

COMUNE DI FIORANO MODENESE

PROVINCIA DI MODENA

**PERMESSO DI COSTRUIRE IN DEROGA
PER PUBBLICA UTILITÀ PER L'INSTALLAZIONE DI CABINA E ANTENNA
PER SERVIZI DI TELECOMUNICAZIONE**

**RELAZIONE INTEGRAZIONI RICHIESTE ALLA
PRATICA SISMICA Prot. n. 083/2019/SIS**

Proprietà: Sig.re Bondi Antonella, Bondi Loretta, Bondi Luisa, Bondi Paola

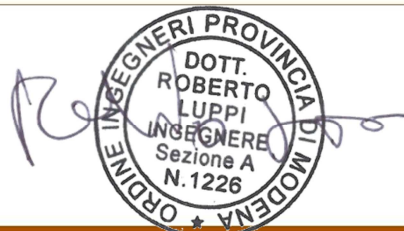
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Vignola, Giugno 2019

IL TECNICO

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STUDIO TECNICO ING. ROBERTO LUPPI

Si riportano a seguire le risposte alle integrazioni richieste allegando gli elaborati integrati con le informazioni e con la documentazione richiesta:

1. Incompletezza ed irregolarità della documentazione amministrativa

- 1.1.** Il rimborso forfettario è stato versato all'Unione di Comuni Terre di Castelli anziché all'Unione del Distretto Ceramico;

Si allega il rimborso forfettario aggiornato.

- 1.2.** Si richiede di aggiornare il modulo MUR A.2 scaricabile dal sito della Regione;

Si allega modulo MUR A.2.

- 1.3.** Non è presente il modulo MUR A1.D1 o MUR A3.D3.;

Si allega modulo MUR A1.D1

- 1.4.** Non è presente la procura speciale del geologo, costruttore e del collaudatore.

Si allegano le procure speciali richieste.

2. Incompletezza ed irregolarità degli elaborati di progetto

- 2.1.** Dagli elaborati grafici architettonici, si rileva un manufatto posto alla base dell'antenna in cui non sono state riportate alcune informazioni strutturali in merito. Chiarire;

Si allega la documentazione relativa alla cabina prefabbricata.

- 2.2.** La relazione geologica è stata redatta ai sensi del NTC.08, inoltre non sono riportate considerazioni in merito alla stabilità globale versante-manufatto.

Si allega relazione del geologo aggiornata al DM2018, nella quale è stata inserita la verifica di stabilità globale.

3. Necessità di chiarimenti e/o integrazioni in merito ai contenuti delle relazioni tecniche;

A) STRUTTURE DI ELEVAZIONE

- 3.1.** In riferimento al modello di calcolo utilizzato, si richiede di esplicitare:

- Dati di input con esplicitati i parametri sismici e fattore di struttura utilizzato;
- Punti di applicazione ed entità dei carichi applicati al modello (soluzione grafica);
- Modi di vibrare e deformata;
- Colormaps riguardante gli aspetti di instabilità;
- Colormaps riguardante gli spostamenti;

Si allega relazione integrazioni a firma dell'ing. Giunchi.

3.2. La verifica dei tiranti riporta valori anomali. Chiarire;

Si allega relazione integrazioni a firma dell'ing. Giunchi.

3.3. Si richiede di riportare il progetto e la verifica di tutti i collegamenti “tipo” degli elementi principali e secondari in acciaio.

Si allega tavola integrativa a firma dell'ing. Giunchi.

3.4. Non è presente il progetto e la verifica del collegamento strutture di elevazione – strutture di fondazione.

Si allega tavola integrativa a firma dell'ing. Giunchi.

B) STRUTTURE DI FONDAZIONE

3.5. Non è chiaro se siano state riportate le verifiche strutturali agli S.L.E;

A seguire si riportano i risultati SLE per i cordoli di fondazione e per gli elementi D3:

LEGENDA TABELLA STATI LIMITE D' ESERCIZIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

In particolare vengono riportati, in relazione al tipo di elemento strutturale, i risultati relativi alle tre categorie di combinazione considerate:

- Combinazioni rare
- Combinazioni frequenti
- Combinazioni quasi permanenti.

I valori di interesse sono i seguenti:

rRfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare [normalizzato a 1]
rRfyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare [normalizzato a 1]
rPfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni quasi permanenti [normalizzato a 1]
wR	apertura caratteristica delle fessure in combinazioni rare [mm]
wF	apertura caratteristica delle fessure in combinazioni frequenti [mm]
wP	apertura caratteristica delle fessure in combinazioni quasi permanenti [mm]
dR	massima deformazione in combinazioni rare
dF	massima deformazione in combinazioni frequenti
dP	massima deformazione in combinazioni quasi permanenti

Per ognuno dei nove valori soprariportati viene indicata (Rif.cmb) la combinazione in cui si è verificato.

In relazione al tipo di elemento strutturale i valori sono selezionati nel modo seguente:

pilastri	rRfck	rRfyk	rPfck	per sezioni significative
travi	rRfck wR dR	rRfyk wF dF	rPfck wP dP	per sezioni significative per sezioni significative massimi in campata
setti e gusci	rRfck wR	rRfyk wF	rPfck wP	massimi nei nodi dell'elemento massimi nei nodi dell'elemento

Trave	Pos. cm	rRfck	rRfyk	rPfck	Rif. cmb	wR mm	wF mm	wP mm	Rif. cmb	dR cm	dF cm	dP cm	Rif. cmb
1	0.0	7.79e-03	0.01	0.01	7,7,19	0.0	0.0	0.0	0,0,0	-8.50e-03	-8.50e-03	-8.50e-03	10,16,22
	52.8	3.06e-03	7.34e-03	4.08e-03	12,12,24	0.0	0.0	0.0	0,0,0				
2	0.0	5.43e-03	0.01	7.24e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	2.13e-03	5.41e-03	2.84e-03	7,7,19	0.0	0.0	0.0	0,0,0				
3	0.0	3.85e-03	9.35e-03	5.14e-03	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	8.51e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0				
4	0.0	8.13e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0	-7.99e-03	-7.99e-03	-7.99e-03	10,16,22
	45.0	6.77e-03	0.02	9.02e-03	9,9,21	0.0	0.0	0.0	0,0,0				
5	0.0	3.19e-03	4.36e-03	4.26e-03	11,11,23	0.0	0.0	0.0	0,0,0	-9.00e-03	-9.00e-03	-9.00e-03	10,16,22
	52.8	4.54e-03	7.03e-03	6.06e-03	11,11,23	0.0	0.0	0.0	0,0,0				
6	0.0	9.53e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	7.42e-03	0.02	9.89e-03	10,10,22	0.0	0.0	0.0	0,0,0				
7	0.0	6.84e-03	0.02	9.12e-03	9,9,21	0.0	0.0	0.0	0,0,0	-7.37e-03	-7.37e-03	-7.37e-03	10,16,22
	41.0	4.94e-03	0.01	6.58e-03	9,9,21	0.0	0.0	0.0	0,0,0				
8	0.0	5.03e-03	0.01	6.71e-03	9,9,21	0.0	0.0	0.0	0,0,0	-3.57e-03	-3.57e-03	-3.57e-03	10,16,22
	41.0	2.12e-03	6.48e-03	2.82e-03	9,9,21	0.0	0.0	0.0	0,0,0				
9	0.0	3.25e-03	7.35e-03	4.33e-03	12,12,24	0.0	0.0	0.0	0,0,0	-8.83e-03	-8.83e-03	-8.83e-03	10,16,22
	52.8	3.32e-03	4.51e-03	4.43e-03	11,11,23	0.0	0.0	0.0	0,0,0				
10	0.0	2.50e-03	6.60e-03	3.33e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	9.50e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0				
11	0.0	6.26e-03	0.01	8.35e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	5.24e-03	0.01	6.98e-03	7,7,19	0.0	0.0	0.0	0,0,0				
12	0.0	7.61e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	3.52e-03	8.56e-03	4.70e-03	10,10,22	0.0	0.0	0.0	0,0,0				
13	0.0	6.51e-03	0.01	8.67e-03	12,7,24	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	6.14e-03	0.01	8.19e-03	7,7,19	0.0	0.0	0.0	0,0,0				
14	0.0	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0	-8.41e-03	-8.41e-03	-8.41e-03	10,16,22
	52.8	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0				
15	0.0	2.28e-03	6.80e-03	3.04e-03	9,9,21	0.0	0.0	0.0	0,0,0	-7.40e-03	-7.40e-03	-7.40e-03	10,16,22
	41.0	4.33e-03	7.45e-03	5.78e-03	10,10,22	0.0	0.0	0.0	0,0,0				
16	0.0	4.04e-03	6.57e-03	5.38e-03	10,10,22	0.0	0.0	0.0	0,0,0	-7.17e-03	-7.17e-03	-7.17e-03	10,16,22
	41.0	0.01	0.02	0.02	10,10,22	0.0	0.0	0.0	0,0,0				
17	0.0	5.37e-04	1.25e-03	7.16e-04	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	50.0	3.44e-03	7.13e-03	4.58e-03	7,7,19	0.0	0.0	0.0	0,0,0				
18	0.0	1.28e-04	4.29e-04	1.71e-04	7,7,19	0.0	0.0	0.0	0,0,0	-6.73e-03	-6.73e-03	-6.73e-03	10,16,22
	52.8	1.99e-03	3.89e-03	2.65e-03	10,10,22	0.0	0.0	0.0	0,0,0				
19	0.0	3.71e-04	8.02e-04	4.94e-04	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	50.0	4.17e-03	8.53e-03	5.56e-03	7,7,19	0.0	0.0	0.0	0,0,0				
20	0.0	1.93e-04	4.14e-04	2.58e-04	9,9,21	0.0	0.0	0.0	0,0,0	-6.73e-03	-6.73e-03	-6.73e-03	10,16,22
	52.8	2.32e-03	4.83e-03	3.10e-03	7,7,19	0.0	0.0	0.0	0,0,0				
21	0.0	4.36e-04	6.79e-04	5.81e-04	9,9,21	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	50.0	1.00e-03	2.11e-03	1.34e-03	7,7,19	0.0	0.0	0.0	0,0,0				
22	0.0	5.92e-04	1.03e-03	7.89e-04	10,10,22	0.0	0.0	0.0	0,0,0	-6.17e-03	-6.17e-03	-6.17e-03	10,16,22
	52.8	1.49e-03	2.84e-03	1.98e-03	10,10,22	0.0	0.0	0.0	0,0,0				
23	0.0	6.89e-03	0.01	9.19e-03	7,9,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	3.80e-03	9.52e-03	5.07e-03	10,10,22	0.0	0.0	0.0	0,0,0				
24	0.0	9.12e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0	-6.10e-03	-6.10e-03	-6.10e-03	10,16,22
	38.3	1.98e-03	3.92e-03	2.65e-03	7,10,19	0.0	0.0	0.0	0,0,0				
25	0.0	5.92e-03	0.01	7.89e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	50.0	3.66e-04	1.22e-03	4.88e-04	7,9,19	0.0	0.0	0.0	0,0,0				
26	0.0	9.99e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0	-6.09e-03	-6.09e-03	-6.09e-03	10,16,22
	38.3	2.24e-03	3.86e-03	2.98e-03	7,10,19	0.0	0.0	0.0	0,0,0				
27	0.0	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	0.01	0.03	0.02	9,9,21	0.0	0.0	0.0	0,0,0				
28	0.0	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0	-7.04e-03	-7.04e-03	-7.04e-03	10,16,22
	45.0	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0				
29	0.0	0.01	0.03	0.02	7,10,19	0.0	0.0	0.0	0,0,0	-6.45e-03	-6.45e-03	-6.45e-03	10,16,22
	42.8	6.16e-03	0.01	8.21e-03	7,10,19	0.0	0.0	0.0	0,0,0				
30	0.0	8.40e-03	0.02	0.01	7,9,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	1.08e-03	2.37e-03	1.44e-03	12,9,24	0.0	0.0	0.0	0,0,0				
31	0.0	0.02	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0	-6.47e-03	-6.47e-03	-6.47e-03	10,16,22
	42.8	7.45e-03	0.01	9.93e-03	7,12,19	0.0	0.0	0.0	0,0,0				
32	0.0	1.99e-03	5.03e-03	2.65e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21

	49.9	3.54e-03	8.15e-03	4.72e-03	7,7,19	0.0	0.0	0.0	0,0,0				
33	0.0	1.44e-03	2.45e-03	1.92e-03	10,10,22	0.0	0.0	0.0	0,0,0	-7.55e-03	-7.55e-03	-7.55e-03	10,16,22
	62.7	2.40e-03	4.38e-03	3.20e-03	10,10,22	0.0	0.0	0.0	0,0,0				
34	0.0	5.66e-03	0.01	7.54e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	50.0	6.96e-04	1.70e-03	9.27e-04	7,9,19	0.0	0.0	0.0	0,0,0				
35	0.0	1.91e-03	3.81e-03	2.55e-03	7,7,19	0.0	0.0	0.0	0,0,0	-6.05e-03	-6.05e-03	-6.05e-03	10,16,22
	38.3	2.30e-04	6.02e-04	3.07e-04	7,10,19	0.0	0.0	0.0	0,0,0				
36	0.0	2.16e-03	4.19e-03	2.89e-03	7,7,19	0.0	0.0	0.0	0,0,0	-6.03e-03	-6.03e-03	-6.03e-03	10,16,22
	38.3	2.38e-04	6.64e-04	3.18e-04	9,9,21	0.0	0.0	0.0	0,0,0				
37	0.0	2.53e-03	5.82e-03	3.38e-03	9,9,21	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	4.42e-03	8.38e-03	5.89e-03	7,7,19	0.0	0.0	0.0	0,0,0				
38	0.0	7.18e-03	0.01	9.57e-03	7,7,19	0.0	0.0	0.0	0,0,0	-5.28e-03	-5.28e-03	-5.28e-03	10,16,22
	41.0	1.70e-03	4.34e-03	2.26e-03	10,10,22	0.0	0.0	0.0	0,0,0				
39	0.0	1.97e-03	3.98e-03	2.63e-03	10,7,22	0.0	0.0	0.0	0,0,0	-8.27e-03	-8.27e-03	-8.27e-03	10,16,22
	62.7	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0				
40	0.0	2.25e-03	5.02e-03	3.01e-03	7,7,19	0.0	0.0	0.0	0,0,0	-8.28e-03	-8.28e-03	-8.28e-03	10,16,22
	62.7	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0				
41	0.0	3.38e-03	7.19e-03	4.51e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	3.42e-03	7.25e-03	4.55e-03	7,7,19	0.0	0.0	0.0	0,0,0				
42	0.0	7.36e-03	0.02	9.81e-03	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	9.48e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0				
43	0.0	0.01	0.03	0.02	9,9,21	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	8.35e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0				
44	0.0	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0	-6.29e-03	-6.29e-03	-6.29e-03	10,16,22
	45.0	7.27e-03	0.01	9.69e-03	7,7,19	0.0	0.0	0.0	0,0,0				
45	0.0	6.45e-03	0.01	8.60e-03	7,10,19	0.0	0.0	0.0	0,0,0	-8.48e-03	-8.48e-03	-8.48e-03	10,16,22
	52.8	4.54e-03	0.01	6.05e-03	9,9,21	0.0	0.0	0.0	0,0,0				
46	0.0	4.42e-03	7.26e-03	5.89e-03	12,12,24	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	6.13e-03	0.01	8.17e-03	12,12,24	0.0	0.0	0.0	0,0,0				
47	0.0	5.29e-03	8.61e-03	7.05e-03	11,11,23	0.0	0.0	0.0	0,0,0	-3.55e-03	-3.55e-03	-3.55e-03	10,16,22
	41.0	2.31e-03	4.39e-03	3.08e-03	11,7,23	0.0	0.0	0.0	0,0,0				
48	0.0	3.54e-03	7.86e-03	4.73e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0				
49	0.0	1.48e-03	2.55e-03	1.97e-03	10,7,22	0.0	0.0	0.0	0,0,0	-5.32e-03	-5.32e-03	-5.32e-03	10,16,22
	42.8	2.03e-03	3.34e-03	2.70e-03	10,10,22	0.0	0.0	0.0	0,0,0				
50	0.0	1.05e-03	2.06e-03	1.40e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	50.0	1.73e-04	6.86e-04	2.30e-04	11,11,23	0.0	0.0	0.0	0,0,0				
51	0.0	3.65e-03	7.00e-03	4.86e-03	7,7,19	0.0	0.0	0.0	0,0,0	-5.32e-03	-5.32e-03	-5.32e-03	12,18,24
	41.0	3.60e-03	6.91e-03	4.81e-03	7,7,19	0.0	0.0	0.0	0,0,0				
52	0.0	3.49e-03	8.63e-03	4.65e-03	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	7.54e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0				
53	0.0	6.78e-04	1.28e-03	9.04e-04	12,9,24	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	4.63e-03	7.63e-03	6.18e-03	12,12,24	0.0	0.0	0.0	0,0,0				
54	0.0	6.54e-03	0.01	8.72e-03	11,11,23	0.0	0.0	0.0	0,0,0	-7.34e-03	-7.34e-03	-7.34e-03	10,16,22
	41.0	5.12e-03	8.32e-03	6.82e-03	11,11,23	0.0	0.0	0.0	0,0,0				
55	0.0	3.91e-03	7.59e-03	5.22e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	3.86e-03	7.49e-03	5.15e-03	7,7,19	0.0	0.0	0.0	0,0,0				
56	0.0	2.55e-03	4.62e-03	3.40e-03	7,7,19	0.0	0.0	0.0	0,0,0	-5.21e-03	-5.21e-03	-5.21e-03	10,16,22
	41.0	4.02e-03	7.61e-03	5.36e-03	7,7,19	0.0	0.0	0.0	0,0,0				
57	0.0	3.83e-03	8.40e-03	5.11e-03	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	52.0	1.71e-03	3.83e-03	2.29e-03	10,7,22	0.0	0.0	0.0	0,0,0				
58	0.0	9.37e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	0.01	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0				
59	0.0	8.06e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	2.20e-03	5.46e-03	2.94e-03	9,9,21	0.0	0.0	0.0	0,0,0				
60	0.0	4.42e-03	0.01	5.89e-03	9,9,21	0.0	0.0	0.0	0,0,0	-8.80e-03	-8.80e-03	-8.80e-03	10,16,22
	52.8	7.67e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0				
61	0.0	5.99e-03	0.01	7.99e-03	12,12,24	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	6.59e-03	0.01	8.79e-03	12,12,24	0.0	0.0	0.0	0,0,0				
62	0.0	2.54e-03	5.11e-03	3.39e-03	11,7,23	0.0	0.0	0.0	0,0,0	-7.36e-03	-7.36e-03	-7.36e-03	10,16,22
	41.0	4.28e-03	7.29e-03	5.70e-03	10,10,22	0.0	0.0	0.0	0,0,0				
63	0.0	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	9.88e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0				
64	0.0	1.86e-03	2.82e-03	2.48e-03	10,10,22	0.0	0.0	0.0	0,0,0	-6.74e-03	-6.74e-03	-6.74e-03	10,16,22
	52.8	3.26e-03	6.31e-03	4.35e-03	10,7,22	0.0	0.0	0.0	0,0,0				
65	0.0	1.19e-03	2.22e-03	1.58e-03	7,7,19	0.0	0.0	0.0	0,0,0	-2.41e-03	-2.41e-03	-2.41e-03	12,18,24
	38.3	4.28e-04	8.76e-04	5.71e-04	9,9,21	0.0	0.0	0.0	0,0,0				
66	0.0	6.69e-03	0.01	8.92e-03	11,11,23	0.0	0.0	0.0	0,0,0	-7.96e-03	-7.96e-03	-7.96e-03	10,16,22
	45.0	6.40e-03	0.01	8.53e-03	11,11,23	0.0	0.0	0.0	0,0,0				
67	0.0	1.91e-03	4.63e-03	2.54e-03	10,10,22	0.0	0.0	0.0	0,0,0	5.20e-03	5.20e-03	5.20e-03	9,15,21
	41.0	2.95e-03	5.32e-03	3.93e-03	7,7,19	0.0	0.0	0.0	0,0,0				
68	0.0	0.01	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	0.01	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0				
69	0.0	7.61e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0	-9.00e-03	-9.00e-03	-9.00e-03	10,16,22
	52.8	9.00e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0				
70	0.0	6.51e-03	0.01	8.68e-03	12,12,24	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	6.45e-03	0.01	8.60e-03	12,12,24	0.0	0.0	0.0	0,0,0				

71	0.0	3.98e-03	6.44e-03	5.31e-03	10,10,22	0.0	0.0	0.0	0,0,0	-7.14e-03	-7.14e-03	-7.14e-03	10,16,22
	41.0	0.01	0.02	0.02	9,9,21	0.0	0.0	0.0	0,0,0				
72	0.0	3.08e-03	5.59e-03	4.11e-03	10,7,22	0.0	0.0	0.0	0,0,0	-7.07e-03	-7.07e-03	-7.07e-03	10,16,22
	52.8	7.96e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0				
73	0.0	3.75e-04	7.66e-04	5.00e-04	9,9,21	0.0	0.0	0.0	0,0,0	-2.41e-03	-2.41e-03	-2.41e-03	12,18,24
	38.3	3.28e-04	8.60e-04	4.37e-04	7,12,19	0.0	0.0	0.0	0,0,0				
74	0.0	5.70e-03	9.55e-03	7.60e-03	11,11,23	0.0	0.0	0.0	0,0,0	-7.84e-03	-7.84e-03	-7.84e-03	10,16,22
	45.0	6.58e-03	0.01	8.77e-03	11,11,23	0.0	0.0	0.0	0,0,0				
75	0.0	0.01	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	0.01	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0				
76	0.0	8.94e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0	-9.11e-03	-9.11e-03	-9.11e-03	10,16,22
	52.8	8.83e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0				
77	0.0	6.43e-03	0.01	8.57e-03	12,12,24	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	6.43e-03	0.01	8.58e-03	12,7,24	0.0	0.0	0.0	0,0,0				
78	0.0	8.04e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0	-7.69e-03	-7.69e-03	-7.69e-03	10,16,22
	52.8	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0				
79	0.0	4.47e-03	6.99e-03	5.97e-03	11,11,23	0.0	0.0	0.0	0,0,0	-9.10e-03	-9.10e-03	-9.10e-03	10,16,22
	52.8	5.20e-03	8.45e-03	6.94e-03	11,11,23	0.0	0.0	0.0	0,0,0				
80	0.0	0.01	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	9,15,21
	49.9	9.42e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0				
81	0.0	8.89e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0	-7.86e-03	-7.86e-03	-7.86e-03	10,16,22
	45.0	8.07e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0				

Trave	rRfck	rRfyk	rPfck	wR	wF	wP	dR	dF	dP
	0.02	0.03	0.02	0.0	0.0	0.0	5.20e-03	5.20e-03	5.20e-03

Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR mm	wF mm	wP mm	Rif. cmb
1	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
2	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
3	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
4	9.53e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0
5	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
6	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
7	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
8	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
9	0.03	0.06	0.04	9,9,21	0.0	0.0	0.0	0,0,0
10	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
11	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
12	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
13	0.02	0.06	0.03	7,7,19	0.0	0.0	0.0	0,0,0
14	0.03	0.06	0.04	7,7,19	0.0	0.0	0.0	0,0,0
15	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
16	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
17	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
18	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
19	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
20	0.02	0.05	0.03	7,7,19	0.0	0.0	0.0	0,0,0
21	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
22	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
23	0.03	0.07	0.04	9,9,21	0.0	0.0	0.0	0,0,0
24	0.01	0.03	0.02	9,7,21	0.0	0.0	0.0	0,0,0
25	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
26	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
27	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
28	0.01	0.03	0.02	10,12,22	0.0	0.0	0.0	0,0,0
29	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
30	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
31	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
32	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
33	0.03	0.06	0.04	7,7,19	0.0	0.0	0.0	0,0,0
34	0.03	0.07	0.04	7,7,19	0.0	0.0	0.0	0,0,0
35	0.01	0.03	0.02	10,12,22	0.0	0.0	0.0	0,0,0
36	0.02	0.04	0.02	7,7,19	0.0	0.0	0.0	0,0,0
37	0.02	0.04	0.02	7,7,19	0.0	0.0	0.0	0,0,0
38	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
39	9.60e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0
40	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
41	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
42	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
43	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
44	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
45	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
46	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
47	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
48	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0

49	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
50	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
51	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
52	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
53	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
54	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
55	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
56	8.00e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0
57	4.85e-03	0.01	6.46e-03	7,7,19	0.0	0.0	0.0	0,0,0
58	8.11e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0
59	0.02	0.04	0.02	7,7,19	0.0	0.0	0.0	0,0,0
60	9.43e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
61	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
62	8.80e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
63	9.10e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0
64	9.00e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0
65	0.01	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
66	9.20e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0
67	0.01	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
68	9.17e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0
69	0.01	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
70	9.03e-03	0.02	0.01	7,9,19	0.0	0.0	0.0	0,0,0
71	9.46e-03	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
72	8.53e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
73	9.77e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
74	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
75	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
76	9.85e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
77	9.68e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
78	9.68e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
79	0.01	0.03	0.01	10,10,22	0.0	0.0	0.0	0,0,0
80	0.02	0.04	0.02	10,10,22	0.0	0.0	0.0	0,0,0
81	9.91e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
82	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
83	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
84	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
85	9.85e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
86	9.88e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
87	9.21e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
88	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
89	8.86e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
90	7.70e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
91	6.16e-03	0.02	8.21e-03	7,7,19	0.0	0.0	0.0	0,0,0
92	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
93	9.03e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
94	7.77e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
95	7.23e-03	0.02	9.63e-03	9,9,21	0.0	0.0	0.0	0,0,0
96	0.01	0.03	0.02	9,9,21	0.0	0.0	0.0	0,0,0
97	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
98	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
99	9.69e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
100	0.01	0.03	0.02	9,9,21	0.0	0.0	0.0	0,0,0
101	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
102	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
103	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
104	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
105	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
106	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
107	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
108	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
109	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
110	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
111	0.01	0.03	0.01	9,7,21	0.0	0.0	0.0	0,0,0
112	0.02	0.04	0.02	9,9,21	0.0	0.0	0.0	0,0,0
113	0.01	0.02	0.01	11,7,23	0.0	0.0	0.0	0,0,0
114	9.74e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
115	9.51e-03	0.02	0.01	11,11,23	0.0	0.0	0.0	0,0,0
116	8.51e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
117	6.58e-03	0.01	8.77e-03	11,11,23	0.0	0.0	0.0	0,0,0
118	9.01e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
119	6.73e-03	0.02	8.97e-03	7,7,19	0.0	0.0	0.0	0,0,0
120	9.95e-03	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
121	8.84e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
122	9.87e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
123	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
124	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
125	0.02	0.05	0.03	7,7,19	0.0	0.0	0.0	0,0,0

126	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
127	0.01	0.04	0.02	7,7,19	0.0	0.0	0.0	0,0,0
128	8.88e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
129	4.71e-03	0.01	6.28e-03	7,7,19	0.0	0.0	0.0	0,0,0
130	8.16e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0
131	0.01	0.03	0.02	10,10,22	0.0	0.0	0.0	0,0,0
132	9.44e-03	0.02	0.01	10,10,22	0.0	0.0	0.0	0,0,0
133	7.98e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
134	8.46e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0
135	9.72e-03	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
136	0.01	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
137	0.01	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
138	0.01	0.03	0.01	9,9,21	0.0	0.0	0.0	0,0,0
139	9.03e-03	0.02	0.01	9,9,21	0.0	0.0	0.0	0,0,0
140	9.42e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
141	0.02	0.04	0.02	7,7,19	0.0	0.0	0.0	0,0,0
142	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
143	3.69e-03	9.17e-03	4.92e-03	7,7,19	0.0	0.0	0.0	0,0,0
144	0.02	0.04	0.02	9,7,21	0.0	0.0	0.0	0,0,0
145	9.51e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
146	9.75e-03	0.02	0.01	11,7,23	0.0	0.0	0.0	0,0,0
147	0.01	0.02	0.01	11,7,23	0.0	0.0	0.0	0,0,0
148	0.01	0.02	0.01	11,11,23	0.0	0.0	0.0	0,0,0
149	9.20e-03	0.02	0.01	11,11,23	0.0	0.0	0.0	0,0,0
150	6.38e-03	0.01	8.51e-03	11,12,23	0.0	0.0	0.0	0,0,0
151	6.03e-03	0.01	8.03e-03	11,12,23	0.0	0.0	0.0	0,0,0
152	8.76e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
153	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
154	0.02	0.05	0.03	7,7,19	0.0	0.0	0.0	0,0,0
155	0.01	0.04	0.02	7,7,19	0.0	0.0	0.0	0,0,0
156	4.10e-03	0.01	5.46e-03	7,7,19	0.0	0.0	0.0	0,0,0
157	6.66e-03	0.02	8.88e-03	7,7,19	0.0	0.0	0.0	0,0,0
158	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
159	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
160	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
161	7.99e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
162	7.80e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
163	9.42e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
164	8.95e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
165	9.46e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
166	8.98e-03	0.02	0.01	12,12,24	0.0	0.0	0.0	0,0,0
167	9.81e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
168	8.92e-03	0.02	0.01	12,12,24	0.0	0.0	0.0	0,0,0
169	9.67e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
170	9.21e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
171	0.01	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
172	9.69e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
173	0.01	0.03	0.01	7,7,19	0.0	0.0	0.0	0,0,0
174	9.76e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
175	9.13e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
176	8.89e-03	0.02	0.01	7,7,19	0.0	0.0	0.0	0,0,0
177	9.68e-03	0.02	0.01	9,7,21	0.0	0.0	0.0	0,0,0
178	0.01	0.03	0.02	9,7,21	0.0	0.0	0.0	0,0,0
179	6.59e-03	0.02	8.79e-03	7,7,19	0.0	0.0	0.0	0,0,0
180	0.01	0.03	0.02	7,7,19	0.0	0.0	0.0	0,0,0
Guscio	rRfck	rRfyk	rPfck		wR	wF	wP	
	0.03	0.07	0.04		0.0	0.0	0.0	

4. Necessità di chiarimenti e/o integrazioni in merito ai contenuti degli elaborati grafici;

A) STRUTTURE DI ELEVAZIONE

4.1. Si richiede di riportare in opportuna scala i particolari costruttivi dei collegamenti “tipo” delle strutture principali e secondarie metalliche;

Si allega tavola integrativa a firma dell'ing. Giunchi.

4.2. Si richiede di riportare il collegamento tra le strutture metalliche e di fondazione.

Si allega tavola integrativa a firma dell'ing. Giunchi.

B) STRUTTURE DI FONDAZIONE

4.2. Nelle sezioni illustrative della platea di fondazione pare mancante in alcuni punti i cordoli in spessore rappresentati nella pianta.

Si allega tavola integrativa a firma dello scrivente.

Il Progettista
Ing. ~~LUPPI~~ ROBERTO



A circular professional stamp of the Ordine Ingegneri Provincia di Modena. The text inside the stamp reads: "ORDINE INGEGNERI PROV. DI MODENA", "ROBERTO LUPPI", "INGEGNERE", "Sezione A", "N. 1226". A handwritten signature in blue ink is written over the stamp.