



Stazione Appaltante  
 Regione Siciliana  
**Comune di S. Stefano di Camastra**  
 Provincia di Messina



Procedura aperta ex art. 183 commi 1-14 d.lgs. 50/2016 s.m.i. per l'affidamento in project financing della concessione di lavori pubblici avente per oggetto la progettazione definitiva ed esecutiva, l'esecuzione dei lavori per la **REALIZZAZIONE DEL PORTO TURISTICO E DELLE OPERE CONNESSE NEL COMUNE DI SANTO STEFANO DI CAMASTRA** nonché della loro gestione economico-finanziaria

C.I.G.67535662F8

C.U.P.H21H07000030003

**PROGETTO DEFINITIVO**

Concessionario Individuato



Rappresentante legale: Cono Bruno

Via Campidoglio, 70 98076 Sant'Agata di Militello (ME)

Titolo elaborato

**BUNKERAGGIO**

**- CARPENTERIE  
 - ESECUTIVI DI CANTIERE**

Progettista indicato



Dott. Ing. Paolo Turbolente

Via Ajaccio, 14  
 00198 Roma



Amministratore Unico:  
 Prof. Ing. Vincenzo Cataliotti  
 Direttori tecnici:  
 Arch. Sebastiano Provenzano  
 Prof. Ing. Antonio Cataliotti  
 Via Vittorio Emanuele, 492  
 90134 Palermo

Elaborato

PD

EG

**16.4 - BUN**

Scala

Data: Giugno 2017

Comune di SANTO STEFANO DI CAMASTRA

Provincia di MESSINA

# ESECUTIVI DI CANTIERE

Fond.

Oggetto: **Calcolo delle strutture in c.a. per la realizzazione dei serbatoi di bunkeraggio a servizio del portoturistico**

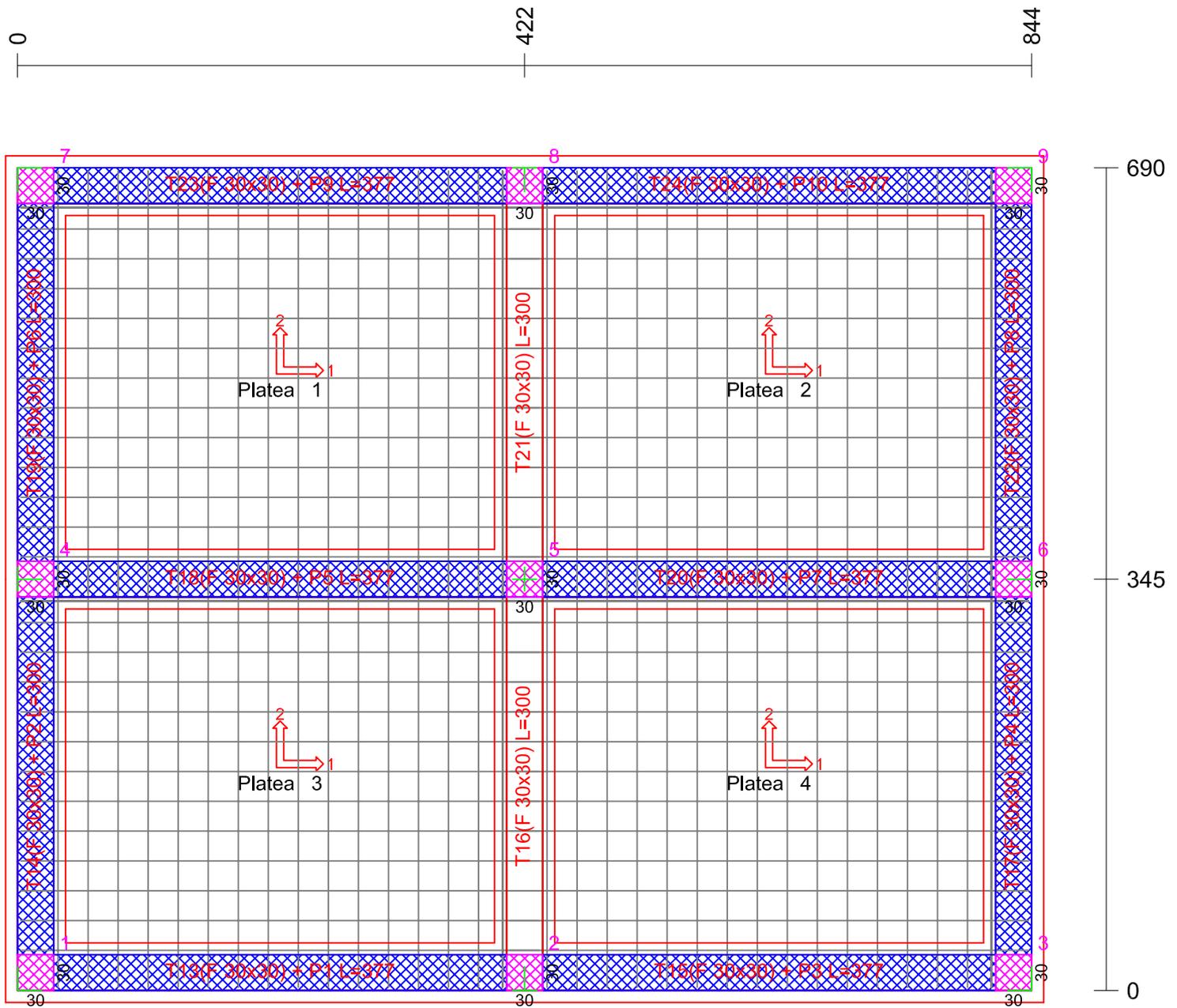
Ditta: COSTRUZIONI BRUNO S.P.A.

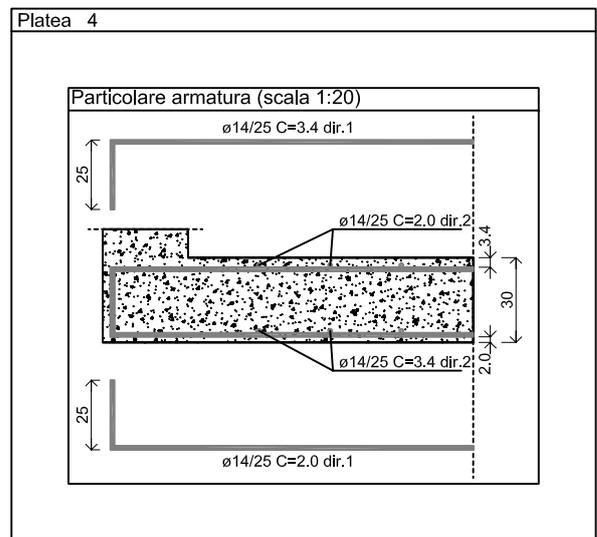
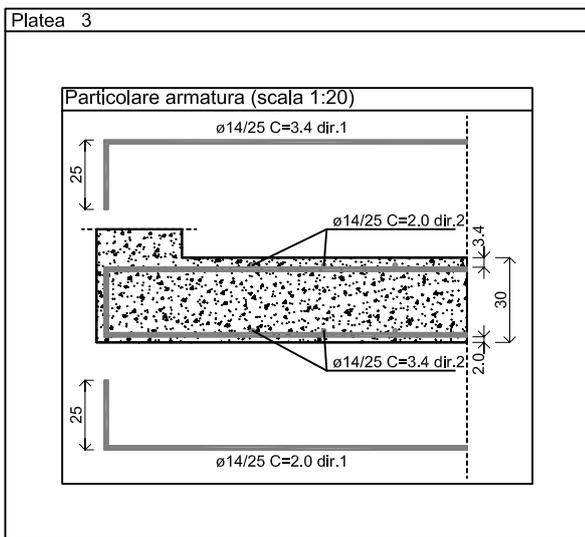
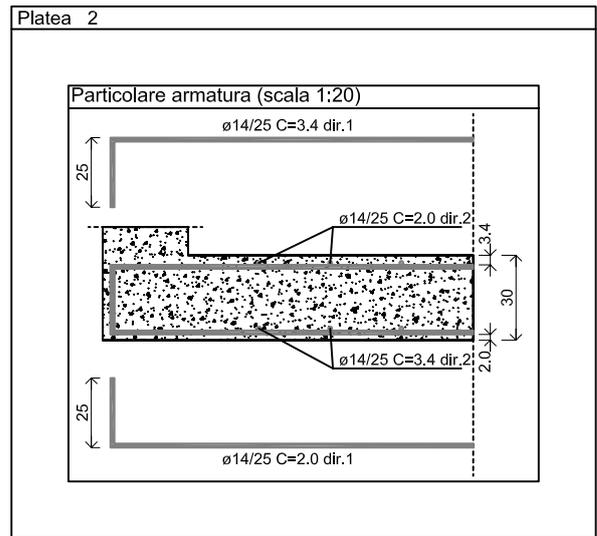
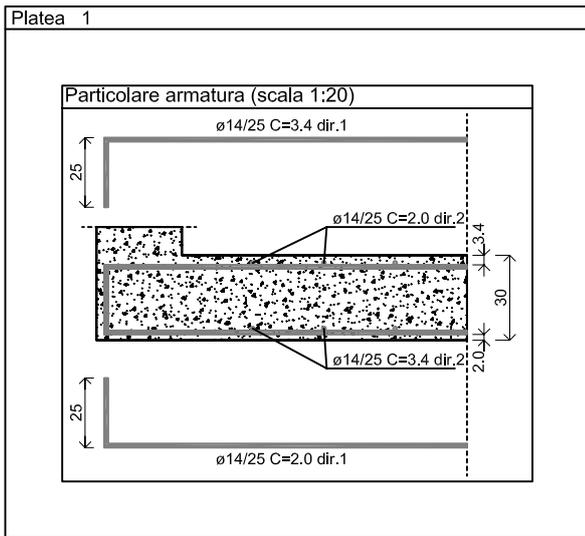
Data: 20/04/2017

## Materiali

**CLS**  
**C25/30**  
**ACCIAIO LONGITUDINALI**  
**B450C**  
**ACCIAIO STAFFE**  
**B450C**

# Carpenteria Fond. (Scala 1:50)





Platea 1												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso		Intradosso			
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Platea	14	480	3.4	25	2.0	25	14	403	2.0	25	3.4	25

Platea 2												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso		Intradosso			
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Platea	14	480	3.4	25	2.0	25	14	403	2.0	25	3.4	25

Platea 3												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso		Intradosso			
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Platea	14	480	3.4	25	2.0	25	14	403	2.0	25	3.4	25

Platea 4												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso		Intradosso			
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Platea	14	480	3.4	25	2.0	25	14	403	2.0	25	3.4	25





Comune di SANTO STEFANO DI CAMASTRA

Provincia di MESSINA

# ESECUTIVI DI CANTIERE

Piano 1

Oggetto: **Calcolo delle strutture in c.a. per la realizzazione dei serbatoi di bunkeraggio a servizio del portoturistico**

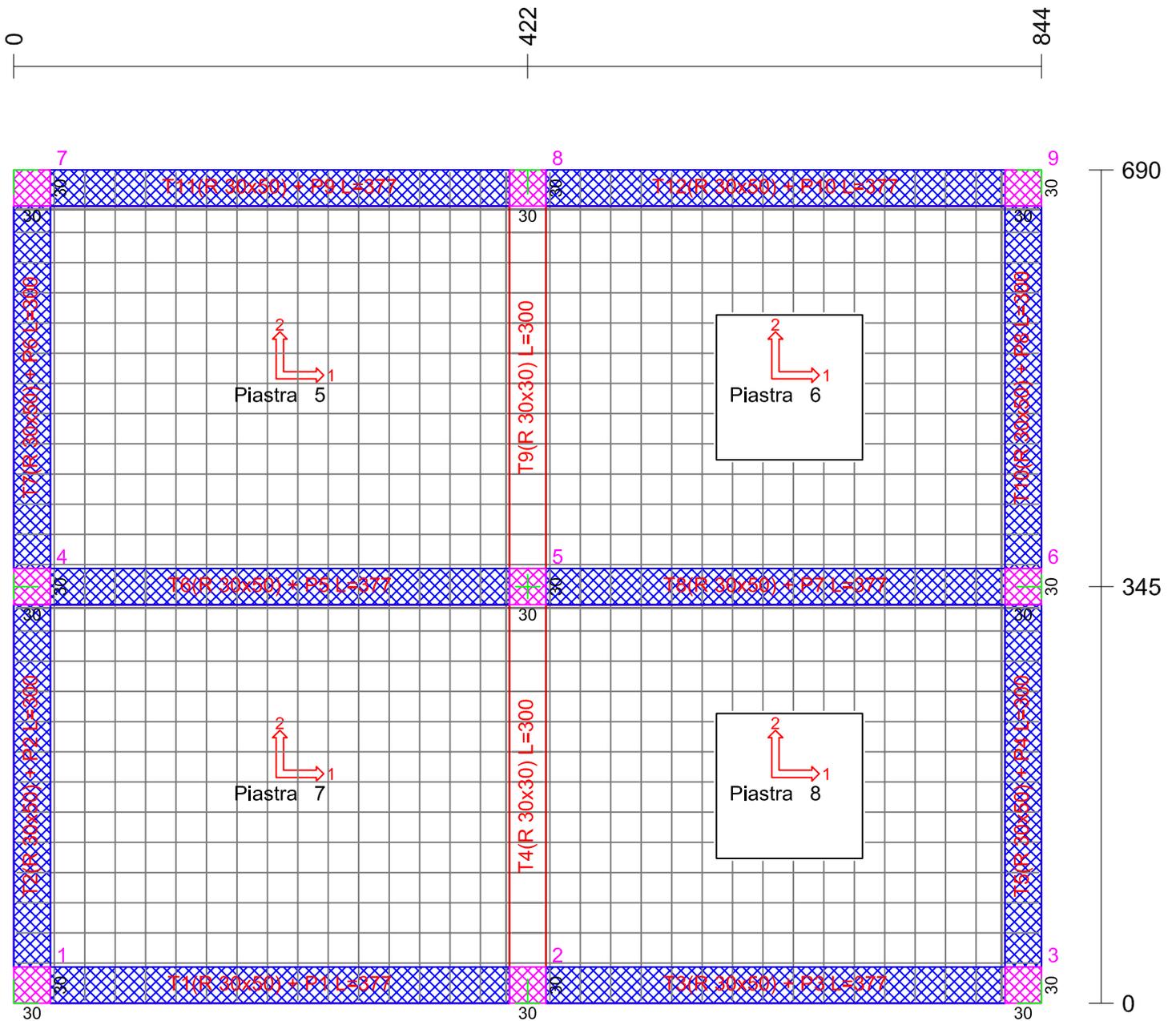
Ditta: COSTRUZIONI BRUNO S.P.A.

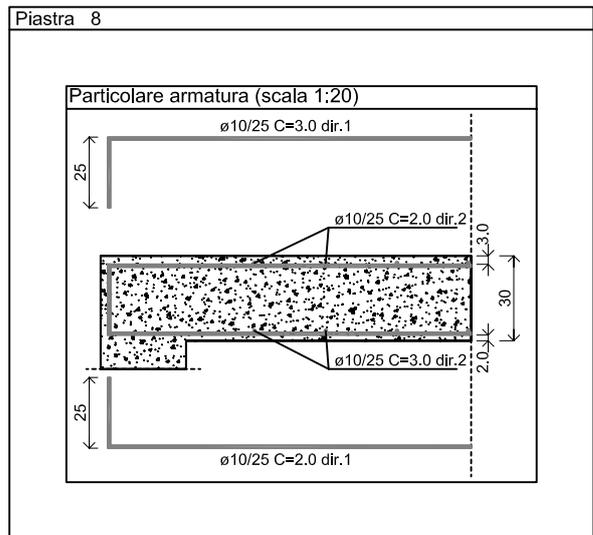
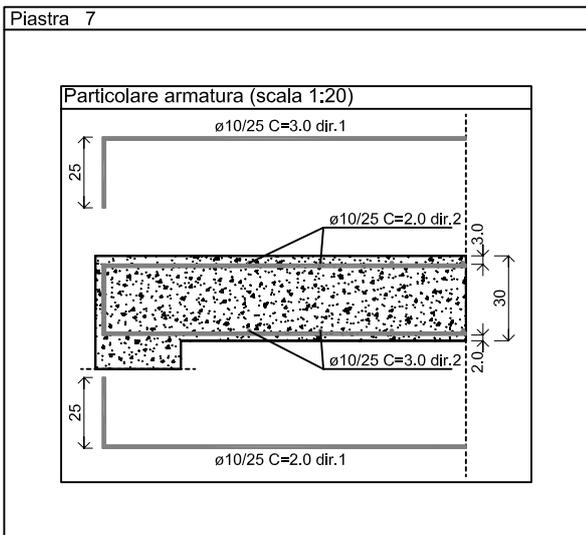
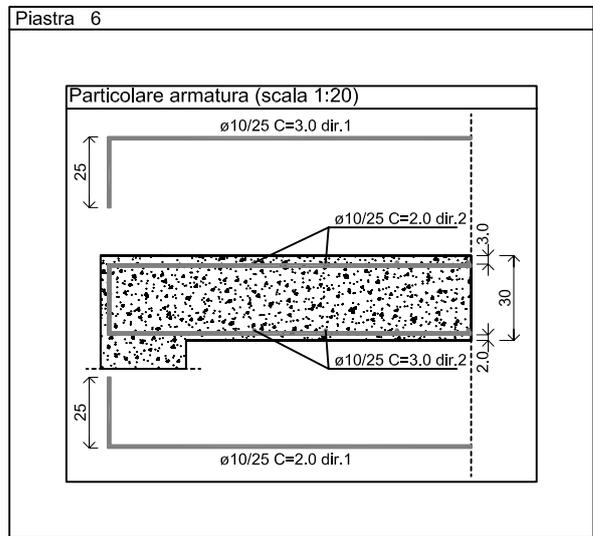
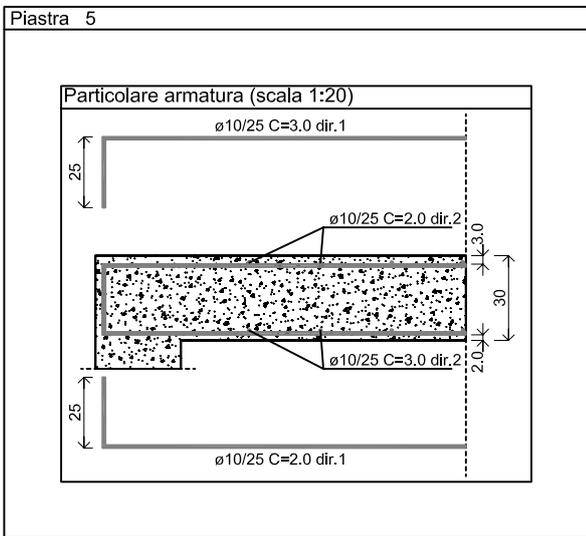
Data: 20/04/2017

## Materiali

**CLS**  
**C25/30**  
**ACCIAIO LONGITUDINALI**  
**B450C**  
**ACCIAIO STAFFE**  
**B450C**

# Carpenteria Piano 1 (Scala 1:50)





Piastra 5												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso			Intradosso		
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Piastra	10	482	3.0	25	2.0	25	10	405	2.0	25	3.0	25

Piastra 6												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso			Intradosso		
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Piastra	10	482	3.0	25	2.0	25	10	405	2.0	25	3.0	25

Piastra 7												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso			Intradosso		
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Piastra	10	482	3.0	25	2.0	25	10	405	2.0	25	3.0	25

Piastra 8												
Armatura a flessione												
Regione	Direzione 1						Direzione 2					
	Estradosso			Intradosso			Estradosso			Intradosso		
	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]	ø[mm]	L[cm]	Cop[cm]	Passo[cm]	Cop[cm]	Passo[cm]
Piastra	10	482	3.0	25	2.0	25	10	405	2.0	25	3.0	25

<b>PILASTRI:</b> 1-2-3-4-6-7-8-9 (fili)			<b>Piano 1</b>
<b>Materiali</b> Cls =C25/30 Acciaio =B450C	<b>STAFFE</b> ø 8/12 cm Da Q= 0 a Q= 48 ø 8/19 cm Da Q= 48 a Q= 242 ø 8/12 cm Da Q= 242 a Q= 290 ø 8/12 cm Da Q= 290 a Q= 340	<b>STAFFE TIPO</b> 1 ø 8 ( 25x 25 L= 116 )	
<b>PIEDE (Q=0)</b>		<b>TESTA (Q=340)</b>	
Diritti: O 8ø16		Copriferro=2.5 Diritti: O 8ø16	
Scala 1:10			

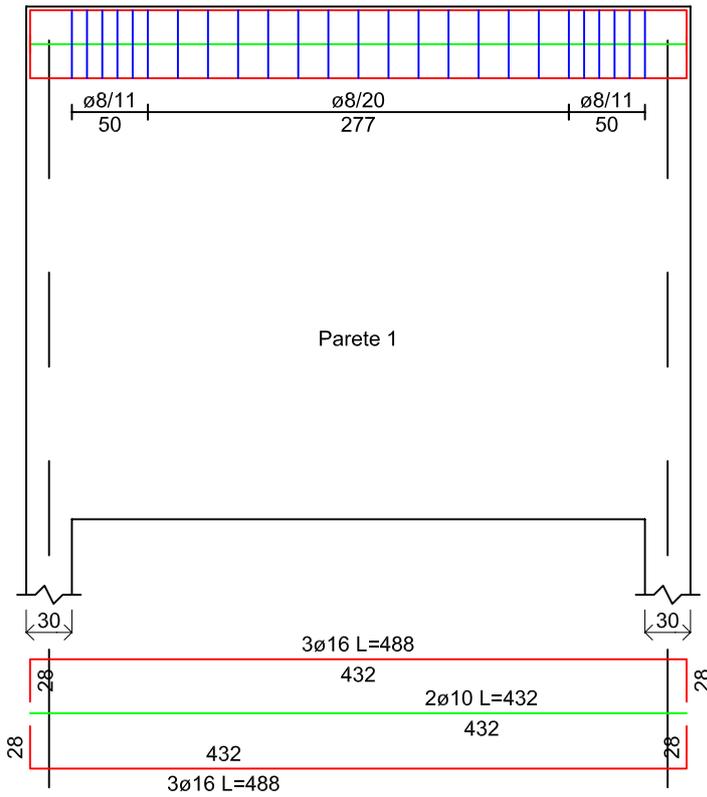
<b>PILASTRO:</b> 5 (filo)			<b>Piano 1</b>
<b>Materiali</b> Cls =C25/30 Acciaio =B450C	<b>STAFFE</b> ø 8/12 cm Da Q= 0 a Q= 48 ø 8/19 cm Da Q= 48 a Q= 242 ø 8/12 cm Da Q= 242 a Q= 340	<b>STAFFE TIPO</b> 1 ø 8 ( 25x 25 L= 116 )	
<b>PIEDE (Q=0)</b>		<b>TESTA (Q=340)</b>	
Diritti: O 8ø16		Copriferro=2.5 Diritti: O 8ø16	
Scala 1:10			

# Travata 13 Piano 1

2  
Q=340

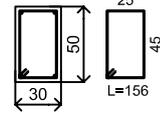


1  
Q=340



Campata 2-1  
Cls =C25/30

Acciaio =B450C

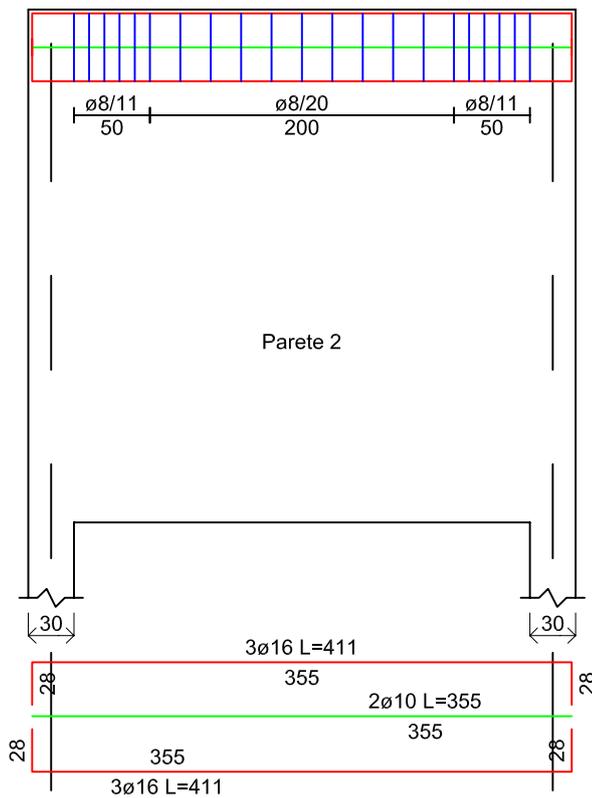


# Travata 14 Piano 1

1  
Q=340

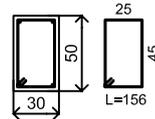


4  
Q=340



Campata 1-4  
Cls =C25/30

Acciaio =B450C



### Travata 15 Piano 1

3  
Q=340

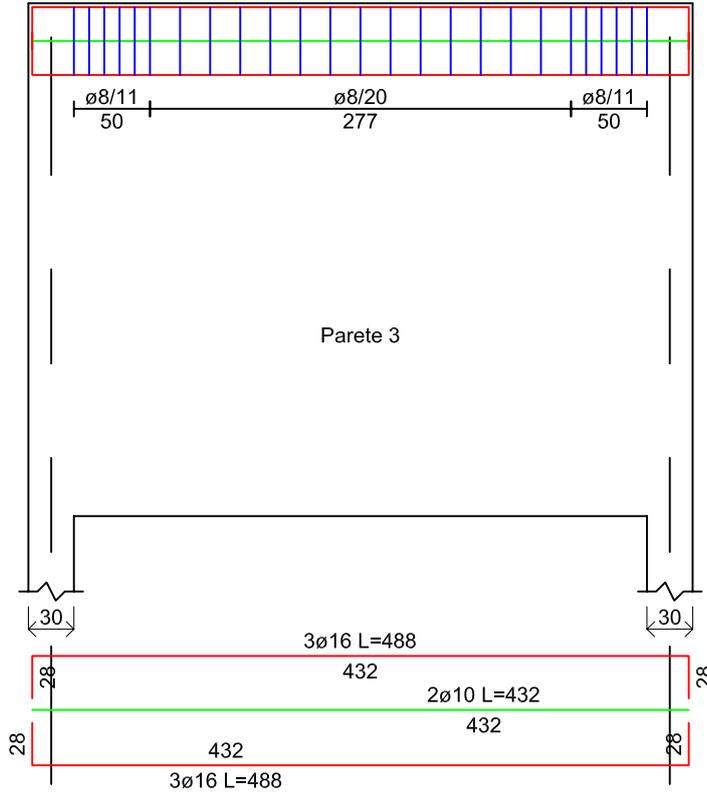
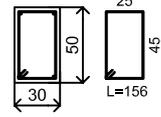


2  
Q=340

Campata 3-2

Cls =C25/30

Acciaio =B450C



### Travata 22 Piano 1

9  
Q=340

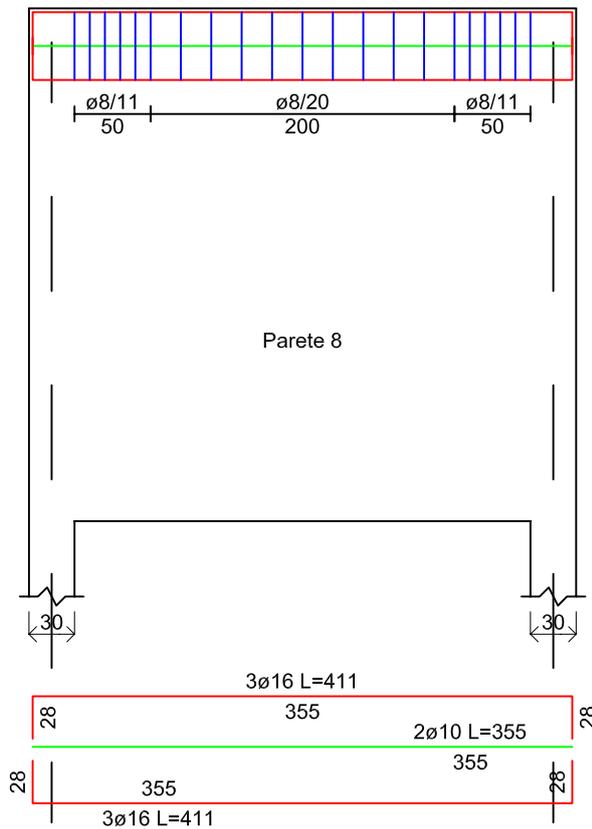
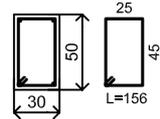


6  
Q=340

Campata 9-6

Cls =C25/30

Acciaio =B450C



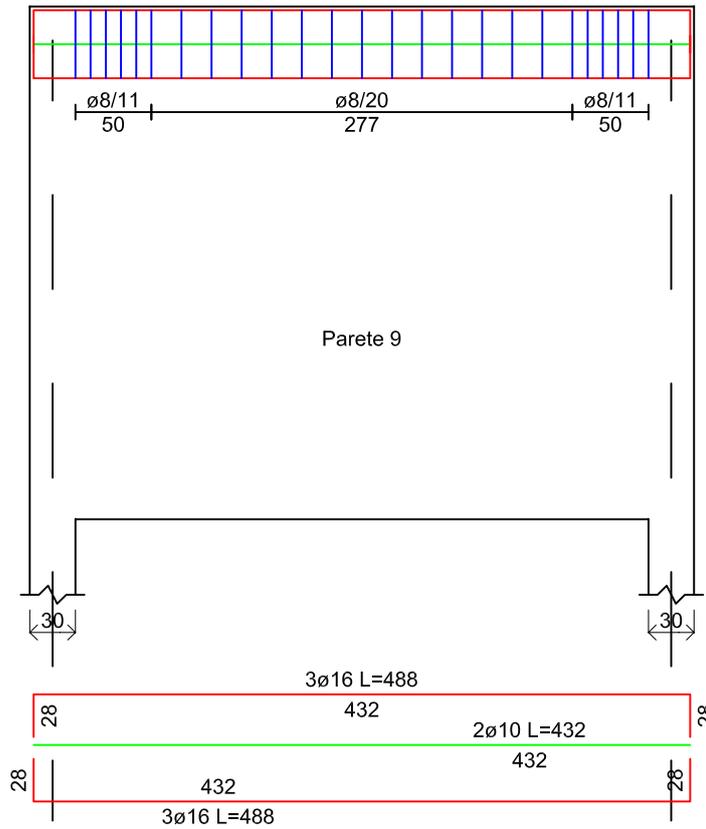
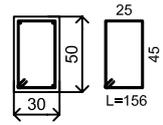
### Travata 23 Piano 1

7  
Q=340



8  
Q=340

Campata 7-8  
Cls =C25/30  
Acciaio =B450C



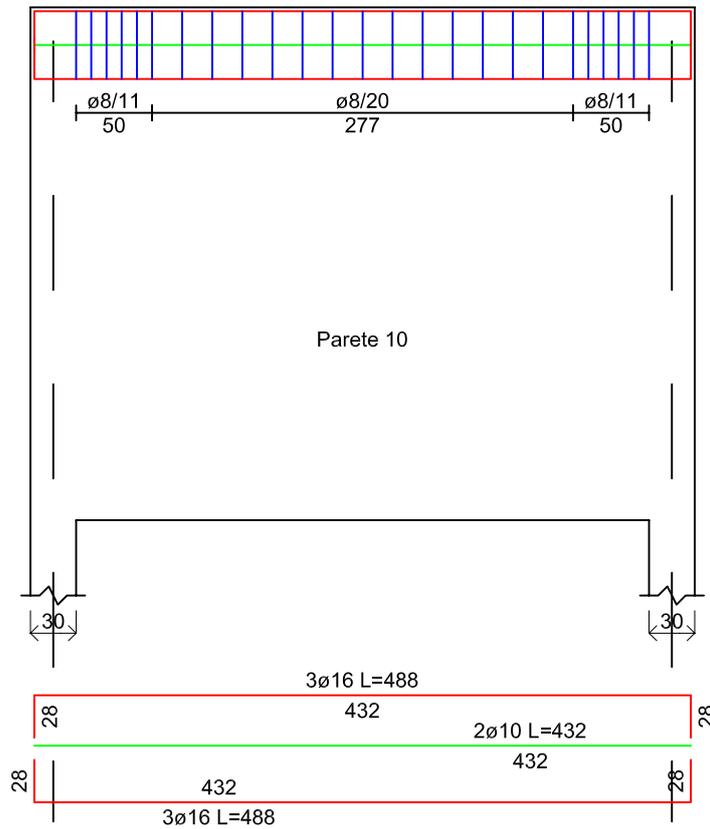
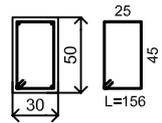
### Travata 24 Piano 1

8  
Q=340



9  
Q=340

Campata 8-9  
Cls =C25/30  
Acciaio =B450C



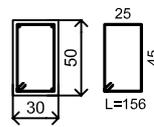
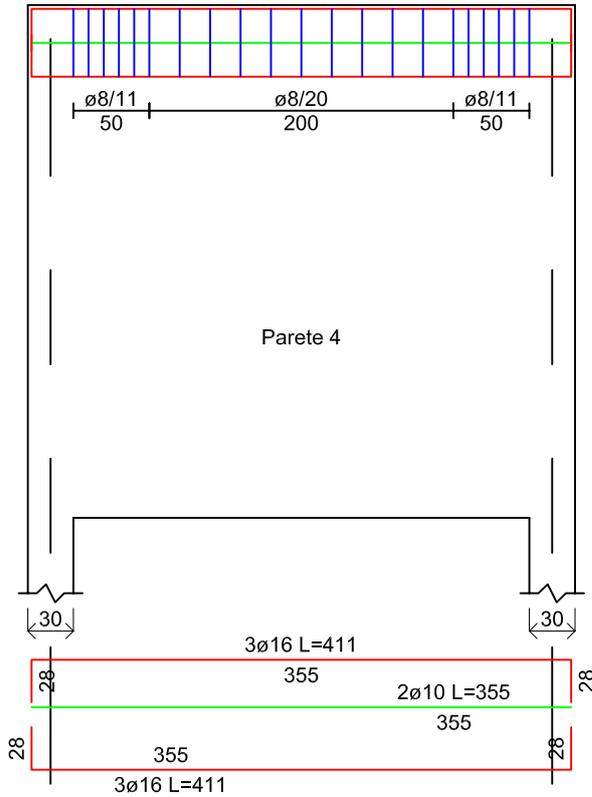
### Travata 17 Piano 1

6  
Q=340

3  
Q=340

Campata 6-3  
Cls = C25/30

Acciaio = B450C



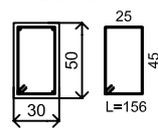
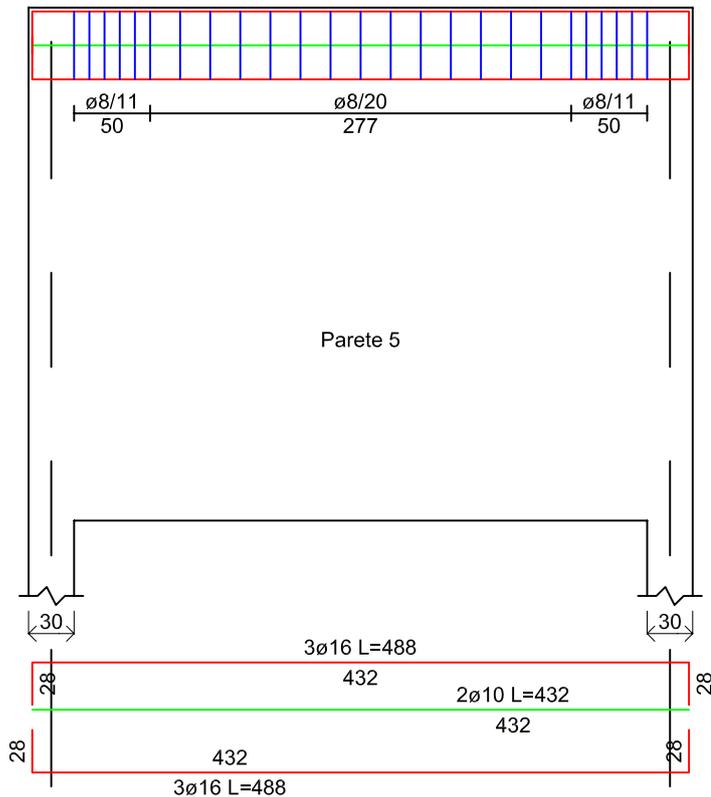
### Travata 18 Piano 1

4  
Q=340

5  
Q=340

Campata 4-5  
Cls = C25/30

Acciaio = B450C



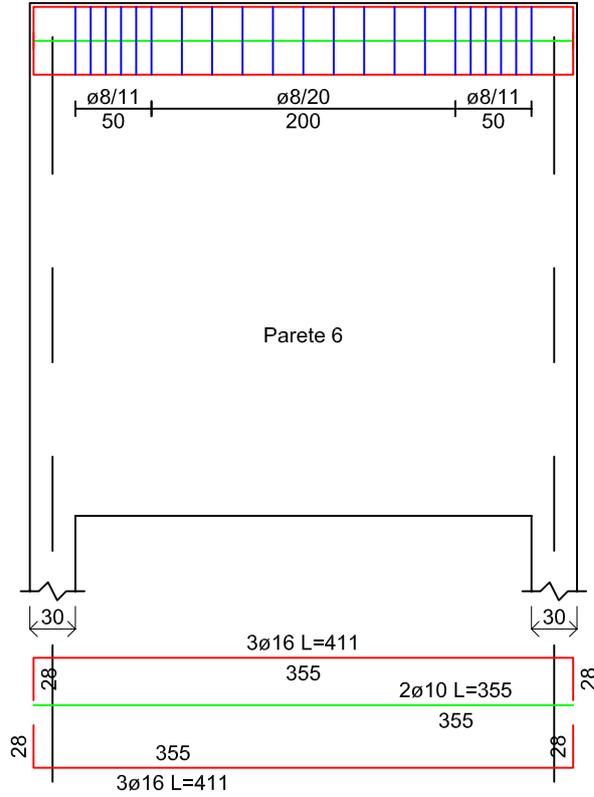
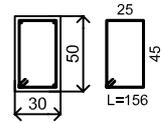
### Travata 19 Piano 1

4  
Q=340



7  
Q=340

Campata 4-7  
Clis = C25/30  
Acciaio = B450C



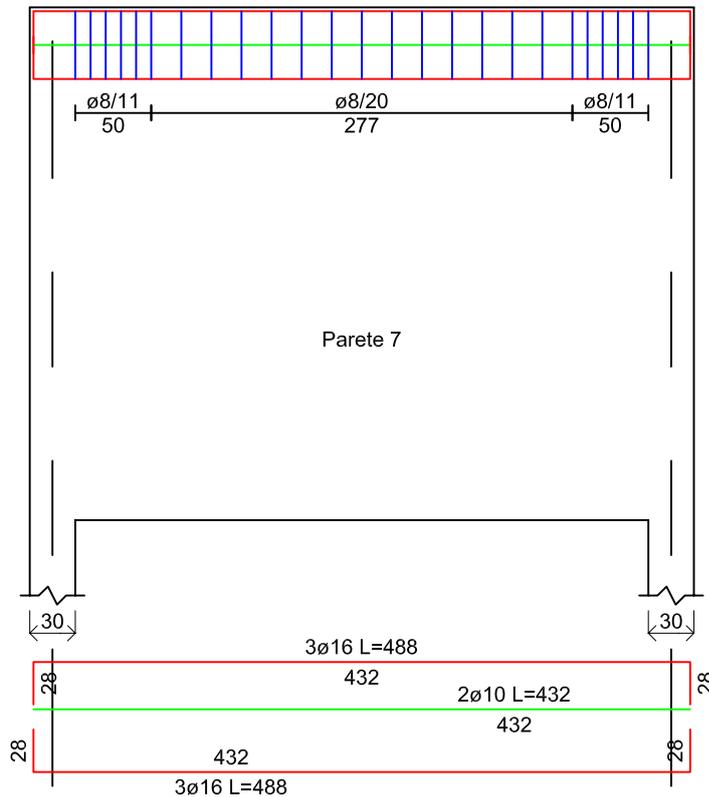
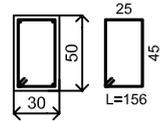
### Travata 20 Piano 1

5  
Q=340



6  
Q=340

Campata 5-6  
Clis = C25/30  
Acciaio = B450C



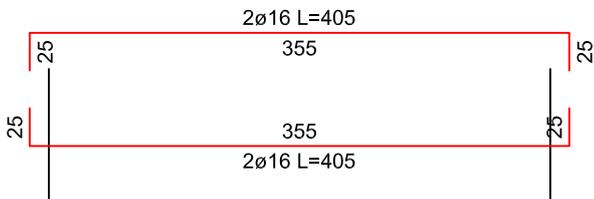
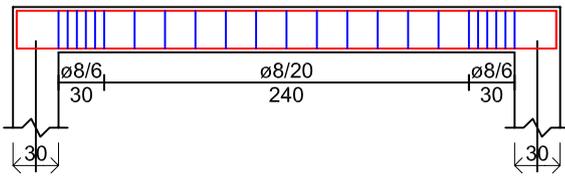
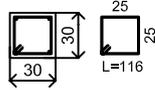
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8  
Q=340

Campata 8-5  
Cls = C25/30

Acciaio = B450C

5  
Q=340



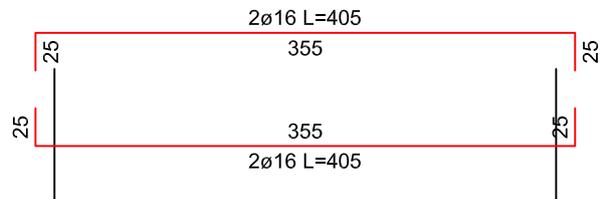
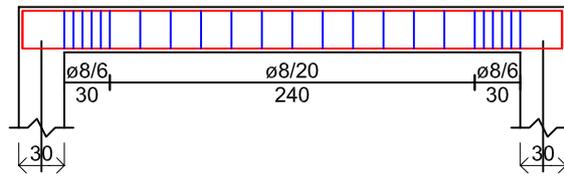
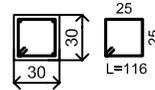
### Travata 16 Piano 1

5  
Q=340

Campata 5-2  
Cls = C25/30

Acciaio = B450C

2  
Q=340



Comune di SANTO STEFANO DI CAMASTRA

Provincia di MESSINA

# ESECUTIVI DI CANTIERE

Pareti

Oggetto: **Calcolo delle strutture in c.a. perla realizzazione dei serbatoi di bunkeraggio a servizio del portoturistico**

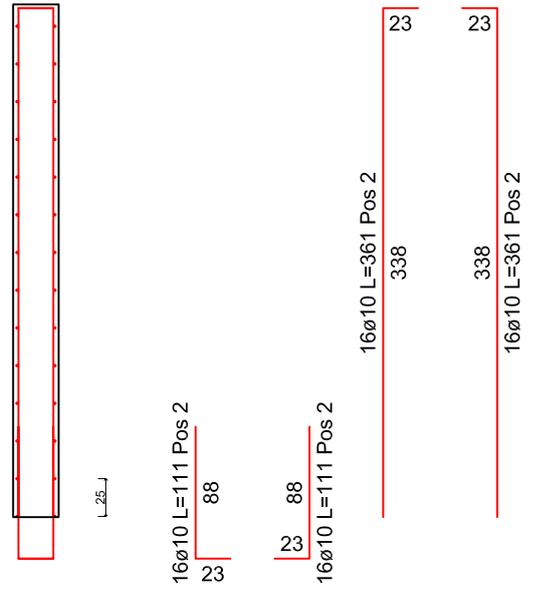
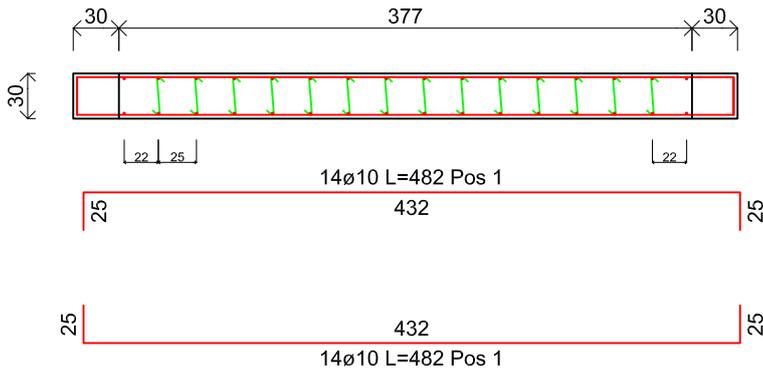
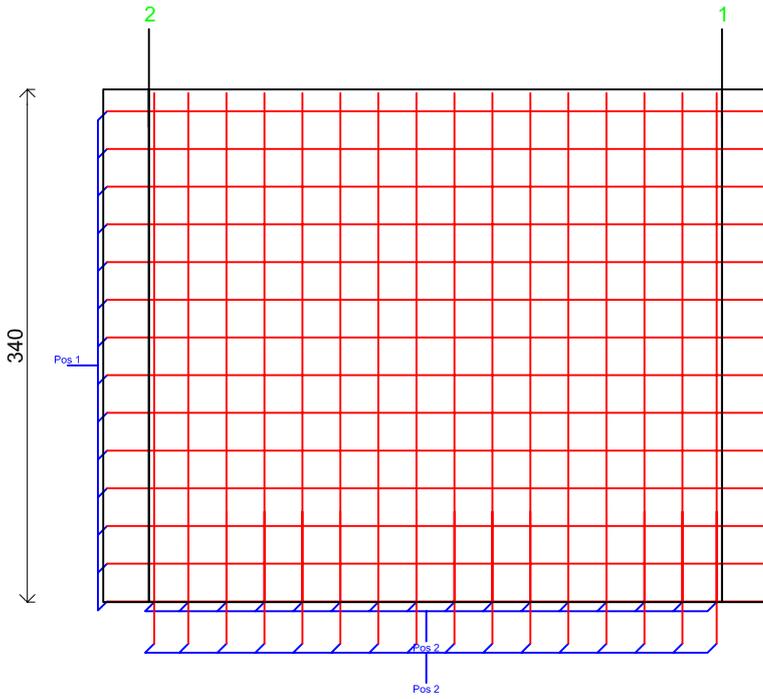
Ditta: COSTRUZIONI BRUNO S.P.A.

Data: 20/04/2017

## Materiali

**CLS**  
**C25/30**  
**ACCIAIO LONGITUDINALI**  
**B450C**  
**ACCIAIO STAFFE**  
**B450C**

# Parete non Dissipativa1 Piano 1 Fili Fissi 2-1



## Materiali

Cls	C25/30
Acciaio	B450C

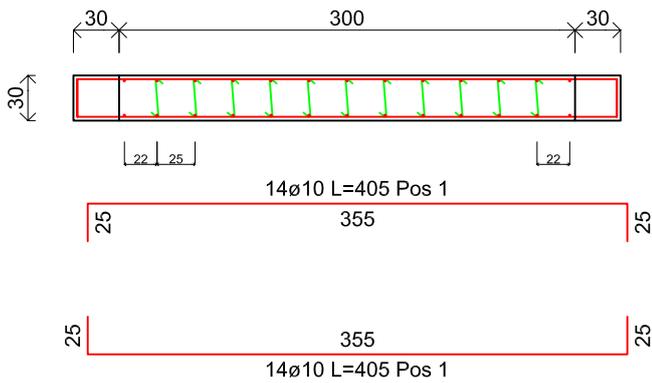
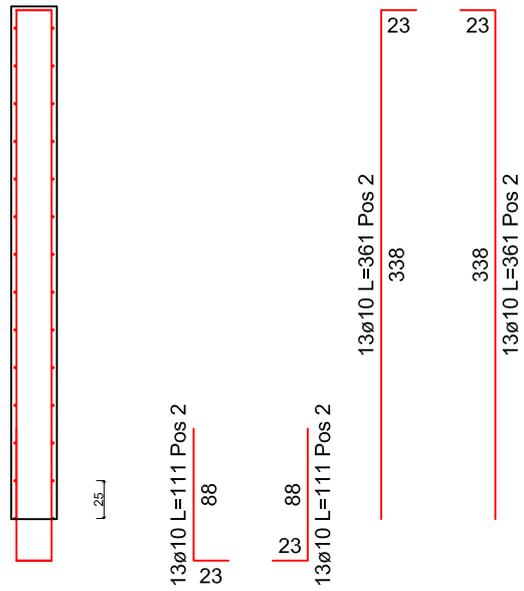
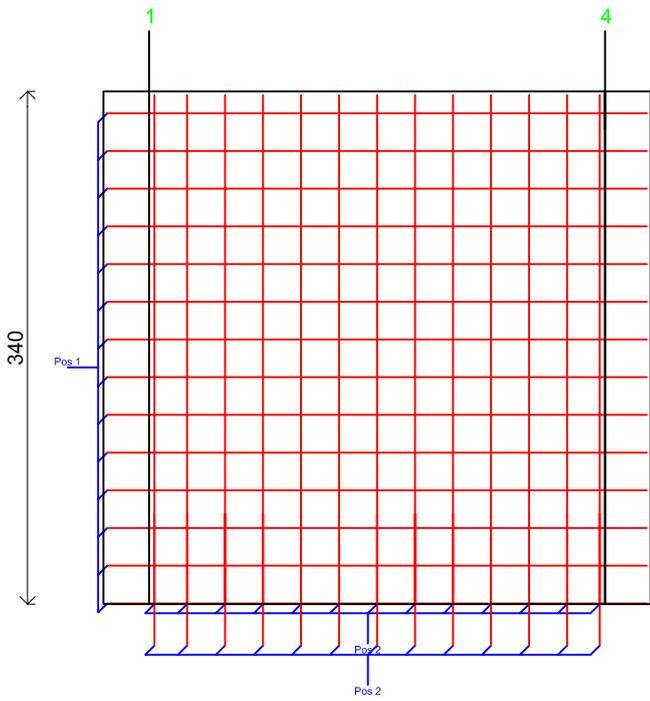
## Armature

TIPO	ø	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

## LEGATURE

Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa2 Piano 1 Fili Fissi 1-4



## Materiali

Cls	C25/30
Acclato	B450C

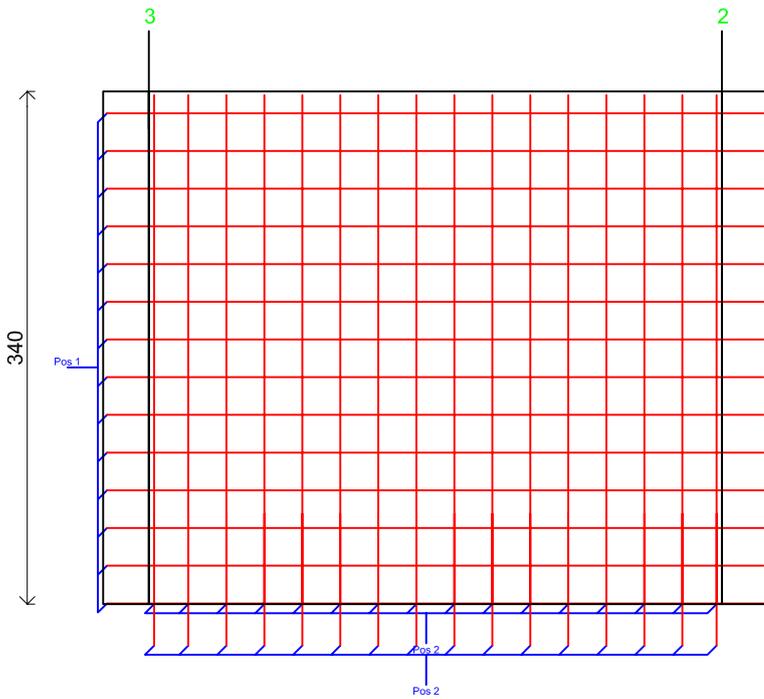
## Armature

TIPO	ø	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

## LEGATURE

Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa3 Piano 1 Fili Fissi 3-2



25

16ø10 L=111 Pos 2

88

23

23

88

16ø10 L=111 Pos 2

16ø10 L=361 Pos 2

338

23

338

23

16ø10 L=361 Pos 2

## Materiali

Cls	C25/30
Acciaio	B450C

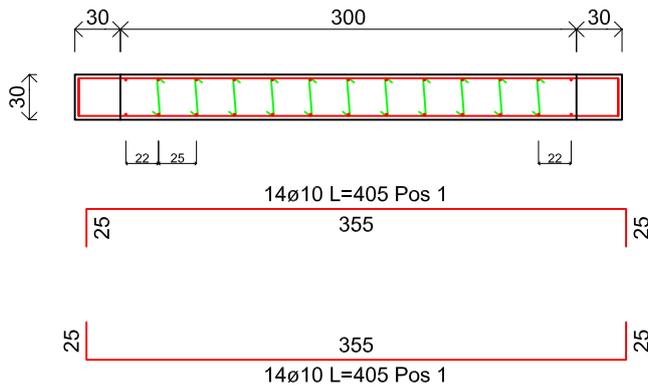
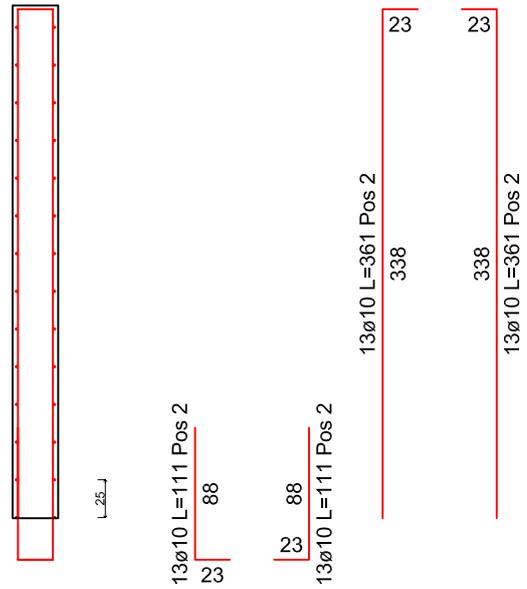
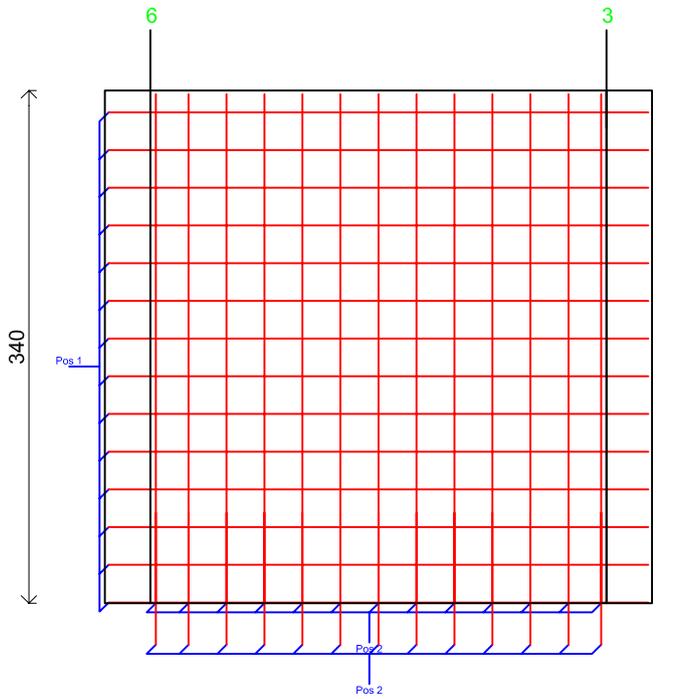
## Armature

TIPO	ø	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

## LEGATURE

Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa4 Piano 1 Fili Fissi 6-3

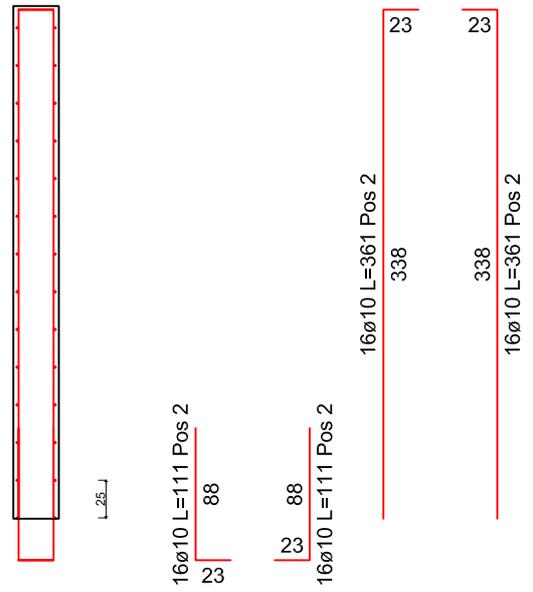
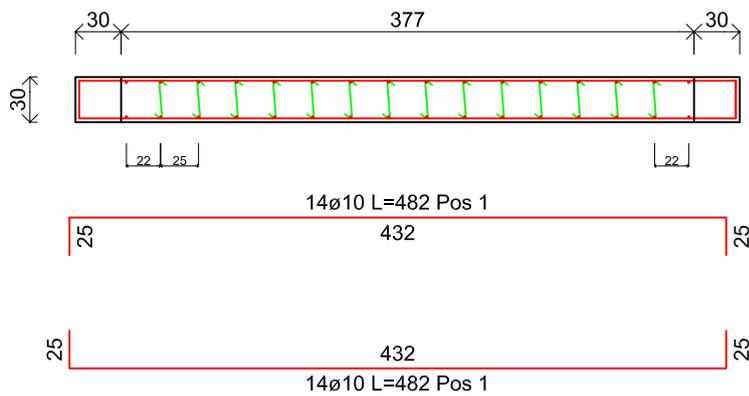
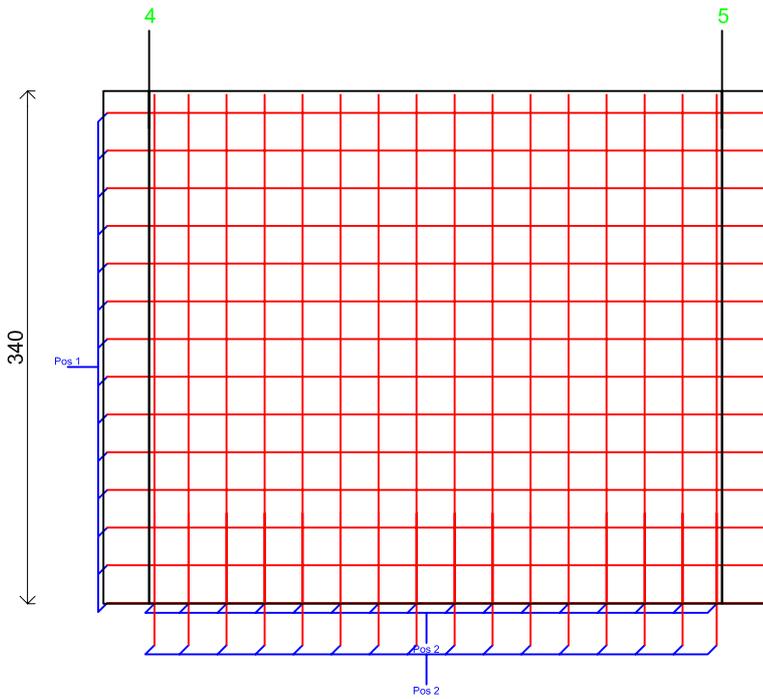


Materiali	
Cls	C25/30
Acciaio	B450C

Armature			
TIPO	ø	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

LEGATURE			
Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa5 Piano 1 Fili Fissi 4-5



## Materiali

Cls	C25/30
Acciaio	B450C

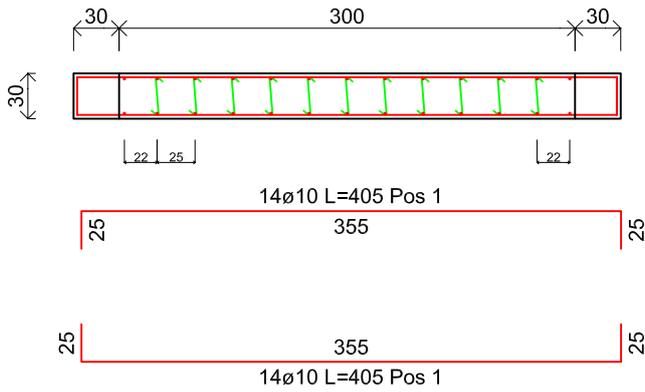
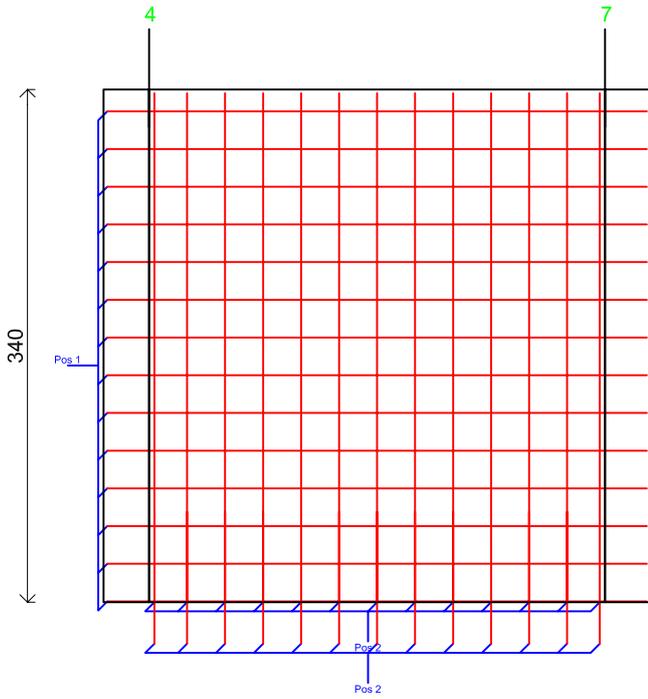
## Armature

TIPO	$\phi$	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

## LEGATURE

Zona	$\phi$	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa6 Piano 1 Fili Fissi 4-7



13ø10 L=111 Pos 2  
23 88

13ø10 L=111 Pos 2  
23 88

13ø10 L=361 Pos 2  
23 338

13ø10 L=361 Pos 2  
23 338

## Materiali

Cls	C25/30
Acciaio	B450C

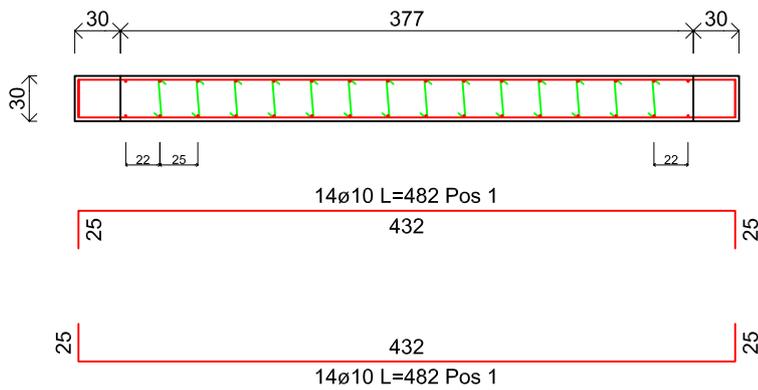
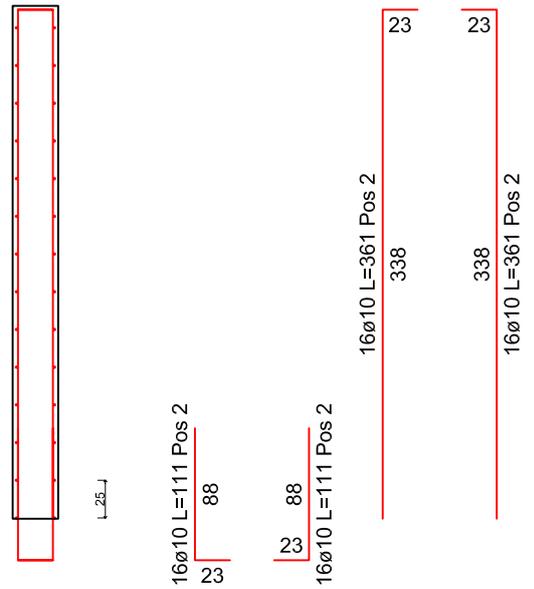
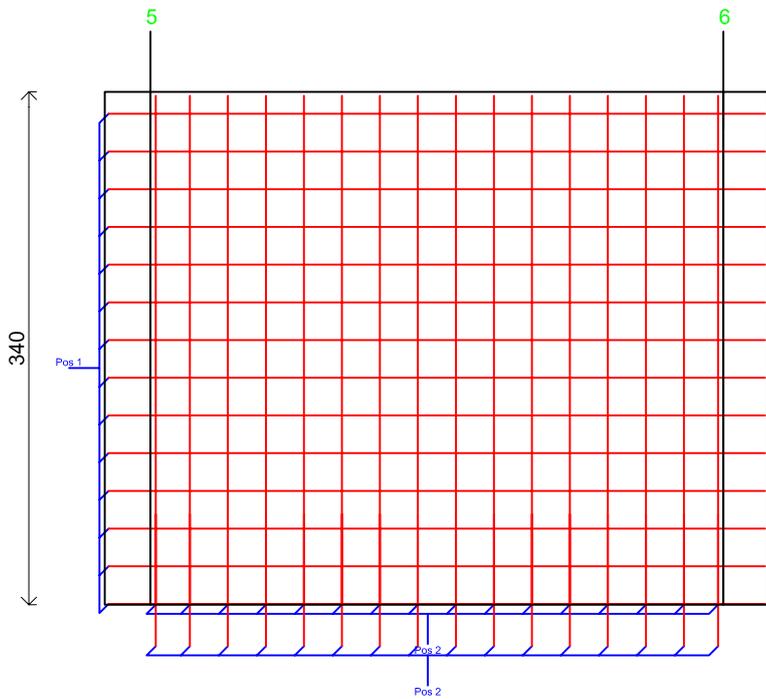
## Armature

TIPO	ø	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

## LEGATURE

Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa7 Piano 1 Fili Fissi 5-6



## Materiali

Cls	C25/30
Acciaio	B450C

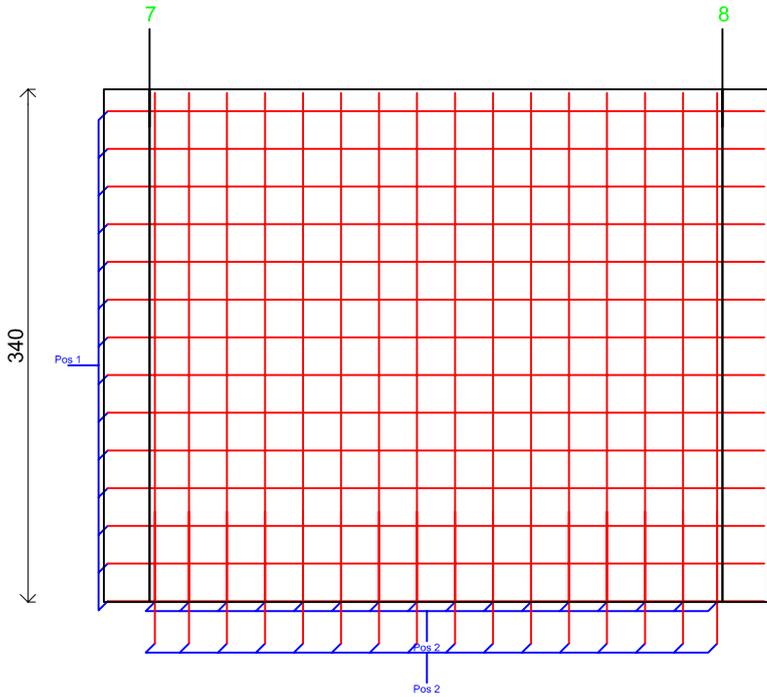
## Armature

TIPO	ø	Passo	Pos.
Oriz.	10	25	1
Vert.	10	25	2

## LEGATURE

Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa9 Piano 1 Fili Fissi 7-8

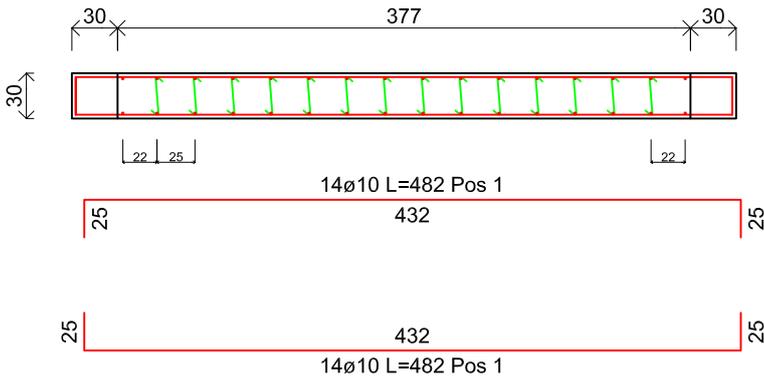


16 $\phi$ 10 L=111 Pos 2  
23 88 23

16 $\phi$ 10 L=111 Pos 2  
23 88 23

16 $\phi$ 10 L=361 Pos 2  
23 338 23

16 $\phi$ 10 L=361 Pos 2  
23 338 23



## Materiali

Cls	C25/30
Acciaio	B450C

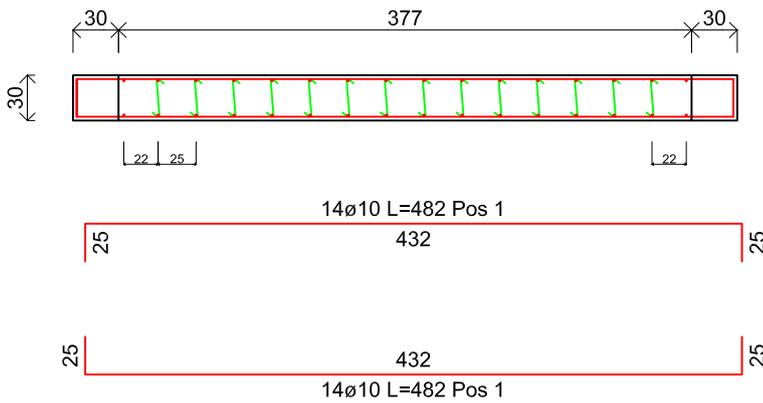
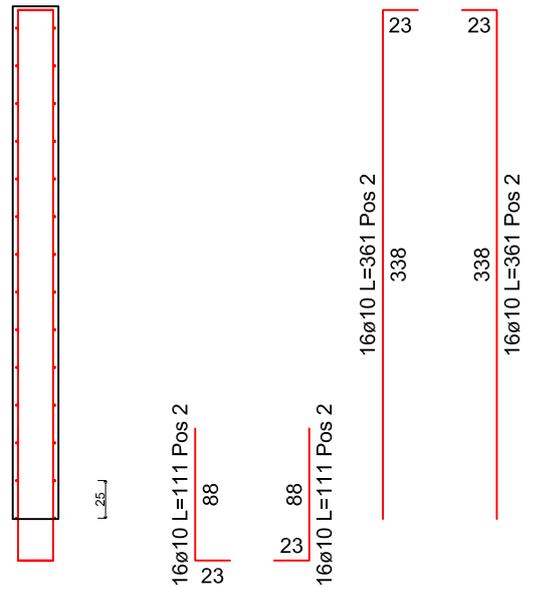
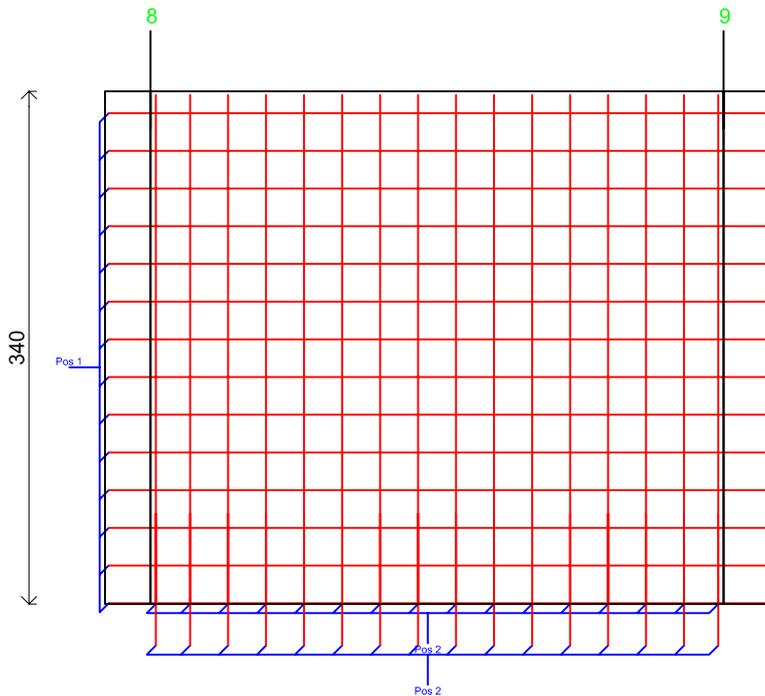
## Armature

TIPO	$\phi$	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

## LEGATURE

Zona	$\phi$	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa10 Piano 1 Fili Fissi 8-9



### Materiali

Cls	C25/30
Acciaio	B450C

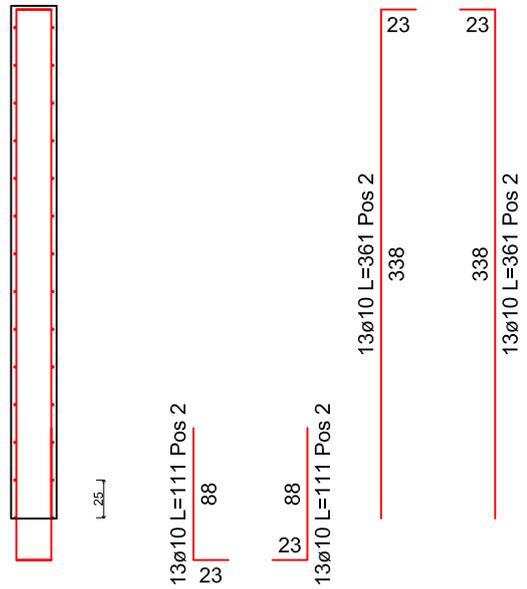
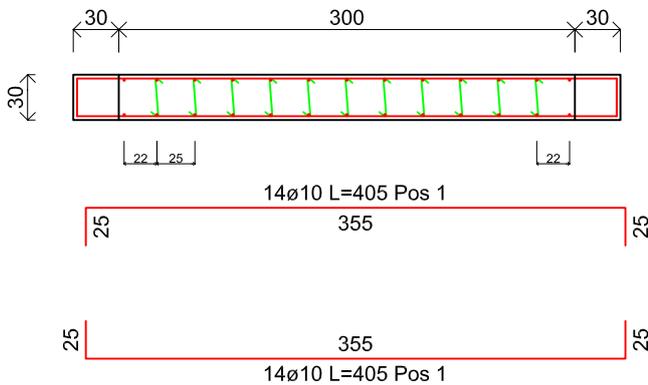
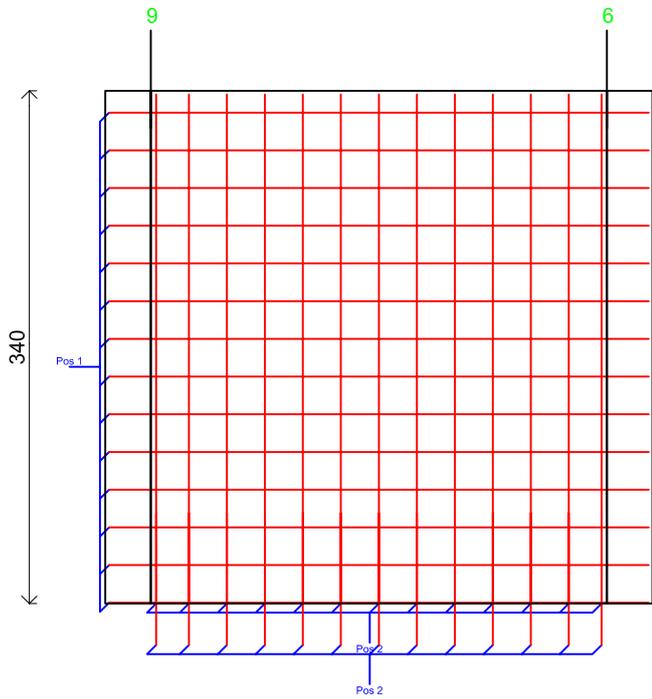
### Armature

TIPO	ø	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

### LEGATURE

Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

# Parete non Dissipativa8 Piano 1 Fili Fissi 9-6



Materiali

Cls	C25/30
Acciaio	B450C

Armature

TIPO	ø	Passo	Pos
Oriz.	10	25	1
Vert.	10	25	2

LEGATURE

Zona	ø	Passo Oriz	Passo Vert
Non Conf	8	25	25

Pilastrata 1

Comune di SANTO STEFANO DI CAMASTRA

Provincia di MESSINA

# ESECUTIVI DI CANTIERE

Pilastrate

Oggetto: **Calcolo delle strutture in c.a. per la realizzazione dei serbatoi di bunkeraggio a servizio del portoturistico**

Ditta: COSTRUZIONI BRUNO S.P.A.

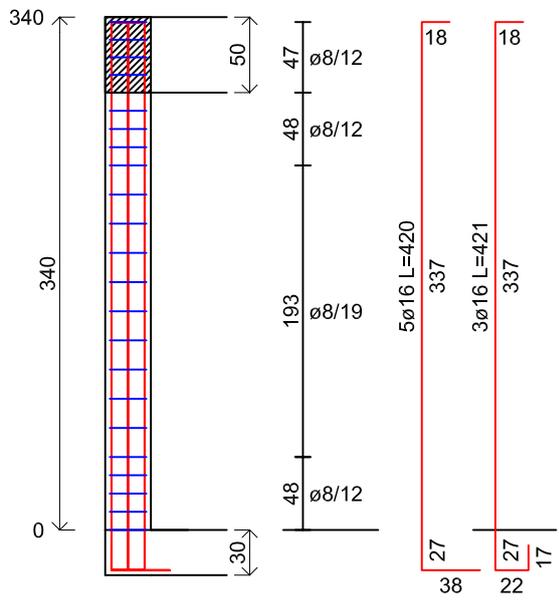
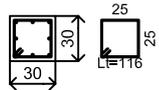
Data: 20/04/2017

## Materiali

**CLS**  
**C25/30**  
**ACCIAIO LONGITUDINALI**  
**B450C**  
**ACCIAIO STAFFE**  
**B450C**

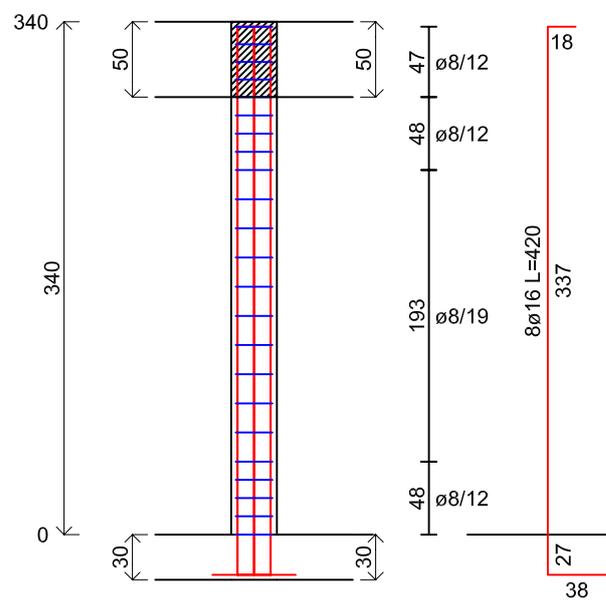
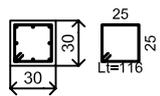
### Pilastrata 1

Clis = C25/30  
Acciaio = B450C



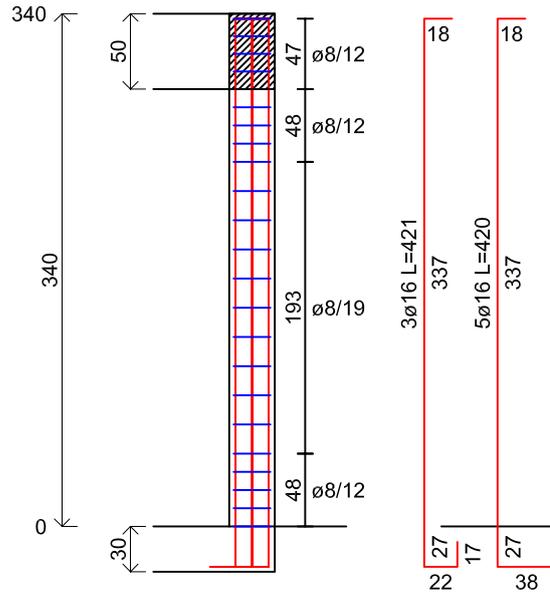
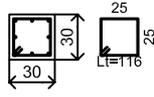
### Pilastrata 2

Clis = C25/30  
Acciaio = B450C



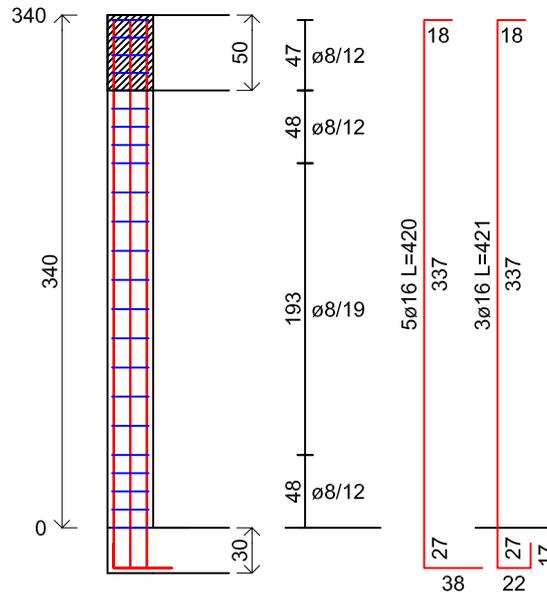
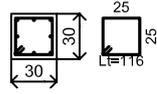
### Pilastrata 3

Cls = C25/30  
Acciaio = B450C



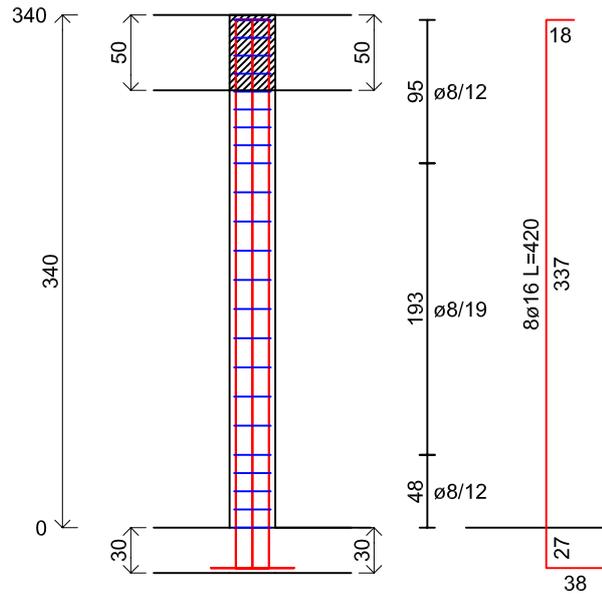
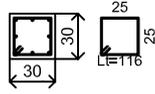
### Pilastrata 4

Cls = C25/30  
Acciaio = B450C



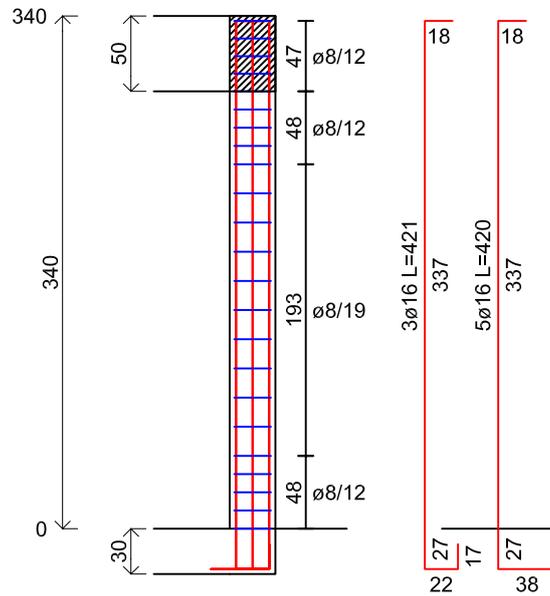
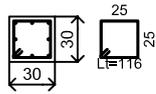
### Pilastrata 5

Cls = C25/30  
Acciaio = B450C



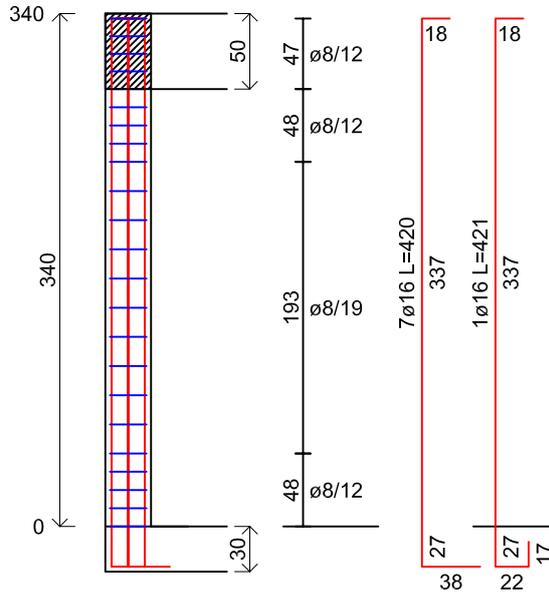
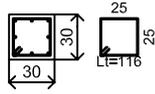
### Pilastrata 6

Cls = C25/30  
Acciaio = B450C



### Pilastrata 7

Cls = C25/30  
Acciaio = B450C



### Pilastrata 8

Cls = C25/30  
Acciaio = B450C

