INTERVENTO DI TRASFORMAZIONE DELL'EX CASERMA MAMELI

viale Suzzani 125, Milano

RELAZIONE TECNICA PER LE STRUTTURE **MAM-PA-Spr002-00**

3 Febbraio 2016 Milan Ingegneria

SOMMARIO

ALLEGATO 1 – tabelle di verifica dei setti in muratura

1. PREMESSA

CDPI SGR è proprietaria dell'area dell'ex caserma Mameli, in via Suzzani 125, Milano. Attraverso CDP Immobiliare, gestore del bene, è in corso di studio una proposta di riqualificazione urbana su scala più ampia, che coinvolge anche l'ex Manifattura Tabacchi, e che prevede la compresenza di residenza libera e convenzionata, edifici a carattere ricettivo e commerciale e di funzioni di interesse pubblico generale. La proposta conferma le prescrizioni della Scheda d'ambito ATU 8-D.

Figura 1 – Fotopiano dell'area di intervento

Onsitestudio è incaricato della progettazione architettonica e urbana dell'intervento, Milan Ingegneria è di supporto per la definizione delle strutture.

Questo documento presenta gli interventi strutturali che si rendono necessari a causa delle mancata rispondenza ai requisiti minimi di resistenza di alcuni elementi strutturali (copertura in legno e parte del solaio del piano terra), come specificato nelle conclusioni del documento "Analisi di consistenza strutturale". Inoltre si presentano gli interventi strutturali a supporto delle scelte presentate nel progetto preliminare architettonico.

1.1. DESCRIZIONE DEGLI EDIFICI

Gli immobili disposti attorno al cortile principale sono edifici a forma di "C" in pianta, di dimensioni circa 58x66m. Sono edifici monopiano, con sottotetto adibito al passaggio degli impianti, anche se alle teste delle ali si riscontra la presenza di una porzione interrata. Sono realizzati in maniera seriale, ripetendo una tipologia architettonica sempre uguale. La porzione con interrato probabilmente è un'espansione successiva, come testimonia il raddoppio delle fondazioni e l'inversione dell'orditura dei solai.

La struttura è in muratura di laterizio pieno e malta di calce. I setti perimetrali sono portanti, mentre internamente si hanno muri trasversali portanti ortogonali alla facciata sulle ali e paralleli alla stessa sul blocco frontale. Normalmente lo spessore è 350mm, 3 teste, ma si rileva la presenza di pilastri in muratura 500x700mm. Non è presente un cordolo di sommità, tuttavia il solaio in laterocemento del sottotetto è ben ammorsato sulle pareti e svolge efficace azione di vincolo.

Localmente si riscontrano inserti in calcestruzzo o acciaio. Una trave di calcestruzzo 500x420mm si trova sul lato corto rivolto verso la corte interna, mentre una coppia di travi in acciaio HEB240 affiancate sostituiscono uno dei setti trasversali. Sono entrambi interventi successivi: la trave in calcestruzzo per superare la luce aumentata e permettere di rendere non portante la muratura sottostante, più sottile, mentre la trave in acciaio fa da architrave consentendo di unire due locali contigui con la demolizione della muratura sottostante.

Figura 2 – Trave in c.a. e in acciaio

Il solaio del sottotetto è in laterocemento monodirezionale, tipo Bausta, con travetti da 100mm, interasse 250mm. Lo spessore medio del solaio è variabile fra 220 e 260mm. L'armatura dei travetti è con barre Ø8 o Ø10 in funzione della luce, tipicamente variabile fra 4 ÷ 6.2m. Le barre sono lisce e non ad aderenza migliorata.

Nelle due appendici aggiunte a nord il solaio del piano terra sul piano interrato è realizzato sempre in laterocemento monodirezionale, con travetti 100x270mm ad interasse 500mm. Questi solai appaiono in grande sofferenza: si riscontra sfondellamento e caduta del copriferro; inoltre interventi di rinforzo successivi sono stati applicati, introducendo 2 file di rompitratta (IPE120) appoggiate su pilastrini in muratura su fondazione superficiale in c.a. Si può supporre gli interventi di rinforzo dei vari campi di solaio non siano stati realizzati tutti contemporaneamente: le dimensioni dei pilastrini, le modalità esecutive e i materiali non sono infatti gli stessi ovunque.

Figura 3 – Intervento di rinforzo dei solai al piano interrato

La copertura è in legno, con orditura secondaria di sezione media 180x200mm, interasse circa 1.8m, usualmente poggiata direttamente sui setti che proseguono fino al colmo a formare un timpano oppure su piccole capriate alla palladiana. Fanno eccezione le zone d'angolo dove puntoni inclinati 230x260mm realizzano la complessa intersezione fra le falde. Sull'orditura secondaria poggiano delle terzere 80x80 e su queste dei magatelli che sostengono direttamente i coppi, senza tavolato, isolante o guaina di protezione.

Figura 4 – Copertura con arcarecci su muro o su capriata alla palladiana

Gli elementi di copertura non sono in buono stato di conservazione: dove lo strato di tenuta è danneggiato l'acqua è percolata all'interno dell'edificio danneggiando irreparabilmente gli elementi in legno. Anche le indagini strumentali confermano il primo giudizio visivo.

Figura 5 – Elemento ammalorato per effetto della percolazione dell'acqua

Le fondazioni sono di tipo a trave rovescia, in calcestruzzo grossolano, impostate a circa 2m dal piano campagna. Il piano terra è un solaio su vespaio areato, realizzato in muricci e tavelle da 500x1200x60mm con caldana di solidarizzazione, spessore 20mm. I muretti di sostegno sono ad una testa per i primi 50cm, a due teste nella seconda metà e sono disposti ad interasse di circa 1.2m. La profondità a cui si attestano i muricci è circa 700mm dal p.c.

Figura 6 – Fondazioni in c.a. di pezzatura grossolana

2. INTERVENTI STRUTTURALI PREVISTI

In seguito si descrivono gli interventi strutturali necessari a sostituire gli elementi che non presentano sufficienti condizioni di resistenza o a supporto delle scelte architettoniche.

Demolizione e ricostruzione di una parte del solaio del piano terra.

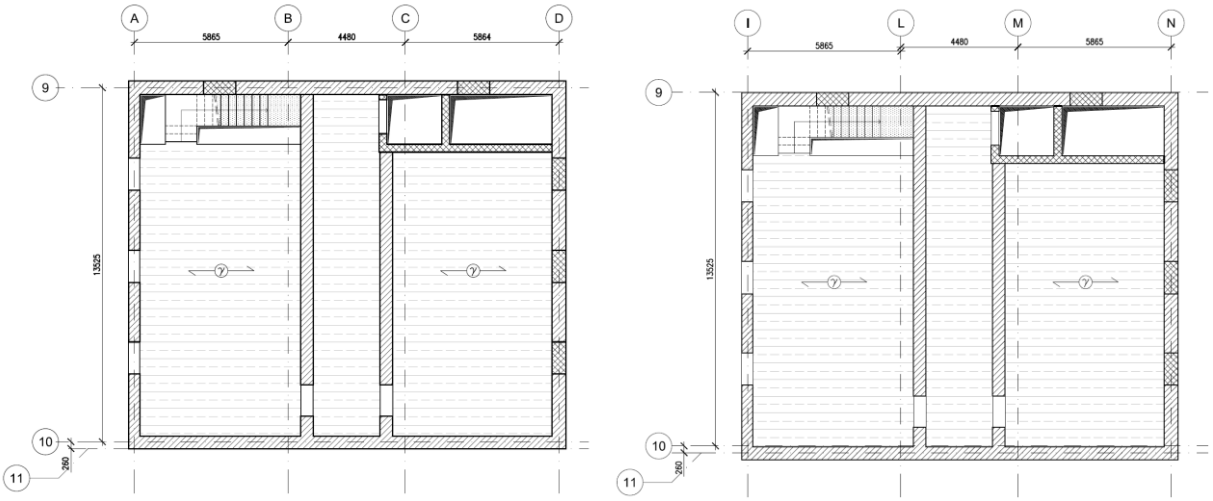


Figura 7. Intervento di realizzazione del nuovo solaio.

Dalle indagini strutturali svolte risulta che una porzione del solaio del piano terra, in corrispondenza delle ali dell'edificio dove è presente l'interrato non è verificato. Questo è già stato oggetto di opere provvisionali di sostegno e di maldestri interventi di messa in sicurezza con rompitratta. Se ne prevede quindi la demolizione e ricostruzione con un solaio tipo Bausta in grado di sopportare l'incremento dei carichi indotti dal cambiamento delle destinazioni d'uso.

Ricostruzione della copertura in legno

Nel sottotetto si sono evidenziate zone diffuse di degrado delle travi in legno. Il degrado è dovuto principalmente al percolamento dell'acqua penetrata nel manto in tegole marsigliesi, cui è venuta a mancare la manutenzione costante a seguito dell'abbandono dell'immobile. Indagini sperimentali a campione hanno confermato il generale cattivo stato di conservazione degli elementi di copertura. Il calcolo analitico presentato nel documento "Analisi della consistenza strutturale" aveva inoltre confermato un dimensionamento insufficiente.

Si prevede quindi la ricostruzione della copertura con elementi in legno massiccio, mantenendo la stessa morfologia del tetto esistente, in modo da garantire il rispetto del vincolo monumentale a cui l'edificio è soggetto.

Laddove il progetto di Architettura prevede la demolizione completa dei setti murari è stato necessario introdurre 9 capriate in legno in grado di sostenere il manto di copertura su una luce di 16.50 m.

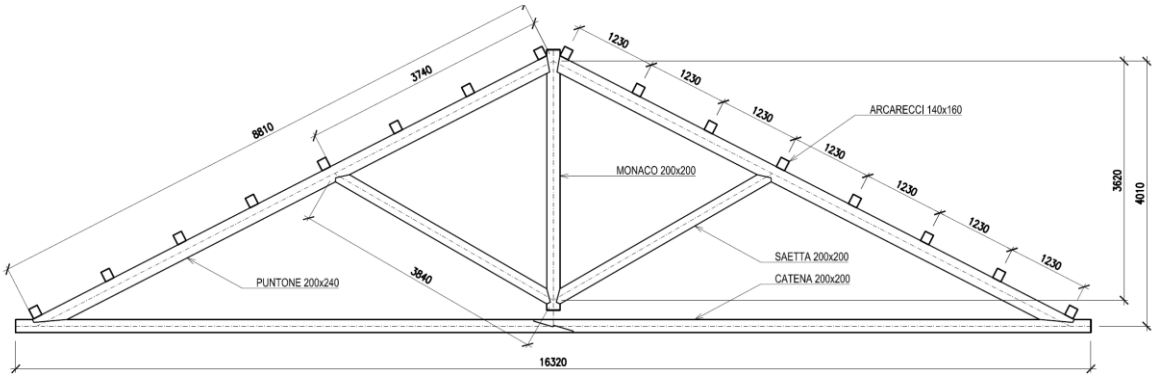


Figura 8. Nuova capriata in legno di sostegno della copertura.

Demolizione totale e parziale di maschi murari e sostituzione con setti in c.a.

Il progetto architettonico prevede la demolizione totale e parziale di setti murari. La demolizione totale avviene in corrispondenza dello spazio da adibire a sala psicomotoria e polifunzionale allo scopo di aumentare lo spazio fruibile. Tale demolizione totale comporta la necessità di introdurre dei setti in c.a. di dimensione 200x1000 per assorbire le azioni sismiche.

Si prevedono inoltre demolizioni localizzate allo scopo di aprire collegamenti interni tra gli ambienti ed anche aperture verso l'esterno sulla corte interna.

Demolizione di porzioni di solaio del piano sottotetto.

Il progetto architettonico prevede la demolizione di varie porzioni del solaio del sottotetto allo scopo di realizzare spazi a doppia altezza. Nelle parti in cui tale demolizione non coinvolge l'intera larghezza dell'edificio, la rimozione avviene nel senso dell'orditura del solaio, non necessitando l'introduzione di elementi di rinforzo.

Realizzazione delle nuove strutture in carpenteria metallica.

Si prevede la costruzione di nuove strutture metalliche per realizzare la copertura di uno spazio destinato ad eventi e di una pensilina.

La struttura di copertura dello spazio eventi è un telaio metallico con colonne circolari cave ϕ168.3x12.5 e trave HEA200 ed una lamiera grecata autoportante tipo EGB2000 o equivalente.

Le travi del telaio si collegano all'edificio esistente tramite appoggi con fori asolati in modo da considerare le due strutture disgiunte dal punto di vista sismico poiché i movimenti orizzontali della copertura metallico sono possibili.

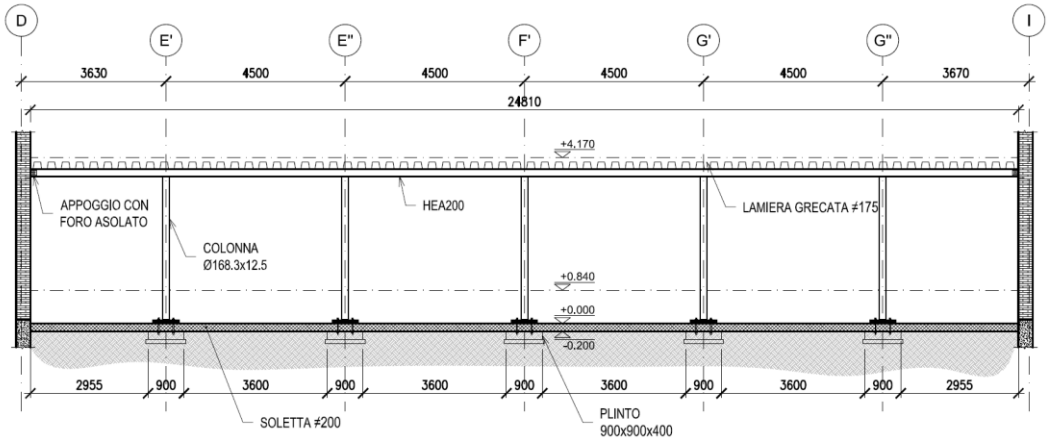


Figura 9. Sezione della copertura dello spazio eventi, con indicazione dei profili metallici.

Anche la struttura della pensilina è realizzata tramite telai metallici (colonne ϕ114.3x5 e trave IPE200) e pannelli coibentati tipo Isolpack Delta 5 o equivalenti.

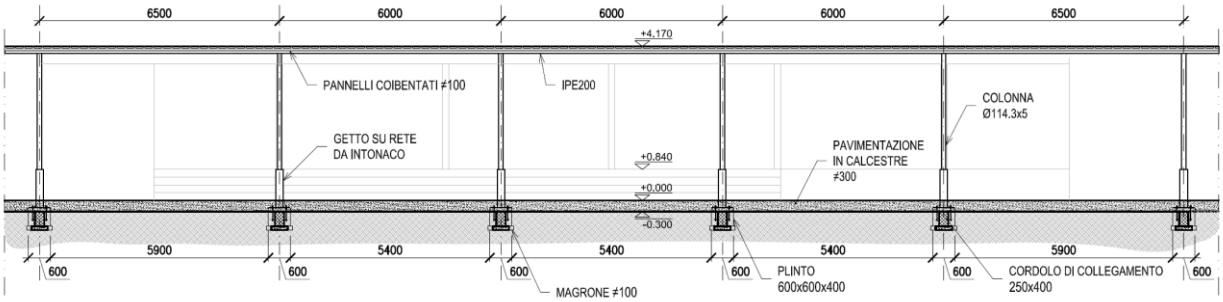


Figura 10. Sezione della pensilina, con indicazione dei profili metallici.

3. NORMATIVA DI RIFERIMENTO

3.1. LEGGI, DECRETI E CIRCOLARI

[1] D.M. 14.1.2008 – *Norme tecniche per le costruzioni;*

[2] Circolare n.617, 2.2.2009 – *Istruzioni per l'applicazione delle Nuove Norme Tecniche per le costruzioni* di cui al D.M. 14 gennaio 2008;

[3] D.G.R. 11.7.2014, n. 2129 – *Aggiornamento delle zone sismiche in Regione Lombardia (L.R. 1/2000, art.3, comma 108, lett. d)*

[4] D.G.R. 8.10.2015, n. X/4144 – *Ulteriore differimento del termine di entrata in vigore della nuova classificazione sismica del territorio approvata con DGR 11.7.2014, n 2129*

3.2. NORMATIVA EUROPEA ED INTERNAZIONALE

[5] UNI EN 1991-1-1:2004 – *Eurocodice 1: Azioni sulle strutture – Parte 1-1: Azioni in generale – Pesi per unità di volume, pesi propri e sovraccarichi per gli edifici;*

[6] UNI EN 1992-1-1:2005 - *Eurocodice 2: Progettazione delle strutture in calcestruzzo – Parte 1-1: Regole generali e regole per gli edifici;*

[7] UNI EN 1993-1-1:2005 - *Eurocodice 3: Progettazione delle strutture in acciaio – Parte 1-1: Regole generali e regole per gli edifici;*

[8] UNI EN 1995-1-2009 – Eurocodice 5: *Progettazione delle strutture in legno – Parte 1-1: Regole generali e regole per gli edifici;*

[9] UNI EN 1996-1-1:2006 – *Eurocodice 6: Progettazione delle strutture in muratura – Parte 1-1: Regole generali e regole per gli edifici;*

[10] UNI EN 1997-1-1:2005 – *Eurocodice 7: Progettazione geotecnica – Parte 1-1: Regole generali*

[11] UNI EN 1998-1:2005 - *Eurocodice 8: Progettazione delle strutture per la resistenza sismica – parte 1: Regole generali, azioni sismiche e regole per gli edifici;*

4. MATERIALI

4.1. ACCIAIO

4.1.1. Carpenteria metallica – strutture esistenti (LC3)

Acciaio tipo			**S275**	
Tensione caratteristica di snervamento	f_{yk}	≥	275	N/mm^2
Tensione caratteristica di rottura	f_{tk}	≥	430	N/mm^2
Tensione di snervamento di progetto	f_{yd}	≥	275/(1.05·1.00) = 262	N/mm^2
Tensione di rottura di progetto	f_{td}	≥	430/(1.05·1.00) = 409	N/mm^2

4.1.2. Carpenteria metallica – nuove strutture

Acciaio tipo			**S355**	
Tensione caratteristica di snervamento	f_{yk}	≥	355	N/mm^2
Tensione caratteristica di rottura	f_{tk}	≥	510	N/mm^2
Tensione di snervamento di progetto	f_{yd}	≥	355/(1.05·1.00) = 338	N/mm^2
Tensione di rottura di progetto	f_{td}	≥	510/(1.05·1.00) = 485	N/mm^2

4.1.3. Armatura per strutture in calcestruzzo – struttura esistente (LC2)

Acciaio per armature tipo			**FeB22k**	
Tensione caratteristica di snervamento	f_{yk}	≥	215	N/mm^2
Tensione caratteristica di rottura	f_{uk}	≥	355	N/mm^2
Tensione di snervamento di progetto	f_{yd}	≥	215/(1.15·1.20) = 156	N/mm^2
Tensione di rottura di progetto	f_{ud}	≥	355/(1.15·1.20) = 257	N/mm^2

4.1.4. Armatura per strutture in calcestruzzo – nuove strutture

Acciaio per armature tipo			**B450C**	
Tensione caratteristica di snervamento	f_{yk}	≥	450	N/mm^2
Tensione caratteristica di rottura	f_{uk}	≥	540	N/mm^2
Tensione di snervamento di progetto	f_{yd}	≥	450/(1.15·1.20) = 326	N/mm^2
Tensione di rottura di progetto	f_{ud}	≥	540/(1.15·1.20) = 391	N/mm^2

4.2. CALCESTRUZZO

4.2.1. Calcestruzzo gettato in opera – struttura esistente (LC2)

Classe di resistenza del calcestruzzo			**C16/20**	
Resistenza cubica caratteristica a 28 gg	R_{ck}	≥	20	N/mm²
Resistenza cilindrica caratteristica a 28 gg	f_{ck}	≥	16	N/mm²
Resistenza di calcolo allo S.L.U.	f_{cd}	=	$0.85 \cdot 16/ (1.5 \cdot 1.2) = 7.6$	N/mm²

4.2.2. Calcestruzzo gettato in opera – nuove strutture di fondazione

Classe di resistenza del calcestruzzo			**C25/30**	
Resistenza cubica caratteristica a 28 gg	R_{ck}	≥	30	N/mm²
Resistenza cilindrica caratteristica a 28 gg	f_{ck}	≥	25	N/mm²
Resistenza di calcolo allo S.L.U.	f_{cd}	=	$0.85 \cdot 25/ (1.5 \cdot 1.2) = 11.8$	N/mm²

4.2.3. Calcestruzzo gettato in opera – nuove strutture in elevazione

Classe di resistenza del calcestruzzo			**C30/37**	
Resistenza cubica caratteristica a 28 gg	R_{ck}	≥	37	N/mm²
Resistenza cilindrica caratteristica a 28 gg	f_{ck}	≥	30	N/mm²
Resistenza di calcolo allo S.L.U.	f_{cd}	=	$0.85 \cdot 30/ (1.5 \cdot 1.2) = 14.2$	N/mm²

4.3. LEGNO

4.3.1. Legno massiccio – nuova copertura

Classe di resistenza secondo UNI EN 338:2004			**C27**	
Resistenza a flessione	$f_{m,g,k}$	≥	27.0	N/mm²
Resistenza a trazione	$f_{t,0,g,k}$	≥	16.0	N/mm²
	$f_{t,90,g,k}$	≥	0.6	
Resistenza a compressione	$f_{c,0,g,k}$	≥	22.0	N/mm²
	$f_{c,90,g,k}$	≥	2.6	
Resistenza a taglio	$f_{v,g,k}$	≥	2.8	N/mm²
Modulo di elasticità	$E_{0,g,mean}$	=	12000	N/mm²
	$E_{0,g,05}$	=	7700	N/mm²
	$E_{90,g,mean}$	=	380	N/mm²
Modulo di taglio	$G_{g,mean}$	=	720	N/mm²

4.4. MURATURA ESISTENTE

La determinazione delle caratteristiche meccaniche della muratura esistente è riferita a Tabella C8A.2.1 dell'Appendice A della Circolare Applicativa n. 617/09.

Tipologia di muratura	f_m (N/cm²)	τ_0 (N/cm²)	E (N/mm²)	G (N/mm²)	w (kN/m³)
	Min-max	min-max	min-max	min-max	
Muratura in pietrame disordinata (ciottoli, pietre erratiche e irregolari)	100 180	2,0 3,2	690 1050	230 350	19
Muratura a conci sbozzati, con paramento di limitato spessore e nucleo interno	200 300	3,5 5,1	1020 1440	340 480	20
Muratura in pietre a spacco con buona tessitura	260 380	5,6 7,4	1500 1980	500 660	21
Muratura a conci di pietra tenera (tufo, calcarenite, ecc.)	140 240	2,8 4,2	900 1260	300 420	16
Muratura a blocchi lapidei squadrati	600 800	9,0 12,0	2400 3200	780 940	22
Muratura in mattoni pieni e malta di calce	240 400	6,0 9,2	1200 1800	400 600	18
Muratura in mattoni semipieni con malta cementizia (es.: doppio UNI foratura ≤ 40%)	500 800	24 32	3500 5600	875 1400	15
Muratura in blocchi laterizi semipieni (perc. foratura < 45%)	400 600	30,0 40,0	3600 5400	1080 1620	12
Muratura in blocchi laterizi semipieni, con giunti verticali a secco (perc. foratura < 45%)	300 400	10,0 13,0	2700 3600	810 1080	11
Muratura in blocchi di calcestruzzo o argilla espansa (perc. foratura tra 45% e 65%)	150 200	9,5 12,5	1200 1600	300 400	12
Muratura in blocchi di calcestruzzo semipieni (foratura < 45%)	300 440	18,0 24,0	2400 3520	600 880	14

Sulla scorta dei risultati delle indagini è possibile applicare i coefficienti migliorativi per "malta buona".

Tipologia di muratura	Malta buona	Giunti sottili (<10 mm)	Ricorsi o listature	Connessione trasversale	Nucleo scadente e/o ampio	Iniezione di miscele leganti	Intonaco armato *
Muratura in pietrame disordinata (ciottoli, pietre erratiche e irregolari)	1,5	-	1,3	1,5	0,9	2	2,5
Muratura a conci sbozzati, con paramen-to di limitato spessore e	1,4	1,2	1,2	1,5	0,8	1,7	2
Muratura in pietre a spacco con buona tessitura	1,3	-	1,1	1,3	0,8	1,5	1,5
Muratura a conci di pietra tenera (tufo, calcarenite, ecc.)	1,5	1,5	-	1,5	0,9	1,7	2
Muratura a blocchi lapidei squadrati	1,2	1,2	-	1,2	0,7	1,2	1,2
Muratura in mattoni pieni e malta di calce	1,5	1,5	-	1,3	0,7	1,5	1,5

Come prescritto al *§C8A.1.A.4 - Costruzioni in muratura: livelli di conoscenza*, per i valori delle resistenze e dei moduli elastici si fa riferimento ai valori medi fra gli estremi riportati in tabella.

Il coefficiente parziale di sicurezza è, in mancanza di certificazioni sugli elementi e di controlli sulle malte, γ_M = 3.0 (elementi resistenti di cat. II, classe di esecuzione 2), secondo la Tabella 4.5.II, *Capitolo 4.5.6.1 – Resistenze di progetto*.

Si precisa che adottando analisi lineari, si determina il valore di resistenza di progetto, R_d, come prescritto al Capitolo C8.7.1.5 – Modelli di capacità per la valutazione di edifici in muratura:

$$R_d = R_m / (FC \cdot \gamma_M)$$

Resistenza a compressione	f_m	=	(2.4 + 4.0) / 2 = 3.2	N/mm^2
Resistenza a taglio	τ_0	=	(0.06 + 0.092) / 2 = 0.076	N/mm^2
Resistenza di progetto a compressione	$f_{m,d}$	=	3.2 · 1.5 / (1.2 · 3) = 1.33	N/mm^2
Resistenza di progetto a taglio	$\tau_{0,d}$	=	0.076 · 1.5 / (1.2 · 3) = 0.032	N/mm^2
Modulo di elasticità normale	E	=	(1200 + 1800) · 1.5/ (1.2 · 2) = 1875	N/mm^2
Modulo di elasticità tangenziale	G	=	(400 + 600) · 1.5 / (1.2 · 2) = 313	N/mm^2
Peso specifico medio	w	=	18.0	kN/m^3

I risultati ottenuti dalla tabella sono compatibili con i risultati delle indagini di martinetto piatto:

- Tensione di esercizio: 1.8 ÷ 2.3 N/mm^2
- Modulo elastico: 1780 ÷ 1813 N/mm^2

I valori da normativa sono più cautelativi e vengono adottati per il calcolo.

5. MODELLAZIONE AD ELEMENTI FINITI

5.1. SOFTWARE UTILIZZATI

Le elaborazioni mediante calcolatore sono state eseguite con l'ausilio dei seguenti programmi:

- MIDAS/GEN sviluppato da MIDAS Information Technology, Co., Ltd. Areum B/D 4th fl., 258-1 Seohyeon-dong, Bundang-gu, Seongnam, Gyeonggi-do, 463-824, Korea e distribuito in Italia da CSP Fea s.c. via Zuccherificio, 5/D I-35042 Este (PD). Questo software è utilizzato per l'analisi delle sollecitazioni sugli elementi strutturali.
- VCaSLU – Verifiche a Pressoflessione, versione 7.7, realizzato dal prof. Piero Gelfi e dagli ingg. Davide Pari, Alberto Antonini e Giovanni Tanghetti. Questo software è utilizzato per il calcolo e la verifica delle sezioni in calcestruzzo armato.

I programmi sono utilizzati dallo scrivente in forza di regolari licenze d'uso e sono testati periodicamente mediante procedure di controllo codificate, tali da verificare l'attendibilità delle applicazioni e dei risultati ottenuti, così da individuare eventuali vizi ed anomalie.

5.2. MODELLAZIONE DEGLI EDIFICI

La raffinatezza dei modelli di calcolo consente di analizzare il comportamento di tutti gli elementi strutturali, considerando l'effettivo contributo alla rigidezza complessiva del sistema fornito da ciascun componente elementare. I criteri di modellazione prevedono la riproduzione fedele delle strutture così come sono state progettate e si prescrive siano realizzate. Le caratteristiche fisico-meccaniche dei materiali sono state inserite come dettato dalla normativa vigente.

Si tratta di modelli tridimensionali ad elementi finiti di tipo *asta* e di tipo *piastra*. Gli elementi asta sono generalmente impiegati per la schematizzazione di travi e pilastri soggetti a momenti flettenti, tagli e sforzi assiali. Gli elementi piastra sono utilizzati per simulare setti, murature e solai.

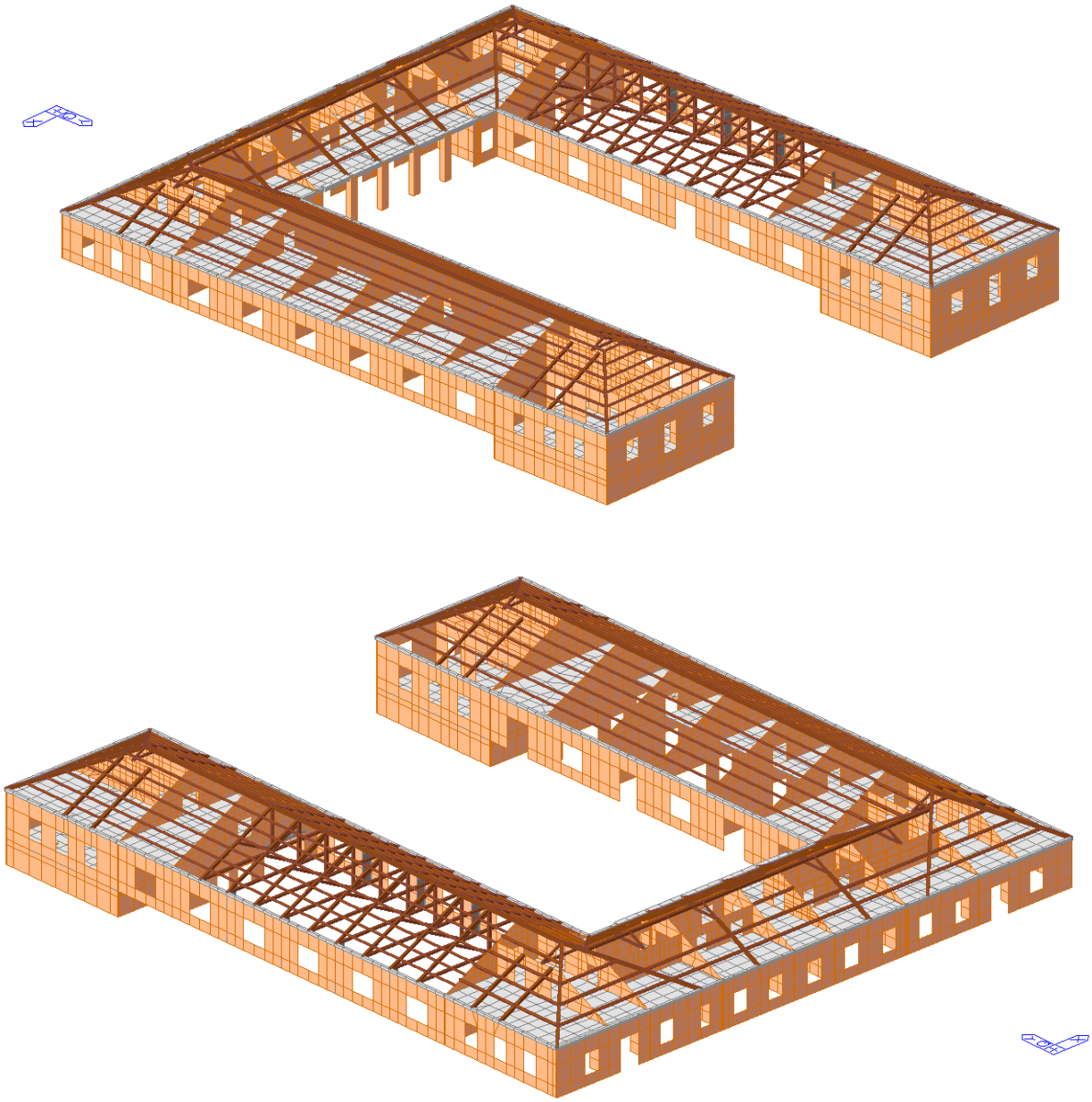


Figura 11. Modello ad elementi finiti

I carichi sono masse strutturali, masse non strutturali oppure applicati dall'esterno. Il programma di calcolo è in grado di computare automaticamente il peso proprio delle strutture, che sono massa strutturale. Vento, neve, spinte dei terreni e carichi di esercizio sono applicati come *Pressioni*, sulle superfici che definiscono solai e pareti in calcestruzzo o come *Carichi Lineari* sulle travi in legno che simulano la copertura.

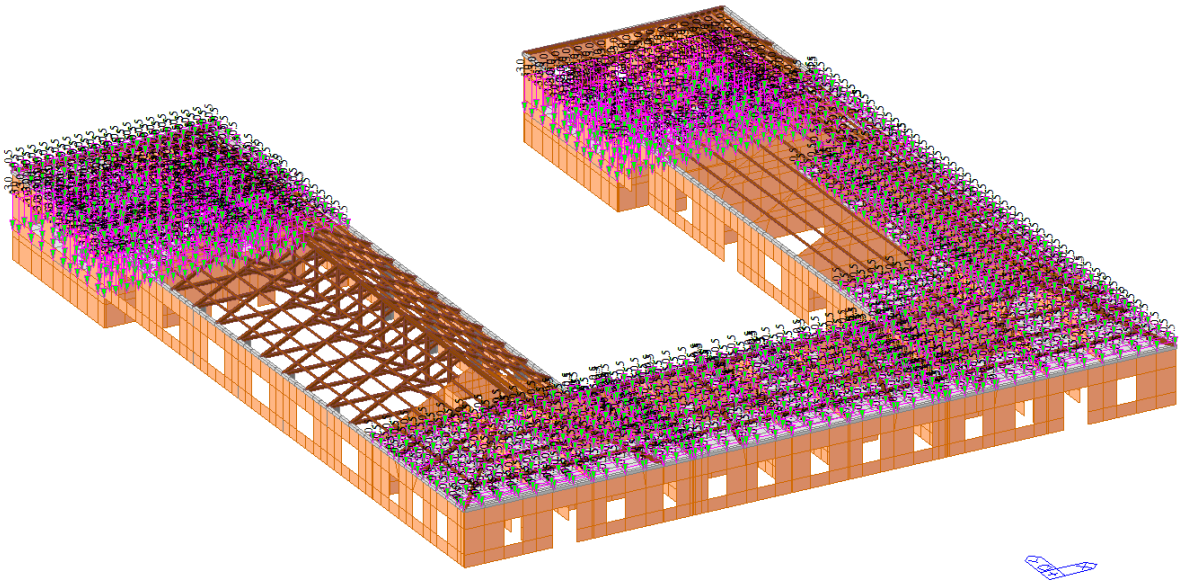


Figura 12. Modello ad elementi finiti – esempio di applicazione dei carichi permanenti su elementi "piastra"

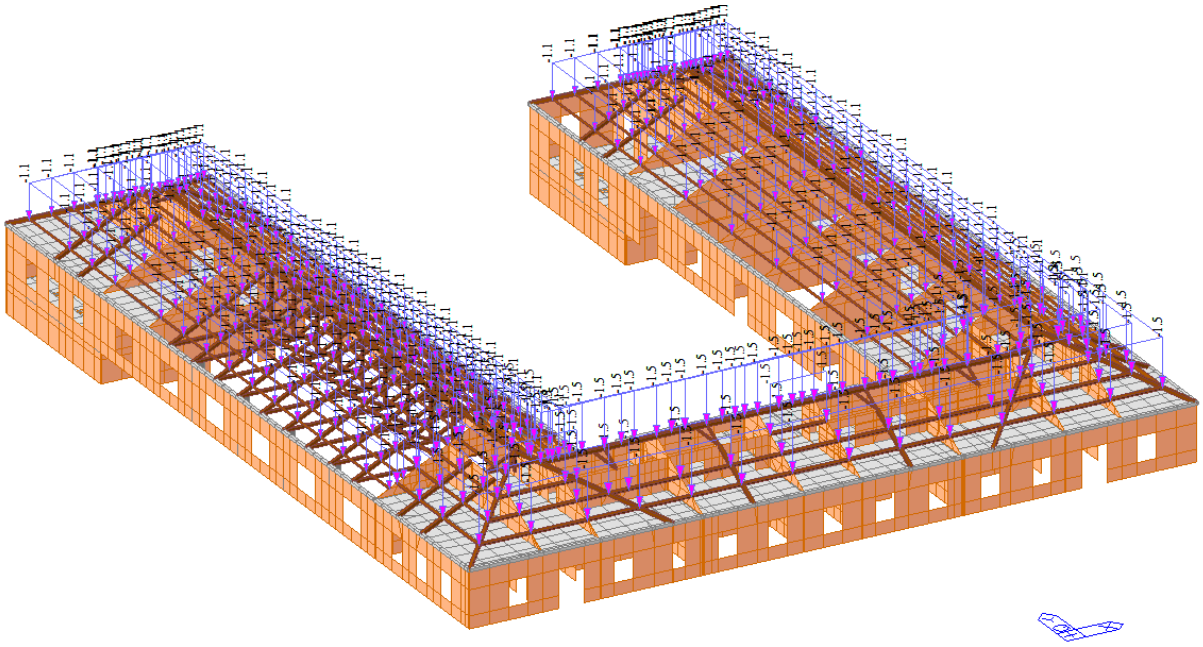


Figura 13. Modello ad elementi finiti – esempio di applicazione dei carichi permanenti su elementi "asta"

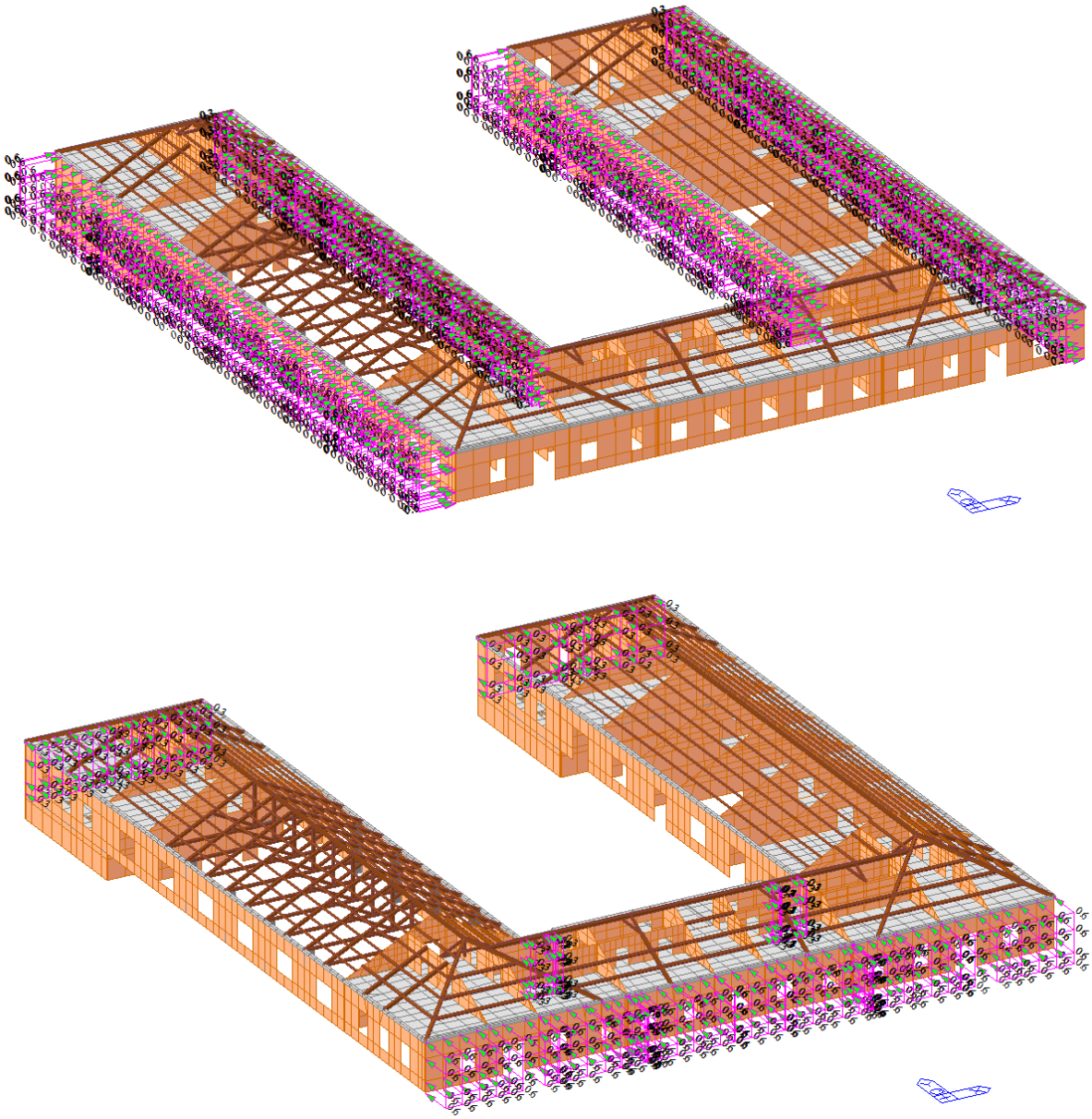


Figura 14. Modello ad elementi finiti – applicazione del vento X e del vento Y su elementi "piastra"

I vincoli esterni sono incastri perfetti al piede dei setti e delle colonne assumendo non vi siano cedimenti differenziali. I vincoli interni fra gli elementi in legno sono assimilati a cerniere e pertanto sono strati introdotti *rilasci rotazionali* alle estremità delle travi considerate in semplice appoggio.

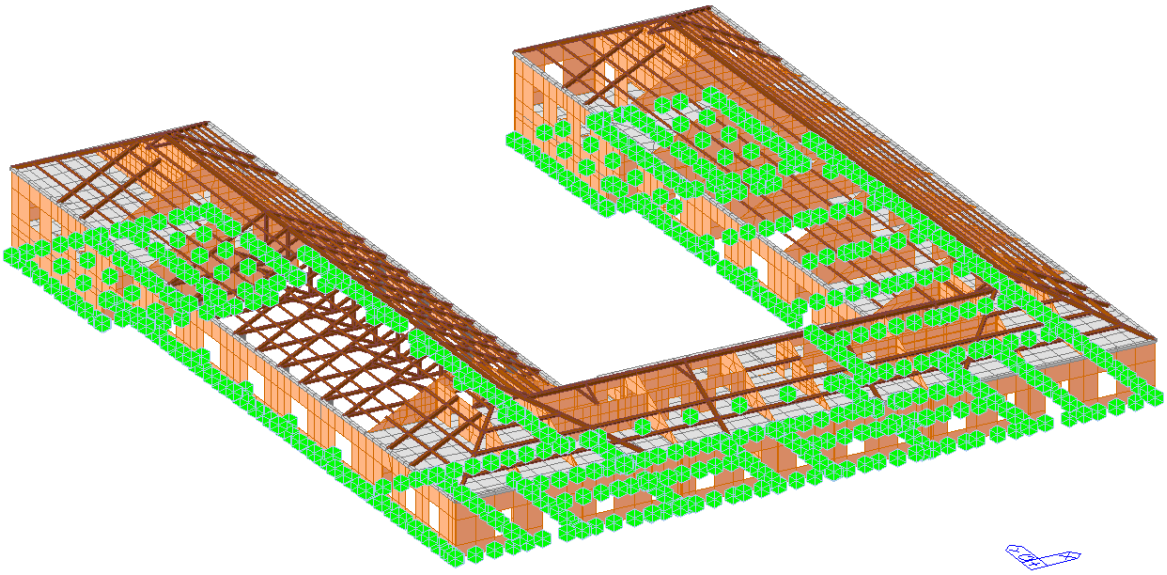


Figura 15. Vincoli esterni di incastro perfetto alla base

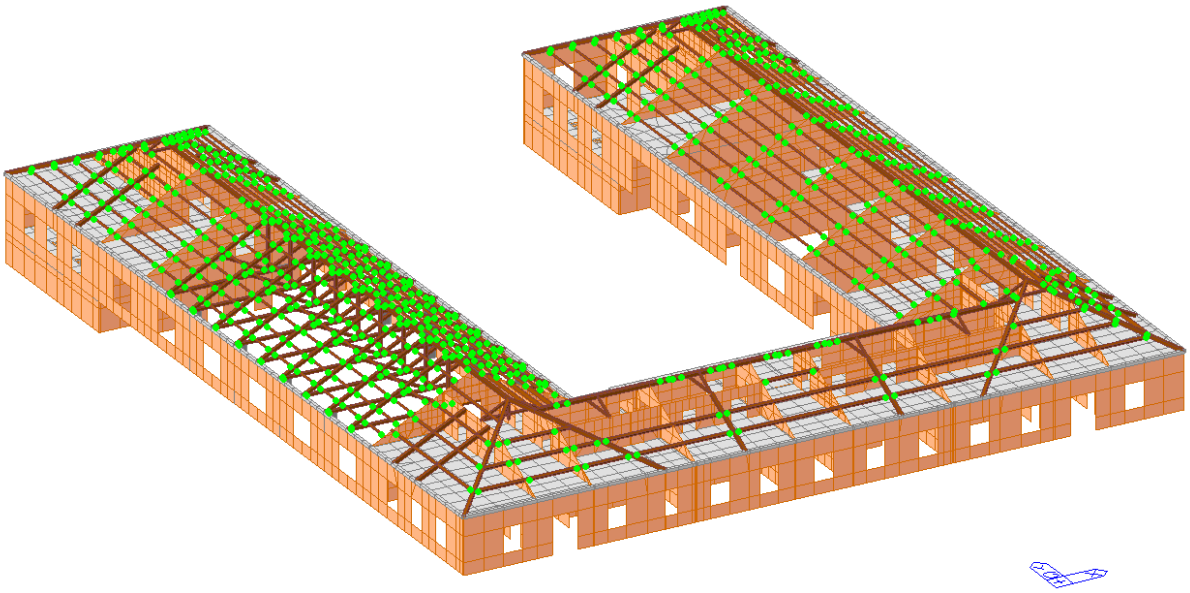


Figura 16. Vincoli interni a cerniera

Laddove necessario si sono realizzati sottomodelli adatti ad analizzare il comportamento locale e di dettaglio. I sottomodelli seguono gli stessi principi di costruzione.

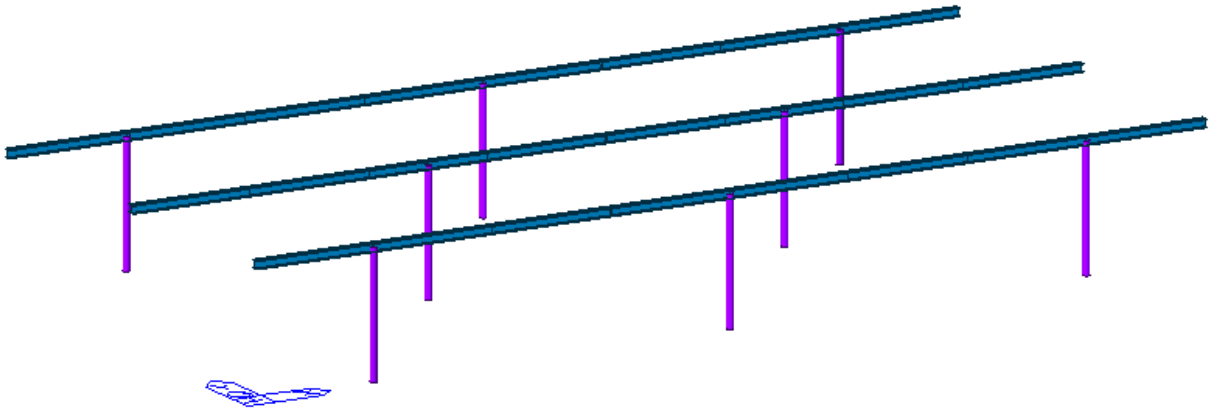


Figura 17. Strutture di copertura dello spazio eventi

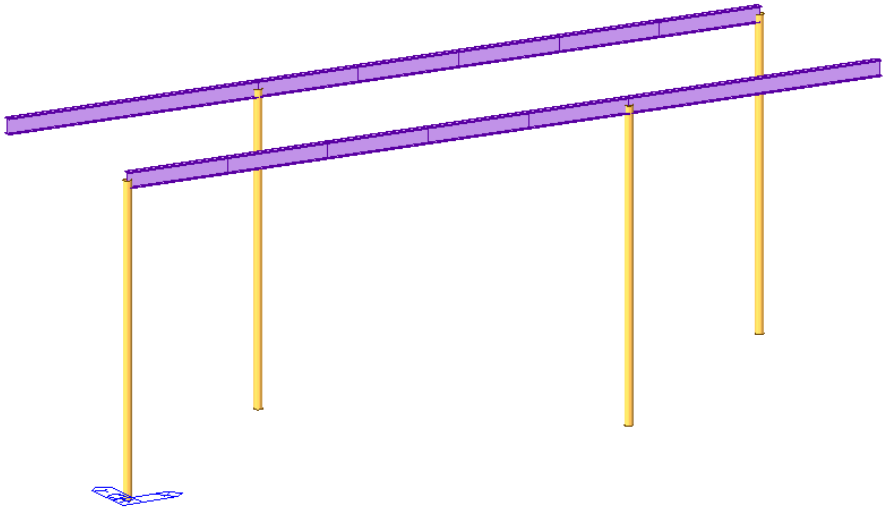


Figura 18. Strutture della pensilina

6. ANALISI DEI CARICHI

6.1. VITA NOMINALE, CLASSI D'USO E PERIODO DI RIFERIMENTO

La vita nominale V_N di un'opera strutturale è intesa come il numero di anni nel quale la struttura, soggetta a manutenzione ordinaria, deve poter essere usata per lo scopo al quale è destinata.

2.4 - Vita nominale, classi d'uso e periodo di riferimento

Tabella 2.4.I – *Vita nominale V_N per diversi tipi di opere*

	TIPI DI COSTRUZIONE	Vita Nominale V_N (in anni)
1	Opere provvisorie – Opere provvisionali - Strutture in fase costruttiva	≤ 10
2	Opere ordinarie, ponti, opere infrastrutturali e dighe di dimensioni contenute o di importanza normale	≥ 50
3	Grandi opere, ponti, opere infrastrutturali e dighe di grandi dimensioni o di importanza strategica	≥ 100

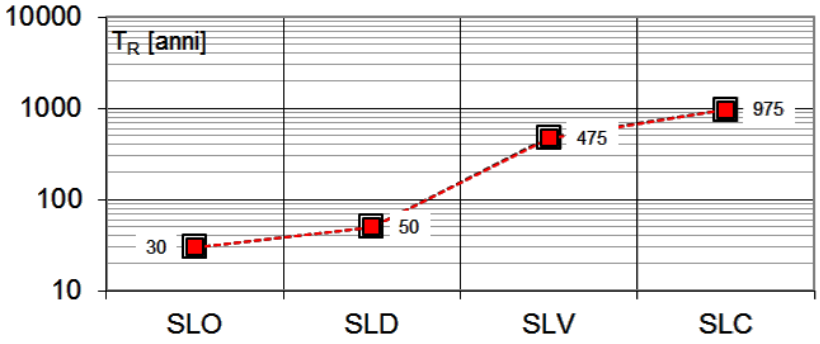
Tipo di costruzione: 2. Opere ordinarie

vita nominale V_N = 50 anni

Classe d'uso: Classe II - Normali affollamenti, ponti, infrastrutture non strategiche

Coefficiente C_U = 1.0

Periodo di riferimento $V_R = V_N \cdot C_U$ = 50 anni



L'opera è classificata in classe d'uso II e l'azione sismica è determinata per un Tempo di Ritorno di 50 anni (SLD) e 475 anni (SLV).

6.2. CASI ELEMENTARI DI CARICO

La progettazione e la verifica degli elementi strutturali seguono il metodo semiprobabilistico degli Stati Limite: le condizioni elementari di carico sono cumulate secondo combinazioni di carico tali da risultare le più sfavorevoli ai fini delle singole verifiche, determinando quindi le azioni di calcolo da utilizzare per le verifiche allo Stato Limite Ultimo (SLU), Stato Limite di Salvaguardia della Vita (SLV), Stato Limite di Danno (SLD) e Stato Limite di Esercizio (SLE) per ciascun elemento.

I casi di carico elementari sono peso proprio, carichi permanenti, carichi accidentali, vento, neve, sisma nelle due direzioni.

Nei paragrafi seguenti è determinata l'entità di ciascuno dei carichi elementari.

6.2.1. Peso proprio

I pesi propri degli elementi strutturali (muratura, travi in legno e acciaio) inseriti nei modelli di calcolo sono autodeterminati dal programma, in funzione delle dimensioni e del peso specifico del materiale:

γ_{mur} = 18.0 kN/m^3 ; γ_{cls} = 25.0 kN/m^3 ; γ_{legno} = 4.5 kN/m^3

Il peso proprio dei solai in laterocemento è calcolato a partire dalle stratigrafie individuate durante le indagini.

Solaio piano terra esistente (21+5)

Peso proprio	**G_1=**	**3.50**	**kN/m^2**
Cappa di completamento (sp. 50mm)	$g_{1,1}$ =	1.25	kN/m^2
Travetti (b = 100mm, H = 210mm, i = 240mm)	$g_{1,2}$ =	2.19	kN/m^2

Nel modello sarà inserito una soletta piena, di peso equivalente, spessa 140mm

Solaio piano terra nuova realizzazione (24+6)

Peso proprio	**G_1=**	**4.45**	**kN/m^2**

Solaio piano sottotetto (25+2)

Peso proprio	**G_1=**	**1.75**	**kN/m^2**
Cappa di completamento (sp. 20mm)	$g_{1,1}$ =	0.50	kN/m^2
Travetti (b = 100mm, H = 250mm, i = 500mm)	$g_{1,2}$ =	1.25	kN/m^2

Nel modello sarà inserito una soletta piena, di peso equivalente, spessa 70mm

6.2.2. Carichi permanenti

I carichi permanenti sono computati, nel modello di calcolo, come masse afferenti gli elementi strutturali ai quali sono applicati.

Piano terra

Carichi permanenti	G_2=	**3.00**	**kN/m²**
Finitura	$g_{2,1}$ =	0.20	kN/m²
Massetto (sp. 60mm, ρ = 1800 kN/m³)	$g_{2,2}$ =	1.10	kN/m²
Tavellone	$g_{2,3}$ =	0.50	kN/m²
Incidenza tramezze	$g_{2,4}$ =	1.20	kN/m²

Sottotetto

Carichi permanenti	G_2=	**0.50**	**kN/m²**
Impianti	$g_{2,1}$ =	0.10	kN/m²
Controsoffitto	$g_{2,2}$ =	0.40	kN/m²

Copertura

Carichi permanenti	G_2=	**0.90**	**kN/m²**
Orditura minuta (secondarie e terzere)	$g_{2,1}$ =	0.10	kN/m²
Tegole marsigliesi	$g_{2,2}$ =	0.80	kN/m²

6.2.3. Sovraccarichi di esercizio

I sovraccarichi d'esercizio sono prescritti dalla Normativa vigente e sono correlati alla destinazione d'uso dei locali. I valori dei carichi verticali e orizzontali uniformemente distribuiti sono indicati in tabella 3.1.II del DM 14.01.2008, di seguito riportata:

Tabella 3.1.II – *Valori dei carichi d'esercizio per le diverse categorie di edifici*

Cat.	Ambienti	q_k [kN/m^2]	Q_k [kN]	H_k [kN/m]
A	**Ambienti ad uso residenziale**. Sono compresi in questa categoria i locali di abitazione e relativi servizi, gli alberghi. (ad esclusione delle aree suscettibili di affollamento)	2,00	2,00	1,00
B	**Uffici**.			
	Cat. B1 Uffici non aperti al pubblico	2,00	2,00	1,00
	Cat. B2 Uffici aperti al pubblico	3,00	2,00	1,00
C	**Ambienti suscettibili di affollamento**			
	Cat. C1 Ospedali, ristoranti, caffè, banche, scuole	3,00	2,00	1,00
	Cat. C2 Balconi, ballatoi e scale comuni, sale convegni, cinema, teatri, chiese, tribune con posti fissi	4,00	4,00	2,00
	Cat. C3 Ambienti privi di ostacoli per il libero movimento delle persone, quali musei, sale per esposizioni, stazioni ferroviarie, sale da ballo, palestre, tribune libere, edifici per eventi pubblici, sale da concerto, palazzetti per lo sport e relative tribune	5,00	5,00	3,00
D	**Ambienti ad uso commerciale**.			
	Cat. D1 Negozi	4,00	4,00	2,00
	Cat. D2 Centri commerciali, mercati, grandi magazzini, librerie…	5,00	5,00	2,00
E	**Biblioteche, archivi, magazzini e ambienti ad uso industriale**.			
	Cat. E1 Biblioteche, archivi, magazzini, depositi, laboratori manifatturieri	≥ 6,00	6,00	1,00*
	Cat. E2 Ambienti ad uso industriale, da valutarsi caso per caso	—	—	—
F-G	**Rimesse e parcheggi**.			
	Cat. F Rimesse e parcheggi per il transito di automezzi di peso a pieno carico fino a 30 kN	2,50	2 x 10,00	1,00**
	Cat. G Rimesse e parcheggi per transito di automezzi di peso a pieno carico superiore a 30 kN: da valutarsi caso per caso	—	—	—
H	**Coperture e sottotetti**			
	Cat. H1 Coperture e sottotetti accessibili per sola manutenzione	0,50	1,20	1,00
	Cat. H2 Coperture praticabili	secondo categoria di appartenenza		
	Cat. H3 Coperture speciali (impianti, eliporti, altri) da valutarsi caso per caso	—	—	—
*	non comprende le azioni orizzontali eventualmente esercitate dai materiali immagazzinati			
**	per i soli parapetti o partizioni nelle zone pedonali. Le azioni sulle barriere esercitate dagli automezzi dovranno essere valutate caso per caso			

I vari ambienti ricadono pertanto:

- Piano terra: CAT B_2 $q_k = 3.0$ kN/m^2
  CAT C_3 $q_k = 5.0$ kN/m^2
- Copertura e sottotetto CAT H_1 $q_k = 0.5$ kN/m^2

6.2.4. Azione della neve

3.4.1 - Carico neve

Il carico provocato dalla neve sulle coperture sarà valutato mediante l'espressione (3.3.7):

$$q_s = \mu_i \cdot q_{sk} \cdot C_E \cdot C_t = 0.8 \cdot 1.5 \cdot 1 \cdot 1 = 1.20 \ kN/m^2 \quad (3.3.7)$$

μ_i = 0.80 (valore massimo)
q_{sk} = 1.50 kN/m^2
C_E = 1
C_t = **1** (par. 3.4.4)

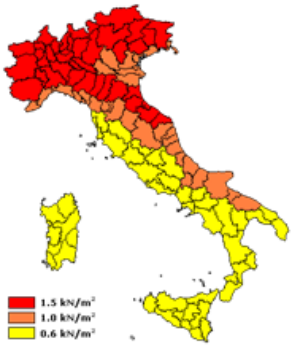
3.4.2 - Valore caratteristico

Provincia: Milano

Zona I - Mediterranea

a_s = **122** m altitudine sul livello del mare del sito

q_{sk} = 1.50 kN/m^2



3.4.3 - Coefficiente di esposizione

Normale

Tabella 3.4.I – *Valori di C_E per diverse classi di topografia*

Topografia	Descrizione	C_E
Battuta dai venti	Aree pianeggianti non ostruite esposte su tutti i lati, senza costruzioni o alberi più alti.	0,9
Normale	Aree in cui non è presente una significativa rimozione di neve sulla costruzione prodotta dal vento, a causa del terreno, altre costruzioni o alberi.	1,0
Riparata	Aree in cui la costruzione considerata è sensibilmente più bassa del circostante terreno o circondata da costruzioni o alberi più alti	1,1

3.4.5.3 - Copertura a due falde

α_1 = 29 °
α_2 = 29 °

$\mu_1(\alpha_1)$ = 0.80
$\mu_1(\alpha_2)$ = 0.80

Caso I	0.80	0.80
Caso II	0.40	0.80
Caso III	0.80	0.40

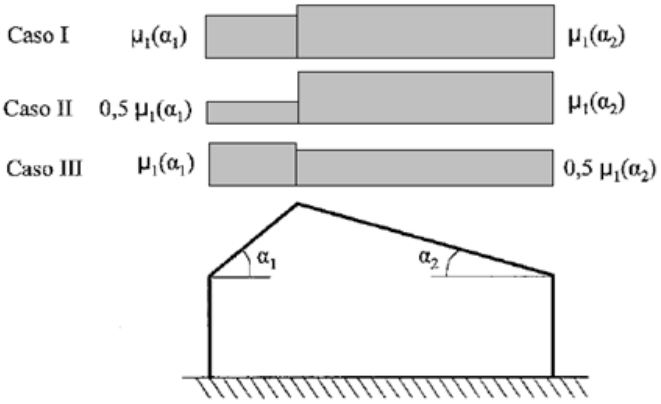


Figura 3.4.3 – *Condizioni di carico per coperture a due falde*

6.2.5. Azione del vento

3.3.2 - Velocità di riferimento

Zona: 1
a_s = 122 m altitudine sul livello del mare del sito
T_R = 50 anni
α_R = 1.000

a_0 = 1000 m
v_{b0} = 25 m/s
k_a = 0.010 1/s

v_b = **25.00** m/s

Figura 3.3.1 – *Mappa delle zone in cui è suddiviso il territorio italiano*

Per il calcolo dei coefficienti di pressione si distinguono 3 possibili diverse situazioni:

- le pareti verticali
- la copertura

6.2.5.1 Vento sulle pareti verticali

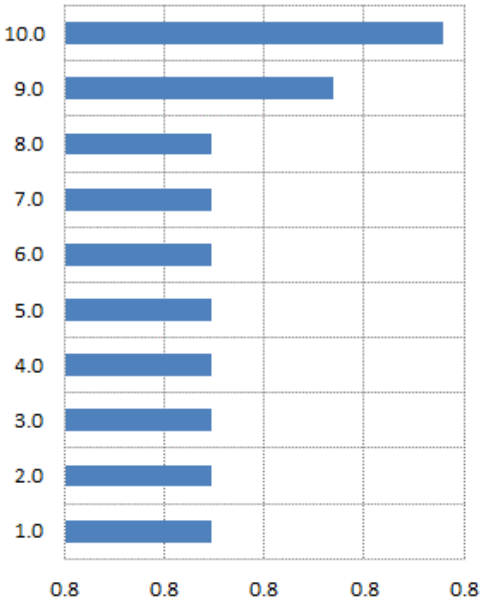
q_b = 390.63 N/m² — pressione cinetica di riferimento

c_p = + 0.80 (sopravento)
c_p = - 0.40 (sottovento) — coefficiente di forma (o aerodinamico)

c_d = 1 — coefficiente dinamico

Tabella - Pressione del vento in funzione della quota di applicazione

z [m]	$c_e(z)$ Cat. IV	+p(z) [N/m²]	-p(z) [N/m²]	$p_{tot}(z)$ [N/m²]	$p_{tot}(z)$ [kN/m²]
1.00	1.63	510.69	-278.62	789.31	0.789
2.00	1.63	510.69	-278.62	789.31	0.789
3.00	1.63	510.69	-278.62	789.31	0.789
4.00	1.63	510.69	-278.62	789.31	0.789
5.00	1.63	510.69	-278.62	789.31	0.789
6.00	1.63	510.69	-278.62	789.31	0.789
7.00	1.63	510.69	-278.62	789.31	0.789
8.00	1.63	510.69	-278.62	789.31	0.789
9.00	1.71	535.07	-278.62	813.69	0.814
10.00	1.78	557.23	-278.62	835.85	0.836



3.3.7 - Coefficiente di esposizione

Zona: 1
a_s = 122 m

z = 10 m (altezza dell'edificio considerato)
Distanza dalla costa: 130 km ☐ Struttura Off-shore
Classe di rugosità: B:aree suburbane

Categoria di esposizione: **IV**

k_r = 0.22
z_0 = 0.30 m
z_{min} = 8.00 m

c_t = 1

C 3.3.10.1 - Edifici a pianta rettangolare con coperture piane, a falde, inclinate, curve

α = 90 °

c_p = + 0.80
c_p = - 0.40

Pressione esterna:
elementi sopravento: c_{pe} = + 0.80
elementi sottovento: c_{pe} = - 0.40

6.2.5.2 Vento sulla copertura

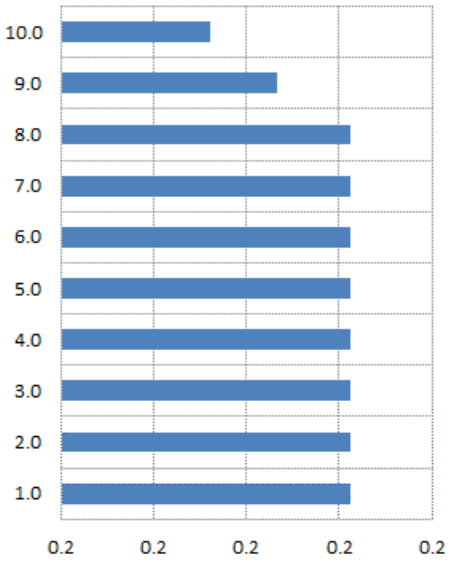
q_b = 390.63 N/m² — pressione cinetica di riferimento

c_p = - 0.13 (sopravento)
c_p = - 0.40 (sottovento) — coefficiente di forma (o aerodinamico)

c_d = 1 — coefficiente dinamico

Tabella - Pressione del vento in funzione della quota di applicazione

z [m]	$c_e(z)$ Cat. IV	+p(z) [N/m²]	-p(z) [N/m²]	$p_{tot}(z)$ [N/m²]	$p_{tot}(z)$ [kN/m²]
1.00	1.63	-82.99	-278.62	195.63	0.196
2.00	1.63	-82.99	-278.62	195.63	0.196
3.00	1.63	-82.99	-278.62	195.63	0.196
4.00	1.63	-82.99	-278.62	195.63	0.196
5.00	1.63	-82.99	-278.62	195.63	0.196
6.00	1.63	-82.99	-278.62	195.63	0.196
7.00	1.63	-82.99	-278.62	195.63	0.196
8.00	1.63	-82.99	-278.62	195.63	0.196
9.00	1.71	-86.95	-278.62	191.67	0.192
10.00	1.78	-90.55	-278.62	188.07	0.188



3.3.7 - Coefficiente di esposizione

Zona: 1
a_s = 122 m

z = 10 m (altezza dell'edificio considerato)
Distanza dalla costa: 130 km ☐ Struttura Off-shore
Classe di rugosità: B:aree suburbane

Categoria di esposizione: **IV**
k_r = 0.22
z_0 = 0.30 m
z_{min} = 8.00 m

c_t = 1

C 3.3.10.1 - Edifici a pianta rettangolare con coperture piane, a falde, inclinate, curve

α = 29 °

c_p = - 0.13
c_p = - 0.40

Pressione esterna:
elementi sopravento: c_{pe} = - 0.13
elementi sottovento: c_{pe} = - 0.40

6.2.6. Azione sismica

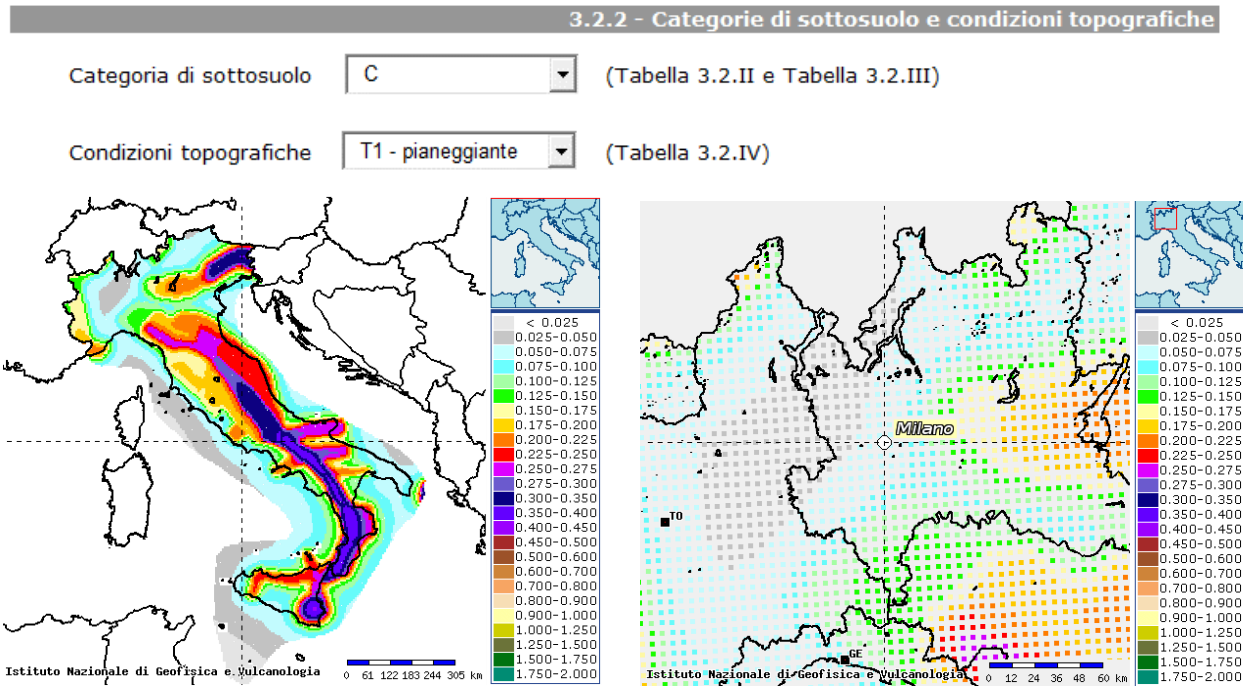


Figura 19. Mappa di pericolosità sismica italiana – probabilità di superamento 5% in 50 anni

Gli spettri di progetto sono calcolati così come prescritto al paragrafo *3.2.3.2.1 – Spettro di risposta elastico in accelerazione delle componenti orizzontali*, con l'accortezza di sostituire a η il valore 1/q così come prescritto al *paragrafo 3.2.3.5 – Spettro di progetto per gli stati limite ultimi*, in modo da tenere in considerazione le capacità dissipative della struttura.

$$0 \le T < T_B \qquad S_D(T) = a_g \cdot S \cdot \frac{1}{q} \cdot F_0 \cdot \left[\frac{T}{T_B} + \frac{q}{F_0} \left(1 - \frac{T}{T_B} \right) \right]$$

$$T_B \le T < T_C \qquad S_D(T) = a_g \cdot S \cdot \frac{1}{q} \cdot F_0$$

$$T_C \le T < T_D \qquad S_D(T) = a_g \cdot S \cdot \frac{1}{q} \cdot F_0 \cdot \left(\frac{T_C}{T} \right)$$

$$T_D \le T \qquad S_D(T) = a_g \cdot S \cdot \frac{1}{q} \cdot F_0 \cdot \left(\frac{T_C \cdot T_D}{T^2} \right)$$

Per il calcolo del fattore di struttura si fa riferimento al paragrafo *§7.8.1.3 - Modalità costruttive e fattori di struttura*:

$$q = q_0 \cdot k_R = 2.8 \cdot 1 = 2.8$$

dove:

$q_0 = 2.0 \cdot \alpha_u/\alpha_1 = 2 \cdot 1.4 = 2.8$ (strutture in muratura ordinaria ad un piano)

$k_R = 1.0$ (strutture regolari in altezza)

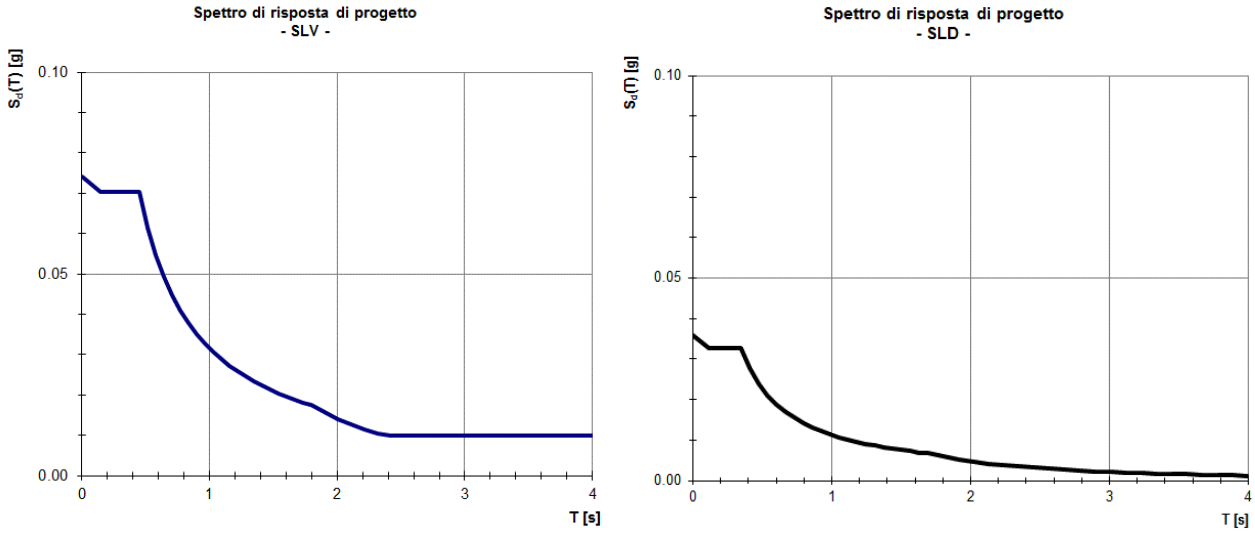


Figura 20. Spettro di risposta di progetto per lo SLD e lo SLV

6.3. COMBINAZIONI DI CARICO

6.3.1. SLU – Stati Limite Ultimi

Si adottano le combinazioni prescritte dalla normativa vigente ed espresse simbolicamente come segue:

$$F_d = \gamma_g \cdot G_k + \gamma_p \cdot P_k + \gamma_q \cdot \left[Q_{1k} + \sum_{i=2}^{i=n} (\psi_{0i} \cdot Q_{ik}) \right]$$ per le azioni statiche

con il seguente significato dei simboli:

G_k	valore caratteristico delle azioni permanenti
Q_{ik}	valore caratteristico dell'azione variabile i-esima
γ_{G1} = 1.3	(1.0 se il suo contributo aumenta la sicurezza)
γ_{G2} = 1.3	(0.0 se il suo contributo aumenta la sicurezza)
γ_Q = 1.5	per sovraccarichi di esercizio, neve, vento, temperatura
ψ_{0i} = 0.0	per coperture accessibili per sola manutenzione
ψ_{0i} = 0.7	per uffici
ψ_{0i} = 0.7	per ambienti suscettibili di affollamento
ψ_{0i} = 0.5	per neve (q < 1000m slm)
ψ_{0i} = 0.6	per vento

	SLU1	SLU2	SLU3	SLU4	SLU5	SLU6	SLU7	SLU8	SLU9	SLU10
Peso proprio	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Permanente	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Variabile	1.50	1.05	1.50	1.05	1.50	1.05	1.50	1.05	1.50	1.05
Vento +X	0.00	0.00	0.90	1.50	0.00	0.00	0.00	0.00	0.00	0.00
Vento +Y	0.00	0.00	0.00	0.00	0.90	1.50	0.00	0.00	0.00	0.00
Neve	0.75	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vento -X	0.00	0.00	0.00	0.00	0.00	0.00	0.90	1.50	0.00	0.00
Vento -Y	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	1.50
Sisma X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma Y	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

6.3.2. SLE – Stati Limite di Esercizio

Si adottano le combinazioni prescritte dalla normativa vigente ed espresse simbolicamente come segue:

$$F_d = G_k + P_k + Q_{k1} + \psi_{02} \cdot Q_{k2} + \ldots$$ combinazione rara

$$F_d = G_k + P_k + \psi_{11} Q_{k1} + \psi_{22} Q_{k2} + \ldots$$ combinazione frequente

$$F_d = G_k + P_k + \psi_{21} \cdot Q_{21} + \psi_{22} \cdot Q_{22} \ldots$$ combinazione quasi permanente

con il seguente significato dei simboli:

G_k valore caratteristico delle azioni permanenti

Q_{ik} valore caratteristico dell'azione variabile i-esima

ψ_{0i} = 0.0 per coperture accessibili per sola manutenzione

ψ_{0i} = 0.7 per uffici

ψ_{0i} = 0.7 per ambienti suscettibili di affollamento

ψ_{0i} = 0.5 per neve (q < 1000m slm)

ψ_{0i} = 0.6 per vento

ψ_{1i} = 0.0 per coperture accessibili per sola manutenzione

ψ_{1i} = 0.2 per neve (q < 1000m slm), vento

ψ_{2i} = 0.0 per coperture, neve e vento

	SLE1	SLE2	SLE3	SLE4	SLE5	SLE6	SLE7	SLE8	SLE9	SLE10
Peso proprio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Permanente	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Variabile	1.00	0.70	1.00	0.70	1.00	0.70	1.00	0.70	1.00	0.70
Vento +X	0.00	0.00	0.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Vento +Y	0.00	0.00	0.00	0.00	0.70	1.00	0.00	0.00	0.00	0.00
Neve	0.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vento -X	0.00	0.00	0.00	0.00	0.00	0.00	0.60	1.00	0.00	0.00
Vento -Y	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	1.00
Sisma X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma Y	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

6.3.3. Combinazioni sismiche

Si adottano le combinazioni prescritte dalla normativa vigente ed espresse simbolicamente come segue:

$$F_d = E + G_k + P_k + \sum_{i=1}^{i=n} (\psi_{2i} \cdot Q_{ik}) \qquad \text{per le azioni sismiche}$$

con il seguente significato dei simboli:

G_k valore caratteristico delle azioni permanenti

Q_{ik} valore caratteristico dell'azione variabile i-esima

$\psi_{2i} = 0.0$ per coperture, neve e vento

$\psi_{2i} = 0.3$ per uffici

$\psi_{2i} = 0.6$ per ambienti suscettibili di affollamento

	SISMA1	SISMA2	SISMA3	SISMA4	SISMA5	SISMA6	SISMA7	SISMA8
Peso proprio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Permanente	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Variabile	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Vento +X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vento +Y	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Neve	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vento -X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vento -Y	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma X	1.00	1.00	-1.00	-1.00	0.30	-0.30	0.30	-0.30
Sisma Y	0.30	-0.30	0.30	-0.30	1.00	1.00	-1.00	-1.00

7. VERIFICA DEGLI ELEMENTI STRUTTURALI

In questa sezione si presentano le verifiche degli elementi coinvolti dagli interventi strutturali proposti. Per le strutture esistenti non coinvolte si rimanda al documento "Analisi di consistenza strutturale".

7.1. VERIFICA DEI SETTI IN MURATURA

In Figura 21 è indicata la numerazione di ciascun setto in muratura. In questa fase progettuale si sono verificati tutti i setti del piano terra e piano interrato previsti dal progetto architettonico. Non si sono considerati i maschi murari che verranno sostituiti con setti in c.a. verificati a parte.

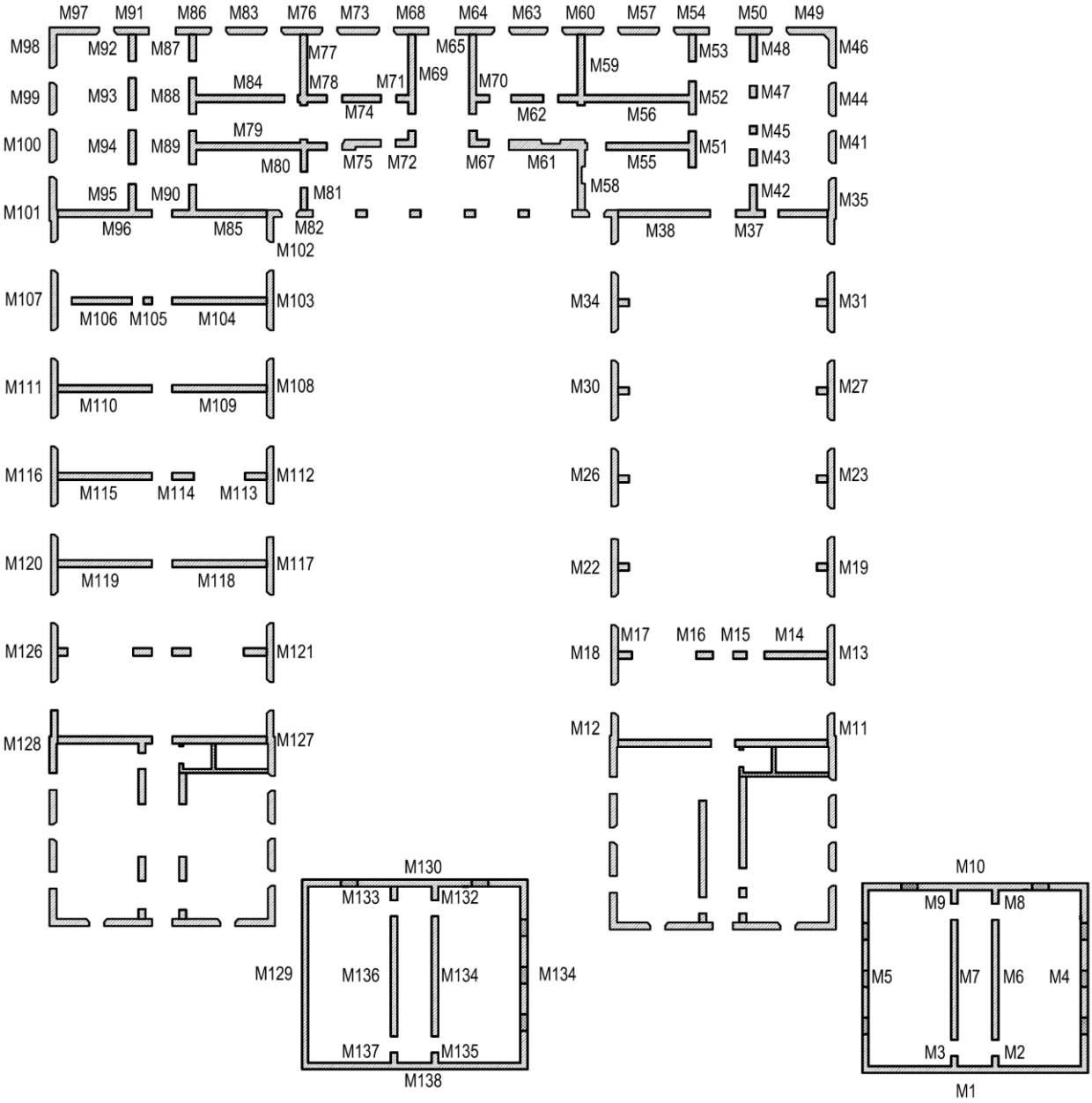


Figura 21. Setti del piano terra e del piano interrato.

Le verifiche sono condotte per le azioni nel piano considerando come meccanismi di rottura la pressoflessione e il taglio nel piano.

Per il calcolo della capacità resistente si fa riferimento alle formule 7.8.2 delle NTC08 e 7.8.1.1 della Circolare Applicativa 617/2009:

Momento resistente

$$M_u = (l^2\, t\, \sigma_o / 2)\,(1 - \sigma_0 / 0{,}85\, f_d)$$

dove: l = lunghezza del setto
t = spessore del setto
σ_0 = N/A = tensione di compressione
f_d = valore resistente a compressione

Taglio resistente

$$V_t = l \cdot t \frac{1.5\tau_{0d}}{b} \sqrt{1 + \frac{\sigma_0}{1.5\tau_{0d}}} = l \cdot t \frac{f_{td}}{b} \sqrt{1 + \frac{\sigma_0}{f_{td}}}$$

dove: l = lunghezza del setto
t = spessore del setto
σ_0 = N/A = tensione di compressione
τ_{0d} = valore resistente a taglio
b = h/l, ma comunque compreso fra 1 e 1.5

Si riportano nel seguito il riepilogo delle verifiche, lasciando all'Appendice 1 il dettaglio del calcolo. Nella tabella è presentato il rapporto Sollecitazione/Resistenza e pertanto le verifiche sono soddisfatte ogniqualvolta questo rapporto è minore di 1.

Le verifiche evidenziano un generale stato di adeguato dimensionamento delle strutture nei confronti di tutti i carichi verticali ed orizzontali, anche quelli introdotti dalle nuove destinazioni d'uso.

Numero setto	VERIFICA PRESSOFLESSIONE NEL PIANO																		MAX
	SLU_1	SLU_2	SLU_3	SLU_4	SLU_5	SLU_6	SLU_7	SLU_8	SLU_9	SLU_10	SLV_1	SLV_2	SLV_3	SLV_4	SLV_5	SLV_6	SLV_7	SLV_8	
M1	0.13	0.13	0.13	0.12	0.13	0.12	0.13	0.12	0.13	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.09	0.13
M2	0.20	0.18	0.20	0.18	0.20	0.19	0.19	0.19	0.19	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.18	0.16	0.20
M3	0.34	0.33	0.34	0.33	0.35	0.34	0.34	0.34	0.33	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.30	0.35
M4	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.14
M5	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.14
M6	0.23	0.23	0.22	0.21	0.22	0.21	0.21	0.21	0.22	0.21	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.16	0.23
M7	0.24	0.24	0.23	0.22	0.23	0.22	0.22	0.22	0.23	0.22	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.17	0.24
M8	0.33	0.31	0.33	0.31	0.32	0.30	0.30	0.30	0.33	0.32	0.28	0.28	0.28	0.28	0.28	0.28	0.30	0.28	0.33
M9	0.29	0.28	0.30	0.29	0.29	0.27	0.27	0.27	0.30	0.29	0.25	0.25	0.25	0.25	0.25	0.25	0.27	0.25	0.30
M10	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M11	0.28	0.28	0.27	0.27	0.28	0.27	0.27	0.27	0.28	0.28	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.26	0.28
M12	0.28	0.28	0.27	0.27	0.27	0.26	0.26	0.26	0.28	0.28	0.26	0.26	0.26	0.26	0.26	0.26	0.25	0.26	0.28
M13	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M14	0.14	0.15	0.14	0.14	0.14	0.13	0.13	0.13	0.14	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15
M15	0.27	0.28	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.28
M16	0.33	0.35	0.30	0.30	0.31	0.30	0.30	0.30	0.31	0.30	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.35
M17	0.38	0.39	0.42	0.45	0.37	0.37	0.37	0.37	0.37	0.37	0.35	0.35	0.35	0.35	0.35	0.35	0.30	0.35	0.45
M18	0.13	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.14
M19	0.08	0.09	0.06	0.05	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.06	0.06	0.05	0.06	0.06	0.06	0.09
M22	0.09	0.10	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.10
M23	0.08	0.10	0.06	0.05	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.06	0.06	0.05	0.06	0.06	0.06	0.10
M26	0.09	0.10	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.10
M27	0.08	0.10	0.06	0.05	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.06	0.06	0.05	0.06	0.06	0.06	0.10
M30	0.08	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.10
M31	0.08	0.09	0.06	0.05	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.06	0.06	0.05	0.06	0.06	0.06	0.09
M34	0.08	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.10
M35	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M36	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.12
M37	0.17	0.18	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.16	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.18
M38	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.14
M39	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M40	0.11	0.11	0.10	0.10	0.11	0.11	0.11	0.11	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M41	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M42	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.18
M43	0.26	0.27	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.27
M44	0.10	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M45	0.26	0.27	0.25	0.24	0.25	0.24	0.24	0.24	0.25	0.24	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.27
M46	0.09	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10
M47	0.26	0.27	0.25	0.24	0.25	0.24	0.24	0.24	0.25	0.24	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.27
M48	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.14
M49	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.09
M50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M51	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M52	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M53	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.12
M54	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.10	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M55	0.15	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.16
M56	0.14	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M57	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.09
M58	0.12	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.13

M59	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.12
M60	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.09
M61	0.15	0.15	0.15	0.14	0.15	0.14	0.14	0.14	0.15	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M62	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M63	0.09	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M64	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.09
M65	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.13
M66	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.16
M67	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.16
M68	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.09
M69	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.13
M70	0.15	0.15	0.15	0.14	0.15	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M71	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M72	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.16
M73	0.09	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M74	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M75	0.17	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.18
M76	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.09
M77	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.12
M78	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M79	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M80	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M81	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.12	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.12
M82	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.12
M83	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.09
M84	0.15	0.15	0.15	0.14	0.15	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M85	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M86	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M87	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.12
M88	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M89	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.15	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15
M90	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M91	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M92	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13
M93	0.20	0.21	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.21
M94	0.21	0.21	0.20	0.19	0.20	0.19	0.19	0.19	0.20	0.19	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.21
M95	0.18	0.18	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.18
M96	0.14	0.15	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15
M97	0.08	0.09	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.09
M98	0.10	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.11
M99	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.10
M100	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M101	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.10	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M102	0.11	0.11	0.11	0.10	0.11	0.11	0.11	0.11	0.11	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M103	0.09	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M104	0.15	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.16
M105	0.27	0.28	0.25	0.24	0.25	0.24	0.24	0.24	0.25	0.24	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.28
M106	0.17	0.17	0.16	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M107	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M108	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.09
M109	0.13	0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.14

M110	0.16	0.17	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M111	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.10	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M112	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.12
M114	0.32	0.35	0.29	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.35
M115	0.17	0.18	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.18
M116	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M117	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.09
M118	0.12	0.13	0.12	0.13	0.12	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.13
M119	0.15	0.16	0.14	0.14	0.15	0.14	0.14	0.14	0.15	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.16
M120	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M121	0.12	0.13	0.12	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.13
M123	0.39	0.42	0.36	0.35	0.36	0.36	0.36	0.36	0.36	0.36	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.42
M124	0.44	0.47	0.40	0.39	0.40	0.40	0.40	0.40	0.40	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.30	0.47
M126	0.15	0.16	0.15	0.14	0.15	0.14	0.14	0.14	0.15	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.16
M127	0.25	0.26	0.25	0.24	0.25	0.25	0.25	0.25	0.26	0.26	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.26
M128	0.22	0.22	0.23	0.23	0.22	0.22	0.22	0.22	0.23	0.23	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.23
M129	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.12
M130	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M131	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.12
M132	0.82	0.79	0.81	0.78	0.81	0.78	0.78	0.78	0.82	0.80	0.71	0.71	0.71	0.71	0.71	0.71	0.75	0.71	0.82
M133	0.34	0.32	0.35	0.33	0.34	0.32	0.32	0.32	0.35	0.34	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.30	0.35
M134	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M135	0.20	0.20	0.19	0.18	0.20	0.19	0.19	0.19	0.19	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.19	0.17	0.20
M136	0.17	0.17	0.16	0.15	0.16	0.15	0.15	0.15	0.16	0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.17
M137	0.21	0.21	0.21	0.20	0.21	0.21	0.21	0.21	0.20	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.18	0.21
M138	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.12

Numero setto	VERIFICA TAGLIO NEL PIANO																		MAX
	SLU_1	SLU_2	SLU_3	SLU_4	SLU_5	SLU_6	SLU_7	SLU_8	SLU_9	SLU_10	SLV_1	SLV_2	SLV_3	SLV_4	SLV_5	SLV_6	SLV_7	SLV_8	
M1	0.01	0.01	0.03	0.05	0.01	0.01	0.02	0.04	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.05
M2	0.26	0.23	0.26	0.23	0.27	0.24	0.24	0.24	0.26	0.23	0.19	0.19	0.19	0.19	0.19	0.19	0.22	0.19	0.27
M3	0.44	0.42	0.43	0.41	0.43	0.41	0.41	0.41	0.42	0.40	0.33	0.33	0.33	0.33	0.33	0.33	0.35	0.33	0.44
M4	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
M5	0.04	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05
M6	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06
M7	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
M8	0.47	0.45	0.46	0.44	0.46	0.43	0.43	0.43	0.47	0.45	0.37	0.37	0.37	0.37	0.37	0.37	0.39	0.37	0.47
M9	0.43	0.40	0.43	0.41	0.42	0.39	0.39	0.39	0.43	0.41	0.33	0.33	0.33	0.33	0.33	0.33	0.35	0.33	0.43
M10	0.01	0.01	0.04	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07
M11	0.75	0.76	0.70	0.68	0.71	0.70	0.70	0.70	0.73	0.73	0.60	0.60	0.60	0.60	0.60	0.60	0.62	0.60	0.76
M12	0.73	0.74	0.71	0.71	0.69	0.68	0.68	0.68	0.71	0.71	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.74
M13	0.06	0.09	0.02	0.02	0.03	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.03	0.02	0.03	0.09
M14	0.20	0.21	0.14	0.10	0.19	0.18	0.18	0.18	0.19	0.18	0.16	0.16	0.16	0.16	0.16	0.16	0.19	0.16	0.21
M15	0.08	0.08	0.06	0.04	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.08
M16	0.08	0.09	0.04	0.02	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.08	0.06	0.09
M17	0.73	0.77	0.75	0.78	0.69	0.68	0.68	0.68	0.69	0.69	0.57	0.57	0.57	0.57	0.57	0.57	0.52	0.57	0.78
M18	0.04	0.07	0.01	0.01	0.02	0.03	0.03	0.03	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.07
M19	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
M22	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
M23	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M26	0.01	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M27	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
M30	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M31	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.03
M34	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.03	0.03	0.03	0.04
M35	0.00	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.03
M36	0.20	0.20	0.16	0.14	0.19	0.19	0.19	0.19	0.18	0.18	0.15	0.15	0.16	0.16	0.15	0.16	0.17	0.16	0.20
M37	0.03	0.03	0.02	0.01	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04
M38	0.09	0.09	0.10	0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M39	0.01	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.02	0.07
M40	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.10
M41	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
M42	0.33	0.32	0.33	0.32	0.34	0.34	0.34	0.34	0.32	0.30	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.27	0.34
M43	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06
M44	0.06	0.08	0.04	0.04	0.04	0.03	0.03	0.03	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.08
M45	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
M46	0.09	0.08	0.10	0.09	0.07	0.06	0.06	0.06	0.11	0.12	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.12
M47	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.03	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04
M48	0.53	0.56	0.49	0.48	0.45	0.41	0.41	0.41	0.51	0.52	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.40	0.56
M49	0.00	0.01	0.02	0.03	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03
M50	0.06	0.06	0.04	0.04	0.05	0.04	0.04	0.04	0.05	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.06
M51	0.08	0.09	0.08	0.08	0.06	0.05	0.05	0.05	0.10	0.11	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.11
M52	0.01	0.01	0.01	0.01	0.02	0.03	0.03	0.03	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
M53	0.25	0.27	0.22	0.22	0.18	0.14	0.14	0.14	0.25	0.27	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.27
M54	0.04	0.04	0.05	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.06
M55	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04
M56	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
M57	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
M58	0.12	0.11	0.11	0.11	0.13	0.15	0.15	0.15	0.09	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15

M59	0.09	0.09	0.08	0.08	0.06	0.04	0.04	0.04	0.11	0.12	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.12
M60	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.03
M61	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04
M62	0.01	0.02	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M63	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M64	0.06	0.06	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.07
M65	0.08	0.08	0.07	0.07	0.04	0.02	0.02	0.02	0.10	0.11	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.11
M66	0.04	0.04	0.03	0.04	0.05	0.07	0.07	0.07	0.01	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.07
M67	0.09	0.10	0.09	0.10	0.08	0.08	0.08	0.08	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
M68	0.06	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.06
M69	0.08	0.08	0.07	0.07	0.04	0.02	0.02	0.02	0.09	0.11	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.11
M70	0.10	0.10	0.11	0.11	0.10	0.10	0.10	0.10	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.11
M71	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.10
M72	0.10	0.11	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.11
M73	0.02	0.02	0.01	0.01	0.02	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
M74	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
M75	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
M76	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
M77	0.11	0.11	0.10	0.10	0.08	0.06	0.06	0.06	0.13	0.14	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.14
M78	0.04	0.04	0.05	0.06	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.06
M79	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
M80	0.06	0.05	0.08	0.08	0.10	0.12	0.12	0.12	0.06	0.04	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.12
M81	0.21	0.22	0.19	0.20	0.21	0.23	0.23	0.23	0.16	0.13	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.23
M82	0.10	0.10	0.10	0.09	0.10	0.09	0.09	0.09	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.10
M83	0.01	0.01	0.01	0.00	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M84	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
M85	0.10	0.10	0.08	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.10
M86	0.04	0.05	0.04	0.03	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
M87	0.28	0.31	0.25	0.24	0.21	0.17	0.17	0.17	0.27	0.28	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.20	0.31
M88	0.01	0.01	0.01	0.01	0.02	0.03	0.03	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03
M89	0.01	0.00	0.02	0.02	0.03	0.03	0.03	0.03	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03
M90	0.05	0.06	0.04	0.03	0.03	0.02	0.02	0.02	0.05	0.06	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.06
M91	0.05	0.06	0.05	0.06	0.05	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06
M92	0.43	0.47	0.39	0.38	0.35	0.32	0.32	0.32	0.41	0.42	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.32	0.47
M93	0.06	0.06	0.05	0.04	0.04	0.03	0.03	0.03	0.06	0.07	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.07
M94	0.05	0.05	0.06	0.05	0.06	0.07	0.07	0.07	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.07
M95	0.09	0.08	0.10	0.10	0.10	0.11	0.11	0.11	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.11
M96	0.13	0.13	0.14	0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.14
M97	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02
M98	0.10	0.10	0.11	0.10	0.09	0.07	0.07	0.07	0.12	0.12	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.12
M99	0.05	0.07	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.07
M100	0.03	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.04
M101	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
M102	0.12	0.12	0.10	0.10	0.12	0.12	0.12	0.12	0.09	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.12
M103	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06
M104	0.19	0.20	0.15	0.13	0.17	0.17	0.17	0.17	0.18	0.18	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.15	0.20
M105	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01
M106	0.21	0.22	0.21	0.22	0.20	0.20	0.20	0.20	0.20	0.19	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.16	0.22
M107	0.01	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M108	0.01	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M109	0.16	0.16	0.12	0.09	0.14	0.14	0.14	0.14	0.15	0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.14	0.12	0.16

M110	0.11	0.12	0.12	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.13
M111	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M112	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M114	0.11	0.13	0.10	0.11	0.08	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.07	0.13
M115	0.18	0.19	0.19	0.20	0.16	0.16	0.16	0.16	0.16	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.12	0.14	0.20
M116	0.00	0.00	0.01	0.00	0.01	0.02	0.02	0.02	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M117	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
M118	0.14	0.14	0.09	0.06	0.12	0.12	0.12	0.12	0.12	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.10	0.14
M119	0.10	0.11	0.12	0.14	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.07	0.14
M120	0.04	0.05	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05
M121	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.09
M123	0.04	0.03	0.02	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.06	0.03	0.06
M124	0.17	0.17	0.14	0.12	0.16	0.16	0.16	0.16	0.16	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.16	0.14	0.17
M126	0.01	0.02	0.01	0.02	0.01	0.00	0.00	0.00	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
M127	0.47	0.48	0.44	0.43	0.45	0.44	0.44	0.44	0.47	0.47	0.38	0.38	0.38	0.38	0.38	0.38	0.39	0.38	0.48
M128	0.51	0.51	0.51	0.52	0.49	0.48	0.48	0.48	0.51	0.51	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.42	0.52
M129	0.05	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.06
M130	0.00	0.00	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.06
M131	0.05	0.06	0.03	0.03	0.04	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.06
M132	0.70	0.68	0.69	0.66	0.69	0.66	0.66	0.66	0.70	0.68	0.56	0.56	0.56	0.56	0.56	0.56	0.59	0.56	0.70
M133	0.48	0.46	0.48	0.46	0.47	0.45	0.45	0.45	0.48	0.46	0.38	0.38	0.38	0.38	0.38	0.38	0.40	0.38	0.48
M134	0.05	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06
M135	0.35	0.34	0.33	0.31	0.34	0.32	0.32	0.32	0.33	0.31	0.26	0.26	0.26	0.26	0.26	0.26	0.28	0.26	0.35
M136	0.04	0.04	0.03	0.03	0.04	0.05	0.05	0.05	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05
M137	0.37	0.36	0.37	0.35	0.36	0.34	0.34	0.34	0.36	0.33	0.28	0.28	0.28	0.28	0.28	0.28	0.30	0.28	0.37
M138	0.00	0.00	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.06

7.2. SETTI IN C.A.

In corrispondenza dei maschi murari completamente demoliti come previsto dal progetto architettonico si prevede la costruzione di setti in c.a. aventi dimensioni 200x1000 mm ed altezza 4.50 m.

Le condizioni più svantaggiose corrispondono a:

SISMA3
N_{min} = - 61.03 kN
M = 51.91 kNm

SLU4
N_{max} = - 168.93 kN
M = 18.42 kNm

SLU8
N = - 63.75 kN
M_{max} = 78.85 kNm

L'armatura longitudinale è costituita da (1+1)ϕ16 /200.

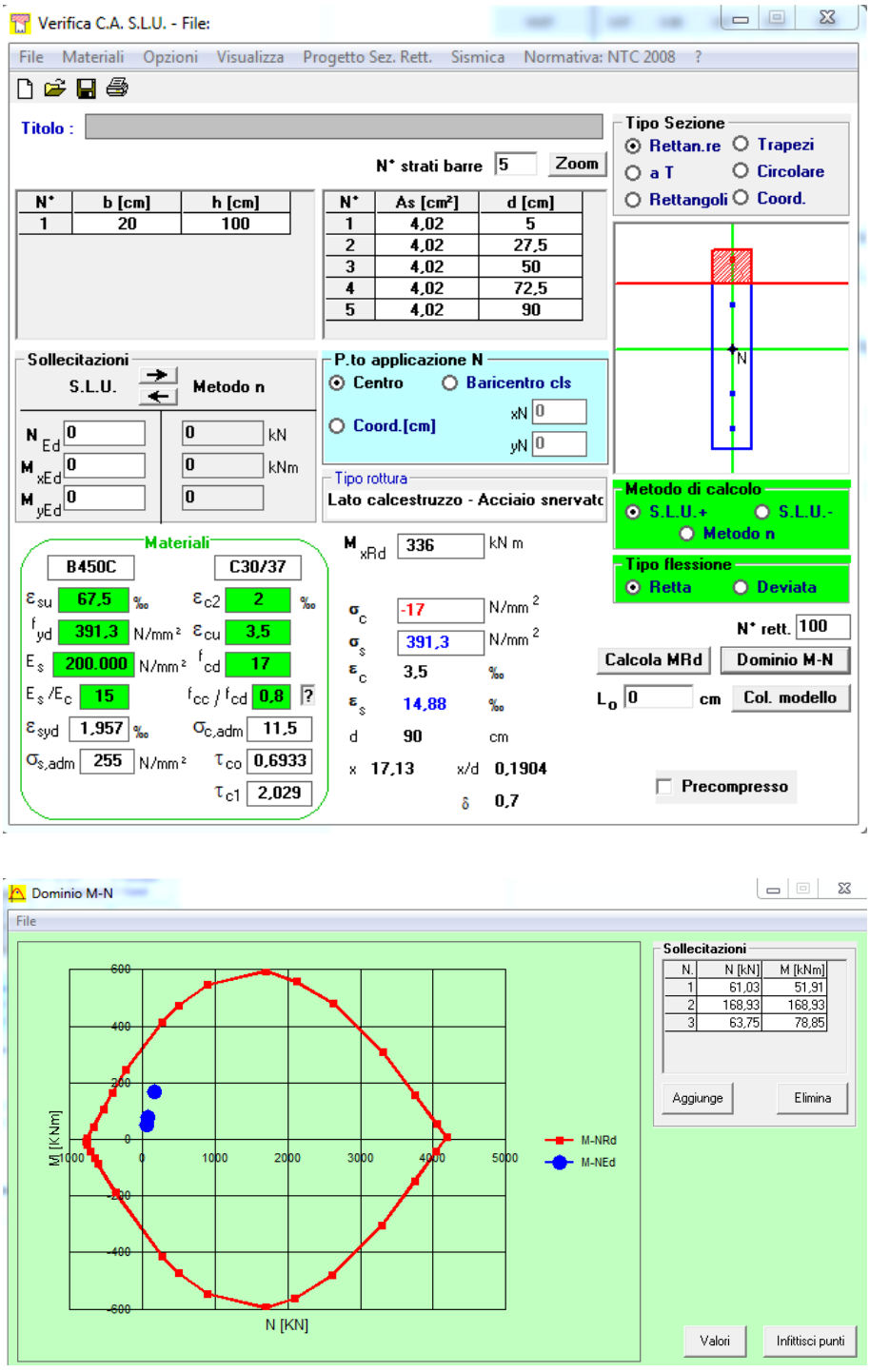


Figura 22. Diagramma M-N della sezione dei setti in c.a..

Come indicato in Figura 22 la sezione risulta verificata nelle condizioni di sollecitazione più svantaggiose.

L'armatura a taglio è costituita dall'armatura minima prevista da normativa:

Zona critica A	h=1.00 m	staffe ϕ8/120 a 4 braccia
Zona critica B	h=2.50 m	staffe ϕ8/240 a 4 braccia
Zona critica C	h=1.00 m	staffe ϕ8/120 a 4 braccia

7.3. NUOVO SOLAIO PIANO TERRA

In questa sezione si presentano le verifiche del nuovo solaio che verrà realizzato al piano terra tipo Bausta a travetto accostato. Per la verifica dei solai in laterocemento esistenti, indagati con le indagini strutturali, si rimanda all'"Analisi di consistenza strutturale".

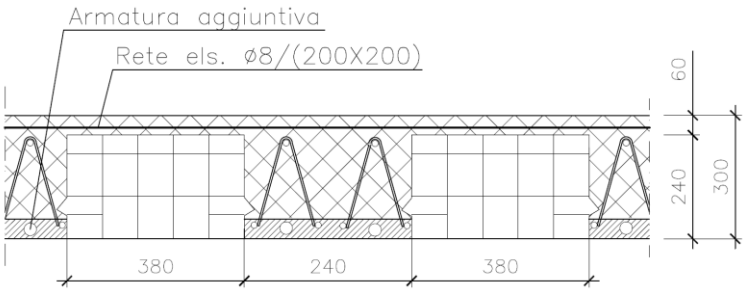


Figura 23. Dettaglio nuovo solaio tipo Bausta.

Il solaio è caratterizzato da uno spessore totale di 300 mm:

- soletta 60 mm;
- pignatte in laterizio di dimensioni 380x240 mm;
- doppi travetti di dimensioni 120x240 mm a passo 620 mm con armatura base 2ϕ6 + 2ϕ14 (T7) e armatura aggiuntiva 1ϕ10.

I carichi agenti sono:

Peso proprio	4.45	kN/m^2
Carico Permanente	3.00	kN/m^2
Carico variabile	5.00	kN/m^2
Totale SLE	12.45	kN/m^2

Lo schema di carico del solaio è quello di trave su due appoggi aventi luce 6.90 m:

$M_{Ed} = \frac{ql^2}{8}$ = 74.0 kNm

$V_{Ed} = \frac{ql}{2}$ = 43.0 kNm

Altezze			**Solaio a travetti tralicciati TRIGON® (i = 62cm) ed alleggerimenti in laterizio**								
laterizio	soletta	totale	Congl. per getto	Peso travetti e blocchi	Peso solaio in opera	Prestazioni di servizio riferite alla striscia di solaio larga 1 metro					Momento d'inerzia sezione compl. reagente
h_l	h_c	H_{tot}				R'_{ck} = 30 N/mm² Acciaio FeB44k					
cm	cm	cm	l/m²	kN/m²	kN/m²	**Momenti massimi di servizio (kNm)**				**Taglio**	
					Armatura tipo	**T1**	**T3**	**T5**	**T7**	**kN**	cm⁴
12	4	16	70	0,85	2,57	12,86	16,33	20,15	21,88	28,05	19359
	5	17	80	0,85	2,82	13,81	17,55	28,56	35,19	30,05	23398
	6	18	90	0,85	3,07	14,77	18,77	31,56	40,17	32,05	27842
16	4	20	85	0,92	3,00	16,34	20,96	30,18	32,60	36,06	37092
	5	21	95	0,92	3,25	17,65	22,44	37,36	48,54	38,06	43624
	6	22	105	0,92	3,50	18,61	23,67	38,70	50,38	40,06	50566
20	4	24	99	1,03	3,47	20,34	26,06	41,12	44,31	44,07	62688
	5	25	109	1,03	3,72	21,50	26,86	46,11	59,84	46,07	72445
	6	26	119	1,03	3,97	22,46	28,59	47,53	61,80	48,08	82594
24	4	28	114	1,14	3,95	24,32	31,14	52,87	56,91	52,08	97365
	5	29	124	1,14	4,20	24,94	31,99	54,82	71,09	54,09	111096
	6	30	134	1,14	4,45	26,33	33,53	56,32	73,15	56,09	125185
28	4	32	129	1,30	4,48	28,29	36,21	61,77	70,33	60,10	142326
	5	33	139	1,30	4,73	28,94	37,10	63,50	82,32	62,10	160796
	6	34	149	1,30	4,98	30,21	37,89	65,07	84,47	64,10	179573
32	4	36	144	1,46	5,05	32,25	41,27	70,37	84,52	68,11	198769
	5	37	154	1,46	5,30	32,93	42,19	72,17	93,52	70,11	222750
	6	38	164	1,46	5,55	34,09	43,02	73,80	95,77	72,12	246978
36	4	40	159	1,56	5,47	36,21	46,32	78,95	99,42	76,12	267888
	5	41	169	1,56	5,72	36,91	47,28	80,83	104,71	78,13	298159
	6	42	179	1,56	5,97	37,54	48,14	82,52	107,04	80,13	328606

Nella tabella sottostante sono indicati i momenti resistenti dei travetti considerando l'armatura aggiuntiva.

Momenti massimi di servizio (kNm) per travetti tralicciati TRIGON® (i = 62cm) con armature aggiuntive

Prestazioni di servizio riferite alla striscia di solaio larga 1 metro - R'_{ck} = 30 N/mm² Acciaio FeB44k

Tipo travetto	Armatura aggiuntiva	Altezza laterizio + altezza soletta (cm)																				
		12			16			20			24			28			32			36		
		+4	+5	+6	+4	+5	+6	+4	+5	+6	+4	+5	+6	+4	+5	+6	+4	+5	+6	+4	+5	+6
T1	1 ϕ 8	14,90	16,05	17,19	19,19	20,65	21,80	23,99	25,27	26,43	28,77	29,55	31,08	33,54	34,36	35,10	38,31	39,16	39,92	43,06	43,95	44,74
	1 ϕ 10	15,93	17,29	18,55	20,79	22,33	23,59	26,04	26,86	28,65	31,27	32,14	33,74	36,49	37,40	38,23	41,70	42,65	43,51	46,91	47,89	48,78
	1 ϕ 12	-	18,81	20,20	22,73	24,36	25,76	28,53	29,47	31,35	34,31	35,30	36,19	40,08	41,12	42,05	45,84	46,92	47,89	51,59	52,71	53,71
	1 ϕ 14	-	20,59	22,13	24,99	26,03	28,31	31,48	32,54	34,52	37,90	39,03	40,05	44,31	45,49	46,56	50,71	51,94	53,05	57,10	58,38	59,53
	1 ϕ 16	-	22,63	24,34	25,59	28,81	31,23	34,86	36,08	37,18	42,02	43,31	44,48	49,17	50,52	51,74	56,30	57,71	58,99	63,43	64,90	66,22
	1 ϕ 18	-	24,93	26,84	26,20	31,96	34,52	36,65	40,07	41,34	46,67	48,15	49,49	54,65	56,20	57,60	62,61	64,23	65,70	70,57	72,26	73,77
T3	1 ϕ 8	16,72	19,76	21,16	23,79	25,41	26,83	29,69	30,65	32,52	35,56	36,58	37,50	41,43	42,49	43,45	47,28	48,39	49,39	53,13	54,28	55,31
	1 ϕ 10	-	20,99	22,50	25,38	26,36	28,59	31,72	32,78	34,71	38,05	39,16	40,16	44,35	45,52	46,57	50,65	51,87	52,96	56,94	58,20	59,34
	1 ϕ 12	-	22,48	24,13	26,33	28,41	30,74	34,20	35,37	37,38	41,07	42,30	43,41	47,92	49,21	50,37	54,76	56,10	57,32	61,59	62,99	64,25
	1 ϕ 14	-	24,24	26,04	26,76	30,81	33,26	37,12	38,43	39,61	44,63	46,00	47,25	52,12	53,56	54,86	59,60	61,10	62,45	67,06	68,63	70,03
	1 ϕ 16	-	26,26	28,23	27,22	33,59	36,15	-	41,95	43,27	48,73	50,27	51,67	56,95	58,56	60,03	65,16	66,84	68,37	73,36	75,11	76,69
	1 ϕ 18	-	28,53	30,70	27,70	36,72	39,41	-	45,92	47,41	50,24	55,08	56,66	62,40	64,22	65,86	71,43	73,33	75,05	80,45	82,43	84,21
T5	1 ϕ 8	20,23	30,70	33,87	30,43	40,30	41,79	41,58	49,84	51,42	53,58	59,34	61,00	66,34	68,81	70,55	76,25	78,26	80,08	85,61	87,70	89,58
	1 ϕ 10	-	31,90	35,16	30,57	41,95	43,53	-	51,94	53,61	-	61,87	63,63	-	71,79	73,63	79,56	81,68	83,60	89,35	91,56	93,55
	1 ϕ 12	-	-	36,74	30,74	43,97	45,64	-	54,49	56,27	-	64,97	66,85	-	75,42	77,38	81,29	85,85	87,89	93,90	96,26	98,39
	1 ϕ 14	-	-	-	30,93	46,35	48,14	-	57,51	59,42	-	68,62	70,63	-	79,70	81,81	82,21	90,76	92,96	96,95	101,81	104,09
	1 ϕ 16	-	-	-	31,15	49,08	51,02	-	60,98	63,04	-	72,82	74,99	-	84,63	86,91	83,21	96,42	98,79	98,21	108,19	110,66
	1 ϕ 18	-	-	-	31,39	50,50	54,28	-	64,90	67,14	-	77,56	79,93	-	90,20	92,67	84,28	102,80	105,39	99,56	115,40	118,08
T7	1 ϕ 8	21,89	35,34	40,39	32,74	51,45	53,45	44,62	63,53	65,66	57,41	75,57	77,80	71,04	87,57	89,91	85,47	99,55	101,98	100,63	111,51	114,04
	1 ϕ 10	-	-	-	32,82	52,74	55,17	-	65,61	67,82	-	78,08	80,41	-	90,51	92,96	-	102,93	105,47	-	115,32	117,97
	1 ϕ 12	-	-	-	32,92	52,99	57,28	-	68,14	70,47	-	81,14	83,59	-	94,11	96,68	-	107,05	109,73	-	119,98	122,76
	1 ϕ 14	-	-	-	33,04	53,28	58,61	-	71,13	73,59	-	84,75	87,35	-	98,35	101,07	-	111,91	114,75	-	125,46	128,41
	1 ϕ 16	-	-	-	33,17	53,61	59,10	-	73,05	77,18	-	88,91	91,68	-	103,22	106,12	-	117,51	120,53	-	131,78	134,92
	1 ϕ 18	-	-	-	33,32	53,97	59,63	-	-	81,03	-	93,62	96,57	-	108,74	111,84	-	123,84	127,07	-	138,91	142,28

La sezione risulta pertanto verificata:

$M_{Ed} < M_{Rd}$ I.R.= 0.92

7.4. NUOVA COPERURA IN LEGNO

Come concluso nell' "Analisi di consistenza strutturale" la copertura lignea eccessivamente ammalorata sarà demolita e ricostruita, mantenendone la morfologia originaria. La demolizione dei maschi murari, prevista dal progetto architettonico, comporta l'introduzione di 9 capriate in legno massiccio di luce 16.5 m di cui si presentano le verifiche strutturali.

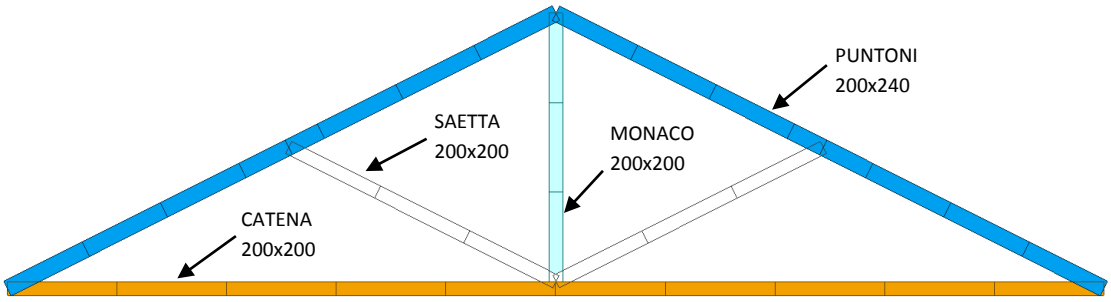


Figura 24. Modello elementi finiti nuova capriata in legno.

7.4.1. Arcarecci

Gli arcarecci saranno realizzati in legno C27 hanno sezione 140x160 e sono a passo 1.3 m.
I carichi agenti sono:

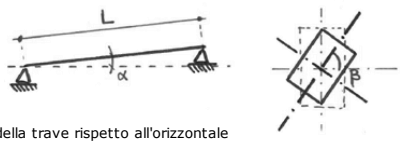
Carichi permanenti	0.85 kN/m^2
Neve	1.20 kN/m^2
Vento	0.09 kN/m^2 (sopravento)
	0.28 kN/m^2 (sottovento)

Categoria di legno: C27

$f_{m,g,k}$ =	27.0	MPa	-->	$f_{m,g,d}$ =	16.2	MPa				
$f_{t,0,g,k}$ =	16.0	MPa	-->	$f_{t,0,g,d}$ =	9.6	MPa	k_{mod} =	0.90		(coeff. correttivo dei valori di resistenza)
$f_{t,90,g,k}$ =	0.6	MPa	-->	$f_{t,90,g,d}$ =	0.4	MPa	k_m =	**0.70**		(coeff. di forma)
$f_{c,0,g,k}$ =	22.0	MPa	-->	$f_{c,0,g,d}$ =	13.2	MPa	γ_M =	1.50		(coeff. di sicurezza materiale)
$f_{c,90,g,k}$ =	2.6	MPa	-->	$f_{c,90,g,d}$ =	1.6	MPa				
$f_{v,g,k}$ =	2.8	MPa	-->	$f_{v,g,d}$ =	1.7	MPa	Classe di servizio 2			
							k_{def} =	0.80		(coeff. combinato di viscosità e umidità)
E_{mean} =	11500.0	MPa								
ρ =	4.50	kN/m^3					Livello di conoscenza:	**LC3**	--> FC =	1.00

Geometria della sezione

L =	**3200**	mm	A =	2.24E+04	mm^2
i =	**1300**	mm	W_z =	5.97E+05	mm^3
			W_y =	5.23E+05	mm^3
			I_z =	4.66E+07	mm^3
b =	**140**	mm			
h =	**160**	mm			



α = **0** ° inclinazione della trave rispetto all'orizzontale
β = **19** ° rotazione della trave attorno al baricentro

rapporto b/h = 0.88 --> rapporto ottimale = 0.7 --> b = 115 mm (con altezza fissata)
--> h = 200 mm (con base fissata)

Carichi

G_1 =	0.08 kN/m^2		γ_G =	**1.30**	γ_Q =	**1.50**
G_2 =	**0.85** kN/m^2					
Q_1 =	**1.20** kN/m^2	Neve (< 1000m slm)	$\psi_{0,1}$ =	0.5	$\psi_{2,1}$ =	0.0
Q_2 =	**0.50** kN/m^2	Cat. H - Coperture	$\psi_{0,2}$ =	0.0	$\psi_{2,2}$ =	0.0

SLU1: 3.0 kN/m^2
SLU2: 2.9 kN/m^2

SLU: 3.0 kN/m^2

q = 3.9 kN/m

$M_{Ed,z}$ =	4.73 kNm	Momento Flettente	$M_{Ed,y}$ =	1.30 kNm	Momento Flettente
$V_{Ed,z}$ =	5.91 kN	Sforzo di Taglio	$V_{Ed,y}$ =	2.04 kN	Sforzo di Taglio
N_{Ed} =	0.00 kN	Sforzo Normale			

Verifiche di resistenza

Pressoflessione

$\sigma_{c,0,d}$ = 0.0 N/mm^2
$\sigma_{m,z,d}$ = 7.92 N/mm^2
$\sigma_{m,y,d}$ = 2.49 N/mm^3

$(\sigma_{c,0,d} / f_{c,0,d})^2 + (\sigma_{m,z,d} / f_{m,z,d}) + k_m (\sigma_{m,y,d} / f_{m,y,d})$ =	0.60	<	1.0	**Verificato** **c.s. = 1.67**
$(\sigma_{c,0,d} / f_{c,0,d})^2 + k_m (\sigma_{m,z,d} / f_{m,z,d}) + (\sigma_{m,y,d} / f_{m,y,d})$ =	0.50	<	1.0	**Verificato** **c.s. = 2.01**

Taglio

$\tau_{d,z}$ =	0.40	N/mm^2	<	1.7	N/mm^2	**Verificato** **c.s. = 4.24**
$\tau_{d,y}$ =	0.14	N/mm^2	<	1.7	N/mm^2	**Verificato** **c.s. = 12.32**

Verifiche di deformabilità

	u_{inst}	$u_{fin,1}$	$u_{fin,2}$
peso proprio	0.26	0.5	--
permanente	2.8	5.1	--
accidentale 1	4.0	4.0	2.0
accidentale 2	1.7	1.7	0.0

$1+k_{def}$ = 1.8
$(1 + \psi_{2,1}\ k_{def})$ = 1.0 $(\psi_{0,1} + \psi_{2,1}\ k_{def})$ = 0.5
$(1 + \psi_{2,2}\ k_{def})$ = 1.0 $(\psi_{0,2} + \psi_{2,2}\ k_{def})$ = 0.0

u_{inst} =	8.7	mm					
$u_{net,fin}$ =	9.5	mm	<	L/250 =	12.8	mm	**Verificato** L/337
$u_{2,in}$ =	5.6	mm	<	L/300 =	10.7	mm	**Verificato** L/569
$u_{2,fin}$ =	4.0	mm	<	L/200 =	16.0	mm	**Verificato** L/806

7.4.2. Puntoni

I puntoni sono profili di dimensione 200x240 mm. In Figura 25, Figura 26 e Figura 27 sono rappresentati i diagrammi delle sollecitazioni, segue la verifica di resistenza.

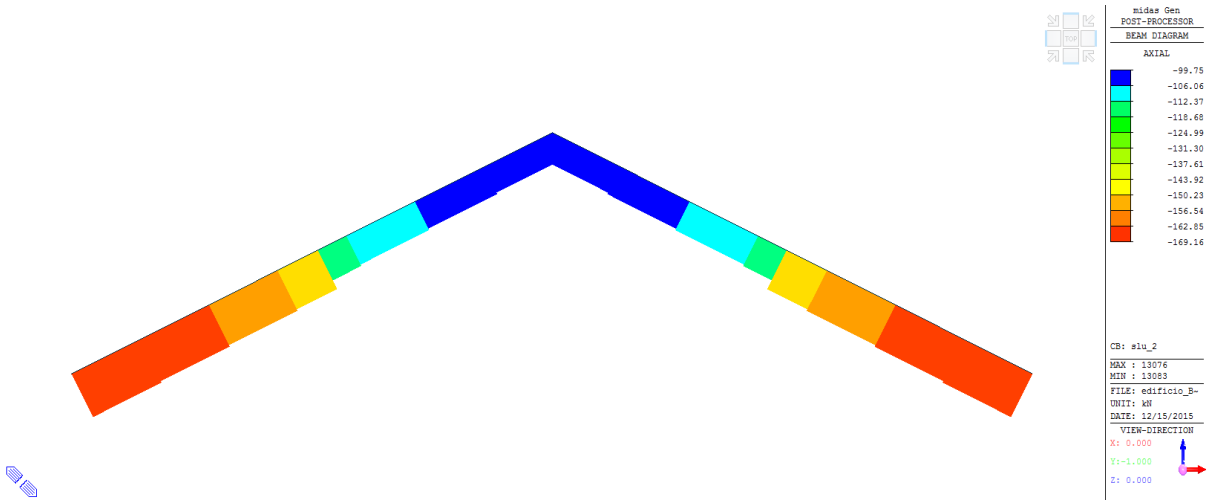


Figura 25. Diagramma dello sforzo assiale nei puntoni della capriata.

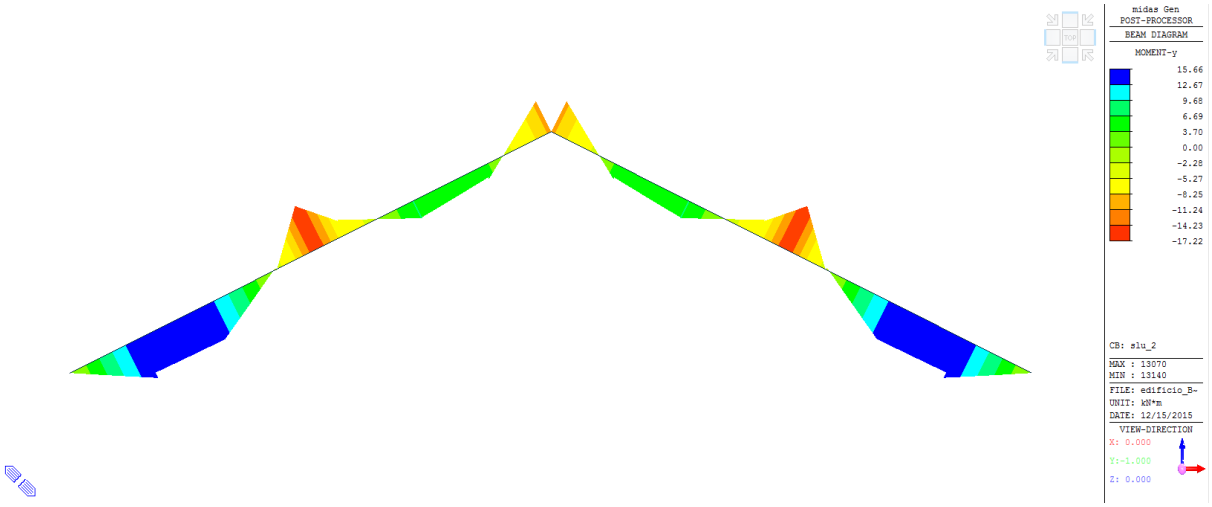


Figura 26. Diagramma del momento flettente nei puntoni della capriata.

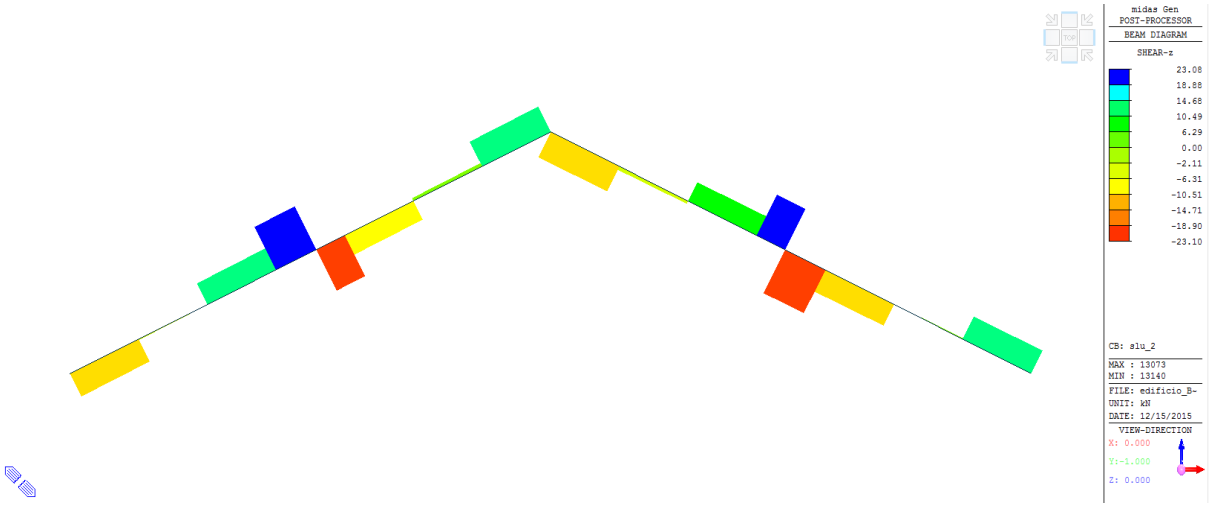


Figura 27. Diagramma del taglio nei puntoni della capriata.

Materiale

k_{mod} =	**0.9**			γ_M =	**1.5**
k_m =	**0.7**				
$f_{m,g,k}$ =	**27.0**	-->	$f_{m,g,d}$ =	16.20	MPa
$f_{t,0,g,k}$ =	**16.0**	-->	$f_{t,0,g,d}$ =	9.60	MPa
$f_{t,90,g,k}$ =	**0.6**	-->	$f_{t,90,g,d}$ =	0.36	MPa
$f_{c,0,g,k}$ =	**22.0**	-->	$f_{c,0,g,d}$ =	13.20	MPa
$f_{c,90,g,k}$ =	**2.6**	-->	$f_{c,90,g,d}$ =	1.56	MPa
$f_{v,g,k}$ =	**2.8**	-->	$f_{v,g,d}$ =	1.68	MPa

Geometria

b =	**200**	mm	
h =	**240**	mm	
A =	48000	mm^2	
W_y =	1920000	mm^3	
W_z =	1600000	mm^3	

Sollecitazione

N =	**170.0**	kN
M_y =	**18.0**	kNm
M_z =	**0.0**	kNm
V =	**23.0**	kN

Verifiche a tensoflessione

σ_t =	3.54 MPa
$\sigma_{y,m}$ =	9.38 MPa
$\sigma_{z,m}$ =	0.00 MPa

$$\frac{\sigma_{t,0,d}}{f_{t,0,d}} + \frac{\sigma_{m,y,d}}{f_{m,y,d}} + k_m \frac{\sigma_{m,z,d}}{f_{m,z,d}} = 0.95 < 1$$ **Verificato**

$$\frac{\sigma_{t,0,d}}{f_{t,0,d}} + k_m \frac{\sigma_{m,y,d}}{f_{m,y,d}} + \frac{\sigma_{m,z,d}}{f_{m,z,d}} = 0.77 < 1$$ **Verificato**

Verifiche a taglio

τ_d = 0.72 MPa < 1.68 MPa **Verificato**

7.4.3. Catena

La catena è un profilo 200x200 mm. In Figura 28, Figura 29 e Figura 30 sono rappresentati i diagrammi delle sollecitazioni, segue la verifica della resistenza.

Figura 28. Diagramma dello sforzo assiale nella catena della capriata.

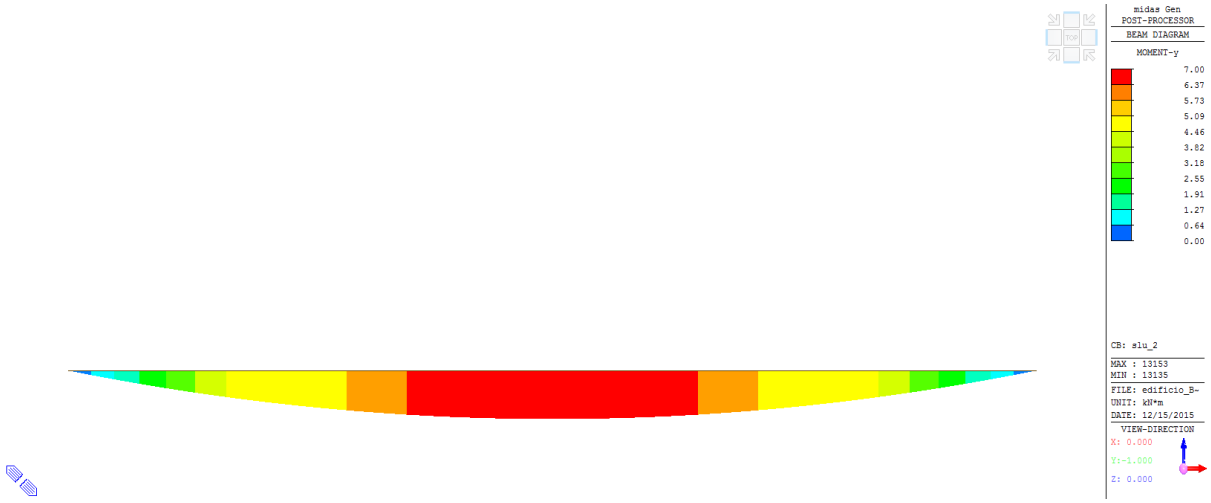


Figura 29. Diagramma del momento flettente nella catena della capriata.

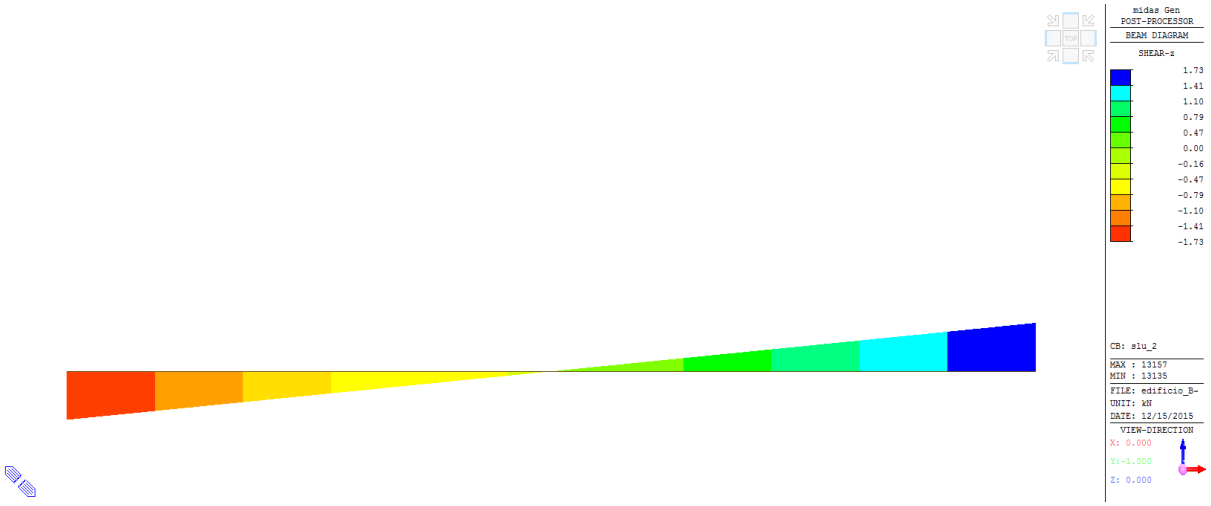


Figura 30. Diagramma del taglio nella catena della capriata.

Materiale

k_{mod} =	**0.9**			γ_M =	**1.5**
k_m =	**0.7**				
$f_{m,g,k}$ =	**27.0**	-->	$f_{m,g,d}$ =	16.20	MPa
$f_{t,0,g,k}$ =	**16.0**	-->	$f_{t,0,g,d}$ =	9.60	MPa
$f_{t,90,g,k}$ =	**0.6**	-->	$f_{t,90,g,d}$ =	0.36	MPa
$f_{c,0,g,k}$ =	**22.0**	-->	$f_{c,0,g,d}$ =	13.20	MPa
$f_{c,90,g,k}$ =	**2.6**	-->	$f_{c,90,g,d}$ =	1.56	MPa
$f_{v,g,k}$ =	**2.8**	-->	$f_{v,g,d}$ =	1.68	MPa

Geometria

b =	**200**	mm	
h =	**200**	mm	
A =	40000	mm^2	
W_y =	1333333.3	mm^3	
W_z =	1333333.3	mm^3	

Sollecitazione

N =	**146.0**	kN
M_y =	**7.0**	kNm
M_z =	**0.0**	kNm
V =	**2.0**	kN

Verifiche a tensoflessione

σ_t =	3.65 MPa	$\frac{\sigma_{t,0,d}}{f_{t,0,d}} + \frac{\sigma_{m,y,d}}{f_{m,y,d}} + k_m \frac{\sigma_{m,z,d}}{f_{m,z,d}}$ =	0.70	< 1 **Verificato**
$\sigma_{y,m}$ =	5.25 MPa			
$\sigma_{z,m}$ =	0.00 MPa			
		$\frac{\sigma_{t,0,d}}{f_{t,0,d}} + k_m \frac{\sigma_{m,y,d}}{f_{m,y,d}} + \frac{\sigma_{m,z,d}}{f_{m,z,d}}$ =	0.61	< 1 **Verificato**

Verifiche a taglio

τ_d =	0.08 MPa	<	1.68	MPa	**Verificato**

7.5. COPERTURA SPAZIO EVENTI

La copertura dello spazio eventi viene realizzata con una struttura metallica a telaio:

- Colonne circolari cave ϕ168.3x12.5,
- travi HEA200,
- solaio in lamiera grecata autoportante tipo EGB 2000 o equivalente spessore 175 mm.

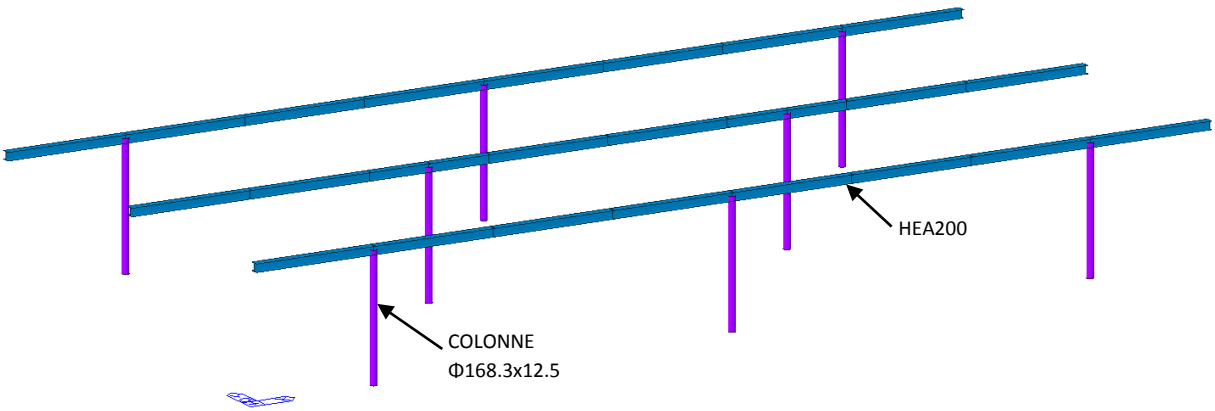


Figura 31 – Modello Midas della struttura di copertura dello spazio eventi.

7.5.1. Lamiera grecata

La lamiera grecata si appoggia sulle travi principali poste a passo 5.4 m. Si considera il carico agente:

Carichi permanenti	**0.95**	**kN/ m²**
Controsoffitto	0.20	kN/m²
Impianti	0.05	kN/m²
Finitura	0.20	kN/m²
Lamiera grecata	0.50	kN/m²
Neve	**1.20**	**kN/m**

EGB 2000® GL — ▲▲▲ 2 campate 2 spans

Spessore Thickness	Distanza fra gli appoggi in m - Supports spacing (m)																
mm	4,00	4,25	4,50	4,75	5,00	5,25	5,50	5,75	6,00	6,25	6,50	6,75	7,00	7,25	7,50	7,75	8,00
	Carico massimo uniformemente distribuito in kN/m² - Max load capacity kN/m²																
0,8	6,01	5,34	4,77	4,28	3,86	3,50	3,19	2,91	2,67	2,45	2,26	2,09	1,94	1,80	1,68	1,56	1,46
1,0	7,71	6,83	6,10	5,47	4,93	4,47	4,06	3,71	3,40	3,12	2,88	2,66	2,47	2,29	2,13	1,99	1,86
1,2	9,50	8,42	7,51	6,74	6,08	5,51	5,01	4,57	4,19	3,85	3,55	3,28	3,04	2,83	2,63	2,45	2,29
1,35	10,75	9,53	8,50	7,63	6,88	6,23	5,67	5,18	4,74	4,36	4,02	3,72	3,44	3,20	2,98	2,78	2,60

Come indicato in tabella il massimo carico che può agire sulla lamiera è 3.19 kN/m², che risulta compatibile con i carichi agenti (2.15 kN/m²).

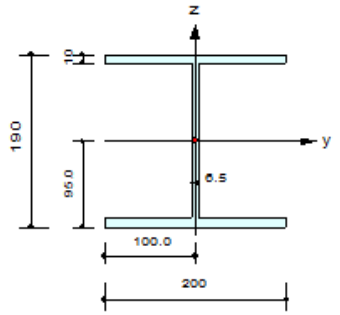
7.5.2. Travi HEA200

I carichi agenti sulle travi sono:

Carichi permanenti	**0.95 x 5.40 = 5.13**	**kN/m**
Controsoffitto	0.20	kN/m²
Impianti	0.05	kN/m²
Finitura	0.20	kN/m²
Lamiera grecata	0.50	kN/m²
Neve	**1.20 x 5.40 = 6.48**	**kN/m**

1. Design Information

Design Code : Eurocode3:05
Unit System : kN, mm
Member No : 23
Material : S355 (No:1)
(Fy = 0.35500, Es = 210.000)
Section Name : HEA200 (No:2)
(Rolled : HEA200).
Member Length : 9000.00



2. Member Forces

Axial Force	Fxx = 0.00000 (LCB: 1, POS:J)
Bending Moments	My = -127625, Mz = 3927.95
End Moments	Myi = -87260, Myj = -127625 (for Lb)
	Myi = -87260, Myj = -127625 (for Ly)
	Mzi = 2991.73, Mzj = 3927.95 (for Lz)
Shear Forces	Fyy = -4.8984 (LCB: 2, POS:J)
	Fzz = 80.6583 (LCB: 1, POS:J)

Depth	190.000	Web Thick	6.50000
Top F Width	200.000	Top F Thick	10.0000
Bot.F Width	200.000	Bot.F Thick	10.0000
Area	5380.00	Asz	1235.00
Qyb	31304.8	Qzb	5000.00
Iyy	36900000	Izz	13400000
Ybar	100.000	Zbar	95.0000
Wely	389000	Welz	134000
ry	82.8000	rz	49.8000

3. Design Parameters

Unbraced Lengths Ly = 9000.00, Lz = 9000.00, Lb = 0.00000
Effective Length Factors Ky = 1.00, Kz = 1.00
Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

4. Checking Results

Slenderness Ratio
L/r = 180.7 < 300.0 (LCB: 11)..... O.K
Axial Resistance
N_Ed/Nt_Rd = 0.00/1909.90 = 0.000 < 1.000 ..... O.K
Bending Resistance
M_Edy/M_Rdy = 127625/ 152650 = 0.836 < 1.000 ..... O.K
M_Edz/M_Rdz = 3927.9/71637.4 = 0.055 < 1.000 ..... O.K
Combined Resistance
RNRd = MAX[M_Edy/Mny_Rd, M_Edz/Mnz_Rd]
Rmax1 = (M_Edy/Mny_Rd)^Alpha + (M_Edz/Mnz_Rd)^Beta
Rcom = N_Ed/(A*fy/Gamma_M0), Rbend = M_Edy/My_Rd + M_Edz/Mz_Rd
Rmax = MAX[RNRd, Rmax1, (Rcom+Rbend)] = 0.891 < 1.000 ..... O.K
Shear Resistance
V_Edy/Vy_Rd = 0.006 < 1.000 ..... O.K
V_Edz/Vz_Rd = 0.218 < 1.000 ..... O.K

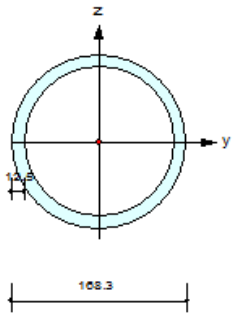
5. Deflection Checking Results

L/ 200.0 = 45.0000 > 34.2086 (Memb:23, LCB: 3, POS:4333.3mm, Dir-Z)..... O.K

7.5.3. Colonne ϕ168.3x12.5

1. Design Information

Design Code : Eurocode3:05
Unit System : kN, mm
Member No : 4
Material : S355 (No:1)
(Fy = 0.35500, Es = 210.000)
Section Name : pilastri_168,3x12,5 (No:1)
(Built-up Section).
Member Length : 3050.00



Outer Dia.	168.300	Well Thick	12.5000
Area	6118.25	Asz	3059.13
Qyb	6107.47	Qzb	6107.47
Iyy	18683527	Izz	18683527
Ybar	84.1500	Zbar	84.1500
Wely	222026	Welz	222026
ry	55.2606	rz	55.2606

2. Member Forces

Axial Force Fxx = -96.790 (LCB: 2, POS:I)
Bending Moments My = 0.00000, Mz = -10663
End Moments Myi = 0.00000, Myj = 0.00000 (for Lb)
Myi = 0.00000, Myj = 0.00000 (for Ly)
Mzi = -10663, Mzj = 0.00000 (for Lz)
Shear Forces Fyy = -3.4962 (LCB: 2, POS:J)
Fzz = 0.00000 (LCB: 3, POS:I)

3. Design Parameters

Unbraced Lengths Ly = 3050.00, Lz = 3050.00, Lb = 3050.00
Effective Length Factors Ky = 1.00, Kz = 1.00
Equivalent Uniform Moment Factors Cmy = 0.85, Cmz = 0.85, CmLT = 1.00

4. Checking Results

Slenderness Ratio
KL/r = 55.2 < 200.0 (LCB: 11)..... O.K
Axial Resistance
N_Ed/MIN[Nc_Rd, Nb_Rd] = 96.79/2171.98 = 0.045 < 1.000 ..... O.K
Bending Resistance
M_Edy/M_Rdy = 0/ 107945 = 0.000 < 1.000 ..... O.K
M_Edz/M_Rdz = 10663/ 107945 = 0.099 < 1.000 ..... O.K
Combined Resistance
RNRd = MAX[M_Edy/Mny_Rd, M_Edz/Mnz_Rd]
Room = N_Ed/(A*fy/Gamma_M0), Rbend = M_Edy/My_Rd + M_Edz/Mz_Rd
Rc_LT1 = N_Ed/(Xiy*A*fy/Gamma_M1)
Rb_LT1 = (kyy*M_Edy)/(Xi_LT*Wply*fy/Gamma_M1) + (kyz*Msdz)/(Wplz*fy/Gamma_M1)
Rc_LT2 = N_Ed/(Xiz*A*fy/Gamma_M1)
Rb_LT2 = (Kzy*M_Edy)/(Xi_LT*Wply*fy/Gamma_M1) + (Kzz*Msdz)/(Wplz*fy/Gamma_M1)
Rmax = MAX[RNRd, (Room+Rbend), MAX(Rc_LT1+Rb_LT1, Rc_LT2+Rb_LT2)] = 0.143 < 1.000 .. O.K
Shear Resistance
V_Edy/Vy_Rd = 0.004 < 1.000 ..... O.K
V_Edz/Vz_Rd = 0.000 < 1.000 ..... O.K

5. Deflection Checking Results

L/ 300.0 = 10.1667 > 5.6470 (Memb:4, LCB: 4, Dir-Y)..... O.K

7.6. PENSILINA

La pensilina viene realizzata con una struttura metallica a telaio:

- colonne circolari cave ϕ114.3x5,
- travi IPE200,
- pannelli metallici coibentati tipo Isolpack Delta 5 o equivalente spessore 100 mm.

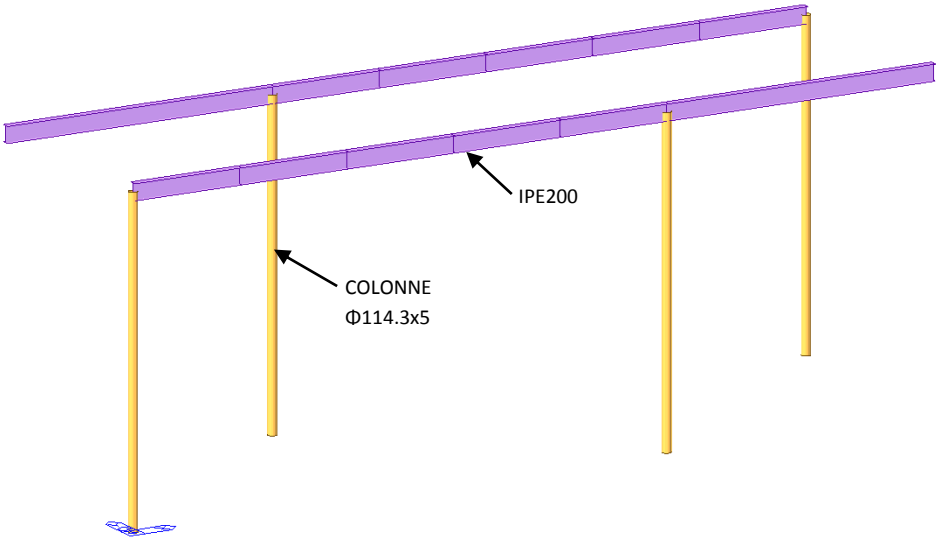


Figura 32 – Modello Midas della struttura della pensilina.

7.6.1. Pannello ci copertura

Il pannello sandwich si appoggia sulle travi principali poste a passo 2.5 m. Si considera il carico agente:

Neve 1.2 kN/m^2

CARICO MASSIMO UNIFORMEMENTE DISTRIBUITO (daN/m²) - FRECCIA ≤1/100 L *MAXIMUM UNIFORMLY DISTRIBUTED LOAD (daN/m²) - DEFLECTION ≤1/100 L*											
Spessore Thickness (mm)	supporti *supports*	Distanza tra gli appoggi "L" in metri / *Pitch "L" in metres between the supports* L									
		1.50	**2.00**	**2.50**	**3.00**	**3.50**	**4.00**	**4.50**	**5.00**	**5.50**	**6.00**
30	0,5+0,5	*691*	*310*	*170*	*104*	*69*	*47*	*33*	*24*	*18*	*13*
40	0,5+0,5	*766*	*359*	*206*	*132*	*90*	*64*	*47*	*35*	*27*	*21*
50	0,5+0,5	*838*	*404*	*241*	*159*	*112*	*82*	*61*	*47*	*37*	*29*
60	0,5+0,5	*907*	*455*	*277*	*187*	*134*	*100*	*76*	*60*	*47*	*38*
80	0,5+0,5	*1058*	*559*	*355*	*248*	*183*	*140*	*110*	*88*	*71*	*58*
100	0,5+0,5	*1195*	*655*	*428*	*306*	*231*	*180*	*144*	*117*	*96*	*80*
120	0,5+0,5	*1331*	*751*	*501*	*365*	*279*	*221*	*179*	*147*	*122*	*103*
140	0,5+0,5	*1467*	*846*	*574*	*424*	*328*	*263*	*214*	*178*	*149*	*126*

Come indicato in tabella il massimo carico che può agire sulla lamiera è 4.28 kN/m^2 che risulta compatibile con i carichi agenti. Tale tipologia di copertura risulta idonea a coprire anche lo spazio esistente tra lo spazio eventi e la pensilina. Trattandosi di una luce pari a 4.50 m, il massimo carico è 1.44 kN/m^2

compatibile con l'azione della neve.

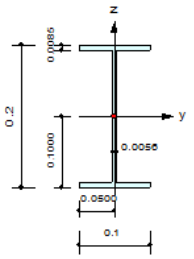
7.6.2. Travi IPE200

I carichi agenti sulle travi sono:

Carichi permanenti	0.50 x 1.25 = 0.63	kN/m
Neve	1.20 x 1.25 = 1.50	kN/m
Vento	0.69 x 1.25 = 0.86	kN/m

1. Design Information

Design Code : Eurocode3:05
Unit System : kN, m
Member No : 5
Material : S355 (No:1)
(Fy = 355000, Es = 210000000)
Section Name : IPE200 (No:1)
(Rolled : IPE200).
Member Length : 10.5000



2. Member Forces

Axial Force Fxx = -0.5778 (LCB: 1, POS:1/2)
Bending Moments My = -30.352, Mz = 0.00000
End Moments Myi = 0.00000, Myj = -2.0994 (for Lb)
Myi = -30.352, Myj = -2.0994 (for Ly)
Mzi = 0.00000, Mzj = 0.00000 (for Lz)
Shear Forces Fyy = -0.0726 (LCB: 12, POS:J)
Fzz = 12.7437 (LCB: 1, POS:J)

Depth	0.20000	Web Thick	0.00560
Top F Width	0.10000	Top F Thick	0.00850
Bot.F Width	0.10000	Bot.F Thick	0.00850
Area	0.00285	Asz	0.00112
Qyb	0.01872	Qzb	0.00125
Iyy	0.00002	Izz	0.00000
Ybar	0.05000	Zbar	0.10000
Wely	0.00019	Welz	0.00003
ry	0.08230	rz	0.02282

3. Design Parameters

Unbraced Lengths Ly = 7.00000, Lz = 10.5000, Lb = 0.00000
Effective Length Factors Ky = 1.00, Kz = 1.00
Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

4. Checking Results

Axial Resistance
N_Ed/MIN[Nc_Rd, Nb_Rd] = 0.58/1011.75 = 0.001 < 1.000 ..... O.K
Bending Resistance
M_Edy/M_Rdy = 30.3517/78.1000 = 0.389 < 1.000 ..... O.K
M_Edz/M_Rdz = 0.0000/15.5968 = 0.000 < 1.000 ..... O.K
Combined Resistance
RNRd = MAX[M_Edy/Mny_Rd, M_Edz/Mnz_Rd]
Rcom = N_Ed/(A*fy/Gamma_M0), Rbend = M_Edy/My_Rd + M_Edz/Mz_Rd
Rc_LT1 = N_Ed/(Xiy*A*fy/Gamma_M1)
Rb_LT1 = (kyy*M_Edy)/(Xi_LT*Wply*fy/Gamma_M1) + (kyz*Msdz)/(Wplz*fy/Gamma_M1)
Rc_LT2 = N_Ed/(Xiz*A*fy/Gamma_M1)
Rb_LT2 = (Kzy*M_Edy)/(Xi_LT*Wply*fy/Gamma_M1) + (Kzz*Msdz)/(Wplz*fy/Gamma_M1)
Rmax = MAX[RNRd, (Rcom+Rbend), MAX(Rc_LT1+Rb_LT1, Rc_LT2+Rb_LT2)] = 0.392 < 1.000 .. O.K
Shear Resistance
V_Edy/Vy_Rd = 0.000 < 1.000 ..... O.K
V_Edz/Vz_Rd = 0.044 < 1.000 ..... O.K

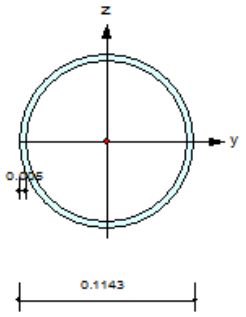
5. Deflection Checking Results

L/ 200.0 = 0.0525 > 0.0345 (Memb:5, LCB: 4, POS: 1.6m, Dir-Z)..... O.K

7.6.3. Colonne ϕ114.3x5

1. Design Information

Design Code : Eurocode3:05
Unit System : kN, m
Member No : 2
Material : S355 (No:1)
(Fy = 355000, Es = 210000000)
Section Name : pilastri_114,3x5 (No:2)
(Built-up Section).
Member Length : 4.00000



2. Member Forces

Axial Force Fxx = -38.283 (LCB: 1, POS:I)
Bending Moments My = -1.3241, Mz = 0.00000
End Moments Myi = -1.3241, Myj = 0.98718 (for Lb)
Myi = -1.3241, Myj = 0.98718 (for Ly)
Mzi = 0.00000, Mzj = 0.00000 (for Lz)
Shear Forces Fyy = -0.1347 (LCB: 12, POS:I)
Fzz = -0.5778 (LCB: 1, POS:I)

Outer Dia.	0.11430	Wall Thick	0.00500
Area	0.00172	Asz	0.00086
Qyb	0.00299	Qzb	0.00299
Iyy	0.00000	Izz	0.00000
Ybar	0.05715	Zbar	0.05715
Wely	0.00004	Welz	0.00004
ry	0.03868	rz	0.03868

3. Design Parameters

Unbraced Lengths Ly = 4.00000, Lz = 4.00000, Lb = 4.00000
Effective Length Factors Ky = 1.00, Kz = 1.00
Equivalent Uniform Moment Factors Cmy = 0.85, Cmz = 0.85, CmLT = 1.00

4. Checking Results

Slenderness Ratio
KL/r = 103.4 < 200.0 (LCB: 14)..... O.K
Axial Resistance
N_Ed/MIN[Nc_Rd, Nb_Rd] = 38.283/269.093 = 0.142 < 1.000 ..... O.K
Bending Resistance
M_Edy/M_Rdy = 1.3241/21.2198 = 0.062 < 1.000 ..... O.K
M_Edz/M_Rdz = 0.0000/21.2198 = 0.000 < 1.000 ..... O.K
Combined Resistance
RNRd = MAX[M_Edy/Mny_Rd, M_Edz/Mnz_Rd]
Room = N_Ed/(A*fy/Gamma_M0), Rbend = M_Edy/My_Rd + M_Edz/Mz_Rd
Rc_LT1 = N_Ed/(Xiy*A*fy/Gamma_M1)
Rb_LT1 = (kyy*M_Edy)/(Xi_LT*Wply*fy/Gamma_M1) + (kyz*Msdz)/(Wplz*fy/Gamma_M1)
Rc_LT2 = N_Ed/(Xiz*A*fy/Gamma_M1)
Rb_LT2 = (Kzy*M_Edy)/(Xi_LT*Wply*fy/Gamma_M1) + (Kzz*Msdz)/(Wplz*fy/Gamma_M1)
Rmax = MAX[RNRd, (Room+Rbend), MAX(Rc_LT1+Rb_LT1, Rc_LT2+Rb_LT2)] = 0.199 < 1.000 .. O.K
Shear Resistance
V_Edy/Vy_Rd = 0.001 < 1.000 ..... O.K
V_Edz/Vz_Rd = 0.003 < 1.000 ..... O.K

5. Deflection Checking Results

L/ 300.0 = 0.0133 > 0.0057 (Memb:2, LCB: 4, Dir-X)..... O.K

INTERVENTO DI TRASFORMAZIONE DELL'EX CASERMA MAMELI

viale Suzzani 125, Milano

RELAZIONE DI CALCOLO DELLE STRUTTURE **MAM-PA-Spr002_all. 1**

ALLEGATO 1 – tabelle di verifica dei setti in muratura Milan Ingegneria

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU1

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1280.92	6.21	-1.26	1280.92	6.21	1.26	0.22	1.70	8804.81	**0.13**	6.21	1.00	0.05	860.74	**0.01**
2	0.97	0.36	4.50	-95.91	9.69	7.37	95.91	9.69	7.37	0.27	1.70	37.67	**0.20**	9.69	1.50	0.05	37.42	**0.26**
3	0.96	0.36	4.50	-98.10	16.38	13.01	98.10	16.38	13.01	0.28	1.70	37.84	**0.34**	16.38	1.50	0.05	37.52	**0.44**
4	13.53	0.36	4.50	-1130.28	21.17	29.23	1130.28	21.17	29.23	0.23	1.70	6418.42	**0.14**	21.17	1.00	0.05	733.63	**0.03**
5	13.53	0.36	4.50	-1145.73	-33.00	-35.78	1145.73	33.00	35.78	0.24	1.70	6489.14	**0.14**	33.00	1.00	0.05	737.42	**0.04**
6	9.16	0.36	4.50	-1268.20	-31.05	588.36	1268.20	31.05	588.36	0.38	1.70	4262.48	**0.23**	31.05	1.00	0.05	607.94	**0.05**
7	9.16	0.36	4.50	-1340.50	-21.35	-4.32	1340.50	21.35	4.32	0.41	1.70	4412.33	**0.24**	21.35	1.00	0.05	622.30	**0.03**
8	0.94	0.36	4.50	-130.55	19.43	14.71	130.55	19.43	14.71	0.39	1.70	44.98	**0.33**	19.43	1.50	0.05	41.65	**0.47**
9	0.94	0.36	4.50	-128.25	17.57	13.03	128.25	17.57	13.03	0.38	1.70	44.47	**0.29**	17.57	1.50	0.05	41.34	**0.43**
10	16.21	0.36	4.50	-1665.81	-12.52	-11.89	1665.81	12.52	11.89	0.29	1.70	10834.22	**0.17**	12.52	1.00	0.05	952.53	**0.01**
11	2.03	0.36	4.50	-185.47	-56.59	-43.83	185.47	56.59	43.83	0.25	1.70	155.19	**0.28**	56.59	1.50	0.05	75.94	**0.75**
12	2.03	0.36	4.50	-190.58	-55.69	-43.66	190.58	55.69	43.66	0.26	1.70	158.53	**0.28**	55.69	1.50	0.05	76.75	**0.73**
13	4.00	0.36	4.50	-241.75	10.26	10.57	241.75	10.26	10.57	0.17	1.70	427.33	**0.10**	10.26	1.13	0.05	171.40	**0.06**
14	5.01	0.36	4.50	-443.16	55.39	-74.20	443.16	55.39	74.20	0.25	1.70	921.35	**0.14**	55.39	1.00	0.05	277.65	**0.20**
15	1.00	0.36	4.50	-164.89	3.90	4.59	164.89	3.90	4.59	0.46	1.70	56.31	**0.27**	3.90	1.50	0.05	47.66	**0.08**
16	1.39	0.36	4.50	-279.36	5.58	4.72	279.36	5.58	4.72	0.56	1.70	119.14	**0.33**	5.58	1.50	0.05	72.21	**0.08**
17	1.38	0.36	4.50	-118.44	-36.95	-26.09	118.44	36.95	26.09	0.24	1.70	68.24	**0.38**	36.95	1.50	0.05	50.40	**0.73**
18	4.00	0.36	4.50	-330.04	-8.32	-8.66	330.04	8.32	8.66	0.23	1.70	555.38	**0.13**	8.32	1.13	0.05	191.89	**0.04**
19	4.00	0.36	4.50	-203.08	3.86	7.17	203.08	3.86	7.17	0.14	1.70	366.52	**0.08**	3.86	1.13	0.05	161.61	**0.02**
22	4.00	0.36	4.50	-212.42	-3.57	1.17	212.42	3.57	1.17	0.15	1.70	381.47	**0.09**	3.57	1.13	0.05	164.03	**0.02**
23	4.00	0.36	4.50	-204.61	2.62	3.84	204.61	2.62	3.84	0.14	1.70	368.98	**0.08**	2.62	1.13	0.05	162.01	**0.02**
26	4.00	0.36	4.50	-212.45	-1.25	-14.07	212.45	1.25	14.07	0.15	1.70	381.52	**0.09**	1.25	1.13	0.05	164.04	**0.01**
27	4.00	0.36	4.50	-204.93	1.66	2.54	204.93	1.66	2.54	0.14	1.70	369.49	**0.08**	1.66	1.13	0.05	162.09	**0.01**
30	4.00	0.36	4.50	-205.23	-2.25	-3.50	205.23	2.25	3.50	0.14	1.70	369.98	**0.08**	2.25	1.13	0.05	162.17	**0.01**
31	4.00	0.36	4.50	-202.84	2.44	2.16	202.84	2.44	2.16	0.14	1.70	366.13	**0.08**	2.44	1.13	0.05	161.55	**0.02**
34	4.00	0.36	4.50	-204.61	-4.56	-5.26	204.61	4.56	5.26	0.14	1.70	368.98	**0.08**	4.56	1.13	0.05	162.01	**0.03**
35	4.47	0.36	4.50	-271.55	0.56	11.50	271.55	0.56	11.50	0.17	1.70	536.04	**0.10**	0.56	1.01	0.05	214.43	**0.00**
36	4.18	0.36	4.50	-284.96	38.27	5.45	284.96	38.27	5.45	0.19	1.70	517.52	**0.11**	38.27	1.08	0.05	195.31	**0.20**
37	2.15	0.36	4.50	-228.15	2.69	6.07	228.15	2.69	6.07	0.29	1.70	195.23	**0.17**	2.69	1.50	0.05	85.31	**0.03**
38	7.85	0.36	4.50	-653.26	-38.50	234.10	653.26	38.50	234.10	0.23	1.70	2153.87	**0.14**	38.50	1.00	0.05	425.03	**0.09**
39	2.04	0.36	4.50	-135.06	1.01	5.30	135.06	1.01	5.30	0.18	1.70	120.23	**0.11**	1.01	1.50	0.05	67.70	**0.01**
40	0.94	0.36	4.50	-61.62	3.17	-0.10	61.62	3.17	0.10	0.18	1.70	25.31	**0.11**	3.17	1.50	0.05	31.08	**0.10**
41	1.98	0.36	4.50	-133.96	-1.90	-2.52	133.96	1.90	2.52	0.19	1.70	115.37	**0.11**	1.90	1.50	0.05	66.22	**0.03**
42	2.07	0.36	4.50	-224.30	-27.21	-21.79	224.30	27.21	21.79	0.30	1.70	183.79	**0.18**	27.21	1.50	0.05	82.82	**0.33**
43	1.20	0.36	4.50	-193.59	-2.80	-4.06	193.59	2.80	4.06	0.45	1.70	80.13	**0.26**	2.80	1.50	0.05	56.65	**0.05**
44	2.06	0.36	4.50	-132.16	4.19	4.69	132.16	4.19	4.69	0.18	1.70	119.34	**0.10**	4.19	1.50	0.05	67.60	**0.06**
45	1.53	0.36	4.50	-245.01	-0.29	-0.83	245.01	0.29	0.83	0.44	1.70	129.73	**0.26**	0.29	1.50	0.05	72.01	**0.00**
46	2.52	0.36	4.50	-140.20	6.97	14.78	140.20	6.97	14.78	0.15	1.70	157.76	**0.09**	6.97	1.50	0.05	78.72	**0.09**
47	0.90	0.36	4.50	-143.48	1.26	1.66	143.48	1.26	1.66	0.44	1.70	44.78	**0.26**	1.26	1.50	0.05	42.27	**0.03**
48	2.31	0.36	4.50	-194.09	44.45	23.66	194.09	44.45	23.66	0.23	1.70	187.97	**0.14**	44.45	1.50	0.05	83.69	**0.53**
49	3.17	0.36	4.50	-162.82	-0.32	20.51	162.82	0.32	20.51	0.14	1.70	232.59	**0.09**	0.32	1.42	0.05	101.89	**0.00**
50	2.44	0.36	4.50	-165.98	4.56	-7.88	165.98	4.56	7.88	0.19	1.70	176.02	**0.11**	4.56	1.50	0.05	81.76	**0.06**
51	2.69	0.36	4.50	-275.55	8.80	1.34	275.55	8.80	1.34	0.28	1.70	297.64	**0.17**	8.80	1.50	0.05	105.25	**0.08**
52	2.68	0.36	4.50	-246.22	-0.75	-2.53	246.22	0.75	2.53	0.26	1.70	271.66	**0.15**	0.75	1.50	0.05	100.47	**0.01**
53	2.25	0.36	4.50	-156.29	18.83	10.60	156.29	18.83	10.60	0.19	1.70	152.35	**0.11**	18.83	1.50	0.05	75.96	**0.25**
54	2.39	0.36	4.50	-145.28	-3.36	6.94	145.28	3.36	6.94	0.17	1.70	153.32	**0.10**	3.36	1.50	0.05	76.96	**0.04**
55	6.88	0.36	4.50	-646.39	-11.93	25.24	646.39	11.93	25.24	0.26	1.70	1821.99	**0.15**	11.93	1.00	0.05	390.28	**0.03**
56	9.94	0.36	4.50	-872.71	-3.08	33.17	872.71	3.08	33.17	0.24	1.70	3605.32	**0.14**	3.08	1.00	0.05	549.29	**0.01**
57	3.07	0.36	4.50	-174.60	-0.03	-7.36	174.60	0.03	7.36	0.16	1.70	238.71	**0.09**	0.03	1.47	0.05	98.88	**0.00**
58	5.47	0.36	4.50	-413.51	-32.97	24.39	413.51	32.97	24.39	0.21	1.70	966.60	**0.12**	32.97	1.00	0.05	285.71	**0.12**
59	5.50	0.36	4.50	-394.30	25.04	-51.80	394.30	25.04	51.80	0.20	1.70	934.89	**0.12**	25.04	1.00	0.05	281.74	**0.09**
60	2.63	0.36	4.50	-145.80	-2.08	-0.63	145.80	2.08	0.63	0.15	1.70	171.29	**0.09**	2.08	1.50	0.05	82.06	**0.03**
61	5.83	0.36	4.50	-535.52	13.94	-35.76	535.52	13.94	35.76	0.26	1.70	1285.40	**0.15**	13.94	1.00	0.05	327.83	**0.04**
62	2.74	0.36	4.50	-277.14	1.48	0.65	277.14	1.48	0.65	0.28	1.70	305.86	**0.17**	1.48	1.50	0.05	106.67	**0.01**
63	2.43	0.36	4.50	-140.96	-0.87	-2.36	140.96	0.87	2.36	0.16	1.70	152.17	**0.09**	0.87	1.50	0.05	77.00	**0.01**
64	2.86	0.36	4.50	-147.92	-5.56	-3.17	147.92	5.56	3.17	0.14	1.70	190.49	**0.08**	5.56	1.50	0.05	87.19	**0.06**
65	6.14	0.36	4.50	-474.63	24.98	-113.16	474.63	24.98	113.16	0.21	1.70	1240.59	**0.13**	24.98	1.00	0.05	323.37	**0.08**
66	1.15	0.36	4.50	-112.63	-1.65	-1.84	112.63	1.65	1.84	0.27	1.70	52.57	**0.16**	1.65	1.50	0.05	44.20	**0.04**
67	2.70	0.36	4.50	-262.60	-9.65	-6.36	262.60	9.65	6.36	0.27	1.70	288.23	**0.16**	9.65	1.50	0.05	103.50	**0.09**
68	2.65	0.36	4.50	-135.65	4.78	2.85	135.65	4.78	2.85	0.14	1.70	162.05	**0.08**	4.78	1.50	0.05	80.52	**0.06**
69	6.13	0.36	4.50	-474.18	24.23	-108.20	474.18	24.23	108.20	0.21	1.70	1237.25	**0.13**	24.23	1.00	0.05	322.92	**0.08**
70	1.15	0.36	4.50	-105.91	-4.41	-3.44	105.91	4.41	3.44	0.26	1.70	50.12	**0.15**	4.41	1.50	0.05	43.15	**0.10**
71	1.14	0.36	4.50	-103.09	4.02	3.14	103.09	4.02	3.14	0.25	1.70	48.55	**0.15**	4.02	1.50	0.05	42.48	**0.09**
72	2.75	0.36	4.50	-262.23	10.87	8.00	262.23	10.87	8.00	0.26	1.70	294.47	**0.16**	10.87	1.50	0.05	104.60	**0.10**
73	2.69	0.36	4.50	-155.70	1.90	3.93	155.70	1.90	3.93	0.16	1.70	186.12	**0.09**	1.90	1.50	0.05	85.17	**0.02**
74	2.85	0.36	4.50	-287.28	1.93	2.51	287.28	1.93	2.51	0.28	1.70	330.05	**0.16**	1.93	1.50	0.05	110.80	**0.02**
75	2.85	0.36	4.50	-303.59	0.32	0.85	303.59	0.32	0.85	0.30	1.70	344.03	**0.17**	0.32	1.50	0.05	113.26	**0.00**
76	2.63	0.36	4.50	-147.73	3.34	5.61	147.73	3.34	5.61	0.16	1.70	173.29	**0.09**	3.34	1.50	0.05	82.43	**0.04**
77	5.50	0.36	4.50	-410.33	-31.49	60.22	410.33	31.49	60.22	0.21	1.70	966.57	**0.12**	31.49	1.00	0.05	285.88	**0.11**
78	2.15	0.36	4.50	-200.53	-3.63	-0.18	200.53	3.63	0.18	0.26	1.70	176.92	**0.15**	3.63	1.50	0.05	81.08	**0.04**
79	9.92	0.36	4.50	-889.46	-1.29	24.46	889.46	1.29	24.46	0.25	1.70	3651.30	**0.15**	1.29	1.00	0.05	552.63	**0.00**
80	2.37	0.36	4.50	-215.94	5.53	8.52	215.94	5.53	8.52	0.25	1.70	211.07	**0.15**	5.53	1.50	0.05	88.57	**0.06**
81	1.91	0.36	4.50	-140.58	13.64	9.72	140.58	13.64	9.72	0.20	1.70	115.26	**0.12**	13.64	1.50	0.05	65.86	**0.21**
82	0.90	0.36	4.50	-64.07	-3.03	0.04	64.07	3.03	0.04	0.20	1.70	24.89	**0.12**	3.03	1.50	0.05	30.66	**0.10**
83	2.59	0.36	4.50	-147.80	0.76	3.78	147.80	0.76	3.78	0.16	1.70	170.40	**0.09**	0.76	1.50	0.05	81.61	**0.01**
84	6.77	0.36	4.50	-618.98	2.39	16.37	618.98	2.39	16.37	0.25	1.70	1726.99	**0.15**	2.39	1.00	0.05	380.00	**0.01**
85	7.91	0.36	4.50	-704.05	42.72	-184.65	704.05	42.72	184.65	0.25	1.70	2308.08	**0.15**	42.72	1.00	0.05	439.41	**0.10**
86	2.42	0.36	4.50	-149.26	3.47	-6.65	149.26	3.47	6.65	0.17	1.70	159.19	**0.10**	3.47	1.50	0.05	78.32	**0.04**
87	2.21	0.36	4.50	-154.72	-21.12	-14.02	154.72	21.12	14.02	0.19	1.70	147.96	**0.11**	21.12	1.50	0.05	74.82	**0.28**
88	2.68	0.36	4.50	-246.38	1.02	0.65	246.38	1.02	0.65	0.26	1.70	271.80	**0.15**	1.02	1.50	0.05	100.50	**0.01**
89	2.61	0.36	4.50	-239.44	0.64	2.31	239.44	0.64	2.31	0.25	1.70	257.36	**0.15**	0.64	1.50	0.05	97.79	**0.01**
90	2.27	0.36	4.50	-227.98	-4.72	-2.06	227.98	4.72	2.06	0.28	1.70	208.80	**0.16**	4.72	1.50	0.05	88.12	**0.05**
91	2.34	0.36	4.50	-153.81	-4.25	8.02	153.81	4.25	8.02	0.18	1.70	157.22	**0.11**	4.25	1.50	0.05	77.45	**0.05**
92	2.23	0.36	4.50	-174.36	-34.05	-19.75	174.36	34.05	19.75	0.22	1.70	165.19	**0.13**	34.05	1.50	0.05	78.63	**0.43**
93	2.61	0.36	4.50	-325.78	-6.28	-6.30	325.78	6.28	6.30	0.35	1.70	323.13	**0.20**	6.28	1.50	0.05	110.61	**0.06**
94	2.61	0.36	4.50	-330.41	5.79	6.13	330.41	5.79	6.13	0.35	1.70	326.25	**0.21**	5.79	1.50	0.05	111.26	**0.05**
95	2.32	0.36	4.50	-251.84	8.25	2.88	251.84	8.25	2.88	0.30	1.70	231.17	**0.18**	8.25	1.50	0.05	92.89	**0.09**
96	7.34	0.36	4.50	-637.24	-51.49	181.40	637.24	51.49	181.40	0.24	1.70	1948.36	**0.14**	51.49	1.00	0.05	403.87	**0.13**
97	3.21	0.36	4.50	-163.35	0.95	-19.21	163.35	0.95	19.21	0.14	1.70	236.53	**0.08**	0.95	1.40	0.05	104.16	**0.01**
98	2.52	0.36	4.50	-138.07	-8.10	-15.96	138.07	8.10	15.96	0.15	1.70	155.65	**0.10**	8.10	1.50	0.05	78.32	**0.10**
99	1.93	0.36	4.50	-121.63	-3.37	-4.20	121.63	3.37	4.20	0.18	1.70	103.15	**0.10**	3.37	1.50	0.05	62.94	**0.05**
100	2.00	0.36	4.50	-134.27	1.79	2.29	134.27	1.79	2.29	0.19	1.70	116.94	**0.11**	1.79	1.50	0.05	66.70	**0.03**
101	4.39	0.36	4.50	-264.21	7.53	6.43	264.21	7.53	6.43	0.17	1.70	512.84	**0.10**	7.53	1.03	0.05	206.15	**0.04**
102	1.90	0.36	4.50	-126.73	7.32	-1.43	126.73	7.32	1.43	0.19	1.70	104.96	**0.11**	7.32	1.50	0.05	63.22	**0.12**
103	4.00	0.36	4.50	-229.63	7.46	19.78	229.63	7.46	19.78	0.16	1.70	408.58	**0.09**	7.46	1.13	0.05	168.39	**0.04**
104	7.36	0.36	4.50	-675.09	78.06	-235.66	675.09	78.06	235.66	0.25	1.70	2046.28	**0.15**	78.06	1.00	0.05	413.63	**0.19**
105	0.61	0.36	4.50	-99.10	-0.21	-0.18	99.10	0.21	0.18	0.45	1.70	20.79	**0.27**	0.21	1.50	0.05	28.89	**0.01**
106	5.86	0.36	4.50	-600.92	-72.75	147.85	600.92	72.75	147.85	0.28	1.70	1413.61	**0.17**	72.75	1.00	0.05	344.05	**0.21**

107	4.00	0.36	4.50	-244.52	1.03	3.26	244.52	1.03	3.26	0.17	1.70	431.57	**0.10**	1.03	1.13	0.05	172.08	**0.01**
108	3.97	0.36	4.50	-203.88	1.02	-7.09	203.88	1.02	7.09	0.14	1.70	364.75	**0.08**	1.02	1.13	0.05	159.79	**0.01**
109	7.36	0.36	4.50	-569.92	60.53	-190.41	569.92	60.53	190.41	0.22	1.70	1785.11	**0.13**	60.53	1.00	0.05	387.87	**0.16**
110	7.34	0.36	4.50	-730.47	-46.23	235.70	730.47	46.23	235.70	0.28	1.70	2167.96	**0.16**	46.23	1.00	0.05	425.87	**0.11**
111	3.97	0.36	4.50	-237.90	1.47	3.04	237.90	1.47	3.04	0.17	1.70	417.83	**0.10**	1.47	1.13	0.05	168.34	**0.01**
112	3.99	0.36	4.50	-282.25	2.13	14.64	282.25	2.13	14.64	0.20	1.70	486.52	**0.12**	2.13	1.13	0.05	180.35	**0.01**
114	1.41	0.36	4.50	-277.13	-7.62	-8.84	277.13	7.62	8.84	0.55	1.70	121.56	**0.32**	7.62	1.50	0.05	72.54	**0.11**
115	7.34	0.36	4.50	-785.39	-78.57	328.23	785.39	78.57	328.23	0.30	1.70	2289.50	**0.17**	78.57	1.00	0.05	438.31	**0.18**
116	4.00	0.36	4.50	-235.37	0.75	1.19	235.37	0.75	1.19	0.16	1.70	417.49	**0.10**	0.75	1.13	0.05	169.82	**0.00**
117	4.57	0.36	4.50	-237.27	0.51	-6.98	237.27	0.51	6.98	0.14	1.70	488.05	**0.08**	0.51	1.00	0.05	209.25	**0.00**
118	7.36	0.36	4.50	-536.12	51.33	-210.13	536.12	51.33	210.13	0.20	1.70	1696.66	**0.12**	51.33	1.00	0.05	379.22	**0.14**
119	7.34	0.36	4.50	-695.14	-41.45	189.78	695.14	41.45	189.78	0.26	1.70	2086.71	**0.15**	41.45	1.00	0.05	417.67	**0.10**
120	4.03	0.36	4.50	-249.40	-7.83	-0.23	249.40	7.83	0.23	0.17	1.70	442.76	**0.10**	7.83	1.12	0.05	175.42	**0.04**
121	3.94	0.36	4.50	-300.06	-16.61	13.87	300.06	16.61	13.87	0.21	1.70	504.58	**0.12**	16.61	1.14	0.05	180.68	**0.09**
126	3.94	0.36	4.50	-365.45	-2.67	-0.90	365.45	2.67	0.90	0.26	1.70	591.57	**0.15**	2.67	1.14	0.05	194.71	**0.01**
127	1.97	0.36	4.50	-185.99	-34.92	-38.19	185.99	34.92	38.19	0.26	1.70	149.95	**0.25**	34.92	1.50	0.05	74.64	**0.47**
128	2.19	0.36	4.50	-184.51	-40.24	-37.91	184.51	40.24	37.91	0.23	1.70	169.32	**0.22**	40.24	1.50	0.05	79.42	**0.51**
129	13.78	0.36	4.50	-991.27	-32.77	-69.18	991.27	32.77	69.18	0.20	1.70	5885.39	**0.12**	32.77	1.00	0.05	706.76	**0.05**
130	16.21	0.36	4.50	-1639.88	-0.67	51.62	1639.88	0.67	51.62	0.28	1.70	10706.45	**0.17**	0.67	1.00	0.05	946.62	**0.00**
131	13.78	0.36	4.50	-984.52	34.11	60.34	984.52	34.11	60.34	0.20	1.70	5851.70	**0.12**	34.11	1.00	0.05	705.00	**0.05**
132	0.63	0.36	4.50	-91.41	-19.90	-16.94	91.41	19.90	16.94	0.40	1.70	20.76	**0.82**	19.90	1.50	0.05	28.43	**0.70**
133	0.96	0.36	4.50	-131.42	-20.26	-15.74	131.42	20.26	15.74	0.38	1.70	46.48	**0.34**	20.26	1.50	0.05	42.28	**0.48**
134	9.22	0.36	4.50	-934.98	28.60	-291.70	934.98	28.60	291.70	0.28	1.70	3470.02	**0.17**	28.60	1.00	0.05	538.94	**0.05**
135	1.25	0.36	4.50	-112.92	16.25	11.77	112.92	16.25	11.77	0.25	1.70	58.32	**0.20**	16.25	1.50	0.05	46.56	**0.35**
136	9.18	0.36	4.50	-927.27	20.17	-241.62	927.27	20.17	241.62	0.28	1.70	3429.73	**0.17**	20.17	1.00	0.05	535.77	**0.04**
137	1.25	0.36	4.50	-114.58	17.39	12.58	114.58	17.39	12.58	0.25	1.70	58.99	**0.21**	17.39	1.50	0.05	46.82	**0.37**
138	16.21	0.36	4.50	-1157.61	3.48	8.21	1157.61	3.48	8.21	0.20	1.70	8094.40	**0.12**	3.48	1.00	0.05	829.19	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU2

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1290.10	7.46	0.23	1290.10	7.46	0.23	0.22	1.70	8856.53	**0.13**	7.46	1.00	0.05	863.05	**0.01**
2	0.97	0.36	4.50	-94.55	8.59	6.56	94.55	8.59	6.56	0.27	1.70	37.26	**0.18**	8.59	1.50	0.05	37.21	**0.23**
3	0.96	0.36	4.50	-96.84	15.66	12.51	96.84	15.66	12.51	0.28	1.70	37.47	**0.33**	15.66	1.50	0.05	37.33	**0.42**
4	13.53	0.36	4.50	-1136.41	23.53	29.28	1136.41	23.53	29.28	0.23	1.70	6446.53	**0.14**	23.53	1.00	0.05	735.14	**0.03**
5	13.53	0.36	4.50	-1152.43	-35.25	-38.12	1152.43	35.25	38.12	0.24	1.70	6519.67	**0.14**	35.25	1.00	0.05	739.06	**0.05**
6	9.16	0.36	4.50	-1273.94	-32.62	602.82	1273.94	32.62	602.82	0.39	1.70	4274.74	**0.23**	32.62	1.00	0.05	609.10	**0.05**
7	9.16	0.36	4.50	-1347.48	-22.86	-11.80	1347.48	22.86	11.80	0.41	1.70	4426.26	**0.24**	22.86	1.00	0.05	623.67	**0.04**
8	0.94	0.36	4.50	-131.28	18.58	14.02	131.28	18.58	14.02	0.39	1.70	45.14	**0.31**	18.58	1.50	0.05	41.74	**0.45**
9	0.94	0.36	4.50	-128.93	16.66	12.28	128.93	16.66	12.28	0.38	1.70	44.62	**0.28**	16.66	1.50	0.05	41.43	**0.40**
10	16.21	0.36	4.50	-1693.89	-13.63	-13.91	1693.89	13.63	13.91	0.29	1.70	10971.13	**0.17**	13.63	1.00	0.05	958.88	**0.01**
11	2.03	0.36	4.50	-187.71	-57.80	-44.55	187.71	57.80	44.55	0.26	1.70	156.66	**0.28**	57.80	1.50	0.05	76.30	**0.76**
12	2.03	0.36	4.50	-193.25	-57.05	-44.58	193.25	57.05	44.58	0.26	1.70	160.25	**0.28**	57.05	1.50	0.05	77.16	**0.74**
13	4.00	0.36	4.50	-254.68	15.77	9.51	254.68	15.77	9.51	0.18	1.70	447.02	**0.10**	15.77	1.13	0.05	174.55	**0.09**
14	5.01	0.36	4.50	-466.70	59.43	-78.95	466.70	59.43	78.95	0.26	1.70	959.73	**0.15**	59.43	1.00	0.05	283.26	**0.21**
15	1.00	0.36	4.50	-174.05	4.11	4.85	174.05	4.11	4.85	0.48	1.70	57.91	**0.28**	4.11	1.50	0.05	48.78	**0.08**
16	1.39	0.36	4.50	-295.79	6.30	5.49	295.79	6.30	5.49	0.59	1.70	121.48	**0.35**	6.30	1.50	0.05	74.07	**0.09**
17	1.38	0.36	4.50	-125.09	-39.39	-27.80	125.09	39.39	27.80	0.25	1.70	71.27	**0.39**	39.39	1.50	0.05	51.47	**0.77**
18	4.00	0.36	4.50	-349.14	-13.65	-6.88	349.14	13.65	6.88	0.24	1.70	581.11	**0.14**	13.65	1.13	0.05	196.04	**0.07**
19	4.00	0.36	4.50	-232.10	3.83	6.82	232.10	3.83	6.82	0.16	1.70	412.42	**0.09**	3.83	1.13	0.05	169.01	**0.02**
22	4.00	0.36	4.50	-242.91	-3.37	3.37	242.91	3.37	3.37	0.17	1.70	429.11	**0.10**	3.37	1.13	0.05	171.68	**0.02**
23	4.00	0.36	4.50	-234.35	2.59	3.81	234.35	2.59	3.81	0.16	1.70	415.91	**0.10**	2.59	1.13	0.05	169.57	**0.02**
26	4.00	0.36	4.50	-243.18	-0.67	-14.82	243.18	0.67	14.82	0.17	1.70	429.52	**0.10**	0.67	1.13	0.05	171.75	**0.00**
27	4.00	0.36	4.50	-234.67	1.82	2.84	234.67	1.82	2.84	0.16	1.70	416.41	**0.10**	1.82	1.13	0.05	169.65	**0.01**
30	4.00	0.36	4.50	-234.99	-2.15	-3.38	234.99	2.15	3.38	0.16	1.70	416.90	**0.10**	2.15	1.13	0.05	169.73	**0.01**
31	4.00	0.36	4.50	-231.91	2.45	2.61	231.91	2.45	2.61	0.16	1.70	412.13	**0.09**	2.45	1.13	0.05	168.96	**0.01**
34	4.00	0.36	4.50	-233.75	-4.25	-5.05	233.75	4.25	5.05	0.16	1.70	414.98	**0.10**	4.25	1.13	0.05	169.42	**0.03**
35	4.47	0.36	4.50	-285.91	-3.92	13.82	285.91	3.92	13.82	0.18	1.70	560.44	**0.10**	3.92	1.01	0.05	218.33	**0.02**
36	4.18	0.36	4.50	-297.64	40.23	6.01	297.64	40.23	6.01	0.20	1.70	536.92	**0.12**	40.23	1.08	0.05	198.40	**0.20**
37	2.15	0.36	4.50	-235.91	2.68	5.94	235.91	2.68	5.94	0.30	1.70	200.11	**0.18**	2.68	1.50	0.05	86.46	**0.03**
38	7.85	0.36	4.50	-678.10	-40.09	237.44	678.10	40.09	237.44	0.24	1.70	2219.58	**0.14**	40.09	1.00	0.05	431.10	**0.09**
39	2.04	0.36	4.50	-143.50	4.89	8.18	143.50	4.89	8.18	0.20	1.70	126.58	**0.11**	4.89	1.50	0.05	69.19	**0.07**
40	0.94	0.36	4.50	-63.21	3.28	-0.15	63.21	3.28	0.15	0.19	1.70	25.87	**0.11**	3.28	1.50	0.05	31.37	**0.10**
41	1.98	0.36	4.50	-139.21	-2.04	-2.55	139.21	2.04	2.55	0.20	1.70	119.19	**0.11**	2.04	1.50	0.05	67.14	**0.03**
42	2.07	0.36	4.50	-232.13	-26.85	-21.61	232.13	26.85	21.61	0.31	1.70	188.46	**0.18**	26.85	1.50	0.05	83.98	**0.32**
43	1.20	0.36	4.50	-199.60	-2.88	-4.12	199.60	2.88	4.12	0.46	1.70	81.47	**0.27**	2.88	1.50	0.05	57.40	**0.05**
44	2.06	0.36	4.50	-135.01	5.46	6.13	135.01	5.46	6.13	0.18	1.70	121.54	**0.11**	5.46	1.50	0.05	68.11	**0.08**
45	1.53	0.36	4.50	-252.96	-0.11	-0.53	252.96	0.11	0.53	0.46	1.70	132.01	**0.27**	0.11	1.50	0.05	73.00	**0.00**
46	2.52	0.36	4.50	-143.96	6.29	15.37	143.96	6.29	15.37	0.16	1.70	161.47	**0.10**	6.29	1.50	0.05	79.43	**0.08**
47	0.90	0.36	4.50	-148.41	1.34	1.79	148.41	1.34	1.79	0.46	1.70	45.61	**0.27**	1.34	1.50	0.05	42.89	**0.03**
48	2.31	0.36	4.50	-197.90	47.49	25.58	197.90	47.49	25.58	0.24	1.70	190.93	**0.14**	47.49	1.50	0.05	84.31	**0.56**
49	3.17	0.36	4.50	-166.76	-0.71	21.84	166.76	0.71	21.84	0.15	1.70	237.59	**0.09**	0.71	1.42	0.05	102.70	**0.01**
50	2.44	0.36	4.50	-168.82	5.22	-7.08	168.82	5.22	7.08	0.19	1.70	178.57	**0.11**	5.22	1.50	0.05	82.26	**0.06**
51	2.69	0.36	4.50	-281.08	9.59	2.36	281.08	9.59	2.36	0.29	1.70	302.11	**0.17**	9.59	1.50	0.05	106.08	**0.09**
52	2.68	0.36	4.50	-252.18	-1.04	-2.17	252.18	1.04	2.17	0.26	1.70	276.80	**0.15**	1.04	1.50	0.05	101.41	**0.01**
53	2.25	0.36	4.50	-159.38	20.79	11.76	159.38	20.79	11.76	0.20	1.70	154.89	**0.12**	20.79	1.50	0.05	76.50	**0.27**
54	2.39	0.36	4.50	-147.81	-3.41	7.18	147.81	3.41	7.18	0.17	1.70	155.63	**0.10**	3.41	1.50	0.05	77.43	**0.04**
55	6.88	0.36	4.50	-656.47	-13.05	29.17	656.47	13.05	29.17	0.27	1.70	1844.04	**0.16**	13.05	1.00	0.05	392.64	**0.03**
56	9.94	0.36	4.50	-885.89	-4.22	37.36	885.89	4.22	37.36	0.25	1.70	3648.55	**0.15**	4.22	1.00	0.05	552.46	**0.01**
57	3.07	0.36	4.50	-176.29	0.29	-7.33	176.29	0.29	7.33	0.16	1.70	240.73	**0.09**	0.29	1.47	0.05	99.20	**0.00**
58	5.47	0.36	4.50	-424.61	-33.11	24.81	424.61	33.11	24.81	0.22	1.70	988.02	**0.13**	33.11	1.00	0.05	288.53	**0.11**
59	5.50	0.36	4.50	-403.89	26.23	-51.03	403.89	26.23	51.03	0.20	1.70	953.90	**0.12**	26.23	1.00	0.05	284.23	**0.09**
60	2.63	0.36	4.50	-148.68	-2.27	-0.84	148.68	2.27	0.84	0.16	1.70	174.27	**0.09**	2.27	1.50	0.05	82.61	**0.03**
61	5.83	0.36	4.50	-544.05	14.30	-34.48	544.05	14.30	34.48	0.26	1.70	1301.41	**0.15**	14.30	1.00	0.05	329.85	**0.04**
62	2.74	0.36	4.50	-280.33	1.75	0.88	280.33	1.75	0.88	0.28	1.70	308.52	**0.17**	1.75	1.50	0.05	107.15	**0.02**
63	2.43	0.36	4.50	-142.96	-0.87	-2.43	142.96	0.87	2.43	0.16	1.70	154.05	**0.10**	0.87	1.50	0.05	77.37	**0.01**
64	2.86	0.36	4.50	-150.18	-5.61	-3.24	150.18	5.61	3.24	0.15	1.70	193.08	**0.09**	5.61	1.50	0.05	87.63	**0.06**
65	6.14	0.36	4.50	-486.11	26.75	-115.40	486.11	26.75	115.40	0.22	1.70	1265.23	**0.13**	26.75	1.00	0.05	326.26	**0.08**
66	1.15	0.36	4.50	-114.95	-1.92	-2.02	114.95	1.92	2.02	0.28	1.70	53.40	**0.16**	1.92	1.50	0.05	44.56	**0.04**
67	2.70	0.36	4.50	-268.00	-10.33	-6.75	268.00	10.33	6.75	0.28	1.70	292.77	**0.16**	10.33	1.50	0.05	104.33	**0.10**
68	2.65	0.36	4.50	-137.99	4.94	2.95	137.99	4.94	2.95	0.14	1.70	164.53	**0.09**	4.94	1.50	0.05	80.97	**0.06**
69	6.13	0.36	4.50	-485.80	26.08	-109.97	485.80	26.08	109.97	0.22	1.70	1262.14	**0.13**	26.08	1.00	0.05	325.85	**0.08**
70	1.15	0.36	4.50	-108.46	-4.23	-3.35	108.46	4.23	3.35	0.26	1.70	51.06	**0.15**	4.23	1.50	0.05	43.56	**0.10**
71	1.14	0.36	4.50	-105.55	3.84	3.04	105.55	3.84	3.04	0.26	1.70	49.46	**0.15**	3.84	1.50	0.05	42.87	**0.09**
72	2.75	0.36	4.50	-266.76	11.49	8.34	266.76	11.49	8.34	0.27	1.70	298.40	**0.16**	11.49	1.50	0.05	105.31	**0.11**
73	2.69	0.36	4.50	-157.91	2.04	4.18	157.91	2.04	4.18	0.16	1.70	188.42	**0.10**	2.04	1.50	0.05	85.58	**0.02**
74	2.85	0.36	4.50	-290.59	1.70	2.33	290.59	1.70	2.33	0.28	1.70	332.93	**0.17**	1.70	1.50	0.05	111.30	**0.02**
75	2.85	0.36	4.50	-308.34	-0.04	0.56	308.34	0.04	0.56	0.30	1.70	348.00	**0.18**	0.04	1.50	0.05	113.96	**0.00**
76	2.63	0.36	4.50	-150.59	3.59	5.98	150.59	3.59	5.98	0.16	1.70	176.23	**0.09**	3.59	1.50	0.05	82.97	**0.04**
77	5.50	0.36	4.50	-420.13	-32.97	59.64	420.13	32.97	59.64	0.21	1.70	985.70	**0.12**	32.97	1.00	0.05	288.39	**0.11**
78	2.15	0.36	4.50	-203.67	-3.41	-0.17	203.67	3.41	0.17	0.26	1.70	179.07	**0.15**	3.41	1.50	0.05	81.57	**0.04**
79	9.92	0.36	4.50	-904.87	-1.12	23.73	904.87	1.12	23.73	0.25	1.70	3701.16	**0.15**	1.12	1.00	0.05	556.31	**0.00**
80	2.37	0.36	4.50	-220.39	4.04	7.45	220.39	4.04	7.45	0.26	1.70	214.48	**0.15**	4.04	1.50	0.05	89.27	**0.05**
81	1.91	0.36	4.50	-143.93	14.91	10.34	143.93	14.91	10.34	0.21	1.70	117.54	**0.12**	14.91	1.50	0.05	66.43	**0.22**
82	0.90	0.36	4.50	-65.43	-3.04	0.08	65.43	3.04	0.08	0.20	1.70	25.33	**0.12**	3.04	1.50	0.05	30.89	**0.10**
83	2.59	0.36	4.50	-149.12	0.50	3.72	149.12	0.50	3.72	0.16	1.70	171.74	**0.09**	0.50	1.50	0.05	81.86	**0.01**
84	6.77	0.36	4.50	-628.96	3.95	11.14	628.96	3.95	11.14	0.26	1.70	1748.80	**0.15**	3.95	1.00	0.05	382.37	**0.01**
85	7.91	0.36	4.50	-725.14	44.03	-190.55	725.14	44.03	190.55	0.25	1.70	2362.52	**0.15**	44.03	1.00	0.05	444.45	**0.10**
86	2.42	0.36	4.50	-152.52	3.59	-6.80	152.52	3.59	6.80	0.18	1.70	162.19	**0.10**	3.59	1.50	0.05	78.92	**0.05**
87	2.21	0.36	4.50	-158.33	-23.64	-15.63	158.33	23.64	15.63	0.20	1.70	150.86	**0.12**	23.64	1.50	0.05	75.45	**0.31**
88	2.68	0.36	4.50	-253.68	1.32	-0.03	253.68	1.32	0.03	0.26	1.70	278.08	**0.15**	1.32	1.50	0.05	101.65	**0.01**
89	2.61	0.36	4.50	-244.36	-0.04	1.11	244.36	0.04	1.11	0.26	1.70	261.50	**0.15**	0.04	1.50	0.05	98.57	**0.00**
90	2.27	0.36	4.50	-234.56	-5.71	-2.94	234.56	5.71	2.94	0.29	1.70	213.34	**0.17**	5.71	1.50	0.05	89.12	**0.06**
91	2.34	0.36	4.50	-156.78	-4.83	7.36	156.78	4.83	7.36	0.19	1.70	159.81	**0.11**	4.83	1.50	0.05	77.98	**0.06**
92	2.23	0.36	4.50	-177.62	-37.02	-21.88	177.62	37.02	21.88	0.22	1.70	167.72	**0.13**	37.02	1.50	0.05	79.18	**0.47**
93	2.61	0.36	4.50	-337.39	-7.02	-7.81	337.39	7.02	7.81	0.36	1.70	330.88	**0.21**	7.02	1.50	0.05	112.23	**0.06**
94	2.61	0.36	4.50	-340.02	5.51	5.20	340.02	5.51	5.20	0.36	1.70	332.60	**0.21**	5.51	1.50	0.05	112.59	**0.05**
95	2.32	0.36	4.50	-259.33	7.64	2.22	259.33	7.64	2.22	0.31	1.70	236.18	**0.18**	7.64	1.50	0.05	94.00	**0.08**
96	7.34	0.36	4.50	-656.61	-54.56	186.72	656.61	54.56	186.72	0.25	1.70	1995.36	**0.15**	54.56	1.00	0.05	408.54	**0.13**
97	3.21	0.36	4.50	-167.33	1.49	-20.41	167.33	1.49	20.41	0.14	1.70	241.65	**0.09**	1.49	1.40	0.05	104.99	**0.01**
98	2.52	0.36	4.50	-141.40	-7.75	-16.89	141.40	7.75	16.89	0.16	1.70	158.95	**0.11**	7.75	1.50	0.05	78.95	**0.10**
99	1.93	0.36	4.50	-123.64	-4.49	-5.63	123.64	4.49	5.63	0.18	1.70	104.62	**0.10**	4.49	1.50	0.05	63.30	**0.07**
100	2.00	0.36	4.50	-139.13	1.63	1.91	139.13	1.63	1.91	0.19	1.70	120.52	**0.11**	1.63	1.50	0.05	67.56	**0.02**
101	4.39	0.36	4.50	-269.64	7.92	5.40	269.64	7.92	5.40	0.17	1.70	521.98	**0.10**	7.92	1.03	0.05	207.61	**0.04**
102	1.90	0.36	4.50	-129.20	7.93	-1.39	129.20	7.93	1.39	0.19	1.70	106.70	**0.11**	7.93	1.50	0.05	63.66	**0.12**
103	4.00	0.36	4.50	-235.23	6.79	19.09	235.23	6.79	19.09	0.16	1.70	417.28	**0.10**	6.79	1.13	0.05	169.79	**0.04**
104	7.36	0.36	4.50	-712.23	83.79	-254.48	712.23	83.79	254.48	0.27	1.70	2133.43	**0.16**	83.79	1.00	0.05	422.35	**0.20**
105	0.61	0.36	4.50	-104.01	-0.24	-0.21	104.01	0.24	0.21	0.47	1.70	21.33	**0.28**	0.24	1.50	0.05	29.49	**0.01**
106	5.86	0.36	4.50	-627.31	-78.05	159.83	627.31	78.05	159.83	0.30	1.70	1459.78	**0.17**	78.05	1.00	0.05	350.00	**0.22**
107	4.00	0.36	4.50	-249.34	0.60	2.75	249.34	0.60	2.75	0.17	1.70	438.92	**0.10**	0.60	1.13	0.05	173.26	**0.00**
108	3.97	0.36	4.50	-210.48	0.42	-8.21	210.48	0.42	8.21	0.15	1.70	375.22	**0.09**	0.42	1.13	0.05	161.49	**0.00**

109	7.36	0.36	4.50	-611.60	65.41	-209.39	611.60	65.41	209.39	0.23	1.70	1891.16	**0.14**	65.41	1.00	0.05	398.28	**0.16**
110	7.34	0.36	4.50	-763.89	-49.89	256.25	763.89	49.89	256.25	0.29	1.70	2242.61	**0.17**	49.89	1.00	0.05	433.49	**0.12**
111	3.97	0.36	4.50	-242.33	1.11	2.41	242.33	1.11	2.41	0.17	1.70	424.58	**0.10**	1.11	1.13	0.05	169.42	**0.01**
112	3.99	0.36	4.50	-298.76	1.81	14.66	298.76	1.81	14.66	0.21	1.70	510.23	**0.12**	1.81	1.13	0.05	184.14	**0.01**
114	1.41	0.36	4.50	-301.65	-9.78	-11.45	301.65	9.78	11.45	0.59	1.70	125.20	**0.35**	9.78	1.50	0.05	75.31	**0.13**
115	7.34	0.36	4.50	-822.98	-86.08	357.70	822.98	86.08	357.70	0.31	1.70	2369.34	**0.18**	86.08	1.00	0.05	446.63	**0.19**
116	4.00	0.36	4.50	-239.20	0.16	0.15	239.20	0.16	0.15	0.17	1.70	423.41	**0.10**	0.16	1.13	0.05	170.77	**0.00**
117	4.57	0.36	4.50	-245.65	-0.20	-8.17	245.65	0.20	8.17	0.15	1.70	503.31	**0.09**	0.20	1.00	0.05	211.68	**0.00**
118	7.36	0.36	4.50	-577.23	56.24	-235.27	577.23	56.24	235.27	0.22	1.70	1803.95	**0.13**	56.24	1.00	0.05	389.72	**0.14**
119	7.34	0.36	4.50	-730.08	-46.49	210.15	730.08	46.49	210.15	0.28	1.70	2167.07	**0.16**	46.49	1.00	0.05	425.78	**0.11**
120	4.03	0.36	4.50	-254.26	-8.59	-1.91	254.26	8.59	1.91	0.18	1.70	450.20	**0.10**	8.59	1.12	0.05	176.61	**0.05**
121	3.94	0.36	4.50	-311.59	-16.59	12.92	311.59	16.59	12.92	0.22	1.70	520.51	**0.13**	16.59	1.14	0.05	183.23	**0.09**
126	3.94	0.36	4.50	-376.78	-3.04	-2.15	376.78	3.04	2.15	0.27	1.70	605.81	**0.16**	3.04	1.14	0.05	197.04	**0.02**
127	1.97	0.36	4.50	-188.49	-35.70	-38.81	188.49	35.70	38.81	0.27	1.70	151.51	**0.26**	35.70	1.50	0.05	75.03	**0.48**
128	2.19	0.36	4.50	-186.73	-40.87	-38.28	186.73	40.87	38.28	0.24	1.70	170.96	**0.22**	40.87	1.50	0.05	79.78	**0.51**
129	13.78	0.36	4.50	-1007.38	-40.78	-124.45	1007.38	40.78	124.45	0.20	1.70	5965.44	**0.12**	40.78	1.00	0.05	710.94	**0.06**
130	16.21	0.36	4.50	-1679.21	0.16	54.37	1679.21	0.16	54.37	0.29	1.70	10899.75	**0.17**	0.16	1.00	0.05	955.57	**0.00**
131	13.78	0.36	4.50	-999.84	41.43	113.66	999.84	41.43	113.66	0.20	1.70	5928.04	**0.12**	41.43	1.00	0.05	708.99	**0.06**
132	0.63	0.36	4.50	-92.97	-19.47	-16.57	92.97	19.47	16.57	0.41	1.70	20.98	**0.79**	19.47	1.50	0.05	28.63	**0.68**
133	0.96	0.36	4.50	-133.19	-19.44	-15.10	133.19	19.44	15.10	0.39	1.70	46.88	**0.32**	19.44	1.50	0.05	42.51	**0.46**
134	9.22	0.36	4.50	-940.03	30.83	-297.05	940.03	30.83	297.05	0.28	1.70	3484.20	**0.17**	30.83	1.00	0.05	540.09	**0.06**
135	1.25	0.36	4.50	-111.31	15.69	11.51	111.31	15.69	11.51	0.25	1.70	57.66	**0.20**	15.69	1.50	0.05	46.30	**0.34**
136	9.18	0.36	4.50	-932.61	22.27	-247.07	932.61	22.27	247.07	0.28	1.70	3444.69	**0.17**	22.27	1.00	0.05	536.98	**0.04**
137	1.25	0.36	4.50	-112.91	16.81	12.32	112.91	16.81	12.32	0.25	1.70	58.32	**0.21**	16.81	1.50	0.05	46.56	**0.36**
138	16.21	0.36	4.50	-1183.24	2.94	8.71	1183.24	2.94	8.71	0.20	1.70	8244.47	**0.12**	2.94	1.00	0.05	835.85	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU3

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1251.17	28.03	52.55	1251.17	28.03	52.55	0.21	1.70	8636.09	**0.13**	28.03	1.00	0.05	853.24	**0.03**
2	0.97	0.36	4.50	-94.87	9.68	7.32	94.87	9.68	7.32	0.27	1.70	37.36	**0.20**	9.68	1.50	0.05	37.26	**0.26**
3	0.96	0.36	4.50	-96.17	16.10	12.74	96.17	16.10	12.74	0.28	1.70	37.27	**0.34**	16.10	1.50	0.05	37.23	**0.43**
4	13.53	0.36	4.50	-1092.14	17.70	26.72	1092.14	17.70	26.72	0.22	1.70	6241.87	**0.13**	17.70	1.00	0.05	724.19	**0.02**
5	13.53	0.36	4.50	-1118.86	-31.11	-36.52	1118.86	31.11	36.52	0.23	1.70	6365.85	**0.14**	31.11	1.00	0.05	730.82	**0.04**
6	9.16	0.36	4.50	-1226.35	-28.77	565.67	1226.35	28.77	565.67	0.37	1.70	4171.15	**0.22**	28.77	1.00	0.05	599.47	**0.05**
7	9.16	0.36	4.50	-1292.19	-19.03	0.14	1292.19	19.03	0.14	0.39	1.70	4313.31	**0.23**	19.03	1.00	0.05	612.75	**0.03**
8	0.94	0.36	4.50	-126.91	19.00	14.42	126.91	19.00	14.42	0.38	1.70	44.17	**0.33**	19.00	1.50	0.05	41.16	**0.46**
9	0.94	0.36	4.50	-122.78	17.45	13.01	122.78	17.45	13.01	0.36	1.70	43.22	**0.30**	17.45	1.50	0.05	40.59	**0.43**
10	16.21	0.36	4.50	-1604.98	-41.20	-56.16	1604.98	41.20	56.16	0.28	1.70	10532.43	**0.16**	41.20	1.00	0.05	938.62	**0.04**
11	2.03	0.36	4.50	-178.27	-52.72	-41.22	178.27	52.72	41.22	0.24	1.70	150.40	**0.27**	52.72	1.50	0.05	74.79	**0.70**
12	2.03	0.36	4.50	-186.88	-54.05	-42.66	186.88	54.05	42.66	0.26	1.70	156.12	**0.27**	54.05	1.50	0.05	76.16	**0.71**
13	4.00	0.36	4.50	-219.85	3.69	11.36	219.85	3.69	11.36	0.15	1.70	393.24	**0.09**	3.69	1.13	0.05	165.93	**0.02**
14	5.01	0.36	4.50	-417.03	37.45	-88.22	417.03	37.45	88.22	0.23	1.70	877.50	**0.14**	37.45	1.00	0.05	271.29	**0.14**
15	1.00	0.36	4.50	-153.58	2.60	2.71	153.58	2.60	2.71	0.43	1.70	54.12	**0.25**	2.60	1.50	0.05	46.23	**0.06**
16	1.39	0.36	4.50	-256.65	2.65	0.61	256.65	2.65	0.61	0.51	1.70	115.06	**0.30**	2.65	1.50	0.05	69.57	**0.04**
17	1.38	0.36	4.50	-107.17	-36.41	-26.52	107.17	36.41	26.52	0.22	1.70	62.91	**0.42**	36.41	1.50	0.05	48.54	**0.75**
18	4.00	0.36	4.50	-309.53	-2.54	-10.91	309.53	2.54	10.91	0.21	1.70	526.97	**0.13**	2.54	1.13	0.05	187.33	**0.01**
19	4.00	0.36	4.50	-139.26	3.31	7.28	139.26	3.31	7.28	0.10	1.70	259.88	**0.06**	3.31	1.13	0.05	144.00	**0.02**
22	4.00	0.36	4.50	-184.76	-3.91	-1.00	184.76	3.91	1.00	0.13	1.70	336.71	**0.08**	3.91	1.13	0.05	156.76	**0.02**
23	4.00	0.36	4.50	-138.44	2.70	3.54	138.44	2.70	3.54	0.10	1.70	258.46	**0.06**	2.70	1.13	0.05	143.76	**0.02**
26	4.00	0.36	4.50	-184.82	-1.88	-13.64	184.82	1.88	13.64	0.13	1.70	336.81	**0.08**	1.88	1.13	0.05	156.77	**0.01**
27	4.00	0.36	4.50	-138.75	1.41	1.67	138.75	1.41	1.67	0.10	1.70	259.00	**0.06**	1.41	1.13	0.05	143.85	**0.01**
30	4.00	0.36	4.50	-178.40	-2.33	-3.70	178.40	2.33	3.70	0.12	1.70	326.21	**0.07**	2.33	1.13	0.05	155.04	**0.02**
31	4.00	0.36	4.50	-138.79	3.03	1.05	138.79	3.03	1.05	0.10	1.70	259.07	**0.06**	3.03	1.13	0.05	143.87	**0.02**
34	4.00	0.36	4.50	-178.22	-4.69	-5.48	178.22	4.69	5.48	0.12	1.70	325.91	**0.07**	4.69	1.13	0.05	154.99	**0.03**
35	4.47	0.36	4.50	-251.41	5.98	8.74	251.41	5.98	8.74	0.16	1.70	501.15	**0.09**	5.98	1.01	0.05	208.83	**0.03**
36	4.18	0.36	4.50	-271.06	30.33	-1.93	271.06	30.33	1.93	0.18	1.70	495.89	**0.11**	30.33	1.08	0.05	191.85	**0.16**
37	2.15	0.36	4.50	-217.95	1.66	4.44	217.95	1.66	4.44	0.28	1.70	188.64	**0.17**	1.66	1.50	0.05	83.77	**0.02**
38	7.85	0.36	4.50	-619.58	-39.96	219.34	619.58	39.96	219.34	0.22	1.70	2062.88	**0.13**	39.96	1.00	0.05	416.65	**0.10**
39	2.04	0.36	4.50	-125.26	-3.14	2.28	125.26	3.14	2.28	0.17	1.70	112.68	**0.10**	3.14	1.50	0.05	65.92	**0.05**
40	0.94	0.36	4.50	-59.76	3.06	-0.12	59.76	3.06	0.12	0.18	1.70	24.65	**0.10**	3.06	1.50	0.05	30.75	**0.10**
41	1.98	0.36	4.50	-126.96	-1.75	-2.48	126.96	1.75	2.48	0.18	1.70	110.20	**0.10**	1.75	1.50	0.05	64.96	**0.03**
42	2.07	0.36	4.50	-213.62	-26.80	-21.31	213.62	26.80	21.31	0.29	1.70	177.24	**0.17**	26.80	1.50	0.05	81.23	**0.33**
43	1.20	0.36	4.50	-184.19	-2.64	-3.88	184.19	2.64	3.88	0.43	1.70	77.91	**0.25**	2.64	1.50	0.05	55.46	**0.05**
44	2.06	0.36	4.50	-127.62	2.81	3.11	127.62	2.81	3.11	0.17	1.70	115.79	**0.10**	2.81	1.50	0.05	66.78	**0.04**
45	1.53	0.36	4.50	-232.73	-0.47	-1.12	232.73	0.47	1.12	0.42	1.70	125.98	**0.25**	0.47	1.50	0.05	70.44	**0.01**
46	2.52	0.36	4.50	-134.52	7.39	13.57	134.52	7.39	13.57	0.15	1.70	152.10	**0.09**	7.39	1.50	0.05	77.64	**0.10**
47	0.90	0.36	4.50	-136.10	1.15	1.49	136.10	1.15	1.49	0.42	1.70	43.44	**0.25**	1.15	1.50	0.05	41.33	**0.03**
48	2.31	0.36	4.50	-187.93	40.38	21.24	187.93	40.38	21.24	0.23	1.70	183.11	**0.13**	40.38	1.50	0.05	82.67	**0.49**
49	3.17	0.36	4.50	-157.62	-1.75	16.75	157.62	1.75	16.75	0.14	1.70	225.95	**0.08**	1.75	1.42	0.05	100.81	**0.02**
50	2.44	0.36	4.50	-161.71	3.34	-9.57	161.71	3.34	9.57	0.18	1.70	172.15	**0.11**	3.34	1.50	0.05	81.00	**0.04**
51	2.69	0.36	4.50	-265.51	7.88	0.30	265.51	7.88	0.30	0.27	1.70	289.35	**0.16**	7.88	1.50	0.05	103.71	**0.08**
52	2.68	0.36	4.50	-237.10	-0.51	-2.78	237.10	0.51	2.78	0.25	1.70	263.68	**0.14**	0.51	1.50	0.05	99.02	**0.01**
53	2.25	0.36	4.50	-151.88	16.58	9.31	151.88	16.58	9.31	0.19	1.70	148.69	**0.11**	16.58	1.50	0.05	75.18	**0.22**
54	2.39	0.36	4.50	-141.47	-3.89	5.70	141.47	3.89	5.70	0.16	1.70	149.82	**0.10**	3.89	1.50	0.05	76.26	**0.05**
55	6.88	0.36	4.50	-628.67	-12.59	15.86	628.67	12.59	15.86	0.25	1.70	1782.75	**0.15**	12.59	1.00	0.05	386.09	**0.03**
56	9.94	0.36	4.50	-851.25	-4.92	21.50	851.25	4.92	21.50	0.24	1.70	3534.22	**0.14**	4.92	1.00	0.05	544.08	**0.01**
57	3.07	0.36	4.50	-171.21	-0.93	-8.28	171.21	0.93	8.28	0.15	1.70	234.63	**0.09**	0.93	1.47	0.05	98.22	**0.01**
58	5.47	0.36	4.50	-399.23	-32.34	23.22	399.23	32.34	23.22	0.20	1.70	938.70	**0.12**	32.34	1.00	0.05	282.04	**0.11**
59	5.50	0.36	4.50	-382.10	23.52	-52.08	382.10	23.52	52.08	0.19	1.70	910.44	**0.11**	23.52	1.00	0.05	278.54	**0.08**
60	2.63	0.36	4.50	-141.76	-2.28	-1.05	141.76	2.28	1.05	0.15	1.70	167.10	**0.09**	2.28	1.50	0.05	81.29	**0.03**
61	5.83	0.36	4.50	-522.17	11.36	-38.82	522.17	11.36	38.82	0.25	1.70	1260.05	**0.15**	11.36	1.00	0.05	324.65	**0.03**
62	2.74	0.36	4.50	-270.86	0.55	-0.70	270.86	0.55	0.70	0.27	1.70	300.56	**0.16**	0.55	1.50	0.05	105.70	**0.01**
63	2.43	0.36	4.50	-137.53	-1.20	-2.82	137.53	1.20	2.82	0.16	1.70	148.92	**0.09**	1.20	1.50	0.05	76.35	**0.02**
64	2.86	0.36	4.50	-144.52	-5.78	-3.75	144.52	5.78	3.75	0.14	1.70	186.59	**0.08**	5.78	1.50	0.05	86.53	**0.07**
65	6.14	0.36	4.50	-459.58	22.68	-110.35	459.58	22.68	110.35	0.21	1.70	1207.90	**0.12**	22.68	1.00	0.05	319.53	**0.07**
66	1.15	0.36	4.50	-108.92	-1.51	-1.76	108.92	1.51	1.76	0.26	1.70	51.23	**0.15**	1.51	1.50	0.05	43.63	**0.03**
67	2.70	0.36	4.50	-254.44	-9.60	-7.12	254.44	9.60	7.12	0.26	1.70	281.27	**0.15**	9.60	1.50	0.05	102.23	**0.09**
68	2.65	0.36	4.50	-132.22	4.05	1.97	132.22	4.05	1.97	0.14	1.70	158.39	**0.08**	4.05	1.50	0.05	79.84	**0.05**
69	6.13	0.36	4.50	-457.99	21.65	-104.61	457.99	21.65	104.61	0.21	1.70	1202.13	**0.12**	21.65	1.00	0.05	318.80	**0.07**
70	1.15	0.36	4.50	-102.18	-4.68	-3.65	102.18	4.68	3.65	0.25	1.70	48.72	**0.15**	4.68	1.50	0.05	42.56	**0.11**
71	1.14	0.36	4.50	-99.83	3.93	3.00	99.83	3.93	3.00	0.24	1.70	47.32	**0.14**	3.93	1.50	0.05	41.96	**0.09**
72	2.75	0.36	4.50	-254.69	9.38	6.26	254.69	9.38	6.26	0.26	1.70	287.85	**0.15**	9.38	1.50	0.05	103.42	**0.09**
73	2.69	0.36	4.50	-151.91	1.26	2.85	151.91	1.26	2.85	0.16	1.70	182.14	**0.09**	1.26	1.50	0.05	84.46	**0.01**
74	2.85	0.36	4.50	-280.59	1.37	1.30	280.59	1.37	1.30	0.27	1.70	324.17	**0.16**	1.37	1.50	0.05	109.77	**0.01**
75	2.85	0.36	4.50	-295.22	-0.08	-0.25	295.22	0.08	0.25	0.29	1.70	336.92	**0.17**	0.08	1.50	0.05	112.00	**0.00**
76	2.63	0.36	4.50	-143.41	2.57	4.42	143.41	2.57	4.42	0.15	1.70	168.82	**0.09**	2.57	1.50	0.05	81.60	**0.03**
77	5.50	0.36	4.50	-397.56	-28.99	61.42	397.56	28.99	61.42	0.20	1.70	941.37	**0.12**	28.99	1.00	0.05	282.59	**0.10**
78	2.15	0.36	4.50	-195.39	-4.23	-0.99	195.39	4.23	0.99	0.25	1.70	173.35	**0.15**	4.23	1.50	0.05	80.27	**0.05**
79	9.92	0.36	4.50	-865.13	-5.84	17.95	865.13	5.84	17.95	0.24	1.70	3571.66	**0.14**	5.84	1.00	0.05	546.77	**0.01**
80	2.37	0.36	4.50	-209.59	7.06	9.82	209.59	7.06	9.82	0.25	1.70	206.14	**0.14**	7.06	1.50	0.05	87.55	**0.08**
81	1.91	0.36	4.50	-135.83	12.56	9.32	135.83	12.56	9.32	0.20	1.70	111.98	**0.12**	12.56	1.50	0.05	65.04	**0.19**
82	0.90	0.36	4.50	-61.87	-2.92	-0.09	61.87	2.92	0.09	0.19	1.70	24.16	**0.11**	2.92	1.50	0.05	30.27	**0.10**
83	2.59	0.36	4.50	-144.90	0.52	2.98	144.90	0.52	2.98	0.16	1.70	167.46	**0.09**	0.52	1.50	0.05	81.06	**0.01**
84	6.77	0.36	4.50	-602.39	-1.73	16.12	602.39	1.73	16.12	0.25	1.70	1690.31	**0.15**	1.73	1.00	0.05	376.04	**0.00**
85	7.91	0.36	4.50	-672.98	34.75	-185.85	672.98	34.75	185.85	0.24	1.70	2226.32	**0.14**	34.75	1.00	0.05	431.89	**0.08**
86	2.42	0.36	4.50	-144.89	2.86	-7.33	144.89	2.86	7.33	0.17	1.70	155.14	**0.10**	2.86	1.50	0.05	77.52	**0.04**
87	2.21	0.36	4.50	-150.01	-18.15	-11.96	150.01	18.15	11.96	0.19	1.70	144.13	**0.11**	18.15	1.50	0.05	73.99	**0.25**
88	2.68	0.36	4.50	-237.88	0.83	1.68	237.88	0.83	1.68	0.25	1.70	264.37	**0.15**	0.83	1.50	0.05	99.15	**0.01**
89	2.61	0.36	4.50	-233.36	1.66	3.91	233.36	1.66	3.91	0.25	1.70	252.19	**0.15**	1.66	1.50	0.05	96.83	**0.02**
90	2.27	0.36	4.50	-218.30	-3.10	-0.76	218.30	3.10	0.76	0.27	1.70	201.97	**0.16**	3.10	1.50	0.05	86.63	**0.04**
91	2.34	0.36	4.50	-149.01	-4.20	7.61	149.01	4.20	7.61	0.18	1.70	153.00	**0.10**	4.20	1.50	0.05	76.59	**0.05**
92	2.23	0.36	4.50	-169.05	-30.12	-17.06	169.05	30.12	17.06	0.21	1.70	161.02	**0.12**	30.12	1.50	0.05	77.73	**0.39**
93	2.61	0.36	4.50	-307.82	-5.04	-4.31	307.82	5.04	4.31	0.33	1.70	310.63	**0.19**	5.04	1.50	0.05	108.07	**0.05**
94	2.61	0.36	4.50	-313.18	5.99	6.98	313.18	5.99	6.98	0.33	1.70	314.43	**0.20**	5.99	1.50	0.05	108.84	**0.06**
95	2.32	0.36	4.50	-238.80	8.75	3.51	238.80	8.75	3.51	0.29	1.70	222.20	**0.17**	8.75	1.50	0.05	90.94	**0.10**
96	7.34	0.36	4.50	-605.59	-53.60	160.48	605.59	53.60	160.48	0.23	1.70	1870.02	**0.13**	53.60	1.00	0.05	396.12	**0.14**
97	3.21	0.36	4.50	-158.34	-0.96	-19.40	158.34	0.96	19.40	0.14	1.70	230.04	**0.08**	0.96	1.40	0.05	103.10	**0.01**
98	2.52	0.36	4.50	-133.74	-8.23	-15.12	133.74	8.23	15.12	0.15	1.70	151.32	**0.10**	8.23	1.50	0.05	77.49	**0.11**
99	1.93	0.36	4.50	-117.50	-2.18	-2.74	117.50	2.18	2.74	0.17	1.70	100.12	**0.10**	2.18	1.50	0.05	62.18	**0.04**
100	2.00	0.36	4.50	-126.85	1.76	2.37	126.85	1.76	2.37	0.18	1.70	111.38	**0.10**	1.76	1.50	0.05	65.37	**0.03**
101	4.39	0.36	4.50	-257.56	6.13	7.21	257.56	6.13	7.21	0.16	1.70	501.58	**0.10**	6.13	1.03	0.05	204.35	**0.03**
102	1.90	0.36	4.50	-122.36	6.49	-1.35	122.36	6.49	1.35	0.18	1.70	101.85	**0.11**	6.49	1.50	0.05	62.43	**0.10**
103	4.00	0.36	4.50	-220.31	8.35	21.00	220.31	8.35	21.00	0.15	1.70	393.97	**0.09**	8.35	1.13	0.05	166.04	**0.05**
104	7.36	0.36	4.50	-628.44	60.92	-221.56	628.44	60.92	221.56	0.24	1.70	1933.06	**0.14**	60.92	1.00	0.05	402.41	**0.15**
105	0.61	0.36	4.50	-91.48	-0.31	-0.34	91.48	0.31	0.34	0.42	1.70	19.86	**0.25**	0.31	1.50	0.05	27.92	**0.01**
106	5.86	0.36	4.50	-559.43	-70.91	120.35	559.43	70.91	120.35	0.27	1.70	1338.32	**0.16**	70.91	1.00	0.05	334.50	**0.21**
107	4.00	0.36	4.50	-239.29	1.15	3.22	239.29	1.15	3.22	0.17	1.70	423.54	**0.10**	1.15	1.13	0.05	170.79	**0.01**
108	3.97	0.36	4.50	-193.81	1.80	-5.55	193.81	1.80	5.55	0.14	1.70	348.61	**0.08**	1.80	1.13	0.05	157.18	**0.01**

109	7.36	0.36	4.50	-522.68	43.34	-178.98	522.68	43.34	178.98	0.20	1.70	1660.88	**0.12**	43.34	1.00	0.05	375.72	**0.12**
110	7.34	0.36	4.50	-679.33	-50.12	191.06	679.33	50.12	191.06	0.26	1.70	2049.57	**0.15**	50.12	1.00	0.05	413.95	**0.12**
111	3.97	0.36	4.50	-233.84	1.47	3.05	233.84	1.47	3.05	0.16	1.70	411.61	**0.10**	1.47	1.13	0.05	167.34	**0.01**
112	3.99	0.36	4.50	-261.61	2.48	14.64	261.61	2.48	14.64	0.18	1.70	456.13	**0.11**	2.48	1.13	0.05	175.49	**0.01**
114	1.41	0.36	4.50	-246.04	-6.81	-8.38	246.04	6.81	8.38	0.48	1.70	115.27	**0.29**	6.81	1.50	0.05	68.86	**0.10**
115	7.34	0.36	4.50	-727.91	-79.83	267.35	727.91	79.83	267.35	0.28	1.70	2162.15	**0.16**	79.83	1.00	0.05	425.28	**0.19**
116	4.00	0.36	4.50	-232.74	0.90	1.55	232.74	0.90	1.55	0.16	1.70	413.42	**0.10**	0.90	1.13	0.05	169.17	**0.01**
117	4.57	0.36	4.50	-224.36	1.18	-6.48	224.36	1.18	6.48	0.14	1.70	464.28	**0.08**	1.18	1.00	0.05	205.46	**0.01**
118	7.36	0.36	4.50	-490.55	32.61	-194.88	490.55	32.61	194.88	0.19	1.70	1573.93	**0.12**	32.61	1.00	0.05	367.23	**0.09**
119	7.34	0.36	4.50	-643.21	-47.96	139.87	643.21	47.96	139.87	0.24	1.70	1962.93	**0.14**	47.96	1.00	0.05	405.31	**0.12**
120	4.03	0.36	4.50	-246.00	-7.20	0.40	246.00	7.20	0.40	0.17	1.70	437.52	**0.10**	7.20	1.12	0.05	174.58	**0.04**
121	3.94	0.36	4.50	-280.76	-16.26	14.32	280.76	16.26	14.32	0.20	1.70	477.33	**0.12**	16.26	1.14	0.05	176.32	**0.09**
126	3.94	0.36	4.50	-350.71	-2.72	-0.43	350.71	2.72	0.43	0.25	1.70	572.68	**0.15**	2.72	1.14	0.05	191.64	**0.01**
127	1.97	0.36	4.50	-179.09	-32.42	-36.06	179.09	32.42	36.06	0.25	1.70	145.58	**0.25**	32.42	1.50	0.05	73.55	**0.44**
128	2.19	0.36	4.50	-181.87	-40.32	-38.21	181.87	40.32	38.21	0.23	1.70	167.36	**0.23**	40.32	1.50	0.05	78.99	**0.51**
129	13.78	0.36	4.50	-958.78	-25.37	-22.77	958.78	25.37	22.77	0.19	1.70	5722.43	**0.11**	25.37	1.00	0.05	698.26	**0.04**
130	16.21	0.36	4.50	-1571.33	-35.48	-9.37	1571.33	35.48	9.37	0.27	1.70	10362.43	**0.16**	35.48	1.00	0.05	930.84	**0.04**
131	13.78	0.36	4.50	-942.64	24.21	-2.34	942.64	24.21	2.34	0.19	1.70	5640.72	**0.11**	24.21	1.00	0.05	694.00	**0.03**
132	0.63	0.36	4.50	-87.99	-19.36	-16.48	87.99	19.36	16.48	0.39	1.70	20.28	**0.81**	19.36	1.50	0.05	27.98	**0.69**
133	0.96	0.36	4.50	-125.34	-20.01	-15.57	125.34	20.01	15.57	0.36	1.70	45.06	**0.35**	20.01	1.50	0.05	41.45	**0.48**
134	9.22	0.36	4.50	-905.69	25.88	-278.80	905.69	25.88	278.80	0.27	1.70	3386.81	**0.16**	25.88	1.00	0.05	532.21	**0.05**
135	1.25	0.36	4.50	-112.21	15.55	11.19	112.21	15.55	11.19	0.25	1.70	58.03	**0.19**	15.55	1.50	0.05	46.44	**0.33**
136	9.18	0.36	4.50	-892.31	17.75	-229.25	892.31	17.75	229.25	0.27	1.70	3330.40	**0.16**	17.75	1.00	0.05	527.71	**0.03**
137	1.25	0.36	4.50	-112.79	16.99	12.21	112.79	16.99	12.21	0.25	1.70	58.27	**0.21**	16.99	1.50	0.05	46.54	**0.37**
138	16.21	0.36	4.50	-1116.90	30.51	82.26	1116.90	30.51	82.26	0.19	1.70	7853.45	**0.11**	30.51	1.00	0.05	818.51	**0.04**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU4

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1230.93	43.41	89.51	1230.93	43.41	89.51	0.21	1.70	8520.34	**0.12**	43.41	1.00	0.05	848.09	**0.05**
2	0.97	0.36	4.50	-92.36	8.59	6.48	92.36	8.59	6.48	0.26	1.70	36.60	**0.18**	8.59	1.50	0.05	36.87	**0.23**
3	0.96	0.36	4.50	-93.12	15.07	11.95	93.12	15.07	11.95	0.27	1.70	36.36	**0.33**	15.07	1.50	0.05	36.76	**0.41**
4	13.53	0.36	4.50	-1063.06	16.83	24.66	1063.06	16.83	24.66	0.22	1.70	6105.39	**0.13**	16.83	1.00	0.05	716.91	**0.02**
5	13.53	0.36	4.50	-1097.79	-31.19	-38.16	1097.79	31.19	38.16	0.23	1.70	6268.20	**0.13**	31.19	1.00	0.05	725.60	**0.04**
6	9.16	0.36	4.50	-1191.04	-28.12	558.26	1191.04	28.12	558.26	0.36	1.70	4091.47	**0.21**	28.12	1.00	0.05	592.23	**0.05**
7	9.16	0.36	4.50	-1253.01	-18.36	-1.41	1253.01	18.36	1.41	0.38	1.70	4229.72	**0.22**	18.36	1.00	0.05	604.88	**0.03**
8	0.94	0.36	4.50	-123.90	17.76	13.46	123.90	17.76	13.46	0.37	1.70	43.48	**0.31**	17.76	1.50	0.05	40.75	**0.44**
9	0.94	0.36	4.50	-118.54	16.39	12.21	118.54	16.39	12.21	0.35	1.70	42.21	**0.29**	16.39	1.50	0.05	40.01	**0.41**
10	16.21	0.36	4.50	-1574.92	-61.03	-87.05	1574.92	61.03	87.05	0.27	1.70	10380.67	**0.16**	61.03	1.00	0.05	931.67	**0.07**
11	2.03	0.36	4.50	-174.17	-50.62	-39.73	174.17	50.62	39.73	0.24	1.70	147.63	**0.27**	50.62	1.50	0.05	74.13	**0.68**
12	2.03	0.36	4.50	-185.39	-53.54	-42.37	185.39	53.54	42.37	0.25	1.70	155.14	**0.27**	53.54	1.50	0.05	75.93	**0.71**
13	4.00	0.36	4.50	-213.53	3.01	11.09	213.53	3.01	11.09	0.15	1.70	383.24	**0.09**	3.01	1.13	0.05	164.31	**0.02**
14	5.01	0.36	4.50	-414.16	27.95	-100.37	414.16	27.95	100.37	0.23	1.70	872.60	**0.14**	27.95	1.00	0.05	270.58	**0.10**
15	1.00	0.36	4.50	-151.62	1.85	1.60	151.62	1.85	1.60	0.42	1.70	53.71	**0.25**	1.85	1.50	0.05	45.98	**0.04**
16	1.39	0.36	4.50	-251.55	1.17	-1.64	251.55	1.17	1.64	0.50	1.70	114.01	**0.30**	1.17	1.50	0.05	68.97	**0.02**
17	1.38	0.36	4.50	-103.83	-37.52	-27.85	103.83	37.52	27.85	0.21	1.70	61.28	**0.45**	37.52	1.50	0.05	47.97	**0.78**
18	4.00	0.36	4.50	-307.93	-2.29	-11.13	307.93	2.29	11.13	0.21	1.70	524.72	**0.13**	2.29	1.13	0.05	186.97	**0.01**
19	4.00	0.36	4.50	-116.06	2.89	7.06	116.06	2.89	7.06	0.08	1.70	219.17	**0.05**	2.89	1.13	0.05	137.04	**0.02**
22	4.00	0.36	4.50	-186.64	-3.97	-0.91	186.64	3.97	0.91	0.13	1.70	339.80	**0.08**	3.97	1.13	0.05	157.26	**0.03**
23	4.00	0.36	4.50	-114.16	2.70	3.28	114.16	2.70	3.28	0.08	1.70	215.79	**0.05**	2.70	1.13	0.05	136.46	**0.02**
26	4.00	0.36	4.50	-186.88	-1.89	-13.82	186.88	1.89	13.82	0.13	1.70	340.19	**0.08**	1.89	1.13	0.05	157.33	**0.01**
27	4.00	0.36	4.50	-114.46	1.33	1.28	114.46	1.33	1.28	0.08	1.70	216.33	**0.05**	1.33	1.13	0.05	136.55	**0.01**
30	4.00	0.36	4.50	-180.37	-2.30	-3.72	180.37	2.30	3.72	0.13	1.70	329.47	**0.07**	2.30	1.13	0.05	155.57	**0.01**
31	4.00	0.36	4.50	-115.48	3.43	0.59	115.48	3.43	0.59	0.08	1.70	218.14	**0.05**	3.43	1.13	0.05	136.87	**0.03**
34	4.00	0.36	4.50	-180.06	-4.55	-5.44	180.06	4.55	5.44	0.13	1.70	328.96	**0.07**	4.55	1.13	0.05	155.49	**0.03**
35	4.47	0.36	4.50	-247.08	6.43	8.48	247.08	6.43	8.48	0.15	1.70	493.55	**0.09**	6.43	1.01	0.05	207.61	**0.03**
36	4.18	0.36	4.50	-269.88	26.22	-6.56	269.88	26.22	6.56	0.18	1.70	494.04	**0.11**	26.22	1.08	0.05	191.56	**0.14**
37	2.15	0.36	4.50	-215.77	0.97	3.24	215.77	0.97	3.24	0.28	1.70	187.20	**0.16**	0.97	1.50	0.05	83.44	**0.01**
38	7.85	0.36	4.50	-612.46	-41.94	211.30	612.46	41.94	211.30	0.22	1.70	2043.36	**0.13**	41.94	1.00	0.05	414.85	**0.10**
39	2.04	0.36	4.50	-124.13	-3.20	2.26	124.13	3.20	2.26	0.17	1.70	111.80	**0.10**	3.20	1.50	0.05	65.71	**0.05**
40	0.94	0.36	4.50	-59.40	3.05	-0.17	59.40	3.05	0.17	0.18	1.70	24.53	**0.10**	3.05	1.50	0.05	30.68	**0.10**
41	1.98	0.36	4.50	-125.29	-1.73	-2.45	125.29	1.73	2.45	0.18	1.70	108.95	**0.10**	1.73	1.50	0.05	64.66	**0.03**
42	2.07	0.36	4.50	-211.14	-26.05	-20.69	211.14	26.05	20.69	0.28	1.70	175.68	**0.17**	26.05	1.50	0.05	80.85	**0.32**
43	1.20	0.36	4.50	-181.06	-2.56	-3.76	181.06	2.56	3.76	0.42	1.70	77.13	**0.25**	2.56	1.50	0.05	55.06	**0.05**
44	2.06	0.36	4.50	-125.97	2.72	3.00	125.97	2.72	3.00	0.17	1.70	114.50	**0.10**	2.72	1.50	0.05	66.47	**0.04**
45	1.53	0.36	4.50	-228.67	-0.46	-1.08	228.67	0.46	1.08	0.42	1.70	124.67	**0.24**	0.46	1.50	0.05	69.92	**0.01**
46	2.52	0.36	4.50	-132.86	7.11	13.07	132.86	7.11	13.07	0.15	1.70	150.44	**0.09**	7.11	1.50	0.05	77.32	**0.09**
47	0.90	0.36	4.50	-133.76	1.12	1.45	133.76	1.12	1.45	0.41	1.70	43.00	**0.24**	1.12	1.50	0.05	41.03	**0.03**
48	2.31	0.36	4.50	-185.63	39.39	20.76	185.63	39.39	20.76	0.22	1.70	181.28	**0.13**	39.39	1.50	0.05	82.29	**0.48**
49	3.17	0.36	4.50	-156.48	-2.96	15.04	156.48	2.96	15.04	0.14	1.70	224.49	**0.08**	2.96	1.42	0.05	100.57	**0.03**
50	2.44	0.36	4.50	-160.22	2.97	-10.10	160.22	2.97	10.10	0.18	1.70	170.79	**0.11**	2.97	1.50	0.05	80.73	**0.04**
51	2.69	0.36	4.50	-261.73	7.80	0.33	261.73	7.80	0.33	0.27	1.70	286.18	**0.16**	7.80	1.50	0.05	103.13	**0.08**
52	2.68	0.36	4.50	-234.28	-0.53	-2.67	234.28	0.53	2.67	0.24	1.70	261.18	**0.14**	0.53	1.50	0.05	98.57	**0.01**
53	2.25	0.36	4.50	-150.60	16.30	9.18	150.60	16.30	9.18	0.19	1.70	147.63	**0.11**	16.30	1.50	0.05	74.96	**0.22**
54	2.39	0.36	4.50	-140.25	-4.28	5.01	140.25	4.28	5.01	0.16	1.70	148.69	**0.10**	4.28	1.50	0.05	76.03	**0.06**
55	6.88	0.36	4.50	-621.46	-13.71	12.41	621.46	13.71	12.41	0.25	1.70	1766.61	**0.15**	13.71	1.00	0.05	384.37	**0.04**
56	9.94	0.36	4.50	-843.00	-6.86	16.23	843.00	6.86	16.23	0.24	1.70	3506.66	**0.14**	6.86	1.00	0.05	542.07	**0.01**
57	3.07	0.36	4.50	-169.52	-1.31	-8.82	169.52	1.31	8.82	0.15	1.70	232.59	**0.09**	1.31	1.47	0.05	97.89	**0.01**
58	5.47	0.36	4.50	-396.10	-31.89	22.69	396.10	31.89	22.69	0.20	1.70	932.53	**0.12**	31.89	1.00	0.05	281.23	**0.11**
59	5.50	0.36	4.50	-379.41	23.19	-51.54	379.41	23.19	51.54	0.19	1.70	905.02	**0.11**	23.19	1.00	0.05	277.84	**0.08**
60	2.63	0.36	4.50	-140.61	-2.54	-1.45	140.61	2.54	1.45	0.15	1.70	165.90	**0.09**	2.54	1.50	0.05	81.07	**0.03**
61	5.83	0.36	4.50	-517.15	9.75	-39.57	517.15	9.75	39.57	0.25	1.70	1250.43	**0.14**	9.75	1.00	0.05	323.44	**0.03**
62	2.74	0.36	4.50	-267.72	0.09	-1.45	267.72	0.09	1.45	0.27	1.70	297.89	**0.16**	0.09	1.50	0.05	105.22	**0.00**
63	2.43	0.36	4.50	-136.11	-1.42	-3.16	136.11	1.42	3.16	0.16	1.70	147.57	**0.09**	1.42	1.50	0.05	76.08	**0.02**
64	2.86	0.36	4.50	-143.40	-5.90	-4.14	143.40	5.90	4.14	0.14	1.70	185.30	**0.08**	5.90	1.50	0.05	86.31	**0.07**
65	6.14	0.36	4.50	-455.83	22.21	-109.41	455.83	22.21	109.41	0.21	1.70	1199.69	**0.12**	22.21	1.00	0.05	318.57	**0.07**
66	1.15	0.36	4.50	-107.55	-1.63	-1.84	107.55	1.63	1.84	0.26	1.70	50.72	**0.15**	1.63	1.50	0.05	43.41	**0.04**
67	2.70	0.36	4.50	-251.62	-9.97	-7.85	251.62	9.97	7.85	0.26	1.70	278.83	**0.15**	9.97	1.50	0.05	101.79	**0.10**
68	2.65	0.36	4.50	-131.18	3.63	1.42	131.18	3.63	1.42	0.14	1.70	157.27	**0.08**	3.63	1.50	0.05	79.64	**0.05**
69	6.13	0.36	4.50	-453.58	21.04	-102.86	453.58	21.04	102.86	0.21	1.70	1192.48	**0.12**	21.04	1.00	0.05	317.67	**0.07**
70	1.15	0.36	4.50	-101.04	-4.71	-3.71	101.04	4.71	3.71	0.24	1.70	48.29	**0.14**	4.71	1.50	0.05	42.38	**0.11**
71	1.14	0.36	4.50	-98.96	3.72	2.81	98.96	3.72	2.81	0.24	1.70	46.99	**0.14**	3.72	1.50	0.05	41.82	**0.09**
72	2.75	0.36	4.50	-251.70	8.77	5.30	251.70	8.77	5.30	0.25	1.70	285.19	**0.15**	8.77	1.50	0.05	102.95	**0.09**
73	2.69	0.36	4.50	-150.35	0.92	2.28	150.35	0.92	2.28	0.16	1.70	180.49	**0.09**	0.92	1.50	0.05	84.16	**0.01**
74	2.85	0.36	4.50	-277.22	0.84	0.38	277.22	0.84	0.38	0.27	1.70	321.17	**0.16**	0.84	1.50	0.05	109.25	**0.01**
75	2.85	0.36	4.50	-291.64	-0.57	-1.17	291.64	0.57	1.17	0.28	1.70	333.84	**0.17**	0.57	1.50	0.05	111.46	**0.01**
76	2.63	0.36	4.50	-142.03	2.21	3.83	142.03	2.21	3.83	0.15	1.70	167.38	**0.09**	2.21	1.50	0.05	81.34	**0.03**
77	5.50	0.36	4.50	-394.59	-28.17	61.62	394.59	28.17	61.62	0.20	1.70	935.47	**0.12**	28.17	1.00	0.05	281.81	**0.10**
78	2.15	0.36	4.50	-193.47	-4.43	-1.50	193.47	4.43	1.50	0.25	1.70	172.00	**0.15**	4.43	1.50	0.05	79.96	**0.06**
79	9.92	0.36	4.50	-856.50	-8.77	13.16	856.50	8.77	13.16	0.24	1.70	3543.13	**0.14**	8.77	1.00	0.05	544.68	**0.02**
80	2.37	0.36	4.50	-207.74	7.04	9.94	207.74	7.04	9.94	0.24	1.70	204.69	**0.14**	7.04	1.50	0.05	87.26	**0.08**
81	1.91	0.36	4.50	-134.53	12.66	9.43	134.53	12.66	9.43	0.20	1.70	111.08	**0.12**	12.66	1.50	0.05	64.81	**0.20**
82	0.90	0.36	4.50	-61.12	-2.84	-0.16	61.12	2.84	0.16	0.19	1.70	23.91	**0.11**	2.84	1.50	0.05	30.14	**0.09**
83	2.59	0.36	4.50	-143.35	0.18	2.38	143.35	0.18	2.38	0.15	1.70	165.89	**0.09**	0.18	1.50	0.05	80.77	**0.00**
84	6.77	0.36	4.50	-595.96	-3.47	12.23	595.96	3.47	12.23	0.24	1.70	1675.95	**0.14**	3.47	1.00	0.05	374.49	**0.01**
85	7.91	0.36	4.50	-663.82	30.12	-189.99	663.82	30.12	189.99	0.23	1.70	2201.86	**0.14**	30.12	1.00	0.05	429.64	**0.07**
86	2.42	0.36	4.50	-143.77	2.55	-7.86	143.77	2.55	7.86	0.17	1.70	154.09	**0.10**	2.55	1.50	0.05	77.31	**0.03**
87	2.21	0.36	4.50	-148.89	-17.76	-11.60	148.89	17.76	11.60	0.19	1.70	143.22	**0.11**	17.76	1.50	0.05	73.80	**0.24**
88	2.68	0.36	4.50	-236.37	0.89	1.87	236.37	0.89	1.87	0.24	1.70	263.03	**0.14**	0.89	1.50	0.05	98.90	**0.01**
89	2.61	0.36	4.50	-231.93	1.87	4.15	231.93	1.87	4.15	0.25	1.70	250.97	**0.15**	1.87	1.50	0.05	96.60	**0.02**
90	2.27	0.36	4.50	-215.47	-2.59	-0.44	215.47	2.59	0.44	0.26	1.70	199.93	**0.16**	2.59	1.50	0.05	86.19	**0.03**
91	2.34	0.36	4.50	-147.33	-4.57	6.84	147.33	4.57	6.84	0.17	1.70	151.51	**0.10**	4.57	1.50	0.05	76.28	**0.06**
92	2.23	0.36	4.50	-167.06	-29.25	-16.57	167.06	29.25	16.57	0.21	1.70	159.45	**0.12**	29.25	1.50	0.05	77.39	**0.38**
93	2.61	0.36	4.50	-302.09	-4.68	-3.97	302.09	4.68	3.97	0.32	1.70	306.51	**0.19**	4.68	1.50	0.05	107.25	**0.04**
94	2.61	0.36	4.50	-306.62	5.87	6.86	306.62	5.87	6.86	0.33	1.70	309.77	**0.19**	5.87	1.50	0.05	107.90	**0.05**
95	2.32	0.36	4.50	-234.13	8.64	3.49	234.13	8.64	3.49	0.28	1.70	218.90	**0.16**	8.64	1.50	0.05	90.23	**0.10**
96	7.34	0.36	4.50	-595.31	-56.82	149.18	595.31	56.82	149.18	0.23	1.70	1844.16	**0.13**	56.82	1.00	0.05	393.57	**0.14**
97	3.21	0.36	4.50	-157.36	-1.88	-20.24	157.36	1.88	20.24	0.14	1.70	228.76	**0.09**	1.88	1.40	0.05	102.90	**0.02**
98	2.52	0.36	4.50	-132.71	-7.97	-15.09	132.71	7.97	15.09	0.15	1.70	150.29	**0.10**	7.97	1.50	0.05	77.29	**0.10**
99	1.93	0.36	4.50	-115.59	-2.13	-2.71	115.59	2.13	2.71	0.17	1.70	98.70	**0.10**	2.13	1.50	0.05	61.83	**0.03**
100	2.00	0.36	4.50	-124.61	1.63	2.15	124.61	1.63	2.15	0.17	1.70	109.69	**0.10**	1.63	1.50	0.05	64.96	**0.03**
101	4.39	0.36	4.50	-256.02	5.34	7.05	256.02	5.34	7.05	0.16	1.70	498.96	**0.10**	5.34	1.03	0.05	203.93	**0.03**
102	1.90	0.36	4.50	-120.71	6.25	-1.30	120.71	6.25	1.30	0.18	1.70	100.67	**0.10**	6.25	1.50	0.05	62.14	**0.10**
103	4.00	0.36	4.50	-217.50	8.40	21.25	217.50	8.40	21.25	0.15	1.70	389.53	**0.09**	8.40	1.13	0.05	165.33	**0.05**
104	7.36	0.36	4.50	-620.10	52.85	-223.38	620.10	52.85	223.38	0.23	1.70	1912.38	**0.14**	52.85	1.00	0.05	400.37	**0.13**
105	0.61	0.36	4.50	-89.21	-0.39	-0.46	89.21	0.39	0.46	0.41	1.70	19.56	**0.24**	0.39	1.50	0.05	27.62	**0.01**
106	5.86	0.36	4.50	-546.83	-72.79	109.08	546.83	72.79	109.08	0.26	1.70	1314.80	**0.15**	72.79	1.00	0.05	331.54	**0.22**
107	4.00	0.36	4.50	-238.39	0.94	2.83	238.39	0.94	2.83	0.17	1.70	422.16	**0.10**	0.94	1.13	0.05	170.57	**0.01**
108	3.97	0.36	4.50	-191.50	1.89	-5.30	191.50	1.89	5.30	0.13	1.70	344.88	**0.08**	1.89	1.13	0.05	156.57	**0.01**

109	7.36	0.36	4.50	-518.31	34.83	-183.11	518.31	34.83	183.11	0.20	1.70	1649.17	**0.12**	34.83	1.00	0.05	374.58	**0.09**
110	7.34	0.36	4.50	-664.59	-54.91	173.74	664.59	54.91	173.74	0.25	1.70	2014.52	**0.15**	54.91	1.00	0.05	410.45	**0.13**
111	3.97	0.36	4.50	-233.48	1.21	2.61	233.48	1.21	2.61	0.16	1.70	411.06	**0.10**	1.21	1.13	0.05	167.25	**0.01**
112	3.99	0.36	4.50	-258.81	2.50	14.65	258.81	2.50	14.65	0.18	1.70	451.94	**0.11**	2.50	1.13	0.05	174.82	**0.01**
114	1.41	0.36	4.50	-241.09	-7.77	-9.89	241.09	7.77	9.89	0.47	1.70	114.10	**0.28**	7.77	1.50	0.05	68.26	**0.11**
115	7.34	0.36	4.50	-711.61	-85.40	244.97	711.61	85.40	244.97	0.27	1.70	2124.88	**0.16**	85.40	1.00	0.05	421.51	**0.20**
116	4.00	0.36	4.50	-232.93	0.59	1.07	232.93	0.59	1.07	0.16	1.70	413.71	**0.10**	0.59	1.13	0.05	169.22	**0.00**
117	4.57	0.36	4.50	-221.35	1.14	-6.97	221.35	1.14	6.97	0.13	1.70	458.69	**0.08**	1.14	1.00	0.05	204.56	**0.01**
118	7.36	0.36	4.50	-487.18	23.21	-200.91	487.18	23.21	200.91	0.18	1.70	1564.69	**0.13**	23.21	1.00	0.05	366.33	**0.06**
119	7.34	0.36	4.50	-629.44	-55.55	119.42	629.44	55.55	119.42	0.24	1.70	1929.23	**0.14**	55.55	1.00	0.05	401.97	**0.14**
120	4.03	0.36	4.50	-246.29	-7.21	-0.32	246.29	7.21	0.32	0.17	1.70	437.97	**0.10**	7.21	1.12	0.05	174.65	**0.04**
121	3.94	0.36	4.50	-274.94	-15.85	13.93	274.94	15.85	13.93	0.19	1.70	468.98	**0.11**	15.85	1.14	0.05	174.99	**0.09**
126	3.94	0.36	4.50	-347.06	-2.99	-0.94	347.06	2.99	0.94	0.24	1.70	567.93	**0.14**	2.99	1.14	0.05	190.87	**0.02**
127	1.97	0.36	4.50	-175.47	-31.16	-34.93	175.47	31.16	34.93	0.25	1.70	143.24	**0.24**	31.16	1.50	0.05	72.98	**0.43**
128	2.19	0.36	4.50	-180.91	-40.65	-38.52	180.91	40.65	38.52	0.23	1.70	166.64	**0.23**	40.65	1.50	0.05	78.83	**0.52**
129	13.78	0.36	4.50	-942.42	-25.78	-29.74	942.42	25.78	29.74	0.19	1.70	5639.61	**0.11**	25.78	1.00	0.05	693.94	**0.04**
130	16.21	0.36	4.50	-1545.17	-58.03	-48.50	1545.17	58.03	48.50	0.26	1.70	10228.76	**0.16**	58.03	1.00	0.05	924.74	**0.06**
131	13.78	0.36	4.50	-919.37	22.43	-7.41	919.37	22.43	7.41	0.19	1.70	5522.04	**0.11**	22.43	1.00	0.05	687.81	**0.03**
132	0.63	0.36	4.50	-86.14	-18.41	-15.68	86.14	18.41	15.68	0.38	1.70	20.00	**0.78**	18.41	1.50	0.05	27.73	**0.66**
133	0.96	0.36	4.50	-121.51	-18.92	-14.74	121.51	18.92	14.74	0.35	1.70	44.13	**0.33**	18.92	1.50	0.05	40.92	**0.46**
134	9.22	0.36	4.50	-881.34	25.49	-272.41	881.34	25.49	272.41	0.27	1.70	3316.38	**0.16**	25.49	1.00	0.05	526.56	**0.05**
135	1.25	0.36	4.50	-109.69	14.34	10.37	109.69	14.34	10.37	0.24	1.70	56.99	**0.18**	14.34	1.50	0.05	46.04	**0.31**
136	9.18	0.36	4.50	-864.41	17.53	-223.84	864.41	17.53	223.84	0.26	1.70	3249.45	**0.15**	17.53	1.00	0.05	521.20	**0.03**
137	1.25	0.36	4.50	-109.48	15.95	11.53	109.48	15.95	11.53	0.24	1.70	56.90	**0.20**	15.95	1.50	0.05	46.01	**0.35**
138	16.21	0.36	4.50	-1102.54	48.04	131.73	1102.54	48.04	131.73	0.19	1.70	7767.70	**0.11**	48.04	1.00	0.05	814.70	**0.06**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU5

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1252.10	4.87	-1.80	1252.10	4.87	1.80	0.21	1.70	8641.39	**0.13**	4.87	1.00	0.05	853.47	**0.01**
2	0.97	0.36	4.50	-94.07	9.87	7.56	94.07	9.87	7.56	0.27	1.70	37.12	**0.20**	9.87	1.50	0.05	37.14	**0.27**
3	0.96	0.36	4.50	-96.25	16.19	12.89	96.25	16.19	12.89	0.28	1.70	37.30	**0.35**	16.19	1.50	0.05	37.24	**0.43**
4	13.53	0.36	4.50	-1100.83	22.70	31.82	1100.83	22.70	31.82	0.23	1.70	6282.34	**0.13**	22.70	1.00	0.05	726.35	**0.03**
5	13.53	0.36	4.50	-1116.03	-34.78	-37.07	1116.03	34.78	37.07	0.23	1.70	6352.79	**0.13**	34.78	1.00	0.05	730.12	**0.05**
6	9.16	0.36	4.50	-1225.70	-32.61	560.49	1225.70	32.61	560.49	0.37	1.70	4169.70	**0.22**	32.61	1.00	0.05	599.34	**0.05**
7	9.16	0.36	4.50	-1295.01	-23.18	-3.42	1295.01	23.18	3.42	0.39	1.70	4319.22	**0.23**	23.18	1.00	0.05	613.31	**0.04**
8	0.94	0.36	4.50	-126.51	18.86	14.25	126.51	18.86	14.25	0.37	1.70	44.08	**0.32**	18.86	1.50	0.05	41.10	**0.46**
9	0.94	0.36	4.50	-124.28	17.08	12.64	124.28	17.08	12.64	0.37	1.70	43.57	**0.29**	17.08	1.50	0.05	40.80	**0.42**
10	16.21	0.36	4.50	-1611.00	-11.30	-9.71	1611.00	11.30	9.71	0.28	1.70	10562.61	**0.16**	11.30	1.00	0.05	940.01	**0.01**
11	2.03	0.36	4.50	-180.42	-53.60	-41.80	180.42	53.60	41.80	0.25	1.70	151.84	**0.28**	53.60	1.50	0.05	75.14	**0.71**
12	2.03	0.36	4.50	-185.01	-52.52	-41.40	185.01	52.52	41.40	0.25	1.70	154.89	**0.27**	52.52	1.50	0.05	75.87	**0.69**
13	4.00	0.36	4.50	-227.60	5.67	12.88	227.60	5.67	12.88	0.16	1.70	405.41	**0.09**	5.67	1.13	0.05	167.88	**0.03**
14	5.01	0.36	4.50	-416.11	50.48	-68.67	416.11	50.48	68.67	0.23	1.70	875.93	**0.14**	50.48	1.00	0.05	271.06	**0.19**
15	1.00	0.36	4.50	-154.09	3.63	4.27	154.09	3.63	4.27	0.43	1.70	54.22	**0.25**	3.63	1.50	0.05	46.29	**0.08**
16	1.39	0.36	4.50	-260.09	4.81	3.93	260.09	4.81	3.93	0.52	1.70	115.74	**0.31**	4.81	1.50	0.05	69.98	**0.07**
17	1.38	0.36	4.50	-110.98	-34.03	-24.03	110.98	34.03	24.03	0.22	1.70	64.74	**0.37**	34.03	1.50	0.05	49.17	**0.69**
18	4.00	0.36	4.50	-308.76	-4.01	-11.86	308.76	4.01	11.86	0.21	1.70	525.89	**0.13**	4.01	1.13	0.05	187.16	**0.02**
19	4.00	0.36	4.50	-173.94	4.28	8.18	173.94	4.28	8.18	0.12	1.70	318.80	**0.07**	4.28	1.13	0.05	153.82	**0.03**
22	4.00	0.36	4.50	-181.69	-4.34	-2.01	181.69	4.34	2.01	0.13	1.70	331.65	**0.07**	4.34	1.13	0.05	155.93	**0.03**
23	4.00	0.36	4.50	-174.86	2.90	4.30	174.86	2.90	4.30	0.12	1.70	320.33	**0.07**	2.90	1.13	0.05	154.07	**0.02**
26	4.00	0.36	4.50	-181.82	-2.27	-14.14	181.82	2.27	14.14	0.13	1.70	331.87	**0.07**	2.27	1.13	0.05	155.97	**0.01**
27	4.00	0.36	4.50	-175.21	1.78	2.69	175.21	1.78	2.69	0.12	1.70	320.91	**0.07**	1.78	1.13	0.05	154.17	**0.01**
30	4.00	0.36	4.50	-175.55	-2.94	-4.64	175.55	2.94	4.64	0.12	1.70	321.48	**0.07**	2.94	1.13	0.05	154.26	**0.02**
31	4.00	0.36	4.50	-173.89	2.89	2.48	173.89	2.89	2.48	0.12	1.70	318.72	**0.07**	2.89	1.13	0.05	153.81	**0.02**
34	4.00	0.36	4.50	-175.71	-6.04	-7.44	175.71	6.04	7.44	0.12	1.70	321.74	**0.07**	6.04	1.13	0.05	154.31	**0.04**
35	4.47	0.36	4.50	-256.42	5.47	11.14	256.42	5.47	11.14	0.16	1.70	509.90	**0.09**	5.47	1.01	0.05	210.24	**0.03**
36	4.18	0.36	4.50	-271.34	36.60	5.66	271.34	36.60	5.66	0.18	1.70	496.33	**0.11**	36.60	1.08	0.05	191.92	**0.19**
37	2.15	0.36	4.50	-219.60	2.96	6.67	219.60	2.96	6.67	0.28	1.70	189.72	**0.17**	2.96	1.50	0.05	84.02	**0.04**
38	7.85	0.36	4.50	-624.15	-36.02	235.23	624.15	36.02	235.23	0.22	1.70	2075.35	**0.13**	36.02	1.00	0.05	417.79	**0.09**
39	2.04	0.36	4.50	-126.18	-3.31	1.65	126.18	3.31	1.65	0.17	1.70	113.40	**0.10**	3.31	1.50	0.05	66.09	**0.05**
40	0.94	0.36	4.50	-60.42	3.00	0.00	60.42	3.00	0.00	0.18	1.70	24.89	**0.11**	3.00	1.50	0.05	30.87	**0.10**
41	1.98	0.36	4.50	-127.15	-2.06	-3.00	127.15	2.06	3.00	0.18	1.70	110.34	**0.10**	2.06	1.50	0.05	65.00	**0.03**
42	2.07	0.36	4.50	-214.29	-27.64	-22.57	214.29	27.64	22.57	0.29	1.70	177.65	**0.17**	27.64	1.50	0.05	81.33	**0.34**
43	1.20	0.36	4.50	-184.71	-2.96	-4.40	184.71	2.96	4.40	0.43	1.70	78.03	**0.25**	2.96	1.50	0.05	55.53	**0.05**
44	2.06	0.36	4.50	-127.65	2.49	2.53	127.65	2.49	2.53	0.17	1.70	115.82	**0.10**	2.49	1.50	0.05	66.78	**0.04**
45	1.53	0.36	4.50	-233.02	-0.93	-1.91	233.02	0.93	1.91	0.42	1.70	126.07	**0.25**	0.93	1.50	0.05	70.48	**0.01**
46	2.52	0.36	4.50	-134.83	5.81	12.24	134.83	5.81	12.24	0.15	1.70	152.41	**0.09**	5.81	1.50	0.05	77.70	**0.07**
47	0.90	0.36	4.50	-136.00	0.98	1.22	136.00	0.98	1.22	0.42	1.70	43.42	**0.25**	0.98	1.50	0.05	41.32	**0.02**
48	2.31	0.36	4.50	-188.92	37.23	18.40	188.92	37.23	18.40	0.23	1.70	183.90	**0.13**	37.23	1.50	0.05	82.84	**0.45**
49	3.17	0.36	4.50	-156.90	-0.35	17.34	156.90	0.35	17.34	0.14	1.70	225.02	**0.08**	0.35	1.42	0.05	100.66	**0.00**
50	2.44	0.36	4.50	-160.17	3.65	-9.01	160.17	3.65	9.01	0.18	1.70	170.75	**0.11**	3.65	1.50	0.05	80.72	**0.05**
51	2.69	0.36	4.50	-267.93	6.48	-2.49	267.93	6.48	2.49	0.28	1.70	291.37	**0.16**	6.48	1.50	0.05	104.08	**0.06**
52	2.68	0.36	4.50	-237.21	-2.03	-5.80	237.21	2.03	5.80	0.25	1.70	263.78	**0.14**	2.03	1.50	0.05	99.04	**0.02**
53	2.25	0.36	4.50	-152.71	13.21	6.22	152.71	13.21	6.22	0.19	1.70	149.38	**0.11**	13.21	1.50	0.05	75.33	**0.18**
54	2.39	0.36	4.50	-139.79	-3.60	6.15	139.79	3.60	6.15	0.16	1.70	148.27	**0.10**	3.60	1.50	0.05	75.94	**0.05**
55	6.88	0.36	4.50	-628.41	-10.93	23.00	628.41	10.93	23.00	0.25	1.70	1782.17	**0.15**	10.93	1.00	0.05	386.03	**0.03**
56	9.94	0.36	4.50	-851.12	-2.04	23.31	851.12	2.04	23.31	0.24	1.70	3533.79	**0.14**	2.04	1.00	0.05	544.05	**0.00**
57	3.07	0.36	4.50	-170.92	-0.69	-7.81	170.92	0.69	7.81	0.15	1.70	234.28	**0.09**	0.69	1.47	0.05	98.17	**0.01**
58	5.47	0.36	4.50	-397.23	-37.99	14.13	397.23	37.99	14.13	0.20	1.70	934.76	**0.12**	37.99	1.00	0.05	281.52	**0.13**
59	5.50	0.36	4.50	-381.28	15.78	-60.43	381.28	15.78	60.43	0.19	1.70	908.79	**0.11**	15.78	1.00	0.05	278.33	**0.06**
60	2.63	0.36	4.50	-139.56	-2.10	-0.65	139.56	2.10	0.65	0.15	1.70	164.80	**0.09**	2.10	1.50	0.05	80.87	**0.03**
61	5.83	0.36	4.50	-517.61	13.62	-37.86	517.61	13.62	37.86	0.25	1.70	1251.32	**0.15**	13.62	1.00	0.05	323.55	**0.04**
62	2.74	0.36	4.50	-270.45	1.10	0.27	270.45	1.10	0.27	0.27	1.70	300.21	**0.16**	1.10	1.50	0.05	105.64	**0.01**
63	2.43	0.36	4.50	-137.27	-0.98	-2.43	137.27	0.98	2.43	0.16	1.70	148.67	**0.09**	0.98	1.50	0.05	76.30	**0.01**
64	2.86	0.36	4.50	-141.53	-5.39	-3.11	141.53	5.39	3.11	0.14	1.70	183.13	**0.08**	5.39	1.50	0.05	85.94	**0.06**
65	6.14	0.36	4.50	-458.92	13.01	-122.28	458.92	13.01	122.28	0.21	1.70	1206.45	**0.12**	13.01	1.00	0.05	319.37	**0.04**
66	1.15	0.36	4.50	-107.73	-2.25	-2.55	107.73	2.25	2.55	0.26	1.70	50.79	**0.15**	2.25	1.50	0.05	43.44	**0.05**
67	2.70	0.36	4.50	-255.33	-8.64	-5.54	255.33	8.64	5.54	0.26	1.70	282.03	**0.15**	8.64	1.50	0.05	102.37	**0.08**
68	2.65	0.36	4.50	-129.47	4.54	3.04	129.47	4.54	3.04	0.14	1.70	155.44	**0.08**	4.54	1.50	0.05	79.30	**0.06**
69	6.13	0.36	4.50	-458.23	12.37	-117.92	458.23	12.37	117.92	0.21	1.70	1202.65	**0.12**	12.37	1.00	0.05	318.86	**0.04**
70	1.15	0.36	4.50	-102.43	-4.47	-3.45	102.43	4.47	3.45	0.25	1.70	48.81	**0.15**	4.47	1.50	0.05	42.60	**0.10**
71	1.14	0.36	4.50	-99.69	4.11	3.20	99.69	4.11	3.20	0.24	1.70	47.27	**0.14**	4.11	1.50	0.05	41.93	**0.10**
72	2.75	0.36	4.50	-256.01	10.02	7.31	256.01	10.02	7.31	0.26	1.70	289.02	**0.15**	10.02	1.50	0.05	103.63	**0.10**
73	2.69	0.36	4.50	-151.65	1.99	4.02	151.65	1.99	4.02	0.16	1.70	181.86	**0.09**	1.99	1.50	0.05	84.41	**0.02**
74	2.85	0.36	4.50	-280.38	2.33	2.98	280.38	2.33	2.98	0.27	1.70	323.98	**0.16**	2.33	1.50	0.05	109.74	**0.02**
75	2.85	0.36	4.50	-294.15	0.72	1.24	294.15	0.72	1.24	0.29	1.70	336.00	**0.17**	0.72	1.50	0.05	111.84	**0.01**
76	2.63	0.36	4.50	-141.60	3.35	5.54	141.60	3.35	5.54	0.15	1.70	166.93	**0.09**	3.35	1.50	0.05	81.26	**0.04**
77	5.50	0.36	4.50	-397.01	-22.23	68.08	397.01	22.23	68.08	0.20	1.70	940.28	**0.12**	22.23	1.00	0.05	282.44	**0.08**
78	2.15	0.36	4.50	-196.18	-3.44	-0.04	196.18	3.44	0.04	0.25	1.70	173.90	**0.15**	3.44	1.50	0.05	80.39	**0.04**
79	9.92	0.36	4.50	-861.80	-0.71	19.82	861.80	0.71	19.82	0.24	1.70	3560.67	**0.14**	0.71	1.00	0.05	545.97	**0.00**
80	2.37	0.36	4.50	-209.21	8.94	12.49	209.21	8.94	12.49	0.25	1.70	205.84	**0.14**	8.94	1.50	0.05	87.49	**0.10**
81	1.91	0.36	4.50	-135.01	13.81	10.86	135.01	13.81	10.86	0.20	1.70	111.41	**0.12**	13.81	1.50	0.05	64.89	**0.21**
82	0.90	0.36	4.50	-62.79	-2.91	-0.02	62.79	2.91	0.02	0.19	1.70	24.47	**0.11**	2.91	1.50	0.05	30.43	**0.10**
83	2.59	0.36	4.50	-144.80	1.32	4.29	144.80	1.32	4.29	0.16	1.70	167.36	**0.09**	1.32	1.50	0.05	81.04	**0.02**
84	6.77	0.36	4.50	-601.98	1.13	22.38	601.98	1.13	22.38	0.25	1.70	1689.39	**0.15**	1.13	1.00	0.05	375.94	**0.00**
85	7.91	0.36	4.50	-675.57	40.90	-182.59	675.57	40.90	182.59	0.24	1.70	2233.21	**0.14**	40.90	1.00	0.05	432.52	**0.09**
86	2.42	0.36	4.50	-143.27	3.67	-5.91	143.27	3.67	5.91	0.16	1.70	153.63	**0.10**	3.67	1.50	0.05	77.22	**0.05**
87	2.21	0.36	4.50	-150.47	-15.19	-9.46	150.47	15.19	9.46	0.19	1.70	144.51	**0.11**	15.19	1.50	0.05	74.08	**0.21**
88	2.68	0.36	4.50	-235.83	1.92	3.62	235.83	1.92	3.62	0.24	1.70	262.56	**0.14**	1.92	1.50	0.05	98.82	**0.02**
89	2.61	0.36	4.50	-232.25	2.44	5.55	232.25	2.44	5.55	0.25	1.70	251.24	**0.15**	2.44	1.50	0.05	96.65	**0.03**
90	2.27	0.36	4.50	-218.72	-2.50	0.21	218.72	2.50	0.21	0.27	1.70	202.27	**0.16**	2.50	1.50	0.05	86.70	**0.03**
91	2.34	0.36	4.50	-148.24	-3.45	8.94	148.24	3.45	8.94	0.18	1.70	152.32	**0.10**	3.45	1.50	0.05	76.45	**0.05**
92	2.23	0.36	4.50	-169.84	-27.35	-14.69	169.84	27.35	14.69	0.21	1.70	161.65	**0.12**	27.35	1.50	0.05	77.87	**0.35**
93	2.61	0.36	4.50	-308.59	-4.39	-2.79	308.59	4.39	2.79	0.33	1.70	311.18	**0.19**	4.39	1.50	0.05	108.18	**0.04**
94	2.61	0.36	4.50	-316.05	6.88	8.64	316.05	6.88	8.64	0.34	1.70	316.44	**0.20**	6.88	1.50	0.05	109.24	**0.06**
95	2.32	0.36	4.50	-241.13	9.56	4.61	241.13	9.56	4.61	0.29	1.70	223.82	**0.17**	9.56	1.50	0.05	91.30	**0.10**
96	7.34	0.36	4.50	-612.86	-48.03	174.68	612.86	48.03	174.68	0.23	1.70	1888.18	**0.14**	48.03	1.00	0.05	397.92	**0.12**
97	3.21	0.36	4.50	-157.54	0.81	-16.27	157.54	0.81	16.27	0.14	1.70	229.00	**0.08**	0.81	1.40	0.05	102.93	**0.01**
98	2.52	0.36	4.50	-133.18	-6.64	-13.09	133.18	6.64	13.09	0.15	1.70	150.76	**0.09**	6.64	1.50	0.05	77.38	**0.09**
99	1.93	0.36	4.50	-118.06	-1.91	-2.18	118.06	1.91	2.18	0.17	1.70	100.53	**0.10**	1.91	1.50	0.05	62.29	**0.03**
100	2.00	0.36	4.50	-127.79	2.24	3.17	127.79	2.24	3.17	0.18	1.70	112.09	**0.10**	2.24	1.50	0.05	65.54	**0.03**
101	4.39	0.36	4.50	-256.76	7.98	9.57	256.76	7.98	9.57	0.16	1.70	500.22	**0.10**	7.98	1.03	0.05	204.13	**0.04**
102	1.90	0.36	4.50	-123.28	7.26	-0.71	123.28	7.26	0.71	0.18	1.70	102.51	**0.11**	7.26	1.50	0.05	62.60	**0.12**
103	4.00	0.36	4.50	-223.30	9.30	23.05	223.30	9.30	23.05	0.16	1.70	398.67	**0.09**	9.30	1.13	0.05	166.80	**0.06**
104	7.36	0.36	4.50	-632.25	70.16	-214.10	632.25	70.16	214.10	0.24	1.70	1942.46	**0.14**	70.16	1.00	0.05	403.34	**0.17**
105	0.61	0.36	4.50	-92.79	-0.20	-0.18	92.79	0.20	0.18	0.42	1.70	20.03	**0.25**	0.20	1.50	0.05	28.08	**0.01**
106	5.86	0.36	4.50	-566.84	-66.65	132.12	566.84	66.65	132.12	0.27	1.70	1352.01	**0.16**	66.65	1.00	0.05	336.22	**0.20**
107	4.00	0.36	4.50	-238.06	2.42	5.45	238.06	2.42	5.45	0.17	1.70	421.65	**0.10**	2.42	1.13	0.05	170.49	**0.01**
108	3.97	0.36	4.50	-197.16	2.47	-4.37	197.16	2.47	4.37	0.14	1.70	354.00	**0.08**	2.47	1.13	0.05	158.05	**0.02**

109	7.36	0.36	4.50	-526.27	54.41	-169.06	526.27	54.41	169.06	0.20	1.70	1670.47	**0.12**	54.41	1.00	0.05	376.66	**0.14**
110	7.34	0.36	4.50	-688.20	-42.35	210.43	688.20	42.35	210.43	0.26	1.70	2070.47	**0.15**	42.35	1.00	0.05	416.04	**0.10**
111	3.97	0.36	4.50	-231.86	2.79	5.36	231.86	2.79	5.36	0.16	1.70	408.57	**0.10**	2.79	1.13	0.05	166.86	**0.02**
112	3.99	0.36	4.50	-265.70	3.02	15.68	265.70	3.02	15.68	0.18	1.70	462.22	**0.11**	3.02	1.13	0.05	176.47	**0.02**
114	1.41	0.36	4.50	-250.90	-5.70	-6.53	250.90	5.70	6.53	0.49	1.70	116.38	**0.29**	5.70	1.50	0.05	69.45	**0.08**
115	7.34	0.36	4.50	-738.56	-70.48	294.06	738.56	70.48	294.06	0.28	1.70	2186.23	**0.16**	70.48	1.00	0.05	427.73	**0.16**
116	4.00	0.36	4.50	-229.81	2.33	3.99	229.81	2.33	3.99	0.16	1.70	408.86	**0.09**	2.33	1.13	0.05	168.44	**0.01**
117	4.57	0.36	4.50	-228.76	1.97	-4.42	228.76	1.97	4.42	0.14	1.70	472.42	**0.08**	1.97	1.00	0.05	206.76	**0.01**
118	7.36	0.36	4.50	-493.82	45.92	-183.29	493.82	45.92	183.29	0.19	1.70	1582.87	**0.12**	45.92	1.00	0.05	368.11	**0.12**
119	7.34	0.36	4.50	-652.82	-36.02	167.38	652.82	36.02	167.38	0.25	1.70	1986.22	**0.15**	36.02	1.00	0.05	407.63	**0.09**
120	4.03	0.36	4.50	-242.43	-5.71	3.36	242.43	5.71	3.36	0.17	1.70	432.01	**0.10**	5.71	1.12	0.05	173.70	**0.03**
121	3.94	0.36	4.50	-286.33	-15.21	16.50	286.33	15.21	16.50	0.20	1.70	485.27	**0.12**	15.21	1.14	0.05	177.59	**0.09**
126	3.94	0.36	4.50	-350.09	-1.12	2.29	350.09	1.12	2.29	0.25	1.70	571.87	**0.15**	1.12	1.14	0.05	191.51	**0.01**
127	1.97	0.36	4.50	-181.02	-33.24	-36.64	181.02	33.24	36.64	0.26	1.70	146.81	**0.25**	33.24	1.50	0.05	73.86	**0.45**
128	2.19	0.36	4.50	-180.20	-38.65	-36.65	180.20	38.65	36.65	0.23	1.70	166.11	**0.22**	38.65	1.50	0.05	78.71	**0.49**
129	13.78	0.36	4.50	-958.69	-28.48	-14.39	958.69	28.48	14.39	0.19	1.70	5721.98	**0.11**	28.48	1.00	0.05	698.24	**0.04**
130	16.21	0.36	4.50	-1577.21	-1.85	46.08	1577.21	1.85	46.08	0.27	1.70	10392.29	**0.16**	1.85	1.00	0.05	932.20	**0.00**
131	13.78	0.36	4.50	-952.03	30.14	8.68	952.03	30.14	8.68	0.19	1.70	5688.32	**0.11**	30.14	1.00	0.05	696.48	**0.04**
132	0.63	0.36	4.50	-87.91	-19.28	-16.39	87.91	19.28	16.39	0.39	1.70	20.26	**0.81**	19.28	1.50	0.05	27.97	**0.69**
133	0.96	0.36	4.50	-126.59	-19.71	-15.25	126.59	19.71	15.25	0.37	1.70	45.36	**0.34**	19.71	1.50	0.05	41.62	**0.47**
134	9.22	0.36	4.50	-902.01	30.36	-281.28	902.01	30.36	281.28	0.27	1.70	3376.24	**0.16**	30.36	1.00	0.05	531.36	**0.06**
135	1.25	0.36	4.50	-111.09	15.73	11.52	111.09	15.73	11.52	0.25	1.70	57.57	**0.20**	15.73	1.50	0.05	46.27	**0.34**
136	9.18	0.36	4.50	-894.08	22.15	-232.74	894.08	22.15	232.74	0.27	1.70	3335.49	**0.16**	22.15	1.00	0.05	528.13	**0.04**
137	1.25	0.36	4.50	-112.70	16.87	12.32	112.70	16.87	12.32	0.25	1.70	58.23	**0.21**	16.87	1.50	0.05	46.52	**0.36**
138	16.21	0.36	4.50	-1120.22	3.70	7.05	1120.22	3.70	7.05	0.19	1.70	7873.22	**0.11**	3.70	1.00	0.05	819.38	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU6

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1232.49	4.81	-1.08	1232.49	4.81	1.08	0.21	1.70	8529.29	**0.12**	4.81	1.00	0.05	848.49	**0.01**
2	0.97	0.36	4.50	-91.02	8.91	6.88	91.02	8.91	6.88	0.26	1.70	36.18	**0.19**	8.91	1.50	0.05	36.67	**0.24**
3	0.96	0.36	4.50	-93.26	15.23	12.20	93.26	15.23	12.20	0.27	1.70	36.41	**0.34**	15.23	1.50	0.05	36.78	**0.41**
4	13.53	0.36	4.50	-1077.54	25.16	33.15	1077.54	25.16	33.15	0.22	1.70	6173.55	**0.13**	25.16	1.00	0.05	720.54	**0.03**
5	13.53	0.36	4.50	-1093.07	-37.32	-39.09	1093.07	37.32	39.09	0.22	1.70	6246.21	**0.13**	37.32	1.00	0.05	724.42	**0.05**
6	9.16	0.36	4.50	-1189.96	-34.52	549.63	1189.96	34.52	549.63	0.36	1.70	4089.00	**0.21**	34.52	1.00	0.05	592.01	**0.06**
7	9.16	0.36	4.50	-1257.71	-25.28	-7.34	1257.71	25.28	7.34	0.38	1.70	4239.90	**0.22**	25.28	1.00	0.05	605.83	**0.04**
8	0.94	0.36	4.50	-123.22	17.53	13.19	123.22	17.53	13.19	0.36	1.70	43.32	**0.30**	17.53	1.50	0.05	40.65	**0.43**
9	0.94	0.36	4.50	-121.04	15.77	11.60	121.04	15.77	11.60	0.36	1.70	42.81	**0.27**	15.77	1.50	0.05	40.35	**0.39**
10	16.21	0.36	4.50	-1584.96	-11.20	-9.65	1584.96	11.20	9.65	0.27	1.70	10431.55	**0.16**	11.20	1.00	0.05	934.00	**0.01**
11	2.03	0.36	4.50	-177.76	-52.07	-40.69	177.76	52.07	40.69	0.24	1.70	150.05	**0.27**	52.07	1.50	0.05	74.71	**0.70**
12	2.03	0.36	4.50	-182.28	-50.99	-40.27	182.28	50.99	40.27	0.25	1.70	153.08	**0.26**	50.99	1.50	0.05	75.43	**0.68**
13	4.00	0.36	4.50	-226.45	6.32	13.61	226.45	6.32	13.61	0.16	1.70	403.61	**0.09**	6.32	1.13	0.05	167.59	**0.04**
14	5.01	0.36	4.50	-412.62	49.66	-67.79	412.62	49.66	67.79	0.23	1.70	869.97	**0.13**	49.66	1.00	0.05	270.20	**0.18**
15	1.00	0.36	4.50	-152.46	3.58	4.20	152.46	3.58	4.20	0.42	1.70	53.89	**0.25**	3.58	1.50	0.05	46.09	**0.08**
16	1.39	0.36	4.50	-257.28	4.77	3.90	257.28	4.77	3.90	0.51	1.70	115.19	**0.30**	4.77	1.50	0.05	69.65	**0.07**
17	1.38	0.36	4.50	-110.19	-33.54	-23.69	110.19	33.54	23.69	0.22	1.70	64.36	**0.37**	33.54	1.50	0.05	49.04	**0.68**
18	4.00	0.36	4.50	-306.65	-4.76	-12.72	306.65	4.76	12.72	0.21	1.70	522.92	**0.13**	4.76	1.13	0.05	186.68	**0.03**
19	4.00	0.36	4.50	-173.86	4.51	8.55	173.86	4.51	8.55	0.12	1.70	318.67	**0.07**	4.51	1.13	0.05	153.80	**0.03**
22	4.00	0.36	4.50	-181.53	-4.69	-2.58	181.53	4.69	2.58	0.13	1.70	331.39	**0.07**	4.69	1.13	0.05	155.89	**0.03**
23	4.00	0.36	4.50	-174.85	3.05	4.54	174.85	3.05	4.54	0.12	1.70	320.31	**0.07**	3.05	1.13	0.05	154.07	**0.02**
26	4.00	0.36	4.50	-181.89	-2.54	-14.64	181.89	2.54	14.64	0.13	1.70	331.98	**0.07**	2.54	1.13	0.05	155.98	**0.02**
27	4.00	0.36	4.50	-175.22	1.95	2.98	175.22	1.95	2.98	0.12	1.70	320.93	**0.07**	1.95	1.13	0.05	154.17	**0.01**
30	4.00	0.36	4.50	-175.60	-3.32	-5.28	175.60	3.32	5.28	0.12	1.70	321.56	**0.07**	3.32	1.13	0.05	154.28	**0.02**
31	4.00	0.36	4.50	-173.99	3.20	2.99	173.99	3.20	2.99	0.12	1.70	318.88	**0.07**	3.20	1.13	0.05	153.83	**0.02**
34	4.00	0.36	4.50	-175.87	-6.80	-8.69	175.87	6.80	8.69	0.12	1.70	322.01	**0.07**	6.80	1.13	0.05	154.35	**0.04**
35	4.47	0.36	4.50	-255.43	5.59	12.48	255.43	5.59	12.48	0.16	1.70	508.18	**0.09**	5.59	1.01	0.05	209.96	**0.03**
36	4.18	0.36	4.50	-270.35	36.69	6.09	270.35	36.69	6.09	0.18	1.70	494.78	**0.11**	36.69	1.08	0.05	191.67	**0.19**
37	2.15	0.36	4.50	-218.52	3.15	6.96	218.52	3.15	6.96	0.28	1.70	189.01	**0.17**	3.15	1.50	0.05	83.86	**0.04**
38	7.85	0.36	4.50	-620.07	-35.37	237.80	620.07	35.37	237.80	0.22	1.70	2064.22	**0.13**	35.37	1.00	0.05	416.77	**0.08**
39	2.04	0.36	4.50	-125.66	-3.48	1.21	125.66	3.48	1.21	0.17	1.70	113.00	**0.10**	3.48	1.50	0.05	66.00	**0.05**
40	0.94	0.36	4.50	-60.51	2.96	0.04	60.51	2.96	0.04	0.18	1.70	24.92	**0.11**	2.96	1.50	0.05	30.88	**0.10**
41	1.98	0.36	4.50	-125.60	-2.24	-3.33	125.60	2.24	3.33	0.18	1.70	109.18	**0.10**	2.24	1.50	0.05	64.72	**0.03**
42	2.07	0.36	4.50	-212.25	-27.44	-22.80	212.25	27.44	22.80	0.28	1.70	176.38	**0.17**	27.44	1.50	0.05	81.02	**0.34**
43	1.20	0.36	4.50	-181.93	-3.10	-4.63	181.93	3.10	4.63	0.42	1.70	77.34	**0.25**	3.10	1.50	0.05	55.17	**0.06**
44	2.06	0.36	4.50	-126.01	2.19	2.03	126.01	2.19	2.03	0.17	1.70	114.53	**0.10**	2.19	1.50	0.05	66.48	**0.03**
45	1.53	0.36	4.50	-229.16	-1.21	-2.41	229.16	1.21	2.41	0.42	1.70	124.83	**0.24**	1.21	1.50	0.05	69.98	**0.02**
46	2.52	0.36	4.50	-133.39	4.48	10.85	133.39	4.48	10.85	0.15	1.70	150.97	**0.09**	4.48	1.50	0.05	77.42	**0.06**
47	0.90	0.36	4.50	-133.59	0.84	1.00	133.59	0.84	1.00	0.41	1.70	42.96	**0.24**	0.84	1.50	0.05	41.01	**0.02**
48	2.31	0.36	4.50	-187.28	34.14	16.03	187.28	34.14	16.03	0.23	1.70	182.60	**0.13**	34.14	1.50	0.05	82.56	**0.41**
49	3.17	0.36	4.50	-155.28	-0.63	16.04	155.28	0.63	16.04	0.14	1.70	222.94	**0.08**	0.63	1.42	0.05	100.32	**0.01**
50	2.44	0.36	4.50	-157.65	3.50	-9.17	157.65	3.50	9.17	0.18	1.70	168.44	**0.11**	3.50	1.50	0.05	80.27	**0.04**
51	2.69	0.36	4.50	-265.76	5.47	-4.33	265.76	5.47	4.33	0.27	1.70	289.56	**0.16**	5.47	1.50	0.05	103.75	**0.05**
52	2.68	0.36	4.50	-234.46	-3.06	-7.69	234.46	3.06	7.69	0.24	1.70	261.34	**0.14**	3.06	1.50	0.05	98.60	**0.03**
53	2.25	0.36	4.50	-151.97	10.68	4.03	151.97	10.68	4.03	0.19	1.70	148.77	**0.11**	10.68	1.50	0.05	75.20	**0.14**
54	2.39	0.36	4.50	-137.45	-3.80	5.77	137.45	3.80	5.77	0.16	1.70	146.09	**0.09**	3.80	1.50	0.05	75.51	**0.05**
55	6.88	0.36	4.50	-621.02	-10.94	24.30	621.02	10.94	24.30	0.25	1.70	1765.62	**0.15**	10.94	1.00	0.05	384.27	**0.03**
56	9.94	0.36	4.50	-842.77	-2.06	19.26	842.77	2.06	19.26	0.24	1.70	3505.89	**0.14**	2.06	1.00	0.05	542.01	**0.00**
57	3.07	0.36	4.50	-169.03	-0.90	-8.03	169.03	0.90	8.03	0.15	1.70	232.00	**0.09**	0.90	1.47	0.05	97.80	**0.01**
58	5.47	0.36	4.50	-392.77	-41.30	7.55	392.77	41.30	7.55	0.20	1.70	925.95	**0.12**	41.30	1.00	0.05	280.36	**0.15**
59	5.50	0.36	4.50	-378.05	10.30	-65.45	378.05	10.30	65.45	0.19	1.70	902.27	**0.11**	10.30	1.00	0.05	277.48	**0.04**
60	2.63	0.36	4.50	-136.94	-2.24	-0.79	136.94	2.24	0.79	0.14	1.70	162.05	**0.09**	2.24	1.50	0.05	80.36	**0.03**
61	5.83	0.36	4.50	-509.56	13.51	-37.98	509.56	13.51	37.98	0.24	1.70	1235.80	**0.14**	13.51	1.00	0.05	321.61	**0.04**
62	2.74	0.36	4.50	-267.05	1.01	0.16	267.05	1.01	0.16	0.27	1.70	297.31	**0.16**	1.01	1.50	0.05	105.12	**0.01**
63	2.43	0.36	4.50	-135.67	-1.06	-2.52	135.67	1.06	2.52	0.16	1.70	147.15	**0.09**	1.06	1.50	0.05	76.00	**0.01**
64	2.86	0.36	4.50	-138.42	-5.25	-3.07	138.42	5.25	3.07	0.13	1.70	179.52	**0.08**	5.25	1.50	0.05	85.33	**0.06**
65	6.14	0.36	4.50	-454.73	6.09	-129.30	454.73	6.09	129.30	0.21	1.70	1197.27	**0.12**	6.09	1.00	0.05	318.29	**0.02**
66	1.15	0.36	4.50	-105.55	-2.86	-3.16	105.55	2.86	3.16	0.25	1.70	49.98	**0.15**	2.86	1.50	0.05	43.10	**0.07**
67	2.70	0.36	4.50	-253.10	-8.38	-5.21	253.10	8.38	5.21	0.26	1.70	280.11	**0.15**	8.38	1.50	0.05	102.02	**0.08**
68	2.65	0.36	4.50	-126.60	4.44	3.21	126.60	4.44	3.21	0.13	1.70	152.34	**0.08**	4.44	1.50	0.05	78.73	**0.06**
69	6.13	0.36	4.50	-453.98	5.57	-125.04	453.98	5.57	125.04	0.21	1.70	1193.35	**0.12**	5.57	1.00	0.05	317.77	**0.02**
70	1.15	0.36	4.50	-101.46	-4.35	-3.37	101.46	4.35	3.37	0.25	1.70	48.45	**0.14**	4.35	1.50	0.05	42.45	**0.10**
71	1.14	0.36	4.50	-98.73	4.03	3.15	98.73	4.03	3.15	0.24	1.70	46.91	**0.14**	4.03	1.50	0.05	41.78	**0.10**
72	2.75	0.36	4.50	-253.89	9.83	7.05	253.89	9.83	7.05	0.26	1.70	287.14	**0.15**	9.83	1.50	0.05	103.29	**0.10**
73	2.69	0.36	4.50	-149.92	2.13	4.23	149.92	2.13	4.23	0.15	1.70	180.04	**0.09**	2.13	1.50	0.05	84.08	**0.03**
74	2.85	0.36	4.50	-276.88	2.43	3.17	276.88	2.43	3.17	0.27	1.70	320.87	**0.16**	2.43	1.50	0.05	109.20	**0.02**
75	2.85	0.36	4.50	-289.85	0.77	1.33	289.85	0.77	1.33	0.28	1.70	332.29	**0.17**	0.77	1.50	0.05	111.19	**0.01**
76	2.63	0.36	4.50	-139.02	3.51	5.70	139.02	3.51	5.70	0.15	1.70	164.24	**0.09**	3.51	1.50	0.05	80.76	**0.04**
77	5.50	0.36	4.50	-393.67	-16.90	72.74	393.67	16.90	72.74	0.20	1.70	933.63	**0.12**	16.90	1.00	0.05	281.58	**0.06**
78	2.15	0.36	4.50	-194.78	-3.12	0.08	194.78	3.12	0.08	0.25	1.70	172.92	**0.15**	3.12	1.50	0.05	80.17	**0.04**
79	9.92	0.36	4.50	-850.95	-0.23	16.28	850.95	0.23	16.28	0.24	1.70	3524.71	**0.14**	0.23	1.00	0.05	543.33	**0.00**
80	2.37	0.36	4.50	-207.12	10.18	14.39	207.12	10.18	14.39	0.24	1.70	204.20	**0.14**	10.18	1.50	0.05	87.16	**0.12**
81	1.91	0.36	4.50	-133.15	14.75	11.99	133.15	14.75	11.99	0.19	1.70	110.12	**0.11**	14.75	1.50	0.05	64.57	**0.23**
82	0.90	0.36	4.50	-62.64	-2.83	-0.04	62.64	2.83	0.04	0.19	1.70	24.42	**0.11**	2.83	1.50	0.05	30.41	**0.09**
83	2.59	0.36	4.50	-143.18	1.52	4.56	143.18	1.52	4.56	0.15	1.70	165.71	**0.09**	1.52	1.50	0.05	80.74	**0.02**
84	6.77	0.36	4.50	-595.29	1.30	22.67	595.29	1.30	22.67	0.24	1.70	1674.45	**0.14**	1.30	1.00	0.05	374.33	**0.00**
85	7.91	0.36	4.50	-668.14	40.37	-184.56	668.14	40.37	184.56	0.23	1.70	2213.42	**0.14**	40.37	1.00	0.05	430.70	**0.09**
86	2.42	0.36	4.50	-141.09	3.90	-5.49	141.09	3.90	5.49	0.16	1.70	151.59	**0.10**	3.90	1.50	0.05	76.81	**0.05**
87	2.21	0.36	4.50	-149.65	-12.83	-7.43	149.65	12.83	7.43	0.19	1.70	143.84	**0.11**	12.83	1.50	0.05	73.93	**0.17**
88	2.68	0.36	4.50	-232.95	2.71	5.10	232.95	2.71	5.10	0.24	1.70	259.99	**0.14**	2.71	1.50	0.05	98.35	**0.03**
89	2.61	0.36	4.50	-230.09	3.17	6.88	230.09	3.17	6.88	0.24	1.70	249.38	**0.14**	3.17	1.50	0.05	96.30	**0.03**
90	2.27	0.36	4.50	-216.17	-1.59	1.18	216.17	1.59	1.18	0.26	1.70	200.44	**0.16**	1.59	1.50	0.05	86.30	**0.02**
91	2.34	0.36	4.50	-146.03	-3.32	9.06	146.03	3.32	9.06	0.17	1.70	150.36	**0.10**	3.32	1.50	0.05	76.05	**0.04**
92	2.23	0.36	4.50	-168.37	-24.65	-12.62	168.37	24.65	12.62	0.21	1.70	160.48	**0.12**	24.65	1.50	0.05	77.62	**0.32**
93	2.61	0.36	4.50	-303.36	-3.61	-1.44	303.36	3.61	1.44	0.32	1.70	307.43	**0.19**	3.61	1.50	0.05	107.43	**0.03**
94	2.61	0.36	4.50	-311.40	7.36	9.62	311.40	7.36	9.62	0.33	1.70	313.17	**0.19**	7.36	1.50	0.05	108.58	**0.07**
95	2.32	0.36	4.50	-238.02	9.98	5.32	238.02	9.98	5.32	0.28	1.70	221.65	**0.17**	9.98	1.50	0.05	90.83	**0.11**
96	7.34	0.36	4.50	-607.42	-47.54	172.85	607.42	47.54	172.85	0.23	1.70	1874.60	**0.14**	47.54	1.00	0.05	396.58	**0.12**
97	3.21	0.36	4.50	-156.03	1.08	-15.02	156.03	1.08	15.02	0.14	1.70	227.03	**0.08**	1.08	1.40	0.05	102.61	**0.01**
98	2.52	0.36	4.50	-131.78	-5.32	-11.71	131.78	5.32	11.71	0.15	1.70	149.35	**0.09**	5.32	1.50	0.05	77.11	**0.07**
99	1.93	0.36	4.50	-116.52	-1.68	-1.79	116.52	1.68	1.79	0.17	1.70	99.39	**0.10**	1.68	1.50	0.05	62.00	**0.03**
100	2.00	0.36	4.50	-126.18	2.42	3.49	126.18	2.42	3.49	0.18	1.70	110.88	**0.10**	2.42	1.50	0.05	65.25	**0.04**
101	4.39	0.36	4.50	-254.68	8.43	10.98	254.68	8.43	10.98	0.16	1.70	496.68	**0.09**	8.43	1.03	0.05	203.56	**0.04**
102	1.90	0.36	4.50	-122.24	7.53	-0.23	122.24	7.53	0.23	0.18	1.70	101.77	**0.11**	7.53	1.50	0.05	62.41	**0.12**
103	4.00	0.36	4.50	-222.49	9.98	24.67	222.49	9.98	24.67	0.15	1.70	397.40	**0.09**	9.98	1.13	0.05	166.60	**0.06**
104	7.36	0.36	4.50	-626.46	68.25	-210.95	626.46	68.25	210.95	0.24	1.70	1928.16	**0.14**	68.25	1.00	0.05	401.93	**0.17**
105	0.61	0.36	4.50	-91.40	-0.22	-0.20	91.40	0.22	0.20	0.42	1.70	19.85	**0.24**	0.22	1.50	0.05	27.91	**0.01**
106	5.86	0.36	4.50	-559.18	-65.69	128.69	559.18	65.69	128.69	0.27	1.70	1337.86	**0.16**	65.69	1.00	0.05	334.44	**0.20**
107	4.00	0.36	4.50	-236.33	3.06	6.55	236.33	3.06	6.55	0.16	1.70	418.98	**0.10**	3.06	1.13	0.05	170.06	**0.02**
108	3.97	0.36	4.50	-197.09	3.02	-3.33	197.09	3.02	3.33	0.14	1.70	353.89	**0.08**	3.02	1.13	0.05	158.03	**0.02**

109	7.36	0.36	4.50	-524.29	53.28	-166.57	524.29	53.28	166.57	0.20	1.70	1665.18	**0.12**	53.28	1.00	0.05	376.14	**0.14**
110	7.34	0.36	4.50	-679.38	-41.96	206.02	679.38	41.96	206.02	0.26	1.70	2049.69	**0.15**	41.96	1.00	0.05	413.96	**0.10**
111	3.97	0.36	4.50	-230.18	3.42	6.47	230.18	3.42	6.47	0.16	1.70	405.98	**0.09**	3.42	1.13	0.05	166.44	**0.02**
112	3.99	0.36	4.50	-265.62	3.39	16.37	265.62	3.39	16.37	0.18	1.70	462.10	**0.11**	3.39	1.13	0.05	176.45	**0.02**
114	1.41	0.36	4.50	-249.20	-5.92	-6.81	249.20	5.92	6.81	0.49	1.70	116.00	**0.29**	5.92	1.50	0.05	69.24	**0.09**
115	7.34	0.36	4.50	-729.36	-69.82	289.49	729.36	69.82	289.49	0.28	1.70	2165.44	**0.16**	69.82	1.00	0.05	425.62	**0.16**
116	4.00	0.36	4.50	-228.05	2.98	5.14	228.05	2.98	5.14	0.16	1.70	406.11	**0.09**	2.98	1.13	0.05	168.00	**0.02**
117	4.57	0.36	4.50	-228.69	2.45	-3.55	228.69	2.45	3.55	0.14	1.70	472.29	**0.08**	2.45	1.00	0.05	206.74	**0.01**
118	7.36	0.36	4.50	-492.63	45.40	-181.59	492.63	45.40	181.59	0.19	1.70	1579.62	**0.11**	45.40	1.00	0.05	367.79	**0.12**
119	7.34	0.36	4.50	-645.47	-35.64	165.27	645.47	35.64	165.27	0.24	1.70	1968.42	**0.14**	35.64	1.00	0.05	405.86	**0.09**
120	4.03	0.36	4.50	-240.34	-4.73	4.61	240.34	4.73	4.61	0.17	1.70	428.76	**0.10**	4.73	1.12	0.05	173.18	**0.03**
121	3.94	0.36	4.50	-284.22	-14.08	17.56	284.22	14.08	17.56	0.20	1.70	482.27	**0.12**	14.08	1.14	0.05	177.11	**0.08**
126	3.94	0.36	4.50	-346.04	-0.33	3.60	346.04	0.33	3.60	0.24	1.70	566.60	**0.14**	0.33	1.14	0.05	190.66	**0.00**
127	1.97	0.36	4.50	-178.68	-32.52	-35.89	178.68	32.52	35.89	0.25	1.70	145.31	**0.25**	32.52	1.50	0.05	73.49	**0.44**
128	2.19	0.36	4.50	-178.14	-37.87	-35.91	178.14	37.87	35.91	0.23	1.70	164.56	**0.22**	37.87	1.50	0.05	78.37	**0.48**
129	13.78	0.36	4.50	-942.26	-30.96	-15.78	942.26	30.96	15.78	0.19	1.70	5638.79	**0.11**	30.96	1.00	0.05	693.90	**0.04**
130	16.21	0.36	4.50	-1554.95	-2.00	43.90	1554.95	2.00	43.90	0.27	1.70	10278.89	**0.16**	2.00	1.00	0.05	927.02	**0.00**
131	13.78	0.36	4.50	-935.02	32.33	10.95	935.02	32.33	10.95	0.19	1.70	5601.97	**0.11**	32.33	1.00	0.05	691.98	**0.05**
132	0.63	0.36	4.50	-86.01	-18.28	-15.53	86.01	18.28	15.53	0.38	1.70	19.98	**0.78**	18.28	1.50	0.05	27.71	**0.66**
133	0.96	0.36	4.50	-123.60	-18.41	-14.20	123.60	18.41	14.20	0.36	1.70	44.64	**0.32**	18.41	1.50	0.05	41.21	**0.45**
134	9.22	0.36	4.50	-875.21	32.96	-276.53	875.21	32.96	276.53	0.26	1.70	3298.47	**0.16**	32.96	1.00	0.05	525.12	**0.06**
135	1.25	0.36	4.50	-107.82	14.65	10.93	107.82	14.65	10.93	0.24	1.70	56.21	**0.19**	14.65	1.50	0.05	45.74	**0.32**
136	9.18	0.36	4.50	-867.36	24.87	-229.66	867.36	24.87	229.66	0.26	1.70	3258.08	**0.15**	24.87	1.00	0.05	521.89	**0.05**
137	1.25	0.36	4.50	-109.33	15.75	11.71	109.33	15.75	11.71	0.24	1.70	56.84	**0.21**	15.75	1.50	0.05	45.98	**0.34**
138	16.21	0.36	4.50	-1108.07	3.35	6.39	1108.07	3.35	6.39	0.19	1.70	7800.77	**0.11**	3.35	1.00	0.05	816.17	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU7

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1250.60	-17.08	-56.89	1250.60	17.08	56.89	0.21	1.70	8632.84	**0.13**	17.08	1.00	0.05	853.09	**0.02**
2	0.97	0.36	4.50	-91.02	8.91	6.88	91.02	8.91	6.88	0.26	1.70	36.18	**0.19**	8.91	1.50	0.05	36.67	**0.24**
3	0.96	0.36	4.50	-93.26	15.23	12.20	93.26	15.23	12.20	0.27	1.70	36.41	**0.34**	15.23	1.50	0.05	36.78	**0.41**
4	13.53	0.36	4.50	-1077.54	25.16	33.15	1077.54	25.16	33.15	0.22	1.70	6173.55	**0.13**	25.16	1.00	0.05	720.54	**0.03**
5	13.53	0.36	4.50	-1093.07	-37.32	-39.09	1093.07	37.32	39.09	0.22	1.70	6246.21	**0.13**	37.32	1.00	0.05	724.42	**0.05**
6	9.16	0.36	4.50	-1189.96	-34.52	549.63	1189.96	34.52	549.63	0.36	1.70	4089.00	**0.21**	34.52	1.00	0.05	592.01	**0.06**
7	9.16	0.36	4.50	-1257.71	-25.28	-7.34	1257.71	25.28	7.34	0.38	1.70	4239.90	**0.22**	25.28	1.00	0.05	605.83	**0.04**
8	0.94	0.36	4.50	-123.22	17.53	13.19	123.22	17.53	13.19	0.36	1.70	43.32	**0.30**	17.53	1.50	0.05	40.65	**0.43**
9	0.94	0.36	4.50	-121.04	15.77	11.60	121.04	15.77	11.60	0.36	1.70	42.81	**0.27**	15.77	1.50	0.05	40.35	**0.39**
10	16.21	0.36	4.50	-1584.96	-11.20	-9.65	1584.96	11.20	9.65	0.27	1.70	10431.55	**0.16**	11.20	1.00	0.05	934.00	**0.01**
11	2.03	0.36	4.50	-177.76	-52.07	-40.69	177.76	52.07	40.69	0.24	1.70	150.05	**0.27**	52.07	1.50	0.05	74.71	**0.70**
12	2.03	0.36	4.50	-182.28	-50.99	-40.27	182.28	50.99	40.27	0.25	1.70	153.08	**0.26**	50.99	1.50	0.05	75.43	**0.68**
13	4.00	0.36	4.50	-226.45	6.32	13.61	226.45	6.32	13.61	0.16	1.70	403.61	**0.09**	6.32	1.13	0.05	167.59	**0.04**
14	5.01	0.36	4.50	-412.62	49.66	-67.79	412.62	49.66	67.79	0.23	1.70	869.97	**0.13**	49.66	1.00	0.05	270.20	**0.18**
15	1.00	0.36	4.50	-152.46	3.58	4.20	152.46	3.58	4.20	0.42	1.70	53.89	**0.25**	3.58	1.50	0.05	46.09	**0.08**
16	1.39	0.36	4.50	-257.28	4.77	3.90	257.28	4.77	3.90	0.51	1.70	115.19	**0.30**	4.77	1.50	0.05	69.65	**0.07**
17	1.38	0.36	4.50	-110.19	-33.54	-23.69	110.19	33.54	23.69	0.22	1.70	64.36	**0.37**	33.54	1.50	0.05	49.04	**0.68**
18	4.00	0.36	4.50	-306.65	-4.76	-12.72	306.65	4.76	12.72	0.21	1.70	522.92	**0.13**	4.76	1.13	0.05	186.68	**0.03**
19	4.00	0.36	4.50	-173.86	4.51	8.55	173.86	4.51	8.55	0.12	1.70	318.67	**0.07**	4.51	1.13	0.05	153.80	**0.03**
22	4.00	0.36	4.50	-181.53	-4.69	-2.58	181.53	4.69	2.58	0.13	1.70	331.39	**0.07**	4.69	1.13	0.05	155.89	**0.03**
23	4.00	0.36	4.50	-174.85	3.05	4.54	174.85	3.05	4.54	0.12	1.70	320.31	**0.07**	3.05	1.13	0.05	154.07	**0.02**
26	4.00	0.36	4.50	-181.89	-2.54	-14.64	181.89	2.54	14.64	0.13	1.70	331.98	**0.07**	2.54	1.13	0.05	155.98	**0.02**
27	4.00	0.36	4.50	-175.22	1.95	2.98	175.22	1.95	2.98	0.12	1.70	320.93	**0.07**	1.95	1.13	0.05	154.17	**0.01**
30	4.00	0.36	4.50	-175.60	-3.32	-5.28	175.60	3.32	5.28	0.12	1.70	321.56	**0.07**	3.32	1.13	0.05	154.28	**0.02**
31	4.00	0.36	4.50	-173.99	3.20	2.99	173.99	3.20	2.99	0.12	1.70	318.88	**0.07**	3.20	1.13	0.05	153.83	**0.02**
34	4.00	0.36	4.50	-175.87	-6.80	-8.69	175.87	6.80	8.69	0.12	1.70	322.01	**0.07**	6.80	1.13	0.05	154.35	**0.04**
35	4.47	0.36	4.50	-255.43	5.59	12.48	255.43	5.59	12.48	0.16	1.70	508.18	**0.09**	5.59	1.01	0.05	209.96	**0.03**
36	4.18	0.36	4.50	-270.35	36.69	6.09	270.35	36.69	6.09	0.18	1.70	494.78	**0.11**	36.69	1.08	0.05	191.67	**0.19**
37	2.15	0.36	4.50	-218.52	3.15	6.96	218.52	3.15	6.96	0.28	1.70	189.01	**0.17**	3.15	1.50	0.05	83.86	**0.04**
38	7.85	0.36	4.50	-620.07	-35.37	237.80	620.07	35.37	237.80	0.22	1.70	2064.22	**0.13**	35.37	1.00	0.05	416.77	**0.08**
39	2.04	0.36	4.50	-125.66	-3.48	1.21	125.66	3.48	1.21	0.17	1.70	113.00	**0.10**	3.48	1.50	0.05	66.00	**0.05**
40	0.94	0.36	4.50	-60.51	2.96	0.04	60.51	2.96	0.04	0.18	1.70	24.92	**0.11**	2.96	1.50	0.05	30.88	**0.10**
41	1.98	0.36	4.50	-125.60	-2.24	-3.33	125.60	2.24	3.33	0.18	1.70	109.18	**0.10**	2.24	1.50	0.05	64.72	**0.03**
42	2.07	0.36	4.50	-212.25	-27.44	-22.80	212.25	27.44	22.80	0.28	1.70	176.38	**0.17**	27.44	1.50	0.05	81.02	**0.34**
43	1.20	0.36	4.50	-181.93	-3.10	-4.63	181.93	3.10	4.63	0.42	1.70	77.34	**0.25**	3.10	1.50	0.05	55.17	**0.06**
44	2.06	0.36	4.50	-126.01	2.19	2.03	126.01	2.19	2.03	0.17	1.70	114.53	**0.10**	2.19	1.50	0.05	66.48	**0.03**
45	1.53	0.36	4.50	-229.16	-1.21	-2.41	229.16	1.21	2.41	0.42	1.70	124.83	**0.24**	1.21	1.50	0.05	69.98	**0.02**
46	2.52	0.36	4.50	-133.39	4.48	10.85	133.39	4.48	10.85	0.15	1.70	150.97	**0.09**	4.48	1.50	0.05	77.42	**0.06**
47	0.90	0.36	4.50	-133.59	0.84	1.00	133.59	0.84	1.00	0.41	1.70	42.96	**0.24**	0.84	1.50	0.05	41.01	**0.02**
48	2.31	0.36	4.50	-187.28	34.14	16.03	187.28	34.14	16.03	0.23	1.70	182.60	**0.13**	34.14	1.50	0.05	82.56	**0.41**
49	3.17	0.36	4.50	-155.28	-0.63	16.04	155.28	0.63	16.04	0.14	1.70	222.94	**0.08**	0.63	1.42	0.05	100.32	**0.01**
50	2.44	0.36	4.50	-157.65	3.50	-9.17	157.65	3.50	9.17	0.18	1.70	168.44	**0.11**	3.50	1.50	0.05	80.27	**0.04**
51	2.69	0.36	4.50	-265.76	5.47	-4.33	265.76	5.47	4.33	0.27	1.70	289.56	**0.16**	5.47	1.50	0.05	103.75	**0.05**
52	2.68	0.36	4.50	-234.46	-3.06	-7.69	234.46	3.06	7.69	0.24	1.70	261.34	**0.14**	3.06	1.50	0.05	98.60	**0.03**
53	2.25	0.36	4.50	-151.97	10.68	4.03	151.97	10.68	4.03	0.19	1.70	148.77	**0.11**	10.68	1.50	0.05	75.20	**0.14**
54	2.39	0.36	4.50	-137.45	-3.80	5.77	137.45	3.80	5.77	0.16	1.70	146.09	**0.09**	3.80	1.50	0.05	75.51	**0.05**
55	6.88	0.36	4.50	-621.02	-10.94	24.30	621.02	10.94	24.30	0.25	1.70	1765.62	**0.15**	10.94	1.00	0.05	384.27	**0.03**
56	9.94	0.36	4.50	-842.77	-2.06	19.26	842.77	2.06	19.26	0.24	1.70	3505.89	**0.14**	2.06	1.00	0.05	542.01	**0.00**
57	3.07	0.36	4.50	-169.03	-0.90	-8.03	169.03	0.90	8.03	0.15	1.70	232.00	**0.09**	0.90	1.47	0.05	97.80	**0.01**
58	5.47	0.36	4.50	-392.77	-41.30	7.55	392.77	41.30	7.55	0.20	1.70	925.95	**0.12**	41.30	1.00	0.05	280.36	**0.15**
59	5.50	0.36	4.50	-378.05	10.30	-65.45	378.05	10.30	65.45	0.19	1.70	902.27	**0.11**	10.30	1.00	0.05	277.48	**0.04**
60	2.63	0.36	4.50	-136.94	-2.24	-0.79	136.94	2.24	0.79	0.14	1.70	162.05	**0.09**	2.24	1.50	0.05	80.36	**0.03**
61	5.83	0.36	4.50	-509.56	13.51	-37.98	509.56	13.51	37.98	0.24	1.70	1235.80	**0.14**	13.51	1.00	0.05	321.61	**0.04**
62	2.74	0.36	4.50	-267.05	1.01	0.16	267.05	1.01	0.16	0.27	1.70	297.31	**0.16**	1.01	1.50	0.05	105.12	**0.01**
63	2.43	0.36	4.50	-135.67	-1.06	-2.52	135.67	1.06	2.52	0.16	1.70	147.15	**0.09**	1.06	1.50	0.05	76.00	**0.01**
64	2.86	0.36	4.50	-138.42	-5.25	-3.07	138.42	5.25	3.07	0.13	1.70	179.52	**0.08**	5.25	1.50	0.05	85.33	**0.06**
65	6.14	0.36	4.50	-454.73	6.09	-129.30	454.73	6.09	129.30	0.21	1.70	1197.27	**0.12**	6.09	1.00	0.05	318.29	**0.02**
66	1.15	0.36	4.50	-105.55	-2.86	-3.16	105.55	2.86	3.16	0.25	1.70	49.98	**0.15**	2.86	1.50	0.05	43.10	**0.07**
67	2.70	0.36	4.50	-253.10	-8.38	-5.21	253.10	8.38	5.21	0.26	1.70	280.11	**0.15**	8.38	1.50	0.05	102.02	**0.08**
68	2.65	0.36	4.50	-126.60	4.44	3.21	126.60	4.44	3.21	0.13	1.70	152.34	**0.08**	4.44	1.50	0.05	78.73	**0.06**
69	6.13	0.36	4.50	-453.98	5.57	-125.04	453.98	5.57	125.04	0.21	1.70	1193.35	**0.12**	5.57	1.00	0.05	317.77	**0.02**
70	1.15	0.36	4.50	-101.46	-4.35	-3.37	101.46	4.35	3.37	0.25	1.70	48.45	**0.14**	4.35	1.50	0.05	42.45	**0.10**
71	1.14	0.36	4.50	-98.73	4.03	3.15	98.73	4.03	3.15	0.24	1.70	46.91	**0.14**	4.03	1.50	0.05	41.78	**0.10**
72	2.75	0.36	4.50	-253.89	9.83	7.05	253.89	9.83	7.05	0.26	1.70	287.14	**0.15**	9.83	1.50	0.05	103.29	**0.10**
73	2.69	0.36	4.50	-149.92	2.13	4.23	149.92	2.13	4.23	0.15	1.70	180.04	**0.09**	2.13	1.50	0.05	84.08	**0.03**
74	2.85	0.36	4.50	-276.88	2.43	3.17	276.88	2.43	3.17	0.27	1.70	320.87	**0.16**	2.43	1.50	0.05	109.20	**0.02**
75	2.85	0.36	4.50	-289.85	0.77	1.33	289.85	0.77	1.33	0.28	1.70	332.29	**0.17**	0.77	1.50	0.05	111.19	**0.01**
76	2.63	0.36	4.50	-139.02	3.51	5.70	139.02	3.51	5.70	0.15	1.70	164.24	**0.09**	3.51	1.50	0.05	80.76	**0.04**
77	5.50	0.36	4.50	-393.67	-16.90	72.74	393.67	16.90	72.74	0.20	1.70	933.63	**0.12**	16.90	1.00	0.05	281.58	**0.06**
78	2.15	0.36	4.50	-194.78	-3.12	0.08	194.78	3.12	0.08	0.25	1.70	172.92	**0.15**	3.12	1.50	0.05	80.17	**0.04**
79	9.92	0.36	4.50	-850.95	-0.23	16.28	850.95	0.23	16.28	0.24	1.70	3524.71	**0.14**	0.23	1.00	0.05	543.33	**0.00**
80	2.37	0.36	4.50	-207.12	10.18	14.39	207.12	10.18	14.39	0.24	1.70	204.20	**0.14**	10.18	1.50	0.05	87.16	**0.12**
81	1.91	0.36	4.50	-133.15	14.75	11.99	133.15	14.75	11.99	0.19	1.70	110.12	**0.11**	14.75	1.50	0.05	64.57	**0.23**
82	0.90	0.36	4.50	-62.64	-2.83	-0.04	62.64	2.83	0.04	0.19	1.70	24.42	**0.11**	2.83	1.50	0.05	30.41	**0.09**
83	2.59	0.36	4.50	-143.18	1.52	4.56	143.18	1.52	4.56	0.15	1.70	165.71	**0.09**	1.52	1.50	0.05	80.74	**0.02**
84	6.77	0.36	4.50	-595.29	1.30	22.67	595.29	1.30	22.67	0.24	1.70	1674.45	**0.14**	1.30	1.00	0.05	374.33	**0.00**
85	7.91	0.36	4.50	-668.14	40.37	-184.56	668.14	40.37	184.56	0.23	1.70	2213.42	**0.14**	40.37	1.00	0.05	430.70	**0.09**
86	2.42	0.36	4.50	-141.09	3.90	-5.49	141.09	3.90	5.49	0.16	1.70	151.59	**0.10**	3.90	1.50	0.05	76.81	**0.05**
87	2.21	0.36	4.50	-149.65	-12.83	-7.43	149.65	12.83	7.43	0.19	1.70	143.84	**0.11**	12.83	1.50	0.05	73.93	**0.17**
88	2.68	0.36	4.50	-232.95	2.71	5.10	232.95	2.71	5.10	0.24	1.70	259.99	**0.14**	2.71	1.50	0.05	98.35	**0.03**
89	2.61	0.36	4.50	-230.09	3.17	6.88	230.09	3.17	6.88	0.24	1.70	249.38	**0.14**	3.17	1.50	0.05	96.30	**0.03**
90	2.27	0.36	4.50	-216.17	-1.59	1.18	216.17	1.59	1.18	0.26	1.70	200.44	**0.16**	1.59	1.50	0.05	86.30	**0.02**
91	2.34	0.36	4.50	-146.03	-3.32	9.06	146.03	3.32	9.06	0.17	1.70	150.36	**0.10**	3.32	1.50	0.05	76.05	**0.04**
92	2.23	0.36	4.50	-168.37	-24.65	-12.62	168.37	24.65	12.62	0.21	1.70	160.48	**0.12**	24.65	1.50	0.05	77.62	**0.32**
93	2.61	0.36	4.50	-303.36	-3.61	-1.44	303.36	3.61	1.44	0.32	1.70	307.43	**0.19**	3.61	1.50	0.05	107.43	**0.03**
94	2.61	0.36	4.50	-311.40	7.36	9.62	311.40	7.36	9.62	0.33	1.70	313.17	**0.19**	7.36	1.50	0.05	108.58	**0.07**
95	2.32	0.36	4.50	-238.02	9.98	5.32	238.02	9.98	5.32	0.28	1.70	221.65	**0.17**	9.98	1.50	0.05	90.83	**0.11**
96	7.34	0.36	4.50	-607.42	-47.54	172.85	607.42	47.54	172.85	0.23	1.70	1874.60	**0.14**	47.54	1.00	0.05	396.58	**0.12**
97	3.21	0.36	4.50	-156.03	1.08	-15.02	156.03	1.08	15.02	0.14	1.70	227.03	**0.08**	1.08	1.40	0.05	102.61	**0.01**
98	2.52	0.36	4.50	-131.78	-5.32	-11.71	131.78	5.32	11.71	0.15	1.70	149.35	**0.09**	5.32	1.50	0.05	77.11	**0.07**
99	1.93	0.36	4.50	-116.52	-1.68	-1.79	116.52	1.68	1.79	0.17	1.70	99.39	**0.10**	1.68	1.50	0.05	62.00	**0.03**
100	2.00	0.36	4.50	-126.18	2.42	3.49	126.18	2.42	3.49	0.18	1.70	110.88	**0.10**	2.42	1.50	0.05	65.25	**0.04**
101	4.39	0.36	4.50	-254.68	8.43	10.98	254.68	8.43	10.98	0.16	1.70	496.68	**0.09**	8.43	1.03	0.05	203.56	**0.04**
102	1.90	0.36	4.50	-122.24	7.53	-0.23	122.24	7.53	0.23	0.18	1.70	101.77	**0.11**	7.53	1.50	0.05	62.41	**0.12**
103	4.00	0.36	4.50	-222.49	9.98	24.67	222.49	9.98	24.67	0.15	1.70	397.40	**0.09**	9.98	1.13	0.05	166.60	**0.06**
104	7.36	0.36	4.50	-626.46	68.25	-210.95	626.46	68.25	210.95	0.24	1.70	1928.16	**0.14**	68.25	1.00	0.05	401.93	**0.17**
105	0.61	0.36	4.50	-91.40	-0.22	-0.20	91.40	0.22	0.20	0.42	1.70	19.85	**0.24**	0.22	1.50	0.05	27.91	**0.01**
106	5.86	0.36	4.50	-559.18	-65.69	128.69	559.18	65.69	128.69	0.27	1.70	1337.86	**0.16**	65.69	1.00	0.05	334.44	**0.20**
107	4.00	0.36	4.50	-236.33	3.06	6.55	236.33	3.06	6.55	0.16	1.70	418.98	**0.10**	3.06	1.13	0.05	170.06	**0.02**
108	3.97	0.36	4.50	-197.09	3.02	-3.33	197.09	3.02	3.33	0.14	1.70	353.89	**0.08**	3.02	1.13	0.05	158.03	**0.02**

109	7.36	0.36	4.50	-524.29	53.28	-166.57	524.29	53.28	166.57	0.20	1.70	1665.18	**0.12**	53.28	1.00	0.05	376.14	**0.14**
110	7.34	0.36	4.50	-679.38	-41.96	206.02	679.38	41.96	206.02	0.26	1.70	2049.69	**0.15**	41.96	1.00	0.05	413.96	**0.10**
111	3.97	0.36	4.50	-230.18	3.42	6.47	230.18	3.42	6.47	0.16	1.70	405.98	**0.09**	3.42	1.13	0.05	166.44	**0.02**
112	3.99	0.36	4.50	-265.62	3.39	16.37	265.62	3.39	16.37	0.18	1.70	462.10	**0.11**	3.39	1.13	0.05	176.45	**0.02**
114	1.41	0.36	4.50	-249.20	-5.92	-6.81	249.20	5.92	6.81	0.49	1.70	116.00	**0.29**	5.92	1.50	0.05	69.24	**0.09**
115	7.34	0.36	4.50	-729.36	-69.82	289.49	729.36	69.82	289.49	0.28	1.70	2165.44	**0.16**	69.82	1.00	0.05	425.62	**0.16**
116	4.00	0.36	4.50	-228.05	2.98	5.14	228.05	2.98	5.14	0.16	1.70	406.11	**0.09**	2.98	1.13	0.05	168.00	**0.02**
117	4.57	0.36	4.50	-228.69	2.45	-3.55	228.69	2.45	3.55	0.14	1.70	472.29	**0.08**	2.45	1.00	0.05	206.74	**0.01**
118	7.36	0.36	4.50	-492.63	45.40	-181.59	492.63	45.40	181.59	0.19	1.70	1579.62	**0.11**	45.40	1.00	0.05	367.79	**0.12**
119	7.34	0.36	4.50	-645.47	-35.64	165.27	645.47	35.64	165.27	0.24	1.70	1968.42	**0.14**	35.64	1.00	0.05	405.86	**0.09**
120	4.03	0.36	4.50	-240.34	-4.73	4.61	240.34	4.73	4.61	0.17	1.70	428.76	**0.10**	4.73	1.12	0.05	173.18	**0.03**
121	3.94	0.36	4.50	-284.22	-14.08	17.56	284.22	14.08	17.56	0.20	1.70	482.27	**0.12**	14.08	1.14	0.05	177.11	**0.08**
126	3.94	0.36	4.50	-346.04	-0.33	3.60	346.04	0.33	3.60	0.24	1.70	566.60	**0.14**	0.33	1.14	0.05	190.66	**0.00**
127	1.97	0.36	4.50	-178.68	-32.52	-35.89	178.68	32.52	35.89	0.25	1.70	145.31	**0.25**	32.52	1.50	0.05	73.49	**0.44**
128	2.19	0.36	4.50	-178.14	-37.87	-35.91	178.14	37.87	35.91	0.23	1.70	164.56	**0.22**	37.87	1.50	0.05	78.37	**0.48**
129	13.78	0.36	4.50	-942.26	-30.96	-15.78	942.26	30.96	15.78	0.19	1.70	5638.79	**0.11**	30.96	1.00	0.05	693.90	**0.04**
130	16.21	0.36	4.50	-1554.95	-2.00	43.90	1554.95	2.00	43.90	0.27	1.70	10278.89	**0.16**	2.00	1.00	0.05	927.02	**0.00**
131	13.78	0.36	4.50	-935.02	32.33	10.95	935.02	32.33	10.95	0.19	1.70	5601.97	**0.11**	32.33	1.00	0.05	691.98	**0.05**
132	0.63	0.36	4.50	-86.01	-18.28	-15.53	86.01	18.28	15.53	0.38	1.70	19.98	**0.78**	18.28	1.50	0.05	27.71	**0.66**
133	0.96	0.36	4.50	-123.60	-18.41	-14.20	123.60	18.41	14.20	0.36	1.70	44.64	**0.32**	18.41	1.50	0.05	41.21	**0.45**
134	9.22	0.36	4.50	-875.21	32.96	-276.53	875.21	32.96	276.53	0.26	1.70	3298.47	**0.16**	32.96	1.00	0.05	525.12	**0.06**
135	1.25	0.36	4.50	-107.82	14.65	10.93	107.82	14.65	10.93	0.24	1.70	56.21	**0.19**	14.65	1.50	0.05	45.74	**0.32**
136	9.18	0.36	4.50	-867.36	24.87	-229.66	867.36	24.87	229.66	0.26	1.70	3258.08	**0.15**	24.87	1.00	0.05	521.89	**0.05**
137	1.25	0.36	4.50	-109.33	15.75	11.71	109.33	15.75	11.71	0.24	1.70	56.84	**0.21**	15.75	1.50	0.05	45.98	**0.34**
138	16.21	0.36	4.50	-1108.07	3.35	6.39	1108.07	3.35	6.39	0.19	1.70	7800.77	**0.11**	3.35	1.00	0.05	816.17	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU8

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1229.98	-31.78	-92.89	1229.98	31.78	92.89	0.21	1.70	8514.88	**0.12**	31.78	1.00	0.05	847.85	**0.04**
2	0.97	0.36	4.50	-91.02	8.91	6.88	91.02	8.91	6.88	0.26	1.70	36.18	**0.19**	8.91	1.50	0.05	36.67	**0.24**
3	0.96	0.36	4.50	-93.26	15.23	12.20	93.26	15.23	12.20	0.27	1.70	36.41	**0.34**	15.23	1.50	0.05	36.78	**0.41**
4	13.53	0.36	4.50	-1077.54	25.16	33.15	1077.54	25.16	33.15	0.22	1.70	6173.55	**0.13**	25.16	1.00	0.05	720.54	**0.03**
5	13.53	0.36	4.50	-1093.07	-37.32	-39.09	1093.07	37.32	39.09	0.22	1.70	6246.21	**0.13**	37.32	1.00	0.05	724.42	**0.05**
6	9.16	0.36	4.50	-1189.96	-34.52	549.63	1189.96	34.52	549.63	0.36	1.70	4089.00	**0.21**	34.52	1.00	0.05	592.01	**0.06**
7	9.16	0.36	4.50	-1257.71	-25.28	-7.34	1257.71	25.28	7.34	0.38	1.70	4239.90	**0.22**	25.28	1.00	0.05	605.83	**0.04**
8	0.94	0.36	4.50	-123.22	17.53	13.19	123.22	17.53	13.19	0.36	1.70	43.32	**0.30**	17.53	1.50	0.05	40.65	**0.43**
9	0.94	0.36	4.50	-121.04	15.77	11.60	121.04	15.77	11.60	0.36	1.70	42.81	**0.27**	15.77	1.50	0.05	40.35	**0.39**
10	16.21	0.36	4.50	-1584.96	-11.20	-9.65	1584.96	11.20	9.65	0.27	1.70	10431.55	**0.16**	11.20	1.00	0.05	934.00	**0.01**
11	2.03	0.36	4.50	-177.76	-52.07	-40.69	177.76	52.07	40.69	0.24	1.70	150.05	**0.27**	52.07	1.50	0.05	74.71	**0.70**
12	2.03	0.36	4.50	-182.28	-50.99	-40.27	182.28	50.99	40.27	0.25	1.70	153.08	**0.26**	50.99	1.50	0.05	75.43	**0.68**
13	4.00	0.36	4.50	-226.45	6.32	13.61	226.45	6.32	13.61	0.16	1.70	403.61	**0.09**	6.32	1.13	0.05	167.59	**0.04**
14	5.01	0.36	4.50	-412.62	49.66	-67.79	412.62	49.66	67.79	0.23	1.70	869.97	**0.13**	49.66	1.00	0.05	270.20	**0.18**
15	1.00	0.36	4.50	-152.46	3.58	4.20	152.46	3.58	4.20	0.42	1.70	53.89	**0.25**	3.58	1.50	0.05	46.09	**0.08**
16	1.39	0.36	4.50	-257.28	4.77	3.90	257.28	4.77	3.90	0.51	1.70	115.19	**0.30**	4.77	1.50	0.05	69.65	**0.07**
17	1.38	0.36	4.50	-110.19	-33.54	-23.69	110.19	33.54	23.69	0.22	1.70	64.36	**0.37**	33.54	1.50	0.05	49.04	**0.68**
18	4.00	0.36	4.50	-306.65	-4.76	-12.72	306.65	4.76	12.72	0.21	1.70	522.92	**0.13**	4.76	1.13	0.05	186.68	**0.03**
19	4.00	0.36	4.50	-173.86	4.51	8.55	173.86	4.51	8.55	0.12	1.70	318.67	**0.07**	4.51	1.13	0.05	153.80	**0.03**
22	4.00	0.36	4.50	-181.53	-4.69	-2.58	181.53	4.69	2.58	0.13	1.70	331.39	**0.07**	4.69	1.13	0.05	155.89	**0.03**
23	4.00	0.36	4.50	-174.85	3.05	4.54	174.85	3.05	4.54	0.12	1.70	320.31	**0.07**	3.05	1.13	0.05	154.07	**0.02**
26	4.00	0.36	4.50	-181.89	-2.54	-14.64	181.89	2.54	14.64	0.13	1.70	331.98	**0.07**	2.54	1.13	0.05	155.98	**0.02**
27	4.00	0.36	4.50	-175.22	1.95	2.98	175.22	1.95	2.98	0.12	1.70	320.93	**0.07**	1.95	1.13	0.05	154.17	**0.01**
30	4.00	0.36	4.50	-175.60	-3.32	-5.28	175.60	3.32	5.28	0.12	1.70	321.56	**0.07**	3.32	1.13	0.05	154.28	**0.02**
31	4.00	0.36	4.50	-173.99	3.20	2.99	173.99	3.20	2.99	0.12	1.70	318.88	**0.07**	3.20	1.13	0.05	153.83	**0.02**
34	4.00	0.36	4.50	-175.87	-6.80	-8.69	175.87	6.80	8.69	0.12	1.70	322.01	**0.07**	6.80	1.13	0.05	154.35	**0.04**
35	4.47	0.36	4.50	-255.43	5.59	12.48	255.43	5.59	12.48	0.16	1.70	508.18	**0.09**	5.59	1.01	0.05	209.96	**0.03**
36	4.18	0.36	4.50	-270.35	36.69	6.09	270.35	36.69	6.09	0.18	1.70	494.78	**0.11**	36.69	1.08	0.05	191.67	**0.19**
37	2.15	0.36	4.50	-218.52	3.15	6.96	218.52	3.15	6.96	0.28	1.70	189.01	**0.17**	3.15	1.50	0.05	83.86	**0.04**
38	7.85	0.36	4.50	-620.07	-35.37	237.80	620.07	35.37	237.80	0.22	1.70	2064.22	**0.13**	35.37	1.00	0.05	416.77	**0.08**
39	2.04	0.36	4.50	-125.66	-3.48	1.21	125.66	3.48	1.21	0.17	1.70	113.00	**0.10**	3.48	1.50	0.05	66.00	**0.05**
40	0.94	0.36	4.50	-60.51	2.96	0.04	60.51	2.96	0.04	0.18	1.70	24.92	**0.11**	2.96	1.50	0.05	30.88	**0.10**
41	1.98	0.36	4.50	-125.60	-2.24	-3.33	125.60	2.24	3.33	0.18	1.70	109.18	**0.10**	2.24	1.50	0.05	64.72	**0.03**
42	2.07	0.36	4.50	-212.25	-27.44	-22.80	212.25	27.44	22.80	0.28	1.70	176.38	**0.17**	27.44	1.50	0.05	81.02	**0.34**
43	1.20	0.36	4.50	-181.93	-3.10	-4.63	181.93	3.10	4.63	0.42	1.70	77.34	**0.25**	3.10	1.50	0.05	55.17	**0.06**
44	2.06	0.36	4.50	-126.01	2.19	2.03	126.01	2.19	2.03	0.17	1.70	114.53	**0.10**	2.19	1.50	0.05	66.48	**0.03**
45	1.53	0.36	4.50	-229.16	-1.21	-2.41	229.16	1.21	2.41	0.42	1.70	124.83	**0.24**	1.21	1.50	0.05	69.98	**0.02**
46	2.52	0.36	4.50	-133.39	4.48	10.85	133.39	4.48	10.85	0.15	1.70	150.97	**0.09**	4.48	1.50	0.05	77.42	**0.06**
47	0.90	0.36	4.50	-133.59	0.84	1.00	133.59	0.84	1.00	0.41	1.70	42.96	**0.24**	0.84	1.50	0.05	41.01	**0.02**
48	2.31	0.36	4.50	-187.28	34.14	16.03	187.28	34.14	16.03	0.23	1.70	182.60	**0.13**	34.14	1.50	0.05	82.56	**0.41**
49	3.17	0.36	4.50	-155.28	-0.63	16.04	155.28	0.63	16.04	0.14	1.70	222.94	**0.08**	0.63	1.42	0.05	100.32	**0.01**
50	2.44	0.36	4.50	-157.65	3.50	-9.17	157.65	3.50	9.17	0.18	1.70	168.44	**0.11**	3.50	1.50	0.05	80.27	**0.04**
51	2.69	0.36	4.50	-265.76	5.47	-4.33	265.76	5.47	4.33	0.27	1.70	289.56	**0.16**	5.47	1.50	0.05	103.75	**0.05**
52	2.68	0.36	4.50	-234.46	-3.06	-7.69	234.46	3.06	7.69	0.24	1.70	261.34	**0.14**	3.06	1.50	0.05	98.60	**0.03**
53	2.25	0.36	4.50	-151.97	10.68	4.03	151.97	10.68	4.03	0.19	1.70	148.77	**0.11**	10.68	1.50	0.05	75.20	**0.14**
54	2.39	0.36	4.50	-137.45	-3.80	5.77	137.45	3.80	5.77	0.16	1.70	146.09	**0.09**	3.80	1.50	0.05	75.51	**0.05**
55	6.88	0.36	4.50	-621.02	-10.94	24.30	621.02	10.94	24.30	0.25	1.70	1765.62	**0.15**	10.94	1.00	0.05	384.27	**0.03**
56	9.94	0.36	4.50	-842.77	-2.06	19.26	842.77	2.06	19.26	0.24	1.70	3505.89	**0.14**	2.06	1.00	0.05	542.01	**0.00**
57	3.07	0.36	4.50	-169.03	-0.90	-8.03	169.03	0.90	8.03	0.15	1.70	232.00	**0.09**	0.90	1.47	0.05	97.80	**0.01**
58	5.47	0.36	4.50	-392.77	-41.30	7.55	392.77	41.30	7.55	0.20	1.70	925.95	**0.12**	41.30	1.00	0.05	280.36	**0.15**
59	5.50	0.36	4.50	-378.05	10.30	-65.45	378.05	10.30	65.45	0.19	1.70	902.27	**0.11**	10.30	1.00	0.05	277.48	**0.04**
60	2.63	0.36	4.50	-136.94	-2.24	-0.79	136.94	2.24	0.79	0.14	1.70	162.05	**0.09**	2.24	1.50	0.05	80.36	**0.03**
61	5.83	0.36	4.50	-509.56	13.51	-37.98	509.56	13.51	37.98	0.24	1.70	1235.80	**0.14**	13.51	1.00	0.05	321.61	**0.04**
62	2.74	0.36	4.50	-267.05	1.01	0.16	267.05	1.01	0.16	0.27	1.70	297.31	**0.16**	1.01	1.50	0.05	105.12	**0.01**
63	2.43	0.36	4.50	-135.67	-1.06	-2.52	135.67	1.06	2.52	0.16	1.70	147.15	**0.09**	1.06	1.50	0.05	76.00	**0.01**
64	2.86	0.36	4.50	-138.42	-5.25	-3.07	138.42	5.25	3.07	0.13	1.70	179.52	**0.08**	5.25	1.50	0.05	85.33	**0.06**
65	6.14	0.36	4.50	-454.73	6.09	-129.30	454.73	6.09	129.30	0.21	1.70	1197.27	**0.12**	6.09	1.00	0.05	318.29	**0.02**
66	1.15	0.36	4.50	-105.55	-2.86	-3.16	105.55	2.86	3.16	0.25	1.70	49.98	**0.15**	2.86	1.50	0.05	43.10	**0.07**
67	2.70	0.36	4.50	-253.10	-8.38	-5.21	253.10	8.38	5.21	0.26	1.70	280.11	**0.15**	8.38	1.50	0.05	102.02	**0.08**
68	2.65	0.36	4.50	-126.60	4.44	3.21	126.60	4.44	3.21	0.13	1.70	152.34	**0.08**	4.44	1.50	0.05	78.73	**0.06**
69	6.13	0.36	4.50	-453.98	5.57	-125.04	453.98	5.57	125.04	0.21	1.70	1193.35	**0.12**	5.57	1.00	0.05	317.77	**0.02**
70	1.15	0.36	4.50	-101.46	-4.35	-3.37	101.46	4.35	3.37	0.25	1.70	48.45	**0.14**	4.35	1.50	0.05	42.45	**0.10**
71	1.14	0.36	4.50	-98.73	4.03	3.15	98.73	4.03	3.15	0.24	1.70	46.91	**0.14**	4.03	1.50	0.05	41.78	**0.10**
72	2.75	0.36	4.50	-253.89	9.83	7.05	253.89	9.83	7.05	0.26	1.70	287.14	**0.15**	9.83	1.50	0.05	103.29	**0.10**
73	2.69	0.36	4.50	-149.92	2.13	4.23	149.92	2.13	4.23	0.15	1.70	180.04	**0.09**	2.13	1.50	0.05	84.08	**0.03**
74	2.85	0.36	4.50	-276.88	2.43	3.17	276.88	2.43	3.17	0.27	1.70	320.87	**0.16**	2.43	1.50	0.05	109.20	**0.02**
75	2.85	0.36	4.50	-289.85	0.77	1.33	289.85	0.77	1.33	0.28	1.70	332.29	**0.17**	0.77	1.50	0.05	111.19	**0.01**
76	2.63	0.36	4.50	-139.02	3.51	5.70	139.02	3.51	5.70	0.15	1.70	164.24	**0.09**	3.51	1.50	0.05	80.76	**0.04**
77	5.50	0.36	4.50	-393.67	-16.90	72.74	393.67	16.90	72.74	0.20	1.70	933.63	**0.12**	16.90	1.00	0.05	281.58	**0.06**
78	2.15	0.36	4.50	-194.78	-3.12	0.08	194.78	3.12	0.08	0.25	1.70	172.92	**0.15**	3.12	1.50	0.05	80.17	**0.04**
79	9.92	0.36	4.50	-850.95	-0.23	16.28	850.95	0.23	16.28	0.24	1.70	3524.71	**0.14**	0.23	1.00	0.05	543.33	**0.00**
80	2.37	0.36	4.50	-207.12	10.18	14.39	207.12	10.18	14.39	0.24	1.70	204.20	**0.14**	10.18	1.50	0.05	87.16	**0.12**
81	1.91	0.36	4.50	-133.15	14.75	11.99	133.15	14.75	11.99	0.19	1.70	110.12	**0.11**	14.75	1.50	0.05	64.57	**0.23**
82	0.90	0.36	4.50	-62.64	-2.83	-0.04	62.64	2.83	0.04	0.19	1.70	24.42	**0.11**	2.83	1.50	0.05	30.41	**0.09**
83	2.59	0.36	4.50	-143.18	1.52	4.56	143.18	1.52	4.56	0.15	1.70	165.71	**0.09**	1.52	1.50	0.05	80.74	**0.02**
84	6.77	0.36	4.50	-595.29	1.30	22.67	595.29	1.30	22.67	0.24	1.70	1674.45	**0.14**	1.30	1.00	0.05	374.33	**0.00**
85	7.91	0.36	4.50	-668.14	40.37	-184.56	668.14	40.37	184.56	0.23	1.70	2213.42	**0.14**	40.37	1.00	0.05	430.70	**0.09**
86	2.42	0.36	4.50	-141.09	3.90	-5.49	141.09	3.90	5.49	0.16	1.70	151.59	**0.10**	3.90	1.50	0.05	76.81	**0.05**
87	2.21	0.36	4.50	-149.65	-12.83	-7.43	149.65	12.83	7.43	0.19	1.70	143.84	**0.11**	12.83	1.50	0.05	73.93	**0.17**
88	2.68	0.36	4.50	-232.95	2.71	5.10	232.95	2.71	5.10	0.24	1.70	259.99	**0.14**	2.71	1.50	0.05	98.35	**0.03**
89	2.61	0.36	4.50	-230.09	3.17	6.88	230.09	3.17	6.88	0.24	1.70	249.38	**0.14**	3.17	1.50	0.05	96.30	**0.03**
90	2.27	0.36	4.50	-216.17	-1.59	1.18	216.17	1.59	1.18	0.26	1.70	200.44	**0.16**	1.59	1.50	0.05	86.30	**0.02**
91	2.34	0.36	4.50	-146.03	-3.32	9.06	146.03	3.32	9.06	0.17	1.70	150.36	**0.10**	3.32	1.50	0.05	76.05	**0.04**
92	2.23	0.36	4.50	-168.37	-24.65	-12.62	168.37	24.65	12.62	0.21	1.70	160.48	**0.12**	24.65	1.50	0.05	77.62	**0.32**
93	2.61	0.36	4.50	-303.36	-3.61	-1.44	303.36	3.61	1.44	0.32	1.70	307.43	**0.19**	3.61	1.50	0.05	107.43	**0.03**
94	2.61	0.36	4.50	-311.40	7.36	9.62	311.40	7.36	9.62	0.33	1.70	313.17	**0.19**	7.36	1.50	0.05	108.58	**0.07**
95	2.32	0.36	4.50	-238.02	9.98	5.32	238.02	9.98	5.32	0.28	1.70	221.65	**0.17**	9.98	1.50	0.05	90.83	**0.11**
96	7.34	0.36	4.50	-607.42	-47.54	172.85	607.42	47.54	172.85	0.23	1.70	1874.60	**0.14**	47.54	1.00	0.05	396.58	**0.12**
97	3.21	0.36	4.50	-156.03	1.08	-15.02	156.03	1.08	15.02	0.14	1.70	227.03	**0.08**	1.08	1.40	0.05	102.61	**0.01**
98	2.52	0.36	4.50	-131.78	-5.32	-11.71	131.78	5.32	11.71	0.15	1.70	149.35	**0.09**	5.32	1.50	0.05	77.11	**0.07**
99	1.93	0.36	4.50	-116.52	-1.68	-1.79	116.52	1.68	1.79	0.17	1.70	99.39	**0.10**	1.68	1.50	0.05	62.00	**0.03**
100	2.00	0.36	4.50	-126.18	2.42	3.49	126.18	2.42	3.49	0.18	1.70	110.88	**0.10**	2.42	1.50	0.05	65.25	**0.04**
101	4.39	0.36	4.50	-254.68	8.43	10.98	254.68	8.43	10.98	0.16	1.70	496.68	**0.09**	8.43	1.03	0.05	203.56	**0.04**
102	1.90	0.36	4.50	-122.24	7.53	-0.23	122.24	7.53	0.23	0.18	1.70	101.77	**0.11**	7.53	1.50	0.05	62.41	**0.12**
103	4.00	0.36	4.50	-222.49	9.98	24.67	222.49	9.98	24.67	0.15	1.70	397.40	**0.09**	9.98	1.13	0.05	166.60	**0.06**
104	7.36	0.36	4.50	-626.46	68.25	-210.95	626.46	68.25	210.95	0.24	1.70	1928.16	**0.14**	68.25	1.00	0.05	401.93	**0.17**
105	0.61	0.36	4.50	-91.40	-0.22	-0.20	91.40	0.22	0.20	0.42	1.70	19.85	**0.24**	0.22	1.50	0.05	27.91	**0.01**
106	5.86	0.36	4.50	-559.18	-65.69	128.69	559.18	65.69	128.69	0.27	1.70	1337.86	**0.16**	65.69	1.00	0.05	334.44	**0.20**
107	4.00	0.36	4.50	-236.33	3.06	6.55	236.33	3.06	6.55	0.16	1.70	418.98	**0.10**	3.06	1.13	0.05	170.06	**0.02**
108	3.97	0.36	4.50	-197.09	3.02	-3.33	197.09	3.02	3.33	0.14	1.70	353.89	**0.08**	3.02	1.13	0.05	158.03	**0.02**

109	7.36	0.36	4.50	-524.29	53.28	-166.57	524.29	53.28	166.57	0.20	1.70	1665.18	**0.12**	53.28	1.00	0.05	376.14	**0.14**
110	7.34	0.36	4.50	-679.38	-41.96	206.02	679.38	41.96	206.02	0.26	1.70	2049.69	**0.15**	41.96	1.00	0.05	413.96	**0.10**
111	3.97	0.36	4.50	-230.18	3.42	6.47	230.18	3.42	6.47	0.16	1.70	405.98	**0.09**	3.42	1.13	0.05	166.44	**0.02**
112	3.99	0.36	4.50	-265.62	3.39	16.37	265.62	3.39	16.37	0.18	1.70	462.10	**0.11**	3.39	1.13	0.05	176.45	**0.02**
114	1.41	0.36	4.50	-249.20	-5.92	-6.81	249.20	5.92	6.81	0.49	1.70	116.00	**0.29**	5.92	1.50	0.05	69.24	**0.09**
115	7.34	0.36	4.50	-729.36	-69.82	289.49	729.36	69.82	289.49	0.28	1.70	2165.44	**0.16**	69.82	1.00	0.05	425.62	**0.16**
116	4.00	0.36	4.50	-228.05	2.98	5.14	228.05	2.98	5.14	0.16	1.70	406.11	**0.09**	2.98	1.13	0.05	168.00	**0.02**
117	4.57	0.36	4.50	-228.69	2.45	-3.55	228.69	2.45	3.55	0.14	1.70	472.29	**0.08**	2.45	1.00	0.05	206.74	**0.01**
118	7.36	0.36	4.50	-492.63	45.40	-181.59	492.63	45.40	181.59	0.19	1.70	1579.62	**0.11**	45.40	1.00	0.05	367.79	**0.12**
119	7.34	0.36	4.50	-645.47	-35.64	165.27	645.47	35.64	165.27	0.24	1.70	1968.42	**0.14**	35.64	1.00	0.05	405.86	**0.09**
120	4.03	0.36	4.50	-240.34	-4.73	4.61	240.34	4.73	4.61	0.17	1.70	428.76	**0.10**	4.73	1.12	0.05	173.18	**0.03**
121	3.94	0.36	4.50	-284.22	-14.08	17.56	284.22	14.08	17.56	0.20	1.70	482.27	**0.12**	14.08	1.14	0.05	177.11	**0.08**
126	3.94	0.36	4.50	-346.04	-0.33	3.60	346.04	0.33	3.60	0.24	1.70	566.60	**0.14**	0.33	1.14	0.05	190.66	**0.00**
127	1.97	0.36	4.50	-178.68	-32.52	-35.89	178.68	32.52	35.89	0.25	1.70	145.31	**0.25**	32.52	1.50	0.05	73.49	**0.44**
128	2.19	0.36	4.50	-178.14	-37.87	-35.91	178.14	37.87	35.91	0.23	1.70	164.56	**0.22**	37.87	1.50	0.05	78.37	**0.48**
129	13.78	0.36	4.50	-942.26	-30.96	-15.78	942.26	30.96	15.78	0.19	1.70	5638.79	**0.11**	30.96	1.00	0.05	693.90	**0.04**
130	16.21	0.36	4.50	-1554.95	-2.00	43.90	1554.95	2.00	43.90	0.27	1.70	10278.89	**0.16**	2.00	1.00	0.05	927.02	**0.00**
131	13.78	0.36	4.50	-935.02	32.33	10.95	935.02	32.33	10.95	0.19	1.70	5601.97	**0.11**	32.33	1.00	0.05	691.98	**0.05**
132	0.63	0.36	4.50	-86.01	-18.28	-15.53	86.01	18.28	15.53	0.38	1.70	19.98	**0.78**	18.28	1.50	0.05	27.71	**0.66**
133	0.96	0.36	4.50	-123.60	-18.41	-14.20	123.60	18.41	14.20	0.36	1.70	44.64	**0.32**	18.41	1.50	0.05	41.21	**0.45**
134	9.22	0.36	4.50	-875.21	32.96	-276.53	875.21	32.96	276.53	0.26	1.70	3298.47	**0.16**	32.96	1.00	0.05	525.12	**0.06**
135	1.25	0.36	4.50	-107.82	14.65	10.93	107.82	14.65	10.93	0.24	1.70	56.21	**0.19**	14.65	1.50	0.05	45.74	**0.32**
136	9.18	0.36	4.50	-867.36	24.87	-229.66	867.36	24.87	229.66	0.26	1.70	3258.08	**0.15**	24.87	1.00	0.05	521.89	**0.05**
137	1.25	0.36	4.50	-109.33	15.75	11.71	109.33	15.75	11.71	0.24	1.70	56.84	**0.21**	15.75	1.50	0.05	45.98	**0.34**
138	16.21	0.36	4.50	-1108.07	3.35	6.39	1108.07	3.35	6.39	0.19	1.70	7800.77	**0.11**	3.35	1.00	0.05	816.17	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU9

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1248.39	4.85	-2.75	1248.39	4.85	2.75	0.21	1.70	8620.24	**0.13**	4.85	1.00	0.05	852.53	**0.01**
2	0.97	0.36	4.50	-94.90	9.65	7.18	94.90	9.65	7.18	0.27	1.70	37.37	**0.19**	9.65	1.50	0.05	37.27	**0.26**
3	0.96	0.36	4.50	-96.94	15.85	12.41	96.94	15.85	12.41	0.28	1.70	37.50	**0.33**	15.85	1.50	0.05	37.35	**0.42**
4	13.53	0.36	4.50	-1100.06	13.02	18.63	1100.06	13.02	18.63	0.23	1.70	6278.76	**0.13**	13.02	1.00	0.05	726.16	**0.02**
5	13.53	0.36	4.50	-1115.25	-24.83	-21.90	1115.25	24.83	21.90	0.23	1.70	6349.18	**0.13**	24.83	1.00	0.05	729.93	**0.03**
6	9.16	0.36	4.50	-1226.65	-25.08	575.89	1226.65	25.08	575.89	0.37	1.70	4171.81	**0.22**	25.08	1.00	0.05	599.54	**0.04**
7	9.16	0.36	4.50	-1296.59	-15.61	16.91	1296.59	15.61	16.91	0.39	1.70	4322.52	**0.23**	15.61	1.00	0.05	613.62	**0.03**
8	0.94	0.36	4.50	-126.63	19.37	14.77	126.63	19.37	14.77	0.37	1.70	44.10	**0.33**	19.37	1.50	0.05	41.12	**0.47**
9	0.94	0.36	4.50	-124.41	17.61	13.17	124.41	17.61	13.17	0.37	1.70	43.60	**0.30**	17.61	1.50	0.05	40.82	**0.43**
10	16.21	0.36	4.50	-1614.89	-11.39	-10.41	1614.89	11.39	10.41	0.28	1.70	10582.08	**0.16**	11.39	1.00	0.05	940.90	**0.01**
11	2.03	0.36	4.50	-181.37	-55.29	-43.19	181.37	55.29	43.19	0.25	1.70	152.47	**0.28**	55.29	1.50	0.05	75.29	**0.73**
12	2.03	0.36	4.50	-186.00	-54.24	-42.80	186.00	54.24	42.80	0.25	1.70	155.54	**0.28**	54.24	1.50	0.05	76.03	**0.71**
13	4.00	0.36	4.50	-227.95	3.99	9.73	227.95	3.99	9.73	0.16	1.70	405.96	**0.09**	3.99	1.13	0.05	167.97	**0.02**
14	5.01	0.36	4.50	-416.20	50.65	-68.25	416.20	50.65	68.25	0.23	1.70	876.08	**0.14**	50.65	1.00	0.05	271.08	**0.19**
15	1.00	0.36	4.50	-154.11	3.63	4.26	154.11	3.63	4.26	0.43	1.70	54.23	**0.25**	3.63	1.50	0.05	46.30	**0.08**
16	1.39	0.36	4.50	-260.11	4.76	3.86	260.11	4.76	3.86	0.52	1.70	115.75	**0.31**	4.76	1.50	0.05	69.98	**0.07**
17	1.38	0.36	4.50	-111.00	-34.06	-24.09	111.00	34.06	24.09	0.22	1.70	64.75	**0.37**	34.06	1.50	0.05	49.18	**0.69**
18	4.00	0.36	4.50	-309.14	-2.34	-8.72	309.14	2.34	8.72	0.21	1.70	526.42	**0.13**	2.34	1.13	0.05	187.24	**0.01**
19	4.00	0.36	4.50	-174.14	3.25	6.46	174.14	3.25	6.46	0.12	1.70	319.13	**0.07**	3.25	1.13	0.05	153.88	**0.02**
22	4.00	0.36	4.50	-182.11	-3.11	0.25	182.11	3.11	0.25	0.13	1.70	332.34	**0.07**	3.11	1.13	0.05	156.04	**0.02**
23	4.00	0.36	4.50	-174.89	2.26	3.21	174.89	2.26	3.21	0.12	1.70	320.38	**0.07**	2.26	1.13	0.05	154.08	**0.01**
26	4.00	0.36	4.50	-181.60	-1.26	-12.24	181.60	1.26	12.24	0.13	1.70	331.50	**0.07**	1.26	1.13	0.05	155.91	**0.01**
27	4.00	0.36	4.50	-175.17	1.14	1.60	175.17	1.14	1.60	0.12	1.70	320.85	**0.07**	1.14	1.13	0.05	154.16	**0.01**
30	4.00	0.36	4.50	-175.37	-1.60	-2.37	175.37	1.60	2.37	0.12	1.70	321.18	**0.07**	1.60	1.13	0.05	154.21	**0.01**
31	4.00	0.36	4.50	-173.67	1.84	0.77	173.67	1.84	0.77	0.12	1.70	318.35	**0.07**	1.84	1.13	0.05	153.75	**0.01**
34	4.00	0.36	4.50	-175.29	-3.47	-3.07	175.29	3.47	3.07	0.12	1.70	321.05	**0.07**	3.47	1.13	0.05	154.19	**0.02**
35	4.47	0.36	4.50	-255.03	3.44	7.25	255.03	3.44	7.25	0.16	1.70	507.48	**0.09**	3.44	1.01	0.05	209.85	**0.02**
36	4.18	0.36	4.50	-271.10	35.16	3.41	271.10	35.16	3.41	0.18	1.70	495.96	**0.11**	35.16	1.08	0.05	191.86	**0.18**
37	2.15	0.36	4.50	-217.73	2.56	5.58	217.73	2.56	5.58	0.28	1.70	188.49	**0.17**	2.56	1.50	0.05	83.74	**0.03**
38	7.85	0.36	4.50	-625.04	-37.42	224.15	625.04	37.42	224.15	0.22	1.70	2077.78	**0.13**	37.42	1.00	0.05	418.02	**0.09**
39	2.04	0.36	4.50	-125.44	-1.26	3.96	125.44	1.26	3.96	0.17	1.70	112.82	**0.10**	1.26	1.50	0.05	65.96	**0.02**
40	0.94	0.36	4.50	-58.37	3.09	-0.09	58.37	3.09	0.09	0.17	1.70	24.16	**0.10**	3.09	1.50	0.05	30.50	**0.10**
41	1.98	0.36	4.50	-127.16	-1.38	-1.82	127.16	1.38	1.82	0.18	1.70	110.35	**0.10**	1.38	1.50	0.05	65.00	**0.02**
42	2.07	0.36	4.50	-215.18	-25.80	-20.13	215.18	25.80	20.13	0.29	1.70	178.21	**0.17**	25.80	1.50	0.05	81.46	**0.32**
43	1.20	0.36	4.50	-184.74	-2.21	-3.21	184.74	2.21	3.21	0.43	1.70	78.04	**0.25**	2.21	1.50	0.05	55.53	**0.04**
44	2.06	0.36	4.50	-127.70	3.28	3.88	127.70	3.28	3.88	0.17	1.70	115.86	**0.10**	3.28	1.50	0.05	66.79	**0.05**
45	1.53	0.36	4.50	-232.46	0.40	0.20	232.46	0.40	0.20	0.42	1.70	125.89	**0.25**	0.40	1.50	0.05	70.41	**0.01**
46	2.52	0.36	4.50	-135.39	8.48	15.27	135.39	8.48	15.27	0.15	1.70	152.97	**0.10**	8.48	1.50	0.05	77.80	**0.11**
47	0.90	0.36	4.50	-135.30	1.39	1.85	135.30	1.39	1.85	0.42	1.70	43.29	**0.25**	1.39	1.50	0.05	41.23	**0.03**
48	2.31	0.36	4.50	-186.18	42.12	23.30	186.18	42.12	23.30	0.22	1.70	181.72	**0.13**	42.12	1.50	0.05	82.38	**0.51**
49	3.17	0.36	4.50	-158.54	0.50	20.16	158.54	0.50	20.16	0.14	1.70	227.13	**0.09**	0.50	1.42	0.05	101.00	**0.00**
50	2.44	0.36	4.50	-162.10	4.26	-7.97	162.10	4.26	7.97	0.18	1.70	172.51	**0.11**	4.26	1.50	0.05	81.07	**0.05**
51	2.69	0.36	4.50	-266.78	9.93	3.87	266.78	9.93	3.87	0.28	1.70	290.41	**0.16**	9.93	1.50	0.05	103.91	**0.10**
52	2.68	0.36	4.50	-236.71	1.74	0.83	236.71	1.74	0.83	0.25	1.70	263.34	**0.14**	1.74	1.50	0.05	98.96	**0.02**
53	2.25	0.36	4.50	-150.57	18.69	11.64	150.57	18.69	11.64	0.19	1.70	147.60	**0.11**	18.69	1.50	0.05	74.95	**0.25**
54	2.39	0.36	4.50	-143.00	-3.14	7.03	143.00	3.14	7.03	0.17	1.70	151.23	**0.10**	3.14	1.50	0.05	76.54	**0.04**
55	6.88	0.36	4.50	-629.52	-10.61	21.01	629.52	10.61	21.01	0.25	1.70	1784.64	**0.15**	10.61	1.00	0.05	386.29	**0.03**
56	9.94	0.36	4.50	-845.02	-1.37	31.86	845.02	1.37	31.86	0.24	1.70	3513.42	**0.14**	1.37	1.00	0.05	542.56	**0.00**
57	3.07	0.36	4.50	-170.84	0.00	-6.81	170.84	0.00	6.81	0.15	1.70	234.19	**0.09**	0.00	1.47	0.05	98.15	**0.00**
58	5.47	0.36	4.50	-398.35	-26.46	32.12	398.35	26.46	32.12	0.20	1.70	936.97	**0.12**	26.46	1.00	0.05	281.81	**0.09**
59	5.50	0.36	4.50	-379.45	29.95	-42.78	379.45	29.95	42.78	0.19	1.70	905.10	**0.11**	29.95	1.00	0.05	277.85	**0.11**
60	2.63	0.36	4.50	-143.42	-1.62	-0.15	143.42	1.62	0.15	0.15	1.70	168.83	**0.09**	1.62	1.50	0.05	81.61	**0.02**
61	5.83	0.36	4.50	-521.15	12.58	-33.86	521.15	12.58	33.86	0.25	1.70	1258.10	**0.15**	12.58	1.00	0.05	324.40	**0.04**
62	2.74	0.36	4.50	-269.22	1.22	0.52	269.22	1.22	0.52	0.27	1.70	299.17	**0.16**	1.22	1.50	0.05	105.45	**0.01**
63	2.43	0.36	4.50	-137.38	-0.78	-2.12	137.38	0.78	2.12	0.16	1.70	148.78	**0.09**	0.78	1.50	0.05	76.32	**0.01**
64	2.86	0.36	4.50	-146.93	-5.23	-2.88	146.93	5.23	2.88	0.14	1.70	189.36	**0.08**	5.23	1.50	0.05	87.00	**0.06**
65	6.14	0.36	4.50	-455.19	30.95	-94.80	455.19	30.95	94.80	0.21	1.70	1198.28	**0.12**	30.95	1.00	0.05	318.41	**0.10**
66	1.15	0.36	4.50	-109.14	-0.61	-0.84	109.14	0.61	0.84	0.26	1.70	51.31	**0.16**	0.61	1.50	0.05	43.66	**0.01**
67	2.70	0.36	4.50	-250.84	-8.84	-6.08	250.84	8.84	6.08	0.26	1.70	278.16	**0.15**	8.84	1.50	0.05	101.66	**0.09**
68	2.65	0.36	4.50	-134.59	4.32	2.23	134.59	4.32	2.23	0.14	1.70	160.92	**0.08**	4.32	1.50	0.05	80.31	**0.05**
69	6.13	0.36	4.50	-454.56	29.94	-90.55	454.56	29.94	90.55	0.21	1.70	1194.63	**0.12**	29.94	1.00	0.05	317.92	**0.09**
70	1.15	0.36	4.50	-101.17	-4.58	-3.52	101.17	4.58	3.52	0.24	1.70	48.33	**0.14**	4.58	1.50	0.05	42.40	**0.11**
71	1.14	0.36	4.50	-98.51	4.17	3.21	98.51	4.17	3.21	0.24	1.70	46.82	**0.14**	4.17	1.50	0.05	41.74	**0.10**
72	2.75	0.36	4.50	-251.42	10.07	7.70	251.42	10.07	7.70	0.25	1.70	284.95	**0.15**	10.07	1.50	0.05	102.90	**0.10**
73	2.69	0.36	4.50	-151.73	1.48	3.21	151.73	1.48	3.21	0.16	1.70	181.95	**0.09**	1.48	1.50	0.05	84.43	**0.02**
74	2.85	0.36	4.50	-279.11	2.00	2.36	279.11	2.00	2.36	0.27	1.70	322.85	**0.16**	2.00	1.50	0.05	109.54	**0.02**
75	2.85	0.36	4.50	-294.21	0.88	1.20	294.21	0.88	1.20	0.29	1.70	336.05	**0.17**	0.88	1.50	0.05	111.85	**0.01**
76	2.63	0.36	4.50	-145.15	2.71	4.75	145.15	2.71	4.75	0.15	1.70	170.62	**0.09**	2.71	1.50	0.05	81.94	**0.03**
77	5.50	0.36	4.50	-395.01	-35.46	51.56	395.01	35.46	51.56	0.20	1.70	936.30	**0.12**	35.46	1.00	0.05	281.92	**0.13**
78	2.15	0.36	4.50	-193.45	-3.99	-0.21	193.45	3.99	0.21	0.25	1.70	171.99	**0.15**	3.99	1.50	0.05	79.96	**0.05**
79	9.92	0.36	4.50	-865.58	-1.66	26.01	865.58	1.66	26.01	0.24	1.70	3573.14	**0.14**	1.66	1.00	0.05	546.88	**0.00**
80	2.37	0.36	4.50	-208.41	5.18	6.75	208.41	5.18	6.75	0.24	1.70	205.22	**0.14**	5.18	1.50	0.05	87.36	**0.06**
81	1.91	0.36	4.50	-136.54	10.20	6.81	136.54	10.20	6.81	0.20	1.70	112.48	**0.12**	10.20	1.50	0.05	65.16	**0.16**
82	0.90	0.36	4.50	-61.23	-3.07	0.01	61.23	3.07	0.01	0.19	1.70	23.95	**0.11**	3.07	1.50	0.05	30.16	**0.10**
83	2.59	0.36	4.50	-144.66	0.75	3.32	144.66	0.75	3.32	0.16	1.70	167.22	**0.09**	0.75	1.50	0.05	81.02	**0.01**
84	6.77	0.36	4.50	-599.82	-0.01	21.00	599.82	0.01	21.00	0.25	1.70	1684.58	**0.14**	0.01	1.00	0.05	375.42	**0.00**
85	7.91	0.36	4.50	-674.75	40.95	-171.36	674.75	40.95	171.36	0.24	1.70	2231.03	**0.14**	40.95	1.00	0.05	432.32	**0.09**
86	2.42	0.36	4.50	-145.83	3.16	-6.85	145.83	3.16	6.85	0.17	1.70	156.01	**0.10**	3.16	1.50	0.05	77.69	**0.04**
87	2.21	0.36	4.50	-148.56	-19.99	-14.10	148.56	19.99	14.10	0.19	1.70	142.95	**0.11**	19.99	1.50	0.05	73.74	**0.27**
88	2.68	0.36	4.50	-235.52	-1.10	-1.58	235.52	1.10	1.58	0.24	1.70	262.28	**0.14**	1.10	1.50	0.05	98.77	**0.01**
89	2.61	0.36	4.50	-232.19	-0.22	0.93	232.19	0.22	0.93	0.25	1.70	251.19	**0.15**	0.22	1.50	0.05	96.64	**0.00**
90	2.27	0.36	4.50	-219.47	-4.53	-2.37	219.47	4.53	2.37	0.27	1.70	202.80	**0.16**	4.53	1.50	0.05	86.81	**0.05**
91	2.34	0.36	4.50	-149.91	-3.97	8.06	149.91	3.97	8.06	0.18	1.70	153.79	**0.10**	3.97	1.50	0.05	76.75	**0.05**
92	2.23	0.36	4.50	-167.88	-31.83	-18.91	167.88	31.83	18.91	0.21	1.70	160.10	**0.12**	31.83	1.50	0.05	77.53	**0.41**
93	2.61	0.36	4.50	-307.48	-6.84	-6.99	307.48	6.84	6.99	0.33	1.70	310.39	**0.19**	6.84	1.50	0.05	108.02	**0.06**
94	2.61	0.36	4.50	-315.68	4.49	4.66	315.68	4.49	4.66	0.34	1.70	316.18	**0.20**	4.49	1.50	0.05	109.19	**0.04**
95	2.32	0.36	4.50	-241.73	7.77	2.34	241.73	7.77	2.34	0.29	1.70	224.24	**0.17**	7.77	1.50	0.05	91.39	**0.09**
96	7.34	0.36	4.50	-610.32	-47.23	172.26	610.32	47.23	172.26	0.23	1.70	1881.85	**0.14**	47.23	1.00	0.05	397.29	**0.12**
97	3.21	0.36	4.50	-158.99	-0.01	-18.91	158.99	0.01	18.91	0.14	1.70	230.88	**0.08**	0.01	1.40	0.05	103.24	**0.00**
98	2.52	0.36	4.50	-133.72	-9.18	-15.96	133.72	9.18	15.96	0.15	1.70	151.30	**0.11**	9.18	1.50	0.05	77.48	**0.12**
99	1.93	0.36	4.50	-118.14	-2.51	-3.24	118.14	2.51	3.24	0.17	1.70	100.59	**0.10**	2.51	1.50	0.05	62.30	**0.04**
100	2.00	0.36	4.50	-127.89	1.59	2.05	127.89	1.59	2.05	0.18	1.70	112.17	**0.10**	1.59	1.50	0.05	65.56	**0.02**
101	4.39	0.36	4.50	-256.35	5.71	5.43	256.35	5.71	5.43	0.16	1.70	499.52	**0.10**	5.71	1.03	0.05	204.02	**0.03**
102	1.90	0.36	4.50	-122.72	5.32	-2.65	122.72	5.32	2.65	0.18	1.70	102.11	**0.11**	5.32	1.50	0.05	62.50	**0.09**
103	4.00	0.36	4.50	-222.91	6.46	17.36	222.91	6.46	17.36	0.15	1.70	398.06	**0.09**	6.46	1.13	0.05	166.70	**0.04**
104	7.36	0.36	4.50	-631.70	71.78	-211.55	631.70	71.78	211.55	0.24	1.70	1941.11	**0.14**	71.78	1.00	0.05	403.20	**0.18**
105	0.61	0.36	4.50	-92.79	-0.18	-0.14	92.79	0.18	0.14	0.42	1.70	20.03	**0.25**	0.18	1.50	0.05	28.08	**0.01**
106	5.86	0.36	4.50	-566.98	-65.59	134.05	566.98	65.59	134.05	0.27	1.70	1352.27	**0.16**	65.59	1.00	0.05	336.26	**0.20**
107	4.00	0.36	4.50	-237.57	0.55	2.11	237.57	0.55	2.11	0.16	1.70	420.89	**0.10**	0.55	1.13	0.05	170.37	**0.00**
108	3.97	0.36	4.50	-197.41	0.77	-7.56	197.41	0.77	7.56	0.14	1.70	354.40	**0.08**	0.77	1.13	0.05	158.12	**0.00**

109	7.36	0.36	4.50	-526.24	55.06	-168.32	526.24	55.06	168.32	0.20	1.70	1670.39	**0.12**	55.06	1.00	0.05	376.65	**0.15**
110	7.34	0.36	4.50	-688.34	-41.33	212.29	688.34	41.33	212.29	0.26	1.70	2070.79	**0.15**	41.33	1.00	0.05	416.07	**0.10**
111	3.97	0.36	4.50	-231.49	0.95	2.07	231.49	0.95	2.07	0.16	1.70	408.00	**0.10**	0.95	1.13	0.05	166.76	**0.01**
112	3.99	0.36	4.50	-265.53	1.90	13.64	265.53	1.90	13.64	0.18	1.70	461.96	**0.11**	1.90	1.13	0.05	176.42	**0.01**
114	1.41	0.36	4.50	-250.95	-5.65	-6.45	250.95	5.65	6.45	0.49	1.70	116.39	**0.29**	5.65	1.50	0.05	69.45	**0.08**
115	7.34	0.36	4.50	-738.68	-70.01	294.98	738.68	70.01	294.98	0.28	1.70	2186.50	**0.16**	70.01	1.00	0.05	427.75	**0.16**
116	4.00	0.36	4.50	-229.64	0.43	0.64	229.64	0.43	0.64	0.16	1.70	408.59	**0.09**	0.43	1.13	0.05	168.40	**0.00**
117	4.57	0.36	4.50	-229.11	0.60	-6.98	229.11	0.60	6.98	0.14	1.70	473.06	**0.08**	0.60	1.00	0.05	206.86	**0.00**
118	7.36	0.36	4.50	-493.87	45.96	-183.10	493.87	45.96	183.10	0.19	1.70	1583.01	**0.12**	45.96	1.00	0.05	368.12	**0.12**
119	7.34	0.36	4.50	-652.92	-35.92	167.33	652.92	35.92	167.33	0.25	1.70	1986.47	**0.15**	35.92	1.00	0.05	407.65	**0.09**
120	4.03	0.36	4.50	-242.49	-7.78	-0.30	242.49	7.78	0.30	0.17	1.70	432.10	**0.10**	7.78	1.12	0.05	173.71	**0.04**
121	3.94	0.36	4.50	-286.66	-16.76	13.34	286.66	16.76	13.34	0.20	1.70	485.74	**0.12**	16.76	1.14	0.05	177.67	**0.09**
126	3.94	0.36	4.50	-349.89	-3.20	-1.33	349.89	3.20	1.33	0.25	1.70	571.61	**0.15**	3.20	1.14	0.05	191.47	**0.02**
127	1.97	0.36	4.50	-181.94	-34.60	-37.91	181.94	34.60	37.91	0.26	1.70	147.39	**0.26**	34.60	1.50	0.05	74.01	**0.47**
128	2.19	0.36	4.50	-180.52	-39.99	-37.82	180.52	39.99	37.82	0.23	1.70	166.35	**0.23**	39.99	1.50	0.05	78.77	**0.51**
129	13.78	0.36	4.50	-958.41	-19.10	-6.30	958.41	19.10	6.30	0.19	1.70	5720.56	**0.11**	19.10	1.00	0.05	698.16	**0.03**
130	16.21	0.36	4.50	-1582.19	-0.90	48.88	1582.19	0.90	48.88	0.27	1.70	10417.53	**0.16**	0.90	1.00	0.05	933.36	**0.00**
131	13.78	0.36	4.50	-952.37	21.31	-0.30	952.37	21.31	0.30	0.19	1.70	5690.04	**0.11**	21.31	1.00	0.05	696.57	**0.03**
132	0.63	0.36	4.50	-88.08	-19.57	-16.68	88.08	19.57	16.68	0.39	1.70	20.29	**0.82**	19.57	1.50	0.05	27.99	**0.70**
133	0.96	0.36	4.50	-126.83	-20.15	-15.72	126.83	20.15	15.72	0.37	1.70	45.42	**0.35**	20.15	1.50	0.05	41.65	**0.48**
134	9.22	0.36	4.50	-904.77	21.79	-287.41	904.77	21.79	287.41	0.27	1.70	3384.17	**0.16**	21.79	1.00	0.05	532.00	**0.04**
135	1.25	0.36	4.50	-111.95	15.52	10.89	111.95	15.52	10.89	0.25	1.70	57.92	**0.19**	15.52	1.50	0.05	46.40	**0.33**
136	9.18	0.36	4.50	-896.85	13.74	-239.09	896.85	13.74	239.09	0.27	1.70	3343.44	**0.16**	13.74	1.00	0.05	528.77	**0.03**
137	1.25	0.36	4.50	-113.62	16.65	11.67	113.62	16.65	11.67	0.25	1.70	58.60	**0.20**	16.65	1.50	0.05	46.67	**0.36**
138	16.21	0.36	4.50	-1112.17	3.64	6.77	1112.17	3.64	6.77	0.19	1.70	7825.25	**0.11**	3.64	1.00	0.05	817.26	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SLU10

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-1226.30	4.78	-2.65	1226.30	4.78	2.65	0.21	1.70	8493.74	**0.12**	4.78	1.00	0.05	846.91	**0.01**
2	0.97	0.36	4.50	-92.40	8.54	6.24	92.40	8.54	6.24	0.26	1.70	36.61	**0.17**	8.54	1.50	0.05	36.88	**0.23**
3	0.96	0.36	4.50	-94.41	14.66	11.40	94.41	14.66	11.40	0.27	1.70	36.75	**0.31**	14.66	1.50	0.05	36.96	**0.40**
4	13.53	0.36	4.50	-1076.25	9.03	11.16	1076.25	9.03	11.16	0.22	1.70	6167.50	**0.13**	9.03	1.00	0.05	720.22	**0.01**
5	13.53	0.36	4.50	-1091.76	-20.73	-13.80	1091.76	20.73	13.80	0.22	1.70	6240.10	**0.13**	20.73	1.00	0.05	724.09	**0.03**
6	9.16	0.36	4.50	-1191.54	-21.97	575.30	1191.54	21.97	575.30	0.36	1.70	4092.62	**0.21**	21.97	1.00	0.05	592.34	**0.04**
7	9.16	0.36	4.50	-1260.34	-12.66	26.55	1260.34	12.66	26.55	0.38	1.70	4245.58	**0.22**	12.66	1.00	0.05	606.36	**0.02**
8	0.94	0.36	4.50	-123.43	18.38	14.05	123.43	18.38	14.05	0.36	1.70	43.37	**0.32**	18.38	1.50	0.05	40.68	**0.45**
9	0.94	0.36	4.50	-121.25	16.65	12.49	121.25	16.65	12.49	0.36	1.70	42.86	**0.29**	16.65	1.50	0.05	40.38	**0.41**
10	16.21	0.36	4.50	-1591.44	-11.35	-10.82	1591.44	11.35	10.82	0.27	1.70	10464.29	**0.16**	11.35	1.00	0.05	935.50	**0.01**
11	2.03	0.36	4.50	-179.33	-54.90	-43.02	179.33	54.90	43.02	0.25	1.70	151.11	**0.28**	54.90	1.50	0.05	74.96	**0.73**
12	2.03	0.36	4.50	-183.92	-53.85	-42.61	183.92	53.85	42.61	0.25	1.70	154.17	**0.28**	53.85	1.50	0.05	75.70	**0.71**
13	4.00	0.36	4.50	-227.04	3.52	8.37	227.04	3.52	8.37	0.16	1.70	404.53	**0.09**	3.52	1.13	0.05	167.74	**0.02**
14	5.01	0.36	4.50	-412.77	49.94	-67.09	412.77	49.94	67.09	0.23	1.70	870.23	**0.13**	49.94	1.00	0.05	270.23	**0.18**
15	1.00	0.36	4.50	-152.50	3.57	4.19	152.50	3.57	4.19	0.42	1.70	53.90	**0.25**	3.57	1.50	0.05	46.09	**0.08**
16	1.39	0.36	4.50	-257.31	4.69	3.78	257.31	4.69	3.78	0.51	1.70	115.19	**0.30**	4.69	1.50	0.05	69.65	**0.07**
17	1.38	0.36	4.50	-110.21	-33.60	-23.79	110.21	33.60	23.79	0.22	1.70	64.37	**0.37**	33.60	1.50	0.05	49.05	**0.69**
18	4.00	0.36	4.50	-307.28	-1.97	-7.50	307.28	1.97	7.50	0.21	1.70	523.81	**0.13**	1.97	1.13	0.05	186.82	**0.01**
19	4.00	0.36	4.50	-174.20	2.79	5.69	174.20	2.79	5.69	0.12	1.70	319.23	**0.07**	2.79	1.13	0.05	153.89	**0.02**
22	4.00	0.36	4.50	-182.22	-2.63	1.18	182.22	2.63	1.18	0.13	1.70	332.53	**0.07**	2.63	1.13	0.05	156.07	**0.02**
23	4.00	0.36	4.50	-174.91	1.98	2.73	174.91	1.98	2.73	0.12	1.70	320.41	**0.07**	1.98	1.13	0.05	154.09	**0.01**
26	4.00	0.36	4.50	-181.53	-0.86	-11.48	181.53	0.86	11.48	0.13	1.70	331.39	**0.07**	0.86	1.13	0.05	155.89	**0.01**
27	4.00	0.36	4.50	-175.15	0.88	1.16	175.15	0.88	1.16	0.12	1.70	320.81	**0.07**	0.88	1.13	0.05	154.15	**0.01**
30	4.00	0.36	4.50	-175.31	-1.09	-1.51	175.31	1.09	1.51	0.12	1.70	321.08	**0.07**	1.09	1.13	0.05	154.20	**0.01**
31	4.00	0.36	4.50	-173.61	1.44	0.13	173.61	1.44	0.13	0.12	1.70	318.25	**0.07**	1.44	1.13	0.05	153.73	**0.01**
34	4.00	0.36	4.50	-175.18	-2.52	-1.41	175.18	2.52	1.41	0.12	1.70	320.86	**0.07**	2.52	1.13	0.05	154.16	**0.02**
35	4.47	0.36	4.50	-253.12	2.21	5.99	253.12	2.21	5.99	0.16	1.70	504.14	**0.09**	2.21	1.01	0.05	209.31	**0.01**
36	4.18	0.36	4.50	-269.95	34.28	2.34	269.95	34.28	2.34	0.18	1.70	494.15	**0.11**	34.28	1.08	0.05	191.57	**0.18**
37	2.15	0.36	4.50	-215.40	2.48	5.14	215.40	2.48	5.14	0.28	1.70	186.96	**0.16**	2.48	1.50	0.05	83.38	**0.03**
38	7.85	0.36	4.50	-621.56	-37.71	219.33	621.56	37.71	219.33	0.22	1.70	2068.29	**0.13**	37.71	1.00	0.05	417.14	**0.09**
39	2.04	0.36	4.50	-124.44	-0.07	5.06	124.44	0.07	5.06	0.17	1.70	112.04	**0.10**	0.07	1.50	0.05	65.77	**0.00**
40	0.94	0.36	4.50	-57.08	3.10	-0.12	57.08	3.10	0.12	0.17	1.70	23.70	**0.10**	3.10	1.50	0.05	30.26	**0.10**
41	1.98	0.36	4.50	-125.62	-1.11	-1.36	125.62	1.11	1.36	0.18	1.70	109.20	**0.10**	1.11	1.50	0.05	64.72	**0.02**
42	2.07	0.36	4.50	-213.73	-24.38	-18.72	213.73	24.38	18.72	0.29	1.70	177.30	**0.17**	24.38	1.50	0.05	81.24	**0.30**
43	1.20	0.36	4.50	-181.97	-1.84	-2.65	181.97	1.84	2.65	0.42	1.70	77.35	**0.25**	1.84	1.50	0.05	55.18	**0.03**
44	2.06	0.36	4.50	-126.09	3.50	4.28	126.09	3.50	4.28	0.17	1.70	114.59	**0.10**	3.50	1.50	0.05	66.50	**0.05**
45	1.53	0.36	4.50	-228.23	1.00	1.11	228.23	1.00	1.11	0.41	1.70	124.53	**0.24**	1.00	1.50	0.05	69.86	**0.01**
46	2.52	0.36	4.50	-134.31	8.93	15.90	134.31	8.93	15.90	0.15	1.70	151.89	**0.10**	8.93	1.50	0.05	77.60	**0.12**
47	0.90	0.36	4.50	-132.43	1.52	2.06	132.43	1.52	2.06	0.41	1.70	42.74	**0.24**	1.52	1.50	0.05	40.86	**0.04**
48	2.31	0.36	4.50	-182.72	42.30	24.20	182.72	42.30	24.20	0.22	1.70	178.95	**0.14**	42.30	1.50	0.05	81.80	**0.52**
49	3.17	0.36	4.50	-158.02	0.80	20.72	158.02	0.80	20.72	0.14	1.70	226.46	**0.09**	0.80	1.42	0.05	100.89	**0.01**
50	2.44	0.36	4.50	-160.87	4.51	-7.42	160.87	4.51	7.42	0.18	1.70	171.39	**0.11**	4.51	1.50	0.05	80.85	**0.06**
51	2.69	0.36	4.50	-263.84	11.21	6.29	263.84	11.21	6.29	0.27	1.70	287.96	**0.16**	11.21	1.50	0.05	103.46	**0.11**
52	2.68	0.36	4.50	-233.63	3.23	3.36	233.63	3.23	3.36	0.24	1.70	260.60	**0.14**	3.23	1.50	0.05	98.46	**0.03**
53	2.25	0.36	4.50	-148.40	19.83	13.06	148.40	19.83	13.06	0.18	1.70	145.78	**0.11**	19.83	1.50	0.05	74.56	**0.27**
54	2.39	0.36	4.50	-142.80	-3.04	7.22	142.80	3.04	7.22	0.17	1.70	151.05	**0.10**	3.04	1.50	0.05	76.50	**0.04**
55	6.88	0.36	4.50	-622.87	-10.41	20.99	622.87	10.41	20.99	0.25	1.70	1769.77	**0.15**	10.41	1.00	0.05	384.71	**0.03**
56	9.94	0.36	4.50	-832.62	-0.95	33.51	832.62	0.95	33.51	0.23	1.70	3471.79	**0.14**	0.95	1.00	0.05	539.52	**0.00**
57	3.07	0.36	4.50	-168.90	0.24	-6.36	168.90	0.24	6.36	0.15	1.70	231.84	**0.09**	0.24	1.47	0.05	97.77	**0.00**
58	5.47	0.36	4.50	-394.63	-22.09	37.53	394.63	22.09	37.53	0.20	1.70	929.63	**0.12**	22.09	1.00	0.05	280.85	**0.08**
59	5.50	0.36	4.50	-375.00	33.91	-36.04	375.00	33.91	36.04	0.19	1.70	896.09	**0.11**	33.91	1.00	0.05	276.67	**0.12**
60	2.63	0.36	4.50	-143.38	-1.43	0.04	143.38	1.43	0.04	0.15	1.70	168.79	**0.09**	1.43	1.50	0.05	81.60	**0.02**
61	5.83	0.36	4.50	-515.46	11.77	-31.31	515.46	11.77	31.31	0.25	1.70	1247.18	**0.14**	11.77	1.00	0.05	323.04	**0.04**
62	2.74	0.36	4.50	-265.00	1.22	0.58	265.00	1.22	0.58	0.27	1.70	295.55	**0.16**	1.22	1.50	0.05	104.80	**0.01**
63	2.43	0.36	4.50	-135.86	-0.72	-2.00	135.86	0.72	2.00	0.16	1.70	147.33	**0.09**	0.72	1.50	0.05	76.04	**0.01**
64	2.86	0.36	4.50	-147.43	-4.98	-2.69	147.43	4.98	2.69	0.14	1.70	189.93	**0.08**	4.98	1.50	0.05	87.10	**0.06**
65	6.14	0.36	4.50	-448.52	35.99	-83.50	448.52	35.99	83.50	0.20	1.70	1183.60	**0.12**	35.99	1.00	0.05	316.69	**0.11**
66	1.15	0.36	4.50	-107.91	-0.12	-0.31	107.91	0.12	0.31	0.26	1.70	50.86	**0.15**	0.12	1.50	0.05	43.47	**0.00**
67	2.70	0.36	4.50	-245.62	-8.71	-6.11	245.62	8.71	6.11	0.25	1.70	273.60	**0.15**	8.71	1.50	0.05	100.84	**0.09**
68	2.65	0.36	4.50	-135.13	4.08	1.86	135.13	4.08	1.86	0.14	1.70	161.50	**0.08**	4.08	1.50	0.05	80.42	**0.05**
69	6.13	0.36	4.50	-447.86	34.86	-79.44	447.86	34.86	79.44	0.20	1.70	1179.90	**0.12**	34.86	1.00	0.05	316.19	**0.11**
70	1.15	0.36	4.50	-99.37	-4.55	-3.48	99.37	4.55	3.48	0.24	1.70	47.65	**0.14**	4.55	1.50	0.05	42.11	**0.11**
71	1.14	0.36	4.50	-96.76	4.14	3.17	96.76	4.14	3.17	0.24	1.70	46.15	**0.14**	4.14	1.50	0.05	41.46	**0.10**
72	2.75	0.36	4.50	-246.25	9.91	7.70	246.25	9.91	7.70	0.25	1.70	280.31	**0.15**	9.91	1.50	0.05	102.08	**0.10**
73	2.69	0.36	4.50	-150.04	1.29	2.88	150.04	1.29	2.88	0.15	1.70	180.17	**0.09**	1.29	1.50	0.05	84.11	**0.02**
74	2.85	0.36	4.50	-274.76	1.89	2.14	274.76	1.89	2.14	0.27	1.70	318.97	**0.16**	1.89	1.50	0.05	108.87	**0.02**
75	2.85	0.36	4.50	-289.95	1.04	1.26	289.95	1.04	1.26	0.28	1.70	332.37	**0.17**	1.04	1.50	0.05	111.20	**0.01**
76	2.63	0.36	4.50	-144.93	2.44	4.39	144.93	2.44	4.39	0.15	1.70	170.39	**0.09**	2.44	1.50	0.05	81.89	**0.03**
77	5.50	0.36	4.50	-390.34	-38.96	45.20	390.34	38.96	45.20	0.20	1.70	926.99	**0.12**	38.96	1.00	0.05	280.71	**0.14**
78	2.15	0.36	4.50	-190.24	-4.04	-0.21	190.24	4.04	0.21	0.25	1.70	169.72	**0.14**	4.04	1.50	0.05	79.44	**0.05**
79	9.92	0.36	4.50	-857.26	-1.81	26.60	857.26	1.81	26.60	0.24	1.70	3545.65	**0.14**	1.81	1.00	0.05	544.87	**0.00**
80	2.37	0.36	4.50	-205.78	3.91	4.81	205.78	3.91	4.81	0.24	1.70	203.15	**0.14**	3.91	1.50	0.05	86.94	**0.04**
81	1.91	0.36	4.50	-135.71	8.73	5.24	135.71	8.73	5.24	0.20	1.70	111.90	**0.12**	8.73	1.50	0.05	65.01	**0.13**
82	0.90	0.36	4.50	-60.06	-3.10	0.02	60.06	3.10	0.02	0.19	1.70	23.56	**0.11**	3.10	1.50	0.05	29.95	**0.10**
83	2.59	0.36	4.50	-142.94	0.57	2.96	142.94	0.57	2.96	0.15	1.70	165.47	**0.09**	0.57	1.50	0.05	80.69	**0.01**
84	6.77	0.36	4.50	-591.69	-0.60	20.36	591.69	0.60	20.36	0.24	1.70	1666.37	**0.14**	0.60	1.00	0.05	373.46	**0.00**
85	7.91	0.36	4.50	-666.78	40.46	-165.83	666.78	40.46	165.83	0.23	1.70	2209.78	**0.14**	40.46	1.00	0.05	430.37	**0.09**
86	2.42	0.36	4.50	-145.35	3.05	-7.06	145.35	3.05	7.06	0.17	1.70	155.57	**0.10**	3.05	1.50	0.05	77.60	**0.04**
87	2.21	0.36	4.50	-146.47	-20.83	-15.16	146.47	20.83	15.16	0.18	1.70	141.23	**0.11**	20.83	1.50	0.05	73.37	**0.28**
88	2.68	0.36	4.50	-232.43	-2.33	-3.57	232.43	2.33	3.57	0.24	1.70	259.53	**0.14**	2.33	1.50	0.05	98.27	**0.02**
89	2.61	0.36	4.50	-229.99	-1.27	-0.82	229.99	1.27	0.82	0.24	1.70	249.30	**0.14**	1.27	1.50	0.05	96.29	**0.01**
90	2.27	0.36	4.50	-217.43	-4.97	-3.12	217.43	4.97	3.12	0.27	1.70	201.34	**0.16**	4.97	1.50	0.05	86.50	**0.06**
91	2.34	0.36	4.50	-148.83	-4.17	7.59	148.83	4.17	7.59	0.18	1.70	152.84	**0.10**	4.17	1.50	0.05	76.56	**0.05**
92	2.23	0.36	4.50	-165.12	-32.11	-19.66	165.12	32.11	19.66	0.21	1.70	157.90	**0.12**	32.11	1.50	0.05	77.06	**0.42**
93	2.61	0.36	4.50	-301.52	-7.69	-8.44	301.52	7.69	8.44	0.32	1.70	306.10	**0.19**	7.69	1.50	0.05	107.17	**0.07**
94	2.61	0.36	4.50	-310.79	3.37	2.99	310.79	3.37	2.99	0.33	1.70	312.74	**0.19**	3.37	1.50	0.05	108.50	**0.03**
95	2.32	0.36	4.50	-239.02	6.99	1.54	239.02	6.99	1.54	0.29	1.70	222.35	**0.17**	6.99	1.50	0.05	90.98	**0.08**
96	7.34	0.36	4.50	-603.19	-46.21	168.81	603.19	46.21	168.81	0.23	1.70	1864.00	**0.13**	46.21	1.00	0.05	395.53	**0.12**
97	3.21	0.36	4.50	-158.45	-0.29	-19.44	158.45	0.29	19.44	0.14	1.70	230.18	**0.08**	0.29	1.40	0.05	103.13	**0.00**
98	2.52	0.36	4.50	-132.67	-9.56	-16.50	132.67	9.56	16.50	0.15	1.70	150.25	**0.11**	9.56	1.50	0.05	77.28	**0.12**
99	1.93	0.36	4.50	-116.66	-2.67	-3.54	116.66	2.67	3.54	0.17	1.70	99.50	**0.10**	2.67	1.50	0.05	62.03	**0.04**
100	2.00	0.36	4.50	-126.36	1.34	1.61	126.36	1.34	1.61	0.18	1.70	111.01	**0.10**	1.34	1.50	0.05	65.28	**0.02**
101	4.39	0.36	4.50	-253.98	4.64	4.09	253.98	4.64	4.09	0.16	1.70	495.49	**0.09**	4.64	1.03	0.05	203.37	**0.02**
102	1.90	0.36	4.50	-121.31	4.30	-3.47	121.31	4.30	3.47	0.18	1.70	101.10	**0.10**	4.30	1.50	0.05	62.24	**0.07**
103	4.00	0.36	4.50	-221.85	5.26	15.18	221.85	5.26	15.18	0.15	1.70	396.39	**0.09**	5.26	1.13	0.05	166.43	**0.03**
104	7.36	0.36	4.50	-625.54	70.95	-206.70	625.54	70.95	206.70	0.24	1.70	1925.88	**0.14**	70.95	1.00	0.05	401.70	**0.18**
105	0.61	0.36	4.50	-91.40	-0.17	-0.14	91.40	0.17	0.14	0.42	1.70	19.85	**0.24**	0.17	1.50	0.05	27.91	**0.01**
106	5.86	0.36	4.50	-559.42	-63.91	131.91	559.42	63.91	131.91	0.27	1.70	1338.30	**0.16**	63.91	1.00	0.05	334.49	**0.19**
107	4.00	0.36	4.50	-235.52	-0.07	0.99	235.52	0.07	0.99	0.16	1.70	417.72	**0.10**	0.07	1.13	0.05	169.86	**0.00**
108	3.97	0.36	4.50	-197.51	0.18	-8.64	197.51	0.18	8.64	0.14	1.70	354.56	**0.08**	0.18	1.13	0.05	158.14	**0.00**

109	7.36	0.36	4.50	-524.23	54.37	-165.34	524.23	54.37	165.34	0.20	1.70	1665.02	**0.12**	54.37	1.00	0.05	376.13	**0.14**
110	7.34	0.36	4.50	-679.61	-40.25	209.13	679.61	40.25	209.13	0.26	1.70	2050.23	**0.15**	40.25	1.00	0.05	414.01	**0.10**
111	3.97	0.36	4.50	-229.57	0.35	0.98	229.57	0.35	0.98	0.16	1.70	405.04	**0.09**	0.35	1.13	0.05	166.29	**0.00**
112	3.99	0.36	4.50	-265.33	1.54	12.98	265.33	1.54	12.98	0.18	1.70	461.67	**0.11**	1.54	1.13	0.05	176.38	**0.01**
114	1.41	0.36	4.50	-249.27	-5.84	-6.68	249.27	5.84	6.68	0.49	1.70	116.01	**0.29**	5.84	1.50	0.05	69.25	**0.08**
115	7.34	0.36	4.50	-729.56	-69.05	291.02	729.56	69.05	291.02	0.28	1.70	2165.90	**0.16**	69.05	1.00	0.05	425.66	**0.16**
116	4.00	0.36	4.50	-227.78	-0.18	-0.44	227.78	0.18	0.44	0.16	1.70	405.69	**0.09**	0.18	1.13	0.05	167.93	**0.00**
117	4.57	0.36	4.50	-229.27	0.16	-7.80	229.27	0.16	7.80	0.14	1.70	473.36	**0.08**	0.16	1.00	0.05	206.91	**0.00**
118	7.36	0.36	4.50	-492.70	45.47	-181.26	492.70	45.47	181.26	0.19	1.70	1579.81	**0.11**	45.47	1.00	0.05	367.81	**0.12**
119	7.34	0.36	4.50	-645.62	-35.47	165.19	645.62	35.47	165.19	0.24	1.70	1968.79	**0.14**	35.47	1.00	0.05	405.90	**0.09**
120	4.03	0.36	4.50	-240.45	-8.18	-1.48	240.45	8.18	1.48	0.17	1.70	428.94	**0.10**	8.18	1.12	0.05	173.21	**0.05**
121	3.94	0.36	4.50	-284.77	-16.67	12.30	284.77	16.67	12.30	0.20	1.70	483.05	**0.12**	16.67	1.14	0.05	177.24	**0.09**
126	3.94	0.36	4.50	-345.70	-3.79	-2.45	345.70	3.79	2.45	0.24	1.70	566.16	**0.14**	3.79	1.14	0.05	190.58	**0.02**
127	1.97	0.36	4.50	-180.21	-34.79	-38.01	180.21	34.79	38.01	0.25	1.70	146.29	**0.26**	34.79	1.50	0.05	73.73	**0.47**
128	2.19	0.36	4.50	-178.67	-40.10	-37.86	178.67	40.10	37.86	0.23	1.70	164.96	**0.23**	40.10	1.50	0.05	78.46	**0.51**
129	13.78	0.36	4.50	-941.80	-15.33	-2.29	941.80	15.33	2.29	0.19	1.70	5636.46	**0.11**	15.33	1.00	0.05	693.78	**0.02**
130	16.21	0.36	4.50	-1563.26	-0.41	48.57	1563.26	0.41	48.57	0.27	1.70	10321.34	**0.16**	0.41	1.00	0.05	928.96	**0.00**
131	13.78	0.36	4.50	-935.58	17.61	-4.01	935.58	17.61	4.01	0.19	1.70	5604.83	**0.11**	17.61	1.00	0.05	692.13	**0.03**
132	0.63	0.36	4.50	-86.29	-18.76	-16.00	86.29	18.76	16.00	0.38	1.70	20.02	**0.80**	18.76	1.50	0.05	27.75	**0.68**
133	0.96	0.36	4.50	-124.00	-19.15	-14.99	124.00	19.15	14.99	0.36	1.70	44.74	**0.34**	19.15	1.50	0.05	41.27	**0.46**
134	9.22	0.36	4.50	-879.80	18.68	-286.76	879.80	18.68	286.76	0.27	1.70	3311.89	**0.16**	18.68	1.00	0.05	526.20	**0.04**
135	1.25	0.36	4.50	-109.25	14.30	9.88	109.25	14.30	9.88	0.24	1.70	56.81	**0.17**	14.30	1.50	0.05	45.97	**0.31**
136	9.18	0.36	4.50	-871.98	10.86	-240.24	871.98	10.86	240.24	0.26	1.70	3271.56	**0.16**	10.86	1.00	0.05	522.98	**0.02**
137	1.25	0.36	4.50	-110.86	15.38	10.63	110.86	15.38	10.63	0.25	1.70	57.47	**0.18**	15.38	1.50	0.05	46.23	**0.33**
138	16.21	0.36	4.50	-1094.65	3.25	5.92	1094.65	3.25	5.92	0.19	1.70	7720.41	**0.11**	3.25	1.00	0.05	812.61	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA1

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-939.34	4.07	-0.91	939.34	4.07	0.91	0.16	1.70	6765.25	**0.09**	4.07	1.00	0.05	770.18	**0.01**
2	0.97	0.36	4.50	-69.31	6.22	4.69	69.31	6.22	4.69	0.20	1.70	29.00	**0.16**	6.22	1.50	0.05	33.09	**0.19**
3	0.96	0.36	4.50	-70.93	11.02	8.73	70.93	11.02	8.73	0.21	1.70	29.21	**0.30**	11.02	1.50	0.05	33.15	**0.33**
4	13.53	0.36	4.50	-818.26	13.88	20.14	818.26	13.88	20.14	0.17	1.70	4891.98	**0.10**	13.88	1.00	0.05	652.38	**0.02**
5	13.53	0.36	4.50	-830.44	-22.84	-23.59	830.44	22.84	23.59	0.17	1.70	4955.08	**0.10**	22.84	1.00	0.05	655.74	**0.03**
6	9.16	0.36	4.50	-903.74	-21.77	429.62	903.74	21.77	429.62	0.27	1.70	3354.10	**0.16**	21.77	1.00	0.05	529.66	**0.04**
7	9.16	0.36	4.50	-956.02	-14.67	4.72	956.02	14.67	4.72	0.29	1.70	3500.09	**0.17**	14.67	1.00	0.05	541.58	**0.03**
8	0.94	0.36	4.50	-93.43	13.30	10.08	93.43	13.30	10.08	0.28	1.70	35.52	**0.28**	13.30	1.50	0.05	36.34	**0.37**
9	0.94	0.36	4.50	-91.74	11.97	8.88	91.74	11.97	8.88	0.27	1.70	35.03	**0.25**	11.97	1.50	0.05	36.08	**0.33**
10	16.21	0.36	4.50	-1210.35	-9.00	-8.66	1210.35	9.00	8.66	0.21	1.70	8401.83	**0.12**	9.00	1.00	0.05	842.83	**0.01**
11	2.03	0.36	4.50	-136.15	-40.52	-31.76	136.15	40.52	31.76	0.19	1.70	120.38	**0.26**	40.52	1.50	0.05	67.68	**0.60**
12	2.03	0.36	4.50	-139.75	-39.81	-31.54	139.75	39.81	31.54	0.19	1.70	123.07	**0.26**	39.81	1.50	0.05	68.31	**0.58**
13	4.00	0.36	4.50	-173.55	3.61	8.40	173.55	3.61	8.40	0.12	1.70	318.15	**0.07**	3.61	1.13	0.05	153.71	**0.02**
14	5.01	0.36	4.50	-315.87	38.08	-51.58	315.87	38.08	51.58	0.18	1.70	695.35	**0.10**	38.08	1.00	0.05	245.10	**0.16**
15	1.00	0.36	4.50	-116.59	2.72	3.20	116.59	2.72	3.20	0.32	1.70	45.23	**0.19**	2.72	1.50	0.05	41.21	**0.07**
16	1.39	0.36	4.50	-196.62	3.62	2.94	196.62	3.62	2.94	0.39	1.70	99.49	**0.23**	3.62	1.50	0.05	62.06	**0.06**
17	1.38	0.36	4.50	-84.46	-25.59	-18.10	84.46	25.59	18.10	0.17	1.70	51.42	**0.35**	25.59	1.50	0.05	44.54	**0.57**
18	4.00	0.36	4.50	-235.28	-2.70	-7.61	235.28	2.70	7.61	0.16	1.70	417.35	**0.10**	2.70	1.13	0.05	169.80	**0.02**
19	4.00	0.36	4.50	-120.72	2.23	5.43	120.72	2.23	5.43	0.08	1.70	227.43	**0.05**	2.23	1.13	0.05	138.47	**0.02**
22	4.00	0.36	4.50	-140.11	-2.78	-0.37	140.11	2.78	0.37	0.10	1.70	261.35	**0.06**	2.78	1.13	0.05	144.25	**0.02**
23	4.00	0.36	4.50	-111.77	1.74	2.65	111.77	1.74	2.65	0.08	1.70	211.53	**0.05**	1.74	1.13	0.05	135.72	**0.01**
26	4.00	0.36	4.50	-140.12	-1.28	-9.99	140.12	1.28	9.99	0.10	1.70	261.37	**0.06**	1.28	1.13	0.05	144.26	**0.01**
27	4.00	0.36	4.50	-111.67	1.29	1.25	111.67	1.29	1.25	0.08	1.70	211.35	**0.05**	1.29	1.13	0.05	135.69	**0.01**
30	4.00	0.36	4.50	-135.30	-1.67	-2.60	135.30	1.67	2.60	0.09	1.70	253.00	**0.06**	1.67	1.13	0.05	142.84	**0.01**
31	4.00	0.36	4.50	-119.76	2.35	0.88	119.76	2.35	0.88	0.08	1.70	225.73	**0.05**	2.35	1.13	0.05	138.18	**0.02**
34	4.00	0.36	4.50	-135.17	-3.51	-3.89	135.17	3.51	3.89	0.09	1.70	252.78	**0.06**	3.51	1.13	0.05	142.80	**0.02**
35	4.47	0.36	4.50	-194.43	2.99	6.92	194.43	2.99	6.92	0.12	1.70	398.22	**0.07**	2.99	1.01	0.05	192.11	**0.02**
36	4.18	0.36	4.50	-207.29	27.04	2.74	207.29	27.04	2.74	0.14	1.70	391.94	**0.08**	27.04	1.08	0.05	175.13	**0.15**
37	2.15	0.36	4.50	-166.24	2.14	4.57	166.24	2.14	4.57	0.21	1.70	152.15	**0.13**	2.14	1.50	0.05	75.49	**0.03**
38	7.85	0.36	4.50	-475.97	-28.05	174.71	475.97	28.05	174.71	0.17	1.70	1650.43	**0.11**	28.05	1.00	0.05	378.84	**0.07**
39	2.04	0.36	4.50	-96.03	-1.45	2.34	96.03	1.45	2.34	0.13	1.70	89.09	**0.08**	1.45	1.50	0.05	60.32	**0.02**
40	0.94	0.36	4.50	-45.12	2.32	-0.04	45.12	2.32	0.04	0.13	1.70	19.25	**0.08**	2.32	1.50	0.05	27.97	**0.08**
41	1.98	0.36	4.50	-95.96	-1.26	-1.75	95.96	1.26	1.75	0.13	1.70	86.15	**0.08**	1.26	1.50	0.05	59.10	**0.02**
42	2.07	0.36	4.50	-163.10	-19.66	-15.79	163.10	19.66	15.79	0.22	1.70	143.24	**0.13**	19.66	1.50	0.05	73.20	**0.27**
43	1.20	0.36	4.50	-139.06	-1.92	-2.82	139.06	1.92	2.82	0.32	1.70	64.85	**0.19**	1.92	1.50	0.05	49.33	**0.04**
44	2.06	0.36	4.50	-96.29	2.22	2.47	96.29	2.22	2.47	0.13	1.70	90.27	**0.08**	2.22	1.50	0.05	60.78	**0.04**
45	1.53	0.36	4.50	-175.30	-0.23	-0.68	175.30	0.23	0.68	0.32	1.70	104.57	**0.19**	0.23	1.50	0.05	62.61	**0.00**
46	2.52	0.36	4.50	-102.71	5.32	10.48	102.71	5.32	10.48	0.11	1.70	119.27	**0.09**	5.32	1.50	0.05	71.25	**0.07**
47	0.90	0.36	4.50	-102.33	0.88	1.15	102.33	0.88	1.15	0.32	1.70	35.98	**0.19**	0.88	1.50	0.05	36.72	**0.02**
48	2.31	0.36	4.50	-141.93	30.09	15.92	141.93	30.09	15.92	0.17	1.70	144.57	**0.11**	30.09	1.50	0.05	74.66	**0.40**
49	3.17	0.36	4.50	-120.47	0.06	14.22	120.47	0.06	14.22	0.11	1.70	177.00	**0.08**	0.06	1.42	0.05	92.76	**0.00**
50	2.44	0.36	4.50	-122.33	3.08	-6.34	122.33	3.08	6.34	0.14	1.70	134.86	**0.08**	3.08	1.50	0.05	73.63	**0.04**
51	2.69	0.36	4.50	-203.01	6.23	0.57	203.01	6.23	0.57	0.21	1.70	233.44	**0.12**	6.23	1.50	0.05	93.61	**0.07**
52	2.68	0.36	4.50	-180.50	-0.16	-1.86	180.50	0.16	1.86	0.19	1.70	210.55	**0.11**	0.16	1.50	0.05	89.48	**0.00**
53	2.25	0.36	4.50	-115.38	12.46	7.00	115.38	12.46	7.00	0.14	1.70	117.01	**0.08**	12.46	1.50	0.05	68.40	**0.18**
54	2.39	0.36	4.50	-107.66	-2.65	4.97	107.66	2.65	4.97	0.13	1.70	117.51	**0.07**	2.65	1.50	0.05	69.69	**0.04**
55	6.88	0.36	4.50	-476.79	-8.00	17.35	476.79	8.00	17.35	0.19	1.70	1421.66	**0.11**	8.00	1.00	0.05	348.12	**0.02**
56	9.94	0.36	4.50	-644.78	-1.27	20.53	644.78	1.27	20.53	0.18	1.70	2804.96	**0.11**	1.27	1.00	0.05	491.20	**0.00**
57	3.07	0.36	4.50	-129.62	-0.21	-5.45	129.62	0.21	5.45	0.12	1.70	182.82	**0.07**	0.21	1.47	0.05	89.79	**0.00**
58	5.47	0.36	4.50	-303.48	-24.45	18.41	303.48	24.45	18.41	0.15	1.70	741.49	**0.09**	24.45	1.00	0.05	256.08	**0.10**
59	5.50	0.36	4.50	-290.27	17.78	-39.12	290.27	17.78	39.12	0.15	1.70	717.26	**0.09**	17.78	1.00	0.05	253.21	**0.07**
60	2.63	0.36	4.50	-107.61	-1.40	-0.28	107.61	1.40	0.28	0.11	1.70	130.38	**0.07**	1.40	1.50	0.05	74.45	**0.02**
61	5.83	0.36	4.50	-394.59	9.62	-25.93	394.59	9.62	25.93	0.19	1.70	1000.57	**0.11**	9.62	1.00	0.05	292.50	**0.03**
62	2.74	0.36	4.50	-204.28	0.89	0.32	204.28	0.89	0.32	0.21	1.70	239.75	**0.12**	0.89	1.50	0.05	94.92	**0.01**
63	2.43	0.36	4.50	-104.07	-0.65	-1.70	104.07	0.65	1.70	0.12	1.70	116.04	**0.07**	0.65	1.50	0.05	69.76	**0.01**
64	2.86	0.36	4.50	-109.93	-3.88	-2.18	109.93	3.88	2.18	0.11	1.70	145.58	**0.06**	3.88	1.50	0.05	79.46	**0.05**
65	6.14	0.36	4.50	-348.10	17.12	-81.92	348.10	17.12	81.92	0.16	1.70	952.20	**0.09**	17.12	1.00	0.05	289.56	**0.06**
66	1.15	0.36	4.50	-82.11	-1.23	-1.40	82.11	1.23	1.40	0.20	1.70	40.73	**0.12**	1.23	1.50	0.05	39.21	**0.03**
67	2.70	0.36	4.50	-191.92	-6.68	-4.41	191.92	6.68	4.41	0.20	1.70	223.69	**0.12**	6.68	1.50	0.05	91.92	**0.07**
68	2.65	0.36	4.50	-100.71	3.24	1.90	100.71	3.24	1.90	0.11	1.70	123.69	**0.06**	3.24	1.50	0.05	73.38	**0.04**
69	6.13	0.36	4.50	-347.65	16.50	-78.69	347.65	16.50	78.69	0.16	1.70	949.38	**0.09**	16.50	1.00	0.05	289.12	**0.06**
70	1.15	0.36	4.50	-77.45	-3.36	-2.60	77.45	3.36	2.60	0.19	1.70	38.77	**0.11**	3.36	1.50	0.05	38.40	**0.09**
71	1.14	0.36	4.50	-75.41	3.07	2.39	75.41	3.07	2.39	0.18	1.70	37.52	**0.11**	3.07	1.50	0.05	37.82	**0.08**
72	2.75	0.36	4.50	-192.27	7.66	5.70	192.27	7.66	5.70	0.19	1.70	228.84	**0.11**	7.66	1.50	0.05	93.06	**0.08**
73	2.69	0.36	4.50	-114.99	1.30	2.70	114.99	1.30	2.70	0.12	1.70	141.95	**0.07**	1.30	1.50	0.05	77.17	**0.02**
74	2.85	0.36	4.50	-211.81	1.61	1.99	211.81	1.61	1.99	0.21	1.70	258.71	**0.12**	1.61	1.50	0.05	98.62	**0.02**
75	2.85	0.36	4.50	-222.90	0.68	0.98	222.90	0.68	0.98	0.22	1.70	269.88	**0.13**	0.68	1.50	0.05	100.50	**0.01**
76	2.63	0.36	4.50	-108.98	2.26	3.86	108.98	2.26	3.86	0.12	1.70	131.89	**0.07**	2.26	1.50	0.05	74.74	**0.03**
77	5.50	0.36	4.50	-302.18	-22.22	45.59	302.18	22.22	45.59	0.15	1.70	743.23	**0.09**	22.22	1.00	0.05	256.63	**0.09**
78	2.15	0.36	4.50	-148.31	-2.66	-0.06	148.31	2.66	0.06	0.19	1.70	138.29	**0.11**	2.66	1.50	0.05	72.40	**0.04**
79	9.92	0.36	4.50	-656.30	-1.22	19.59	656.30	1.22	19.59	0.18	1.70	2841.24	**0.11**	1.22	1.00	0.05	493.66	**0.00**
80	2.37	0.36	4.50	-159.15	5.10	7.13	159.15	5.10	7.13	0.19	1.70	164.25	**0.11**	5.10	1.50	0.05	79.05	**0.06**
81	1.91	0.36	4.50	-103.28	9.38	6.80	103.28	9.38	6.80	0.15	1.70	88.38	**0.09**	9.38	1.50	0.05	59.10	**0.16**
82	0.90	0.36	4.50	-47.09	-2.26	-0.01	47.09	2.26	0.01	0.15	1.70	19.06	**0.09**	2.26	1.50	0.05	27.54	**0.08**
83	2.59	0.36	4.50	-109.69	0.74	2.82	109.69	0.74	2.82	0.12	1.70	130.48	**0.07**	0.74	1.50	0.05	74.09	**0.01**
84	6.77	0.36	4.50	-456.37	0.46	15.19	456.37	0.46	15.19	0.19	1.70	1344.63	**0.11**	0.46	1.00	0.05	339.17	**0.00**
85	7.91	0.36	4.50	-510.25	30.72	-133.90	510.25	30.72	133.90	0.18	1.70	1767.79	**0.11**	30.72	1.00	0.05	390.12	**0.08**
86	2.42	0.36	4.50	-110.12	2.68	-4.83	110.12	2.68	4.83	0.13	1.70	121.59	**0.07**	2.68	1.50	0.05	70.79	**0.04**
87	2.21	0.36	4.50	-113.86	-13.75	-9.15	113.86	13.75	9.15	0.14	1.70	113.35	**0.08**	13.75	1.50	0.05	67.29	**0.20**
88	2.68	0.36	4.50	-179.68	0.42	0.80	179.68	0.42	0.80	0.19	1.70	209.74	**0.11**	0.42	1.50	0.05	89.34	**0.00**
89	2.61	0.36	4.50	-176.45	0.91	2.51	176.45	0.91	2.51	0.19	1.70	200.34	**0.11**	0.91	1.50	0.05	87.26	**0.01**
90	2.27	0.36	4.50	-165.74	-2.34	-0.64	165.74	2.34	0.64	0.20	1.70	161.71	**0.12**	2.34	1.50	0.05	78.04	**0.03**
91	2.34	0.36	4.50	-113.21	-2.91	6.32	113.21	2.91	6.32	0.13	1.70	120.14	**0.08**	2.91	1.50	0.05	69.80	**0.04**
92	2.23	0.36	4.50	-127.86	-22.53	-12.89	127.86	22.53	12.89	0.16	1.70	126.85	**0.10**	22.53	1.50	0.05	70.38	**0.32**
93	2.61	0.36	4.50	-232.63	-4.14	-3.64	232.63	4.14	3.64	0.25	1.70	251.57	**0.15**	4.14	1.50	0.05	96.71	**0.04**
94	2.61	0.36	4.50	-237.90	4.29	4.99	237.90	4.29	4.99	0.25	1.70	256.06	**0.15**	4.29	1.50	0.05	97.55	**0.04**
95	2.32	0.36	4.50	-182.18	6.53	2.67	182.18	6.53	2.67	0.22	1.70	179.43	**0.13**	6.53	1.50	0.05	81.93	**0.08**
96	7.34	0.36	4.50	-462.70	-35.84	130.04	462.70	35.84	130.04	0.18	1.70	1492.33	**0.10**	35.84	1.00	0.05	359.08	**0.10**
97	3.21	0.36	4.50	-120.87	0.27	-13.38	120.87	0.27	13.38	0.10	1.70	179.95	**0.07**	0.27	1.40	0.05	94.86	**0.00**
98	2.52	0.36	4.50	-101.45	-5.88	-11.05	101.45	5.88	11.05	0.11	1.70	117.93	**0.09**	5.88	1.50	0.05	70.99	**0.08**
99	1.93	0.36	4.50	-89.03	-1.69	-2.08	89.03	1.69	2.08	0.13	1.70	78.30	**0.08**	1.69	1.50	0.05	56.70	**0.03**
100	2.00	0.36	4.50	-96.43	1.42	1.92	96.43	1.42	1.92	0.13	1.70	87.49	**0.08**	1.42	1.50	0.05	59.60	**0.02**
101	4.39	0.36	4.50	-194.66	4.83	5.76	194.66	4.83	5.76	0.12	1.70	390.86	**0.07**	4.83	1.03	0.05	186.41	**0.03**
102	1.90	0.36	4.50	-93.24	4.61	-1.35	93.24	4.61	1.35	0.14	1.70	80.22	**0.08**	4.61	1.50	0.05	56.94	**0.08**
103	4.00	0.36	4.50	-170.39	5.69	15.11	170.39	5.69	15.11	0.12	1.70	312.87	**0.07**	5.69	1.13	0.05	152.85	**0.04**
104	7.36	0.36	4.50	-478.70	52.91	-158.83	478.70	52.91	158.83	0.18	1.70	1541.36	**0.11**	52.91	1.00	0.05	364.05	**0.15**
105	0.61	0.36	4.50	-69.67	-0.15	-0.13	69.67	0.15	0.13	0.32	1.70	16.58	**0.19**	0.15	1.50	0.05	24.93	**0.01**
106	5.86	0.36	4.50	-426.74	-49.25	98.90	426.74	49.25	98.90	0.20	1.70	1075.31	**0.12**	49.25	1.00	0.05	301.90	**0.16**
107	4.00	0.36	4.50	-180.64	1.11	2.82	180.64	1.11	2.82	0.13	1.70	329.92	**0.07**	1.11	1.13	0.05	155.65	**0.01**
108	3.97	0.36	4.50	-151.79	1.15	-4.74	151.79	1.15	4.74	0.11	1.70	279.16	**0.06**	1.15	1.13	0.05	145.74	**0.01**

109	7.36	0.36	4.50	-402.36	40.98	-126.38	402.36	40.98	126.38	0.15	1.70	1325.08	**0.10**	40.98	1.00	0.05	342.85	**0.12**
110	7.34	0.36	4.50	-518.65	-31.28	157.90	518.65	31.28	157.90	0.20	1.70	1644.89	**0.12**	31.28	1.00	0.05	374.02	**0.08**
111	3.97	0.36	4.50	-176.02	1.38	2.73	176.02	1.38	2.73	0.12	1.70	319.62	**0.07**	1.38	1.13	0.05	152.44	**0.01**
112	3.99	0.36	4.50	-204.14	1.81	11.13	204.14	1.81	11.13	0.14	1.70	367.20	**0.08**	1.81	1.13	0.05	161.21	**0.01**
114	1.41	0.36	4.50	-190.93	-4.62	-5.31	190.93	4.62	5.31	0.38	1.70	99.57	**0.22**	4.62	1.50	0.05	61.81	**0.07**
115	7.34	0.36	4.50	-556.90	-53.08	221.19	556.90	53.08	221.19	0.21	1.70	1745.73	**0.13**	53.08	1.00	0.05	383.90	**0.14**
116	4.00	0.36	4.50	-174.52	0.96	1.62	174.52	0.96	1.62	0.12	1.70	319.77	**0.07**	0.96	1.13	0.05	153.98	**0.01**
117	4.57	0.36	4.50	-176.19	0.85	-4.67	176.19	0.85	4.67	0.11	1.70	372.76	**0.06**	0.85	1.00	0.05	190.63	**0.00**
118	7.36	0.36	4.50	-378.43	34.62	-138.85	378.43	34.62	138.85	0.14	1.70	1254.97	**0.11**	34.62	1.00	0.05	335.93	**0.10**
119	7.34	0.36	4.50	-493.18	-27.33	125.79	493.18	27.33	125.79	0.19	1.70	1576.19	**0.11**	27.33	1.00	0.05	367.29	**0.07**
120	4.03	0.36	4.50	-184.05	-5.00	0.92	184.05	5.00	0.92	0.13	1.70	338.30	**0.07**	5.00	1.12	0.05	158.55	**0.03**
121	3.94	0.36	4.50	-218.07	-11.73	11.09	218.07	11.73	11.09	0.15	1.70	383.89	**0.09**	11.73	1.14	0.05	161.37	**0.07**
126	3.94	0.36	4.50	-264.17	-1.66	0.23	264.17	1.66	0.23	0.19	1.70	453.34	**0.11**	1.66	1.14	0.05	172.49	**0.01**
127	1.97	0.36	4.50	-137.03	-25.59	-28.19	137.03	25.59	28.19	0.19	1.70	116.93	**0.24**	25.59	1.50	0.05	66.54	**0.38**
128	2.19	0.36	4.50	-136.18	-29.59	-28.08	136.18	29.59	28.08	0.17	1.70	131.29	**0.21**	29.59	1.50	0.05	71.08	**0.42**
129	13.78	0.36	4.50	-717.48	-19.07	-17.05	717.48	19.07	17.05	0.14	1.70	4448.65	**0.09**	19.07	1.00	0.05	631.56	**0.03**
130	16.21	0.36	4.50	-1191.08	-0.59	35.73	1191.08	0.59	35.73	0.20	1.70	8290.12	**0.12**	0.59	1.00	0.05	837.87	**0.00**
131	13.78	0.36	4.50	-712.13	20.33	12.37	712.13	20.33	12.37	0.14	1.70	4419.14	**0.08**	20.33	1.00	0.05	630.00	**0.03**
132	0.63	0.36	4.50	-65.50	-13.84	-11.78	65.50	13.84	11.78	0.29	1.70	16.51	**0.71**	13.84	1.50	0.05	24.79	**0.56**
133	0.96	0.36	4.50	-94.01	-13.93	-10.84	94.01	13.93	10.84	0.27	1.70	36.63	**0.30**	13.93	1.50	0.05	36.90	**0.38**
134	9.22	0.36	4.50	-666.19	19.96	-212.11	666.19	19.96	212.11	0.20	1.70	2644.56	**0.12**	19.96	1.00	0.05	473.65	**0.04**
135	1.25	0.36	4.50	-82.25	10.74	7.78	82.25	10.74	7.78	0.18	1.70	44.90	**0.17**	10.74	1.50	0.05	41.39	**0.26**
136	9.18	0.36	4.50	-660.33	13.90	-176.93	660.33	13.90	176.93	0.20	1.70	2611.81	**0.12**	13.90	1.00	0.05	470.82	**0.03**
137	1.25	0.36	4.50	-83.41	11.56	8.36	83.41	11.56	8.36	0.19	1.70	45.44	**0.18**	11.56	1.50	0.05	41.60	**0.28**
138	16.21	0.36	4.50	-844.86	2.31	4.57	844.86	2.31	4.57	0.14	1.70	6161.52	**0.09**	2.31	1.00	0.05	743.18	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA2

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-939.34	4.07	-0.91	939.34	4.07	0.91	0.16	1.70	6765.25	**0.09**	4.07	1.00	0.05	770.18	**0.01**
2	0.97	0.36	4.50	-69.31	6.22	4.69	69.31	6.22	4.69	0.20	1.70	29.00	**0.16**	6.22	1.50	0.05	33.09	**0.19**
3	0.96	0.36	4.50	-70.93	11.02	8.73	70.93	11.02	8.73	0.21	1.70	29.21	**0.30**	11.02	1.50	0.05	33.15	**0.33**
4	13.53	0.36	4.50	-818.26	13.88	20.14	818.26	13.88	20.14	0.17	1.70	4891.98	**0.10**	13.88	1.00	0.05	652.38	**0.02**
5	13.53	0.36	4.50	-830.44	-22.84	-23.59	830.44	22.84	23.59	0.17	1.70	4955.08	**0.10**	22.84	1.00	0.05	655.74	**0.03**
6	9.16	0.36	4.50	-903.74	-21.77	429.62	903.74	21.77	429.62	0.27	1.70	3354.10	**0.16**	21.77	1.00	0.05	529.66	**0.04**
7	9.16	0.36	4.50	-956.02	-14.67	4.72	956.02	14.67	4.72	0.29	1.70	3500.09	**0.17**	14.67	1.00	0.05	541.58	**0.03**
8	0.94	0.36	4.50	-93.43	13.30	10.08	93.43	13.30	10.08	0.28	1.70	35.52	**0.28**	13.30	1.50	0.05	36.34	**0.37**
9	0.94	0.36	4.50	-91.74	11.97	8.88	91.74	11.97	8.88	0.27	1.70	35.03	**0.25**	11.97	1.50	0.05	36.08	**0.33**
10	16.21	0.36	4.50	-1210.35	-9.00	-8.66	1210.35	9.00	8.66	0.21	1.70	8401.83	**0.12**	9.00	1.00	0.05	842.83	**0.01**
11	2.03	0.36	4.50	-136.15	-40.52	-31.76	136.15	40.52	31.76	0.19	1.70	120.38	**0.26**	40.52	1.50	0.05	67.68	**0.60**
12	2.03	0.36	4.50	-139.75	-39.81	-31.54	139.75	39.81	31.54	0.19	1.70	123.07	**0.26**	39.81	1.50	0.05	68.31	**0.58**
13	4.00	0.36	4.50	-173.55	3.61	8.40	173.55	3.61	8.40	0.12	1.70	318.15	**0.07**	3.61	1.13	0.05	153.71	**0.02**
14	5.01	0.36	4.50	-315.87	38.08	-51.58	315.87	38.08	51.58	0.18	1.70	695.35	**0.10**	38.08	1.00	0.05	245.10	**0.16**
15	1.00	0.36	4.50	-116.59	2.72	3.20	116.59	2.72	3.20	0.32	1.70	45.23	**0.19**	2.72	1.50	0.05	41.21	**0.07**
16	1.39	0.36	4.50	-196.62	3.62	2.94	196.62	3.62	2.94	0.39	1.70	99.49	**0.23**	3.62	1.50	0.05	62.06	**0.06**
17	1.38	0.36	4.50	-84.46	-25.59	-18.10	84.46	25.59	18.10	0.17	1.70	51.42	**0.35**	25.59	1.50	0.05	44.54	**0.57**
18	4.00	0.36	4.50	-235.28	-2.70	-7.61	235.28	2.70	7.61	0.16	1.70	417.35	**0.10**	2.70	1.13	0.05	169.80	**0.02**
19	4.00	0.36	4.50	-120.73	2.23	5.43	120.73	2.23	5.43	0.08	1.70	227.45	**0.05**	2.23	1.13	0.05	138.47	**0.02**
22	4.00	0.36	4.50	-140.11	-2.78	-0.37	140.11	2.78	0.37	0.10	1.70	261.35	**0.06**	2.78	1.13	0.05	144.25	**0.02**
23	4.00	0.36	4.50	-111.78	1.74	2.65	111.78	1.74	2.65	0.08	1.70	211.55	**0.05**	1.74	1.13	0.05	135.72	**0.01**
26	4.00	0.36	4.50	-140.12	-1.28	-9.99	140.12	1.28	9.99	0.10	1.70	261.37	**0.06**	1.28	1.13	0.05	144.26	**0.01**
27	4.00	0.36	4.50	-111.67	1.29	1.25	111.67	1.29	1.25	0.08	1.70	211.35	**0.05**	1.29	1.13	0.05	135.69	**0.01**
30	4.00	0.36	4.50	-135.30	-1.67	-2.60	135.30	1.67	2.60	0.09	1.70	253.00	**0.06**	1.67	1.13	0.05	142.84	**0.01**
31	4.00	0.36	4.50	-119.76	2.35	0.88	119.76	2.35	0.88	0.08	1.70	225.73	**0.05**	2.35	1.13	0.05	138.18	**0.02**
34	4.00	0.36	4.50	-135.17	-3.51	-3.89	135.17	3.51	3.89	0.09	1.70	252.78	**0.06**	3.51	1.13	0.05	142.80	**0.02**
35	4.47	0.36	4.50	-194.43	2.99	6.92	194.43	2.99	6.92	0.12	1.70	398.22	**0.07**	2.99	1.01	0.05	192.11	**0.02**
36	4.18	0.36	4.50	-207.29	27.04	2.74	207.29	27.04	2.74	0.14	1.70	391.94	**0.08**	27.04	1.08	0.05	175.13	**0.15**
37	2.15	0.36	4.50	-166.24	2.14	4.57	166.24	2.14	4.57	0.21	1.70	152.15	**0.13**	2.14	1.50	0.05	75.49	**0.03**
38	7.85	0.36	4.50	-475.97	-28.05	174.71	475.97	28.05	174.71	0.17	1.70	1650.43	**0.11**	28.05	1.00	0.05	378.84	**0.07**
39	2.04	0.36	4.50	-96.03	-1.45	2.34	96.03	1.45	2.34	0.13	1.70	89.09	**0.08**	1.45	1.50	0.05	60.32	**0.02**
40	0.94	0.36	4.50	-45.12	2.32	-0.04	45.12	2.32	0.04	0.13	1.70	19.25	**0.08**	2.32	1.50	0.05	27.97	**0.08**
41	1.98	0.36	4.50	-95.96	-1.26	-1.75	95.96	1.26	1.75	0.13	1.70	86.15	**0.08**	1.26	1.50	0.05	59.10	**0.02**
42	2.07	0.36	4.50	-163.10	-19.66	-15.79	163.10	19.66	15.79	0.22	1.70	143.24	**0.13**	19.66	1.50	0.05	73.20	**0.27**
43	1.20	0.36	4.50	-139.06	-1.92	-2.82	139.06	1.92	2.82	0.32	1.70	64.85	**0.19**	1.92	1.50	0.05	49.33	**0.04**
44	2.06	0.36	4.50	-96.29	2.22	2.47	96.29	2.22	2.47	0.13	1.70	90.27	**0.08**	2.22	1.50	0.05	60.78	**0.04**
45	1.53	0.36	4.50	-175.30	-0.23	-0.68	175.30	0.23	0.68	0.32	1.70	104.57	**0.19**	0.23	1.50	0.05	62.61	**0.00**
46	2.52	0.36	4.50	-102.71	5.32	10.48	102.71	5.32	10.48	0.11	1.70	119.27	**0.09**	5.32	1.50	0.05	71.25	**0.07**
47	0.90	0.36	4.50	-102.33	0.88	1.15	102.33	0.88	1.15	0.32	1.70	35.98	**0.19**	0.88	1.50	0.05	36.72	**0.02**
48	2.31	0.36	4.50	-141.93	30.09	15.92	141.93	30.09	15.92	0.17	1.70	144.57	**0.11**	30.09	1.50	0.05	74.66	**0.40**
49	3.17	0.36	4.50	-120.47	0.06	14.22	120.47	0.06	14.22	0.11	1.70	177.00	**0.08**	0.06	1.42	0.05	92.76	**0.00**
50	2.44	0.36	4.50	-122.33	3.08	-6.34	122.33	3.08	6.34	0.14	1.70	134.86	**0.08**	3.08	1.50	0.05	73.63	**0.04**
51	2.69	0.36	4.50	-203.01	6.23	0.57	203.01	6.23	0.57	0.21	1.70	233.44	**0.12**	6.23	1.50	0.05	93.61	**0.07**
52	2.68	0.36	4.50	-180.50	-0.16	-1.86	180.50	0.16	1.86	0.19	1.70	210.55	**0.11**	0.16	1.50	0.05	89.48	**0.00**
53	2.25	0.36	4.50	-115.38	12.46	7.00	115.38	12.46	7.00	0.14	1.70	117.01	**0.08**	12.46	1.50	0.05	68.40	**0.18**
54	2.39	0.36	4.50	-107.66	-2.65	4.97	107.66	2.65	4.97	0.13	1.70	117.51	**0.07**	2.65	1.50	0.05	69.69	**0.04**
55	6.88	0.36	4.50	-476.79	-8.00	17.35	476.79	8.00	17.35	0.19	1.70	1421.66	**0.11**	8.00	1.00	0.05	348.12	**0.02**
56	9.94	0.36	4.50	-644.78	-1.27	20.53	644.78	1.27	20.53	0.18	1.70	2804.96	**0.11**	1.27	1.00	0.05	491.20	**0.00**
57	3.07	0.36	4.50	-129.62	-0.21	-5.45	129.62	0.21	5.45	0.12	1.70	182.82	**0.07**	0.21	1.47	0.05	89.79	**0.00**
58	5.47	0.36	4.50	-303.48	-24.45	18.41	303.48	24.45	18.41	0.15	1.70	741.49	**0.09**	24.45	1.00	0.05	256.08	**0.10**
59	5.50	0.36	4.50	-290.27	17.78	-39.12	290.27	17.78	39.12	0.15	1.70	717.26	**0.09**	17.78	1.00	0.05	253.21	**0.07**
60	2.63	0.36	4.50	-107.61	-1.40	-0.28	107.61	1.40	0.28	0.11	1.70	130.38	**0.07**	1.40	1.50	0.05	74.45	**0.02**
61	5.83	0.36	4.50	-394.59	9.62	-25.93	394.59	9.62	25.93	0.19	1.70	1000.57	**0.11**	9.62	1.00	0.05	292.50	**0.03**
62	2.74	0.36	4.50	-204.28	0.89	0.32	204.28	0.89	0.32	0.21	1.70	239.75	**0.12**	0.89	1.50	0.05	94.92	**0.01**
63	2.43	0.36	4.50	-104.07	-0.65	-1.70	104.07	0.65	1.70	0.12	1.70	116.04	**0.07**	0.65	1.50	0.05	69.76	**0.01**
64	2.86	0.36	4.50	-109.93	-3.88	-2.18	109.93	3.88	2.18	0.11	1.70	145.58	**0.06**	3.88	1.50	0.05	79.46	**0.05**
65	6.14	0.36	4.50	-348.10	17.12	-81.92	348.10	17.12	81.92	0.16	1.70	952.20	**0.09**	17.12	1.00	0.05	289.56	**0.06**
66	1.15	0.36	4.50	-82.11	-1.23	-1.40	82.11	1.23	1.40	0.20	1.70	40.73	**0.12**	1.23	1.50	0.05	39.21	**0.03**
67	2.70	0.36	4.50	-191.92	-6.68	-4.41	191.92	6.68	4.41	0.20	1.70	223.69	**0.12**	6.68	1.50	0.05	91.92	**0.07**
68	2.65	0.36	4.50	-100.71	3.24	1.90	100.71	3.24	1.90	0.11	1.70	123.69	**0.06**	3.24	1.50	0.05	73.38	**0.04**
69	6.13	0.36	4.50	-347.65	16.50	-78.69	347.65	16.50	78.69	0.16	1.70	949.38	**0.09**	16.50	1.00	0.05	289.12	**0.06**
70	1.15	0.36	4.50	-77.45	-3.36	-2.60	77.45	3.36	2.60	0.19	1.70	38.77	**0.11**	3.36	1.50	0.05	38.40	**0.09**
71	1.14	0.36	4.50	-75.41	3.07	2.39	75.41	3.07	2.39	0.18	1.70	37.52	**0.11**	3.07	1.50	0.05	37.82	**0.08**
72	2.75	0.36	4.50	-192.27	7.66	5.70	192.27	7.66	5.70	0.19	1.70	228.84	**0.11**	7.66	1.50	0.05	93.06	**0.08**
73	2.69	0.36	4.50	-114.99	1.30	2.70	114.99	1.30	2.70	0.12	1.70	141.95	**0.07**	1.30	1.50	0.05	77.17	**0.02**
74	2.85	0.36	4.50	-211.81	1.61	1.99	211.81	1.61	1.99	0.21	1.70	258.71	**0.12**	1.61	1.50	0.05	98.62	**0.02**
75	2.85	0.36	4.50	-222.90	0.68	0.98	222.90	0.68	0.98	0.22	1.70	269.88	**0.13**	0.68	1.50	0.05	100.50	**0.01**
76	2.63	0.36	4.50	-108.98	2.26	3.86	108.98	2.26	3.86	0.12	1.70	131.89	**0.07**	2.26	1.50	0.05	74.74	**0.03**
77	5.50	0.36	4.50	-302.18	-22.22	45.59	302.18	22.22	45.59	0.15	1.70	743.23	**0.09**	22.22	1.00	0.05	256.63	**0.09**
78	2.15	0.36	4.50	-148.31	-2.66	-0.06	148.31	2.66	0.06	0.19	1.70	138.29	**0.11**	2.66	1.50	0.05	72.40	**0.04**
79	9.92	0.36	4.50	-656.30	-1.22	19.59	656.30	1.22	19.59	0.18	1.70	2841.24	**0.11**	1.22	1.00	0.05	493.66	**0.00**
80	2.37	0.36	4.50	-159.15	5.10	7.13	159.15	5.10	7.13	0.19	1.70	164.25	**0.11**	5.10	1.50	0.05	79.05	**0.06**
81	1.91	0.36	4.50	-103.28	9.38	6.80	103.28	9.38	6.80	0.15	1.70	88.38	**0.09**	9.38	1.50	0.05	59.10	**0.16**
82	0.90	0.36	4.50	-47.09	-2.26	-0.01	47.09	2.26	0.01	0.15	1.70	19.06	**0.09**	2.26	1.50	0.05	27.54	**0.08**
83	2.59	0.36	4.50	-109.69	0.74	2.82	109.69	0.74	2.82	0.12	1.70	130.48	**0.07**	0.74	1.50	0.05	74.09	**0.01**
84	6.77	0.36	4.50	-456.37	0.46	15.19	456.37	0.46	15.19	0.19	1.70	1344.63	**0.11**	0.46	1.00	0.05	339.17	**0.00**
85	7.91	0.36	4.50	-510.25	30.72	-133.90	510.25	30.72	133.90	0.18	1.70	1767.79	**0.11**	30.72	1.00	0.05	390.12	**0.08**
86	2.42	0.36	4.50	-110.12	2.68	-4.83	110.12	2.68	4.83	0.13	1.70	121.59	**0.07**	2.68	1.50	0.05	70.79	**0.04**
87	2.21	0.36	4.50	-113.86	-13.75	-9.15	113.86	13.75	9.15	0.14	1.70	113.35	**0.08**	13.75	1.50	0.05	67.29	**0.20**
88	2.68	0.36	4.50	-179.68	0.42	0.80	179.68	0.42	0.80	0.19	1.70	209.74	**0.11**	0.42	1.50	0.05	89.34	**0.00**
89	2.61	0.36	4.50	-176.45	0.91	2.51	176.45	0.91	2.51	0.19	1.70	200.34	**0.11**	0.91	1.50	0.05	87.26	**0.01**
90	2.27	0.36	4.50	-165.74	-2.34	-0.64	165.74	2.34	0.64	0.20	1.70	161.71	**0.12**	2.34	1.50	0.05	78.04	**0.03**
91	2.34	0.36	4.50	-113.21	-2.91	6.32	113.21	2.91	6.32	0.13	1.70	120.14	**0.08**	2.91	1.50	0.05	69.80	**0.04**
92	2.23	0.36	4.50	-127.86	-22.53	-12.89	127.86	22.53	12.89	0.16	1.70	126.85	**0.10**	22.53	1.50	0.05	70.38	**0.32**
93	2.61	0.36	4.50	-232.63	-4.14	-3.64	232.63	4.14	3.64	0.25	1.70	251.57	**0.15**	4.14	1.50	0.05	96.71	**0.04**
94	2.61	0.36	4.50	-237.90	4.29	4.99	237.90	4.29	4.99	0.25	1.70	256.06	**0.15**	4.29	1.50	0.05	97.55	**0.04**
95	2.32	0.36	4.50	-182.18	6.53	2.67	182.18	6.53	2.67	0.22	1.70	179.43	**0.13**	6.53	1.50	0.05	81.93	**0.08**
96	7.34	0.36	4.50	-462.70	-35.84	130.04	462.70	35.84	130.04	0.18	1.70	1492.33	**0.10**	35.84	1.00	0.05	359.08	**0.10**
97	3.21	0.36	4.50	-120.87	0.27	-13.38	120.87	0.27	13.38	0.10	1.70	179.95	**0.07**	0.27	1.40	0.05	94.86	**0.00**
98	2.52	0.36	4.50	-101.45	-5.88	-11.05	101.45	5.88	11.05	0.11	1.70	117.93	**0.09**	5.88	1.50	0.05	70.99	**0.08**
99	1.93	0.36	4.50	-89.03	-1.69	-2.08	89.03	1.69	2.08	0.13	1.70	78.30	**0.08**	1.69	1.50	0.05	56.70	**0.03**
100	2.00	0.36	4.50	-96.43	1.42	1.92	96.43	1.42	1.92	0.13	1.70	87.49	**0.08**	1.42	1.50	0.05	59.60	**0.02**
101	4.39	0.36	4.50	-194.66	4.83	5.76	194.66	4.83	5.76	0.12	1.70	390.86	**0.07**	4.83	1.03	0.05	186.41	**0.03**
102	1.90	0.36	4.50	-93.24	4.61	-1.35	93.24	4.61	1.35	0.14	1.70	80.22	**0.08**	4.61	1.50	0.05	56.94	**0.08**
103	4.00	0.36	4.50	-170.39	5.69	15.11	170.39	5.69	15.11	0.12	1.70	312.87	**0.07**	5.69	1.13	0.05	152.85	**0.04**
104	7.36	0.36	4.50	-478.70	52.91	-158.83	478.70	52.91	158.83	0.18	1.70	1541.36	**0.11**	52.91	1.00	0.05	364.05	**0.15**
105	0.61	0.36	4.50	-69.67	-0.15	-0.13	69.67	0.15	0.13	0.32	1.70	16.58	**0.19**	0.15	1.50	0.05	24.93	**0.01**
106	5.86	0.36	4.50	-426.74	-49.25	98.90	426.74	49.25	98.90	0.20	1.70	1075.31	**0.12**	49.25	1.00	0.05	301.90	**0.16**
107	4.00	0.36	4.50	-180.64	1.11	2.82	180.64	1.11	2.82	0.13	1.70	329.92	**0.07**	1.11	1.13	0.05	155.65	**0.01**
108	3.97	0.36	4.50	-151.79	1.15	-4.74	151.79	1.15	4.74	0.11	1.70	279.16	**0.06**	1.15	1.13	0.05	145.74	**0.01**

109	7.36	0.36	4.50	-402.36	40.98	-126.38	402.36	40.98	126.38	0.15	1.70	1325.08	**0.10**	40.98	1.00	0.05	342.85	**0.12**
110	7.34	0.36	4.50	-518.65	-31.28	157.90	518.65	31.28	157.90	0.20	1.70	1644.89	**0.12**	31.28	1.00	0.05	374.02	**0.08**
111	3.97	0.36	4.50	-176.02	1.38	2.73	176.02	1.38	2.73	0.12	1.70	319.62	**0.07**	1.38	1.13	0.05	152.44	**0.01**
112	3.99	0.36	4.50	-204.14	1.81	11.13	204.14	1.81	11.13	0.14	1.70	367.20	**0.08**	1.81	1.13	0.05	161.21	**0.01**
114	1.41	0.36	4.50	-190.93	-4.62	-5.31	190.93	4.62	5.31	0.38	1.70	99.57	**0.22**	4.62	1.50	0.05	61.81	**0.07**
115	7.34	0.36	4.50	-556.90	-53.08	221.19	556.90	53.08	221.19	0.21	1.70	1745.73	**0.13**	53.08	1.00	0.05	383.90	**0.14**
116	4.00	0.36	4.50	-174.52	0.96	1.62	174.52	0.96	1.62	0.12	1.70	319.77	**0.07**	0.96	1.13	0.05	153.98	**0.01**
117	4.57	0.36	4.50	-176.19	0.85	-4.67	176.19	0.85	4.67	0.11	1.70	372.76	**0.06**	0.85	1.00	0.05	190.63	**0.00**
118	7.36	0.36	4.50	-378.43	34.62	-138.85	378.43	34.62	138.85	0.14	1.70	1254.97	**0.11**	34.62	1.00	0.05	335.93	**0.10**
119	7.34	0.36	4.50	-493.18	-27.33	125.79	493.18	27.33	125.79	0.19	1.70	1576.19	**0.11**	27.33	1.00	0.05	367.29	**0.07**
120	4.03	0.36	4.50	-184.05	-5.00	0.92	184.05	5.00	0.92	0.13	1.70	338.30	**0.07**	5.00	1.12	0.05	158.55	**0.03**
121	3.94	0.36	4.50	-218.07	-11.73	11.09	218.07	11.73	11.09	0.15	1.70	383.89	**0.09**	11.73	1.14	0.05	161.37	**0.07**
126	3.94	0.36	4.50	-264.17	-1.66	0.23	264.17	1.66	0.23	0.19	1.70	453.34	**0.11**	1.66	1.14	0.05	172.49	**0.01**
127	1.97	0.36	4.50	-137.03	-25.59	-28.19	137.03	25.59	28.19	0.19	1.70	116.93	**0.24**	25.59	1.50	0.05	66.54	**0.38**
128	2.19	0.36	4.50	-136.18	-29.59	-28.08	136.18	29.59	28.08	0.17	1.70	131.29	**0.21**	29.59	1.50	0.05	71.08	**0.42**
129	13.78	0.36	4.50	-717.48	-19.07	-17.05	717.48	19.07	17.05	0.14	1.70	4448.65	**0.09**	19.07	1.00	0.05	631.56	**0.03**
130	16.21	0.36	4.50	-1191.08	-0.59	35.73	1191.08	0.59	35.73	0.20	1.70	8290.12	**0.12**	0.59	1.00	0.05	837.87	**0.00**
131	13.78	0.36	4.50	-712.13	20.33	12.37	712.13	20.33	12.37	0.14	1.70	4419.14	**0.08**	20.33	1.00	0.05	630.00	**0.03**
132	0.63	0.36	4.50	-65.50	-13.84	-11.78	65.50	13.84	11.78	0.29	1.70	16.51	**0.71**	13.84	1.50	0.05	24.79	**0.56**
133	0.96	0.36	4.50	-94.01	-13.93	-10.84	94.01	13.93	10.84	0.27	1.70	36.63	**0.30**	13.93	1.50	0.05	36.90	**0.38**
134	9.22	0.36	4.50	-666.19	19.96	-212.11	666.19	19.96	212.11	0.20	1.70	2644.56	**0.12**	19.96	1.00	0.05	473.65	**0.04**
135	1.25	0.36	4.50	-82.25	10.74	7.78	82.25	10.74	7.78	0.18	1.70	44.90	**0.17**	10.74	1.50	0.05	41.39	**0.26**
136	9.18	0.36	4.50	-660.33	13.90	-176.93	660.33	13.90	176.93	0.20	1.70	2611.81	**0.12**	13.90	1.00	0.05	470.82	**0.03**
137	1.25	0.36	4.50	-83.41	11.56	8.36	83.41	11.56	8.36	0.19	1.70	45.44	**0.18**	11.56	1.50	0.05	41.60	**0.28**
138	16.21	0.36	4.50	-844.86	2.31	4.57	844.86	2.31	4.57	0.14	1.70	6161.52	**0.09**	2.31	1.00	0.05	743.18	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA3

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-939.02	3.58	-2.27	939.02	3.58	2.27	0.16	1.70	6763.24	**0.09**	3.58	1.00	0.05	770.09	**0.00**
2	0.97	0.36	4.50	-69.29	6.21	4.68	69.29	6.21	4.68	0.20	1.70	28.99	**0.16**	6.21	1.50	0.05	33.08	**0.19**
3	0.96	0.36	4.50	-70.94	10.99	8.71	70.94	10.99	8.71	0.21	1.70	29.21	**0.30**	10.99	1.50	0.05	33.15	**0.33**
4	13.53	0.36	4.50	-818.33	13.53	19.74	818.33	13.53	19.74	0.17	1.70	4892.34	**0.10**	13.53	1.00	0.05	652.40	**0.02**
5	13.53	0.36	4.50	-830.17	-22.54	-22.96	830.17	22.54	22.96	0.17	1.70	4953.68	**0.10**	22.54	1.00	0.05	655.67	**0.03**
6	9.16	0.36	4.50	-903.69	-21.52	430.26	903.69	21.52	430.26	0.27	1.70	3353.96	**0.16**	21.52	1.00	0.05	529.65	**0.04**
7	9.16	0.36	4.50	-956.04	-14.43	5.64	956.04	14.43	5.64	0.29	1.70	3500.14	**0.17**	14.43	1.00	0.05	541.59	**0.03**
8	0.94	0.36	4.50	-93.40	13.32	10.10	93.40	13.32	10.10	0.28	1.70	35.51	**0.28**	13.32	1.50	0.05	36.34	**0.37**
9	0.94	0.36	4.50	-91.77	11.98	8.89	91.77	11.98	8.89	0.27	1.70	35.04	**0.25**	11.98	1.50	0.05	36.09	**0.33**
10	16.21	0.36	4.50	-1210.54	-8.31	-7.09	1210.54	8.31	7.09	0.21	1.70	8402.92	**0.12**	8.31	1.00	0.05	842.88	**0.01**
11	2.03	0.36	4.50	-136.30	-40.67	-31.89	136.30	40.67	31.89	0.19	1.70	120.49	**0.26**	40.67	1.50	0.05	67.70	**0.60**
12	2.03	0.36	4.50	-139.72	-39.85	-31.57	139.72	39.85	31.57	0.19	1.70	123.05	**0.26**	39.85	1.50	0.05	68.31	**0.58**
13	4.00	0.36	4.50	-174.45	4.12	8.31	174.45	4.12	8.31	0.12	1.70	319.65	**0.07**	4.12	1.13	0.05	153.96	**0.03**
14	5.01	0.36	4.50	-315.91	38.04	-50.94	315.91	38.04	50.94	0.18	1.70	695.43	**0.10**	38.04	1.00	0.05	245.12	**0.16**
15	1.00	0.36	4.50	-116.53	2.75	3.23	116.53	2.75	3.23	0.32	1.70	45.21	**0.19**	2.75	1.50	0.05	41.20	**0.07**
16	1.39	0.36	4.50	-196.74	3.66	3.01	196.74	3.66	3.01	0.39	1.70	99.53	**0.23**	3.66	1.50	0.05	62.08	**0.06**
17	1.38	0.36	4.50	-84.48	-25.58	-18.08	84.48	25.58	18.08	0.17	1.70	51.43	**0.35**	25.58	1.50	0.05	44.55	**0.57**
18	4.00	0.36	4.50	-235.19	-2.61	-7.52	235.19	2.61	7.52	0.16	1.70	417.21	**0.10**	2.61	1.13	0.05	169.78	**0.02**
19	4.00	0.36	4.50	-147.04	3.31	5.38	147.04	3.31	5.38	0.10	1.70	273.30	**0.06**	3.31	1.13	0.05	146.26	**0.02**
22	4.00	0.36	4.50	-139.74	-2.67	-0.36	139.74	2.67	0.36	0.10	1.70	260.71	**0.06**	2.67	1.13	0.05	144.14	**0.02**
23	4.00	0.36	4.50	-157.31	2.11	2.91	157.31	2.11	2.91	0.11	1.70	290.83	**0.06**	2.11	1.13	0.05	149.19	**0.01**
26	4.00	0.36	4.50	-139.44	-1.25	-9.96	139.44	1.25	9.96	0.10	1.70	260.19	**0.06**	1.25	1.13	0.05	144.06	**0.01**
27	4.00	0.36	4.50	-157.88	0.92	1.99	157.88	0.92	1.99	0.11	1.70	291.80	**0.06**	0.92	1.13	0.05	149.35	**0.01**
30	4.00	0.36	4.50	-134.64	-1.70	-2.59	134.64	1.70	2.59	0.09	1.70	251.86	**0.06**	1.70	1.13	0.05	142.64	**0.01**
31	4.00	0.36	4.50	-147.71	1.29	1.65	147.71	1.29	1.65	0.10	1.70	274.45	**0.06**	1.29	1.13	0.05	146.46	**0.01**
34	4.00	0.36	4.50	-134.77	-3.61	-3.89	134.77	3.61	3.89	0.09	1.70	252.08	**0.06**	3.61	1.13	0.05	142.68	**0.03**
35	4.47	0.36	4.50	-195.56	2.61	7.57	195.56	2.61	7.57	0.12	1.70	400.32	**0.07**	2.61	1.01	0.05	192.45	**0.01**
36	4.18	0.36	4.50	-207.27	27.32	3.71	207.27	27.32	3.71	0.14	1.70	391.90	**0.08**	27.32	1.08	0.05	175.13	**0.16**
37	2.15	0.36	4.50	-166.20	2.23	4.73	166.20	2.23	4.73	0.21	1.70	152.12	**0.13**	2.23	1.50	0.05	75.49	**0.03**
38	7.85	0.36	4.50	-476.05	-28.01	175.28	476.05	28.01	175.28	0.17	1.70	1650.67	**0.11**	28.01	1.00	0.05	378.87	**0.07**
39	2.04	0.36	4.50	-95.97	-1.49	2.31	95.97	1.49	2.31	0.13	1.70	89.04	**0.08**	1.49	1.50	0.05	60.31	**0.02**
40	0.94	0.36	4.50	-45.13	2.32	-0.03	45.13	2.32	0.03	0.13	1.70	19.25	**0.08**	2.32	1.50	0.05	27.97	**0.08**
41	1.98	0.36	4.50	-95.94	-1.32	-1.86	95.94	1.32	1.86	0.13	1.70	86.13	**0.08**	1.32	1.50	0.05	59.09	**0.02**
42	2.07	0.36	4.50	-162.95	-19.76	-15.91	162.95	19.76	15.91	0.22	1.70	143.13	**0.13**	19.76	1.50	0.05	73.17	**0.27**
43	1.20	0.36	4.50	-139.03	-1.95	-2.88	139.03	1.95	2.88	0.32	1.70	64.84	**0.19**	1.95	1.50	0.05	49.33	**0.04**
44	2.06	0.36	4.50	-96.29	2.15	2.37	96.29	2.15	2.37	0.13	1.70	90.27	**0.08**	2.15	1.50	0.05	60.78	**0.04**
45	1.53	0.36	4.50	-175.29	-0.29	-0.77	175.29	0.29	0.77	0.32	1.70	104.56	**0.19**	0.29	1.50	0.05	62.61	**0.00**
46	2.52	0.36	4.50	-102.74	5.21	10.35	102.74	5.21	10.35	0.11	1.70	119.31	**0.09**	5.21	1.50	0.05	71.26	**0.07**
47	0.90	0.36	4.50	-102.33	0.87	1.12	102.33	0.87	1.12	0.32	1.70	35.98	**0.19**	0.87	1.50	0.05	36.72	**0.02**
48	2.31	0.36	4.50	-141.97	30.00	15.81	141.97	30.00	15.81	0.17	1.70	144.60	**0.11**	30.00	1.50	0.05	74.67	**0.40**
49	3.17	0.36	4.50	-120.36	0.15	14.26	120.36	0.15	14.26	0.11	1.70	176.85	**0.08**	0.15	1.42	0.05	92.73	**0.00**
50	2.44	0.36	4.50	-122.23	3.12	-6.27	122.23	3.12	6.27	0.14	1.70	134.76	**0.08**	3.12	1.50	0.05	73.61	**0.04**
51	2.69	0.36	4.50	-203.10	6.15	0.42	203.10	6.15	0.42	0.21	1.70	233.52	**0.12**	6.15	1.50	0.05	93.63	**0.07**
52	2.68	0.36	4.50	-180.55	-0.25	-2.02	180.55	0.25	2.02	0.19	1.70	210.60	**0.11**	0.25	1.50	0.05	89.49	**0.00**
53	2.25	0.36	4.50	-115.40	12.40	6.91	115.40	12.40	6.91	0.14	1.70	117.02	**0.08**	12.40	1.50	0.05	68.41	**0.18**
54	2.39	0.36	4.50	-107.61	-2.60	5.04	107.61	2.60	5.04	0.13	1.70	117.46	**0.07**	2.60	1.50	0.05	69.68	**0.04**
55	6.88	0.36	4.50	-476.81	-7.94	17.55	476.81	7.94	17.55	0.19	1.70	1421.71	**0.11**	7.94	1.00	0.05	348.13	**0.02**
56	9.94	0.36	4.50	-644.81	-1.12	20.81	644.81	1.12	20.81	0.18	1.70	2805.07	**0.11**	1.12	1.00	0.05	491.21	**0.00**
57	3.07	0.36	4.50	-129.61	-0.16	-5.37	129.61	0.16	5.37	0.12	1.70	182.80	**0.07**	0.16	1.47	0.05	89.79	**0.00**
58	5.47	0.36	4.50	-303.48	-24.52	18.32	303.48	24.52	18.32	0.15	1.70	741.49	**0.09**	24.52	1.00	0.05	256.08	**0.10**
59	5.50	0.36	4.50	-290.25	17.70	-39.23	290.25	17.70	39.23	0.15	1.70	717.21	**0.09**	17.70	1.00	0.05	253.20	**0.07**
60	2.63	0.36	4.50	-107.57	-1.37	-0.24	107.57	1.37	0.24	0.11	1.70	130.33	**0.07**	1.37	1.50	0.05	74.44	**0.02**
61	5.83	0.36	4.50	-394.56	9.67	-25.88	394.56	9.67	25.88	0.19	1.70	1000.51	**0.11**	9.67	1.00	0.05	292.49	**0.03**
62	2.74	0.36	4.50	-204.28	0.91	0.36	204.28	0.91	0.36	0.21	1.70	239.75	**0.12**	0.91	1.50	0.05	94.92	**0.01**
63	2.43	0.36	4.50	-104.06	-0.63	-1.66	104.06	0.63	1.66	0.12	1.70	116.02	**0.07**	0.63	1.50	0.05	69.75	**0.01**
64	2.86	0.36	4.50	-109.92	-3.86	-2.15	109.92	3.86	2.15	0.11	1.70	145.57	**0.06**	3.86	1.50	0.05	79.46	**0.05**
65	6.14	0.36	4.50	-348.09	17.09	-81.96	348.09	17.09	81.96	0.16	1.70	952.17	**0.09**	17.09	1.00	0.05	289.55	**0.06**
66	1.15	0.36	4.50	-82.11	-1.24	-1.40	82.11	1.24	1.40	0.20	1.70	40.73	**0.12**	1.24	1.50	0.05	39.21	**0.03**
67	2.70	0.36	4.50	-191.92	-6.66	-4.39	191.92	6.66	4.39	0.20	1.70	223.69	**0.12**	6.66	1.50	0.05	91.92	**0.07**
68	2.65	0.36	4.50	-100.70	3.26	1.92	100.70	3.26	1.92	0.11	1.70	123.68	**0.06**	3.26	1.50	0.05	73.38	**0.04**
69	6.13	0.36	4.50	-347.66	16.49	-78.73	347.66	16.49	78.73	0.16	1.70	949.40	**0.09**	16.49	1.00	0.05	289.12	**0.06**
70	1.15	0.36	4.50	-77.45	-3.35	-2.59	77.45	3.35	2.59	0.19	1.70	38.77	**0.11**	3.35	1.50	0.05	38.40	**0.09**
71	1.14	0.36	4.50	-75.41	3.08	2.39	75.41	3.08	2.39	0.18	1.70	37.52	**0.11**	3.08	1.50	0.05	37.82	**0.08**
72	2.75	0.36	4.50	-192.28	7.67	5.71	192.28	7.67	5.71	0.19	1.70	228.85	**0.11**	7.67	1.50	0.05	93.06	**0.08**
73	2.69	0.36	4.50	-114.99	1.31	2.72	114.99	1.31	2.72	0.12	1.70	141.95	**0.07**	1.31	1.50	0.05	77.17	**0.02**
74	2.85	0.36	4.50	-211.81	1.62	2.01	211.81	1.62	2.01	0.21	1.70	258.71	**0.12**	1.62	1.50	0.05	98.62	**0.02**
75	2.85	0.36	4.50	-222.90	0.69	0.99	222.90	0.69	0.99	0.22	1.70	269.88	**0.13**	0.69	1.50	0.05	100.50	**0.01**
76	2.63	0.36	4.50	-108.98	2.27	3.88	108.98	2.27	3.88	0.12	1.70	131.89	**0.07**	2.27	1.50	0.05	74.74	**0.03**
77	5.50	0.36	4.50	-302.18	-22.21	45.60	302.18	22.21	45.60	0.15	1.70	743.23	**0.09**	22.21	1.00	0.05	256.63	**0.09**
78	2.15	0.36	4.50	-148.31	-2.66	-0.06	148.31	2.66	0.06	0.19	1.70	138.29	**0.11**	2.66	1.50	0.05	72.40	**0.04**
79	9.92	0.36	4.50	-656.30	-1.19	19.64	656.30	1.19	19.64	0.18	1.70	2841.24	**0.11**	1.19	1.00	0.05	493.66	**0.00**
80	2.37	0.36	4.50	-159.15	5.10	7.14	159.15	5.10	7.14	0.19	1.70	164.25	**0.11**	5.10	1.50	0.05	79.05	**0.06**
81	1.91	0.36	4.50	-103.28	9.38	6.80	103.28	9.38	6.80	0.15	1.70	88.38	**0.09**	9.38	1.50	0.05	59.10	**0.16**
82	0.90	0.36	4.50	-47.09	-2.26	-0.01	47.09	2.26	0.01	0.15	1.70	19.06	**0.09**	2.26	1.50	0.05	27.54	**0.08**
83	2.59	0.36	4.50	-109.69	0.74	2.82	109.69	0.74	2.82	0.12	1.70	130.48	**0.07**	0.74	1.50	0.05	74.09	**0.01**
84	6.77	0.36	4.50	-456.37	0.47	15.22	456.37	0.47	15.22	0.19	1.70	1344.63	**0.11**	0.47	1.00	0.05	339.17	**0.00**
85	7.91	0.36	4.50	-510.25	30.73	-133.89	510.25	30.73	133.89	0.18	1.70	1767.79	**0.11**	30.73	1.00	0.05	390.12	**0.08**
86	2.42	0.36	4.50	-110.11	2.68	-4.82	110.11	2.68	4.82	0.13	1.70	121.58	**0.07**	2.68	1.50	0.05	70.79	**0.04**
87	2.21	0.36	4.50	-113.86	-13.75	-9.15	113.86	13.75	9.15	0.14	1.70	113.35	**0.08**	13.75	1.50	0.05	67.29	**0.20**
88	2.68	0.36	4.50	-179.67	0.42	0.80	179.67	0.42	0.80	0.19	1.70	209.73	**0.11**	0.42	1.50	0.05	89.33	**0.00**
89	2.61	0.36	4.50	-176.44	0.91	2.51	176.44	0.91	2.51	0.19	1.70	200.33	**0.11**	0.91	1.50	0.05	87.26	**0.01**
90	2.27	0.36	4.50	-165.74	-2.34	-0.64	165.74	2.34	0.64	0.20	1.70	161.71	**0.12**	2.34	1.50	0.05	78.04	**0.03**
91	2.34	0.36	4.50	-113.21	-2.90	6.32	113.21	2.90	6.32	0.13	1.70	120.14	**0.08**	2.90	1.50	0.05	69.80	**0.04**
92	2.23	0.36	4.50	-127.86	-22.53	-12.89	127.86	22.53	12.89	0.16	1.70	126.85	**0.10**	22.53	1.50	0.05	70.38	**0.32**
93	2.61	0.36	4.50	-232.63	-4.14	-3.64	232.63	4.14	3.64	0.25	1.70	251.57	**0.15**	4.14	1.50	0.05	96.71	**0.04**
94	2.61	0.36	4.50	-237.90	4.29	4.99	237.90	4.29	4.99	0.25	1.70	256.06	**0.15**	4.29	1.50	0.05	97.55	**0.04**
95	2.32	0.36	4.50	-182.18	6.53	2.67	182.18	6.53	2.67	0.22	1.70	179.43	**0.13**	6.53	1.50	0.05	81.93	**0.08**
96	7.34	0.36	4.50	-462.70	-35.83	130.06	462.70	35.83	130.06	0.18	1.70	1492.33	**0.10**	35.83	1.00	0.05	359.08	**0.10**
97	3.21	0.36	4.50	-120.87	0.27	-13.38	120.87	0.27	13.38	0.10	1.70	179.95	**0.07**	0.27	1.40	0.05	94.86	**0.00**
98	2.52	0.36	4.50	-101.45	-5.88	-11.05	101.45	5.88	11.05	0.11	1.70	117.93	**0.09**	5.88	1.50	0.05	70.99	**0.08**
99	1.93	0.36	4.50	-89.03	-1.69	-2.08	89.03	1.69	2.08	0.13	1.70	78.30	**0.08**	1.69	1.50	0.05	56.70	**0.03**
100	2.00	0.36	4.50	-96.43	1.42	1.92	96.43	1.42	1.92	0.13	1.70	87.49	**0.08**	1.42	1.50	0.05	59.60	**0.02**
101	4.39	0.36	4.50	-194.66	4.83	5.75	194.66	4.83	5.75	0.12	1.70	390.86	**0.07**	4.83	1.03	0.05	186.41	**0.03**
102	1.90	0.36	4.50	-93.24	4.61	-1.35	93.24	4.61	1.35	0.14	1.70	80.22	**0.08**	4.61	1.50	0.05	56.94	**0.08**
103	4.00	0.36	4.50	-170.39	5.69	15.11	170.39	5.69	15.11	0.12	1.70	312.87	**0.07**	5.69	1.13	0.05	152.85	**0.04**
104	7.36	0.36	4.50	-478.70	52.91	-158.82	478.70	52.91	158.82	0.18	1.70	1541.36	**0.11**	52.91	1.00	0.05	364.05	**0.15**
105	0.61	0.36	4.50	-69.67	-0.15	-0.13	69.67	0.15	0.13	0.32	1.70	16.58	**0.19**	0.15	1.50	0.05	24.93	**0.01**
106	5.86	0.36	4.50	-426.74	-49.25	98.90	426.74	49.25	98.90	0.20	1.70	1075.31	**0.12**	49.25	1.00	0.05	301.90	**0.16**
107	4.00	0.36	4.50	-180.64	1.11	2.82	180.64	1.11	2.82	0.13	1.70	329.92	**0.07**	1.11	1.13	0.05	155.65	**0.01**
108	3.97	0.36	4.50	-151.79	1.15	-4.74	151.79	1.15	4.74	0.11	1.70	279.16	**0.06**	1.15	1.13	0.05	145.74	**0.01**

109	7.36	0.36	4.50	-402.36	40.99	-126.38	402.36	40.99	126.38	0.15	1.70	1325.08	**0.10**	40.99	1.00	0.05	342.85	**0.12**
110	7.34	0.36	4.50	-518.65	-31.28	157.90	518.65	31.28	157.90	0.20	1.70	1644.89	**0.12**	31.28	1.00	0.05	374.02	**0.08**
111	3.97	0.36	4.50	-176.02	1.38	2.73	176.02	1.38	2.73	0.12	1.70	319.62	**0.07**	1.38	1.13	0.05	152.44	**0.01**
112	3.99	0.36	4.50	-204.14	1.81	11.13	204.14	1.81	11.13	0.14	1.70	367.20	**0.08**	1.81	1.13	0.05	161.21	**0.01**
114	1.41	0.36	4.50	-190.93	-4.62	-5.31	190.93	4.62	5.31	0.38	1.70	99.57	**0.22**	4.62	1.50	0.05	61.81	**0.07**
115	7.34	0.36	4.50	-556.90	-53.08	221.19	556.90	53.08	221.19	0.21	1.70	1745.73	**0.13**	53.08	1.00	0.05	383.90	**0.14**
116	4.00	0.36	4.50	-174.52	0.96	1.61	174.52	0.96	1.61	0.12	1.70	319.77	**0.07**	0.96	1.13	0.05	153.98	**0.01**
117	4.57	0.36	4.50	-176.19	0.85	-4.67	176.19	0.85	4.67	0.11	1.70	372.76	**0.06**	0.85	1.00	0.05	190.63	**0.00**
118	7.36	0.36	4.50	-378.43	34.62	-138.85	378.43	34.62	138.85	0.14	1.70	1254.97	**0.11**	34.62	1.00	0.05	335.93	**0.10**
119	7.34	0.36	4.50	-493.18	-27.33	125.79	493.18	27.33	125.79	0.19	1.70	1576.19	**0.11**	27.33	1.00	0.05	367.29	**0.07**
120	4.03	0.36	4.50	-184.05	-5.00	0.92	184.05	5.00	0.92	0.13	1.70	338.30	**0.07**	5.00	1.12	0.05	158.55	**0.03**
121	3.94	0.36	4.50	-218.07	-11.73	11.09	218.07	11.73	11.09	0.15	1.70	383.89	**0.09**	11.73	1.14	0.05	161.37	**0.07**
126	3.94	0.36	4.50	-264.17	-1.66	0.23	264.17	1.66	0.23	0.19	1.70	453.34	**0.11**	1.66	1.14	0.05	172.49	**0.01**
127	1.97	0.36	4.50	-137.03	-25.59	-28.19	137.03	25.59	28.19	0.19	1.70	116.93	**0.24**	25.59	1.50	0.05	66.54	**0.38**
128	2.19	0.36	4.50	-136.18	-29.59	-28.08	136.18	29.59	28.08	0.17	1.70	131.29	**0.21**	29.59	1.50	0.05	71.08	**0.42**
129	13.78	0.36	4.50	-717.48	-19.07	-17.05	717.48	19.07	17.05	0.14	1.70	4448.65	**0.09**	19.07	1.00	0.05	631.56	**0.03**
130	16.21	0.36	4.50	-1191.08	-0.59	35.73	1191.08	0.59	35.73	0.20	1.70	8290.12	**0.12**	0.59	1.00	0.05	837.87	**0.00**
131	13.78	0.36	4.50	-712.13	20.33	12.37	712.13	20.33	12.37	0.14	1.70	4419.14	**0.08**	20.33	1.00	0.05	630.00	**0.03**
132	0.63	0.36	4.50	-65.50	-13.84	-11.78	65.50	13.84	11.78	0.29	1.70	16.51	**0.71**	13.84	1.50	0.05	24.79	**0.56**
133	0.96	0.36	4.50	-94.01	-13.93	-10.84	94.01	13.93	10.84	0.27	1.70	36.63	**0.30**	13.93	1.50	0.05	36.90	**0.38**
134	9.22	0.36	4.50	-666.19	19.96	-212.11	666.19	19.96	212.11	0.20	1.70	2644.56	**0.12**	19.96	1.00	0.05	473.65	**0.04**
135	1.25	0.36	4.50	-82.25	10.74	7.78	82.25	10.74	7.78	0.18	1.70	44.90	**0.17**	10.74	1.50	0.05	41.39	**0.26**
136	9.18	0.36	4.50	-660.33	13.90	-176.93	660.33	13.90	176.93	0.20	1.70	2611.81	**0.12**	13.90	1.00	0.05	470.82	**0.03**
137	1.25	0.36	4.50	-83.41	11.56	8.36	83.41	11.56	8.36	0.19	1.70	45.44	**0.18**	11.56	1.50	0.05	41.60	**0.28**
138	16.21	0.36	4.50	-844.86	2.31	4.57	844.86	2.31	4.57	0.14	1.70	6161.52	**0.09**	2.31	1.00	0.05	743.18	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA4

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-939.02	3.58	-2.27	939.02	3.58	2.27	0.16	1.70	6763.24	**0.09**	3.58	1.00	0.05	770.09	**0.00**
2	0.97	0.36	4.50	-69.29	6.21	4.68	69.29	6.21	4.68	0.20	1.70	28.99	**0.16**	6.21	1.50	0.05	33.08	**0.19**
3	0.96	0.36	4.50	-70.94	10.99	8.71	70.94	10.99	8.71	0.21	1.70	29.21	**0.30**	10.99	1.50	0.05	33.15	**0.33**
4	13.53	0.36	4.50	-818.33	13.53	19.74	818.33	13.53	19.74	0.17	1.70	4892.34	**0.10**	13.53	1.00	0.05	652.40	**0.02**
5	13.53	0.36	4.50	-830.17	-22.54	-22.96	830.17	22.54	22.96	0.17	1.70	4953.68	**0.10**	22.54	1.00	0.05	655.67	**0.03**
6	9.16	0.36	4.50	-903.69	-21.52	430.26	903.69	21.52	430.26	0.27	1.70	3353.96	**0.16**	21.52	1.00	0.05	529.65	**0.04**
7	9.16	0.36	4.50	-956.04	-14.43	5.64	956.04	14.43	5.64	0.29	1.70	3500.14	**0.17**	14.43	1.00	0.05	541.59	**0.03**
8	0.94	0.36	4.50	-93.40	13.32	10.10	93.40	13.32	10.10	0.28	1.70	35.51	**0.28**	13.32	1.50	0.05	36.34	**0.37**
9	0.94	0.36	4.50	-91.77	11.98	8.89	91.77	11.98	8.89	0.27	1.70	35.04	**0.25**	11.98	1.50	0.05	36.09	**0.33**
10	16.21	0.36	4.50	-1210.54	-8.31	-7.09	1210.54	8.31	7.09	0.21	1.70	8402.92	**0.12**	8.31	1.00	0.05	842.88	**0.01**
11	2.03	0.36	4.50	-136.30	-40.67	-31.89	136.30	40.67	31.89	0.19	1.70	120.49	**0.26**	40.67	1.50	0.05	67.70	**0.60**
12	2.03	0.36	4.50	-139.72	-39.85	-31.57	139.72	39.85	31.57	0.19	1.70	123.05	**0.26**	39.85	1.50	0.05	68.31	**0.58**
13	4.00	0.36	4.50	-174.45	4.12	8.31	174.45	4.12	8.31	0.12	1.70	319.65	**0.07**	4.12	1.13	0.05	153.96	**0.03**
14	5.01	0.36	4.50	-315.91	38.04	-50.94	315.91	38.04	50.94	0.18	1.70	695.43	**0.10**	38.04	1.00	0.05	245.12	**0.16**
15	1.00	0.36	4.50	-116.53	2.75	3.23	116.53	2.75	3.23	0.32	1.70	45.21	**0.19**	2.75	1.50	0.05	41.20	**0.07**
16	1.39	0.36	4.50	-196.74	3.66	3.01	196.74	3.66	3.01	0.39	1.70	99.53	**0.23**	3.66	1.50	0.05	62.08	**0.06**
17	1.38	0.36	4.50	-84.48	-25.58	-18.08	84.48	25.58	18.08	0.17	1.70	51.43	**0.35**	25.58	1.50	0.05	44.55	**0.57**
18	4.00	0.36	4.50	-235.19	-2.61	-7.52	235.19	2.61	7.52	0.16	1.70	417.21	**0.10**	2.61	1.13	0.05	169.78	**0.02**
19	4.00	0.36	4.50	-147.04	3.31	5.38	147.04	3.31	5.38	0.10	1.70	273.30	**0.06**	3.31	1.13	0.05	146.26	**0.02**
22	4.00	0.36	4.50	-139.74	-2.67	-0.36	139.74	2.67	0.36	0.10	1.70	260.71	**0.06**	2.67	1.13	0.05	144.14	**0.02**
23	4.00	0.36	4.50	-157.31	2.11	2.91	157.31	2.11	2.91	0.11	1.70	290.83	**0.06**	2.11	1.13	0.05	149.19	**0.01**
26	4.00	0.36	4.50	-139.44	-1.25	-9.96	139.44	1.25	9.96	0.10	1.70	260.19	**0.06**	1.25	1.13	0.05	144.06	**0.01**
27	4.00	0.36	4.50	-157.89	0.92	1.99	157.89	0.92	1.99	0.11	1.70	291.82	**0.06**	0.92	1.13	0.05	149.36	**0.01**
30	4.00	0.36	4.50	-134.64	-1.70	-2.59	134.64	1.70	2.59	0.09	1.70	251.86	**0.06**	1.70	1.13	0.05	142.64	**0.01**
31	4.00	0.36	4.50	-147.71	1.29	1.65	147.71	1.29	1.65	0.10	1.70	274.45	**0.06**	1.29	1.13	0.05	146.46	**0.01**
34	4.00	0.36	4.50	-134.77	-3.61	-3.89	134.77	3.61	3.89	0.09	1.70	252.08	**0.06**	3.61	1.13	0.05	142.68	**0.03**
35	4.47	0.36	4.50	-195.56	2.61	7.57	195.56	2.61	7.57	0.12	1.70	400.32	**0.07**	2.61	1.01	0.05	192.45	**0.01**
36	4.18	0.36	4.50	-207.27	27.32	3.71	207.27	27.32	3.71	0.14	1.70	391.90	**0.08**	27.32	1.08	0.05	175.13	**0.16**
37	2.15	0.36	4.50	-166.20	2.23	4.73	166.20	2.23	4.73	0.21	1.70	152.12	**0.13**	2.23	1.50	0.05	75.49	**0.03**
38	7.85	0.36	4.50	-476.05	-28.01	175.28	476.05	28.01	175.28	0.17	1.70	1650.67	**0.11**	28.01	1.00	0.05	378.87	**0.07**
39	2.04	0.36	4.50	-95.97	-1.49	2.31	95.97	1.49	2.31	0.13	1.70	89.04	**0.08**	1.49	1.50	0.05	60.31	**0.02**
40	0.94	0.36	4.50	-45.13	2.32	-0.03	45.13	2.32	0.03	0.13	1.70	19.25	**0.08**	2.32	1.50	0.05	27.97	**0.08**
41	1.98	0.36	4.50	-95.94	-1.32	-1.86	95.94	1.32	1.86	0.13	1.70	86.13	**0.08**	1.32	1.50	0.05	59.09	**0.02**
42	2.07	0.36	4.50	-162.95	-19.76	-15.91	162.95	19.76	15.91	0.22	1.70	143.13	**0.13**	19.76	1.50	0.05	73.17	**0.27**
43	1.20	0.36	4.50	-139.03	-1.95	-2.88	139.03	1.95	2.88	0.32	1.70	64.84	**0.19**	1.95	1.50	0.05	49.33	**0.04**
44	2.06	0.36	4.50	-96.29	2.15	2.37	96.29	2.15	2.37	0.13	1.70	90.27	**0.08**	2.15	1.50	0.05	60.78	**0.04**
45	1.53	0.36	4.50	-175.29	-0.29	-0.77	175.29	0.29	0.77	0.32	1.70	104.56	**0.19**	0.29	1.50	0.05	62.61	**0.00**
46	2.52	0.36	4.50	-102.74	5.21	10.35	102.74	5.21	10.35	0.11	1.70	119.31	**0.09**	5.21	1.50	0.05	71.26	**0.07**
47	0.90	0.36	4.50	-102.33	0.87	1.12	102.33	0.87	1.12	0.32	1.70	35.98	**0.19**	0.87	1.50	0.05	36.72	**0.02**
48	2.31	0.36	4.50	-141.97	30.00	15.81	141.97	30.00	15.81	0.17	1.70	144.60	**0.11**	30.00	1.50	0.05	74.67	**0.40**
49	3.17	0.36	4.50	-120.36	0.15	14.26	120.36	0.15	14.26	0.11	1.70	176.85	**0.08**	0.15	1.42	0.05	92.73	**0.00**
50	2.44	0.36	4.50	-122.23	3.12	-6.27	122.23	3.12	6.27	0.14	1.70	134.76	**0.08**	3.12	1.50	0.05	73.61	**0.04**
51	2.69	0.36	4.50	-203.10	6.15	0.42	203.10	6.15	0.42	0.21	1.70	233.52	**0.12**	6.15	1.50	0.05	93.63	**0.07**
52	2.68	0.36	4.50	-180.55	-0.25	-2.02	180.55	0.25	2.02	0.19	1.70	210.60	**0.11**	0.25	1.50	0.05	89.49	**0.00**
53	2.25	0.36	4.50	-115.40	12.40	6.91	115.40	12.40	6.91	0.14	1.70	117.02	**0.08**	12.40	1.50	0.05	68.41	**0.18**
54	2.39	0.36	4.50	-107.61	-2.60	5.04	107.61	2.60	5.04	0.13	1.70	117.46	**0.07**	2.60	1.50	0.05	69.68	**0.04**
55	6.88	0.36	4.50	-476.81	-7.94	17.55	476.81	7.94	17.55	0.19	1.70	1421.71	**0.11**	7.94	1.00	0.05	348.13	**0.02**
56	9.94	0.36	4.50	-644.81	-1.12	20.81	644.81	1.12	20.81	0.18	1.70	2805.07	**0.11**	1.12	1.00	0.05	491.21	**0.00**
57	3.07	0.36	4.50	-129.61	-0.16	-5.37	129.61	0.16	5.37	0.12	1.70	182.80	**0.07**	0.16	1.47	0.05	89.79	**0.00**
58	5.47	0.36	4.50	-303.48	-24.52	18.32	303.48	24.52	18.32	0.15	1.70	741.49	**0.09**	24.52	1.00	0.05	256.08	**0.10**
59	5.50	0.36	4.50	-290.25	17.70	-39.23	290.25	17.70	39.23	0.15	1.70	717.21	**0.09**	17.70	1.00	0.05	253.20	**0.07**
60	2.63	0.36	4.50	-107.57	-1.37	-0.24	107.57	1.37	0.24	0.11	1.70	130.33	**0.07**	1.37	1.50	0.05	74.44	**0.02**
61	5.83	0.36	4.50	-394.56	9.67	-25.88	394.56	9.67	25.88	0.19	1.70	1000.51	**0.11**	9.67	1.00	0.05	292.49	**0.03**
62	2.74	0.36	4.50	-204.28	0.91	0.36	204.28	0.91	0.36	0.21	1.70	239.75	**0.12**	0.91	1.50	0.05	94.92	**0.01**
63	2.43	0.36	4.50	-104.06	-0.63	-1.66	104.06	0.63	1.66	0.12	1.70	116.02	**0.07**	0.63	1.50	0.05	69.75	**0.01**
64	2.86	0.36	4.50	-109.92	-3.86	-2.15	109.92	3.86	2.15	0.11	1.70	145.57	**0.06**	3.86	1.50	0.05	79.46	**0.05**
65	6.14	0.36	4.50	-348.09	17.09	-81.96	348.09	17.09	81.96	0.16	1.70	952.17	**0.09**	17.09	1.00	0.05	289.55	**0.06**
66	1.15	0.36	4.50	-82.11	-1.24	-1.40	82.11	1.24	1.40	0.20	1.70	40.73	**0.12**	1.24	1.50	0.05	39.21	**0.03**
67	2.70	0.36	4.50	-191.92	-6.66	-4.39	191.92	6.66	4.39	0.20	1.70	223.69	**0.12**	6.66	1.50	0.05	91.92	**0.07**
68	2.65	0.36	4.50	-100.70	3.26	1.92	100.70	3.26	1.92	0.11	1.70	123.68	**0.06**	3.26	1.50	0.05	73.38	**0.04**
69	6.13	0.36	4.50	-347.66	16.49	-78.73	347.66	16.49	78.73	0.16	1.70	949.40	**0.09**	16.49	1.00	0.05	289.12	**0.06**
70	1.15	0.36	4.50	-77.45	-3.35	-2.59	77.45	3.35	2.59	0.19	1.70	38.77	**0.11**	3.35	1.50	0.05	38.40	**0.09**
71	1.14	0.36	4.50	-75.41	3.08	2.39	75.41	3.08	2.39	0.18	1.70	37.52	**0.11**	3.08	1.50	0.05	37.82	**0.08**
72	2.75	0.36	4.50	-192.28	7.67	5.71	192.28	7.67	5.71	0.19	1.70	228.85	**0.11**	7.67	1.50	0.05	93.06	**0.08**
73	2.69	0.36	4.50	-114.99	1.31	2.72	114.99	1.31	2.72	0.12	1.70	141.95	**0.07**	1.31	1.50	0.05	77.17	**0.02**
74	2.85	0.36	4.50	-211.81	1.62	2.01	211.81	1.62	2.01	0.21	1.70	258.71	**0.12**	1.62	1.50	0.05	98.62	**0.02**
75	2.85	0.36	4.50	-222.90	0.69	0.99	222.90	0.69	0.99	0.22	1.70	269.88	**0.13**	0.69	1.50	0.05	100.50	**0.01**
76	2.63	0.36	4.50	-108.98	2.27	3.88	108.98	2.27	3.88	0.12	1.70	131.89	**0.07**	2.27	1.50	0.05	74.74	**0.03**
77	5.50	0.36	4.50	-302.18	-22.21	45.60	302.18	22.21	45.60	0.15	1.70	743.23	**0.09**	22.21	1.00	0.05	256.63	**0.09**
78	2.15	0.36	4.50	-148.31	-2.66	-0.06	148.31	2.66	0.06	0.19	1.70	138.29	**0.11**	2.66	1.50	0.05	72.40	**0.04**
79	9.92	0.36	4.50	-656.30	-1.19	19.64	656.30	1.19	19.64	0.18	1.70	2841.24	**0.11**	1.19	1.00	0.05	493.66	**0.00**
80	2.37	0.36	4.50	-159.15	5.10	7.14	159.15	5.10	7.14	0.19	1.70	164.25	**0.11**	5.10	1.50	0.05	79.05	**0.06**
81	1.91	0.36	4.50	-103.28	9.38	6.80	103.28	9.38	6.80	0.15	1.70	88.38	**0.09**	9.38	1.50	0.05	59.10	**0.16**
82	0.90	0.36	4.50	-47.09	-2.26	-0.01	47.09	2.26	0.01	0.15	1.70	19.06	**0.09**	2.26	1.50	0.05	27.54	**0.08**
83	2.59	0.36	4.50	-109.69	0.74	2.82	109.69	0.74	2.82	0.12	1.70	130.48	**0.07**	0.74	1.50	0.05	74.09	**0.01**
84	6.77	0.36	4.50	-456.37	0.47	15.22	456.37	0.47	15.22	0.19	1.70	1344.63	**0.11**	0.47	1.00	0.05	339.17	**0.00**
85	7.91	0.36	4.50	-510.25	30.73	-133.89	510.25	30.73	133.89	0.18	1.70	1767.79	**0.11**	30.73	1.00	0.05	390.12	**0.08**
86	2.42	0.36	4.50	-110.11	2.68	-4.82	110.11	2.68	4.82	0.13	1.70	121.58	**0.07**	2.68	1.50	0.05	70.79	**0.04**
87	2.21	0.36	4.50	-113.86	-13.75	-9.15	113.86	13.75	9.15	0.14	1.70	113.35	**0.08**	13.75	1.50	0.05	67.29	**0.20**
88	2.68	0.36	4.50	-179.67	0.42	0.80	179.67	0.42	0.80	0.19	1.70	209.73	**0.11**	0.42	1.50	0.05	89.33	**0.00**
89	2.61	0.36	4.50	-176.44	0.91	2.51	176.44	0.91	2.51	0.19	1.70	200.33	**0.11**	0.91	1.50	0.05	87.26	**0.01**
90	2.27	0.36	4.50	-165.74	-2.34	-0.64	165.74	2.34	0.64	0.20	1.70	161.71	**0.12**	2.34	1.50	0.05	78.04	**0.03**
91	2.34	0.36	4.50	-113.21	-2.90	6.32	113.21	2.90	6.32	0.13	1.70	120.14	**0.08**	2.90	1.50	0.05	69.80	**0.04**
92	2.23	0.36	4.50	-127.86	-22.53	-12.89	127.86	22.53	12.89	0.16	1.70	126.85	**0.10**	22.53	1.50	0.05	70.38	**0.32**
93	2.61	0.36	4.50	-232.63	-4.14	-3.64	232.63	4.14	3.64	0.25	1.70	251.57	**0.15**	4.14	1.50	0.05	96.71	**0.04**
94	2.61	0.36	4.50	-237.90	4.29	4.99	237.90	4.29	4.99	0.25	1.70	256.06	**0.15**	4.29	1.50	0.05	97.55	**0.04**
95	2.32	0.36	4.50	-182.18	6.53	2.67	182.18	6.53	2.67	0.22	1.70	179.43	**0.13**	6.53	1.50	0.05	81.93	**0.08**
96	7.34	0.36	4.50	-462.70	-35.83	130.06	462.70	35.83	130.06	0.18	1.70	1492.33	**0.10**	35.83	1.00	0.05	359.08	**0.10**
97	3.21	0.36	4.50	-120.87	0.27	-13.38	120.87	0.27	13.38	0.10	1.70	179.95	**0.07**	0.27	1.40	0.05	94.86	**0.00**
98	2.52	0.36	4.50	-101.45	-5.88	-11.05	101.45	5.88	11.05	0.11	1.70	117.93	**0.09**	5.88	1.50	0.05	70.99	**0.08**
99	1.93	0.36	4.50	-89.03	-1.69	-2.08	89.03	1.69	2.08	0.13	1.70	78.30	**0.08**	1.69	1.50	0.05	56.70	**0.03**
100	2.00	0.36	4.50	-96.43	1.42	1.92	96.43	1.42	1.92	0.13	1.70	87.49	**0.08**	1.42	1.50	0.05	59.60	**0.02**
101	4.39	0.36	4.50	-194.66	4.83	5.75	194.66	4.83	5.75	0.12	1.70	390.86	**0.07**	4.83	1.03	0.05	186.41	**0.03**
102	1.90	0.36	4.50	-93.24	4.61	-1.35	93.24	4.61	1.35	0.14	1.70	80.22	**0.08**	4.61	1.50	0.05	56.94	**0.08**
103	4.00	0.36	4.50	-170.39	5.69	15.11	170.39	5.69	15.11	0.12	1.70	312.87	**0.07**	5.69	1.13	0.05	152.85	**0.04**
104	7.36	0.36	4.50	-478.70	52.91	-158.82	478.70	52.91	158.82	0.18	1.70	1541.36	**0.11**	52.91	1.00	0.05	364.05	**0.15**
105	0.61	0.36	4.50	-69.67	-0.15	-0.13	69.67	0.15	0.13	0.32	1.70	16.58	**0.19**	0.15	1.50	0.05	24.93	**0.01**
106	5.86	0.36	4.50	-426.74	-49.25	98.90	426.74	49.25	98.90	0.20	1.70	1075.31	**0.12**	49.25	1.00	0.05	301.90	**0.16**
107	4.00	0.36	4.50	-180.64	1.11	2.82	180.64	1.11	2.82	0.13	1.70	329.92	**0.07**	1.11	1.13	0.05	155.65	**0.01**
108	3.97	0.36	4.50	-151.79	1.15	-4.74	151.79	1.15	4.74	0.11	1.70	279.16	**0.06**	1.15	1.13	0.05	145.74	**0.01**

109	7.36	0.36	4.50	-402.36	40.99	-126.38	402.36	40.99	126.38	0.15	1.70	1325.08	**0.10**	40.99	1.00	0.05	342.85	**0.12**
110	7.34	0.36	4.50	-518.65	-31.28	157.90	518.65	31.28	157.90	0.20	1.70	1644.89	**0.12**	31.28	1.00	0.05	374.02	**0.08**
111	3.97	0.36	4.50	-176.02	1.38	2.73	176.02	1.38	2.73	0.12	1.70	319.62	**0.07**	1.38	1.13	0.05	152.44	**0.01**
112	3.99	0.36	4.50	-204.14	1.81	11.13	204.14	1.81	11.13	0.14	1.70	367.20	**0.08**	1.81	1.13	0.05	161.21	**0.01**
114	1.41	0.36	4.50	-190.93	-4.62	-5.31	190.93	4.62	5.31	0.38	1.70	99.57	**0.22**	4.62	1.50	0.05	61.81	**0.07**
115	7.34	0.36	4.50	-556.90	-53.08	221.19	556.90	53.08	221.19	0.21	1.70	1745.73	**0.13**	53.08	1.00	0.05	383.90	**0.14**
116	4.00	0.36	4.50	-174.52	0.96	1.61	174.52	0.96	1.61	0.12	1.70	319.77	**0.07**	0.96	1.13	0.05	153.98	**0.01**
117	4.57	0.36	4.50	-176.19	0.85	-4.67	176.19	0.85	4.67	0.11	1.70	372.76	**0.06**	0.85	1.00	0.05	190.63	**0.00**
118	7.36	0.36	4.50	-378.43	34.62	-138.85	378.43	34.62	138.85	0.14	1.70	1254.97	**0.11**	34.62	1.00	0.05	335.93	**0.10**
119	7.34	0.36	4.50	-493.18	-27.33	125.79	493.18	27.33	125.79	0.19	1.70	1576.19	**0.11**	27.33	1.00	0.05	367.29	**0.07**
120	4.03	0.36	4.50	-184.05	-5.00	0.92	184.05	5.00	0.92	0.13	1.70	338.30	**0.07**	5.00	1.12	0.05	158.55	**0.03**
121	3.94	0.36	4.50	-218.07	-11.73	11.09	218.07	11.73	11.09	0.15	1.70	383.89	**0.09**	11.73	1.14	0.05	161.37	**0.07**
126	3.94	0.36	4.50	-264.17	-1.66	0.23	264.17	1.66	0.23	0.19	1.70	453.34	**0.11**	1.66	1.14	0.05	172.49	**0.01**
127	1.97	0.36	4.50	-137.03	-25.59	-28.19	137.03	25.59	28.19	0.19	1.70	116.93	**0.24**	25.59	1.50	0.05	66.54	**0.38**
128	2.19	0.36	4.50	-136.18	-29.59	-28.08	136.18	29.59	28.08	0.17	1.70	131.29	**0.21**	29.59	1.50	0.05	71.08	**0.42**
129	13.78	0.36	4.50	-717.48	-19.07	-17.05	717.48	19.07	17.05	0.14	1.70	4448.65	**0.09**	19.07	1.00	0.05	631.56	**0.03**
130	16.21	0.36	4.50	-1191.08	-0.59	35.73	1191.08	0.59	35.73	0.20	1.70	8290.12	**0.12**	0.59	1.00	0.05	837.87	**0.00**
131	13.78	0.36	4.50	-712.13	20.33	12.37	712.13	20.33	12.37	0.14	1.70	4419.14	**0.08**	20.33	1.00	0.05	630.00	**0.03**
132	0.63	0.36	4.50	-65.50	-13.84	-11.78	65.50	13.84	11.78	0.29	1.70	16.51	**0.71**	13.84	1.50	0.05	24.79	**0.56**
133	0.96	0.36	4.50	-94.01	-13.93	-10.84	94.01	13.93	10.84	0.27	1.70	36.63	**0.30**	13.93	1.50	0.05	36.90	**0.38**
134	9.22	0.36	4.50	-666.19	19.96	-212.11	666.19	19.96	212.11	0.20	1.70	2644.56	**0.12**	19.96	1.00	0.05	473.65	**0.04**
135	1.25	0.36	4.50	-82.25	10.74	7.78	82.25	10.74	7.78	0.18	1.70	44.90	**0.17**	10.74	1.50	0.05	41.39	**0.26**
136	9.18	0.36	4.50	-660.33	13.90	-176.93	660.33	13.90	176.93	0.20	1.70	2611.81	**0.12**	13.90	1.00	0.05	470.82	**0.03**
137	1.25	0.36	4.50	-83.41	11.56	8.36	83.41	11.56	8.36	0.19	1.70	45.44	**0.18**	11.56	1.50	0.05	41.60	**0.28**
138	16.21	0.36	4.50	-844.86	2.31	4.57	844.86	2.31	4.57	0.14	1.70	6161.52	**0.09**	2.31	1.00	0.05	743.18	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA5

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-939.23	3.90	-1.39	939.23	3.90	1.39	0.16	1.70	6764.56	**0.09**	3.90	1.00	0.05	770.15	**0.01**
2	0.97	0.36	4.50	-69.30	6.22	4.69	69.30	6.22	4.69	0.20	1.70	28.99	**0.16**	6.22	1.50	0.05	33.08	**0.19**
3	0.96	0.36	4.50	-70.93	11.01	8.73	70.93	11.01	8.73	0.21	1.70	29.21	**0.30**	11.01	1.50	0.05	33.15	**0.33**
4	13.53	0.36	4.50	-818.29	13.76	20.00	818.29	13.76	20.00	0.17	1.70	4892.13	**0.10**	13.76	1.00	0.05	652.39	**0.02**
5	13.53	0.36	4.50	-830.35	-22.73	-23.37	830.35	22.73	23.37	0.17	1.70	4954.61	**0.10**	22.73	1.00	0.05	655.72	**0.03**
6	9.16	0.36	4.50	-903.72	-21.68	429.84	903.72	21.68	429.84	0.27	1.70	3354.04	**0.16**	21.68	1.00	0.05	529.65	**0.04**
7	9.16	0.36	4.50	-956.03	-14.59	5.05	956.03	14.59	5.05	0.29	1.70	3500.12	**0.17**	14.59	1.00	0.05	541.59	**0.03**
8	0.94	0.36	4.50	-93.42	13.31	10.09	93.42	13.31	10.09	0.28	1.70	35.52	**0.28**	13.31	1.50	0.05	36.34	**0.37**
9	0.94	0.36	4.50	-91.75	11.97	8.88	91.75	11.97	8.88	0.27	1.70	35.03	**0.25**	11.97	1.50	0.05	36.08	**0.33**
10	16.21	0.36	4.50	-1210.41	-8.76	-8.11	1210.41	8.76	8.11	0.21	1.70	8402.17	**0.12**	8.76	1.00	0.05	842.85	**0.01**
11	2.03	0.36	4.50	-136.20	-40.57	-31.81	136.20	40.57	31.81	0.19	1.70	120.41	**0.26**	40.57	1.50	0.05	67.69	**0.60**
12	2.03	0.36	4.50	-139.74	-39.82	-31.55	139.74	39.82	31.55	0.19	1.70	123.07	**0.26**	39.82	1.50	0.05	68.31	**0.58**
13	4.00	0.36	4.50	-173.86	3.79	8.37	173.86	3.79	8.37	0.12	1.70	318.67	**0.07**	3.79	1.13	0.05	153.80	**0.02**
14	5.01	0.36	4.50	-315.89	38.07	-51.36	315.89	38.07	51.36	0.18	1.70	695.39	**0.10**	38.07	1.00	0.05	245.11	**0.16**
15	1.00	0.36	4.50	-116.57	2.73	3.21	116.57	2.73	3.21	0.32	1.70	45.22	**0.19**	2.73	1.50	0.05	41.21	**0.07**
16	1.39	0.36	4.50	-196.66	3.63	2.97	196.66	3.63	2.97	0.39	1.70	99.51	**0.23**	3.63	1.50	0.05	62.06	**0.06**
17	1.38	0.36	4.50	-84.47	-25.58	-18.09	84.47	25.58	18.09	0.17	1.70	51.43	**0.35**	25.58	1.50	0.05	44.55	**0.57**
18	4.00	0.36	4.50	-235.25	-2.66	-7.58	235.25	2.66	7.58	0.16	1.70	417.31	**0.10**	2.66	1.13	0.05	169.79	**0.02**
19	4.00	0.36	4.50	-129.93	2.61	5.41	129.93	2.61	5.41	0.09	1.70	243.63	**0.05**	2.61	1.13	0.05	141.25	**0.02**
22	4.00	0.36	4.50	-139.98	-2.74	-0.37	139.98	2.74	0.37	0.10	1.70	261.13	**0.06**	2.74	1.13	0.05	144.21	**0.02**
23	4.00	0.36	4.50	-127.71	1.87	2.74	127.71	1.87	2.74	0.09	1.70	239.74	**0.05**	1.87	1.13	0.05	140.58	**0.01**
26	4.00	0.36	4.50	-139.88	-1.27	-9.98	139.88	1.27	9.98	0.10	1.70	260.95	**0.06**	1.27	1.13	0.05	144.19	**0.01**
27	4.00	0.36	4.50	-127.84	1.16	1.51	127.84	1.16	1.51	0.09	1.70	239.97	**0.05**	1.16	1.13	0.05	140.62	**0.01**
30	4.00	0.36	4.50	-135.07	-1.68	-2.59	135.07	1.68	2.59	0.09	1.70	252.60	**0.06**	1.68	1.13	0.05	142.77	**0.01**
31	4.00	0.36	4.50	-129.54	1.98	1.15	129.54	1.98	1.15	0.09	1.70	242.95	**0.05**	1.98	1.13	0.05	141.13	**0.01**
34	4.00	0.36	4.50	-135.03	-3.54	-3.89	135.03	3.54	3.89	0.09	1.70	252.53	**0.06**	3.54	1.13	0.05	142.76	**0.02**
35	4.47	0.36	4.50	-194.83	2.86	7.15	194.83	2.86	7.15	0.12	1.70	398.96	**0.07**	2.86	1.01	0.05	192.23	**0.01**
36	4.18	0.36	4.50	-207.28	27.14	3.08	207.28	27.14	3.08	0.14	1.70	391.92	**0.08**	27.14	1.08	0.05	175.13	**0.15**
37	2.15	0.36	4.50	-166.23	2.17	4.62	166.23	2.17	4.62	0.21	1.70	152.14	**0.13**	2.17	1.50	0.05	75.49	**0.03**
38	7.85	0.36	4.50	-476.00	-28.04	174.91	476.00	28.04	174.91	0.17	1.70	1650.52	**0.11**	28.04	1.00	0.05	378.85	**0.07**
39	2.04	0.36	4.50	-96.01	-1.47	2.33	96.01	1.47	2.33	0.13	1.70	89.07	**0.08**	1.47	1.50	0.05	60.32	**0.02**
40	0.94	0.36	4.50	-45.12	2.32	-0.03	45.12	2.32	0.03	0.13	1.70	19.25	**0.08**	2.32	1.50	0.05	27.97	**0.08**
41	1.98	0.36	4.50	-95.96	-1.28	-1.79	95.96	1.28	1.79	0.13	1.70	86.15	**0.08**	1.28	1.50	0.05	59.10	**0.02**
42	2.07	0.36	4.50	-163.05	-19.69	-15.83	163.05	19.69	15.83	0.22	1.70	143.20	**0.13**	19.69	1.50	0.05	73.19	**0.27**
43	1.20	0.36	4.50	-139.05	-1.93	-2.84	139.05	1.93	2.84	0.32	1.70	64.85	**0.19**	1.93	1.50	0.05	49.33	**0.04**
44	2.06	0.36	4.50	-96.29	2.20	2.44	96.29	2.20	2.44	0.13	1.70	90.27	**0.08**	2.20	1.50	0.05	60.78	**0.04**
45	1.53	0.36	4.50	-175.30	-0.25	-0.71	175.30	0.25	0.71	0.32	1.70	104.57	**0.19**	0.25	1.50	0.05	62.61	**0.00**
46	2.52	0.36	4.50	-102.72	5.28	10.43	102.72	5.28	10.43	0.11	1.70	119.29	**0.09**	5.28	1.50	0.05	71.26	**0.07**
47	0.90	0.36	4.50	-102.33	0.88	1.14	102.33	0.88	1.14	0.32	1.70	35.98	**0.19**	0.88	1.50	0.05	36.72	**0.02**
48	2.31	0.36	4.50	-141.94	30.06	15.88	141.94	30.06	15.88	0.17	1.70	144.58	**0.11**	30.06	1.50	0.05	74.67	**0.40**
49	3.17	0.36	4.50	-120.43	0.09	14.24	120.43	0.09	14.24	0.11	1.70	176.94	**0.08**	0.09	1.42	0.05	92.75	**0.00**
50	2.44	0.36	4.50	-122.30	3.09	-6.32	122.30	3.09	6.32	0.14	1.70	134.83	**0.08**	3.09	1.50	0.05	73.63	**0.04**
51	2.69	0.36	4.50	-203.04	6.21	0.52	203.04	6.21	0.52	0.21	1.70	233.46	**0.12**	6.21	1.50	0.05	93.62	**0.07**
52	2.68	0.36	4.50	-180.52	-0.19	-1.91	180.52	0.19	1.91	0.19	1.70	210.57	**0.11**	0.19	1.50	0.05	89.48	**0.00**
53	2.25	0.36	4.50	-115.39	12.44	6.97	115.39	12.44	6.97	0.14	1.70	117.02	**0.08**	12.44	1.50	0.05	68.41	**0.18**
54	2.39	0.36	4.50	-107.64	-2.63	4.99	107.64	2.63	4.99	0.13	1.70	117.49	**0.07**	2.63	1.50	0.05	69.69	**0.04**
55	6.88	0.36	4.50	-476.80	-7.98	17.42	476.80	7.98	17.42	0.19	1.70	1421.68	**0.11**	7.98	1.00	0.05	348.13	**0.02**
56	9.94	0.36	4.50	-644.79	-1.22	20.63	644.79	1.22	20.63	0.18	1.70	2805.00	**0.11**	1.22	1.00	0.05	491.20	**0.00**
57	3.07	0.36	4.50	-129.62	-0.19	-5.42	129.62	0.19	5.42	0.12	1.70	182.82	**0.07**	0.19	1.47	0.05	89.79	**0.00**
58	5.47	0.36	4.50	-303.48	-24.47	18.38	303.48	24.47	18.38	0.15	1.70	741.49	**0.09**	24.47	1.00	0.05	256.08	**0.10**
59	5.50	0.36	4.50	-290.26	17.75	-39.16	290.26	17.75	39.16	0.15	1.70	717.24	**0.09**	17.75	1.00	0.05	253.20	**0.07**
60	2.63	0.36	4.50	-107.60	-1.39	-0.27	107.60	1.39	0.27	0.11	1.70	130.37	**0.07**	1.39	1.50	0.05	74.45	**0.02**
61	5.83	0.36	4.50	-394.58	9.64	-25.91	394.58	9.64	25.91	0.19	1.70	1000.55	**0.11**	9.64	1.00	0.05	292.49	**0.03**
62	2.74	0.36	4.50	-204.28	0.90	0.34	204.28	0.90	0.34	0.21	1.70	239.75	**0.12**	0.90	1.50	0.05	94.92	**0.01**
63	2.43	0.36	4.50	-104.07	-0.65	-1.69	104.07	0.65	1.69	0.12	1.70	116.04	**0.07**	0.65	1.50	0.05	69.76	**0.01**
64	2.86	0.36	4.50	-109.93	-3.87	-2.17	109.93	3.87	2.17	0.11	1.70	145.58	**0.06**	3.87	1.50	0.05	79.46	**0.05**
65	6.14	0.36	4.50	-348.10	17.11	-81.93	348.10	17.11	81.93	0.16	1.70	952.20	**0.09**	17.11	1.00	0.05	289.56	**0.06**
66	1.15	0.36	4.50	-82.11	-1.23	-1.40	82.11	1.23	1.40	0.20	1.70	40.73	**0.12**	1.23	1.50	0.05	39.21	**0.03**
67	2.70	0.36	4.50	-191.92	-6.67	-4.40	191.92	6.67	4.40	0.20	1.70	223.69	**0.12**	6.67	1.50	0.05	91.92	**0.07**
68	2.65	0.36	4.50	-100.70	3.25	1.91	100.70	3.25	1.91	0.11	1.70	123.68	**0.06**	3.25	1.50	0.05	73.38	**0.04**
69	6.13	0.36	4.50	-347.65	16.50	-78.70	347.65	16.50	78.70	0.16	1.70	949.38	**0.09**	16.50	1.00	0.05	289.12	**0.06**
70	1.15	0.36	4.50	-77.45	-3.36	-2.59	77.45	3.36	2.59	0.19	1.70	38.77	**0.11**	3.36	1.50	0.05	38.40	**0.09**
71	1.14	0.36	4.50	-75.41	3.07	2.39	75.41	3.07	2.39	0.18	1.70	37.52	**0.11**	3.07	1.50	0.05	37.82	**0.08**
72	2.75	0.36	4.50	-192.28	7.66	5.70	192.28	7.66	5.70	0.19	1.70	228.85	**0.11**	7.66	1.50	0.05	93.06	**0.08**
73	2.69	0.36	4.50	-114.99	1.30	2.71	114.99	1.30	2.71	0.12	1.70	141.95	**0.07**	1.30	1.50	0.05	77.17	**0.02**
74	2.85	0.36	4.50	-211.81	1.61	1.99	211.81	1.61	1.99	0.21	1.70	258.71	**0.12**	1.61	1.50	0.05	98.62	**0.02**
75	2.85	0.36	4.50	-222.90	0.69	0.98	222.90	0.69	0.98	0.22	1.70	269.88	**0.13**	0.69	1.50	0.05	100.50	**0.01**
76	2.63	0.36	4.50	-108.98	2.27	3.87	108.98	2.27	3.87	0.12	1.70	131.89	**0.07**	2.27	1.50	0.05	74.74	**0.03**
77	5.50	0.36	4.50	-302.18	-22.22	45.59	302.18	22.22	45.59	0.15	1.70	743.23	**0.09**	22.22	1.00	0.05	256.63	**0.09**
78	2.15	0.36	4.50	-148.31	-2.66	-0.06	148.31	2.66	0.06	0.19	1.70	138.29	**0.11**	2.66	1.50	0.05	72.40	**0.04**
79	9.92	0.36	4.50	-656.30	-1.21	19.61	656.30	1.21	19.61	0.18	1.70	2841.24	**0.11**	1.21	1.00	0.05	493.66	**0.00**
80	2.37	0.36	4.50	-159.15	5.10	7.14	159.15	5.10	7.14	0.19	1.70	164.25	**0.11**	5.10	1.50	0.05	79.05	**0.06**
81	1.91	0.36	4.50	-103.28	9.38	6.80	103.28	9.38	6.80	0.15	1.70	88.38	**0.09**	9.38	1.50	0.05	59.10	**0.16**
82	0.90	0.36	4.50	-47.09	-2.26	-0.01	47.09	2.26	0.01	0.15	1.70	19.06	**0.09**	2.26	1.50	0.05	27.54	**0.08**
83	2.59	0.36	4.50	-109.69	0.74	2.82	109.69	0.74	2.82	0.12	1.70	130.48	**0.07**	0.74	1.50	0.05	74.09	**0.01**
84	6.77	0.36	4.50	-456.37	0.46	15.20	456.37	0.46	15.20	0.19	1.70	1344.63	**0.11**	0.46	1.00	0.05	339.17	**0.00**
85	7.91	0.36	4.50	-510.25	30.72	-133.90	510.25	30.72	133.90	0.18	1.70	1767.79	**0.11**	30.72	1.00	0.05	390.12	**0.08**
86	2.42	0.36	4.50	-110.11	2.68	-4.83	110.11	2.68	4.83	0.13	1.70	121.58	**0.07**	2.68	1.50	0.05	70.79	**0.04**
87	2.21	0.36	4.50	-113.86	-13.75	-9.15	113.86	13.75	9.15	0.14	1.70	113.35	**0.08**	13.75	1.50	0.05	67.29	**0.20**
88	2.68	0.36	4.50	-179.68	0.42	0.80	179.68	0.42	0.80	0.19	1.70	209.74	**0.11**	0.42	1.50	0.05	89.34	**0.00**
89	2.61	0.36	4.50	-176.45	0.91	2.51	176.45	0.91	2.51	0.19	1.70	200.34	**0.11**	0.91	1.50	0.05	87.26	**0.01**
90	2.27	0.36	4.50	-165.74	-2.34	-0.64	165.74	2.34	0.64	0.20	1.70	161.71	**0.12**	2.34	1.50	0.05	78.04	**0.03**
91	2.34	0.36	4.50	-113.21	-2.91	6.32	113.21	2.91	6.32	0.13	1.70	120.14	**0.08**	2.91	1.50	0.05	69.80	**0.04**
92	2.23	0.36	4.50	-127.86	-22.53	-12.89	127.86	22.53	12.89	0.16	1.70	126.85	**0.10**	22.53	1.50	0.05	70.38	**0.32**
93	2.61	0.36	4.50	-232.63	-4.14	-3.64	232.63	4.14	3.64	0.25	1.70	251.57	**0.15**	4.14	1.50	0.05	96.71	**0.04**
94	2.61	0.36	4.50	-237.90	4.29	4.99	237.90	4.29	4.99	0.25	1.70	256.06	**0.15**	4.29	1.50	0.05	97.55	**0.04**
95	2.32	0.36	4.50	-182.18	6.53	2.67	182.18	6.53	2.67	0.22	1.70	179.43	**0.13**	6.53	1.50	0.05	81.93	**0.08**
96	7.34	0.36	4.50	-462.70	-35.83	130.05	462.70	35.83	130.05	0.18	1.70	1492.33	**0.10**	35.83	1.00	0.05	359.08	**0.10**
97	3.21	0.36	4.50	-120.87	0.27	-13.38	120.87	0.27	13.38	0.10	1.70	179.95	**0.07**	0.27	1.40	0.05	94.86	**0.00**
98	2.52	0.36	4.50	-101.45	-5.88	-11.05	101.45	5.88	11.05	0.11	1.70	117.93	**0.09**	5.88	1.50	0.05	70.99	**0.08**
99	1.93	0.36	4.50	-89.03	-1.69	-2.08	89.03	1.69	2.08	0.13	1.70	78.30	**0.08**	1.69	1.50	0.05	56.70	**0.03**
100	2.00	0.36	4.50	-96.43	1.42	1.92	96.43	1.42	1.92	0.13	1.70	87.49	**0.08**	1.42	1.50	0.05	59.60	**0.02**
101	4.39	0.36	4.50	-194.66	4.83	5.75	194.66	4.83	5.75	0.12	1.70	390.86	**0.07**	4.83	1.03	0.05	186.41	**0.03**
102	1.90	0.36	4.50	-93.24	4.61	-1.35	93.24	4.61	1.35	0.14	1.70	80.22	**0.08**	4.61	1.50	0.05	56.94	**0.08**
103	4.00	0.36	4.50	-170.39	5.69	15.11	170.39	5.69	15.11	0.12	1.70	312.87	**0.07**	5.69	1.13	0.05	152.85	**0.04**
104	7.36	0.36	4.50	-478.70	52.91	-158.83	478.70	52.91	158.83	0.18	1.70	1541.36	**0.11**	52.91	1.00	0.05	364.05	**0.15**
105	0.61	0.36	4.50	-69.67	-0.15	-0.13	69.67	0.15	0.13	0.32	1.70	16.58	**0.19**	0.15	1.50	0.05	24.93	**0.01**
106	5.86	0.36	4.50	-426.74	-49.25	98.90	426.74	49.25	98.90	0.20	1.70	1075.31	**0.12**	49.25	1.00	0.05	301.90	**0.16**
107	4.00	0.36	4.50	-180.64	1.11	2.82	180.64	1.11	2.82	0.13	1.70	329.92	**0.07**	1.11	1.13	0.05	155.65	**0.01**
108	3.97	0.36	4.50	-151.79	1.15	-4.74	151.79	1.15	4.74	0.11	1.70	279.16	**0.06**	1.15	1.13	0.05	145.74	**0.01**

109	7.36	0.36	4.50	-402.36	40.98	-126.38	402.36	40.98	126.38	0.15	1.70	1325.08	**0.10**	40.98	1.00	0.05	342.85	**0.12**
110	7.34	0.36	4.50	-518.65	-31.28	157.90	518.65	31.28	157.90	0.20	1.70	1644.89	**0.12**	31.28	1.00	0.05	374.02	**0.08**
111	3.97	0.36	4.50	-176.02	1.38	2.73	176.02	1.38	2.73	0.12	1.70	319.62	**0.07**	1.38	1.13	0.05	152.44	**0.01**
112	3.99	0.36	4.50	-204.14	1.81	11.13	204.14	1.81	11.13	0.14	1.70	367.20	**0.08**	1.81	1.13	0.05	161.21	**0.01**
114	1.41	0.36	4.50	-190.93	-4.62	-5.31	190.93	4.62	5.31	0.38	1.70	99.57	**0.22**	4.62	1.50	0.05	61.81	**0.07**
115	7.34	0.36	4.50	-556.90	-53.08	221.19	556.90	53.08	221.19	0.21	1.70	1745.73	**0.13**	53.08	1.00	0.05	383.90	**0.14**
116	4.00	0.36	4.50	-174.52	0.96	1.61	174.52	0.96	1.61	0.12	1.70	319.77	**0.07**	0.96	1.13	0.05	153.98	**0.01**
117	4.57	0.36	4.50	-176.19	0.85	-4.67	176.19	0.85	4.67	0.11	1.70	372.76	**0.06**	0.85	1.00	0.05	190.63	**0.00**
118	7.36	0.36	4.50	-378.43	34.62	-138.85	378.43	34.62	138.85	0.14	1.70	1254.97	**0.11**	34.62	1.00	0.05	335.93	**0.10**
119	7.34	0.36	4.50	-493.18	-27.33	125.79	493.18	27.33	125.79	0.19	1.70	1576.19	**0.11**	27.33	1.00	0.05	367.29	**0.07**
120	4.03	0.36	4.50	-184.05	-5.00	0.92	184.05	5.00	0.92	0.13	1.70	338.30	**0.07**	5.00	1.12	0.05	158.55	**0.03**
121	3.94	0.36	4.50	-218.07	-11.73	11.09	218.07	11.73	11.09	0.15	1.70	383.89	**0.09**	11.73	1.14	0.05	161.37	**0.07**
126	3.94	0.36	4.50	-264.17	-1.66	0.23	264.17	1.66	0.23	0.19	1.70	453.34	**0.11**	1.66	1.14	0.05	172.49	**0.01**
127	1.97	0.36	4.50	-137.03	-25.59	-28.19	137.03	25.59	28.19	0.19	1.70	116.93	**0.24**	25.59	1.50	0.05	66.54	**0.38**
128	2.19	0.36	4.50	-136.18	-29.59	-28.08	136.18	29.59	28.08	0.17	1.70	131.29	**0.21**	29.59	1.50	0.05	71.08	**0.42**
129	13.78	0.36	4.50	-717.48	-19.07	-17.05	717.48	19.07	17.05	0.14	1.70	4448.65	**0.09**	19.07	1.00	0.05	631.56	**0.03**
130	16.21	0.36	4.50	-1191.08	-0.59	35.73	1191.08	0.59	35.73	0.20	1.70	8290.12	**0.12**	0.59	1.00	0.05	837.87	**0.00**
131	13.78	0.36	4.50	-712.13	20.33	12.37	712.13	20.33	12.37	0.14	1.70	4419.14	**0.08**	20.33	1.00	0.05	630.00	**0.03**
132	0.63	0.36	4.50	-65.50	-13.84	-11.78	65.50	13.84	11.78	0.29	1.70	16.51	**0.71**	13.84	1.50	0.05	24.79	**0.56**
133	0.96	0.36	4.50	-94.01	-13.93	-10.84	94.01	13.93	10.84	0.27	1.70	36.63	**0.30**	13.93	1.50	0.05	36.90	**0.38**
134	9.22	0.36	4.50	-666.19	19.96	-212.11	666.19	19.96	212.11	0.20	1.70	2644.56	**0.12**	19.96	1.00	0.05	473.65	**0.04**
135	1.25	0.36	4.50	-82.25	10.74	7.78	82.25	10.74	7.78	0.18	1.70	44.90	**0.17**	10.74	1.50	0.05	41.39	**0.26**
136	9.18	0.36	4.50	-660.33	13.90	-176.93	660.33	13.90	176.93	0.20	1.70	2611.81	**0.12**	13.90	1.00	0.05	470.82	**0.03**
137	1.25	0.36	4.50	-83.41	11.56	8.36	83.41	11.56	8.36	0.19	1.70	45.44	**0.18**	11.56	1.50	0.05	41.60	**0.28**
138	16.21	0.36	4.50	-844.86	2.31	4.57	844.86	2.31	4.57	0.14	1.70	6161.52	**0.09**	2.31	1.00	0.05	743.18	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA6

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-939.13	3.76	-1.79	939.13	3.76	1.79	0.16	1.70	6763.93	**0.09**	3.76	1.00	0.05	770.12	**0.00**
2	0.97	0.36	4.50	-69.30	6.21	4.68	69.30	6.21	4.68	0.20	1.70	28.99	**0.16**	6.21	1.50	0.05	33.08	**0.19**
3	0.96	0.36	4.50	-70.94	11.00	8.72	70.94	11.00	8.72	0.21	1.70	29.21	**0.30**	11.00	1.50	0.05	33.15	**0.33**
4	13.53	0.36	4.50	-818.31	13.65	19.88	818.31	13.65	19.88	0.17	1.70	4892.24	**0.10**	13.65	1.00	0.05	652.39	**0.02**
5	13.53	0.36	4.50	-830.27	-22.65	-23.18	830.27	22.65	23.18	0.17	1.70	4954.20	**0.10**	22.65	1.00	0.05	655.69	**0.03**
6	9.16	0.36	4.50	-903.70	-21.61	430.04	903.70	21.61	430.04	0.27	1.70	3353.98	**0.16**	21.61	1.00	0.05	529.65	**0.04**
7	9.16	0.36	4.50	-956.03	-14.51	5.32	956.03	14.51	5.32	0.29	1.70	3500.12	**0.17**	14.51	1.00	0.05	541.59	**0.03**
8	0.94	0.36	4.50	-93.41	13.31	10.10	93.41	13.31	10.10	0.28	1.70	35.52	**0.28**	13.31	1.50	0.05	36.34	**0.37**
9	0.94	0.36	4.50	-91.76	11.98	8.89	91.76	11.98	8.89	0.27	1.70	35.03	**0.25**	11.98	1.50	0.05	36.08	**0.33**
10	16.21	0.36	4.50	-1210.47	-8.55	-7.64	1210.47	8.55	7.64	0.21	1.70	8402.52	**0.12**	8.55	1.00	0.05	842.86	**0.01**
11	2.03	0.36	4.50	-136.25	-40.62	-31.84	136.25	40.62	31.84	0.19	1.70	120.45	**0.26**	40.62	1.50	0.05	67.69	**0.60**
12	2.03	0.36	4.50	-139.73	-39.83	-31.56	139.73	39.83	31.56	0.19	1.70	123.06	**0.26**	39.83	1.50	0.05	68.31	**0.58**
13	4.00	0.36	4.50	-174.13	3.95	8.35	174.13	3.95	8.35	0.12	1.70	319.12	**0.07**	3.95	1.13	0.05	153.87	**0.03**
14	5.01	0.36	4.50	-315.90	38.06	-51.17	315.90	38.06	51.17	0.18	1.70	695.41	**0.10**	38.06	1.00	0.05	245.11	**0.16**
15	1.00	0.36	4.50	-116.55	2.74	3.22	116.55	2.74	3.22	0.32	1.70	45.22	**0.19**	2.74	1.50	0.05	41.21	**0.07**
16	1.39	0.36	4.50	-196.70	3.65	2.99	196.70	3.65	2.99	0.39	1.70	99.52	**0.23**	3.65	1.50	0.05	62.07	**0.06**
17	1.38	0.36	4.50	-84.47	-25.58	-18.08	84.47	25.58	18.08	0.17	1.70	51.43	**0.35**	25.58	1.50	0.05	44.55	**0.57**
18	4.00	0.36	4.50	-235.22	-2.64	-7.55	235.22	2.64	7.55	0.16	1.70	417.26	**0.10**	2.64	1.13	0.05	169.79	**0.02**
19	4.00	0.36	4.50	-137.83	2.93	5.40	137.83	2.93	5.40	0.10	1.70	257.40	**0.06**	2.93	1.13	0.05	143.58	**0.02**
22	4.00	0.36	4.50	-139.87	-2.71	-0.36	139.87	2.71	0.36	0.10	1.70	260.94	**0.06**	2.71	1.13	0.05	144.18	**0.02**
23	4.00	0.36	4.50	-141.37	1.98	2.82	141.37	1.98	2.82	0.10	1.70	263.53	**0.06**	1.98	1.13	0.05	144.62	**0.01**
26	4.00	0.36	4.50	-139.68	-1.26	-9.97	139.68	1.26	9.97	0.10	1.70	260.61	**0.06**	1.26	1.13	0.05	144.13	**0.01**
27	4.00	0.36	4.50	-141.71	1.05	1.73	141.71	1.05	1.73	0.10	1.70	264.12	**0.06**	1.05	1.13	0.05	144.72	**0.01**
30	4.00	0.36	4.50	-134.87	-1.69	-2.59	134.87	1.69	2.59	0.09	1.70	252.26	**0.06**	1.69	1.13	0.05	142.71	**0.01**
31	4.00	0.36	4.50	-137.92	1.66	1.38	137.92	1.66	1.38	0.10	1.70	257.56	**0.06**	1.66	1.13	0.05	143.61	**0.01**
34	4.00	0.36	4.50	-134.91	-3.57	-3.89	134.91	3.57	3.89	0.09	1.70	252.33	**0.06**	3.57	1.13	0.05	142.72	**0.03**
35	4.47	0.36	4.50	-195.17	2.75	7.34	195.17	2.75	7.34	0.12	1.70	399.59	**0.07**	2.75	1.01	0.05	192.34	**0.01**
36	4.18	0.36	4.50	-207.27	27.22	3.37	207.27	27.22	3.37	0.14	1.70	391.90	**0.08**	27.22	1.08	0.05	175.13	**0.16**
37	2.15	0.36	4.50	-166.22	2.20	4.67	166.22	2.20	4.67	0.21	1.70	152.13	**0.13**	2.20	1.50	0.05	75.49	**0.03**
38	7.85	0.36	4.50	-476.03	-28.03	175.08	476.03	28.03	175.08	0.17	1.70	1650.61	**0.11**	28.03	1.00	0.05	378.86	**0.07**
39	2.04	0.36	4.50	-95.99	-1.48	2.32	95.99	1.48	2.32	0.13	1.70	89.05	**0.08**	1.48	1.50	0.05	60.31	**0.02**
40	0.94	0.36	4.50	-45.12	2.32	-0.03	45.12	2.32	0.03	0.13	1.70	19.25	**0.08**	2.32	1.50	0.05	27.97	**0.08**
41	1.98	0.36	4.50	-95.95	-1.30	-1.82	95.95	1.30	1.82	0.13	1.70	86.14	**0.08**	1.30	1.50	0.05	59.10	**0.02**
42	2.07	0.36	4.50	-163.00	-19.72	-15.87	163.00	19.72	15.87	0.22	1.70	143.17	**0.13**	19.72	1.50	0.05	73.18	**0.27**
43	1.20	0.36	4.50	-139.04	-1.94	-2.86	139.04	1.94	2.86	0.32	1.70	64.84	**0.19**	1.94	1.50	0.05	49.33	**0.04**
44	2.06	0.36	4.50	-96.29	2.18	2.40	96.29	2.18	2.40	0.13	1.70	90.27	**0.08**	2.18	1.50	0.05	60.78	**0.04**
45	1.53	0.36	4.50	-175.29	-0.27	-0.74	175.29	0.27	0.74	0.32	1.70	104.56	**0.19**	0.27	1.50	0.05	62.61	**0.00**
46	2.52	0.36	4.50	-102.73	5.25	10.40	102.73	5.25	10.40	0.11	1.70	119.30	**0.09**	5.25	1.50	0.05	71.26	**0.07**
47	0.90	0.36	4.50	-102.33	0.87	1.13	102.33	0.87	1.13	0.32	1.70	35.98	**0.19**	0.87	1.50	0.05	36.72	**0.02**
48	2.31	0.36	4.50	-141.96	30.03	15.85	141.96	30.03	15.85	0.17	1.70	144.59	**0.11**	30.03	1.50	0.05	74.67	**0.40**
49	3.17	0.36	4.50	-120.40	0.12	14.25	120.40	0.12	14.25	0.11	1.70	176.90	**0.08**	0.12	1.42	0.05	92.74	**0.00**
50	2.44	0.36	4.50	-122.26	3.10	-6.30	122.26	3.10	6.30	0.14	1.70	134.79	**0.08**	3.10	1.50	0.05	73.62	**0.04**
51	2.69	0.36	4.50	-203.07	6.18	0.47	203.07	6.18	0.47	0.21	1.70	233.49	**0.12**	6.18	1.50	0.05	93.62	**0.07**
52	2.68	0.36	4.50	-180.53	-0.22	-1.96	180.53	0.22	1.96	0.19	1.70	210.58	**0.11**	0.22	1.50	0.05	89.49	**0.00**
53	2.25	0.36	4.50	-115.40	12.42	6.94	115.40	12.42	6.94	0.14	1.70	117.02	**0.08**	12.42	1.50	0.05	68.41	**0.18**
54	2.39	0.36	4.50	-107.63	-2.62	5.01	107.63	2.62	5.01	0.13	1.70	117.48	**0.07**	2.62	1.50	0.05	69.69	**0.04**
55	6.88	0.36	4.50	-476.80	-7.96	17.48	476.80	7.96	17.48	0.19	1.70	1421.68	**0.11**	7.96	1.00	0.05	348.13	**0.02**
56	9.94	0.36	4.50	-644.80	-1.17	20.71	644.80	1.17	20.71	0.18	1.70	2805.03	**0.11**	1.17	1.00	0.05	491.21	**0.00**
57	3.07	0.36	4.50	-129.62	-0.17	-5.40	129.62	0.17	5.40	0.12	1.70	182.82	**0.07**	0.17	1.47	0.05	89.79	**0.00**
58	5.47	0.36	4.50	-303.48	-24.49	18.35	303.48	24.49	18.35	0.15	1.70	741.49	**0.09**	24.49	1.00	0.05	256.08	**0.10**
59	5.50	0.36	4.50	-290.26	17.73	-39.19	290.26	17.73	39.19	0.15	1.70	717.24	**0.09**	17.73	1.00	0.05	253.20	**0.07**
60	2.63	0.36	4.50	-107.59	-1.38	-0.25	107.59	1.38	0.25	0.11	1.70	130.35	**0.07**	1.38	1.50	0.05	74.45	**0.02**
61	5.83	0.36	4.50	-394.57	9.65	-25.90	394.57	9.65	25.90	0.19	1.70	1000.53	**0.11**	9.65	1.00	0.05	292.49	**0.03**
62	2.74	0.36	4.50	-204.28	0.91	0.35	204.28	0.91	0.35	0.21	1.70	239.75	**0.12**	0.91	1.50	0.05	94.92	**0.01**
63	2.43	0.36	4.50	-104.07	-0.64	-1.68	104.07	0.64	1.68	0.12	1.70	116.04	**0.07**	0.64	1.50	0.05	69.76	**0.01**
64	2.86	0.36	4.50	-109.92	-3.86	-2.16	109.92	3.86	2.16	0.11	1.70	145.57	**0.06**	3.86	1.50	0.05	79.46	**0.05**
65	6.14	0.36	4.50	-348.09	17.10	-81.94	348.09	17.10	81.94	0.16	1.70	952.17	**0.09**	17.10	1.00	0.05	289.55	**0.06**
66	1.15	0.36	4.50	-82.11	-1.24	-1.40	82.11	1.24	1.40	0.20	1.70	40.73	**0.12**	1.24	1.50	0.05	39.21	**0.03**
67	2.70	0.36	4.50	-191.92	-6.67	-4.40	191.92	6.67	4.40	0.20	1.70	223.69	**0.12**	6.67	1.50	0.05	91.92	**0.07**
68	2.65	0.36	4.50	-100.70	3.25	1.91	100.70	3.25	1.91	0.11	1.70	123.68	**0.06**	3.25	1.50	0.05	73.38	**0.04**
69	6.13	0.36	4.50	-347.65	16.50	-78.71	347.65	16.50	78.71	0.16	1.70	949.38	**0.09**	16.50	1.00	0.05	289.12	**0.06**
70	1.15	0.36	4.50	-77.45	-3.36	-2.59	77.45	3.36	2.59	0.19	1.70	38.77	**0.11**	3.36	1.50	0.05	38.40	**0.09**
71	1.14	0.36	4.50	-75.41	3.07	2.39	75.41	3.07	2.39	0.18	1.70	37.52	**0.11**	3.07	1.50	0.05	37.82	**0.08**
72	2.75	0.36	4.50	-192.28	7.66	5.71	192.28	7.66	5.71	0.19	1.70	228.85	**0.11**	7.66	1.50	0.05	93.06	**0.08**
73	2.69	0.36	4.50	-114.99	1.30	2.71	114.99	1.30	2.71	0.12	1.70	141.95	**0.07**	1.30	1.50	0.05	77.17	**0.02**
74	2.85	0.36	4.50	-211.81	1.62	2.00	211.81	1.62	2.00	0.21	1.70	258.71	**0.12**	1.62	1.50	0.05	98.62	**0.02**
75	2.85	0.36	4.50	-222.90	0.69	0.99	222.90	0.69	0.99	0.22	1.70	269.88	**0.13**	0.69	1.50	0.05	100.50	**0.01**
76	2.63	0.36	4.50	-108.98	2.27	3.87	108.98	2.27	3.87	0.12	1.70	131.89	**0.07**	2.27	1.50	0.05	74.74	**0.03**
77	5.50	0.36	4.50	-302.18	-22.21	45.60	302.18	22.21	45.60	0.15	1.70	743.23	**0.09**	22.21	1.00	0.05	256.63	**0.09**
78	2.15	0.36	4.50	-148.31	-2.66	-0.06	148.31	2.66	0.06	0.19	1.70	138.29	**0.11**	2.66	1.50	0.05	72.40	**0.04**
79	9.92	0.36	4.50	-656.30	-1.20	19.62	656.30	1.20	19.62	0.18	1.70	2841.24	**0.11**	1.20	1.00	0.05	493.66	**0.00**
80	2.37	0.36	4.50	-159.15	5.10	7.14	159.15	5.10	7.14	0.19	1.70	164.25	**0.11**	5.10	1.50	0.05	79.05	**0.06**
81	1.91	0.36	4.50	-103.28	9.38	6.80	103.28	9.38	6.80	0.15	1.70	88.38	**0.09**	9.38	1.50	0.05	59.10	**0.16**
82	0.90	0.36	4.50	-47.09	-2.26	-0.01	47.09	2.26	0.01	0.15	1.70	19.06	**0.09**	2.26	1.50	0.05	27.54	**0.08**
83	2.59	0.36	4.50	-109.69	0.74	2.82	109.69	0.74	2.82	0.12	1.70	130.48	**0.07**	0.74	1.50	0.05	74.09	**0.01**
84	6.77	0.36	4.50	-456.37	0.47	15.21	456.37	0.47	15.21	0.19	1.70	1344.63	**0.11**	0.47	1.00	0.05	339.17	**0.00**
85	7.91	0.36	4.50	-510.25	30.73	-133.89	510.25	30.73	133.89	0.18	1.70	1767.79	**0.11**	30.73	1.00	0.05	390.12	**0.08**
86	2.42	0.36	4.50	-110.11	2.68	-4.82	110.11	2.68	4.82	0.13	1.70	121.58	**0.07**	2.68	1.50	0.05	70.79	**0.04**
87	2.21	0.36	4.50	-113.86	-13.75	-9.15	113.86	13.75	9.15	0.14	1.70	113.35	**0.08**	13.75	1.50	0.05	67.29	**0.20**
88	2.68	0.36	4.50	-179.68	0.42	0.80	179.68	0.42	0.80	0.19	1.70	209.74	**0.11**	0.42	1.50	0.05	89.34	**0.00**
89	2.61	0.36	4.50	-176.44	0.91	2.51	176.44	0.91	2.51	0.19	1.70	200.33	**0.11**	0.91	1.50	0.05	87.26	**0.01**
90	2.27	0.36	4.50	-165.74	-2.34	-0.64	165.74	2.34	0.64	0.20	1.70	161.71	**0.12**	2.34	1.50	0.05	78.04	**0.03**
91	2.34	0.36	4.50	-113.21	-2.90	6.32	113.21	2.90	6.32	0.13	1.70	120.14	**0.08**	2.90	1.50	0.05	69.80	**0.04**
92	2.23	0.36	4.50	-127.86	-22.53	-12.89	127.86	22.53	12.89	0.16	1.70	126.85	**0.10**	22.53	1.50	0.05	70.38	**0.32**
93	2.61	0.36	4.50	-232.63	-4.14	-3.64	232.63	4.14	3.64	0.25	1.70	251.57	**0.15**	4.14	1.50	0.05	96.71	**0.04**
94	2.61	0.36	4.50	-237.90	4.29	4.99	237.90	4.29	4.99	0.25	1.70	256.06	**0.15**	4.29	1.50	0.05	97.55	**0.04**
95	2.32	0.36	4.50	-182.18	6.53	2.67	182.18	6.53	2.67	0.22	1.70	179.43	**0.13**	6.53	1.50	0.05	81.93	**0.08**
96	7.34	0.36	4.50	-462.70	-35.83	130.05	462.70	35.83	130.05	0.18	1.70	1492.33	**0.10**	35.83	1.00	0.05	359.08	**0.10**
97	3.21	0.36	4.50	-120.87	0.27	-13.38	120.87	0.27	13.38	0.10	1.70	179.95	**0.07**	0.27	1.40	0.05	94.86	**0.00**
98	2.52	0.36	4.50	-101.45	-5.88	-11.05	101.45	5.88	11.05	0.11	1.70	117.93	**0.09**	5.88	1.50	0.05	70.99	**0.08**
99	1.93	0.36	4.50	-89.03	-1.69	-2.08	89.03	1.69	2.08	0.13	1.70	78.30	**0.08**	1.69	1.50	0.05	56.70	**0.03**
100	2.00	0.36	4.50	-96.43	1.42	1.92	96.43	1.42	1.92	0.13	1.70	87.49	**0.08**	1.42	1.50	0.05	59.60	**0.02**
101	4.39	0.36	4.50	-194.66	4.83	5.75	194.66	4.83	5.75	0.12	1.70	390.86	**0.07**	4.83	1.03	0.05	186.41	**0.03**
102	1.90	0.36	4.50	-93.24	4.61	-1.35	93.24	4.61	1.35	0.14	1.70	80.22	**0.08**	4.61	1.50	0.05	56.94	**0.08**
103	4.00	0.36	4.50	-170.39	5.69	15.11	170.39	5.69	15.11	0.12	1.70	312.87	**0.07**	5.69	1.13	0.05	152.85	**0.04**
104	7.36	0.36	4.50	-478.70	52.91	-158.83	478.70	52.91	158.83	0.18	1.70	1541.36	**0.11**	52.91	1.00	0.05	364.05	**0.15**
105	0.61	0.36	4.50	-69.67	-0.15	-0.13	69.67	0.15	0.13	0.32	1.70	16.58	**0.19**	0.15	1.50	0.05	24.93	**0.01**
106	5.86	0.36	4.50	-426.74	-49.25	98.90	426.74	49.25	98.90	0.20	1.70	1075.31	**0.12**	49.25	1.00	0.05	301.90	**0.16**
107	4.00	0.36	4.50	-180.64	1.11	2.82	180.64	1.11	2.82	0.13	1.70	329.92	**0.07**	1.11	1.13	0.05	155.65	**0.01**
108	3.97	0.36	4.50	-151.79	1.15	-4.74	151.79	1.15	4.74	0.11	1.70	279.16	**0.06**	1.15	1.13	0.05	145.74	**0.01**

109	7.36	0.36	4.50	-402.36	40.98	-126.38	402.36	40.98	126.38	0.15	1.70	1325.08	**0.10**	40.98	1.00	0.05	342.85	**0.12**
110	7.34	0.36	4.50	-518.65	-31.28	157.90	518.65	31.28	157.90	0.20	1.70	1644.89	**0.12**	31.28	1.00	0.05	374.02	**0.08**
111	3.97	0.36	4.50	-176.02	1.38	2.73	176.02	1.38	2.73	0.12	1.70	319.62	**0.07**	1.38	1.13	0.05	152.44	**0.01**
112	3.99	0.36	4.50	-204.14	1.81	11.13	204.14	1.81	11.13	0.14	1.70	367.20	**0.08**	1.81	1.13	0.05	161.21	**0.01**
114	1.41	0.36	4.50	-190.93	-4.62	-5.31	190.93	4.62	5.31	0.38	1.70	99.57	**0.22**	4.62	1.50	0.05	61.81	**0.07**
115	7.34	0.36	4.50	-556.90	-53.08	221.19	556.90	53.08	221.19	0.21	1.70	1745.73	**0.13**	53.08	1.00	0.05	383.90	**0.14**
116	4.00	0.36	4.50	-174.52	0.96	1.61	174.52	0.96	1.61	0.12	1.70	319.77	**0.07**	0.96	1.13	0.05	153.98	**0.01**
117	4.57	0.36	4.50	-176.19	0.85	-4.67	176.19	0.85	4.67	0.11	1.70	372.76	**0.06**	0.85	1.00	0.05	190.63	**0.00**
118	7.36	0.36	4.50	-378.43	34.62	-138.85	378.43	34.62	138.85	0.14	1.70	1254.97	**0.11**	34.62	1.00	0.05	335.93	**0.10**
119	7.34	0.36	4.50	-493.18	-27.33	125.79	493.18	27.33	125.79	0.19	1.70	1576.19	**0.11**	27.33	1.00	0.05	367.29	**0.07**
120	4.03	0.36	4.50	-184.05	-5.00	0.92	184.05	5.00	0.92	0.13	1.70	338.30	**0.07**	5.00	1.12	0.05	158.55	**0.03**
121	3.94	0.36	4.50	-218.07	-11.73	11.09	218.07	11.73	11.09	0.15	1.70	383.89	**0.09**	11.73	1.14	0.05	161.37	**0.07**
126	3.94	0.36	4.50	-264.17	-1.66	0.23	264.17	1.66	0.23	0.19	1.70	453.34	**0.11**	1.66	1.14	0.05	172.49	**0.01**
127	1.97	0.36	4.50	-137.03	-25.59	-28.19	137.03	25.59	28.19	0.19	1.70	116.93	**0.24**	25.59	1.50	0.05	66.54	**0.38**
128	2.19	0.36	4.50	-136.18	-29.59	-28.08	136.18	29.59	28.08	0.17	1.70	131.29	**0.21**	29.59	1.50	0.05	71.08	**0.42**
129	13.78	0.36	4.50	-717.48	-19.07	-17.05	717.48	19.07	17.05	0.14	1.70	4448.65	**0.09**	19.07	1.00	0.05	631.56	**0.03**
130	16.21	0.36	4.50	-1191.08	-0.59	35.73	1191.08	0.59	35.73	0.20	1.70	8290.12	**0.12**	0.59	1.00	0.05	837.87	**0.00**
131	13.78	0.36	4.50	-712.13	20.33	12.37	712.13	20.33	12.37	0.14	1.70	4419.14	**0.08**	20.33	1.00	0.05	630.00	**0.03**
132	0.63	0.36	4.50	-65.50	-13.84	-11.78	65.50	13.84	11.78	0.29	1.70	16.51	**0.71**	13.84	1.50	0.05	24.79	**0.56**
133	0.96	0.36	4.50	-94.01	-13.93	-10.84	94.01	13.93	10.84	0.27	1.70	36.63	**0.30**	13.93	1.50	0.05	36.90	**0.38**
134	9.22	0.36	4.50	-666.19	19.96	-212.11	666.19	19.96	212.11	0.20	1.70	2644.56	**0.12**	19.96	1.00	0.05	473.65	**0.04**
135	1.25	0.36	4.50	-82.25	10.74	7.78	82.25	10.74	7.78	0.18	1.70	44.90	**0.17**	10.74	1.50	0.05	41.39	**0.26**
136	9.18	0.36	4.50	-660.33	13.90	-176.93	660.33	13.90	176.93	0.20	1.70	2611.81	**0.12**	13.90	1.00	0.05	470.82	**0.03**
137	1.25	0.36	4.50	-83.41	11.56	8.36	83.41	11.56	8.36	0.19	1.70	45.44	**0.18**	11.56	1.50	0.05	41.60	**0.28**
138	16.21	0.36	4.50	-844.86	2.31	4.57	844.86	2.31	4.57	0.14	1.70	6161.52	**0.09**	2.31	1.00	0.05	743.18	**0.00**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA7

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-955.48	-10.88	-38.09	955.48	10.88	38.09	0.16	1.70	6866.67	**0.10**	10.88	1.00	0.05	774.69	**0.01**
2	0.97	0.36	4.50	-71.47	7.22	5.47	71.47	7.22	5.47	0.20	1.70	29.75	**0.18**	7.22	1.50	0.05	33.46	**0.22**
3	0.96	0.36	4.50	-73.61	11.89	9.40	73.61	11.89	9.40	0.21	1.70	30.12	**0.31**	11.89	1.50	0.05	33.60	**0.35**
4	13.53	0.36	4.50	-840.63	14.37	23.40	840.63	14.37	23.40	0.17	1.70	5007.64	**0.10**	14.37	1.00	0.05	658.54	**0.02**
5	13.53	0.36	4.50	-844.63	-22.26	-22.74	844.63	22.26	22.74	0.17	1.70	5028.22	**0.10**	22.26	1.00	0.05	659.63	**0.03**
6	9.16	0.36	4.50	-929.51	-21.60	430.56	929.51	21.60	430.56	0.28	1.70	3426.72	**0.17**	21.60	1.00	0.05	535.57	**0.04**
7	9.16	0.36	4.50	-985.49	-14.55	4.25	985.49	14.55	4.25	0.30	1.70	3580.07	**0.18**	14.55	1.00	0.05	548.19	**0.03**
8	0.94	0.36	4.50	-95.19	14.40	10.94	95.19	14.40	10.94	0.28	1.70	36.03	**0.30**	14.40	1.50	0.05	36.61	**0.39**
9	0.94	0.36	4.50	-94.80	12.90	9.59	94.80	12.90	9.59	0.28	1.70	35.92	**0.27**	12.90	1.50	0.05	36.55	**0.35**
10	16.21	0.36	4.50	-1227.18	10.74	22.63	1227.18	10.74	22.63	0.21	1.70	8498.80	**0.12**	10.74	1.00	0.05	847.14	**0.01**
11	2.03	0.36	4.50	-139.43	-42.00	-32.86	139.43	42.00	32.86	0.19	1.70	122.84	**0.27**	42.00	1.50	0.05	68.26	**0.62**
12	2.03	0.36	4.50	-140.21	-39.70	-31.42	140.21	39.70	31.42	0.19	1.70	123.42	**0.25**	39.70	1.50	0.05	68.39	**0.58**
13	4.00	0.36	4.50	-177.74	3.59	9.05	177.74	3.59	9.05	0.12	1.70	325.12	**0.07**	3.59	1.13	0.05	154.86	**0.02**
14	5.01	0.36	4.50	-313.34	45.62	-37.89	313.34	45.62	37.89	0.17	1.70	690.55	**0.10**	45.62	1.00	0.05	244.41	**0.19**
15	1.00	0.36	4.50	-115.89	3.42	4.25	115.89	3.42	4.25	0.32	1.70	45.04	**0.19**	3.42	1.50	0.05	41.11	**0.08**
16	1.39	0.36	4.50	-197.25	5.04	5.16	197.25	5.04	5.16	0.39	1.70	99.69	**0.23**	5.04	1.50	0.05	62.14	**0.08**
17	1.38	0.36	4.50	-86.67	-23.33	-15.97	86.67	23.33	15.97	0.17	1.70	52.58	**0.30**	23.33	1.50	0.05	44.95	**0.52**
18	4.00	0.36	4.50	-232.81	-1.93	-7.75	232.81	1.93	7.75	0.16	1.70	413.52	**0.10**	1.93	1.13	0.05	169.19	**0.01**
19	4.00	0.36	4.50	-146.73	3.15	5.78	146.73	3.15	5.78	0.10	1.70	272.77	**0.06**	3.15	1.13	0.05	146.17	**0.02**
22	4.00	0.36	4.50	-127.21	-2.61	-1.15	127.21	2.61	1.15	0.09	1.70	238.87	**0.05**	2.61	1.13	0.05	140.43	**0.02**
23	4.00	0.36	4.50	-148.00	1.96	3.04	148.00	1.96	3.04	0.10	1.70	274.95	**0.06**	1.96	1.13	0.05	146.54	**0.01**
26	4.00	0.36	4.50	-126.55	-1.39	-9.34	126.55	1.39	9.34	0.09	1.70	237.71	**0.05**	1.39	1.13	0.05	140.23	**0.01**
27	4.00	0.36	4.50	-148.24	1.14	1.87	148.24	1.14	1.87	0.10	1.70	275.36	**0.06**	1.14	1.13	0.05	146.61	**0.01**
30	4.00	0.36	4.50	-122.27	-1.71	-2.49	122.27	1.71	2.49	0.08	1.70	230.17	**0.05**	1.71	1.13	0.05	138.94	**0.01**
31	4.00	0.36	4.50	-146.60	1.48	1.46	146.60	1.48	1.46	0.10	1.70	272.54	**0.06**	1.48	1.13	0.05	146.14	**0.01**
34	4.00	0.36	4.50	-122.71	-3.81	-3.81	122.71	3.81	3.81	0.09	1.70	230.95	**0.05**	3.81	1.13	0.05	139.07	**0.03**
35	4.47	0.36	4.50	-196.57	3.16	6.82	196.57	3.16	6.82	0.12	1.70	402.19	**0.07**	3.16	1.01	0.05	192.76	**0.02**
36	4.18	0.36	4.50	-205.92	30.07	7.63	205.92	30.07	7.63	0.14	1.70	389.62	**0.08**	30.07	1.08	0.05	174.76	**0.17**
37	2.15	0.36	4.50	-165.95	2.98	6.02	165.95	2.98	6.02	0.21	1.70	151.93	**0.13**	2.98	1.50	0.05	75.45	**0.04**
38	7.85	0.36	4.50	-477.73	-25.02	181.26	477.73	25.02	181.26	0.17	1.70	1655.73	**0.11**	25.02	1.00	0.05	379.33	**0.07**
39	2.04	0.36	4.50	-95.52	-2.24	1.74	95.52	2.24	1.74	0.13	1.70	88.66	**0.08**	2.24	1.50	0.05	60.22	**0.04**
40	0.94	0.36	4.50	-45.39	2.30	0.02	45.39	2.30	0.02	0.13	1.70	19.35	**0.08**	2.30	1.50	0.05	28.02	**0.08**
41	1.98	0.36	4.50	-96.64	-1.22	-1.71	96.64	1.22	1.71	0.14	1.70	86.70	**0.08**	1.22	1.50	0.05	59.23	**0.02**
42	2.07	0.36	4.50	-163.16	-20.22	-16.27	163.16	20.22	16.27	0.22	1.70	143.28	**0.13**	20.22	1.50	0.05	73.21	**0.28**
43	1.20	0.36	4.50	-140.02	-2.00	-2.94	140.02	2.00	2.94	0.32	1.70	65.17	**0.19**	2.00	1.50	0.05	49.47	**0.04**
44	2.06	0.36	4.50	-97.19	2.15	2.43	97.19	2.15	2.43	0.13	1.70	91.03	**0.08**	2.15	1.50	0.05	60.96	**0.04**
45	1.53	0.36	4.50	-177.11	-0.45	-0.96	177.11	0.45	0.96	0.32	1.70	105.34	**0.19**	0.45	1.50	0.05	62.87	**0.01**
46	2.52	0.36	4.50	-103.77	5.57	10.84	103.77	5.57	10.84	0.11	1.70	120.40	**0.09**	5.57	1.50	0.05	71.48	**0.08**
47	0.90	0.36	4.50	-103.78	0.85	1.10	103.78	0.85	1.10	0.32	1.70	36.35	**0.19**	0.85	1.50	0.05	36.93	**0.02**
48	2.31	0.36	4.50	-143.79	30.65	16.09	143.79	30.65	16.09	0.17	1.70	146.20	**0.11**	30.65	1.50	0.05	75.00	**0.41**
49	3.17	0.36	4.50	-121.07	1.01	15.56	121.07	1.01	15.56	0.11	1.70	177.81	**0.09**	1.01	1.42	0.05	92.89	**0.01**
50	2.44	0.36	4.50	-123.43	3.43	-5.79	123.43	3.43	5.79	0.14	1.70	135.94	**0.08**	3.43	1.50	0.05	73.85	**0.05**
51	2.69	0.36	4.50	-205.68	6.01	0.21	205.68	6.01	0.21	0.21	1.70	235.98	**0.12**	6.01	1.50	0.05	94.07	**0.06**
52	2.68	0.36	4.50	-183.10	-0.31	-2.21	183.10	0.31	2.21	0.19	1.70	213.13	**0.11**	0.31	1.50	0.05	89.94	**0.00**
53	2.25	0.36	4.50	-116.55	12.63	7.01	116.55	12.63	7.01	0.14	1.70	118.06	**0.08**	12.63	1.50	0.05	68.63	**0.18**
54	2.39	0.36	4.50	-108.68	-2.21	5.73	108.68	2.21	5.73	0.13	1.70	118.52	**0.07**	2.21	1.50	0.05	69.90	**0.03**
55	6.88	0.36	4.50	-481.96	-6.31	20.09	481.96	6.31	20.09	0.19	1.70	1434.68	**0.11**	6.31	1.00	0.05	349.48	**0.02**
56	9.94	0.36	4.50	-651.78	1.06	26.31	651.78	1.06	26.31	0.18	1.70	2831.03	**0.11**	1.06	1.00	0.05	493.09	**0.00**
57	3.07	0.36	4.50	-131.07	0.26	-4.75	131.07	0.26	4.75	0.12	1.70	184.68	**0.07**	0.26	1.47	0.05	90.10	**0.00**
58	5.47	0.36	4.50	-306.22	-24.94	18.89	306.22	24.94	18.89	0.16	1.70	747.38	**0.09**	24.94	1.00	0.05	256.86	**0.10**
59	5.50	0.36	4.50	-292.53	18.01	-39.63	292.53	18.01	39.63	0.15	1.70	722.21	**0.09**	18.01	1.00	0.05	253.86	**0.07**
60	2.63	0.36	4.50	-108.57	-1.07	0.22	108.57	1.07	0.22	0.11	1.70	131.44	**0.07**	1.07	1.50	0.05	74.65	**0.01**
61	5.83	0.36	4.50	-399.01	11.30	-24.97	399.01	11.30	24.97	0.19	1.70	1010.09	**0.11**	11.30	1.00	0.05	293.67	**0.04**
62	2.74	0.36	4.50	-207.02	1.40	1.15	207.02	1.40	1.15	0.21	1.70	242.42	**0.12**	1.40	1.50	0.05	95.39	**0.01**
63	2.43	0.36	4.50	-105.32	-0.40	-1.30	105.32	0.40	1.30	0.12	1.70	117.30	**0.07**	0.40	1.50	0.05	70.01	**0.01**
64	2.86	0.36	4.50	-110.92	-3.72	-1.75	110.92	3.72	1.75	0.11	1.70	146.79	**0.06**	3.72	1.50	0.05	79.67	**0.05**
65	6.14	0.36	4.50	-351.35	17.56	-82.64	351.35	17.56	82.64	0.16	1.70	959.99	**0.09**	17.56	1.00	0.05	290.47	**0.06**
66	1.15	0.36	4.50	-83.34	-1.12	-1.31	83.34	1.12	1.31	0.20	1.70	41.24	**0.12**	1.12	1.50	0.05	39.43	**0.03**
67	2.70	0.36	4.50	-194.41	-6.28	-3.65	194.41	6.28	3.65	0.20	1.70	226.13	**0.12**	6.28	1.50	0.05	92.35	**0.07**
68	2.65	0.36	4.50	-101.62	3.65	2.43	101.62	3.65	2.43	0.11	1.70	124.72	**0.06**	3.65	1.50	0.05	73.58	**0.05**
69	6.13	0.36	4.50	-351.59	17.06	-80.29	351.59	17.06	80.29	0.16	1.70	958.81	**0.09**	17.06	1.00	0.05	290.23	**0.06**
70	1.15	0.36	4.50	-78.47	-3.31	-2.52	78.47	3.31	2.52	0.19	1.70	39.20	**0.11**	3.31	1.50	0.05	38.58	**0.09**
71	1.14	0.36	4.50	-76.17	3.26	2.56	76.17	3.26	2.56	0.19	1.70	37.84	**0.11**	3.26	1.50	0.05	37.95	**0.09**
72	2.75	0.36	4.50	-194.95	8.27	6.67	194.95	8.27	6.67	0.20	1.70	231.53	**0.12**	8.27	1.50	0.05	93.53	**0.09**
73	2.69	0.36	4.50	-116.37	1.60	3.22	116.37	1.60	3.22	0.12	1.70	143.50	**0.07**	1.60	1.50	0.05	77.46	**0.02**
74	2.85	0.36	4.50	-214.79	2.12	2.88	214.79	2.12	2.88	0.21	1.70	261.73	**0.12**	2.12	1.50	0.05	99.13	**0.02**
75	2.85	0.36	4.50	-226.14	1.19	1.91	226.14	1.19	1.91	0.22	1.70	273.10	**0.13**	1.19	1.50	0.05	101.04	**0.01**
76	2.63	0.36	4.50	-110.16	2.57	4.37	110.16	2.57	4.37	0.12	1.70	133.20	**0.07**	2.57	1.50	0.05	74.98	**0.03**
77	5.50	0.36	4.50	-304.76	-22.88	45.48	304.76	22.88	45.48	0.15	1.70	748.82	**0.09**	22.88	1.00	0.05	257.37	**0.09**
78	2.15	0.36	4.50	-150.00	-2.47	0.41	150.00	2.47	0.41	0.19	1.70	139.62	**0.11**	2.47	1.50	0.05	72.70	**0.03**
79	9.92	0.36	4.50	-662.77	1.21	27.19	662.77	1.21	27.19	0.19	1.70	2865.13	**0.11**	1.21	1.00	0.05	495.39	**0.00**
80	2.37	0.36	4.50	-160.82	5.13	7.06	160.82	5.13	7.06	0.19	1.70	165.71	**0.11**	5.13	1.50	0.05	79.34	**0.06**
81	1.91	0.36	4.50	-104.47	9.31	6.74	104.47	9.31	6.74	0.15	1.70	89.28	**0.09**	9.31	1.50	0.05	59.33	**0.16**
82	0.90	0.36	4.50	-47.80	-2.32	0.05	47.80	2.32	0.05	0.15	1.70	19.31	**0.09**	2.32	1.50	0.05	27.68	**0.08**
83	2.59	0.36	4.50	-111.04	1.03	3.32	111.04	1.03	3.32	0.12	1.70	131.95	**0.07**	1.03	1.50	0.05	74.37	**0.01**
84	6.77	0.36	4.50	-461.71	1.98	18.73	461.71	1.98	18.73	0.19	1.70	1357.99	**0.11**	1.98	1.00	0.05	340.59	**0.01**
85	7.91	0.36	4.50	-513.94	34.06	-126.31	513.94	34.06	126.31	0.18	1.70	1778.76	**0.11**	34.06	1.00	0.05	391.11	**0.09**
86	2.42	0.36	4.50	-111.00	2.95	-4.35	111.00	2.95	4.35	0.13	1.70	122.47	**0.07**	2.95	1.50	0.05	70.97	**0.04**
87	2.21	0.36	4.50	-114.87	-14.00	-9.36	114.87	14.00	9.36	0.14	1.70	114.25	**0.08**	14.00	1.50	0.05	67.49	**0.21**
88	2.68	0.36	4.50	-180.85	0.56	0.90	180.85	0.56	0.90	0.19	1.70	210.90	**0.11**	0.56	1.50	0.05	89.54	**0.01**
89	2.61	0.36	4.50	-176.79	0.99	2.62	176.79	0.99	2.62	0.19	1.70	200.67	**0.11**	0.99	1.50	0.05	87.32	**0.01**
90	2.27	0.36	4.50	-166.44	-2.49	-0.70	166.44	2.49	0.70	0.20	1.70	162.28	**0.12**	2.49	1.50	0.05	78.16	**0.03**
91	2.34	0.36	4.50	-114.50	-2.53	7.07	114.50	2.53	7.07	0.14	1.70	121.36	**0.08**	2.53	1.50	0.05	70.06	**0.04**
92	2.23	0.36	4.50	-129.46	-23.00	-13.07	129.46	23.00	13.07	0.16	1.70	128.24	**0.10**	23.00	1.50	0.05	70.68	**0.33**
93	2.61	0.36	4.50	-236.05	-4.04	-3.46	236.05	4.04	3.46	0.25	1.70	254.49	**0.15**	4.04	1.50	0.05	97.26	**0.04**
94	2.61	0.36	4.50	-240.96	4.56	5.35	240.96	4.56	5.35	0.26	1.70	258.65	**0.15**	4.56	1.50	0.05	98.03	**0.05**
95	2.32	0.36	4.50	-184.03	6.69	2.78	184.03	6.69	2.78	0.22	1.70	180.92	**0.13**	6.69	1.50	0.05	82.24	**0.08**
96	7.34	0.36	4.50	-466.96	-30.88	137.62	466.96	30.88	137.62	0.18	1.70	1504.16	**0.10**	30.88	1.00	0.05	360.24	**0.09**
97	3.21	0.36	4.50	-121.27	1.43	-12.16	121.27	1.43	12.16	0.10	1.70	180.50	**0.07**	1.43	1.40	0.05	94.95	**0.02**
98	2.52	0.36	4.50	-101.89	-6.08	-10.88	101.89	6.08	10.88	0.11	1.70	118.40	**0.09**	6.08	1.50	0.05	71.08	**0.09**
99	1.93	0.36	4.50	-90.31	-1.60	-1.94	90.31	1.60	1.94	0.13	1.70	79.31	**0.08**	1.60	1.50	0.05	56.96	**0.03**
100	2.00	0.36	4.50	-97.65	1.54	2.13	97.65	1.54	2.13	0.14	1.70	88.48	**0.08**	1.54	1.50	0.05	59.84	**0.03**
101	4.39	0.36	4.50	-195.06	5.47	6.02	195.06	5.47	6.02	0.12	1.70	391.59	**0.07**	5.47	1.03	0.05	186.53	**0.03**
102	1.90	0.36	4.50	-94.46	4.77	-1.40	94.46	4.77	1.40	0.14	1.70	81.16	**0.08**	4.77	1.50	0.05	57.18	**0.08**
103	4.00	0.36	4.50	-172.21	5.63	14.85	172.21	5.63	14.85	0.12	1.70	315.92	**0.07**	5.63	1.13	0.05	153.35	**0.04**
104	7.36	0.36	4.50	-477.67	58.70	-150.31	477.67	58.70	150.31	0.18	1.70	1538.52	**0.11**	58.70	1.00	0.05	363.77	**0.16**
105	0.61	0.36	4.50	-70.32	-0.06	-0.01	70.32	0.06	0.01	0.32	1.70	16.69	**0.19**	0.06	1.50	0.05	25.02	**0.00**
106	5.86	0.36	4.50	-432.01	-45.06	106.27	432.01	45.06	106.27	0.20	1.70	1086.40	**0.12**	45.06	1.00	0.05	303.26	**0.15**
107	4.00	0.36	4.50	-180.52	1.36	3.21	180.52	1.36	3.21	0.13	1.70	329.72	**0.07**	1.36	1.13	0.05	155.61	**0.01**
108	3.97	0.36	4.50	-153.67	1.10	-5.00	153.67	1.10	5.00	0.11	1.70	282.34	**0.06**	1.10	1.13	0.05	146.27	**0.01**

109	7.36	0.36	4.50	-397.38	48.52	-113.64	397.38	48.52	113.64	0.15	1.70	1310.58	**0.09**	48.52	1.00	0.05	341.42	**0.14**
110	7.34	0.36	4.50	-523.99	-24.76	168.09	523.99	24.76	168.09	0.20	1.70	1659.14	**0.12**	24.76	1.00	0.05	375.42	**0.07**
111	3.97	0.36	4.50	-175.47	1.65	3.19	175.47	1.65	3.19	0.12	1.70	318.71	**0.07**	1.65	1.13	0.05	152.29	**0.01**
112	3.99	0.36	4.50	-204.34	1.81	11.10	204.34	1.81	11.10	0.14	1.70	367.52	**0.08**	1.81	1.13	0.05	161.26	**0.01**
114	1.41	0.36	4.50	-189.99	-3.25	-3.30	189.99	3.25	3.30	0.37	1.70	99.25	**0.22**	3.25	1.50	0.05	61.68	**0.05**
115	7.34	0.36	4.50	-562.81	-45.01	234.46	562.81	45.01	234.46	0.21	1.70	1761.06	**0.13**	45.01	1.00	0.05	385.41	**0.12**
116	4.00	0.36	4.50	-173.53	1.33	2.20	173.53	1.33	2.20	0.12	1.70	318.12	**0.07**	1.33	1.13	0.05	153.71	**0.01**
117	4.57	0.36	4.50	-178.50	0.92	-4.18	178.50	0.92	4.18	0.11	1.70	377.25	**0.06**	0.92	1.00	0.05	191.37	**0.00**
118	7.36	0.36	4.50	-372.87	43.10	-123.24	372.87	43.10	123.24	0.14	1.70	1238.53	**0.10**	43.10	1.00	0.05	334.30	**0.13**
119	7.34	0.36	4.50	-497.62	-17.75	139.77	497.62	17.75	139.77	0.19	1.70	1588.26	**0.11**	17.75	1.00	0.05	368.47	**0.05**
120	4.03	0.36	4.50	-182.69	-4.81	1.89	182.69	4.81	1.89	0.13	1.70	336.04	**0.07**	4.81	1.12	0.05	158.18	**0.03**
121	3.94	0.36	4.50	-221.68	-12.09	11.54	221.68	12.09	11.54	0.16	1.70	389.48	**0.09**	12.09	1.14	0.05	162.26	**0.07**
126	3.94	0.36	4.50	-264.83	-1.31	0.97	264.83	1.31	0.97	0.19	1.70	454.30	**0.11**	1.31	1.14	0.05	172.64	**0.01**
127	1.97	0.36	4.50	-140.01	-26.48	-29.09	140.01	26.48	29.09	0.20	1.70	119.07	**0.24**	26.48	1.50	0.05	67.06	**0.39**
128	2.19	0.36	4.50	-136.35	-28.82	-27.50	136.35	28.82	27.50	0.17	1.70	131.43	**0.21**	28.82	1.50	0.05	71.11	**0.41**
129	13.78	0.36	4.50	-725.47	-17.48	-6.07	725.47	17.48	6.07	0.15	1.70	4492.62	**0.09**	17.48	1.00	0.05	633.88	**0.03**
130	16.21	0.36	4.50	-1203.16	21.98	74.51	1203.16	21.98	74.51	0.21	1.70	8360.23	**0.12**	21.98	1.00	0.05	840.98	**0.03**
131	13.78	0.36	4.50	-727.12	21.07	12.49	727.12	21.07	12.49	0.15	1.70	4501.68	**0.09**	21.07	1.00	0.05	634.36	**0.03**
132	0.63	0.36	4.50	-66.42	-14.62	-12.45	66.42	14.62	12.45	0.29	1.70	16.68	**0.75**	14.62	1.50	0.05	24.93	**0.59**
133	0.96	0.36	4.50	-96.55	-14.88	-11.58	96.55	14.88	11.58	0.28	1.70	37.38	**0.31**	14.88	1.50	0.05	37.29	**0.40**
134	9.22	0.36	4.50	-684.45	19.68	-212.70	684.45	19.68	212.70	0.21	1.70	2705.03	**0.12**	19.68	1.00	0.05	478.37	**0.04**
135	1.25	0.36	4.50	-84.55	11.81	8.51	84.55	11.81	8.51	0.19	1.70	45.97	**0.19**	11.81	1.50	0.05	41.80	**0.28**
136	9.18	0.36	4.50	-682.23	13.53	-177.13	682.23	13.53	177.13	0.21	1.70	2684.07	**0.12**	13.53	1.00	0.05	476.48	**0.03**
137	1.25	0.36	4.50	-86.49	12.46	8.96	86.49	12.46	8.96	0.19	1.70	46.87	**0.19**	12.46	1.50	0.05	42.14	**0.30**
138	16.21	0.36	4.50	-854.87	-14.45	-43.60	854.87	14.45	43.60	0.15	1.70	6226.30	**0.09**	14.45	1.00	0.05	746.09	**0.02**

EX CASERMA MAMELI
Verifica delle strutture in muratura - COMBINAZIONE SISMA 8

MASCHI MURARI				SOLLECITAZIONI COPIATE DA MIDAS			SOLLECITAZIONI			PRESSOFLESSIONE NEL PIANO				TAGLIO				
Wall ID	l [m]	t [m]	h[m]	N [kN]	V [kN]	M_{Ed} [kNm]	N [kN]	V [kN]	M_{Ed} [kNm]	σ_0 [N/mm^2]	f_d [N/mm^2]	M_u [kNm]	I.R.	V_{Ed} [kN]	b	f_{vd} [N/mm^2]	V_u [kN]	I.R.
1	16.21	0.36	4.50	-939.13	3.76	-1.79	939.13	3.76	1.79	0.16	1.70	6763.93	**0.09**	3.76	1.00	0.05	770.12	**0.00**
2	0.97	0.36	4.50	-69.30	6.21	4.68	69.30	6.21	4.68	0.20	1.70	28.99	**0.16**	6.21	1.50	0.05	33.08	**0.19**
3	0.96	0.36	4.50	-70.94	11.00	8.72	70.94	11.00	8.72	0.21	1.70	29.21	**0.30**	11.00	1.50	0.05	33.15	**0.33**
4	13.53	0.36	4.50	-818.31	13.65	19.88	818.31	13.65	19.88	0.17	1.70	4892.24	**0.10**	13.65	1.00	0.05	652.39	**0.02**
5	13.53	0.36	4.50	-830.27	-22.65	-23.18	830.27	22.65	23.18	0.17	1.70	4954.20	**0.10**	22.65	1.00	0.05	655.69	**0.03**
6	9.16	0.36	4.50	-903.70	-21.61	430.04	903.70	21.61	430.04	0.27	1.70	3353.98	**0.16**	21.61	1.00	0.05	529.65	**0.04**
7	9.16	0.36	4.50	-956.03	-14.51	5.32	956.03	14.51	5.32	0.29	1.70	3500.12	**0.17**	14.51	1.00	0.05	541.59	**0.03**
8	0.94	0.36	4.50	-93.41	13.31	10.10	93.41	13.31	10.10	0.28	1.70	35.52	**0.28**	13.31	1.50	0.05	36.34	**0.37**
9	0.94	0.36	4.50	-91.76	11.98	8.89	91.76	11.98	8.89	0.27	1.70	35.03	**0.25**	11.98	1.50	0.05	36.08	**0.33**
10	16.21	0.36	4.50	-1210.47	-8.55	-7.64	1210.47	8.55	7.64	0.21	1.70	8402.52	**0.12**	8.55	1.00	0.05	842.86	**0.01**
11	2.03	0.36	4.50	-136.25	-40.62	-31.84	136.25	40.62	31.84	0.19	1.70	120.45	**0.26**	40.62	1.50	0.05	67.69	**0.60**
12	2.03	0.36	4.50	-139.73	-39.83	-31.56	139.73	39.83	31.56	0.19	1.70	123.06	**0.26**	39.83	1.50	0.05	68.31	**0.58**
13	4.00	0.36	4.50	-174.13	3.95	8.35	174.13	3.95	8.35	0.12	1.70	319.12	**0.07**	3.95	1.13	0.05	153.87	**0.03**
14	5.01	0.36	4.50	-315.90	38.06	-51.17	315.90	38.06	51.17	0.18	1.70	695.41	**0.10**	38.06	1.00	0.05	245.11	**0.16**
15	1.00	0.36	4.50	-116.55	2.74	3.22	116.55	2.74	3.22	0.32	1.70	45.22	**0.19**	2.74	1.50	0.05	41.21	**0.07**
16	1.39	0.36	4.50	-196.70	3.65	2.99	196.70	3.65	2.99	0.39	1.70	99.52	**0.23**	3.65	1.50	0.05	62.07	**0.06**
17	1.38	0.36	4.50	-84.47	-25.58	-18.08	84.47	25.58	18.08	0.17	1.70	51.43	**0.35**	25.58	1.50	0.05	44.55	**0.57**
18	4.00	0.36	4.50	-235.22	-2.64	-7.55	235.22	2.64	7.55	0.16	1.70	417.26	**0.10**	2.64	1.13	0.05	169.79	**0.02**
19	4.00	0.36	4.50	-137.83	2.93	5.40	137.83	2.93	5.40	0.10	1.70	257.40	**0.06**	2.93	1.13	0.05	143.58	**0.02**
22	4.00	0.36	4.50	-139.87	-2.71	-0.36	139.87	2.71	0.36	0.10	1.70	260.94	**0.06**	2.71	1.13	0.05	144.18	**0.02**
23	4.00	0.36	4.50	-141.38	1.98	2.82	141.38	1.98	2.82	0.10	1.70	263.55	**0.06**	1.98	1.13	0.05	144.62	**0.01**
26	4.00	0.36	4.50	-139.68	-1.26	-9.97	139.68	1.26	9.97	0.10	1.70	260.61	**0.06**	1.26	1.13	0.05	144.13	**0.01**
27	4.00	0.36	4.50	-141.71	1.05	1.73	141.71	1.05	1.73	0.10	1.70	264.12	**0.06**	1.05	1.13	0.05	144.72	**0.01**
30	4.00	0.36	4.50	-134.87	-1.69	-2.59	134.87	1.69	2.59	0.09	1.70	252.26	**0.06**	1.69	1.13	0.05	142.71	**0.01**
31	4.00	0.36	4.50	-137.93	1.66	1.38	137.93	1.66	1.38	0.10	1.70	257.57	**0.06**	1.66	1.13	0.05	143.61	**0.01**
34	4.00	0.36	4.50	-134.91	-3.57	-3.89	134.91	3.57	3.89	0.09	1.70	252.33	**0.06**	3.57	1.13	0.05	142.72	**0.03**
35	4.47	0.36	4.50	-195.17	2.75	7.34	195.17	2.75	7.34	0.12	1.70	399.59	**0.07**	2.75	1.01	0.05	192.34	**0.01**
36	4.18	0.36	4.50	-207.27	27.22	3.37	207.27	27.22	3.37	0.14	1.70	391.90	**0.08**	27.22	1.08	0.05	175.13	**0.16**
37	2.15	0.36	4.50	-166.22	2.20	4.67	166.22	2.20	4.67	0.21	1.70	152.13	**0.13**	2.20	1.50	0.05	75.49	**0.03**
38	7.85	0.36	4.50	-476.03	-28.03	175.08	476.03	28.03	175.08	0.17	1.70	1650.61	**0.11**	28.03	1.00	0.05	378.86	**0.07**
39	2.04	0.36	4.50	-95.99	-1.48	2.32	95.99	1.48	2.32	0.13	1.70	89.05	**0.08**	1.48	1.50	0.05	60.31	**0.02**
40	0.94	0.36	4.50	-45.12	2.32	-0.03	45.12	2.32	0.03	0.13	1.70	19.25	**0.08**	2.32	1.50	0.05	27.97	**0.08**
41	1.98	0.36	4.50	-95.95	-1.30	-1.82	95.95	1.30	1.82	0.13	1.70	86.14	**0.08**	1.30	1.50	0.05	59.10	**0.02**
42	2.07	0.36	4.50	-163.00	-19.72	-15.87	163.00	19.72	15.87	0.22	1.70	143.17	**0.13**	19.72	1.50	0.05	73.18	**0.27**
43	1.20	0.36	4.50	-139.04	-1.94	-2.86	139.04	1.94	2.86	0.32	1.70	64.84	**0.19**	1.94	1.50	0.05	49.33	**0.04**
44	2.06	0.36	4.50	-96.29	2.18	2.40	96.29	2.18	2.40	0.13	1.70	90.27	**0.08**	2.18	1.50	0.05	60.78	**0.04**
45	1.53	0.36	4.50	-175.29	-0.27	-0.74	175.29	0.27	0.74	0.32	1.70	104.56	**0.19**	0.27	1.50	0.05	62.61	**0.00**
46	2.52	0.36	4.50	-102.73	5.25	10.40	102.73	5.25	10.40	0.11	1.70	119.30	**0.09**	5.25	1.50	0.05	71.26	**0.07**
47	0.90	0.36	4.50	-102.33	0.87	1.13	102.33	0.87	1.13	0.32	1.70	35.98	**0.19**	0.87	1.50	0.05	36.72	**0.02**
48	2.31	0.36	4.50	-141.96	30.03	15.85	141.96	30.03	15.85	0.17	1.70	144.59	**0.11**	30.03	1.50	0.05	74.67	**0.40**
49	3.17	0.36	4.50	-120.40	0.12	14.25	120.40	0.12	14.25	0.11	1.70	176.90	**0.08**	0.12	1.42	0.05	92.74	**0.00**
50	2.44	0.36	4.50	-122.26	3.10	-6.30	122.26	3.10	6.30	0.14	1.70	134.79	**0.08**	3.10	1.50	0.05	73.62	**0.04**
51	2.69	0.36	4.50	-203.07	6.18	0.47	203.07	6.18	0.47	0.21	1.70	233.49	**0.12**	6.18	1.50	0.05	93.62	**0.07**
52	2.68	0.36	4.50	-180.53	-0.22	-1.96	180.53	0.22	1.96	0.19	1.70	210.58	**0.11**	0.22	1.50	0.05	89.49	**0.00**
53	2.25	0.36	4.50	-115.40	12.42	6.94	115.40	12.42	6.94	0.14	1.70	117.02	**0.08**	12.42	1.50	0.05	68.41	**0.18**
54	2.39	0.36	4.50	-107.63	-2.62	5.01	107.63	2.62	5.01	0.13	1.70	117.48	**0.07**	2.62	1.50	0.05	69.69	**0.04**
55	6.88	0.36	4.50	-476.80	-7.96	17.48	476.80	7.96	17.48	0.19	1.70	1421.68	**0.11**	7.96	1.00	0.05	348.13	**0.02**
56	9.94	0.36	4.50	-644.80	-1.17	20.71	644.80	1.17	20.71	0.18	1.70	2805.03	**0.11**	1.17	1.00	0.05	491.21	**0.00**
57	3.07	0.36	4.50	-129.62	-0.17	-5.40	129.62	0.17	5.40	0.12	1.70	182.82	**0.07**	0.17	1.47	0.05	89.79	**0.00**
58	5.47	0.36	4.50	-303.48	-24.49	18.35	303.48	24.49	18.35	0.15	1.70	741.49	**0.09**	24.49	1.00	0.05	256.08	**0.10**
59	5.50	0.36	4.50	-290.26	17.73	-39.19	290.26	17.73	39.19	0.15	1.70	717.24	**0.09**	17.73	1.00	0.05	253.20	**0.07**
60	2.63	0.36	4.50	-107.59	-1.38	-0.25	107.59	1.38	0.25	0.11	1.70	130.35	**0.07**	1.38	1.50	0.05	74.45	**0.02**
61	5.83	0.36	4.50	-394.57	9.65	-25.90	394.57	9.65	25.90	0.19	1.70	1000.53	**0.11**	9.65	1.00	0.05	292.49	**0.03**
62	2.74	0.36	4.50	-204.28	0.91	0.35	204.28	0.91	0.35	0.21	1.70	239.75	**0.12**	0.91	1.50	0.05	94.92	**0.01**
63	2.43	0.36	4.50	-104.07	-0.64	-1.68	104.07	0.64	1.68	0.12	1.70	116.04	**0.07**	0.64	1.50	0.05	69.76	**0.01**
64	2.86	0.36	4.50	-109.92	-3.86	-2.16	109.92	3.86	2.16	0.11	1.70	145.57	**0.06**	3.86	1.50	0.05	79.46	**0.05**
65	6.14	0.36	4.50	-348.09	17.10	-81.94	348.09	17.10	81.94	0.16	1.70	952.17	**0.09**	17.10	1.00	0.05	289.55	**0.06**
66	1.15	0.36	4.50	-82.11	-1.24	-1.40	82.11	1.24	1.40	0.20	1.70	40.73	**0.12**	1.24	1.50	0.05	39.21	**0.03**
67	2.70	0.36	4.50	-191.92	-6.67	-4.40	191.92	6.67	4.40	0.20	1.70	223.69	**0.12**	6.67	1.50	0.05	91.92	**0.07**
68	2.65	0.36	4.50	-100.70	3.25	1.91	100.70	3.25	1.91	0.11	1.70	123.68	**0.06**	3.25	1.50	0.05	73.38	**0.04**
69	6.13	0.36	4.50	-347.65	16.50	-78.71	347.65	16.50	78.71	0.16	1.70	949.38	**0.09**	16.50	1.00	0.05	289.12	**0.06**
70	1.15	0.36	4.50	-77.45	-3.36	-2.59	77.45	3.36	2.59	0.19	1.70	38.77	**0.11**	3.36	1.50	0.05	38.40	**0.09**
71	1.14	0.36	4.50	-75.41	3.07	2.39	75.41	3.07	2.39	0.18	1.70	37.52	**0.11**	3.07	1.50	0.05	37.82	**0.08**
72	2.75	0.36	4.50	-192.28	7.66	5.71	192.28	7.66	5.71	0.19	1.70	228.85	**0.11**	7.66	1.50	0.05	93.06	**0.08**
73	2.69	0.36	4.50	-114.99	1.30	2.71	114.99	1.30	2.71	0.12	1.70	141.95	**0.07**	1.30	1.50	0.05	77.17	**0.02**
74	2.85	0.36	4.50	-211.81	1.62	2.00	211.81	1.62	2.00	0.21	1.70	258.71	**0.12**	1.62	1.50	0.05	98.62	**0.02**
75	2.85	0.36	4.50	-222.90	0.69	0.99	222.90	0.69	0.99	0.22	1.70	269.88	**0.13**	0.69	1.50	0.05	100.50	**0.01**
76	2.63	0.36	4.50	-108.98	2.27	3.87	108.98	2.27	3.87	0.12	1.70	131.89	**0.07**	2.27	1.50	0.05	74.74	**0.03**
77	5.50	0.36	4.50	-302.18	-22.21	45.60	302.18	22.21	45.60	0.15	1.70	743.23	**0.09**	22.21	1.00	0.05	256.63	**0.09**
78	2.15	0.36	4.50	-148.31	-2.66	-0.06	148.31	2.66	0.06	0.19	1.70	138.29	**0.11**	2.66	1.50	0.05	72.40	**0.04**
79	9.92	0.36	4.50	-656.30	-1.20	19.62	656.30	1.20	19.62	0.18	1.70	2841.24	**0.11**	1.20	1.00	0.05	493.66	**0.00**
80	2.37	0.36	4.50	-159.15	5.10	7.14	159.15	5.10	7.14	0.19	1.70	164.25	**0.11**	5.10	1.50	0.05	79.05	**0.06**
81	1.91	0.36	4.50	-103.28	9.38	6.80	103.28	9.38	6.80	0.15	1.70	88.38	**0.09**	9.38	1.50	0.05	59.10	**0.16**
82	0.90	0.36	4.50	-47.09	-2.26	-0.01	47.09	2.26	0.01	0.15	1.70	19.06	**0.09**	2.26	1.50	0.05	27.54	**0.08**
83	2.59	0.36	4.50	-109.69	0.74	2.82	109.69	0.74	2.82	0.12	1.70	130.48	**0.07**	0.74	1.50	0.05	74.09	**0.01**
84	6.77	0.36	4.50	-456.37	0.47	15.21	456.37	0.47	15.21	0.19	1.70	1344.63	**0.11**	0.47	1.00	0.05	339.17	**0.00**
85	7.91	0.36	4.50	-510.25	30.73	-133.89	510.25	30.73	133.89	0.18	1.70	1767.79	**0.11**	30.73	1.00	0.05	390.12	**0.08**
86	2.42	0.36	4.50	-110.11	2.68	-4.82	110.11	2.68	4.82	0.13	1.70	121.58	**0.07**	2.68	1.50	0.05	70.79	**0.04**
87	2.21	0.36	4.50	-113.86	-13.75	-9.15	113.86	13.75	9.15	0.14	1.70	113.35	**0.08**	13.75	1.50	0.05	67.29	**0.20**
88	2.68	0.36	4.50	-179.68	0.42	0.80	179.68	0.42	0.80	0.19	1.70	209.74	**0.11**	0.42	1.50	0.05	89.34	**0.00**
89	2.61	0.36	4.50	-176.44	0.91	2.51	176.44	0.91	2.51	0.19	1.70	200.33	**0.11**	0.91	1.50	0.05	87.26	**0.01**
90	2.27	0.36	4.50	-165.74	-2.34	-0.64	165.74	2.34	0.64	0.20	1.70	161.71	**0.12**	2.34	1.50	0.05	78.04	**0.03**
91	2.34	0.36	4.50	-113.21	-2.90	6.32	113.21	2.90	6.32	0.13	1.70	120.14	**0.08**	2.90	1.50	0.05	69.80	**0.04**
92	2.23	0.36	4.50	-127.86	-22.53	-12.89	127.86	22.53	12.89	0.16	1.70	126.85	**0.10**	22.53	1.50	0.05	70.38	**0.32**
93	2.61	0.36	4.50	-232.63	-4.14	-3.64	232.63	4.14	3.64	0.25	1.70	251.57	**0.15**	4.14	1.50	0.05	96.71	**0.04**
94	2.61	0.36	4.50	-237.90	4.29	4.99	237.90	4.29	4.99	0.25	1.70	256.06	**0.15**	4.29	1.50	0.05	97.55	**0.04**
95	2.32	0.36	4.50	-182.18	6.53	2.67	182.18	6.53	2.67	0.22	1.70	179.43	**0.13**	6.53	1.50	0.05	81.93	**0.08**
96	7.34	0.36	4.50	-462.70	-35.83	130.05	462.70	35.83	130.05	0.18	1.70	1492.33	**0.10**	35.83	1.00	0.05	359.08	**0.10**
97	3.21	0.36	4.50	-120.87	0.27	-13.38	120.87	0.27	13.38	0.10	1.70	179.95	**0.07**	0.27	1.40	0.05	94.86	**0.00**
98	2.52	0.36	4.50	-101.45	-5.88	-11.05	101.45	5.88	11.05	0.11	1.70	117.93	**0.09**	5.88	1.50	0.05	70.99	**0.08**
99	1.93	0.36	4.50	-89.03	-1.69	-2.08	89.03	1.69	2.08	0.13	1.70	78.30	**0.08**	1.69	1.50	0.05	56.70	**0.03**
100	2.00	0.36	4.50	-96.43	1.42	1.92	96.43	1.42	1.92	0.13	1.70	87.49	**0.08**	1.42	1.50	0.05	59.60	**0.02**
101	4.39	0.36	4.50	-194.66	4.83	5.75	194.66	4.83	5.75	0.12	1.70	390.86	**0.07**	4.83	1.03	0.05	186.41	**0.03**
102	1.90	0.36	4.50	-93.24	4.61	-1.35	93.24	4.61	1.35	0.14	1.70	80.22	**0.08**	4.61	1.50	0.05	56.94	**0.08**
103	4.00	0.36	4.50	-170.39	5.69	15.11	170.39	5.69	15.11	0.12	1.70	312.87	**0.07**	5.69	1.13	0.05	152.85	**0.04**
104	7.36	0.36	4.50	-478.70	52.91	-158.83	478.70	52.91	158.83	0.18	1.70	1541.36	**0.11**	52.91	1.00	0.05	364.05	**0.15**
105	0.61	0.36	4.50	-69.67	-0.15	-0.13	69.67	0.15	0.13	0.32	1.70	16.58	**0.19**	0.15	1.50	0.05	24.93	**0.01**
106	5.86	0.36	4.50	-426.74	-49.25	98.90	426.74	49.25	98.90	0.20	1.70	1075.31	**0.12**	49.25	1.00	0.05	301.90	**0.16**
107	4.00	0.36	4.50	-180.64	1.11	2.82	180.64	1.11	2.82	0.13	1.70	329.92	**0.07**	1.11	1.13	0.05	155.65	**0.01**
108	3.97	0.36	4.50	-151.79	1.15	-4.74	151.79	1.15	4.74	0.11	1.70	279.16	**0.06**	1.15	1.13	0.05	145.74	**0.01**

109	7.36	0.36	4.50	-402.36	40.98	-126.38	402.36	40.98	126.38	0.15	1.70	1325.08	**0.10**	40.98	1.00	0.05	342.85	**0.12**
110	7.34	0.36	4.50	-518.65	-31.28	157.90	518.65	31.28	157.90	0.20	1.70	1644.89	**0.12**	31.28	1.00	0.05	374.02	**0.08**
111	3.97	0.36	4.50	-176.02	1.38	2.73	176.02	1.38	2.73	0.12	1.70	319.62	**0.07**	1.38	1.13	0.05	152.44	**0.01**
112	3.99	0.36	4.50	-204.14	1.81	11.13	204.14	1.81	11.13	0.14	1.70	367.20	**0.08**	1.81	1.13	0.05	161.21	**0.01**
114	1.41	0.36	4.50	-190.93	-4.62	-5.31	190.93	4.62	5.31	0.38	1.70	99.57	**0.22**	4.62	1.50	0.05	61.81	**0.07**
115	7.34	0.36	4.50	-556.90	-53.08	221.19	556.90	53.08	221.19	0.21	1.70	1745.73	**0.13**	53.08	1.00	0.05	383.90	**0.14**
116	4.00	0.36	4.50	-174.52	0.96	1.61	174.52	0.96	1.61	0.12	1.70	319.77	**0.07**	0.96	1.13	0.05	153.98	**0.01**
117	4.57	0.36	4.50	-176.19	0.85	-4.67	176.19	0.85	4.67	0.11	1.70	372.76	**0.06**	0.85	1.00	0.05	190.63	**0.00**
118	7.36	0.36	4.50	-378.43	34.62	-138.85	378.43	34.62	138.85	0.14	1.70	1254.97	**0.11**	34.62	1.00	0.05	335.93	**0.10**
119	7.34	0.36	4.50	-493.18	-27.33	125.79	493.18	27.33	125.79	0.19	1.70	1576.19	**0.11**	27.33	1.00	0.05	367.29	**0.07**
120	4.03	0.36	4.50	-184.05	-5.00	0.92	184.05	5.00	0.92	0.13	1.70	338.30	**0.07**	5.00	1.12	0.05	158.55	**0.03**
121	3.94	0.36	4.50	-218.07	-11.73	11.09	218.07	11.73	11.09	0.15	1.70	383.89	**0.09**	11.73	1.14	0.05	161.37	**0.07**
126	3.94	0.36	4.50	-264.17	-1.66	0.23	264.17	1.66	0.23	0.19	1.70	453.34	**0.11**	1.66	1.14	0.05	172.49	**0.01**
127	1.97	0.36	4.50	-137.03	-25.59	-28.19	137.03	25.59	28.19	0.19	1.70	116.93	**0.24**	25.59	1.50	0.05	66.54	**0.38**
128	2.19	0.36	4.50	-136.18	-29.59	-28.08	136.18	29.59	28.08	0.17	1.70	131.29	**0.21**	29.59	1.50	0.05	71.08	**0.42**
129	13.78	0.36	4.50	-717.48	-19.07	-17.05	717.48	19.07	17.05	0.14	1.70	4448.65	**0.09**	19.07	1.00	0.05	631.56	**0.03**
130	16.21	0.36	4.50	-1191.08	-0.59	35.73	1191.08	0.59	35.73	0.20	1.70	8290.12	**0.12**	0.59	1.00	0.05	837.87	**0.00**
131	13.78	0.36	4.50	-712.13	20.33	12.37	712.13	20.33	12.37	0.14	1.70	4419.14	**0.08**	20.33	1.00	0.05	630.00	**0.03**
132	0.63	0.36	4.50	-65.50	-13.84	-11.78	65.50	13.84	11.78	0.29	1.70	16.51	**0.71**	13.84	1.50	0.05	24.79	**0.56**
133	0.96	0.36	4.50	-94.01	-13.93	-10.84	94.01	13.93	10.84	0.27	1.70	36.63	**0.30**	13.93	1.50	0.05	36.90	**0.38**
134	9.22	0.36	4.50	-666.19	19.96	-212.11	666.19	19.96	212.11	0.20	1.70	2644.56	**0.12**	19.96	1.00	0.05	473.65	**0.04**
135	1.25	0.36	4.50	-82.25	10.74	7.78	82.25	10.74	7.78	0.18	1.70	44.90	**0.17**	10.74	1.50	0.05	41.39	**0.26**
136	9.18	0.36	4.50	-660.33	13.90	-176.93	660.33	13.90	176.93	0.20	1.70	2611.81	**0.12**	13.90	1.00	0.05	470.82	**0.03**
137	1.25	0.36	4.50	-83.41	11.56	8.36	83.41	11.56	8.36	0.19	1.70	45.44	**0.18**	11.56	1.50	0.05	41.60	**0.28**
138	16.21	0.36	4.50	-844.86	2.31	4.57	844.86	2.31	4.57	0.14	1.70	6161.52	**0.09**	2.31	1.00	0.05	743.18	**0.00**