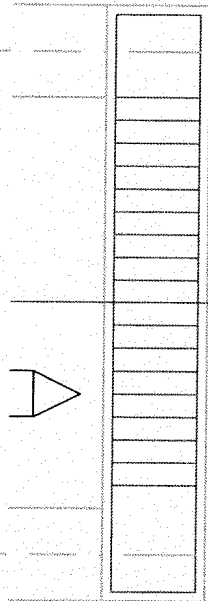
(mm)

(cm)

1 SUP. 2  $\varnothing$  14  
2 INF. 2  $\varnothing$  14

L=155  
L=155

Setto A Setto



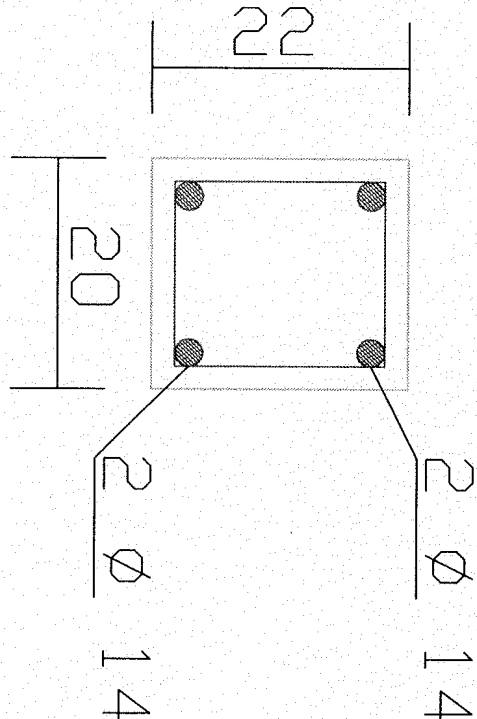
Sez. A-A

STAFFE

$\varnothing$ 8/5  
10 110 10

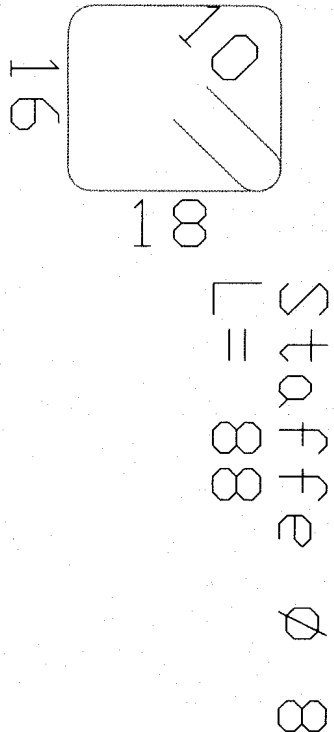
Pos. 1 SUP. 2  $\varnothing$  14 L=155

5 125 5



Pos. 2 INF. 2  $\varnothing$  14 L=155

5 125 5



# Trave 59 (20x20)

POS

DIAM  $\varnothing$

LUNGH

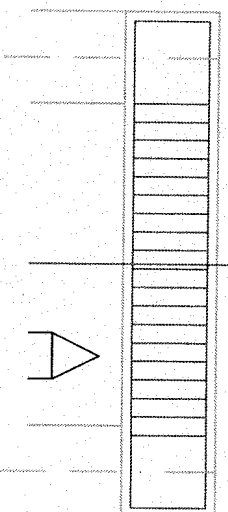
(mm)

(cm)

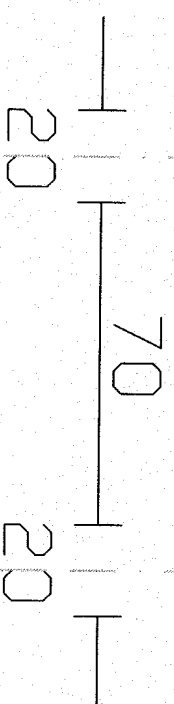
1 SUP. 2  $\varnothing$  14  
2 INF. 2  $\varnothing$  14

L=135  
L=135

Setto A Setto



Sez. A-A

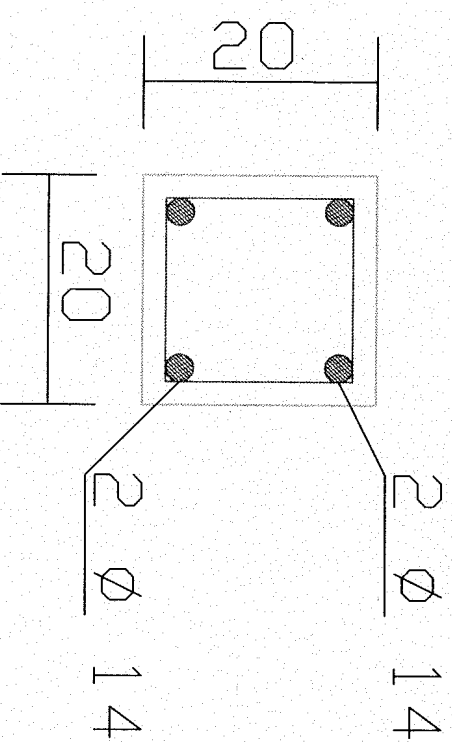


STAFFE  $\varnothing$  8/4

10 100

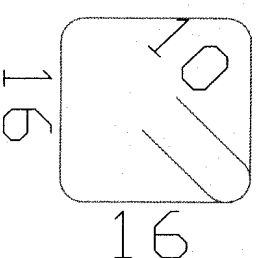
Pos. 1 SUP. 2  $\varnothing$  14 L=135

5 105 5



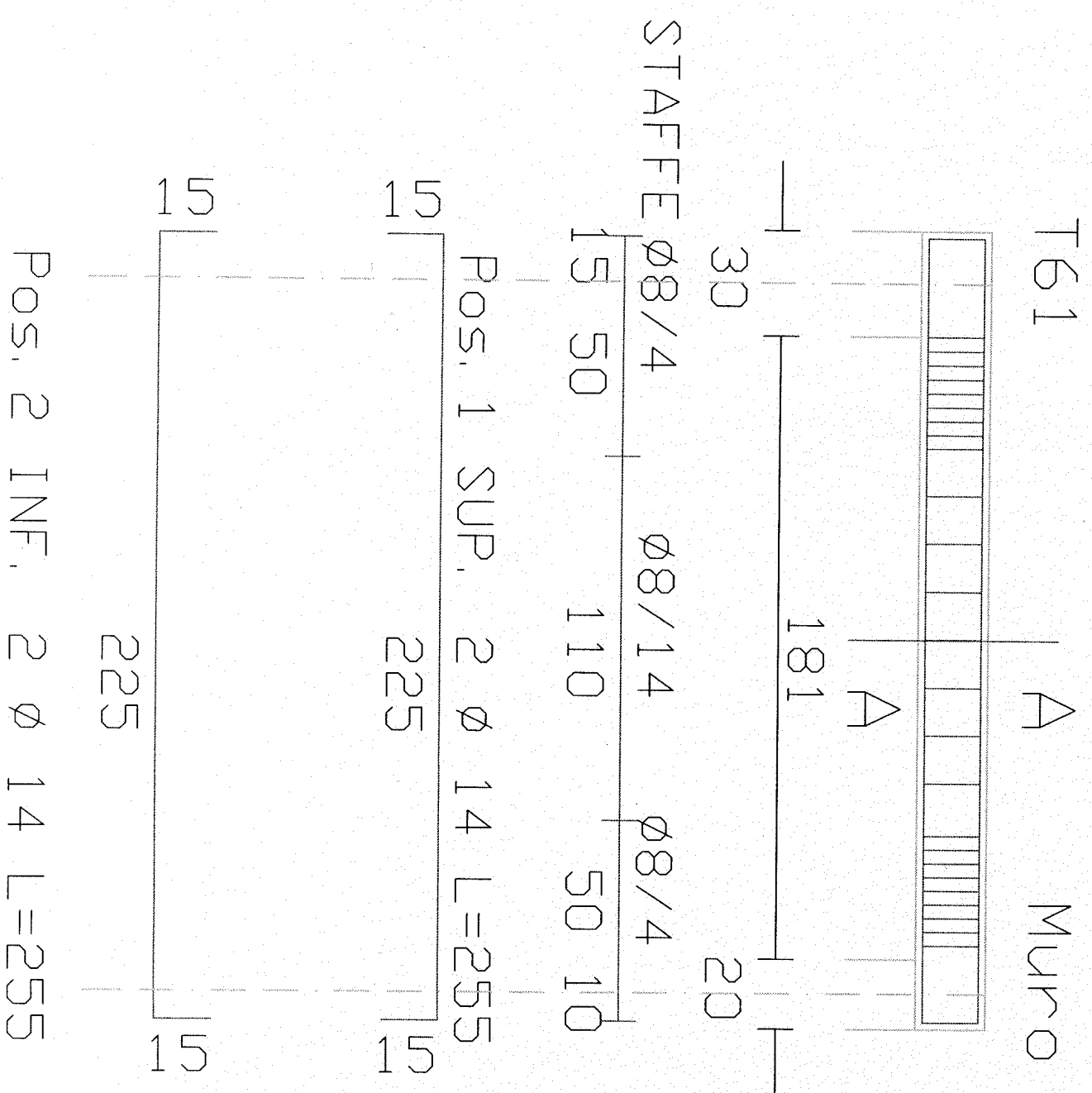
5 105 5

Pos. 2 INF. 2  $\varnothing$  14 L=135



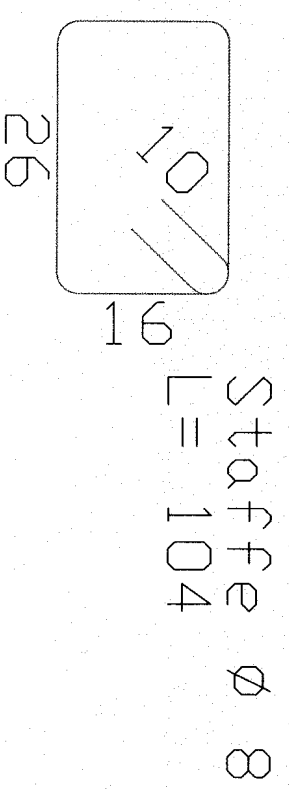
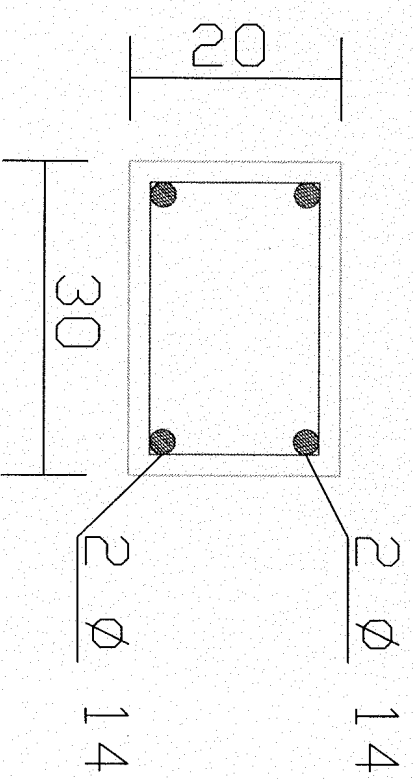
Staffe  $\varnothing$  8  
L=84

Twelve boxes



| POS    | DIAM Ø<br>(mm) | LUNGH<br>(cm) |
|--------|----------------|---------------|
| 1 SUP. | 2 Ø 14         | L=255         |
| 2 INF. | 2 Ø 14         | L=255         |

SON- A-A



Trave 61 (30x20)

POS

DIAM Ø

LUNGH

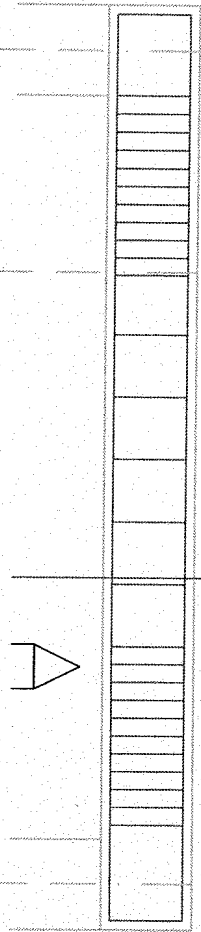
(mm)

(cm)

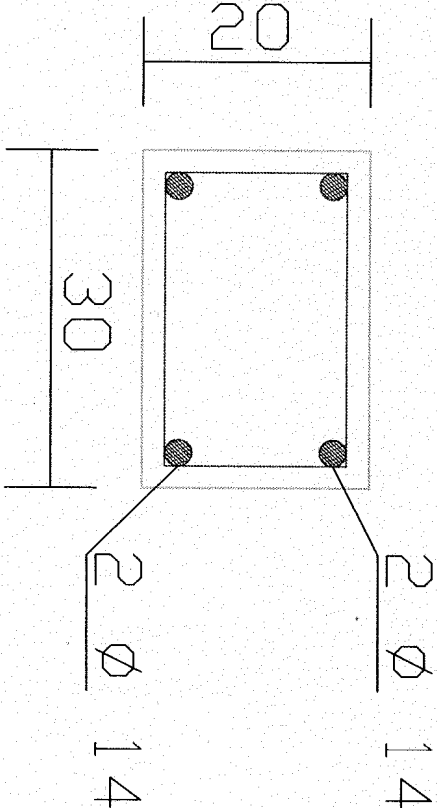
1 SUP. 2 Ø 14  
2 INF. 2 Ø 14

L=230  
L=230

Setto A Setto



Sez. A-A



20 39

127

20

STAFFE Ø8/4 Ø8/14 Ø8/4

10 50

90

50 10

Pos. 1 SUP. 2 Ø 14 L=230

51

200

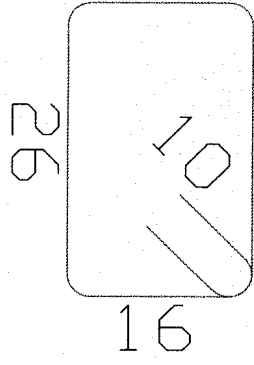
51

51

200

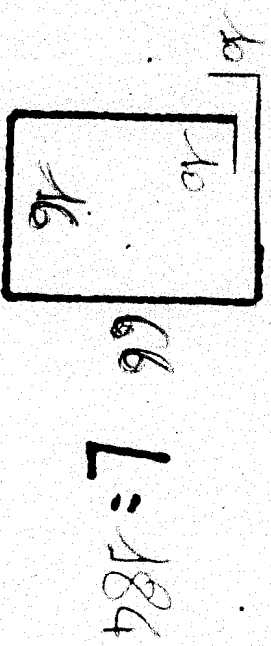
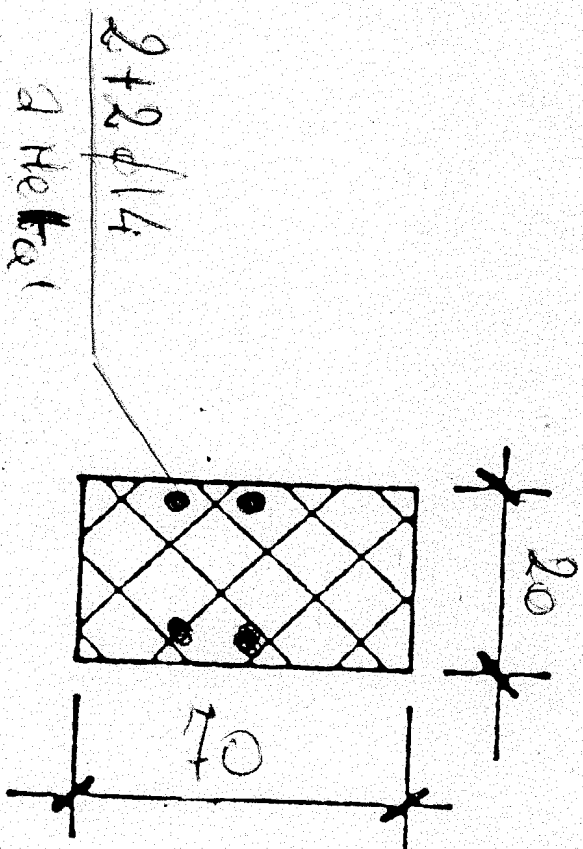
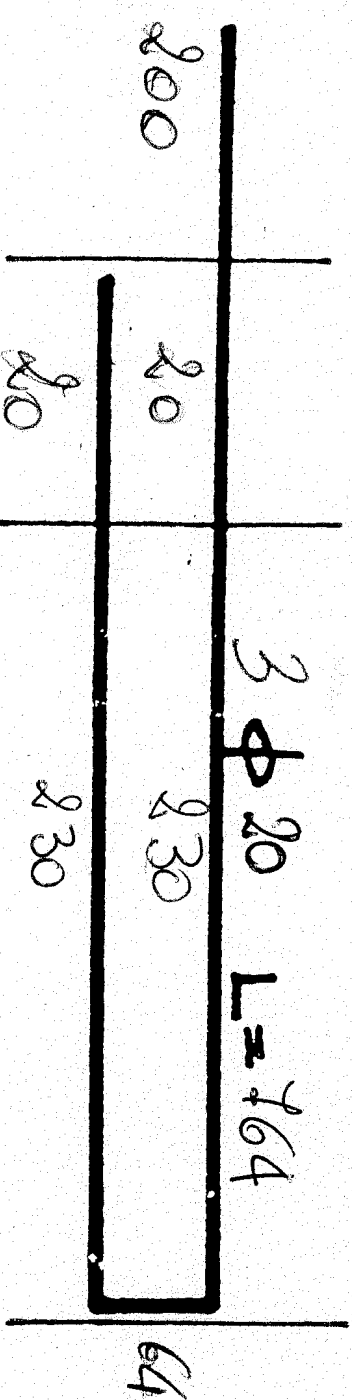
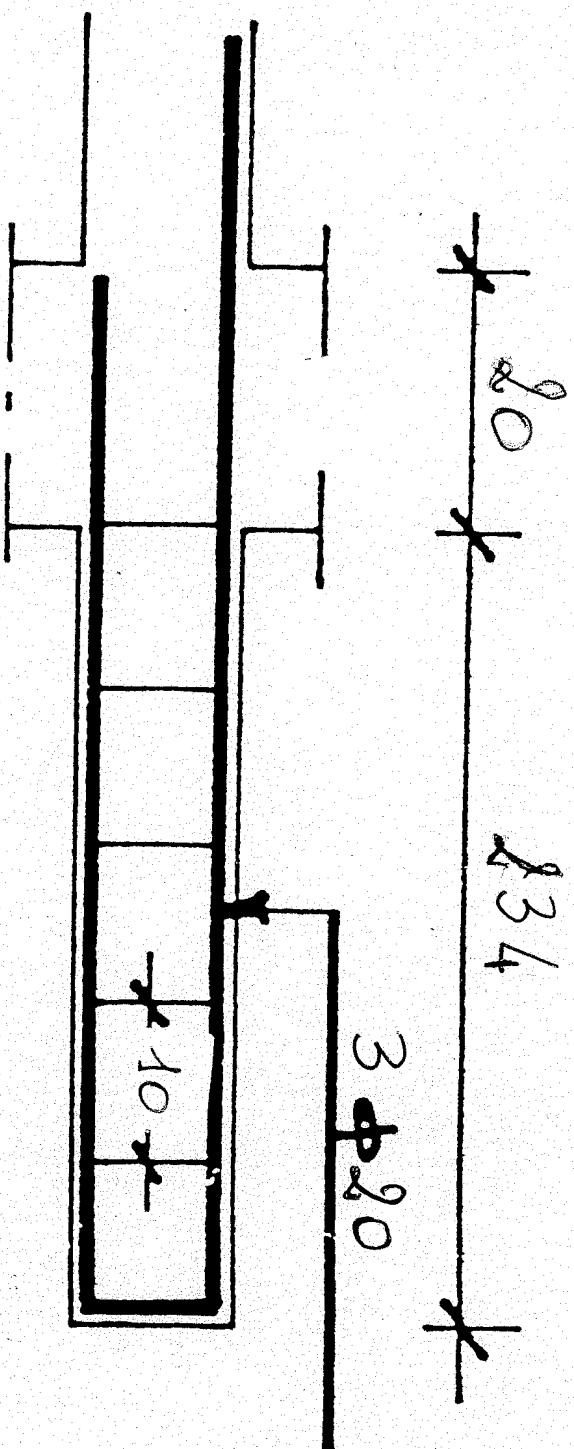
51

Pos. 2 INF. 2 Ø 14 L=230



Staffe Ø 8  
L=104

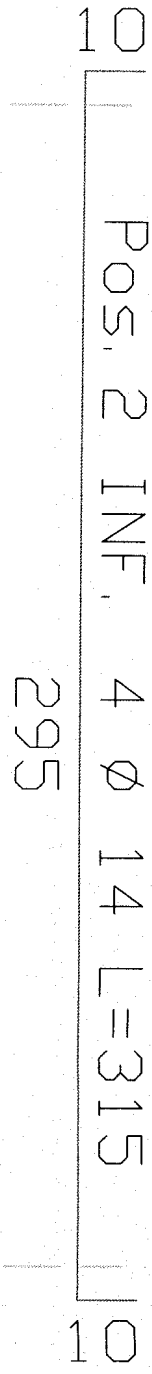
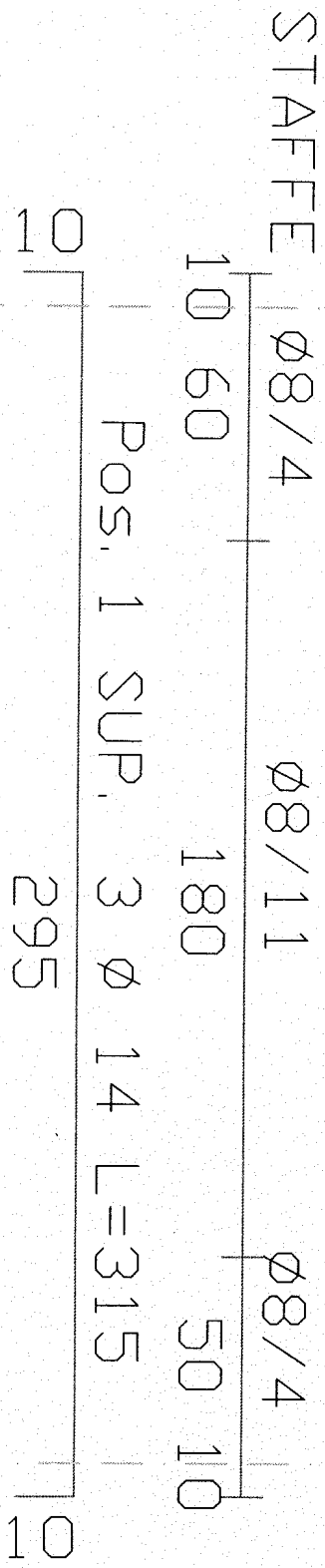
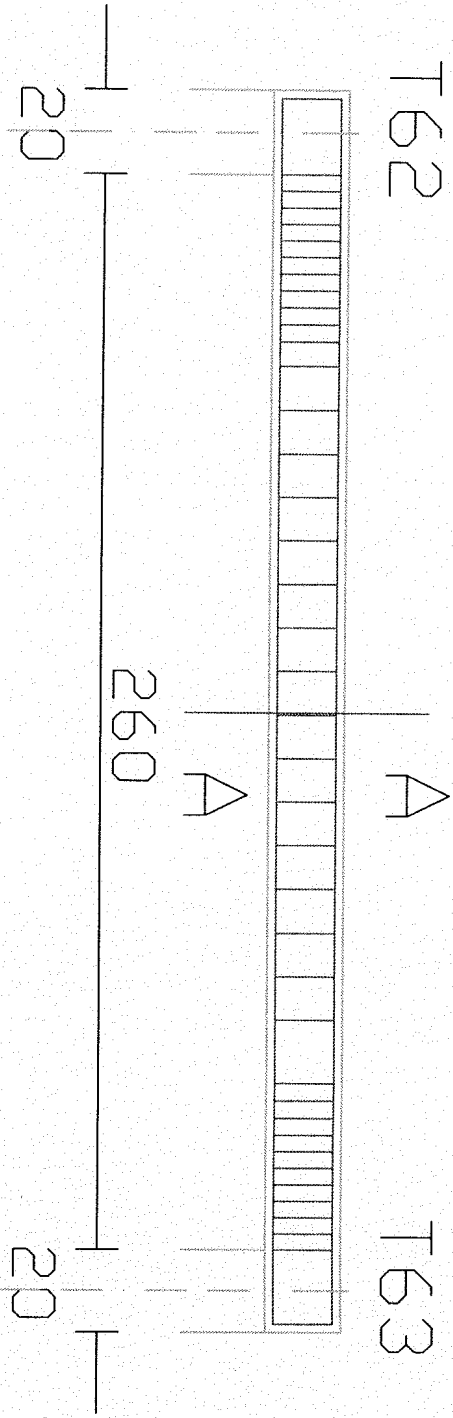
Sethoca T 62/63 (20 x 40)



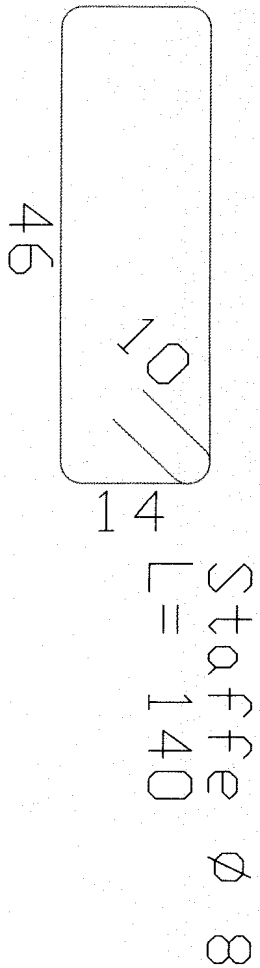
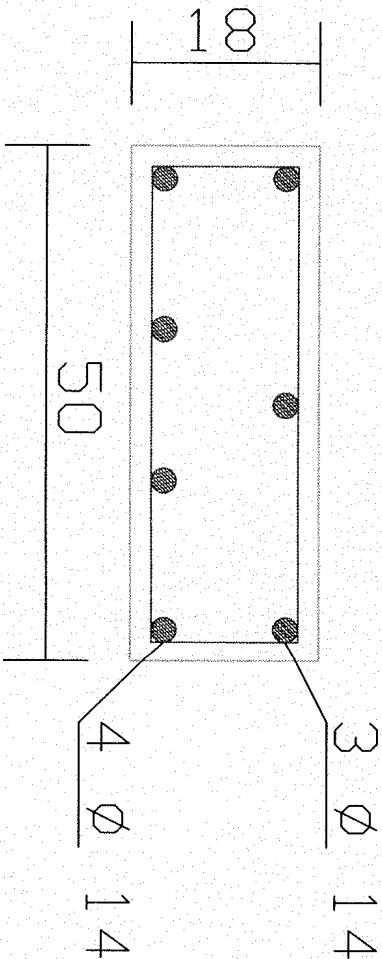
H: 25 staffs \phi 8  
passo 10 cm.

Trave 64 (50x18)

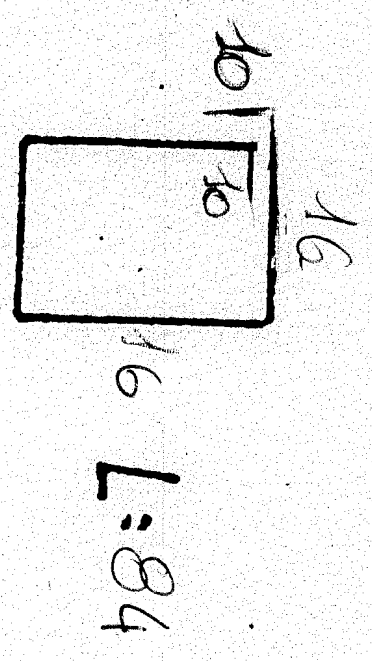
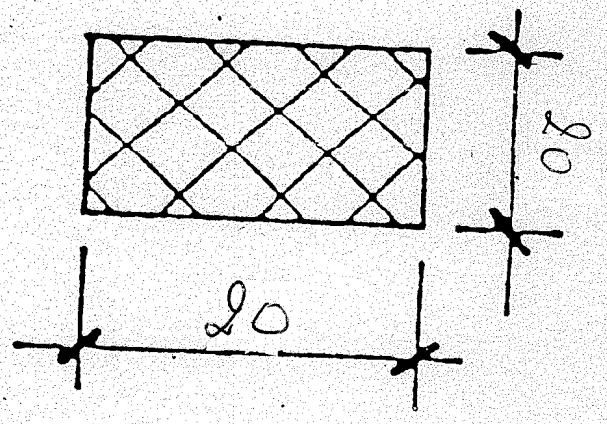
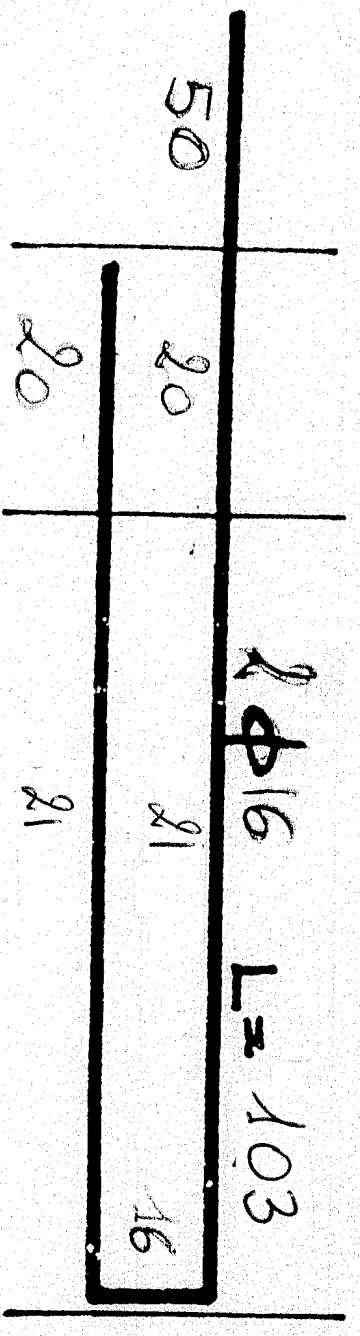
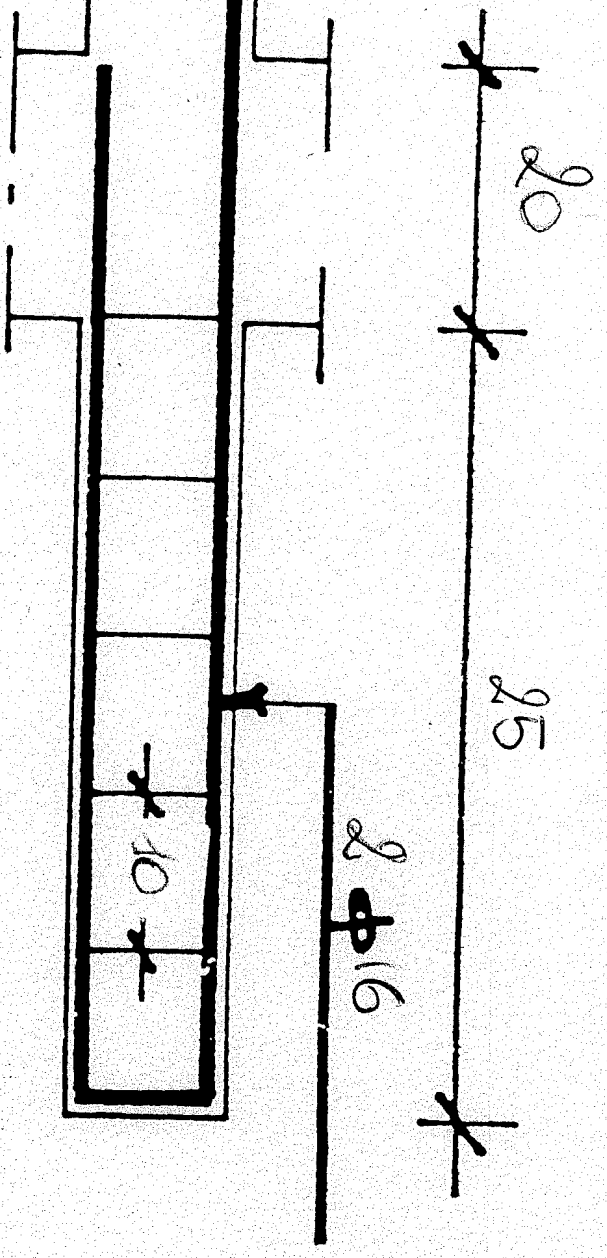
| POS                       | DIAM $\varnothing$<br>(mm) | LUNGH<br>(cm) |
|---------------------------|----------------------------|---------------|
| 1 SUP. 3 $\varnothing$ 14 |                            | L=315         |
| 2 INF. 4 $\varnothing$ 14 |                            | L=315         |



Sez. A-A



Setback A T 65/66 (20x20)



H: 3 staffe φ8  
passo 10 cm.