Manifattura del Turchino s.p.a.
piazza della Vittoria n.7-4
16121 GENOVA

AUTORIZZAZIONE UNICA PER COSTRUZIONE
DI IMPIANTO IDROELETTRICO AD ACQUA FLUENTE
IN COMUNE DI BORZONASCA (GENOVA)

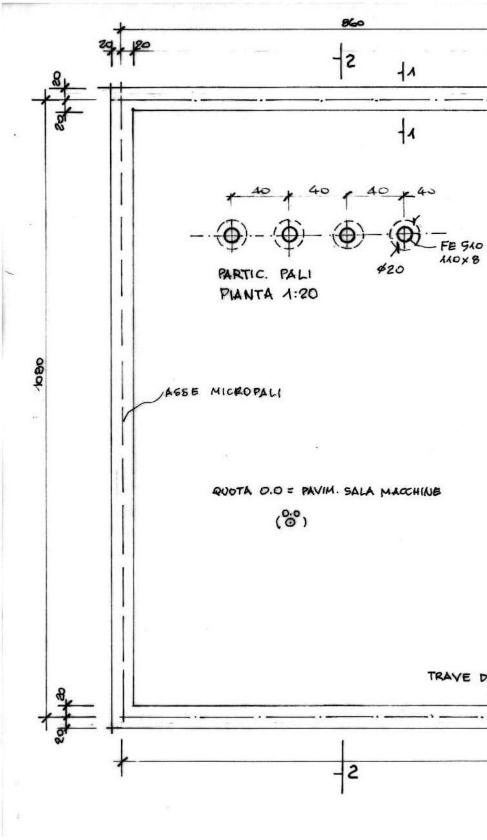
DOMANDA DI CONCESSIONE DI DERIVAZIONE DI ACQUA PUBBLICA
AD USO IDROELETTRICO
DAI TORRENTI STORTO, CERESOLE E PORAGINE
IN COMUNE DI BORZONASCA (GENOVA)

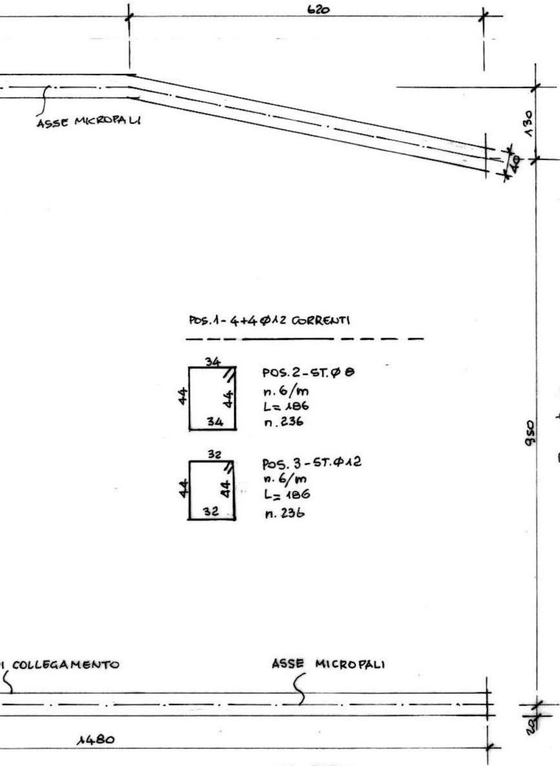
ELABORATI GRAFICI

PARTICOLARI COSTRUTTIVI

Studio Tecnico
dr.ing. Aldo Galleti
contrada di Borgoratto, 2
29022 BOBBIO (PC)

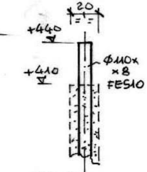
tel.+fax: 0523 936182


860
20
20
2
1
1
80
20
40
40
40
40
FE 510
110x8
Ø20
PARTIC. PALI
PIANTA 1:20
1090
ASSE MICROPALI
QUOTA 0.0 = PAVIM. SALA MACCHINE
(0.0)
TRAVE D
80
20
2

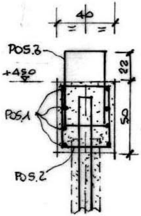

620
ASSE MICROPALI
130
40
POS.1 - 4+4 Ø12 CORRENTI
34
44
44
34
POS.2 - ST. Ø 8
n. 6/m
L= 186
n. 236
32
44
44
32
POS. 3 - ST. Ø12
n. 6/m
L= 186
n. 236
950
I COLLEGAMENTO
ASSE MICROPALI
20
1480

FE = B450C
CLS: CL. 25/30

1

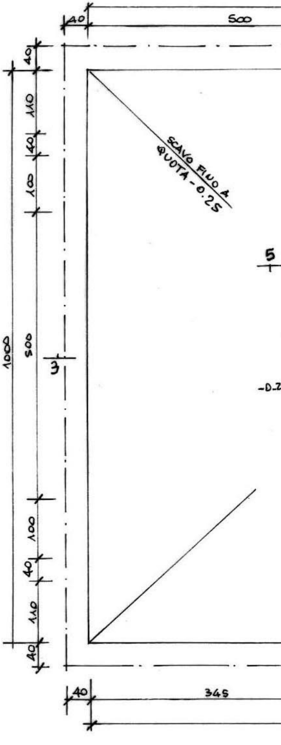

20
= =
+440
+410
Ø110×
×8
FE510

SEZ. 1-1

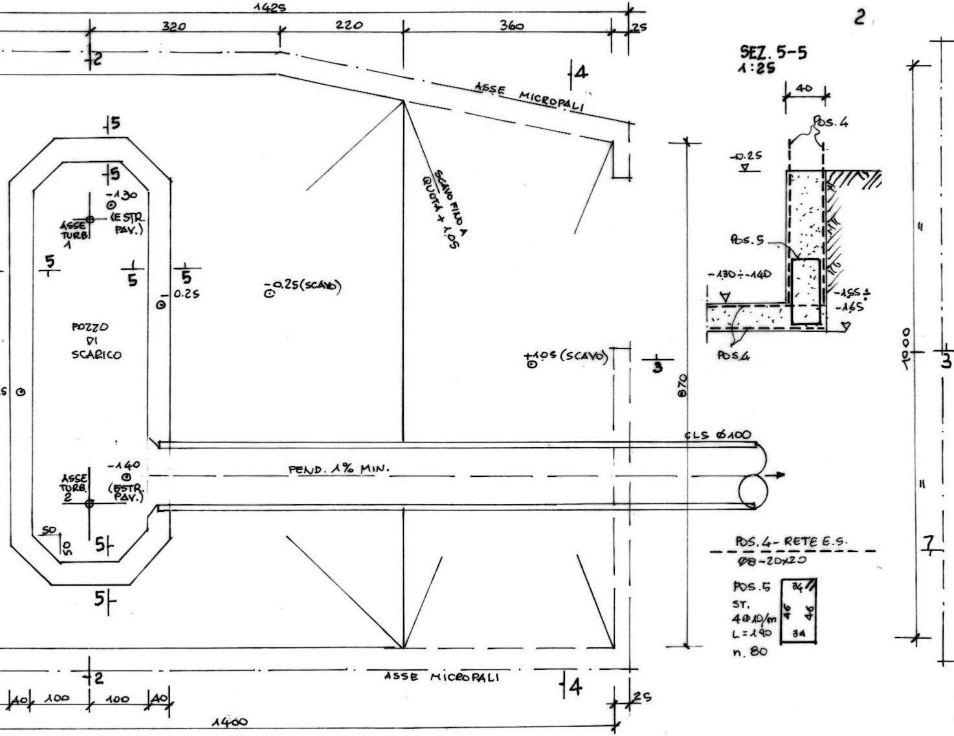

40
= =
POS.3
+450
22
50
POS.1
POS.2

SEZ. 1-1
1:20
TRAVE COLLEG.
TESTE PALI

CENTRALE
PIANTA
TRACCIATO
1:50


40
500
40
110
40
100
1000
500
3
SCAVO FINO A
QUOTA -0.25
5
-0.2
100
40
110
40
40
345

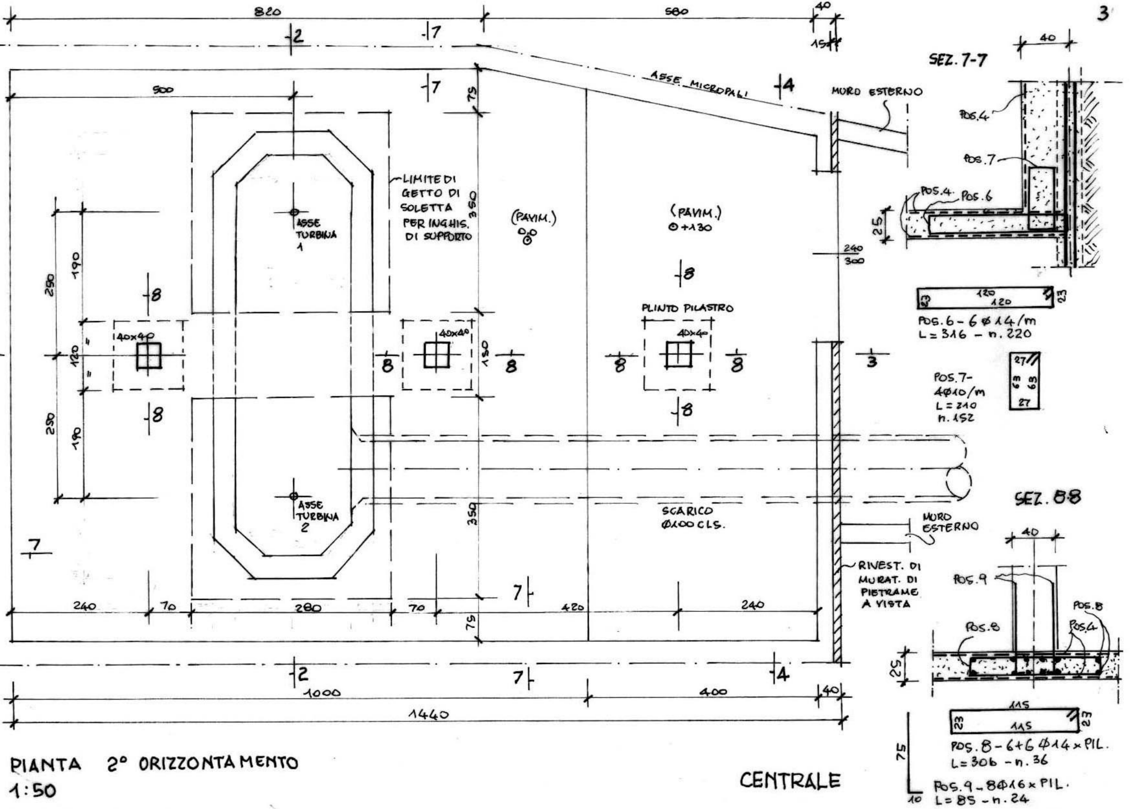
PIANTA 1° ORIZZONTA
1:50



2
1425
320
220
360
25
2
4
ASSE MICROPALI
5
-1.30
(ESTR. PAV.)
ASSE TURB. 1
SCAVO FINO A QUOTA + 1.05
-0.25 (SCAVO)
-0.25
POZZO DI SCARICO
+1.05 (SCAVO)
3
870
CLS Ø100
PEND. 1% MIN.
-1.40
(ESTR. PAV.)
ASSE TURB. 2
50
50
ASSE MICROPALI
40
100
100
40
1400
25
SEZ. 5-5
1:25
40
POS. 4
-0.25
POS. 5
-1.30 ÷ -1.40
-1.55 ÷ -1.65
POS. 4
POS. 4 - RETE E.S.
Ø8 - 20x20
POS. 5
ST.
4 Ø 10/m
L = 1.90
n. 80
34
46
46
34
1000
3
7

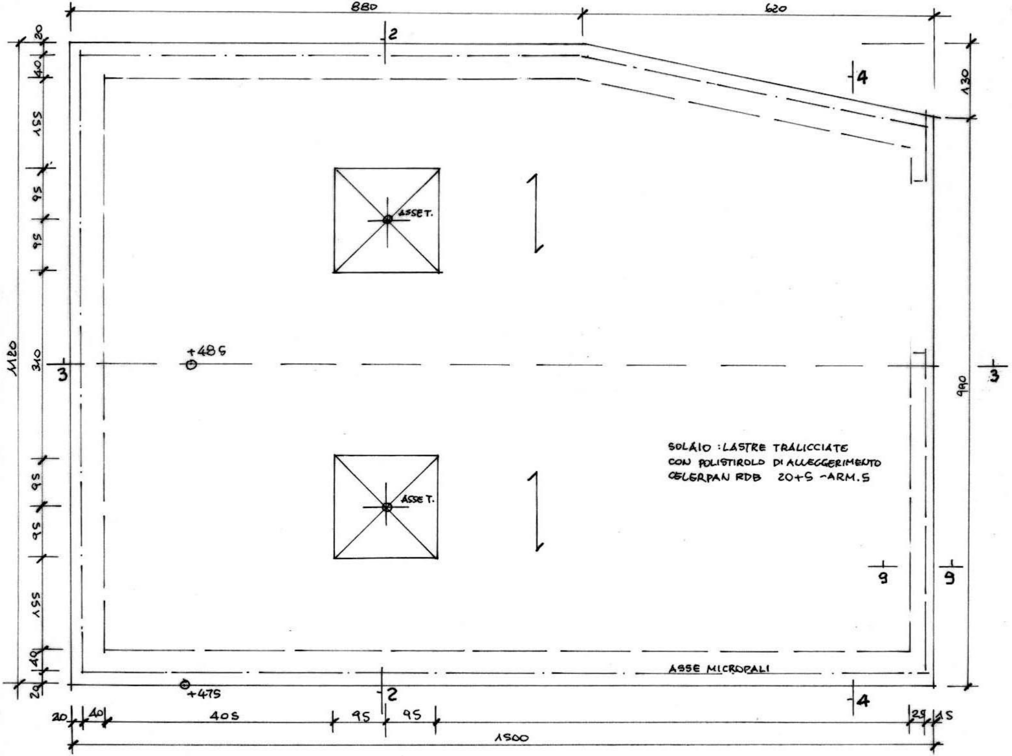
MENTO

CENTRALE


820
580
40
15
500
75
ASSE MICROPALI
MURO ESTERNO
LIMITE DI GETTO DI SOLETTA PER INGHIS. DI SUPPORTO
ASSE TURBINA 1
ASSE TURBINA 2
(PAVIM.) 0,0
(PAVIM.) 0+130
PLINTO PILASTRO
40x40
350
150
190
250
120
240
300
SCARICO Ø100 CLS.
RIVEST. DI MURAT. DI PIETRAME A VISTA
240
70
280
70
420
240
1000
400
40
1440
2
7
4
8
3
SEZ. 7-7
POS.4
POS.7
POS.6
25
120
23
POS.6 - 6Ø14/m
L=316 - n.220
27
63
POS.7-
4Ø10/m
L=210
n.152
SEZ. 8-8
POS.9
POS.8
115
POS.8 - 6+6 Ø14 x PIL.
L=306 - n.36
POS.9 - 8Ø16 x PIL.
L=85 - n.24
10

PIANTA 2° ORIZZONTAMENTO
1:50

CENTRALE


880
620
2
4
130
20
40
155
95
95
310
1120
3
+485
ASSE T.
ASSE T.
3
990
95
95
155
40
20
9
9
+475
ASSE MICROPALI
2
4
20
40
405
95
95
25
15
1500

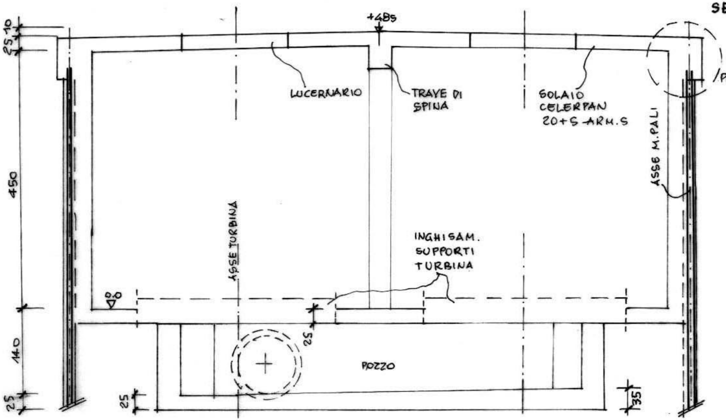
SOLAIO : LASTRE TRALICCIATE
CON POLISTIROLO DI ALLEGGERIMENTO
CELERPAN RDB 20+5 -ARM.5

PIANTA 2° ORIZZ. (COPERTURA)
1:50

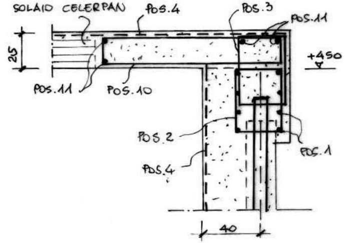
CENTRALE

CENTRALE

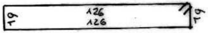
SEZIONE 2-2
1:50


+485
10
25
450
140
25
LUCERNARIO
TRAVE DI SPINA
SOLAIO CELERPAN 20+5 ARM.S
/PART. A
ASSE M.PALI
ASSE TURBINA
INGHISAM. SUPPORTI TURBINA
0.0
25
POZZO
25
35

PARTICOLARE A
1:20

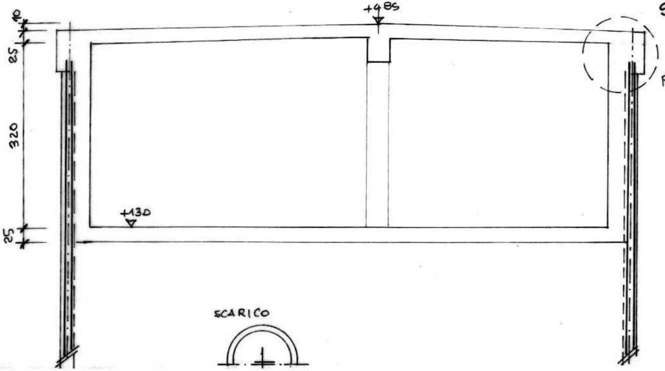

SOLAIO CELERPAN
POS.4
POS.3
POS.11
25
+450
POS.11
POS.10
POS.2
POS.1
POS.4
40

POS. 10 - ST. Ø12/16cm - L=320 - n. 278

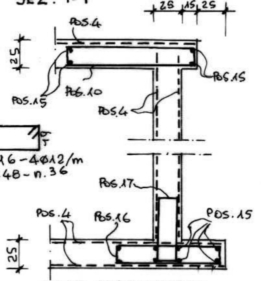

19
126
126
19

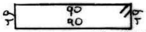
POS.11 - 4Ø10 REGGIST. CORRENTI

SEZIONE 4-4
1:50

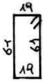

+485
10
25
320
25
25
+130
PART. A
SCARICO

SEZ. 9-9


25
15
25
POS.4
25
POS.15
POS.10
POS.15
POS.4
POS.17
POS.4
POS.16
POS.15
25

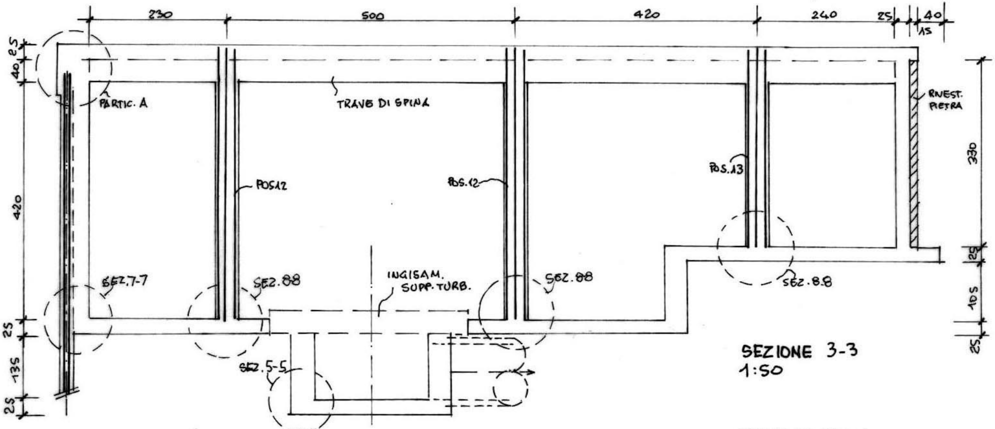


POS.16 - 4Ø12/m
L=248 - n.36

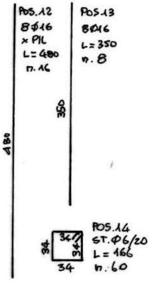


POS.17
CHIAM.
4Ø10/m
L=190
n.24

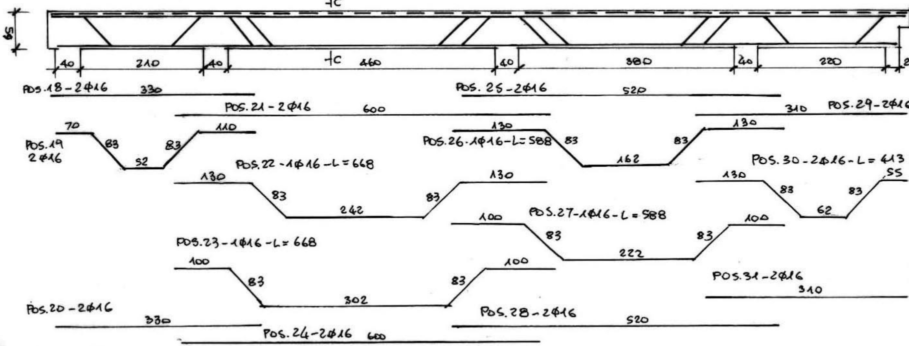
POS.15 - 12Ø10 CORRENTI

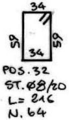

230
500
420
240
25
40
15
25
40
420
25
135
25
330
25
105
25
PARTIC. A
TRAVE DI SPINA
RIVEST. PIETRA
POS12
POS.12
POS.13
SEZ.7-7
SEZ.88
INGISAM. SUPP. TURB.
SEZ.88
SEZ.8.8
SEZ.5-5

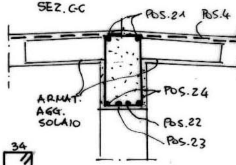
SEZIONE 3-3
1:50


POS.12
8Φ16
x PIL
L= 480
n.16
POS.13
8Φ16
L=350
n.8
480
350
POS.14
ST.Φ6/20
L= 166
n. 60
34
34
34
34

TRAVE DI SPINA

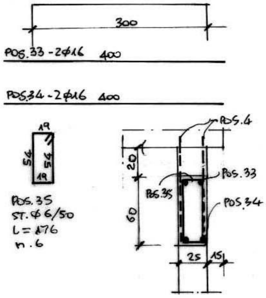

C
C
65
40
210
40
460
40
380
40
220
25
POS.18 - 2Φ16
330
POS.25 - 2Φ16
520
POS.21 - 2Φ16
600
310
POS.29 - 2Φ16
70
110
POS.19
2Φ16
83
52
83
130
POS.26 - 1Φ16 - L= 588
83
162
83
130
POS.22 - 1Φ16 - L = 668
130
83
242
83
130
POS.30 - 2Φ16 - L = 413
130
83
62
83
55
100
POS.27 - 1Φ16 - L = 588
83
222
83
100
POS.23 - 1Φ16 - L= 668
100
83
302
83
100
POS.31 - 2Φ16
310
POS.20 - 2Φ16
330
POS.28 - 2Φ16
520
POS.24 - 2Φ16
600


34
59
59
34
POS.32
ST.Φ8/20
L= 216
N. 64


SEZ.C-C
POS.21
POS.4
POS.24
ARMAT. AGG. SOLAIO
POS.22
POS.23

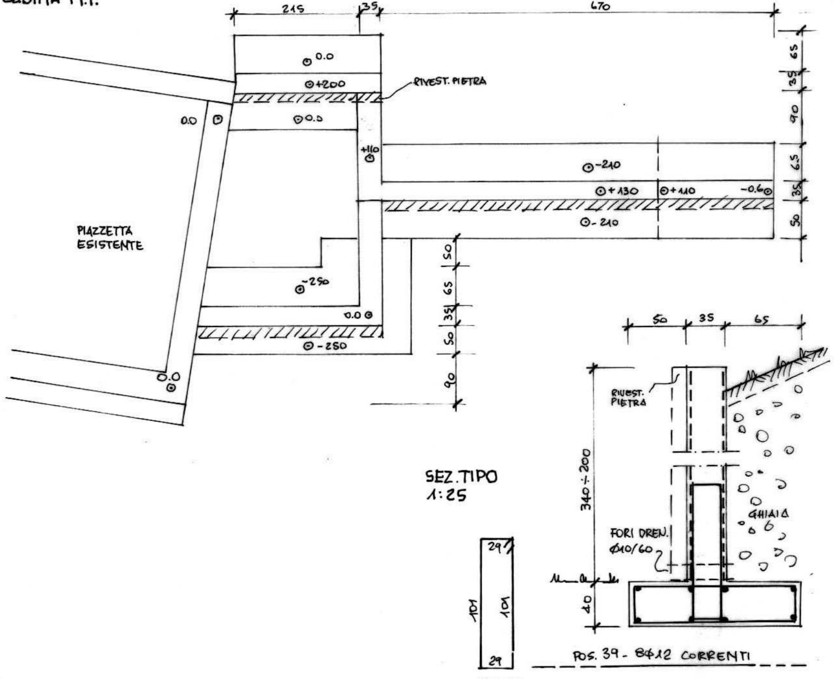
CENTRALE

CENTRALE

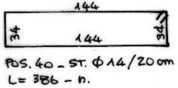

300
POS.33 - 2Φ16 400
POS.34 - 2Φ16 400
19
54
54
19
POS.35
ST. Φ 6/50
L= 176
n. 6
POS.4
POS.33
POS.35
POS.34
20
60
25
15

ARCHITRAVE PORTONE

CABINA M.T.


215
35
670
65
35
90
65
35
50
0.0
+200
RIVEST. PIETRA
0.0
0.0
+110
-210
+130
+110
-0.6
-210
PIAZZETTA
ESISTENTE
-250
0.0
-250
0.0
50
65
35
50
90
50
35
65
RIVEST. PIETRA
340 ÷ 200
GHIAIA
FORI DREN.
Φ10/60
40
SEZ.TIPO
1:25
29
101
101
29
POS. 39 - 8Φ12 CORRENTI

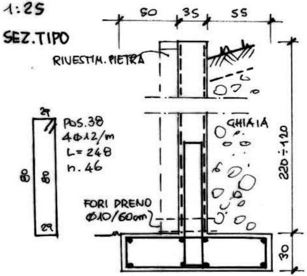
POS.41
5Φ14/m
L=290
n

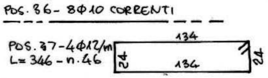

144
34
144
34

POS. 40 - ST. Φ14/20cm
L= 386 - n.

MURI ESTERNI
1:25

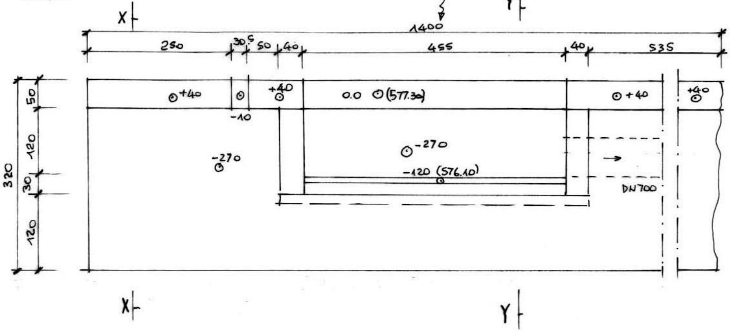
SEZ.TIPO

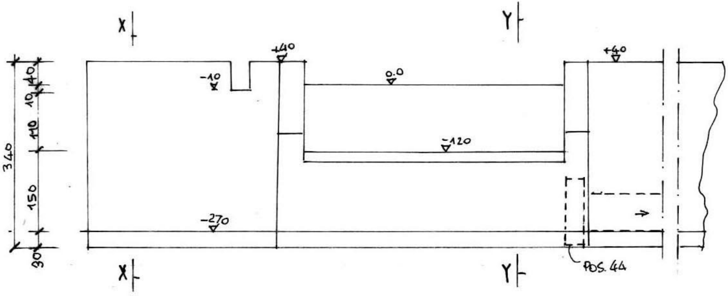

50
35
55
RIVESTIM. PIETRA
GHIAIA
220 ÷ 120
29
POS.38
4Φ12/m
L= 248
n. 46
80
80
29
FORI DRENO
Φ10/60cm
30


POS. 36 - 8Φ10 CORRENTI
134
24
134
24

POS. 37 - 4Φ12/m
L= 346 - n. 46

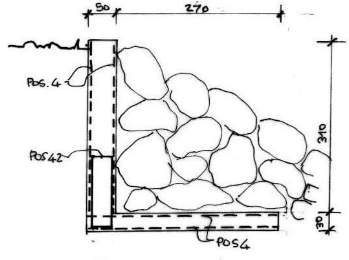
PIANTA

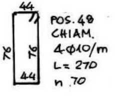

X
Y
1400
250
30.5
50
40
455
40
535
50
120
30
120
320
+40
+40
0.0
(577.30)
+40
+40
-10
-270
-270
-120 (576.10)
DN700


X
Y
+40
+40
-10
0.0
-120
-270
40
10
110
150
340
30
POS. 44

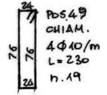
FRONTE

SEZ. X-X


50
270
310
30
Pos. 4
POS 42
POS 4

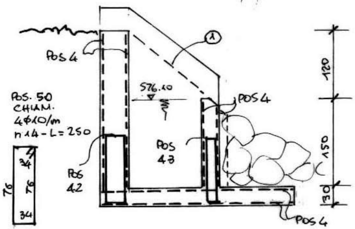


POS. 48
CHIAM.
4Φ10/m
L= 270
n. 70



POS. 49
CHIAM.
4Φ10/m
L= 230
n. 19

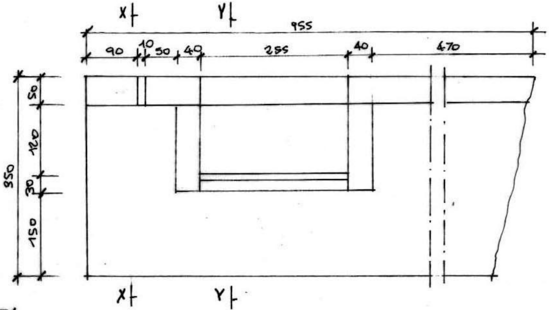
SEZ. Y-Y


①
576.10
Pos 4
POS 4
Pos 43
Pos 42
Pos 4
120
150
30
34
76
76
34

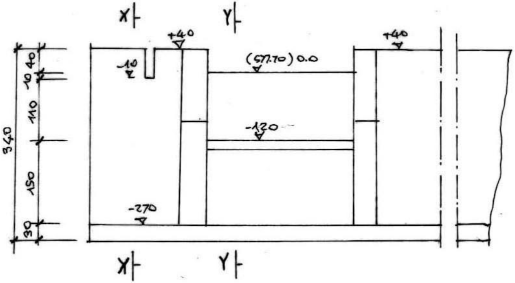
POS. 50
CHIAM.
4Φ10/m
n 14 - L= 250

① PREFABBRICATO DI ACCIAIO DA MONTARE

PRESA RIO STORTO
1:50

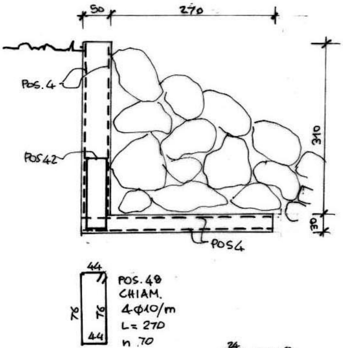

X
Y
955
90
10
50
40
255
40
470
50
120
350
30
150
X
Y

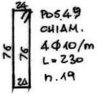
PIANTA


X
Y
+40
+40
(577.70) 0.0
-10
-120
-270
10
40
10
110
340
150
30
X
Y

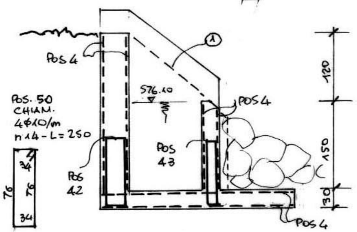
FRONTE

SEZ. X-X


50
270
Pos. 4
POS 42
310
30
POS 4
44
76
76
44
POS. 48
CHIAM.
4Φ10/m
L = 270
n. 70

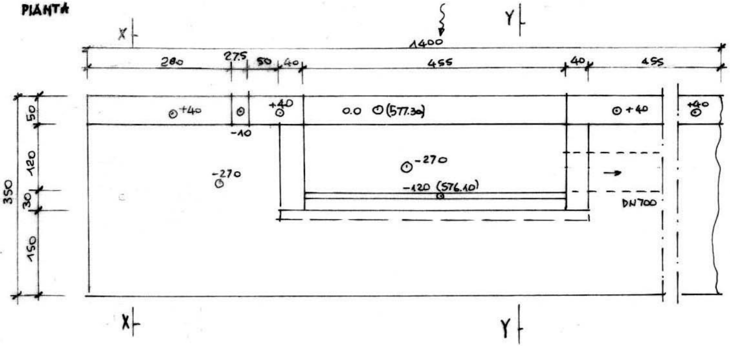

24
76
76
24
POS. 49
CHIAM.
4Φ10/m
L = 230
n. 19

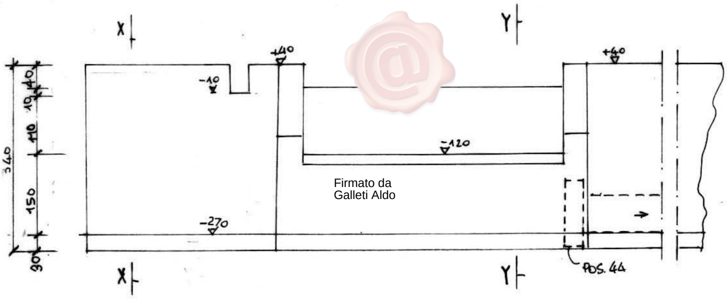
SEZ. Y-Y


Pos 4
1
576.10
POS 4
120
POS. 50
CHIAM.
4Φ10/m
n 14 - L = 250
Pos 43
Pos 42
150
30
Pos 4
34
76
76
34

PRESA RIO CERESOLE
1:50

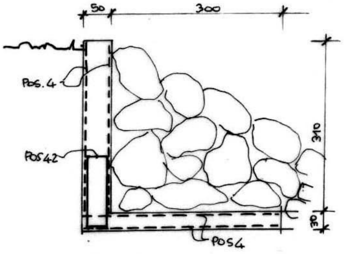
PIANTA

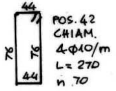

X
Y
1400
280
27.5
50
40
455
40
455
⊙ +40
⊙
-10
+40
0.0
⊙ (577.30)
⊙ + 40
+40
⊙ -270
-270
-120 (576.10)
DN700
350
50
120
30
150
X
Y

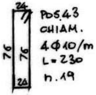

X
Y
+40
+40
-10
-120
-270
340
40
10
10
10
150
30
POS. 44
X
Y

FRONTE

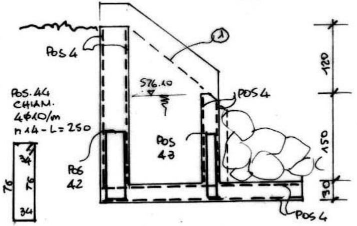
SEZ. X-X


50
300
Pos. 4
POS 42
310
30
POS 4


44
76
76
44
POS. 42
CHIAM.
4Φ10/m
L = 270
n. 70


24
76
76
24
POS 43
CHIAM.
4Φ10/m
L = 230
n. 19

SEZ. Y-Y


①
Pos 4
576.10
POS 4
Pos 43
Pos 42
POS. 44
CHIAM.
4Φ10/m
n 14 - L = 250
34
76
76
34
120
150
30
POS 4

① = PREFABBRICATO
DI ACCIAIO DA
MONTARE

Firmato da
Galleti Aldo

PRESA RIO PORAGINE

1:50