

COMMITTENTE:



DIREZIONE INVESTIMENTI

DIREZIONE PROGRAMMA INVESTIMENTI AREA SUD

PROGETTAZIONE:



S.O. PROGETTAZIONE INTEGRATA SUD

PROGETTO DI FATTIBILITA' TECNICA ECONOMICA ARRICCHITO

LINEA POTENZA - FOGGIA - AMMODERNAMENTO

SOTTOPROGETTO: LOTTO 1.2 - ELETTRIFICAZIONE ROCCHETTA-POTENZA

ADEGUAMENTO ALLE STI SRT/ENE - POSIZIONAMENTO DELLE APPARECCHIATURE STES PER QUATTRO GALLERIE DI LUNGHEZZA MAGGIORE A 1.000 M

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO (NV24)

COMMESSA LOTTO FASE ENTE TIPO DOC. OPERA/DISCIPLINA PROGR. REV.

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1 PREMESSA

Il presente documento rientra nell'ambito del progetto esecutivo della linea ferroviaria Potenza – Foggia, tratto Galleria Pietracolpa – Imbocco lato Foggia.

L'opera oggetto delle analisi, riportate nei paragrafi qui di seguito, appartiene alla categoria "Paratia".

Scopo del seguente studio è il dimensionamento delle strutture costituenti l'opera e la verifica del soddisfacimento dei requisiti di resistenza e deformabilità richiesti da quest'ultima.

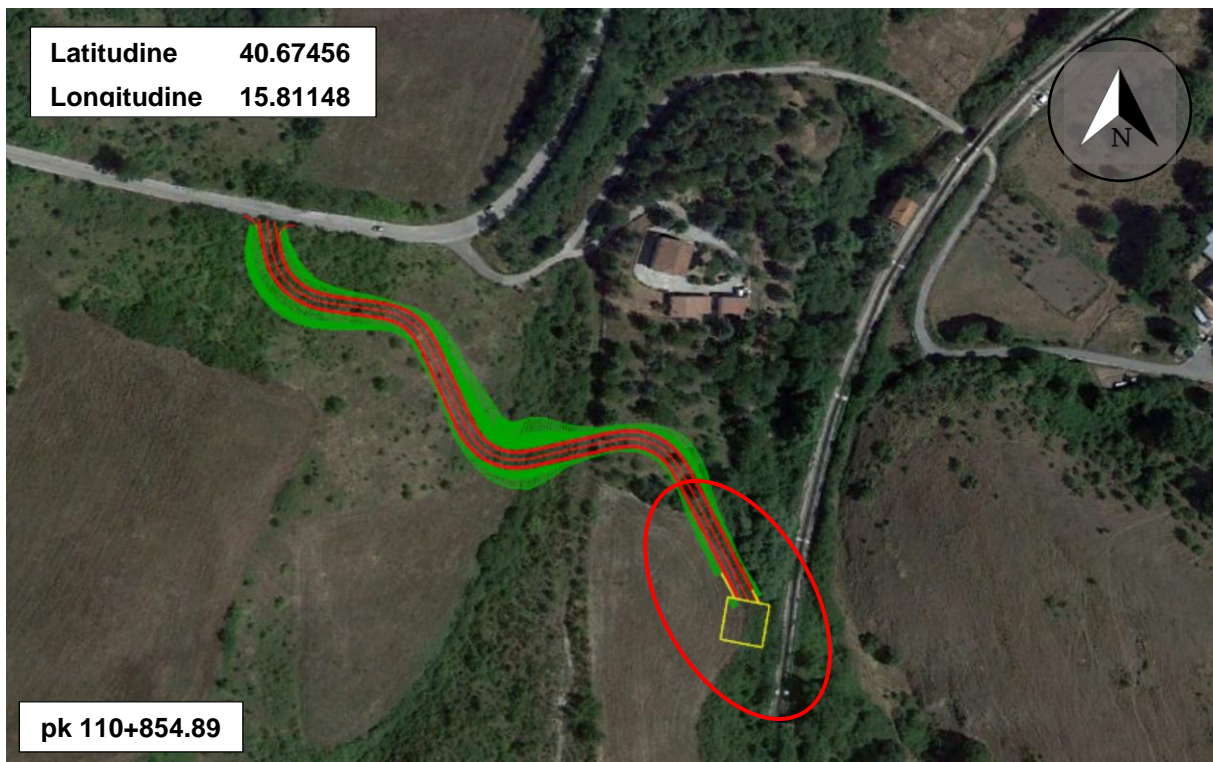


Figura 1.1 – ubicazione intervento ed opera NV24

2 DESCRIZIONE DELL'OPERA

La paratia oggetto di studio è posta in adiacenza al piazzale NV24, a sostegno dello scavo necessario alla realizzazione del piazzale.

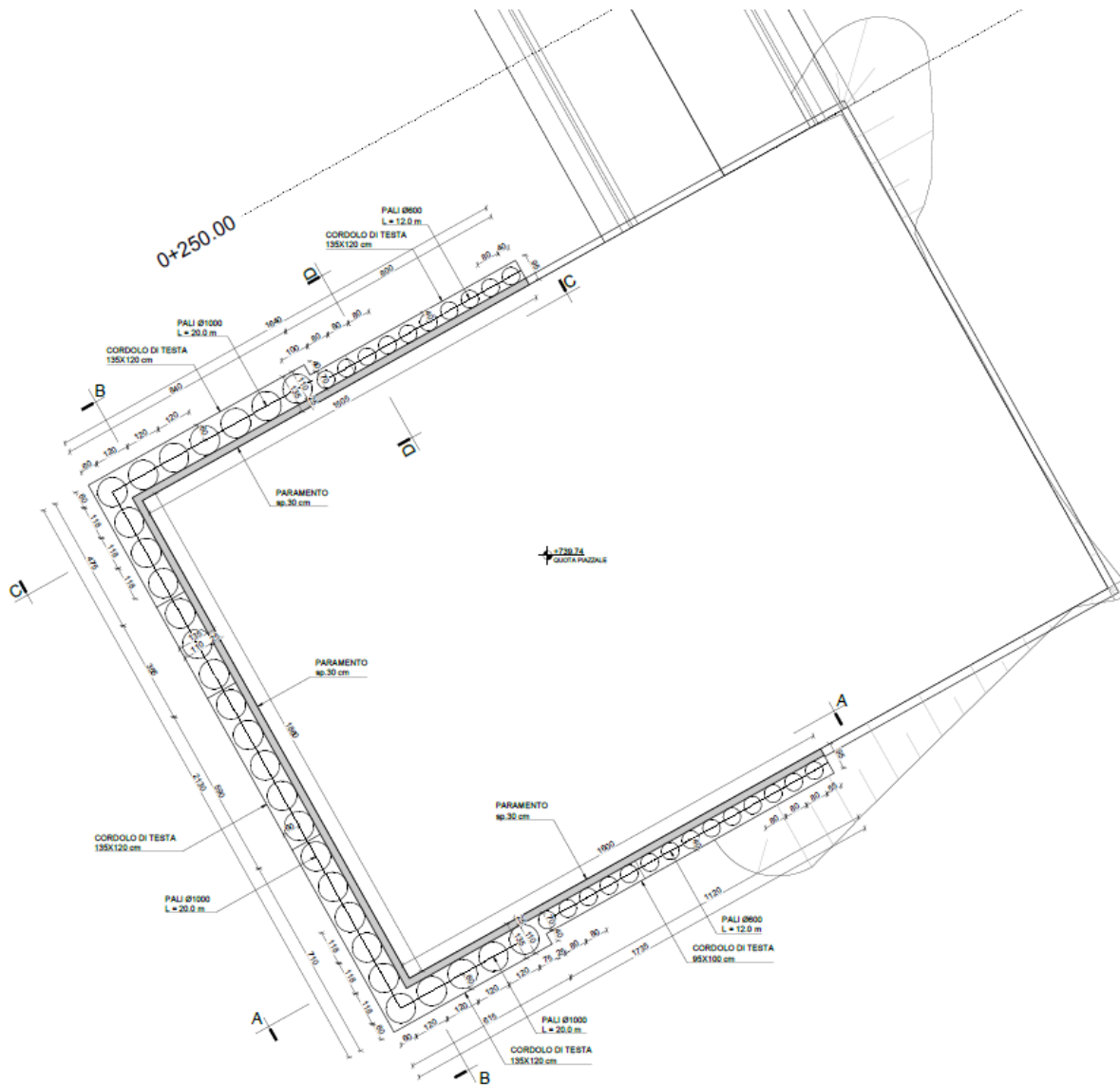
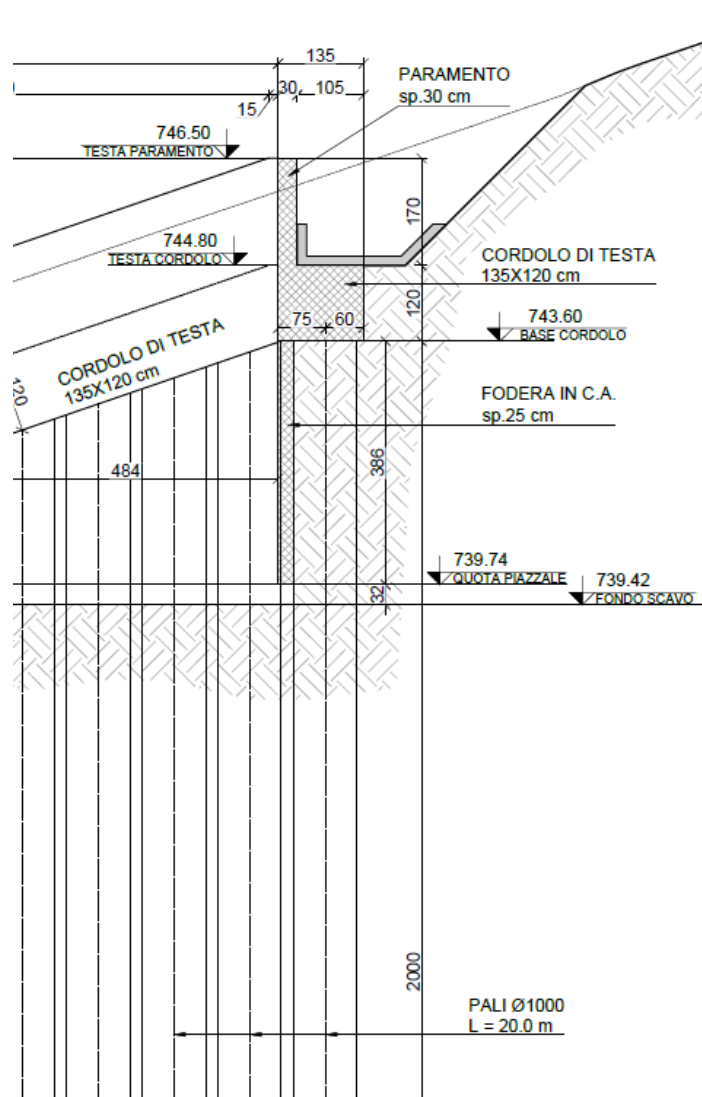


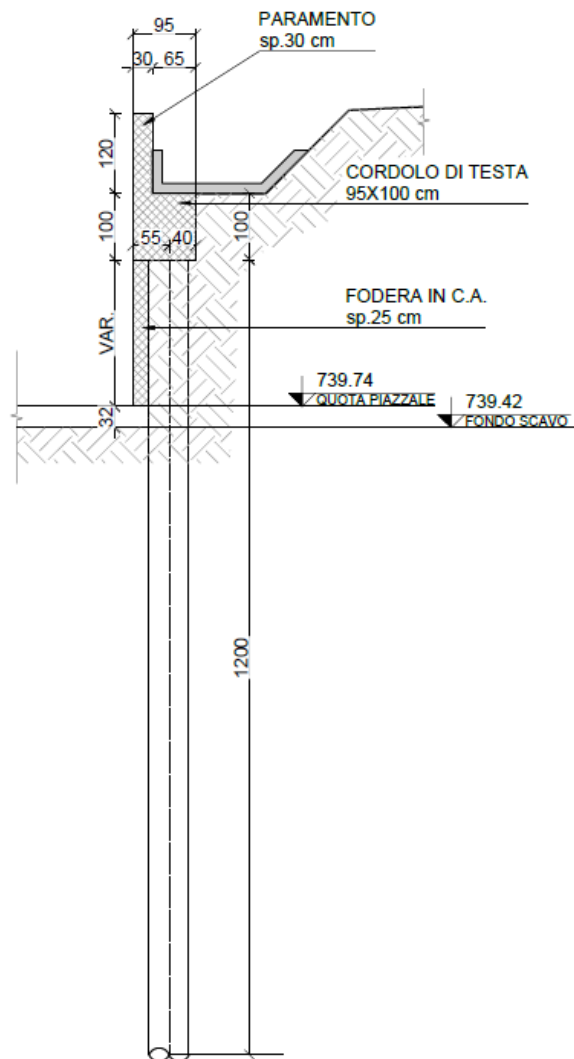
Figura 2.1 - Vista in pianta paratia definitiva NV24

Si riportano di seguito le caratteristiche dell'opera a carattere definitivo.

- Paratia Tipo 1: Paratia definitiva di pali Ø1000 mm a interasse 1,2 m, di lunghezza pari a 20,0 m.



- Paratia Tipo 2: Paratia definitiva di pali Ø600 mm a interasse 0,8 m, di lunghezza pari a 12,0 m.



3 NORMATIVE E DOCUMENTI DI RIFERIMENTO

Si riporta nel seguito l'elenco delle leggi e dei decreti di carattere generale, assunti come riferimento.

- Legge 5-1-1971 n° 1086: Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso, ed a struttura metallica”.
- Legge. 2 febbraio 1974, n. 64. Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche.
- D.M. 17 gennaio 2018 - Norme Tecniche per le Costruzioni
- Circolare 21 Gennaio 2019, n. 617 - Istruzioni per l'applicazione delle “Nuove norme tecniche per le costruzioni” di cui al D.M. 17 gennaio 2018.
- UNI EN 1992-1 “Progettazione delle strutture di calcestruzzo – Regole generali”.
- UNI EN 1992-2 “Progettazione delle strutture di calcestruzzo - Ponti”.
- UNI EN 1998-5 (Eurocodice 8) – Gennaio 2005: “Progettazione delle strutture per la resistenza sismica – Parte 5: Fondazioni, strutture di contenimento ed aspetti geotecnici”.
- UNI EN 206-1:2014: “Calcestruzzo - Specificazione, prestazione, produzione e conformità”.
- UNI 11104: “Calcestruzzo - Specificazione, prestazione, produzione e conformità – Istruzioni complementari per l'applicazione della EN 206-1”.
- “Linee guida sul calcestruzzo strutturale - Servizio Tecnico Centrale della Presidenza del Consiglio Superiore dei LL.PP.”.
- Regolamento (UE) N. 1299/2014 del 18 novembre 2014 della commissione Europea. Relativo alle specifiche tecniche di interoperabilità per il sottosistema “infrastruttura” del sistema ferroviario dell'Unione Europea, modificato dal Regolamento di esecuzione (UE) N°2019/776 della Commissione del 16 maggio 2019.

Si riporta, ora, l'elenco delle norme tecniche, delle circolari e delle istruzioni F.S. delle quali si è tenuto conto.

- RFI DTC SI MA IFS 001 E del Dicembre 2020 – Manuale di Progettazione delle Opere Civili.

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
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4 CARATTERISTICHE DEI MATERIALI

Calcestruzzo classe C12/15 (calcestruzzo magro)

	Var.	Valore	U.M.
Resistenza caratteristica cubica	R _{ck}	15.00	MPa

Paratia pali

Calcestruzzo classe C25/30

	Var.	Valore	U.M.
Resistenza caratteristica cubica a compressione	R _{ck}	30.00	MPa
Resistenza caratteristica cilindrica a compressione	f _{ck}	25.00	MPa
Resistenza media a trazione semplice	f _{ctm}	2.56	MPa
Resistenza caratteristica a trazione semplice	f _{ctk}	1.80	MPa
Coefficiente di sicurezza del materiale	γ _c	1.50	-
Coefficiente riduttivo per le resistenze di lunga durata	α _{cc}	0.85	-
Resistenza di calcolo a compressione	f _{cd}	14.17	MPa
Modulo elastico istantaneo	E _{cm}	31475.81	MPa

Acciaio B450C per strutture in conglomerato cementizio

	Var.	Valore	U.M.
Tensione caratteristica di rottura	f _{tk}	540.00	MPa
Tensione caratteristica di snervamento	f _{yk}	450.00	MPa
Coefficiente di sicurezza del materiale	γ _s	1.15	-
Tensione di snervamento di calcolo	f _{yk}	391.30	MPa
Modulo elastico	E _s	210000.00	MPa

Con riferimento a quanto riportato nel Manuale di progettazione RFI 2020 §2.5.2.2.3.2:

“Per copriferro delle armature si intende la distanza tra la superficie esterna dell’armatura, inclusi collegamenti e staffe, e la superficie di calcestruzzo più vicina”.

Per la definizione del copriferro minimo da adottare per i diversi elementi strutturali si è, dunque, fatto riferimento alla Tabella 2.5.2.2.3.2.-1 di seguito riportata.

Tabella 4.1 - Copriferro minimo – Stralcio MdP 2020 Tab. 2.5.2.2.3.2-1

Elemento strutturale	Copriferro minimo
Pali (di paratie o opere di sostegno), diaframmi e relativi cordoli di collegamento gettati in opera	60mm
Pali/diaframmi di fondazione gettati in opera	60mm
Pali di fondazione prefabbricati	60mm
Solettoni di fondazione, fondazioni armate	40mm
Fondazioni non armate (pozzi, sottoplinti, ecc.)	40mm
Cunette canalette e cordoli	40mm
Opere in elevazione in viste (pile, spalle, pulvini, baggioli)	40mm
Opere in elevazione con superfici interrate o non ispezionabili	40mm

La classe di esposizione scelta è XC4, pertanto si è in condizioni ambientali aggressive.

Tab. 4.1.III – Descrizione delle condizioni ambientali

Condizioni ambientali	Classe di esposizione
Ordinarie	X0, XC1, XC2, XC3, XF1
Aggressive	XC4, XD1, XS1, XA1, XA2, XF2, XF3
Molto aggressive	XD2, XD3, XS2, XS3, XA3, XF4

Tenuto di quanto sopra ed in ragione delle specifiche del MdP par. 2.5.2.2.3.2 per cui, in condizioni ambientali aggressive, è necessario incrementare i minimi di tabella di 10 mm, sono stati fissati per le strutture in oggetto i seguenti copriferri minimi:

Cordolo	C _{min}	7,00 cm
Pali	C _{min}	7,00 cm

5 STRATIGRAFIA E PARAMETRI GEOTECNICI

Sulla base delle indagini svolte, sintetizzate nei profili geotecnici e nelle relazioni geotecniche, cui si rimanda per approfondimenti, si evince la seguente caratterizzazione geotecnica:

Tabella 1 – Stratigrafia di progetto – Stratigrafia 1

Stratigrafia 1			
Strato	Profondità (m)	Facies	Descrizione
Strato 0	0,0 - 0,3	Vegetale	Terreno vegetale
Strato 1	0,3 – 5,9	A	Arenarie poco cementate
Strato 2	5,9 – 10,0	B	Argilla marnosa
Strato 3	>10,0	C	Argilla marnosa

Tabella 3– Parametri geotecnici caratteristici dei materiali – Stratigrafia 1

Strato	Profondità tetto strato	γ_n	φ'	c'	C_u	OCR	Eop (fondazioni)	Eop (opera di sostegno)	Cc	Cs	K
	[m da p.c.]	[kN/m ³]	[°]	[kPa]	[kPa]	[-]	[MPa]	[MPa]	[-]	[-]	[m/s]
1	0.3- 5,9	19	37	-	-	-	20	40	-	-	5E-5 – 5E-6
2	5,9 – 10,0	20,0	26	10	115	1	45	90	0,13	0,06	1E-8 - 1E-9
3	>10,0	20.5	24	20	250	1	50+1,0z*	100+2,0z*	-	-	1E-9 - 1E-10

z* = profondità dal tetto dello strato

6 CARATTERIZZAZIONE SISMICA DEL SITO

Per tutte le opere d'arte di progetto vengono adottati i seguenti parametri per la definizione dell'azione sismica:

- Classe d'uso: II
- Coefficiente d'uso CU = 1
- Vita nominale VN = 50 anni
- Categoria di suolo: C
- Categoria topografica: T1

L'azione sismica è stata calcolata per mezzo del foglio di calcolo Spettri-NTCver.1.0.3 messo a disposizione dal Consiglio Superiore dei Lavori Pubblici.

6.1 SPETTRI DI RISPOSTA

FASE 1. INDIVIDUAZIONE DELLA PERICOLOSITÀ DEL SITO

Ricerca per coordinate

LONGITUDINE

LATITUDINE

Ricerca per comune

REGIONE

PROVINCIA

COMUNE

Elaborazioni grafiche

Grafici spettri di risposta ▶▶▶

Variabilità dei parametri ▶▶▶

Elaborazioni numeriche

Tabella parametri ▶▶▶

Reticolo di riferimento



Controllo sul reticolo

- Sito esterno al reticolo
- Interpolazione su 3 nodi
- Interpolazione corretta

Interpolazione

La "Ricerca per comune" utilizza le ... coordinate ISTAT del comune per identificare il sito. Si sottolinea che ... all'interno del territorio comunale le azioni sismiche possono essere significativamente diverse da quelle così individuate e si consiglia, quindi, la "Ricerca per coordinate".

Nodi del reticolo intorno al sito



INTRO
FASE 1
FASE 2
FASE 3

FASE 2. SCELTA DELLA STRATEGIA DI PROGETTAZIONE

Vita nominale della costruzione (in anni) - V_N info

Coefficiente d'uso della costruzione - c_U info

Valori di progetto

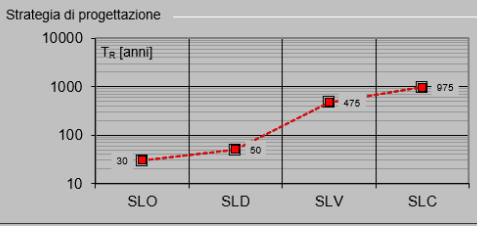
Periodo di riferimento per la costruzione (in anni) - V_R info

Periodi di ritorno per la definizione dell'azione sismica (in anni) - T_R info

Stati limite di esercizio - SLE {
 SLO - $P_{VR} = 81\%$
 SLD - $P_{VR} = 63\%$
 SLV - $P_{VR} = 10\%$
 Stati limite ultimi - SLU {
 SLC - $P_{VR} = 5\%$

Elaborazioni
 Grafici parametri azione
 Grafici spettri di risposta
 Tabella parametri azione

Strategia di progettazione



LEGENDA GRAFICO
 - - - - - Strategia per costruzioni ordinarie
 - - - - - Strategia scelta

FASE 3. DETERMINAZIONE DELL'AZIONE DI PROGETTO

Stato Limite
 Stato Limite considerato info

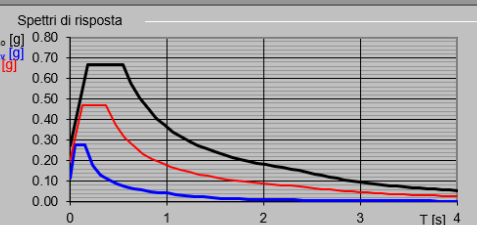
Risposta sismica locale
 Categoria di sottosuolo info $S_S = 1.418$ $C_C = 1.450$ info
 Categoria topografica info $h/H = 1.000$ $S_T = 1.000$ info
(h=quota sito, H=altezza rilievo topografico)

Compon. orizzontale
 Spettro di progetto elastico (SLE) Smorzamento ξ (%) $\eta = 1.000$ info
 Spettro di progetto inelastico (SLU) Fattore q_0 Regol. in altezza info

Compon. verticale
 Spettro di progetto Fattore q $\eta = 1/q = 1.000$ info

Elaborazioni
 Grafici spettri di risposta
 Parametri e punti spettri di risposta

Spettri di risposta



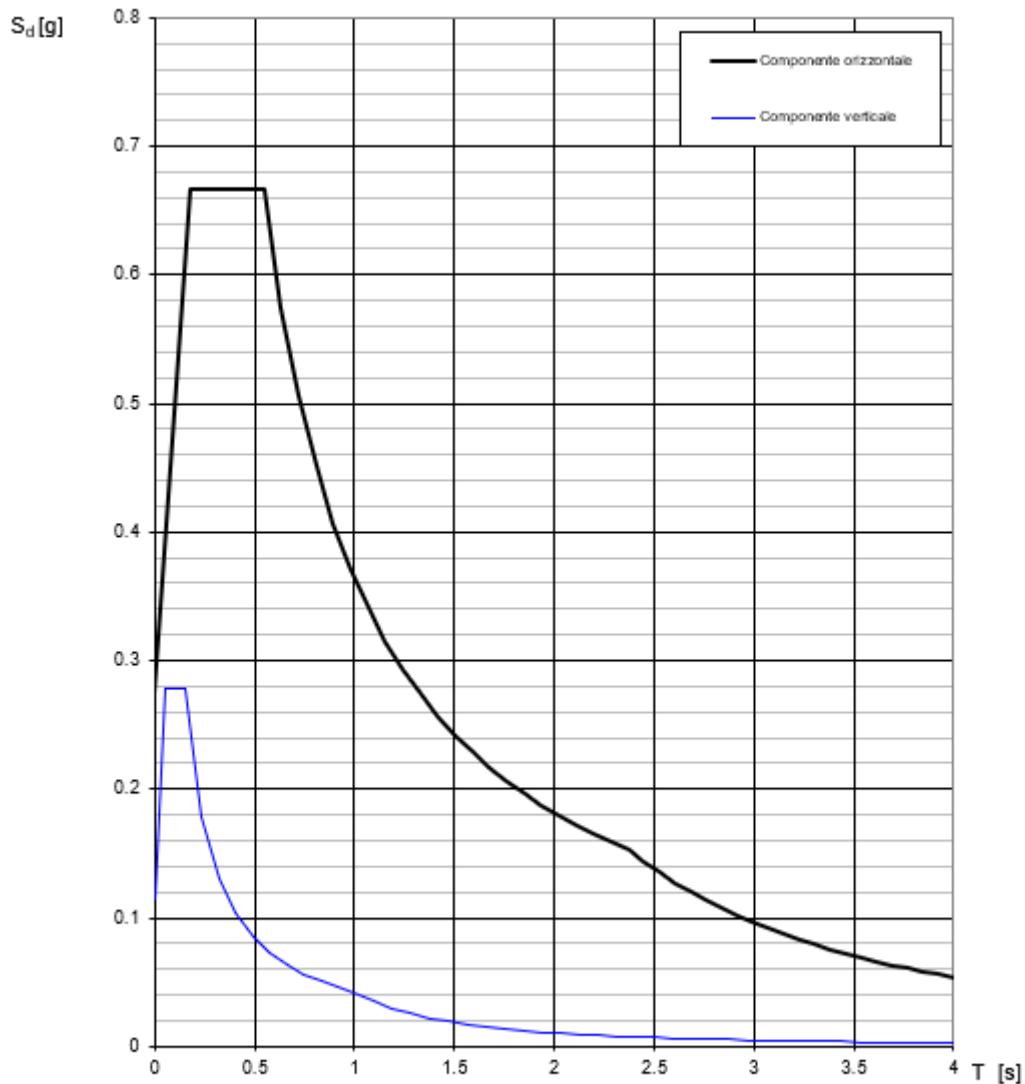
— Spettro di progetto - componente orizzontale
 — Spettro di progetto - componente verticale
 — Spettro elastico di riferimento (Cat. A-T1, $\xi = 5\%$)

Tabella 6.1 - Parametri sismici sito in esame

Stato Limite	a_g (g)	F_0 (-)	T_c^* (s)	S_S (-)	C_C (g)	S_T (-)
SLV	0.193	2.437	0.376	1.418	1.450	1.00
SLD	0.069	2.363	0.316	1.500	1.536	1.00

6.1.1 Spettri di risposta SLV

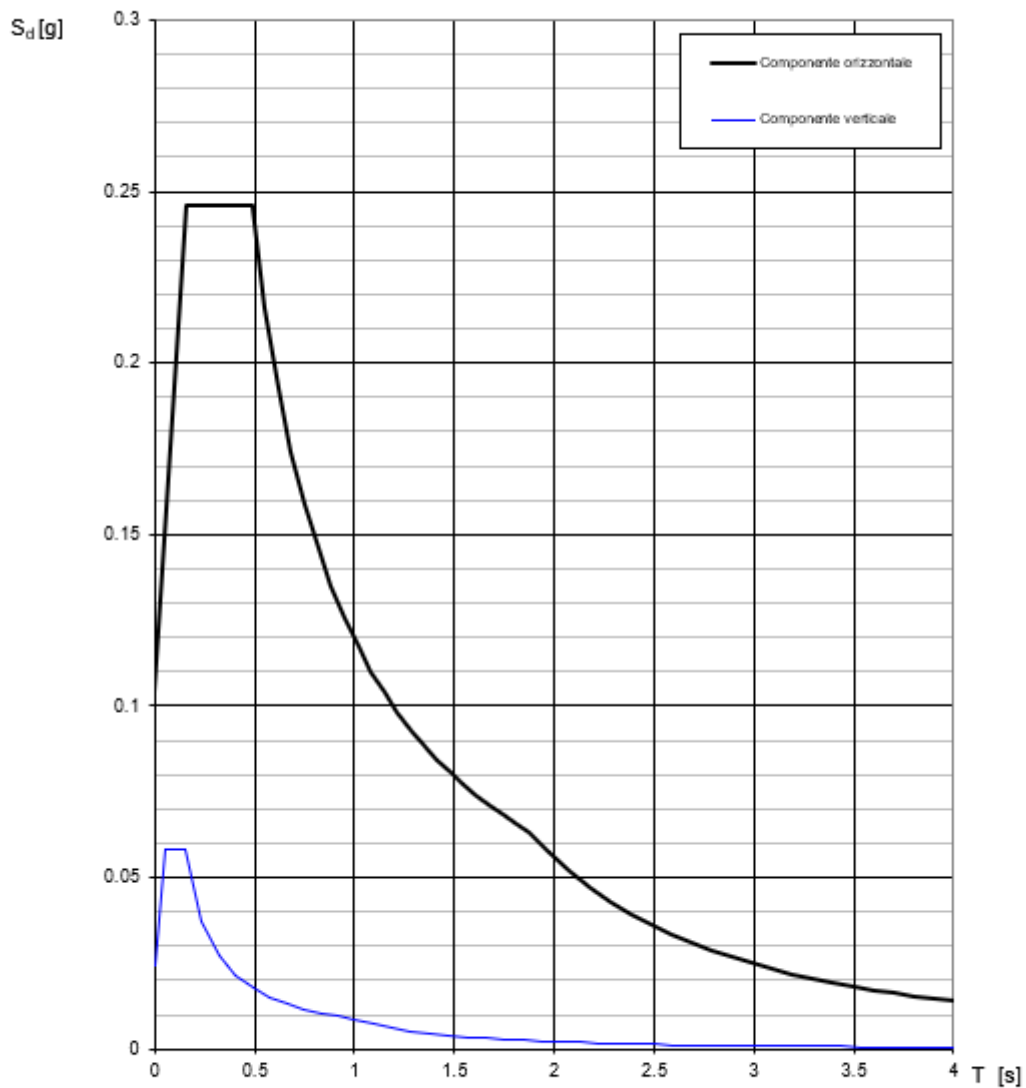
Spettri di risposta (componenti orizz. e vert.) per lo stato li SLV



La verifica dell' idoneità del programma, l' utilizzo dei risultati da esso ottenuti sono onere e responsabilità esclusiva dell' utente. L' ANIDIS non potrà essere ritenuta responsabile dei danni risultanti dall' utilizzo dello stesso.

6.1.2 Spettri di risposta SLD

Spettri di risposta (componenti orizz. e vert.) per lo stato li SLD



La verifica dell' idoneità del programma, l' utilizzo dei risultati da esso ottenuti sono onere e responsabilità esclusiva dell' utente. L' ANDIS non potrà essere ritenuta responsabile dei danni risultanti dall' utilizzo dello stesso.

6.1.3 Impostazione parametri software **PARATIE**

Si riporta la schermata di input per la definizione dell'azione sismica all'interno del software di calcolo utilizzato.

Il valore dello spostamento U_s utilizzato è $0.005 H$, dove H è l'altezza della paratia sino a fondo scavo.

Opzioni Sisma (attive solo nell'ultima fase)

Includi Azione Sismica

1. Definizione accelerazione

Coefficiente accel. base a_g / g

Fattore importanza I

Coefficiente S_s

Coefficiente S_T

$a_{max} / g =$

2. Accelerazione di calcolo

Eurocodice

Calcolo coefficiente di risposta R

Input diretto

Da formule

U_s m T_c s

V_{max} m/s V_{max}/a_{max}

$R =$

NTC

$U_{s=}$ m

$\beta =$

$\alpha =$

$k_h = \alpha \beta a_{max}$

3. Definizione calcolo

Modalità spinta Paratia fuori terra
 Paratia intera

Comportamento idraulico Terreno pervio
 Terreno impervio

k_{vu} (% k_h)

k_{vd} (% k_h)

R_u

Includi inerzia paratia

4. Metodo di calcolo

Procedura Automatica (Paratie)

Pressione di Wood [0-1]

Valore Applicato


Manuale (Carichi Esterni)

Comportamento Paratia Flessibile (usa k_h)
 Rigido (usa a_{max})

Metodo Wood
 Mononobe-Okabe
 Semirigido

$B =$

$\alpha_1 =$ $\alpha_2 =$

Correlazione $\alpha_1 - \alpha_2$ 

a_{max} / g (without ductility) = k_h / g (including ductility) = (NTC)

Figura 6.1 - Condizione sismica SLV – Paratia 1

Opzioni Sisma (attive solo nell'ultima fase)

Includi Azione Sismica

1. Definizione accelerazione

Coefficiente accel. base a_g / g NTC

Fattore importanza I

Coefficiente S_s

Coefficiente S_T

$a_{max} / g =$

2. Accelerazione di calcolo

Eurocodice

Calcolo coefficiente di risposta R

Input diretto

Da formule

U_s m T_c s

V_{max} m/s V_{max}/a_{max} >

R= >

NTC

$U_{s=}$ m

$\beta=$ >

$\alpha=$ >

$k_h = \alpha \beta a_{max}$

3. Definizione calcolo

Modalità spinta Paratia fuori terra
 Paratia intera

Comportamento idraulico Terreno pervio
 Terreno impervio

k_{vu} (% k_h)

k_{vd} (% k_h)

R_u

Includi inerzia paratia

4. Metodo di calcolo

Procedura Automatica (Paratie)

Pressione di Wood [0-1]


Valore Applicato

Manuale (Carichi Esterni)

Comportamento Paratia Flessibile (usa k_h)
 Rigido (usa a_{max})

Metodo Wood
 Mononobe-Okabe
 Semirigido

B= Correlazione $\alpha_1 - \alpha_2$

$\alpha_1=$ 

$\alpha_2=$

a_{max} / g (without ductility) = k_h / g (including ductility) = (NTC)

Applica OK Annulla

Figura 6.2 - Condizione sismica SLD – Paratia 1

Si riporta la schermata di input per la definizione dell'azione sismica all'interno del software di calcolo utilizzato.

Il valore dello spostamento U_s utilizzato è 0.005 H, dove H è l'altezza della paratia sino a fondo scavo.

Opzioni Sisma (attive solo nell'ultima fase)

Includi Azione Sismica

1. Definizione accelerazione

Coefficiente accel. base a_g / g

Fattore importanza I

Coefficiente S_s

Coefficiente S_T

$a_{max} / g =$

2. Accelerazione di calcolo

Eurocodice

Calcolo coefficiente di risposta R

Input diretto

Da formule

U_s m T_c s

V_{max} m/s V_{max}/a_{max} >

R= >

NTC

$U_s =$ m

$\beta =$ >

$\alpha =$ >

$k_h = \alpha \beta a_{max}$

3. Definizione calcolo

Modalità spinta Paratia fuori terra
 Paratia intera

Comportamento idraulico Terreno pervio
 Terreno impervio

k_{vu} (% k_h)

k_{vd} (% k_h)

R_u

Includi inerzia paratia

4. Metodo di calcolo

Procedura Automatica (Paratie)

Pressione di Wood [0-1]

Valore Applicato

Manuale (Carichi Esterni)

Comportamento Paratia Flessibile (usa k_h)
 Rigido (usa a_{max})

Metodo Wood
 Mononobe-Okabe
 Semirigido

B= Correlazione $\alpha_1 - \alpha_2$

$\alpha_1 =$

$\alpha_2 =$

a_{max} / g (without ductility) = k_h / g (including ductility) = (NTC)

Figura 6.3 - Condizione sismica SLV – Paratia 2

Opzioni Sisma (attive solo nell'ultima fase)

Includi Azione Sismica

1. Definizione accelerazione

Coefficiente accel. base a_g / g NTC

Fattore importanza I

Coefficiente S_s

Coefficiente S_T

$a_{max} / g =$

2. Accelerazione di calcolo

Eurocodice

Calcolo coefficiente di risposta R

Input diretto

Da formule

U_s m T_c s

V_{max} m/s V_{max}/a_{max} >

R = >

NTC

$U_{s=}$ m

$\beta =$ >

$\alpha =$ >

$k_h = \alpha \beta a_{max}$

3. Definizione calcolo

Modalità spinta Paratia fuori terra
 Paratia intera

Comportamento idraulico Terreno pervio
 Terreno impervio

k_{vu} (% k_h)

k_{vd} (% k_h)

R_u

Includi inerzia paratia

4. Metodo di calcolo

Procedura Automatica (Paratie)

Pressione di Wood [0-1]


Valore Applicato

Manuale (Carichi Esterni)

Comportamento Paratia Flessibile (usa k_h)
 Rigido (usa a_{max})

Metodo Wood
 Mononobe-Okabe
 Semirigido

B = Correlazione $\alpha_1 - \alpha_2$

$\alpha_1 =$ 

$\alpha_2 =$

a_{max} / g (without ductility) = k_h / g (including ductility) = (NTC)

Applica OK Annulla

Figura 6.4 - Condizione sismica SLD – Paratia 2

7 APPROCCI NORMATIVI

Le verifiche delle strutture di sostegno sono state condotte nei riguardi dei seguenti stati limite ultimi (SLU):

- collasso del complesso opera-terreno;
- instabilità globale dell'insieme terreno-opera
- raggruppimento della resistenza elementi strutturali parete;

Come prescritto dal DM 17/01/2018 per le strutture di sostegno flessibili, è stato adottato l'Approccio Progettuale 1 con le due combinazioni di coefficienti parziali (tabelle 6.2.I, 6.2.II e 6.5.I del DM 17/01/2018):

- combinazione 1: A1 + M1 + R1
- combinazione 2: A2 + M2 + R1.

Il dimensionamento geotecnico dell'opera è stato condotto con la verifica di stati limite ultimi GEO, applicando la Combinazione 2 (A2+M2+R1). Per le verifiche di stati limite ultimi STR l'analisi è stata condotta la combinazione 1 (A1+M1+R1), in condizioni statiche.

Il corretto dimensionamento nei confronti degli SLU assicura che gli spostamenti dell'opera siano compatibili con le esigenze di funzionalità della stessa; pertanto, in assenza di fabbricati o altre opere da salvaguardare a ridosso delle stesse, non si ritengono necessarie ulteriori valutazioni di verifica nei confronti degli SLE.

Per le verifiche di stabilità globale è stato applicato l'Approccio 1- Combinazione 2 (A2+M2+R2 – tab. 6.2.I, 6.2.II e 6.8.I del DM 17/01/2018).

Tab. 6.2.I – Coefficienti parziali per le azioni o per l'effetto delle azioni

	Effetto	Coefficiente Parziale γ_F (o γ_E)	EQU	(A1)	(A2)
Carichi permanenti G_1	Favorevole	γ_{G1}	0,9	1,0	1,0
	Sfavorevole		1,1	1,3	1,0
Carichi permanenti $G_2^{(1)}$	Favorevole	γ_{G2}	0,8	0,8	0,8
	Sfavorevole		1,5	1,5	1,3
Azioni variabili Q	Favorevole	γ_Q	0,0	0,0	0,0
	Sfavorevole		1,5	1,5	1,3

⁽¹⁾ Per i carichi permanenti G_2 si applica quanto indicato alla Tabella 2.6.I. Per la spinta delle terre si fa riferimento ai coefficienti γ_{G1}

Tab. 6.2.I – Coefficienti parziali per le azioni o per l'effetto delle azioni

	Effetto	Coefficiente Parziale γ_F (o γ_E)	EQU	(A1)	(A2)
Carichi permanenti G_1	Favorevole	γ_{G1}	0,9	1,0	1,0
	Sfavorevole		1,1	1,3	1,0
Carichi permanenti $G_2^{(1)}$	Favorevole	γ_{G2}	0,8	0,8	0,8
	Sfavorevole		1,5	1,5	1,3
Azioni variabili Q	Favorevole	γ_Q	0,0	0,0	0,0
	Sfavorevole		1,5	1,5	1,3

⁽¹⁾ Per i carichi permanenti G_2 si applica quanto indicato alla Tabella 2.6.I. Per la spinta delle terre si fa riferimento ai coefficienti γ_{G1}

8 VERIFICHE

8.1 VERIFICHE STRUTTURALI

8.1.1 Verifica di resistenza a pressoflessione (SLU)

La verifica di resistenza a pressoflessione sugli elementi viene condotta calcolando il momento resistente massimo della sezione in presenza o meno di sforzo assiale di compressione. Il calcolo si basa sull'assunzione dei diagrammi di calcolo a tensione-deformazione del calcestruzzo e dell'acciaio previsti dalla normativa. La suddetta verifica si ritiene soddisfatta se risulta rispettata la seguente disuguaglianza:

$$M_{Rd} = M_{Rd}(N_{Ed}) \geq M_{Ed}$$

dove: N_{Ed} è il valore di calcolo della componente assiale (sforzo normale) dell'azione; M_{Rd} è il valore di calcolo del momento resistente corrispondente a N_{Ed} ; M_{Ed} è il valore di calcolo della componente flettente dell'azione.

8.1.2 Verifica di resistenza a taglio (SLU)

La verifica di resistenza nei confronti delle sollecitazioni taglianti è stata eseguita nel rispetto delle prescrizioni riportate al paragrafo §4.1.2.1.3 delle NTC 2018. Si è dapprima valutato il soddisfacimento delle verifiche considerando elementi strutturali sprovvisti di armature trasversali resistenti a taglio. Laddove la verifica non è risultata soddisfatta si è proceduto al calcolo del taglio resistente considerando il caso di elementi provvisti di armature trasversali resistenti al taglio.

Per le verifiche a taglio degli elementi con armatura resistente a taglio, si è adottato il criterio dell'inclinazione variabile della biella compressa.

8.1.3 Verifica delle tensioni di esercizio (SLE)

Le verifiche tensionali sono state eseguite in ottemperanza alle NTC 2018 e a quanto prescritto dal MdP 2020 §2.5.1.8.3.2.1 per le strutture in calcestruzzo armato ordinario.

2.5.1.8.3.2.1 Valori limite delle tensioni

Strutture in C.A.

Tensioni di compressione del calcestruzzo

Devono essere rispettati i seguenti limiti per le tensioni di compressione nel calcestruzzo:

- Per combinazione di carico caratteristica (rara): $0,55 f_{ck}$;
- Per combinazioni di carico quasi permanente: $0,40 f_{ck}$;
- Per spessori minori di 5 cm, le tensioni normali limite di esercizio sono ridotte del 30%.

Tensioni di trazione nell'acciaio

Per le armature ordinarie, la massima tensione di trazione sotto la combinazione di carico caratteristica (rara) non deve superare $0,75 f_{yk}$.

8.1.4 Verifica allo stato limite di fessurazione (SLE)

Le verifiche di fessurazione sono state eseguite in ottemperanza alle NTC 2018 e a quanto riportato nel MdP RFI 2020 §2.5.1.8.3.2.4.

2.5.1.8.3.2.4 Requisiti concernenti la fessurazione per strutture in C.A., C.A.P. e miste acciaio-calcestruzzo

Si rimanda integralmente al par. 4.1.2.2.4 del DM del 17.01.2018 di seguito riportato con le integrazioni e i chiarimenti elencati nel seguito.

“4.1.2.2.4 Stato limite di fessurazione

In ordine di severità decrescente, per la combinazione di azioni prescelta, si distinguono i seguenti stati limite:

- stato limite di decompressione, nel quale la tensione normale è ovunque di compressione ed al più uguale a 0;*
- stato limite di formazione delle fessure, nel quale la tensione normale di trazione nella fibra più sollecitata è:*

$$\sigma_t = \frac{f_{ctm}}{1,2} \quad [4.1.13]$$

dove f_{ctm} è definito nel § 11.2.10.2;

- stato limite di apertura delle fessure, nel quale il valore limite di apertura della fessura calcolato al livello considerato è pari ad uno dei seguenti valori nominali:*

$$w_1 = 0,2 \text{ mm} \quad w_2 = 0,3 \text{ mm} \quad w_3 = 0,4 \text{ mm}''$$

Lo stato limite di fessurazione deve essere fissato in funzione delle condizioni ambientali e della sensibilità delle armature alla corrosione, come descritto nel seguito.

Stato limite di decompressione

Le tensioni sono calcolate in base alle caratteristiche geometriche e meccaniche della sezione omogeneizzata; per tutte le strutture precomprese, sia a fili, sia a trefoli che a barre, nelle zone in cui la struttura è considerata precompressa, nella combinazione caratteristica (rara) dello SLE non devono verificarsi tensioni di trazioni.

Stato limite di apertura delle fessure

L'apertura convenzionale delle fessure, calcolata con la combinazione caratteristica (rara) per gli SLE, dovrà risultare:

- $\delta_f \leq w_1$ per strutture in condizioni ambientali aggressive e molto aggressive, così come identificate nel par. 4.1.2.2.4 del DM 17.01.2018, per tutte le strutture a permanente contatto con il terreno e per le zone non ispezionabili di tutte le strutture;
- $\delta_f \leq w_2$ per strutture in condizioni ambientali ordinarie secondo il citato paragrafo del DM 17.01.2018.

Si fa comunque presente che per le sole testate delle travi in C.A.P., se dovessero verificarsi micro fessurazioni, queste non dovranno essere di ampiezza superiore a 0,10 mm. Le suddette micro fessure, dopo la loro accettazione, andranno trattate con materiali idonei e secondo procedure da concordare con le FERROVIE.

Essendo l'opera oggetto di studio una “*struttura a permanente contatto con il terreno*”, sebbene le condizioni ambientali siano ordinarie, si è verificato il limite di apertura delle fessure in **combinazione rara** ponendo $\delta_f \leq w_1$ anziché a w_2 .

A ragione di ciò, le verifiche di fessurazione, saranno condotte nei soli riguardi della combinazione rara, in quanto combinazione più gravosa rispetto alle combinazioni frequente e quasi permanente, previste da NTC, con limiti di apertura maggiori.

8.2 VERIFICHE GEOTECNICHE

Per quello che riguarda le verifiche di collasso terreno opera, l'analisi di interazione terreno struttura permette di valutare l'aliquota di mobilitazione della resistenza passiva nel terreno a valle dell'opera di sostegno.

Supponendo che a monte venga completamente attinta la resistenza attiva, ipotesi ragionevole per le opere considerate, il margine di sicurezza nei confronti di un meccanismo di collasso viene esplicitato dimostrando che, durante tutte le fasi di scavo, il rapporto di mobilitazione della resistenza passiva si mantenga minore dell'unità, ovvero che non venga completamente attinta tale resistenza nel terreno di valle.

Per il calcolo delle spinte sono state utilizzate le seguenti formulazioni, presenti nel software:

- coefficiente di spinta a riposo K_0 con formula di Kulhavy & Mayne;
- coefficiente di spinta attiva e passiva con le relazioni di Lancellotta (2006), in cui l'angolo di attrito terreno-parete δ è stato posto pari a $2/3\phi'$

9 MODELLO DI CALCOLO

L'analisi è stata effettuata per fasi (stage), al fine di rappresentare le sollecitazioni durante le diverse fasi di costruzione. La modellazione è stata eseguita tramite il software di calcolo "ParatiePlus v. 22.0.7" della Ceas s.r.l. Nei paragrafi che seguono si riporta la geometria della sezione di paratia descritta al cap. 2, con la suddivisione in stage o fasi di calcolo.

Ai fini del dimensionamento è stata considerata una modellazione ed un'analisi in condizioni drenate, assimilando il comportamento delle argille a terreni sabbiosi/ghiaiosi e tenendo in conto, in misura cautelativa visti i parametri meccanici risultanti da caratterizzazione geotecnica, i valori dei parametri di resistenza drenati.

Si rimanda ad una successiva fase per un'analisi più di dettaglio del comportamento drenato / non drenato dei terreni e relative fasi.

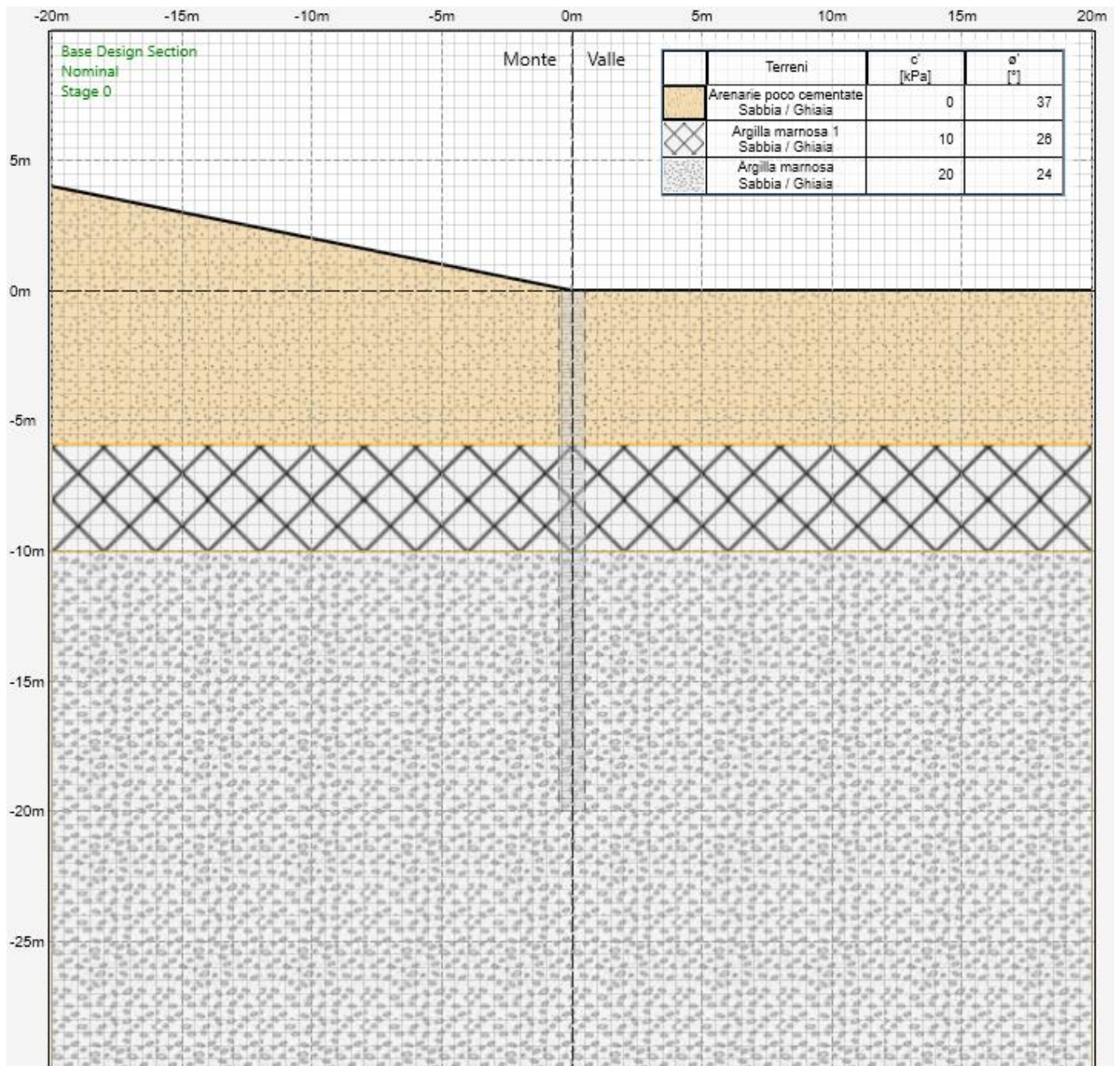
9.1 PARATIA TIPO 1

La tabella che segue riassume le caratteristiche geometriche degli elementi che compongono la paratia e le armature del palo, dimensionate sulla base delle sollecitazioni riportate ai capitoli seguenti.

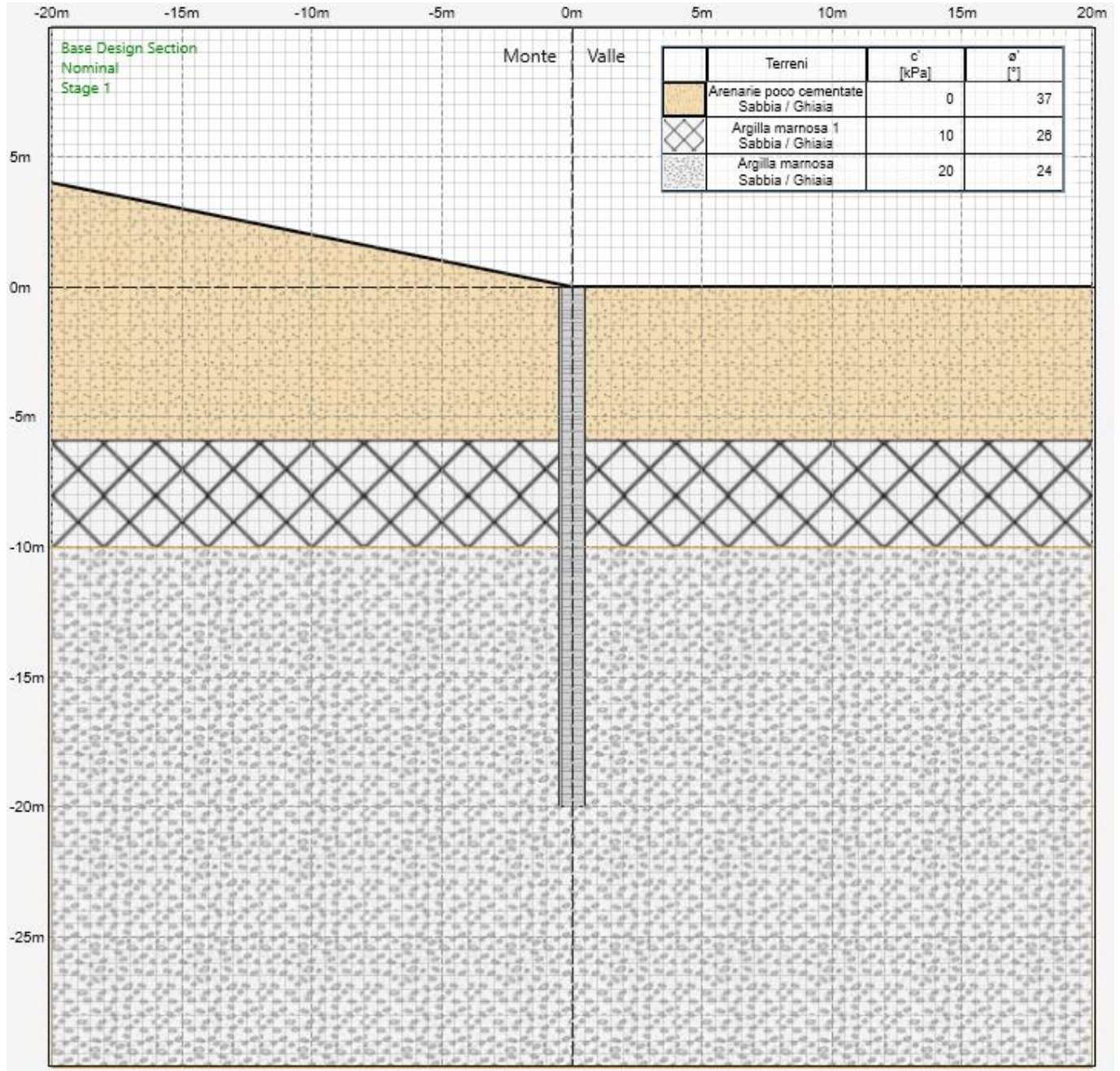
PARATIA DEFINITIVA DI PALI - TIPO 1		
H _{scavo} ,	8.0	m
L _{paratia} ,	20.0	m
PALI (C25/30)	Φ (mm)	1000
	i (mm)	1200
Armatura	Longitudinale N x D (mm)	42 x Φ30
	Trasversale D (mm) / s (mm)	Φ12 / 150

9.1.1 Stage di Calcolo

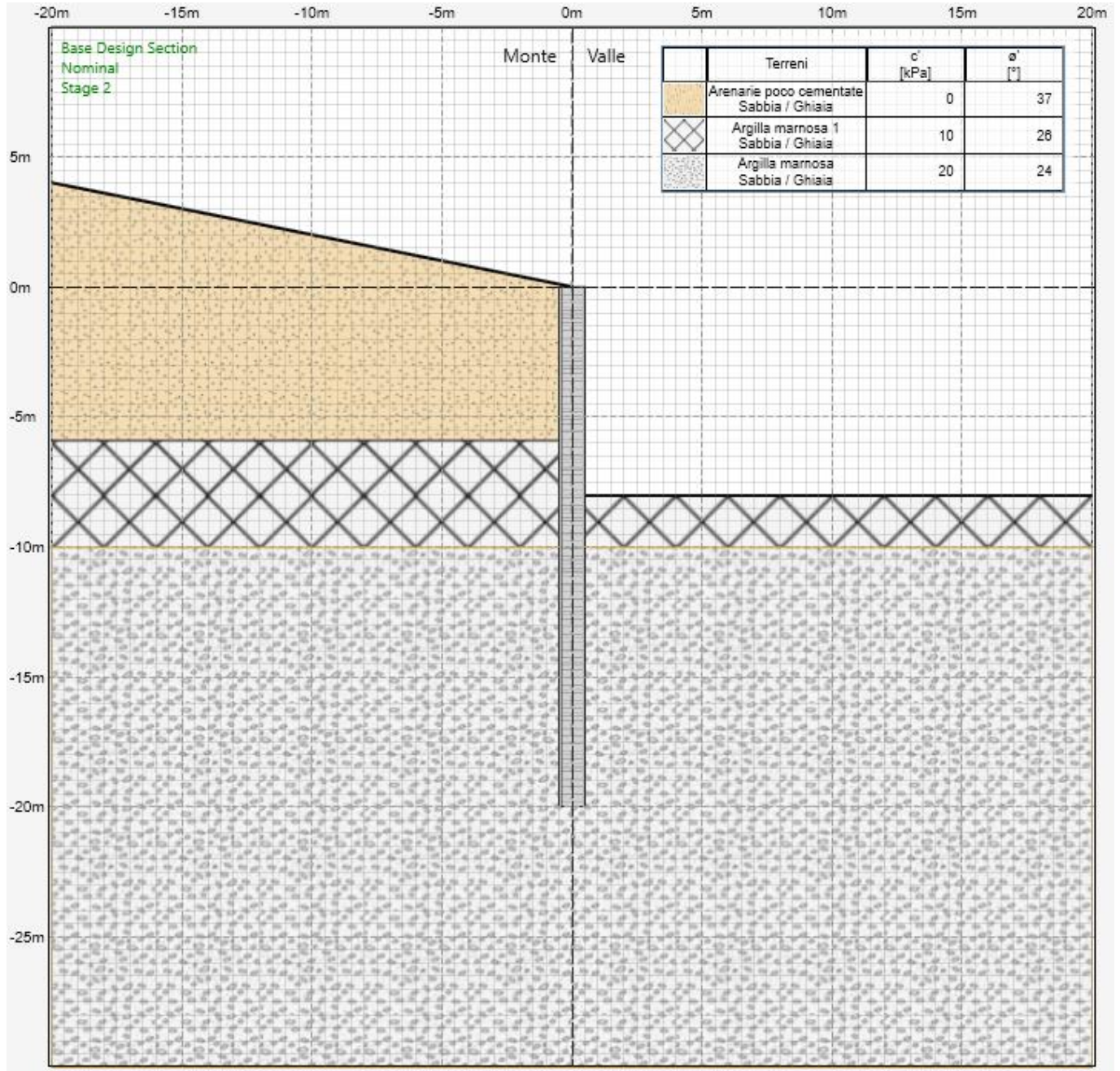
Stage 0: Ricostruzione dello stato tensionale.



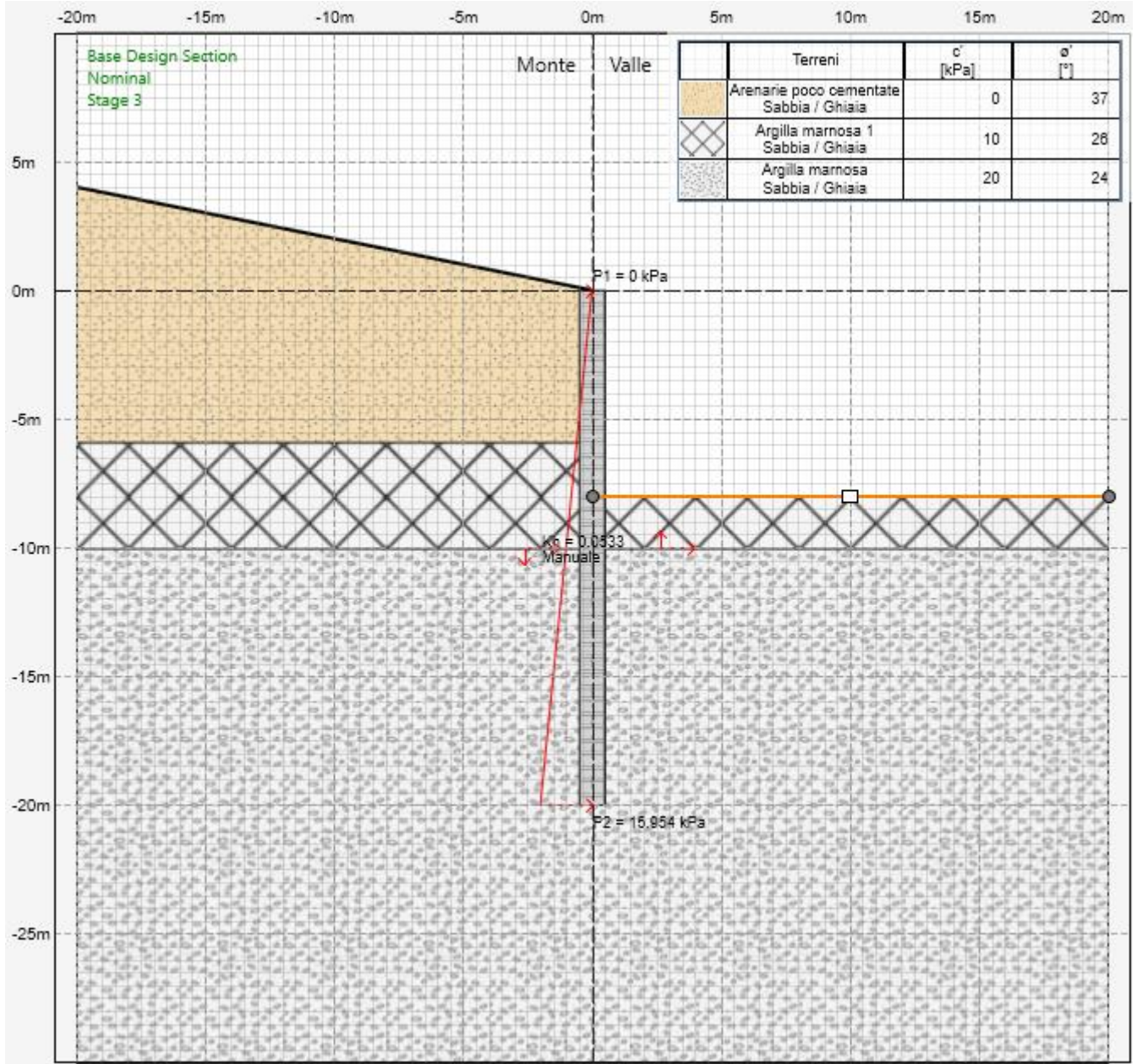
Stage 1: Attivazione paratia.



Stage 2: Scavo fino a fondo scavo



Stage 3: Presenza di azione sismica



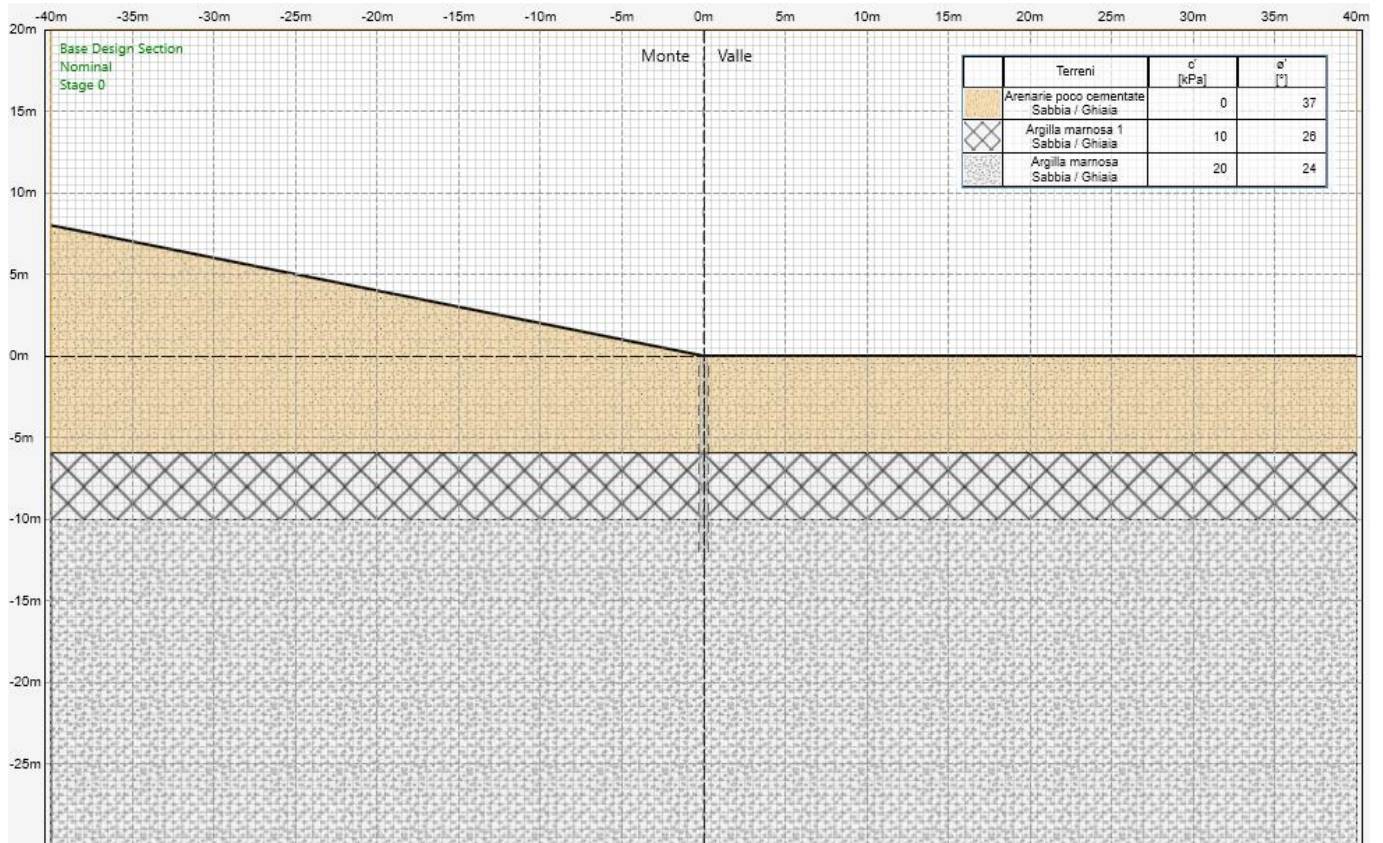
9.2 PARATIA TIPO 2

La tabella che segue riassume le caratteristiche geometriche degli elementi che compongono la paratia e le armature del palo, dimensionate sulla base delle sollecitazioni riportate ai capitoli seguenti.

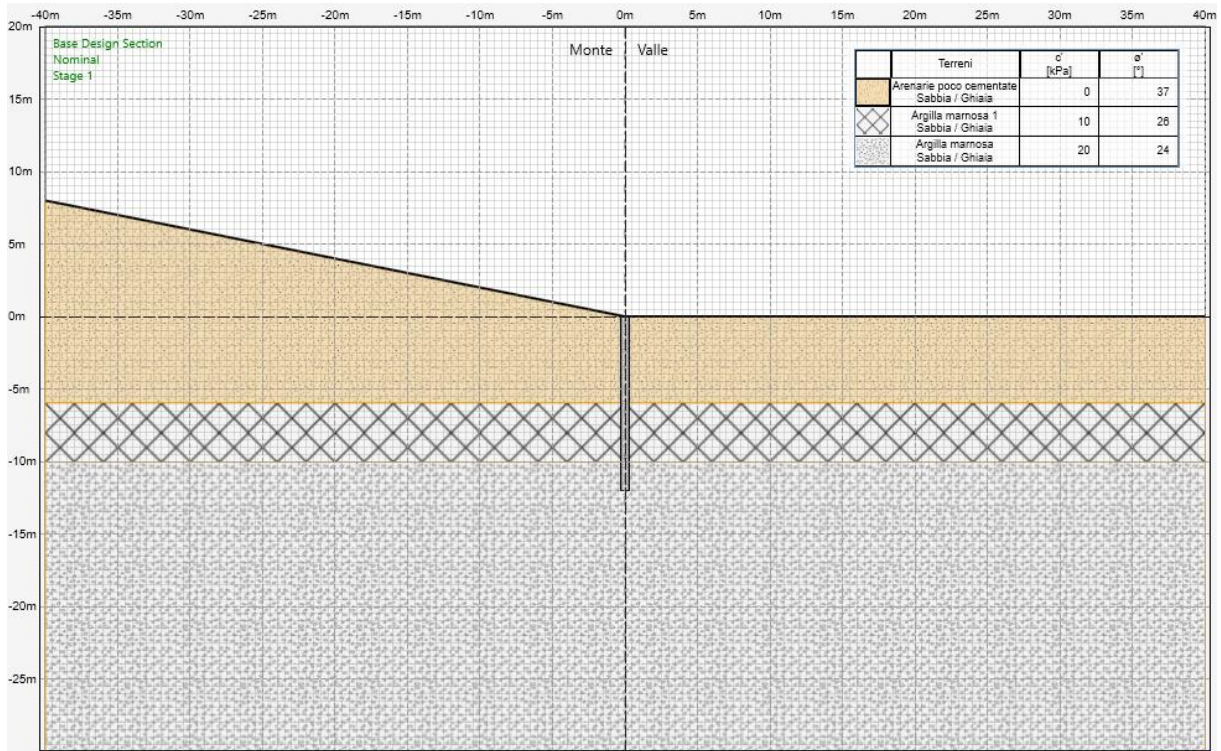
PARATIA DEFINITIVA DI PALI - TIPO 2		
H _{scavo, calcolo}	5.0	m
L _{paratia,}	12.0	m
PALI (C25/30)	Φ (mm)	600
	i (mm)	800
Armatura	Longitudinale N x D (mm)	17 x Φ24
	Trasversale D (mm) / s (mm)	Φ12 / 150

9.2.1 Stage di Calcolo

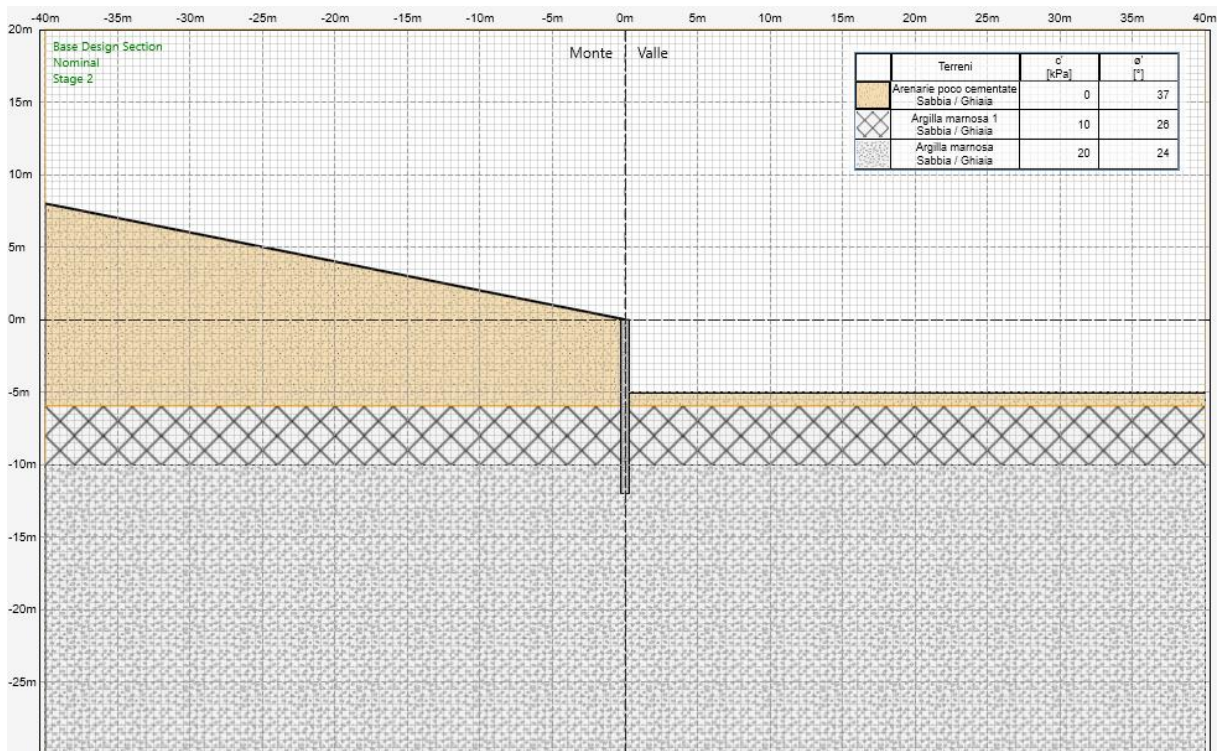
Stage 0: Ricostruzione dello stato tensionale.



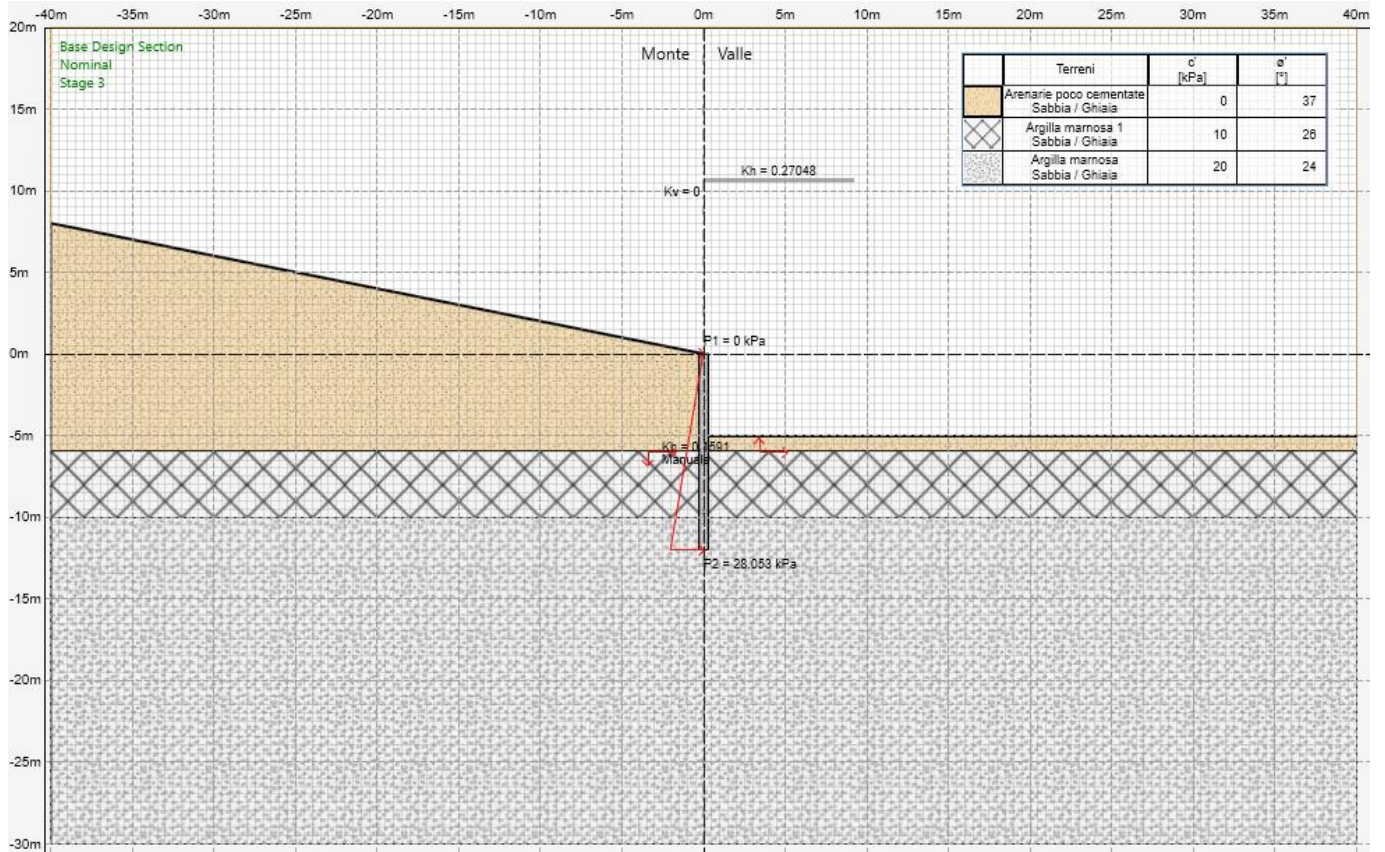
Stage 1: Attivazione paratia.



Stage 2: Scavo fino a fondo scavo



Stage 3: Presenza di azione sismica



10 RISULTATI PARATIA TIPO 1

10.1 Verifiche deformabilità

Si riportano i massimi spostamenti orizzontali in condizione statica ed in condizione sismica.

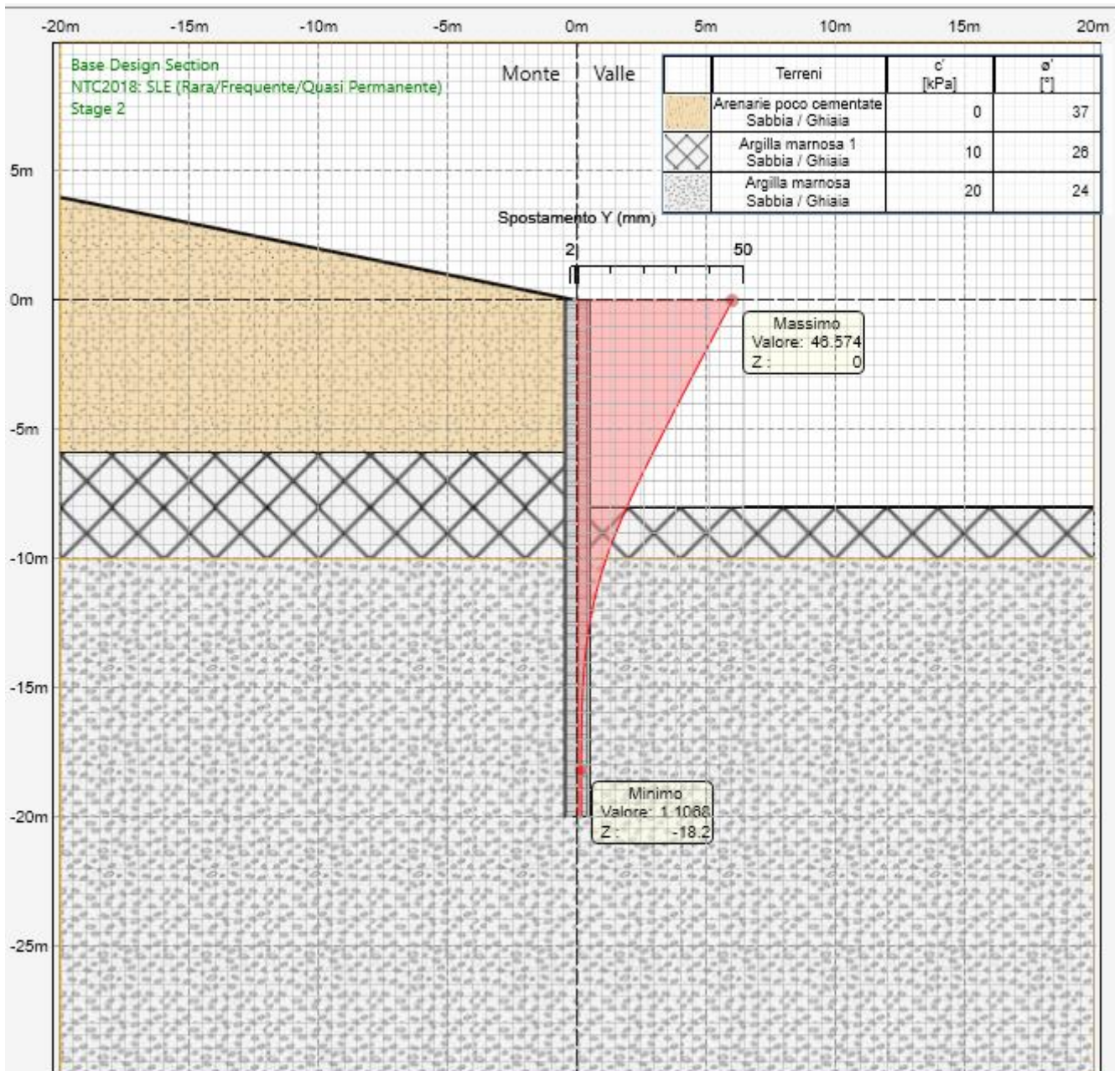


Figura 10.1 - Spostamenti orizzontali in combinazione statica (SLE) – Paratia T1

Lo spostamento massimo in condizione statica è pari a 46,57 mm, pertanto, poiché il valore è inferiore all'1% dell'altezza h si ritiene accettabile.

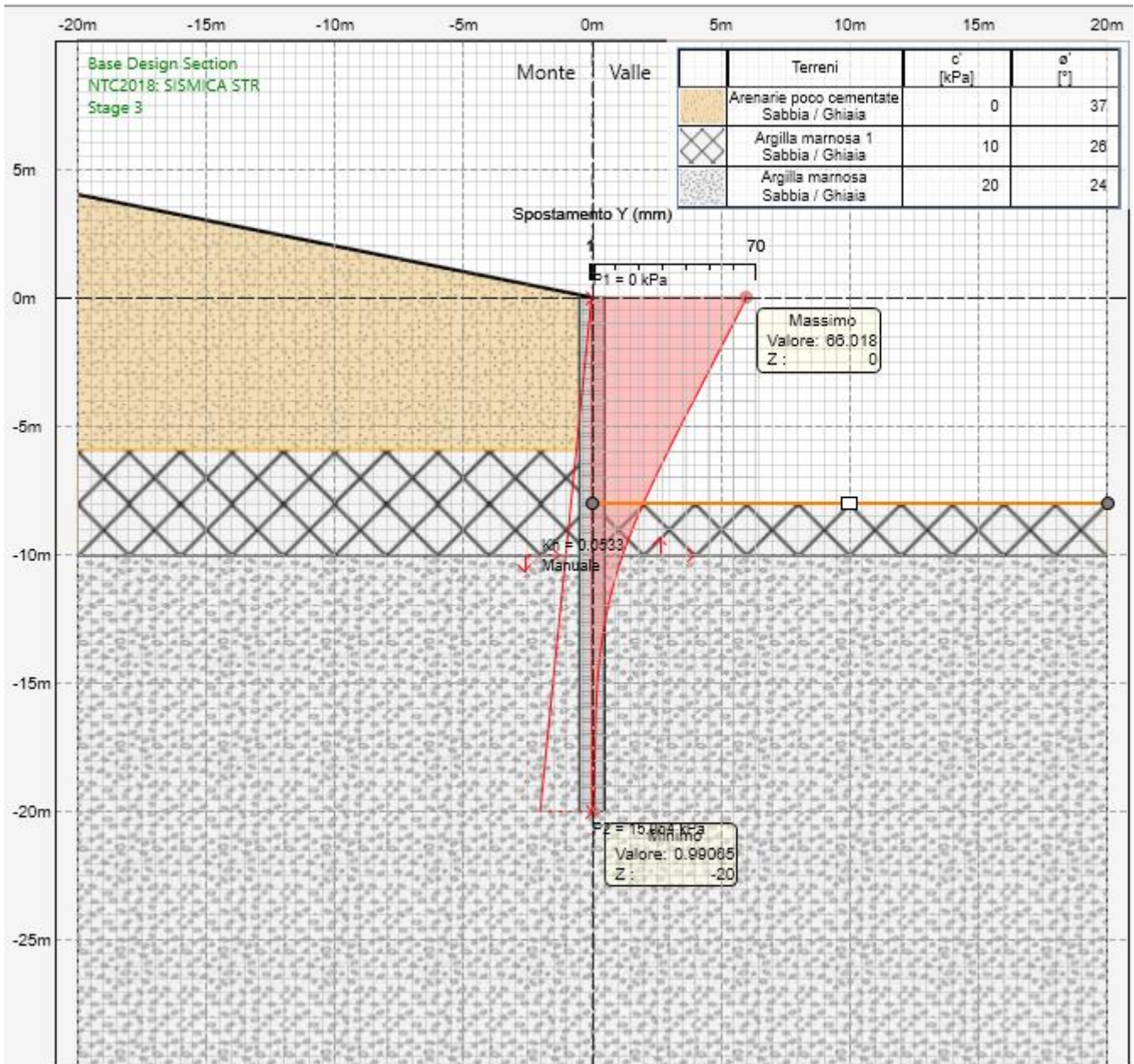


Figura 10.2 - Spostamenti orizzontali in combinazione sismica (SLD) – Paratia T1

Lo spostamento massimo in condizione sismica SLD è ottenuto dal delta di spostamento rispetto alla condizione statica, pertanto, avremo: 66.0 mm – 46.57 mm = **19.43 mm**.

10.2 Sollecitazioni

10.2.1 SLE - Combinazione statica

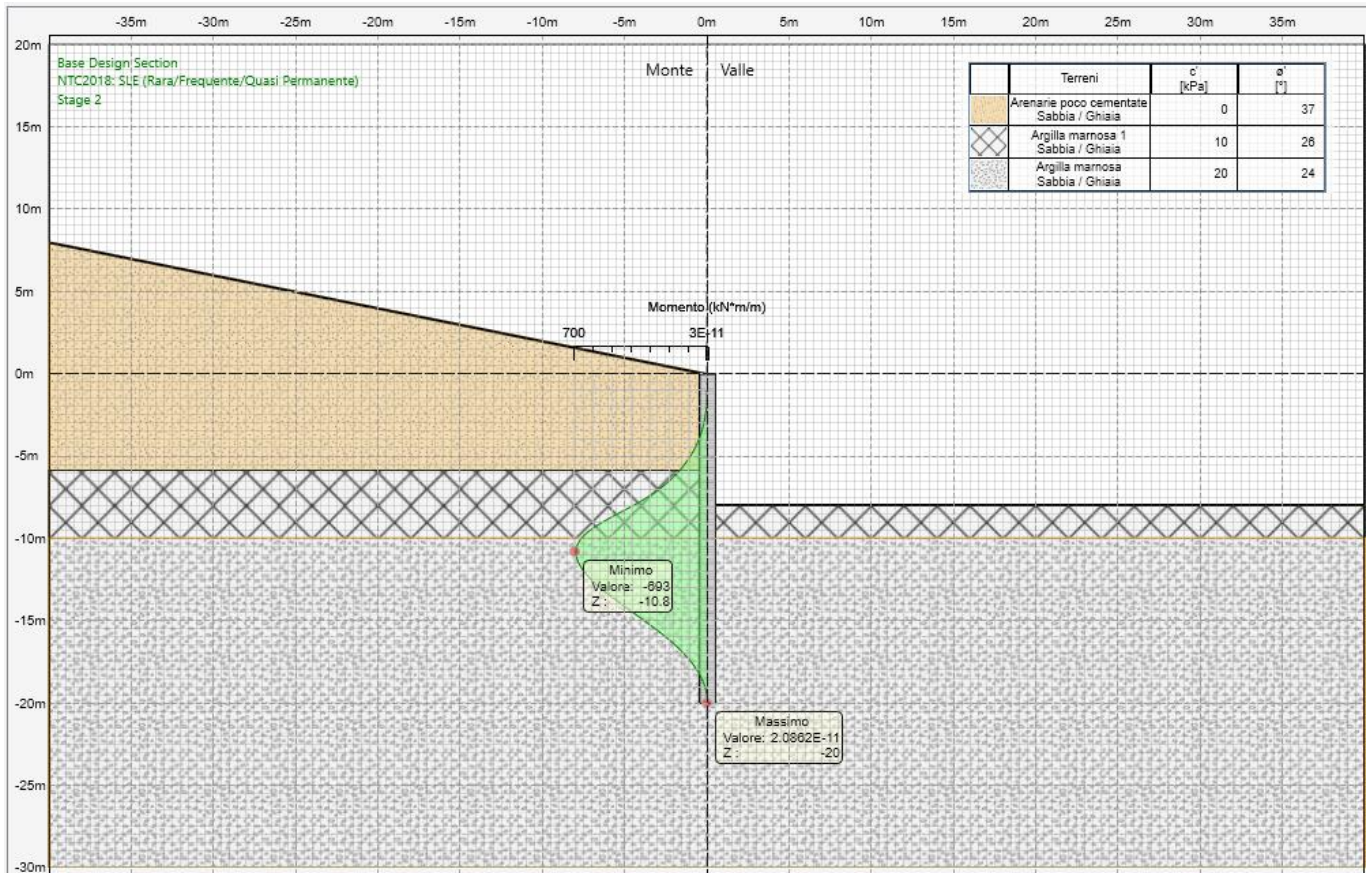


Figura 10.3 - Momento flettente SLE – Paratia T1

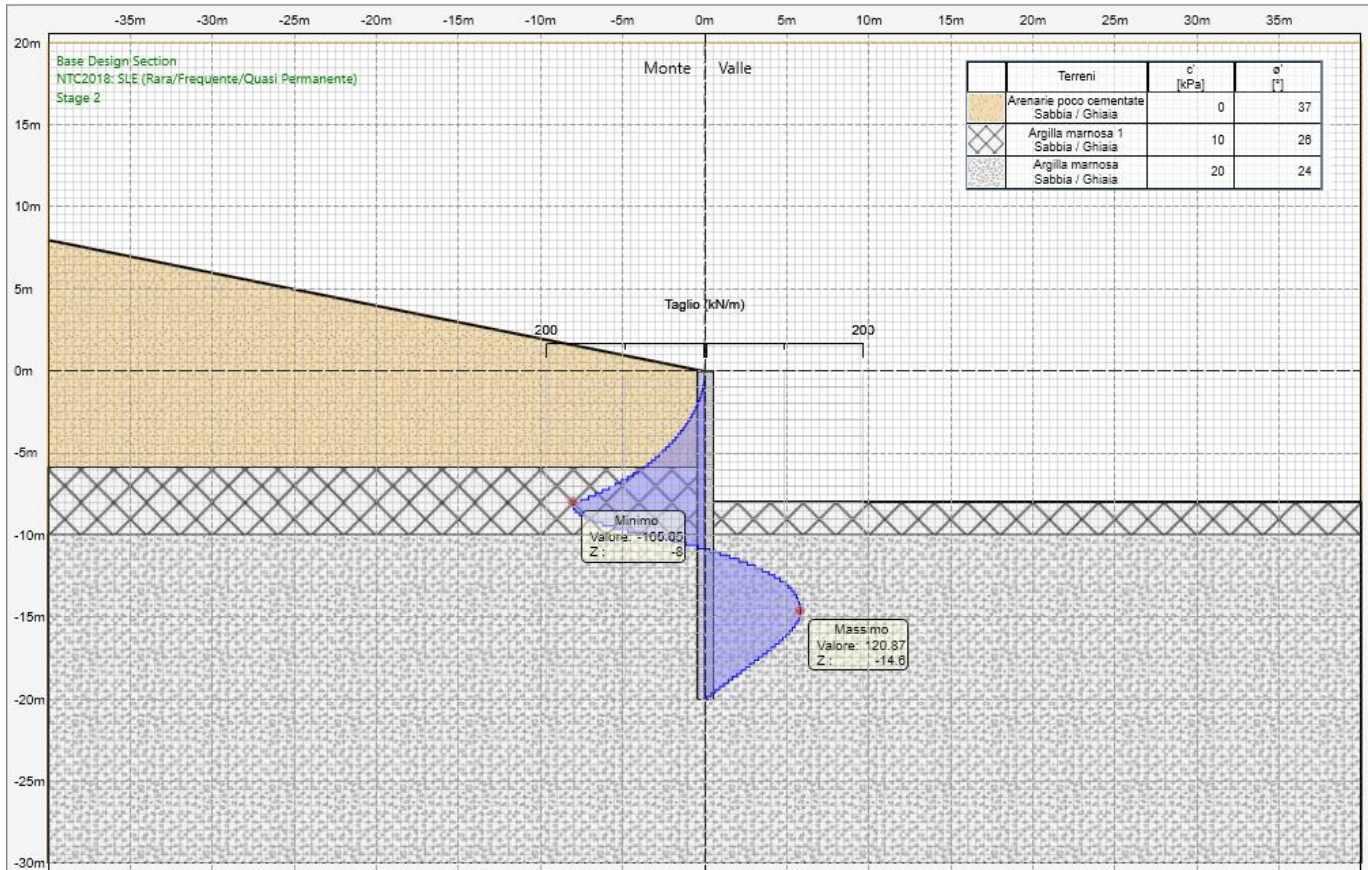


Figura 10.4 - Taglio SLE - Paratia T1

10.2.2 SLR - Combinazione statica ultima e sismica

Si riporta l'involuppo delle sollecitazioni in combinazione statica e sismica ultimi.

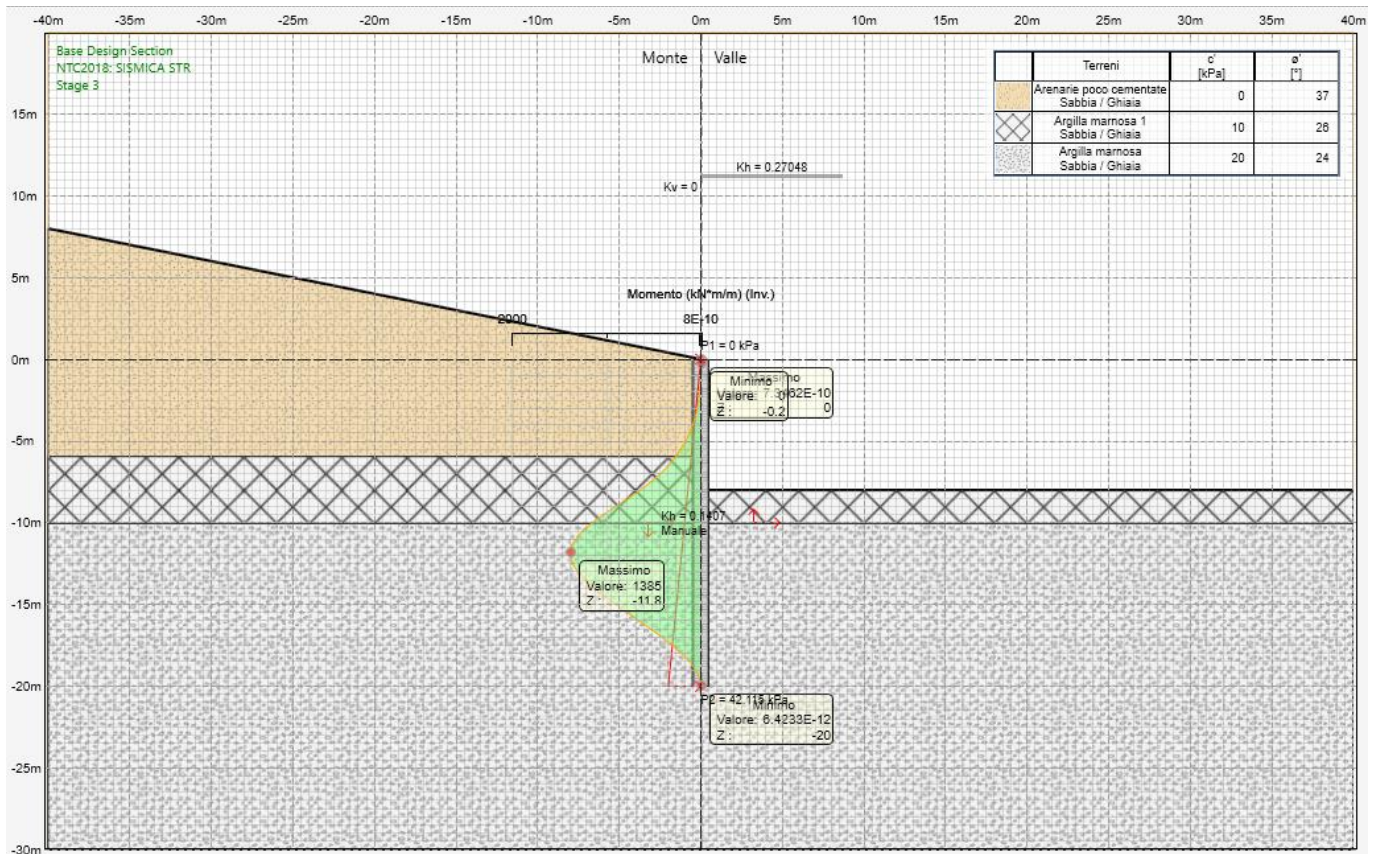


Figura 10.5 – Involuppo Momento flettente – Paratia T1

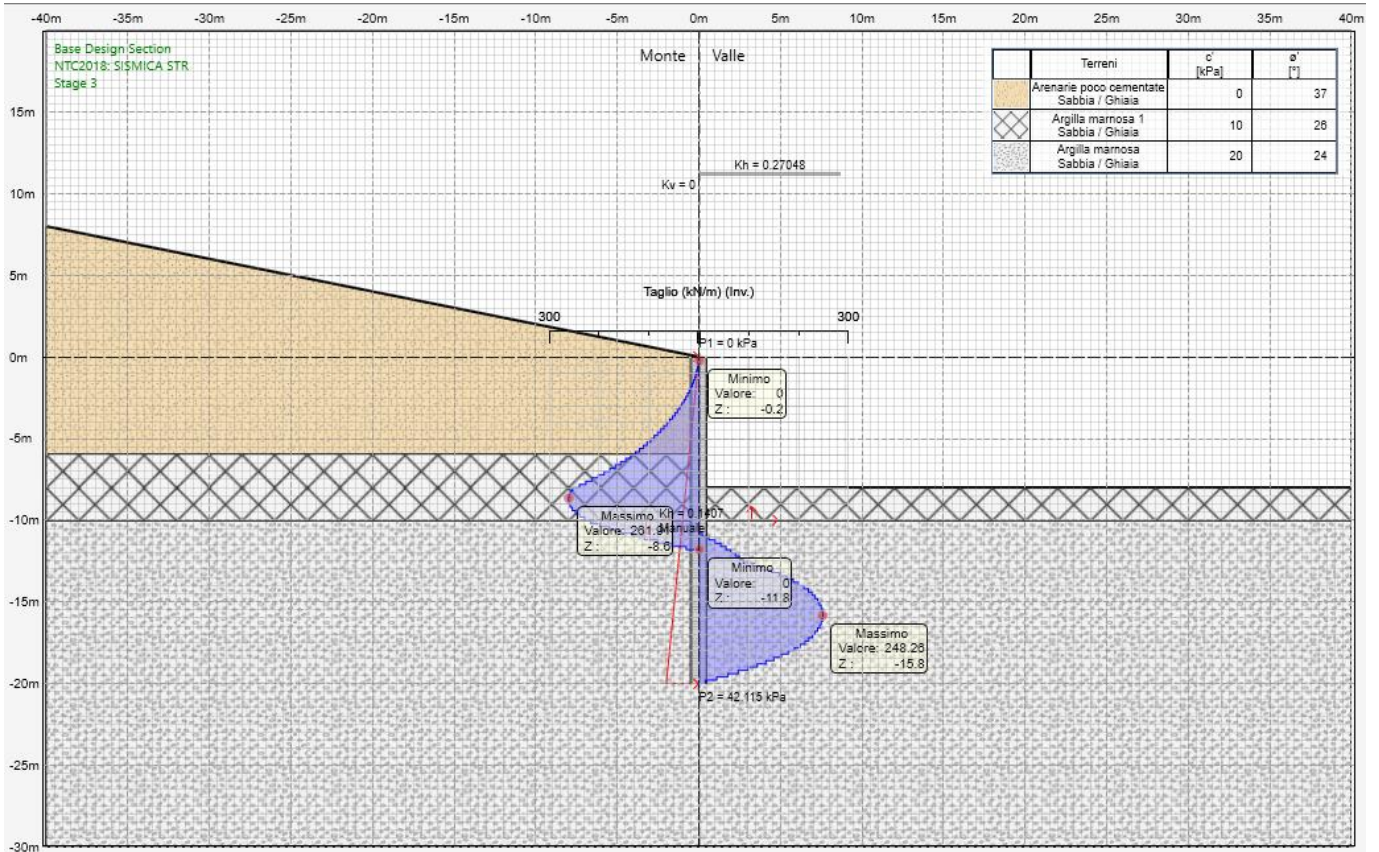


Figura 10.6 – Involuppo Taglio – Paratia T1

10.3 ARMATURE MINIME

Le armature dei pali sono state determinate in relazione alle sollecitazioni agenti e alle prescrizioni relative ai minimi contenuti di armatura presenti sul Manuale di Progettazione ai par. 2.5.1.8.3.3 e 2.5.2.2.6.

In particolare, l'armatura longitudinale minima è pari all' 1% dell'area della sezione in calcestruzzo per una lunghezza pari a $10\varnothing$ dalla testa del palo. Oltre tale lunghezza, il minimo quantitativo di armatura è pari allo 0,4% della sezione in calcestruzzo.

Il massimo quantitativo di armatura considerato è pari al 4% dell'area di calcestruzzo.

Il diametro minimo delle armature longitudinali è pari a 16 mm.

L'interasse delle staffe/passo delle spirali non dovrà essere superiore a 20 cm ed il loro diametro non essere inferiore a 12 mm.

Si riportano pertanto le armature minime scelte per il caso in esame e il soddisfacimento dei quantitativi secondo prescrizioni.

ARMATURA MINIMA PALI DI FONDAZIONE

	Variabile	valore	u.m.
Diametro del palo	$\varnothing_{\text{palo}}$	1000	mm
Area della sezione di calcestruzzo	A_{cls}	7854.0	cm ²
Diametro minimo barre di armatura longitudinali	$\varnothing_{\text{min-long}}$	16	mm
Diametro minimo barre di armatura trasversali (staffe a spirale)	$\varnothing_{\text{min-trasv}}$	12	mm
Passo massimo staffe a spirale	S_{max}	200	mm

Utilizzando una gabbia di armatura costituita da 43 $\varnothing 30$ longitudinali si ottiene un quantitativo di armatura longitudinale pari al 3.8%, ampiamente superiore al minimo (1%) e inferiore al massimo quantitativo (4%).

ARMATURA MASSIMA PALI DI FONDAZIONE

	Variabile	valore	u.m.
Diametro del palo	$\varnothing_{\text{palo}}$	1000	mm
Area della sezione di calcestruzzo	A_{cls}	7854.0	cm ²
Numero di barre longitudinali scelte	n_{long}	42	-
Diametro barre longitudinali scelto	$\varnothing_{\text{long}}$	30	mm
Quantitativo di armatura longitudinale scelta	$A_{\text{s-long}}/A_{\text{cls}}$	ρ_{long}	3.8% -
	check	$\rho_{\text{long}} \leq 4\%$	ok

Controllo sugli interferri

Copriferro nominale	c	70	mm
Copriferro in asse	C_{net}	97	mm
Circonferenza corona armatura longitudinale	C	2532	mm
Numero di corone di armatura	n_{corone}	2	-
Interasse ferri corona (NB: se ferri accoppiati $n_{\text{long}}/2$)	i	126.6	mm
Interasse minimo	$i_{\text{min}} = 3\varnothing$	i_{min}	90
check	$i > i_{\text{min}}$	ok	

10.4 Verifiche strutturali

10.4.1 SLE - Combinazione statica

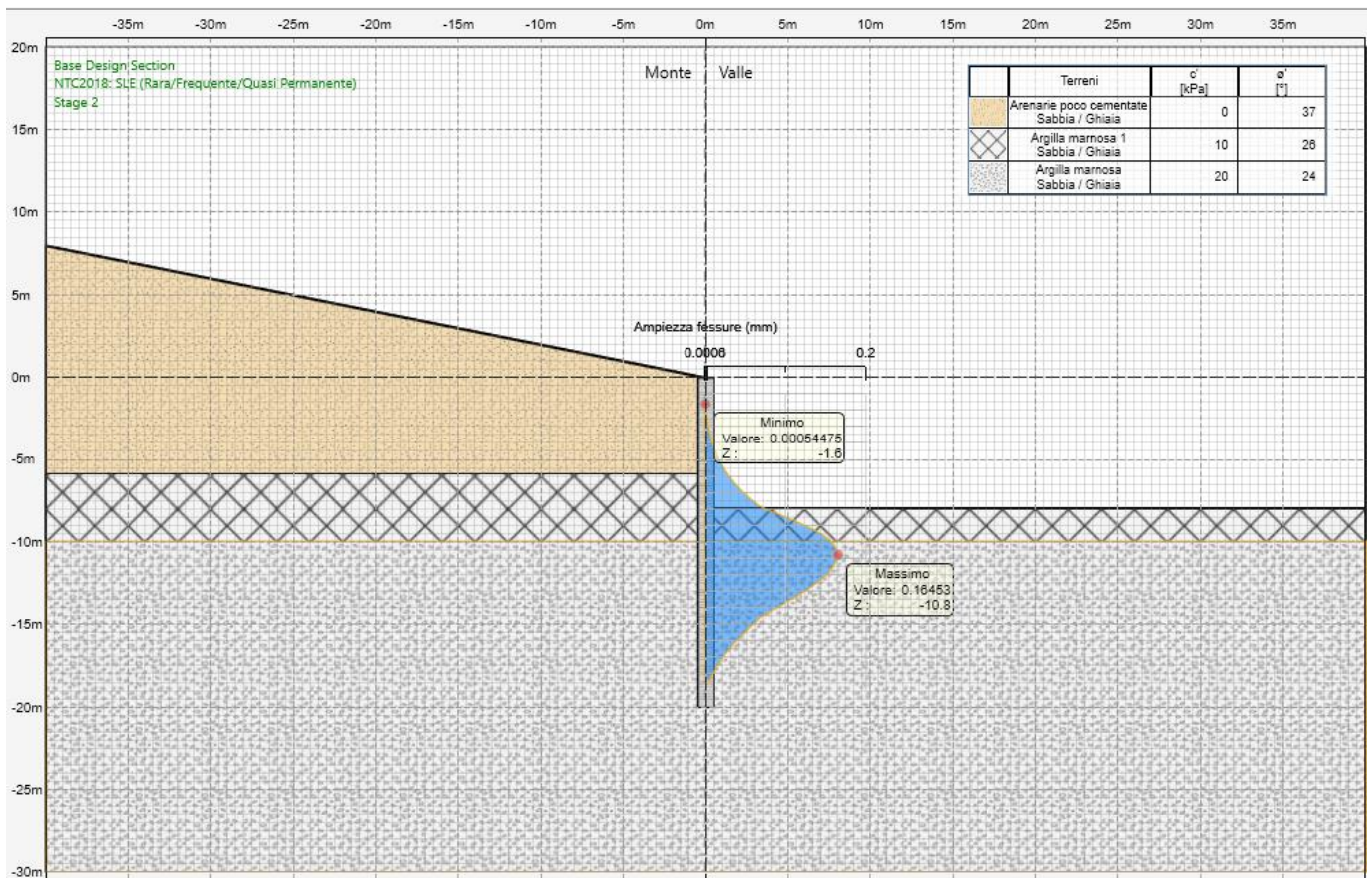


Figura 10.7 – Apertura di fessura

Il valore di apertura di fessura è 0.16 mm inferiore al limite normativo di 0.2 mm, pertanto, le verifiche sono soddisfatte.

I dettagli delle verifiche sono esplicitati all'interno dell'allegato di calcolo.

10.4.2 SLR - Combinazione statica ultima e sismica

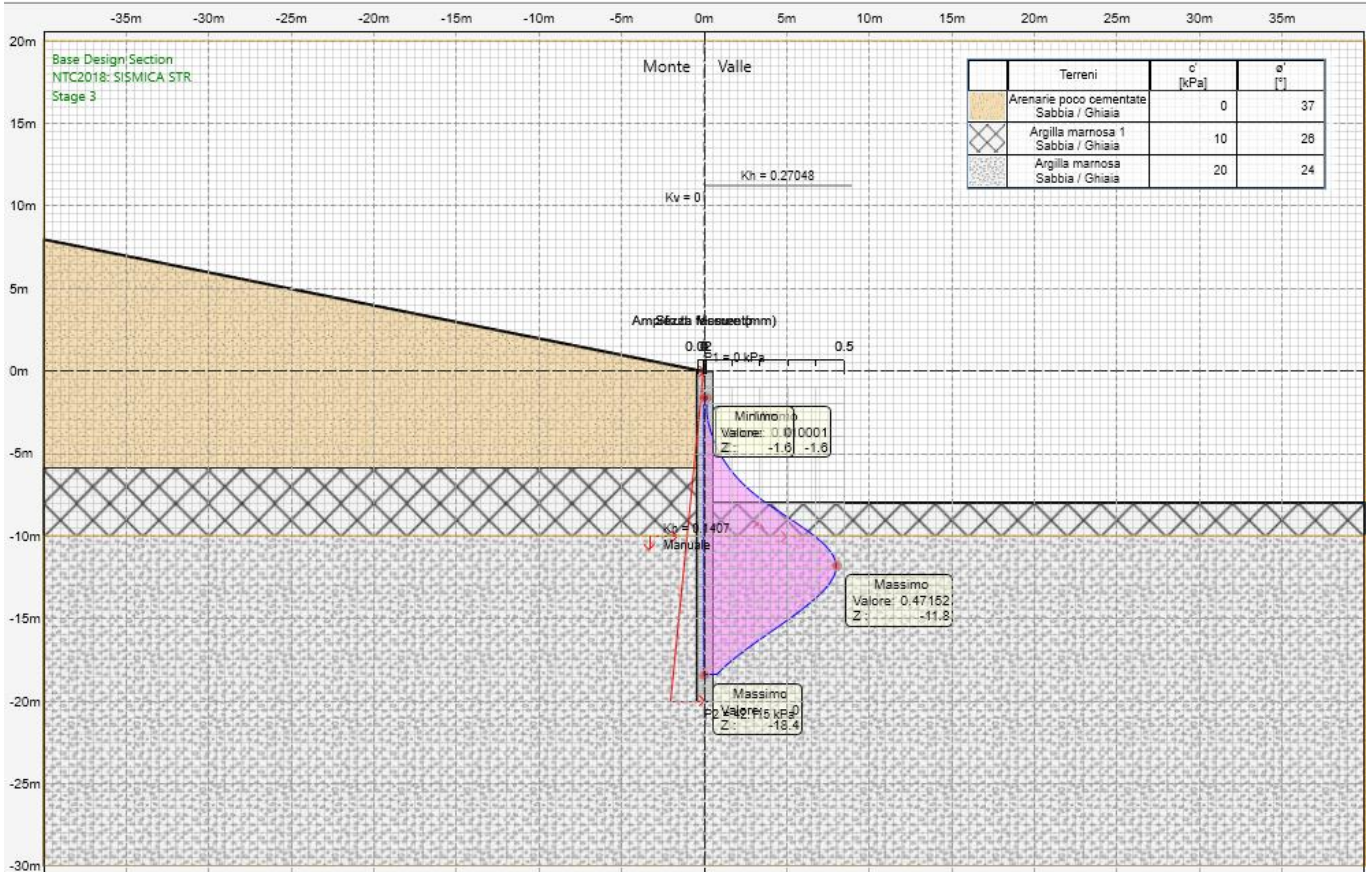


Figura 10.8 – Tasso sfruttamento - Momento flettente – Paratia T1

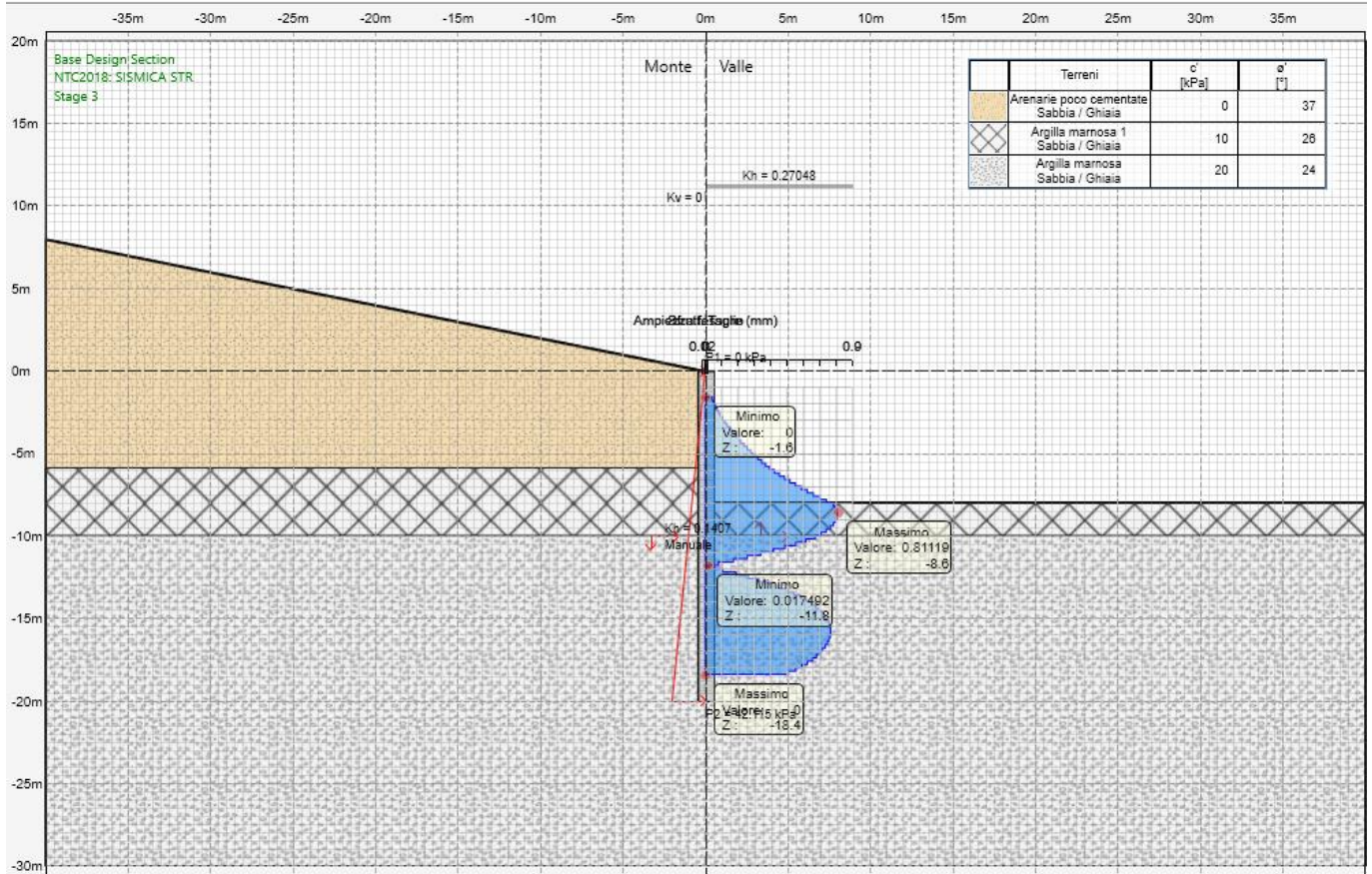


Figura 10.9 – Tasso sfruttamento - Taglio

Tutti i tassi di sfruttamento sono inferiori all'unità, pertanto, le verifiche sono soddisfatte.

I dettagli delle verifiche sono esplicitati all'interno dell'allegato di calcolo.

10.4.3 Incidenza

Geometria PALI	var.	valore	u.m.
Diametro palo	D_P	1000	mm
Lunghezza palo	H_{PALO}	20000	mm
Volume palo	V_{PA}	16	m³

ARMATURA PALO	var.	valore	u.m.
Copriferro	c	70	mm
Ancoraggio (moltiplicatore diametro)	\varnothing_{anch}	50	-
Sovrapposizione (moltiplicatore diametro)	$\varnothing_{overlap}$	50	-

Armatura Campo 1 - da testa palo

	<i>Descrizione</i>	<i>VAR.</i>	<i>VALORE</i>	<i>U.M.</i>
	Estensione armatura	$L_{sc1,1}$	23000	mm
ARM LONG	Diametro barre	$\varnothing_{c1,str1}$	30	mm
	n. barre strato	n_{c1}	42	-
	Volume armatura 1° strato	$P_{c1,str1}$	5360	kg
	Estensione campo staffe	$L_{sc1,MAX}$	20000	mm
STAFFE	Diametro staffe	\varnothing_{st}	12	mm
	Passo staffe	p_{st}	150	mm
	Volume tot. Staffe	P_{st}	315	kg
	Peso tot. armatura campo 1	P_{c1}	5676	kg

Anelli di irrigidimento campo 1

Estensione campo 1	$L_{sc1,MAX}$	20000	mm
Diametro anelli di irrigidimento	\varnothing_{irr}	20	mm
Passo anelli di irrigidimento	s_{irr}	2000	mm
num. anelli di irrigidimento	n_{irr}	10	-
Raggio medio anelli	ρ_{irr}	348	mm
Volume tot. anelli	P_{irr}	54	kg

INCIDENZA PALI

<i>Descrizione</i>	<i>VAR.</i>	<i>VALORE</i>	<i>U.M.</i>
Volume totale armatura	$P_{s,PALO}$	5729	kg
Volume calcestruzzo palo	V_{PA}	16	m ³
INCIDENZA (+10% sovrapposizioni, sfridi) - val. arrotondato	i_{PALO}	400	kg/m³

Per il cordolo sommitale non sono state eseguite modellazioni o verifiche strutturali. Esso sarà armato con i minimi quantitativi previsti da normativa e si considera un'incidenza pari a 80 kg/m³

10.5 Verifiche geotecniche

10.5.1 Mobilitazione spinte

Si riporta la condizione più gravosa: sismica

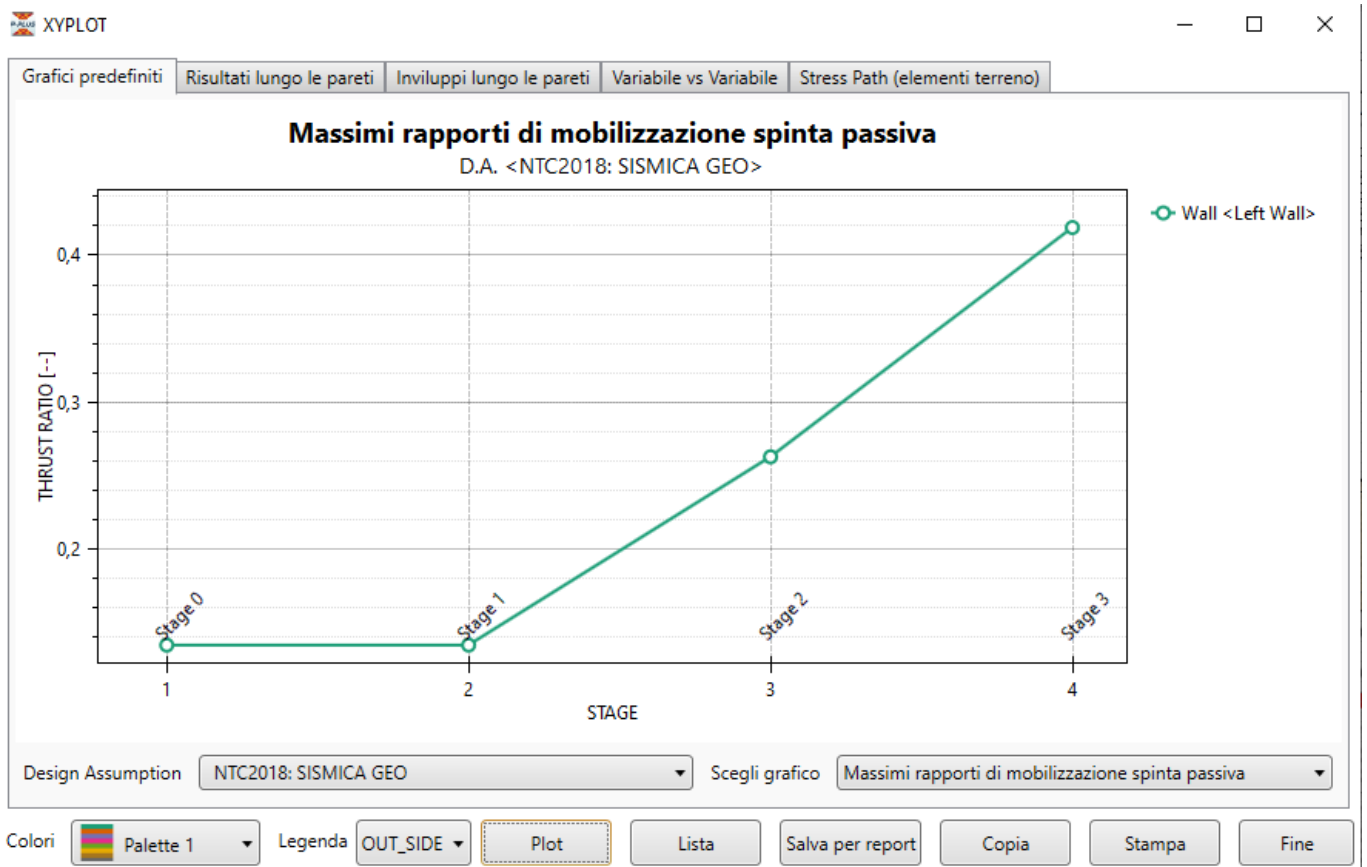
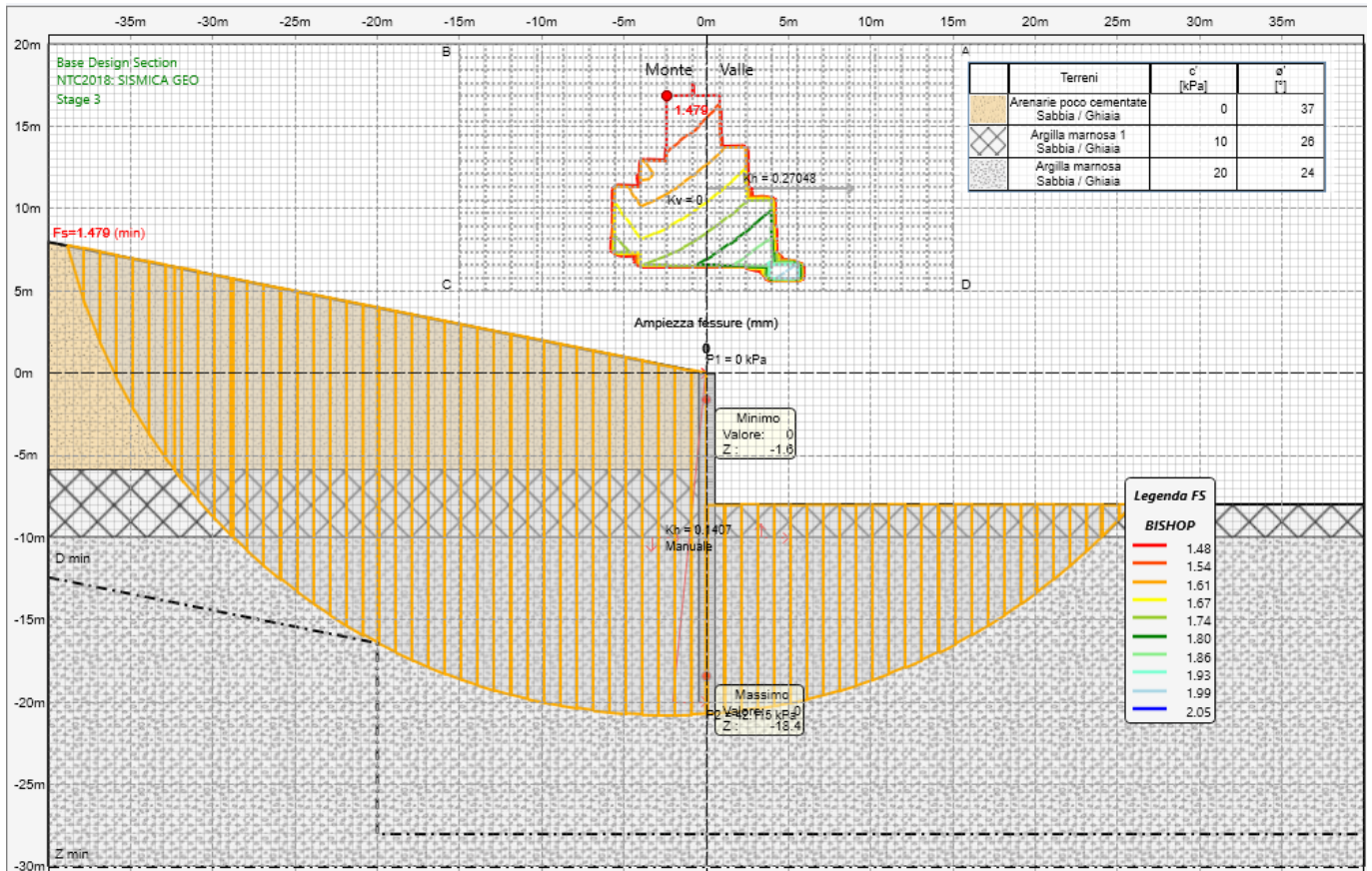


Figura 10.10 - Mobilitazione spinte

10.5.2 Verifiche stabilità globale

Si riporta la condizione più gravosa: **sismica**



Impiegando il metodo di Bishop, si ottiene un fattore di sicurezza pari a:

$$FS = 1.48 > R2 (= 1.10)$$

Pertanto, la verifica può ritenersi soddisfatta.

11 RISULTATI PARATIA TIPO 2

11.1 Verifiche deformabilità

Si riportano i massimi spostamenti orizzontali in condizione statica ed in condizione sismica.

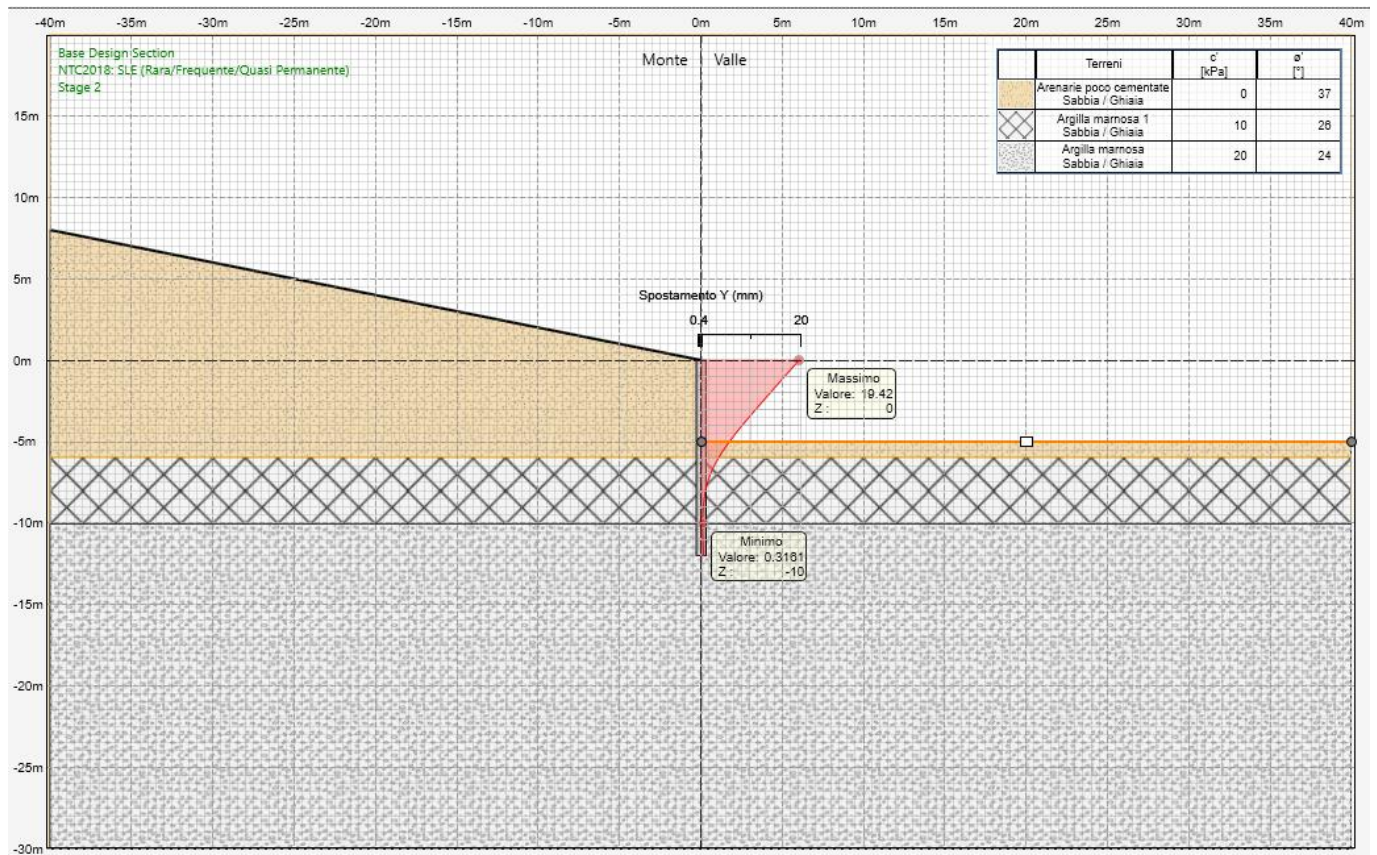


Figura 11.1 - Spostamenti orizzontali in combinazione statica (SLE) – Paratia Tipo 2

Lo spostamento massimo in condizione statica è pari a 19,42 mm, pertanto, poiché il valore è inferiore all'1% dell'altezza h si ritiene accettabile.

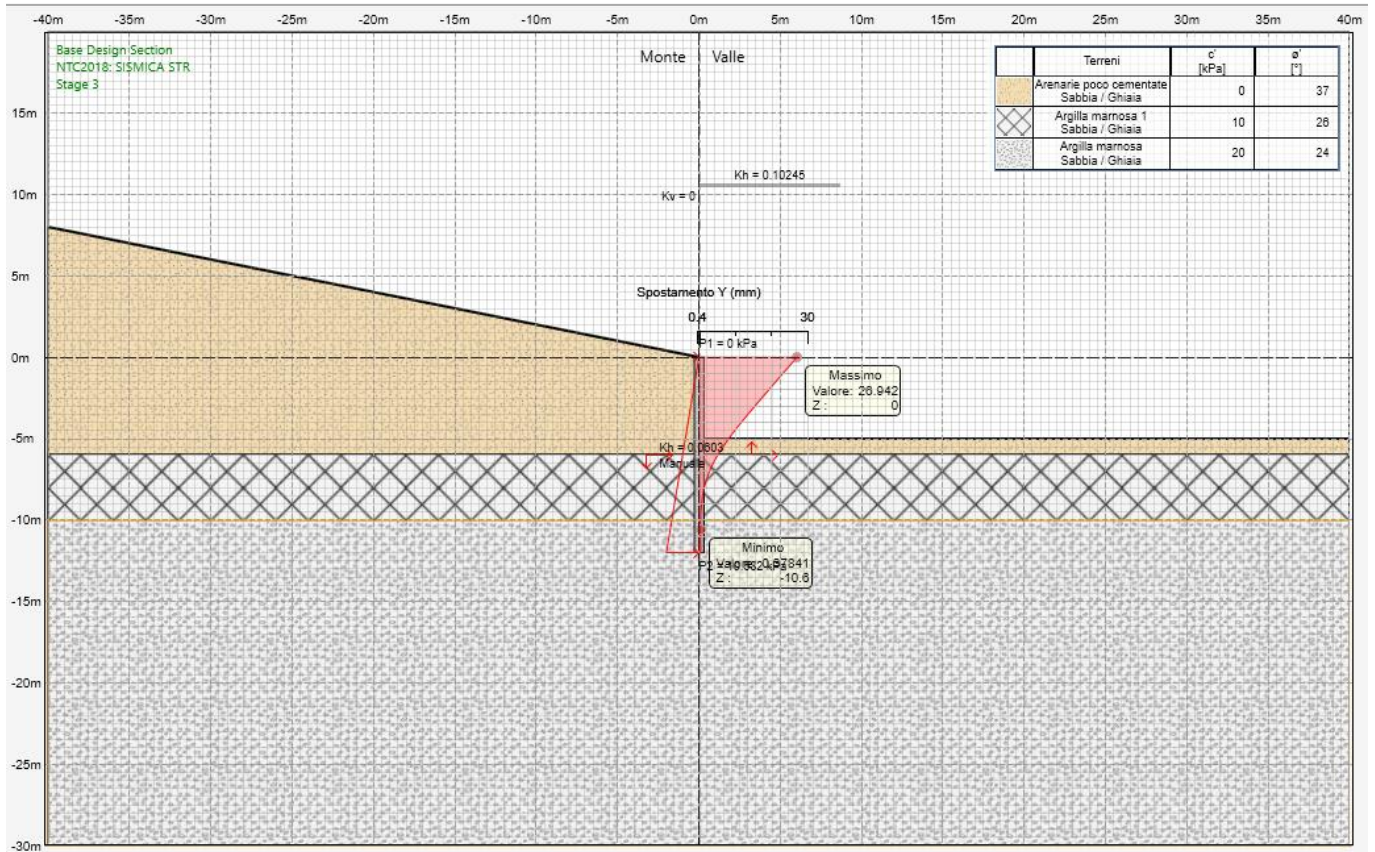


Figura 11.2 - Spostamenti orizzontali in combinazione sismica (SLD) – Paratia T2

Lo spostamento massimo in condizione sismica SLD è ottenuto dal delta di spostamento rispetto alla condizione statica, pertanto, avremo: $26,94 \text{ mm} - 19,42 \text{ mm} = \mathbf{7.52 \text{ mm}}$.

11.2 Sollecitazioni

11.2.1 SLE - Combinazione statica

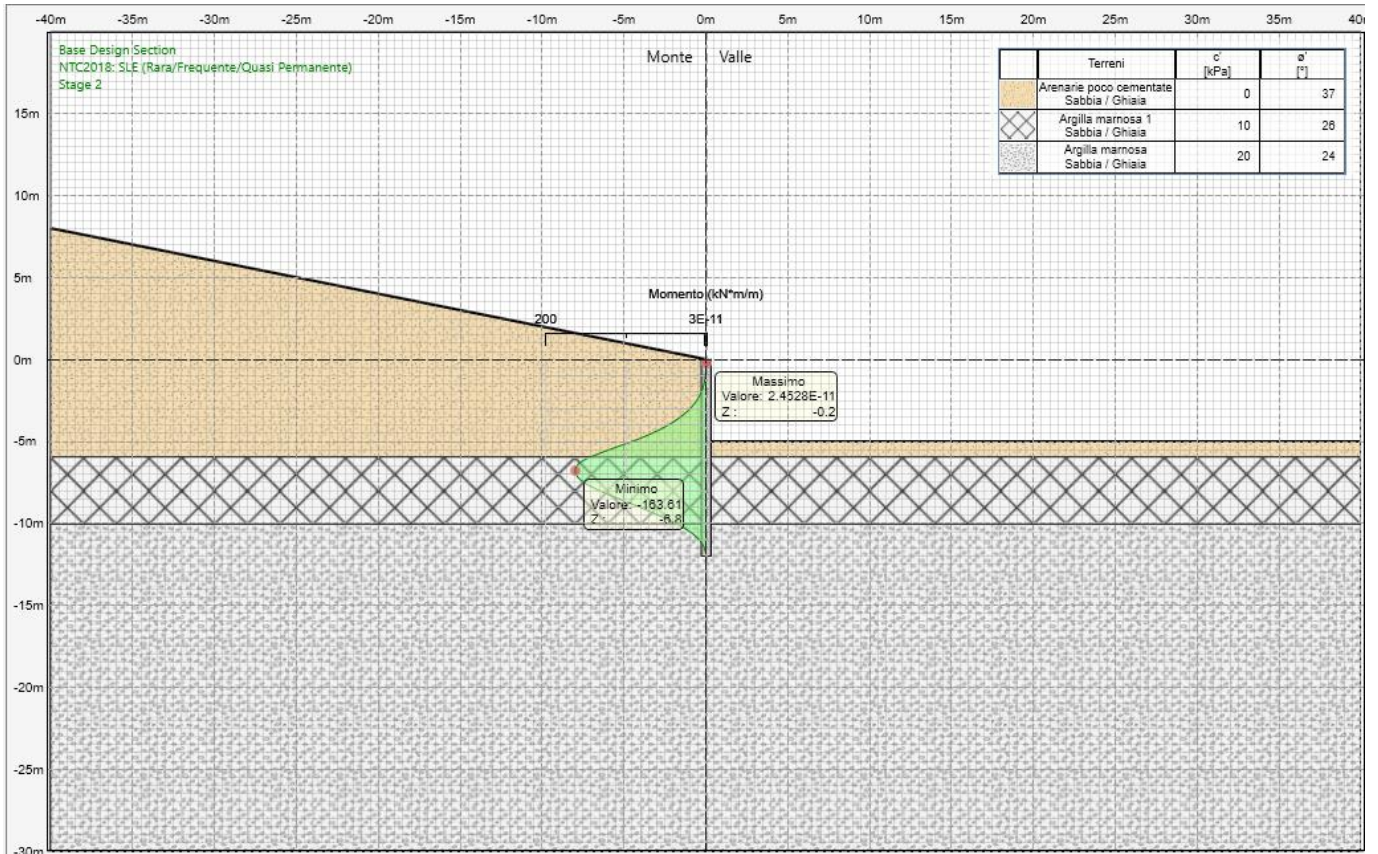


Figura 11.3 - Momento flettente SLE – Paratia T2

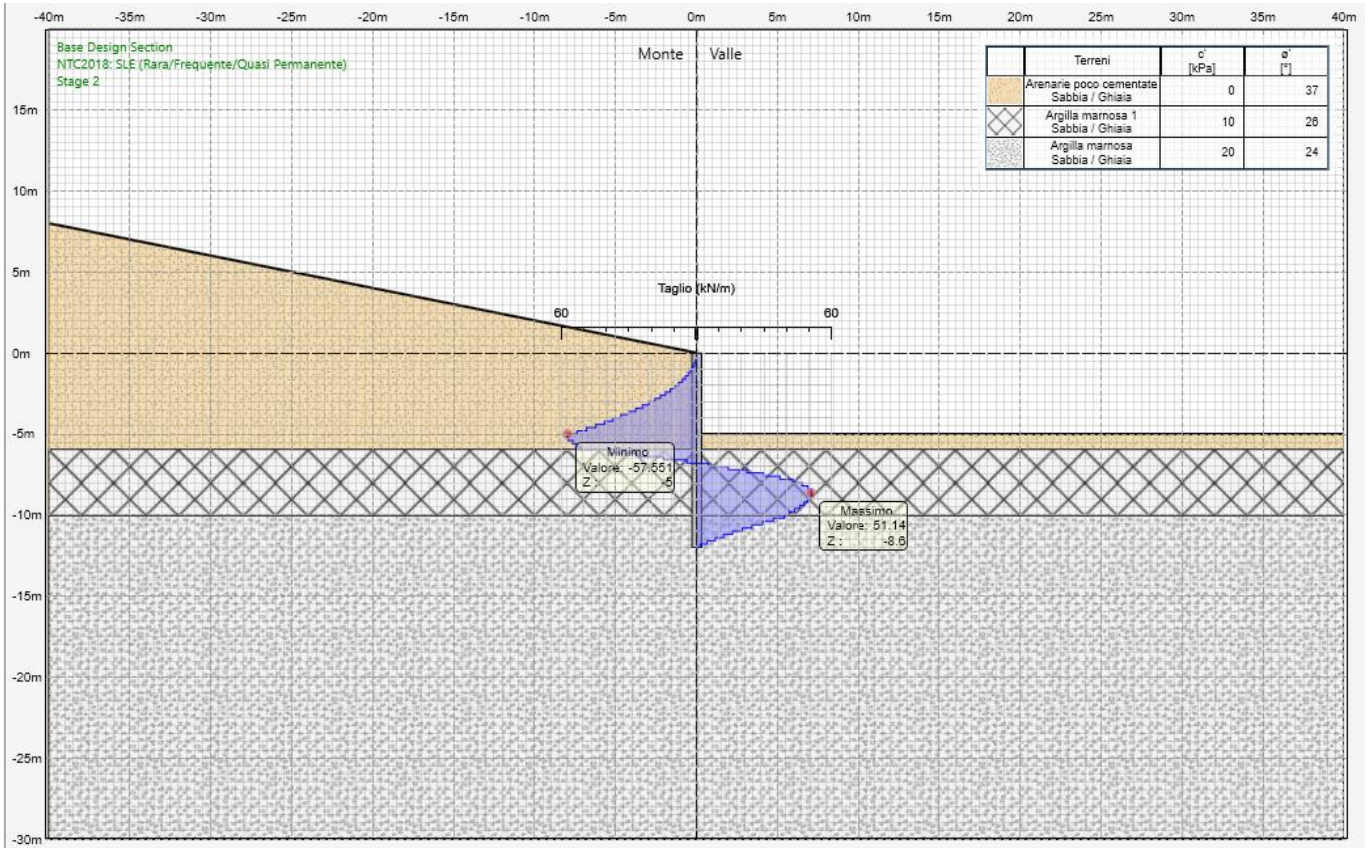


Figura 11.4 - Taglio SLE - Paratia T2

11.2.2 SLR - Combinazione statica ultima e sismica

Si riporta l'involuppo delle sollecitazioni in combinazione statica e sismica ultimi.

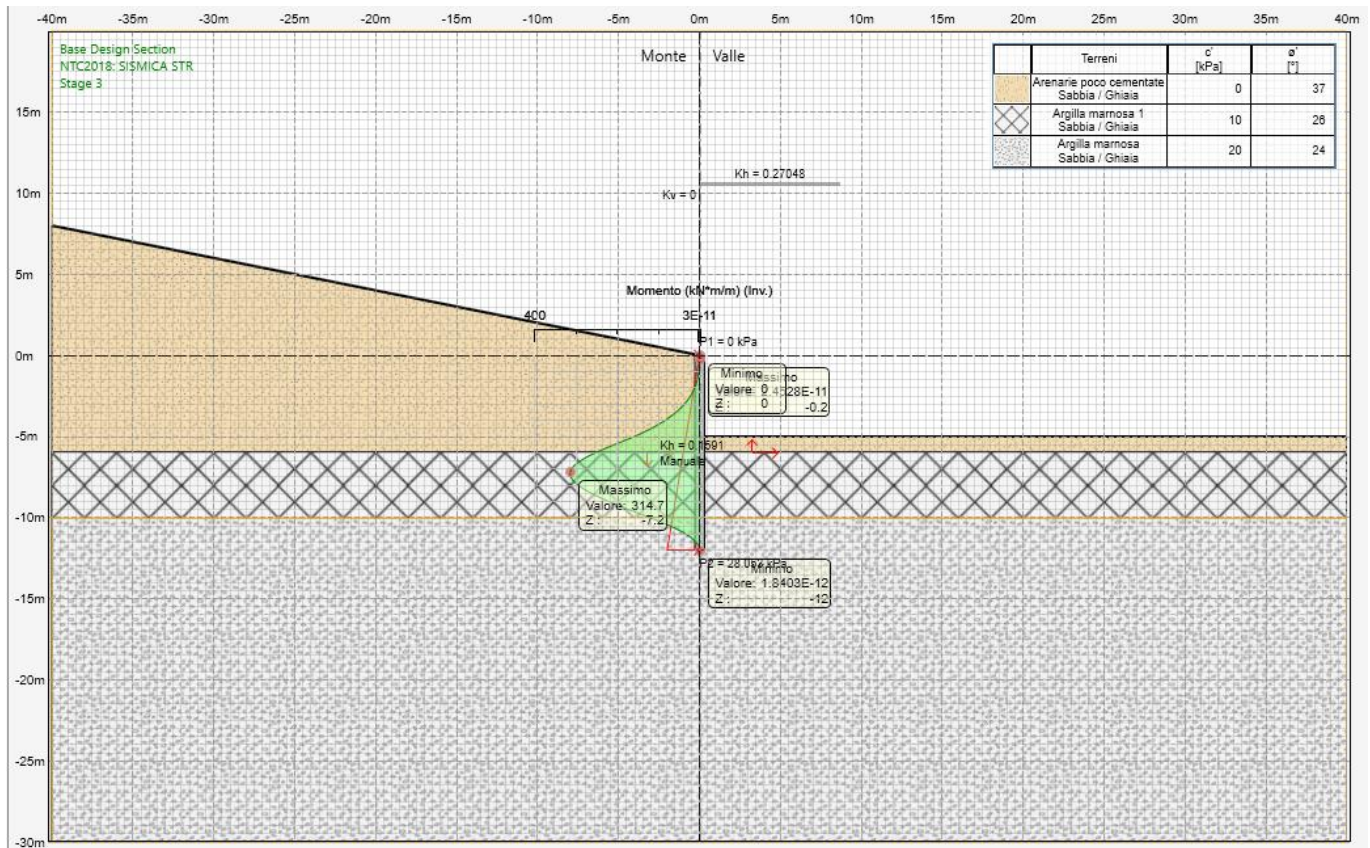


Figura 11.5 – Involuppo Momento flettente – Paratia Tipo 2

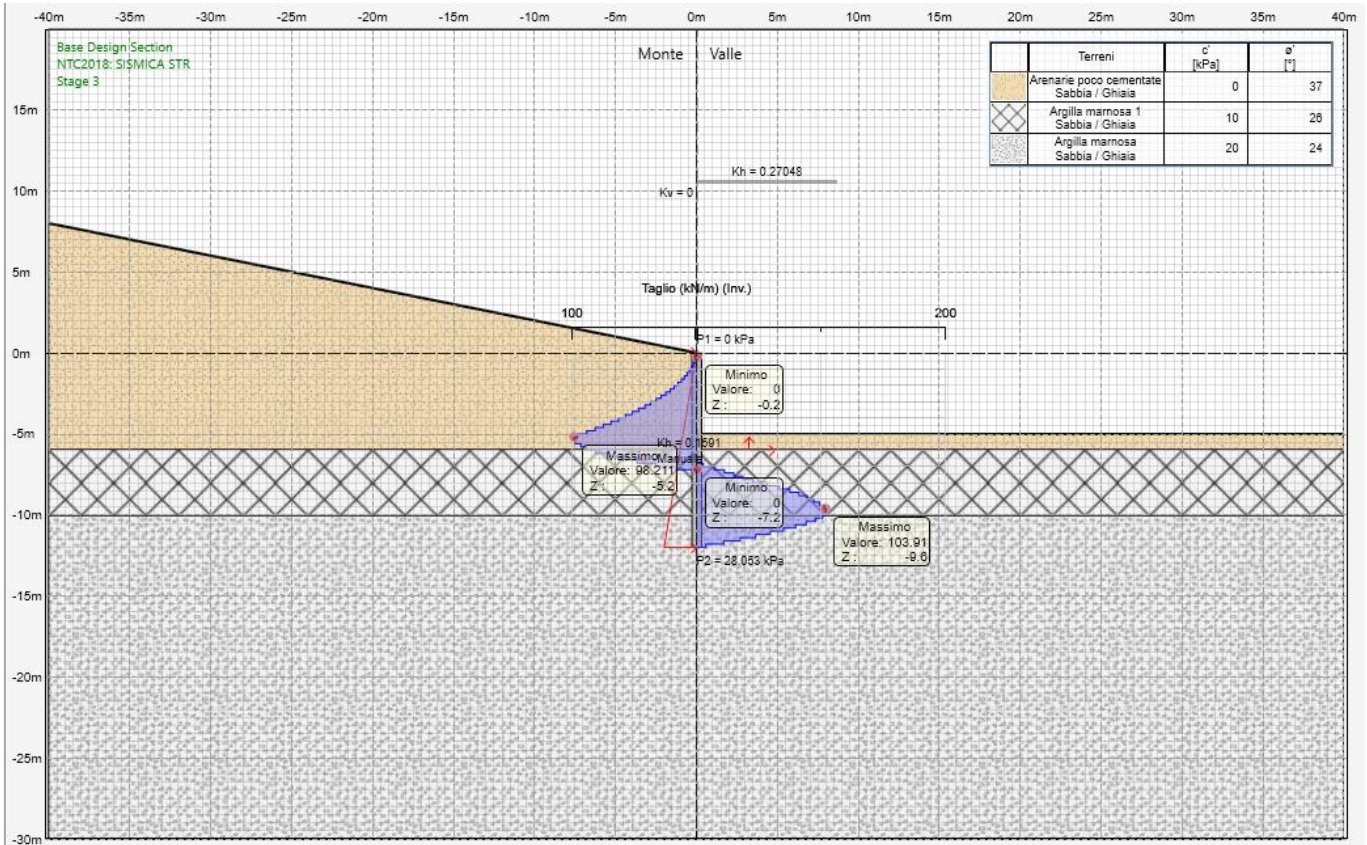


Figura 11.6 – Involuppo Taglio – Paratia Tipo 2

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
	IABH	00	F	CL	MU04 00 001	A	51 di 731

11.3 ARMATURE MINIME

Le armature dei pali sono state determinate in relazione alle sollecitazioni agenti e alle prescrizioni relative ai minimi contenuti di armatura presenti sul Manuale di Progettazione ai par. 2.5.1.8.3.3 e 2.5.2.2.6.

In particolare, l'armatura longitudinale minima è pari all' 1% dell'area della sezione in calcestruzzo per una lunghezza pari a $10\varnothing$ dalla testa del palo. Oltre tale lunghezza, il minimo quantitativo di armatura è pari allo 0,4% della sezione in calcestruzzo.

Il massimo quantitativo di armatura considerato è pari al 4% dell'area di calcestruzzo.

Il diametro minimo delle armature longitudinali è pari a 16 mm.

L'interasse delle staffe/passo delle spirali non dovrà essere superiore a 20 cm ed il loro diametro non essere inferiore a 12 mm.

Si riportano pertanto le armature minime scelte per il caso in esame e il soddisfacimento dei quantitativi secondo prescrizioni.

ARMATURA MINIMA PALI DI FONDAZIONE

	Variabile	valore u.m.
Diametro del palo	$\varnothing_{\text{palo}}$	600 mm
Area della sezione di calcestruzzo	A_{cls}	2827.4 cm ²
Diametro minimo barre di armatura longitudinali	$\varnothing_{\text{min-long}}$	16 mm
Diametro minimo barre di armatura trasversali (staffe a spirale)	$\varnothing_{\text{min-trasv}}$	12 mm
Passo massimo staffe a spirale	S_{max}	200 mm

Utilizzando una gabbia di armatura costituita da 17 $\varnothing 24$ longitudinali si ottiene un quantitativo di armatura longitudinale pari al 2,7 %, ampiamente superiore al minimo (1%) e inferiore al massimo quantitativo (4%).

ARMATURA MASSIMA PALI DI FONDAZIONE

	Variabile	valore u.m.
Diametro del palo	$\varnothing_{\text{palo}}$	600 mm
Area della sezione di calcestruzzo	A_{cls}	2827.4 cm ²
Numero di barre longitudinali scelte	n_{long}	17 -
Diametro barre longitudinali scelto	$\varnothing_{\text{long}}$	24 mm

Quantitativo di armatura longitudinale scelta

$A_{\text{s-long}}/A_{\text{cls}}$	ρ_{long}	2.7% -
check	$\rho_{\text{long}} \leq 4\%$	ok

Controllo sugli interferri

Copriferro nominale	c	70 mm
Copriferro in asse	C_{net}	94 mm
Circonferenza corona armatura longitudinale	C	1294 mm
Interasse ferri corona	i	80.9 mm
Interasse minimo	$i_{\text{min}} = 3\varnothing$	i_{min} 72 mm
check	$i > i_{\text{min}}$	ok

11.4 Verifiche strutturali

11.4.1 SLE - Combinazione statica

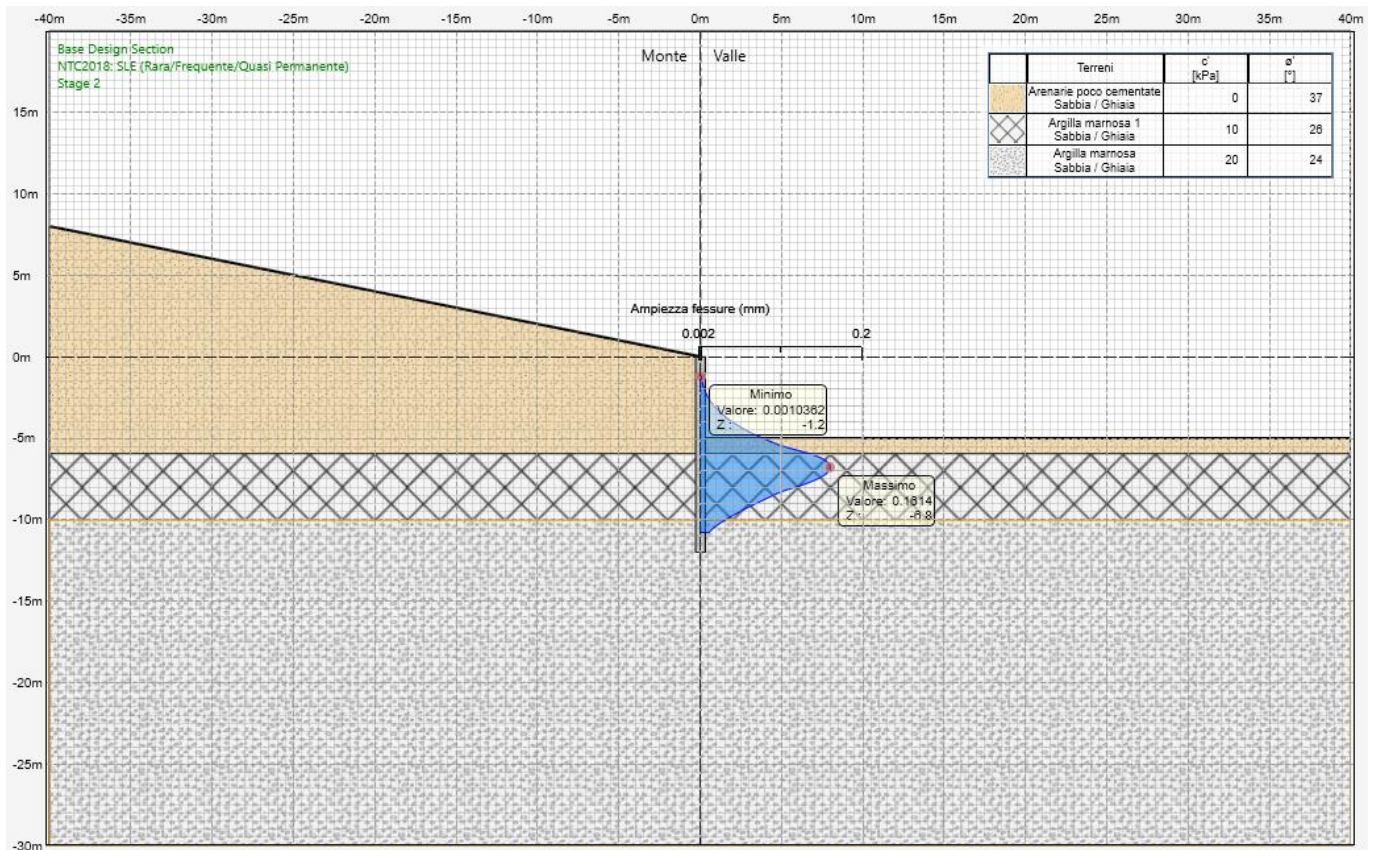


Figura 11.7 – Apertura di fessura

Il valore di apertura di fessura è 0.16 mm inferiore al limite normativo di 0.2 mm, pertanto, le verifiche sono soddisfatte.

11.4.2 SLR - Combinazione statica ultima e sismica

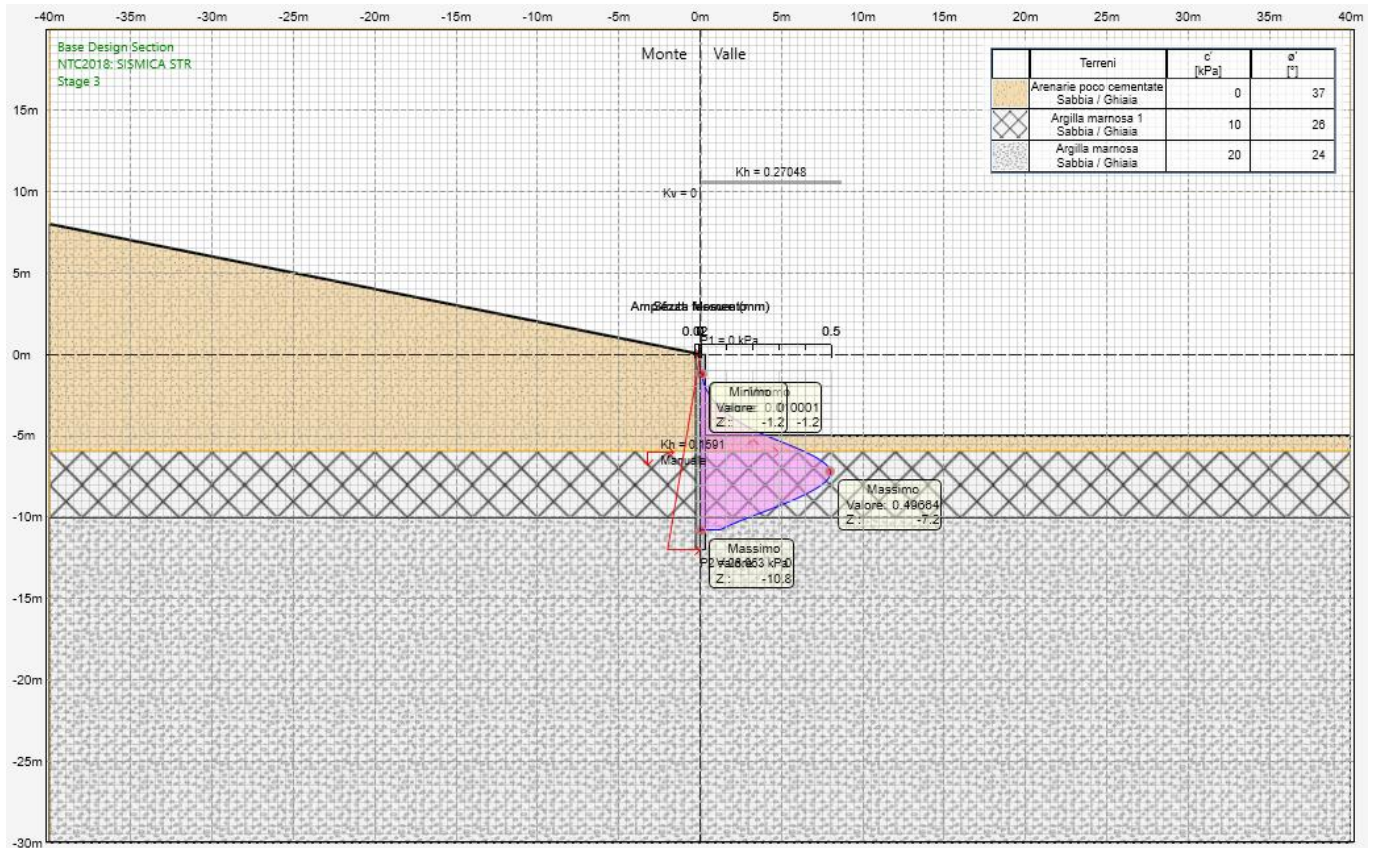


Figura 11.8 – Tasso sfruttamento - Momento flettente – Paratia Tipo 2

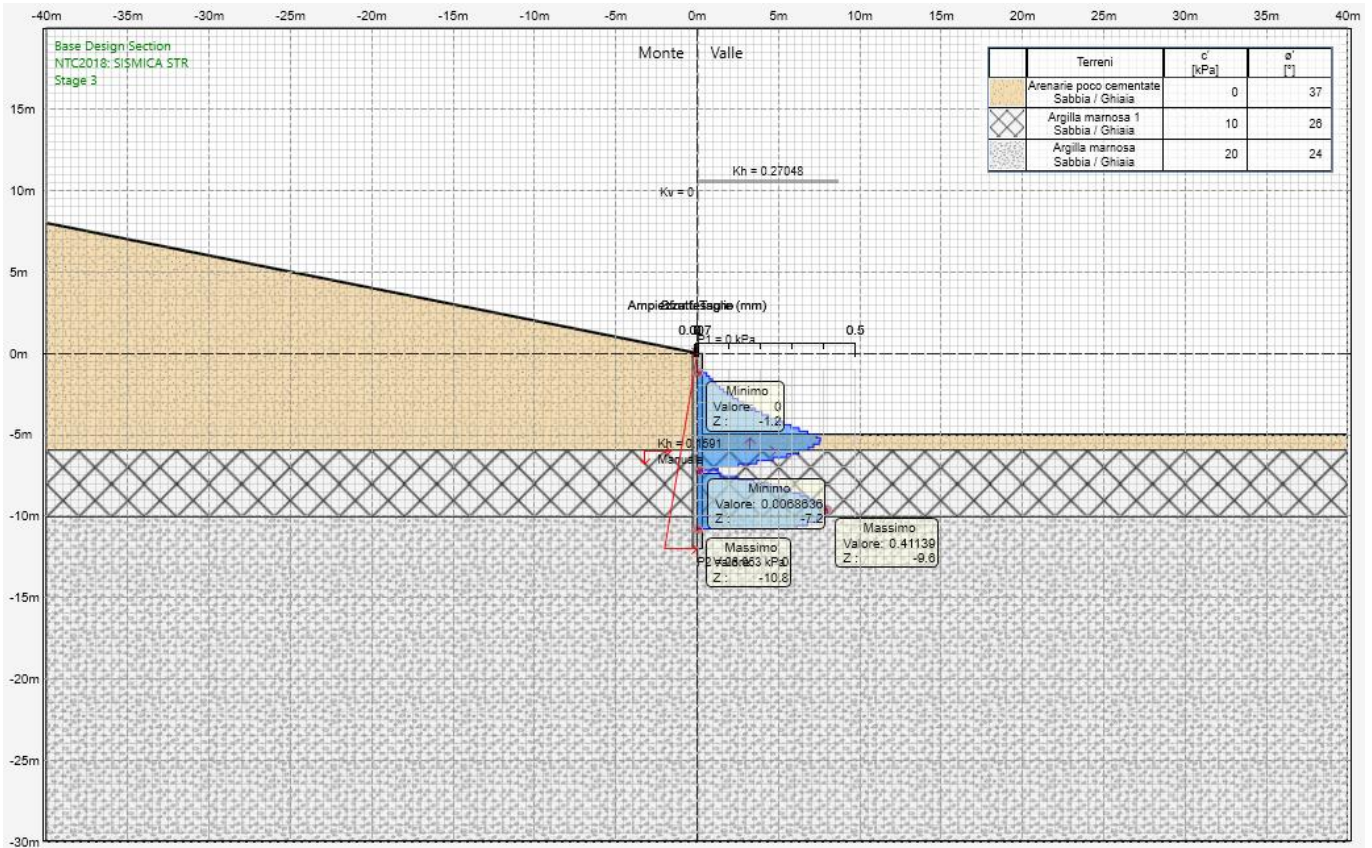


Figura 11.9 – Tasso sfruttamento - Taglio

Tutti i tassi di sfruttamento sono inferiori all'unità, pertanto, le verifiche sono soddisfatte.

11.4.3 Incidenza

Geometria PALI	var.	valore	u.m.
Diametro palo	D_P	600	mm
Lunghezza palo	H_{PALO}	12000	mm
Volume palo	V_{PA}	3	m^3

ARMATURA PALO	var.	valore	u.m.
Copriferro	c	70	mm
Ancoraggio (moltiplicatore diametro)	\varnothing_{anch}	50	-
Sovrapposizione (moltiplicatore diametro)	$\varnothing_{overlap}$	50	-

Armatura Campo 1 - da testa palo

	<i>Descrizione</i>	<i>VAR.</i>	<i>VALORE</i>	<i>U.M.</i>
ARM LONG	Estensione armatura	$L_{sc1,1}$	22700	mm
	Diametro barre	$\varnothing_{c1,str1}$	24	mm
	n. barre strato	n_{c1}	17	-
	Volume armatura 1° strato	$P_{c1,str1}$	1370	kg
STAFFE	Estensione campo staffe	$L_{sc1,MAX}$	20000	mm
	Diametro staffe	\varnothing_{st}	12	mm
	Passo staffe	p_{st}	150	mm
	Volume tot. Staffe	P_{st}	167	kg
Peso tot. armatura campo 1		P_{c1}	1537	kg

Anelli di irrigidimento campo 1

Estensione campo 1	$L_{sc1,MAX}$	20000	mm
Diametro anelli di irrigidimento	\varnothing_{irr}	20	mm
Passo anelli di irrigidimento	s_{irr}	2000	mm
num. anelli di irrigidimento	n_{irr}	10	-
Raggio medio anelli	ρ_{irr}	154	mm
Volume tot. anelli	P_{irr}	24	kg

INCIDENZA PALI

<i>Descrizione</i>	<i>VAR.</i>	<i>VALORE</i>	<i>U.M.</i>
Volume totale armatura	$P_{s,PALO}$	1012	kg
Volume calcestruzzo palo	V_{PA}	3	m^3
INCIDENZA (+10% sovrapposizioni, sfridi) - val. arrotondato	i_{PALO}	330	kg/m^3

Per il cordolo sommitale non sono state eseguite modellazioni o verifiche strutturali. Esso sarà armato con i minimi quantitativi previsti da normativa e si considera un'incidenza pari a 80 kg/m³.

11.5 Verifiche geotecniche

11.5.1 Mobilizzazione spinte

Si riporta la condizione più gravosa: sismica

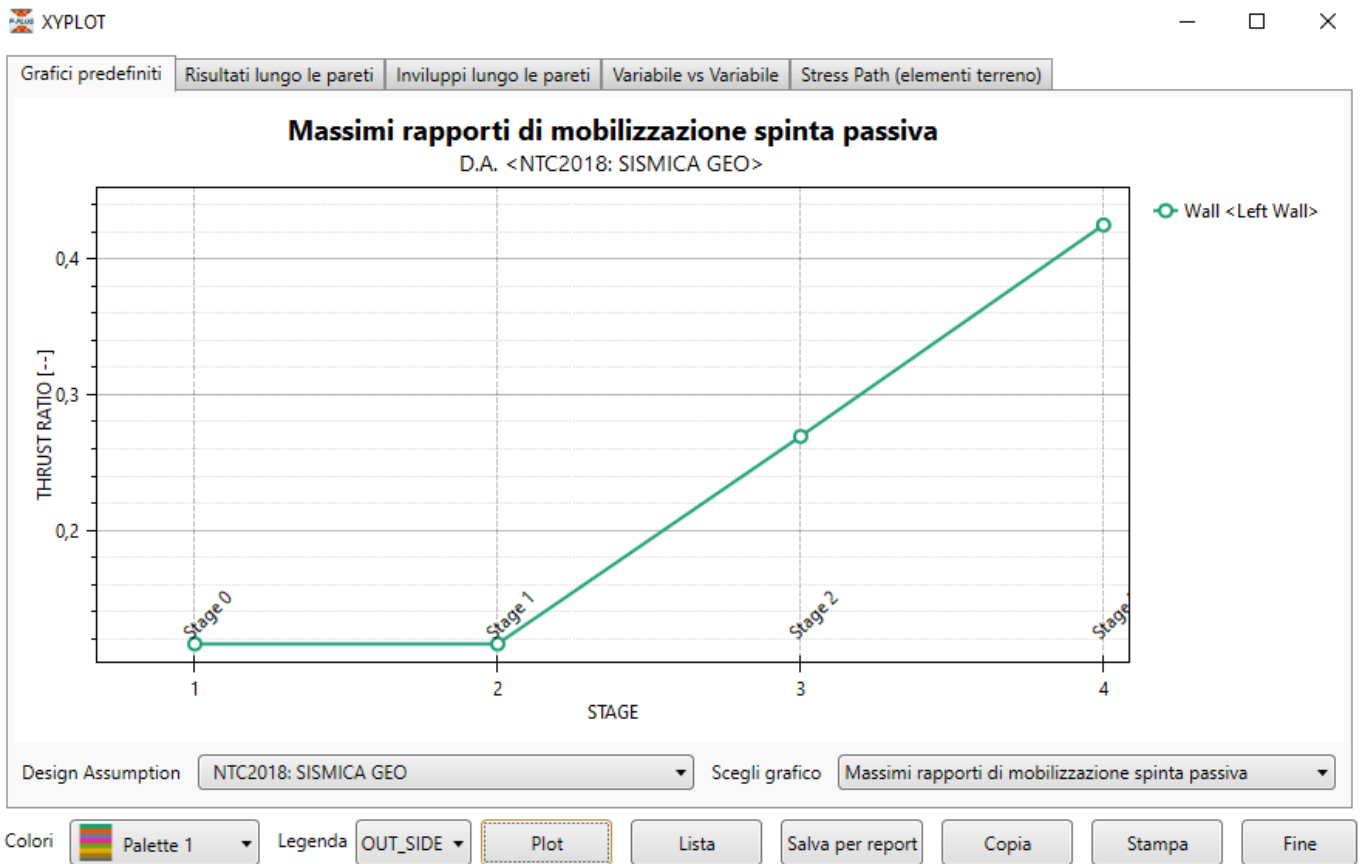
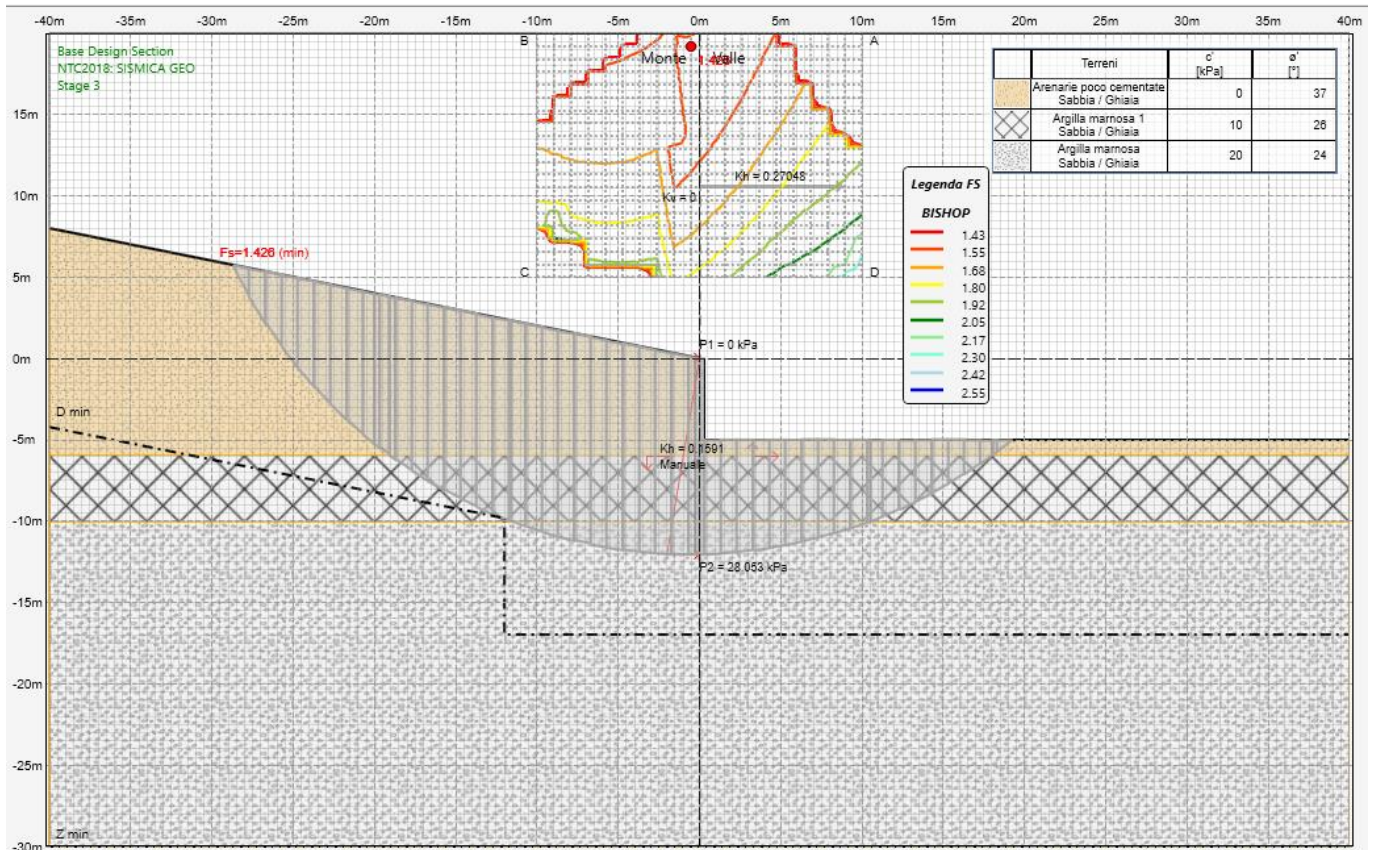


Figura 11.10 - Mobilizzazione spinte

11.5.2 Verifiche stabilità globale

Si riporta la condizione più gravosa: **sismica**



Impiegando il metodo di Bishop, si ottiene un fattore di sicurezza pari a:

$$FS = 1.43 > R2 (= 1.10)$$

Pertanto, la verifica può ritenersi soddisfatta.



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	58 di 731

12 CONCLUSIONI

Con la presente relazione si è proceduto al progetto ed alla verifica delle opere di sostegno del piazzale PT07, in corrispondenza della viabilità NV24.

Le verifiche strutturali e geotecniche rispettano le indicazioni delle Normative tecniche di riferimento.



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	59 di 731

13 ALLEGATO DI CALCOLO

Si riporta l'allegato di calcolo estratto dal software utilizzato, per la sola paratia T1, ovvero quella di maggiori dimensioni.

Report di Calcolo

Sommario

Contenuto Sommario

1. Descrizione del Software

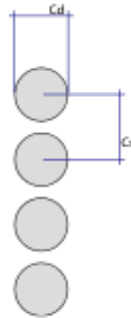
ParatiePlus è un codice agli elementi finiti che simula il problema di uno scavo sostenuto da diaframmi flessibili e permette di valutare il comportamento della parete di sostegno durante tutte le fasi intermedie e nella configurazione finale.

3. Descrizione Pareti

X : 0 m
 Quota in alto : 0 m
 Quota di fondo : -20 m
 Muro di sinistra

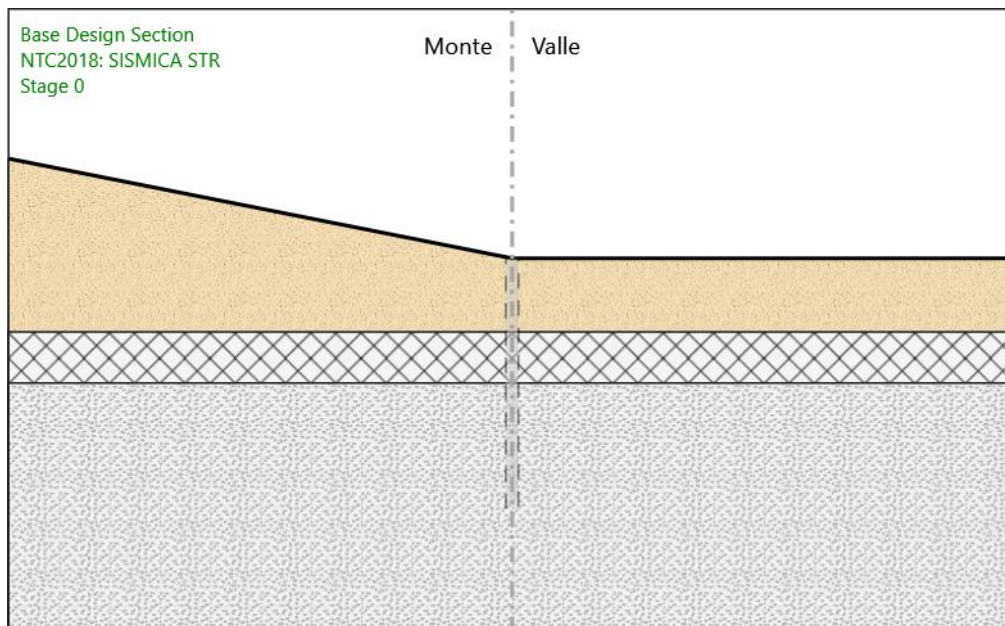
Armatura Lunghezza segmenti : 1 m
 Rinforzo longitudinale 1
 Lunghezza : 20 m
 Materiale : B450C
 Quota iniziale : 0 m
 Barre 1
 Numero di barre : 42
 Diametro : 0.03 m
 Distanza dal bordo : 0.097 m
 Staffe 1
 Numero di staffe : 2
 Copertura : 0.07 m
 Diametro : 0.012 m
 Lunghezza : 20 m
 Quota iniziale : 0 m
 Passo : 0.15 m

Sezione : PALO Ø1000
 Area equivalente : 0.654498469497874 m
 Inerzia equivalente : 0.0409 m⁴/m
 Materiale calcestruzzo : C25/30
 Tipo sezione : Tangent
 Spaziatura : 1.2 m
 Diametro : 1 m
 Efficacia : 1



4. Fasi di Calcolo

4.1. Stage 0



Stage 0

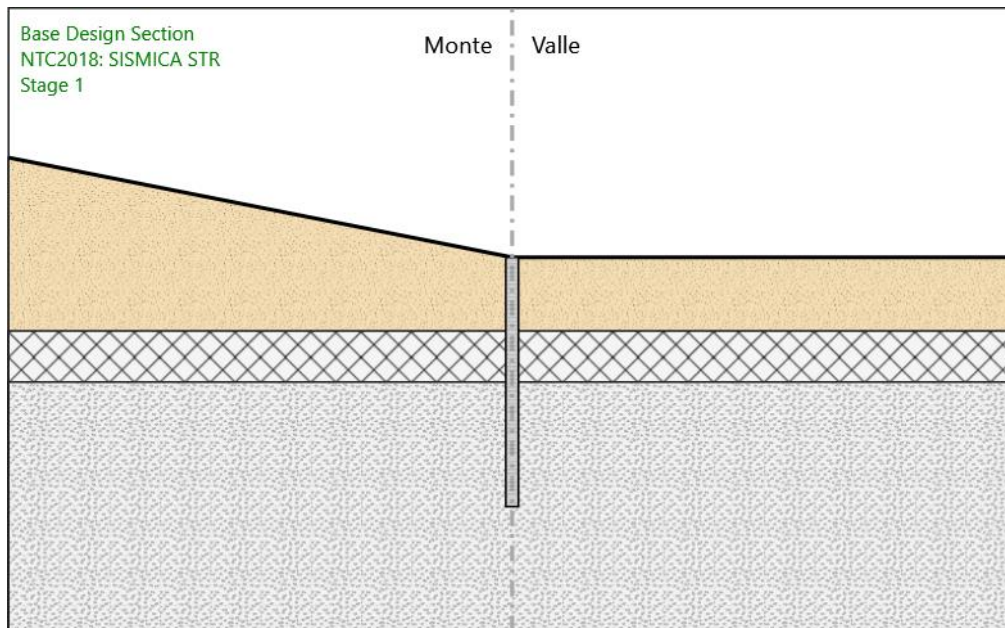
Scavo

Muro			di			sinistra
Lato		monte	:	0		m
Lato		valle	:	0		m
Linea	di	scavo	di	sinistra		(Irregolare)
Linea	di	scavo	di	destra		(Orizzontale)

Falda

Falda	di	sinistra	:	-40		m
Falda	di	destra	:	-40		m

4.2. Stage 1



Stage 1

Scavo

Muro			di			sinistra
------	--	--	----	--	--	----------

Lato monte : 0 m
Lato valle : 0 m

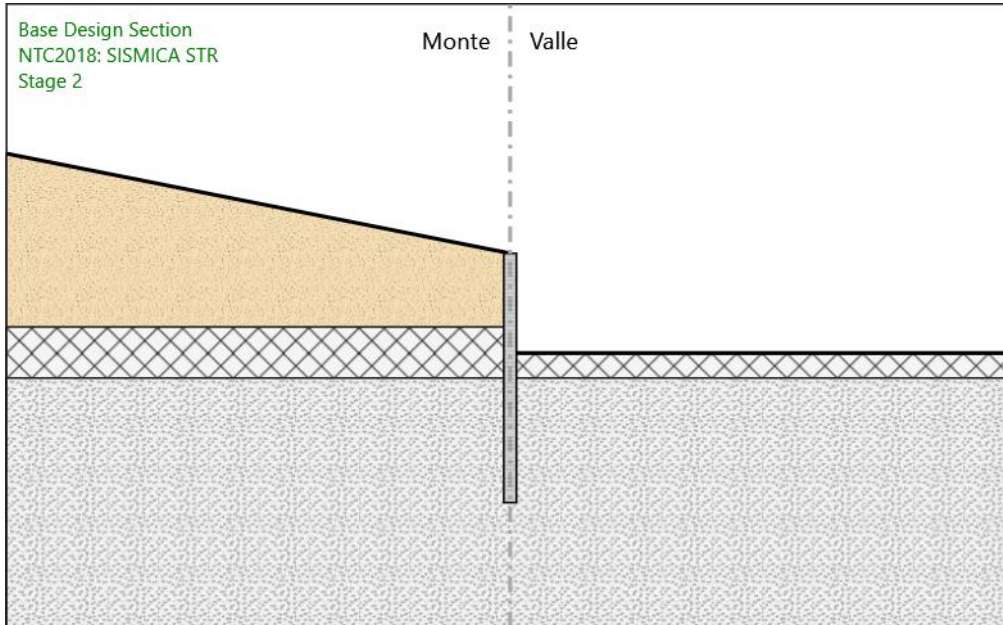
Linea di scavo di sinistra (Irregolare)
(-40;8)
(-20;4)
(0;0)

Linea di scavo di destra (Orizzontale)
0 m

Falda acquifera
Falda di sinistra : -40 m
Falda di destra : -40 m

Elementi strutturali
Paratia : WallElement
X : 0 m
Quota in alto : 0 m
Quota di fondo : -20 m
Sezione : PALO Ø1000

4.3. Stage 2



Stage 2

Scavo

Muro			di			sinistra
Lato		monte	:		0	m
Lato		valle	:		-8	m
Linea	di	scavo	di	sinistra		(Irregolare)
		(-40;8)				
		(-20;4)				
		(0;0)				
Linea	di	scavo	di	destra		(Orizzontale)
		-8				m

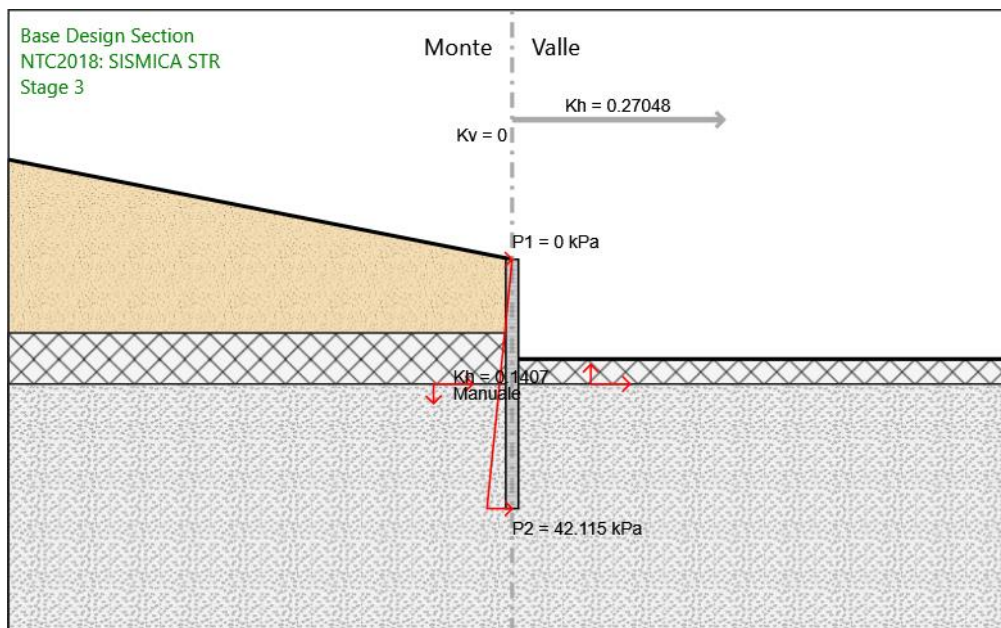
Falda

Falda	di	sinistra	:		-40	m	acquifera
Falda	di	destra	:		-40	m	

Elementi

Paratia			:				strutturali
X			:		0	m	WallElement
Quota	in	alto	:		0	m	
Quota	di	fondo	:		-20	m	
Sezione			:		PALO	Ø1000	

4.4. Stage 3



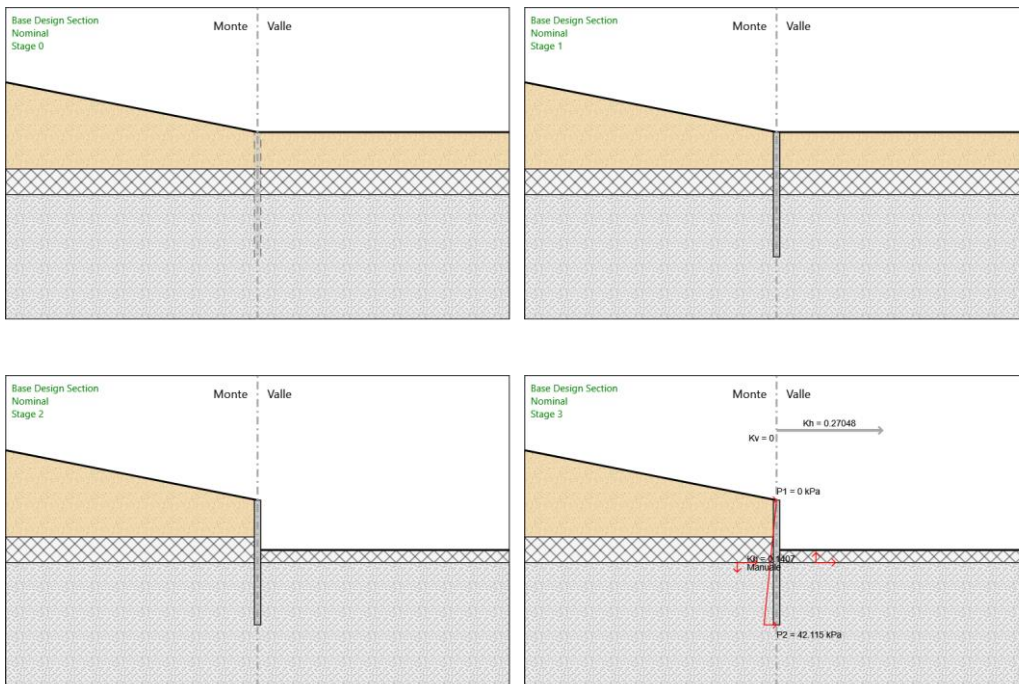
Stage 3

Scavo

Muro	di	sinistra	
Lato monte	:	0	m
Lato valle	:	-8	m
Linea di scavo	di	sinistra	(Irregolare)
(-40;8)			
(-20;4)			
(0;0)			
Linea di scavo	di	destra	(Orizzontale)
-8			m
Falda		acquifera	
Falda di sinistra	:	-40	m
Falda di destra	:	-40	m
Elementi		strutturali	
Paratia	:	WallElement	
X	:	0	m

Quota in alto : 0 m
 Quota di fondo : -20 m
 Sezione : PALO Ø1000

4.5. Tabella Configurazione Stage (Nominal)



5. Grafici dei Risultati

5.1. Design Assumption : Nominal

5.1.1. Tabella Spostamento Nominal - LEFT Stage: Stage 0

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 0	0	0
Stage 0	-0.2	0
Stage 0	-0.4	0
Stage 0	-0.6	0
Stage 0	-0.8	0
Stage 0	-1	0
Stage 0	-1.2	0

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 0	-1.4	0
Stage 0	-1.6	0
Stage 0	-1.8	0
Stage 0	-2	0
Stage 0	-2.2	0
Stage 0	-2.4	0
Stage 0	-2.6	0
Stage 0	-2.8	0
Stage 0	-3	0
Stage 0	-3.2	0
Stage 0	-3.4	0
Stage 0	-3.6	0
Stage 0	-3.8	0
Stage 0	-4	0
Stage 0	-4.2	0
Stage 0	-4.4	0
Stage 0	-4.6	0
Stage 0	-4.8	0
Stage 0	-5	0
Stage 0	-5.2	0
Stage 0	-5.4	0
Stage 0	-5.6	0
Stage 0	-5.8	0
Stage 0	-6	0
Stage 0	-6.2	0
Stage 0	-6.4	0
Stage 0	-6.6	0
Stage 0	-6.8	0
Stage 0	-7	0
Stage 0	-7.2	0
Stage 0	-7.4	0
Stage 0	-7.6	0
Stage 0	-7.8	0

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 0	-8	0
Stage 0	-8.2	0
Stage 0	-8.4	0
Stage 0	-8.6	0
Stage 0	-8.8	0
Stage 0	-9	0
Stage 0	-9.2	0
Stage 0	-9.4	0
Stage 0	-9.6	0
Stage 0	-9.8	0
Stage 0	-10	0
Stage 0	-10.2	0
Stage 0	-10.4	0
Stage 0	-10.6	0
Stage 0	-10.8	0
Stage 0	-11	0
Stage 0	-11.2	0
Stage 0	-11.4	0
Stage 0	-11.6	0
Stage 0	-11.8	0
Stage 0	-12	0
Stage 0	-12.2	0
Stage 0	-12.4	0
Stage 0	-12.6	0
Stage 0	-12.8	0
Stage 0	-13	0
Stage 0	-13.2	0
Stage 0	-13.4	0
Stage 0	-13.6	0
Stage 0	-13.8	0
Stage 0	-14	0
Stage 0	-14.2	0
Stage 0	-14.4	0

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 0	-14.6	0
Stage 0	-14.8	0
Stage 0	-15	0
Stage 0	-15.2	0
Stage 0	-15.4	0
Stage 0	-15.6	0
Stage 0	-15.8	0
Stage 0	-16	0
Stage 0	-16.2	0
Stage 0	-16.4	0
Stage 0	-16.6	0
Stage 0	-16.8	0
Stage 0	-17	0
Stage 0	-17.2	0
Stage 0	-17.4	0
Stage 0	-17.6	0
Stage 0	-17.8	0
Stage 0	-18	0
Stage 0	-18.2	0
Stage 0	-18.4	0
Stage 0	-18.6	0
Stage 0	-18.8	0
Stage 0	-19	0
Stage 0	-19.2	0
Stage 0	-19.4	0
Stage 0	-19.6	0
Stage 0	-19.8	0
Stage 0	-20	0

5.1.2. Tabella Spostamento Nominal - LEFT Stage: Stage 1

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 1	0	0

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 1	-0.2	0
Stage 1	-0.4	0
Stage 1	-0.6	0
Stage 1	-0.8	0
Stage 1	-1	0
Stage 1	-1.2	0
Stage 1	-1.4	0
Stage 1	-1.6	0
Stage 1	-1.8	0
Stage 1	-2	0
Stage 1	-2.2	0
Stage 1	-2.4	0
Stage 1	-2.6	0
Stage 1	-2.8	0
Stage 1	-3	0
Stage 1	-3.2	0
Stage 1	-3.4	0
Stage 1	-3.6	0
Stage 1	-3.8	0
Stage 1	-4	0
Stage 1	-4.2	0
Stage 1	-4.4	0
Stage 1	-4.6	0
Stage 1	-4.8	0
Stage 1	-5	0
Stage 1	-5.2	0
Stage 1	-5.4	0
Stage 1	-5.6	0
Stage 1	-5.8	0
Stage 1	-6	0
Stage 1	-6.2	0
Stage 1	-6.4	0
Stage 1	-6.6	0

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 1	-6.8	0
Stage 1	-7	0
Stage 1	-7.2	0
Stage 1	-7.4	0
Stage 1	-7.6	0
Stage 1	-7.8	0
Stage 1	-8	0
Stage 1	-8.2	0
Stage 1	-8.4	0
Stage 1	-8.6	0
Stage 1	-8.8	0
Stage 1	-9	0
Stage 1	-9.2	0
Stage 1	-9.4	0
Stage 1	-9.6	0
Stage 1	-9.8	0
Stage 1	-10	0
Stage 1	-10.2	0
Stage 1	-10.4	0
Stage 1	-10.6	0
Stage 1	-10.8	0
Stage 1	-11	0
Stage 1	-11.2	0
Stage 1	-11.4	0
Stage 1	-11.6	0
Stage 1	-11.8	0
Stage 1	-12	0
Stage 1	-12.2	0
Stage 1	-12.4	0
Stage 1	-12.6	0
Stage 1	-12.8	0
Stage 1	-13	0
Stage 1	-13.2	0

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 1	-13.4	0
Stage 1	-13.6	0
Stage 1	-13.8	0
Stage 1	-14	0
Stage 1	-14.2	0
Stage 1	-14.4	0
Stage 1	-14.6	0
Stage 1	-14.8	0
Stage 1	-15	0
Stage 1	-15.2	0
Stage 1	-15.4	0
Stage 1	-15.6	0
Stage 1	-15.8	0
Stage 1	-16	0
Stage 1	-16.2	0
Stage 1	-16.4	0
Stage 1	-16.6	0
Stage 1	-16.8	0
Stage 1	-17	0
Stage 1	-17.2	0
Stage 1	-17.4	0
Stage 1	-17.6	0
Stage 1	-17.8	0
Stage 1	-18	0
Stage 1	-18.2	0
Stage 1	-18.4	0
Stage 1	-18.6	0
Stage 1	-18.8	0
Stage 1	-19	0
Stage 1	-19.2	0
Stage 1	-19.4	0
Stage 1	-19.6	0
Stage 1	-19.8	0

Design Assumption: NominalTipo Risultato: SpostamentoMuro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 1	-20	0

5.1.3. Tabella Spostamento Nominal - LEFT Stage: Stage 2

Design Assumption: NominalTipo Risultato: SpostamentoMuro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 2	0	46.57
Stage 2	-0.2	45.76
Stage 2	-0.4	44.94
Stage 2	-0.6	44.12
Stage 2	-0.8	43.3
Stage 2	-1	42.49
Stage 2	-1.2	41.67
Stage 2	-1.4	40.85
Stage 2	-1.6	40.04
Stage 2	-1.8	39.22
Stage 2	-2	38.4
Stage 2	-2.2	37.58
Stage 2	-2.4	36.77
Stage 2	-2.6	35.95
Stage 2	-2.8	35.14
Stage 2	-3	34.32
Stage 2	-3.2	33.51
Stage 2	-3.4	32.69
Stage 2	-3.6	31.88
Stage 2	-3.8	31.07
Stage 2	-4	30.26
Stage 2	-4.2	29.45
Stage 2	-4.4	28.64
Stage 2	-4.6	27.83
Stage 2	-4.8	27.03
Stage 2	-5	26.23
Stage 2	-5.2	25.43
Stage 2	-5.4	24.64

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 2	-5.6	23.85
Stage 2	-5.8	23.06
Stage 2	-6	22.28
Stage 2	-6.2	21.5
Stage 2	-6.4	20.73
Stage 2	-6.6	19.96
Stage 2	-6.8	19.2
Stage 2	-7	18.45
Stage 2	-7.2	17.7
Stage 2	-7.4	16.97
Stage 2	-7.6	16.24
Stage 2	-7.8	15.53
Stage 2	-8	14.82
Stage 2	-8.2	14.13
Stage 2	-8.4	13.45
Stage 2	-8.6	12.79
Stage 2	-8.8	12.14
Stage 2	-9	11.51
Stage 2	-9.2	10.89
Stage 2	-9.4	10.29
Stage 2	-9.6	9.71
Stage 2	-9.8	9.16
Stage 2	-10	8.62
Stage 2	-10.2	8.1
Stage 2	-10.4	7.6
Stage 2	-10.6	7.13
Stage 2	-10.8	6.67
Stage 2	-11	6.24
Stage 2	-11.2	5.83
Stage 2	-11.4	5.44
Stage 2	-11.6	5.07
Stage 2	-11.8	4.72
Stage 2	-12	4.4

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 2	-12.2	4.09
Stage 2	-12.4	3.8
Stage 2	-12.6	3.53
Stage 2	-12.8	3.28
Stage 2	-13	3.05
Stage 2	-13.2	2.84
Stage 2	-13.4	2.64
Stage 2	-13.6	2.46
Stage 2	-13.8	2.29
Stage 2	-14	2.14
Stage 2	-14.2	2.01
Stage 2	-14.4	1.88
Stage 2	-14.6	1.77
Stage 2	-14.8	1.67
Stage 2	-15	1.58
Stage 2	-15.2	1.51
Stage 2	-15.4	1.44
Stage 2	-15.6	1.38
Stage 2	-15.8	1.33
Stage 2	-16	1.28
Stage 2	-16.2	1.24
Stage 2	-16.4	1.21
Stage 2	-16.6	1.18
Stage 2	-16.8	1.16
Stage 2	-17	1.15
Stage 2	-17.2	1.13
Stage 2	-17.4	1.12
Stage 2	-17.6	1.12
Stage 2	-17.8	1.11
Stage 2	-18	1.11
Stage 2	-18.2	1.11
Stage 2	-18.4	1.11
Stage 2	-18.6	1.11

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 2	-18.8	1.11
Stage 2	-19	1.11
Stage 2	-19.2	1.12
Stage 2	-19.4	1.12
Stage 2	-19.6	1.12
Stage 2	-19.8	1.13
Stage 2	-20	1.13

5.1.4. Tabella Spostamento Nominal - LEFT Stage: Stage 3

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 3	0	113.66
Stage 3	-0.2	111.82
Stage 3	-0.4	109.97
Stage 3	-0.6	108.12
Stage 3	-0.8	106.28
Stage 3	-1	104.43
Stage 3	-1.2	102.58
Stage 3	-1.4	100.74
Stage 3	-1.6	98.89
Stage 3	-1.8	97.04
Stage 3	-2	95.2
Stage 3	-2.2	93.35
Stage 3	-2.4	91.51
Stage 3	-2.6	89.66
Stage 3	-2.8	87.82
Stage 3	-3	85.98
Stage 3	-3.2	84.14
Stage 3	-3.4	82.3
Stage 3	-3.6	80.46
Stage 3	-3.8	78.62
Stage 3	-4	76.79
Stage 3	-4.2	74.96

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 3	-4.4	73.13
Stage 3	-4.6	71.31
Stage 3	-4.8	69.49
Stage 3	-5	67.67
Stage 3	-5.2	65.86
Stage 3	-5.4	64.06
Stage 3	-5.6	62.26
Stage 3	-5.8	60.47
Stage 3	-6	58.68
Stage 3	-6.2	56.91
Stage 3	-6.4	55.14
Stage 3	-6.6	53.39
Stage 3	-6.8	51.65
Stage 3	-7	49.91
Stage 3	-7.2	48.2
Stage 3	-7.4	46.49
Stage 3	-7.6	44.81
Stage 3	-7.8	43.14
Stage 3	-8	41.49
Stage 3	-8.2	39.85
Stage 3	-8.4	38.24
Stage 3	-8.6	36.66
Stage 3	-8.8	35.1
Stage 3	-9	33.56
Stage 3	-9.2	32.06
Stage 3	-9.4	30.58
Stage 3	-9.6	29.13
Stage 3	-9.8	27.72
Stage 3	-10	26.34
Stage 3	-10.2	25
Stage 3	-10.4	23.7
Stage 3	-10.6	22.43
Stage 3	-10.8	21.2

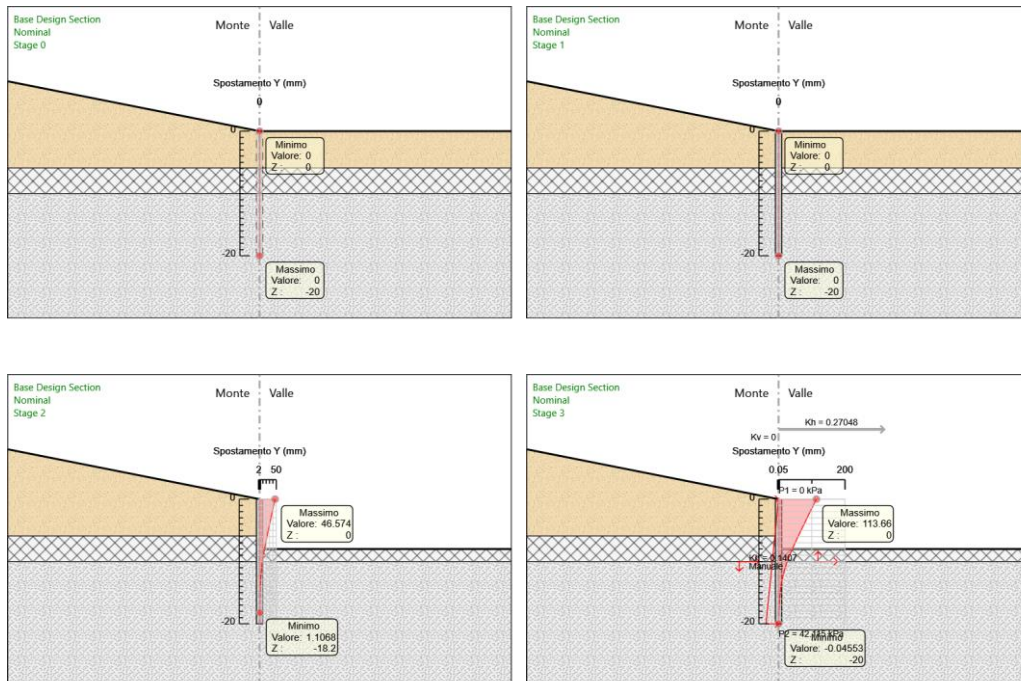
Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 3	-11	20.02
Stage 3	-11.2	18.87
Stage 3	-11.4	17.77
Stage 3	-11.6	16.71
Stage 3	-11.8	15.69
Stage 3	-12	14.71
Stage 3	-12.2	13.78
Stage 3	-12.4	12.89
Stage 3	-12.6	12.04
Stage 3	-12.8	11.24
Stage 3	-13	10.47
Stage 3	-13.2	9.75
Stage 3	-13.4	9.07
Stage 3	-13.6	8.42
Stage 3	-13.8	7.81
Stage 3	-14	7.24
Stage 3	-14.2	6.7
Stage 3	-14.4	6.2
Stage 3	-14.6	5.73
Stage 3	-14.8	5.29
Stage 3	-15	4.88
Stage 3	-15.2	4.5
Stage 3	-15.4	4.14
Stage 3	-15.6	3.81
Stage 3	-15.8	3.5
Stage 3	-16	3.22
Stage 3	-16.2	2.95
Stage 3	-16.4	2.71
Stage 3	-16.6	2.48
Stage 3	-16.8	2.26
Stage 3	-17	2.06
Stage 3	-17.2	1.88
Stage 3	-17.4	1.7

Design Assumption: Nominal Tipo Risultato: Spostamento Muro: LEFT

Stage	Z (m)	Spostamento orizzontale (mm)
Stage 3	-17.6	1.54
Stage 3	-17.8	1.38
Stage 3	-18	1.24
Stage 3	-18.2	1.09
Stage 3	-18.4	0.96
Stage 3	-18.6	0.83
Stage 3	-18.8	0.7
Stage 3	-19	0.57
Stage 3	-19.2	0.45
Stage 3	-19.4	0.32
Stage 3	-19.6	0.2
Stage 3	-19.8	0.08
Stage 3	-20	-0.05

5.1.5. Grafici Spostamento in tabella



5.2. Involuppi Spostamento Nominal

5.2.1. Tabella Inviluppi Spostamento orizzontale Nominal Left Wall

Selected Design Assumptions Inviluppi: Spostamento orizzontale Muro: LEFT

Z (m)	Lato sinistro (mm)	Lato destro (mm)
0	0	113.66
-0.2	0	111.82
-0.4	0	109.97
-0.6	0	108.12
-0.8	0	106.28
-1	0	104.43
-1.2	0	102.58
-1.4	0	100.74
-1.6	0	98.89
-1.8	0	97.04
-2	0	95.2
-2.2	0	93.35
-2.4	0	91.51
-2.6	0	89.66
-2.8	0	87.82
-3	0	85.98
-3.2	0	84.14
-3.4	0	82.3
-3.6	0	80.46
-3.8	0	78.62
-4	0	76.79
-4.2	0	74.96
-4.4	0	73.13
-4.6	0	71.31
-4.8	0	69.49
-5	0	67.67
-5.2	0	65.86
-5.4	0	64.06
-5.6	0	62.26
-5.8	0	60.47
-6	0	58.68
-6.2	0	56.91

Selected Design Assumptions Inviluppi: Spostamento orizzontale Muro: LEFT

Z (m)	Lato sinistro (mm)	Lato destro (mm)
-6.4	0	55.14
-6.6	0	53.39
-6.8	0	51.65
-7	0	49.91
-7.2	0	48.2
-7.4	0	46.49
-7.6	0	44.81
-7.8	0	43.14
-8	0	41.49
-8.2	0	39.85
-8.4	0	38.24
-8.6	0	36.66
-8.8	0	35.1
-9	0	33.56
-9.2	0	32.06
-9.4	0	30.58
-9.6	0	29.13
-9.8	0	27.72
-10	0	26.34
-10.2	0	25
-10.4	0	23.7
-10.6	0	22.43
-10.8	0	21.2
-11	0	20.02
-11.2	0	18.87
-11.4	0	17.77
-11.6	0	16.71
-11.8	0	15.69
-12	0	14.71
-12.2	0	13.78
-12.4	0	12.89
-12.6	0	12.04
-12.8	0	11.24

Selected Design Assumptions Inviluppi: Spostamento orizzontale Muro: LEFT

Z (m)	Lato sinistro (mm)	Lato destro (mm)
-13	0	10.47
-13.2	0	9.75
-13.4	0	9.07
-13.6	0	8.42
-13.8	0	7.81
-14	0	7.24
-14.2	0	6.7
-14.4	0	6.2
-14.6	0	5.73
-14.8	0	5.29
-15	0	4.88
-15.2	0	4.5
-15.4	0	4.14
-15.6	0	3.81
-15.8	0	3.5
-16	0	3.22
-16.2	0	2.95
-16.4	0	2.71
-16.6	0	2.48
-16.8	0	2.26
-17	0	2.06
-17.2	0	1.88
-17.4	0	1.7
-17.6	0	1.54
-17.8	0	1.38
-18	0	1.24
-18.2	0	1.11
-18.4	0	1.11
-18.6	0	1.11
-18.8	0	1.11
-19	0	1.11
-19.2	0	1.12
-19.4	0	1.12



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

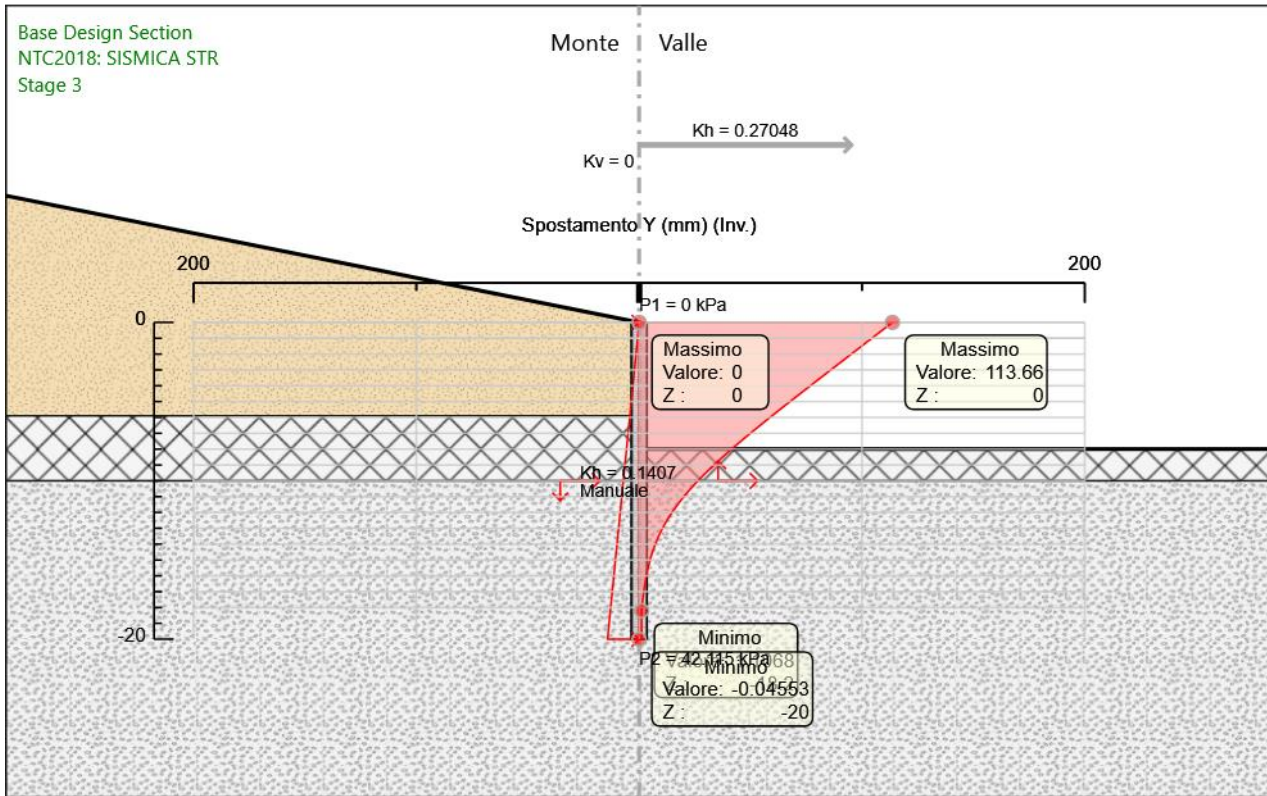
RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

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Selected Design Assumptions Inviluppi: Spostamento orizzontale Muro: LEFT

Z (m)	Lato sinistro (mm)	Lato destro (mm)
-19.6	0	1.12
-19.8	0	1.13
-20	-0.05	1.13

5.2.2. Grafico Inviluppi Spostamento



Spostamento

5.3. Risultati Paratia

5.3.1. Tabella Risultati Paratia Nominal - Stage: Stage 0

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	0	0	0
Stage 0	-0.2	0	0
Stage 0	-0.4	0	0
Stage 0	-0.6	0	0
Stage 0	-0.8	0	0
Stage 0	-1	0	0
Stage 0	-1.2	0	0
Stage 0	-1.4	0	0
Stage 0	-1.6	0	0
Stage 0	-1.8	0	0
Stage 0	-2	0	0
Stage 0	-2.2	0	0
Stage 0	-2.4	0	0
Stage 0	-2.6	0	0
Stage 0	-2.8	0	0
Stage 0	-3	0	0
Stage 0	-3.2	0	0
Stage 0	-3.4	0	0
Stage 0	-3.6	0	0
Stage 0	-3.8	0	0
Stage 0	-4	0	0
Stage 0	-4.2	0	0
Stage 0	-4.4	0	0
Stage 0	-4.6	0	0
Stage 0	-4.8	0	0
Stage 0	-5	0	0
Stage 0	-5.2	0	0
Stage 0	-5.4	0	0
Stage 0	-5.6	0	0
Stage 0	-5.8	0	0
Stage 0	-6	0	0
Stage 0	-6.2	0	0

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-6.4	0	0
Stage 0	-6.6	0	0
Stage 0	-6.8	0	0
Stage 0	-7	0	0
Stage 0	-7.2	0	0
Stage 0	-7.4	0	0
Stage 0	-7.6	0	0
Stage 0	-7.8	0	0
Stage 0	-8	0	0
Stage 0	-8.2	0	0
Stage 0	-8.4	0	0
Stage 0	-8.6	0	0
Stage 0	-8.8	0	0
Stage 0	-9	0	0
Stage 0	-9.2	0	0
Stage 0	-9.4	0	0
Stage 0	-9.6	0	0
Stage 0	-9.8	0	0
Stage 0	-10	0	0
Stage 0	-10.2	0	0
Stage 0	-10.4	0	0
Stage 0	-10.6	0	0
Stage 0	-10.8	0	0
Stage 0	-11	0	0
Stage 0	-11.2	0	0
Stage 0	-11.4	0	0
Stage 0	-11.6	0	0
Stage 0	-11.8	0	0
Stage 0	-12	0	0
Stage 0	-12.2	0	0
Stage 0	-12.4	0	0
Stage 0	-12.6	0	0
Stage 0	-12.8	0	0

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-13	0	0
Stage 0	-13.2	0	0
Stage 0	-13.4	0	0
Stage 0	-13.6	0	0
Stage 0	-13.8	0	0
Stage 0	-14	0	0
Stage 0	-14.2	0	0
Stage 0	-14.4	0	0
Stage 0	-14.6	0	0
Stage 0	-14.8	0	0
Stage 0	-15	0	0
Stage 0	-15.2	0	0
Stage 0	-15.4	0	0
Stage 0	-15.6	0	0
Stage 0	-15.8	0	0
Stage 0	-16	0	0
Stage 0	-16.2	0	0
Stage 0	-16.4	0	0
Stage 0	-16.6	0	0
Stage 0	-16.8	0	0
Stage 0	-17	0	0
Stage 0	-17.2	0	0
Stage 0	-17.4	0	0
Stage 0	-17.6	0	0
Stage 0	-17.8	0	0
Stage 0	-18	0	0
Stage 0	-18.2	0	0
Stage 0	-18.4	0	0
Stage 0	-18.6	0	0
Stage 0	-18.8	0	0
Stage 0	-19	0	0
Stage 0	-19.2	0	0
Stage 0	-19.4	0	0

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-19.6	0	0
Stage 0	-19.8	0	0
Stage 0	-20	0	0

5.3.2. Tabella Risultati Paratia Nominal - Stage: Stage 1

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.6	0	0
Stage 1	-0.8	0	0
Stage 1	-1	0	0
Stage 1	-1.2	0	0
Stage 1	-1.4	0	0
Stage 1	-1.6	0	0
Stage 1	-1.8	0	0
Stage 1	-2	0	0
Stage 1	-2.2	0	0
Stage 1	-2.4	0	0
Stage 1	-2.6	0	0
Stage 1	-2.8	0	0
Stage 1	-3	0	0
Stage 1	-3.2	0	0
Stage 1	-3.4	0	0
Stage 1	-3.6	0	0
Stage 1	-3.8	0	0
Stage 1	-4	0	0
Stage 1	-4.2	0	0
Stage 1	-4.4	0	0
Stage 1	-4.6	0	0
Stage 1	-4.8	0	0
Stage 1	-5	0	0

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-5.2	0	0
Stage 1	-5.4	0	0
Stage 1	-5.6	0	0
Stage 1	-5.8	0	0
Stage 1	-6	0	0
Stage 1	-6.2	0	0
Stage 1	-6.4	0	0
Stage 1	-6.6	0	0
Stage 1	-6.8	0	0
Stage 1	-7	0	0
Stage 1	-7.2	0	0
Stage 1	-7.4	0	0
Stage 1	-7.6	0	0
Stage 1	-7.8	0	0
Stage 1	-8	0	0
Stage 1	-8.2	0	0
Stage 1	-8.4	0	0
Stage 1	-8.6	0	0
Stage 1	-8.8	0	0
Stage 1	-9	0	0
Stage 1	-9.2	0	0
Stage 1	-9.4	0	0
Stage 1	-9.6	0	0
Stage 1	-9.8	0	0
Stage 1	-10	0	0
Stage 1	-10.2	0	0
Stage 1	-10.4	0	0
Stage 1	-10.6	0	0
Stage 1	-10.8	0	0
Stage 1	-11	0	0
Stage 1	-11.2	0	0
Stage 1	-11.4	0	0
Stage 1	-11.6	0	0

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-11.8	0	0
Stage 1	-12	0	0
Stage 1	-12.2	0	0
Stage 1	-12.4	0	0
Stage 1	-12.6	0	0
Stage 1	-12.8	0	0
Stage 1	-13	0	0
Stage 1	-13.2	0	0
Stage 1	-13.4	0	0
Stage 1	-13.6	0	0
Stage 1	-13.8	0	0
Stage 1	-14	0	0
Stage 1	-14.2	0	0
Stage 1	-14.4	0	0
Stage 1	-14.6	0	0
Stage 1	-14.8	0	0
Stage 1	-15	0	0
Stage 1	-15.2	0	0
Stage 1	-15.4	0	0
Stage 1	-15.6	0	0
Stage 1	-15.8	0	0
Stage 1	-16	0	0
Stage 1	-16.2	0	0
Stage 1	-16.4	0	0
Stage 1	-16.6	0	0
Stage 1	-16.8	0	0
Stage 1	-17	0	0
Stage 1	-17.2	0	0
Stage 1	-17.4	0	0
Stage 1	-17.6	0	0
Stage 1	-17.8	0	0
Stage 1	-18	0	0
Stage 1	-18.2	0	0

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-18.4	0	0
Stage 1	-18.6	0	0
Stage 1	-18.8	0	0
Stage 1	-19	0	0
Stage 1	-19.2	0	0
Stage 1	-19.4	0	0
Stage 1	-19.6	0	0
Stage 1	-19.8	0	0
Stage 1	-20	0	0

5.3.3. Tabella Risultati Paratia Nominal - Stage: Stage 2

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	0	0	0
Stage 2	-0.2	0	0
Stage 2	-0.2	0	0
Stage 2	-0.4	-0.04	-0.18
Stage 2	-0.6	-0.14	-0.53
Stage 2	-0.8	-0.35	-1.06
Stage 2	-1	-0.71	-1.77
Stage 2	-1.2	-1.24	-2.66
Stage 2	-1.4	-1.98	-3.72
Stage 2	-1.6	-2.97	-4.96
Stage 2	-1.8	-4.25	-6.37
Stage 2	-2	-5.84	-7.97
Stage 2	-2.2	-7.79	-9.74
Stage 2	-2.4	-10.13	-11.69
Stage 2	-2.6	-12.89	-13.81
Stage 2	-2.8	-16.11	-16.11
Stage 2	-3	-19.83	-18.59
Stage 2	-3.2	-24.08	-21.25
Stage 2	-3.4	-28.9	-24.08
Stage 2	-3.6	-34.32	-27.09

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-3.8	-40.37	-30.28
Stage 2	-4	-47.1	-33.65
Stage 2	-4.2	-54.54	-37.19
Stage 2	-4.4	-62.72	-40.91
Stage 2	-4.6	-71.68	-44.8
Stage 2	-4.8	-81.46	-48.87
Stage 2	-5	-92.08	-53.12
Stage 2	-5.2	-103.59	-57.55
Stage 2	-5.4	-116.02	-62.16
Stage 2	-5.6	-129.41	-66.94
Stage 2	-5.8	-143.79	-71.89
Stage 2	-6	-159.19	-77.03
Stage 2	-6.2	-175.9	-83.51
Stage 2	-6.4	-193.96	-90.31
Stage 2	-6.6	-213.44	-97.42
Stage 2	-6.8	-234.41	-104.84
Stage 2	-7	-256.93	-112.58
Stage 2	-7.2	-281.05	-120.64
Stage 2	-7.4	-306.86	-129.01
Stage 2	-7.6	-334.4	-137.7
Stage 2	-7.8	-363.74	-146.7
Stage 2	-8	-394.94	-156.02
Stage 2	-8.2	-428.07	-165.65
Stage 2	-8.4	-461.17	-165.49
Stage 2	-8.6	-493.75	-162.93
Stage 2	-8.8	-525.35	-157.96
Stage 2	-9	-555.46	-150.58
Stage 2	-9.2	-583.62	-140.79
Stage 2	-9.4	-609.34	-128.6
Stage 2	-9.6	-632.14	-113.99
Stage 2	-9.8	-651.53	-96.98
Stage 2	-10	-667.04	-77.56
Stage 2	-10.2	-678.6	-57.8

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-10.4	-686.63	-40.13
Stage 2	-10.6	-691.36	-23.62
Stage 2	-10.8	-693	-8.24
Stage 2	-11	-691.79	6.09
Stage 2	-11.2	-687.91	19.4
Stage 2	-11.4	-681.56	31.75
Stage 2	-11.6	-672.92	43.2
Stage 2	-11.8	-662.16	53.79
Stage 2	-12	-649.44	63.57
Stage 2	-12.2	-634.92	72.6
Stage 2	-12.4	-618.74	80.93
Stage 2	-12.6	-601.03	88.54
Stage 2	-12.8	-582	95.15
Stage 2	-13	-561.83	100.84
Stage 2	-13.2	-540.7	105.66
Stage 2	-13.4	-518.76	109.69
Stage 2	-13.6	-496.16	113
Stage 2	-13.8	-473.04	115.64
Stage 2	-14	-449.5	117.68
Stage 2	-14.2	-425.67	119.17
Stage 2	-14.4	-401.63	120.17
Stage 2	-14.6	-377.49	120.73
Stage 2	-14.8	-353.31	120.87
Stage 2	-15	-329.28	120.17
Stage 2	-15.2	-305.53	118.71
Stage 2	-15.4	-282.22	116.59
Stage 2	-15.6	-259.44	113.88
Stage 2	-15.8	-237.31	110.66
Stage 2	-16	-215.91	107
Stage 2	-16.2	-195.32	102.95
Stage 2	-16.4	-175.6	98.59
Stage 2	-16.6	-156.81	93.95
Stage 2	-16.8	-138.99	89.09

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-17	-122.19	84.05
Stage 2	-17.2	-106.41	78.86
Stage 2	-17.4	-91.7	73.55
Stage 2	-17.6	-78.07	68.16
Stage 2	-17.8	-65.53	62.71
Stage 2	-18	-54.08	57.22
Stage 2	-18.2	-43.74	51.71
Stage 2	-18.4	-34.5	46.19
Stage 2	-18.6	-26.37	40.67
Stage 2	-18.8	-19.34	35.16
Stage 2	-19	-13.4	29.67
Stage 2	-19.2	-8.56	24.21
Stage 2	-19.4	-4.8	18.78
Stage 2	-19.6	-2.13	13.37
Stage 2	-19.8	-0.53	8
Stage 2	-20	0	2.65

5.3.4. Tabella Risultati Paratia Nominal - Stage: Stage 3

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	0	0	-0.23
Stage 3	-0.2	-0.05	-0.23
Stage 3	-0.4	-0.24	-0.95
Stage 3	-0.6	-0.62	-1.93
Stage 3	-0.8	-1.26	-3.18
Stage 3	-1	-2.2	-4.68
Stage 3	-1.2	-3.49	-6.45
Stage 3	-1.4	-5.18	-8.48
Stage 3	-1.6	-7.34	-10.77
Stage 3	-1.8	-10	-13.32
Stage 3	-2	-13.23	-16.13
Stage 3	-2.2	-17.07	-19.21
Stage 3	-2.4	-21.58	-22.54

Design Assumption: Nominal Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-2.6	-26.8	-26.14
Stage 3	-2.8	-32.8	-30
Stage 3	-3	-39.63	-34.11
Stage 3	-3.2	-47.33	-38.49
Stage 3	-3.4	-55.95	-43.14
Stage 3	-3.6	-65.56	-48.04
Stage 3	-3.8	-76.2	-53.2
Stage 3	-4	-87.93	-58.63
Stage 3	-4.2	-100.79	-64.32
Stage 3	-4.4	-114.84	-70.26
Stage 3	-4.6	-130.14	-76.47
Stage 3	-4.8	-146.73	-82.94
Stage 3	-5	-164.66	-89.68
Stage 3	-5.2	-184	-96.67
Stage 3	-5.4	-204.78	-103.92
Stage 3	-5.6	-227.07	-111.44
Stage 3	-5.8	-250.91	-119.22
Stage 3	-6	-276.36	-127.26
Stage 3	-6.2	-303.71	-136.72
Stage 3	-6.4	-333.03	-146.59
Stage 3	-6.6	-364.4	-156.86
Stage 3	-6.8	-397.9	-167.52
Stage 3	-7	-433.62	-178.59
Stage 3	-7.2	-471.63	-190.06
Stage 3	-7.4	-512.01	-201.92
Stage 3	-7.6	-554.85	-214.18
Stage 3	-7.8	-600.22	-226.85
Stage 3	-8	-648.2	-239.91
Stage 3	-8.2	-698.88	-253.37
Stage 3	-8.4	-750.49	-258.06
Stage 3	-8.6	-802.67	-260.9
Stage 3	-8.8	-855.05	-261.91
Stage 3	-9	-907.26	-261.07

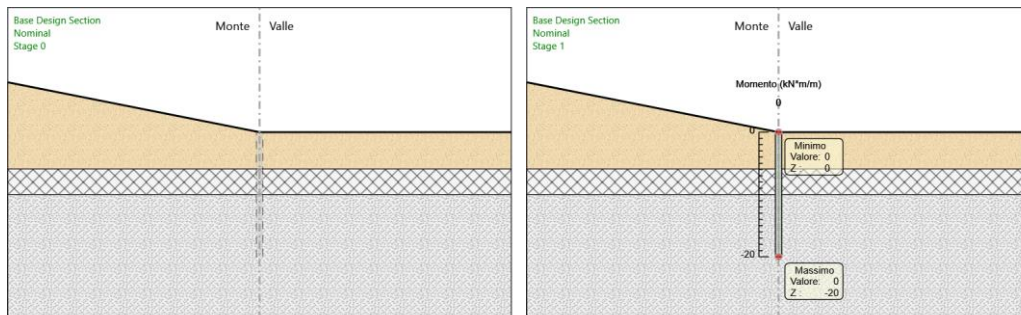
Design Assumption: Nominal Risultati Paratia Muro: LEFT

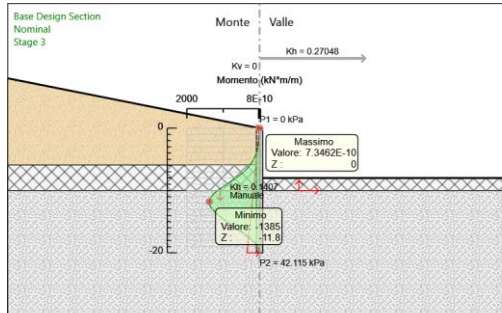
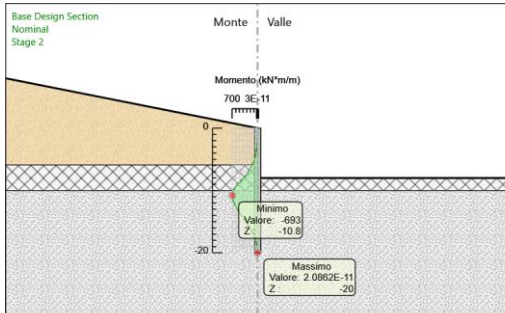
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-9.2	-958.94	-258.4
Stage 3	-9.4	-1009.72	-253.89
Stage 3	-9.6	-1059.23	-247.54
Stage 3	-9.8	-1107.1	-239.34
Stage 3	-10	-1152.96	-229.32
Stage 3	-10.2	-1196.45	-217.45
Stage 3	-10.4	-1236.26	-199.06
Stage 3	-10.6	-1272.07	-179.06
Stage 3	-10.8	-1303.56	-157.46
Stage 3	-11	-1330.41	-134.26
Stage 3	-11.2	-1352.3	-109.45
Stage 3	-11.4	-1368.91	-83.04
Stage 3	-11.6	-1379.92	-55.03
Stage 3	-11.8	-1385	-25.41
Stage 3	-12	-1383.87	5.65
Stage 3	-12.2	-1377.01	34.29
Stage 3	-12.4	-1364.89	60.62
Stage 3	-12.6	-1347.94	84.74
Stage 3	-12.8	-1326.59	106.75
Stage 3	-13	-1301.24	126.76
Stage 3	-13.2	-1272.27	144.87
Stage 3	-13.4	-1240.03	161.17
Stage 3	-13.6	-1204.88	175.77
Stage 3	-13.8	-1167.13	188.75
Stage 3	-14	-1127.09	200.2
Stage 3	-14.2	-1085.04	210.22
Stage 3	-14.4	-1041.27	218.89
Stage 3	-14.6	-996.01	226.3
Stage 3	-14.8	-949.5	232.51
Stage 3	-15	-901.98	237.61
Stage 3	-15.2	-853.65	241.67
Stage 3	-15.4	-804.7	244.75
Stage 3	-15.6	-755.31	246.93

Design Assumption: Nominal Risultati Paratia Muro: LEFT

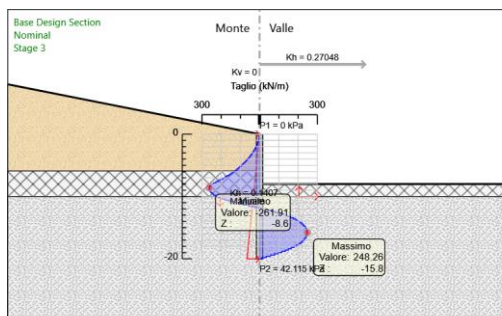
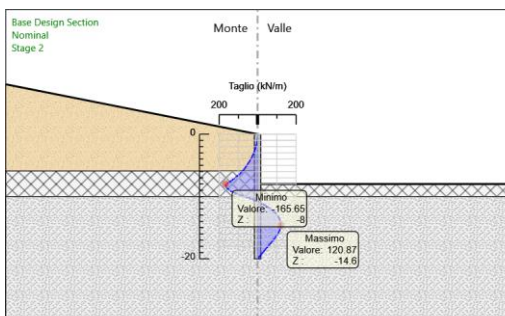
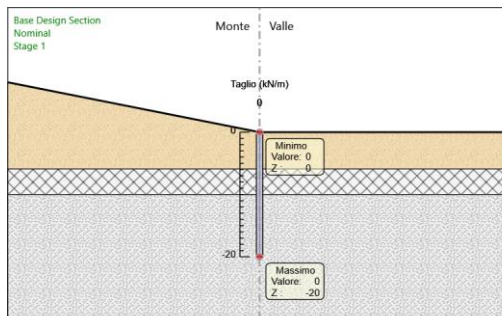
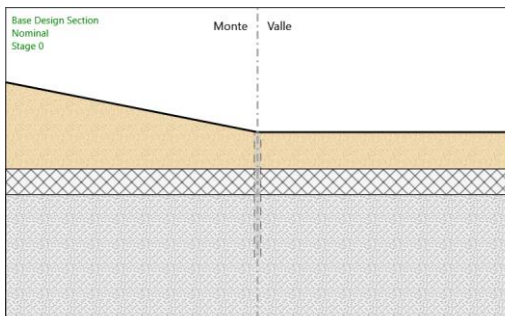
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-15.8	-705.67	248.21
Stage 3	-16	-656.02	248.26
Stage 3	-16.2	-606.59	247.15
Stage 3	-16.4	-557.59	244.97
Stage 3	-16.6	-509.24	241.78
Stage 3	-16.8	-461.71	237.66
Stage 3	-17	-415.18	232.66
Stage 3	-17.2	-369.81	226.85
Stage 3	-17.4	-325.77	220.19
Stage 3	-17.6	-283.38	211.95
Stage 3	-17.8	-242.93	202.24
Stage 3	-18	-204.71	191.11
Stage 3	-18.2	-168.98	178.64
Stage 3	-18.4	-136	164.88
Stage 3	-18.6	-106.03	149.88
Stage 3	-18.8	-79.29	133.66
Stage 3	-19	-56.04	116.27
Stage 3	-19.2	-36.5	97.71
Stage 3	-19.4	-20.9	78.01
Stage 3	-19.6	-9.46	57.17
Stage 3	-19.8	-2.42	35.2
Stage 3	-20	0	12.11

5.3.5. Grafico Momento Nominal





5.3.6. Grafico Taglio Nominal



5.4. Involuppi Risultati Paratia Nominal

5.4.1. Tabella Involuppi Momento Nominal WallElement

Selected Design Assumptions Involuppi: Momento Muro: WallElement

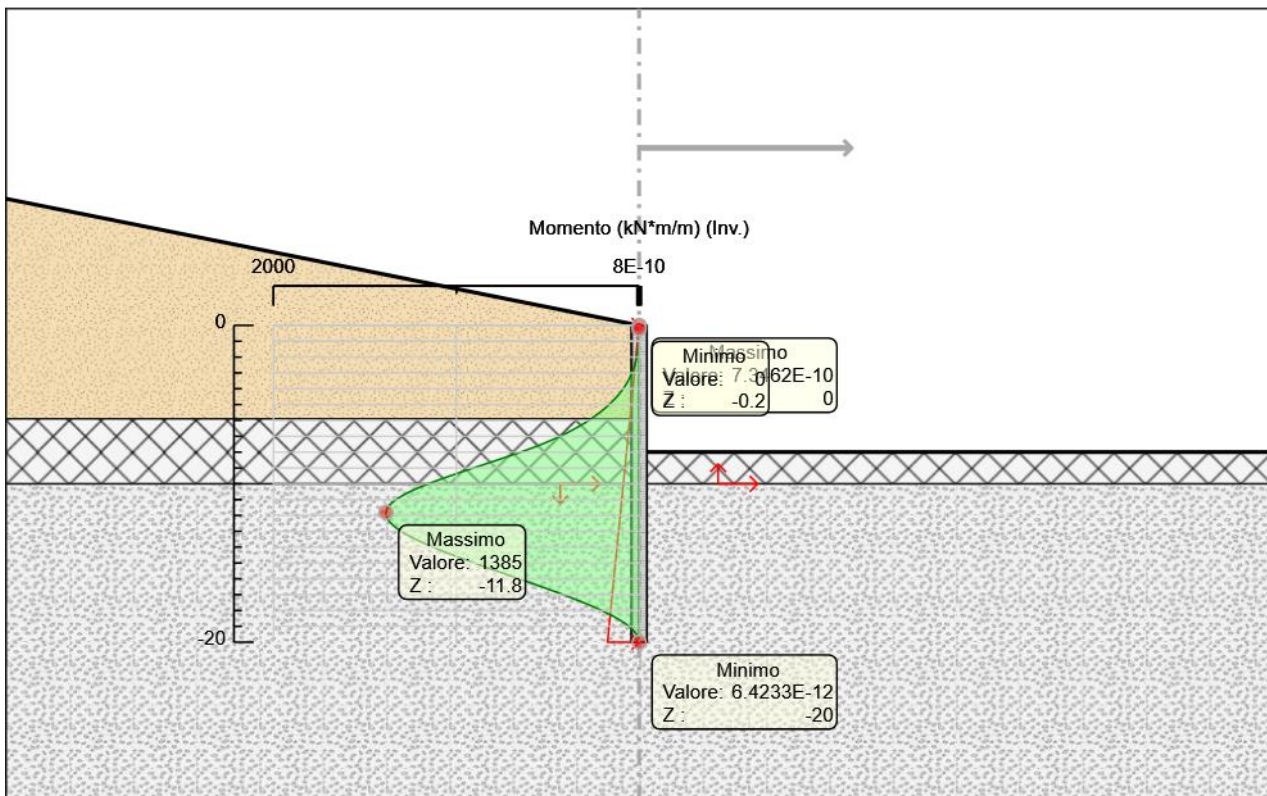
Z (m)	Lato sinistro (kN*m/m)	Lato destro (kN*m/m)
0	0	0
-0.2	0.046	0
-0.4	0.236	0
-0.6	0.623	0

Selected Design Assumptions	Inviluppi: Momento	Muro: WallElement
Z (m)	Lato sinistro (kN*m/m)	Lato destro (kN*m/m)
-0.8	1.259	0
-1	2.196	0
-1.2	3.487	0
-1.4	5.183	0
-1.6	7.337	0
-1.8	10.001	0
-2	13.228	0
-2.2	17.069	0
-2.4	21.577	0
-2.6	26.805	0
-2.8	32.804	0
-3	39.627	0
-3.2	47.326	0
-3.4	55.953	0
-3.6	65.561	0
-3.8	76.201	0
-4	87.927	0
-4.2	100.79	0
-4.4	114.843	0
-4.6	130.137	0
-4.8	146.726	0
-5	164.661	0
-5.2	183.995	0
-5.4	204.78	0
-5.6	227.068	0
-5.8	250.911	0
-6	276.363	0
-6.2	303.707	0
-6.4	333.026	0
-6.6	364.397	0
-6.8	397.902	0
-7	433.62	0
-7.2	471.631	0

Selected Design Assumptions	Inviluppi: Momento	Muro: WallElement
Z (m)	Lato sinistro (kN*m/m)	Lato destro (kN*m/m)
-7.4	512.015	0
-7.6	554.851	0
-7.8	600.221	0
-8	648.203	0
-8.2	698.877	0
-8.4	750.488	0
-8.6	802.668	0
-8.8	855.049	0
-9	907.263	0
-9.2	958.943	0
-9.4	1009.72	0
-9.6	1059.227	0
-9.8	1107.096	0
-10	1152.959	0
-10.2	1196.449	0
-10.4	1236.259	0
-10.6	1272.07	0
-10.8	1303.562	0
-11	1330.414	0
-11.2	1352.304	0
-11.4	1368.912	0
-11.6	1379.918	0
-11.8	1385	0
-12	1383.87	0
-12.2	1377.013	0
-12.4	1364.89	0
-12.6	1347.942	0
-12.8	1326.592	0
-13	1301.24	0
-13.2	1272.266	0
-13.4	1240.032	0
-13.6	1204.879	0
-13.8	1167.129	0

Selected Design Assumptions	Inviluppi: Momento	Muro: WallElement
Z (m)	Lato sinistro (kN*m/m)	Lato destro (kN*m/m)
-14	1127.089	0
-14.2	1085.044	0
-14.4	1041.265	0
-14.6	996.006	0
-14.8	949.503	0
-15	901.981	0
-15.2	853.648	0
-15.4	804.697	0
-15.6	755.312	0
-15.8	705.669	0
-16	656.017	0
-16.2	606.587	0
-16.4	557.594	0
-16.6	509.239	0
-16.8	461.708	0
-17	415.176	0
-17.2	369.806	0
-17.4	325.769	0
-17.6	283.379	0
-17.8	242.929	0
-18	204.706	0
-18.2	168.978	0
-18.4	136.001	0
-18.6	106.026	0
-18.8	79.293	0
-19	56.04	0
-19.2	36.498	0
-19.4	20.897	0
-19.6	9.463	0
-19.8	2.422	0
-20	0	0

5.4.2. Grafico Inviluppi Momento Nominal



Momento

5.4.3. Tabella Involuppi Taglio Nominal WallElement

Selected Design Assumptions Involuppi: Taglio Muro: WallElement

Z (m)	Lato sinistro (kN/m)	Lato destro (kN/m)
0	0.23	0
-0.2	0.952	0
-0.4	1.935	0
-0.6	3.179	0
-0.8	4.685	0
-1	6.452	0
-1.2	8.48	0
-1.4	10.77	0
-1.6	13.321	0
-1.8	16.133	0
-2	19.207	0
-2.2	22.542	0
-2.4	26.138	0
-2.6	29.996	0
-2.8	34.114	0
-3	38.495	0
-3.2	43.136	0
-3.4	48.039	0
-3.6	53.203	0
-3.8	58.629	0
-4	64.315	0
-4.2	70.264	0
-4.4	76.473	0
-4.6	82.944	0
-4.8	89.676	0
-5	96.669	0
-5.2	103.924	0
-5.4	111.44	0
-5.6	119.217	0
-5.8	127.256	0
-6	136.724	0
-6.2	146.591	0
-6.4	156.858	0

Selected Design Assumptions Inviluppi: Taglio Muro: WallElement

Z (m)	Lato sinistro (kN/m)	Lato destro (kN/m)
-6.6	167.524	0
-6.8	178.59	0
-7	190.055	0
-7.2	201.92	0
-7.4	214.184	0
-7.6	226.847	0
-7.8	239.91	0
-8	253.372	0
-8.2	258.056	0
-8.4	260.9	0
-8.6	261.905	0
-8.8	261.905	0
-9	261.071	0
-9.2	258.398	0
-9.4	253.886	0
-9.6	247.535	0
-9.8	239.345	0
-10	229.316	0
-10.2	217.447	0
-10.4	199.055	0
-10.6	179.06	0
-10.8	157.46	6.087
-11	134.258	19.399
-11.2	109.451	31.752
-11.4	83.041	43.198
-11.6	55.027	53.787
-11.8	25.41	63.572
-12	0	72.602
-12.2	0	80.926
-12.4	0	88.541
-12.6	0	106.75
-12.8	0	126.761
-13	0	144.869

Selected Design Assumptions Inviluppi: Taglio Muro: WallElement

Z (m)	Lato sinistro (kN/m)	Lato destro (kN/m)
-13.2	0	161.172
-13.4	0	175.767
-13.6	0	188.747
-13.8	0	200.203
-14	0	210.224
-14.2	0	218.895
-14.4	0	226.298
-14.6	0	232.511
-14.8	0	237.611
-15	0	241.668
-15.2	0	244.752
-15.4	0	246.926
-15.6	0	248.213
-15.8	0	248.259
-16	0	248.259
-16.2	0	247.15
-16.4	0	244.965
-16.6	0	241.778
-16.8	0	237.656
-17	0	232.66
-17.2	0	226.847
-17.4	0	220.185
-17.6	0	211.954
-17.8	0	202.238
-18	0	191.113
-18.2	0	178.643
-18.4	0	164.883
-18.6	0	149.877
-18.8	0	133.662
-19	0	116.266
-19.2	0	97.709
-19.4	0	78.008
-19.6	0	57.17



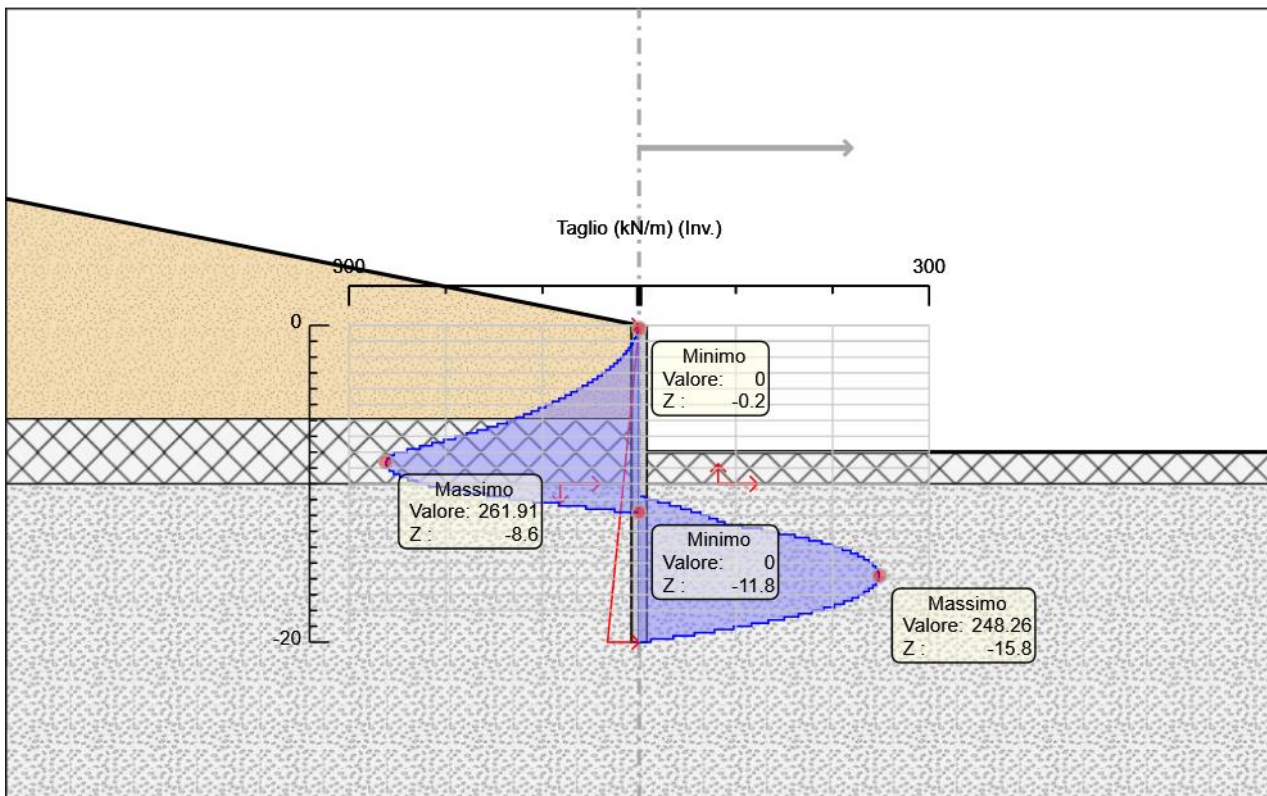
LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
	IABH	00	F	CL	MU04 00 001	A	107 di 731

Selected Design Assumptions Inviluppi: Taglio Muro: WallElement

Z (m)	Lato sinistro (kN/m)	Lato destro (kN/m)
-19.8	0	35.204
-20	0	12.11

5.4.4. Grafico Inviluppi Taglio Nominal



Taglio

5.5. Risultati Terreno

5.5.1. Tabella Risultati Terreno Left Wall - Nominal - Stage 0

Design	Nominal	Risultati	Muro:	LEFT	Lato	LEFT			
Assumption:	Terreno								
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente U* Peq
Stage 0	0	0	0	V-C	0.233	10.6730	0	0	0 0
Stage 0	-0.2	3.8	1.52	V-C	0.233	10.6730	0	0	0 1.52
Stage 0	-0.4	7.6	3.04	V-C	0.233	10.6730	0	0	0 3.04
Stage 0	-0.6	11.4	4.56	V-C	0.233	10.6730	0	0	0 4.56
Stage 0	-0.8	15.2	6.08	V-C	0.233	10.6730	0	0	0 6.08
Stage 0	-1	19	7.6	V-C	0.233	10.6730	0	0	0 7.6
Stage 0	-1.2	22.8	9.12	V-C	0.233	10.6730	0	0	0 9.12
Stage 0	-1.4	26.6	10.64	V-C	0.233	10.6730	0	0	0 10.64
Stage 0	-1.6	30.4	12.16	V-C	0.233	10.6730	0	0	0 12.16
Stage 0	-1.8	34.2	13.68	V-C	0.233	10.6730	0	0	0 13.68
Stage 0	-2	38	15.2	V-C	0.233	10.6730	0	0	0 15.2
Stage 0	-2.2	41.8	16.72	V-C	0.233	10.6730	0	0	0 16.72
Stage 0	-2.4	45.6	18.24	V-C	0.233	10.6730	0	0	0 18.24
Stage 0	-2.6	49.4	19.76	V-C	0.233	10.6730	0	0	0 19.76
Stage 0	-2.8	53.2	21.28	V-C	0.233	10.6730	0	0	0 21.28
Stage 0	-3	57	22.8	V-C	0.233	10.6730	0	0	0 22.8
Stage 0	-3.2	60.8	24.32	V-C	0.233	10.6730	0	0	0 24.32
Stage 0	-3.4	64.6	25.84	V-C	0.233	10.6730	0	0	0 25.84
Stage 0	-3.6	68.4	27.36	V-C	0.233	10.6730	0	0	0 27.36
Stage 0	-3.8	72.2	28.88	V-C	0.233	10.6730	0	0	0 28.88
Stage 0	-4	76	30.4	V-C	0.233	10.6730	0	0	0 30.4
Stage 0	-4.2	79.8	31.92	V-C	0.233	10.6730	0	0	0 31.92
Stage 0	-4.4	83.6	33.44	V-C	0.233	10.6730	0	0	0 33.44
Stage 0	-4.6	87.4	34.96	V-C	0.233	10.6730	0	0	0 34.96
Stage 0	-4.8	91.2	36.48	V-C	0.233	10.6730	0	0	0 36.48
Stage 0	-5	95	38	V-C	0.233	10.6730	0	0	0 38
Stage 0	-5.2	98.8	39.52	V-C	0.233	10.6730	0	0	0 39.52
Stage 0	-5.4	102.6	41.04	V-C	0.233	10.6730	0	0	0 41.04
Stage 0	-5.6	106.4	42.56	V-C	0.233	10.6730	0	0	0 42.56
Stage 0	-5.8	110.2	44.08	V-C	0.233	10.6730	0	0	0 44.08
Stage 0	-6	114.1	64.124	V-C	0.3944	4.676 10	0	0	0 64.124

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*	Peq
Stage 0	-6.2	118.1	66.372	V-C	0.3944	6.676	10	0	0	0	66.372
Stage 0	-6.4	122.1	68.62	V-C	0.3944	6.676	10	0	0	0	68.62
Stage 0	-6.6	126.1	70.868	V-C	0.3944	6.676	10	0	0	0	70.868
Stage 0	-6.8	130.1	73.116	V-C	0.3944	6.676	10	0	0	0	73.116
Stage 0	-7	134.1	75.364	V-C	0.3944	6.676	10	0	0	0	75.364
Stage 0	-7.2	138.1	77.612	V-C	0.3944	6.676	10	0	0	0	77.612
Stage 0	-7.4	142.1	79.86	V-C	0.3944	6.676	10	0	0	0	79.86
Stage 0	-7.6	146.1	82.108	V-C	0.3944	6.676	10	0	0	0	82.108
Stage 0	-7.8	150.1	84.356	V-C	0.3944	6.676	10	0	0	0	84.356
Stage 0	-8	154.1	86.604	V-C	0.3944	6.676	10	0	0	0	86.604
Stage 0	-8.2	158.1	88.852	V-C	0.3944	6.676	10	0	0	0	88.852
Stage 0	-8.4	162.1	91.1	V-C	0.3944	6.676	10	0	0	0	91.1
Stage 0	-8.6	166.1	93.348	V-C	0.3944	6.676	10	0	0	0	93.348
Stage 0	-8.8	170.1	95.596	V-C	0.3944	6.676	10	0	0	0	95.596
Stage 0	-9	174.1	97.844	V-C	0.3944	6.676	10	0	0	0	97.844
Stage 0	-9.2	178.1	100.092	V-C	0.3944	6.676	10	0	0	0	100.092
Stage 0	-9.4	182.1	102.34	V-C	0.3944	6.676	10	0	0	0	102.34
Stage 0	-9.6	186.1	104.588	V-C	0.3944	6.676	10	0	0	0	104.588
Stage 0	-9.8	190.1	106.836	V-C	0.3944	6.676	10	0	0	0	106.836
Stage 0	-10	194.1	109.084	V-C	0.3944	6.676	10	0	0	0	109.084
Stage 0	-10.2	198.2	96.127	V-C	0.4344	4.096	20	0	0	0	96.127
Stage 0	-10.4	202.3	98.115	V-C	0.4344	4.096	20	0	0	0	98.115
Stage 0	-10.6	206.4	100.104	V-C	0.4344	4.096	20	0	0	0	100.104
Stage 0	-10.8	210.5	102.092	V-C	0.4344	4.096	20	0	0	0	102.092
Stage 0	-11	214.6	104.081	V-C	0.4344	4.096	20	0	0	0	104.081
Stage 0	-11.2	218.7	106.069	V-C	0.4344	4.096	20	0	0	0	106.069
Stage 0	-11.4	222.8	108.058	V-C	0.4344	4.096	20	0	0	0	108.058
Stage 0	-11.6	226.9	110.046	V-C	0.4344	4.096	20	0	0	0	110.046
Stage 0	-11.8	231	112.035	V-C	0.4344	4.096	20	0	0	0	112.035
Stage 0	-12	235.1	114.023	V-C	0.4344	4.096	20	0	0	0	114.023
Stage 0	-12.2	239.2	116.012	V-C	0.4344	4.096	20	0	0	0	116.012
Stage 0	-12.4	243.3	118	V-C	0.4344	4.096	20	0	0	0	118

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*	Peq
Stage 0	-12.6	247.4	119.989	V-C	0.4344	0.096	20	0	0	0	119.989
Stage 0	-12.8	251.5	121.977	V-C	0.4344	0.096	20	0	0	0	121.977
Stage 0	-13	255.6	123.966	V-C	0.4344	0.096	20	0	0	0	123.966
Stage 0	-13.2	259.7	125.954	V-C	0.4344	0.096	20	0	0	0	125.954
Stage 0	-13.4	263.8	127.943	V-C	0.4344	0.096	20	0	0	0	127.943
Stage 0	-13.6	267.9	129.931	V-C	0.4344	0.096	20	0	0	0	129.931
Stage 0	-13.8	272	131.92	V-C	0.4344	0.096	20	0	0	0	131.92
Stage 0	-14	276.1	133.908	V-C	0.4344	0.096	20	0	0	0	133.908
Stage 0	-14.2	280.2	135.897	V-C	0.4344	0.096	20	0	0	0	135.897
Stage 0	-14.4	284.3	137.885	V-C	0.4344	0.096	20	0	0	0	137.885
Stage 0	-14.6	288.4	139.874	V-C	0.4344	0.096	20	0	0	0	139.874
Stage 0	-14.8	292.5	141.862	V-C	0.4344	0.096	20	0	0	0	141.862
Stage 0	-15	296.6	143.851	V-C	0.4344	0.096	20	0	0	0	143.851
Stage 0	-15.2	300.7	145.839	V-C	0.4344	0.096	20	0	0	0	145.839
Stage 0	-15.4	304.8	147.828	V-C	0.4344	0.096	20	0	0	0	147.828
Stage 0	-15.6	308.9	149.816	V-C	0.4344	0.096	20	0	0	0	149.816
Stage 0	-15.8	313	151.805	V-C	0.4344	0.096	20	0	0	0	151.805
Stage 0	-16	317.1	153.793	V-C	0.4344	0.096	20	0	0	0	153.793
Stage 0	-16.2	321.2	155.782	V-C	0.4344	0.096	20	0	0	0	155.782
Stage 0	-16.4	325.3	157.77	V-C	0.4344	0.096	20	0	0	0	157.77
Stage 0	-16.6	329.4	159.759	V-C	0.4344	0.096	20	0	0	0	159.759
Stage 0	-16.8	333.5	161.747	V-C	0.4344	0.096	20	0	0	0	161.747
Stage 0	-17	337.6	163.736	V-C	0.4344	0.096	20	0	0	0	163.736
Stage 0	-17.2	341.7	165.724	V-C	0.4344	0.096	20	0	0	0	165.724
Stage 0	-17.4	345.8	167.713	V-C	0.4344	0.096	20	0	0	0	167.713
Stage 0	-17.6	349.9	169.701	V-C	0.4344	0.096	20	0	0	0	169.701
Stage 0	-17.8	354	171.69	V-C	0.4344	0.096	20	0	0	0	171.69
Stage 0	-18	358.1	173.678	V-C	0.4344	0.096	20	0	0	0	173.678
Stage 0	-18.2	362.2	175.667	V-C	0.4344	0.096	20	0	0	0	175.667
Stage 0	-18.4	366.3	177.656	V-C	0.4344	0.096	20	0	0	0	177.656
Stage 0	-18.6	370.4	179.644	V-C	0.4344	0.096	20	0	0	0	179.644
Stage 0	-18.8	374.5	181.632	V-C	0.4344	0.096	20	0	0	0	181.632

Design Assumption:	Nominal	Risultati	Muro: LEFT	Lato LEFT					
		Terreno							
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente U* Peq
Stage 0	-19	378.6	183.621	V-C	0.4344	0.096 20	0	0	0 183.621
Stage 0	-19.2	382.7	185.61	V-C	0.4344	0.096 20	0	0	0 185.61
Stage 0	-19.4	386.8	187.598	V-C	0.4344	0.096 20	0	0	0 187.598
Stage 0	-19.6	390.9	189.586	V-C	0.4344	0.096 20	0	0	0 189.586
Stage 0	-19.8	395	191.575	V-C	0.4344	0.096 20	0	0	0 191.575
Stage 0	-20	399.1	193.564	V-C	0.4344	0.096 20	0	0	0 193.564

Design Assumption:	Nominal	Risultati	Muro: LEFT	Lato RIGHT					
		Terreno							
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente U* Peq
Stage 0	0	0	0	V-C	0.2056	0.7380	0	0	0 0
Stage 0	-0.2	3.8	1.52	V-C	0.2056	0.7380	0	0	0 1.52
Stage 0	-0.4	7.6	3.04	V-C	0.2056	0.7380	0	0	0 3.04
Stage 0	-0.6	11.4	4.56	V-C	0.2056	0.7380	0	0	0 4.56
Stage 0	-0.8	15.2	6.08	V-C	0.2056	0.7380	0	0	0 6.08
Stage 0	-1	19	7.6	V-C	0.2056	0.7380	0	0	0 7.6
Stage 0	-1.2	22.8	9.12	V-C	0.2056	0.7380	0	0	0 9.12
Stage 0	-1.4	26.6	10.64	V-C	0.2056	0.7380	0	0	0 10.64
Stage 0	-1.6	30.4	12.16	V-C	0.2056	0.7380	0	0	0 12.16
Stage 0	-1.8	34.2	13.68	V-C	0.2056	0.7380	0	0	0 13.68
Stage 0	-2	38	15.2	V-C	0.2056	0.7380	0	0	0 15.2
Stage 0	-2.2	41.8	16.72	V-C	0.2056	0.7380	0	0	0 16.72
Stage 0	-2.4	45.6	18.24	V-C	0.2056	0.7380	0	0	0 18.24
Stage 0	-2.6	49.4	19.76	V-C	0.2056	0.7380	0	0	0 19.76
Stage 0	-2.8	53.2	21.28	V-C	0.2056	0.7380	0	0	0 21.28
Stage 0	-3	57	22.8	V-C	0.2056	0.7380	0	0	0 22.8
Stage 0	-3.2	60.8	24.32	V-C	0.2056	0.7380	0	0	0 24.32
Stage 0	-3.4	64.6	25.84	V-C	0.2056	0.7380	0	0	0 25.84
Stage 0	-3.6	68.4	27.36	V-C	0.2056	0.7380	0	0	0 27.36
Stage 0	-3.8	72.2	28.88	V-C	0.2056	0.7380	0	0	0 28.88
Stage 0	-4	76	30.4	V-C	0.2056	0.7380	0	0	0 30.4
Stage 0	-4.2	79.8	31.92	V-C	0.2056	0.7380	0	0	0 31.92

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*	Peq
Stage 0	-4.4	83.6	33.44	V-C	0.2056	7.380	0	0	0	33.44	
Stage 0	-4.6	87.4	34.96	V-C	0.2056	7.380	0	0	0	34.96	
Stage 0	-4.8	91.2	36.48	V-C	0.2056	7.380	0	0	0	36.48	
Stage 0	-5	95	38	V-C	0.2056	7.380	0	0	0	38	
Stage 0	-5.2	98.8	39.52	V-C	0.2056	7.380	0	0	0	39.52	
Stage 0	-5.4	102.6	41.04	V-C	0.2056	7.380	0	0	0	41.04	
Stage 0	-5.6	106.4	42.56	V-C	0.2056	7.380	0	0	0	42.56	
Stage 0	-5.8	110.2	44.08	V-C	0.2056	7.380	0	0	0	44.08	
Stage 0	-6	114.1	64.124	V-C	0.3313	3.40410	0	0	0	64.124	
Stage 0	-6.2	118.1	66.372	V-C	0.3313	3.40410	0	0	0	66.372	
Stage 0	-6.4	122.1	68.62	V-C	0.3313	3.40410	0	0	0	68.62	
Stage 0	-6.6	126.1	70.868	V-C	0.3313	3.40410	0	0	0	70.868	
Stage 0	-6.8	130.1	73.116	V-C	0.3313	3.40410	0	0	0	73.116	
Stage 0	-7	134.1	75.364	V-C	0.3313	3.40410	0	0	0	75.364	
Stage 0	-7.2	138.1	77.612	V-C	0.3313	3.40410	0	0	0	77.612	
Stage 0	-7.4	142.1	79.86	V-C	0.3313	3.40410	0	0	0	79.86	
Stage 0	-7.6	146.1	82.108	V-C	0.3313	3.40410	0	0	0	82.108	
Stage 0	-7.8	150.1	84.356	V-C	0.3313	3.40410	0	0	0	84.356	
Stage 0	-8	154.1	86.604	V-C	0.3313	3.40410	0	0	0	86.604	
Stage 0	-8.2	158.1	88.852	V-C	0.3313	3.40410	0	0	0	88.852	
Stage 0	-8.4	162.1	91.1	V-C	0.3313	3.40410	0	0	0	91.1	
Stage 0	-8.6	166.1	93.348	V-C	0.3313	3.40410	0	0	0	93.348	
Stage 0	-8.8	170.1	95.596	V-C	0.3313	3.40410	0	0	0	95.596	
Stage 0	-9	174.1	97.844	V-C	0.3313	3.40410	0	0	0	97.844	
Stage 0	-9.2	178.1	100.092	V-C	0.3313	3.40410	0	0	0	100.092	
Stage 0	-9.4	182.1	102.34	V-C	0.3313	3.40410	0	0	0	102.34	
Stage 0	-9.6	186.1	104.588	V-C	0.3313	3.40410	0	0	0	104.588	
Stage 0	-9.8	190.1	106.836	V-C	0.3313	3.40410	0	0	0	106.836	
Stage 0	-10	194.1	109.084	V-C	0.3313	3.40410	0	0	0	109.084	
Stage 0	-10.2	198.2	96.127	V-C	0.36	3.05120	0	0	0	96.127	
Stage 0	-10.4	202.3	98.115	V-C	0.36	3.05120	0	0	0	98.115	
Stage 0	-10.6	206.4	100.104	V-C	0.36	3.05120	0	0	0	100.104	

Design Assumption:	Nominal	Risultati	Muro: LEFT	Lato RIGHT					
		Terreno							
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente U* Peq
Stage 0	-10.8	210.5	102.092	V-C	0.36	3.05120	0	0	0 102.092
Stage 0	-11	214.6	104.081	V-C	0.36	3.05120	0	0	0 104.081
Stage 0	-11.2	218.7	106.069	V-C	0.36	3.05120	0	0	0 106.069
Stage 0	-11.4	222.8	108.058	V-C	0.36	3.05120	0	0	0 108.058
Stage 0	-11.6	226.9	110.046	V-C	0.36	3.05120	0	0	0 110.046
Stage 0	-11.8	231	112.035	V-C	0.36	3.05120	0	0	0 112.035
Stage 0	-12	235.1	114.023	V-C	0.36	3.05120	0	0	0 114.023
Stage 0	-12.2	239.2	116.012	V-C	0.36	3.05120	0	0	0 116.012
Stage 0	-12.4	243.3	118	V-C	0.36	3.05120	0	0	0 118
Stage 0	-12.6	247.4	119.989	V-C	0.36	3.05120	0	0	0 119.989
Stage 0	-12.8	251.5	121.977	V-C	0.36	3.05120	0	0	0 121.977
Stage 0	-13	255.6	123.966	V-C	0.36	3.05120	0	0	0 123.966
Stage 0	-13.2	259.7	125.954	V-C	0.36	3.05120	0	0	0 125.954
Stage 0	-13.4	263.8	127.943	V-C	0.36	3.05120	0	0	0 127.943
Stage 0	-13.6	267.9	129.931	V-C	0.36	3.05120	0	0	0 129.931
Stage 0	-13.8	272	131.92	V-C	0.36	3.05120	0	0	0 131.92
Stage 0	-14	276.1	133.908	V-C	0.36	3.05120	0	0	0 133.908
Stage 0	-14.2	280.2	135.897	V-C	0.36	3.05120	0	0	0 135.897
Stage 0	-14.4	284.3	137.885	V-C	0.36	3.05120	0	0	0 137.885
Stage 0	-14.6	288.4	139.874	V-C	0.36	3.05120	0	0	0 139.874
Stage 0	-14.8	292.5	141.862	V-C	0.36	3.05120	0	0	0 141.862
Stage 0	-15	296.6	143.851	V-C	0.36	3.05120	0	0	0 143.851
Stage 0	-15.2	300.7	145.839	V-C	0.36	3.05120	0	0	0 145.839
Stage 0	-15.4	304.8	147.828	V-C	0.36	3.05120	0	0	0 147.828
Stage 0	-15.6	308.9	149.816	V-C	0.36	3.05120	0	0	0 149.816
Stage 0	-15.8	313	151.805	V-C	0.36	3.05120	0	0	0 151.805
Stage 0	-16	317.1	153.793	V-C	0.36	3.05120	0	0	0 153.793
Stage 0	-16.2	321.2	155.782	V-C	0.36	3.05120	0	0	0 155.782
Stage 0	-16.4	325.3	157.77	V-C	0.36	3.05120	0	0	0 157.77
Stage 0	-16.6	329.4	159.759	V-C	0.36	3.05120	0	0	0 159.759
Stage 0	-16.8	333.5	161.747	V-C	0.36	3.05120	0	0	0 161.747
Stage 0	-17	337.6	163.736	V-C	0.36	3.05120	0	0	0 163.736

Design	Nominal	Risultati	Muro: LEFT	Lato RIGHT					
Assumption:		Terreno							
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente U* Peq
Stage 0	-17.2	341.7	165.724	V-C	0.36	3.05120	0	0	0 165.724
Stage 0	-17.4	345.8	167.713	V-C	0.36	3.05120	0	0	0 167.713
Stage 0	-17.6	349.9	169.701	V-C	0.36	3.05120	0	0	0 169.701
Stage 0	-17.8	354	171.69	V-C	0.36	3.05120	0	0	0 171.69
Stage 0	-18	358.1	173.678	V-C	0.36	3.05120	0	0	0 173.678
Stage 0	-18.2	362.2	175.667	V-C	0.36	3.05120	0	0	0 175.667
Stage 0	-18.4	366.3	177.656	V-C	0.36	3.05120	0	0	0 177.656
Stage 0	-18.6	370.4	179.644	V-C	0.36	3.05120	0	0	0 179.644
Stage 0	-18.8	374.5	181.632	V-C	0.36	3.05120	0	0	0 181.632
Stage 0	-19	378.6	183.621	V-C	0.36	3.05120	0	0	0 183.621
Stage 0	-19.2	382.7	185.61	V-C	0.36	3.05120	0	0	0 185.61
Stage 0	-19.4	386.8	187.598	V-C	0.36	3.05120	0	0	0 187.598
Stage 0	-19.6	390.9	189.586	V-C	0.36	3.05120	0	0	0 189.586
Stage 0	-19.8	395	191.575	V-C	0.36	3.05120	0	0	0 191.575
Stage 0	-20	399.1	193.564	V-C	0.36	3.05120	0	0	0 193.564

5.5.2. Tabella Risultati Terreno Left Wall - Nominal - Stage 1

Design	Nominal	Risultati	Muro: LEFT	Lato LEFT					
Assumption:		Terreno							
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente U* Peq
Stage 1	0	0	0	UL- RL	0.23310	0.6730	0	0	0 0
Stage 1	-0.2	3.8	1.52	UL- RL	0.23310	0.6730	0	0	0 1.52
Stage 1	-0.4	7.6	3.04	UL- RL	0.23310	0.6730	0	0	0 3.04
Stage 1	-0.6	11.4	4.56	UL- RL	0.23310	0.6730	0	0	0 4.56
Stage 1	-0.8	15.2	6.08	UL- RL	0.23310	0.6730	0	0	0 6.08
Stage 1	-1	19	7.6	UL- RL	0.23310	0.6730	0	0	0 7.6

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 1	-1.2	22.8	9.12	UL- RL	0.233	10.6730	0	0	0	9.12	
Stage 1	-1.4	26.6	10.64	UL- RL	0.233	10.6730	0	0	0	10.64	
Stage 1	-1.6	30.4	12.16	UL- RL	0.233	10.6730	0	0	0	12.16	
Stage 1	-1.8	34.2	13.68	UL- RL	0.233	10.6730	0	0	0	13.68	
Stage 1	-2	38	15.2	UL- RL	0.233	10.6730	0	0	0	15.2	
Stage 1	-2.2	41.8	16.72	UL- RL	0.233	10.6730	0	0	0	16.72	
Stage 1	-2.4	45.6	18.24	UL- RL	0.233	10.6730	0	0	0	18.24	
Stage 1	-2.6	49.4	19.76	UL- RL	0.233	10.6730	0	0	0	19.76	
Stage 1	-2.8	53.2	21.28	UL- RL	0.233	10.6730	0	0	0	21.28	
Stage 1	-3	57	22.8	UL- RL	0.233	10.6730	0	0	0	22.8	
Stage 1	-3.2	60.8	24.32	UL- RL	0.233	10.6730	0	0	0	24.32	
Stage 1	-3.4	64.6	25.84	UL- RL	0.233	10.6730	0	0	0	25.84	
Stage 1	-3.6	68.4	27.36	UL- RL	0.233	10.6730	0	0	0	27.36	
Stage 1	-3.8	72.2	28.88	UL- RL	0.233	10.6730	0	0	0	28.88	
Stage 1	-4	76	30.4	UL- RL	0.233	10.6730	0	0	0	30.4	
Stage 1	-4.2	79.8	31.92	UL- RL	0.233	10.6730	0	0	0	31.92	
Stage 1	-4.4	83.6	33.44	UL- RL	0.233	10.6730	0	0	0	33.44	

Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT				
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 1	-4.6	87.4	34.96	UL- RL	0.233	10.6730	0	0	0	34.96
Stage 1	-4.8	91.2	36.48	UL- RL	0.233	10.6730	0	0	0	36.48
Stage 1	-5	95	38	UL- RL	0.233	10.6730	0	0	0	38
Stage 1	-5.2	98.8	39.52	UL- RL	0.233	10.6730	0	0	0	39.52
Stage 1	-5.4	102.6	41.04	UL- RL	0.233	10.6730	0	0	0	41.04
Stage 1	-5.6	106.4	42.56	UL- RL	0.233	10.6730	0	0	0	42.56
Stage 1	-5.8	110.2	44.08	UL- RL	0.233	10.6730	0	0	0	44.08
Stage 1	-6	114.1	64.124	UL- RL	0.3944	4.676 10	0	0	0	64.124
Stage 1	-6.2	118.1	66.372	UL- RL	0.3944	4.676 10	0	0	0	66.372
Stage 1	-6.4	122.1	68.62	UL- RL	0.3944	4.676 10	0	0	0	68.62
Stage 1	-6.6	126.1	70.868	UL- RL	0.3944	4.676 10	0	0	0	70.868
Stage 1	-6.8	130.1	73.116	UL- RL	0.3944	4.676 10	0	0	0	73.116
Stage 1	-7	134.1	75.364	UL- RL	0.3944	4.676 10	0	0	0	75.364
Stage 1	-7.2	138.1	77.612	UL- RL	0.3944	4.676 10	0	0	0	77.612
Stage 1	-7.4	142.1	79.86	UL- RL	0.3944	4.676 10	0	0	0	79.86
Stage 1	-7.6	146.1	82.108	UL- RL	0.3944	4.676 10	0	0	0	82.108
Stage 1	-7.8	150.1	84.356	UL- RL	0.3944	4.676 10	0	0	0	84.356

Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 1	-8	154.1	86.604	UL- RL	0.3944	4.676	10	0	0	0	86.604
Stage 1	-8.2	158.1	88.852	UL- RL	0.3944	4.676	10	0	0	0	88.852
Stage 1	-8.4	162.1	91.1	UL- RL	0.3944	4.676	10	0	0	0	91.1
Stage 1	-8.6	166.1	93.348	UL- RL	0.3944	4.676	10	0	0	0	93.348
Stage 1	-8.8	170.1	95.596	UL- RL	0.3944	4.676	10	0	0	0	95.596
Stage 1	-9	174.1	97.844	UL- RL	0.3944	4.676	10	0	0	0	97.844
Stage 1	-9.2	178.1	100.092	UL- RL	0.3944	4.676	10	0	0	0	100.092
Stage 1	-9.4	182.1	102.34	UL- RL	0.3944	4.676	10	0	0	0	102.34
Stage 1	-9.6	186.1	104.588	UL- RL	0.3944	4.676	10	0	0	0	104.588
Stage 1	-9.8	190.1	106.836	UL- RL	0.3944	4.676	10	0	0	0	106.836
Stage 1	-10	194.1	109.084	UL- RL	0.3944	4.676	10	0	0	0	109.084
Stage 1	-10.2	198.2	96.127	UL- RL	0.4344	4.096	20	0	0	0	96.127
Stage 1	-10.4	202.3	98.115	UL- RL	0.4344	4.096	20	0	0	0	98.115
Stage 1	-10.6	206.4	100.104	UL- RL	0.4344	4.096	20	0	0	0	100.104
Stage 1	-10.8	210.5	102.092	UL- RL	0.4344	4.096	20	0	0	0	102.092
Stage 1	-11	214.6	104.081	UL- RL	0.4344	4.096	20	0	0	0	104.081
Stage 1	-11.2	218.7	106.069	UL- RL	0.4344	4.096	20	0	0	0	106.069

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato LEFT						
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 1	-11.4	222.8	108.058	UL-RL	0.43	4.096	20	0	0	0 108.058
Stage 1	-11.6	226.9	110.046	UL-RL	0.43	4.096	20	0	0	0 110.046
Stage 1	-11.8	231	112.035	UL-RL	0.43	4.096	20	0	0	0 112.035
Stage 1	-12	235.1	114.023	UL-RL	0.43	4.096	20	0	0	0 114.023
Stage 1	-12.2	239.2	116.012	UL-RL	0.43	4.096	20	0	0	0 116.012
Stage 1	-12.4	243.3	118	UL-RL	0.43	4.096	20	0	0	0 118
Stage 1	-12.6	247.4	119.989	UL-RL	0.43	4.096	20	0	0	0 119.989
Stage 1	-12.8	251.5	121.977	UL-RL	0.43	4.096	20	0	0	0 121.977
Stage 1	-13	255.6	123.966	UL-RL	0.43	4.096	20	0	0	0 123.966
Stage 1	-13.2	259.7	125.954	UL-RL	0.43	4.096	20	0	0	0 125.954
Stage 1	-13.4	263.8	127.943	UL-RL	0.43	4.096	20	0	0	0 127.943
Stage 1	-13.6	267.9	129.931	UL-RL	0.43	4.096	20	0	0	0 129.931
Stage 1	-13.8	272	131.92	UL-RL	0.43	4.096	20	0	0	0 131.92
Stage 1	-14	276.1	133.908	UL-RL	0.43	4.096	20	0	0	0 133.908
Stage 1	-14.2	280.2	135.897	UL-RL	0.43	4.096	20	0	0	0 135.897
Stage 1	-14.4	284.3	137.885	UL-RL	0.43	4.096	20	0	0	0 137.885
Stage 1	-14.6	288.4	139.874	UL-RL	0.43	4.096	20	0	0	0 139.874

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato LEFT						
Stage	Z (m)	Sigma V	Sigma H Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 1	-14.8	292.5	141.862 UL-RL	0.43	4.096	20	0	0	0	141.862
Stage 1	-15	296.6	143.851 UL-RL	0.43	4.096	20	0	0	0	143.851
Stage 1	-15.2	300.7	145.839 UL-RL	0.43	4.096	20	0	0	0	145.839
Stage 1	-15.4	304.8	147.828 UL-RL	0.43	4.096	20	0	0	0	147.828
Stage 1	-15.6	308.9	149.816 UL-RL	0.43	4.096	20	0	0	0	149.816
Stage 1	-15.8	313	151.805 UL-RL	0.43	4.096	20	0	0	0	151.805
Stage 1	-16	317.1	153.793 UL-RL	0.43	4.096	20	0	0	0	153.793
Stage 1	-16.2	321.2	155.782 UL-RL	0.43	4.096	20	0	0	0	155.782
Stage 1	-16.4	325.3	157.77 UL-RL	0.43	4.096	20	0	0	0	157.77
Stage 1	-16.6	329.4	159.759 UL-RL	0.43	4.096	20	0	0	0	159.759
Stage 1	-16.8	333.5	161.747 UL-RL	0.43	4.096	20	0	0	0	161.747
Stage 1	-17	337.6	163.736 UL-RL	0.43	4.096	20	0	0	0	163.736
Stage 1	-17.2	341.7	165.724 UL-RL	0.43	4.096	20	0	0	0	165.724
Stage 1	-17.4	345.8	167.713 UL-RL	0.43	4.096	20	0	0	0	167.713
Stage 1	-17.6	349.9	169.701 UL-RL	0.43	4.096	20	0	0	0	169.701
Stage 1	-17.8	354	171.69 UL-RL	0.43	4.096	20	0	0	0	171.69
Stage 1	-18	358.1	173.678 UL-RL	0.43	4.096	20	0	0	0	173.678

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato LEFT						
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 1	-18.2	362.2	175.667	UL- RL	0.43	4.096	20	0	0	0 175.667
Stage 1	-18.4	366.3	177.656	UL- RL	0.43	4.096	20	0	0	0 177.656
Stage 1	-18.6	370.4	179.644	UL- RL	0.43	4.096	20	0	0	0 179.644
Stage 1	-18.8	374.5	181.632	UL- RL	0.43	4.096	20	0	0	0 181.632
Stage 1	-19	378.6	183.621	UL- RL	0.43	4.096	20	0	0	0 183.621
Stage 1	-19.2	382.7	185.61	UL- RL	0.43	4.096	20	0	0	0 185.61
Stage 1	-19.4	386.8	187.598	UL- RL	0.43	4.096	20	0	0	0 187.598
Stage 1	-19.6	390.9	189.586	UL- RL	0.43	4.096	20	0	0	0 189.586
Stage 1	-19.8	395	191.575	UL- RL	0.43	4.096	20	0	0	0 191.575
Stage 1	-20	399.1	193.564	UL- RL	0.43	4.096	20	0	0	0 193.564

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato RIGHT						
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 1	0	0	0	UL- RL	0.20	5.7380		0	0	0 0
Stage 1	-0.2	3.8	1.52	UL- RL	0.20	5.7380		0	0	0 1.52
Stage 1	-0.4	7.6	3.04	UL- RL	0.20	5.7380		0	0	0 3.04
Stage 1	-0.6	11.4	4.56	UL- RL	0.20	5.7380		0	0	0 4.56
Stage 1	-0.8	15.2	6.08	UL- RL	0.20	5.7380		0	0	0 6.08

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	RIGHT					
	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*Peq	
Stage 1	-1	19	7.6	UL- RL	0.2056	7.380	0	0	0	7.6	
Stage 1	-1.2	22.8	9.12	UL- RL	0.2056	7.380	0	0	0	9.12	
Stage 1	-1.4	26.6	10.64	UL- RL	0.2056	7.380	0	0	0	10.64	
Stage 1	-1.6	30.4	12.16	UL- RL	0.2056	7.380	0	0	0	12.16	
Stage 1	-1.8	34.2	13.68	UL- RL	0.2056	7.380	0	0	0	13.68	
Stage 1	-2	38	15.2	UL- RL	0.2056	7.380	0	0	0	15.2	
Stage 1	-2.2	41.8	16.72	UL- RL	0.2056	7.380	0	0	0	16.72	
Stage 1	-2.4	45.6	18.24	UL- RL	0.2056	7.380	0	0	0	18.24	
Stage 1	-2.6	49.4	19.76	UL- RL	0.2056	7.380	0	0	0	19.76	
Stage 1	-2.8	53.2	21.28	UL- RL	0.2056	7.380	0	0	0	21.28	
Stage 1	-3	57	22.8	UL- RL	0.2056	7.380	0	0	0	22.8	
Stage 1	-3.2	60.8	24.32	UL- RL	0.2056	7.380	0	0	0	24.32	
Stage 1	-3.4	64.6	25.84	UL- RL	0.2056	7.380	0	0	0	25.84	
Stage 1	-3.6	68.4	27.36	UL- RL	0.2056	7.380	0	0	0	27.36	
Stage 1	-3.8	72.2	28.88	UL- RL	0.2056	7.380	0	0	0	28.88	
Stage 1	-4	76	30.4	UL- RL	0.2056	7.380	0	0	0	30.4	
Stage 1	-4.2	79.8	31.92	UL- RL	0.2056	7.380	0	0	0	31.92	

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 1	-4.4	83.6	33.44	UL- RL	0.2056	7.380		0	0	0	33.44
Stage 1	-4.6	87.4	34.96	UL- RL	0.2056	7.380		0	0	0	34.96
Stage 1	-4.8	91.2	36.48	UL- RL	0.2056	7.380		0	0	0	36.48
Stage 1	-5	95	38	UL- RL	0.2056	7.380		0	0	0	38
Stage 1	-5.2	98.8	39.52	UL- RL	0.2056	7.380		0	0	0	39.52
Stage 1	-5.4	102.6	41.04	UL- RL	0.2056	7.380		0	0	0	41.04
Stage 1	-5.6	106.4	42.56	UL- RL	0.2056	7.380		0	0	0	42.56
Stage 1	-5.8	110.2	44.08	UL- RL	0.2056	7.380		0	0	0	44.08
Stage 1	-6	114.1	64.124	UL- RL	0.3313	3.40410		0	0	0	64.124
Stage 1	-6.2	118.1	66.372	UL- RL	0.3313	3.40410		0	0	0	66.372
Stage 1	-6.4	122.1	68.62	UL- RL	0.3313	3.40410		0	0	0	68.62
Stage 1	-6.6	126.1	70.868	UL- RL	0.3313	3.40410		0	0	0	70.868
Stage 1	-6.8	130.1	73.116	UL- RL	0.3313	3.40410		0	0	0	73.116
Stage 1	-7	134.1	75.364	UL- RL	0.3313	3.40410		0	0	0	75.364
Stage 1	-7.2	138.1	77.612	UL- RL	0.3313	3.40410		0	0	0	77.612
Stage 1	-7.4	142.1	79.86	UL- RL	0.3313	3.40410		0	0	0	79.86
Stage 1	-7.6	146.1	82.108	UL- RL	0.3313	3.40410		0	0	0	82.108

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	RIGHT					
	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 1	-7.8	150.1	84.356	UL- RL	0.331	3.404	10	0	0	0	84.356
Stage 1	-8	154.1	86.604	UL- RL	0.331	3.404	10	0	0	0	86.604
Stage 1	-8.2	158.1	88.852	UL- RL	0.331	3.404	10	0	0	0	88.852
Stage 1	-8.4	162.1	91.1	UL- RL	0.331	3.404	10	0	0	0	91.1
Stage 1	-8.6	166.1	93.348	UL- RL	0.331	3.404	10	0	0	0	93.348
Stage 1	-8.8	170.1	95.596	UL- RL	0.331	3.404	10	0	0	0	95.596
Stage 1	-9	174.1	97.844	UL- RL	0.331	3.404	10	0	0	0	97.844
Stage 1	-9.2	178.1	100.092	UL- RL	0.331	3.404	10	0	0	0	100.092
Stage 1	-9.4	182.1	102.34	UL- RL	0.331	3.404	10	0	0	0	102.34
Stage 1	-9.6	186.1	104.588	UL- RL	0.331	3.404	10	0	0	0	104.588
Stage 1	-9.8	190.1	106.836	UL- RL	0.331	3.404	10	0	0	0	106.836
Stage 1	-10	194.1	109.084	UL- RL	0.331	3.404	10	0	0	0	109.084
Stage 1	-10.2	198.2	96.127	UL- RL	0.36	3.051	20	0	0	0	96.127
Stage 1	-10.4	202.3	98.115	UL- RL	0.36	3.051	20	0	0	0	98.115
Stage 1	-10.6	206.4	100.104	UL- RL	0.36	3.051	20	0	0	0	100.104
Stage 1	-10.8	210.5	102.092	UL- RL	0.36	3.051	20	0	0	0	102.092
Stage 1	-11	214.6	104.081	UL- RL	0.36	3.051	20	0	0	0	104.081

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	RIGHT					
	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 1	-11.2	218.7	106.069	UL- RL	0.36	3.05120	0	0	0	106.069	
Stage 1	-11.4	222.8	108.058	UL- RL	0.36	3.05120	0	0	0	108.058	
Stage 1	-11.6	226.9	110.046	UL- RL	0.36	3.05120	0	0	0	110.046	
Stage 1	-11.8	231	112.035	UL- RL	0.36	3.05120	0	0	0	112.035	
Stage 1	-12	235.1	114.023	UL- RL	0.36	3.05120	0	0	0	114.023	
Stage 1	-12.2	239.2	116.012	UL- RL	0.36	3.05120	0	0	0	116.012	
Stage 1	-12.4	243.3	118	UL- RL	0.36	3.05120	0	0	0	118	
Stage 1	-12.6	247.4	119.989	UL- RL	0.36	3.05120	0	0	0	119.989	
Stage 1	-12.8	251.5	121.977	UL- RL	0.36	3.05120	0	0	0	121.977	
Stage 1	-13	255.6	123.966	UL- RL	0.36	3.05120	0	0	0	123.966	
Stage 1	-13.2	259.7	125.954	UL- RL	0.36	3.05120	0	0	0	125.954	
Stage 1	-13.4	263.8	127.943	UL- RL	0.36	3.05120	0	0	0	127.943	
Stage 1	-13.6	267.9	129.931	UL- RL	0.36	3.05120	0	0	0	129.931	
Stage 1	-13.8	272	131.92	UL- RL	0.36	3.05120	0	0	0	131.92	
Stage 1	-14	276.1	133.908	UL- RL	0.36	3.05120	0	0	0	133.908	
Stage 1	-14.2	280.2	135.897	UL- RL	0.36	3.05120	0	0	0	135.897	
Stage 1	-14.4	284.3	137.885	UL- RL	0.36	3.05120	0	0	0	137.885	

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato RIGHT						
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 1	-14.6	288.4	139.874	UL- RL	0.36	3.05120	0	0	0	139.874
Stage 1	-14.8	292.5	141.862	UL- RL	0.36	3.05120	0	0	0	141.862
Stage 1	-15	296.6	143.851	UL- RL	0.36	3.05120	0	0	0	143.851
Stage 1	-15.2	300.7	145.839	UL- RL	0.36	3.05120	0	0	0	145.839
Stage 1	-15.4	304.8	147.828	UL- RL	0.36	3.05120	0	0	0	147.828
Stage 1	-15.6	308.9	149.816	UL- RL	0.36	3.05120	0	0	0	149.816
Stage 1	-15.8	313	151.805	UL- RL	0.36	3.05120	0	0	0	151.805
Stage 1	-16	317.1	153.793	UL- RL	0.36	3.05120	0	0	0	153.793
Stage 1	-16.2	321.2	155.782	UL- RL	0.36	3.05120	0	0	0	155.782
Stage 1	-16.4	325.3	157.77	UL- RL	0.36	3.05120	0	0	0	157.77
Stage 1	-16.6	329.4	159.759	UL- RL	0.36	3.05120	0	0	0	159.759
Stage 1	-16.8	333.5	161.747	UL- RL	0.36	3.05120	0	0	0	161.747
Stage 1	-17	337.6	163.736	UL- RL	0.36	3.05120	0	0	0	163.736
Stage 1	-17.2	341.7	165.724	UL- RL	0.36	3.05120	0	0	0	165.724
Stage 1	-17.4	345.8	167.713	UL- RL	0.36	3.05120	0	0	0	167.713
Stage 1	-17.6	349.9	169.701	UL- RL	0.36	3.05120	0	0	0	169.701
Stage 1	-17.8	354	171.69	UL- RL	0.36	3.05120	0	0	0	171.69

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato RIGHT						
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 1	-18	358.1	173.678	UL-RL	0.36	3.05120	0	0	0	173.678
Stage 1	-18.2	362.2	175.667	UL-RL	0.36	3.05120	0	0	0	175.667
Stage 1	-18.4	366.3	177.656	UL-RL	0.36	3.05120	0	0	0	177.656
Stage 1	-18.6	370.4	179.644	UL-RL	0.36	3.05120	0	0	0	179.644
Stage 1	-18.8	374.5	181.632	UL-RL	0.36	3.05120	0	0	0	181.632
Stage 1	-19	378.6	183.621	UL-RL	0.36	3.05120	0	0	0	183.621
Stage 1	-19.2	382.7	185.61	UL-RL	0.36	3.05120	0	0	0	185.61
Stage 1	-19.4	386.8	187.598	UL-RL	0.36	3.05120	0	0	0	187.598
Stage 1	-19.6	390.9	189.586	UL-RL	0.36	3.05120	0	0	0	189.586
Stage 1	-19.8	395	191.575	UL-RL	0.36	3.05120	0	0	0	191.575
Stage 1	-20	399.1	193.564	UL-RL	0.36	3.05120	0	0	0	193.564

5.5.3. Tabella Risultati Terreno Left Wall - Nominal - Stage 2

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato LEFT						
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 2	0	0	0	ACTIVE	0.233	10.6730	0	0	0	0
Stage 2	-0.2	3.8	0.885	ACTIVE	0.233	10.6730	0	0	0	0.885
Stage 2	-0.4	7.6	1.771	ACTIVE	0.233	10.6730	0	0	0	1.771
Stage 2	-0.6	11.4	2.656	ACTIVE	0.233	10.6730	0	0	0	2.656
Stage 2	-0.8	15.2	3.542	ACTIVE	0.233	10.6730	0	0	0	3.542
Stage 2	-1	19	4.427	ACTIVE	0.233	10.6730	0	0	0	4.427

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*	Peq
			H								
Stage 2	-1.2	22.8	5.312	ACTIVE	0.233	10.6730	0	0	0	5.312	
Stage 2	-1.4	26.6	6.198	ACTIVE	0.233	10.6730	0	0	0	6.198	
Stage 2	-1.6	30.4	7.083	ACTIVE	0.233	10.6730	0	0	0	7.083	
Stage 2	-1.8	34.2	7.969	ACTIVE	0.233	10.6730	0	0	0	7.969	
Stage 2	-2	38	8.854	ACTIVE	0.233	10.6730	0	0	0	8.854	
Stage 2	-2.2	41.8	9.739	ACTIVE	0.233	10.6730	0	0	0	9.739	
Stage 2	-2.4	45.6	10.625	ACTIVE	0.233	10.6730	0	0	0	10.625	
Stage 2	-2.6	49.4	11.51	ACTIVE	0.233	10.6730	0	0	0	11.51	
Stage 2	-2.8	53.2	12.396	ACTIVE	0.233	10.6730	0	0	0	12.396	
Stage 2	-3	57	13.281	ACTIVE	0.233	10.6730	0	0	0	13.281	
Stage 2	-3.2	60.8	14.166	ACTIVE	0.233	10.6730	0	0	0	14.166	
Stage 2	-3.4	64.6	15.052	ACTIVE	0.233	10.6730	0	0	0	15.052	
Stage 2	-3.6	68.4	15.937	ACTIVE	0.233	10.6730	0	0	0	15.937	
Stage 2	-3.8	72.2	16.823	ACTIVE	0.233	10.6730	0	0	0	16.823	
Stage 2	-4	76	17.708	ACTIVE	0.233	10.6730	0	0	0	17.708	
Stage 2	-4.2	79.8	18.593	ACTIVE	0.233	10.6730	0	0	0	18.593	
Stage 2	-4.4	83.6	19.479	ACTIVE	0.233	10.6730	0	0	0	19.479	
Stage 2	-4.6	87.4	20.364	ACTIVE	0.233	10.6730	0	0	0	20.364	
Stage 2	-4.8	91.2	21.25	ACTIVE	0.233	10.6730	0	0	0	21.25	
Stage 2	-5	95	22.135	ACTIVE	0.233	10.6730	0	0	0	22.135	
Stage 2	-5.2	98.8	23.02	ACTIVE	0.233	10.6730	0	0	0	23.02	
Stage 2	-5.4	102.6	23.906	ACTIVE	0.233	10.6730	0	0	0	23.906	
Stage 2	-5.6	106.4	24.791	ACTIVE	0.233	10.6730	0	0	0	24.791	
Stage 2	-5.8	110.2	25.677	ACTIVE	0.233	10.6730	0	0	0	25.677	
Stage 2	-6	114.1	32.402	ACTIVE	0.3944	4.676 10	0	0	0	32.402	
Stage 2	-6.2	118.1	33.978	ACTIVE	0.3944	4.676 10	0	0	0	33.978	
Stage 2	-6.4	122.1	35.554	ACTIVE	0.3944	4.676 10	0	0	0	35.554	
Stage 2	-6.6	126.1	37.13	ACTIVE	0.3944	4.676 10	0	0	0	37.13	
Stage 2	-6.8	130.1	38.706	ACTIVE	0.3944	4.676 10	0	0	0	38.706	
Stage 2	-7	134.1	40.282	ACTIVE	0.3944	4.676 10	0	0	0	40.282	
Stage 2	-7.2	138.1	41.857	ACTIVE	0.3944	4.676 10	0	0	0	41.857	

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
			H								
Stage 2	-7.4	142.1	43.433	ACTIVE	0.39	4.676	10	0	0	0	43.433
Stage 2	-7.6	146.1	45.009	ACTIVE	0.39	4.676	10	0	0	0	45.009
Stage 2	-7.8	150.1	46.585	ACTIVE	0.39	4.676	10	0	0	0	46.585
Stage 2	-8	154.1	48.161	ACTIVE	0.39	4.676	10	0	0	0	48.161
Stage 2	-8.2	158.1	49.737	ACTIVE	0.39	4.676	10	0	0	0	49.737
Stage 2	-8.4	162.1	51.313	ACTIVE	0.39	4.676	10	0	0	0	51.313
Stage 2	-8.6	166.1	52.889	ACTIVE	0.39	4.676	10	0	0	0	52.889
Stage 2	-8.8	170.1	54.465	ACTIVE	0.39	4.676	10	0	0	0	54.465
Stage 2	-9	174.1	56.041	ACTIVE	0.39	4.676	10	0	0	0	56.041
Stage 2	-9.2	178.1	57.617	ACTIVE	0.39	4.676	10	0	0	0	57.617
Stage 2	-9.4	182.1	59.193	ACTIVE	0.39	4.676	10	0	0	0	59.193
Stage 2	-9.6	186.1	60.769	ACTIVE	0.39	4.676	10	0	0	0	60.769
Stage 2	-9.8	190.1	62.345	ACTIVE	0.39	4.676	10	0	0	0	62.345
Stage 2	-10	194.1	63.921	ACTIVE	0.39	4.676	10	0	0	0	63.921
Stage 2	-10.2	198.2	59.667	ACTIVE	0.43	4.096	20	0	0	0	59.667
Stage 2	-10.4	202.3	61.447	ACTIVE	0.43	4.096	20	0	0	0	61.447
Stage 2	-10.6	206.4	63.226	ACTIVE	0.43	4.096	20	0	0	0	63.226
Stage 2	-10.8	210.5	65.005	ACTIVE	0.43	4.096	20	0	0	0	65.005
Stage 2	-11	214.6	66.785	ACTIVE	0.43	4.096	20	0	0	0	66.785
Stage 2	-11.2	218.7	68.564	ACTIVE	0.43	4.096	20	0	0	0	68.564
Stage 2	-11.4	222.8	70.344	ACTIVE	0.43	4.096	20	0	0	0	70.344
Stage 2	-11.6	226.9	72.123	ACTIVE	0.43	4.096	20	0	0	0	72.123
Stage 2	-11.8	231	73.902	ACTIVE	0.43	4.096	20	0	0	0	73.902
Stage 2	-12	235.1	75.682	ACTIVE	0.43	4.096	20	0	0	0	75.682
Stage 2	-12.2	239.2	77.461	ACTIVE	0.43	4.096	20	0	0	0	77.461
Stage 2	-12.4	243.3	79.241	ACTIVE	0.43	4.096	20	0	0	0	79.241
Stage 2	-12.6	247.4	81.02	ACTIVE	0.43	4.096	20	0	0	0	81.02
Stage 2	-12.8	251.5	82.799	ACTIVE	0.43	4.096	20	0	0	0	82.799
Stage 2	-13	255.6	84.579	ACTIVE	0.43	4.096	20	0	0	0	84.579
Stage 2	-13.2	259.7	86.358	ACTIVE	0.43	4.096	20	0	0	0	86.358
Stage 2	-13.4	263.8	88.138	ACTIVE	0.43	4.096	20	0	0	0	88.138

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
			H								
Stage 2	-13.6	267.9	89.917	ACTIVE	0.4344	0.096	20	0	0	0	89.917
Stage 2	-13.8	272	91.696	ACTIVE	0.4344	0.096	20	0	0	0	91.696
Stage 2	-14	276.1	93.476	ACTIVE	0.4344	0.096	20	0	0	0	93.476
Stage 2	-14.2	280.2	95.255	ACTIVE	0.4344	0.096	20	0	0	0	95.255
Stage 2	-14.4	284.3	97.035	ACTIVE	0.4344	0.096	20	0	0	0	97.035
Stage 2	-14.6	288.4	98.941	UL-RL	0.4344	0.096	20	0	0	0	98.941
Stage 2	-14.8	292.5	103.228	UL-RL	0.4344	0.096	20	0	0	0	103.228
Stage 2	-15	296.6	107.261	UL-RL	0.4344	0.096	20	0	0	0	107.261
Stage 2	-15.2	300.7	111.058	UL-RL	0.4344	0.096	20	0	0	0	111.058
Stage 2	-15.4	304.8	114.635	UL-RL	0.4344	0.096	20	0	0	0	114.635
Stage 2	-15.6	308.9	118.01	UL-RL	0.4344	0.096	20	0	0	0	118.01
Stage 2	-15.8	313	121.199	UL-RL	0.4344	0.096	20	0	0	0	121.199
Stage 2	-16	317.1	124.217	UL-RL	0.4344	0.096	20	0	0	0	124.217
Stage 2	-16.2	321.2	127.08	UL-RL	0.4344	0.096	20	0	0	0	127.08
Stage 2	-16.4	325.3	129.803	UL-RL	0.4344	0.096	20	0	0	0	129.803
Stage 2	-16.6	329.4	132.4	UL-RL	0.4344	0.096	20	0	0	0	132.4
Stage 2	-16.8	333.5	134.885	UL-RL	0.4344	0.096	20	0	0	0	134.885
Stage 2	-17	337.6	137.269	UL-RL	0.4344	0.096	20	0	0	0	137.269
Stage 2	-17.2	341.7	139.566	UL-RL	0.4344	0.096	20	0	0	0	139.566
Stage 2	-17.4	345.8	141.786	UL-RL	0.4344	0.096	20	0	0	0	141.786
Stage 2	-17.6	349.9	143.94	UL-RL	0.4344	0.096	20	0	0	0	143.94
Stage 2	-17.8	354	146.039	UL-RL	0.4344	0.096	20	0	0	0	146.039
Stage 2	-18	358.1	148.09	UL-RL	0.4344	0.096	20	0	0	0	148.09
Stage 2	-18.2	362.2	150.102	UL-RL	0.4344	0.096	20	0	0	0	150.102
Stage 2	-18.4	366.3	152.082	UL-RL	0.4344	0.096	20	0	0	0	152.082
Stage 2	-18.6	370.4	154.038	UL-RL	0.4344	0.096	20	0	0	0	154.038
Stage 2	-18.8	374.5	155.974	UL-RL	0.4344	0.096	20	0	0	0	155.974
Stage 2	-19	378.6	157.897	UL-RL	0.4344	0.096	20	0	0	0	157.897
Stage 2	-19.2	382.7	159.81	UL-RL	0.4344	0.096	20	0	0	0	159.81
Stage 2	-19.4	386.8	161.716	UL-RL	0.4344	0.096	20	0	0	0	161.716
Stage 2	-19.6	390.9	163.62	UL-RL	0.4344	0.096	20	0	0	0	163.62

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	H
Stage 2	-19.8	395	165.521	UL-RL	0.4344	0.096	20	0	0	0	165.521
Stage 2	-20	399.1	167.422	UL-RL	0.4344	0.096	20	0	0	0	167.422

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	H
Stage 2	0	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-2.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-2.6	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-2.8	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-3.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-3.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-3.6	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-3.8	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-4.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-4.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-4.6	0	0	REMOVED	0	0	0	0	0	0	0

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato RIGHT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 2	-4.8	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-5	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-5.2	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-5.4	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-5.6	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-5.8	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-6	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-6.2	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-6.4	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-6.6	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-6.8	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-7	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-7.2	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-7.4	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-7.6	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-7.8	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-8	0	0	REMOVED	0	0	0	0	0	0
Stage 2	-8.2	4	50.516	PASSIVE	0.3313	3.40410	0	0	0	50.516
Stage 2	-8.4	8	64.132	PASSIVE	0.3313	3.40410	0	0	0	64.132
Stage 2	-8.6	12	77.748	PASSIVE	0.3313	3.40410	0	0	0	77.748
Stage 2	-8.8	16	91.364	PASSIVE	0.3313	3.40410	0	0	0	91.364
Stage 2	-9	20	104.98	PASSIVE	0.3313	3.40410	0	0	0	104.98
Stage 2	-9.2	24	118.596	PASSIVE	0.3313	3.40410	0	0	0	118.596
Stage 2	-9.4	28	132.212	PASSIVE	0.3313	3.40410	0	0	0	132.212
Stage 2	-9.6	32	145.828	PASSIVE	0.3313	3.40410	0	0	0	145.828
Stage 2	-9.8	36	159.444	PASSIVE	0.3313	3.40410	0	0	0	159.444
Stage 2	-10	40	162.717	V-C	0.3313	3.40410	0	0	0	162.717
Stage 2	-10.2	44.1	148.029	V-C	0.36	3.05120	0	0	0	148.029
Stage 2	-10.4	48.2	143.968	V-C	0.36	3.05120	0	0	0	143.968
Stage 2	-10.6	52.3	140.166	V-C	0.36	3.05120	0	0	0	140.166
Stage 2	-10.8	56.4	136.625	V-C	0.36	3.05120	0	0	0	136.625

Design Assumption:	Nominal	Risultati	Muro: LEFT	Lato RIGHT						
Stage	Z (m)	Sigma V	Sigma Stato H	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 2	-11	60.5	133.346 V-C	0.36	3.05120	0	0	0	133.346	
Stage 2	-11.2	64.6	130.329 V-C	0.36	3.05120	0	0	0	130.329	
Stage 2	-11.4	68.7	127.571 V-C	0.36	3.05120	0	0	0	127.571	
Stage 2	-11.6	72.8	125.072 V-C	0.36	3.05120	0	0	0	125.072	
Stage 2	-11.8	76.9	122.826 V-C	0.36	3.05120	0	0	0	122.826	
Stage 2	-12	81	120.831 V-C	0.36	3.05120	0	0	0	120.831	
Stage 2	-12.2	85.1	119.082 V-C	0.36	3.05120	0	0	0	119.082	
Stage 2	-12.4	89.2	117.316 UL-RL	0.36	3.05120	0	0	0	117.316	
Stage 2	-12.6	93.3	114.082 UL-RL	0.36	3.05120	0	0	0	114.082	
Stage 2	-12.8	97.4	111.212 UL-RL	0.36	3.05120	0	0	0	111.212	
Stage 2	-13	101.5	108.693 UL-RL	0.36	3.05120	0	0	0	108.693	
Stage 2	-13.2	105.6	106.515 UL-RL	0.36	3.05120	0	0	0	106.515	
Stage 2	-13.4	109.7	104.664 UL-RL	0.36	3.05120	0	0	0	104.664	
Stage 2	-13.6	113.8	103.127 UL-RL	0.36	3.05120	0	0	0	103.127	
Stage 2	-13.8	117.9	101.89 UL-RL	0.36	3.05120	0	0	0	101.89	
Stage 2	-14	122	100.939 UL-RL	0.36	3.05120	0	0	0	100.939	
Stage 2	-14.2	126.1	100.26 UL-RL	0.36	3.05120	0	0	0	100.26	
Stage 2	-14.4	130.2	99.839 UL-RL	0.36	3.05120	0	0	0	99.839	
Stage 2	-14.6	134.3	99.66 UL-RL	0.36	3.05120	0	0	0	99.66	
Stage 2	-14.8	138.4	99.711 UL-RL	0.36	3.05120	0	0	0	99.711	
Stage 2	-15	142.5	99.975 UL-RL	0.36	3.05120	0	0	0	99.975	
Stage 2	-15.2	146.6	100.438 UL-RL	0.36	3.05120	0	0	0	100.438	
Stage 2	-15.4	150.7	101.086 UL-RL	0.36	3.05120	0	0	0	101.086	
Stage 2	-15.6	154.8	101.905 UL-RL	0.36	3.05120	0	0	0	101.905	
Stage 2	-15.8	158.9	102.882 UL-RL	0.36	3.05120	0	0	0	102.882	
Stage 2	-16	163	104.001 UL-RL	0.36	3.05120	0	0	0	104.001	
Stage 2	-16.2	167.1	105.252 UL-RL	0.36	3.05120	0	0	0	105.252	
Stage 2	-16.4	171.2	106.621 UL-RL	0.36	3.05120	0	0	0	106.621	
Stage 2	-16.6	175.3	108.096 UL-RL	0.36	3.05120	0	0	0	108.096	
Stage 2	-16.8	179.4	109.666 UL-RL	0.36	3.05120	0	0	0	109.666	
Stage 2	-17	183.5	111.321 UL-RL	0.36	3.05120	0	0	0	111.321	

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato RIGHT						
		Terreno									
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*	Peq
Stage 2	-17.2	187.6	113.05	UL-RL	0.36	3.05120	0	0	0	113.05	
Stage 2	-17.4	191.7	114.843	UL-RL	0.36	3.05120	0	0	0	114.843	
Stage 2	-17.6	195.8	116.691	UL-RL	0.36	3.05120	0	0	0	116.691	
Stage 2	-17.8	199.9	118.587	UL-RL	0.36	3.05120	0	0	0	118.587	
Stage 2	-18	204	120.523	UL-RL	0.36	3.05120	0	0	0	120.523	
Stage 2	-18.2	208.1	122.492	UL-RL	0.36	3.05120	0	0	0	122.492	
Stage 2	-18.4	212.2	124.487	UL-RL	0.36	3.05120	0	0	0	124.487	
Stage 2	-18.6	216.3	126.503	UL-RL	0.36	3.05120	0	0	0	126.503	
Stage 2	-18.8	220.4	128.536	UL-RL	0.36	3.05120	0	0	0	128.536	
Stage 2	-19	224.5	130.58	UL-RL	0.36	3.05120	0	0	0	130.58	
Stage 2	-19.2	228.6	132.632	UL-RL	0.36	3.05120	0	0	0	132.632	
Stage 2	-19.4	232.7	134.69	UL-RL	0.36	3.05120	0	0	0	134.69	
Stage 2	-19.6	236.8	136.75	UL-RL	0.36	3.05120	0	0	0	136.75	
Stage 2	-19.8	240.9	138.812	UL-RL	0.36	3.05120	0	0	0	138.812	
Stage 2	-20	245	140.874	UL-RL	0.36	3.05120	0	0	0	140.874	

5.5.4. Tabella Risultati Terreno Left Wall - Nominal - Stage 3

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato LEFT						
		Terreno									
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*	Peq
Stage 3	0	0	0	ACTIVE	0.233	10.9910	0	0	0	0	
Stage 3	-0.2	3.8	0.885	ACTIVE	0.233	10.9910	0	0	0	0.885	
Stage 3	-0.4	7.6	1.771	ACTIVE	0.233	10.9910	0	0	0	1.771	
Stage 3	-0.6	11.4	2.656	ACTIVE	0.233	10.9910	0	0	0	2.656	
Stage 3	-0.8	15.2	3.542	ACTIVE	0.233	10.9910	0	0	0	3.542	
Stage 3	-1	19	4.427	ACTIVE	0.233	10.9910	0	0	0	4.427	
Stage 3	-1.2	22.8	5.312	ACTIVE	0.233	10.9910	0	0	0	5.312	
Stage 3	-1.4	26.6	6.198	ACTIVE	0.233	10.9910	0	0	0	6.198	
Stage 3	-1.6	30.4	7.083	ACTIVE	0.233	10.9910	0	0	0	7.083	
Stage 3	-1.8	34.2	7.969	ACTIVE	0.233	10.9910	0	0	0	7.969	

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
			H								
Stage 3	-2	38	8.854	ACTIVE	0.233	10.9910	0	0	0	8.854	
Stage 3	-2.2	41.8	9.739	ACTIVE	0.233	10.9910	0	0	0	9.739	
Stage 3	-2.4	45.6	10.625	ACTIVE	0.233	10.9910	0	0	0	10.625	
Stage 3	-2.6	49.4	11.51	ACTIVE	0.233	10.9910	0	0	0	11.51	
Stage 3	-2.8	53.2	12.396	ACTIVE	0.233	10.9910	0	0	0	12.396	
Stage 3	-3	57	13.281	ACTIVE	0.233	10.9910	0	0	0	13.281	
Stage 3	-3.2	60.8	14.166	ACTIVE	0.233	10.9910	0	0	0	14.166	
Stage 3	-3.4	64.6	15.052	ACTIVE	0.233	10.9910	0	0	0	15.052	
Stage 3	-3.6	68.4	15.937	ACTIVE	0.233	10.9910	0	0	0	15.937	
Stage 3	-3.8	72.2	16.823	ACTIVE	0.233	10.9910	0	0	0	16.823	
Stage 3	-4	76	17.708	ACTIVE	0.233	10.9910	0	0	0	17.708	
Stage 3	-4.2	79.8	18.593	ACTIVE	0.233	10.9910	0	0	0	18.593	
Stage 3	-4.4	83.6	19.479	ACTIVE	0.233	10.9910	0	0	0	19.479	
Stage 3	-4.6	87.4	20.364	ACTIVE	0.233	10.9910	0	0	0	20.364	
Stage 3	-4.8	91.2	21.25	ACTIVE	0.233	10.9910	0	0	0	21.25	
Stage 3	-5	95	22.135	ACTIVE	0.233	10.9910	0	0	0	22.135	
Stage 3	-5.2	98.8	23.02	ACTIVE	0.233	10.9910	0	0	0	23.02	
Stage 3	-5.4	102.6	23.906	ACTIVE	0.233	10.9910	0	0	0	23.906	
Stage 3	-5.6	106.4	24.791	ACTIVE	0.233	10.9910	0	0	0	24.791	
Stage 3	-5.8	110.2	25.677	ACTIVE	0.233	10.9910	0	0	0	25.677	
Stage 3	-6	114.1	32.402	ACTIVE	0.3944	7.79 10	0	0	0	32.402	
Stage 3	-6.2	118.1	33.978	ACTIVE	0.3944	7.79 10	0	0	0	33.978	
Stage 3	-6.4	122.1	35.554	ACTIVE	0.3944	7.79 10	0	0	0	35.554	
Stage 3	-6.6	126.1	37.13	ACTIVE	0.3944	7.79 10	0	0	0	37.13	
Stage 3	-6.8	130.1	38.706	ACTIVE	0.3944	7.79 10	0	0	0	38.706	
Stage 3	-7	134.1	40.282	ACTIVE	0.3944	7.79 10	0	0	0	40.282	
Stage 3	-7.2	138.1	41.857	ACTIVE	0.3944	7.79 10	0	0	0	41.857	
Stage 3	-7.4	142.1	43.433	ACTIVE	0.3944	7.79 10	0	0	0	43.433	
Stage 3	-7.6	146.1	45.009	ACTIVE	0.3944	7.79 10	0	0	0	45.009	
Stage 3	-7.8	150.1	46.585	ACTIVE	0.3944	7.79 10	0	0	0	46.585	
Stage 3	-8	154.1	48.161	ACTIVE	0.3944	7.79 10	0	0	0	48.161	

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
			H								
Stage 3	-8.2	158.1	49.737	ACTIVE	0.39	44.779	10	0	0	0	49.737
Stage 3	-8.4	162.1	51.313	ACTIVE	0.39	44.779	10	0	0	0	51.313
Stage 3	-8.6	166.1	52.889	ACTIVE	0.39	44.779	10	0	0	0	52.889
Stage 3	-8.8	170.1	54.465	ACTIVE	0.39	44.779	10	0	0	0	54.465
Stage 3	-9	174.1	56.041	ACTIVE	0.39	44.779	10	0	0	0	56.041
Stage 3	-9.2	178.1	57.617	ACTIVE	0.39	44.779	10	0	0	0	57.617
Stage 3	-9.4	182.1	59.193	ACTIVE	0.39	44.779	10	0	0	0	59.193
Stage 3	-9.6	186.1	60.769	ACTIVE	0.39	44.779	10	0	0	0	60.769
Stage 3	-9.8	190.1	62.345	ACTIVE	0.39	44.779	10	0	0	0	62.345
Stage 3	-10	194.1	63.921	ACTIVE	0.39	44.779	10	0	0	0	63.921
Stage 3	-10.2	198.2	59.667	ACTIVE	0.43	44.181	20	0	0	0	59.667
Stage 3	-10.4	202.3	61.447	ACTIVE	0.43	44.181	20	0	0	0	61.447
Stage 3	-10.6	206.4	63.226	ACTIVE	0.43	44.181	20	0	0	0	63.226
Stage 3	-10.8	210.5	65.005	ACTIVE	0.43	44.181	20	0	0	0	65.005
Stage 3	-11	214.6	66.785	ACTIVE	0.43	44.181	20	0	0	0	66.785
Stage 3	-11.2	218.7	68.564	ACTIVE	0.43	44.181	20	0	0	0	68.564
Stage 3	-11.4	222.8	70.344	ACTIVE	0.43	44.181	20	0	0	0	70.344
Stage 3	-11.6	226.9	72.123	ACTIVE	0.43	44.181	20	0	0	0	72.123
Stage 3	-11.8	231	73.902	ACTIVE	0.43	44.181	20	0	0	0	73.902
Stage 3	-12	235.1	75.682	ACTIVE	0.43	44.181	20	0	0	0	75.682
Stage 3	-12.2	239.2	77.461	ACTIVE	0.43	44.181	20	0	0	0	77.461
Stage 3	-12.4	243.3	79.241	ACTIVE	0.43	44.181	20	0	0	0	79.241
Stage 3	-12.6	247.4	81.02	ACTIVE	0.43	44.181	20	0	0	0	81.02
Stage 3	-12.8	251.5	82.799	ACTIVE	0.43	44.181	20	0	0	0	82.799
Stage 3	-13	255.6	84.579	ACTIVE	0.43	44.181	20	0	0	0	84.579
Stage 3	-13.2	259.7	86.358	ACTIVE	0.43	44.181	20	0	0	0	86.358
Stage 3	-13.4	263.8	88.138	ACTIVE	0.43	44.181	20	0	0	0	88.138
Stage 3	-13.6	267.9	89.917	ACTIVE	0.43	44.181	20	0	0	0	89.917
Stage 3	-13.8	272	91.696	ACTIVE	0.43	44.181	20	0	0	0	91.696
Stage 3	-14	276.1	93.476	ACTIVE	0.43	44.181	20	0	0	0	93.476
Stage 3	-14.2	280.2	95.255	ACTIVE	0.43	44.181	20	0	0	0	95.255

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	LEFT						
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq		
			H									
Stage 3	-14.4	284.3	97.035	ACTIVE	0.4344	0.181	20	0	0	0	97.035	
Stage 3	-14.6	288.4	98.814	ACTIVE	0.4344	0.181	20	0	0	0	98.814	
Stage 3	-14.8	292.5	100.593	ACTIVE	0.4344	0.181	20	0	0	0	100.593	
Stage 3	-15	296.6	102.373	ACTIVE	0.4344	0.181	20	0	0	0	102.373	
Stage 3	-15.2	300.7	104.152	ACTIVE	0.4344	0.181	20	0	0	0	104.152	
Stage 3	-15.4	304.8	105.932	ACTIVE	0.4344	0.181	20	0	0	0	105.932	
Stage 3	-15.6	308.9	107.711	ACTIVE	0.4344	0.181	20	0	0	0	107.711	
Stage 3	-15.8	313	109.49	ACTIVE	0.4344	0.181	20	0	0	0	109.49	
Stage 3	-16	317.1	111.27	ACTIVE	0.4344	0.181	20	0	0	0	111.27	
Stage 3	-16.2	321.2	113.049	ACTIVE	0.4344	0.181	20	0	0	0	113.049	
Stage 3	-16.4	325.3	114.829	ACTIVE	0.4344	0.181	20	0	0	0	114.829	
Stage 3	-16.6	329.4	116.608	ACTIVE	0.4344	0.181	20	0	0	0	116.608	
Stage 3	-16.8	333.5	118.387	ACTIVE	0.4344	0.181	20	0	0	0	118.387	
Stage 3	-17	337.6	120.167	ACTIVE	0.4344	0.181	20	0	0	0	120.167	
Stage 3	-17.2	341.7	122.351	UL-RL	0.4344	0.181	20	0	0	0	122.351	
Stage 3	-17.4	345.8	128.37	UL-RL	0.4344	0.181	20	0	0	0	128.37	
Stage 3	-17.6	349.9	134.156	UL-RL	0.4344	0.181	20	0	0	0	134.156	
Stage 3	-17.8	354	139.738	UL-RL	0.4344	0.181	20	0	0	0	139.738	
Stage 3	-18	358.1	145.145	UL-RL	0.4344	0.181	20	0	0	0	145.145	
Stage 3	-18.2	362.2	150.405	UL-RL	0.4344	0.181	20	0	0	0	150.405	
Stage 3	-18.4	366.3	155.543	UL-RL	0.4344	0.181	20	0	0	0	155.543	
Stage 3	-18.6	370.4	160.584	UL-RL	0.4344	0.181	20	0	0	0	160.584	
Stage 3	-18.8	374.5	165.548	UL-RL	0.4344	0.181	20	0	0	0	165.548	
Stage 3	-19	378.6	170.455	UL-RL	0.4344	0.181	20	0	0	0	170.455	
Stage 3	-19.2	382.7	175.321	UL-RL	0.4344	0.181	20	0	0	0	175.321	
Stage 3	-19.4	386.8	180.16	UL-RL	0.4344	0.181	20	0	0	0	180.16	
Stage 3	-19.6	390.9	184.984	UL-RL	0.4344	0.181	20	0	0	0	184.984	
Stage 3	-19.8	395	189.801	UL-RL	0.4344	0.181	20	0	0	0	189.801	
Stage 3	-20	399.1	194.221	V-C	0.4344	0.181	20	0	0	0	194.221	

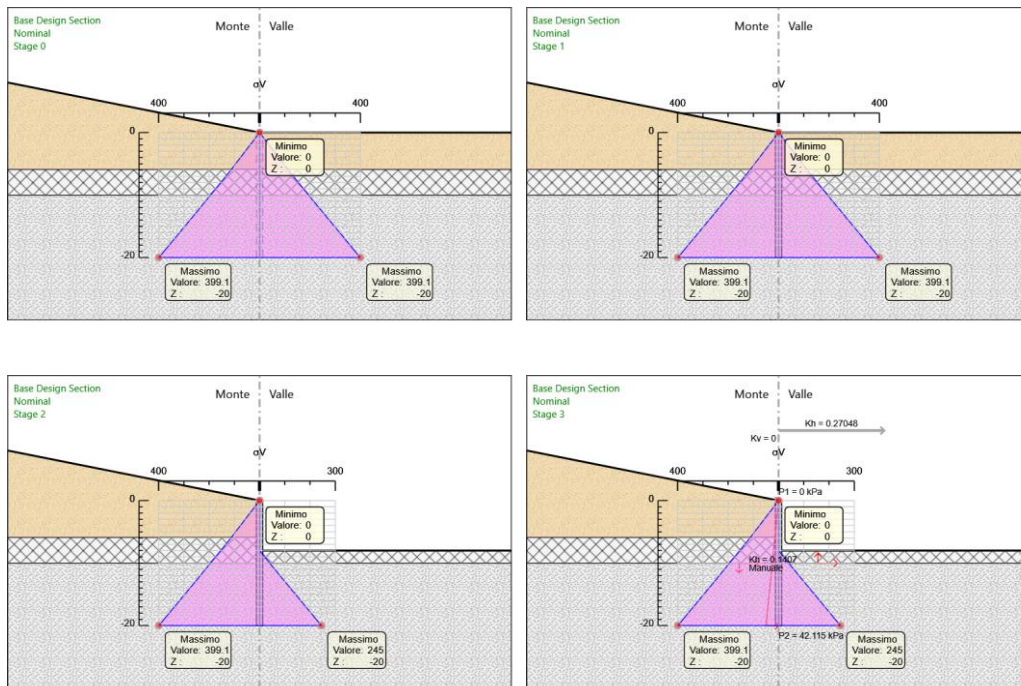
Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V	Sigma	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
			H								
Stage 3	0	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.6	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.8	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-1	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-1.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-1.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-1.6	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-1.8	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-2.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-2.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-2.6	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-2.8	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-3	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-3.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-3.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-3.6	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-3.8	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-4.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-4.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-4.6	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-4.8	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-5	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-5.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-5.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-5.6	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-5.8	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-6	0	0	REMOVED	0	0	0	0	0	0	

Design Assumption:	Nominal	Risultati	Muro:	LEFT	Lato RIGHT					
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U* Peq
Stage 3	-6.2	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-6.4	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-6.6	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-6.8	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-7	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-7.2	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-7.4	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-7.6	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-7.8	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-8	0	0	REMOVED	0	0	0	0	0	0
Stage 3	-8.2	4	45.891	PASSIVE	0.331	2.798	10.371	0	0	0 45.891
Stage 3	-8.4	8	57.084	PASSIVE	0.331	2.798	10.371	0	0	0 57.084
Stage 3	-8.6	12	68.277	PASSIVE	0.331	2.798	10.371	0	0	0 68.277
Stage 3	-8.8	16	79.469	PASSIVE	0.331	2.798	10.371	0	0	0 79.469
Stage 3	-9	20	90.662	PASSIVE	0.331	2.798	10.371	0	0	0 90.662
Stage 3	-9.2	24	101.855	PASSIVE	0.331	2.798	10.371	0	0	0 101.855
Stage 3	-9.4	28	113.048	PASSIVE	0.331	2.798	10.371	0	0	0 113.048
Stage 3	-9.6	32	124.241	PASSIVE	0.331	2.798	10.371	0	0	0 124.241
Stage 3	-9.8	36	135.433	PASSIVE	0.331	2.798	10.371	0	0	0 135.433
Stage 3	-10	40	146.626	PASSIVE	0.331	2.798	10.371	0	0	0 146.626
Stage 3	-10.2	44.1	175.41	PASSIVE	0.36	2.492	20.743	0	0	0 175.41
Stage 3	-10.4	48.2	185.628	PASSIVE	0.36	2.492	20.743	0	0	0 185.628
Stage 3	-10.6	52.3	195.847	PASSIVE	0.36	2.492	20.743	0	0	0 195.847
Stage 3	-10.8	56.4	206.066	PASSIVE	0.36	2.492	20.743	0	0	0 206.066
Stage 3	-11	60.5	216.285	PASSIVE	0.36	2.492	20.743	0	0	0 216.285
Stage 3	-11.2	64.6	226.504	PASSIVE	0.36	2.492	20.743	0	0	0 226.504
Stage 3	-11.4	68.7	236.722	PASSIVE	0.36	2.492	20.743	0	0	0 236.722
Stage 3	-11.6	72.8	246.941	PASSIVE	0.36	2.492	20.743	0	0	0 246.941
Stage 3	-11.8	76.9	256.344	V-C	0.36	2.492	20.743	0	0	0 256.344
Stage 3	-12	81	246.459	V-C	0.36	2.492	20.743	0	0	0 246.459
Stage 3	-12.2	85.1	237.096	V-C	0.36	2.492	20.743	0	0	0 237.096

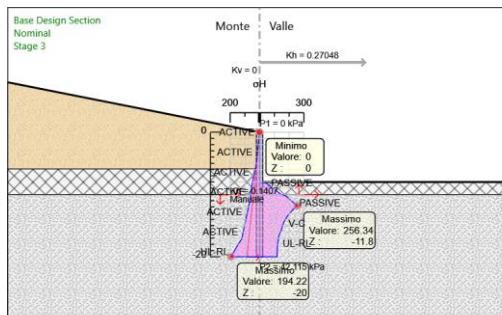
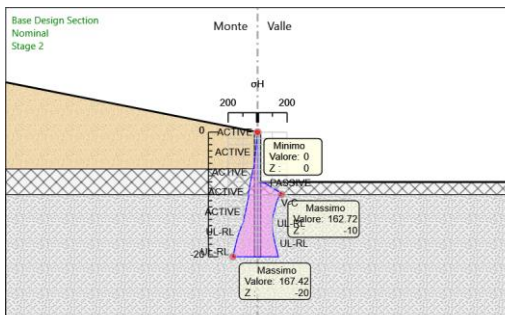
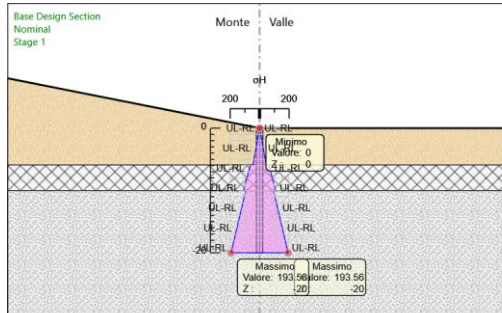
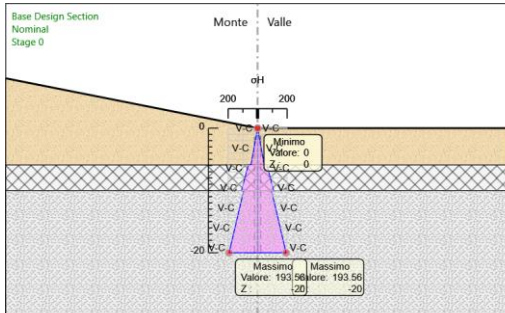
Design Assumption:	Nominal	Risultati	Muro: LEFT	Lato RIGHT						
Stage	Z (m)	Sigma V	Sigma Stato H	Ka	Kp	Coesione	Pore	Gradiente	U* Peq	
Stage 3	-12.4	89.2	228.255 V-C	0.36	2.492	20.743	0	0	0 228.255	
Stage 3	-12.6	93.3	219.929 V-C	0.36	2.492	20.743	0	0	0 219.929	
Stage 3	-12.8	97.4	212.113 V-C	0.36	2.492	20.743	0	0	0 212.113	
Stage 3	-13	101.5	204.798 V-C	0.36	2.492	20.743	0	0	0 204.798	
Stage 3	-13.2	105.6	197.975 V-C	0.36	2.492	20.743	0	0	0 197.975	
Stage 3	-13.4	109.7	191.633 V-C	0.36	2.492	20.743	0	0	0 191.633	
Stage 3	-13.6	113.8	185.76 V-C	0.36	2.492	20.743	0	0	0 185.76	
Stage 3	-13.8	117.9	180.343 V-C	0.36	2.492	20.743	0	0	0 180.343	
Stage 3	-14	122	175.367 V-C	0.36	2.492	20.743	0	0	0 175.367	
Stage 3	-14.2	126.1	170.817 V-C	0.36	2.492	20.743	0	0	0 170.817	
Stage 3	-14.4	130.2	166.677 V-C	0.36	2.492	20.743	0	0	0 166.677	
Stage 3	-14.6	134.3	162.931 V-C	0.36	2.492	20.743	0	0	0 162.931	
Stage 3	-14.8	138.4	159.562 V-C	0.36	2.492	20.743	0	0	0 159.562	
Stage 3	-15	142.5	156.552 V-C	0.36	2.492	20.743	0	0	0 156.552	
Stage 3	-15.2	146.6	153.883 V-C	0.36	2.492	20.743	0	0	0 153.883	
Stage 3	-15.4	150.7	151.537 V-C	0.36	2.492	20.743	0	0	0 151.537	
Stage 3	-15.6	154.8	149.302 UL-RL	0.36	2.492	20.743	0	0	0 149.302	
Stage 3	-15.8	158.9	145.299 UL-RL	0.36	2.492	20.743	0	0	0 145.299	
Stage 3	-16	163	141.723 UL-RL	0.36	2.492	20.743	0	0	0 141.723	
Stage 3	-16.2	167.1	138.544 UL-RL	0.36	2.492	20.743	0	0	0 138.544	
Stage 3	-16.4	171.2	135.732 UL-RL	0.36	2.492	20.743	0	0	0 135.732	
Stage 3	-16.6	175.3	133.258 UL-RL	0.36	2.492	20.743	0	0	0 133.258	
Stage 3	-16.8	179.4	131.091 UL-RL	0.36	2.492	20.743	0	0	0 131.091	
Stage 3	-17	183.5	129.205 UL-RL	0.36	2.492	20.743	0	0	0 129.205	
Stage 3	-17.2	187.6	127.57 UL-RL	0.36	2.492	20.743	0	0	0 127.57	
Stage 3	-17.4	191.7	126.158 UL-RL	0.36	2.492	20.743	0	0	0 126.158	
Stage 3	-17.6	195.8	124.944 UL-RL	0.36	2.492	20.743	0	0	0 124.944	
Stage 3	-17.8	199.9	123.902 UL-RL	0.36	2.492	20.743	0	0	0 123.902	
Stage 3	-18	204	123.007 UL-RL	0.36	2.492	20.743	0	0	0 123.007	
Stage 3	-18.2	208.1	122.236 UL-RL	0.36	2.492	20.743	0	0	0 122.236	
Stage 3	-18.4	212.2	121.568 UL-RL	0.36	2.492	20.743	0	0	0 121.568	

Design Assumption:	Nominal	Risultati Terreno	Muro: LEFT	Lato RIGHT							
Stage	Z (m)	Sigma V	Sigma H	Stato	Ka	Kp	Coesione	Pore	Gradiente	U*Peq	
Stage 3	-18.6	216.3	120.982	UL-RL	0.36	2.492	20.743	0	0	0	120.982
Stage 3	-18.8	220.4	120.461	UL-RL	0.36	2.492	20.743	0	0	0	120.461
Stage 3	-19	224.5	119.988	UL-RL	0.36	2.492	20.743	0	0	0	119.988
Stage 3	-19.2	228.6	119.549	UL-RL	0.36	2.492	20.743	0	0	0	119.549
Stage 3	-19.4	232.7	119.133	UL-RL	0.36	2.492	20.743	0	0	0	119.133
Stage 3	-19.6	236.8	118.73	UL-RL	0.36	2.492	20.743	0	0	0	118.73
Stage 3	-19.8	240.9	118.333	UL-RL	0.36	2.492	20.743	0	0	0	118.333
Stage 3	-20	245	117.938	UL-RL	0.36	2.492	20.743	0	0	0	117.938

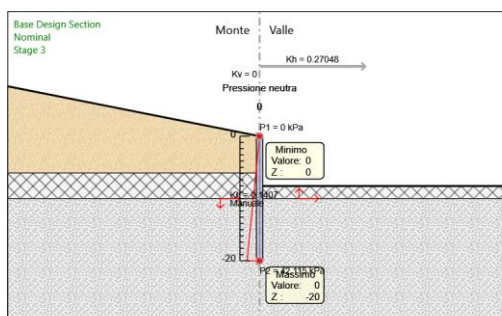
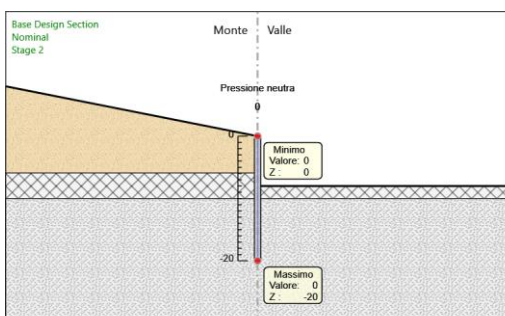
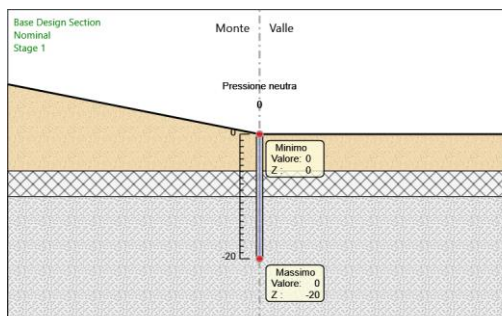
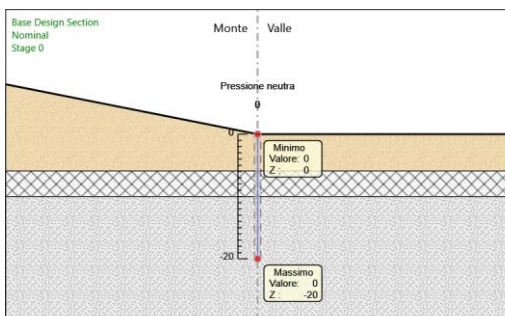
5.6. Grafico Risultati Terreno Sigma V



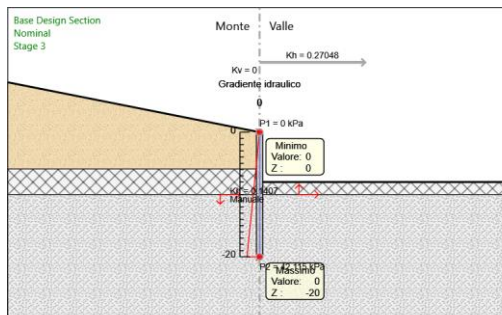
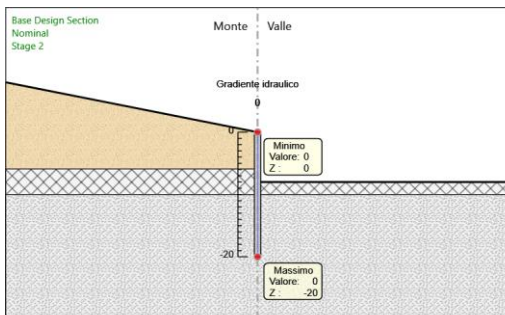
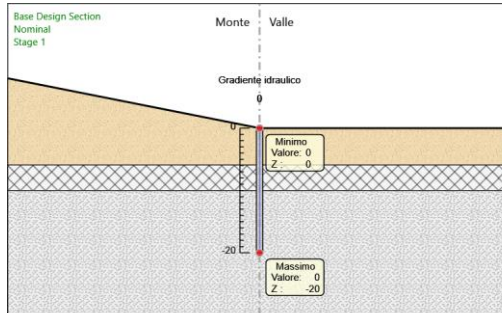
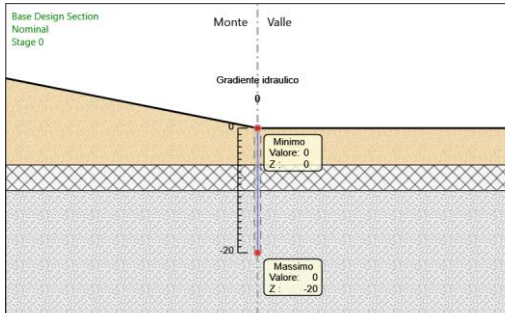
5.7. Grafico Risultati Terreno Sigma H



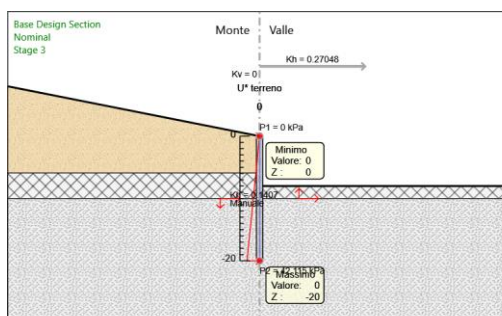
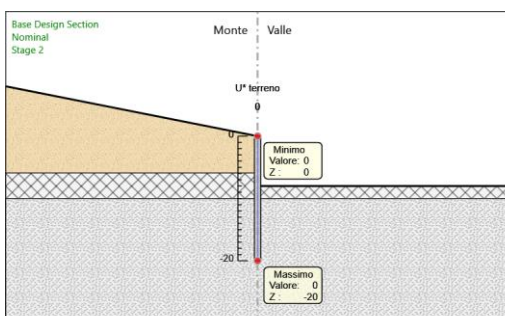
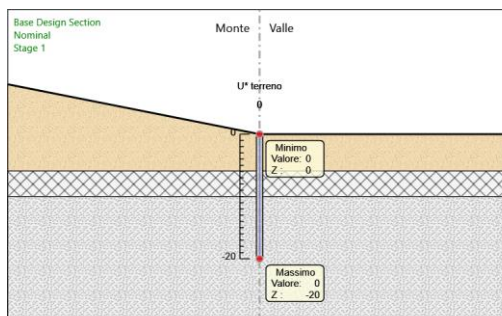
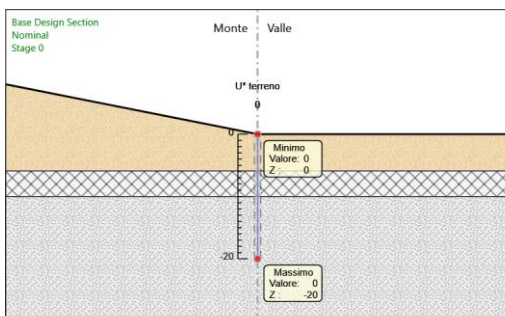
5.8. Grafico Risultati Terreno Pore



5.9. Grafico Risultati Terreno Gradiente



5.10. Grafico Risultati Terreno U*



5.10. Riepilogo spinte

Design	Tipo	Muro:	LEFT	Lato	LEFT		
Assumption:	Risultato:						
Nominal	Riepilogo						
	spinte						
Stage	Vera effettiva	Pressione	Vera	Min	Max	Percentuale	di Vera /
	(kN/m)	neutra	Totale	ammissibile	ammissibile	resistenza	Attiva
		(kN/m)	(kN/m)	(kN/m)	(kN/m)	massima	
Stage 0	1925.1	0	1925.1	1297.2	19607.2	9.82%	1.48
Stage 1	1925.1	0	1925.1	1297.2	19607.2	9.82%	1.48
Stage 2	1380.8	0	1380.8	1297.2	19607.2	7.04%	1.06
Stage 3	1368.7	0	1368.7	1297.2	20039.2	6.83%	1.06

Design	Tipo	Muro:	LEFT	Lato	RIGHT		
Assumption:	Risultato:						
Nominal	Riepilogo						
	spinte						
Stage	Vera effettiva	Pressione	Vera	Min	Max	Percentuale	di Vera /
	(kN/m)	neutra	Totale	ammissibile	ammissibile	resistenza	Attiva
		(kN/m)	(kN/m)	(kN/m)	(kN/m)	massima	
Stage 0	1925.1	0	1925.1	1056.8	14267.4	13.49%	1.82
Stage 1	1925.1	0	1925.1	1056.8	14267.4	13.49%	1.82
Stage 2	1380.8	0	1380.8	279.7	5250.7	26.3%	4.94
Stage 3	1835.9	0	1835.9	271.8	4382.6	41.89%	6.75

6. Descrizione Coefficienti Design Assumption

Coefficienti A



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 145 di 731
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Nome	Carichi Permanenti Sfavorevoli (F_dead_load_unfavour)	Carichi Permanenti Favorevoli (F_dead_load_favour)	Carichi Variabili Sfavorevoli (F_live_load_unfavour)	Carichi Variabili Favorevoli (F_live_load_favour)	Caric Sismi (F_seism)	Pres Acqu (F_Water)	Pres Acqu (F_Water)	Carich Permanenti (F_Unter)	Caric Permanenti (F_Unter)	Carich Variabili (F_Unter)	Carichi Permanenti (F_HYD)	Caric Permanenti (F_HYD)	Carichi Variabili (F_HYD)
Simbolo	γ_G	γ_G	γ_Q	γ_Q	γ_{QE}	γ_G	γ_G	γ_{Gdst}	γ_{Gstb}	γ_{Qdst}	γ_{Gdst}	γ_{Gstb}	γ_{Qdst}
Nominal	1	1	1	1	1	1	1	1	1	1	1	1	1
NTC201 8: SLE (Rara/Frequente/ Quasi Permanente)	1	1	1	0	1	1	1	1	1	1	1	1	1
NTC201 8: A1+M1+ R1 (R3 per tiranti)	1.3	1	1.5	1	0	1.3	1	1	1	1	1.3	0.9	1
NTC201 8: A2+M2+ R1	1	1	1.3	1	0	1	1	1	1	1	1.3	0.9	1
NTC201 8: SISMIC A STR	1	1	1	1	1	1	1	1	1	1	1	1	1
NTC201 8: SISMIC A GEO	1	1	1	1	1	1	1	1	1	1	1.3	0.9	1

Coefficienti M

Nome	Parziale tan(ϕ') (F_Fr)	suParziale (F_eff_cohe)	su c' Parziale Su (F_Su)	suParziale qu (F_qu)	suParziale specifico (F_gamma)	su peso
Simbolo	$\gamma\phi$	γc	γ_{cu}	γ_{qu}	$\gamma\gamma$	
Nominal	1	1	1	1	1	
NTC2018: (Rara/Frequente/Quasi Permanente)	SLE1	1	1	1	1	
NTC2018: A1+M1+R1 (R3 per1 tiranti)		1	1	1	1	
NTC2018: A2+M2+R1	1.25	1.25	1.4	1	1	
NTC2018: SISMICA STR	1	1	1	1	1	
NTC2018: SISMICA GEO	1	1	1	1	1	

Coefficienti R

Nome	Parziale terreno (F_Soil_Res_walls)	resistenza (es. Kp) Parziale resistenza permanenti (F_Anch_P)	Parziale Tiranti resistenza temporanei (F_Anch_T)	Parziale Tiranti elementi strutturali (F_wall)
Simbolo	γR_e	γa_p	γa_t	
Nominal	1	1	1	1
NTC2018: (Rara/Frequente/Quasi Permanente)	SLE1	1	1	1
NTC2018: A1+M1+R1 (R31 per tiranti)		1.2	1.1	1
NTC2018: A2+M2+R1	1	1.2	1.1	1
NTC2018: SISMICA STR	1	1.2	1.1	1
NTC2018: SISMICA GEO	1	1.2	1.1	1

6.1. Risultati NTC2018: SLE (Rara/Frequente/Quasi Permanente)
6.1.1. Tabella Spostamento NTC2018: SLE (Rara/Frequente/Quasi Permanente) - LEFT Stage: Stage 0

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage		Z (m)	Spostamento orizzontale (mm)
Stage 0		0	0

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)	
Stage 0	-0.2	0	
Stage 0	-0.4	0	
Stage 0	-0.6	0	
Stage 0	-0.8	0	
Stage 0	-1	0	
Stage 0	-1.2	0	
Stage 0	-1.4	0	
Stage 0	-1.6	0	
Stage 0	-1.8	0	
Stage 0	-2	0	
Stage 0	-2.2	0	
Stage 0	-2.4	0	
Stage 0	-2.6	0	
Stage 0	-2.8	0	
Stage 0	-3	0	
Stage 0	-3.2	0	
Stage 0	-3.4	0	
Stage 0	-3.6	0	
Stage 0	-3.8	0	
Stage 0	-4	0	
Stage 0	-4.2	0	
Stage 0	-4.4	0	
Stage 0	-4.6	0	
Stage 0	-4.8	0	
Stage 0	-5	0	
Stage 0	-5.2	0	
Stage 0	-5.4	0	
Stage 0	-5.6	0	
Stage 0	-5.8	0	
Stage 0	-6	0	
Stage 0	-6.2	0	

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)	
Stage 0	-6.4	0	
Stage 0	-6.6	0	
Stage 0	-6.8	0	
Stage 0	-7	0	
Stage 0	-7.2	0	
Stage 0	-7.4	0	
Stage 0	-7.6	0	
Stage 0	-7.8	0	
Stage 0	-8	0	
Stage 0	-8.2	0	
Stage 0	-8.4	0	
Stage 0	-8.6	0	
Stage 0	-8.8	0	
Stage 0	-9	0	
Stage 0	-9.2	0	
Stage 0	-9.4	0	
Stage 0	-9.6	0	
Stage 0	-9.8	0	
Stage 0	-10	0	
Stage 0	-10.2	0	
Stage 0	-10.4	0	
Stage 0	-10.6	0	
Stage 0	-10.8	0	
Stage 0	-11	0	
Stage 0	-11.2	0	
Stage 0	-11.4	0	
Stage 0	-11.6	0	
Stage 0	-11.8	0	
Stage 0	-12	0	
Stage 0	-12.2	0	
Stage 0	-12.4	0	

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)	
Stage 0	-12.6	0	
Stage 0	-12.8	0	
Stage 0	-13	0	
Stage 0	-13.2	0	
Stage 0	-13.4	0	
Stage 0	-13.6	0	
Stage 0	-13.8	0	
Stage 0	-14	0	
Stage 0	-14.2	0	
Stage 0	-14.4	0	
Stage 0	-14.6	0	
Stage 0	-14.8	0	
Stage 0	-15	0	
Stage 0	-15.2	0	
Stage 0	-15.4	0	
Stage 0	-15.6	0	
Stage 0	-15.8	0	
Stage 0	-16	0	
Stage 0	-16.2	0	
Stage 0	-16.4	0	
Stage 0	-16.6	0	
Stage 0	-16.8	0	
Stage 0	-17	0	
Stage 0	-17.2	0	
Stage 0	-17.4	0	
Stage 0	-17.6	0	
Stage 0	-17.8	0	
Stage 0	-18	0	
Stage 0	-18.2	0	
Stage 0	-18.4	0	
Stage 0	-18.6	0	

Design Assumption: (Rara/Frequente/Quasi Permanente)	NTC2018:	SLE Tipo	Risultato:
		Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)	
Stage 0	-18.8	0	
Stage 0	-19	0	
Stage 0	-19.2	0	
Stage 0	-19.4	0	
Stage 0	-19.6	0	
Stage 0	-19.8	0	
Stage 0	-20	0	

6.1.2. Tabella Risultati Paratia NTC2018: SLE (Rara/Frequente/Quasi Permanente) - Left Wall - Stage: Stage 0

Design Assumption: (Rara/Frequente/Quasi Permanente)	NTC2018:	SLE Risultati Paratia	Muro: LEFT
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	0	0	0
Stage 0	-0.2	0	0
Stage 0	-0.4	0	0
Stage 0	-0.6	0	0
Stage 0	-0.8	0	0
Stage 0	-1	0	0
Stage 0	-1.2	0	0
Stage 0	-1.4	0	0
Stage 0	-1.6	0	0
Stage 0	-1.8	0	0
Stage 0	-2	0	0
Stage 0	-2.2	0	0
Stage 0	-2.4	0	0
Stage 0	-2.6	0	0
Stage 0	-2.8	0	0
Stage 0	-3	0	0
Stage 0	-3.2	0	0
Stage 0	-3.4	0	0

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)
Risultati Paratia

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-3.6	0	0
Stage 0	-3.8	0	0
Stage 0	-4	0	0
Stage 0	-4.2	0	0
Stage 0	-4.4	0	0
Stage 0	-4.6	0	0
Stage 0	-4.8	0	0
Stage 0	-5	0	0
Stage 0	-5.2	0	0
Stage 0	-5.4	0	0
Stage 0	-5.6	0	0
Stage 0	-5.8	0	0
Stage 0	-6	0	0
Stage 0	-6.2	0	0
Stage 0	-6.4	0	0
Stage 0	-6.6	0	0
Stage 0	-6.8	0	0
Stage 0	-7	0	0
Stage 0	-7.2	0	0
Stage 0	-7.4	0	0
Stage 0	-7.6	0	0
Stage 0	-7.8	0	0
Stage 0	-8	0	0
Stage 0	-8.2	0	0
Stage 0	-8.4	0	0
Stage 0	-8.6	0	0
Stage 0	-8.8	0	0
Stage 0	-9	0	0
Stage 0	-9.2	0	0
Stage 0	-9.4	0	0
Stage 0	-9.6	0	0

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)
Risultati Paratia

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-9.8	0	0
Stage 0	-10	0	0
Stage 0	-10.2	0	0
Stage 0	-10.4	0	0
Stage 0	-10.6	0	0
Stage 0	-10.8	0	0
Stage 0	-11	0	0
Stage 0	-11.2	0	0
Stage 0	-11.4	0	0
Stage 0	-11.6	0	0
Stage 0	-11.8	0	0
Stage 0	-12	0	0
Stage 0	-12.2	0	0
Stage 0	-12.4	0	0
Stage 0	-12.6	0	0
Stage 0	-12.8	0	0
Stage 0	-13	0	0
Stage 0	-13.2	0	0
Stage 0	-13.4	0	0
Stage 0	-13.6	0	0
Stage 0	-13.8	0	0
Stage 0	-14	0	0
Stage 0	-14.2	0	0
Stage 0	-14.4	0	0
Stage 0	-14.6	0	0
Stage 0	-14.8	0	0
Stage 0	-15	0	0
Stage 0	-15.2	0	0
Stage 0	-15.4	0	0
Stage 0	-15.6	0	0
Stage 0	-15.8	0	0

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)	Paratia	Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-16	0	0
Stage 0	-16.2	0	0
Stage 0	-16.4	0	0
Stage 0	-16.6	0	0
Stage 0	-16.8	0	0
Stage 0	-17	0	0
Stage 0	-17.2	0	0
Stage 0	-17.4	0	0
Stage 0	-17.6	0	0
Stage 0	-17.8	0	0
Stage 0	-18	0	0
Stage 0	-18.2	0	0
Stage 0	-18.4	0	0
Stage 0	-18.6	0	0
Stage 0	-18.8	0	0
Stage 0	-19	0	0
Stage 0	-19.2	0	0
Stage 0	-19.4	0	0
Stage 0	-19.6	0	0
Stage 0	-19.8	0	0
Stage 0	-20	0	0

6.1.3. Tabella Spostamento NTC2018: SLE (Rara/Frequente/Quasi Permanente) - LEFT Stage: Stage 1

Design Assumption: NTC2018: SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage	Z (m) Spostamento orizzontale (mm)
Stage 1	0
Stage 1	-0.2
Stage 1	-0.4
Stage 1	-0.6

Design (Rara/Frequente/Quasi Permanente)	Assumption:	NTC2018:	SLE Tipo	Risultato:
Stage			Spostamento Z (m)	Muro: LEFT Spostamento orizzontale (mm)
Stage 1			-0.8	0
Stage 1			-1	0
Stage 1			-1.2	0
Stage 1			-1.4	0
Stage 1			-1.6	0
Stage 1			-1.8	0
Stage 1			-2	0
Stage 1			-2.2	0
Stage 1			-2.4	0
Stage 1			-2.6	0
Stage 1			-2.8	0
Stage 1			-3	0
Stage 1			-3.2	0
Stage 1			-3.4	0
Stage 1			-3.6	0
Stage 1			-3.8	0
Stage 1			-4	0
Stage 1			-4.2	0
Stage 1			-4.4	0
Stage 1			-4.6	0
Stage 1			-4.8	0
Stage 1			-5	0
Stage 1			-5.2	0
Stage 1			-5.4	0
Stage 1			-5.6	0
Stage 1			-5.8	0
Stage 1			-6	0
Stage 1			-6.2	0
Stage 1			-6.4	0
Stage 1			-6.6	0
Stage 1			-6.8	0

Design (Rara/Frequente/Quasi Permanente)	Assumption:	NTC2018:	SLE Tipo	Risultato:
Stage			Spostamento	Muro: LEFT
			Z (m)	Spostamento orizzontale (mm)
Stage 1			-7	0
Stage 1			-7.2	0
Stage 1			-7.4	0
Stage 1			-7.6	0
Stage 1			-7.8	0
Stage 1			-8	0
Stage 1			-8.2	0
Stage 1			-8.4	0
Stage 1			-8.6	0
Stage 1			-8.8	0
Stage 1			-9	0
Stage 1			-9.2	0
Stage 1			-9.4	0
Stage 1			-9.6	0
Stage 1			-9.8	0
Stage 1			-10	0
Stage 1			-10.2	0
Stage 1			-10.4	0
Stage 1			-10.6	0
Stage 1			-10.8	0
Stage 1			-11	0
Stage 1			-11.2	0
Stage 1			-11.4	0
Stage 1			-11.6	0
Stage 1			-11.8	0
Stage 1			-12	0
Stage 1			-12.2	0
Stage 1			-12.4	0
Stage 1			-12.6	0
Stage 1			-12.8	0
Stage 1			-13	0

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT Spostamento orizzontale (mm)
Stage		Z (m)	
Stage 1		-13.2	0
Stage 1		-13.4	0
Stage 1		-13.6	0
Stage 1		-13.8	0
Stage 1		-14	0
Stage 1		-14.2	0
Stage 1		-14.4	0
Stage 1		-14.6	0
Stage 1		-14.8	0
Stage 1		-15	0
Stage 1		-15.2	0
Stage 1		-15.4	0
Stage 1		-15.6	0
Stage 1		-15.8	0
Stage 1		-16	0
Stage 1		-16.2	0
Stage 1		-16.4	0
Stage 1		-16.6	0
Stage 1		-16.8	0
Stage 1		-17	0
Stage 1		-17.2	0
Stage 1		-17.4	0
Stage 1		-17.6	0
Stage 1		-17.8	0
Stage 1		-18	0
Stage 1		-18.2	0
Stage 1		-18.4	0
Stage 1		-18.6	0
Stage 1		-18.8	0
Stage 1		-19	0
Stage 1		-19.2	0

Design Assumption: NTC2018: SLE Tipo Risultato: Muro: LEFT (Rara/Frequente/Quasi Permanente)	Z (m)	Spostamento orizzontale (mm)
Stage 1	-19.4	0
Stage 1	-19.6	0
Stage 1	-19.8	0
Stage 1	-20	0

6.1.4. Tabella Risultati Paratia NTC2018: SLE (Rara/Frequente/Quasi Permanente) - Left Wall - Stage: Stage 1

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente) Risultati Paratia Muro: LEFT	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.6	0	0
Stage 1	-0.8	0	0
Stage 1	-1	0	0
Stage 1	-1.2	0	0
Stage 1	-1.4	0	0
Stage 1	-1.6	0	0
Stage 1	-1.8	0	0
Stage 1	-2	0	0
Stage 1	-2.2	0	0
Stage 1	-2.4	0	0
Stage 1	-2.6	0	0
Stage 1	-2.8	0	0
Stage 1	-3	0	0
Stage 1	-3.2	0	0
Stage 1	-3.4	0	0
Stage 1	-3.6	0	0
Stage 1	-3.8	0	0
Stage 1	-4	0	0

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)
Risultati Paratia

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-4.2	0	0
Stage 1	-4.4	0	0
Stage 1	-4.6	0	0
Stage 1	-4.8	0	0
Stage 1	-5	0	0
Stage 1	-5.2	0	0
Stage 1	-5.4	0	0
Stage 1	-5.6	0	0
Stage 1	-5.8	0	0
Stage 1	-6	0	0
Stage 1	-6.2	0	0
Stage 1	-6.4	0	0
Stage 1	-6.6	0	0
Stage 1	-6.8	0	0
Stage 1	-7	0	0
Stage 1	-7.2	0	0
Stage 1	-7.4	0	0
Stage 1	-7.6	0	0
Stage 1	-7.8	0	0
Stage 1	-8	0	0
Stage 1	-8.2	0	0
Stage 1	-8.4	0	0
Stage 1	-8.6	0	0
Stage 1	-8.8	0	0
Stage 1	-9	0	0
Stage 1	-9.2	0	0
Stage 1	-9.4	0	0
Stage 1	-9.6	0	0
Stage 1	-9.8	0	0
Stage 1	-10	0	0
Stage 1	-10.2	0	0

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente) Risultati

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-10.4	0	0
Stage 1	-10.6	0	0
Stage 1	-10.8	0	0
Stage 1	-11	0	0
Stage 1	-11.2	0	0
Stage 1	-11.4	0	0
Stage 1	-11.6	0	0
Stage 1	-11.8	0	0
Stage 1	-12	0	0
Stage 1	-12.2	0	0
Stage 1	-12.4	0	0
Stage 1	-12.6	0	0
Stage 1	-12.8	0	0
Stage 1	-13	0	0
Stage 1	-13.2	0	0
Stage 1	-13.4	0	0
Stage 1	-13.6	0	0
Stage 1	-13.8	0	0
Stage 1	-14	0	0
Stage 1	-14.2	0	0
Stage 1	-14.4	0	0
Stage 1	-14.6	0	0
Stage 1	-14.8	0	0
Stage 1	-15	0	0
Stage 1	-15.2	0	0
Stage 1	-15.4	0	0
Stage 1	-15.6	0	0
Stage 1	-15.8	0	0
Stage 1	-16	0	0
Stage 1	-16.2	0	0
Stage 1	-16.4	0	0

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)	Risultati Paratia	Muro: LEFT
Stage	Z (m)	Momento (kN*m/m) Taglio (kN/m)
Stage 1	-16.6	0 0
Stage 1	-16.8	0 0
Stage 1	-17	0 0
Stage 1	-17.2	0 0
Stage 1	-17.4	0 0
Stage 1	-17.6	0 0
Stage 1	-17.8	0 0
Stage 1	-18	0 0
Stage 1	-18.2	0 0
Stage 1	-18.4	0 0
Stage 1	-18.6	0 0
Stage 1	-18.8	0 0
Stage 1	-19	0 0
Stage 1	-19.2	0 0
Stage 1	-19.4	0 0
Stage 1	-19.6	0 0
Stage 1	-19.8	0 0
Stage 1	-20	0 0

6.1.5. Tabella Spostamento NTC2018: SLE (Rara/Frequente/Quasi Permanente) - LEFT Stage: Stage 2

Design Assumption: NTC2018: SLE Tipo	Risultato: Muro: LEFT
(Rara/Frequente/Quasi Permanente)	Spostamento
Stage	Z (m) Spostamento orizzontale (mm)
Stage 2	0 46.57
Stage 2	-0.2 45.76
Stage 2	-0.4 44.94
Stage 2	-0.6 44.12
Stage 2	-0.8 43.3
Stage 2	-1 42.49
Stage 2	-1.2 41.67

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage		Z (m)	Spostamento orizzontale (mm)
Stage 2		-1.4	40.85
Stage 2		-1.6	40.04
Stage 2		-1.8	39.22
Stage 2		-2	38.4
Stage 2		-2.2	37.58
Stage 2		-2.4	36.77
Stage 2		-2.6	35.95
Stage 2		-2.8	35.14
Stage 2		-3	34.32
Stage 2		-3.2	33.51
Stage 2		-3.4	32.69
Stage 2		-3.6	31.88
Stage 2		-3.8	31.07
Stage 2		-4	30.26
Stage 2		-4.2	29.45
Stage 2		-4.4	28.64
Stage 2		-4.6	27.83
Stage 2		-4.8	27.03
Stage 2		-5	26.23
Stage 2		-5.2	25.43
Stage 2		-5.4	24.64
Stage 2		-5.6	23.85
Stage 2		-5.8	23.06
Stage 2		-6	22.28
Stage 2		-6.2	21.5
Stage 2		-6.4	20.73
Stage 2		-6.6	19.96
Stage 2		-6.8	19.2
Stage 2		-7	18.45
Stage 2		-7.2	17.7
Stage 2		-7.4	16.97

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage		Z (m)	Spostamento orizzontale (mm)
Stage 2		-7.6	16.24
Stage 2		-7.8	15.53
Stage 2		-8	14.82
Stage 2		-8.2	14.13
Stage 2		-8.4	13.45
Stage 2		-8.6	12.79
Stage 2		-8.8	12.14
Stage 2		-9	11.51
Stage 2		-9.2	10.89
Stage 2		-9.4	10.29
Stage 2		-9.6	9.71
Stage 2		-9.8	9.16
Stage 2		-10	8.62
Stage 2		-10.2	8.1
Stage 2		-10.4	7.6
Stage 2		-10.6	7.13
Stage 2		-10.8	6.67
Stage 2		-11	6.24
Stage 2		-11.2	5.83
Stage 2		-11.4	5.44
Stage 2		-11.6	5.07
Stage 2		-11.8	4.72
Stage 2		-12	4.4
Stage 2		-12.2	4.09
Stage 2		-12.4	3.8
Stage 2		-12.6	3.53
Stage 2		-12.8	3.28
Stage 2		-13	3.05
Stage 2		-13.2	2.84
Stage 2		-13.4	2.64
Stage 2		-13.6	2.46

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage		Z (m)	Spostamento orizzontale (mm)
Stage 2		-13.8	2.29
Stage 2		-14	2.14
Stage 2		-14.2	2.01
Stage 2		-14.4	1.88
Stage 2		-14.6	1.77
Stage 2		-14.8	1.67
Stage 2		-15	1.58
Stage 2		-15.2	1.51
Stage 2		-15.4	1.44
Stage 2		-15.6	1.38
Stage 2		-15.8	1.33
Stage 2		-16	1.28
Stage 2		-16.2	1.24
Stage 2		-16.4	1.21
Stage 2		-16.6	1.18
Stage 2		-16.8	1.16
Stage 2		-17	1.15
Stage 2		-17.2	1.13
Stage 2		-17.4	1.12
Stage 2		-17.6	1.12
Stage 2		-17.8	1.11
Stage 2		-18	1.11
Stage 2		-18.2	1.11
Stage 2		-18.4	1.11
Stage 2		-18.6	1.11
Stage 2		-18.8	1.11
Stage 2		-19	1.11
Stage 2		-19.2	1.12
Stage 2		-19.4	1.12
Stage 2		-19.6	1.12
Stage 2		-19.8	1.13

Design Assumption: NTC2018: SLE Tipo Risultato: Muro: LEFT (Rara/Frequente/Quasi Permanente) Spostamento
Stage Z (m) Spostamento orizzontale (mm)
Stage 2 -20 1.13

6.1.6. Tabella Risultati Paratia NTC2018: SLE (Rara/Frequente/Quasi Permanente) - Left Wall - Stage: Stage 2

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente) Risultati Paratia Muro: LEFT
Stage Z (m) Momento (kN*m/m) Taglio (kN/m)
Stage 2 0 0 0
Stage 2 -0.2 0 0
Stage 2 -0.2 0 0
Stage 2 -0.4 -0.04 -0.18
Stage 2 -0.6 -0.14 -0.53
Stage 2 -0.8 -0.35 -1.06
Stage 2 -1 -0.71 -1.77
Stage 2 -1.2 -1.24 -2.66
Stage 2 -1.4 -1.98 -3.72
Stage 2 -1.6 -2.97 -4.96
Stage 2 -1.8 -4.25 -6.37
Stage 2 -2 -5.84 -7.97
Stage 2 -2.2 -7.79 -9.74
Stage 2 -2.4 -10.13 -11.69
Stage 2 -2.6 -12.89 -13.81
Stage 2 -2.8 -16.11 -16.11
Stage 2 -3 -19.83 -18.59
Stage 2 -3.2 -24.08 -21.25
Stage 2 -3.4 -28.9 -24.08
Stage 2 -3.6 -34.32 -27.09
Stage 2 -3.8 -40.37 -30.28
Stage 2 -4 -47.1 -33.65
Stage 2 -4.2 -54.54 -37.19
Stage 2 -4.4 -62.72 -40.91

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente) Risultati

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-4.6	-71.68	-44.8
Stage 2	-4.8	-81.46	-48.87
Stage 2	-5	-92.08	-53.12
Stage 2	-5.2	-103.59	-57.55
Stage 2	-5.4	-116.02	-62.16
Stage 2	-5.6	-129.41	-66.94
Stage 2	-5.8	-143.79	-71.89
Stage 2	-6	-159.19	-77.03
Stage 2	-6.2	-175.9	-83.51
Stage 2	-6.4	-193.96	-90.31
Stage 2	-6.6	-213.44	-97.42
Stage 2	-6.8	-234.41	-104.84
Stage 2	-7	-256.93	-112.58
Stage 2	-7.2	-281.05	-120.64
Stage 2	-7.4	-306.86	-129.01
Stage 2	-7.6	-334.4	-137.7
Stage 2	-7.8	-363.74	-146.7
Stage 2	-8	-394.94	-156.02
Stage 2	-8.2	-428.07	-165.65
Stage 2	-8.4	-461.17	-165.49
Stage 2	-8.6	-493.75	-162.93
Stage 2	-8.8	-525.35	-157.96
Stage 2	-9	-555.46	-150.58
Stage 2	-9.2	-583.62	-140.79
Stage 2	-9.4	-609.34	-128.6
Stage 2	-9.6	-632.14	-113.99
Stage 2	-9.8	-651.53	-96.98
Stage 2	-10	-667.04	-77.56
Stage 2	-10.2	-678.6	-57.8
Stage 2	-10.4	-686.63	-40.13
Stage 2	-10.6	-691.36	-23.62

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente) Risultati

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-10.8	-693	-8.24
Stage 2	-11	-691.79	6.09
Stage 2	-11.2	-687.91	19.4
Stage 2	-11.4	-681.56	31.75
Stage 2	-11.6	-672.92	43.2
Stage 2	-11.8	-662.16	53.79
Stage 2	-12	-649.44	63.57
Stage 2	-12.2	-634.92	72.6
Stage 2	-12.4	-618.74	80.93
Stage 2	-12.6	-601.03	88.54
Stage 2	-12.8	-582	95.15
Stage 2	-13	-561.83	100.84
Stage 2	-13.2	-540.7	105.66
Stage 2	-13.4	-518.76	109.69
Stage 2	-13.6	-496.16	113
Stage 2	-13.8	-473.04	115.64
Stage 2	-14	-449.5	117.68
Stage 2	-14.2	-425.67	119.17
Stage 2	-14.4	-401.63	120.17
Stage 2	-14.6	-377.49	120.73
Stage 2	-14.8	-353.31	120.87
Stage 2	-15	-329.28	120.17
Stage 2	-15.2	-305.53	118.71
Stage 2	-15.4	-282.22	116.59
Stage 2	-15.6	-259.44	113.88
Stage 2	-15.8	-237.31	110.66
Stage 2	-16	-215.91	107
Stage 2	-16.2	-195.32	102.95
Stage 2	-16.4	-175.6	98.59
Stage 2	-16.6	-156.81	93.95
Stage 2	-16.8	-138.99	89.09

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)	Risultati Paratia	Muro: LEFT
Stage	Z (m)	Momento (kN*m/m) Taglio (kN/m)
Stage 2	-17	-122.19 84.05
Stage 2	-17.2	-106.41 78.86
Stage 2	-17.4	-91.7 73.55
Stage 2	-17.6	-78.07 68.16
Stage 2	-17.8	-65.53 62.71
Stage 2	-18	-54.08 57.22
Stage 2	-18.2	-43.74 51.71
Stage 2	-18.4	-34.5 46.19
Stage 2	-18.6	-26.37 40.67
Stage 2	-18.8	-19.34 35.16
Stage 2	-19	-13.4 29.67
Stage 2	-19.2	-8.56 24.21
Stage 2	-19.4	-4.8 18.78
Stage 2	-19.6	-2.13 13.37
Stage 2	-19.8	-0.53 8
Stage 2	-20	0 2.65

6.1.7. Tabella Spostamento NTC2018: SLE (Rara/Frequente/Quasi Permanente) - LEFT Stage: Stage 3

Design Assumption: NTC2018: SLE Tipo	Risultato: Muro: LEFT
(Rara/Frequente/Quasi Permanente)	Spostamento
Stage	Z (m) Spostamento orizzontale (mm)
Stage 3	0 46.57
Stage 3	-0.2 45.76
Stage 3	-0.4 44.94
Stage 3	-0.6 44.12
Stage 3	-0.8 43.3
Stage 3	-1 42.49
Stage 3	-1.2 41.67
Stage 3	-1.4 40.85
Stage 3	-1.6 40.04

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage		Z (m)	Spostamento orizzontale (mm)
Stage 3		-1.8	39.22
Stage 3		-2	38.4
Stage 3		-2.2	37.58
Stage 3		-2.4	36.77
Stage 3		-2.6	35.95
Stage 3		-2.8	35.14
Stage 3		-3	34.32
Stage 3		-3.2	33.51
Stage 3		-3.4	32.69
Stage 3		-3.6	31.88
Stage 3		-3.8	31.07
Stage 3		-4	30.26
Stage 3		-4.2	29.45
Stage 3		-4.4	28.64
Stage 3		-4.6	27.83
Stage 3		-4.8	27.03
Stage 3		-5	26.23
Stage 3		-5.2	25.43
Stage 3		-5.4	24.64
Stage 3		-5.6	23.85
Stage 3		-5.8	23.06
Stage 3		-6	22.28
Stage 3		-6.2	21.5
Stage 3		-6.4	20.73
Stage 3		-6.6	19.96
Stage 3		-6.8	19.2
Stage 3		-7	18.45
Stage 3		-7.2	17.7
Stage 3		-7.4	16.97
Stage 3		-7.6	16.24
Stage 3		-7.8	15.53

Design (Rara/Frequente/Quasi Permanente)	Assumption: NTC2018:	SLE Tipo Spostamento	Risultato: Muro: LEFT
Stage		Z (m)	Spostamento orizzontale (mm)
Stage 3		-8	14.82
Stage 3		-8.2	14.13
Stage 3		-8.4	13.45
Stage 3		-8.6	12.79
Stage 3		-8.8	12.14
Stage 3		-9	11.51
Stage 3		-9.2	10.89
Stage 3		-9.4	10.29
Stage 3		-9.6	9.71
Stage 3		-9.8	9.16
Stage 3		-10	8.62
Stage 3		-10.2	8.1
Stage 3		-10.4	7.6
Stage 3		-10.6	7.13
Stage 3		-10.8	6.67
Stage 3		-11	6.24
Stage 3		-11.2	5.83
Stage 3		-11.4	5.44
Stage 3		-11.6	5.07
Stage 3		-11.8	4.72
Stage 3		-12	4.4
Stage 3		-12.2	4.09
Stage 3		-12.4	3.8
Stage 3		-12.6	3.53
Stage 3		-12.8	3.28
Stage 3		-13	3.05
Stage 3		-13.2	2.84
Stage 3		-13.4	2.64
Stage 3		-13.6	2.46
Stage 3		-13.8	2.29
Stage 3		-14	2.14

Design (Rara/Frequente/Quasi Permanente)	Assumption:	NTC2018:	SLE Tipo	Risultato:
Stage			Z (m)	Muro: LEFT Spostamento orizzontale (mm)
Stage 3			-14.2	2.01
Stage 3			-14.4	1.88
Stage 3			-14.6	1.77
Stage 3			-14.8	1.67
Stage 3			-15	1.58
Stage 3			-15.2	1.51
Stage 3			-15.4	1.44
Stage 3			-15.6	1.38
Stage 3			-15.8	1.33
Stage 3			-16	1.28
Stage 3			-16.2	1.24
Stage 3			-16.4	1.21
Stage 3			-16.6	1.18
Stage 3			-16.8	1.16
Stage 3			-17	1.15
Stage 3			-17.2	1.13
Stage 3			-17.4	1.12
Stage 3			-17.6	1.12
Stage 3			-17.8	1.11
Stage 3			-18	1.11
Stage 3			-18.2	1.11
Stage 3			-18.4	1.11
Stage 3			-18.6	1.11
Stage 3			-18.8	1.11
Stage 3			-19	1.11
Stage 3			-19.2	1.12
Stage 3			-19.4	1.12
Stage 3			-19.6	1.12
Stage 3			-19.8	1.13
Stage 3			-20	1.13

6.1.8. Tabella Risultati Paratia NTC2018: SLE (Rara/Frequente/Quasi Permanente) - Left Wall - Stage: Stage 3

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)	Risultati Paratia	Muro: LEFT
Stage	Z (m)	Momento (kN*m/m) Taglio (kN/m)
Stage 3	0	0 0
Stage 3	-0.2	0 0
Stage 3	-0.2	0 0
Stage 3	-0.4	-0.04 -0.18
Stage 3	-0.6	-0.14 -0.53
Stage 3	-0.8	-0.35 -1.06
Stage 3	-1	-0.71 -1.77
Stage 3	-1.2	-1.24 -2.66
Stage 3	-1.4	-1.98 -3.72
Stage 3	-1.6	-2.97 -4.96
Stage 3	-1.8	-4.25 -6.37
Stage 3	-2	-5.84 -7.97
Stage 3	-2.2	-7.79 -9.74
Stage 3	-2.4	-10.13 -11.69
Stage 3	-2.6	-12.89 -13.81
Stage 3	-2.8	-16.11 -16.11
Stage 3	-3	-19.83 -18.59
Stage 3	-3.2	-24.08 -21.25
Stage 3	-3.4	-28.9 -24.08
Stage 3	-3.6	-34.32 -27.09
Stage 3	-3.8	-40.37 -30.28
Stage 3	-4	-47.1 -33.65
Stage 3	-4.2	-54.54 -37.19
Stage 3	-4.4	-62.72 -40.91
Stage 3	-4.6	-71.68 -44.8
Stage 3	-4.8	-81.46 -48.87
Stage 3	-5	-92.08 -53.12
Stage 3	-5.2	-103.59 -57.55
Stage 3	-5.4	-116.02 -62.16

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente) Risultati Paratia

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-5.6	-129.41	-66.94
Stage 3	-5.8	-143.79	-71.89
Stage 3	-6	-159.19	-77.03
Stage 3	-6.2	-175.9	-83.51
Stage 3	-6.4	-193.96	-90.31
Stage 3	-6.6	-213.44	-97.42
Stage 3	-6.8	-234.41	-104.84
Stage 3	-7	-256.93	-112.58
Stage 3	-7.2	-281.05	-120.64
Stage 3	-7.4	-306.86	-129.01
Stage 3	-7.6	-334.4	-137.7
Stage 3	-7.8	-363.74	-146.7
Stage 3	-8	-394.94	-156.02
Stage 3	-8.2	-428.07	-165.65
Stage 3	-8.4	-461.17	-165.49
Stage 3	-8.6	-493.75	-162.93
Stage 3	-8.8	-525.35	-157.96
Stage 3	-9	-555.46	-150.58
Stage 3	-9.2	-583.62	-140.79
Stage 3	-9.4	-609.34	-128.6
Stage 3	-9.6	-632.14	-113.99
Stage 3	-9.8	-651.53	-96.98
Stage 3	-10	-667.04	-77.56
Stage 3	-10.2	-678.6	-57.8
Stage 3	-10.4	-686.63	-40.13
Stage 3	-10.6	-691.36	-23.62
Stage 3	-10.8	-693	-8.24
Stage 3	-11	-691.79	6.09
Stage 3	-11.2	-687.91	19.4
Stage 3	-11.4	-681.56	31.75
Stage 3	-11.6	-672.92	43.2

Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)
 Risultati Paratia

Muro: LEFT

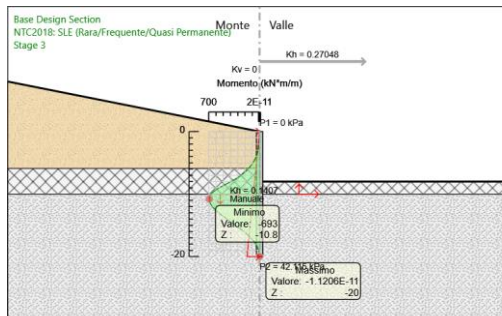
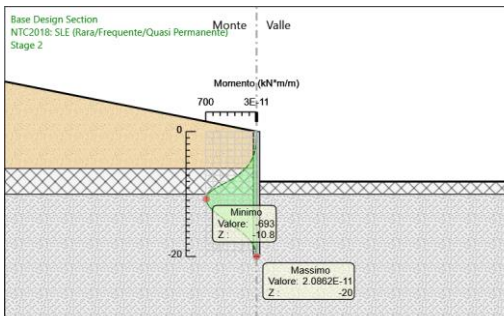
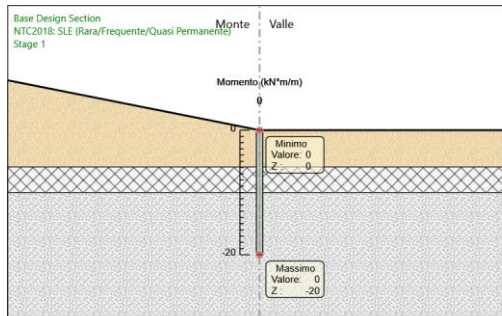
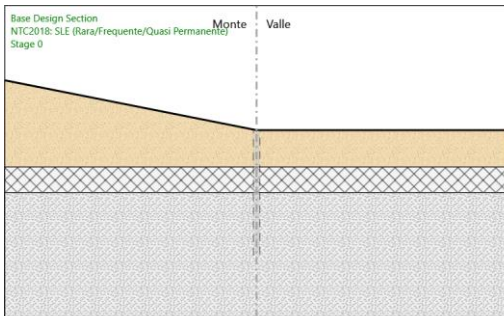
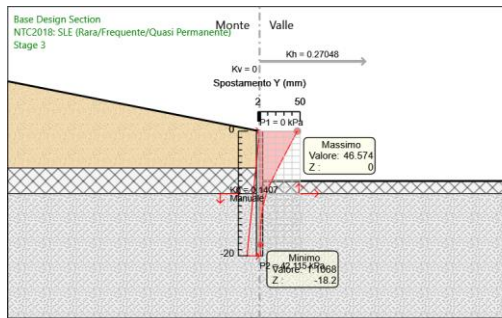
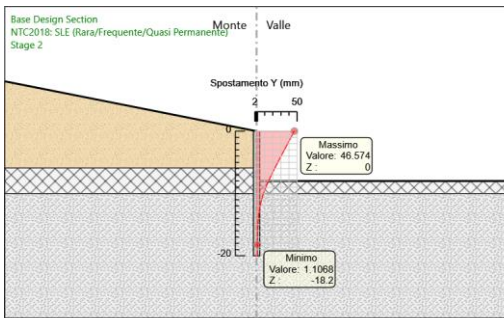
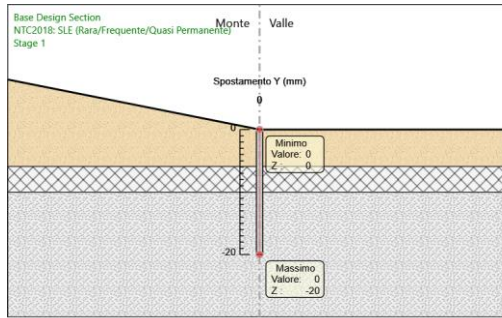
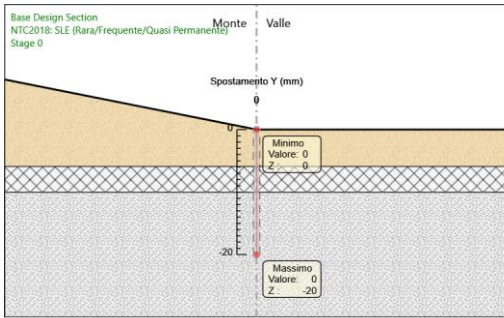
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-11.8	-662.16	53.79
Stage 3	-12	-649.44	63.57
Stage 3	-12.2	-634.92	72.6
Stage 3	-12.4	-618.74	80.93
Stage 3	-12.6	-601.03	88.54
Stage 3	-12.8	-582	95.15
Stage 3	-13	-561.83	100.84
Stage 3	-13.2	-540.7	105.66
Stage 3	-13.4	-518.76	109.69
Stage 3	-13.6	-496.16	113
Stage 3	-13.8	-473.04	115.64
Stage 3	-14	-449.5	117.68
Stage 3	-14.2	-425.67	119.17
Stage 3	-14.4	-401.63	120.17
Stage 3	-14.6	-377.49	120.73
Stage 3	-14.8	-353.31	120.87
Stage 3	-15	-329.28	120.17
Stage 3	-15.2	-305.53	118.71
Stage 3	-15.4	-282.22	116.59
Stage 3	-15.6	-259.44	113.88
Stage 3	-15.8	-237.31	110.66
Stage 3	-16	-215.91	107
Stage 3	-16.2	-195.32	102.95
Stage 3	-16.4	-175.6	98.59
Stage 3	-16.6	-156.81	93.95
Stage 3	-16.8	-138.99	89.09
Stage 3	-17	-122.19	84.05
Stage 3	-17.2	-106.41	78.86
Stage 3	-17.4	-91.7	73.55
Stage 3	-17.6	-78.07	68.16
Stage 3	-17.8	-65.53	62.71

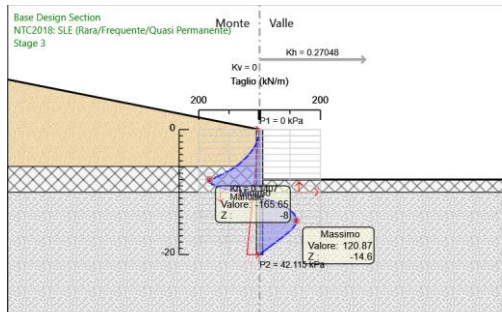
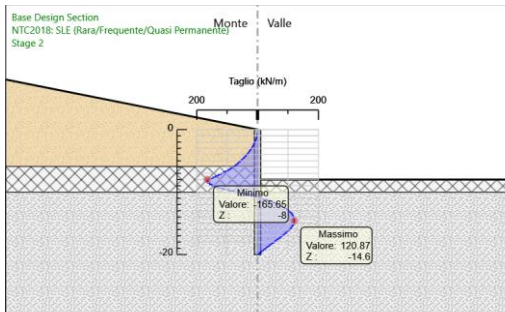
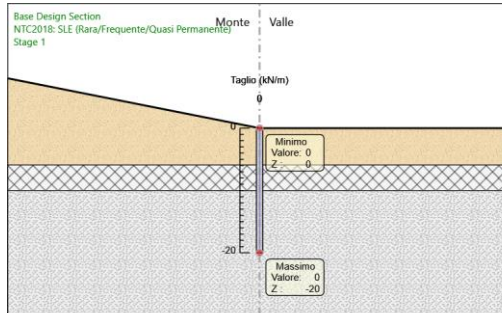
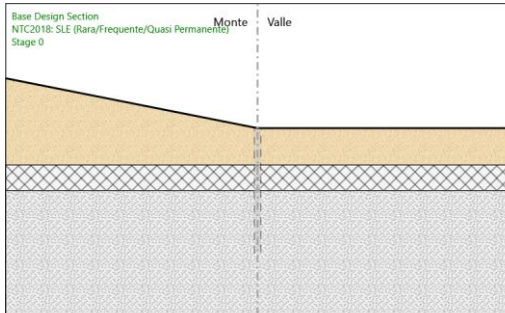
Design Assumption: NTC2018: SLE (Rara/Frequente/Quasi Permanente)
Risultati Paratia

Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-18	-54.08	57.22
Stage 3	-18.2	-43.74	51.71
Stage 3	-18.4	-34.5	46.19
Stage 3	-18.6	-26.37	40.67
Stage 3	-18.8	-19.34	35.16
Stage 3	-19	-13.4	29.67
Stage 3	-19.2	-8.56	24.21
Stage 3	-19.4	-4.8	18.78
Stage 3	-19.6	-2.13	13.37
Stage 3	-19.8	-0.53	8
Stage 3	-20	0	2.65

6.1.9. Tabella Grafici dei Risultati





6.2. Risultati NTC2018: A1+M1+R1 (R3 per tiranti)

6.2.1. Tabella Risultati Paratia NTC2018: A1+M1+R1 (R3 per tiranti) - Left Wall - Stage: Stage 0

Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	0	0	0
Stage 0	-0.2	0	0
Stage 0	-0.4	0	0
Stage 0	-0.6	0	0
Stage 0	-0.8	0	0
Stage 0	-1	0	0
Stage 0	-1.2	0	0
Stage 0	-1.4	0	0
Stage 0	-1.6	0	0
Stage 0	-1.8	0	0
Stage 0	-2	0	0
Stage 0	-2.2	0	0
Stage 0	-2.4	0	0
Stage 0	-2.6	0	0
Stage 0	-2.8	0	0
Stage 0	-3	0	0
Stage 0	-3.2	0	0
Stage 0	-3.4	0	0
Stage 0	-3.6	0	0
Stage 0	-3.8	0	0
Stage 0	-4	0	0
Stage 0	-4.2	0	0
Stage 0	-4.4	0	0
Stage 0	-4.6	0	0
Stage 0	-4.8	0	0
Stage 0	-5	0	0
Stage 0	-5.2	0	0
Stage 0	-5.4	0	0
Stage 0	-5.6	0	0
Stage 0	-5.8	0	0
Stage 0	-6	0	0
Stage 0	-6.2	0	0
Stage 0	-6.4	0	0
Stage 0	-6.6	0	0
Stage 0	-6.8	0	0
Stage 0	-7	0	0
Stage 0	-7.2	0	0
Stage 0	-7.4	0	0
Stage 0	-7.6	0	0
Stage 0	-7.8	0	0
Stage 0	-8	0	0
Stage 0	-8.2	0	0
Stage 0	-8.4	0	0
Stage 0	-8.6	0	0
Stage 0	-8.8	0	0
Stage 0	-9	0	0
Stage 0	-9.2	0	0
Stage 0	-9.4	0	0
Stage 0	-9.6	0	0
Stage 0	-9.8	0	0
Stage 0	-10	0	0
Stage 0	-10.2	0	0
Stage 0	-10.4	0	0

Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-10.6	0	0
Stage 0	-10.8	0	0
Stage 0	-11	0	0
Stage 0	-11.2	0	0
Stage 0	-11.4	0	0
Stage 0	-11.6	0	0
Stage 0	-11.8	0	0
Stage 0	-12	0	0
Stage 0	-12.2	0	0
Stage 0	-12.4	0	0
Stage 0	-12.6	0	0
Stage 0	-12.8	0	0
Stage 0	-13	0	0
Stage 0	-13.2	0	0
Stage 0	-13.4	0	0
Stage 0	-13.6	0	0
Stage 0	-13.8	0	0
Stage 0	-14	0	0
Stage 0	-14.2	0	0
Stage 0	-14.4	0	0
Stage 0	-14.6	0	0
Stage 0	-14.8	0	0
Stage 0	-15	0	0
Stage 0	-15.2	0	0
Stage 0	-15.4	0	0
Stage 0	-15.6	0	0
Stage 0	-15.8	0	0
Stage 0	-16	0	0
Stage 0	-16.2	0	0
Stage 0	-16.4	0	0
Stage 0	-16.6	0	0
Stage 0	-16.8	0	0
Stage 0	-17	0	0
Stage 0	-17.2	0	0
Stage 0	-17.4	0	0
Stage 0	-17.6	0	0
Stage 0	-17.8	0	0
Stage 0	-18	0	0
Stage 0	-18.2	0	0
Stage 0	-18.4	0	0
Stage 0	-18.6	0	0
Stage 0	-18.8	0	0
Stage 0	-19	0	0
Stage 0	-19.2	0	0
Stage 0	-19.4	0	0
Stage 0	-19.6	0	0
Stage 0	-19.8	0	0
Stage 0	-20	0	0

6.2.2. Tabella Risultati Paratia NTC2018: A1+M1+R1 (R3 per tiranti) - Left Wall - Stage: Stage 1

Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.6	0	0
Stage 1	-0.8	0	0
Stage 1	-1	0	0
Stage 1	-1.2	0	0
Stage 1	-1.4	0	0
Stage 1	-1.6	0	0
Stage 1	-1.8	0	0
Stage 1	-2	0	0
Stage 1	-2.2	0	0
Stage 1	-2.4	0	0
Stage 1	-2.6	0	0
Stage 1	-2.8	0	0
Stage 1	-3	0	0
Stage 1	-3.2	0	0
Stage 1	-3.4	0	0
Stage 1	-3.6	0	0
Stage 1	-3.8	0	0
Stage 1	-4	0	0
Stage 1	-4.2	0	0
Stage 1	-4.4	0	0
Stage 1	-4.6	0	0
Stage 1	-4.8	0	0
Stage 1	-5	0	0
Stage 1	-5.2	0	0
Stage 1	-5.4	0	0
Stage 1	-5.6	0	0
Stage 1	-5.8	0	0
Stage 1	-6	0	0
Stage 1	-6.2	0	0
Stage 1	-6.4	0	0
Stage 1	-6.6	0	0
Stage 1	-6.8	0	0
Stage 1	-7	0	0
Stage 1	-7.2	0	0
Stage 1	-7.4	0	0
Stage 1	-7.6	0	0
Stage 1	-7.8	0	0
Stage 1	-8	0	0
Stage 1	-8.2	0	0
Stage 1	-8.4	0	0
Stage 1	-8.6	0	0
Stage 1	-8.8	0	0
Stage 1	-9	0	0
Stage 1	-9.2	0	0
Stage 1	-9.4	0	0
Stage 1	-9.6	0	0
Stage 1	-9.8	0	0
Stage 1	-10	0	0
Stage 1	-10.2	0	0
Stage 1	-10.4	0	0
Stage 1	-10.6	0	0
Stage 1	-10.8	0	0
Stage 1	-11	0	0

Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-11.2	0	0
Stage 1	-11.4	0	0
Stage 1	-11.6	0	0
Stage 1	-11.8	0	0
Stage 1	-12	0	0
Stage 1	-12.2	0	0
Stage 1	-12.4	0	0
Stage 1	-12.6	0	0
Stage 1	-12.8	0	0
Stage 1	-13	0	0
Stage 1	-13.2	0	0
Stage 1	-13.4	0	0
Stage 1	-13.6	0	0
Stage 1	-13.8	0	0
Stage 1	-14	0	0
Stage 1	-14.2	0	0
Stage 1	-14.4	0	0
Stage 1	-14.6	0	0
Stage 1	-14.8	0	0
Stage 1	-15	0	0
Stage 1	-15.2	0	0
Stage 1	-15.4	0	0
Stage 1	-15.6	0	0
Stage 1	-15.8	0	0
Stage 1	-16	0	0
Stage 1	-16.2	0	0
Stage 1	-16.4	0	0
Stage 1	-16.6	0	0
Stage 1	-16.8	0	0
Stage 1	-17	0	0
Stage 1	-17.2	0	0
Stage 1	-17.4	0	0
Stage 1	-17.6	0	0
Stage 1	-17.8	0	0
Stage 1	-18	0	0
Stage 1	-18.2	0	0
Stage 1	-18.4	0	0
Stage 1	-18.6	0	0
Stage 1	-18.8	0	0
Stage 1	-19	0	0
Stage 1	-19.2	0	0
Stage 1	-19.4	0	0
Stage 1	-19.6	0	0
Stage 1	-19.8	0	0
Stage 1	-20	0	0

6.2.3. Tabella Risultati Paratia NTC2018: A1+M1+R1 (R3 per tiranti) - Left Wall - Stage: Stage 2

Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	0	0	0
Stage 2	-0.2	0	0
Stage 2	-0.2	0	0
Stage 2	-0.4	-0.05	-0.23
Stage 2	-0.6	-0.18	-0.69
Stage 2	-0.8	-0.46	-1.38
Stage 2	-1	-0.92	-2.3
Stage 2	-1.2	-1.61	-3.45
Stage 2	-1.4	-2.58	-4.83
Stage 2	-1.6	-3.87	-6.45
Stage 2	-1.8	-5.52	-8.29
Stage 2	-2	-7.6	-10.36
Stage 2	-2.2	-10.13	-12.66
Stage 2	-2.4	-13.17	-15.19
Stage 2	-2.6	-16.76	-17.96
Stage 2	-2.8	-20.95	-20.95
Stage 2	-3	-25.78	-24.17
Stage 2	-3.2	-31.31	-27.62
Stage 2	-3.4	-37.57	-31.31
Stage 2	-3.6	-44.61	-35.22
Stage 2	-3.8	-52.49	-39.36
Stage 2	-4	-61.23	-43.74
Stage 2	-4.2	-70.9	-48.34
Stage 2	-4.4	-81.54	-53.18
Stage 2	-4.6	-93.19	-58.24
Stage 2	-4.8	-105.89	-63.54
Stage 2	-5	-119.71	-69.06
Stage 2	-5.2	-134.67	-74.82
Stage 2	-5.4	-150.83	-80.8
Stage 2	-5.6	-168.23	-87.02
Stage 2	-5.8	-186.93	-93.46
Stage 2	-6	-206.95	-100.14
Stage 2	-6.2	-228.67	-108.56
Stage 2	-6.4	-252.15	-117.4
Stage 2	-6.6	-277.47	-126.64
Stage 2	-6.8	-304.73	-136.29
Stage 2	-7	-334	-146.36
Stage 2	-7.2	-365.37	-156.83
Stage 2	-7.4	-398.91	-167.71
Stage 2	-7.6	-434.71	-179.01
Stage 2	-7.8	-472.86	-190.71
Stage 2	-8	-513.42	-202.82
Stage 2	-8.2	-556.49	-215.34
Stage 2	-8.4	-599.52	-215.14
Stage 2	-8.6	-641.88	-211.81
Stage 2	-8.8	-682.95	-205.35
Stage 2	-9	-722.1	-195.75
Stage 2	-9.2	-758.7	-183.03
Stage 2	-9.4	-792.14	-167.17
Stage 2	-9.6	-821.78	-148.19
Stage 2	-9.8	-846.99	-126.07
Stage 2	-10	-867.16	-100.83
Stage 2	-10.2	-882.19	-75.14
Stage 2	-10.4	-892.62	-52.17
Stage 2	-10.6	-898.76	-30.71
Stage 2	-10.8	-900.9	-10.71

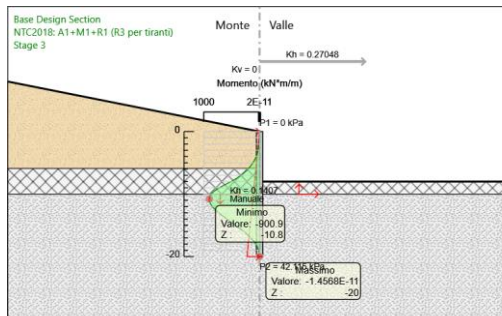
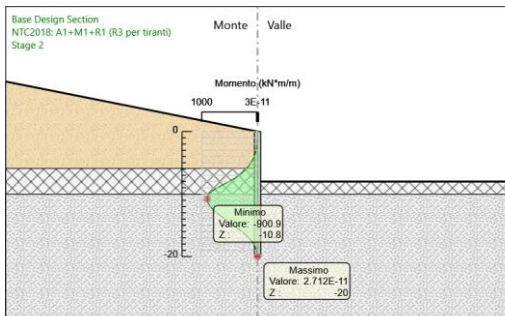
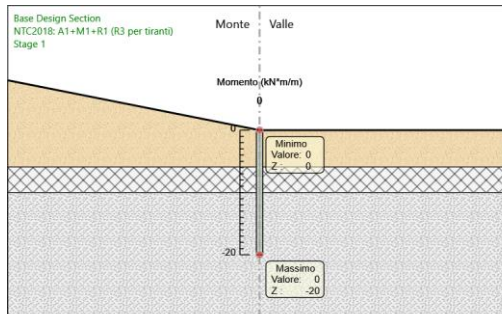
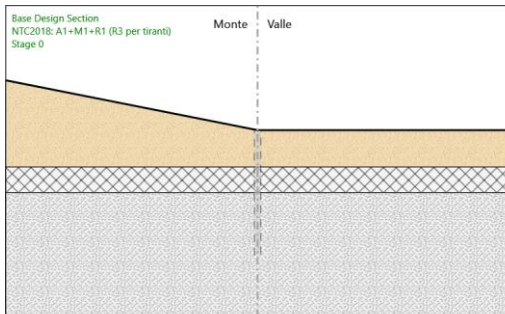
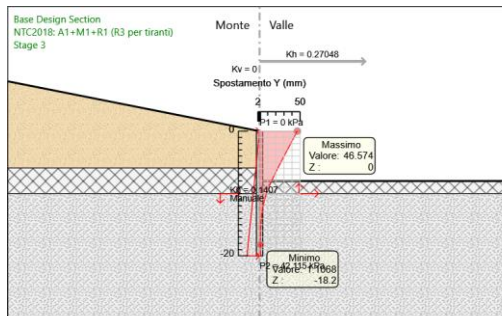
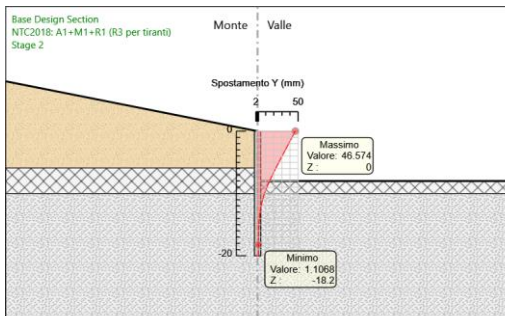
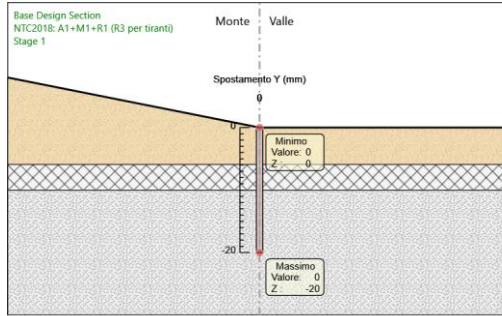
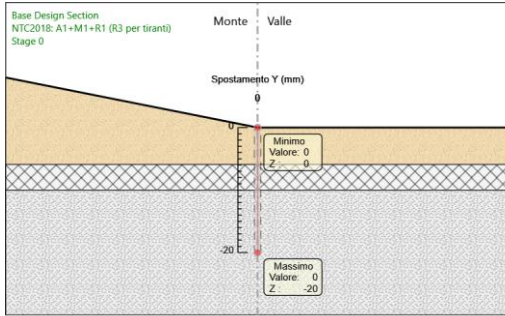
Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-11	-899.32	7.91
Stage 2	-11.2	-894.28	25.22
Stage 2	-11.4	-886.02	41.28
Stage 2	-11.6	-874.79	56.16
Stage 2	-11.8	-860.81	69.92
Stage 2	-12	-844.28	82.64
Stage 2	-12.2	-825.4	94.38
Stage 2	-12.4	-804.36	105.2
Stage 2	-12.6	-781.34	115.1
Stage 2	-12.8	-756.6	123.7
Stage 2	-13	-730.38	131.09
Stage 2	-13.2	-702.91	137.36
Stage 2	-13.4	-674.39	142.6
Stage 2	-13.6	-645.01	146.89
Stage 2	-13.8	-614.95	150.33
Stage 2	-14	-584.35	152.98
Stage 2	-14.2	-553.37	154.92
Stage 2	-14.4	-522.12	156.22
Stage 2	-14.6	-490.73	156.95
Stage 2	-14.8	-459.31	157.14
Stage 2	-15	-428.06	156.22
Stage 2	-15.2	-397.2	154.33
Stage 2	-15.4	-366.88	151.57
Stage 2	-15.6	-337.27	148.04
Stage 2	-15.8	-308.5	143.86
Stage 2	-16	-280.68	139.09
Stage 2	-16.2	-253.92	133.84
Stage 2	-16.4	-228.28	128.16
Stage 2	-16.6	-203.86	122.13
Stage 2	-16.8	-180.69	115.82
Stage 2	-17	-158.84	109.26
Stage 2	-17.2	-138.34	102.51
Stage 2	-17.4	-119.22	95.62
Stage 2	-17.6	-101.49	88.61
Stage 2	-17.8	-85.19	81.53
Stage 2	-18	-70.31	74.39
Stage 2	-18.2	-56.86	67.22
Stage 2	-18.4	-44.85	60.05
Stage 2	-18.6	-34.28	52.87
Stage 2	-18.8	-25.14	45.71
Stage 2	-19	-17.42	38.58
Stage 2	-19.2	-11.13	31.47
Stage 2	-19.4	-6.25	24.41
Stage 2	-19.6	-2.77	17.38
Stage 2	-19.8	-0.69	10.4
Stage 2	-20	0	3.45

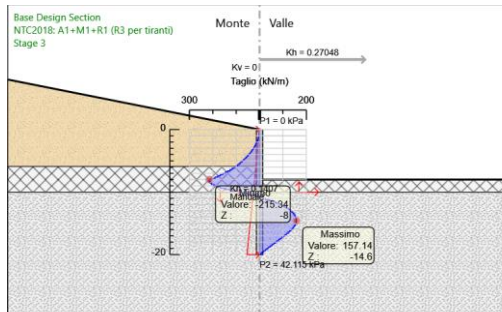
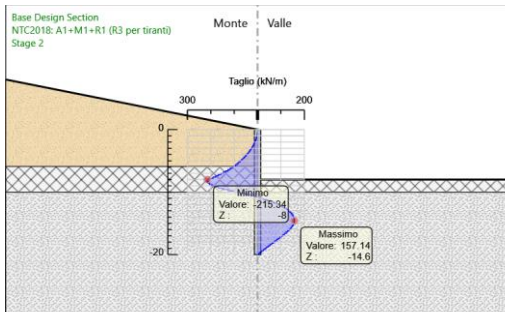
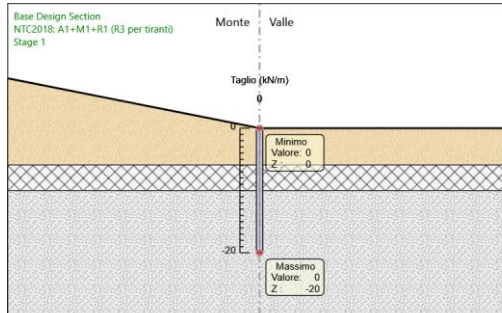
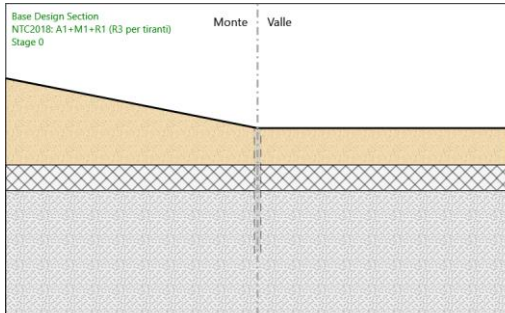
6.2.4. Tabella Risultati Paratia NTC2018: A1+M1+R1 (R3 per tiranti) - Left Wall - Stage: Stage 3

Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	0	0	0
Stage 3	-0.2	0	0
Stage 3	-0.2	0	0
Stage 3	-0.4	-0.05	-0.23
Stage 3	-0.6	-0.18	-0.69
Stage 3	-0.8	-0.46	-1.38
Stage 3	-1	-0.92	-2.3
Stage 3	-1.2	-1.61	-3.45
Stage 3	-1.4	-2.58	-4.83
Stage 3	-1.6	-3.87	-6.45
Stage 3	-1.8	-5.52	-8.29
Stage 3	-2	-7.6	-10.36
Stage 3	-2.2	-10.13	-12.66
Stage 3	-2.4	-13.17	-15.19
Stage 3	-2.6	-16.76	-17.96
Stage 3	-2.8	-20.95	-20.95
Stage 3	-3	-25.78	-24.17
Stage 3	-3.2	-31.31	-27.62
Stage 3	-3.4	-37.57	-31.31
Stage 3	-3.6	-44.61	-35.22
Stage 3	-3.8	-52.49	-39.36
Stage 3	-4	-61.23	-43.74
Stage 3	-4.2	-70.9	-48.34
Stage 3	-4.4	-81.54	-53.18
Stage 3	-4.6	-93.19	-58.24
Stage 3	-4.8	-105.89	-63.54
Stage 3	-5	-119.71	-69.06
Stage 3	-5.2	-134.67	-74.82
Stage 3	-5.4	-150.83	-80.8
Stage 3	-5.6	-168.23	-87.02
Stage 3	-5.8	-186.93	-93.46
Stage 3	-6	-206.95	-100.14
Stage 3	-6.2	-228.67	-108.56
Stage 3	-6.4	-252.15	-117.4
Stage 3	-6.6	-277.47	-126.64
Stage 3	-6.8	-304.73	-136.29
Stage 3	-7	-334	-146.36
Stage 3	-7.2	-365.37	-156.83
Stage 3	-7.4	-398.91	-167.71
Stage 3	-7.6	-434.71	-179.01
Stage 3	-7.8	-472.86	-190.71
Stage 3	-8	-513.42	-202.82
Stage 3	-8.2	-556.49	-215.34
Stage 3	-8.4	-599.52	-215.14
Stage 3	-8.6	-641.88	-211.81
Stage 3	-8.8	-682.95	-205.35
Stage 3	-9	-722.1	-195.75
Stage 3	-9.2	-758.7	-183.03
Stage 3	-9.4	-792.14	-167.17
Stage 3	-9.6	-821.78	-148.19
Stage 3	-9.8	-846.99	-126.07
Stage 3	-10	-867.16	-100.83
Stage 3	-10.2	-882.19	-75.14
Stage 3	-10.4	-892.62	-52.17
Stage 3	-10.6	-898.76	-30.71
Stage 3	-10.8	-900.9	-10.71

Design Assumption: NTC2018: A1+M1+R1 (R3 per tiranti) Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-11	-899.32	7.91
Stage 3	-11.2	-894.28	25.22
Stage 3	-11.4	-886.02	41.28
Stage 3	-11.6	-874.79	56.16
Stage 3	-11.8	-860.81	69.92
Stage 3	-12	-844.28	82.64
Stage 3	-12.2	-825.4	94.38
Stage 3	-12.4	-804.36	105.2
Stage 3	-12.6	-781.34	115.1
Stage 3	-12.8	-756.6	123.7
Stage 3	-13	-730.38	131.09
Stage 3	-13.2	-702.91	137.36
Stage 3	-13.4	-674.39	142.6
Stage 3	-13.6	-645.01	146.89
Stage 3	-13.8	-614.95	150.33
Stage 3	-14	-584.35	152.98
Stage 3	-14.2	-553.37	154.92
Stage 3	-14.4	-522.12	156.22
Stage 3	-14.6	-490.73	156.95
Stage 3	-14.8	-459.31	157.14
Stage 3	-15	-428.06	156.22
Stage 3	-15.2	-397.2	154.33
Stage 3	-15.4	-366.88	151.57
Stage 3	-15.6	-337.27	148.04
Stage 3	-15.8	-308.5	143.86
Stage 3	-16	-280.68	139.09
Stage 3	-16.2	-253.92	133.84
Stage 3	-16.4	-228.28	128.16
Stage 3	-16.6	-203.86	122.13
Stage 3	-16.8	-180.69	115.82
Stage 3	-17	-158.84	109.26
Stage 3	-17.2	-138.34	102.51
Stage 3	-17.4	-119.22	95.62
Stage 3	-17.6	-101.49	88.61
Stage 3	-17.8	-85.19	81.53
Stage 3	-18	-70.31	74.39
Stage 3	-18.2	-56.86	67.22
Stage 3	-18.4	-44.85	60.05
Stage 3	-18.6	-34.28	52.87
Stage 3	-18.8	-25.14	45.71
Stage 3	-19	-17.42	38.58
Stage 3	-19.2	-11.13	31.47
Stage 3	-19.4	-6.25	24.41
Stage 3	-19.6	-2.77	17.38
Stage 3	-19.8	-0.69	10.4
Stage 3	-20	0	3.45

6.2.5. Tabella Grafici dei Risultati





6.3. Risultati NTC2018: A2+M2+R1

6.3.1. Tabella Risultati Paratia NTC2018: A2+M2+R1 - Left Wall - Stage: Stage 0

Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	0	0	0
Stage 0	-0.2	0	0
Stage 0	-0.4	0	0
Stage 0	-0.6	0	0
Stage 0	-0.8	0	0
Stage 0	-1	0	0
Stage 0	-1.2	0	0
Stage 0	-1.4	0	0
Stage 0	-1.6	0	0
Stage 0	-1.8	0	0
Stage 0	-2	0	0
Stage 0	-2.2	0	0
Stage 0	-2.4	0	0
Stage 0	-2.6	0	0
Stage 0	-2.8	0	0
Stage 0	-3	0	0
Stage 0	-3.2	0	0
Stage 0	-3.4	0	0
Stage 0	-3.6	0	0
Stage 0	-3.8	0	0
Stage 0	-4	0	0
Stage 0	-4.2	0	0
Stage 0	-4.4	0	0
Stage 0	-4.6	0	0
Stage 0	-4.8	0	0
Stage 0	-5	0	0
Stage 0	-5.2	0	0
Stage 0	-5.4	0	0
Stage 0	-5.6	0	0
Stage 0	-5.8	0	0
Stage 0	-6	0	0
Stage 0	-6.2	0	0
Stage 0	-6.4	0	0
Stage 0	-6.6	0	0
Stage 0	-6.8	0	0
Stage 0	-7	0	0
Stage 0	-7.2	0	0
Stage 0	-7.4	0	0
Stage 0	-7.6	0	0
Stage 0	-7.8	0	0
Stage 0	-8	0	0
Stage 0	-8.2	0	0
Stage 0	-8.4	0	0
Stage 0	-8.6	0	0
Stage 0	-8.8	0	0
Stage 0	-9	0	0
Stage 0	-9.2	0	0
Stage 0	-9.4	0	0
Stage 0	-9.6	0	0
Stage 0	-9.8	0	0
Stage 0	-10	0	0
Stage 0	-10.2	0	0
Stage 0	-10.4	0	0

Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-10.6	0	0
Stage 0	-10.8	0	0
Stage 0	-11	0	0
Stage 0	-11.2	0	0
Stage 0	-11.4	0	0
Stage 0	-11.6	0	0
Stage 0	-11.8	0	0
Stage 0	-12	0	0
Stage 0	-12.2	0	0
Stage 0	-12.4	0	0
Stage 0	-12.6	0	0
Stage 0	-12.8	0	0
Stage 0	-13	0	0
Stage 0	-13.2	0	0
Stage 0	-13.4	0	0
Stage 0	-13.6	0	0
Stage 0	-13.8	0	0
Stage 0	-14	0	0
Stage 0	-14.2	0	0
Stage 0	-14.4	0	0
Stage 0	-14.6	0	0
Stage 0	-14.8	0	0
Stage 0	-15	0	0
Stage 0	-15.2	0	0
Stage 0	-15.4	0	0
Stage 0	-15.6	0	0
Stage 0	-15.8	0	0
Stage 0	-16	0	0
Stage 0	-16.2	0	0
Stage 0	-16.4	0	0
Stage 0	-16.6	0	0
Stage 0	-16.8	0	0
Stage 0	-17	0	0
Stage 0	-17.2	0	0
Stage 0	-17.4	0	0
Stage 0	-17.6	0	0
Stage 0	-17.8	0	0
Stage 0	-18	0	0
Stage 0	-18.2	0	0
Stage 0	-18.4	0	0
Stage 0	-18.6	0	0
Stage 0	-18.8	0	0
Stage 0	-19	0	0
Stage 0	-19.2	0	0
Stage 0	-19.4	0	0
Stage 0	-19.6	0	0
Stage 0	-19.8	0	0
Stage 0	-20	0	0

6.3.2. Tabella Risultati Paratia NTC2018: A2+M2+R1 - Left Wall - Stage: Stage 1

Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.6	0	0
Stage 1	-0.8	0	0
Stage 1	-1	0	0
Stage 1	-1.2	0	0
Stage 1	-1.4	0	0
Stage 1	-1.6	0	0
Stage 1	-1.8	0	0
Stage 1	-2	0	0
Stage 1	-2.2	0	0
Stage 1	-2.4	0	0
Stage 1	-2.6	0	0
Stage 1	-2.8	0	0
Stage 1	-3	0	0
Stage 1	-3.2	0	0
Stage 1	-3.4	0	0
Stage 1	-3.6	0	0
Stage 1	-3.8	0	0
Stage 1	-4	0	0
Stage 1	-4.2	0	0
Stage 1	-4.4	0	0
Stage 1	-4.6	0	0
Stage 1	-4.8	0	0
Stage 1	-5	0	0
Stage 1	-5.2	0	0
Stage 1	-5.4	0	0
Stage 1	-5.6	0	0
Stage 1	-5.8	0	0
Stage 1	-6	0	0
Stage 1	-6.2	0	0
Stage 1	-6.4	0	0
Stage 1	-6.6	0	0
Stage 1	-6.8	0	0
Stage 1	-7	0	0
Stage 1	-7.2	0	0
Stage 1	-7.4	0	0
Stage 1	-7.6	0	0
Stage 1	-7.8	0	0
Stage 1	-8	0	0
Stage 1	-8.2	0	0
Stage 1	-8.4	0	0
Stage 1	-8.6	0	0
Stage 1	-8.8	0	0
Stage 1	-9	0	0
Stage 1	-9.2	0	0
Stage 1	-9.4	0	0
Stage 1	-9.6	0	0
Stage 1	-9.8	0	0
Stage 1	-10	0	0
Stage 1	-10.2	0	0
Stage 1	-10.4	0	0
Stage 1	-10.6	0	0
Stage 1	-10.8	0	0
Stage 1	-11	0	0

Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-11.2	0	0
Stage 1	-11.4	0	0
Stage 1	-11.6	0	0
Stage 1	-11.8	0	0
Stage 1	-12	0	0
Stage 1	-12.2	0	0
Stage 1	-12.4	0	0
Stage 1	-12.6	0	0
Stage 1	-12.8	0	0
Stage 1	-13	0	0
Stage 1	-13.2	0	0
Stage 1	-13.4	0	0
Stage 1	-13.6	0	0
Stage 1	-13.8	0	0
Stage 1	-14	0	0
Stage 1	-14.2	0	0
Stage 1	-14.4	0	0
Stage 1	-14.6	0	0
Stage 1	-14.8	0	0
Stage 1	-15	0	0
Stage 1	-15.2	0	0
Stage 1	-15.4	0	0
Stage 1	-15.6	0	0
Stage 1	-15.8	0	0
Stage 1	-16	0	0
Stage 1	-16.2	0	0
Stage 1	-16.4	0	0
Stage 1	-16.6	0	0
Stage 1	-16.8	0	0
Stage 1	-17	0	0
Stage 1	-17.2	0	0
Stage 1	-17.4	0	0
Stage 1	-17.6	0	0
Stage 1	-17.8	0	0
Stage 1	-18	0	0
Stage 1	-18.2	0	0
Stage 1	-18.4	0	0
Stage 1	-18.6	0	0
Stage 1	-18.8	0	0
Stage 1	-19	0	0
Stage 1	-19.2	0	0
Stage 1	-19.4	0	0
Stage 1	-19.6	0	0
Stage 1	-19.8	0	0
Stage 1	-20	0	0

6.3.3. Tabella Risultati Paratia NTC2018: A2+M2+R1 - Left Wall - Stage: Stage 2

Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	0	0	0
Stage 2	-0.2	0	0
Stage 2	-0.2	0	0
Stage 2	-0.4	-0.05	-0.24
Stage 2	-0.4	-0.05	-0.24
Stage 2	-0.6	-0.19	-0.71
Stage 2	-0.8	-0.47	-1.41
Stage 2	-1	-0.94	-2.36
Stage 2	-1.2	-1.65	-3.53
Stage 2	-1.4	-2.64	-4.95
Stage 2	-1.6	-3.96	-6.6
Stage 2	-1.8	-5.65	-8.48
Stage 2	-2	-7.77	-10.6
Stage 2	-2.2	-10.37	-12.96
Stage 2	-2.4	-13.48	-15.55
Stage 2	-2.6	-17.15	-18.38
Stage 2	-2.8	-21.44	-21.44
Stage 2	-3	-26.39	-24.74
Stage 2	-3.2	-32.04	-28.27
Stage 2	-3.4	-38.45	-32.04
Stage 2	-3.6	-45.66	-36.05
Stage 2	-3.8	-53.72	-40.29
Stage 2	-4	-62.67	-44.76
Stage 2	-4.2	-72.56	-49.48
Stage 2	-4.4	-83.45	-54.42
Stage 2	-4.6	-95.37	-59.61
Stage 2	-4.8	-108.38	-65.03
Stage 2	-5	-122.51	-70.68
Stage 2	-5.2	-137.83	-76.57
Stage 2	-5.4	-154.36	-82.7
Stage 2	-5.6	-172.18	-89.06
Stage 2	-5.8	-191.31	-95.65
Stage 2	-6	-211.8	-102.49
Stage 2	-6.2	-234.11	-111.51
Stage 2	-6.4	-258.29	-120.93
Stage 2	-6.6	-284.44	-130.74
Stage 2	-6.8	-312.63	-140.95
Stage 2	-7	-342.94	-151.56
Stage 2	-7.2	-375.45	-162.56
Stage 2	-7.4	-410.24	-173.95
Stage 2	-7.6	-447.39	-185.74
Stage 2	-7.8	-486.98	-197.93
Stage 2	-8	-529.08	-210.51
Stage 2	-8.2	-573.78	-223.49
Stage 2	-8.4	-619.68	-229.53
Stage 2	-8.6	-666.45	-233.85
Stage 2	-8.8	-713.74	-236.44
Stage 2	-9	-761.21	-237.32
Stage 2	-9.2	-808.5	-236.46
Stage 2	-9.4	-855.28	-233.89
Stage 2	-9.6	-901.19	-229.59
Stage 2	-9.8	-945.91	-223.56
Stage 2	-10	-989.07	-215.82
Stage 2	-10.2	-1030.34	-206.34
Stage 2	-10.4	-1068.65	-191.55
Stage 2	-10.6	-1103.69	-175.21

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	192 di 731

Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-10.8	-1135.15	-157.32
Stage 2	-11	-1162.73	-137.88
Stage 2	-11.2	-1186.1	-116.88
Stage 2	-11.4	-1204.97	-94.34
Stage 2	-11.6	-1219.02	-70.25
Stage 2	-11.8	-1227.94	-44.6
Stage 2	-12	-1231.42	-17.4
Stage 2	-12.2	-1229.18	11.22
Stage 2	-12.4	-1221.67	37.56
Stage 2	-12.6	-1209.32	61.71
Stage 2	-12.8	-1192.57	83.78
Stage 2	-13	-1171.8	103.86
Stage 2	-13.2	-1147.38	122.05
Stage 2	-13.4	-1119.69	138.45
Stage 2	-13.6	-1089.06	153.15
Stage 2	-13.8	-1055.81	166.25
Stage 2	-14	-1020.25	177.82
Stage 2	-14.2	-982.66	187.97
Stage 2	-14.4	-943.3	196.77
Stage 2	-14.6	-902.44	204.3
Stage 2	-14.8	-860.31	210.65
Stage 2	-15	-817.14	215.88
Stage 2	-15.2	-773.12	220.07
Stage 2	-15.4	-728.47	223.28
Stage 2	-15.6	-683.35	225.58
Stage 2	-15.8	-637.95	227
Stage 2	-16	-592.52	227.18
Stage 2	-16.2	-547.28	226.19
Stage 2	-16.4	-502.45	224.12
Stage 2	-16.6	-458.25	221.02
Stage 2	-16.8	-414.85	216.98
Stage 2	-17	-372.44	212.05
Stage 2	-17.2	-331.18	206.29
Stage 2	-17.4	-291.29	199.48
Stage 2	-17.6	-253.01	191.4
Stage 2	-17.8	-216.58	182.11
Stage 2	-18	-182.25	171.66
Stage 2	-18.2	-150.23	160.1
Stage 2	-18.4	-120.74	147.45
Stage 2	-18.6	-93.99	133.76
Stage 2	-18.8	-70.18	119.04
Stage 2	-19	-49.52	103.32
Stage 2	-19.2	-32.2	86.61
Stage 2	-19.4	-18.4	68.97
Stage 2	-19.6	-8.32	50.42
Stage 2	-19.8	-2.12	30.97
Stage 2	-20	0	10.62

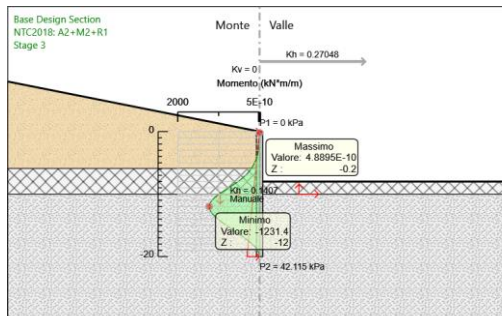
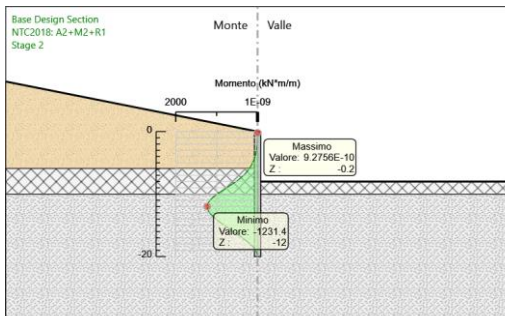
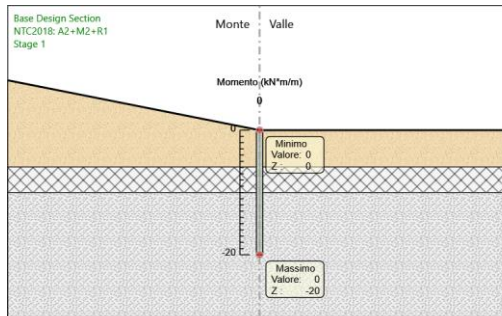
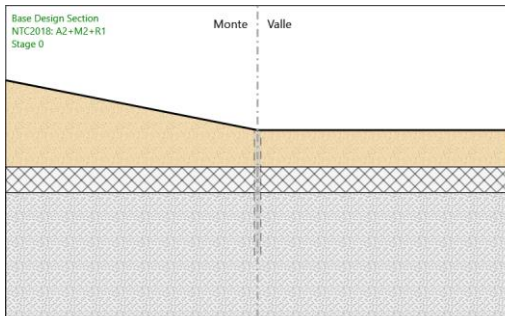
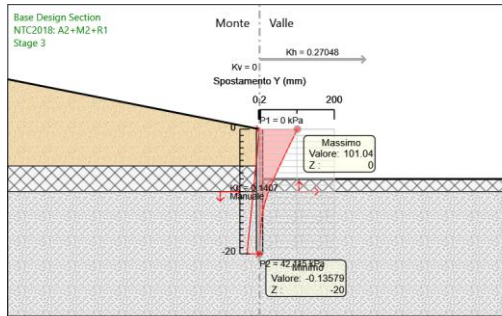
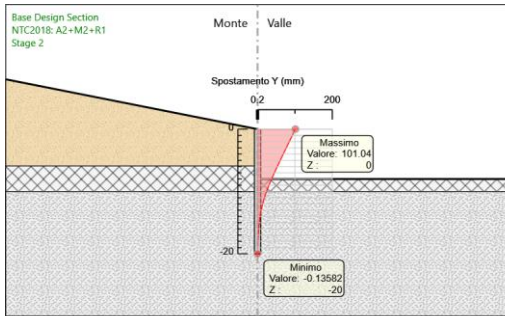
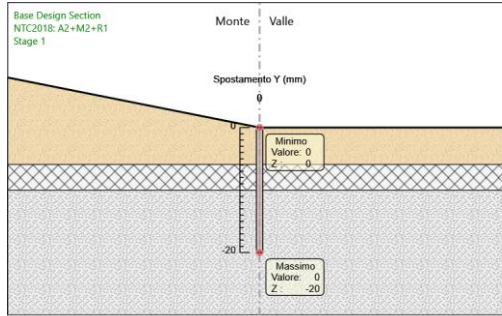
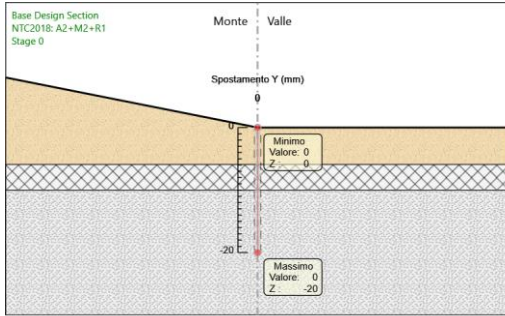
6.3.4. Tabella Risultati Paratia NTC2018: A2+M2+R1 - Left Wall - Stage: Stage 3

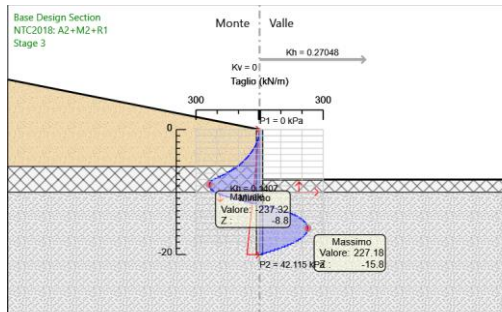
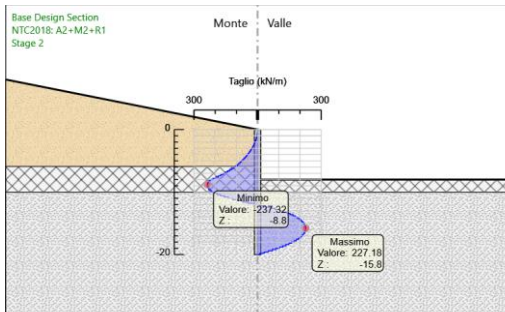
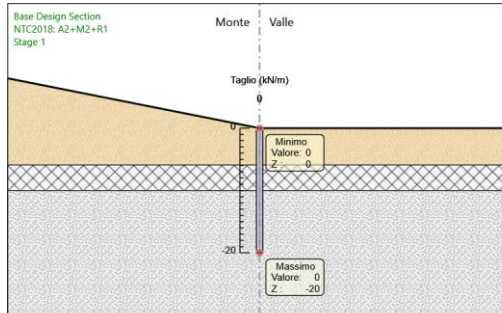
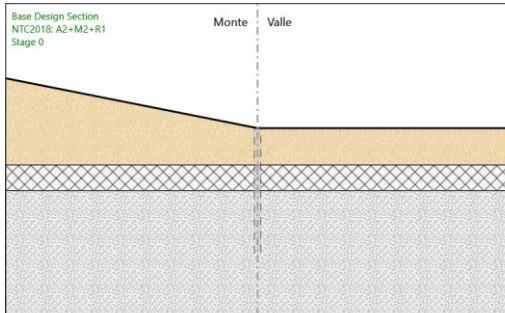
Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	0	0	0
Stage 3	-0.2	0	0
Stage 3	-0.2	0	0
Stage 3	-0.4	-0.05	-0.24
Stage 3	-0.4	-0.05	-0.24
Stage 3	-0.6	-0.19	-0.71
Stage 3	-0.8	-0.47	-1.41
Stage 3	-1	-0.94	-2.36
Stage 3	-1.2	-1.65	-3.53
Stage 3	-1.4	-2.64	-4.95
Stage 3	-1.6	-3.96	-6.6
Stage 3	-1.8	-5.65	-8.48
Stage 3	-2	-7.77	-10.6
Stage 3	-2.2	-10.37	-12.96
Stage 3	-2.4	-13.48	-15.55
Stage 3	-2.6	-17.15	-18.38
Stage 3	-2.8	-21.44	-21.44
Stage 3	-3	-26.39	-24.74
Stage 3	-3.2	-32.04	-28.27
Stage 3	-3.4	-38.45	-32.04
Stage 3	-3.6	-45.66	-36.05
Stage 3	-3.8	-53.72	-40.29
Stage 3	-4	-62.67	-44.76
Stage 3	-4.2	-72.57	-49.48
Stage 3	-4.4	-83.45	-54.42
Stage 3	-4.6	-95.37	-59.61
Stage 3	-4.8	-108.38	-65.03
Stage 3	-5	-122.51	-70.68
Stage 3	-5.2	-137.83	-76.57
Stage 3	-5.4	-154.37	-82.7
Stage 3	-5.6	-172.18	-89.06
Stage 3	-5.8	-191.31	-95.65
Stage 3	-6	-211.81	-102.49
Stage 3	-6.2	-234.11	-111.51
Stage 3	-6.4	-258.29	-120.93
Stage 3	-6.6	-284.44	-130.74
Stage 3	-6.8	-312.63	-140.95
Stage 3	-7	-342.94	-151.56
Stage 3	-7.2	-375.46	-162.56
Stage 3	-7.4	-410.25	-173.95
Stage 3	-7.6	-447.4	-185.74
Stage 3	-7.8	-486.98	-197.93
Stage 3	-8	-529.08	-210.51
Stage 3	-8.2	-573.78	-223.49
Stage 3	-8.4	-619.69	-229.53
Stage 3	-8.6	-666.46	-233.85
Stage 3	-8.8	-713.74	-236.44
Stage 3	-9	-761.21	-237.32
Stage 3	-9.2	-808.5	-236.46
Stage 3	-9.4	-855.28	-233.89
Stage 3	-9.6	-901.2	-229.59
Stage 3	-9.8	-945.91	-223.56
Stage 3	-10	-989.07	-215.81
Stage 3	-10.2	-1030.34	-206.34
Stage 3	-10.4	-1068.65	-191.55
Stage 3	-10.6	-1103.69	-175.21

Design Assumption: NTC2018: A2+M2+R1 Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-10.8	-1135.15	-157.32
Stage 3	-11	-1162.73	-137.88
Stage 3	-11.2	-1186.11	-116.88
Stage 3	-11.4	-1204.97	-94.34
Stage 3	-11.6	-1219.02	-70.24
Stage 3	-11.8	-1227.94	-44.6
Stage 3	-12	-1231.42	-17.4
Stage 3	-12.2	-1229.18	11.22
Stage 3	-12.4	-1221.67	37.56
Stage 3	-12.6	-1209.32	61.72
Stage 3	-12.8	-1192.57	83.78
Stage 3	-13	-1171.79	103.86
Stage 3	-13.2	-1147.38	122.05
Stage 3	-13.4	-1119.69	138.45
Stage 3	-13.6	-1089.06	153.15
Stage 3	-13.8	-1055.81	166.25
Stage 3	-14	-1020.25	177.82
Stage 3	-14.2	-982.65	187.97
Stage 3	-14.4	-943.3	196.77
Stage 3	-14.6	-902.44	204.3
Stage 3	-14.8	-860.31	210.65
Stage 3	-15	-817.13	215.88
Stage 3	-15.2	-773.12	220.07
Stage 3	-15.4	-728.46	223.28
Stage 3	-15.6	-683.34	225.58
Stage 3	-15.8	-637.94	227.01
Stage 3	-16	-592.51	227.18
Stage 3	-16.2	-547.27	226.19
Stage 3	-16.4	-502.44	224.12
Stage 3	-16.6	-458.24	221.02
Stage 3	-16.8	-414.84	216.98
Stage 3	-17	-372.43	212.05
Stage 3	-17.2	-331.18	206.28
Stage 3	-17.4	-291.28	199.47
Stage 3	-17.6	-253	191.4
Stage 3	-17.8	-216.58	182.11
Stage 3	-18	-182.25	171.66
Stage 3	-18.2	-150.23	160.09
Stage 3	-18.4	-120.74	147.45
Stage 3	-18.6	-93.99	133.76
Stage 3	-18.8	-70.18	119.04
Stage 3	-19	-49.52	103.32
Stage 3	-19.2	-32.2	86.61
Stage 3	-19.4	-18.4	68.97
Stage 3	-19.6	-8.32	50.42
Stage 3	-19.8	-2.12	30.97
Stage 3	-20	0	10.62

6.3.5. Tabella Grafici dei Risultati





6.4. Risultati NTC2018: SISMICA STR

6.4.1. Tabella Risultati Paratia NTC2018: SISMICA STR - Left Wall - Stage: Stage 0

Design Assumption: NTC2018: SISMICA STR Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	0	0	0
Stage 0	-0.2	0	0
Stage 0	-0.4	0	0
Stage 0	-0.6	0	0
Stage 0	-0.8	0	0
Stage 0	-1	0	0
Stage 0	-1.2	0	0
Stage 0	-1.4	0	0
Stage 0	-1.6	0	0
Stage 0	-1.8	0	0
Stage 0	-2	0	0
Stage 0	-2.2	0	0
Stage 0	-2.4	0	0
Stage 0	-2.6	0	0
Stage 0	-2.8	0	0
Stage 0	-3	0	0
Stage 0	-3.2	0	0
Stage 0	-3.4	0	0
Stage 0	-3.6	0	0
Stage 0	-3.8	0	0
Stage 0	-4	0	0
Stage 0	-4.2	0	0
Stage 0	-4.4	0	0
Stage 0	-4.6	0	0
Stage 0	-4.8	0	0
Stage 0	-5	0	0
Stage 0	-5.2	0	0
Stage 0	-5.4	0	0
Stage 0	-5.6	0	0
Stage 0	-5.8	0	0
Stage 0	-6	0	0
Stage 0	-6.2	0	0
Stage 0	-6.4	0	0
Stage 0	-6.6	0	0
Stage 0	-6.8	0	0
Stage 0	-7	0	0
Stage 0	-7.2	0	0
Stage 0	-7.4	0	0
Stage 0	-7.6	0	0
Stage 0	-7.8	0	0
Stage 0	-8	0	0
Stage 0	-8.2	0	0
Stage 0	-8.4	0	0
Stage 0	-8.6	0	0
Stage 0	-8.8	0	0
Stage 0	-9	0	0
Stage 0	-9.2	0	0
Stage 0	-9.4	0	0
Stage 0	-9.6	0	0
Stage 0	-9.8	0	0
Stage 0	-10	0	0
Stage 0	-10.2	0	0
Stage 0	-10.4	0	0

Design Assumption: NTC2018: SISMICA STR Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-10.6	0	0
Stage 0	-10.8	0	0
Stage 0	-11	0	0
Stage 0	-11.2	0	0
Stage 0	-11.4	0	0
Stage 0	-11.6	0	0
Stage 0	-11.8	0	0
Stage 0	-12	0	0
Stage 0	-12.2	0	0
Stage 0	-12.4	0	0
Stage 0	-12.6	0	0
Stage 0	-12.8	0	0
Stage 0	-13	0	0
Stage 0	-13.2	0	0
Stage 0	-13.4	0	0
Stage 0	-13.6	0	0
Stage 0	-13.8	0	0
Stage 0	-14	0	0
Stage 0	-14.2	0	0
Stage 0	-14.4	0	0
Stage 0	-14.6	0	0
Stage 0	-14.8	0	0
Stage 0	-15	0	0
Stage 0	-15.2	0	0
Stage 0	-15.4	0	0
Stage 0	-15.6	0	0
Stage 0	-15.8	0	0
Stage 0	-16	0	0
Stage 0	-16.2	0	0
Stage 0	-16.4	0	0
Stage 0	-16.6	0	0
Stage 0	-16.8	0	0
Stage 0	-17	0	0
Stage 0	-17.2	0	0
Stage 0	-17.4	0	0
Stage 0	-17.6	0	0
Stage 0	-17.8	0	0
Stage 0	-18	0	0
Stage 0	-18.2	0	0
Stage 0	-18.4	0	0
Stage 0	-18.6	0	0
Stage 0	-18.8	0	0
Stage 0	-19	0	0
Stage 0	-19.2	0	0
Stage 0	-19.4	0	0
Stage 0	-19.6	0	0
Stage 0	-19.8	0	0
Stage 0	-20	0	0

6.4.2. Tabella Risultati Paratia NTC2018: SISMICA STR - Left Wall - Stage: Stage 1

Design Assumption: NTC2018: SISMICA STR Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.6	0	0
Stage 1	-0.8	0	0
Stage 1	-1	0	0
Stage 1	-1.2	0	0
Stage 1	-1.4	0	0
Stage 1	-1.6	0	0
Stage 1	-1.8	0	0
Stage 1	-2	0	0
Stage 1	-2.2	0	0
Stage 1	-2.4	0	0
Stage 1	-2.6	0	0
Stage 1	-2.8	0	0
Stage 1	-3	0	0
Stage 1	-3.2	0	0
Stage 1	-3.4	0	0
Stage 1	-3.6	0	0
Stage 1	-3.8	0	0
Stage 1	-4	0	0
Stage 1	-4.2	0	0
Stage 1	-4.4	0	0
Stage 1	-4.6	0	0
Stage 1	-4.8	0	0
Stage 1	-5	0	0
Stage 1	-5.2	0	0
Stage 1	-5.4	0	0
Stage 1	-5.6	0	0
Stage 1	-5.8	0	0
Stage 1	-6	0	0
Stage 1	-6.2	0	0
Stage 1	-6.4	0	0
Stage 1	-6.6	0	0
Stage 1	-6.8	0	0
Stage 1	-7	0	0
Stage 1	-7.2	0	0
Stage 1	-7.4	0	0
Stage 1	-7.6	0	0
Stage 1	-7.8	0	0
Stage 1	-8	0	0
Stage 1	-8.2	0	0
Stage 1	-8.4	0	0
Stage 1	-8.6	0	0
Stage 1	-8.8	0	0
Stage 1	-9	0	0
Stage 1	-9.2	0	0
Stage 1	-9.4	0	0
Stage 1	-9.6	0	0
Stage 1	-9.8	0	0
Stage 1	-10	0	0
Stage 1	-10.2	0	0
Stage 1	-10.4	0	0
Stage 1	-10.6	0	0
Stage 1	-10.8	0	0
Stage 1	-11	0	0

Design Assumption: NTC2018: SISMICA STR Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-11.2	0	0
Stage 1	-11.4	0	0
Stage 1	-11.6	0	0
Stage 1	-11.8	0	0
Stage 1	-12	0	0
Stage 1	-12.2	0	0
Stage 1	-12.4	0	0
Stage 1	-12.6	0	0
Stage 1	-12.8	0	0
Stage 1	-13	0	0
Stage 1	-13.2	0	0
Stage 1	-13.4	0	0
Stage 1	-13.6	0	0
Stage 1	-13.8	0	0
Stage 1	-14	0	0
Stage 1	-14.2	0	0
Stage 1	-14.4	0	0
Stage 1	-14.6	0	0
Stage 1	-14.8	0	0
Stage 1	-15	0	0
Stage 1	-15.2	0	0
Stage 1	-15.4	0	0
Stage 1	-15.6	0	0
Stage 1	-15.8	0	0
Stage 1	-16	0	0
Stage 1	-16.2	0	0
Stage 1	-16.4	0	0
Stage 1	-16.6	0	0
Stage 1	-16.8	0	0
Stage 1	-17	0	0
Stage 1	-17.2	0	0
Stage 1	-17.4	0	0
Stage 1	-17.6	0	0
Stage 1	-17.8	0	0
Stage 1	-18	0	0
Stage 1	-18.2	0	0
Stage 1	-18.4	0	0
Stage 1	-18.6	0	0
Stage 1	-18.8	0	0
Stage 1	-19	0	0
Stage 1	-19.2	0	0
Stage 1	-19.4	0	0
Stage 1	-19.6	0	0
Stage 1	-19.8	0	0
Stage 1	-20	0	0

6.4.3. Tabella Risultati Paratia NTC2018: SISMICA STR - Left Wall - Stage: Stage 2

Design Assumption: NTC2018: SISMICA STR Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	0	0	0
Stage 2	-0.2	0	0
Stage 2	-0.2	0	0
Stage 2	-0.4	-0.04	-0.18
Stage 2	-0.6	-0.14	-0.53
Stage 2	-0.8	-0.35	-1.06
Stage 2	-1	-0.71	-1.77
Stage 2	-1.2	-1.24	-2.66
Stage 2	-1.4	-1.98	-3.72
Stage 2	-1.6	-2.97	-4.96
Stage 2	-1.8	-4.25	-6.37
Stage 2	-2	-5.84	-7.97
Stage 2	-2.2	-7.79	-9.74
Stage 2	-2.4	-10.13	-11.69
Stage 2	-2.6	-12.89	-13.81
Stage 2	-2.8	-16.11	-16.11
Stage 2	-3	-19.83	-18.59
Stage 2	-3.2	-24.08	-21.25
Stage 2	-3.4	-28.9	-24.08
Stage 2	-3.6	-34.32	-27.09
Stage 2	-3.8	-40.37	-30.28
Stage 2	-4	-47.1	-33.65
Stage 2	-4.2	-54.54	-37.19
Stage 2	-4.4	-62.72	-40.91
Stage 2	-4.6	-71.68	-44.8
Stage 2	-4.8	-81.46	-48.87
Stage 2	-5	-92.08	-53.12
Stage 2	-5.2	-103.59	-57.55
Stage 2	-5.4	-116.02	-62.16
Stage 2	-5.6	-129.41	-66.94
Stage 2	-5.8	-143.79	-71.89
Stage 2	-6	-159.19	-77.03
Stage 2	-6.2	-175.9	-83.51
Stage 2	-6.4	-193.96	-90.31
Stage 2	-6.6	-213.44	-97.42
Stage 2	-6.8	-234.41	-104.84
Stage 2	-7	-256.93	-112.58
Stage 2	-7.2	-281.05	-120.64
Stage 2	-7.4	-306.86	-129.01
Stage 2	-7.6	-334.4	-137.7
Stage 2	-7.8	-363.74	-146.7
Stage 2	-8	-394.94	-156.02
Stage 2	-8.2	-428.07	-165.65
Stage 2	-8.4	-461.17	-165.49
Stage 2	-8.6	-493.75	-162.93
Stage 2	-8.8	-525.35	-157.96
Stage 2	-9	-555.46	-150.58
Stage 2	-9.2	-583.62	-140.79
Stage 2	-9.4	-609.34	-128.6
Stage 2	-9.6	-632.14	-113.99
Stage 2	-9.8	-651.53	-96.98
Stage 2	-10	-667.04	-77.56
Stage 2	-10.2	-678.6	-57.8
Stage 2	-10.4	-686.63	-40.13
Stage 2	-10.6	-691.36	-23.62
Stage 2	-10.8	-693	-8.24

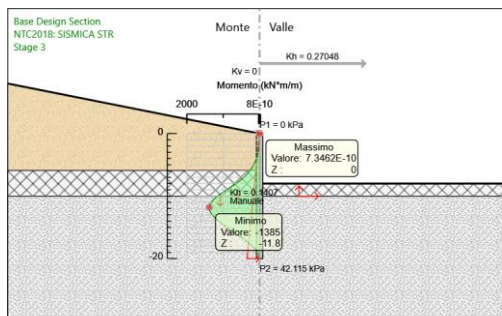
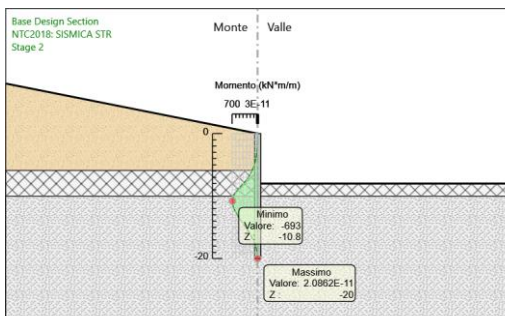
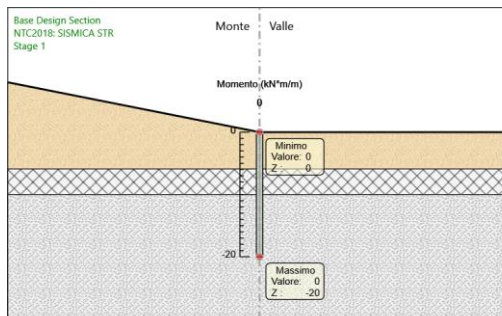
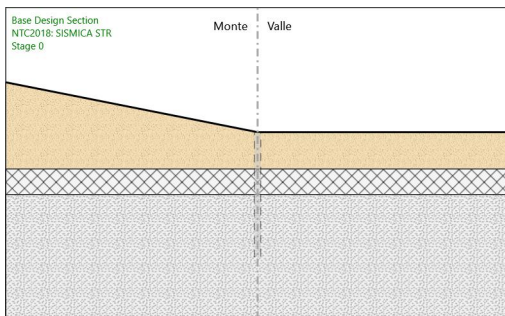
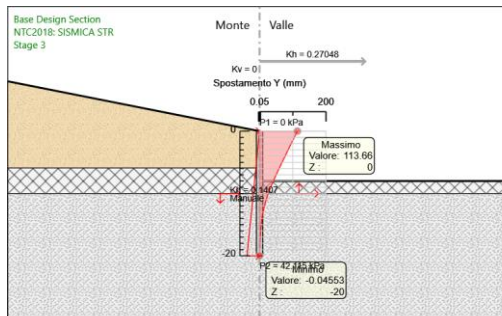
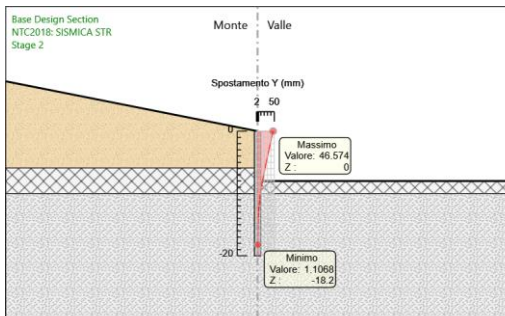
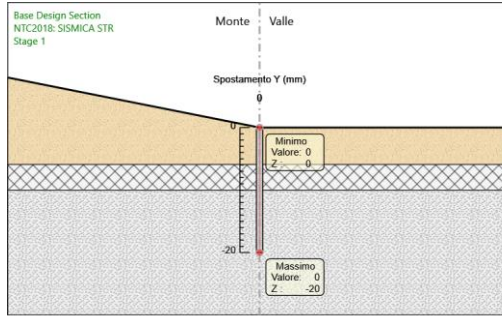
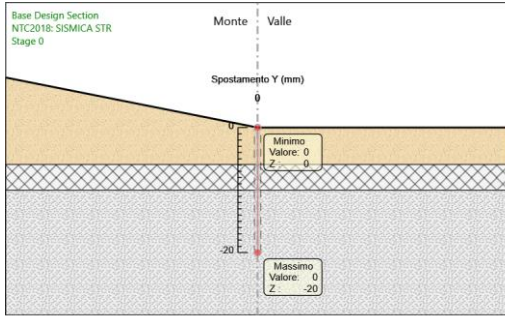
Design Assumption: NTC2018: SISMICA STR Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-11	-691.79	6.09
Stage 2	-11.2	-687.91	19.4
Stage 2	-11.4	-681.56	31.75
Stage 2	-11.6	-672.92	43.2
Stage 2	-11.8	-662.16	53.79
Stage 2	-12	-649.44	63.57
Stage 2	-12.2	-634.92	72.6
Stage 2	-12.4	-618.74	80.93
Stage 2	-12.6	-601.03	88.54
Stage 2	-12.8	-582	95.15
Stage 2	-13	-561.83	100.84
Stage 2	-13.2	-540.7	105.66
Stage 2	-13.4	-518.76	109.69
Stage 2	-13.6	-496.16	113
Stage 2	-13.8	-473.04	115.64
Stage 2	-14	-449.5	117.68
Stage 2	-14.2	-425.67	119.17
Stage 2	-14.4	-401.63	120.17
Stage 2	-14.6	-377.49	120.73
Stage 2	-14.8	-353.31	120.87
Stage 2	-15	-329.28	120.17
Stage 2	-15.2	-305.53	118.71
Stage 2	-15.4	-282.22	116.59
Stage 2	-15.6	-259.44	113.88
Stage 2	-15.8	-237.31	110.66
Stage 2	-16	-215.91	107
Stage 2	-16.2	-195.32	102.95
Stage 2	-16.4	-175.6	98.59
Stage 2	-16.6	-156.81	93.95
Stage 2	-16.8	-138.99	89.09
Stage 2	-17	-122.19	84.05
Stage 2	-17.2	-106.41	78.86
Stage 2	-17.4	-91.7	73.55
Stage 2	-17.6	-78.07	68.16
Stage 2	-17.8	-65.53	62.71
Stage 2	-18	-54.08	57.22
Stage 2	-18.2	-43.74	51.71
Stage 2	-18.4	-34.5	46.19
Stage 2	-18.6	-26.37	40.67
Stage 2	-18.8	-19.34	35.16
Stage 2	-19	-13.4	29.67
Stage 2	-19.2	-8.56	24.21
Stage 2	-19.4	-4.8	18.78
Stage 2	-19.6	-2.13	13.37
Stage 2	-19.8	-0.53	8
Stage 2	-20	0	2.65

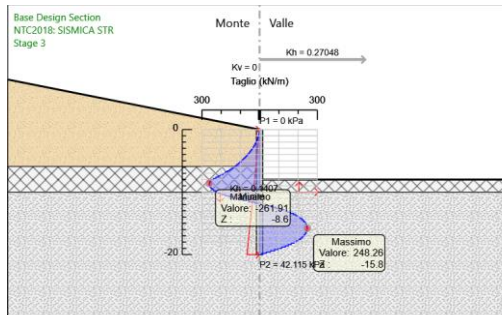
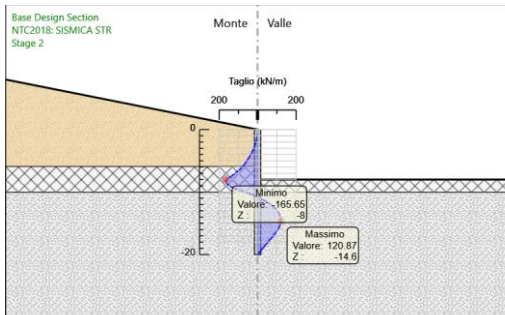
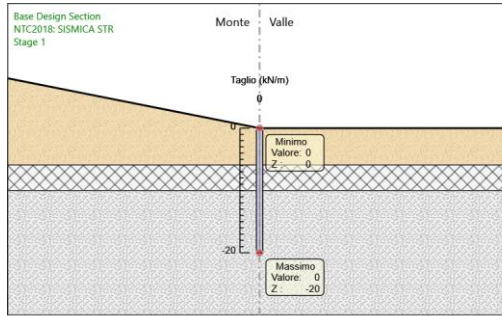
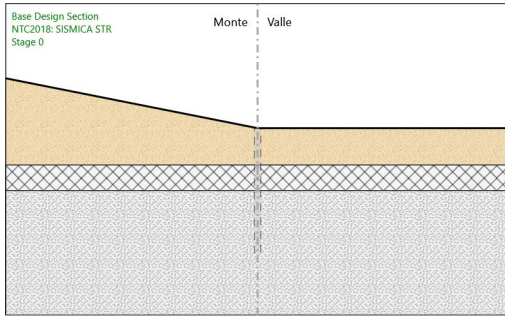
6.4.4. Tabella Risultati Paratia NTC2018: SISMICA STR - Left Wall - Stage: Stage 3

Design Assumption: NTC2018: SISMICA STR Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	0	0	-0.23
Stage 3	-0.2	-0.05	-0.23
Stage 3	-0.4	-0.24	-0.95
Stage 3	-0.6	-0.62	-1.93
Stage 3	-0.8	-1.26	-3.18
Stage 3	-1	-2.2	-4.68
Stage 3	-1.2	-3.49	-6.45
Stage 3	-1.4	-5.18	-8.48
Stage 3	-1.6	-7.34	-10.77
Stage 3	-1.8	-10	-13.32
Stage 3	-2	-13.23	-16.13
Stage 3	-2.2	-17.07	-19.21
Stage 3	-2.4	-21.58	-22.54
Stage 3	-2.6	-26.8	-26.14
Stage 3	-2.8	-32.8	-30
Stage 3	-3	-39.63	-34.11
Stage 3	-3.2	-47.33	-38.49
Stage 3	-3.4	-55.95	-43.14
Stage 3	-3.6	-65.56	-48.04
Stage 3	-3.8	-76.2	-53.2
Stage 3	-4	-87.93	-58.63
Stage 3	-4.2	-100.79	-64.32
Stage 3	-4.4	-114.84	-70.26
Stage 3	-4.6	-130.14	-76.47
Stage 3	-4.8	-146.73	-82.94
Stage 3	-5	-164.66	-89.68
Stage 3	-5.2	-184	-96.67
Stage 3	-5.4	-204.78	-103.92
Stage 3	-5.6	-227.07	-111.44
Stage 3	-5.8	-250.91	-119.22
Stage 3	-6	-276.36	-127.26
Stage 3	-6.2	-303.71	-136.72
Stage 3	-6.4	-333.03	-146.59
Stage 3	-6.6	-364.4	-156.86
Stage 3	-6.8	-397.9	-167.52
Stage 3	-7	-433.62	-178.59
Stage 3	-7.2	-471.63	-190.06
Stage 3	-7.4	-512.01	-201.92
Stage 3	-7.6	-554.85	-214.18
Stage 3	-7.8	-600.22	-226.85
Stage 3	-8	-648.2	-239.91
Stage 3	-8.2	-698.88	-253.37
Stage 3	-8.4	-750.49	-258.06
Stage 3	-8.6	-802.67	-260.9
Stage 3	-8.8	-855.05	-261.91
Stage 3	-9	-907.26	-261.07
Stage 3	-9.2	-958.94	-258.4
Stage 3	-9.4	-1009.72	-253.89
Stage 3	-9.6	-1059.23	-247.54
Stage 3	-9.8	-1107.1	-239.34
Stage 3	-10	-1152.96	-229.32
Stage 3	-10.2	-1196.45	-217.45
Stage 3	-10.4	-1236.26	-199.06
Stage 3	-10.6	-1272.07	-179.06
Stage 3	-10.8	-1303.56	-157.46
Stage 3	-11	-1330.41	-134.26

Design Assumption: NTC2018: SISMICA STR Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-11.2	-1352.3	-109.45
Stage 3	-11.4	-1368.91	-83.04
Stage 3	-11.6	-1379.92	-55.03
Stage 3	-11.8	-1385	-25.41
Stage 3	-12	-1383.87	5.65
Stage 3	-12.2	-1377.01	34.29
Stage 3	-12.4	-1364.89	60.62
Stage 3	-12.6	-1347.94	84.74
Stage 3	-12.8	-1326.59	106.75
Stage 3	-13	-1301.24	126.76
Stage 3	-13.2	-1272.27	144.87
Stage 3	-13.4	-1240.03	161.17
Stage 3	-13.6	-1204.88	175.77
Stage 3	-13.8	-1167.13	188.75
Stage 3	-14	-1127.09	200.2
Stage 3	-14.2	-1085.04	210.22
Stage 3	-14.4	-1041.27	218.89
Stage 3	-14.6	-996.01	226.3
Stage 3	-14.8	-949.5	232.51
Stage 3	-15	-901.98	237.61
Stage 3	-15.2	-853.65	241.67
Stage 3	-15.4	-804.7	244.75
Stage 3	-15.6	-755.31	246.93
Stage 3	-15.8	-705.67	248.21
Stage 3	-16	-656.02	248.26
Stage 3	-16.2	-606.59	247.15
Stage 3	-16.4	-557.59	244.97
Stage 3	-16.6	-509.24	241.78
Stage 3	-16.8	-461.71	237.66
Stage 3	-17	-415.18	232.66
Stage 3	-17.2	-369.81	226.85
Stage 3	-17.4	-325.77	220.19
Stage 3	-17.6	-283.38	211.95
Stage 3	-17.8	-242.93	202.24
Stage 3	-18	-204.71	191.11
Stage 3	-18.2	-168.98	178.64
Stage 3	-18.4	-136	164.88
Stage 3	-18.6	-106.03	149.88
Stage 3	-18.8	-79.29	133.66
Stage 3	-19	-56.04	116.27
Stage 3	-19.2	-36.5	97.71
Stage 3	-19.4	-20.9	78.01
Stage 3	-19.6	-9.46	57.17
Stage 3	-19.8	-2.42	35.2
Stage 3	-20	0	12.11

6.4.5. Tabella Grafici dei Risultati





6.5. Risultati NTC2018: SISMICA GEO

6.5.1. Tabella Risultati Paratia NTC2018: SISMICA GEO - Left Wall - Stage: Stage 0

Design Assumption: NTC2018: SISMICA GEO Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	0	0	0
Stage 0	-0.2	0	0
Stage 0	-0.4	0	0
Stage 0	-0.6	0	0
Stage 0	-0.8	0	0
Stage 0	-1	0	0
Stage 0	-1.2	0	0
Stage 0	-1.4	0	0
Stage 0	-1.6	0	0
Stage 0	-1.8	0	0
Stage 0	-2	0	0
Stage 0	-2.2	0	0
Stage 0	-2.4	0	0
Stage 0	-2.6	0	0
Stage 0	-2.8	0	0
Stage 0	-3	0	0
Stage 0	-3.2	0	0
Stage 0	-3.4	0	0
Stage 0	-3.6	0	0
Stage 0	-3.8	0	0
Stage 0	-4	0	0
Stage 0	-4.2	0	0
Stage 0	-4.4	0	0
Stage 0	-4.6	0	0
Stage 0	-4.8	0	0
Stage 0	-5	0	0
Stage 0	-5.2	0	0
Stage 0	-5.4	0	0
Stage 0	-5.6	0	0
Stage 0	-5.8	0	0
Stage 0	-6	0	0
Stage 0	-6.2	0	0
Stage 0	-6.4	0	0
Stage 0	-6.6	0	0
Stage 0	-6.8	0	0
Stage 0	-7	0	0
Stage 0	-7.2	0	0
Stage 0	-7.4	0	0
Stage 0	-7.6	0	0
Stage 0	-7.8	0	0
Stage 0	-8	0	0
Stage 0	-8.2	0	0
Stage 0	-8.4	0	0
Stage 0	-8.6	0	0
Stage 0	-8.8	0	0
Stage 0	-9	0	0
Stage 0	-9.2	0	0
Stage 0	-9.4	0	0
Stage 0	-9.6	0	0
Stage 0	-9.8	0	0
Stage 0	-10	0	0
Stage 0	-10.2	0	0
Stage 0	-10.4	0	0

Design Assumption: NTC2018: SISMICA GEO Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 0	-10.6	0	0
Stage 0	-10.8	0	0
Stage 0	-11	0	0
Stage 0	-11.2	0	0
Stage 0	-11.4	0	0
Stage 0	-11.6	0	0
Stage 0	-11.8	0	0
Stage 0	-12	0	0
Stage 0	-12.2	0	0
Stage 0	-12.4	0	0
Stage 0	-12.6	0	0
Stage 0	-12.8	0	0
Stage 0	-13	0	0
Stage 0	-13.2	0	0
Stage 0	-13.4	0	0
Stage 0	-13.6	0	0
Stage 0	-13.8	0	0
Stage 0	-14	0	0
Stage 0	-14.2	0	0
Stage 0	-14.4	0	0
Stage 0	-14.6	0	0
Stage 0	-14.8	0	0
Stage 0	-15	0	0
Stage 0	-15.2	0	0
Stage 0	-15.4	0	0
Stage 0	-15.6	0	0
Stage 0	-15.8	0	0
Stage 0	-16	0	0
Stage 0	-16.2	0	0
Stage 0	-16.4	0	0
Stage 0	-16.6	0	0
Stage 0	-16.8	0	0
Stage 0	-17	0	0
Stage 0	-17.2	0	0
Stage 0	-17.4	0	0
Stage 0	-17.6	0	0
Stage 0	-17.8	0	0
Stage 0	-18	0	0
Stage 0	-18.2	0	0
Stage 0	-18.4	0	0
Stage 0	-18.6	0	0
Stage 0	-18.8	0	0
Stage 0	-19	0	0
Stage 0	-19.2	0	0
Stage 0	-19.4	0	0
Stage 0	-19.6	0	0
Stage 0	-19.8	0	0
Stage 0	-20	0	0

6.5.2. Tabella Risultati Paratia NTC2018: SISMICA GEO - Left Wall - Stage: Stage 1

Design Assumption: NTC2018: SISMICA GEO Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.6	0	0
Stage 1	-0.8	0	0
Stage 1	-1	0	0
Stage 1	-1.2	0	0
Stage 1	-1.4	0	0
Stage 1	-1.6	0	0
Stage 1	-1.8	0	0
Stage 1	-2	0	0
Stage 1	-2.2	0	0
Stage 1	-2.4	0	0
Stage 1	-2.6	0	0
Stage 1	-2.8	0	0
Stage 1	-3	0	0
Stage 1	-3.2	0	0
Stage 1	-3.4	0	0
Stage 1	-3.6	0	0
Stage 1	-3.8	0	0
Stage 1	-4	0	0
Stage 1	-4.2	0	0
Stage 1	-4.4	0	0
Stage 1	-4.6	0	0
Stage 1	-4.8	0	0
Stage 1	-5	0	0
Stage 1	-5.2	0	0
Stage 1	-5.4	0	0
Stage 1	-5.6	0	0
Stage 1	-5.8	0	0
Stage 1	-6	0	0
Stage 1	-6.2	0	0
Stage 1	-6.4	0	0
Stage 1	-6.6	0	0
Stage 1	-6.8	0	0
Stage 1	-7	0	0
Stage 1	-7.2	0	0
Stage 1	-7.4	0	0
Stage 1	-7.6	0	0
Stage 1	-7.8	0	0
Stage 1	-8	0	0
Stage 1	-8.2	0	0
Stage 1	-8.4	0	0
Stage 1	-8.6	0	0
Stage 1	-8.8	0	0
Stage 1	-9	0	0
Stage 1	-9.2	0	0
Stage 1	-9.4	0	0
Stage 1	-9.6	0	0
Stage 1	-9.8	0	0
Stage 1	-10	0	0
Stage 1	-10.2	0	0
Stage 1	-10.4	0	0
Stage 1	-10.6	0	0
Stage 1	-10.8	0	0
Stage 1	-11	0	0

Design Assumption: NTC2018: SISMICA GEO Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-11.2	0	0
Stage 1	-11.4	0	0
Stage 1	-11.6	0	0
Stage 1	-11.8	0	0
Stage 1	-12	0	0
Stage 1	-12.2	0	0
Stage 1	-12.4	0	0
Stage 1	-12.6	0	0
Stage 1	-12.8	0	0
Stage 1	-13	0	0
Stage 1	-13.2	0	0
Stage 1	-13.4	0	0
Stage 1	-13.6	0	0
Stage 1	-13.8	0	0
Stage 1	-14	0	0
Stage 1	-14.2	0	0
Stage 1	-14.4	0	0
Stage 1	-14.6	0	0
Stage 1	-14.8	0	0
Stage 1	-15	0	0
Stage 1	-15.2	0	0
Stage 1	-15.4	0	0
Stage 1	-15.6	0	0
Stage 1	-15.8	0	0
Stage 1	-16	0	0
Stage 1	-16.2	0	0
Stage 1	-16.4	0	0
Stage 1	-16.6	0	0
Stage 1	-16.8	0	0
Stage 1	-17	0	0
Stage 1	-17.2	0	0
Stage 1	-17.4	0	0
Stage 1	-17.6	0	0
Stage 1	-17.8	0	0
Stage 1	-18	0	0
Stage 1	-18.2	0	0
Stage 1	-18.4	0	0
Stage 1	-18.6	0	0
Stage 1	-18.8	0	0
Stage 1	-19	0	0
Stage 1	-19.2	0	0
Stage 1	-19.4	0	0
Stage 1	-19.6	0	0
Stage 1	-19.8	0	0
Stage 1	-20	0	0

6.5.3. Tabella Risultati Paratia NTC2018: SISMICA GEO - Left Wall - Stage: Stage 2

Design Assumption: NTC2018: SISMICA GEO Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	0	0	0
Stage 2	-0.2	0	0
Stage 2	-0.2	0	0
Stage 2	-0.4	-0.04	-0.18
Stage 2	-0.6	-0.14	-0.53
Stage 2	-0.8	-0.35	-1.06
Stage 2	-1	-0.71	-1.77
Stage 2	-1.2	-1.24	-2.66
Stage 2	-1.4	-1.98	-3.72
Stage 2	-1.6	-2.97	-4.96
Stage 2	-1.8	-4.25	-6.37
Stage 2	-2	-5.84	-7.97
Stage 2	-2.2	-7.79	-9.74
Stage 2	-2.4	-10.13	-11.69
Stage 2	-2.6	-12.89	-13.81
Stage 2	-2.8	-16.11	-16.11
Stage 2	-3	-19.83	-18.59
Stage 2	-3.2	-24.08	-21.25
Stage 2	-3.4	-28.9	-24.08
Stage 2	-3.6	-34.32	-27.09
Stage 2	-3.8	-40.37	-30.28
Stage 2	-4	-47.1	-33.65
Stage 2	-4.2	-54.54	-37.19
Stage 2	-4.4	-62.72	-40.91
Stage 2	-4.6	-71.68	-44.8
Stage 2	-4.8	-81.46	-48.87
Stage 2	-5	-92.08	-53.12
Stage 2	-5.2	-103.59	-57.55
Stage 2	-5.4	-116.02	-62.16
Stage 2	-5.6	-129.41	-66.94
Stage 2	-5.8	-143.79	-71.89
Stage 2	-6	-159.19	-77.03
Stage 2	-6.2	-175.9	-83.51
Stage 2	-6.4	-193.96	-90.31
Stage 2	-6.6	-213.44	-97.42
Stage 2	-6.8	-234.41	-104.84
Stage 2	-7	-256.93	-112.58
Stage 2	-7.2	-281.05	-120.64
Stage 2	-7.4	-306.86	-129.01
Stage 2	-7.6	-334.4	-137.7
Stage 2	-7.8	-363.74	-146.7
Stage 2	-8	-394.94	-156.02
Stage 2	-8.2	-428.07	-165.65
Stage 2	-8.4	-461.17	-165.49
Stage 2	-8.6	-493.75	-162.93
Stage 2	-8.8	-525.35	-157.96
Stage 2	-9	-555.46	-150.58
Stage 2	-9.2	-583.62	-140.79
Stage 2	-9.4	-609.34	-128.6
Stage 2	-9.6	-632.14	-113.99
Stage 2	-9.8	-651.53	-96.98
Stage 2	-10	-667.04	-77.56
Stage 2	-10.2	-678.6	-57.8
Stage 2	-10.4	-686.63	-40.13
Stage 2	-10.6	-691.36	-23.62
Stage 2	-10.8	-693	-8.24

Design Assumption: NTC2018: SISMICA GEO Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-11	-691.79	6.09
Stage 2	-11.2	-687.91	19.4
Stage 2	-11.4	-681.56	31.75
Stage 2	-11.6	-672.92	43.2
Stage 2	-11.8	-662.16	53.79
Stage 2	-12	-649.44	63.57
Stage 2	-12.2	-634.92	72.6
Stage 2	-12.4	-618.74	80.93
Stage 2	-12.6	-601.03	88.54
Stage 2	-12.8	-582	95.15
Stage 2	-13	-561.83	100.84
Stage 2	-13.2	-540.7	105.66
Stage 2	-13.4	-518.76	109.69
Stage 2	-13.6	-496.16	113
Stage 2	-13.8	-473.04	115.64
Stage 2	-14	-449.5	117.68
Stage 2	-14.2	-425.67	119.17
Stage 2	-14.4	-401.63	120.17
Stage 2	-14.6	-377.49	120.73
Stage 2	-14.8	-353.31	120.87
Stage 2	-15	-329.28	120.17
Stage 2	-15.2	-305.53	118.71
Stage 2	-15.4	-282.22	116.59
Stage 2	-15.6	-259.44	113.88
Stage 2	-15.8	-237.31	110.66
Stage 2	-16	-215.91	107
Stage 2	-16.2	-195.32	102.95
Stage 2	-16.4	-175.6	98.59
Stage 2	-16.6	-156.81	93.95
Stage 2	-16.8	-138.99	89.09
Stage 2	-17	-122.19	84.05
Stage 2	-17.2	-106.41	78.86
Stage 2	-17.4	-91.7	73.55
Stage 2	-17.6	-78.07	68.16
Stage 2	-17.8	-65.53	62.71
Stage 2	-18	-54.08	57.22
Stage 2	-18.2	-43.74	51.71
Stage 2	-18.4	-34.5	46.19
Stage 2	-18.6	-26.37	40.67
Stage 2	-18.8	-19.34	35.16
Stage 2	-19	-13.4	29.67
Stage 2	-19.2	-8.56	24.21
Stage 2	-19.4	-4.8	18.78
Stage 2	-19.6	-2.13	13.37
Stage 2	-19.8	-0.53	8
Stage 2	-20	0	2.65

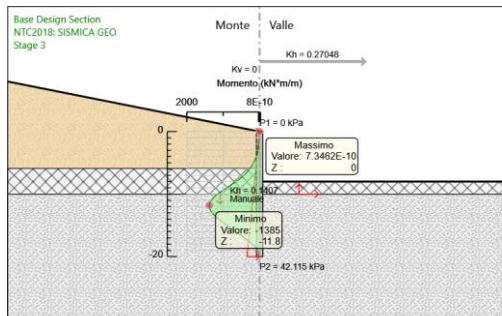
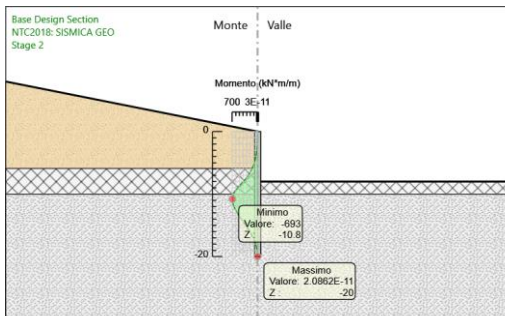
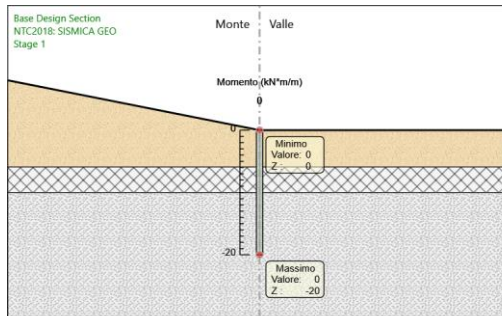
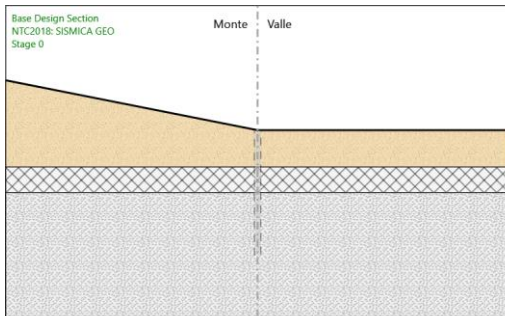
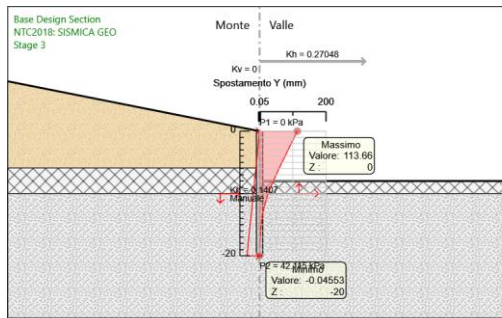
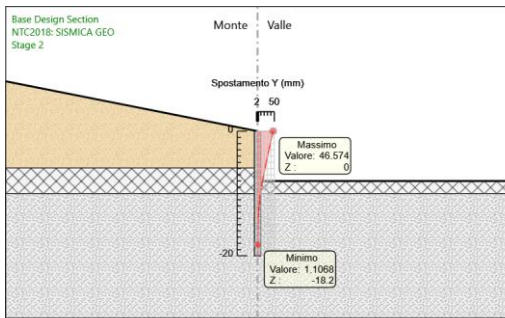
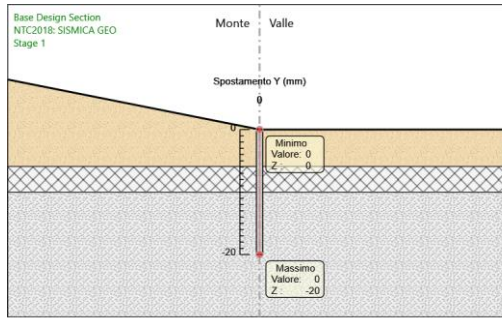
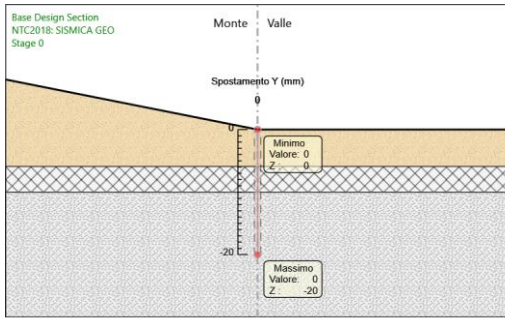
6.5.4. Tabella Risultati Paratia NTC2018: SISMICA GEO - Left Wall - Stage: Stage 3

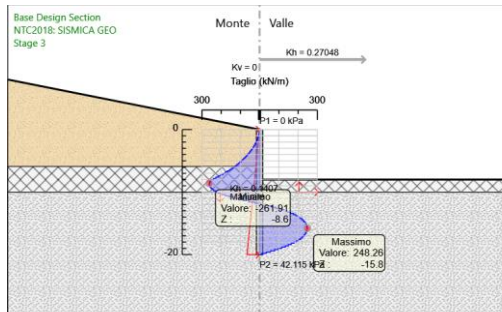
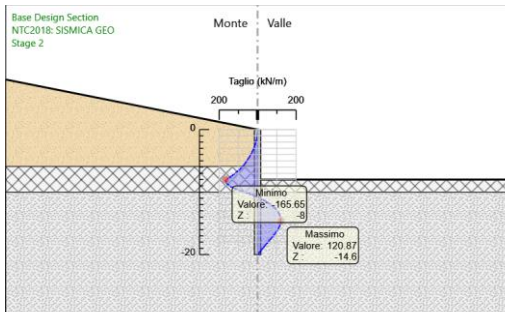
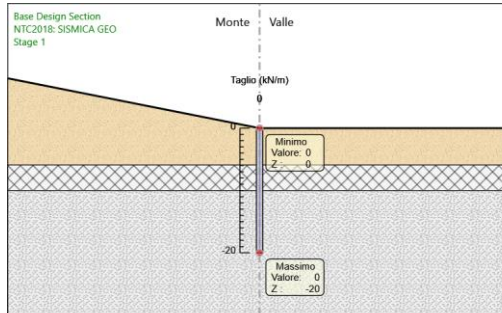
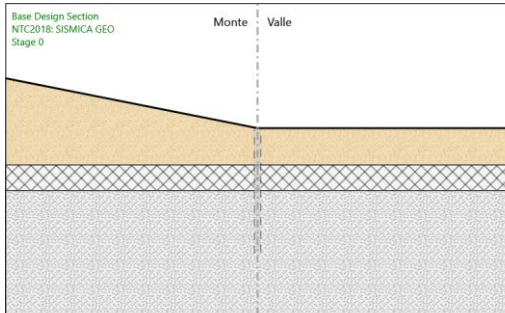
Design Assumption: NTC2018: SISMICA GEO Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	0	0	-0.23
Stage 3	-0.2	-0.05	-0.23
Stage 3	-0.4	-0.24	-0.95
Stage 3	-0.6	-0.62	-1.93
Stage 3	-0.8	-1.26	-3.18
Stage 3	-1	-2.2	-4.68
Stage 3	-1.2	-3.49	-6.45
Stage 3	-1.4	-5.18	-8.48
Stage 3	-1.6	-7.34	-10.77
Stage 3	-1.8	-10	-13.32
Stage 3	-2	-13.23	-16.13
Stage 3	-2.2	-17.07	-19.21
Stage 3	-2.4	-21.58	-22.54
Stage 3	-2.6	-26.8	-26.14
Stage 3	-2.8	-32.8	-30
Stage 3	-3	-39.63	-34.11
Stage 3	-3.2	-47.33	-38.49
Stage 3	-3.4	-55.95	-43.14
Stage 3	-3.6	-65.56	-48.04
Stage 3	-3.8	-76.2	-53.2
Stage 3	-4	-87.93	-58.63
Stage 3	-4.2	-100.79	-64.32
Stage 3	-4.4	-114.84	-70.26
Stage 3	-4.6	-130.14	-76.47
Stage 3	-4.8	-146.73	-82.94
Stage 3	-5	-164.66	-89.68
Stage 3	-5.2	-184	-96.67
Stage 3	-5.4	-204.78	-103.92
Stage 3	-5.6	-227.07	-111.44
Stage 3	-5.8	-250.91	-119.22
Stage 3	-6	-276.36	-127.26
Stage 3	-6.2	-303.71	-136.72
Stage 3	-6.4	-333.03	-146.59
Stage 3	-6.6	-364.4	-156.86
Stage 3	-6.8	-397.9	-167.52
Stage 3	-7	-433.62	-178.59
Stage 3	-7.2	-471.63	-190.06
Stage 3	-7.4	-512.01	-201.92
Stage 3	-7.6	-554.85	-214.18
Stage 3	-7.8	-600.22	-226.85
Stage 3	-8	-648.2	-239.91
Stage 3	-8.2	-698.88	-253.37
Stage 3	-8.4	-750.49	-258.06
Stage 3	-8.6	-802.67	-260.9
Stage 3	-8.8	-855.05	-261.91
Stage 3	-9	-907.26	-261.07
Stage 3	-9.2	-958.94	-258.4
Stage 3	-9.4	-1009.72	-253.89
Stage 3	-9.6	-1059.23	-247.54
Stage 3	-9.8	-1107.1	-239.34
Stage 3	-10	-1152.96	-229.32
Stage 3	-10.2	-1196.45	-217.45
Stage 3	-10.4	-1236.26	-199.06
Stage 3	-10.6	-1272.07	-179.06
Stage 3	-10.8	-1303.56	-157.46
Stage 3	-11	-1330.41	-134.26

Design Assumption: NTC2018: SISMICA GEO Risultati Paratia Muro: LEFT

Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-11.2	-1352.3	-109.45
Stage 3	-11.4	-1368.91	-83.04
Stage 3	-11.6	-1379.92	-55.03
Stage 3	-11.8	-1385	-25.41
Stage 3	-12	-1383.87	5.65
Stage 3	-12.2	-1377.01	34.29
Stage 3	-12.4	-1364.89	60.62
Stage 3	-12.6	-1347.94	84.74
Stage 3	-12.8	-1326.59	106.75
Stage 3	-13	-1301.24	126.76
Stage 3	-13.2	-1272.27	144.87
Stage 3	-13.4	-1240.03	161.17
Stage 3	-13.6	-1204.88	175.77
Stage 3	-13.8	-1167.13	188.75
Stage 3	-14	-1127.09	200.2
Stage 3	-14.2	-1085.04	210.22
Stage 3	-14.4	-1041.27	218.89
Stage 3	-14.6	-996.01	226.3
Stage 3	-14.8	-949.5	232.51
Stage 3	-15	-901.98	237.61
Stage 3	-15.2	-853.65	241.67
Stage 3	-15.4	-804.7	244.75
Stage 3	-15.6	-755.31	246.93
Stage 3	-15.8	-705.67	248.21
Stage 3	-16	-656.02	248.26
Stage 3	-16.2	-606.59	247.15
Stage 3	-16.4	-557.59	244.97
Stage 3	-16.6	-509.24	241.78
Stage 3	-16.8	-461.71	237.66
Stage 3	-17	-415.18	232.66
Stage 3	-17.2	-369.81	226.85
Stage 3	-17.4	-325.77	220.19
Stage 3	-17.6	-283.38	211.95
Stage 3	-17.8	-242.93	202.24
Stage 3	-18	-204.71	191.11
Stage 3	-18.2	-168.98	178.64
Stage 3	-18.4	-136	164.88
Stage 3	-18.6	-106.03	149.88
Stage 3	-18.8	-79.29	133.66
Stage 3	-19	-56.04	116.27
Stage 3	-19.2	-36.5	97.71
Stage 3	-19.4	-20.9	78.01
Stage 3	-19.6	-9.46	57.17
Stage 3	-19.8	-2.42	35.2
Stage 3	-20	0	12.11

6.5.5. Tabella Grafici dei Risultati







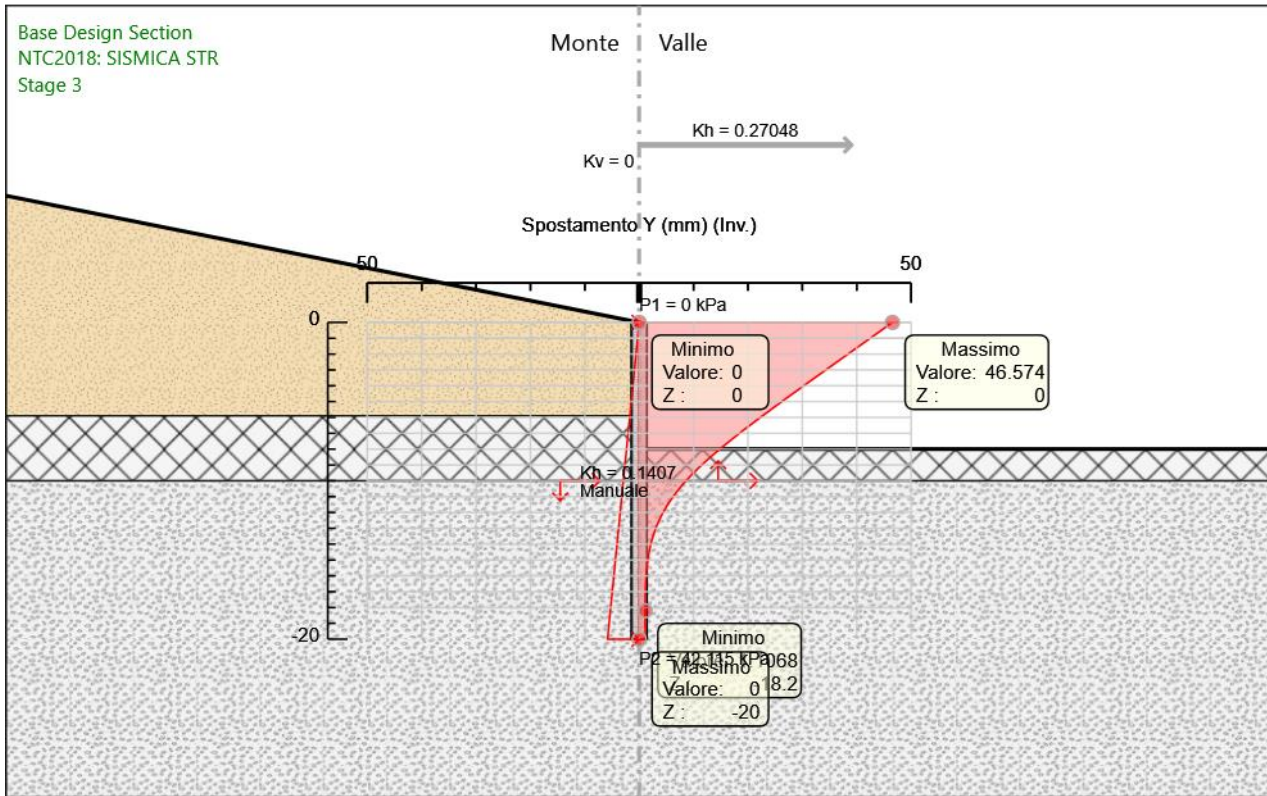
LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
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7. Descrizione sintetica dei risultati delle Design Assumption (Inviluppi)

7.1. Grafico Inviluppi Spostamento



Spostamento

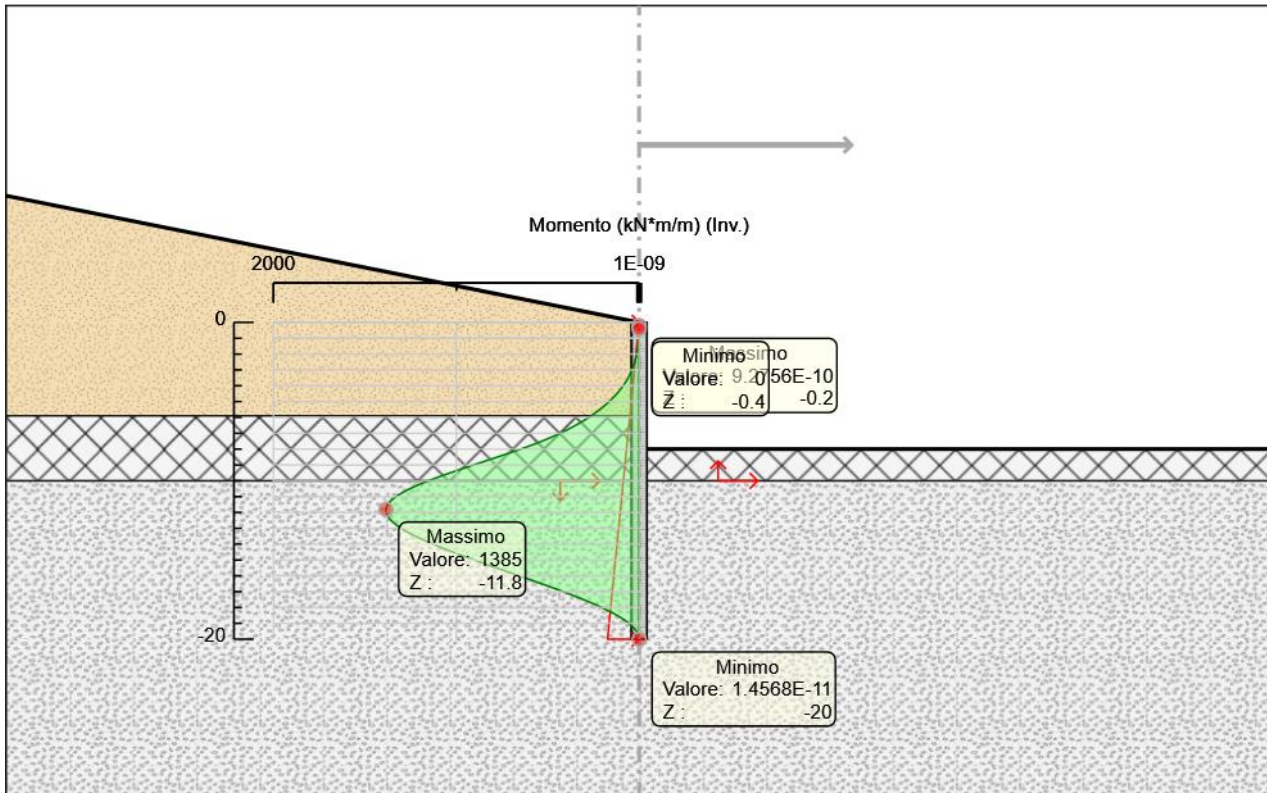
7.2. Tabella Inviluppi Momento WallElement

Selected Design Assumptions	Inviluppi: Momento	Muro: WallElement
Z (m)	Lato sinistro (kN*m/m)	Lato destro (kN*m/m)
0	0	0
-0.2	0.046	0
-0.4	0.236	0
-0.6	0.623	0
-0.8	1.259	0
-1	2.196	0
-1.2	3.487	0
-1.4	5.183	0
-1.6	7.337	0
-1.8	10.001	0
-2	13.228	0
-2.2	17.069	0
-2.4	21.577	0
-2.6	26.805	0
-2.8	32.804	0
-3	39.627	0
-3.2	47.326	0
-3.4	55.953	0
-3.6	65.561	0
-3.8	76.201	0
-4	87.927	0
-4.2	100.79	0
-4.4	114.843	0
-4.6	130.137	0
-4.8	146.726	0
-5	164.661	0
-5.2	183.995	0
-5.4	204.78	0
-5.6	227.068	0
-5.8	250.911	0
-6	276.363	0
-6.2	303.707	0
-6.4	333.026	0
-6.6	364.397	0
-6.8	397.902	0
-7	433.62	0
-7.2	471.631	0
-7.4	512.015	0
-7.6	554.851	0
-7.8	600.221	0
-8	648.203	0
-8.2	698.877	0
-8.4	750.488	0
-8.6	802.668	0
-8.8	855.049	0
-9	907.263	0
-9.2	958.943	0
-9.4	1009.72	0
-9.6	1059.227	0
-9.8	1107.096	0
-10	1152.959	0
-10.2	1196.449	0
-10.4	1236.259	0
-10.6	1272.07	0
-10.8	1303.562	0
-11	1330.414	0

Selected Design Assumptions **Involuppi: Momento** **Muro: WallElement**

Z (m)	Lato sinistro (kN*m/m)	Lato destro (kN*m/m)
-11.2	1352.304	0
-11.4	1368.912	0
-11.6	1379.918	0
-11.8	1385	0
-12	1383.87	0
-12.2	1377.013	0
-12.4	1364.89	0
-12.6	1347.942	0
-12.8	1326.592	0
-13	1301.24	0
-13.2	1272.266	0
-13.4	1240.032	0
-13.6	1204.879	0
-13.8	1167.129	0
-14	1127.089	0
-14.2	1085.044	0
-14.4	1041.265	0
-14.6	996.006	0
-14.8	949.503	0
-15	901.981	0
-15.2	853.648	0
-15.4	804.697	0
-15.6	755.312	0
-15.8	705.669	0
-16	656.017	0
-16.2	606.587	0
-16.4	557.594	0
-16.6	509.239	0
-16.8	461.708	0
-17	415.176	0
-17.2	369.806	0
-17.4	325.769	0
-17.6	283.379	0
-17.8	242.929	0
-18	204.706	0
-18.2	168.978	0
-18.4	136.001	0
-18.6	106.026	0
-18.8	79.293	0
-19	56.04	0
-19.2	36.498	0
-19.4	20.897	0
-19.6	9.463	0
-19.8	2.422	0
-20	0	0

7.3. Grafico Involuppi Momento



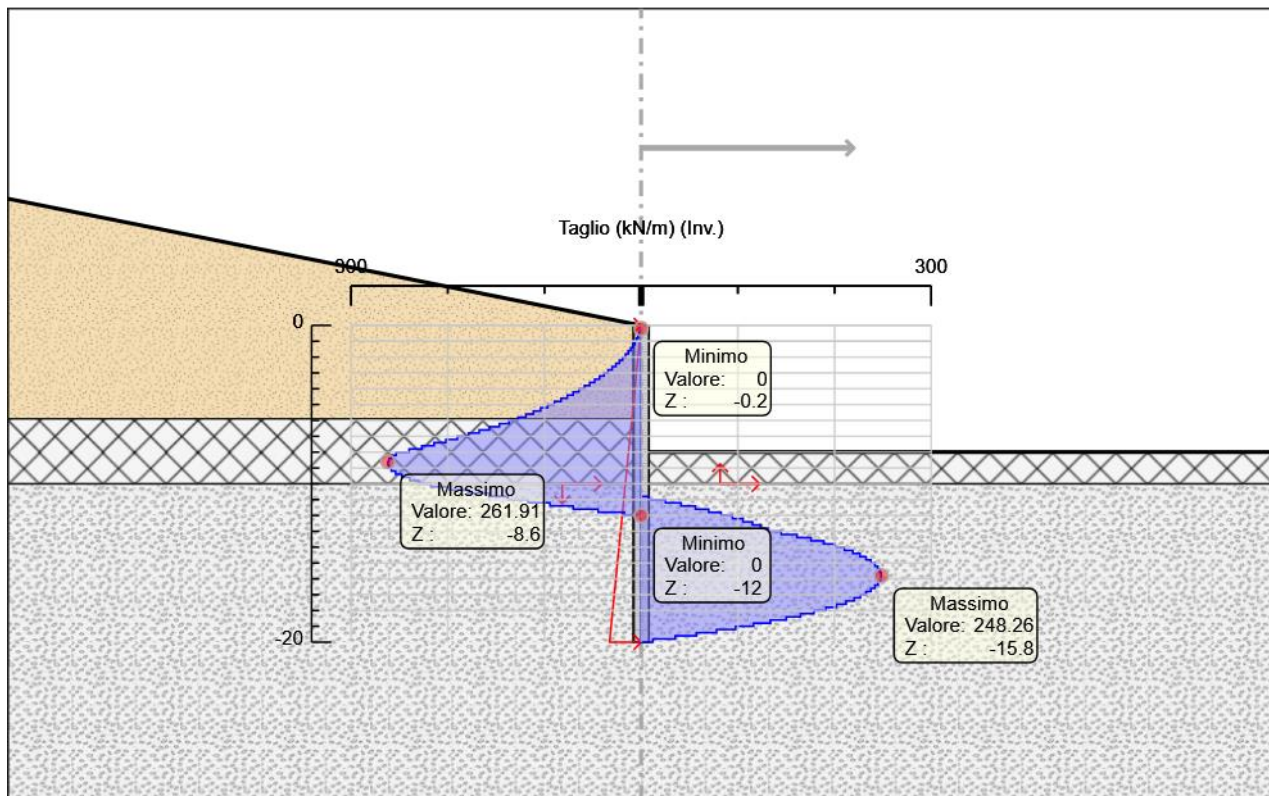
7.4. Tabella Involuppi Taglio WallElement

Selected Design Assumptions	Involuppi: Taglio	Muro: WallElement
Z (m)	Lato sinistro (kN/m)	Lato destro (kN/m)
0	0.23	0
-0.2	0.952	0
-0.4	1.935	0
-0.6	3.179	0
-0.8	4.685	0
-1	6.452	0
-1.2	8.48	0
-1.4	10.77	0
-1.6	13.321	0
-1.8	16.133	0
-2	19.207	0
-2.2	22.542	0
-2.4	26.138	0
-2.6	29.996	0
-2.8	34.114	0
-3	38.495	0
-3.2	43.136	0
-3.4	48.039	0
-3.6	53.203	0
-3.8	58.629	0
-4	64.315	0
-4.2	70.264	0
-4.4	76.473	0
-4.6	82.944	0
-4.8	89.676	0
-5	96.669	0
-5.2	103.924	0
-5.4	111.44	0
-5.6	119.217	0
-5.8	127.256	0
-6	136.724	0
-6.2	146.591	0
-6.4	156.858	0
-6.6	167.524	0
-6.8	178.59	0
-7	190.055	0
-7.2	201.92	0
-7.4	214.184	0
-7.6	226.847	0
-7.8	239.91	0
-8	253.372	0
-8.2	258.056	0
-8.4	260.9	0
-8.6	261.905	0
-8.8	261.905	0
-9	261.071	0
-9.2	258.398	0
-9.4	253.886	0
-9.6	247.535	0
-9.8	239.345	0
-10	229.316	0
-10.2	217.447	0
-10.4	199.055	0
-10.6	179.06	0
-10.8	157.46	7.913
-11	137.877	25.219

Selected Design Assumptions Involuppi: Taglio Muro: WallElement

Z (m)	Lato sinistro (kN/m)	Lato destro (kN/m)
-11.2	116.883	41.278
-11.4	94.34	56.157
-11.6	70.245	69.924
-11.8	44.6	82.644
-12	17.405	94.383
-12.2	0	105.204
-12.4	0	115.104
-12.6	0	123.7
-12.8	0	131.087
-13	0	144.869
-13.2	0	161.172
-13.4	0	175.767
-13.6	0	188.747
-13.8	0	200.203
-14	0	210.224
-14.2	0	218.895
-14.4	0	226.298
-14.6	0	232.511
-14.8	0	237.611
-15	0	241.668
-15.2	0	244.752
-15.4	0	246.926
-15.6	0	248.213
-15.8	0	248.259
-16	0	248.259
-16.2	0	247.15
-16.4	0	244.965
-16.6	0	241.778
-16.8	0	237.656
-17	0	232.66
-17.2	0	226.847
-17.4	0	220.185
-17.6	0	211.954
-17.8	0	202.238
-18	0	191.113
-18.2	0	178.643
-18.4	0	164.883
-18.6	0	149.877
-18.8	0	133.662
-19	0	116.266
-19.2	0	97.709
-19.4	0	78.008
-19.6	0	57.17
-19.8	0	35.204
-20	0	12.11

7.5. Grafico Inviluppi Taglio





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PT07 (NV24)

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7.6. Involuppo Spinta Reale Efficace / Spinta Passiva

Design Assumption	Stage	Muro	Lato	Involuppo Spinta Reale Efficace / Spinta Passiva %
NTC2018: A2+M2+R1 Stage 0 Left Wall			LEFT	13.45
NTC2018: A2+M2+R1 Stage 2 Left Wall			RIGHT	43.14



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RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	226 di 731

7.7. Involuppo Spinta Reale Efficace / Spinta Attiva

Design Assumption	Stage	Muro	Lato	Involuppo Spinta Reale Efficace / Spinta Attiva %
NTC2018: A2+M2+R1 Stage 2 Left Wall		LEFT		102.84
NTC2018: A2+M2+R1 Stage 0 Left Wall		RIGHT		140.12



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IABH	00	F	CL	MU04 00 001	A	227 di 731

8. Normative adottate per le verifiche degli Elementi Strutturali

Normative Verifiche

Calcestruzzo	NTC
Acciaio	NTC
Tirante	NONE



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RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	228 di 731

8.1. Riepilogo Stage / Design Assumption per Inviluppo

Design Assumption	Stage 0	Stage 1	Stage 2	Stage 3
NTC2018: SLE (Rara/Frequente/Quasi Permanente)	V	V	V	V
NTC2018: A1+M1+R1 (R3 per tiranti)	V	V	V	V
NTC2018: A2+M2+R1	V	V	V	V
NTC2018: SISMICA STR	V	V	V	V
NTC2018: SISMICA GEO	V	V	V	V

8.2. Risultati Caver

8.2.1. Tabella Inviluppi Tasso di Sfruttamento Calcestruzzo - Caver : LEFT

Inviluppi Tasso di Sfruttamento Calcestruzzo - Caver		LEFT
Z (m)	Tasso di Sfruttamento Calcestruzzo - Caver	
-1.6	0.003	
-1.8	0.004	
-2	0.006	
-2.2	0.008	
-2.4	0.01	
-2.6	0.013	
-2.8	0.016	
-3	0.02	
-3.2	0.024	
-3.4	0.029	
-3.6	0.034	
-3.8	0.04	
-4	0.047	
-4.2	0.054	
-4.4	0.063	
-4.6	0.072	
-4.8	0.081	
-5	0.092	
-5.2	0.103	
-5.4	0.116	
-5.6	0.129	
-5.8	0.144	
-6	0.159	
-6.2	0.176	
-6.4	0.194	
-6.6	0.213	
-6.8	0.234	
-7	0.257	
-7.2	0.281	
-7.4	0.307	
-7.6	0.334	
-7.8	0.363	
-8	0.395	
-8.2	0.428	
-8.4	0.461	
-8.6	0.493	
-8.8	0.525	
-9	0.555	
-9.2	0.583	
-9.4	0.609	
-9.6	0.631	
-9.8	0.651	
-10	0.666	
-10.2	0.678	
-10.4	0.686	
-10.6	0.691	
-10.8	0.692	
-11	0.691	
-11.2	0.687	
-11.4	0.681	
-11.6	0.672	
-11.8	0.661	
-12	0.649	



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RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
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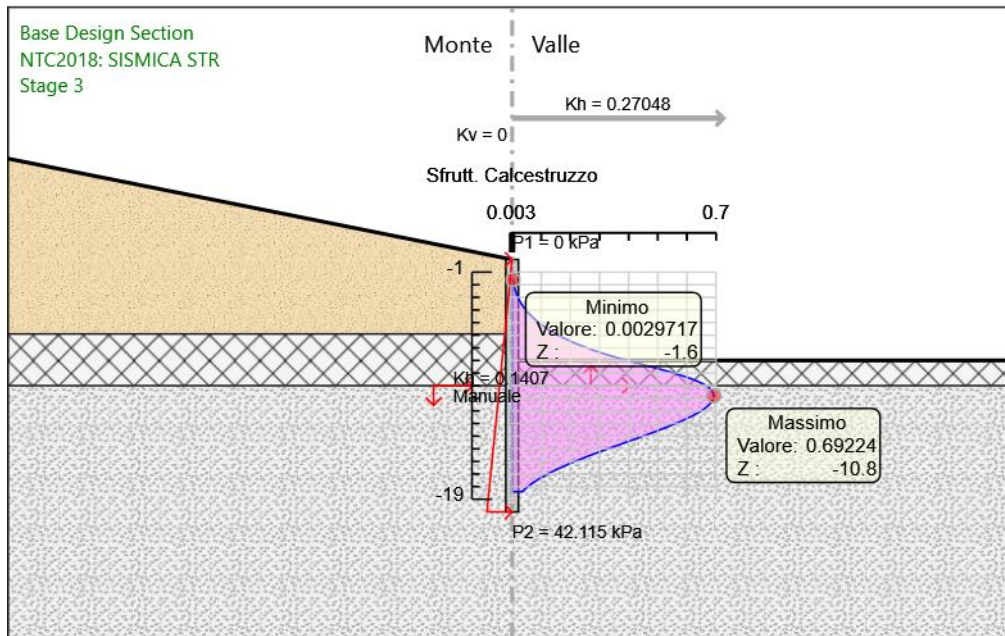
COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 230 di 731
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Involuppi Tasso di Sfruttamento Calcestruzzo - Caver

LEFT

Z (m)	Tasso di Sfruttamento Calcestruzzo - Caver
-12.2	0.634
-12.4	0.618
-12.6	0.6
-12.8	0.581
-13	0.561
-13.2	0.54
-13.4	0.518
-13.6	0.496
-13.8	0.473
-14	0.449
-14.2	0.425
-14.4	0.401
-14.6	0.377
-14.8	0.353
-15	0.329
-15.2	0.305
-15.4	0.282
-15.6	0.259
-15.8	0.237
-16	0.216
-16.2	0.195
-16.4	0.175
-16.6	0.157
-16.8	0.139
-17	0.122
-17.2	0.106
-17.4	0.092
-17.6	0.078
-17.8	0.065
-18	0.054
-18.2	0.044
-18.4	0.034

8.2.2. Grafico Involuppi Tasso di Sfruttamento Calcestruzzo - Caver



Involuppi
Tasso di Sfruttamento Calcestruzzo - Caver

8.2.3. Tabella Inviluppi Tasso di Sfruttamento Armature - Caver : LEFT

Inviluppi Tasso di Sfruttamento Armature - Caver		LEFT
Z (m)	Tasso di Sfruttamento Armature - Caver	
-1.6	0.001	
-1.8	0.002	
-2	0.003	
-2.2	0.004	
-2.4	0.005	
-2.6	0.006	
-2.8	0.007	
-3	0.009	
-3.2	0.011	
-3.4	0.013	
-3.6	0.015	
-3.8	0.018	
-4	0.021	
-4.2	0.025	
-4.4	0.028	
-4.6	0.032	
-4.8	0.037	
-5	0.042	
-5.2	0.047	
-5.4	0.052	
-5.6	0.058	
-5.8	0.065	
-6	0.072	
-6.2	0.079	
-6.4	0.088	
-6.6	0.096	
-6.8	0.106	
-7	0.116	
-7.2	0.127	
-7.4	0.139	
-7.6	0.151	
-7.8	0.164	
-8	0.178	
-8.2	0.193	
-8.4	0.208	
-8.6	0.223	
-8.8	0.237	
-9	0.251	
-9.2	0.263	
-9.4	0.275	
-9.6	0.285	
-9.8	0.294	
-10	0.301	
-10.2	0.306	
-10.4	0.31	
-10.6	0.312	
-10.8	0.313	
-11	0.312	
-11.2	0.311	
-11.4	0.308	
-11.6	0.304	
-11.8	0.299	
-12	0.293	
-12.2	0.287	
-12.4	0.279	
-12.6	0.271	



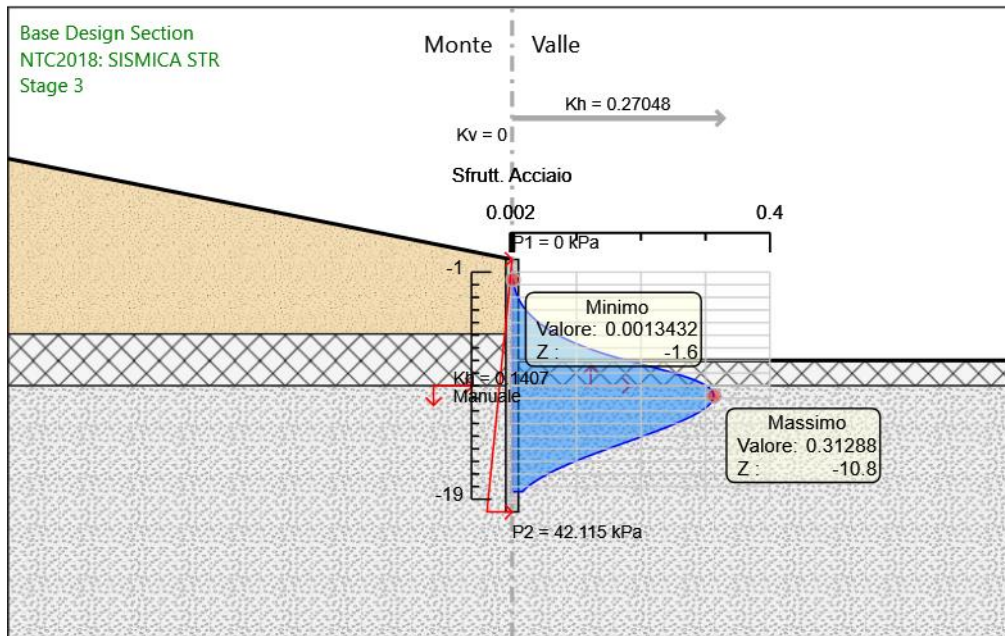
LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	233 di 731

Involuppi Tasso di Sfruttamento Armature - Caver		LEFT
Z (m)	Tasso di Sfruttamento Armature - Caver	
-12.8	0.263	
-13	0.254	
-13.2	0.244	
-13.4	0.234	
-13.6	0.224	
-13.8	0.214	
-14	0.203	
-14.2	0.192	
-14.4	0.181	
-14.6	0.17	
-14.8	0.16	
-15	0.149	
-15.2	0.138	
-15.4	0.127	
-15.6	0.117	
-15.8	0.107	
-16	0.097	
-16.2	0.088	
-16.4	0.079	
-16.6	0.071	
-16.8	0.063	
-17	0.055	
-17.2	0.048	
-17.4	0.041	
-17.6	0.035	
-17.8	0.03	
-18	0.024	
-18.2	0.02	
-18.4	0.016	

8.2.4. Grafico Involuppi Tasso di Sfruttamento Armature - Caver



Involuppi
Tasso di Sfruttamento Armature - Caver

8.2.5. Tabella Inviluppi Apertura Fessure - Caver : LEFT

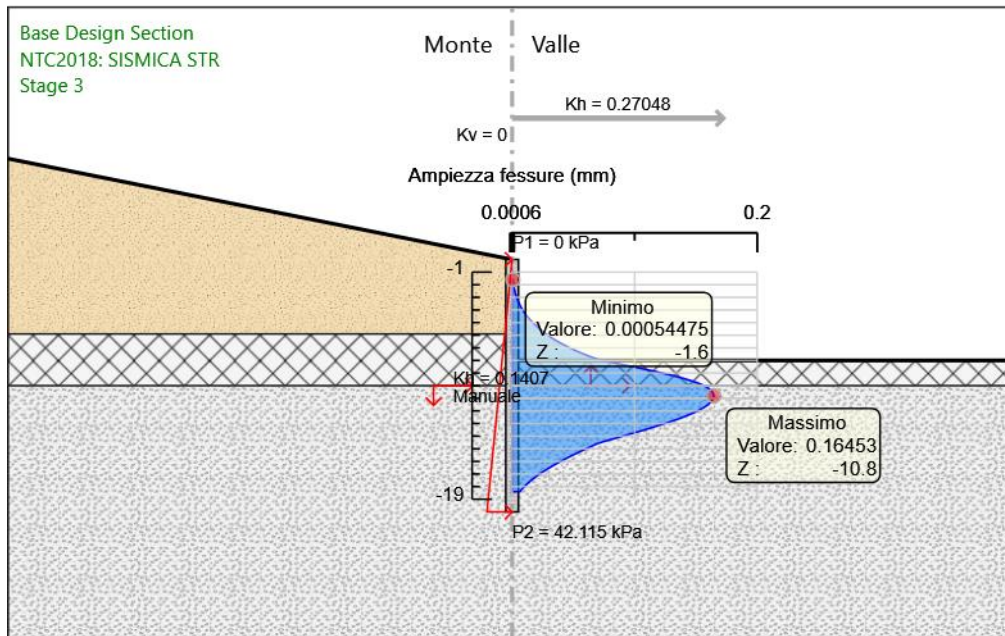
Inviluppi Apertura Fessure - Caver		LEFT
Z (m)	Apertura Fessure - Caver (mm)	
-1.6	0.001	
-1.8	0.001	
-2	0.001	
-2.2	0.001	
-2.4	0.002	
-2.6	0.002	
-2.8	0.003	
-3	0.004	
-3.2	0.004	
-3.4	0.005	
-3.6	0.006	
-3.8	0.007	
-4	0.009	
-4.2	0.01	
-4.4	0.011	
-4.6	0.013	
-4.8	0.015	
-5	0.017	
-5.2	0.019	
-5.4	0.021	
-5.6	0.024	
-5.8	0.026	
-6	0.029	
-6.2	0.032	
-6.4	0.036	
-6.6	0.039	
-6.8	0.043	
-7	0.047	
-7.2	0.051	
-7.4	0.056	
-7.6	0.061	
-7.8	0.067	
-8	0.074	
-8.2	0.084	
-8.4	0.094	
-8.6	0.104	
-8.8	0.113	
-9	0.123	
-9.2	0.131	
-9.4	0.139	
-9.6	0.146	
-9.8	0.152	
-10	0.157	
-10.2	0.16	
-10.4	0.163	
-10.6	0.164	
-10.8	0.165	
-11	0.164	
-11.2	0.163	
-11.4	0.161	
-11.6	0.158	
-11.8	0.155	
-12	0.151	
-12.2	0.147	
-12.4	0.142	
-12.6	0.136	

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	236 di 731

Involuppi Apertura Fessure - Caver		LEFT
Z (m)	Apertura Fessure - Caver (mm)	
-12.8	0.131	
-13	0.125	
-13.2	0.118	
-13.4	0.111	
-13.6	0.104	
-13.8	0.097	
-14	0.09	
-14.2	0.083	
-14.4	0.076	
-14.6	0.069	
-14.8	0.065	
-15	0.06	
-15.2	0.056	
-15.4	0.052	
-15.6	0.048	
-15.8	0.043	
-16	0.04	
-16.2	0.036	
-16.4	0.032	
-16.6	0.029	
-16.8	0.025	
-17	0.022	
-17.2	0.019	
-17.4	0.017	
-17.6	0.014	
-17.8	0.012	
-18	0.01	
-18.2	0.008	
-18.4	0.006	

8.2.6. Grafico Involuppi Apertura Fessure - Cover



-40 m



-40 m

Involuppi
Apertura Fessure - Cover

8.2.7. Tabella Inviluppi Tasso di Sfruttamento M-N - Caver : LEFT

Inviluppi Tasso di Sfruttamento M-N - Caver		LEFT
Z (m)	Tasso di Sfruttamento M-N - Caver	
-1.6	0.01	
-1.8	0.01	
-2	0.01	
-2.2	0.01	
-2.4	0.01	
-2.6	0.01	
-2.8	0.011	
-3	0.013	
-3.2	0.016	
-3.4	0.019	
-3.6	0.022	
-3.8	0.026	
-4	0.03	
-4.2	0.034	
-4.4	0.039	
-4.6	0.044	
-4.8	0.05	
-5	0.056	
-5.2	0.063	
-5.4	0.07	
-5.6	0.077	
-5.8	0.085	
-6	0.094	
-6.2	0.103	
-6.4	0.113	
-6.6	0.124	
-6.8	0.135	
-7	0.148	
-7.2	0.161	
-7.4	0.174	
-7.6	0.189	
-7.8	0.204	
-8	0.221	
-8.2	0.238	
-8.4	0.256	
-8.6	0.273	
-8.8	0.291	
-9	0.309	
-9.2	0.326	
-9.4	0.344	
-9.6	0.361	
-9.8	0.377	
-10	0.393	
-10.2	0.407	
-10.4	0.421	
-10.6	0.433	
-10.8	0.444	
-11	0.453	
-11.2	0.46	
-11.4	0.466	
-11.6	0.47	
-11.8	0.472	
-12	0.471	
-12.2	0.469	
-12.4	0.465	
-12.6	0.459	



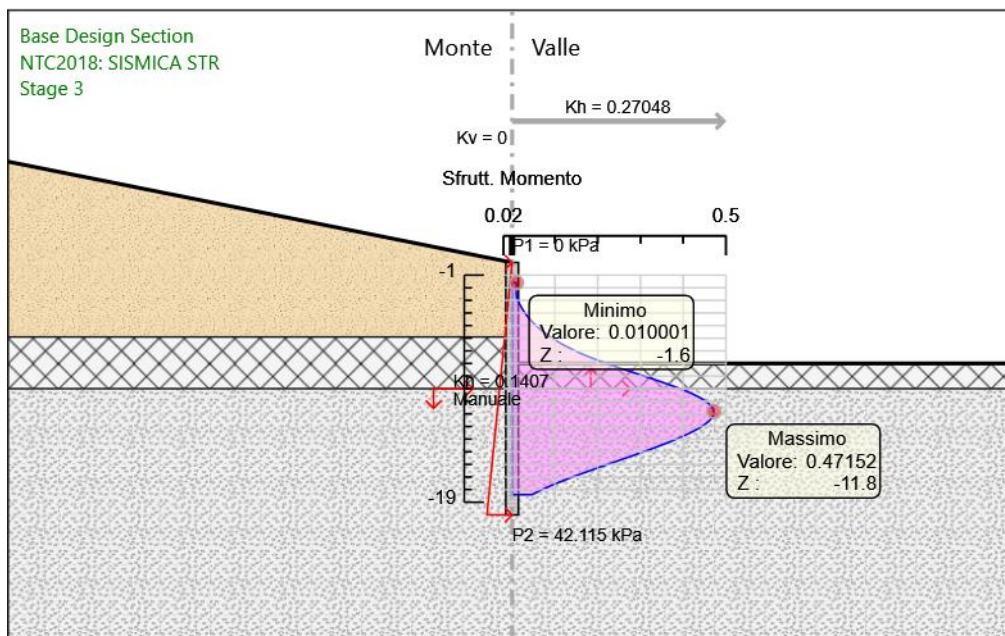
LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	239 di 731

Involuppi Tasso di Sfruttamento M-N - Caver		LEFT
Z (m)	Tasso di Sfruttamento M-N - Caver	
-12.8	0.452	
-13	0.443	
-13.2	0.433	
-13.4	0.422	
-13.6	0.41	
-13.8	0.397	
-14	0.384	
-14.2	0.369	
-14.4	0.354	
-14.6	0.339	
-14.8	0.323	
-15	0.307	
-15.2	0.291	
-15.4	0.274	
-15.6	0.257	
-15.8	0.24	
-16	0.223	
-16.2	0.207	
-16.4	0.19	
-16.6	0.173	
-16.8	0.157	
-17	0.141	
-17.2	0.126	
-17.4	0.111	
-17.6	0.096	
-17.8	0.083	
-18	0.07	
-18.2	0.058	
-18.4	0.046	

8.2.8. Grafico Involuppi Tasso di Sfruttamento M-N - Cover



-40 m



-40 m

Involuppi
Tasso di Sfruttamento M-N - Cover

8.2.9. Tabella Inviluppi Tasso di Sfruttamento a Taglio - Caver : LEFT

Inviluppi Tasso di Sfruttamento a Taglio - Caver	LEFT
Z (m)	Tasso di Sfruttamento a Taglio - Caver
-1.6	0.041
-1.8	0.05
-2	0.059
-2.2	0.07
-2.4	0.081
-2.6	0.093
-2.8	0.106
-3	0.119
-3.2	0.134
-3.4	0.149
-3.6	0.165
-3.8	0.182
-4	0.199
-4.2	0.218
-4.4	0.237
-4.6	0.257
-4.8	0.278
-5	0.299
-5.2	0.322
-5.4	0.345
-5.6	0.369
-5.8	0.394
-6	0.423
-6.2	0.454
-6.4	0.486
-6.6	0.519
-6.8	0.553
-7	0.589
-7.2	0.625
-7.4	0.663
-7.6	0.703
-7.8	0.743
-8	0.785
-8.2	0.799
-8.4	0.808
-8.6	0.811
-8.8	0.811
-9	0.809
-9.2	0.8
-9.4	0.786
-9.6	0.767
-9.8	0.741
-10	0.71
-10.2	0.673
-10.4	0.617
-10.6	0.555
-10.8	0.488
-11	0.427
-11.2	0.362
-11.4	0.292
-11.6	0.218
-11.8	0.256
-12	0.292
-12.2	0.326
-12.4	0.357
-12.6	0.383



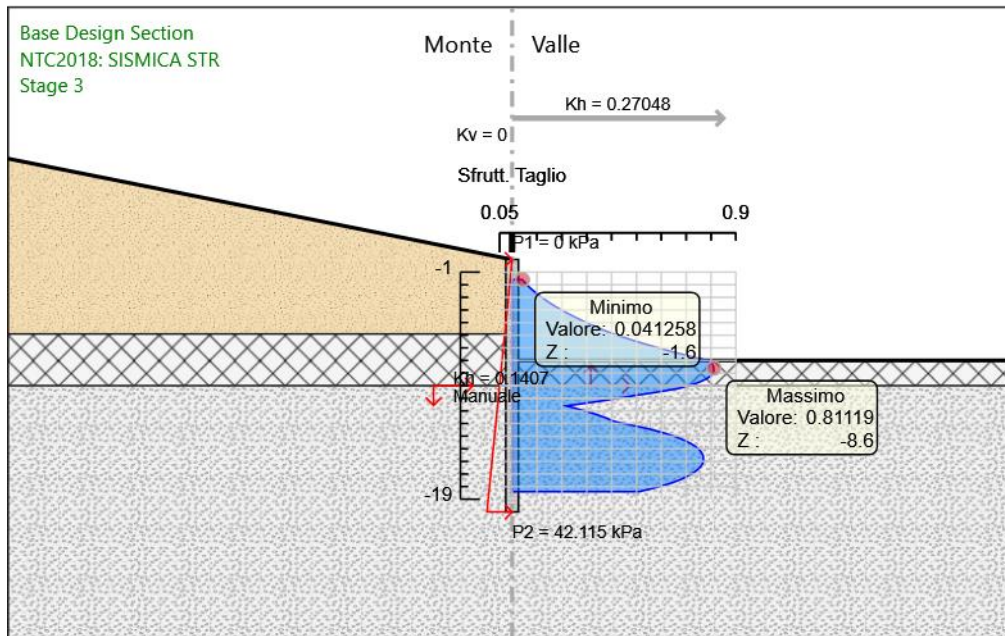
LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	242 di 731

Involuppi Tasso di Sfruttamento a Taglio - Caver		LEFT
Z (m)	Tasso di Sfruttamento a Taglio - Caver	
-12.8	0.406	
-13	0.449	
-13.2	0.499	
-13.4	0.544	
-13.6	0.585	
-13.8	0.62	
-14	0.651	
-14.2	0.678	
-14.4	0.701	
-14.6	0.72	
-14.8	0.736	
-15	0.749	
-15.2	0.758	
-15.4	0.765	
-15.6	0.769	
-15.8	0.769	
-16	0.769	
-16.2	0.765	
-16.4	0.759	
-16.6	0.749	
-16.8	0.736	
-17	0.721	
-17.2	0.703	
-17.4	0.682	
-17.6	0.656	
-17.8	0.626	
-18	0.592	
-18.2	0.553	
-18.4	0.511	

8.2.10. Grafico Inviluppi Tasso di Sfruttamento a Taglio - Caver



-40 m



-40 m

Inviluppi
Tasso di Sfruttamento a Taglio - Caver



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	244 di 731



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	245 di 731

9. Allegati

9.1. Design Assumption : Nominal - File di Paratie - File di input (.d)

```
* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: Nominal
* Time:giovedì 17 novembre 2022 18:38:01
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control contact lagrange

option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_910 0 -20 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_910 -20 0 1 0
SOIL 0_R LeftWall_910 -20 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Arenariepococementate_2_12_L_0)
*
LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
ATREST 0.4 0.5 0
WEIGHT 19 9 10
PERMEABILITY 5E-05
RESISTANCE 0 37 0 0 0
TZDATA LINEAR 10000 0 25 0.5 0
KSCALE 0 0
YOUNG 20000 32000
ENDL
*
* Soil Profile (Argillamarnosal_1057_1068_L_0)
*
LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
ATREST 0.562 0.5 1
WEIGHT 20 10 10
PERMEABILITY 1E-05
RESISTANCE 10 26 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 90000 1.44E+05
ENDL
*
* Soil Profile (Argillamarnosal_1061_1069_L_0)
*
LDATA Argillamarnosal_1061_1069_L_0 -10 LeftWall_910
ATREST 0.485 0 1
WEIGHT 20.5 10.5 10
PERMEABILITY 5E-05
RESISTANCE 20 24 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 1E+05 1.6E+05
ENDL

* 5: Defining structural materials
* Steel material: 988 Name=Fe360 E=206000200 kPa
MATERIAL Fe360_988 2.06E+08
* Concrete material: 984 Name=C25/30 E=31475800 kPa
MATERIAL C2530_984 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
** rev 2021 and later
BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0

* 6.2: Supports
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	246 di 731

* 6.3: Strips

* 7: Defining Steps

STEP Stage0_3964977

```
CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

STEP Stage1_909

```
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ADD WallElement_911
ENDSTEP
```

STEP Stage2_1078

```
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

STEP Stage3_3941534

```
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
CHANGE Arenariepococementate_2_12_L_0 U-KAED=0.35322 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KAEW=0.53946 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KPED=10.991 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KPEW=10.24 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KAED=0.27146 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KAEW=0.4044 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KPED=5.696 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KPEW=4.8732 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KAED=0.59404 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KAEW=1.1988 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KPED=4.7791 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KPEW=4.4184 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KAED=0.41648 LeftWall_910
```



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	247 di 731

```

CHANGE Argillamarnosa1_1057_1068_L_0 D-KAEW=0.58754 LeftWall_910
CHANGE Argillamarnosa1_1057_1068_L_0 D-KPED=2.7982 LeftWall_910
CHANGE Argillamarnosa1_1057_1068_L_0 D-KPEW=2.2962 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 U-KAED=0.66041 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 U-KAEW=1.1977 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 U-KPED=4.1808 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 U-KPEW=3.8704 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 D-KAED=0.44995 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 D-KAEW=0.62658 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 D-KPED=2.4924 LeftWall_910
CHANGE Argillamarnosa1_1061_1069_L_0 D-KPEW=2.0341 LeftWall_910
EQK USER 0.1407 0.07035 -0.07035 11.31 0.667 0 0.5 0 0
* Defining seismic surcharge pressures on wall LeftWall_910
*   min elevation = -20
*   max elevation = 0
*   average gamma = 19,955
*   kh = 0,1407
*   deltaQ = 421,150275
DLOAD step LeftWall_910 -20 42.115 0 0
* Include pressure contribution from wall: LeftWall_910
* Include wall contribution
DLOAD step LeftWall_910 -20 2.3022 0 2.3022
ENDSTEP
  
```

9.2. Design Assumption : Nominal - File di Paratie - File di output (.out)

```

-----
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
|                               ParatiePlus                                                    |
|                               Exe Time :17 November 2022 18:38:02                            |
|                                                                                               |
-----
  
```

```

*****
*                                                                                               *
* PARATIE PLUS Non-Linear Spring Engine                                                         *
*                                                                                               *
*           AN ELASTOPLASTIC FINITE ELEMENT PROGRAM                                           *
*           FOR FLEXIBLE EARTH-RETAINING STRUCTURES                                           *
*                                                                                               *
*****
*                                                                                               *
* RELEASE 2022.0.0 *Build date:Jan 24, 2022*                                                 *
*                                                                                               *
* HARPACEAS S.R.L.                                                                              *
*           M I L A N O (ITALY)                                                                *
*****
  
```

```

JOB : ParatiePlus
STARTING
ACCEPTED <FILE,GENW                                     >;
ACCEPTED <FILE,PLOTTER,BINARY                           >;
ACCEPTED <SOLVE TOTAL_STRESS                           >;
ACCEPTED <PARAM ITEMAX 40                               >;
ACCEPTED <CONTROL CONTACT LAGRANGE                     >;
ACCEPTED <CONTROL HINGES 0 0.0001 0.001                >;
  
```

```

*****
*                                                                                               *
* WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED                                         *
*           BY THE PROGRAM.                                                                     *
*****
  
```

PRELIMINARY OPERATIONS CPU TIME 0.00 [sec]



**LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	248 di 731

```

-----+-----
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022 18:38:02           |
|-----+-----
  
```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

```

NO. OF NODAL POINTS (NUMNP) ..... 101
NO. OF COORDINATES (NCOORD) ..... 2
NO. OF NODE DOFS (NDOF) ..... 2
NO. OF EQUATIONS (NEQ) ..... 202
NO. OF CONSTRAINTS CARDS (NVINC) ..... 0
NO. OF ELEMENT GROUPS (NEG) ..... 3
NO. OF SOLUTION STEPS (NSTE) ..... 4
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ... 0
NO. OF RECORD FROM WALGEN ..... 121
NO. OF LONG NAMES (LASTNAME) ..... 17
LENGTH UNIT CHOICE ..... 3 (M )
FORCE UNIT CHOICE ..... 3 (KN )
MAX PORE PRESSURE TABLE LENGTH ..... 1
MAX INELASTIC DISPL. TABLE LENGTH ..... 0
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF . 0
  
```

IDOFA (01) = 2 Y-DISPL.F
IDOFA (02) = 4 X-ROT. F

RELEVANT ITEMS UNITS

```

STRESSES                kPa
Y-DISPLACEMENTS        m
ROTATIONS               RADIANs
BEAM AND SLAB MOMENTS   kN*m/m
BEAM SHEAR FORCES       kN/m
ANCHOR FORCES           kN/m
AXIAL FORCES IN TRUSSES kN/m
AXIAL FORCES SPRINGS    kN/m
Y-REACTIONS             kN/m
X-MOMENT REACTIONS      kN*m/m
ETC.
  
```




LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	249 di 731

```

-----
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
|
|                                     ParatiePlus
|                                     Exe Time :17 November 2022  18:38:02
|
-----

```

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 121

```

1 : UNIT m kN
2 : TITLE New Project
3 : DELTA 0.2
4 : option param itemax 40
5 : option control contact lagrange
6 : option control hinges 0 0.0001 0.001
7 : WALL LeftWall_910 0 -20 0 1
8 : SOIL 0_L LeftWall_910 -20 0 1 0
9 : SOIL 0_R LeftWall_910 -20 0 2 180
10 : LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
11 : ATREST 0.4 0.5 0
12 : WEIGHT 19 9 10
13 : PERMEABILITY 5E-05
14 : RESISTANCE 0 37 0 0 0
15 : TZDATA LINEAR 10000 0 25 0.5 0
16 : KSCALE 0 0
17 : YOUNG 20000 32000
18 : ENDL
19 : LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
20 : ATREST 0.562 0.5 1
21 : WEIGHT 20 10 10
22 : PERMEABILITY 1E-05
23 : RESISTANCE 10 26 0 0 0
24 : TZDATA LINEAR 0 0 0 0.5 0
25 : KSCALE 0 0
26 : YOUNG 90000 1.44E+05
27 : ENDL
28 : LDATA Argillamarnosa_1061_1069_L_0 -10 LeftWall_910
29 : ATREST 0.485 0 1
30 : WEIGHT 20.5 10.5 10
31 : PERMEABILITY 5E-05
32 : RESISTANCE 20 24 0 0 0
33 : TZDATA LINEAR 0 0 0 0.5 0
34 : KSCALE 0 0
35 : YOUNG 1E+05 1.6E+05
36 : ENDL
37 : MATERIAL Fe360_988 2.06E+08
38 : MATERIAL C2530_984 3.1476E+07
39 : BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0
40 : STEP Stage0_3964977
41 : CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
42 : CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
43 : CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
44 : CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
45 : CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
46 : CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
47 : CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
48 : CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
49 : CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
50 : CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
51 : CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
52 : CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
53 : CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
54 : CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
55 : CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
56 : CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
57 : CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
58 : CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
59 : CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
60 : CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
61 : CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
62 : CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
63 : CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
64 : CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
65 : CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
66 : CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910

```

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	250 di 731

```

67 : CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
68 : CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
69 : CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
70 : CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
71 : SETWALL LeftWall_910
72 : GEOM 0 0
73 : SURCHARGE 0 0 0 0
74 : WATER -40 0 -20 0 0
75 : ENDSTEP
76 : STEP Stage1_909
77 : SETWALL LeftWall_910
78 : GEOM 0 0
79 : SURCHARGE 0 0 0 0
80 : WATER -40 0 -20 0 0
81 : ADD WallElement_911
82 : ENDSTEP
83 : STEP Stage2_1078
84 : SETWALL LeftWall_910
85 : GEOM 0 -8
86 : SURCHARGE 0 0 0 0
87 : WATER -40 0 -20 0 0
88 : ENDSTEP
89 : STEP Stage3_3941534
90 : SETWALL LeftWall_910
91 : GEOM 0 -8
92 : SURCHARGE 0 0 0 0
93 : WATER -40 0 -20 0 0
94 : CHANGE Arenariepococementate_2_12_L_0 U-KAED=0.35322 LeftWall_910
95 : CHANGE Arenariepococementate_2_12_L_0 U-KAEW=0.53946 LeftWall_910
96 : CHANGE Arenariepococementate_2_12_L_0 U-KPED=10.991 LeftWall_910
97 : CHANGE Arenariepococementate_2_12_L_0 U-KPEW=10.24 LeftWall_910
98 : CHANGE Arenariepococementate_2_12_L_0 D-KAED=0.27146 LeftWall_910
99 : CHANGE Arenariepococementate_2_12_L_0 D-KAEW=0.4044 LeftWall_910
100 : CHANGE Arenariepococementate_2_12_L_0 D-KPED=5.696 LeftWall_910
101 : CHANGE Arenariepococementate_2_12_L_0 D-KPEW=4.8732 LeftWall_910
102 : CHANGE Argillamarnosal_1057_1068_L_0 U-KAED=0.59404 LeftWall_910
103 : CHANGE Argillamarnosal_1057_1068_L_0 U-KAEW=1.1988 LeftWall_910
104 : CHANGE Argillamarnosal_1057_1068_L_0 U-KPED=4.7791 LeftWall_910
105 : CHANGE Argillamarnosal_1057_1068_L_0 U-KPEW=4.4184 LeftWall_910
106 : CHANGE Argillamarnosal_1057_1068_L_0 D-KAED=0.41648 LeftWall_910
107 : CHANGE Argillamarnosal_1057_1068_L_0 D-KAEW=0.58754 LeftWall_910
108 : CHANGE Argillamarnosal_1057_1068_L_0 D-KPED=2.7982 LeftWall_910
109 : CHANGE Argillamarnosal_1057_1068_L_0 D-KPEW=2.2962 LeftWall_910
110 : CHANGE Argillamarnosa_1061_1069_L_0 U-KAED=0.66041 LeftWall_910
111 : CHANGE Argillamarnosa_1061_1069_L_0 U-KAEW=1.1977 LeftWall_910
112 : CHANGE Argillamarnosa_1061_1069_L_0 U-KPED=4.1808 LeftWall_910
113 : CHANGE Argillamarnosa_1061_1069_L_0 U-KPEW=3.8704 LeftWall_910
114 : CHANGE Argillamarnosa_1061_1069_L_0 D-KAED=0.44995 LeftWall_910
115 : CHANGE Argillamarnosa_1061_1069_L_0 D-KAEW=0.62658 LeftWall_910
116 : CHANGE Argillamarnosa_1061_1069_L_0 D-KPED=2.4924 LeftWall_910
117 : CHANGE Argillamarnosa_1061_1069_L_0 D-KPEW=2.0341 LeftWall_910
118 : EQK USER 0.1407 0.07035 -0.07035 11.31 0.667 0 0.5 0 0
119 : DLOAD step LeftWall_910 -20 42.115 0 0
120 : DLOAD step LeftWall_910 -20 2.3022 0 2.3022
121 : ENDSTEP

```




LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 252 di 731
------------------	-------------	-----------	----------------	----------------------	----------	----------------------

```

+-----+
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022* |
|          |
|                               ParatiePlus |
|          |
|                               Exe Time :17 November 2022 18:38:02 |
+-----+
  
```

ELEMENT GROUP NO. 1

```

0_L          :
 5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....
  
```

element group behaviour throughout stage analysis

```

stage  status
-----
  1  active
  2  active
  3  active
  4  active
  
```

material set no. 1

```

prop( 1) angle      0.00000
prop( 2) layer as foreseen 1.00000
  
```

material set no. 2

```

prop( 1) angle      0.00000
prop( 2) layer as foreseen 2.00000
  
```

material set no. 3

```

prop( 1) angle      0.00000
prop( 2) layer as foreseen 3.00000
  
```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	1	0.2000	0.000	0.000	0.000	1.000
16	16	1	0.2000	0.000	0.000	0.000	1.000
17	17	1	0.2000	0.000	0.000	0.000	1.000
18	18	1	0.2000	0.000	0.000	0.000	1.000
19	19	1	0.2000	0.000	0.000	0.000	1.000
20	20	1	0.2000	0.000	0.000	0.000	1.000
21	21	1	0.2000	0.000	0.000	0.000	1.000
22	22	1	0.2000	0.000	0.000	0.000	1.000
23	23	1	0.2000	0.000	0.000	0.000	1.000
24	24	1	0.2000	0.000	0.000	0.000	1.000
25	25	1	0.2000	0.000	0.000	0.000	1.000
26	26	1	0.2000	0.000	0.000	0.000	1.000
27	27	1	0.2000	0.000	0.000	0.000	1.000
28	28	1	0.2000	0.000	0.000	0.000	1.000
29	29	1	0.2000	0.000	0.000	0.000	1.000
30	30	1	0.2000	0.000	0.000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	253 di 731

31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	3	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.2000	0.000	0.000	0.000	1.000
62	62	3	0.2000	0.000	0.000	0.000	1.000
63	63	3	0.2000	0.000	0.000	0.000	1.000
64	64	3	0.2000	0.000	0.000	0.000	1.000
65	65	3	0.2000	0.000	0.000	0.000	1.000
66	66	3	0.2000	0.000	0.000	0.000	1.000
67	67	3	0.2000	0.000	0.000	0.000	1.000
68	68	3	0.2000	0.000	0.000	0.000	1.000
69	69	3	0.2000	0.000	0.000	0.000	1.000
70	70	3	0.2000	0.000	0.000	0.000	1.000
71	71	3	0.2000	0.000	0.000	0.000	1.000
72	72	3	0.2000	0.000	0.000	0.000	1.000
73	73	3	0.2000	0.000	0.000	0.000	1.000
74	74	3	0.2000	0.000	0.000	0.000	1.000
75	75	3	0.2000	0.000	0.000	0.000	1.000
76	76	3	0.2000	0.000	0.000	0.000	1.000
77	77	3	0.2000	0.000	0.000	0.000	1.000
78	78	3	0.2000	0.000	0.000	0.000	1.000
79	79	3	0.2000	0.000	0.000	0.000	1.000
80	80	3	0.2000	0.000	0.000	0.000	1.000
81	81	3	0.2000	0.000	0.000	0.000	1.000
82	82	3	0.2000	0.000	0.000	0.000	1.000
83	83	3	0.2000	0.000	0.000	0.000	1.000
84	84	3	0.2000	0.000	0.000	0.000	1.000
85	85	3	0.2000	0.000	0.000	0.000	1.000
86	86	3	0.2000	0.000	0.000	0.000	1.000
87	87	3	0.2000	0.000	0.000	0.000	1.000
88	88	3	0.2000	0.000	0.000	0.000	1.000
89	89	3	0.2000	0.000	0.000	0.000	1.000
90	90	3	0.2000	0.000	0.000	0.000	1.000
91	91	3	0.2000	0.000	0.000	0.000	1.000
92	92	3	0.2000	0.000	0.000	0.000	1.000
93	93	3	0.2000	0.000	0.000	0.000	1.000
94	94	3	0.2000	0.000	0.000	0.000	1.000
95	95	3	0.2000	0.000	0.000	0.000	1.000
96	96	3	0.2000	0.000	0.000	0.000	1.000
97	97	3	0.2000	0.000	0.000	0.000	1.000
98	98	3	0.2000	0.000	0.000	0.000	1.000
99	99	3	0.2000	0.000	0.000	0.000	1.000
100	100	3	0.2000	0.000	0.000	0.000	1.000
101	101	3	0.1000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 254 di 731
------------------	-------------	-----------	----------------	----------------------	----------	----------------------

```

+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:02                                                                 |
+-----+
  
```

ELEMENT GROUP NO. 2

```

0_R          :
 5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....
  
```

element group behaviour throughout stage analysis

stage status

```

-----
 1 active
 2 active
 3 active
 4 active
  
```

material set no. 1

```

prop( 1) angle          180.000
prop( 2) layer as foreseen 1.00000
  
```

material set no. 2

```

prop( 1) angle          180.000
prop( 2) layer as foreseen 2.00000
  
```

material set no. 3

```

prop( 1) angle          180.000
prop( 2) layer as foreseen 3.00000
  
```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	1	0.2000	0.000	0.000	0.000	2.000
16	16	1	0.2000	0.000	0.000	0.000	2.000
17	17	1	0.2000	0.000	0.000	0.000	2.000
18	18	1	0.2000	0.000	0.000	0.000	2.000
19	19	1	0.2000	0.000	0.000	0.000	2.000
20	20	1	0.2000	0.000	0.000	0.000	2.000
21	21	1	0.2000	0.000	0.000	0.000	2.000
22	22	1	0.2000	0.000	0.000	0.000	2.000
23	23	1	0.2000	0.000	0.000	0.000	2.000
24	24	1	0.2000	0.000	0.000	0.000	2.000
25	25	1	0.2000	0.000	0.000	0.000	2.000
26	26	1	0.2000	0.000	0.000	0.000	2.000
27	27	1	0.2000	0.000	0.000	0.000	2.000
28	28	1	0.2000	0.000	0.000	0.000	2.000
29	29	1	0.2000	0.000	0.000	0.000	2.000
30	30	1	0.2000	0.000	0.000	0.000	2.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	255 di 731

31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	3	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.2000	0.000	0.000	0.000	2.000
62	62	3	0.2000	0.000	0.000	0.000	2.000
63	63	3	0.2000	0.000	0.000	0.000	2.000
64	64	3	0.2000	0.000	0.000	0.000	2.000
65	65	3	0.2000	0.000	0.000	0.000	2.000
66	66	3	0.2000	0.000	0.000	0.000	2.000
67	67	3	0.2000	0.000	0.000	0.000	2.000
68	68	3	0.2000	0.000	0.000	0.000	2.000
69	69	3	0.2000	0.000	0.000	0.000	2.000
70	70	3	0.2000	0.000	0.000	0.000	2.000
71	71	3	0.2000	0.000	0.000	0.000	2.000
72	72	3	0.2000	0.000	0.000	0.000	2.000
73	73	3	0.2000	0.000	0.000	0.000	2.000
74	74	3	0.2000	0.000	0.000	0.000	2.000
75	75	3	0.2000	0.000	0.000	0.000	2.000
76	76	3	0.2000	0.000	0.000	0.000	2.000
77	77	3	0.2000	0.000	0.000	0.000	2.000
78	78	3	0.2000	0.000	0.000	0.000	2.000
79	79	3	0.2000	0.000	0.000	0.000	2.000
80	80	3	0.2000	0.000	0.000	0.000	2.000
81	81	3	0.2000	0.000	0.000	0.000	2.000
82	82	3	0.2000	0.000	0.000	0.000	2.000
83	83	3	0.2000	0.000	0.000	0.000	2.000
84	84	3	0.2000	0.000	0.000	0.000	2.000
85	85	3	0.2000	0.000	0.000	0.000	2.000
86	86	3	0.2000	0.000	0.000	0.000	2.000
87	87	3	0.2000	0.000	0.000	0.000	2.000
88	88	3	0.2000	0.000	0.000	0.000	2.000
89	89	3	0.2000	0.000	0.000	0.000	2.000
90	90	3	0.2000	0.000	0.000	0.000	2.000
91	91	3	0.2000	0.000	0.000	0.000	2.000
92	92	3	0.2000	0.000	0.000	0.000	2.000
93	93	3	0.2000	0.000	0.000	0.000	2.000
94	94	3	0.2000	0.000	0.000	0.000	2.000
95	95	3	0.2000	0.000	0.000	0.000	2.000
96	96	3	0.2000	0.000	0.000	0.000	2.000
97	97	3	0.2000	0.000	0.000	0.000	2.000
98	98	3	0.2000	0.000	0.000	0.000	2.000
99	99	3	0.2000	0.000	0.000	0.000	2.000
100	100	3	0.2000	0.000	0.000	0.000	2.000
101	101	3	0.1000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 256 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*  |
|                                                                                               |
|                                                                                               |
|                               ParatiePlus                                                     |
|                               Exe Time :17 November 2022  18:38:02                             |
|-----+-----

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ELEMENT GROUP NO. 3

```

WallElement_911
  2 100  0  1  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  1  0
.....
.....2D WALL ELEMENT.....
.....

```

element group behaviour throughout stage analysis

stage status

```

-----
  1  inactive
  2  active
  3  active
  4  active

```

material set no. 1

```

prop( 1) young modulus      0.314800E+08
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future .....      0.00000

```

no. of step variable items: 1
step inertia multiplier

```

-----
  1  1.000
  2  1.000
  3  1.000
  4  1.000

```

element data

el	na	nb	mat	erc1	erc2	thick	area	inertia	wgt(-z)	by-i	by-j
1	1	2	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
2	2	3	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
3	3	4	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
4	4	5	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
5	5	6	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
6	6	7	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
7	7	8	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
8	8	9	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
9	9	10	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
10	10	11	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
11	11	12	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
12	12	13	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
13	13	14	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
14	14	15	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
15	15	16	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
16	16	17	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
17	17	18	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
18	18	19	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
19	19	20	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
20	20	21	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
21	21	22	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
22	22	23	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
23	23	24	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
24	24	25	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
25	25	26	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
26	26	27	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
27	27	28	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
28	28	29	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
29	29	30	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
30	30	31	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
31	31	32	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
32	32	33	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	257 di 731

33	33	34	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
34	34	35	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
35	35	36	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
36	36	37	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
37	37	38	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
38	38	39	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
39	39	40	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
40	40	41	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
41	41	42	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
42	42	43	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
43	43	44	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
44	44	45	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
45	45	46	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
46	46	47	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
47	47	48	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
48	48	49	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
49	49	50	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
50	50	51	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
51	51	52	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
52	52	53	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
53	53	54	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
54	54	55	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
55	55	56	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
56	56	57	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
57	57	58	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
58	58	59	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
59	59	60	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
60	60	61	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
61	61	62	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
62	62	63	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
63	63	64	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
64	64	65	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
65	65	66	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
66	66	67	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
67	67	68	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
68	68	69	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
69	69	70	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
70	70	71	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
71	71	72	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
72	72	73	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
73	73	74	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
74	74	75	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
75	75	76	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
76	76	77	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
77	77	78	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
78	78	79	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
79	79	80	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
80	80	81	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
81	81	82	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
82	82	83	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
83	83	84	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
84	84	85	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
85	85	86	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
86	86	87	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
87	87	88	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
88	88	89	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
89	89	90	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
90	90	91	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
91	91	92	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
92	92	93	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
93	93	94	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
94	94	95	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
95	95	96	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
96	96	97	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
97	97	98	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
98	98	99	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
99	99	100	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
100	100	101	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	258 di 731

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| PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                         |
|                               ParatiePlus                               |
|                               Exe Time :17 November 2022 18:38:02       |
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NO. OF NODAL LOADS (NLOAD) 0
NO. OF LOAD CURVES (NLCUR) 8
MAXIMUM POINTS/LCURVE (NPTM) 5



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	259 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
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|                                                                                               |
|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:02                                               |
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L O A D D A T A

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 4



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	260 di 731

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 7
 NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 8
 NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
5.00000	0.1000E+01

PROCESSING DISTRIBUTED LOADS CARD NO. 1
 AT Y-COORD 0.000 Z-COORD -20.00 PRESSURE 42.12
 Z-COORD 0.000 PRESSURE 0.000
 L.CURVE 4

NO. OF GENERATED NODAL FORCES		101							
NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	
101	-.2000E+02	0.4212000E+01 /	100	-.1980E+02	0.8339760E+01 /	99	-.1960E+02	0.8255520E+01 /	
98	-.1940E+02	0.8171280E+01 /	97	-.1920E+02	0.8087040E+01 /	96	-.1900E+02	0.8002800E+01 /	
95	-.1880E+02	0.7918560E+01 /	94	-.1860E+02	0.7834320E+01 /	93	-.1840E+02	0.7750080E+01 /	
92	-.1820E+02	0.7665840E+01 /	91	-.1800E+02	0.7581600E+01 /	90	-.1780E+02	0.7497547E+01 /	
89	-.1760E+02	0.7413301E+01 /	88	-.1740E+02	0.7328876E+01 /	87	-.1720E+02	0.7244636E+01 /	
86	-.1700E+02	0.7160396E+01 /	85	-.1680E+02	0.7076156E+01 /	84	-.1660E+02	0.6991916E+01 /	
83	-.1640E+02	0.6907676E+01 /	82	-.1620E+02	0.6823436E+01 /	81	-.1600E+02	0.6739196E+01 /	
80	-.1580E+02	0.6654956E+01 /	79	-.1560E+02	0.6570716E+01 /	78	-.1540E+02	0.6486476E+01 /	
77	-.1520E+02	0.6402236E+01 /	76	-.1500E+02	0.6317996E+01 /	75	-.1480E+02	0.6233756E+01 /	
74	-.1460E+02	0.6149516E+01 /	73	-.1440E+02	0.6065276E+01 /	72	-.1420E+02	0.5981036E+01 /	
71	-.1400E+02	0.5896796E+01 /	70	-.1380E+02	0.5812556E+01 /	69	-.1360E+02	0.5728316E+01 /	
68	-.1340E+02	0.5644076E+01 /	67	-.1320E+02	0.5559836E+01 /	66	-.1300E+02	0.5475596E+01 /	
65	-.1280E+02	0.5391356E+01 /	64	-.1260E+02	0.5307116E+01 /	63	-.1240E+02	0.5222876E+01 /	
62	-.1220E+02	0.5138636E+01 /	61	-.1200E+02	0.5054396E+01 /	60	-.1180E+02	0.4970156E+01 /	
59	-.1160E+02	0.4885916E+01 /	58	-.1140E+02	0.4801676E+01 /	57	-.1120E+02	0.4717436E+01 /	
56	-.1100E+02	0.4633196E+01 /	55	-.1080E+02	0.4548956E+01 /	54	-.1060E+02	0.4464716E+01 /	
53	-.1040E+02	0.4380366E+01 /	52	-.1020E+02	0.4296186E+01 /	51	-.1000E+02	0.4212051E+01 /	
50	-.9800E+01	0.4127748E+01 /	49	-.9600E+01	0.4043508E+01 /	48	-.9400E+01	0.3959278E+01 /	
47	-.9200E+01	0.3875038E+01 /	46	-.9000E+01	0.3790798E+01 /	45	-.8800E+01	0.3706549E+01 /	
44	-.8600E+01	0.3622310E+01 /	43	-.8400E+01	0.3538079E+01 /	42	-.8200E+01	0.3453839E+01 /	
41	-.8000E+01	0.3369599E+01 /	40	-.7800E+01	0.3285359E+01 /	39	-.7600E+01	0.3201119E+01 /	
38	-.7400E+01	0.3116879E+01 /	37	-.7200E+01	0.3032631E+01 /	36	-.7000E+01	0.2948392E+01 /	
35	-.6800E+01	0.2864159E+01 /	34	-.6600E+01	0.2779919E+01 /	33	-.6400E+01	0.2695679E+01 /	
32	-.6200E+01	0.2611433E+01 /	31	-.6000E+01	0.2527193E+01 /	30	-.5800E+01	0.2442960E+01 /	
29	-.5600E+01	0.2358720E+01 /	28	-.5400E+01	0.2274480E+01 /	27	-.5200E+01	0.2190234E+01 /	
26	-.5000E+01	0.2105995E+01 /	25	-.4800E+01	0.2021760E+01 /	24	-.4600E+01	0.1937520E+01 /	
23	-.4400E+01	0.1853280E+01 /	22	-.4200E+01	0.1769040E+01 /	21	-.4000E+01	0.1684796E+01 /	
20	-.3800E+01	0.1600556E+01 /	19	-.3600E+01	0.1516320E+01 /	18	-.3400E+01	0.1432080E+01 /	
17	-.3200E+01	0.1347844E+01 /	16	-.3000E+01	0.1263603E+01 /	15	-.2800E+01	0.1179360E+01 /	
14	-.2600E+01	0.1095120E+01 /	13	-.2400E+01	0.1010880E+01 /	12	-.2200E+01	0.9266400E+00 /	
11	-.2000E+01	0.8424000E+00 /	10	-.1800E+01	0.7581600E+00 /	9	-.1600E+01	0.6739200E+00 /	
8	-.1400E+01	0.5896800E+00 /	7	-.1200E+01	0.5054400E+00 /	6	-.1000E+01	0.4212000E+00 /	
5	-.8000E+00	0.3369600E+00 /	4	-.6000E+00	0.2527200E+00 /	3	-.4000E+00	0.1684800E+00 /	
2	-.2000E+00	0.8424000E-01 /	1	0.0000E+00	0.0000000E+00 /				

OVERALL APPLIED Y FORCE FOR CURRENT DISTRIBUTED LOAD 421.20



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 261 di 731
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PROCESSING DISTRIBUTED LOADS CARD NO. 2
 AT Y-COORD 0.000 Z-COORD -20.00 PRESSURE 2.302
 Z-COORD 0.000 PRESSURE 2.302
 L.CURVE 4

NO. OF GENERATED NODAL FORCES 101

NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /
101	-.2000E+02	0.2302000E+00 /	100	-.1980E+02	0.4604000E+00 /	99	-.1960E+02	0.4604000E+00 /
98	-.1940E+02	0.4604000E+00 /	97	-.1920E+02	0.4604000E+00 /	96	-.1900E+02	0.4604000E+00 /
95	-.1880E+02	0.4604000E+00 /	94	-.1860E+02	0.4604000E+00 /	93	-.1840E+02	0.4604000E+00 /
92	-.1820E+02	0.4604000E+00 /	91	-.1800E+02	0.4604000E+00 /	90	-.1780E+02	0.4604115E+00 /
89	-.1760E+02	0.4604115E+00 /	88	-.1740E+02	0.4604000E+00 /	87	-.1720E+02	0.4604000E+00 /
86	-.1700E+02	0.4604000E+00 /	85	-.1680E+02	0.4604000E+00 /	84	-.1660E+02	0.4604000E+00 /
83	-.1640E+02	0.4604000E+00 /	82	-.1620E+02	0.4604000E+00 /	81	-.1600E+02	0.4604000E+00 /
80	-.1580E+02	0.4604000E+00 /	79	-.1560E+02	0.4604000E+00 /	78	-.1540E+02	0.4604000E+00 /
77	-.1520E+02	0.4604000E+00 /	76	-.1500E+02	0.4604000E+00 /	75	-.1480E+02	0.4604000E+00 /
74	-.1460E+02	0.4604000E+00 /	73	-.1440E+02	0.4604000E+00 /	72	-.1420E+02	0.4604000E+00 /
71	-.1400E+02	0.4604000E+00 /	70	-.1380E+02	0.4604000E+00 /	69	-.1360E+02	0.4604000E+00 /
68	-.1340E+02	0.4604000E+00 /	67	-.1320E+02	0.4604000E+00 /	66	-.1300E+02	0.4604000E+00 /
65	-.1280E+02	0.4604000E+00 /	64	-.1260E+02	0.4604000E+00 /	63	-.1240E+02	0.4604000E+00 /
62	-.1220E+02	0.4604000E+00 /	61	-.1200E+02	0.4604000E+00 /	60	-.1180E+02	0.4604000E+00 /
59	-.1160E+02	0.4604000E+00 /	58	-.1140E+02	0.4604000E+00 /	57	-.1120E+02	0.4604000E+00 /
56	-.1100E+02	0.4604000E+00 /	55	-.1080E+02	0.4604000E+00 /	54	-.1060E+02	0.4604000E+00 /
53	-.1040E+02	0.4603988E+00 /	52	-.1020E+02	0.4603942E+00 /	51	-.1000E+02	0.4604058E+00 /
50	-.9800E+01	0.4603988E+00 /	49	-.9600E+01	0.4603988E+00 /	48	-.9400E+01	0.4604000E+00 /
47	-.9200E+01	0.4604000E+00 /	46	-.9000E+01	0.4604000E+00 /	45	-.8800E+01	0.4603988E+00 /
44	-.8600E+01	0.4603988E+00 /	43	-.8400E+01	0.4604000E+00 /	42	-.8200E+01	0.4604000E+00 /
41	-.8000E+01	0.4604000E+00 /	40	-.7800E+01	0.4604000E+00 /	39	-.7600E+01	0.4604000E+00 /
38	-.7400E+01	0.4604000E+00 /	37	-.7200E+01	0.4603988E+00 /	36	-.7000E+01	0.4603988E+00 /
35	-.6800E+01	0.4604000E+00 /	34	-.6600E+01	0.4604000E+00 /	33	-.6400E+01	0.4604000E+00 /
32	-.6200E+01	0.4603988E+00 /	31	-.6000E+01	0.4603988E+00 /	30	-.5800E+01	0.4604000E+00 /
29	-.5600E+01	0.4604000E+00 /	28	-.5400E+01	0.4604000E+00 /	27	-.5200E+01	0.4603988E+00 /
26	-.5000E+01	0.4603988E+00 /	25	-.4800E+01	0.4604000E+00 /	24	-.4600E+01	0.4604000E+00 /
23	-.4400E+01	0.4604000E+00 /	22	-.4200E+01	0.4604000E+00 /	21	-.4000E+01	0.4603988E+00 /
20	-.3800E+01	0.4603988E+00 /	19	-.3600E+01	0.4604000E+00 /	18	-.3400E+01	0.4604000E+00 /
17	-.3200E+01	0.4604012E+00 /	16	-.3000E+01	0.4604012E+00 /	15	-.2800E+01	0.4604000E+00 /
14	-.2600E+01	0.4604000E+00 /	13	-.2400E+01	0.4604000E+00 /	12	-.2200E+01	0.4604000E+00 /
11	-.2000E+01	0.4604000E+00 /	10	-.1800E+01	0.4604000E+00 /	9	-.1600E+01	0.4604000E+00 /
8	-.1400E+01	0.4604000E+00 /	7	-.1200E+01	0.4604000E+00 /	6	-.1000E+01	0.4604000E+00 /
5	-.8000E+00	0.4604000E+00 /	4	-.6000E+00	0.4604000E+00 /	3	-.4000E+00	0.4604000E+00 /
2	-.2000E+00	0.4604000E+00 /	1	0.0000E+00	0.2302000E+00 /			

OVERALL APPLIED Y FORCE FOR CURRENT DISTRIBUTED LOAD 46.040

NO. OF DISTRIBUTED LOAD CARDS 2



**LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	262 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                          ParatiePlus                                  |
|                                                                                          Exe Time :17 November 2022 18:38:02          |
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L O A D B A L A N C E

STEP	1	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	1	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	467.24000
STEP	4	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000

LOAD INPUT SECTION COMPLETED



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	263 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
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|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:02                                                         |
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NO. OF LAYERS 3
NO. OF DATA PER LAYER..... 160



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	264 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022 18:38:02           |
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LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.33100	WALL NO.	1
ITEM NO.	91	D-KP	= 3.4040	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

ITEM NO.	1	NAME	= 14.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -10.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	265 di 731

ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.500	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.500	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.43400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.0960	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.48500	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.36000	WALL NO.	1
ITEM NO.	91	D-KP	= 3.0510	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	266 di 731

ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 10.0000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 26.0000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.33100 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.4040 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPH>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO. 1<NAME >= 14.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -10.000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.500 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 10.500 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 8<U-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.43400 WALL NO. 1
 ITEM NO. 11<U-KP >= 4.0960 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.48500 (BOTH WALLS)
 ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18<EUR >= 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61<U-TZALPH>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.36000 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.0510 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPH>= 0.50000 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO. 1<NAME >= 12.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= 10.000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 9.0000 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 37.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.23300 WALL NO. 1
 ITEM NO. 11<U-KP >= 10.673 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.40000 (BOTH WALLS)
 ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 20000. (BOTH WALLS)
 ITEM NO. 18<EUR >= 32000. (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 58<U-TZKZ >= 10000. (BOTH WALLS)
 ITEM NO. 60<U-TZDELT>= 25.000 (BOTH WALLS)
 ITEM NO. 61<U-TZALPH>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 37.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.20500 WALL NO. 1
 ITEM NO. 91<D-KP >= 6.7380 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138<D-TZKZ >= 10000. (BOTH WALLS)
 ITEM NO. 140<D-TZDELT>= 25.000 (BOTH WALLS)
 ITEM NO. 141<D-TZALPH>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO. 1<NAME >= 13.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -5.9000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.000 (BOTH WALLS)

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	267 di 731

ITEM NO.	6	<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.39400	WALL NO.	1
ITEM NO.	11	<U-KP	>= 4.6760	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.56200	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14	<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 90000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>= 10.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>= 0.33100	WALL NO.	1
ITEM NO.	91	<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	107	<D-PERM	>= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO.	1	<NAME	>= 14.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>= -10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>= 20.500	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>= 10.500	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>= 20.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 24.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.43400	WALL NO.	1
ITEM NO.	11	<U-KP	>= 4.0960	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.48500	(BOTH WALLS)	
ITEM NO.	14	<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>= 20.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>= 24.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>= 0.36000	WALL NO.	1
ITEM NO.	91	<D-KP	>= 3.0510	WALL NO.	1
ITEM NO.	107	<D-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO.	1	<NAME	>= 12.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>= 10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>= 9.0000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 37.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.23300	WALL NO.	1
ITEM NO.	11	<U-KP	>= 10.673	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.40000	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 32000.	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	47	<U-KAED	>= 0.35322	WALL NO.	1
ITEM NO.	48	<U-KAEW	>= 0.53946	WALL NO.	1
ITEM NO.	49	<U-KPED	>= 10.991	WALL NO.	1
ITEM NO.	50	<U-KPEW	>= 10.240	WALL NO.	1
ITEM NO.	58	<U-TZKZ	>= 10000.	(BOTH WALLS)	
ITEM NO.	60	<U-TZDELTA	>= 25.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	268 di 731

ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.20500 WALL NO. 1
 ITEM NO. 91 <D-KP > = 6.7380 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 127 <D-KAED > = 0.27146 WALL NO. 1
 ITEM NO. 128 <D-KAEW > = 0.40440 WALL NO. 1
 ITEM NO. 129 <D-KPED > = 5.6960 WALL NO. 1
 ITEM NO. 130 <D-KPEW > = 4.8732 WALL NO. 1
 ITEM NO. 138 <D-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 140 <D-TZDELTA> = 25.000 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO. 1 <NAME > = 13.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -5.9000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.000 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.000 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 10.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 26.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.39400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.6760 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.56200 (BOTH WALLS)
 ITEM NO. 13 <NEXP > = 0.50000 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 90000. (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.14400E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 47 <U-KAED > = 0.59404 WALL NO. 1
 ITEM NO. 48 <U-KAEW > = 1.1988 WALL NO. 1
 ITEM NO. 49 <U-KPED > = 4.7791 WALL NO. 1
 ITEM NO. 50 <U-KPEW > = 4.4184 WALL NO. 1
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 10.000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 26.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.33100 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.4040 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 127 <D-KAED > = 0.41648 WALL NO. 1
 ITEM NO. 128 <D-KAEW > = 0.58754 WALL NO. 1
 ITEM NO. 129 <D-KPED > = 2.7982 WALL NO. 1
 ITEM NO. 130 <D-KPEW > = 2.2962 WALL NO. 1
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO. 1 <NAME > = 14.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.500 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.500 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.43400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.0960 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.48500 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 47 <U-KAED > = 0.66041 WALL NO. 1
 ITEM NO. 48 <U-KAEW > = 1.1977 WALL NO. 1
 ITEM NO. 49 <U-KPED > = 4.1808 WALL NO. 1
 ITEM NO. 50 <U-KPEW > = 3.8704 WALL NO. 1
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	269 di 731

ITEM NO. 88ϵD-COHE ϵ= 20.000 (BOTH WALLS)
ITEM NO. 89ϵD-FRICT ϵ= 24.000 (BOTH WALLS)
ITEM NO. 90ϵD-KA ϵ= 0.36000 WALL NO. 1
ITEM NO. 91ϵD-KP ϵ= 3.0510 WALL NO. 1
ITEM NO. 107ϵD-PERM ϵ= 0.50000E-04 (BOTH WALLS)
ITEM NO. 127ϵD-KAED ϵ= 0.44995 WALL NO. 1
ITEM NO. 128ϵD-KAEW ϵ= 0.62658 WALL NO. 1
ITEM NO. 129ϵD-KPED ϵ= 2.4924 WALL NO. 1
ITEM NO. 130ϵD-KPEW ϵ= 2.0341 WALL NO. 1
ITEM NO. 141ϵD-TZALPHϵ= 0.50000 (BOTH WALLS)

DEFAULT WATER UNIT WEIGHT = 10.000
AVERAGED ON 12 VALUES



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 270 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                           |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:02          |
|-----+-----
  
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PHASE DESCRIPTORS

STEP NO.	1 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000
DYN.WATER BEHAVIOUR			0.000	0.000
Excess pore pressure RATIO Ru			0.000	0.000
SEISMIC PRESSURE LOWER VALUE			0.000	0.000
SEISMIC PRESSURE UPPER VALUE			0.000	0.000
SEISMIC PRESSURE LOWER LEVEL			0.000	0.000
SEISMIC PRESSURE UPPER LEVEL			0.000	0.000

=====
 =====end of step 1

STEP NO.	2 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	271 di 731

DYN.WATER BEHAVIOUR	0.000	0.000
Excess pore pressure RATIO Ru	0.000	0.000
SEISMIC PRESSURE LOWER VALUE	0.000	0.000
SEISMIC PRESSURE UPPER VALUE	0.000	0.000
SEISMIC PRESSURE LOWER LEVEL	0.000	0.000
SEISMIC PRESSURE UPPER LEVEL	0.000	0.000

=====end of step 2

STEP NO.	3 no. of subincrements	1	
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-8.000	0.000
Z-WATER_TABLE		-40.000	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		0.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		0.000	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.000	-20.000
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
UPHILL DELTA/PHI RATIO		0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000
SEISMIC PRESSURE LOWER VALUE		0.000	0.000
SEISMIC PRESSURE UPPER VALUE		0.000	0.000
SEISMIC PRESSURE LOWER LEVEL		0.000	0.000
SEISMIC PRESSURE UPPER LEVEL		0.000	0.000

=====end of step 3

STEP NO.	4 no. of subincrements	1	
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-8.000	0.000
Z-WATER_TABLE		-40.000	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		0.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		0.000	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.000	-20.000
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		-0.1407	0.000
		MANUAL	
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.7035E-01	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		-0.7035E-01	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		11.31	0.000
UPHILL DELTA/PHI RATIO		0.6670	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.5000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	272 di 731

SEISMIC PRESSURE LOWER VALUE 0.000 0.000
 SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====end of step 4

LEFT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

RIGHT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
 POSITION 5881

NO. OF D.P.W FOR THIS AREA 15427
 MAX NO. OF D.P.W. AVAILABLE 81920
 ** MAX NO OF ITERATIONS SET TO 40

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	273 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                       |
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|                                                                                                       |
|          ParatiePlus                                                                                                       |
|          Exe Time :17 November 2022 18:38:02                                                                                   |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 1 (AT TIME 1.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	275 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	1.5043E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	1.5043E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	1.5043E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	1.5043E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	1.5043E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	1.5043E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	1.5043E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	1.5043E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	1.5043E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	1.5043E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	1.5043E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	1.5043E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	1.5043E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	5.4011E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	5.4011E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	5.4011E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	5.4011E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	5.4011E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	5.4011E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	5.4011E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	5.4011E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	5.4011E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	5.4011E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	5.4011E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	5.4011E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	5.4011E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	5.4011E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	276 di 731
1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 5.4011E+04	-8.800	0.000		1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 5.4011E+04	-9.000	0.000		1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 5.4011E+04	-9.200	0.000		1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 5.4011E+04	-9.400	0.000		1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 5.4011E+04	-9.600	0.000		1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 5.4011E+04	-9.800	0.000		1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 5.4011E+04	-10.00	0.000		1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 5.7745E+04	-10.20	0.000		1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 5.7745E+04	-10.40	0.000		1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 5.7745E+04	-10.60	0.000		1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 5.7745E+04	-10.80	0.000		1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 5.7745E+04	-11.00	0.000		1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 5.7745E+04	-11.20	0.000		1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 5.7745E+04	-11.40	0.000		1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 5.7745E+04	-11.60	0.000		1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 5.7745E+04	-11.80	0.000		1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 5.7745E+04	-12.00	0.000		1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 5.7745E+04	-12.20	0.000		1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 5.7745E+04	-12.40	0.000		1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 5.7745E+04	-12.60	0.000		1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 5.7745E+04	-12.80	0.000		1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 5.7745E+04	-13.00	0.000		1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 5.7745E+04	-13.20	0.000		1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 5.7745E+04	-13.40	0.000		1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 5.7745E+04	-13.60	0.000		1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 5.7745E+04	-13.80	0.000		1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	280 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	7479.	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	7479.	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	7479.	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	7479.	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	7479.	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	7479.	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	7479.	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	7479.	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	7479.	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	7479.	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	7479.	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	7479.	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	7479.	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	4.2179E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	4.2179E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	4.2179E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	4.2179E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	4.2179E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	4.2179E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	4.2179E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	4.2179E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	4.2179E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	4.2179E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	4.2179E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	4.2179E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	4.2179E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	4.2179E+04	-8.600	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	281 di 731

1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 4.2179E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 4.2179E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 4.2179E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 4.2179E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 4.2179E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 4.2179E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 4.2179E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 4.8706E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 4.8706E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 4.8706E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 4.8706E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 4.8706E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 4.8706E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 4.8706E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 4.8706E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 4.8706E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 4.8706E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 4.8706E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 4.8706E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 4.8706E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 4.8706E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 4.8706E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 4.8706E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 4.8706E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 4.8706E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 4.8706E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	284 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*
|
|
|          ParatiePlus
|          Exe Time :17 November 2022 18:38:02
|
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
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***** NO ONE ELEMENT ACTIVE AT CURRENT STEP *****

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ITER 0 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE    1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0

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ITER 1 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE    1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0

```

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ITER 2 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE    1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0

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LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	285 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
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|                                                                                                     |
|          Exe Time :17 November 2022 18:38:02          |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F	X-ROT. F
02	04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 286 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|
|          ParatiePlus
|          Exe Time :17 November 2022  18:38:02
|
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New Project

STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	UL-RL	2.4068E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	UL-RL	2.4068E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	UL-RL	2.4068E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	UL-RL	2.4068E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	UL-RL	2.4068E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	UL-RL	2.4068E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	UL-RL	2.4068E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	UL-RL	2.4068E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	UL-RL	2.4068E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	UL-RL	2.4068E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	UL-RL	2.4068E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	UL-RL	2.4068E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	UL-RL	2.4068E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	UL-RL	2.4068E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	UL-RL	2.4068E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	UL-RL	2.4068E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	UL-RL	2.4068E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	287 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	2.4068E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	2.4068E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	2.4068E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	2.4068E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	2.4068E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	2.4068E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	2.4068E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	2.4068E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	2.4068E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	2.4068E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	2.4068E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	2.4068E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	2.4068E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	8.6418E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	8.6418E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	8.6418E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	8.6418E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	8.6418E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	8.6418E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	8.6418E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	8.6418E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	8.6418E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	8.6418E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	8.6418E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	8.6418E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	8.6418E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	8.6418E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	288 di 731
1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL	8.6418E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL	8.6418E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL	8.6418E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL	8.6418E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL	8.6418E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL	8.6418E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL	8.6418E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL	9.2392E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL	9.2392E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL	9.2392E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL	9.2392E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL	9.2392E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL	9.2392E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL	9.2392E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL	9.2392E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL	9.2392E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL	9.2392E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL	9.2392E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL	9.2392E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL	9.2392E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL	9.2392E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL	9.2392E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL	9.2392E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL	9.2392E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL	9.2392E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL	9.2392E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 291 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|          ParatiePlus
|          Exe Time :17 November 2022  18:38:02
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	UL-RL	1.1966E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	UL-RL	1.1966E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	UL-RL	1.1966E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	UL-RL	1.1966E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	UL-RL	1.1966E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	UL-RL	1.1966E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	UL-RL	1.1966E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	UL-RL	1.1966E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	UL-RL	1.1966E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	UL-RL	1.1966E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	UL-RL	1.1966E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	UL-RL	1.1966E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	UL-RL	1.1966E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	UL-RL	1.1966E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	UL-RL	1.1966E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	UL-RL	1.1966E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	UL-RL	1.1966E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	292 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	1.1966E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	1.1966E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	1.1966E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	1.1966E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	1.1966E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	1.1966E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	1.1966E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	1.1966E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	1.1966E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	1.1966E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	1.1966E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	1.1966E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	1.1966E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	6.7486E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	6.7486E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	6.7486E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	6.7486E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	6.7486E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	6.7486E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	6.7486E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	6.7486E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	6.7486E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	6.7486E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	6.7486E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	6.7486E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	6.7486E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	6.7486E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	293 di 731

1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 6.7486E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 6.7486E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 6.7486E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 6.7486E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 6.7486E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 6.7486E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 6.7486E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 7.7929E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 7.7929E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 7.7929E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 7.7929E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 7.7929E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 7.7929E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 7.7929E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 7.7929E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 7.7929E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 7.7929E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 7.7929E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 7.7929E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 7.7929E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 7.7929E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 7.7929E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 7.7929E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 7.7929E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 7.7929E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 7.7929E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	296 di 731

| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
| | |
| ParatiePlus |
Exe Time :17 November 2022 18:38:02

New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000
57	0.0000	0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	297 di 731

58	0.0000	0.0000	0.0000	0.0000
59	0.0000	0.0000	0.0000	0.0000
60	0.0000	0.0000	0.0000	0.0000
61	0.0000	0.0000	0.0000	0.0000
62	0.0000	0.0000	0.0000	0.0000
63	0.0000	0.0000	0.0000	0.0000
64	0.0000	0.0000	0.0000	0.0000
65	0.0000	0.0000	0.0000	0.0000
66	0.0000	0.0000	0.0000	0.0000
67	0.0000	0.0000	0.0000	0.0000
68	0.0000	0.0000	0.0000	0.0000
69	0.0000	0.0000	0.0000	0.0000
70	0.0000	0.0000	0.0000	0.0000
71	0.0000	0.0000	0.0000	0.0000
72	0.0000	0.0000	0.0000	0.0000
73	0.0000	0.0000	0.0000	0.0000
74	0.0000	0.0000	0.0000	0.0000
75	0.0000	0.0000	0.0000	0.0000
76	0.0000	0.0000	0.0000	0.0000
77	0.0000	0.0000	0.0000	0.0000
78	0.0000	0.0000	0.0000	0.0000
79	0.0000	0.0000	0.0000	0.0000
80	0.0000	0.0000	0.0000	0.0000
81	0.0000	0.0000	0.0000	0.0000
82	0.0000	0.0000	0.0000	0.0000
83	0.0000	0.0000	0.0000	0.0000
84	0.0000	0.0000	0.0000	0.0000
85	0.0000	0.0000	0.0000	0.0000
86	0.0000	0.0000	0.0000	0.0000
87	0.0000	0.0000	0.0000	0.0000
88	0.0000	0.0000	0.0000	0.0000
89	0.0000	0.0000	0.0000	0.0000
90	0.0000	0.0000	0.0000	0.0000
91	0.0000	0.0000	0.0000	0.0000
92	0.0000	0.0000	0.0000	0.0000
93	0.0000	0.0000	0.0000	0.0000
94	0.0000	0.0000	0.0000	0.0000
95	0.0000	0.0000	0.0000	0.0000
96	0.0000	0.0000	0.0000	0.0000
97	0.0000	0.0000	0.0000	0.0000
98	0.0000	0.0000	0.0000	0.0000
99	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.1602E+05 REMNOR= 0.000 RATIO =0.5113 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5113 RATIO= 0.000
 MAX UN= 17.32 IEQ= 81 NODE 41 DOF 1 Y-DISPL.F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 503.4 REMNOR=0.9692E-18 RATIO =0.9063E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.9063E-01 RATIO= 0.000
 MAX UN= 6.564 IEQ= 61 NODE 31 DOF 1 Y-DISPL.F
 MIN UN=-.1502E-08 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1103. REMNOR=0.2276E-16 RATIO =0.1342 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1342 RATIO= 0.000
 MAX UN= 18.93 IEQ= 85 NODE 43 DOF 1 Y-DISPL.F
 MIN UN=-.2222E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	298 di 731

ITER 4 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 76.02 REMNOR=0.2342E-16 RATIO =0.3522E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.3522E-01 RATIO= 0.000
 MAX UN= 6.545 IEQ= 95 NODE 48 DOF 1 Y-DISPL.F
 MIN UN=-.1757E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1.634 REMNOR=0.8775E-17 RATIO =0.5164E-02 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5164E-02 RATIO= 0.000
 MAX UN= 1.139 IEQ= 99 NODE 50 DOF 1 Y-DISPL.F
 MIN UN=-.1767E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 6 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.2226E-14 REMNOR=0.5797E-17 RATIO =0.1906E-09 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1906E-09 RATIO= 0.000
 MAX UN=0.1596E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 MIN UN=-.1821E-07 IEQ= 7 NODE 4 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 299 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022  18:38:02          |
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New Project
SOLUTION REACHED USING 6 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	4.6573506E-02	-4.0866567E-03
2	4.5756175E-02	-4.0866567E-03
3	4.4938844E-02	-4.0866540E-03
4	4.4121514E-02	-4.0866402E-03
5	4.3304189E-02	-4.0866017E-03
6	4.2486876E-02	-4.0865192E-03
7	4.1669586E-02	-4.0863679E-03
8	4.0852336E-02	-4.0861176E-03
9	4.0035148E-02	-4.0857326E-03
10	3.9218054E-02	-4.0851715E-03
11	3.8401094E-02	-4.0843877E-03
12	3.7584318E-02	-4.0833288E-03
13	3.6767785E-02	-4.0819372E-03
14	3.5951569E-02	-4.0801495E-03
15	3.5135756E-02	-4.0778970E-03
16	3.4320446E-02	-4.0751055E-03
17	3.3505751E-02	-4.0716951E-03
18	3.2691811E-02	-4.0675806E-03
19	3.1878772E-02	-4.0626714E-03
20	3.1066802E-02	-4.0568710E-03
21	3.0256094E-02	-4.0500778E-03
22	2.9446848E-02	-4.0421844E-03
23	2.8639301E-02	-4.0330782E-03
24	2.7833706E-02	-4.0226409E-03
25	2.7030342E-02	-4.0107486E-03
26	2.6229512E-02	-3.9972721E-03
27	2.5431551E-02	-3.9820768E-03
28	2.4636809E-02	-3.9650223E-03
29	2.3845676E-02	-3.9459627E-03
30	2.3058568E-02	-3.9247470E-03
31	2.2275931E-02	-3.9012182E-03
32	2.1498251E-02	-3.8751962E-03
33	2.0726037E-02	-3.8464744E-03
34	1.9959855E-02	-3.8148371E-03
35	1.9200311E-02	-3.7800584E-03
36	1.8448057E-02	-3.7419028E-03
37	1.7703795E-02	-3.7001252E-03
38	1.6968269E-02	-3.6544699E-03
39	1.6242284E-02	-3.6046723E-03
40	1.5526695E-02	-3.5504576E-03
41	1.4822414E-02	-3.4915413E-03
42	1.4130411E-02	-3.4276291E-03
43	1.3451705E-02	-3.3585738E-03
44	1.2787322E-02	-3.2844176E-03
45	1.2138274E-02	-3.2052780E-03
46	1.1505533E-02	-3.1213460E-03
47	1.0890037E-02	-3.0328886E-03
48	1.0292657E-02	-2.9402474E-03
49	9.7141893E-03	-2.8438384E-03
50	9.1553427E-03	-2.7441532E-03
51	8.6167116E-03	-2.6417567E-03
52	8.0987675E-03	-2.5372552E-03
53	7.6019220E-03	-2.4312406E-03
54	7.1263627E-03	-2.3242306E-03
55	6.6722628E-03	-2.2167257E-03
56	6.2396746E-03	-2.1091874E-03
57	5.8285614E-03	-2.0020450E-03
58	5.4388037E-03	-1.8956970E-03
59	5.0702050E-03	-1.7905131E-03
60	4.7224980E-03	-1.6868355E-03
61	4.3953493E-03	-1.5849806E-03

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	300 di 731

62	4.0883648E-03	-1.4852408E-03
63	3.8010940E-03	-1.3878854E-03
64	3.5330351E-03	-1.2931621E-03
65	3.2836390E-03	-1.2012918E-03
66	3.0523155E-03	-1.1124655E-03
67	2.8384390E-03	-1.0268464E-03
68	2.6413539E-03	-9.4457191E-04
69	2.4603796E-03	-8.6575605E-04
70	2.2948148E-03	-7.9049118E-04
71	2.1439416E-03	-7.1884998E-04
72	2.0070296E-03	-6.5088731E-04
73	1.8833389E-03	-5.8664188E-04
74	1.7721234E-03	-5.2613795E-04
75	1.6726335E-03	-4.6938647E-04
76	1.5841192E-03	-4.1637874E-04
77	1.5058347E-03	-3.6708121E-04
78	1.4370431E-03	-3.2143825E-04
79	1.3770207E-03	-2.7937478E-04
80	1.3250607E-03	-2.4079870E-04
81	1.2804759E-03	-2.0560308E-04
82	1.2426021E-03	-1.7366823E-04
83	1.2107999E-03	-1.4486355E-04
84	1.1844573E-03	-1.1904922E-04
85	1.1629907E-03	-9.6077741E-05
86	1.1458469E-03	-7.5795278E-05
87	1.1325039E-03	-5.8042896E-05
88	1.1224720E-03	-4.2657626E-05
89	1.1152941E-03	-2.9473409E-05
90	1.1105469E-03	-1.8321399E-05
91	1.1078411E-03	-9.0327974E-06
92	1.1068210E-03	-1.4360977E-06
93	1.1071653E-03	4.6400924E-06
94	1.1085871E-03	9.3672548E-06
95	1.1108337E-03	1.2916638E-05
96	1.1136866E-03	1.5459004E-05
97	1.1169615E-03	1.7164443E-05
98	1.1205079E-03	1.8202233E-05
99	1.1242091E-03	1.8740748E-05
100	1.1279820E-03	1.8947407E-05
101	1.1317770E-03	1.8988639E-05

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	302 di 731
18 D	3.010	-3.2692E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
19 D	3.187	-3.1879E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
20 D	3.365	-3.1067E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
21 D	3.542	-3.0256E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
22 D	3.719	-2.9447E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
23 D	3.896	-2.8639E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
24 D	4.073	-2.7834E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
25 D	4.250	-2.7030E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
26 D	4.427	-2.6230E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
27 D	4.604	-2.5432E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
28 D	4.781	-2.4637E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
29 D	4.958	-2.3846E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
30 D	5.135	-2.3059E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
31 D	6.480	-2.2276E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
32 D	6.796	-2.1498E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
33 D	7.111	-2.0726E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
34 D	7.426	-1.9960E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
35 D	7.741	-1.9200E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
36 D	8.056	-1.8448E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
37 D	8.371	-1.7704E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
38 D	8.687	-1.6968E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
39 D	9.002	-1.6242E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
40 D	9.317	-1.5527E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
41 D	9.632	-1.4822E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
42 D	9.947	-1.4130E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
43 D	10.26	-1.3452E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
44 D	10.58	-1.2787E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	303 di 731
1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	10.89	-1.2138E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	11.21	-1.1506E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	11.52	-1.0890E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	11.84	-1.0293E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	12.15	-9.7142E-03	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	12.47	-9.1553E-03	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	12.78	-8.6167E-03	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	11.93	-8.0988E-03	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	12.29	-7.6019E-03	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	12.65	-7.1264E-03	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	13.00	-6.6723E-03	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	13.36	-6.2397E-03	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	13.71	-5.8286E-03	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	14.07	-5.4388E-03	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	14.42	-5.0702E-03	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	14.78	-4.7225E-03	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	15.14	-4.3953E-03	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	15.49	-4.0884E-03	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	15.85	-3.8011E-03	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	16.20	-3.5330E-03	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	16.56	-3.2836E-03	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	16.92	-3.0523E-03	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	17.27	-2.8384E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	17.63	-2.6414E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	17.98	-2.4604E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	18.34	-2.2948E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 306 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:02          |
|-----+-----

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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	308 di 731

58 D	25.51	5.4388E-03	68.70	127.6	222.8	127.6	V-C	1.2176E+04	-11.40	0.000	1.000
1.000	127.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	25.01	5.0702E-03	72.80	125.1	226.9	125.1	V-C	1.2176E+04	-11.60	0.000	1.000
1.000	125.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	24.57	4.7225E-03	76.90	122.8	231.0	122.8	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	122.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	24.17	4.3953E-03	81.00	120.8	235.1	120.8	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	120.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.82	4.0884E-03	85.10	119.1	239.2	119.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	119.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.46	3.8011E-03	89.20	117.3	243.3	118.0	UL-RL	1.9482E+04	-12.40	0.000	1.000
1.000	117.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	22.82	3.5330E-03	93.30	114.1	247.4	120.0	UL-RL	1.9482E+04	-12.60	0.000	1.000
1.000	114.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	22.24	3.2836E-03	97.40	111.2	251.5	122.0	UL-RL	1.9482E+04	-12.80	0.000	1.000
1.000	111.2	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	21.74	3.0523E-03	101.5	108.7	255.6	124.0	UL-RL	1.9482E+04	-13.00	0.000	1.000
1.000	108.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	21.30	2.8384E-03	105.6	106.5	259.7	126.0	UL-RL	1.9482E+04	-13.20	0.000	1.000
1.000	106.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	20.93	2.6414E-03	109.7	104.7	263.8	127.9	UL-RL	1.9482E+04	-13.40	0.000	1.000
1.000	104.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	20.63	2.4604E-03	113.8	103.1	267.9	129.9	UL-RL	1.9482E+04	-13.60	0.000	1.000
1.000	103.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	20.38	2.2948E-03	117.9	101.9	272.0	131.9	UL-RL	1.9482E+04	-13.80	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	20.19	2.1439E-03	122.0	100.9	276.1	133.9	UL-RL	1.9482E+04	-14.00	0.000	1.000
1.000	100.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	20.05	2.0070E-03	126.1	100.3	280.2	135.9	UL-RL	1.9482E+04	-14.20	0.000	1.000
1.000	100.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	19.97	1.8833E-03	130.2	99.84	284.3	137.9	UL-RL	1.9482E+04	-14.40	0.000	1.000
1.000	99.84	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	19.93	1.7721E-03	134.3	99.66	288.4	139.9	UL-RL	1.9482E+04	-14.60	0.000	1.000
1.000	99.66	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	19.94	1.6726E-03	138.4	99.71	292.5	141.9	UL-RL	1.9482E+04	-14.80	0.000	1.000
1.000	99.71	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	19.99	1.5841E-03	142.5	99.97	296.6	143.9	UL-RL	1.9482E+04	-15.00	0.000	1.000
1.000	99.97	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	20.09	1.5058E-03	146.6	100.4	300.7	145.8	UL-RL	1.9482E+04	-15.20	0.000	1.000
1.000	100.4	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	20.22	1.4370E-03	150.7	101.1	304.8	147.8	UL-RL	1.9482E+04	-15.40	0.000	1.000
1.000	101.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	20.38	1.3770E-03	154.8	101.9	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	20.58	1.3251E-03	158.9	102.9	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	102.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	20.80	1.2805E-03	163.0	104.0	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	104.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	21.05	1.2426E-03	167.1	105.3	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	105.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	21.32	1.2108E-03	171.2	106.6	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	106.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	21.62	1.1845E-03	175.3	108.1	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	309 di 731

1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	21.93	1.1630E-03	179.4	109.7	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	109.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	22.26	1.1458E-03	183.5	111.3	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	111.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	22.61	1.1325E-03	187.6	113.0	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	113.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	22.97	1.1225E-03	191.7	114.8	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	114.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	23.34	1.1153E-03	195.8	116.7	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	116.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	23.72	1.1105E-03	199.9	118.6	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	118.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.10	1.1078E-03	204.0	120.5	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	120.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.50	1.1068E-03	208.1	122.5	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.90	1.1072E-03	212.2	124.5	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	124.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	25.30	1.1086E-03	216.3	126.5	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	126.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	25.71	1.1108E-03	220.4	128.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	128.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	26.12	1.1137E-03	224.5	130.6	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	130.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	26.53	1.1170E-03	228.6	132.6	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	132.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	26.94	1.1205E-03	232.7	134.7	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	134.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	27.35	1.1242E-03	236.8	136.8	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	136.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	27.76	1.1280E-03	240.9	138.8	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	138.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	14.09	1.1318E-03	245.0	140.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	140.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 310 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:02          |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-2.62889E-09	2.62889E-09	-2.60371E-10	3.99666E-10
2	0.17708	-0.17708	-1.64363E-10	3.54160E-02
3	0.53124	-0.53124	-3.54160E-02	0.14166
4	1.0625	-1.0625	-0.14166	0.35416
5	1.7708	-1.7708	-0.35416	0.70832
6	2.6562	-2.6562	-0.70832	1.2396
7	3.7187	-3.7187	-1.2396	1.9833
8	4.9582	-4.9582	-1.9833	2.9749
9	6.3749	-6.3749	-2.9749	4.2499
10	7.9686	-7.9686	-4.2499	5.8436
11	9.7394	-9.7394	-5.8436	7.7915
12	11.687	-11.687	-7.7915	10.129
13	13.812	-13.812	-10.129	12.891
14	16.114	-16.114	-12.891	16.114
15	18.593	-18.593	-16.114	19.833
16	21.250	-21.250	-19.833	24.083
17	24.083	-24.083	-24.083	28.899
18	27.093	-27.093	-28.899	34.318
19	30.281	-30.281	-34.318	40.374
20	33.645	-33.645	-40.374	47.103
21	37.187	-37.187	-47.103	54.541
22	40.905	-40.905	-54.541	62.722
23	44.801	-44.801	-62.722	71.682
24	48.874	-48.874	-71.682	81.457
25	53.124	-53.124	-81.457	92.082
26	57.551	-57.551	-92.082	103.59
27	62.155	-62.155	-103.59	116.02
28	66.936	-66.936	-116.02	129.41
29	71.894	-71.894	-129.41	143.79
30	77.030	-77.030	-143.79	159.19
31	83.510	-83.510	-159.19	175.90
32	90.306	-90.306	-175.90	193.96
33	97.416	-97.416	-193.96	213.44
34	104.84	-104.84	-213.44	234.41
35	112.58	-112.58	-234.41	256.93
36	120.64	-120.64	-256.93	281.05
37	129.01	-129.01	-281.05	306.86
38	137.70	-137.70	-306.86	334.40
39	146.70	-146.70	-334.40	363.74
40	156.02	-156.02	-363.74	394.94
41	165.65	-165.65	-394.94	428.07
42	165.49	-165.49	-428.07	461.17
43	162.93	-162.93	-461.17	493.75
44	157.96	-157.96	-493.75	525.35
45	150.58	-150.58	-525.35	555.46
46	140.79	-140.79	-555.46	583.62
47	128.60	-128.60	-583.62	609.34
48	113.99	-113.99	-609.34	632.14
49	96.980	-96.980	-632.14	651.53
50	77.560	-77.560	-651.53	667.04
51	57.801	-57.801	-667.04	678.61
52	40.129	-40.129	-678.61	686.63
53	23.625	-23.625	-686.63	691.36
54	8.2369	-8.2369	-691.36	693.00
55	-6.0870	6.0870	-693.00	691.79
56	-19.399	19.399	-691.79	687.91
57	-31.752	31.752	-687.91	681.56

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	311 di 731

58	-43.198	43.198	-681.56	672.92
59	-53.787	53.787	-672.92	662.16
60	-63.572	63.572	-662.16	649.44
61	-72.602	72.602	-649.44	634.92
62	-80.926	80.926	-634.92	618.74
63	-88.541	88.541	-618.74	601.03
64	-95.154	95.154	-601.03	582.00
65	-100.84	100.84	-582.00	561.83
66	-105.66	105.66	-561.83	540.70
67	-109.69	109.69	-540.70	518.76
68	-113.00	113.00	-518.76	496.16
69	-115.64	115.64	-496.16	473.04
70	-117.68	117.68	-473.04	449.50
71	-119.17	119.17	-449.50	425.67
72	-120.17	120.17	-425.67	401.63
73	-120.73	120.73	-401.63	377.49
74	-120.87	120.87	-377.49	353.31
75	-120.17	120.17	-353.31	329.28
76	-118.71	118.71	-329.28	305.53
77	-116.59	116.59	-305.53	282.22
78	-113.88	113.88	-282.22	259.44
79	-110.66	110.66	-259.44	237.31
80	-107.00	107.00	-237.31	215.91
81	-102.95	102.95	-215.91	195.32
82	-98.586	98.586	-195.32	175.60
83	-93.950	93.950	-175.60	156.81
84	-89.089	89.089	-156.81	138.99
85	-84.045	84.045	-138.99	122.19
86	-78.856	78.856	-122.19	106.41
87	-73.553	73.553	-106.41	91.704
88	-68.164	68.164	-91.704	78.071
89	-62.714	62.714	-78.071	65.528
90	-57.224	57.224	-65.528	54.083
91	-51.711	51.711	-54.083	43.741
92	-46.189	46.189	-43.741	34.503
93	-40.670	40.670	-34.503	26.369
94	-35.163	35.163	-26.369	19.337
95	-29.675	29.675	-19.337	13.402
96	-24.211	24.211	-13.402	8.5595
97	-18.776	18.776	-8.5595	4.8043
98	-13.370	13.370	-4.8043	2.1302
99	-7.9965	7.9965	-2.1302	0.53094
100	-2.6547	2.6547	-0.53094	-2.08615E-11

ITER 0 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 3107. REMNOR=0.5797E-17 RATIO =0.4588E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.4588E-01 RATIO= 0.000
MAX UN= 9.390 IEQ= 99 NODE 50 DOF 1 Y-DISPL.F
MIN UN=-.7008E-09 IEQ= 10 NODE 5 DOF 2 X-ROT. F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 1446. REMNOR=0.1091E-15 RATIO =0.3130E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.3130E-01 RATIO= 0.000
MAX UN= 21.25 IEQ= 103 NODE 52 DOF 1 Y-DISPL.F
MIN UN=-.7316E-07 IEQ= 39 NODE 20 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 72.27 REMNOR=0.3615E-16 RATIO =0.6997E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.6997E-02 RATIO= 0.000
MAX UN= 6.874 IEQ= 115 NODE 58 DOF 1 Y-DISPL.F
MIN UN=-.4880E-07 IEQ= 43 NODE 22 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	312 di 731

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ITER      4  RNORM = 2755.      RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM=0.1555E-02 REMNOR=0.5570E-16  RATIO =0.3246E-04  TOLER =0.1000E-03      CONVERGED !
RFMAX = 165.6      RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT      =0.1476E+07  RDR      =0.2603E+08
RATIOT=0.3246E-04  RATIOR= 0.000
MAX UN=0.4317E-07  IEQ=      11  NODE      6  DOF      1  Y-DISPL.F
MIN UN=-.3944E-01  IEQ=     201  NODE     101  DOF      1  Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS      0
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LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 313 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:02                                                                 |
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New Project
SOLUTION REACHED USING 4 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 4 (AT TIME 4.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	0.1136639	-9.2340469E-03
2	0.1118171	-9.2340433E-03
3	0.1099703	-9.2340214E-03
4	0.1081235	-9.2339546E-03
5	0.1062767	-9.2338084E-03
6	0.1044300	-9.2335401E-03
7	0.1025833	-9.2330988E-03
8	0.1007368	-9.2324255E-03
9	9.8890386E-02	-9.2314533E-03
10	9.7044223E-02	-9.2301069E-03
11	9.5198374E-02	-9.2283031E-03
12	9.3352939E-02	-9.2259503E-03
13	9.1508037E-02	-9.2229492E-03
14	8.9663810E-02	-9.2191920E-03
15	8.7820419E-02	-9.2145629E-03
16	8.5978051E-02	-9.2089382E-03
17	8.4136909E-02	-9.2021857E-03
18	8.2297252E-02	-9.1941654E-03
19	8.0459337E-02	-9.1847290E-03
20	7.8623465E-02	-9.1737202E-03
21	7.6789974E-02	-9.1609746E-03
22	7.4959212E-02	-9.1463194E-03
23	7.3131586E-02	-9.1295740E-03
24	7.1307534E-02	-9.1105496E-03
25	6.9487531E-02	-9.0890492E-03
26	6.7672093E-02	-9.0648678E-03
27	6.5861786E-02	-9.0377924E-03
28	6.4057193E-02	-9.0076014E-03
29	6.2258969E-02	-8.9740654E-03
30	6.0467806E-02	-8.9369471E-03
31	5.8684445E-02	-8.8960006E-03
32	5.6909687E-02	-8.8509545E-03
33	5.5144365E-02	-8.8015078E-03
34	5.3389399E-02	-8.7473482E-03
35	5.1645762E-02	-8.6881504E-03
36	4.9914497E-02	-8.6235771E-03
37	4.8196721E-02	-8.5532785E-03
38	4.6493600E-02	-8.4768918E-03
39	4.4806396E-02	-8.3940423E-03
40	4.3136440E-02	-8.3043431E-03
41	4.1485142E-02	-8.2073945E-03
42	3.9853993E-02	-8.1027845E-03
43	3.8244557E-02	-7.9902314E-03
44	3.6658437E-02	-7.8696182E-03
45	3.5097259E-02	-7.7408858E-03
46	3.3562632E-02	-7.6040302E-03
47	3.2056185E-02	-7.4591065E-03
48	3.0579520E-02	-7.3062263E-03
49	2.9134214E-02	-7.1455584E-03
50	2.7721808E-02	-6.9773294E-03
51	2.6343774E-02	-6.8018207E-03
52	2.5001509E-02	-6.6193685E-03
53	2.3696488E-02	-6.4304615E-03
54	2.2429782E-02	-6.2356726E-03
55	2.1202568E-02	-6.0356570E-03
56	2.0015821E-02	-5.8311107E-03
57	1.8870376E-02	-5.6227793E-03
58	1.7766909E-02	-5.4114582E-03
59	1.6705936E-02	-5.1979927E-03
60	1.5687795E-02	-4.9832778E-03
61	1.4712645E-02	-4.7682561E-03



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	314 di 731

62	1.3780452E-02	-4.5538546E-03
63	1.2891005E-02	-4.3409271E-03
64	1.2043930E-02	-4.1302571E-03
65	1.1238704E-02	-3.9225612E-03
66	1.0474664E-02	-3.7184920E-03
67	9.7510256E-03	-3.5186416E-03
68	9.0668904E-03	-3.3235444E-03
69	8.4212589E-03	-3.1336803E-03
70	7.8130408E-03	-2.9494777E-03
71	7.2410651E-03	-2.7713159E-03
72	6.7040895E-03	-2.5995287E-03
73	6.2008093E-03	-2.4344062E-03
74	5.7298661E-03	-2.2761982E-03
75	5.2898550E-03	-2.1251161E-03
76	4.8793328E-03	-1.9813357E-03
77	4.4968245E-03	-1.8449991E-03
78	4.1408296E-03	-1.7162173E-03
79	3.8098285E-03	-1.5950719E-03
80	3.5022881E-03	-1.4816167E-03
81	3.2166677E-03	-1.3758724E-03
82	2.9514262E-03	-1.2778225E-03
83	2.7050292E-03	-1.1874159E-03
84	2.4759558E-03	-1.1045690E-03
85	2.2627052E-03	-1.0291683E-03
86	2.0638015E-03	-9.6107235E-04
87	1.8778004E-03	-9.0011313E-04
88	1.7032934E-03	-8.4609692E-04
89	1.5389142E-03	-7.9879242E-04
90	1.3833400E-03	-7.5791899E-04
91	1.2353313E-03	-7.2315703E-04
92	1.0936943E-03	-6.9413788E-04
93	9.5732049E-04	-6.7045416E-04
94	8.2518676E-04	-6.5165910E-04
95	6.9636327E-04	-6.3726780E-04
96	5.7002086E-04	-6.2675822E-04
97	4.4543843E-04	-6.1957197E-04
98	3.2201013E-04	-6.1511485E-04
99	1.9925252E-04	-6.1275723E-04
100	7.6811593E-05	-6.1183430E-04
101	-4.5530189E-05	-6.1164621E-04

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	316 di 731

18 D	3.010	-8.2297E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	3.187	-8.0459E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	3.365	-7.8623E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	3.542	-7.6790E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	3.719	-7.4959E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	3.896	-7.3132E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	4.073	-7.1308E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	4.250	-6.9488E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	4.427	-6.7672E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	4.604	-6.5862E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	4.781	-6.4057E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	4.958	-6.2259E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	5.135	-6.0468E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	6.480	-5.8684E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
32 D	6.796	-5.6910E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
33 D	7.111	-5.5144E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
34 D	7.426	-5.3389E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
35 D	7.741	-5.1646E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
36 D	8.056	-4.9914E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
37 D	8.371	-4.8197E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
38 D	8.687	-4.6494E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
39 D	9.002	-4.4806E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
40 D	9.317	-4.3136E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
41 D	9.632	-4.1485E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
42 D	9.947	-3.9854E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
43 D	10.26	-3.8245E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
44 D	10.58	-3.6658E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	317 di 731

1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	10.89	-3.5097E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	11.21	-3.3563E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	11.52	-3.2056E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	11.84	-3.0580E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	12.15	-2.9134E-02	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	12.47	-2.7722E-02	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	12.78	-2.6344E-02	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	11.93	-2.5002E-02	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	12.29	-2.3696E-02	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	12.65	-2.2430E-02	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	13.00	-2.1203E-02	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	13.36	-2.0016E-02	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	13.71	-1.8870E-02	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	14.07	-1.7767E-02	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	14.42	-1.6706E-02	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	14.78	-1.5688E-02	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	15.14	-1.4713E-02	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	15.49	-1.3780E-02	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	15.85	-1.2891E-02	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	16.20	-1.2044E-02	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	16.56	-1.1239E-02	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	16.92	-1.0475E-02	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	17.27	-9.7510E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	17.63	-9.0669E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	17.98	-8.4213E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	18.34	-7.8130E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 320 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:02          |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	322 di 731

58 D	47.34	1.7767E-02	68.70	236.7	222.8	236.7	PASSIVE	0.000	-11.40	0.000	1.000
1.000	236.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	49.39	1.6706E-02	72.80	246.9	226.9	246.9	PASSIVE	0.000	-11.60	0.000	1.000
1.000	246.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	51.27	1.5688E-02	76.90	256.3	231.0	256.3	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	256.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	49.29	1.4713E-02	81.00	246.5	235.1	246.5	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	246.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	47.42	1.3780E-02	85.10	237.1	239.2	237.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	237.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	45.65	1.2891E-02	89.20	228.3	243.3	228.3	V-C	1.2176E+04	-12.40	0.000	1.000
1.000	228.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	43.99	1.2044E-02	93.30	219.9	247.4	219.9	V-C	1.2176E+04	-12.60	0.000	1.000
1.000	219.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	42.42	1.1239E-02	97.40	212.1	251.5	212.1	V-C	1.2176E+04	-12.80	0.000	1.000
1.000	212.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	40.96	1.0475E-02	101.5	204.8	255.6	204.8	V-C	1.2176E+04	-13.00	0.000	1.000
1.000	204.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	39.60	9.7510E-03	105.6	198.0	259.7	198.0	V-C	1.2176E+04	-13.20	0.000	1.000
1.000	198.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	38.33	9.0669E-03	109.7	191.6	263.8	191.6	V-C	1.2176E+04	-13.40	0.000	1.000
1.000	191.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	37.15	8.4213E-03	113.8	185.8	267.9	185.8	V-C	1.2176E+04	-13.60	0.000	1.000
1.000	185.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	36.07	7.8130E-03	117.9	180.3	272.0	180.3	V-C	1.2176E+04	-13.80	0.000	1.000
1.000	180.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	35.07	7.2411E-03	122.0	175.4	276.1	175.4	V-C	1.2176E+04	-14.00	0.000	1.000
1.000	175.4	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	34.16	6.7041E-03	126.1	170.8	280.2	170.8	V-C	1.2176E+04	-14.20	0.000	1.000
1.000	170.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	33.34	6.2008E-03	130.2	166.7	284.3	166.7	V-C	1.2176E+04	-14.40	0.000	1.000
1.000	166.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	32.59	5.7299E-03	134.3	162.9	288.4	162.9	V-C	1.2176E+04	-14.60	0.000	1.000
1.000	162.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	31.91	5.2899E-03	138.4	159.6	292.5	159.6	V-C	1.2176E+04	-14.80	0.000	1.000
1.000	159.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	31.31	4.8793E-03	142.5	156.6	296.6	156.6	V-C	1.2176E+04	-15.00	0.000	1.000
1.000	156.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	30.78	4.4968E-03	146.6	153.9	300.7	153.9	V-C	1.2176E+04	-15.20	0.000	1.000
1.000	153.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	30.31	4.1408E-03	150.7	151.5	304.8	151.5	V-C	1.2176E+04	-15.40	0.000	1.000
1.000	151.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	29.86	3.8098E-03	154.8	149.3	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	149.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	29.06	3.5023E-03	158.9	145.3	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	145.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	28.34	3.2167E-03	163.0	141.7	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	141.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	27.71	2.9514E-03	167.1	138.5	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	138.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	27.15	2.7050E-03	171.2	135.7	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	135.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	26.65	2.4760E-03	175.3	133.3	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	323 di 731

1.000	133.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	26.22	2.2627E-03	179.4	131.1	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	131.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	25.84	2.0638E-03	183.5	129.2	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	129.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	25.51	1.8778E-03	187.6	127.6	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	127.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	25.23	1.7033E-03	191.7	126.2	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	126.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	24.99	1.5389E-03	195.8	124.9	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	124.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	24.78	1.3833E-03	199.9	123.9	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	123.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.60	1.2353E-03	204.0	123.0	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	123.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.45	1.0937E-03	208.1	122.2	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.31	9.5732E-04	212.2	121.6	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	121.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	24.20	8.2519E-04	216.3	121.0	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	121.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	24.09	6.9636E-04	220.4	120.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	120.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	24.00	5.7002E-04	224.5	120.0	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	120.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	23.91	4.4544E-04	228.6	119.5	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	119.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	23.83	3.2201E-04	232.7	119.1	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	119.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	23.75	1.9925E-04	236.8	118.7	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	118.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	23.67	7.6812E-05	240.9	118.3	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	118.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	11.79	-4.5530E-05	245.0	117.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	117.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	324 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                               |
|                                                                                               Exe Time :17 November 2022  18:38:02                                                                 |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.23020	-0.23020	7.34616E-10	4.60400E-02
2	0.95192	-0.95192	-4.60400E-02	0.23642
3	1.9350	-1.9350	-0.23642	0.62342
4	3.1793	-3.1793	-0.62342	1.2593
5	4.6850	-4.6850	-1.2593	2.1963
6	6.4520	-6.4520	-2.1963	3.4867
7	8.4803	-8.4803	-3.4867	5.1827
8	10.770	-10.770	-5.1827	7.3367
9	13.321	-13.321	-7.3367	10.001
10	16.133	-16.133	-10.001	13.228
11	19.207	-19.207	-13.228	17.069
12	22.542	-22.542	-17.069	21.577
13	26.138	-26.138	-21.577	26.805
14	29.996	-29.996	-26.805	32.804
15	34.114	-34.114	-32.804	39.627
16	38.495	-38.495	-39.627	47.326
17	43.136	-43.136	-47.326	55.953
18	48.039	-48.039	-55.953	65.561
19	53.203	-53.203	-65.561	76.201
20	58.629	-58.629	-76.201	87.927
21	64.315	-64.315	-87.927	100.79
22	70.264	-70.264	-100.79	114.84
23	76.473	-76.473	-114.84	130.14
24	82.944	-82.944	-130.14	146.73
25	89.676	-89.676	-146.73	164.66
26	96.669	-96.669	-164.66	184.00
27	103.92	-103.92	-184.00	204.78
28	111.44	-111.44	-204.78	227.07
29	119.22	-119.22	-227.07	250.91
30	127.26	-127.26	-250.91	276.36
31	136.72	-136.72	-276.36	303.71
32	146.59	-146.59	-303.71	333.03
33	156.86	-156.86	-333.03	364.40
34	167.52	-167.52	-364.40	397.90
35	178.59	-178.59	-397.90	433.62
36	190.05	-190.05	-433.62	471.63
37	201.92	-201.92	-471.63	512.01
38	214.18	-214.18	-512.01	554.85
39	226.85	-226.85	-554.85	600.22
40	239.91	-239.91	-600.22	648.20
41	253.37	-253.37	-648.20	698.88
42	258.06	-258.06	-698.88	750.49
43	260.90	-260.90	-750.49	802.67
44	261.91	-261.91	-802.67	855.05
45	261.07	-261.07	-855.05	907.26
46	258.40	-258.40	-907.26	958.94
47	253.89	-253.89	-958.94	1009.7
48	247.54	-247.54	-1009.7	1059.2
49	239.34	-239.34	-1059.2	1107.1
50	229.32	-229.32	-1107.1	1153.0
51	217.45	-217.45	-1153.0	1196.4
52	199.06	-199.06	-1196.4	1236.3
53	179.06	-179.06	-1236.3	1272.1
54	157.46	-157.46	-1272.1	1303.6
55	134.26	-134.26	-1303.6	1330.4
56	109.45	-109.45	-1330.4	1352.3
57	83.041	-83.041	-1352.3	1368.9

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	325 di 731

58	55.027	-55.027	-1368.9	1379.9
59	25.410	-25.410	-1379.9	1385.0
60	-5.6477	5.6477	-1385.0	1383.9
61	-34.288	34.288	-1383.9	1377.0
62	-60.616	60.616	-1377.0	1364.9
63	-84.736	84.736	-1364.9	1347.9
64	-106.75	106.75	-1347.9	1326.6
65	-126.76	126.76	-1326.6	1301.2
66	-144.87	144.87	-1301.2	1272.3
67	-161.17	161.17	-1272.3	1240.0
68	-175.77	175.77	-1240.0	1204.9
69	-188.75	188.75	-1204.9	1167.1
70	-200.20	200.20	-1167.1	1127.1
71	-210.22	210.22	-1127.1	1085.0
72	-218.89	218.89	-1085.0	1041.3
73	-226.30	226.30	-1041.3	996.01
74	-232.51	232.51	-996.01	949.50
75	-237.61	237.61	-949.50	901.98
76	-241.67	241.67	-901.98	853.65
77	-244.75	244.75	-853.65	804.70
78	-246.93	246.93	-804.70	755.31
79	-248.21	248.21	-755.31	705.67
80	-248.26	248.26	-705.67	656.02
81	-247.15	247.15	-656.02	606.59
82	-244.97	244.97	-606.59	557.59
83	-241.78	241.78	-557.59	509.24
84	-237.66	237.66	-509.24	461.71
85	-232.66	232.66	-461.71	415.18
86	-226.85	226.85	-415.18	369.81
87	-220.19	220.19	-369.81	325.77
88	-211.95	211.95	-325.77	283.38
89	-202.24	202.24	-283.38	242.93
90	-191.11	191.11	-242.93	204.71
91	-178.64	178.64	-204.71	168.98
92	-164.88	164.88	-168.98	136.00
93	-149.88	149.88	-136.00	106.03
94	-133.66	133.66	-106.03	79.293
95	-116.27	116.27	-79.293	56.040
96	-97.709	97.709	-56.040	36.498
97	-78.008	78.008	-36.498	20.897
98	-57.170	57.170	-20.897	9.4627
99	-35.204	35.204	-9.4627	2.4220
100	-12.110	12.110	-2.4220	6.42331E-12



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	326 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022 18:38:02           |
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F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	2
3	CONVERGENCE :YES	6
4	CONVERGENCE :YES	4

END OF PROCESS FOR PROBLEM
New Project
NONLINEAR SOLUTION CPU TIME 0.08 [sec]
DATABASE CREATION CPU TIME..... 0.38 [sec]



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	327 di 731

9.3. Design Assumption : NTC2018: SLE (Rara/Frequente/Quasi Permanente) - File di Paratie - File di input (.d)

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* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: SLE (Rara/Frequente/Quasi Permanente)
* Time:giovedì 17 novembre 2022 18:38:02
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control contact lagrange

option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_910 0 -20 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_910 -20 0 1 0
SOIL 0_R LeftWall_910 -20 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Arenariepococementate_2_12_L_0)
*
LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
ATREST 0.4 0.5 0
WEIGHT 19 9 10
PERMEABILITY 5E-05
RESISTANCE 0 37 0 0 0
TZDATA LINEAR 10000 0 25 0.5 0
KSCALE 0 0
YOUNG 20000 32000
ENDL
*
* Soil Profile (Argillamarnosal_1057_1068_L_0)
*
LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
ATREST 0.562 0.5 1
WEIGHT 20 10 10
PERMEABILITY 1E-05
RESISTANCE 10 26 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 90000 1.44E+05
ENDL
*
* Soil Profile (Argillamarnosal_1061_1069_L_0)
*
LDATA Argillamarnosal_1061_1069_L_0 -10 LeftWall_910
ATREST 0.485 0 1
WEIGHT 20.5 10.5 10
PERMEABILITY 5E-05
RESISTANCE 20 24 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 1E+05 1.6E+05
ENDL

* 5: Defining structural materials
* Steel material: 988 Name=Fe360 E=206000200 kPa
MATERIAL Fe360_988 2.06E+08
* Concrete material: 984 Name=C25/30 E=31475800 kPa
MATERIAL C2530_984 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
** rev 2021 and later
BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0

* 6.2: Supports
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	328 di 731

* 6.3: Strips

* 7: Defining Steps

```
STEP Stage0_3964977
CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

```
STEP Stage1_909
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ADD WallElement_911
ENDSTEP
```

```
STEP Stage2_1078
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

```
STEP Stage3_3941534
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

9.4. Design Assumption : NTC2018: SLE (Rara/Frequente/Quasi Permanente) - File di Paratie - File di output (.out)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	329 di 731

|
| ParatiePlus |
| Exe Time :17 November 2022 18:38:03 |
+-----+-----+

```
*****
*
* PARATIE PLUS Non-Linear Spring Engine
*
* AN ELASTOPLASTIC FINITE ELEMENT PROGRAM
* FOR FLEXIBLE EARTH-RETAINING STRUCTURES
*
*
*****
*
* RELEASE 2022.0.0 *Build date:Jan 24, 2022*
*
*
* HARPACEAS S.R.L
* M I L A N O (ITALY)
*
*****
```

```
JOB : ParatiePlus
STARTING
ACCEPTED <FILE,GENW >
ACCEPTED <FILE,PLOTTER,BINARY >
ACCEPTED <SOLVE TOTAL_STRESS >
ACCEPTED <PARAM ITEMAX 40 >
ACCEPTED <CONTROL CONTACT LAGRANGE >
ACCEPTED <CONTROL HINGES 0 0.0001 0.001 >
```

```
*****
*
* WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED
* BY THE PROGRAM.
*****
```

PRELIMINARY OPERATIONS CPU TIME 0.00 [sec]



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 330 di 731
------------------	-------------	-----------	----------------	----------------------	----------	----------------------

```

+-----+
|              PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022* |
|                                                                                               |
|                                 ParatiePlus                                                    |
|                                 Exe Time :17 November 2022  18:38:03                             |
+-----+

```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

NO. OF NODAL POINTS (NUMNP)	101
NO. OF COORDINATES (NCOORD).....	2
NO. OF NODE DOFS (NDOF).....	2
NO. OF EQUATIONS (NEQ).....	202
NO. OF CONSTRAINTS CARDS (NVINC).....	0
NO. OF ELEMENT GROUPS (NEG).....	3
NO. OF SOLUTION STEPS (NSTE).....	4
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ..	0
NO. OF RECORD FROM WALGEN	94
NO. OF LONG NAMES (LASTNAME)	17
LENGTH UNIT CHOICE	3 (M)
FORCE UNIT CHOICE	3 (KN)
MAX PORE PRESSURE TABLE LENGTH.....	1
MAX INELASTIC DISPL. TABLE LENGTH.....	0
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF .	0

IDOFA (01) = 2 Y-DISPL.F
 IDOFA (02) = 4 X-ROT. F

RELEVANT ITEMS UNITS

STRESSES	kPa
Y-DISPLACEMENTS	m
ROTATIONS	RADIANS
BEAM AND SLAB MOMENTS	kN*m/m
BEAM SHEAR FORCES	kN/m
ANCHOR FORCES	kN/m
AXIAL FORCES IN TRUSSES	kN/m
AXIAL FORCES SPRINGS	kN/m
Y-REACTIONS	kN/m
X-MOMENT REACTIONS	kN*m/m
ETC.	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	331 di 731

```
-----+-----  
| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |  
| |  
| ParatiePlus |  
| Exe Time :17 November 2022 18:38:03 |  
| |  
-----+-----
```

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 94

```
1 : UNIT m kN  
2 : TITLE New Project  
3 : DELTA 0.2  
4 : option param itemax 40  
5 : option control contact lagrange  
6 : option control hinges 0 0.0001 0.001  
7 : WALL LeftWall_910 0 -20 0 1  
8 : SOIL 0_L LeftWall_910 -20 0 1 0  
9 : SOIL 0_R LeftWall_910 -20 0 2 180  
10 : LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910  
11 : ATREST 0.4 0.5 0  
12 : WEIGHT 19 9 10  
13 : PERMEABILITY 5E-05  
14 : RESISTANCE 0 37 0 0 0  
15 : TZDATA LINEAR 10000 0 25 0.5 0  
16 : KSCALE 0 0  
17 : YOUNG 20000 32000  
18 : ENDL  
19 : LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910  
20 : ATREST 0.562 0.5 1  
21 : WEIGHT 20 10 10  
22 : PERMEABILITY 1E-05  
23 : RESISTANCE 10 26 0 0 0  
24 : TZDATA LINEAR 0 0 0 0.5 0  
25 : KSCALE 0 0  
26 : YOUNG 90000 1.44E+05  
27 : ENDL  
28 : LDATA Argillamarnosa_1061_1069_L_0 -10 LeftWall_910  
29 : ATREST 0.485 0 1  
30 : WEIGHT 20.5 10.5 10  
31 : PERMEABILITY 5E-05  
32 : RESISTANCE 20 24 0 0 0  
33 : TZDATA LINEAR 0 0 0 0.5 0  
34 : KSCALE 0 0  
35 : YOUNG 1E+05 1.6E+05  
36 : ENDL  
37 : MATERIAL Fe360_988 2.06E+08  
38 : MATERIAL C2530_984 3.1476E+07  
39 : BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0  
40 : STEP Stage0_3964977  
41 : CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910  
42 : CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910  
43 : CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910  
44 : CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910  
45 : CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910  
46 : CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910  
47 : CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910  
48 : CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910  
49 : CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910  
50 : CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910  
51 : CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910  
52 : CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910  
53 : CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910  
54 : CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910  
55 : CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910  
56 : CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910  
57 : CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910  
58 : CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910  
59 : CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910  
60 : CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910  
61 : CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910  
62 : CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910  
63 : CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910  
64 : CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910  
65 : CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910  
66 : CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	332 di 731

67 : CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
68 : CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
69 : CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
70 : CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
71 : SETWALL LeftWall_910
72 : GEOM 0 0
73 : SURCHARGE 0 0 0 0
74 : WATER -40 0 -20 0 0
75 : ENDSTEP
76 : STEP Stage1_909
77 : SETWALL LeftWall_910
78 : GEOM 0 0
79 : SURCHARGE 0 0 0 0
80 : WATER -40 0 -20 0 0
81 : ADD Wallelement_911
82 : ENDSTEP
83 : STEP Stage2_1078
84 : SETWALL LeftWall_910
85 : GEOM 0 -8
86 : SURCHARGE 0 0 0 0
87 : WATER -40 0 -20 0 0
88 : ENDSTEP
89 : STEP Stage3_3941534
90 : SETWALL LeftWall_910
91 : GEOM 0 -8
92 : SURCHARGE 0 0 0 0
93 : WATER -40 0 -20 0 0
94 : ENDSTEP



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	334 di 731

```

-----
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*  |
|                                                                           |
|                               ParatiePlus                               |
|                               Exe Time :17 November 2022 18:38:03      |
|                                                                           |
-----

```

```

ELEMENT GROUP NO. 1

0_L
  5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

stage	status
1	active
2	active
3	active
4	active

```

material set no. 1

prop( 1) angle          0.00000
prop( 2) layer as foreseen 1.00000

material set no. 2

prop( 1) angle          0.00000
prop( 2) layer as foreseen 2.00000

material set no. 3

prop( 1) angle          0.00000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	1	0.2000	0.000	0.000	0.000	1.000
16	16	1	0.2000	0.000	0.000	0.000	1.000
17	17	1	0.2000	0.000	0.000	0.000	1.000
18	18	1	0.2000	0.000	0.000	0.000	1.000
19	19	1	0.2000	0.000	0.000	0.000	1.000
20	20	1	0.2000	0.000	0.000	0.000	1.000
21	21	1	0.2000	0.000	0.000	0.000	1.000
22	22	1	0.2000	0.000	0.000	0.000	1.000
23	23	1	0.2000	0.000	0.000	0.000	1.000
24	24	1	0.2000	0.000	0.000	0.000	1.000
25	25	1	0.2000	0.000	0.000	0.000	1.000
26	26	1	0.2000	0.000	0.000	0.000	1.000
27	27	1	0.2000	0.000	0.000	0.000	1.000
28	28	1	0.2000	0.000	0.000	0.000	1.000
29	29	1	0.2000	0.000	0.000	0.000	1.000
30	30	1	0.2000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	335 di 731

31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	3	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.2000	0.000	0.000	0.000	1.000
62	62	3	0.2000	0.000	0.000	0.000	1.000
63	63	3	0.2000	0.000	0.000	0.000	1.000
64	64	3	0.2000	0.000	0.000	0.000	1.000
65	65	3	0.2000	0.000	0.000	0.000	1.000
66	66	3	0.2000	0.000	0.000	0.000	1.000
67	67	3	0.2000	0.000	0.000	0.000	1.000
68	68	3	0.2000	0.000	0.000	0.000	1.000
69	69	3	0.2000	0.000	0.000	0.000	1.000
70	70	3	0.2000	0.000	0.000	0.000	1.000
71	71	3	0.2000	0.000	0.000	0.000	1.000
72	72	3	0.2000	0.000	0.000	0.000	1.000
73	73	3	0.2000	0.000	0.000	0.000	1.000
74	74	3	0.2000	0.000	0.000	0.000	1.000
75	75	3	0.2000	0.000	0.000	0.000	1.000
76	76	3	0.2000	0.000	0.000	0.000	1.000
77	77	3	0.2000	0.000	0.000	0.000	1.000
78	78	3	0.2000	0.000	0.000	0.000	1.000
79	79	3	0.2000	0.000	0.000	0.000	1.000
80	80	3	0.2000	0.000	0.000	0.000	1.000
81	81	3	0.2000	0.000	0.000	0.000	1.000
82	82	3	0.2000	0.000	0.000	0.000	1.000
83	83	3	0.2000	0.000	0.000	0.000	1.000
84	84	3	0.2000	0.000	0.000	0.000	1.000
85	85	3	0.2000	0.000	0.000	0.000	1.000
86	86	3	0.2000	0.000	0.000	0.000	1.000
87	87	3	0.2000	0.000	0.000	0.000	1.000
88	88	3	0.2000	0.000	0.000	0.000	1.000
89	89	3	0.2000	0.000	0.000	0.000	1.000
90	90	3	0.2000	0.000	0.000	0.000	1.000
91	91	3	0.2000	0.000	0.000	0.000	1.000
92	92	3	0.2000	0.000	0.000	0.000	1.000
93	93	3	0.2000	0.000	0.000	0.000	1.000
94	94	3	0.2000	0.000	0.000	0.000	1.000
95	95	3	0.2000	0.000	0.000	0.000	1.000
96	96	3	0.2000	0.000	0.000	0.000	1.000
97	97	3	0.2000	0.000	0.000	0.000	1.000
98	98	3	0.2000	0.000	0.000	0.000	1.000
99	99	3	0.2000	0.000	0.000	0.000	1.000
100	100	3	0.2000	0.000	0.000	0.000	1.000
101	101	3	0.1000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 336 di 731
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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:03          |
+-----+

```

ELEMENT GROUP NO. 2

```

0_R          :
 5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

stage status

```

-----
 1 active
 2 active
 3 active
 4 active

```

material set no. 1

```

prop( 1) angle          180.000
prop( 2) layer as foreseen 1.00000

```

material set no. 2

```

prop( 1) angle          180.000
prop( 2) layer as foreseen 2.00000

```

material set no. 3

```

prop( 1) angle          180.000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	1	0.2000	0.000	0.000	0.000	2.000
16	16	1	0.2000	0.000	0.000	0.000	2.000
17	17	1	0.2000	0.000	0.000	0.000	2.000
18	18	1	0.2000	0.000	0.000	0.000	2.000
19	19	1	0.2000	0.000	0.000	0.000	2.000
20	20	1	0.2000	0.000	0.000	0.000	2.000
21	21	1	0.2000	0.000	0.000	0.000	2.000
22	22	1	0.2000	0.000	0.000	0.000	2.000
23	23	1	0.2000	0.000	0.000	0.000	2.000
24	24	1	0.2000	0.000	0.000	0.000	2.000
25	25	1	0.2000	0.000	0.000	0.000	2.000
26	26	1	0.2000	0.000	0.000	0.000	2.000
27	27	1	0.2000	0.000	0.000	0.000	2.000
28	28	1	0.2000	0.000	0.000	0.000	2.000
29	29	1	0.2000	0.000	0.000	0.000	2.000
30	30	1	0.2000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	337 di 731

31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	3	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.2000	0.000	0.000	0.000	2.000
62	62	3	0.2000	0.000	0.000	0.000	2.000
63	63	3	0.2000	0.000	0.000	0.000	2.000
64	64	3	0.2000	0.000	0.000	0.000	2.000
65	65	3	0.2000	0.000	0.000	0.000	2.000
66	66	3	0.2000	0.000	0.000	0.000	2.000
67	67	3	0.2000	0.000	0.000	0.000	2.000
68	68	3	0.2000	0.000	0.000	0.000	2.000
69	69	3	0.2000	0.000	0.000	0.000	2.000
70	70	3	0.2000	0.000	0.000	0.000	2.000
71	71	3	0.2000	0.000	0.000	0.000	2.000
72	72	3	0.2000	0.000	0.000	0.000	2.000
73	73	3	0.2000	0.000	0.000	0.000	2.000
74	74	3	0.2000	0.000	0.000	0.000	2.000
75	75	3	0.2000	0.000	0.000	0.000	2.000
76	76	3	0.2000	0.000	0.000	0.000	2.000
77	77	3	0.2000	0.000	0.000	0.000	2.000
78	78	3	0.2000	0.000	0.000	0.000	2.000
79	79	3	0.2000	0.000	0.000	0.000	2.000
80	80	3	0.2000	0.000	0.000	0.000	2.000
81	81	3	0.2000	0.000	0.000	0.000	2.000
82	82	3	0.2000	0.000	0.000	0.000	2.000
83	83	3	0.2000	0.000	0.000	0.000	2.000
84	84	3	0.2000	0.000	0.000	0.000	2.000
85	85	3	0.2000	0.000	0.000	0.000	2.000
86	86	3	0.2000	0.000	0.000	0.000	2.000
87	87	3	0.2000	0.000	0.000	0.000	2.000
88	88	3	0.2000	0.000	0.000	0.000	2.000
89	89	3	0.2000	0.000	0.000	0.000	2.000
90	90	3	0.2000	0.000	0.000	0.000	2.000
91	91	3	0.2000	0.000	0.000	0.000	2.000
92	92	3	0.2000	0.000	0.000	0.000	2.000
93	93	3	0.2000	0.000	0.000	0.000	2.000
94	94	3	0.2000	0.000	0.000	0.000	2.000
95	95	3	0.2000	0.000	0.000	0.000	2.000
96	96	3	0.2000	0.000	0.000	0.000	2.000
97	97	3	0.2000	0.000	0.000	0.000	2.000
98	98	3	0.2000	0.000	0.000	0.000	2.000
99	99	3	0.2000	0.000	0.000	0.000	2.000
100	100	3	0.2000	0.000	0.000	0.000	2.000
101	101	3	0.1000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	338 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                          |
|                                                                                                          |
|                                                                                                          |
|                                                                                                          |
|                                                                                                          |
|          ParatiePlus                                                                                      |
|          Exe Time :17 November 2022 18:38:03                                                            |
+-----+

```

ELEMENT GROUP NO. 3

```

WallElement_911
2 100 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0
.....
.....2D WALL ELEMENT.....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----
1  inactive
2  active
3  active
4  active

```

material set no. 1

```

prop( 1) young modulus      0.314800E+08
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future              0.00000

```

```

no. of step variable items: 1
step inertia multiplier

```

```

1  1.000
2  1.000
3  1.000
4  1.000

```

element data

el	na	nb	mat	erc1	erc2	thick	area	inertia	wgt(-z)	by-i	by-j
1	1	2	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
2	2	3	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
3	3	4	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
4	4	5	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
5	5	6	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
6	6	7	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
7	7	8	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
8	8	9	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
9	9	10	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
10	10	11	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
11	11	12	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
12	12	13	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
13	13	14	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
14	14	15	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
15	15	16	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
16	16	17	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
17	17	18	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
18	18	19	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
19	19	20	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
20	20	21	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
21	21	22	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
22	22	23	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
23	23	24	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
24	24	25	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
25	25	26	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
26	26	27	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
27	27	28	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
28	28	29	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
29	29	30	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
30	30	31	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
31	31	32	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
32	32	33	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	339 di 731

33	33	34	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
34	34	35	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
35	35	36	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
36	36	37	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
37	37	38	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
38	38	39	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
39	39	40	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
40	40	41	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
41	41	42	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
42	42	43	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
43	43	44	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
44	44	45	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
45	45	46	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
46	46	47	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
47	47	48	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
48	48	49	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
49	49	50	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
50	50	51	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
51	51	52	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
52	52	53	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
53	53	54	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
54	54	55	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
55	55	56	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
56	56	57	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
57	57	58	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
58	58	59	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
59	59	60	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
60	60	61	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
61	61	62	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
62	62	63	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
63	63	64	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
64	64	65	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
65	65	66	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
66	66	67	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
67	67	68	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
68	68	69	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
69	69	70	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
70	70	71	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
71	71	72	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
72	72	73	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
73	73	74	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
74	74	75	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
75	75	76	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
76	76	77	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
77	77	78	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
78	78	79	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
79	79	80	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
80	80	81	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
81	81	82	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
82	82	83	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
83	83	84	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
84	84	85	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
85	85	86	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
86	86	87	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
87	87	88	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
88	88	89	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
89	89	90	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
90	90	91	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
91	91	92	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
92	92	93	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
93	93	94	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
94	94	95	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
95	95	96	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
96	96	97	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
97	97	98	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
98	98	99	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
99	99	100	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
100	100	101	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	340 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                           |
|                                                                                                     ParatiePlus                             |
|                                                                                                     Exe Time :17 November 2022 18:38:03         |
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NO. OF NODAL LOADS (NLOAD) 0
 NO. OF LOAD CURVES (NLCUR) 8
 MAXIMUM POINTS/LCURVE (NPTM) 5



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	341 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
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|                                                                                               |
|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:03                                               |
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L O A D D A T A

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 4



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	342 di 731

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 7
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 8
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
5.00000	0.1000E+01

NO. OF DISTRIBUTED LOAD CARDS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	343 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:03          |
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L O A D B A L A N C E

STEP	1	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	1	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000

LOAD INPUT SECTION COMPLETED



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	344 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022 18:38:03           |
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NO. OF LAYERS 3
NO. OF DATA PER LAYER..... 160



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	345 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022 18:38:03           |
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LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.33100	WALL NO.	1
ITEM NO.	91	D-KP	= 3.4040	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

ITEM NO.	1	NAME	= 14.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -10.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	346 di 731

ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.500	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.500	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.43400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.0960	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.48500	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.36000	WALL NO.	1
ITEM NO.	91	D-KP	= 3.0510	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	347 di 731

ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 10.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 26.0000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.33100 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.4040 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO. 1 <NAME > = 14.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.500 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.500 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.43400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.0960 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.48500 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.36000 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.0510 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO. 1 <NAME > = 12.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = 10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 19.000 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 9.0000 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.23300 WALL NO. 1
 ITEM NO. 11 <U-KP > = 10.673 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.40000 (BOTH WALLS)
 ITEM NO. 13 <NEXP > = 0.50000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 20000. (BOTH WALLS)
 ITEM NO. 18 <EUR > = 32000. (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 58 <U-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 60 <U-TZDELT> = 25.000 (BOTH WALLS)
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.20500 WALL NO. 1
 ITEM NO. 91 <D-KP > = 6.7380 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138 <D-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 140 <D-TZDELT> = 25.000 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO. 1 <NAME > = 13.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -5.9000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.000 (BOTH WALLS)

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	348 di 731

ITEM NO.	6	<GAMMAB	>=	10.000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>=	10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>=	10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>=	26.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>=	0.39400	WALL NO.	1
ITEM NO.	11	<U-KP	>=	4.6760	WALL NO.	1
ITEM NO.	12	<K0-NC	>=	0.56200	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	14	<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>=	90000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>=	0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>=	0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>=	0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>=	10.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>=	26.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>=	0.33100	WALL NO.	1
ITEM NO.	91	<D-KP	>=	3.4040	WALL NO.	1
ITEM NO.	107	<D-PERM	>=	0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>=	0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO.	1	<NAME	>=	14.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>=	-10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>=	20.500	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>=	10.500	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>=	10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>=	20.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>=	24.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>=	0.43400	WALL NO.	1
ITEM NO.	11	<U-KP	>=	4.0960	WALL NO.	1
ITEM NO.	12	<K0-NC	>=	0.48500	(BOTH WALLS)	
ITEM NO.	14	<OCR	>=	1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>=	0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	<EUR	>=	0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>=	0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>=	0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>=	20.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>=	24.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>=	0.36000	WALL NO.	1
ITEM NO.	91	<D-KP	>=	3.0510	WALL NO.	1
ITEM NO.	107	<D-PERM	>=	0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>=	0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO.	1	<NAME	>=	12.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>=	10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>=	19.000	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>=	9.0000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>=	10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>=	37.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>=	0.23300	WALL NO.	1
ITEM NO.	11	<U-KP	>=	10.673	WALL NO.	1
ITEM NO.	12	<K0-NC	>=	0.40000	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>=	0.50000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>=	1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>=	20000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>=	32000.	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>=	0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	<U-TZKZ	>=	10000.	(BOTH WALLS)	
ITEM NO.	60	<U-TZDELTA	>=	25.000	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>=	0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>=	1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>=	0.0000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>=	37.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	349 di 731

ITEM NO. 90<D-KA >= 0.20500 WALL NO. 1
 ITEM NO. 91<D-KP >= 6.7380 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138<D-TZKZ >= 10000. (BOTH WALLS)
 ITEM NO. 140<D-TZDELTA>= 25.000 (BOTH WALLS)
 ITEM NO. 141<D-TZALPHA>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO. 1<NAME >= 13.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -5.9000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.000 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 8<U-COHE >= 10.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 26.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.39400 WALL NO. 1
 ITEM NO. 11<U-KP >= 4.6760 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.56200 (BOTH WALLS)
 ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
 ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 90000. (BOTH WALLS)
 ITEM NO. 18<EUR >= 0.14400E+06 (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 61<U-TZALPHA>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 10.000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 26.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.33100 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.4040 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPHA>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO. 1<NAME >= 14.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -10.000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.500 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 10.500 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 8<U-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.43400 WALL NO. 1
 ITEM NO. 11<U-KP >= 4.0960 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.48500 (BOTH WALLS)
 ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18<EUR >= 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61<U-TZALPHA>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.36000 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.0510 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPHA>= 0.50000 (BOTH WALLS)

DEFAULT WATER UNIT WEIGHT = 10.000
 AVERAGED ON 12 VALUES



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	350 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022* |
|                                                                                               |
|                               ParatiePlus                                                     |
|                               Exe Time :17 November 2022  18:38:03                             |
|-----+-----
  
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PHASE DESCRIPTORS

STEP NO.	1 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000
DYN.WATER BEHAVIOUR			0.000	0.000
Excess pore pressure RATIO Ru			0.000	0.000
SEISMIC PRESSURE LOWER VALUE			0.000	0.000
SEISMIC PRESSURE UPPER VALUE			0.000	0.000
SEISMIC PRESSURE LOWER LEVEL			0.000	0.000
SEISMIC PRESSURE UPPER LEVEL			0.000	0.000

=====end of step 1

STEP NO.	2 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	351 di 731

DYN.WATER BEHAVIOUR 0.000 0.000
 Excess pore pressure RATIO Ru 0.000 0.000
 SEISMIC PRESSURE LOWER VALUE 0.000 0.000
 SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====end of step 2

STEP NO. 3 no. of subincrements 1
 LEFT WALL RIGHT WALL
 Y 0.000 -0.9990E+30
 Z-PC 0.000 0.000
 Z-EXCAVATION -8.000 0.000
 Z-WATER_TABLE -40.00 -0.9990E+30
 Q_AT_THE_FREE_FIELD_LEVEL 0.000 0.000
 ZQ 0.000 0.000
 DZW_OF_THE_WATER_TABLE 0.000 0.000
 QS_ON_THE_EXCAVATION_SIDE 0.000 0.000
 ZQS 0.000 -0.9990E+30
 ZCUT 0.000 0.000
 BALANCE LEVEL FOR PORE PRESSURES -20.00 -20.00
 WATER_BEHAVIOUR_FLAG (LINING OPT) 0.000 0.000
 PORE_UPDATE_FLAG 0.000 0.000
 PORE_TAB._FLAG (gt.0= use tabs) 0.000 0.000
 lateral thrusts reduction elevatio 0.000 0.000
 Downhill reduction factor for effe 0.000 0.000
 Downhill reduction factor for pore 0.000 0.000
 Uphill reduction factor for effect 0.000 0.000
 Uphill reduction factor for pore p 0.000 0.000
 SEISMIC HORIZONTAL ACCEL. Kh [g] 0.000 0.000
 UPHILL VERTICAL ACCEL. Kv_uh [g] 0.000 0.000
 DOWNHILL VERTICAL ACCEL.Kv_dh [g] 0.000 0.000
 UPHILL BETA ANGLE (SLOPE) [deg] 0.000 0.000
 UPHILL DELTA/PHI RATIO 0.000 0.000
 DOWNHILL BETA ANGLE (SLOPE) [deg] 0.000 0.000
 DOWNHILL DELTA/PHI RATIO 0.000 0.000
 DYN.WATER BEHAVIOUR 0.000 0.000
 Excess pore pressure RATIO Ru 0.000 0.000
 SEISMIC PRESSURE LOWER VALUE 0.000 0.000
 SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====end of step 3

STEP NO. 4 no. of subincrements 1
 LEFT WALL RIGHT WALL
 Y 0.000 -0.9990E+30
 Z-PC 0.000 0.000
 Z-EXCAVATION -8.000 0.000
 Z-WATER_TABLE -40.00 -0.9990E+30
 Q_AT_THE_FREE_FIELD_LEVEL 0.000 0.000
 ZQ 0.000 0.000
 DZW_OF_THE_WATER_TABLE 0.000 0.000
 QS_ON_THE_EXCAVATION_SIDE 0.000 0.000
 ZQS 0.000 -0.9990E+30
 ZCUT 0.000 0.000
 BALANCE LEVEL FOR PORE PRESSURES -20.00 -20.00
 WATER_BEHAVIOUR_FLAG (LINING OPT) 0.000 0.000
 PORE_UPDATE_FLAG 0.000 0.000
 PORE_TAB._FLAG (gt.0= use tabs) 0.000 0.000
 lateral thrusts reduction elevatio 0.000 0.000
 Downhill reduction factor for effe 0.000 0.000
 Downhill reduction factor for pore 0.000 0.000
 Uphill reduction factor for effect 0.000 0.000
 Uphill reduction factor for pore p 0.000 0.000
 SEISMIC HORIZONTAL ACCEL. Kh [g] 0.000 0.000
 UPHILL VERTICAL ACCEL. Kv_uh [g] 0.000 0.000
 DOWNHILL VERTICAL ACCEL.Kv_dh [g] 0.000 0.000
 UPHILL BETA ANGLE (SLOPE) [deg] 0.000 0.000
 UPHILL DELTA/PHI RATIO 0.000 0.000
 DOWNHILL BETA ANGLE (SLOPE) [deg] 0.000 0.000
 DOWNHILL DELTA/PHI RATIO 0.000 0.000
 DYN.WATER BEHAVIOUR 0.000 0.000
 Excess pore pressure RATIO Ru 0.000 0.000
 SEISMIC PRESSURE LOWER VALUE 0.000 0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	352 di 731

SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====end of step 4

LEFT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

RIGHT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
 POSITION 5881

NO. OF D.P.W FOR THIS AREA 15427
 MAX NO. OF D.P.W. AVAILABLE 81920
 ** MAX NO OF ITERATIONS SET TO 40

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	353 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:03                                                         |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 1 (AT TIME 1.000) SUBINCREMENT 0001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 354 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|
|          ParatiePlus
|          Exe Time :17 November 2022  18:38:03
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New Project

STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	V-C	1.5043E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	V-C	1.5043E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	V-C	1.5043E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	V-C	1.5043E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	V-C	1.5043E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	V-C	1.5043E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	V-C	1.5043E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	V-C	1.5043E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	V-C	1.5043E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	V-C	1.5043E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	V-C	1.5043E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	V-C	1.5043E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	V-C	1.5043E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	V-C	1.5043E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	V-C	1.5043E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	V-C	1.5043E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	V-C	1.5043E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	355 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	1.5043E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	1.5043E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	1.5043E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	1.5043E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	1.5043E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	1.5043E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	1.5043E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	1.5043E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	1.5043E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	1.5043E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	1.5043E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	1.5043E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	1.5043E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	5.4011E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	5.4011E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	5.4011E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	5.4011E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	5.4011E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	5.4011E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	5.4011E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	5.4011E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	5.4011E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	5.4011E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	5.4011E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	5.4011E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	5.4011E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	5.4011E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	356 di 731
1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C	5.4011E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C	5.4011E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C	5.4011E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C	5.4011E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C	5.4011E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C	5.4011E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C	5.4011E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C	5.7745E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C	5.7745E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C	5.7745E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C	5.7745E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C	5.7745E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C	5.7745E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C	5.7745E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C	5.7745E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C	5.7745E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C	5.7745E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C	5.7745E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C	5.7745E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C	5.7745E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C	5.7745E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C	5.7745E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C	5.7745E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C	5.7745E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C	5.7745E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C	5.7745E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	360 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	7479.	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	7479.	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	7479.	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	7479.	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	7479.	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	7479.	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	7479.	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	7479.	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	7479.	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	7479.	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	7479.	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	7479.	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	7479.	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	4.2179E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	4.2179E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	4.2179E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	4.2179E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	4.2179E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	4.2179E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	4.2179E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	4.2179E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	4.2179E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	4.2179E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	4.2179E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	4.2179E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	4.2179E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	4.2179E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	361 di 731

1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 4.2179E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 4.2179E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 4.2179E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 4.2179E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 4.2179E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 4.2179E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 4.2179E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 4.8706E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 4.8706E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 4.8706E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 4.8706E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 4.8706E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 4.8706E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 4.8706E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 4.8706E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 4.8706E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 4.8706E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 4.8706E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 4.8706E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 4.8706E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 4.8706E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 4.8706E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 4.8706E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 4.8706E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 4.8706E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 4.8706E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	364 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|          ParatiePlus |
|          Exe Time :17 November 2022 18:38:03 |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL TA TB MA MB

***** NO ONE ELEMENT ACTIVE AT CURRENT STEP *****

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.9946E+05 RIMNOR= 0.000
RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.9946E+05 RDR = 0.000
RATIOT= 0.000 RATIO= 0.000
MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
RINORM=0.9946E+05 RIMNOR= 0.000
RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.9946E+05 RDR = 0.000
RATIOT= 0.000 RATIO= 0.000
MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.9946E+05 RIMNOR= 0.000
RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.9946E+05 RDR = 0.000
RATIOT= 0.000 RATIO= 0.000
MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	365 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:03          |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	367 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	2.4068E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	2.4068E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	2.4068E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	2.4068E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	2.4068E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	2.4068E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	2.4068E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	2.4068E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	2.4068E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	2.4068E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	2.4068E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	2.4068E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	2.4068E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	8.6418E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	8.6418E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	8.6418E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	8.6418E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	8.6418E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	8.6418E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	8.6418E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	8.6418E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	8.6418E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	8.6418E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	8.6418E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	8.6418E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	8.6418E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	8.6418E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	368 di 731

1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 8.6418E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 8.6418E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 8.6418E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 8.6418E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 8.6418E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 8.6418E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 8.6418E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 9.2392E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 9.2392E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 9.2392E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 9.2392E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 9.2392E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 9.2392E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 9.2392E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 9.2392E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 9.2392E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 9.2392E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 9.2392E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 9.2392E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 9.2392E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 9.2392E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 9.2392E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 9.2392E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 9.2392E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 9.2392E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 9.2392E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	372 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	1.1966E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	1.1966E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	1.1966E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	1.1966E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	1.1966E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	1.1966E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	1.1966E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	1.1966E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	1.1966E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	1.1966E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	1.1966E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	1.1966E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	1.1966E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	6.7486E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	6.7486E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	6.7486E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	6.7486E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	6.7486E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	6.7486E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	6.7486E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	6.7486E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	6.7486E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	6.7486E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	6.7486E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	6.7486E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	6.7486E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	6.7486E+04	-8.600	0.000	1.000

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	373 di 731

1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 6.7486E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 6.7486E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 6.7486E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 6.7486E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 6.7486E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 6.7486E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 6.7486E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 7.7929E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 7.7929E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 7.7929E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 7.7929E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 7.7929E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 7.7929E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 7.7929E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 7.7929E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 7.7929E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 7.7929E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 7.7929E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 7.7929E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 7.7929E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 7.7929E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 7.7929E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 7.7929E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 7.7929E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 7.7929E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 7.7929E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 376 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|
|          ParatiePlus
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|          Exe Time :17 November 2022  18:38:03
|
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000
57	0.0000	0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	377 di 731

58	0.0000	0.0000	0.0000	0.0000
59	0.0000	0.0000	0.0000	0.0000
60	0.0000	0.0000	0.0000	0.0000
61	0.0000	0.0000	0.0000	0.0000
62	0.0000	0.0000	0.0000	0.0000
63	0.0000	0.0000	0.0000	0.0000
64	0.0000	0.0000	0.0000	0.0000
65	0.0000	0.0000	0.0000	0.0000
66	0.0000	0.0000	0.0000	0.0000
67	0.0000	0.0000	0.0000	0.0000
68	0.0000	0.0000	0.0000	0.0000
69	0.0000	0.0000	0.0000	0.0000
70	0.0000	0.0000	0.0000	0.0000
71	0.0000	0.0000	0.0000	0.0000
72	0.0000	0.0000	0.0000	0.0000
73	0.0000	0.0000	0.0000	0.0000
74	0.0000	0.0000	0.0000	0.0000
75	0.0000	0.0000	0.0000	0.0000
76	0.0000	0.0000	0.0000	0.0000
77	0.0000	0.0000	0.0000	0.0000
78	0.0000	0.0000	0.0000	0.0000
79	0.0000	0.0000	0.0000	0.0000
80	0.0000	0.0000	0.0000	0.0000
81	0.0000	0.0000	0.0000	0.0000
82	0.0000	0.0000	0.0000	0.0000
83	0.0000	0.0000	0.0000	0.0000
84	0.0000	0.0000	0.0000	0.0000
85	0.0000	0.0000	0.0000	0.0000
86	0.0000	0.0000	0.0000	0.0000
87	0.0000	0.0000	0.0000	0.0000
88	0.0000	0.0000	0.0000	0.0000
89	0.0000	0.0000	0.0000	0.0000
90	0.0000	0.0000	0.0000	0.0000
91	0.0000	0.0000	0.0000	0.0000
92	0.0000	0.0000	0.0000	0.0000
93	0.0000	0.0000	0.0000	0.0000
94	0.0000	0.0000	0.0000	0.0000
95	0.0000	0.0000	0.0000	0.0000
96	0.0000	0.0000	0.0000	0.0000
97	0.0000	0.0000	0.0000	0.0000
98	0.0000	0.0000	0.0000	0.0000
99	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.1602E+05 REMNOR= 0.000 RATIO =0.5113 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5113 RATIO= 0.000
 MAX UN= 17.32 IEQ= 81 NODE 41 DOF 1 Y-DISPL.F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 503.4 REMNOR=0.9692E-18 RATIO =0.9063E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.9063E-01 RATIO= 0.000
 MAX UN= 6.564 IEQ= 61 NODE 31 DOF 1 Y-DISPL.F
 MIN UN=-.1502E-08 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1103. REMNOR=0.2276E-16 RATIO =0.1342 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1342 RATIO= 0.000
 MAX UN= 18.93 IEQ= 85 NODE 43 DOF 1 Y-DISPL.F
 MIN UN=-.2222E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	378 di 731

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ITER      4  RNORM = 0.000      RMNORM= 0.000
             RINORM=0.6129E+05 RIMNOR= 0.000
             RENORM= 76.02      REMNOR=0.2342E-16 RATIO =0.3522E-01 TOLER =0.1000E-03 NOT CONVERGED
             RFMAX = 38.31      RMMAX = 0.000
             RTSMAL=0.1000E-03 RMSMAL= 0.000
             RDT   =0.6129E+05 RDR   = 0.000
             RATIOT=0.3522E-01 RATIOR= 0.000
             MAX UN= 6.545      IEQ=   95 NODE      48 DOF   1  Y-DISPL.F
             MIN UN=-.1757E-07 IEQ=   23 NODE      12 DOF   1  Y-DISPL.F
             NO. OF CONTACT CONSTRAINT VIOLATIONS      0
  
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ITER      5  RNORM = 0.000      RMNORM= 0.000
             RINORM=0.6129E+05 RIMNOR= 0.000
             RENORM= 1.634      REMNOR=0.8775E-17 RATIO =0.5164E-02 TOLER =0.1000E-03 NOT CONVERGED
             RFMAX = 38.31      RMMAX = 0.000
             RTSMAL=0.1000E-03 RMSMAL= 0.000
             RDT   =0.6129E+05 RDR   = 0.000
             RATIOT=0.5164E-02 RATIOR= 0.000
             MAX UN= 1.139      IEQ=   99 NODE      50 DOF   1  Y-DISPL.F
             MIN UN=-.1767E-07 IEQ=    5 NODE      3 DOF   1  Y-DISPL.F
             NO. OF CONTACT CONSTRAINT VIOLATIONS      0
  
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ITER      6  RNORM = 0.000      RMNORM= 0.000
             RINORM=0.6129E+05 RIMNOR= 0.000
             RENORM=0.2226E-14 REMNOR=0.5797E-17 RATIO =0.1906E-09 TOLER =0.1000E-03 CONVERGED !
             RFMAX = 38.31      RMMAX = 0.000
             RTSMAL=0.1000E-03 RMSMAL= 0.000
             RDT   =0.6129E+05 RDR   = 0.000
             RATIOT=0.1906E-09 RATIOR= 0.000
             MAX UN=0.1596E-07 IEQ=    5 NODE      3 DOF   1  Y-DISPL.F
             MIN UN=-.1821E-07 IEQ=    7 NODE      4 DOF   1  Y-DISPL.F
             NO. OF CONTACT CONSTRAINT VIOLATIONS      0
  
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LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	380 di 731

62	4.0883648E-03	-1.4852408E-03
63	3.8010940E-03	-1.3878854E-03
64	3.5330351E-03	-1.2931621E-03
65	3.2836390E-03	-1.2012918E-03
66	3.0523155E-03	-1.1124655E-03
67	2.8384390E-03	-1.0268464E-03
68	2.6413539E-03	-9.4457191E-04
69	2.4603796E-03	-8.6575605E-04
70	2.2948148E-03	-7.9049118E-04
71	2.1439416E-03	-7.1884998E-04
72	2.0070296E-03	-6.5088731E-04
73	1.8833389E-03	-5.8664188E-04
74	1.7721234E-03	-5.2613795E-04
75	1.6726335E-03	-4.6938647E-04
76	1.5841192E-03	-4.1637874E-04
77	1.5058347E-03	-3.6708121E-04
78	1.4370431E-03	-3.2143825E-04
79	1.3770207E-03	-2.7937478E-04
80	1.3250607E-03	-2.4079870E-04
81	1.2804759E-03	-2.0560308E-04
82	1.2426021E-03	-1.7366823E-04
83	1.2107999E-03	-1.4486355E-04
84	1.1844573E-03	-1.1904922E-04
85	1.1629907E-03	-9.6077741E-05
86	1.1458469E-03	-7.5795278E-05
87	1.1325039E-03	-5.8042896E-05
88	1.1224720E-03	-4.2657626E-05
89	1.1152941E-03	-2.9473409E-05
90	1.1105469E-03	-1.8321399E-05
91	1.1078411E-03	-9.0327974E-06
92	1.1068210E-03	-1.4360977E-06
93	1.1071653E-03	4.6400924E-06
94	1.1085871E-03	9.3672548E-06
95	1.1108337E-03	1.2916638E-05
96	1.1136866E-03	1.5459004E-05
97	1.1169615E-03	1.7164443E-05
98	1.1205079E-03	1.8202233E-05
99	1.1242091E-03	1.8740748E-05
100	1.1279820E-03	1.8947407E-05
101	1.1317770E-03	1.8988639E-05

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	382 di 731
18 D	3.010	-3.2692E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	3.187	-3.1879E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	3.365	-3.1067E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	3.542	-3.0256E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	3.719	-2.9447E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	3.896	-2.8639E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	4.073	-2.7834E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	4.250	-2.7030E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	4.427	-2.6230E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	4.604	-2.5432E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	4.781	-2.4637E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	4.958	-2.3846E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	5.135	-2.3059E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000	Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	6.480	-2.2276E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	6.796	-2.1498E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	7.111	-2.0726E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	7.426	-1.9960E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	7.741	-1.9200E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	8.056	-1.8448E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	8.371	-1.7704E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	8.687	-1.6968E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	9.002	-1.6242E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	9.317	-1.5527E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	9.632	-1.4822E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	9.947	-1.4130E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	10.26	-1.3452E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	10.58	-1.2787E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	383 di 731

1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	10.89	-1.2138E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	11.21	-1.1506E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	11.52	-1.0890E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	11.84	-1.0293E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	12.15	-9.7142E-03	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	12.47	-9.1553E-03	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	12.78	-8.6167E-03	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	11.93	-8.0988E-03	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	12.29	-7.6019E-03	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	12.65	-7.1264E-03	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	13.00	-6.6723E-03	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	13.36	-6.2397E-03	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	13.71	-5.8286E-03	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	14.07	-5.4388E-03	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	14.42	-5.0702E-03	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	14.78	-4.7225E-03	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	15.14	-4.3953E-03	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	15.49	-4.0884E-03	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	15.85	-3.8011E-03	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	16.20	-3.5330E-03	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	16.56	-3.2836E-03	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	16.92	-3.0523E-03	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	17.27	-2.8384E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	17.63	-2.6414E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	17.98	-2.4604E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	18.34	-2.2948E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	386 di 731

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| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
| | |
| ParatiePlus |
| Exe Time :17 November 2022 18:38:03 |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--	REMOVED	--	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-0.2000	0.000	1.000
2	0.000	--	--	--	--	--	REMOVED	--	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-0.6000	0.000	1.000
3	0.000	--	--	--	--	--	REMOVED	--	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-1.0000	0.000	1.000
4	0.000	--	--	--	--	--	REMOVED	--	--	-1.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-1.4000	0.000	1.000
5	0.000	--	--	--	--	--	REMOVED	--	--	-1.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-1.8000	0.000	1.000
6	0.000	--	--	--	--	--	REMOVED	--	--	-2.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-2.2000	0.000	1.000
7	0.000	--	--	--	--	--	REMOVED	--	--	-2.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-2.6000	0.000	1.000
8	0.000	--	--	--	--	--	REMOVED	--	--	-2.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-3.0000	0.000	1.000
9	0.000	--	--	--	--	--	REMOVED	--	--	-3.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-3.4000	0.000	1.000
10	0.000	--	--	--	--	--	REMOVED	--	--	-3.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-3.8000	0.000	1.000
11	0.000	--	--	--	--	--	REMOVED	--	--	-4.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-4.2000	0.000	1.000
12	0.000	--	--	--	--	--	REMOVED	--	--	-4.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-4.6000	0.000	1.000
13	0.000	--	--	--	--	--	REMOVED	--	--	-4.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--	-5.0000	0.000	1.000
14	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
15	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
16	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
17	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
18	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
19	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
20	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
21	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
22	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
23	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
24	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
25	0.000	--	--	--	--	--	REMOVED	--	--			
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available	--	--			
26	0.000	--	--	--	--	--	REMOVED	--	--			

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	388 di 731

58 D	25.51	5.4388E-03	68.70	127.6	222.8	127.6	V-C	1.2176E+04	-11.40	0.000	1.000
1.000	127.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	25.01	5.0702E-03	72.80	125.1	226.9	125.1	V-C	1.2176E+04	-11.60	0.000	1.000
1.000	125.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	24.57	4.7225E-03	76.90	122.8	231.0	122.8	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	122.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	24.17	4.3953E-03	81.00	120.8	235.1	120.8	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	120.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.82	4.0884E-03	85.10	119.1	239.2	119.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	119.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.46	3.8011E-03	89.20	117.3	243.3	118.0	UL-RL	1.9482E+04	-12.40	0.000	1.000
1.000	117.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	22.82	3.5330E-03	93.30	114.1	247.4	120.0	UL-RL	1.9482E+04	-12.60	0.000	1.000
1.000	114.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	22.24	3.2836E-03	97.40	111.2	251.5	122.0	UL-RL	1.9482E+04	-12.80	0.000	1.000
1.000	111.2	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	21.74	3.0523E-03	101.5	108.7	255.6	124.0	UL-RL	1.9482E+04	-13.00	0.000	1.000
1.000	108.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	21.30	2.8384E-03	105.6	106.5	259.7	126.0	UL-RL	1.9482E+04	-13.20	0.000	1.000
1.000	106.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	20.93	2.6414E-03	109.7	104.7	263.8	127.9	UL-RL	1.9482E+04	-13.40	0.000	1.000
1.000	104.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	20.63	2.4604E-03	113.8	103.1	267.9	129.9	UL-RL	1.9482E+04	-13.60	0.000	1.000
1.000	103.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	20.38	2.2948E-03	117.9	101.9	272.0	131.9	UL-RL	1.9482E+04	-13.80	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	20.19	2.1439E-03	122.0	100.9	276.1	133.9	UL-RL	1.9482E+04	-14.00	0.000	1.000
1.000	100.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	20.05	2.0070E-03	126.1	100.3	280.2	135.9	UL-RL	1.9482E+04	-14.20	0.000	1.000
1.000	100.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	19.97	1.8833E-03	130.2	99.84	284.3	137.9	UL-RL	1.9482E+04	-14.40	0.000	1.000
1.000	99.84	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	19.93	1.7721E-03	134.3	99.66	288.4	139.9	UL-RL	1.9482E+04	-14.60	0.000	1.000
1.000	99.66	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	19.94	1.6726E-03	138.4	99.71	292.5	141.9	UL-RL	1.9482E+04	-14.80	0.000	1.000
1.000	99.71	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	19.99	1.5841E-03	142.5	99.97	296.6	143.9	UL-RL	1.9482E+04	-15.00	0.000	1.000
1.000	99.97	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	20.09	1.5058E-03	146.6	100.4	300.7	145.8	UL-RL	1.9482E+04	-15.20	0.000	1.000
1.000	100.4	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	20.22	1.4370E-03	150.7	101.1	304.8	147.8	UL-RL	1.9482E+04	-15.40	0.000	1.000
1.000	101.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	20.38	1.3770E-03	154.8	101.9	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	20.58	1.3251E-03	158.9	102.9	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	102.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	20.80	1.2805E-03	163.0	104.0	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	104.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	21.05	1.2426E-03	167.1	105.3	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	105.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	21.32	1.2108E-03	171.2	106.6	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	106.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	21.62	1.1845E-03	175.3	108.1	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	389 di 731

1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	21.93	1.1630E-03	179.4	109.7	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	109.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	22.26	1.1458E-03	183.5	111.3	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	111.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	22.61	1.1325E-03	187.6	113.0	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	113.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	22.97	1.1225E-03	191.7	114.8	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	114.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	23.34	1.1153E-03	195.8	116.7	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	116.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	23.72	1.1105E-03	199.9	118.6	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	118.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.10	1.1078E-03	204.0	120.5	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	120.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.50	1.1068E-03	208.1	122.5	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.90	1.1072E-03	212.2	124.5	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	124.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	25.30	1.1086E-03	216.3	126.5	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	126.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	25.71	1.1108E-03	220.4	128.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	128.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	26.12	1.1137E-03	224.5	130.6	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	130.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	26.53	1.1170E-03	228.6	132.6	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	132.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	26.94	1.1205E-03	232.7	134.7	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	134.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	27.35	1.1242E-03	236.8	136.8	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	136.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	27.76	1.1280E-03	240.9	138.8	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	138.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	14.09	1.1318E-03	245.0	140.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	140.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



**LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	390 di 731

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|           PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022* |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|           Exe Time :17 November 2022  18:38:03 |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-2.62889E-09	2.62889E-09	-2.60371E-10	3.99666E-10
2	0.17708	-0.17708	-1.64363E-10	3.54160E-02
3	0.53124	-0.53124	-3.54160E-02	0.14166
4	1.0625	-1.0625	-0.14166	0.35416
5	1.7708	-1.7708	-0.35416	0.70832
6	2.6562	-2.6562	-0.70832	1.2396
7	3.7187	-3.7187	-1.2396	1.9833
8	4.9582	-4.9582	-1.9833	2.9749
9	6.3749	-6.3749	-2.9749	4.2499
10	7.9686	-7.9686	-4.2499	5.8436
11	9.7394	-9.7394	-5.8436	7.7915
12	11.687	-11.687	-7.7915	10.129
13	13.812	-13.812	-10.129	12.891
14	16.114	-16.114	-12.891	16.114
15	18.593	-18.593	-16.114	19.833
16	21.250	-21.250	-19.833	24.083
17	24.083	-24.083	-24.083	28.899
18	27.093	-27.093	-28.899	34.318
19	30.281	-30.281	-34.318	40.374
20	33.645	-33.645	-40.374	47.103
21	37.187	-37.187	-47.103	54.541
22	40.905	-40.905	-54.541	62.722
23	44.801	-44.801	-62.722	71.682
24	48.874	-48.874	-71.682	81.457
25	53.124	-53.124	-81.457	92.082
26	57.551	-57.551	-92.082	103.59
27	62.155	-62.155	-103.59	116.02
28	66.936	-66.936	-116.02	129.41
29	71.894	-71.894	-129.41	143.79
30	77.030	-77.030	-143.79	159.19
31	83.510	-83.510	-159.19	175.90
32	90.306	-90.306	-175.90	193.96
33	97.416	-97.416	-193.96	213.44
34	104.84	-104.84	-213.44	234.41
35	112.58	-112.58	-234.41	256.93
36	120.64	-120.64	-256.93	281.05
37	129.01	-129.01	-281.05	306.86
38	137.70	-137.70	-306.86	334.40
39	146.70	-146.70	-334.40	363.74
40	156.02	-156.02	-363.74	394.94
41	165.65	-165.65	-394.94	428.07
42	165.49	-165.49	-428.07	461.17
43	162.93	-162.93	-461.17	493.75
44	157.96	-157.96	-493.75	525.35
45	150.58	-150.58	-525.35	555.46
46	140.79	-140.79	-555.46	583.62
47	128.60	-128.60	-583.62	609.34
48	113.99	-113.99	-609.34	632.14
49	96.980	-96.980	-632.14	651.53
50	77.560	-77.560	-651.53	667.04
51	57.801	-57.801	-667.04	678.61
52	40.129	-40.129	-678.61	686.63
53	23.625	-23.625	-686.63	691.36
54	8.2369	-8.2369	-691.36	693.00
55	-6.0870	6.0870	-693.00	691.79
56	-19.399	19.399	-691.79	687.91
57	-31.752	31.752	-687.91	681.56

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	391 di 731

58	-43.198	43.198	-681.56	672.92
59	-53.787	53.787	-672.92	662.16
60	-63.572	63.572	-662.16	649.44
61	-72.602	72.602	-649.44	634.92
62	-80.926	80.926	-634.92	618.74
63	-88.541	88.541	-618.74	601.03
64	-95.154	95.154	-601.03	582.00
65	-100.84	100.84	-582.00	561.83
66	-105.66	105.66	-561.83	540.70
67	-109.69	109.69	-540.70	518.76
68	-113.00	113.00	-518.76	496.16
69	-115.64	115.64	-496.16	473.04
70	-117.68	117.68	-473.04	449.50
71	-119.17	119.17	-449.50	425.67
72	-120.17	120.17	-425.67	401.63
73	-120.73	120.73	-401.63	377.49
74	-120.87	120.87	-377.49	353.31
75	-120.17	120.17	-353.31	329.28
76	-118.71	118.71	-329.28	305.53
77	-116.59	116.59	-305.53	282.22
78	-113.88	113.88	-282.22	259.44
79	-110.66	110.66	-259.44	237.31
80	-107.00	107.00	-237.31	215.91
81	-102.95	102.95	-215.91	195.32
82	-98.586	98.586	-195.32	175.60
83	-93.950	93.950	-175.60	156.81
84	-89.089	89.089	-156.81	138.99
85	-84.045	84.045	-138.99	122.19
86	-78.856	78.856	-122.19	106.41
87	-73.553	73.553	-106.41	91.704
88	-68.164	68.164	-91.704	78.071
89	-62.714	62.714	-78.071	65.528
90	-57.224	57.224	-65.528	54.083
91	-51.711	51.711	-54.083	43.741
92	-46.189	46.189	-43.741	34.503
93	-40.670	40.670	-34.503	26.369
94	-35.163	35.163	-26.369	19.337
95	-29.675	29.675	-19.337	13.402
96	-24.211	24.211	-13.402	8.5595
97	-18.776	18.776	-8.5595	4.8043
98	-13.370	13.370	-4.8043	2.1302
99	-7.9965	7.9965	-2.1302	0.53094
100	-2.6547	2.6547	-0.53094	-2.08615E-11

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1478E+07 RIMNOR=0.2603E+08
RENORM=0.2226E-14 REMNOR=0.5797E-17 RATIO =0.3881E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1478E+07 RDR =0.2603E+08
RATIOT=0.3881E-10 RATIO= 0.000
MAX UN=0.1596E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
MIN UN=-.1821E-07 IEQ= 7 NODE 4 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1478E+07 RIMNOR=0.2603E+08
RENORM=0.2206E-14 REMNOR=0.6200E-17 RATIO =0.3864E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1478E+07 RDR =0.2603E+08
RATIOT=0.3864E-10 RATIO= 0.000
MAX UN=0.2007E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
MIN UN=-.1526E-07 IEQ= 25 NODE 13 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1478E+07 RIMNOR=0.2603E+08
RENORM=0.1776E-14 REMNOR=0.7415E-17 RATIO =0.3467E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1478E+07 RDR =0.2603E+08
RATIOT=0.3467E-10 RATIO= 0.000
MAX UN=0.1172E-07 IEQ= 25 NODE 13 DOF 1 Y-DISPL.F
MIN UN=-.1440E-07 IEQ= 35 NODE 18 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	392 di 731



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	393 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:03                                                                 |
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New Project
SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 4 (AT TIME 4.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	4.6573506E-02	-4.0866567E-03
2	4.5756175E-02	-4.0866567E-03
3	4.4938844E-02	-4.0866540E-03
4	4.4121514E-02	-4.0866402E-03
5	4.3304189E-02	-4.0866017E-03
6	4.2486876E-02	-4.0865192E-03
7	4.1669586E-02	-4.0863679E-03
8	4.0852336E-02	-4.0861176E-03
9	4.0035148E-02	-4.0857326E-03
10	3.9218054E-02	-4.0851715E-03
11	3.8401094E-02	-4.0843877E-03
12	3.7584318E-02	-4.0833288E-03
13	3.6767785E-02	-4.0819372E-03
14	3.5951569E-02	-4.0801495E-03
15	3.5135756E-02	-4.0778970E-03
16	3.4320446E-02	-4.0751055E-03
17	3.3505751E-02	-4.0716951E-03
18	3.2691811E-02	-4.0675806E-03
19	3.1878772E-02	-4.0626714E-03
20	3.1066802E-02	-4.0568710E-03
21	3.0256094E-02	-4.0500778E-03
22	2.9446848E-02	-4.0421844E-03
23	2.8639301E-02	-4.0330782E-03
24	2.7833706E-02	-4.0226409E-03
25	2.7030342E-02	-4.0107486E-03
26	2.6229512E-02	-3.9972721E-03
27	2.5431551E-02	-3.9820768E-03
28	2.4636809E-02	-3.9650223E-03
29	2.3845676E-02	-3.9459627E-03
30	2.3058568E-02	-3.9247470E-03
31	2.2275931E-02	-3.9012182E-03
32	2.1498251E-02	-3.8751962E-03
33	2.0726037E-02	-3.8464744E-03
34	1.9959855E-02	-3.8148371E-03
35	1.9200311E-02	-3.7800584E-03
36	1.8448057E-02	-3.7419028E-03
37	1.7703795E-02	-3.7001252E-03
38	1.6968269E-02	-3.6544699E-03
39	1.6242284E-02	-3.6046723E-03
40	1.5526695E-02	-3.5504576E-03
41	1.4822414E-02	-3.4915413E-03
42	1.4130411E-02	-3.4276291E-03
43	1.3451705E-02	-3.3585738E-03
44	1.2787322E-02	-3.2844176E-03
45	1.2138274E-02	-3.2052780E-03
46	1.1505533E-02	-3.1213460E-03
47	1.0890037E-02	-3.0328886E-03
48	1.0292657E-02	-2.9402474E-03
49	9.7141893E-03	-2.8438384E-03
50	9.1553427E-03	-2.7441532E-03
51	8.6167116E-03	-2.6417567E-03
52	8.0987675E-03	-2.5372552E-03
53	7.6019220E-03	-2.4312406E-03
54	7.1263627E-03	-2.3242306E-03
55	6.6722628E-03	-2.2167257E-03
56	6.2396746E-03	-2.1091874E-03
57	5.8285614E-03	-2.0020450E-03
58	5.4388037E-03	-1.8956970E-03
59	5.0702050E-03	-1.7905131E-03
60	4.7224980E-03	-1.6868355E-03
61	4.3953493E-03	-1.5849806E-03

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	394 di 731

62	4.0883648E-03	-1.4852408E-03
63	3.8010940E-03	-1.3878854E-03
64	3.5330351E-03	-1.2931621E-03
65	3.2836390E-03	-1.2012918E-03
66	3.0523155E-03	-1.1124655E-03
67	2.8384390E-03	-1.0268464E-03
68	2.6413539E-03	-9.4457191E-04
69	2.4603796E-03	-8.6575605E-04
70	2.2948148E-03	-7.9049118E-04
71	2.1439416E-03	-7.1884998E-04
72	2.0070296E-03	-6.5088731E-04
73	1.8833389E-03	-5.8664188E-04
74	1.7721234E-03	-5.2613795E-04
75	1.6726335E-03	-4.6938647E-04
76	1.5841192E-03	-4.1637874E-04
77	1.5058347E-03	-3.6708121E-04
78	1.4370431E-03	-3.2143825E-04
79	1.3770207E-03	-2.7937478E-04
80	1.3250607E-03	-2.4079870E-04
81	1.2804759E-03	-2.0560308E-04
82	1.2426021E-03	-1.7366823E-04
83	1.2107999E-03	-1.4486355E-04
84	1.1844573E-03	-1.1904922E-04
85	1.1629907E-03	-9.6077741E-05
86	1.1458469E-03	-7.5795278E-05
87	1.1325039E-03	-5.8042896E-05
88	1.1224720E-03	-4.2657626E-05
89	1.1152941E-03	-2.9473409E-05
90	1.1105469E-03	-1.8321399E-05
91	1.1078411E-03	-9.0327974E-06
92	1.1068210E-03	-1.4360977E-06
93	1.1071653E-03	4.6400924E-06
94	1.1085871E-03	9.3672548E-06
95	1.1108337E-03	1.2916638E-05
96	1.1136866E-03	1.5459004E-05
97	1.1169615E-03	1.7164443E-05
98	1.1205079E-03	1.8202233E-05
99	1.1242091E-03	1.8740748E-05
100	1.1279820E-03	1.8947407E-05
101	1.1317770E-03	1.8988639E-05



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	396 di 731

18 D	3.010	-3.2692E-02	64.60	15.05	64.60	25.84	UL-RL	6017.	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	3.187	-3.1879E-02	68.40	15.94	68.40	27.36	UL-RL	6017.	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	3.365	-3.1067E-02	72.20	16.82	72.20	28.88	UL-RL	6017.	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	3.542	-3.0256E-02	76.00	17.71	76.00	30.40	UL-RL	6017.	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	3.719	-2.9447E-02	79.80	18.59	79.80	31.92	UL-RL	6017.	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	3.896	-2.8639E-02	83.60	19.48	83.60	33.44	UL-RL	6017.	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	4.073	-2.7834E-02	87.40	20.36	87.40	34.96	UL-RL	6017.	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	4.250	-2.7030E-02	91.20	21.25	91.20	36.48	UL-RL	6017.	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	4.427	-2.6230E-02	95.00	22.14	95.00	38.00	UL-RL	6017.	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	4.604	-2.5432E-02	98.80	23.02	98.80	39.52	UL-RL	6017.	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	4.781	-2.4637E-02	102.6	23.91	102.6	41.04	UL-RL	6017.	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	4.958	-2.3846E-02	106.4	24.79	106.4	42.56	UL-RL	6017.	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	5.135	-2.3059E-02	110.2	25.68	110.2	44.08	UL-RL	6017.	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	6.480	-2.2276E-02	114.1	32.40	114.1	64.12	UL-RL	2.1605E+04	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	6.796	-2.1498E-02	118.1	33.98	118.1	66.37	UL-RL	2.1605E+04	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	7.111	-2.0726E-02	122.1	35.55	122.1	68.62	UL-RL	2.1605E+04	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	7.426	-1.9960E-02	126.1	37.13	126.1	70.87	UL-RL	2.1605E+04	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	7.741	-1.9200E-02	130.1	38.71	130.1	73.12	UL-RL	2.1605E+04	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	8.056	-1.8448E-02	134.1	40.28	134.1	75.36	UL-RL	2.1605E+04	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	8.371	-1.7704E-02	138.1	41.86	138.1	77.61	UL-RL	2.1605E+04	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	8.687	-1.6968E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	9.002	-1.6242E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	9.317	-1.5527E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	9.632	-1.4822E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	9.947	-1.4130E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	10.26	-1.3452E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	10.58	-1.2787E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	397 di 731

1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	10.89	-1.2138E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	11.21	-1.1506E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	11.52	-1.0890E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	11.84	-1.0293E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	12.15	-9.7142E-03	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	12.47	-9.1553E-03	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	12.78	-8.6167E-03	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	11.93	-8.0988E-03	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	12.29	-7.6019E-03	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	12.65	-7.1264E-03	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	13.00	-6.6723E-03	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	13.36	-6.2397E-03	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	13.71	-5.8286E-03	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	14.07	-5.4388E-03	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	14.42	-5.0702E-03	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	14.78	-4.7225E-03	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	15.14	-4.3953E-03	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	15.49	-4.0884E-03	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	15.85	-3.8011E-03	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	16.20	-3.5330E-03	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	16.56	-3.2836E-03	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	16.92	-3.0523E-03	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	17.27	-2.8384E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	17.63	-2.6414E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	17.98	-2.4604E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	18.34	-2.2948E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 400 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                          |
|                                                                                                          |
|                                                                                                          |
|                                                                                                          |
|          ParatiePlus                                                                                      |
|          Exe Time :17 November 2022  18:38:03                                                         |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
 ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
 CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
6	0.000	--	--	--	--	--		REMOVED	--	-1.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
7	0.000	--	--	--	--	--		REMOVED	--	-1.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
8	0.000	--	--	--	--	--		REMOVED	--	-1.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
9	0.000	--	--	--	--	--		REMOVED	--	-1.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
10	0.000	--	--	--	--	--		REMOVED	--	-1.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
11	0.000	--	--	--	--	--		REMOVED	--	-2.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
12	0.000	--	--	--	--	--		REMOVED	--	-2.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
13	0.000	--	--	--	--	--		REMOVED	--	-2.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
14	0.000	--	--	--	--	--		REMOVED	--	-2.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
15	0.000	--	--	--	--	--		REMOVED	--	-2.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
16	0.000	--	--	--	--	--		REMOVED	--	-3.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
17	0.000	--	--	--	--	--		REMOVED	--	-3.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
18	0.000	--	--	--	--	--		REMOVED	--	-3.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
19	0.000	--	--	--	--	--		REMOVED	--	-3.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
20	0.000	--	--	--	--	--		REMOVED	--	-3.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
21	0.000	--	--	--	--	--		REMOVED	--	-4.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
22	0.000	--	--	--	--	--		REMOVED	--	-4.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
23	0.000	--	--	--	--	--		REMOVED	--	-4.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
24	0.000	--	--	--	--	--		REMOVED	--	-4.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
25	0.000	--	--	--	--	--		REMOVED	--	-4.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available				
26	0.000	--	--	--	--	--		REMOVED	--	-5.0000	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	402 di 731

58 D	25.51	5.4388E-03	68.70	127.6	222.8	127.6	V-C	1.2176E+04	-11.40	0.000	1.000
1.000	127.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	25.01	5.0702E-03	72.80	125.1	226.9	125.1	V-C	1.2176E+04	-11.60	0.000	1.000
1.000	125.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	24.57	4.7225E-03	76.90	122.8	231.0	122.8	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	122.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	24.17	4.3953E-03	81.00	120.8	235.1	120.8	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	120.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.82	4.0884E-03	85.10	119.1	239.2	119.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	119.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.46	3.8011E-03	89.20	117.3	243.3	118.0	UL-RL	1.9482E+04	-12.40	0.000	1.000
1.000	117.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	22.82	3.5330E-03	93.30	114.1	247.4	120.0	UL-RL	1.9482E+04	-12.60	0.000	1.000
1.000	114.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	22.24	3.2836E-03	97.40	111.2	251.5	122.0	UL-RL	1.9482E+04	-12.80	0.000	1.000
1.000	111.2	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	21.74	3.0523E-03	101.5	108.7	255.6	124.0	UL-RL	1.9482E+04	-13.00	0.000	1.000
1.000	108.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	21.30	2.8384E-03	105.6	106.5	259.7	126.0	UL-RL	1.9482E+04	-13.20	0.000	1.000
1.000	106.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	20.93	2.6414E-03	109.7	104.7	263.8	127.9	UL-RL	1.9482E+04	-13.40	0.000	1.000
1.000	104.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	20.63	2.4604E-03	113.8	103.1	267.9	129.9	UL-RL	1.9482E+04	-13.60	0.000	1.000
1.000	103.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	20.38	2.2948E-03	117.9	101.9	272.0	131.9	UL-RL	1.9482E+04	-13.80	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	20.19	2.1439E-03	122.0	100.9	276.1	133.9	UL-RL	1.9482E+04	-14.00	0.000	1.000
1.000	100.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	20.05	2.0070E-03	126.1	100.3	280.2	135.9	UL-RL	1.9482E+04	-14.20	0.000	1.000
1.000	100.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	19.97	1.8833E-03	130.2	99.84	284.3	137.9	UL-RL	1.9482E+04	-14.40	0.000	1.000
1.000	99.84	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	19.93	1.7721E-03	134.3	99.66	288.4	139.9	UL-RL	1.9482E+04	-14.60	0.000	1.000
1.000	99.66	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	19.94	1.6726E-03	138.4	99.71	292.5	141.9	UL-RL	1.9482E+04	-14.80	0.000	1.000
1.000	99.71	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	19.99	1.5841E-03	142.5	99.97	296.6	143.9	UL-RL	1.9482E+04	-15.00	0.000	1.000
1.000	99.97	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	20.09	1.5058E-03	146.6	100.4	300.7	145.8	UL-RL	1.9482E+04	-15.20	0.000	1.000
1.000	100.4	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	20.22	1.4370E-03	150.7	101.1	304.8	147.8	UL-RL	1.9482E+04	-15.40	0.000	1.000
1.000	101.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	20.38	1.3770E-03	154.8	101.9	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	20.58	1.3251E-03	158.9	102.9	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	102.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	20.80	1.2805E-03	163.0	104.0	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	104.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	21.05	1.2426E-03	167.1	105.3	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	105.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	21.32	1.2108E-03	171.2	106.6	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	106.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	21.62	1.1845E-03	175.3	108.1	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	403 di 731

1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	21.93	1.1630E-03	179.4	109.7	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	109.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	22.26	1.1458E-03	183.5	111.3	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	111.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	22.61	1.1325E-03	187.6	113.0	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	113.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	22.97	1.1225E-03	191.7	114.8	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	114.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	23.34	1.1153E-03	195.8	116.7	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	116.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	23.72	1.1105E-03	199.9	118.6	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	118.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.10	1.1078E-03	204.0	120.5	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	120.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.50	1.1068E-03	208.1	122.5	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.90	1.1072E-03	212.2	124.5	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	124.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	25.30	1.1086E-03	216.3	126.5	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	126.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	25.71	1.1108E-03	220.4	128.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	128.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	26.12	1.1137E-03	224.5	130.6	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	130.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	26.53	1.1170E-03	228.6	132.6	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	132.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	26.94	1.1205E-03	232.7	134.7	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	134.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	27.35	1.1242E-03	236.8	136.8	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	136.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	27.76	1.1280E-03	240.9	138.8	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	138.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	14.09	1.1318E-03	245.0	140.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	140.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 404 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                              ParatiePlus                                                                                              |
|                                                                                              Exe Time :17 November 2022  18:38:03                                                                                              |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	5.14196E-09	5.14196E-09	-5.17262E-10	1.53945E-10
2	0.17708	-0.17708	-3.87746E-10	3.54160E-02
3	0.53124	-0.53124	-3.54160E-02	0.14166
4	1.0625	-1.0625	-0.14166	0.35416
5	1.7708	-1.7708	-0.35416	0.70832
6	2.6562	-2.6562	-0.70832	1.2396
7	3.7187	-3.7187	-1.2396	1.9833
8	4.9582	-4.9582	-1.9833	2.9749
9	6.3749	-6.3749	-2.9749	4.2499
10	7.9686	-7.9686	-4.2499	5.8436
11	9.7394	-9.7394	-5.8436	7.7915
12	11.687	-11.687	-7.7915	10.129
13	13.812	-13.812	-10.129	12.891
14	16.114	-16.114	-12.891	16.114
15	18.593	-18.593	-16.114	19.833
16	21.250	-21.250	-19.833	24.083
17	24.083	-24.083	-24.083	28.899
18	27.093	-27.093	-28.899	34.318
19	30.281	-30.281	-34.318	40.374
20	33.645	-33.645	-40.374	47.103
21	37.187	-37.187	-47.103	54.541
22	40.905	-40.905	-54.541	62.722
23	44.801	-44.801	-62.722	71.682
24	48.874	-48.874	-71.682	81.457
25	53.124	-53.124	-81.457	92.082
26	57.551	-57.551	-92.082	103.59
27	62.155	-62.155	-103.59	116.02
28	66.936	-66.936	-116.02	129.41
29	71.894	-71.894	-129.41	143.79
30	77.030	-77.030	-143.79	159.19
31	83.510	-83.510	-159.19	175.90
32	90.306	-90.306	-175.90	193.96
33	97.416	-97.416	-193.96	213.44
34	104.84	-104.84	-213.44	234.41
35	112.58	-112.58	-234.41	256.93
36	120.64	-120.64	-256.93	281.05
37	129.01	-129.01	-281.05	306.86
38	137.70	-137.70	-306.86	334.40
39	146.70	-146.70	-334.40	363.74
40	156.02	-156.02	-363.74	394.94
41	165.65	-165.65	-394.94	428.07
42	165.49	-165.49	-428.07	461.17
43	162.93	-162.93	-461.17	493.75
44	157.96	-157.96	-493.75	525.35
45	150.58	-150.58	-525.35	555.46
46	140.79	-140.79	-555.46	583.62
47	128.60	-128.60	-583.62	609.34
48	113.99	-113.99	-609.34	632.14
49	96.980	-96.980	-632.14	651.53
50	77.560	-77.560	-651.53	667.04
51	57.801	-57.801	-667.04	678.61
52	40.129	-40.129	-678.61	686.63
53	23.625	-23.625	-686.63	691.36
54	8.2369	-8.2369	-691.36	693.00
55	-6.0870	6.0870	-693.00	691.79
56	-19.399	19.399	-691.79	687.91
57	-31.752	31.752	-687.91	681.56

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	405 di 731

58	-43.198	43.198	-681.56	672.92
59	-53.787	53.787	-672.92	662.16
60	-63.572	63.572	-662.16	649.44
61	-72.602	72.602	-649.44	634.92
62	-80.926	80.926	-634.92	618.74
63	-88.541	88.541	-618.74	601.03
64	-95.154	95.154	-601.03	582.00
65	-100.84	100.84	-582.00	561.83
66	-105.66	105.66	-561.83	540.70
67	-109.69	109.69	-540.70	518.76
68	-113.00	113.00	-518.76	496.16
69	-115.64	115.64	-496.16	473.04
70	-117.68	117.68	-473.04	449.50
71	-119.17	119.17	-449.50	425.67
72	-120.17	120.17	-425.67	401.63
73	-120.73	120.73	-401.63	377.49
74	-120.87	120.87	-377.49	353.31
75	-120.17	120.17	-353.31	329.28
76	-118.71	118.71	-329.28	305.53
77	-116.59	116.59	-305.53	282.22
78	-113.88	113.88	-282.22	259.44
79	-110.66	110.66	-259.44	237.31
80	-107.00	107.00	-237.31	215.91
81	-102.95	102.95	-215.91	195.32
82	-98.586	98.586	-195.32	175.60
83	-93.950	93.950	-175.60	156.81
84	-89.089	89.089	-156.81	138.99
85	-84.045	84.045	-138.99	122.19
86	-78.856	78.856	-122.19	106.41
87	-73.553	73.553	-106.41	91.704
88	-68.164	68.164	-91.704	78.071
89	-62.714	62.714	-78.071	65.528
90	-57.224	57.224	-65.528	54.083
91	-51.711	51.711	-54.083	43.741
92	-46.189	46.189	-43.741	34.503
93	-40.670	40.670	-34.503	26.369
94	-35.163	35.163	-26.369	19.337
95	-29.675	29.675	-19.337	13.402
96	-24.211	24.211	-13.402	8.5595
97	-18.776	18.776	-8.5595	4.8043
98	-13.370	13.370	-4.8043	2.1302
99	-7.9965	7.9965	-2.1302	0.53094
100	-2.6547	2.6547	-0.53094	1.12062E-11



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	406 di 731

```
-----+-----
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:03          |
|-----+-----
```

F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	2
3	CONVERGENCE :YES	6
4	CONVERGENCE :YES	2

END OF PROCESS FOR PROBLEM
New Project
NONLINEAR SOLUTION CPU TIME 0.07 [sec]
DATABASE CREATION CPU TIME..... 0.36 [sec]

9.5. Design Assumption : NTC2018: A1+M1+R1 (R3 per tiranti) - File di Paratie - File di input (.d)

* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: A1+M1+R1 (R3 per tiranti)

* Time:giovedì 17 novembre 2022 18:38:03

* 1: Defining general settings

UNIT m kN

TITLE New Project

DELTA 0.2

option param itemax 40

option control contact lagrange

option control hinges 0 0.0001 0.001

* 2: Defining wall(s)

WALL LeftWall_910 0 -20 0 1

* 3: Defining surfaces for wall(s)

SOIL 0_L LeftWall_910 -20 0 1 0

SOIL 0_R LeftWall_910 -20 0 2 180

* 4: Defining soil layers

*

* Soil Profile (Arenariepococementate_2_12_L_0)

*

LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910

ATREST 0.4 0.5 0

WEIGHT 19 9 10

PERMEABILITY 5E-05

RESISTANCE 0 37 0 0 0

TZDATA LINEAR 10000 0 25 0.5 0

KSCALE 0 0

YOUNG 20000 32000

ENDL

*

* Soil Profile (Argillamarnosal_1057_1068_L_0)

*

LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910

ATREST 0.562 0.5 1

WEIGHT 20 10 10

PERMEABILITY 1E-05

RESISTANCE 10 26 0 0 0

TZDATA LINEAR 0 0 0 0.5 0

KSCALE 0 0

YOUNG 90000 1.44E+05

ENDL

*

* Soil Profile (Argillamarnosal_1061_1069_L_0)

*

LDATA Argillamarnosal_1061_1069_L_0 -10 LeftWall_910

ATREST 0.485 0 1

WEIGHT 20.5 10.5 10

PERMEABILITY 5E-05

RESISTANCE 20 24 0 0 0

TZDATA LINEAR 0 0 0 0.5 0

KSCALE 0 0

YOUNG 1E+05 1.6E+05

ENDL

* 5: Defining structural materials

* Steel material: 988 Name=Fe360 E=206000200 kPa

MATERIAL Fe360_988 2.06E+08

* Concrete material: 984 Name=C25/30 E=31475800 kPa

MATERIAL C2530_984 3.1476E+07

* 6: Defining structural elements

* 6.1: Beams and combined Wall Elements

** rev 2021 and later

BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0

* 6.2: Supports



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	408 di 731

* 6.3: Strips

* 7: Defining Steps

```
STEP Stage0_3964977
CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

```
STEP Stage1_909
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ADD WallElement_911
ENDSTEP
```

```
STEP Stage2_1078
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

```
STEP Stage3_3941534
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

9.6. Design Assumption : NTC2018: A1+M1+R1 (R3 per tiranti) - File di Paratie - File di output (.out)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	409 di 731

|
| ParatiePlus |
| Exe Time :17 November 2022 18:38:03 |
+-----+-----+

```
*****  
*  
* PARATIE PLUS Non-Linear Spring Engine *  
* *  
* AN ELASTOPLASTIC FINITE ELEMENT PROGRAM *  
* FOR FLEXIBLE EARTH-RETAINING STRUCTURES *  
* *  
* *  
*****  
*  
* RELEASE 2022.0.0 *Build date:Jan 24, 2022* *  
* *  
* *  
* HARPACEAS S.R.L *  
* M I L A N O (ITALY) *  
*****
```

```
JOB : ParatiePlus  
STARTING  
ACCEPTED <FILE,GENW >  
ACCEPTED <FILE,PLOTTER,BINARY >  
ACCEPTED <SOLVE TOTAL_STRESS >  
ACCEPTED <PARAM ITEMAX 40 >  
ACCEPTED <CONTROL CONTACT LAGRANGE >  
ACCEPTED <CONTROL HINGES 0 0.0001 0.001 >
```

```
*****  
*  
* WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED *  
* BY THE PROGRAM. *  
*****
```

PRELIMINARY OPERATIONS CPU TIME 0.01 [sec]



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	410 di 731

```

-----+-----
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                    |
|                               ParatiePlus                               |
|                               Exe Time :17 November 2022 18:38:03    |
|                                                                    |
+-----+-----

```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

```

NO. OF NODAL POINTS (NUMNP) ..... 101
NO. OF COORDINATES (NCOORD)..... 2
NO. OF NODE DOFS (NDOF)..... 2
NO. OF EQUATIONS (NEQ)..... 202
NO. OF CONSTRAINTS CARDS (NVINC)..... 0
NO. OF ELEMENT GROUPS (NEG)..... 3
NO. OF SOLUTION STEPS (NSTE)..... 4
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ... 0
NO. OF RECORD FROM WALGEN ..... 94
NO. OF LONG NAMES (LASTNAME) ..... 17
LENGTH UNIT CHOICE ..... 3 (M )
FORCE UNIT CHOICE ..... 3 (KN )
MAX PORE PRESSURE TABLE LENGTH..... 1
MAX INELASTIC DISPL. TABLE LENGTH..... 0
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF . 0

```

IDOFA (01) = 2 Y-DISPL.F
 IDOFA (02) = 4 X-ROT. F

RELEVANT ITEMS UNITS

```

STRESSES                kPa
Y-DISPLACEMENTS        m
ROTATIONS                RADIANS
BEAM AND SLAB MOMENTS   kN*m/m
BEAM SHEAR FORCES       kN/m
ANCHOR FORCES           kN/m
AXIAL FORCES IN TRUSSES kN/m
AXIAL FORCES SPRINGS    kN/m
Y-REACTIONS             kN/m
X-MOMENT REACTIONS      kN*m/m
ETC.

```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	411 di 731

```
-----+-----  
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*  |  
|                                                                                               |  
|                               ParatiePlus                                                    |  
|                               Exe Time :17 November 2022  18:38:03                            |  
|-----+-----
```

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 9 4

```
1 : UNIT m kN  
2 : TITLE New Project  
3 : DELTA 0.2  
4 : option param itemax 40  
5 : option control contact lagrange  
6 : option control hinges 0 0.0001 0.001  
7 : WALL LeftWall_910 0 -20 0 1  
8 : SOIL 0_L LeftWall_910 -20 0 1 0  
9 : SOIL 0_R LeftWall_910 -20 0 2 180  
10 : LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910  
11 : ATREST 0.4 0.5 0  
12 : WEIGHT 19 9 10  
13 : PERMEABILITY 5E-05  
14 : RESISTANCE 0 37 0 0 0  
15 : TZDATA LINEAR 10000 0 25 0.5 0  
16 : KSCALE 0 0  
17 : YOUNG 20000 32000  
18 : ENDL  
19 : LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910  
20 : ATREST 0.562 0.5 1  
21 : WEIGHT 20 10 10  
22 : PERMEABILITY 1E-05  
23 : RESISTANCE 10 26 0 0 0  
24 : TZDATA LINEAR 0 0 0 0.5 0  
25 : KSCALE 0 0  
26 : YOUNG 90000 1.44E+05  
27 : ENDL  
28 : LDATA Argillamarnosa_1061_1069_L_0 -10 LeftWall_910  
29 : ATREST 0.485 0 1  
30 : WEIGHT 20.5 10.5 10  
31 : PERMEABILITY 5E-05  
32 : RESISTANCE 20 24 0 0 0  
33 : TZDATA LINEAR 0 0 0 0.5 0  
34 : KSCALE 0 0  
35 : YOUNG 1E+05 1.6E+05  
36 : ENDL  
37 : MATERIAL Fe360_988 2.06E+08  
38 : MATERIAL C2530_984 3.1476E+07  
39 : BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0  
40 : STEP Stage0_3964977  
41 : CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910  
42 : CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910  
43 : CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910  
44 : CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910  
45 : CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910  
46 : CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910  
47 : CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910  
48 : CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910  
49 : CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910  
50 : CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910  
51 : CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910  
52 : CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910  
53 : CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910  
54 : CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910  
55 : CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910  
56 : CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910  
57 : CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910  
58 : CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910  
59 : CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910  
60 : CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910  
61 : CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910  
62 : CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910  
63 : CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910  
64 : CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910  
65 : CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910  
66 : CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	412 di 731

67 : CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
68 : CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
69 : CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
70 : CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
71 : SETWALL LeftWall_910
72 : GEOM 0 0
73 : SURCHARGE 0 0 0 0
74 : WATER -40 0 -20 0 0
75 : ENDSTEP
76 : STEP Stage1_909
77 : SETWALL LeftWall_910
78 : GEOM 0 0
79 : SURCHARGE 0 0 0 0
80 : WATER -40 0 -20 0 0
81 : ADD Wallelement_911
82 : ENDSTEP
83 : STEP Stage2_1078
84 : SETWALL LeftWall_910
85 : GEOM 0 -8
86 : SURCHARGE 0 0 0 0
87 : WATER -40 0 -20 0 0
88 : ENDSTEP
89 : STEP Stage3_3941534
90 : SETWALL LeftWall_910
91 : GEOM 0 -8
92 : SURCHARGE 0 0 0 0
93 : WATER -40 0 -20 0 0
94 : ENDSTEP



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 414 di 731
---	------------------	-------------	-----------	----------------	----------------------	----------	----------------------

```

-----
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*  |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                ParatiePlus                                                                                               |
|                Exe Time :17 November 2022  18:38:03                                                                 |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
-----

```

```

ELEMENT GROUP NO.  1

0_L
 5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----
 1  active
 2  active
 3  active
 4  active

```

```

material set no.  1

prop( 1) angle      0.00000
prop( 2) layer as foreseen  1.00000

```

```

material set no.  2

prop( 1) angle      0.00000
prop( 2) layer as foreseen  2.00000

```

```

material set no.  3

prop( 1) angle      0.00000
prop( 2) layer as foreseen  3.00000

```

```

element data

el   n  mat   area   ....   ....   ....   flag
-----
 1   1   1   0.1000  0.000  0.000  0.000  1.000
 2   2   1   0.2000  0.000  0.000  0.000  1.000
 3   3   1   0.2000  0.000  0.000  0.000  1.000
 4   4   1   0.2000  0.000  0.000  0.000  1.000
 5   5   1   0.2000  0.000  0.000  0.000  1.000
 6   6   1   0.2000  0.000  0.000  0.000  1.000
 7   7   1   0.2000  0.000  0.000  0.000  1.000
 8   8   1   0.2000  0.000  0.000  0.000  1.000
 9   9   1   0.2000  0.000  0.000  0.000  1.000
10  10  1   0.2000  0.000  0.000  0.000  1.000
11  11  1   0.2000  0.000  0.000  0.000  1.000
12  12  1   0.2000  0.000  0.000  0.000  1.000
13  13  1   0.2000  0.000  0.000  0.000  1.000
14  14  1   0.2000  0.000  0.000  0.000  1.000
15  15  1   0.2000  0.000  0.000  0.000  1.000
16  16  1   0.2000  0.000  0.000  0.000  1.000
17  17  1   0.2000  0.000  0.000  0.000  1.000
18  18  1   0.2000  0.000  0.000  0.000  1.000
19  19  1   0.2000  0.000  0.000  0.000  1.000
20  20  1   0.2000  0.000  0.000  0.000  1.000
21  21  1   0.2000  0.000  0.000  0.000  1.000
22  22  1   0.2000  0.000  0.000  0.000  1.000
23  23  1   0.2000  0.000  0.000  0.000  1.000
24  24  1   0.2000  0.000  0.000  0.000  1.000
25  25  1   0.2000  0.000  0.000  0.000  1.000
26  26  1   0.2000  0.000  0.000  0.000  1.000
27  27  1   0.2000  0.000  0.000  0.000  1.000
28  28  1   0.2000  0.000  0.000  0.000  1.000
29  29  1   0.2000  0.000  0.000  0.000  1.000
30  30  1   0.2000  0.000  0.000  0.000  1.000

```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	415 di 731

31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	3	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.2000	0.000	0.000	0.000	1.000
62	62	3	0.2000	0.000	0.000	0.000	1.000
63	63	3	0.2000	0.000	0.000	0.000	1.000
64	64	3	0.2000	0.000	0.000	0.000	1.000
65	65	3	0.2000	0.000	0.000	0.000	1.000
66	66	3	0.2000	0.000	0.000	0.000	1.000
67	67	3	0.2000	0.000	0.000	0.000	1.000
68	68	3	0.2000	0.000	0.000	0.000	1.000
69	69	3	0.2000	0.000	0.000	0.000	1.000
70	70	3	0.2000	0.000	0.000	0.000	1.000
71	71	3	0.2000	0.000	0.000	0.000	1.000
72	72	3	0.2000	0.000	0.000	0.000	1.000
73	73	3	0.2000	0.000	0.000	0.000	1.000
74	74	3	0.2000	0.000	0.000	0.000	1.000
75	75	3	0.2000	0.000	0.000	0.000	1.000
76	76	3	0.2000	0.000	0.000	0.000	1.000
77	77	3	0.2000	0.000	0.000	0.000	1.000
78	78	3	0.2000	0.000	0.000	0.000	1.000
79	79	3	0.2000	0.000	0.000	0.000	1.000
80	80	3	0.2000	0.000	0.000	0.000	1.000
81	81	3	0.2000	0.000	0.000	0.000	1.000
82	82	3	0.2000	0.000	0.000	0.000	1.000
83	83	3	0.2000	0.000	0.000	0.000	1.000
84	84	3	0.2000	0.000	0.000	0.000	1.000
85	85	3	0.2000	0.000	0.000	0.000	1.000
86	86	3	0.2000	0.000	0.000	0.000	1.000
87	87	3	0.2000	0.000	0.000	0.000	1.000
88	88	3	0.2000	0.000	0.000	0.000	1.000
89	89	3	0.2000	0.000	0.000	0.000	1.000
90	90	3	0.2000	0.000	0.000	0.000	1.000
91	91	3	0.2000	0.000	0.000	0.000	1.000
92	92	3	0.2000	0.000	0.000	0.000	1.000
93	93	3	0.2000	0.000	0.000	0.000	1.000
94	94	3	0.2000	0.000	0.000	0.000	1.000
95	95	3	0.2000	0.000	0.000	0.000	1.000
96	96	3	0.2000	0.000	0.000	0.000	1.000
97	97	3	0.2000	0.000	0.000	0.000	1.000
98	98	3	0.2000	0.000	0.000	0.000	1.000
99	99	3	0.2000	0.000	0.000	0.000	1.000
100	100	3	0.2000	0.000	0.000	0.000	1.000
101	101	3	0.1000	0.000	0.000	0.000	1.000



**LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 416 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION  *Build date:Jan 24, 2022* |
|                                                                              |
|                                  ParatiePlus                                |
|                               Exe Time :17 November 2022 18:38:03         |
+-----+

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ELEMENT GROUP NO. 2

```

0_R       :
  5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0

```

.....2D PLASTIC SOIL

element group behaviour throughout stage analysis

stage status

1	active
2	active
3	active
4	active

material set no. 1

prop(1) angle 180.000
prop(2) layer as foreseen 1.00000

material set no. 2

prop(1) angle 180.000
prop(2) layer as foreseen 2.00000

material set no. 3

prop(1) angle 180.000
prop(2) layer as foreseen 3.00000

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	1	0.2000	0.000	0.000	0.000	2.000
16	16	1	0.2000	0.000	0.000	0.000	2.000
17	17	1	0.2000	0.000	0.000	0.000	2.000
18	18	1	0.2000	0.000	0.000	0.000	2.000
19	19	1	0.2000	0.000	0.000	0.000	2.000
20	20	1	0.2000	0.000	0.000	0.000	2.000
21	21	1	0.2000	0.000	0.000	0.000	2.000
22	22	1	0.2000	0.000	0.000	0.000	2.000
23	23	1	0.2000	0.000	0.000	0.000	2.000
24	24	1	0.2000	0.000	0.000	0.000	2.000
25	25	1	0.2000	0.000	0.000	0.000	2.000
26	26	1	0.2000	0.000	0.000	0.000	2.000
27	27	1	0.2000	0.000	0.000	0.000	2.000
28	28	1	0.2000	0.000	0.000	0.000	2.000
29	29	1	0.2000	0.000	0.000	0.000	2.000
30	30	1	0.2000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	417 di 731

31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	3	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.2000	0.000	0.000	0.000	2.000
62	62	3	0.2000	0.000	0.000	0.000	2.000
63	63	3	0.2000	0.000	0.000	0.000	2.000
64	64	3	0.2000	0.000	0.000	0.000	2.000
65	65	3	0.2000	0.000	0.000	0.000	2.000
66	66	3	0.2000	0.000	0.000	0.000	2.000
67	67	3	0.2000	0.000	0.000	0.000	2.000
68	68	3	0.2000	0.000	0.000	0.000	2.000
69	69	3	0.2000	0.000	0.000	0.000	2.000
70	70	3	0.2000	0.000	0.000	0.000	2.000
71	71	3	0.2000	0.000	0.000	0.000	2.000
72	72	3	0.2000	0.000	0.000	0.000	2.000
73	73	3	0.2000	0.000	0.000	0.000	2.000
74	74	3	0.2000	0.000	0.000	0.000	2.000
75	75	3	0.2000	0.000	0.000	0.000	2.000
76	76	3	0.2000	0.000	0.000	0.000	2.000
77	77	3	0.2000	0.000	0.000	0.000	2.000
78	78	3	0.2000	0.000	0.000	0.000	2.000
79	79	3	0.2000	0.000	0.000	0.000	2.000
80	80	3	0.2000	0.000	0.000	0.000	2.000
81	81	3	0.2000	0.000	0.000	0.000	2.000
82	82	3	0.2000	0.000	0.000	0.000	2.000
83	83	3	0.2000	0.000	0.000	0.000	2.000
84	84	3	0.2000	0.000	0.000	0.000	2.000
85	85	3	0.2000	0.000	0.000	0.000	2.000
86	86	3	0.2000	0.000	0.000	0.000	2.000
87	87	3	0.2000	0.000	0.000	0.000	2.000
88	88	3	0.2000	0.000	0.000	0.000	2.000
89	89	3	0.2000	0.000	0.000	0.000	2.000
90	90	3	0.2000	0.000	0.000	0.000	2.000
91	91	3	0.2000	0.000	0.000	0.000	2.000
92	92	3	0.2000	0.000	0.000	0.000	2.000
93	93	3	0.2000	0.000	0.000	0.000	2.000
94	94	3	0.2000	0.000	0.000	0.000	2.000
95	95	3	0.2000	0.000	0.000	0.000	2.000
96	96	3	0.2000	0.000	0.000	0.000	2.000
97	97	3	0.2000	0.000	0.000	0.000	2.000
98	98	3	0.2000	0.000	0.000	0.000	2.000
99	99	3	0.2000	0.000	0.000	0.000	2.000
100	100	3	0.2000	0.000	0.000	0.000	2.000
101	101	3	0.1000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	418 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                          |
|                                                                                                          |
|                                                                                                          |
|                                     ParatiePlus                                                         |
|                                     Exe Time :17 November 2022 18:38:03                                  |
|                                                                                                          |
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ELEMENT GROUP NO. 3

```

WallElement_911      :
 2 100 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0
.....
.....2D WALL ELEMENT.....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----
 1  inactive
 2  active
 3  active
 4  active

```

material set no. 1

```

prop( 1) young modulus      0.314800E+08
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future .....      0.00000

```

```

no. of step variable items: 1
step inertia multiplier

```

```

-----
 1  1.000
 2  1.000
 3  1.000
 4  1.000

```

element data

el	na	nb	mat	erc1	erc2	thick	area	inertia	wgt(-z)	by-i	by-j
1	1	2	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
2	2	3	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
3	3	4	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
4	4	5	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
5	5	6	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
6	6	7	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
7	7	8	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
8	8	9	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
9	9	10	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
10	10	11	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
11	11	12	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
12	12	13	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
13	13	14	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
14	14	15	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
15	15	16	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
16	16	17	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
17	17	18	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
18	18	19	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
19	19	20	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
20	20	21	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
21	21	22	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
22	22	23	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
23	23	24	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
24	24	25	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
25	25	26	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
26	26	27	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
27	27	28	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
28	28	29	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
29	29	30	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
30	30	31	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
31	31	32	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
32	32	33	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
	IABH	00	F	CL	MU04 00 001	A	419 di 731

33	33	34	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
34	34	35	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
35	35	36	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
36	36	37	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
37	37	38	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
38	38	39	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
39	39	40	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
40	40	41	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
41	41	42	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
42	42	43	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
43	43	44	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
44	44	45	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
45	45	46	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
46	46	47	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
47	47	48	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
48	48	49	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
49	49	50	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
50	50	51	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
51	51	52	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
52	52	53	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
53	53	54	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
54	54	55	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
55	55	56	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
56	56	57	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
57	57	58	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
58	58	59	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
59	59	60	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
60	60	61	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
61	61	62	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
62	62	63	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
63	63	64	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
64	64	65	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
65	65	66	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
66	66	67	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
67	67	68	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
68	68	69	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
69	69	70	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
70	70	71	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
71	71	72	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
72	72	73	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
73	73	74	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
74	74	75	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
75	75	76	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
76	76	77	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
77	77	78	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
78	78	79	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
79	79	80	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
80	80	81	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
81	81	82	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
82	82	83	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
83	83	84	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
84	84	85	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
85	85	86	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
86	86	87	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
87	87	88	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
88	88	89	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
89	89	90	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
90	90	91	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
91	91	92	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
92	92	93	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
93	93	94	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
94	94	95	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
95	95	96	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
96	96	97	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
97	97	98	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
98	98	99	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
99	99	100	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
100	100	101	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	420 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
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|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022  18:38:03                                                         |
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NO. OF NODAL LOADS (NLOAD) 0
NO. OF LOAD CURVES (NLCUR) 8
MAXIMUM POINTS/LCURVE (NPTM) 5



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	421 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                    |
|                                ParatiePlus                          |
|                                Exe Time :17 November 2022 18:38:03 |
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L O A D D A T A

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 4



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	422 di 731

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 7
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 8
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
5.00000	0.1000E+01

NO. OF DISTRIBUTED LOAD CARDS 0



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	423 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
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|          ParatiePlus                                                                                                                                            |
|          Exe Time :17 November 2022 18:38:03                                                                                                                                            |
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L O A D B A L A N C E

STEP	1	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	1	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000

LOAD INPUT SECTION COMPLETED



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	424 di 731

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| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                       |
|                               ParatiePlus                                             |
|                               Exe Time :17 November 2022 18:38:03                    |
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NO. OF LAYERS 3
 NO. OF DATA PER LAYER..... 160



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

Table with columns: RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24), COMMESSA IABH, LOTTO 00, FASE F, TIPO DOC CL, OPERA MU04 00 001, REV A, FOGLIO 425 di 731

PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*
ParatiePlus
Exe Time :17 November 2022 18:38:03

LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

Table with columns: ITEM NO., NAME, VALUE, WALLS, QUANTITY. Lists items 1-141 with values and wall assignments.

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

Table with columns: ITEM NO., NAME, VALUE, WALLS, QUANTITY. Lists items 1-141 with values and wall assignments.

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

Table with columns: ITEM NO., NAME, VALUE, WALLS. Lists items 1-3 with values and wall assignments.



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	426 di 731

ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.500	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.500	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.43400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.0960	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.48500	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.36000	WALL NO.	1
ITEM NO.	91	D-KP	= 3.0510	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	427 di 731

ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 10.0000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 26.0000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.33100 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.4040 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPH>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO. 1<NAME >= 14.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -10.000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.500 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 10.500 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 8<U-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.43400 WALL NO. 1
 ITEM NO. 11<U-KP >= 4.0960 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.48500 (BOTH WALLS)
 ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18<EUR >= 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61<U-TZALPH>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.36000 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.0510 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPH>= 0.50000 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO. 1<NAME >= 12.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= 10.000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 19.000 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 9.0000 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 37.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.23300 WALL NO. 1
 ITEM NO. 11<U-KP >= 10.673 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.40000 (BOTH WALLS)
 ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 20000. (BOTH WALLS)
 ITEM NO. 18<EUR >= 32000. (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 58<U-TZKZ >= 10000. (BOTH WALLS)
 ITEM NO. 60<U-TZDELT>= 25.000 (BOTH WALLS)
 ITEM NO. 61<U-TZALPH>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 37.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.20500 WALL NO. 1
 ITEM NO. 91<D-KP >= 6.7380 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138<D-TZKZ >= 10000. (BOTH WALLS)
 ITEM NO. 140<D-TZDELT>= 25.000 (BOTH WALLS)
 ITEM NO. 141<D-TZALPH>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO. 1<NAME >= 13.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -5.9000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.000 (BOTH WALLS)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	428 di 731

ITEM NO.	6	<GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	<U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	<K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	<NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	<OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	= 0.33100	WALL NO.	1
ITEM NO.	91	<D-KP	= 3.4040	WALL NO.	1
ITEM NO.	107	<D-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO.	1	<NAME	= 14.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	= -10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	= 20.500	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	= 10.500	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	= 0.43400	WALL NO.	1
ITEM NO.	11	<U-KP	= 4.0960	WALL NO.	1
ITEM NO.	12	<K0-NC	= 0.48500	(BOTH WALLS)	
ITEM NO.	14	<OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	<EUR	= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	= 0.36000	WALL NO.	1
ITEM NO.	91	<D-KP	= 3.0510	WALL NO.	1
ITEM NO.	107	<D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO.	1	<NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	<U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	<K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	<NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	<U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	<U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	= 37.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	429 di 731

ITEM NO. 90<D-KA >= 0.20500 WALL NO. 1
 ITEM NO. 91<D-KP >= 6.7380 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138<D-TZKZ >= 10000. (BOTH WALLS)
 ITEM NO. 140<D-TZDELTA>= 25.000 (BOTH WALLS)
 ITEM NO. 141<D-TZALPHA>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO. 1<NAME >= 13.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -5.9000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.000 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 10.000 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 8<U-COHE >= 10.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 26.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.39400 WALL NO. 1
 ITEM NO. 11<U-KP >= 4.6760 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.56200 (BOTH WALLS)
 ITEM NO. 13<NEXP >= 0.50000 (BOTH WALLS)
 ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 90000. (BOTH WALLS)
 ITEM NO. 18<EUR >= 0.14400E+06 (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 61<U-TZALPHA>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 10.000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 26.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.33100 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.4040 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPHA>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO. 1<NAME >= 14.000 (BOTH WALLS)
 ITEM NO. 2<NATURE >= 1.0000 (BOTH WALLS)
 ITEM NO. 3<LEVEL >= -10.000 (BOTH WALLS)
 ITEM NO. 4<WALL >= 1.0000 (BOTH WALLS)
 ITEM NO. 5<GAMMAD >= 20.500 (BOTH WALLS)
 ITEM NO. 6<GAMMAB >= 10.500 (BOTH WALLS)
 ITEM NO. 7<GAMMAW >= 10.000 (BOTH WALLS)
 ITEM NO. 8<U-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 9<U-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 10<U-KA >= 0.43400 WALL NO. 1
 ITEM NO. 11<U-KP >= 4.0960 WALL NO. 1
 ITEM NO. 12<K0-NC >= 0.48500 (BOTH WALLS)
 ITEM NO. 14<OCR >= 1.0000 (BOTH WALLS)
 ITEM NO. 16<MODEL >= 1.0000 (BOTH WALLS)
 ITEM NO. 17<EVC >= 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18<EUR >= 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27<U-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61<U-TZALPHA>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<D-NATURE>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<D-LEVEL >= 0.0000 (BOTH WALLS)
 ITEM NO. 88<D-COHE >= 20.000 (BOTH WALLS)
 ITEM NO. 89<D-FRICT >= 24.000 (BOTH WALLS)
 ITEM NO. 90<D-KA >= 0.36000 WALL NO. 1
 ITEM NO. 91<D-KP >= 3.0510 WALL NO. 1
 ITEM NO. 107<D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141<D-TZALPHA>= 0.50000 (BOTH WALLS)

DEFAULT WATER UNIT WEIGHT = 10.000
 AVERAGED ON 12 VALUES



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	430 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022 18:38:03           |
|-----+-----
  
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PHASE DESCRIPTORS

STEP NO.	1 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000
DYN.WATER BEHAVIOUR			0.000	0.000
Excess pore pressure RATIO Ru			0.000	0.000
SEISMIC PRESSURE LOWER VALUE			0.000	0.000
SEISMIC PRESSURE UPPER VALUE			0.000	0.000
SEISMIC PRESSURE LOWER LEVEL			0.000	0.000
SEISMIC PRESSURE UPPER LEVEL			0.000	0.000

=====
 =====end of step 1

STEP NO.	2 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	431 di 731

DYN.WATER BEHAVIOUR	0.000	0.000
Excess pore pressure RATIO Ru	0.000	0.000
SEISMIC PRESSURE LOWER VALUE	0.000	0.000
SEISMIC PRESSURE UPPER VALUE	0.000	0.000
SEISMIC PRESSURE LOWER LEVEL	0.000	0.000
SEISMIC PRESSURE UPPER LEVEL	0.000	0.000

=====
=====end of step 2

STEP NO.	3 no. of subincrements	1
		LEFT WALL RIGHT WALL
Y		0.000 -0.9990E+30
Z-PC		0.000 0.000
Z-EXCAVATION		-8.000 0.000
Z-WATER_TABLE		-40.00 -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000 0.000
ZQ		0.000 0.000
DZW_OF_THE_WATER_TABLE		0.000 0.000
QS_ON_THE_EXCAVATION_SIDE		0.000 0.000
ZQS		0.000 -0.9990E+30
ZCUT		0.000 0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.00 -20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000 0.000
PORE_UPDATE_FLAG		0.000 0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000 0.000
lateral thrusts reduction elevatio		0.000 0.000
Downhill reduction factor for effe		0.000 0.000
Downhill reduction factor for pore		0.000 0.000
Uphill reduction factor for effect		0.000 0.000
Uphill reduction factor for pore p		0.000 0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000 0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000 0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000 0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000 0.000
UPHILL DELTA/PHI RATIO		0.000 0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000 0.000
DOWNHILL DELTA/PHI RATIO		0.000 0.000
DYN.WATER BEHAVIOUR		0.000 0.000
Excess pore pressure RATIO Ru		0.000 0.000
SEISMIC PRESSURE LOWER VALUE		0.000 0.000
SEISMIC PRESSURE UPPER VALUE		0.000 0.000
SEISMIC PRESSURE LOWER LEVEL		0.000 0.000
SEISMIC PRESSURE UPPER LEVEL		0.000 0.000

=====
=====end of step 3

STEP NO.	4 no. of subincrements	1
		LEFT WALL RIGHT WALL
Y		0.000 -0.9990E+30
Z-PC		0.000 0.000
Z-EXCAVATION		-8.000 0.000
Z-WATER_TABLE		-40.00 -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000 0.000
ZQ		0.000 0.000
DZW_OF_THE_WATER_TABLE		0.000 0.000
QS_ON_THE_EXCAVATION_SIDE		0.000 0.000
ZQS		0.000 -0.9990E+30
ZCUT		0.000 0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.00 -20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000 0.000
PORE_UPDATE_FLAG		0.000 0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000 0.000
lateral thrusts reduction elevatio		0.000 0.000
Downhill reduction factor for effe		0.000 0.000
Downhill reduction factor for pore		0.000 0.000
Uphill reduction factor for effect		0.000 0.000
Uphill reduction factor for pore p		0.000 0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000 0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000 0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000 0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000 0.000
UPHILL DELTA/PHI RATIO		0.000 0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000 0.000
DOWNHILL DELTA/PHI RATIO		0.000 0.000
DYN.WATER BEHAVIOUR		0.000 0.000
Excess pore pressure RATIO Ru		0.000 0.000
SEISMIC PRESSURE LOWER VALUE		0.000 0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	432 di 731

SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====end of step 4

LEFT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

RIGHT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
 POSITION 5881

NO. OF D.P.W FOR THIS AREA 15427
 MAX NO. OF D.P.W. AVAILABLE 81920
 ** MAX NO OF ITERATIONS SET TO 40

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	433 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:03                                                         |
+-----+
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 1 (AT TIME 1.000) SUBINCREMENT 0001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F	X-ROT. F
02	04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	435 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	1.5043E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	1.5043E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	1.5043E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	1.5043E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	1.5043E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	1.5043E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	1.5043E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	1.5043E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	1.5043E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	1.5043E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	1.5043E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	1.5043E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	1.5043E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	5.4011E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	5.4011E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	5.4011E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	5.4011E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	5.4011E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	5.4011E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	5.4011E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	5.4011E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	5.4011E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	5.4011E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	5.4011E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	5.4011E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	5.4011E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	5.4011E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	436 di 731
1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 5.4011E+04	-8.800	0.000	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 5.4011E+04	-9.000	0.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 5.4011E+04	-9.200	0.000	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 5.4011E+04	-9.400	0.000	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 5.4011E+04	-9.600	0.000	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 5.4011E+04	-9.800	0.000	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 5.4011E+04	-10.00	0.000	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 5.7745E+04	-10.20	0.000	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 5.7745E+04	-10.40	0.000	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 5.7745E+04	-10.60	0.000	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 5.7745E+04	-10.80	0.000	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 5.7745E+04	-11.00	0.000	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 5.7745E+04	-11.20	0.000	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 5.7745E+04	-11.40	0.000	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 5.7745E+04	-11.60	0.000	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 5.7745E+04	-11.80	0.000	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 5.7745E+04	-12.00	0.000	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 5.7745E+04	-12.20	0.000	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 5.7745E+04	-12.40	0.000	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 5.7745E+04	-12.60	0.000	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 5.7745E+04	-12.80	0.000	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 5.7745E+04	-13.00	0.000	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 5.7745E+04	-13.20	0.000	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 5.7745E+04	-13.40	0.000	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 5.7745E+04	-13.60	0.000	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 5.7745E+04	-13.80	0.000	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 439 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
|
|                                     ParatiePlus
|                                     Exe Time :17 November 2022  18:38:03
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Coh_e_a	MAX-H-P Coh_e_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	V-C	7479.	0.000	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	V-C	7479.	-0.2000	0.000	0.000	1.000
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	V-C	7479.	-0.4000	0.000	0.000	1.000
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	V-C	7479.	-0.6000	0.000	0.000	1.000
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	V-C	7479.	-0.8000	0.000	0.000	1.000
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	V-C	7479.	-1.000	0.000	0.000	1.000
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	V-C	7479.	-1.200	0.000	0.000	1.000
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	V-C	7479.	-1.400	0.000	0.000	1.000
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	V-C	7479.	-1.600	0.000	0.000	1.000
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	V-C	7479.	-1.800	0.000	0.000	1.000
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	V-C	7479.	-2.000	0.000	0.000	1.000
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	V-C	7479.	-2.200	0.000	0.000	1.000
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	V-C	7479.	-2.400	0.000	0.000	1.000
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	V-C	7479.	-2.600	0.000	0.000	1.000
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	V-C	7479.	-2.800	0.000	0.000	1.000
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	V-C	7479.	-3.000	0.000	0.000	1.000
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	V-C	7479.	-3.200	0.000	0.000	1.000
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	440 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	7479.	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	7479.	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	7479.	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	7479.	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	7479.	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	7479.	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	7479.	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	7479.	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	7479.	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	7479.	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	7479.	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	7479.	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	7479.	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	4.2179E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	4.2179E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	4.2179E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	4.2179E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	4.2179E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	4.2179E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	4.2179E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	4.2179E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	4.2179E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	4.2179E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	4.2179E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	4.2179E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	4.2179E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	4.2179E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	441 di 731

1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 4.2179E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 4.2179E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 4.2179E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 4.2179E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 4.2179E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 4.2179E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 4.2179E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 4.8706E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 4.8706E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 4.8706E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 4.8706E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 4.8706E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 4.8706E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 4.8706E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 4.8706E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 4.8706E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 4.8706E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 4.8706E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 4.8706E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 4.8706E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 4.8706E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 4.8706E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 4.8706E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 4.8706E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 4.8706E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 4.8706E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	444 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:03                                             |
|                                                                                               |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
----	----	----	----	----

***** NO ONE ELEMENT ACTIVE AT CURRENT STEP *****

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ITER 0 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE    1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0
  
```

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ITER 1 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE    1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0
  
```

```

ITER 2 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE    1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0
  
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	445 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                       |
|                                                                                                       |
|                                                                                                       |
|                                                                                                       |
|          ParatiePlus                                                                                       |
|          Exe Time :17 November 2022 18:38:03                                                                 |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000) SUBINCREMENT 0001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	447 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	2.4068E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	2.4068E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	2.4068E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	2.4068E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	2.4068E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	2.4068E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	2.4068E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	2.4068E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	2.4068E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	2.4068E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	2.4068E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	2.4068E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	2.4068E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	8.6418E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	8.6418E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	8.6418E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	8.6418E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	8.6418E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	8.6418E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	8.6418E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	8.6418E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	8.6418E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	8.6418E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	8.6418E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	8.6418E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	8.6418E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	8.6418E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	448 di 731
1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL	8.6418E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL	8.6418E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL	8.6418E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL	8.6418E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL	8.6418E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL	8.6418E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL	8.6418E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL	9.2392E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL	9.2392E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL	9.2392E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL	9.2392E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL	9.2392E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL	9.2392E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL	9.2392E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL	9.2392E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL	9.2392E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL	9.2392E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL	9.2392E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL	9.2392E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL	9.2392E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL	9.2392E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL	9.2392E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL	9.2392E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL	9.2392E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL	9.2392E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL	9.2392E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	452 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	1.1966E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	1.1966E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	1.1966E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	1.1966E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	1.1966E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	1.1966E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	1.1966E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	1.1966E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	1.1966E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	1.1966E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	1.1966E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	1.1966E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	1.1966E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	6.7486E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	6.7486E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	6.7486E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	6.7486E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	6.7486E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	6.7486E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	6.7486E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	6.7486E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	6.7486E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	6.7486E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	6.7486E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	6.7486E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	6.7486E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	6.7486E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	453 di 731
1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL	6.7486E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL	6.7486E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL	6.7486E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL	6.7486E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL	6.7486E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL	6.7486E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL	6.7486E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL	7.7929E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL	7.7929E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL	7.7929E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL	7.7929E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL	7.7929E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL	7.7929E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL	7.7929E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL	7.7929E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL	7.7929E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL	7.7929E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL	7.7929E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL	7.7929E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL	7.7929E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL	7.7929E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL	7.7929E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL	7.7929E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL	7.7929E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL	7.7929E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL	7.7929E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	456 di 731

| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
| |
| ParatiePlus |
Exe Time :17 November 2022 18:38:03

New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000
57	0.0000	0.0000	0.0000	0.0000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	457 di 731

58 0.0000 0.0000 0.0000 0.0000
 59 0.0000 0.0000 0.0000 0.0000
 60 0.0000 0.0000 0.0000 0.0000
 61 0.0000 0.0000 0.0000 0.0000
 62 0.0000 0.0000 0.0000 0.0000
 63 0.0000 0.0000 0.0000 0.0000
 64 0.0000 0.0000 0.0000 0.0000
 65 0.0000 0.0000 0.0000 0.0000
 66 0.0000 0.0000 0.0000 0.0000
 67 0.0000 0.0000 0.0000 0.0000
 68 0.0000 0.0000 0.0000 0.0000
 69 0.0000 0.0000 0.0000 0.0000
 70 0.0000 0.0000 0.0000 0.0000
 71 0.0000 0.0000 0.0000 0.0000
 72 0.0000 0.0000 0.0000 0.0000
 73 0.0000 0.0000 0.0000 0.0000
 74 0.0000 0.0000 0.0000 0.0000
 75 0.0000 0.0000 0.0000 0.0000
 76 0.0000 0.0000 0.0000 0.0000
 77 0.0000 0.0000 0.0000 0.0000
 78 0.0000 0.0000 0.0000 0.0000
 79 0.0000 0.0000 0.0000 0.0000
 80 0.0000 0.0000 0.0000 0.0000
 81 0.0000 0.0000 0.0000 0.0000
 82 0.0000 0.0000 0.0000 0.0000
 83 0.0000 0.0000 0.0000 0.0000
 84 0.0000 0.0000 0.0000 0.0000
 85 0.0000 0.0000 0.0000 0.0000
 86 0.0000 0.0000 0.0000 0.0000
 87 0.0000 0.0000 0.0000 0.0000
 88 0.0000 0.0000 0.0000 0.0000
 89 0.0000 0.0000 0.0000 0.0000
 90 0.0000 0.0000 0.0000 0.0000
 91 0.0000 0.0000 0.0000 0.0000
 92 0.0000 0.0000 0.0000 0.0000
 93 0.0000 0.0000 0.0000 0.0000
 94 0.0000 0.0000 0.0000 0.0000
 95 0.0000 0.0000 0.0000 0.0000
 96 0.0000 0.0000 0.0000 0.0000
 97 0.0000 0.0000 0.0000 0.0000
 98 0.0000 0.0000 0.0000 0.0000
 99 0.0000 0.0000 0.0000 0.0000
 100 0.0000 0.0000 0.0000 0.0000

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.1602E+05 REMNOR= 0.000 RATIO =0.5113 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5113 RATIO= 0.000
 MAX UN= 17.32 IEQ= 81 NODE 41 DOF 1 Y-DISPL.F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 503.4 REMNOR=0.9692E-18 RATIO =0.9063E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.9063E-01 RATIO= 0.000
 MAX UN= 6.564 IEQ= 61 NODE 31 DOF 1 Y-DISPL.F
 MIN UN=-.1502E-08 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1103. REMNOR=0.2276E-16 RATIO =0.1342 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1342 RATIO= 0.000
 MAX UN= 18.93 IEQ= 85 NODE 43 DOF 1 Y-DISPL.F
 MIN UN=-.2222E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	458 di 731

ITER 4 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 76.02 REMNOR=0.2342E-16 RATIO =0.3522E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.3522E-01 RATIO= 0.000
 MAX UN= 6.545 IEQ= 95 NODE 48 DOF 1 Y-DISPL.F
 MIN UN=-.1757E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1.634 REMNOR=0.8775E-17 RATIO =0.5164E-02 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5164E-02 RATIO= 0.000
 MAX UN= 1.139 IEQ= 99 NODE 50 DOF 1 Y-DISPL.F
 MIN UN=-.1767E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 6 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.2226E-14 REMNOR=0.5797E-17 RATIO =0.1906E-09 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1906E-09 RATIO= 0.000
 MAX UN=0.1596E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 MIN UN=-.1821E-07 IEQ= 7 NODE 4 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 459 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:03                                                                 |
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New Project
SOLUTION REACHED USING 6 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	4.6573506E-02	-4.0866567E-03
2	4.5756175E-02	-4.0866567E-03
3	4.4938844E-02	-4.0866540E-03
4	4.4121514E-02	-4.0866402E-03
5	4.3304189E-02	-4.0866017E-03
6	4.2486876E-02	-4.0865192E-03
7	4.1669586E-02	-4.0863679E-03
8	4.0852336E-02	-4.0861176E-03
9	4.0035148E-02	-4.0857326E-03
10	3.9218054E-02	-4.0851715E-03
11	3.8401094E-02	-4.0843877E-03
12	3.7584318E-02	-4.0833288E-03
13	3.6767785E-02	-4.0819372E-03
14	3.5951569E-02	-4.0801495E-03
15	3.5135756E-02	-4.0778970E-03
16	3.4320446E-02	-4.0751055E-03
17	3.3505751E-02	-4.0716951E-03
18	3.2691811E-02	-4.0675806E-03
19	3.1878772E-02	-4.0626714E-03
20	3.1066802E-02	-4.0568710E-03
21	3.0256094E-02	-4.0500778E-03
22	2.9446848E-02	-4.0421844E-03
23	2.8639301E-02	-4.0330782E-03
24	2.7833706E-02	-4.0226409E-03
25	2.7030342E-02	-4.0107486E-03
26	2.6229512E-02	-3.9972721E-03
27	2.5431551E-02	-3.9820768E-03
28	2.4636809E-02	-3.9650223E-03
29	2.3845676E-02	-3.9459627E-03
30	2.3058568E-02	-3.9247470E-03
31	2.2275931E-02	-3.9012182E-03
32	2.1498251E-02	-3.8751962E-03
33	2.0726037E-02	-3.8464744E-03
34	1.9959855E-02	-3.8148371E-03
35	1.9200311E-02	-3.7800584E-03
36	1.8448057E-02	-3.7419028E-03
37	1.7703795E-02	-3.7001252E-03
38	1.6968269E-02	-3.6544699E-03
39	1.6242284E-02	-3.6046723E-03
40	1.5526695E-02	-3.5504576E-03
41	1.4822414E-02	-3.4915413E-03
42	1.4130411E-02	-3.4276291E-03
43	1.3451705E-02	-3.3585738E-03
44	1.2787322E-02	-3.2844176E-03
45	1.2138274E-02	-3.2052780E-03
46	1.1505533E-02	-3.1213460E-03
47	1.0890037E-02	-3.0328886E-03
48	1.0292657E-02	-2.9402474E-03
49	9.7141893E-03	-2.8438384E-03
50	9.1553427E-03	-2.7441532E-03
51	8.6167116E-03	-2.6417567E-03
52	8.0987675E-03	-2.5372552E-03
53	7.6019220E-03	-2.4312406E-03
54	7.1263627E-03	-2.3242306E-03
55	6.6722628E-03	-2.2167257E-03
56	6.2396746E-03	-2.1091874E-03
57	5.8285614E-03	-2.0020450E-03
58	5.4388037E-03	-1.8956970E-03
59	5.0702050E-03	-1.7905131E-03
60	4.7224980E-03	-1.6868355E-03
61	4.3953493E-03	-1.5849806E-03



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	460 di 731

62	4.0883648E-03	-1.4852408E-03
63	3.8010940E-03	-1.3878854E-03
64	3.5330351E-03	-1.2931621E-03
65	3.2836390E-03	-1.2012918E-03
66	3.0523155E-03	-1.1124655E-03
67	2.8384390E-03	-1.0268464E-03
68	2.6413539E-03	-9.4457191E-04
69	2.4603796E-03	-8.6575605E-04
70	2.2948148E-03	-7.9049118E-04
71	2.1439416E-03	-7.1884998E-04
72	2.0070296E-03	-6.5088731E-04
73	1.8833389E-03	-5.8664188E-04
74	1.7721234E-03	-5.2613795E-04
75	1.6726335E-03	-4.6938647E-04
76	1.5841192E-03	-4.1637874E-04
77	1.5058347E-03	-3.6708121E-04
78	1.4370431E-03	-3.2143825E-04
79	1.3770207E-03	-2.7937478E-04
80	1.3250607E-03	-2.4079870E-04
81	1.2804759E-03	-2.0560308E-04
82	1.2426021E-03	-1.7366823E-04
83	1.2107999E-03	-1.4486355E-04
84	1.1844573E-03	-1.1904922E-04
85	1.1629907E-03	-9.6077741E-05
86	1.1458469E-03	-7.5795278E-05
87	1.1325039E-03	-5.8042896E-05
88	1.1224720E-03	-4.2657626E-05
89	1.1152941E-03	-2.9473409E-05
90	1.1105469E-03	-1.8321399E-05
91	1.1078411E-03	-9.0327974E-06
92	1.1068210E-03	-1.4360977E-06
93	1.1071653E-03	4.6400924E-06
94	1.1085871E-03	9.3672548E-06
95	1.1108337E-03	1.2916638E-05
96	1.1136866E-03	1.5459004E-05
97	1.1169615E-03	1.7164443E-05
98	1.1205079E-03	1.8202233E-05
99	1.1242091E-03	1.8740748E-05
100	1.1279820E-03	1.8947407E-05
101	1.1317770E-03	1.8988639E-05

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	462 di 731
18 D	3.010	-3.2692E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
19 D	3.187	-3.1879E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
20 D	3.365	-3.1067E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
21 D	3.542	-3.0256E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
22 D	3.719	-2.9447E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
23 D	3.896	-2.8639E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
24 D	4.073	-2.7834E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
25 D	4.250	-2.7030E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
26 D	4.427	-2.6230E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
27 D	4.604	-2.5432E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
28 D	4.781	-2.4637E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
29 D	4.958	-2.3846E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
30 D	5.135	-2.3059E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000				Arenariapococementate_2_12_L_0			0.0000	0.0000	0.0000
31 D	6.480	-2.2276E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
32 D	6.796	-2.1498E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
33 D	7.111	-2.0726E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
34 D	7.426	-1.9960E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
35 D	7.741	-1.9200E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
36 D	8.056	-1.8448E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
37 D	8.371	-1.7704E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
38 D	8.687	-1.6968E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
39 D	9.002	-1.6242E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
40 D	9.317	-1.5527E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
41 D	9.632	-1.4822E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
42 D	9.947	-1.4130E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
43 D	10.26	-1.3452E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000				Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
44 D	10.58	-1.2787E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	463 di 731

1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	10.89	-1.2138E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	11.21	-1.1506E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	11.52	-1.0890E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	11.84	-1.0293E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	12.15	-9.7142E-03	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	12.47	-9.1553E-03	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	12.78	-8.6167E-03	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	11.93	-8.0988E-03	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	12.29	-7.6019E-03	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	12.65	-7.1264E-03	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	13.00	-6.6723E-03	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	13.36	-6.2397E-03	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	13.71	-5.8286E-03	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	14.07	-5.4388E-03	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	14.42	-5.0702E-03	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	14.78	-4.7225E-03	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	15.14	-4.3953E-03	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	15.49	-4.0884E-03	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	15.85	-3.8011E-03	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	16.20	-3.5330E-03	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	16.56	-3.2836E-03	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	16.92	-3.0523E-03	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	17.27	-2.8384E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	17.63	-2.6414E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	17.98	-2.4604E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	18.34	-2.2948E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 466 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:03          |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	468 di 731
58 D	25.51	5.4388E-03	68.70	127.6	222.8	127.6	V-C	1.2176E+04	-11.40	0.000	1.000
1.000	127.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	25.01	5.0702E-03	72.80	125.1	226.9	125.1	V-C	1.2176E+04	-11.60	0.000	1.000
1.000	125.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	24.57	4.7225E-03	76.90	122.8	231.0	122.8	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	122.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	24.17	4.3953E-03	81.00	120.8	235.1	120.8	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	120.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.82	4.0884E-03	85.10	119.1	239.2	119.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	119.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.46	3.8011E-03	89.20	117.3	243.3	118.0	UL-RL	1.9482E+04	-12.40	0.000	1.000
1.000	117.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	22.82	3.5330E-03	93.30	114.1	247.4	120.0	UL-RL	1.9482E+04	-12.60	0.000	1.000
1.000	114.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	22.24	3.2836E-03	97.40	111.2	251.5	122.0	UL-RL	1.9482E+04	-12.80	0.000	1.000
1.000	111.2	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	21.74	3.0523E-03	101.5	108.7	255.6	124.0	UL-RL	1.9482E+04	-13.00	0.000	1.000
1.000	108.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	21.30	2.8384E-03	105.6	106.5	259.7	126.0	UL-RL	1.9482E+04	-13.20	0.000	1.000
1.000	106.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	20.93	2.6414E-03	109.7	104.7	263.8	127.9	UL-RL	1.9482E+04	-13.40	0.000	1.000
1.000	104.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	20.63	2.4604E-03	113.8	103.1	267.9	129.9	UL-RL	1.9482E+04	-13.60	0.000	1.000
1.000	103.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	20.38	2.2948E-03	117.9	101.9	272.0	131.9	UL-RL	1.9482E+04	-13.80	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	20.19	2.1439E-03	122.0	100.9	276.1	133.9	UL-RL	1.9482E+04	-14.00	0.000	1.000
1.000	100.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	20.05	2.0070E-03	126.1	100.3	280.2	135.9	UL-RL	1.9482E+04	-14.20	0.000	1.000
1.000	100.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	19.97	1.8833E-03	130.2	99.84	284.3	137.9	UL-RL	1.9482E+04	-14.40	0.000	1.000
1.000	99.84	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	19.93	1.7721E-03	134.3	99.66	288.4	139.9	UL-RL	1.9482E+04	-14.60	0.000	1.000
1.000	99.66	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	19.94	1.6726E-03	138.4	99.71	292.5	141.9	UL-RL	1.9482E+04	-14.80	0.000	1.000
1.000	99.71	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	19.99	1.5841E-03	142.5	99.97	296.6	143.9	UL-RL	1.9482E+04	-15.00	0.000	1.000
1.000	99.97	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	20.09	1.5058E-03	146.6	100.4	300.7	145.8	UL-RL	1.9482E+04	-15.20	0.000	1.000
1.000	100.4	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	20.22	1.4370E-03	150.7	101.1	304.8	147.8	UL-RL	1.9482E+04	-15.40	0.000	1.000
1.000	101.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	20.38	1.3770E-03	154.8	101.9	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	20.58	1.3251E-03	158.9	102.9	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	102.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	20.80	1.2805E-03	163.0	104.0	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	104.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	21.05	1.2426E-03	167.1	105.3	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	105.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	21.32	1.2108E-03	171.2	106.6	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	106.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	21.62	1.1845E-03	175.3	108.1	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	469 di 731

1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	21.93	1.1630E-03	179.4	109.7	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	109.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	22.26	1.1458E-03	183.5	111.3	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	111.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	22.61	1.1325E-03	187.6	113.0	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	113.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	22.97	1.1225E-03	191.7	114.8	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	114.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	23.34	1.1153E-03	195.8	116.7	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	116.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	23.72	1.1105E-03	199.9	118.6	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	118.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.10	1.1078E-03	204.0	120.5	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	120.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.50	1.1068E-03	208.1	122.5	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.90	1.1072E-03	212.2	124.5	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	124.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	25.30	1.1086E-03	216.3	126.5	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	126.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	25.71	1.1108E-03	220.4	128.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	128.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	26.12	1.1137E-03	224.5	130.6	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	130.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	26.53	1.1170E-03	228.6	132.6	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	132.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	26.94	1.1205E-03	232.7	134.7	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	134.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	27.35	1.1242E-03	236.8	136.8	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	136.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	27.76	1.1280E-03	240.9	138.8	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	138.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	14.09	1.1318E-03	245.0	140.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	140.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	471 di 731

58	-43.198	43.198	-681.56	672.92
59	-53.787	53.787	-672.92	662.16
60	-63.572	63.572	-662.16	649.44
61	-72.602	72.602	-649.44	634.92
62	-80.926	80.926	-634.92	618.74
63	-88.541	88.541	-618.74	601.03
64	-95.154	95.154	-601.03	582.00
65	-100.84	100.84	-582.00	561.83
66	-105.66	105.66	-561.83	540.70
67	-109.69	109.69	-540.70	518.76
68	-113.00	113.00	-518.76	496.16
69	-115.64	115.64	-496.16	473.04
70	-117.68	117.68	-473.04	449.50
71	-119.17	119.17	-449.50	425.67
72	-120.17	120.17	-425.67	401.63
73	-120.73	120.73	-401.63	377.49
74	-120.87	120.87	-377.49	353.31
75	-120.17	120.17	-353.31	329.28
76	-118.71	118.71	-329.28	305.53
77	-116.59	116.59	-305.53	282.22
78	-113.88	113.88	-282.22	259.44
79	-110.66	110.66	-259.44	237.31
80	-107.00	107.00	-237.31	215.91
81	-102.95	102.95	-215.91	195.32
82	-98.586	98.586	-195.32	175.60
83	-93.950	93.950	-175.60	156.81
84	-89.089	89.089	-156.81	138.99
85	-84.045	84.045	-138.99	122.19
86	-78.856	78.856	-122.19	106.41
87	-73.553	73.553	-106.41	91.704
88	-68.164	68.164	-91.704	78.071
89	-62.714	62.714	-78.071	65.528
90	-57.224	57.224	-65.528	54.083
91	-51.711	51.711	-54.083	43.741
92	-46.189	46.189	-43.741	34.503
93	-40.670	40.670	-34.503	26.369
94	-35.163	35.163	-26.369	19.337
95	-29.675	29.675	-19.337	13.402
96	-24.211	24.211	-13.402	8.5595
97	-18.776	18.776	-8.5595	4.8043
98	-13.370	13.370	-4.8043	2.1302
99	-7.9965	7.9965	-2.1302	0.53094
100	-2.6547	2.6547	-0.53094	-2.08615E-11

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1478E+07 RIMNOR=0.2603E+08
RENORM=0.2226E-14 REMNOR=0.5797E-17 RATIO =0.3881E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1478E+07 RDR =0.2603E+08
RATIOT=0.3881E-10 RATIO= 0.000
MAX UN=0.1596E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
MIN UN=-.1821E-07 IEQ= 7 NODE 4 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1478E+07 RIMNOR=0.2603E+08
RENORM=0.2206E-14 REMNOR=0.6200E-17 RATIO =0.3864E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1478E+07 RDR =0.2603E+08
RATIOT=0.3864E-10 RATIO= 0.000
MAX UN=0.2007E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
MIN UN=-.1526E-07 IEQ= 25 NODE 13 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.1478E+07 RIMNOR=0.2603E+08
RENORM=0.1776E-14 REMNOR=0.7415E-17 RATIO =0.3467E-10 TOLER =0.1000E-03 CONVERGED !
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1478E+07 RDR =0.2603E+08
RATIOT=0.3467E-10 RATIO= 0.000
MAX UN=0.1172E-07 IEQ= 25 NODE 13 DOF 1 Y-DISPL.F
MIN UN=-.1440E-07 IEQ= 35 NODE 18 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	472 di 731



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	474 di 731

62	4.0883648E-03	-1.4852408E-03
63	3.8010940E-03	-1.3878854E-03
64	3.5330351E-03	-1.2931621E-03
65	3.2836390E-03	-1.2012918E-03
66	3.0523155E-03	-1.1124655E-03
67	2.8384390E-03	-1.0268464E-03
68	2.6413539E-03	-9.4457191E-04
69	2.4603796E-03	-8.6575605E-04
70	2.2948148E-03	-7.9049118E-04
71	2.1439416E-03	-7.1884998E-04
72	2.0070296E-03	-6.5088731E-04
73	1.8833389E-03	-5.8664188E-04
74	1.7721234E-03	-5.2613795E-04
75	1.6726335E-03	-4.6938647E-04
76	1.5841192E-03	-4.1637874E-04
77	1.5058347E-03	-3.6708121E-04
78	1.4370431E-03	-3.2143825E-04
79	1.3770207E-03	-2.7937478E-04
80	1.3250607E-03	-2.4079870E-04
81	1.2804759E-03	-2.0560308E-04
82	1.2426021E-03	-1.7366823E-04
83	1.2107999E-03	-1.4486355E-04
84	1.1844573E-03	-1.1904922E-04
85	1.1629907E-03	-9.6077741E-05
86	1.1458469E-03	-7.5795278E-05
87	1.1325039E-03	-5.8042896E-05
88	1.1224720E-03	-4.2657626E-05
89	1.1152941E-03	-2.9473409E-05
90	1.1105469E-03	-1.8321399E-05
91	1.1078411E-03	-9.0327974E-06
92	1.1068210E-03	-1.4360977E-06
93	1.1071653E-03	4.6400924E-06
94	1.1085871E-03	9.3672548E-06
95	1.1108337E-03	1.2916638E-05
96	1.1136866E-03	1.5459004E-05
97	1.1169615E-03	1.7164443E-05
98	1.1205079E-03	1.8202233E-05
99	1.1242091E-03	1.8740748E-05
100	1.1279820E-03	1.8947407E-05
101	1.1317770E-03	1.8988639E-05

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	476 di 731

18 D	3.010	-3.2692E-02	64.60	15.05	64.60	25.84	UL-RL	6017.	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	3.187	-3.1879E-02	68.40	15.94	68.40	27.36	UL-RL	6017.	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	3.365	-3.1067E-02	72.20	16.82	72.20	28.88	UL-RL	6017.	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	3.542	-3.0256E-02	76.00	17.71	76.00	30.40	UL-RL	6017.	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	3.719	-2.9447E-02	79.80	18.59	79.80	31.92	UL-RL	6017.	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	3.896	-2.8639E-02	83.60	19.48	83.60	33.44	UL-RL	6017.	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	4.073	-2.7834E-02	87.40	20.36	87.40	34.96	UL-RL	6017.	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	4.250	-2.7030E-02	91.20	21.25	91.20	36.48	UL-RL	6017.	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	4.427	-2.6230E-02	95.00	22.14	95.00	38.00	UL-RL	6017.	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	4.604	-2.5432E-02	98.80	23.02	98.80	39.52	UL-RL	6017.	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	4.781	-2.4637E-02	102.6	23.91	102.6	41.04	UL-RL	6017.	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	4.958	-2.3846E-02	106.4	24.79	106.4	42.56	UL-RL	6017.	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	5.135	-2.3059E-02	110.2	25.68	110.2	44.08	UL-RL	6017.	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	6.480	-2.2276E-02	114.1	32.40	114.1	64.12	UL-RL	2.1605E+04	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
32 D	6.796	-2.1498E-02	118.1	33.98	118.1	66.37	UL-RL	2.1605E+04	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
33 D	7.111	-2.0726E-02	122.1	35.55	122.1	68.62	UL-RL	2.1605E+04	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
34 D	7.426	-1.9960E-02	126.1	37.13	126.1	70.87	UL-RL	2.1605E+04	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
35 D	7.741	-1.9200E-02	130.1	38.71	130.1	73.12	UL-RL	2.1605E+04	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
36 D	8.056	-1.8448E-02	134.1	40.28	134.1	75.36	UL-RL	2.1605E+04	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
37 D	8.371	-1.7704E-02	138.1	41.86	138.1	77.61	UL-RL	2.1605E+04	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
38 D	8.687	-1.6968E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
39 D	9.002	-1.6242E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
40 D	9.317	-1.5527E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
41 D	9.632	-1.4822E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
42 D	9.947	-1.4130E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
43 D	10.26	-1.3452E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
44 D	10.58	-1.2787E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	477 di 731

1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	10.89	-1.2138E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	11.21	-1.1506E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	11.52	-1.0890E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	11.84	-1.0293E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	12.15	-9.7142E-03	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	12.47	-9.1553E-03	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	12.78	-8.6167E-03	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	11.93	-8.0988E-03	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	12.29	-7.6019E-03	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	12.65	-7.1264E-03	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	13.00	-6.6723E-03	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	13.36	-6.2397E-03	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	13.71	-5.8286E-03	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	14.07	-5.4388E-03	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	14.42	-5.0702E-03	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	14.78	-4.7225E-03	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	15.14	-4.3953E-03	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	15.49	-4.0884E-03	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	15.85	-3.8011E-03	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	16.20	-3.5330E-03	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	16.56	-3.2836E-03	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	16.92	-3.0523E-03	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	17.27	-2.8384E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	17.63	-2.6414E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	17.98	-2.4604E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	18.34	-2.2948E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 480 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:03          |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Coh_e_a	MAX-H-P Coh_e_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.0000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	482 di 731

58 D	25.51	5.4388E-03	68.70	127.6	222.8	127.6	V-C	1.2176E+04	-11.40	0.000	1.000
1.000	127.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	25.01	5.0702E-03	72.80	125.1	226.9	125.1	V-C	1.2176E+04	-11.60	0.000	1.000
1.000	125.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	24.57	4.7225E-03	76.90	122.8	231.0	122.8	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	122.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	24.17	4.3953E-03	81.00	120.8	235.1	120.8	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	120.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.82	4.0884E-03	85.10	119.1	239.2	119.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	119.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.46	3.8011E-03	89.20	117.3	243.3	118.0	UL-RL	1.9482E+04	-12.40	0.000	1.000
1.000	117.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	22.82	3.5330E-03	93.30	114.1	247.4	120.0	UL-RL	1.9482E+04	-12.60	0.000	1.000
1.000	114.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	22.24	3.2836E-03	97.40	111.2	251.5	122.0	UL-RL	1.9482E+04	-12.80	0.000	1.000
1.000	111.2	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	21.74	3.0523E-03	101.5	108.7	255.6	124.0	UL-RL	1.9482E+04	-13.00	0.000	1.000
1.000	108.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	21.30	2.8384E-03	105.6	106.5	259.7	126.0	UL-RL	1.9482E+04	-13.20	0.000	1.000
1.000	106.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	20.93	2.6414E-03	109.7	104.7	263.8	127.9	UL-RL	1.9482E+04	-13.40	0.000	1.000
1.000	104.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	20.63	2.4604E-03	113.8	103.1	267.9	129.9	UL-RL	1.9482E+04	-13.60	0.000	1.000
1.000	103.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	20.38	2.2948E-03	117.9	101.9	272.0	131.9	UL-RL	1.9482E+04	-13.80	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	20.19	2.1439E-03	122.0	100.9	276.1	133.9	UL-RL	1.9482E+04	-14.00	0.000	1.000
1.000	100.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	20.05	2.0070E-03	126.1	100.3	280.2	135.9	UL-RL	1.9482E+04	-14.20	0.000	1.000
1.000	100.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	19.97	1.8833E-03	130.2	99.84	284.3	137.9	UL-RL	1.9482E+04	-14.40	0.000	1.000
1.000	99.84	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	19.93	1.7721E-03	134.3	99.66	288.4	139.9	UL-RL	1.9482E+04	-14.60	0.000	1.000
1.000	99.66	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	19.94	1.6726E-03	138.4	99.71	292.5	141.9	UL-RL	1.9482E+04	-14.80	0.000	1.000
1.000	99.71	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	19.99	1.5841E-03	142.5	99.97	296.6	143.9	UL-RL	1.9482E+04	-15.00	0.000	1.000
1.000	99.97	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	20.09	1.5058E-03	146.6	100.4	300.7	145.8	UL-RL	1.9482E+04	-15.20	0.000	1.000
1.000	100.4	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	20.22	1.4370E-03	150.7	101.1	304.8	147.8	UL-RL	1.9482E+04	-15.40	0.000	1.000
1.000	101.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	20.38	1.3770E-03	154.8	101.9	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	20.58	1.3251E-03	158.9	102.9	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	102.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	20.80	1.2805E-03	163.0	104.0	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	104.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	21.05	1.2426E-03	167.1	105.3	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	105.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	21.32	1.2108E-03	171.2	106.6	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	106.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	21.62	1.1845E-03	175.3	108.1	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	483 di 731

1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	21.93	1.1630E-03	179.4	109.7	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	109.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	22.26	1.1458E-03	183.5	111.3	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	111.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	22.61	1.1325E-03	187.6	113.0	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	113.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	22.97	1.1225E-03	191.7	114.8	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	114.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	23.34	1.1153E-03	195.8	116.7	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	116.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	23.72	1.1105E-03	199.9	118.6	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	118.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.10	1.1078E-03	204.0	120.5	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	120.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.50	1.1068E-03	208.1	122.5	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.90	1.1072E-03	212.2	124.5	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	124.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	25.30	1.1086E-03	216.3	126.5	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	126.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	25.71	1.1108E-03	220.4	128.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	128.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	26.12	1.1137E-03	224.5	130.6	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	130.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	26.53	1.1170E-03	228.6	132.6	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	132.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	26.94	1.1205E-03	232.7	134.7	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	134.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	27.35	1.1242E-03	236.8	136.8	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	136.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	27.76	1.1280E-03	240.9	138.8	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	138.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	14.09	1.1318E-03	245.0	140.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	140.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 484 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:03          |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	5.14196E-09	5.14196E-09	-5.17262E-10	1.53945E-10
2	0.17708	-0.17708	-3.87746E-10	3.54160E-02
3	0.53124	-0.53124	-3.54160E-02	0.14166
4	1.0625	-1.0625	-0.14166	0.35416
5	1.7708	-1.7708	-0.35416	0.70832
6	2.6562	-2.6562	-0.70832	1.2396
7	3.7187	-3.7187	-1.2396	1.9833
8	4.9582	-4.9582	-1.9833	2.9749
9	6.3749	-6.3749	-2.9749	4.2499
10	7.9686	-7.9686	-4.2499	5.8436
11	9.7394	-9.7394	-5.8436	7.7915
12	11.687	-11.687	-7.7915	10.129
13	13.812	-13.812	-10.129	12.891
14	16.114	-16.114	-12.891	16.114
15	18.593	-18.593	-16.114	19.833
16	21.250	-21.250	-19.833	24.083
17	24.083	-24.083	-24.083	28.899
18	27.093	-27.093	-28.899	34.318
19	30.281	-30.281	-34.318	40.374
20	33.645	-33.645	-40.374	47.103
21	37.187	-37.187	-47.103	54.541
22	40.905	-40.905	-54.541	62.722
23	44.801	-44.801	-62.722	71.682
24	48.874	-48.874	-71.682	81.457
25	53.124	-53.124	-81.457	92.082
26	57.551	-57.551	-92.082	103.59
27	62.155	-62.155	-103.59	116.02
28	66.936	-66.936	-116.02	129.41
29	71.894	-71.894	-129.41	143.79
30	77.030	-77.030	-143.79	159.19
31	83.510	-83.510	-159.19	175.90
32	90.306	-90.306	-175.90	193.96
33	97.416	-97.416	-193.96	213.44
34	104.84	-104.84	-213.44	234.41
35	112.58	-112.58	-234.41	256.93
36	120.64	-120.64	-256.93	281.05
37	129.01	-129.01	-281.05	306.86
38	137.70	-137.70	-306.86	334.40
39	146.70	-146.70	-334.40	363.74
40	156.02	-156.02	-363.74	394.94
41	165.65	-165.65	-394.94	428.07
42	165.49	-165.49	-428.07	461.17
43	162.93	-162.93	-461.17	493.75
44	157.96	-157.96	-493.75	525.35
45	150.58	-150.58	-525.35	555.46
46	140.79	-140.79	-555.46	583.62
47	128.60	-128.60	-583.62	609.34
48	113.99	-113.99	-609.34	632.14
49	96.980	-96.980	-632.14	651.53
50	77.560	-77.560	-651.53	667.04
51	57.801	-57.801	-667.04	678.61
52	40.129	-40.129	-678.61	686.63
53	23.625	-23.625	-686.63	691.36
54	8.2369	-8.2369	-691.36	693.00
55	-6.0870	6.0870	-693.00	691.79
56	-19.399	19.399	-691.79	687.91
57	-31.752	31.752	-687.91	681.56

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	485 di 731

58 -43.198	43.198	-681.56	672.92
59 -53.787	53.787	-672.92	662.16
60 -63.572	63.572	-662.16	649.44
61 -72.602	72.602	-649.44	634.92
62 -80.926	80.926	-634.92	618.74
63 -88.541	88.541	-618.74	601.03
64 -95.154	95.154	-601.03	582.00
65 -100.84	100.84	-582.00	561.83
66 -105.66	105.66	-561.83	540.70
67 -109.69	109.69	-540.70	518.76
68 -113.00	113.00	-518.76	496.16
69 -115.64	115.64	-496.16	473.04
70 -117.68	117.68	-473.04	449.50
71 -119.17	119.17	-449.50	425.67
72 -120.17	120.17	-425.67	401.63
73 -120.73	120.73	-401.63	377.49
74 -120.87	120.87	-377.49	353.31
75 -120.17	120.17	-353.31	329.28
76 -118.71	118.71	-329.28	305.53
77 -116.59	116.59	-305.53	282.22
78 -113.88	113.88	-282.22	259.44
79 -110.66	110.66	-259.44	237.31
80 -107.00	107.00	-237.31	215.91
81 -102.95	102.95	-215.91	195.32
82 -98.586	98.586	-195.32	175.60
83 -93.950	93.950	-175.60	156.81
84 -89.089	89.089	-156.81	138.99
85 -84.045	84.045	-138.99	122.19
86 -78.856	78.856	-122.19	106.41
87 -73.553	73.553	-106.41	91.704
88 -68.164	68.164	-91.704	78.071
89 -62.714	62.714	-78.071	65.528
90 -57.224	57.224	-65.528	54.083
91 -51.711	51.711	-54.083	43.741
92 -46.189	46.189	-43.741	34.503
93 -40.670	40.670	-34.503	26.369
94 -35.163	35.163	-26.369	19.337
95 -29.675	29.675	-19.337	13.402
96 -24.211	24.211	-13.402	8.5595
97 -18.776	18.776	-8.5595	4.8043
98 -13.370	13.370	-4.8043	2.1302
99 -7.9965	7.9965	-2.1302	0.53094
100 -2.6547	2.6547	-0.53094	1.12062E-11



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	486 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:03          |
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F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	2
3	CONVERGENCE :YES	6
4	CONVERGENCE :YES	2

END OF PROCESS FOR PROBLEM
New Project
NONLINEAR SOLUTION CPU TIME 0.07 [sec]
DATABASE CREATION CPU TIME..... 0.36 [sec]



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	487 di 731

9.7. Design Assumption : NTC2018: A2+M2+R1 - File di Paratie - File di input (.d)

```
* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: A2+M2+R1
* Time:giovedì 17 novembre 2022 18:38:04
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control contact lagrange

option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_910 0 -20 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_910 -20 0 1 0
SOIL 0_R LeftWall_910 -20 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Arenariepococementate_2_12_L_0)
*
LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
ATREST 0.4 0.5 0
WEIGHT 19 9 10
PERMEABILITY 5E-05
RESISTANCE 0 37 0 0 0
TZDATA LINEAR 10000 0 25 0.5 0
KSCALE 0 0
YOUNG 20000 32000
ENDL
*
* Soil Profile (Argillamarnosal_1057_1068_L_0)
*
LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
ATREST 0.562 0.5 1
WEIGHT 20 10 10
PERMEABILITY 1E-05
RESISTANCE 10 26 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 90000 1.44E+05
ENDL
*
* Soil Profile (Argillamarnosal_1061_1069_L_0)
*
LDATA Argillamarnosal_1061_1069_L_0 -10 LeftWall_910
ATREST 0.485 0 1
WEIGHT 20.5 10.5 10
PERMEABILITY 5E-05
RESISTANCE 20 24 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 1E+05 1.6E+05
ENDL

* 5: Defining structural materials
* Steel material: 988 Name=Fe360 E=206000200 kPa
MATERIAL Fe360_988 2.06E+08
* Concrete material: 984 Name=C25/30 E=31475800 kPa
MATERIAL C2530_984 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
** rev 2021 and later
BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0

* 6.2: Supports
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LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	488 di 731

* 6.3: Strips

* 7: Defining Steps

```
STEP Stage0_3964977
CHANGE Arenariepococementate_2_12_L_0 U-FRICT=31.083 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-FRICT=31.083 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KA=0.31 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KP=6.679 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KA=0.267 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KP=4.578 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=21.315 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=21.315 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.494 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KP=3.461 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.403 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KP=2.649 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=19.605 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=19.605 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.537 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KP=3.114 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.433 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KP=2.428 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=8 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=8 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=16 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=16 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

```
STEP Stage1_909
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ADD WallElement_911
ENDSTEP
```

```
STEP Stage2_1078
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

```
STEP Stage3_3941534
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP
```

9.8. Design Assumption : NTC2018: A2+M2+R1 - File di Paratie - File di output (.out)

```
-----
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*  |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|          ParatiePlus  |
|          Exe Time :17 November 2022  18:38:04  |
|          |
|-----
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	489 di 731

```
*
* PARATIE PLUS Non-Linear Spring Engine
*
* AN ELASTOPLASTIC FINITE ELEMENT PROGRAM
* FOR FLEXIBLE EARTH-RETAINING STRUCTURES
*
*
*
*****
*
* RELEASE 2022.0.0 *Build date:Jan 24, 2022*
*
*
* HARPACEAS S.R.L
* M I L A N O (ITALY)
*
*****
```

JOB : ParatiePlus

STARTING

```
ACCEPTED <FILE,GENW >
ACCEPTED <FILE,PLOTTER,BINARY >
ACCEPTED <SOLVE TOTAL_STRESS >
ACCEPTED <PARAM ITEMAX 40 >
ACCEPTED <CONTROL CONTACT LAGRANGE >
ACCEPTED <CONTROL HINGES 0 0.0001 0.001 >
```

```
*****
*
* WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED
* BY THE PROGRAM.
*
*****
```

PRELIMINARY OPERATIONS CPU TIME 0.00 [sec]



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	490 di 731

```
+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                       |
|                                                                                               Exe Time :17 November 2022 18:38:04                                                                 |
+-----+
```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

```
NO. OF NODAL POINTS (NUMNP) ..... 101
NO. OF COORDINATES (NCOORD) ..... 2
NO. OF NODE DOFS (NDOF) ..... 2
NO. OF EQUATIONS (NEQ) ..... 202
NO. OF CONSTRAINTS CARDS (NVINC) ..... 0
NO. OF ELEMENT GROUPS (NEG) ..... 3
NO. OF SOLUTION STEPS (NSTE) ..... 4
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ... 0
NO. OF RECORD FROM WALGEN ..... 94
NO. OF LONG NAMES (LASTNAME) ..... 17
LENGTH UNIT CHOICE ..... 3 (M )
FORCE UNIT CHOICE ..... 3 (KN )
MAX PORE PRESSURE TABLE LENGTH ..... 1
MAX INELASTIC DISPL. TABLE LENGTH ..... 0
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF . 0
```

IDOFA (01) = 2 Y-DISPL.F
IDOFA (02) = 4 X-ROT. F

RELEVANT ITEMS UNITS

```
STRESSES                kPa
Y-DISPLACEMENTS         m
ROTATIONS                RADIAN
BEAM AND SLAB MOMENTS   kN*m/m
BEAM SHEAR FORCES       kN/m
ANCHOR FORCES           kN/m
AXIAL FORCES IN TRUSSES kN/m
AXIAL FORCES SPRINGS    kN/m
Y-REACTIONS             kN/m
X-MOMENT REACTIONS      kN*m/m
ETC.
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	491 di 731

```

-----
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*
|
|                                     ParatiePlus
|                               Exe Time :17 November 2022 18:38:04
|
-----

```

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 9 4

```

1 : UNIT m kN
2 : TITLE New Project
3 : DELTA 0.2
4 : option param itemax 40
5 : option control contact lagrange
6 : option control hinges 0 0.0001 0.001
7 : WALL LeftWall_910 0 -20 0 1
8 : SOIL 0_L LeftWall_910 -20 0 1 0
9 : SOIL 0_R LeftWall_910 -20 0 2 180
10 : LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
11 : ATREST 0.4 0.5 0
12 : WEIGHT 19 9 10
13 : PERMEABILITY 5E-05
14 : RESISTANCE 0 37 0 0 0
15 : TZDATA LINEAR 10000 0 25 0.5 0
16 : KSCALE 0 0
17 : YOUNG 20000 32000
18 : ENDL
19 : LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
20 : ATREST 0.562 0.5 1
21 : WEIGHT 20 10 10
22 : PERMEABILITY 1E-05
23 : RESISTANCE 10 26 0 0 0
24 : TZDATA LINEAR 0 0 0 0.5 0
25 : KSCALE 0 0
26 : YOUNG 90000 1.44E+05
27 : ENDL
28 : LDATA Argillamarnosa_1061_1069_L_0 -10 LeftWall_910
29 : ATREST 0.485 0 1
30 : WEIGHT 20.5 10.5 10
31 : PERMEABILITY 5E-05
32 : RESISTANCE 20 24 0 0 0
33 : TZDATA LINEAR 0 0 0 0.5 0
34 : KSCALE 0 0
35 : YOUNG 1E+05 1.6E+05
36 : ENDL
37 : MATERIAL Fe360_988 2.06E+08
38 : MATERIAL C2530_984 3.1476E+07
39 : BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0
40 : STEP Stage0_3964977
41 : CHANGE Arenariepococementate_2_12_L_0 U-FRICT=31.083 LeftWall_910
42 : CHANGE Arenariepococementate_2_12_L_0 D-FRICT=31.083 LeftWall_910
43 : CHANGE Arenariepococementate_2_12_L_0 U-KA=0.31 LeftWall_910
44 : CHANGE Arenariepococementate_2_12_L_0 U-KP=6.679 LeftWall_910
45 : CHANGE Arenariepococementate_2_12_L_0 D-KA=0.267 LeftWall_910
46 : CHANGE Arenariepococementate_2_12_L_0 D-KP=4.578 LeftWall_910
47 : CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=21.315 LeftWall_910
48 : CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=21.315 LeftWall_910
49 : CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.494 LeftWall_910
50 : CHANGE Argillamarnosal_1057_1068_L_0 U-KP=3.461 LeftWall_910
51 : CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.403 LeftWall_910
52 : CHANGE Argillamarnosal_1057_1068_L_0 D-KP=2.649 LeftWall_910
53 : CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=19.605 LeftWall_910
54 : CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=19.605 LeftWall_910
55 : CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.537 LeftWall_910
56 : CHANGE Argillamarnosa_1061_1069_L_0 U-KP=3.114 LeftWall_910
57 : CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.433 LeftWall_910
58 : CHANGE Argillamarnosa_1061_1069_L_0 D-KP=2.428 LeftWall_910
59 : CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
60 : CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
61 : CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
62 : CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
63 : CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=8 LeftWall_910
64 : CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
65 : CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=8 LeftWall_910
66 : CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910

```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	492 di 731

67 : CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=16 LeftWall_910
68 : CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
69 : CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=16 LeftWall_910
70 : CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
71 : SETWALL LeftWall_910
72 : GEOM 0 0
73 : SURCHARGE 0 0 0 0
74 : WATER -40 0 -20 0 0
75 : ENDSTEP
76 : STEP Stage1_909
77 : SETWALL LeftWall_910
78 : GEOM 0 0
79 : SURCHARGE 0 0 0 0
80 : WATER -40 0 -20 0 0
81 : ADD Wallelement_911
82 : ENDSTEP
83 : STEP Stage2_1078
84 : SETWALL LeftWall_910
85 : GEOM 0 -8
86 : SURCHARGE 0 0 0 0
87 : WATER -40 0 -20 0 0
88 : ENDSTEP
89 : STEP Stage3_3941534
90 : SETWALL LeftWall_910
91 : GEOM 0 -8
92 : SURCHARGE 0 0 0 0
93 : WATER -40 0 -20 0 0
94 : ENDSTEP

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA
IABH

LOTTO
00

FASE
F

TIPO DOC
CL

OPERA
MU04 00 001

REV
A

FOGLIO
493 di 731

| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|
| ParatiePlus |
| Exe Time :17 November 2022 18:38:04 |
|
|-----

N O D A L P O I N T D A T A

NODE	Y-COORD	Z-COORD /	NODE	Y-COORD	Z-COORD /	NODE	Y-COORD	Z-COORD /	NODE	Y-COORD	Z-COORD /	NODE			
1	0.0000	0.0000	/	2	0.0000	-0.20000	/	3	0.0000	-0.40000	/	4	0.0000	-0.60000	/
5	0.0000	-0.80000	/	6	0.0000	-1.0000	/	7	0.0000	-1.2000	/	8	0.0000	-1.4000	/
9	0.0000	-1.6000	/	10	0.0000	-1.8000	/	11	0.0000	-2.0000	/	12	0.0000	-2.2000	/
13	0.0000	-2.4000	/	14	0.0000	-2.6000	/	15	0.0000	-2.8000	/	16	0.0000	-3.0000	/
17	0.0000	-3.2000	/	18	0.0000	-3.4000	/	19	0.0000	-3.6000	/	20	0.0000	-3.8000	/
21	0.0000	-4.0000	/	22	0.0000	-4.2000	/	23	0.0000	-4.4000	/	24	0.0000	-4.6000	/
25	0.0000	-4.8000	/	26	0.0000	-5.0000	/	27	0.0000	-5.2000	/	28	0.0000	-5.4000	/
29	0.0000	-5.6000	/	30	0.0000	-5.8000	/	31	0.0000	-6.0000	/	32	0.0000	-6.2000	/
33	0.0000	-6.4000	/	34	0.0000	-6.6000	/	35	0.0000	-6.8000	/	36	0.0000	-7.0000	/
37	0.0000	-7.2000	/	38	0.0000	-7.4000	/	39	0.0000	-7.6000	/	40	0.0000	-7.8000	/
41	0.0000	-8.0000	/	42	0.0000	-8.2000	/	43	0.0000	-8.4000	/	44	0.0000	-8.6000	/
45	0.0000	-8.8000	/	46	0.0000	-9.0000	/	47	0.0000	-9.2000	/	48	0.0000	-9.4000	/
49	0.0000	-9.6000	/	50	0.0000	-9.8000	/	51	0.0000	-10.000	/	52	0.0000	-10.200	/
53	0.0000	-10.400	/	54	0.0000	-10.600	/	55	0.0000	-10.800	/	56	0.0000	-11.000	/
57	0.0000	-11.200	/	58	0.0000	-11.400	/	59	0.0000	-11.600	/	60	0.0000	-11.800	/
61	0.0000	-12.000	/	62	0.0000	-12.200	/	63	0.0000	-12.400	/	64	0.0000	-12.600	/
65	0.0000	-12.800	/	66	0.0000	-13.000	/	67	0.0000	-13.200	/	68	0.0000	-13.400	/
69	0.0000	-13.600	/	70	0.0000	-13.800	/	71	0.0000	-14.000	/	72	0.0000	-14.200	/
73	0.0000	-14.400	/	74	0.0000	-14.600	/	75	0.0000	-14.800	/	76	0.0000	-15.000	/
77	0.0000	-15.200	/	78	0.0000	-15.400	/	79	0.0000	-15.600	/	80	0.0000	-15.800	/
81	0.0000	-16.000	/	82	0.0000	-16.200	/	83	0.0000	-16.400	/	84	0.0000	-16.600	/
85	0.0000	-16.800	/	86	0.0000	-17.000	/	87	0.0000	-17.200	/	88	0.0000	-17.400	/
89	0.0000	-17.600	/	90	0.0000	-17.800	/	91	0.0000	-18.000	/	92	0.0000	-18.200	/
93	0.0000	-18.400	/	94	0.0000	-18.600	/	95	0.0000	-18.800	/	96	0.0000	-19.000	/
97	0.0000	-19.200	/	98	0.0000	-19.400	/	99	0.0000	-19.600	/	100	0.0000	-19.800	/
101	0.0000	-20.000	/				/				/				/



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 494 di 731
------------------	-------------	-----------	----------------	----------------------	----------	----------------------

```

-----
| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                               |
|               ParatiePlus |
|           Exe Time :17 November 2022 18:38:04 |
-----
  
```

ELEMENT GROUP NO. 1

```

0_L :
  5 101 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0
.....
.....2D PLASTIC SOIL .....
.....
  
```

element group behaviour throughout stage analysis

stage status

```

-----
1 active
2 active
3 active
4 active
  
```

material set no. 1

```

prop( 1) angle          0.00000
prop( 2) layer as foreseen 1.00000
  
```

material set no. 2

```

prop( 1) angle          0.00000
prop( 2) layer as foreseen 2.00000
  
```

material set no. 3

```

prop( 1) angle          0.00000
prop( 2) layer as foreseen 3.00000
  
```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	1	0.2000	0.000	0.000	0.000	1.000
16	16	1	0.2000	0.000	0.000	0.000	1.000
17	17	1	0.2000	0.000	0.000	0.000	1.000
18	18	1	0.2000	0.000	0.000	0.000	1.000
19	19	1	0.2000	0.000	0.000	0.000	1.000
20	20	1	0.2000	0.000	0.000	0.000	1.000
21	21	1	0.2000	0.000	0.000	0.000	1.000
22	22	1	0.2000	0.000	0.000	0.000	1.000
23	23	1	0.2000	0.000	0.000	0.000	1.000
24	24	1	0.2000	0.000	0.000	0.000	1.000
25	25	1	0.2000	0.000	0.000	0.000	1.000
26	26	1	0.2000	0.000	0.000	0.000	1.000
27	27	1	0.2000	0.000	0.000	0.000	1.000
28	28	1	0.2000	0.000	0.000	0.000	1.000
29	29	1	0.2000	0.000	0.000	0.000	1.000
30	30	1	0.2000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	495 di 731

31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	3	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.2000	0.000	0.000	0.000	1.000
62	62	3	0.2000	0.000	0.000	0.000	1.000
63	63	3	0.2000	0.000	0.000	0.000	1.000
64	64	3	0.2000	0.000	0.000	0.000	1.000
65	65	3	0.2000	0.000	0.000	0.000	1.000
66	66	3	0.2000	0.000	0.000	0.000	1.000
67	67	3	0.2000	0.000	0.000	0.000	1.000
68	68	3	0.2000	0.000	0.000	0.000	1.000
69	69	3	0.2000	0.000	0.000	0.000	1.000
70	70	3	0.2000	0.000	0.000	0.000	1.000
71	71	3	0.2000	0.000	0.000	0.000	1.000
72	72	3	0.2000	0.000	0.000	0.000	1.000
73	73	3	0.2000	0.000	0.000	0.000	1.000
74	74	3	0.2000	0.000	0.000	0.000	1.000
75	75	3	0.2000	0.000	0.000	0.000	1.000
76	76	3	0.2000	0.000	0.000	0.000	1.000
77	77	3	0.2000	0.000	0.000	0.000	1.000
78	78	3	0.2000	0.000	0.000	0.000	1.000
79	79	3	0.2000	0.000	0.000	0.000	1.000
80	80	3	0.2000	0.000	0.000	0.000	1.000
81	81	3	0.2000	0.000	0.000	0.000	1.000
82	82	3	0.2000	0.000	0.000	0.000	1.000
83	83	3	0.2000	0.000	0.000	0.000	1.000
84	84	3	0.2000	0.000	0.000	0.000	1.000
85	85	3	0.2000	0.000	0.000	0.000	1.000
86	86	3	0.2000	0.000	0.000	0.000	1.000
87	87	3	0.2000	0.000	0.000	0.000	1.000
88	88	3	0.2000	0.000	0.000	0.000	1.000
89	89	3	0.2000	0.000	0.000	0.000	1.000
90	90	3	0.2000	0.000	0.000	0.000	1.000
91	91	3	0.2000	0.000	0.000	0.000	1.000
92	92	3	0.2000	0.000	0.000	0.000	1.000
93	93	3	0.2000	0.000	0.000	0.000	1.000
94	94	3	0.2000	0.000	0.000	0.000	1.000
95	95	3	0.2000	0.000	0.000	0.000	1.000
96	96	3	0.2000	0.000	0.000	0.000	1.000
97	97	3	0.2000	0.000	0.000	0.000	1.000
98	98	3	0.2000	0.000	0.000	0.000	1.000
99	99	3	0.2000	0.000	0.000	0.000	1.000
100	100	3	0.2000	0.000	0.000	0.000	1.000
101	101	3	0.1000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	496 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:04                                               |
|                                                                                               |
|                                                                                               |
|          -----+-----

```

ELEMENT GROUP NO. 2

```

0_R      :
 5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----
 1  active
 2  active
 3  active
 4  active

```

```

material set no.  1

prop( 1) angle      180.000
prop( 2) layer as foreseen 1.00000

```

```

material set no.  2

prop( 1) angle      180.000
prop( 2) layer as foreseen 2.00000

```

```

material set no.  3

prop( 1) angle      180.000
prop( 2) layer as foreseen 3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	1	0.2000	0.000	0.000	0.000	2.000
16	16	1	0.2000	0.000	0.000	0.000	2.000
17	17	1	0.2000	0.000	0.000	0.000	2.000
18	18	1	0.2000	0.000	0.000	0.000	2.000
19	19	1	0.2000	0.000	0.000	0.000	2.000
20	20	1	0.2000	0.000	0.000	0.000	2.000
21	21	1	0.2000	0.000	0.000	0.000	2.000
22	22	1	0.2000	0.000	0.000	0.000	2.000
23	23	1	0.2000	0.000	0.000	0.000	2.000
24	24	1	0.2000	0.000	0.000	0.000	2.000
25	25	1	0.2000	0.000	0.000	0.000	2.000
26	26	1	0.2000	0.000	0.000	0.000	2.000
27	27	1	0.2000	0.000	0.000	0.000	2.000
28	28	1	0.2000	0.000	0.000	0.000	2.000
29	29	1	0.2000	0.000	0.000	0.000	2.000
30	30	1	0.2000	0.000	0.000	0.000	2.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	497 di 731

31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	3	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.2000	0.000	0.000	0.000	2.000
62	62	3	0.2000	0.000	0.000	0.000	2.000
63	63	3	0.2000	0.000	0.000	0.000	2.000
64	64	3	0.2000	0.000	0.000	0.000	2.000
65	65	3	0.2000	0.000	0.000	0.000	2.000
66	66	3	0.2000	0.000	0.000	0.000	2.000
67	67	3	0.2000	0.000	0.000	0.000	2.000
68	68	3	0.2000	0.000	0.000	0.000	2.000
69	69	3	0.2000	0.000	0.000	0.000	2.000
70	70	3	0.2000	0.000	0.000	0.000	2.000
71	71	3	0.2000	0.000	0.000	0.000	2.000
72	72	3	0.2000	0.000	0.000	0.000	2.000
73	73	3	0.2000	0.000	0.000	0.000	2.000
74	74	3	0.2000	0.000	0.000	0.000	2.000
75	75	3	0.2000	0.000	0.000	0.000	2.000
76	76	3	0.2000	0.000	0.000	0.000	2.000
77	77	3	0.2000	0.000	0.000	0.000	2.000
78	78	3	0.2000	0.000	0.000	0.000	2.000
79	79	3	0.2000	0.000	0.000	0.000	2.000
80	80	3	0.2000	0.000	0.000	0.000	2.000
81	81	3	0.2000	0.000	0.000	0.000	2.000
82	82	3	0.2000	0.000	0.000	0.000	2.000
83	83	3	0.2000	0.000	0.000	0.000	2.000
84	84	3	0.2000	0.000	0.000	0.000	2.000
85	85	3	0.2000	0.000	0.000	0.000	2.000
86	86	3	0.2000	0.000	0.000	0.000	2.000
87	87	3	0.2000	0.000	0.000	0.000	2.000
88	88	3	0.2000	0.000	0.000	0.000	2.000
89	89	3	0.2000	0.000	0.000	0.000	2.000
90	90	3	0.2000	0.000	0.000	0.000	2.000
91	91	3	0.2000	0.000	0.000	0.000	2.000
92	92	3	0.2000	0.000	0.000	0.000	2.000
93	93	3	0.2000	0.000	0.000	0.000	2.000
94	94	3	0.2000	0.000	0.000	0.000	2.000
95	95	3	0.2000	0.000	0.000	0.000	2.000
96	96	3	0.2000	0.000	0.000	0.000	2.000
97	97	3	0.2000	0.000	0.000	0.000	2.000
98	98	3	0.2000	0.000	0.000	0.000	2.000
99	99	3	0.2000	0.000	0.000	0.000	2.000
100	100	3	0.2000	0.000	0.000	0.000	2.000
101	101	3	0.1000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 498 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                           |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:04          |
|-----+-----
  
```

ELEMENT GROUP NO. 3

```

WallElement_911
2 100 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0
.....
.....2D WALL ELEMENT.....
.....
  
```

element group behaviour throughout stage analysis

stage status

```

-----
1 inactive
2 active
3 active
4 active
  
```

material set no. 1

```

prop( 1) young modulus      0.314800E+08
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future .....      0.00000
  
```

no. of step variable items: 1
step inertia multiplier

```

-----
1 1.000
2 1.000
3 1.000
4 1.000
  
```

element data

el	na	nb	mat	erc1	erc2	thick	area	inertia	wgt(-z)	by-i	by-j
1	1	2	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
2	2	3	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
3	3	4	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
4	4	5	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
5	5	6	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
6	6	7	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
7	7	8	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
8	8	9	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
9	9	10	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
10	10	11	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
11	11	12	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
12	12	13	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
13	13	14	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
14	14	15	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
15	15	16	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
16	16	17	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
17	17	18	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
18	18	19	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
19	19	20	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
20	20	21	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
21	21	22	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
22	22	23	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
23	23	24	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
24	24	25	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
25	25	26	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
26	26	27	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
27	27	28	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
28	28	29	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
29	29	30	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
30	30	31	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
31	31	32	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
32	32	33	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	499 di 731

33	33	34	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
34	34	35	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
35	35	36	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
36	36	37	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
37	37	38	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
38	38	39	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
39	39	40	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
40	40	41	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
41	41	42	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
42	42	43	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
43	43	44	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
44	44	45	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
45	45	46	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
46	46	47	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
47	47	48	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
48	48	49	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
49	49	50	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
50	50	51	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
51	51	52	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
52	52	53	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
53	53	54	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
54	54	55	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
55	55	56	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
56	56	57	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
57	57	58	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
58	58	59	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
59	59	60	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
60	60	61	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
61	61	62	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
62	62	63	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
63	63	64	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
64	64	65	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
65	65	66	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
66	66	67	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
67	67	68	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
68	68	69	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
69	69	70	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
70	70	71	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
71	71	72	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
72	72	73	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
73	73	74	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
74	74	75	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
75	75	76	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
76	76	77	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
77	77	78	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
78	78	79	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
79	79	80	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
80	80	81	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
81	81	82	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
82	82	83	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
83	83	84	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
84	84	85	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
85	85	86	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
86	86	87	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
87	87	88	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
88	88	89	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
89	89	90	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
90	90	91	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
91	91	92	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
92	92	93	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
93	93	94	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
94	94	95	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
95	95	96	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
96	96	97	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
97	97	98	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
98	98	99	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
99	99	100	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
100	100	101	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	500 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
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|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:04                                                         |
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NO. OF NODAL LOADS (NLOAD) 0
NO. OF LOAD CURVES (NLCUR) 8
MAXIMUM POINTS/LCURVE (NPTM) 5



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	501 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
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|                                                                                               |
|                                                                                               |
|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:04                                               |
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L O A D D A T A

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 4



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	502 di 731

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 7
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 8
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
5.00000	0.1000E+01

NO. OF DISTRIBUTED LOAD CARDS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	503 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                          ParatiePlus                                       |
|                                                                                          Exe Time :17 November 2022 18:38:04             |
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L O A D B A L A N C E

STEP	1	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	1	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000

LOAD INPUT SECTION COMPLETED



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	504 di 731

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+-----+  
| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |  
|                                                                                       |  
|                                                                                       |  
|                               ParatiePlus                                             |  
|                               Exe Time :17 November 2022 18:38:04                     |  
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NO. OF LAYERS 3
NO. OF DATA PER LAYER..... 160



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	505 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|
|                                     ParatiePlus
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|          Exe Time :17 November 2022  18:38:04
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LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 31.083	WALL NO.	1
ITEM NO.	9	U-FRICT	= 37.000	WALL NO.	2
ITEM NO.	10	U-KA	= 0.31000	WALL NO.	1
ITEM NO.	11	U-KP	= 6.6790	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 31.083	WALL NO.	1
ITEM NO.	89	D-FRICT	= 37.000	WALL NO.	2
ITEM NO.	90	D-KA	= 0.26700	WALL NO.	1
ITEM NO.	91	D-KP	= 4.5780	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 8.0000	WALL NO.	1
ITEM NO.	8	U-COHE	= 10.000	WALL NO.	2
ITEM NO.	9	U-FRICT	= 21.315	WALL NO.	1
ITEM NO.	9	U-FRICT	= 26.000	WALL NO.	2
ITEM NO.	10	U-KA	= 0.49400	WALL NO.	1
ITEM NO.	11	U-KP	= 3.4610	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 8.0000	WALL NO.	1
ITEM NO.	88	D-COHE	= 10.000	WALL NO.	2
ITEM NO.	89	D-FRICT	= 21.315	WALL NO.	1
ITEM NO.	89	D-FRICT	= 26.000	WALL NO.	2
ITEM NO.	90	D-KA	= 0.40300	WALL NO.	1
ITEM NO.	91	D-KP	= 2.6490	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	506 di 731

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

ITEM NO. 1	NAME	= 14.000	(BOTH WALLS)	
ITEM NO. 2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO. 3	LEVEL	= -10.000	(BOTH WALLS)	
ITEM NO. 4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO. 5	GAMMAD	= 20.500	(BOTH WALLS)	
ITEM NO. 6	GAMMAB	= 10.500	(BOTH WALLS)	
ITEM NO. 7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO. 8	U-COHE	= 16.000	WALL NO.	1
ITEM NO. 8	U-COHE	= 20.000	WALL NO.	2
ITEM NO. 9	U-FRICT	= 19.605	WALL NO.	1
ITEM NO. 9	U-FRICT	= 24.000	WALL NO.	2
ITEM NO. 10	U-KA	= 0.53700	WALL NO.	1
ITEM NO. 11	U-KP	= 3.1140	WALL NO.	1
ITEM NO. 12	K0-NC	= 0.48500	(BOTH WALLS)	
ITEM NO. 14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO. 16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO. 17	EVC	= 0.10000E+06	(BOTH WALLS)	
ITEM NO. 18	EUR	= 0.16000E+06	(BOTH WALLS)	
ITEM NO. 27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO. 61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO. 82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO. 83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO. 88	D-COHE	= 16.000	WALL NO.	1
ITEM NO. 88	D-COHE	= 20.000	WALL NO.	2
ITEM NO. 89	D-FRICT	= 19.605	WALL NO.	1
ITEM NO. 89	D-FRICT	= 24.000	WALL NO.	2
ITEM NO. 90	D-KA	= 0.43300	WALL NO.	1
ITEM NO. 91	D-KP	= 2.4280	WALL NO.	1
ITEM NO. 107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO. 141	D-TZALPH	= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO. 1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO. 2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO. 3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO. 4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO. 5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO. 6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO. 7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO. 9	U-FRICT	= 31.083	WALL NO.	1
ITEM NO. 9	U-FRICT	= 37.000	WALL NO.	2
ITEM NO. 10	U-KA	= 0.31000	WALL NO.	1
ITEM NO. 11	U-KP	= 6.6790	WALL NO.	1
ITEM NO. 12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO. 13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO. 16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO. 17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO. 18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO. 27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO. 58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO. 60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO. 61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO. 82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO. 83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO. 89	D-FRICT	= 31.083	WALL NO.	1
ITEM NO. 89	D-FRICT	= 37.000	WALL NO.	2
ITEM NO. 90	D-KA	= 0.26700	WALL NO.	1
ITEM NO. 91	D-KP	= 4.5780	WALL NO.	1
ITEM NO. 107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO. 138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO. 140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO. 141	D-TZALPH	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO. 1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO. 2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO. 3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO. 4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO. 5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO. 6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO. 7	GAMMAW	= 10.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	507 di 731

ITEM NO.	8	U-COHE	8.0000	WALL NO.	1
ITEM NO.	8	U-COHE	10.000	WALL NO.	2
ITEM NO.	9	U-FRICT	21.315	WALL NO.	1
ITEM NO.	9	U-FRICT	26.000	WALL NO.	2
ITEM NO.	10	U-KA	0.49400	WALL NO.	1
ITEM NO.	11	U-KP	3.4610	WALL NO.	1
ITEM NO.	12	K0-NC	0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	8.0000	WALL NO.	1
ITEM NO.	88	D-COHE	10.000	WALL NO.	2
ITEM NO.	89	D-FRICT	21.315	WALL NO.	1
ITEM NO.	89	D-FRICT	26.000	WALL NO.	2
ITEM NO.	90	D-KA	0.40300	WALL NO.	1
ITEM NO.	91	D-KP	2.6490	WALL NO.	1
ITEM NO.	107	D-PERM	0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO.	1	NAME	14.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	-10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	20.500	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	10.500	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	16.000	WALL NO.	1
ITEM NO.	8	U-COHE	20.000	WALL NO.	2
ITEM NO.	9	U-FRICT	19.605	WALL NO.	1
ITEM NO.	9	U-FRICT	24.000	WALL NO.	2
ITEM NO.	10	U-KA	0.53700	WALL NO.	1
ITEM NO.	11	U-KP	3.1140	WALL NO.	1
ITEM NO.	12	K0-NC	0.48500	(BOTH WALLS)	
ITEM NO.	14	OCR	1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	EUR	0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	16.000	WALL NO.	1
ITEM NO.	88	D-COHE	20.000	WALL NO.	2
ITEM NO.	89	D-FRICT	19.605	WALL NO.	1
ITEM NO.	89	D-FRICT	24.000	WALL NO.	2
ITEM NO.	90	D-KA	0.43300	WALL NO.	1
ITEM NO.	91	D-KP	2.4280	WALL NO.	1
ITEM NO.	107	D-PERM	0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO.	1	NAME	12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	31.083	WALL NO.	1
ITEM NO.	9	U-FRICT	37.000	WALL NO.	2
ITEM NO.	10	U-KA	0.31000	WALL NO.	1
ITEM NO.	11	U-KP	6.6790	WALL NO.	1
ITEM NO.	12	K0-NC	0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	32000.	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	508 di 731

ITEM NO. 27<math>U-PERM <math>= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 58<math>U-TZKZ <math>= 10000. (BOTH WALLS)
 ITEM NO. 60<math>U-TZDELTA <math>= 25.000 (BOTH WALLS)
 ITEM NO. 61<math>U-TZALPHA <math>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<math>D-NATURE <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<math>D-LEVEL <math>= 0.0000 (BOTH WALLS)
 ITEM NO. 89<math>D-FRICT <math>= 31.083 WALL NO. 1
 ITEM NO. 89<math>D-FRICT <math>= 37.000 WALL NO. 2
 ITEM NO. 90<math>D-KA <math>= 0.26700 WALL NO. 1
 ITEM NO. 91<math>D-KP <math>= 4.5780 WALL NO. 1
 ITEM NO. 107<math>D-PERM <math>= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138<math>D-TZKZ <math>= 10000. (BOTH WALLS)
 ITEM NO. 140<math>D-TZDELTA <math>= 25.000 (BOTH WALLS)
 ITEM NO. 141<math>D-TZALPHA <math>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO. 1<math>NAME <math>= 13.000 (BOTH WALLS)
 ITEM NO. 2<math>NATURE <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 3<math>LEVEL <math>= -5.9000 (BOTH WALLS)
 ITEM NO. 4<math>WALL <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 5<math>GAMMAD <math>= 20.000 (BOTH WALLS)
 ITEM NO. 6<math>GAMMAB <math>= 10.000 (BOTH WALLS)
 ITEM NO. 7<math>GAMMAW <math>= 10.000 (BOTH WALLS)
 ITEM NO. 8<math>U-COHE <math>= 8.0000 WALL NO. 1
 ITEM NO. 8<math>U-COHE <math>= 10.000 WALL NO. 2
 ITEM NO. 9<math>U-FRICT <math>= 21.315 WALL NO. 1
 ITEM NO. 9<math>U-FRICT <math>= 26.000 WALL NO. 2
 ITEM NO. 10<math>U-KA <math>= 0.49400 WALL NO. 1
 ITEM NO. 11<math>U-KP <math>= 3.4610 WALL NO. 1
 ITEM NO. 12<math>K0-NC <math>= 0.56200 (BOTH WALLS)
 ITEM NO. 13<math>NEXP <math>= 0.50000 (BOTH WALLS)
 ITEM NO. 14<math>OCR <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 16<math>MODEL <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 17<math>EVC <math>= 90000. (BOTH WALLS)
 ITEM NO. 18<math>EUR <math>= 0.14400E+06 (BOTH WALLS)
 ITEM NO. 27<math>U-PERM <math>= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 61<math>U-TZALPHA <math>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<math>D-NATURE <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<math>D-LEVEL <math>= 0.0000 (BOTH WALLS)
 ITEM NO. 88<math>D-COHE <math>= 8.0000 WALL NO. 1
 ITEM NO. 88<math>D-COHE <math>= 10.000 WALL NO. 2
 ITEM NO. 89<math>D-FRICT <math>= 21.315 WALL NO. 1
 ITEM NO. 89<math>D-FRICT <math>= 26.000 WALL NO. 2
 ITEM NO. 90<math>D-KA <math>= 0.40300 WALL NO. 1
 ITEM NO. 91<math>D-KP <math>= 2.6490 WALL NO. 1
 ITEM NO. 107<math>D-PERM <math>= 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141<math>D-TZALPHA <math>= 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO. 1<math>NAME <math>= 14.000 (BOTH WALLS)
 ITEM NO. 2<math>NATURE <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 3<math>LEVEL <math>= -10.000 (BOTH WALLS)
 ITEM NO. 4<math>WALL <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 5<math>GAMMAD <math>= 20.500 (BOTH WALLS)
 ITEM NO. 6<math>GAMMAB <math>= 10.500 (BOTH WALLS)
 ITEM NO. 7<math>GAMMAW <math>= 10.000 (BOTH WALLS)
 ITEM NO. 8<math>U-COHE <math>= 16.000 WALL NO. 1
 ITEM NO. 8<math>U-COHE <math>= 20.000 WALL NO. 2
 ITEM NO. 9<math>U-FRICT <math>= 19.605 WALL NO. 1
 ITEM NO. 9<math>U-FRICT <math>= 24.000 WALL NO. 2
 ITEM NO. 10<math>U-KA <math>= 0.53700 WALL NO. 1
 ITEM NO. 11<math>U-KP <math>= 3.1140 WALL NO. 1
 ITEM NO. 12<math>K0-NC <math>= 0.48500 (BOTH WALLS)
 ITEM NO. 14<math>OCR <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 16<math>MODEL <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 17<math>EVC <math>= 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18<math>EUR <math>= 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27<math>U-PERM <math>= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61<math>U-TZALPHA <math>= 0.50000 (BOTH WALLS)
 ITEM NO. 82<math>D-NATURE <math>= 1.0000 (BOTH WALLS)
 ITEM NO. 83<math>D-LEVEL <math>= 0.0000 (BOTH WALLS)
 ITEM NO. 88<math>D-COHE <math>= 16.000 WALL NO. 1
 ITEM NO. 88<math>D-COHE <math>= 20.000 WALL NO. 2
 ITEM NO. 89<math>D-FRICT <math>= 19.605 WALL NO. 1
 ITEM NO. 89<math>D-FRICT <math>= 24.000 WALL NO. 2
 ITEM NO. 90<math>D-KA <math>= 0.43300 WALL NO. 1
 ITEM NO. 91<math>D-KP <math>= 2.4280 WALL NO. 1



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	509 di 731

ITEM NO. 107 <D-PERM >= 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH>= 0.50000 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO. 1 <NAME >= 12.000 (BOTH WALLS)	
ITEM NO. 2 <NATURE >= 1.0000 (BOTH WALLS)	
ITEM NO. 3 <LEVEL >= 10.000 (BOTH WALLS)	
ITEM NO. 4 <WALL >= 1.0000 (BOTH WALLS)	
ITEM NO. 5 <GAMMAD >= 19.000 (BOTH WALLS)	
ITEM NO. 6 <GAMMAB >= 9.0000 (BOTH WALLS)	
ITEM NO. 7 <GAMMAW >= 10.000 (BOTH WALLS)	
ITEM NO. 9 <U-FRICT >= 31.083 WALL NO. 1	1
ITEM NO. 9 <U-FRICT >= 37.000 WALL NO. 2	2
ITEM NO. 10 <U-KA >= 0.31000 WALL NO. 1	1
ITEM NO. 11 <U-KP >= 6.6790 WALL NO. 1	1
ITEM NO. 12 <K0-NC >= 0.40000 (BOTH WALLS)	
ITEM NO. 13 <NEXP >= 0.50000 (BOTH WALLS)	
ITEM NO. 16 <MODEL >= 1.0000 (BOTH WALLS)	
ITEM NO. 17 <EVC >= 20000. (BOTH WALLS)	
ITEM NO. 18 <EUR >= 32000. (BOTH WALLS)	
ITEM NO. 27 <U-PERM >= 0.50000E-04 (BOTH WALLS)	
ITEM NO. 58 <U-TZKZ >= 10000. (BOTH WALLS)	
ITEM NO. 60 <U-TZDELTA >= 25.000 (BOTH WALLS)	
ITEM NO. 61 <U-TZALPH >= 0.50000 (BOTH WALLS)	
ITEM NO. 82 <D-NATURE >= 1.0000 (BOTH WALLS)	
ITEM NO. 83 <D-LEVEL >= 0.0000 (BOTH WALLS)	
ITEM NO. 89 <D-FRICT >= 31.083 WALL NO. 1	1
ITEM NO. 89 <D-FRICT >= 37.000 WALL NO. 2	2
ITEM NO. 90 <D-KA >= 0.26700 WALL NO. 1	1
ITEM NO. 91 <D-KP >= 4.5780 WALL NO. 1	1
ITEM NO. 107 <D-PERM >= 0.50000E-04 (BOTH WALLS)	
ITEM NO. 138 <D-TZKZ >= 10000. (BOTH WALLS)	
ITEM NO. 140 <D-TZDELTA >= 25.000 (BOTH WALLS)	
ITEM NO. 141 <D-TZALPH >= 0.50000 (BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO. 1 <NAME >= 13.000 (BOTH WALLS)	
ITEM NO. 2 <NATURE >= 1.0000 (BOTH WALLS)	
ITEM NO. 3 <LEVEL >= -5.9000 (BOTH WALLS)	
ITEM NO. 4 <WALL >= 1.0000 (BOTH WALLS)	
ITEM NO. 5 <GAMMAD >= 20.000 (BOTH WALLS)	
ITEM NO. 6 <GAMMAB >= 10.000 (BOTH WALLS)	
ITEM NO. 7 <GAMMAW >= 10.000 (BOTH WALLS)	
ITEM NO. 8 <U-COHE >= 8.0000 WALL NO. 1	1
ITEM NO. 8 <U-COHE >= 10.000 WALL NO. 2	2
ITEM NO. 9 <U-FRICT >= 21.315 WALL NO. 1	1
ITEM NO. 9 <U-FRICT >= 26.000 WALL NO. 2	2
ITEM NO. 10 <U-KA >= 0.49400 WALL NO. 1	1
ITEM NO. 11 <U-KP >= 3.4610 WALL NO. 1	1
ITEM NO. 12 <K0-NC >= 0.56200 (BOTH WALLS)	
ITEM NO. 13 <NEXP >= 0.50000 (BOTH WALLS)	
ITEM NO. 14 <OCR >= 1.0000 (BOTH WALLS)	
ITEM NO. 16 <MODEL >= 1.0000 (BOTH WALLS)	
ITEM NO. 17 <EVC >= 90000. (BOTH WALLS)	
ITEM NO. 18 <EUR >= 0.14400E+06 (BOTH WALLS)	
ITEM NO. 27 <U-PERM >= 0.10000E-04 (BOTH WALLS)	
ITEM NO. 61 <U-TZALPH >= 0.50000 (BOTH WALLS)	
ITEM NO. 82 <D-NATURE >= 1.0000 (BOTH WALLS)	
ITEM NO. 83 <D-LEVEL >= 0.0000 (BOTH WALLS)	
ITEM NO. 88 <D-COHE >= 8.0000 WALL NO. 1	1
ITEM NO. 88 <D-COHE >= 10.000 WALL NO. 2	2
ITEM NO. 89 <D-FRICT >= 21.315 WALL NO. 1	1
ITEM NO. 89 <D-FRICT >= 26.000 WALL NO. 2	2
ITEM NO. 90 <D-KA >= 0.40300 WALL NO. 1	1
ITEM NO. 91 <D-KP >= 2.6490 WALL NO. 1	1
ITEM NO. 107 <D-PERM >= 0.10000E-04 (BOTH WALLS)	
ITEM NO. 141 <D-TZALPH >= 0.50000 (BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO. 1 <NAME >= 14.000 (BOTH WALLS)	
ITEM NO. 2 <NATURE >= 1.0000 (BOTH WALLS)	
ITEM NO. 3 <LEVEL >= -10.000 (BOTH WALLS)	
ITEM NO. 4 <WALL >= 1.0000 (BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	510 di 731

ITEM NO.	5	γ	20.500	(BOTH WALLS)	
ITEM NO.	6	γ	10.500	(BOTH WALLS)	
ITEM NO.	7	γ	10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	16.000	WALL NO.	1
ITEM NO.	8	U-COHE	20.000	WALL NO.	2
ITEM NO.	9	U-FRICT	19.605	WALL NO.	1
ITEM NO.	9	U-FRICT	24.000	WALL NO.	2
ITEM NO.	10	U-KA	0.53700	WALL NO.	1
ITEM NO.	11	U-KP	3.1140	WALL NO.	1
ITEM NO.	12	K0-NC	0.48500	(BOTH WALLS)	
ITEM NO.	14	OCR	1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	EUR	0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	16.000	WALL NO.	1
ITEM NO.	88	D-COHE	20.000	WALL NO.	2
ITEM NO.	89	D-FRICT	19.605	WALL NO.	1
ITEM NO.	89	D-FRICT	24.000	WALL NO.	2
ITEM NO.	90	D-KA	0.43300	WALL NO.	1
ITEM NO.	91	D-KP	2.4280	WALL NO.	1
ITEM NO.	107	D-PERM	0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	0.50000	(BOTH WALLS)	

DEFAULT WATER UNIT WEIGHT = 10.000
 AVERAGED ON 12 VALUES



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	511 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022  18:38:04          |
|-----+-----

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PHASE DESCRIPTORS

STEP NO.	1 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000
DYN.WATER BEHAVIOUR			0.000	0.000
Excess pore pressure RATIO Ru			0.000	0.000
SEISMIC PRESSURE LOWER VALUE			0.000	0.000
SEISMIC PRESSURE UPPER VALUE			0.000	0.000
SEISMIC PRESSURE LOWER LEVEL			0.000	0.000
SEISMIC PRESSURE UPPER LEVEL			0.000	0.000

=====
=====end of step 1

STEP NO.	2 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	512 di 731

DYN.WATER BEHAVIOUR	0.000	0.000
Excess pore pressure RATIO Ru	0.000	0.000
SEISMIC PRESSURE LOWER VALUE	0.000	0.000
SEISMIC PRESSURE UPPER VALUE	0.000	0.000
SEISMIC PRESSURE LOWER LEVEL	0.000	0.000
SEISMIC PRESSURE UPPER LEVEL	0.000	0.000

=====end of step 2

STEP NO.	3 no. of subincrements	1	
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-8.000	0.000
Z-WATER_TABLE		-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		0.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		0.000	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
UPHILL DELTA/PHI RATIO		0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000
SEISMIC PRESSURE LOWER VALUE		0.000	0.000
SEISMIC PRESSURE UPPER VALUE		0.000	0.000
SEISMIC PRESSURE LOWER LEVEL		0.000	0.000
SEISMIC PRESSURE UPPER LEVEL		0.000	0.000

=====end of step 3

STEP NO.	4 no. of subincrements	1	
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-8.000	0.000
Z-WATER_TABLE		-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		0.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		0.000	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
UPHILL DELTA/PHI RATIO		0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000
SEISMIC PRESSURE LOWER VALUE		0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	513 di 731

SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====
 =====end of step 4

LEFT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

RIGHT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
 POSITION 5881

NO. OF D.P.W FOR THIS AREA 15427
 MAX NO. OF D.P.W. AVAILABLE 81920
 ** MAX NO OF ITERATIONS SET TO 40

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIOR= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	514 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|          Exe Time :17 November 2022 18:38:04          |
+-----+
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 1 (AT TIME 1.000) SUBINCREMENT 0001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 515 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
|
|                                     ParatiePlus
|                               Exe Time :17 November 2022  18:38:04
|
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New Project

STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	V-C	1.3279E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	V-C	1.3279E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	V-C	1.3279E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	V-C	1.3279E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	V-C	1.3279E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	V-C	1.3279E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	V-C	1.3279E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	V-C	1.3279E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	V-C	1.3279E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	V-C	1.3279E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	V-C	1.3279E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	V-C	1.3279E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	V-C	1.3279E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	V-C	1.3279E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	V-C	1.3279E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	V-C	1.3279E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	V-C	1.3279E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	516 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C 1.3279E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C 1.3279E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C 1.3279E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C 1.3279E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C 1.3279E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C 1.3279E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C 1.3279E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C 1.3279E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C 1.3279E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C 1.3279E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C 1.3279E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C 1.3279E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C 1.3279E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C 4.9397E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C 4.9397E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C 4.9397E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C 4.9397E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C 4.9397E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C 4.9397E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C 4.9397E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C 4.9397E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C 4.9397E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C 4.9397E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C 4.9397E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C 4.9397E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C 4.9397E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000	0.000	Argillamarnosai_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C 4.9397E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	517 di 731
1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C	4.9397E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C	4.9397E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C	4.9397E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C	4.9397E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C	4.9397E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C	4.9397E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C	4.9397E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C	5.3165E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C	5.3165E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C	5.3165E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C	5.3165E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C	5.3165E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C	5.3165E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C	5.3165E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C	5.3165E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C	5.3165E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C	5.3165E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C	5.3165E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C	5.3165E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C	5.3165E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C	5.3165E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C	5.3165E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C	5.3165E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C	5.3165E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C	5.3165E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C	5.3165E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	521 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	8472.	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	8472.	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	8472.	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	8472.	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	8472.	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	8472.	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	8472.	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	8472.	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	8472.	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	8472.	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	8472.	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	8472.	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	8472.	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	4.6119E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	4.6119E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	4.6119E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	4.6119E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	4.6119E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	4.6119E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	4.6119E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	4.6119E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	4.6119E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	4.6119E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	4.6119E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	4.6119E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	4.6119E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	4.6119E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	522 di 731
1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C	4.6119E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C	4.6119E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C	4.6119E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C	4.6119E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C	4.6119E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C	4.6119E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C	4.6119E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C	5.2902E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C	5.2902E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C	5.2902E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C	5.2902E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C	5.2902E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C	5.2902E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C	5.2902E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C	5.2902E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C	5.2902E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C	5.2902E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C	5.2902E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C	5.2902E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C	5.2902E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C	5.2902E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C	5.2902E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C	5.2902E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C	5.2902E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C	5.2902E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C	5.2902E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 525 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
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|                                                                                                     |
|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:04                                                         |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
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***** NO ONE ELEMENT ACTIVE AT CURRENT STEP *****

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ITER 0 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIO= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE     1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0

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ITER 1 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIO= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE     1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0

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ITER 2 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIO= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE     1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0

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LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	526 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
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|                                                                                                     |
|          Exe Time :17 November 2022 18:38:04          |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 527 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|
|          ParatiePlus
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|          Exe Time :17 November 2022  18:38:04
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New Project

STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	UL-RL	2.1246E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	UL-RL	2.1246E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	UL-RL	2.1246E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	UL-RL	2.1246E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	UL-RL	2.1246E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	UL-RL	2.1246E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	UL-RL	2.1246E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	UL-RL	2.1246E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	UL-RL	2.1246E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	UL-RL	2.1246E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	UL-RL	2.1246E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	UL-RL	2.1246E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	UL-RL	2.1246E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	UL-RL	2.1246E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	UL-RL	2.1246E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	UL-RL	2.1246E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	UL-RL	2.1246E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	528 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL 2.1246E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL 2.1246E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL 2.1246E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL 2.1246E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL 2.1246E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL 2.1246E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL 2.1246E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL 2.1246E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL 2.1246E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL 2.1246E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL 2.1246E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL 2.1246E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL 2.1246E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL 7.9035E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL 7.9035E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL 7.9035E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL 7.9035E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL 7.9035E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL 7.9035E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL 7.9035E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL 7.9035E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL 7.9035E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL 7.9035E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL 7.9035E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL 7.9035E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL 7.9035E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL 7.9035E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	529 di 731

1.000	93.35	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 7.9035E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 7.9035E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 7.9035E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 7.9035E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 7.9035E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 7.9035E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 7.9035E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 8.5063E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 8.5063E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 8.5063E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 8.5063E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 8.5063E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 8.5063E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 8.5063E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 8.5063E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 8.5063E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 8.5063E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 8.5063E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 8.5063E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 8.5063E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 8.5063E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 8.5063E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 8.5063E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 8.5063E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 8.5063E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 8.5063E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	533 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	1.3556E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	1.3556E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	1.3556E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	1.3556E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	1.3556E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	1.3556E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	1.3556E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	1.3556E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	1.3556E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	1.3556E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	1.3556E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	1.3556E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	1.3556E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	7.3790E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	7.3790E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	7.3790E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	7.3790E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	7.3790E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	7.3790E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	7.3790E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	7.3790E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	7.3790E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	7.3790E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	7.3790E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	7.3790E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	7.3790E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	8.000	8.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	7.3790E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	534 di 731

1.000	93.35	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 7.3790E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 7.3790E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 7.3790E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 7.3790E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 7.3790E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 7.3790E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 7.3790E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	8.000	8.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 8.4643E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 8.4643E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 8.4643E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 8.4643E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 8.4643E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 8.4643E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 8.4643E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 8.4643E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 8.4643E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 8.4643E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 8.4643E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 8.4643E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 8.4643E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 8.4643E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 8.4643E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 8.4643E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 8.4643E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 8.4643E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 8.4643E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	537 di 731

| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
| | |
| ParatiePlus |
Exe Time :17 November 2022 18:38:04

New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000
57	0.0000	0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	538 di 731

58	0.0000	0.0000	0.0000	0.0000
59	0.0000	0.0000	0.0000	0.0000
60	0.0000	0.0000	0.0000	0.0000
61	0.0000	0.0000	0.0000	0.0000
62	0.0000	0.0000	0.0000	0.0000
63	0.0000	0.0000	0.0000	0.0000
64	0.0000	0.0000	0.0000	0.0000
65	0.0000	0.0000	0.0000	0.0000
66	0.0000	0.0000	0.0000	0.0000
67	0.0000	0.0000	0.0000	0.0000
68	0.0000	0.0000	0.0000	0.0000
69	0.0000	0.0000	0.0000	0.0000
70	0.0000	0.0000	0.0000	0.0000
71	0.0000	0.0000	0.0000	0.0000
72	0.0000	0.0000	0.0000	0.0000
73	0.0000	0.0000	0.0000	0.0000
74	0.0000	0.0000	0.0000	0.0000
75	0.0000	0.0000	0.0000	0.0000
76	0.0000	0.0000	0.0000	0.0000
77	0.0000	0.0000	0.0000	0.0000
78	0.0000	0.0000	0.0000	0.0000
79	0.0000	0.0000	0.0000	0.0000
80	0.0000	0.0000	0.0000	0.0000
81	0.0000	0.0000	0.0000	0.0000
82	0.0000	0.0000	0.0000	0.0000
83	0.0000	0.0000	0.0000	0.0000
84	0.0000	0.0000	0.0000	0.0000
85	0.0000	0.0000	0.0000	0.0000
86	0.0000	0.0000	0.0000	0.0000
87	0.0000	0.0000	0.0000	0.0000
88	0.0000	0.0000	0.0000	0.0000
89	0.0000	0.0000	0.0000	0.0000
90	0.0000	0.0000	0.0000	0.0000
91	0.0000	0.0000	0.0000	0.0000
92	0.0000	0.0000	0.0000	0.0000
93	0.0000	0.0000	0.0000	0.0000
94	0.0000	0.0000	0.0000	0.0000
95	0.0000	0.0000	0.0000	0.0000
96	0.0000	0.0000	0.0000	0.0000
97	0.0000	0.0000	0.0000	0.0000
98	0.0000	0.0000	0.0000	0.0000
99	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.1602E+05 REMNOR= 0.000 RATIO =0.5113 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5113 RATIO= 0.000
 MAX UN= 17.32 IEQ= 81 NODE 41 DOF 1 Y-DISPL.F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 3086. REMNOR=0.9869E-18 RATIO =0.2244 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.2244 RATIO= 0.000
 MAX UN= 11.22 IEQ= 83 NODE 42 DOF 1 Y-DISPL.F
 MIN UN=-.3265E-09 IEQ= 50 NODE 25 DOF 2 X-ROT. F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 5533. REMNOR=0.5465E-16 RATIO =0.3005 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.3005 RATIO= 0.000
 MAX UN= 38.51 IEQ= 91 NODE 46 DOF 1 Y-DISPL.F
 MIN UN=-.2501E-07 IEQ= 27 NODE 14 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	539 di 731

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ITER 4 RNORM = 0.000 RMNORM= 0.000
RINORM=0.6129E+05 RIMNOR= 0.000
RENORM= 1430. REMNOR=0.5813E-16 RATIO =0.1527 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.6129E+05 RDR = 0.000
RATIOT=0.1527 RATIOR= 0.000
MAX UN= 21.97 IEQ= 105 NODE 53 DOF 1 Y-DISPL.F
MIN UN=-.3353E-07 IEQ= 59 NODE 30 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
RINORM=0.6129E+05 RIMNOR= 0.000
RENORM= 64.03 REMNOR=0.3469E-16 RATIO =0.3232E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.6129E+05 RDR = 0.000
RATIOT=0.3232E-01 RATIOR= 0.000
MAX UN= 6.614 IEQ= 117 NODE 59 DOF 1 Y-DISPL.F
MIN UN=-.6505 IEQ= 173 NODE 87 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 6 RNORM = 0.000 RMNORM= 0.000
RINORM=0.6129E+05 RIMNOR= 0.000
RENORM=0.1479E-01 REMNOR=0.2582E-16 RATIO =0.4913E-03 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.6129E+05 RDR = 0.000
RATIOT=0.4913E-03 RATIOR= 0.000
MAX UN=0.2165E-07 IEQ= 33 NODE 17 DOF 1 Y-DISPL.F
MIN UN=-.1126 IEQ= 195 NODE 98 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 7 RNORM = 0.000 RMNORM= 0.000
RINORM=0.6129E+05 RIMNOR= 0.000
RENORM=0.3021E-04 REMNOR=0.3620E-16 RATIO =0.2220E-04 TOLER =0.1000E-03 CONVERGED !
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.6129E+05 RDR = 0.000
RATIOT=0.2220E-04 RATIOR= 0.000
MAX UN=0.2992E-02 IEQ= 171 NODE 86 DOF 1 Y-DISPL.F
MIN UN=-.2463E-07 IEQ= 43 NODE 22 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

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LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	540 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:04                                                                 |
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New Project
 SOLUTION REACHED USING 7 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	0.1010420	-8.0919426E-03
2	9.9423564E-02	-8.0919426E-03
3	9.7805176E-02	-8.0919389E-03
4	9.6186789E-02	-8.0919206E-03
5	9.4568410E-02	-8.0918694E-03
6	9.2950046E-02	-8.0917596E-03
7	9.1331712E-02	-8.0915583E-03
8	8.9713431E-02	-8.0912254E-03
9	8.8095234E-02	-8.0907131E-03
10	8.6477161E-02	-8.0899666E-03
11	8.4859267E-02	-8.0889237E-03
12	8.3241616E-02	-8.0875149E-03
13	8.1624290E-02	-8.0856634E-03
14	8.0007386E-02	-8.0832849E-03
15	7.8391018E-02	-8.0802880E-03
16	7.6775319E-02	-8.0765740E-03
17	7.5160435E-02	-8.0720365E-03
18	7.3546558E-02	-8.0665624E-03
19	7.1933880E-02	-8.0600307E-03
20	7.0322625E-02	-8.0523135E-03
21	6.8713051E-02	-8.0432753E-03
22	6.7105421E-02	-8.0327735E-03
23	6.5500049E-02	-8.0206579E-03
24	6.3897276E-02	-8.0067713E-03
25	6.2297470E-02	-7.9909489E-03
26	6.0701036E-02	-7.9730189E-03
27	5.9108423E-02	-7.9528020E-03
28	5.7520089E-02	-7.9301113E-03
29	5.5936556E-02	-7.9047532E-03
30	5.4358379E-02	-7.8765262E-03
31	5.2786151E-02	-7.8452218E-03
32	5.1220519E-02	-7.8105940E-03
33	4.9662162E-02	-7.7723559E-03
34	4.8111837E-02	-7.7302090E-03
35	4.6570359E-02	-7.6838422E-03
36	4.5038603E-02	-7.6329324E-03
37	4.3517519E-02	-7.5771443E-03
38	4.2008102E-02	-7.5161293E-03
39	4.0511440E-02	-7.4495279E-03
40	3.9028688E-02	-7.3769674E-03
41	3.7561076E-02	-7.2980634E-03
42	3.6109912E-02	-7.2124188E-03
43	3.4676577E-02	-7.1197383E-03
44	3.3262496E-02	-7.0198609E-03
45	3.1869127E-02	-6.9126797E-03
46	3.0497922E-02	-6.7981399E-03
47	2.9150362E-02	-6.6762416E-03
48	2.7827912E-02	-6.5470381E-03
49	2.6532026E-02	-6.4106361E-03
50	2.5264133E-02	-6.2671969E-03
51	2.4025609E-02	-6.1169328E-03
52	2.2817768E-02	-5.9601080E-03
53	2.1642005E-02	-5.7971155E-03
54	2.0499361E-02	-5.6284187E-03
55	1.9390982E-02	-5.4545572E-03
56	1.8317844E-02	-5.2761109E-03
57	1.7280801E-02	-5.0937078E-03
58	1.6280579E-02	-4.9080242E-03
59	1.5317762E-02	-4.7197843E-03
60	1.4392784E-02	-4.5297607E-03
61	1.3505922E-02	-4.3387741E-03



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	541 di 731

62	1.2657281E-02	-4.1476915E-03
63	1.1846795E-02	-3.9573665E-03
64	1.1074232E-02	-3.7685835E-03
65	1.0339211E-02	-3.5820602E-03
66	9.6412134E-03	-3.3984513E-03
67	8.9795963E-03	-3.2183511E-03
68	8.3536032E-03	-3.0422970E-03
69	7.7623756E-03	-2.8707719E-03
70	7.2049637E-03	-2.7042075E-03
71	6.6803364E-03	-2.5429869E-03
72	6.1873902E-03	-2.3874475E-03
73	5.7249590E-03	-2.2378836E-03
74	5.2918215E-03	-2.0945489E-03
75	4.8867098E-03	-1.9576590E-03
76	4.5083163E-03	-1.8273936E-03
77	4.1553010E-03	-1.7038990E-03
78	3.8262976E-03	-1.5872902E-03
79	3.5199201E-03	-1.4776528E-03
80	3.2347679E-03	-1.3750445E-03
81	2.9694320E-03	-1.2794904E-03
82	2.7225023E-03	-1.1909778E-03
83	2.4925746E-03	-1.1094591E-03
84	2.2782578E-03	-1.0348540E-03
85	2.0781795E-03	-9.6705170E-04
86	1.8909928E-03	-9.0591293E-04
87	1.7153812E-03	-8.5127151E-04
88	1.5500641E-03	-8.0293215E-04
89	1.3938036E-03	-7.6066369E-04
90	1.2454046E-03	-7.2419471E-04
91	1.1037518E-03	-6.9322229E-04
92	9.6777222E-04	-6.6740254E-04
93	8.3647236E-04	-6.4635944E-04
94	7.0893727E-04	-6.2968389E-04
95	5.8433704E-04	-6.1693466E-04
96	4.6193317E-04	-6.0763898E-04
97	3.4108479E-04	-6.0129316E-04
98	2.2125482E-04	-5.9736365E-04
99	1.0201572E-04	-5.9528843E-04
100	-1.6944828E-05	-5.9447736E-04
101	-1.3581830E-04	-5.9431235E-04

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	543 di 731
18 D	4.005	-7.3547E-02	64.60	20.03	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	20.03	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	4.241	-7.1934E-02	68.40	21.20	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	21.20	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	4.476	-7.0323E-02	72.20	22.38	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	22.38	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	4.712	-6.8713E-02	76.00	23.56	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	23.56	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	4.948	-6.7105E-02	79.80	24.74	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	24.74	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	5.183	-6.5500E-02	83.60	25.92	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	25.92	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	5.419	-6.3897E-02	87.40	27.09	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	27.09	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	5.654	-6.2297E-02	91.20	28.27	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	28.27	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	5.890	-6.0701E-02	95.00	29.45	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	29.45	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	6.126	-5.9108E-02	98.80	30.63	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	30.63	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	6.361	-5.7520E-02	102.6	31.81	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	31.81	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	6.597	-5.5937E-02	106.4	32.98	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	32.98	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	6.832	-5.4358E-02	110.2	34.16	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	34.16	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	9.024	-5.2786E-02	114.1	45.12	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	45.12	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
32 D	9.419	-5.1221E-02	118.1	47.10	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	47.10	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
33 D	9.814	-4.9662E-02	122.1	49.07	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	49.07	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
34 D	10.21	-4.8112E-02	126.1	51.05	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	51.05	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
35 D	10.60	-4.6570E-02	130.1	53.02	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	53.02	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
36 D	11.00	-4.5039E-02	134.1	55.00	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	55.00	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
37 D	11.40	-4.3518E-02	138.1	56.98	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	56.98	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
38 D	11.79	-4.2008E-02	142.1	58.95	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	58.95	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
39 D	12.19	-4.0511E-02	146.1	60.93	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	60.93	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
40 D	12.58	-3.9029E-02	150.1	62.90	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	62.90	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
41 D	12.98	-3.7561E-02	154.1	64.88	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	64.88	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
42 D	13.37	-3.6110E-02	158.1	66.86	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	66.86	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
43 D	13.77	-3.4677E-02	162.1	68.83	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	68.83	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
44 D	14.16	-3.3262E-02	166.1	70.81	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	544 di 731

1.000	70.81	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	14.56	-3.1869E-02	170.1	72.78	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	72.78	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	14.95	-3.0498E-02	174.1	74.76	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	74.76	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	15.35	-2.9150E-02	178.1	76.74	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	76.74	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	15.74	-2.7828E-02	182.1	78.71	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	78.71	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	16.14	-2.6532E-02	186.1	80.69	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	80.69	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	16.53	-2.5264E-02	190.1	82.66	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	82.66	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	16.93	-2.4026E-02	194.1	84.64	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	84.64	0.000	0.000	8.000	8.000	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	16.60	-2.2818E-02	198.2	82.98	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	82.98	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	17.04	-2.1642E-02	202.3	85.19	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	85.19	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	17.48	-2.0499E-02	206.4	87.39	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	87.39	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	17.92	-1.9391E-02	210.5	89.59	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	89.59	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	18.36	-1.8318E-02	214.6	91.79	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	91.79	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	18.80	-1.7281E-02	218.7	93.99	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	93.99	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	19.24	-1.6281E-02	222.8	96.19	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	96.19	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	19.68	-1.5318E-02	226.9	98.40	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	98.40	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	20.12	-1.4393E-02	231.0	100.6	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	100.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	20.56	-1.3506E-02	235.1	102.8	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	102.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	21.00	-1.2657E-02	239.2	105.0	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	105.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	21.44	-1.1847E-02	243.3	107.2	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	107.2	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	21.88	-1.1074E-02	247.4	109.4	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	109.4	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	22.32	-1.0339E-02	251.5	111.6	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	111.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	22.76	-9.6412E-03	255.6	113.8	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	113.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	23.20	-8.9796E-03	259.7	116.0	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	116.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	23.64	-8.3536E-03	263.8	118.2	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	118.2	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	24.08	-7.7624E-03	267.9	120.4	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	120.4	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	24.52	-7.2050E-03	272.0	122.6	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	122.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 547 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:04                                                                 |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	549 di 731
58 D	43.33	1.6281E-02	68.70	216.7	222.8	216.7	PASSIVE	0.000	-11.40	0.000	1.000
1.000	216.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	45.32	1.5318E-02	72.80	226.6	226.9	226.6	PASSIVE	0.000	-11.60	0.000	1.000
1.000	226.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	47.32	1.4393E-02	76.90	236.6	231.0	236.6	PASSIVE	0.000	-11.80	0.000	1.000
1.000	236.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	49.19	1.3506E-02	81.00	245.9	235.1	245.9	V-C	1.3225E+04	-12.00	0.000	1.000
1.000	245.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	47.34	1.2657E-02	85.10	236.7	239.2	236.7	V-C	1.3225E+04	-12.20	0.000	1.000
1.000	236.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	45.59	1.1847E-02	89.20	228.0	243.3	228.0	V-C	1.3225E+04	-12.40	0.000	1.000
1.000	228.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	43.95	1.1074E-02	93.30	219.7	247.4	219.7	V-C	1.3225E+04	-12.60	0.000	1.000
1.000	219.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	42.40	1.0339E-02	97.40	212.0	251.5	212.0	V-C	1.3225E+04	-12.80	0.000	1.000
1.000	212.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	40.95	9.6412E-03	101.5	204.8	255.6	204.8	V-C	1.3225E+04	-13.00	0.000	1.000
1.000	204.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	39.60	8.9796E-03	105.6	198.0	259.7	198.0	V-C	1.3225E+04	-13.20	0.000	1.000
1.000	198.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	38.34	8.3536E-03	109.7	191.7	263.8	191.7	V-C	1.3225E+04	-13.40	0.000	1.000
1.000	191.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	37.18	7.7624E-03	113.8	185.9	267.9	185.9	V-C	1.3225E+04	-13.60	0.000	1.000
1.000	185.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	36.10	7.2050E-03	117.9	180.5	272.0	180.5	V-C	1.3225E+04	-13.80	0.000	1.000
1.000	180.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	35.11	6.6803E-03	122.0	175.5	276.1	175.5	V-C	1.3225E+04	-14.00	0.000	1.000
1.000	175.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	34.20	6.1874E-03	126.1	171.0	280.2	171.0	V-C	1.3225E+04	-14.20	0.000	1.000
1.000	171.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	33.38	5.7250E-03	130.2	166.9	284.3	166.9	V-C	1.3225E+04	-14.40	0.000	1.000
1.000	166.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	32.63	5.2918E-03	134.3	163.1	288.4	163.1	V-C	1.3225E+04	-14.60	0.000	1.000
1.000	163.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	31.96	4.8867E-03	138.4	159.8	292.5	159.8	V-C	1.3225E+04	-14.80	0.000	1.000
1.000	159.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	31.35	4.5083E-03	142.5	156.8	296.6	156.8	V-C	1.3225E+04	-15.00	0.000	1.000
1.000	156.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	30.82	4.1553E-03	146.6	154.1	300.7	154.1	UL-RL	2.1161E+04	-15.20	0.000	1.000
1.000	154.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	30.34	3.8263E-03	150.7	151.7	304.8	151.7	UL-RL	2.1161E+04	-15.40	0.000	1.000
1.000	151.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	29.91	3.5199E-03	154.8	149.6	308.9	149.8	UL-RL	2.1161E+04	-15.60	0.000	1.000
1.000	149.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	29.10	3.2348E-03	158.9	145.5	313.0	151.8	UL-RL	2.1161E+04	-15.80	0.000	1.000
1.000	145.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	28.38	2.9694E-03	163.0	141.9	317.1	153.8	UL-RL	2.1161E+04	-16.00	0.000	1.000
1.000	141.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	27.73	2.7225E-03	167.1	138.7	321.2	155.8	UL-RL	2.1161E+04	-16.20	0.000	1.000
1.000	138.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	27.16	2.4926E-03	171.2	135.8	325.3	157.8	UL-RL	2.1161E+04	-16.40	0.000	1.000
1.000	135.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	26.65	2.2783E-03	175.3	133.2	329.4	159.8	UL-RL	2.1161E+04	-16.60	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	550 di 731

1.000	133.2	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	26.20	2.0782E-03	179.4	131.0	333.5	161.7	UL-RL 2.1161E+04	-16.80	0.000	1.000
1.000	131.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	25.80	1.8910E-03	183.5	129.0	337.6	163.7	UL-RL 2.1161E+04	-17.00	0.000	1.000
1.000	129.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	25.46	1.7154E-03	187.6	127.3	341.7	165.7	UL-RL 2.1161E+04	-17.20	0.000	1.000
1.000	127.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	25.15	1.5501E-03	191.7	125.8	345.8	167.7	UL-RL 2.1161E+04	-17.40	0.000	1.000
1.000	125.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	24.89	1.3938E-03	195.8	124.5	349.9	169.7	UL-RL 2.1161E+04	-17.60	0.000	1.000
1.000	124.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	24.66	1.2454E-03	199.9	123.3	354.0	171.7	UL-RL 2.1161E+04	-17.80	0.000	1.000
1.000	123.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.46	1.1038E-03	204.0	122.3	358.1	173.7	UL-RL 2.1161E+04	-18.00	0.000	1.000
1.000	122.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.28	9.6777E-04	208.1	121.4	362.2	175.7	UL-RL 2.1161E+04	-18.20	0.000	1.000
1.000	121.4	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.12	8.3647E-04	212.2	120.6	366.3	177.7	UL-RL 2.1161E+04	-18.40	0.000	1.000
1.000	120.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	23.98	7.0894E-04	216.3	119.9	370.4	179.6	UL-RL 2.1161E+04	-18.60	0.000	1.000
1.000	119.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	23.85	5.8434E-04	220.4	119.3	374.5	181.6	UL-RL 2.1161E+04	-18.80	0.000	1.000
1.000	119.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	23.73	4.6193E-04	224.5	118.7	378.6	183.6	UL-RL 2.1161E+04	-19.00	0.000	1.000
1.000	118.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	23.62	3.4108E-04	228.6	118.1	382.7	185.6	UL-RL 2.1161E+04	-19.20	0.000	1.000
1.000	118.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	23.51	2.2125E-04	232.7	117.5	386.8	187.6	UL-RL 2.1161E+04	-19.40	0.000	1.000
1.000	117.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	23.40	1.0202E-04	236.8	117.0	390.9	189.6	UL-RL 2.1161E+04	-19.60	0.000	1.000
1.000	117.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	23.30	-1.6945E-05	240.9	116.5	395.0	191.6	UL-RL 2.1161E+04	-19.80	0.000	1.000
1.000	116.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	11.60	-1.3582E-04	245.0	116.0	399.1	193.6	UL-RL 2.1161E+04	-20.00	0.000	1.000
1.000	116.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 551 di 731
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|           PARATIEPLUS(TM)   NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                     |
|                               ParatiePlus                           |
|                               Exe Time :17 November 2022  18:38:04  |
|                                                                     |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1-3.30218E-09	3.30218E-09	-3.32548E-10	-8.24030E-10	
2 0.23560	-0.23560	9.27564E-10	4.71200E-02	
3 0.70680	-0.70680	-4.71200E-02	0.18848	
4 1.4136	-1.4136	-0.18848	0.47120	
5 2.3560	-2.3560	-0.47120	0.94240	
6 3.5340	-3.5340	-0.94240	1.6492	
7 4.9476	-4.9476	-1.6492	2.6387	
8 6.5968	-6.5968	-2.6387	3.9581	
9 8.4816	-8.4816	-3.9581	5.6544	
10 10.602	-10.602	-5.6544	7.7748	
11 12.958	-12.958	-7.7748	10.366	
12 15.550	-15.550	-10.366	13.476	
13 18.377	-18.377	-13.476	17.152	
14 21.440	-21.440	-17.152	21.440	
15 24.738	-24.738	-21.440	26.387	
16 28.272	-28.272	-26.387	32.042	
17 32.042	-32.042	-32.042	38.450	
18 36.047	-36.047	-38.450	45.659	
19 40.288	-40.288	-45.659	53.717	
20 44.764	-44.764	-53.717	62.670	
21 49.476	-49.476	-62.670	72.565	
22 54.424	-54.424	-72.565	83.450	
23 59.607	-59.607	-83.450	95.371	
24 65.026	-65.026	-95.371	108.38	
25 70.680	-70.680	-108.38	122.51	
26 76.570	-76.570	-122.51	137.83	
27 82.696	-82.696	-137.83	154.37	
28 89.057	-89.057	-154.37	172.18	
29 95.654	-95.654	-172.18	191.31	
30 102.49	-102.49	-191.31	211.80	
31 111.51	-111.51	-211.80	234.11	
32 120.93	-120.93	-234.11	258.29	
33 130.74	-130.74	-258.29	284.44	
34 140.95	-140.95	-284.44	312.63	
35 151.56	-151.56	-312.63	342.94	
36 162.56	-162.56	-342.94	375.45	
37 173.95	-173.95	-375.45	410.24	
38 185.74	-185.74	-410.24	447.39	
39 197.93	-197.93	-447.39	486.98	
40 210.51	-210.51	-486.98	529.08	
41 223.49	-223.49	-529.08	573.78	
42 229.53	-229.53	-573.78	619.68	
43 233.85	-233.85	-619.68	666.45	
44 236.44	-236.44	-666.45	713.74	
45 237.32	-237.32	-713.74	761.21	
46 236.46	-236.46	-761.21	808.50	
47 233.89	-233.89	-808.50	855.28	
48 229.59	-229.59	-855.28	901.19	
49 223.56	-223.56	-901.19	945.91	
50 215.82	-215.82	-945.91	989.07	
51 206.34	-206.34	-989.07	1030.3	
52 191.55	-191.55	-1030.3	1068.6	
53 175.21	-175.21	-1068.6	1103.7	
54 157.32	-157.32	-1103.7	1135.2	
55 137.88	-137.88	-1135.2	1162.7	
56 116.88	-116.88	-1162.7	1186.1	
57 94.340	-94.340	-1186.1	1205.0	



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	552 di 731

58	70.245	-70.245	-1205.0	1219.0
59	44.600	-44.600	-1219.0	1227.9
60	17.405	-17.405	-1227.9	1231.4
61	-11.222	11.222	-1231.4	1229.2
62	-37.562	37.562	-1229.2	1221.7
63	-61.715	61.715	-1221.7	1209.3
64	-83.782	83.782	-1209.3	1192.6
65	-103.86	103.86	-1192.6	1171.8
66	-122.05	122.05	-1171.8	1147.4
67	-138.45	138.45	-1147.4	1119.7
68	-153.15	153.15	-1119.7	1089.1
69	-166.25	166.25	-1089.1	1055.8
70	-177.82	177.82	-1055.8	1020.2
71	-187.97	187.97	-1020.2	982.66
72	-196.77	196.77	-982.66	943.30
73	-204.30	204.30	-943.30	902.44
74	-210.65	210.65	-902.44	860.31
75	-215.88	215.88	-860.31	817.14
76	-220.07	220.07	-817.14	773.12
77	-223.28	223.28	-773.12	728.47
78	-225.58	225.58	-728.47	683.35
79	-227.00	227.00	-683.35	637.95
80	-227.18	227.18	-637.95	592.52
81	-226.19	226.19	-592.52	547.28
82	-224.12	224.12	-547.28	502.45
83	-221.02	221.02	-502.45	458.25
84	-216.98	216.98	-458.25	414.85
85	-212.05	212.05	-414.85	372.44
86	-206.29	206.29	-372.44	331.18
87	-199.48	199.48	-331.18	291.29
88	-191.40	191.40	-291.29	253.01
89	-182.11	182.11	-253.01	216.58
90	-171.66	171.66	-216.58	182.25
91	-160.10	160.10	-182.25	150.23
92	-147.45	147.45	-150.23	120.74
93	-133.76	133.76	-120.74	93.991
94	-119.04	119.04	-93.991	70.183
95	-103.32	103.32	-70.183	49.519
96	-86.609	86.609	-49.519	32.197
97	-68.968	68.968	-32.197	18.404
98	-50.421	50.421	-18.404	8.3194
99	-30.973	30.973	-8.3194	2.1248
100	-10.624	10.624	-2.1248	-1.92202E-12

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.4446E+07 RIMNOR=0.8496E+08
 RENORM=0.3021E-04 REMNOR=0.3620E-16 RATIO =0.2607E-05 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 237.3 RMMAX = 1231.
 RTSMAL=0.1000E-02 RMSMAL=0.1000E-01
 RDT =0.4446E+07 RDR =0.8496E+08
 RATIOT=0.2607E-05 RATIOR= 0.000
 MAX UN=0.2992E-02 IEQ= 171 NODE 86 DOF 1 Y-DISPL.F
 MIN UN=-.2463E-07 IEQ= 43 NODE 22 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.4446E+07 RIMNOR=0.8496E+08
 RENORM=0.6816E-06 REMNOR=0.3970E-16 RATIO =0.3915E-06 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 237.3 RMMAX = 1231.
 RTSMAL=0.1000E-02 RMSMAL=0.1000E-01
 RDT =0.4446E+07 RDR =0.8496E+08
 RATIOT=0.3915E-06 RATIOR= 0.000
 MAX UN=0.2694E-03 IEQ= 151 NODE 76 DOF 1 Y-DISPL.F
 MIN UN=-.3122E-05 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.4446E+07 RIMNOR=0.8496E+08
 RENORM=0.9048E-07 REMNOR=0.1896E-16 RATIO =0.1427E-06 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 237.3 RMMAX = 1231.
 RTSMAL=0.1000E-02 RMSMAL=0.1000E-01
 RDT =0.4446E+07 RDR =0.8496E+08
 RATIOT=0.1427E-06 RATIOR= 0.000
 MAX UN=0.1467E-03 IEQ= 93 NODE 47 DOF 1 Y-DISPL.F
 MIN UN=-.3043E-07 IEQ= 17 NODE 9 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	553 di 731



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	554 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|          ParatiePlus
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|          Exe Time :17 November 2022  18:38:04
|
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New Project
 SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 4 (AT TIME 4.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	0.1010419	-8.0919402E-03
2	9.9423547E-02	-8.0919402E-03
3	9.7805159E-02	-8.0919365E-03
4	9.6186773E-02	-8.0919182E-03
5	9.4568394E-02	-8.0918670E-03
6	9.2950030E-02	-8.0917572E-03
7	9.1331697E-02	-8.0915560E-03
8	8.9713417E-02	-8.0912230E-03
9	8.8095220E-02	-8.0907107E-03
10	8.6477148E-02	-8.0899642E-03
11	8.4859254E-02	-8.0889213E-03
12	8.3241604E-02	-8.0875125E-03
13	8.1624278E-02	-8.0856609E-03
14	8.0007375E-02	-8.0832824E-03
15	7.8391007E-02	-8.0802855E-03
16	7.6775308E-02	-8.0765713E-03
17	7.5160425E-02	-8.0720338E-03
18	7.3546549E-02	-8.0665596E-03
19	7.1933872E-02	-8.0600279E-03
20	7.0322617E-02	-8.0523106E-03
21	6.8713043E-02	-8.0432723E-03
22	6.7105414E-02	-8.0327704E-03
23	6.5500043E-02	-8.0206547E-03
24	6.3897270E-02	-8.0067680E-03
25	6.2297465E-02	-7.9909455E-03
26	6.0701032E-02	-7.9730153E-03
27	5.9108419E-02	-7.9527983E-03
28	5.7520086E-02	-7.9301075E-03
29	5.5936554E-02	-7.9047492E-03
30	5.4358377E-02	-7.8765220E-03
31	5.2786150E-02	-7.8452175E-03
32	5.1220520E-02	-7.8105895E-03
33	4.9662163E-02	-7.7723512E-03
34	4.8111840E-02	-7.7302040E-03
35	4.6570363E-02	-7.6838371E-03
36	4.5038608E-02	-7.6329271E-03
37	4.3517525E-02	-7.5771386E-03
38	4.2008108E-02	-7.5161235E-03
39	4.0511448E-02	-7.4495218E-03
40	3.9028697E-02	-7.3769611E-03
41	3.7561086E-02	-7.2980568E-03
42	3.6109924E-02	-7.2124119E-03
43	3.4676590E-02	-7.1197312E-03
44	3.3262511E-02	-7.0198535E-03
45	3.1869143E-02	-6.9126721E-03
46	3.0497940E-02	-6.7981320E-03
47	2.9150381E-02	-6.6762334E-03
48	2.7827933E-02	-6.5470297E-03
49	2.6532049E-02	-6.4106276E-03
50	2.5264158E-02	-6.2671881E-03
51	2.4025635E-02	-6.1169239E-03
52	2.2817796E-02	-5.9600989E-03
53	2.1642035E-02	-5.7971063E-03
54	2.0499392E-02	-5.6284093E-03
55	1.9391015E-02	-5.4545477E-03
56	1.8317879E-02	-5.2761014E-03
57	1.7280838E-02	-5.0936982E-03
58	1.6280618E-02	-4.9080146E-03
59	1.5317803E-02	-4.7197747E-03
60	1.4392827E-02	-4.5297511E-03
61	1.3505967E-02	-4.3387645E-03



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	555 di 731

62	1.2657328E-02	-4.1476819E-03
63	1.1846844E-02	-3.9573570E-03
64	1.1074282E-02	-3.7685740E-03
65	1.0339263E-02	-3.5820509E-03
66	9.6412678E-03	-3.3984421E-03
67	8.9796525E-03	-3.2183422E-03
68	8.3536612E-03	-3.0422883E-03
69	7.7624353E-03	-2.8707634E-03
70	7.2050251E-03	-2.7041994E-03
71	6.6803993E-03	-2.5429792E-03
72	6.1874547E-03	-2.3874403E-03
73	5.7250248E-03	-2.2378769E-03
74	5.2918886E-03	-2.0945429E-03
75	4.8867780E-03	-1.9576536E-03
76	4.5083855E-03	-1.8273890E-03
77	4.1553710E-03	-1.7038953E-03
78	3.8263683E-03	-1.5872875E-03
79	3.5199912E-03	-1.4776511E-03
80	3.2348392E-03	-1.3750441E-03
81	2.9695033E-03	-1.2794912E-03
82	2.7225733E-03	-1.1909799E-03
83	2.4926451E-03	-1.1094626E-03
84	2.2783274E-03	-1.0348590E-03
85	2.0782480E-03	-9.6705817E-04
86	1.8910599E-03	-9.0592074E-04
87	1.7154465E-03	-8.5128051E-04
88	1.5501275E-03	-8.0294217E-04
89	1.3938649E-03	-7.6067455E-04
90	1.2454637E-03	-7.2420628E-04
91	1.1038085E-03	-6.9323444E-04
92	9.6782645E-04	-6.6741515E-04
93	8.3652403E-04	-6.4637240E-04
94	7.0898633E-04	-6.2969713E-04
95	5.8438343E-04	-6.1694810E-04
96	4.6197685E-04	-6.0765256E-04
97	3.4112575E-04	-6.0130683E-04
98	2.2129304E-04	-5.9737738E-04
99	1.0205118E-04	-5.9530218E-04
100	-1.6912112E-05	-5.9449112E-04
101	-1.3578834E-04	-5.9432612E-04

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	557 di 731
18 D	4.005	-7.3547E-02	64.60	20.03	64.60	25.84	UL-RL	5311.	-3.400	0.000	1.000
1.000	20.03	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	4.241	-7.1934E-02	68.40	21.20	68.40	27.36	UL-RL	5311.	-3.600	0.000	1.000
1.000	21.20	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	4.476	-7.0323E-02	72.20	22.38	72.20	28.88	UL-RL	5311.	-3.800	0.000	1.000
1.000	22.38	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	4.712	-6.8713E-02	76.00	23.56	76.00	30.40	UL-RL	5311.	-4.000	0.000	1.000
1.000	23.56	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	4.948	-6.7105E-02	79.80	24.74	79.80	31.92	UL-RL	5311.	-4.200	0.000	1.000
1.000	24.74	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	5.183	-6.5500E-02	83.60	25.92	83.60	33.44	UL-RL	5311.	-4.400	0.000	1.000
1.000	25.92	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	5.419	-6.3897E-02	87.40	27.09	87.40	34.96	UL-RL	5311.	-4.600	0.000	1.000
1.000	27.09	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	5.654	-6.2297E-02	91.20	28.27	91.20	36.48	UL-RL	5311.	-4.800	0.000	1.000
1.000	28.27	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	5.890	-6.0701E-02	95.00	29.45	95.00	38.00	UL-RL	5311.	-5.000	0.000	1.000
1.000	29.45	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	6.126	-5.9108E-02	98.80	30.63	98.80	39.52	UL-RL	5311.	-5.200	0.000	1.000
1.000	30.63	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	6.361	-5.7520E-02	102.6	31.81	102.6	41.04	UL-RL	5311.	-5.400	0.000	1.000
1.000	31.81	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	6.597	-5.5937E-02	106.4	32.98	106.4	42.56	UL-RL	5311.	-5.600	0.000	1.000
1.000	32.98	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	6.832	-5.4358E-02	110.2	34.16	110.2	44.08	UL-RL	5311.	-5.800	0.000	1.000
1.000	34.16	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	9.024	-5.2786E-02	114.1	45.12	114.1	64.12	UL-RL	1.9759E+04	-6.000	0.000	1.000
1.000	45.12	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
32 D	9.419	-5.1221E-02	118.1	47.10	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	47.10	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
33 D	9.814	-4.9662E-02	122.1	49.07	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	49.07	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
34 D	10.21	-4.8112E-02	126.1	51.05	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	51.05	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
35 D	10.60	-4.6570E-02	130.1	53.02	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	53.02	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
36 D	11.00	-4.5039E-02	134.1	55.00	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	55.00	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
37 D	11.40	-4.3518E-02	138.1	56.98	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	56.98	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
38 D	11.79	-4.2008E-02	142.1	58.95	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	58.95	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
39 D	12.19	-4.0511E-02	146.1	60.93	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	60.93	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
40 D	12.58	-3.9029E-02	150.1	62.90	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	62.90	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
41 D	12.98	-3.7561E-02	154.1	64.88	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	64.88	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
42 D	13.37	-3.6110E-02	158.1	66.86	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	66.86	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
43 D	13.77	-3.4677E-02	162.1	68.83	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	68.83	0.000	0.000	8.000	8.000						
0.0000	0.0000	0.0000									
44 D	14.16	-3.3263E-02	166.1	70.81	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	558 di 731

1.000	70.81	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000	0.0000								
45 D	14.56	-3.1869E-02	170.1	72.78	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	72.78	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
46 D	14.95	-3.0498E-02	174.1	74.76	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	74.76	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
47 D	15.35	-2.9150E-02	178.1	76.74	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	76.74	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
48 D	15.74	-2.7828E-02	182.1	78.71	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	78.71	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
49 D	16.14	-2.6532E-02	186.1	80.69	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	80.69	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
50 D	16.53	-2.5264E-02	190.1	82.66	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	82.66	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
51 D	16.93	-2.4026E-02	194.1	84.64	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	84.64	0.000	0.000	8.000	8.000	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
52 D	16.60	-2.2818E-02	198.2	82.98	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	82.98	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
53 D	17.04	-2.1642E-02	202.3	85.19	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	85.19	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
54 D	17.48	-2.0499E-02	206.4	87.39	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	87.39	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
55 D	17.92	-1.9391E-02	210.5	89.59	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	89.59	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
56 D	18.36	-1.8318E-02	214.6	91.79	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	91.79	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
57 D	18.80	-1.7281E-02	218.7	93.99	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	93.99	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
58 D	19.24	-1.6281E-02	222.8	96.19	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	96.19	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
59 D	19.68	-1.5318E-02	226.9	98.40	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	98.40	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
60 D	20.12	-1.4393E-02	231.0	100.6	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	100.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
61 D	20.56	-1.3506E-02	235.1	102.8	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	102.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
62 D	21.00	-1.2657E-02	239.2	105.0	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	105.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
63 D	21.44	-1.1847E-02	243.3	107.2	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	107.2	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
64 D	21.88	-1.1074E-02	247.4	109.4	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	109.4	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
65 D	22.32	-1.0339E-02	251.5	111.6	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	111.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
66 D	22.76	-9.6413E-03	255.6	113.8	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	113.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
67 D	23.20	-8.9797E-03	259.7	116.0	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	116.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
68 D	23.64	-8.3537E-03	263.8	118.2	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	118.2	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
69 D	24.08	-7.7624E-03	267.9	120.4	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	120.4	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000								
70 D	24.52	-7.2050E-03	272.0	122.6	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	122.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 561 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:04                                               |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000		not available	--	--	--	1.000
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	563 di 731
58 D	43.33	1.6281E-02	68.70	216.7	222.8	216.7	PASSIVE	0.000	-11.40	0.000	1.000
1.000	216.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	45.32	1.5318E-02	72.80	226.6	226.9	226.6	PASSIVE	0.000	-11.60	0.000	1.000
1.000	226.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	47.32	1.4393E-02	76.90	236.6	231.0	236.6	PASSIVE	0.000	-11.80	0.000	1.000
1.000	236.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	49.19	1.3506E-02	81.00	245.9	235.1	245.9	V-C	1.3225E+04	-12.00	0.000	1.000
1.000	245.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	47.34	1.2657E-02	85.10	236.7	239.2	236.7	V-C	1.3225E+04	-12.20	0.000	1.000
1.000	236.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	45.59	1.1847E-02	89.20	228.0	243.3	228.0	V-C	1.3225E+04	-12.40	0.000	1.000
1.000	228.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	43.95	1.1074E-02	93.30	219.7	247.4	219.7	V-C	1.3225E+04	-12.60	0.000	1.000
1.000	219.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	42.40	1.0339E-02	97.40	212.0	251.5	212.0	V-C	1.3225E+04	-12.80	0.000	1.000
1.000	212.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	40.95	9.6413E-03	101.5	204.8	255.6	204.8	V-C	1.3225E+04	-13.00	0.000	1.000
1.000	204.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	39.60	8.9797E-03	105.6	198.0	259.7	198.0	V-C	1.3225E+04	-13.20	0.000	1.000
1.000	198.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	38.34	8.3537E-03	109.7	191.7	263.8	191.7	V-C	1.3225E+04	-13.40	0.000	1.000
1.000	191.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	37.18	7.7624E-03	113.8	185.9	267.9	185.9	V-C	1.3225E+04	-13.60	0.000	1.000
1.000	185.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	36.10	7.2050E-03	117.9	180.5	272.0	180.5	V-C	1.3225E+04	-13.80	0.000	1.000
1.000	180.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	35.11	6.6804E-03	122.0	175.5	276.1	175.5	V-C	1.3225E+04	-14.00	0.000	1.000
1.000	175.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	34.20	6.1875E-03	126.1	171.0	280.2	171.0	V-C	1.3225E+04	-14.20	0.000	1.000
1.000	171.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	33.38	5.7250E-03	130.2	166.9	284.3	166.9	V-C	1.3225E+04	-14.40	0.000	1.000
1.000	166.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	32.63	5.2919E-03	134.3	163.1	288.4	163.1	V-C	1.3225E+04	-14.60	0.000	1.000
1.000	163.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	31.96	4.8868E-03	138.4	159.8	292.5	159.8	V-C	1.3225E+04	-14.80	0.000	1.000
1.000	159.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	31.35	4.5084E-03	142.5	156.8	296.6	156.8	V-C	1.3225E+04	-15.00	0.000	1.000
1.000	156.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	30.82	4.1554E-03	146.6	154.1	300.7	154.1	V-C	1.3225E+04	-15.20	0.000	1.000
1.000	154.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	30.34	3.8264E-03	150.7	151.7	304.8	151.7	UL-RL	2.1161E+04	-15.40	0.000	1.000
1.000	151.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	29.91	3.5200E-03	154.8	149.6	308.9	149.8	UL-RL	2.1161E+04	-15.60	0.000	1.000
1.000	149.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	29.10	3.2348E-03	158.9	145.5	313.0	151.8	UL-RL	2.1161E+04	-15.80	0.000	1.000
1.000	145.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	28.38	2.9695E-03	163.0	141.9	317.1	153.8	UL-RL	2.1161E+04	-16.00	0.000	1.000
1.000	141.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	27.73	2.7226E-03	167.1	138.7	321.2	155.8	UL-RL	2.1161E+04	-16.20	0.000	1.000
1.000	138.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	27.16	2.4926E-03	171.2	135.8	325.3	157.8	UL-RL	2.1161E+04	-16.40	0.000	1.000
1.000	135.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	26.65	2.2783E-03	175.3	133.2	329.4	159.8	UL-RL	2.1161E+04	-16.60	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	564 di 731

1.000	133.2	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	26.20	2.0782E-03	179.4	131.0	333.5	161.7	UL-RL 2.1161E+04	-16.80	0.000	1.000
1.000	131.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	25.80	1.8911E-03	183.5	129.0	337.6	163.7	UL-RL 2.1161E+04	-17.00	0.000	1.000
1.000	129.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	25.46	1.7154E-03	187.6	127.3	341.7	165.7	UL-RL 2.1161E+04	-17.20	0.000	1.000
1.000	127.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	25.16	1.5501E-03	191.7	125.8	345.8	167.7	UL-RL 2.1161E+04	-17.40	0.000	1.000
1.000	125.8	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	24.89	1.3939E-03	195.8	124.5	349.9	169.7	UL-RL 2.1161E+04	-17.60	0.000	1.000
1.000	124.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	24.66	1.2455E-03	199.9	123.3	354.0	171.7	UL-RL 2.1161E+04	-17.80	0.000	1.000
1.000	123.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.46	1.1038E-03	204.0	122.3	358.1	173.7	UL-RL 2.1161E+04	-18.00	0.000	1.000
1.000	122.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.28	9.6783E-04	208.1	121.4	362.2	175.7	UL-RL 2.1161E+04	-18.20	0.000	1.000
1.000	121.4	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.12	8.3652E-04	212.2	120.6	366.3	177.7	UL-RL 2.1161E+04	-18.40	0.000	1.000
1.000	120.6	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	23.98	7.0899E-04	216.3	119.9	370.4	179.6	UL-RL 2.1161E+04	-18.60	0.000	1.000
1.000	119.9	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	23.85	5.8438E-04	220.4	119.3	374.5	181.6	UL-RL 2.1161E+04	-18.80	0.000	1.000
1.000	119.3	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	23.73	4.6198E-04	224.5	118.7	378.6	183.6	UL-RL 2.1161E+04	-19.00	0.000	1.000
1.000	118.7	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	23.62	3.4113E-04	228.6	118.1	382.7	185.6	UL-RL 2.1161E+04	-19.20	0.000	1.000
1.000	118.1	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	23.51	2.2129E-04	232.7	117.5	386.8	187.6	UL-RL 2.1161E+04	-19.40	0.000	1.000
1.000	117.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	23.40	1.0205E-04	236.8	117.0	390.9	189.6	UL-RL 2.1161E+04	-19.60	0.000	1.000
1.000	117.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	23.30	-1.6912E-05	240.9	116.5	395.0	191.6	UL-RL 2.1161E+04	-19.80	0.000	1.000
1.000	116.5	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	11.60	-1.3579E-04	245.0	116.0	399.1	193.6	UL-RL 2.1161E+04	-20.00	0.000	1.000
1.000	116.0	0.000	0.000	16.00	16.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 565 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:04          |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	4.85654E-11	-4.85654E-11	2.52747E-12	-4.88955E-10
2	0.23562	-0.23562	1.90399E-10	4.71237E-02
3	0.70684	-0.70684	-4.71237E-02	0.18849
4	1.4137	-1.4137	-0.18849	0.47122
5	2.3561	-2.3561	-0.47122	0.94244
6	3.5341	-3.5341	-0.94244	1.6493
7	4.9477	-4.9477	-1.6493	2.6388
8	6.5969	-6.5969	-2.6388	3.9582
9	8.4817	-8.4817	-3.9582	5.6545
10	10.602	-10.602	-5.6545	7.7750
11	12.958	-12.958	-7.7750	10.367
12	15.550	-15.550	-10.367	13.477
13	18.377	-18.377	-13.477	17.152
14	21.440	-21.440	-17.152	21.440
15	24.738	-24.738	-21.440	26.388
16	28.272	-28.272	-26.388	32.042
17	32.042	-32.042	-32.042	38.450
18	36.047	-36.047	-38.450	45.660
19	40.288	-40.288	-45.660	53.717
20	44.764	-44.764	-53.717	62.670
21	49.476	-49.476	-62.670	72.565
22	54.424	-54.424	-72.565	83.450
23	59.607	-59.607	-83.450	95.372
24	65.026	-65.026	-95.372	108.38
25	70.680	-70.680	-108.38	122.51
26	76.570	-76.570	-122.51	137.83
27	82.696	-82.696	-137.83	154.37
28	89.057	-89.057	-154.37	172.18
29	95.654	-95.654	-172.18	191.31
30	102.49	-102.49	-191.31	211.81
31	111.51	-111.51	-211.81	234.11
32	120.93	-120.93	-234.11	258.29
33	130.74	-130.74	-258.29	284.44
34	140.95	-140.95	-284.44	312.63
35	151.56	-151.56	-312.63	342.94
36	162.56	-162.56	-342.94	375.46
37	173.95	-173.95	-375.46	410.25
38	185.74	-185.74	-410.25	447.40
39	197.93	-197.93	-447.40	486.98
40	210.51	-210.51	-486.98	529.08
41	223.49	-223.49	-529.08	573.78
42	229.53	-229.53	-573.78	619.69
43	233.85	-233.85	-619.69	666.46
44	236.44	-236.44	-666.46	713.74
45	237.32	-237.32	-713.74	761.21
46	236.46	-236.46	-761.21	808.50
47	233.89	-233.89	-808.50	855.28
48	229.59	-229.59	-855.28	901.20
49	223.56	-223.56	-901.20	945.91
50	215.81	-215.81	-945.91	989.07
51	206.34	-206.34	-989.07	1030.3
52	191.55	-191.55	-1030.3	1068.6
53	175.21	-175.21	-1068.6	1103.7
54	157.32	-157.32	-1103.7	1135.2
55	137.88	-137.88	-1135.2	1162.7
56	116.88	-116.88	-1162.7	1186.1
57	94.339	-94.339	-1186.1	1205.0

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	566 di 731

58	70.245	-70.245	-1205.0	1219.0
59	44.600	-44.600	-1219.0	1227.9
60	17.404	-17.404	-1227.9	1231.4
61	-11.223	11.223	-1231.4	1229.2
62	-37.563	37.563	-1229.2	1221.7
63	-61.716	61.716	-1221.7	1209.3
64	-83.783	83.783	-1209.3	1192.6
65	-103.86	103.86	-1192.6	1171.8
66	-122.05	122.05	-1171.8	1147.4
67	-138.45	138.45	-1147.4	1119.7
68	-153.15	153.15	-1119.7	1089.1
69	-166.25	166.25	-1089.1	1055.8
70	-177.82	177.82	-1055.8	1020.2
71	-187.97	187.97	-1020.2	982.65
72	-196.77	196.77	-982.65	943.30
73	-204.30	204.30	-943.30	902.44
74	-210.65	210.65	-902.44	860.31
75	-215.88	215.88	-860.31	817.13
76	-220.07	220.07	-817.13	773.12
77	-223.28	223.28	-773.12	728.46
78	-225.58	225.58	-728.46	683.34
79	-227.01	227.01	-683.34	637.94
80	-227.18	227.18	-637.94	592.51
81	-226.19	226.19	-592.51	547.27
82	-224.12	224.12	-547.27	502.44
83	-221.02	221.02	-502.44	458.24
84	-216.98	216.98	-458.24	414.84
85	-212.05	212.05	-414.84	372.43
86	-206.28	206.28	-372.43	331.18
87	-199.47	199.47	-331.18	291.28
88	-191.40	191.40	-291.28	253.00
89	-182.11	182.11	-253.00	216.58
90	-171.66	171.66	-216.58	182.25
91	-160.09	160.09	-182.25	150.23
92	-147.45	147.45	-150.23	120.74
93	-133.76	133.76	-120.74	93.990
94	-119.04	119.04	-93.990	70.182
95	-103.32	103.32	-70.182	49.518
96	-86.607	86.607	-49.518	32.197
97	-68.967	68.967	-32.197	18.403
98	-50.421	50.421	-18.403	8.3193
99	-30.972	30.972	-8.3193	2.1248
100	-10.624	10.624	-2.1248	-2.62401E-13



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	567 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                               |
|                                                                                               Exe Time :17 November 2022 18:38:04                                                                                               |
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F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	2
3	CONVERGENCE :YES	7
4	CONVERGENCE :YES	2

END OF PROCESS FOR PROBLEM
New Project
NONLINEAR SOLUTION CPU TIME 0.07 [sec]
DATABASE CREATION CPU TIME..... 0.37 [sec]



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	568 di 731

9.9. Design Assumption : NTC2018: SISMICA STR - File di Paratie - File di input (.d)

```
* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: SISMICA STR
* Time:giovedì 17 novembre 2022 18:38:05
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control contact lagrange

option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_910 0 -20 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_910 -20 0 1 0
SOIL 0_R LeftWall_910 -20 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Arenariepococementate_2_12_L_0)
*
LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
ATREST 0.4 0.5 0
WEIGHT 19 9 10
PERMEABILITY 5E-05
RESISTANCE 0 37 0 0 0
TZDATA LINEAR 10000 0 25 0.5 0
KSCALE 0 0
YOUNG 20000 32000
ENDL
*
* Soil Profile (Argillamarnosal_1057_1068_L_0)
*
LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
ATREST 0.562 0.5 1
WEIGHT 20 10 10
PERMEABILITY 1E-05
RESISTANCE 10 26 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 90000 1.44E+05
ENDL
*
* Soil Profile (Argillamarnosal_1061_1069_L_0)
*
LDATA Argillamarnosal_1061_1069_L_0 -10 LeftWall_910
ATREST 0.485 0 1
WEIGHT 20.5 10.5 10
PERMEABILITY 5E-05
RESISTANCE 20 24 0 0 0
TZDATA LINEAR 0 0 0 0.5 0
KSCALE 0 0
YOUNG 1E+05 1.6E+05
ENDL

* 5: Defining structural materials
* Steel material: 988 Name=Fe360 E=206000200 kPa
MATERIAL Fe360_988 2.06E+08
* Concrete material: 984 Name=C25/30 E=31475800 kPa
MATERIAL C2530_984 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
** rev 2021 and later
BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0

* 6.2: Supports
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LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	569 di 731

* 6.3: Strips

* 7: Defining Steps

```
STEP Stage0_3964977
CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP

STEP Stage1_909
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ADD WallElement_911
ENDSTEP

STEP Stage2_1078
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP

STEP Stage3_3941534
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
CHANGE Arenariepococementate_2_12_L_0 U-KAED=0.35322 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KAEW=0.53946 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KPED=10.991 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KPEW=10.24 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KAED=0.27146 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KAEW=0.4044 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KPED=5.696 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KPEW=4.8732 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KAED=0.59404 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KAEW=1.1988 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KPED=4.7791 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KPEW=4.4184 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KAED=0.41648 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KAEW=0.58754 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KPED=2.7982 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KPEW=2.2962 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KAED=0.66041 LeftWall_910
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	570 di 731

```
CHANGE Argillamarnosa_1061_1069_L_0 U-KAEW=1.1977 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KPED=4.1808 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KPEW=3.8704 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KAED=0.44995 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KAEW=0.62658 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KPED=2.4924 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KPEW=2.0341 LeftWall_910
EQK USER 0.1407 0.07035 -0.07035 11.31 0.667 0 0.5 0 0
* Defining seismic surcharge pressures on wall LeftWall_910
*   min elevation = -20
*   max elevation = 0
*   average gamma = 19,955
*   kh = 0,1407
*   deltaQ = 421,150275
DLOAD step LeftWall_910 -20 42.115 0 0
* Include pressure contribution from wall: LeftWall_910
* Include wall contribution
DLOAD step LeftWall_910 -20 2.3022 0 2.3022
ENDSTEP
```

9.10. Design Assumption : NTC2018: SISMICA STR - File di Paratie - File di output (.out)

```
-----+-----
| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                       |
|                               ParatiePlus                                             |
|                               Exe Time :17 November 2022  18:38:05                    |
|-----+-----
```

```
*****
*                                                                 *
*  PARATIE PLUS Non-Linear Spring Engine                                             *
*                                                                 *
*      AN ELASTOPLASTIC FINITE ELEMENT PROGRAM                                     *
*      FOR FLEXIBLE EARTH-RETAINING STRUCTURES                                       *
*                                                                 *
*                                                                 *
*****
*  RELEASE  2022.0.0  *Build date:Jan 24, 2022*                                     *
*                                                                 *
*  HARPACEAS S.R.L.                                                                 *
*      M I L A N O  (ITALY)                                                           *
*****
```

```
JOB : ParatiePlus
STARTING
ACCEPTED <<FILE,GENW >>
ACCEPTED <<FILE,PLOTTER,BINARY >>
ACCEPTED <<SOLVE TOTAL_STRESS >>
ACCEPTED <<PARAM ITEMAX 40 >>
ACCEPTED <<CONTROL CONTACT LAGRANGE >>
ACCEPTED <<CONTROL HINGES 0 0.0001 0.001 >>
```

```
*****
*                                                                 *
*  WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED                               *
*  BY THE PROGRAM.                                                                 *
*                                                                 *
*****
```

PRELIMINARY OPERATIONS CPU TIME 0.00 [sec]



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	571 di 731

```
-----+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                    |
|                               ParatiePlus                               |
|                               Exe Time :17 November 2022 18:38:05     |
|                                                                    |
+-----+-----+
```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

```
NO. OF NODAL POINTS (NUMNP) ..... 101
NO. OF COORDINATES (NCOORD)..... 2
NO. OF NODE DOFS (NDOF)..... 2
NO. OF EQUATIONS (NEQ)..... 202
NO. OF CONSTRAINTS CARDS (NVINC)..... 0
NO. OF ELEMENT GROUPS (NEG)..... 3
NO. OF SOLUTION STEPS (NSTE)..... 4
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES ... 0
NO. OF RECORD FROM WALGEN ..... 121
NO. OF LONG NAMES (LASTNAME) ..... 17
LENGTH UNIT CHOICE ..... 3 (M )
FORCE UNIT CHOICE ..... 3 (KN )
MAX PORE PRESSURE TABLE LENGTH..... 1
MAX INELASTIC DISPL. TABLE LENGTH..... 0
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF . 0
```

IDOFA (01) = 2 Y-DISPL.F
IDOFA (02) = 4 X-ROT. F

RELEVANT ITEMS UNITS

```
STRESSES                kPa
Y-DISPLACEMENTS        m
ROTATIONS               RADIANS
BEAM AND SLAB MOMENTS   kN*m/m
BEAM SHEAR FORCES       kN/m
ANCHOR FORCES           kN/m
AXIAL FORCES IN TRUSSES kN/m
AXIAL FORCES SPRINGS    kN/m
Y-REACTIONS             kN/m
X-MOMENT REACTIONS      kN*m/m
ETC.
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	572 di 731

| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
| |
| ParatiePlus |
| Exe Time :17 November 2022 18:38:05 |

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 121

1 : UNIT m kN
2 : TITLE New Project
3 : DELTA 0.2
4 : option param itemax 40
5 : option control contact lagrange
6 : option control hinges 0 0.0001 0.001
7 : WALL LeftWall_910 0 -20 0 1
8 : SOIL 0_L LeftWall_910 -20 0 1 0
9 : SOIL 0_R LeftWall_910 -20 0 2 180
10 : LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
11 : ATREST 0.4 0.5 0
12 : WEIGHT 19 9 10
13 : PERMEABILITY 5E-05
14 : RESISTANCE 0 37 0 0 0
15 : TZDATA LINEAR 10000 0 25 0.5 0
16 : KSCALE 0 0
17 : YOUNG 20000 32000
18 : ENDL
19 : LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
20 : ATREST 0.562 0.5 1
21 : WEIGHT 20 10 10
22 : PERMEABILITY 1E-05
23 : RESISTANCE 10 26 0 0 0
24 : TZDATA LINEAR 0 0 0 0.5 0
25 : KSCALE 0 0
26 : YOUNG 90000 1.44E+05
27 : ENDL
28 : LDATA Argillamarnosa_1061_1069_L_0 -10 LeftWall_910
29 : ATREST 0.485 0 1
30 : WEIGHT 20.5 10.5 10
31 : PERMEABILITY 5E-05
32 : RESISTANCE 20 24 0 0 0
33 : TZDATA LINEAR 0 0 0 0.5 0
34 : KSCALE 0 0
35 : YOUNG 1E+05 1.6E+05
36 : ENDL
37 : MATERIAL Fe360_988 2.06E+08
38 : MATERIAL C2530_984 3.1476E+07
39 : BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0
40 : STEP Stage0_3964977
41 : CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
42 : CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
43 : CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
44 : CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
45 : CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
46 : CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
47 : CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
48 : CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
49 : CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
50 : CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
51 : CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
52 : CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
53 : CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
54 : CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
55 : CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
56 : CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
57 : CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
58 : CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
59 : CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
60 : CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
61 : CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
62 : CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
63 : CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
64 : CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
65 : CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
66 : CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	573 di 731

67 : CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
68 : CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
69 : CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
70 : CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
71 : SETWALL LeftWall_910
72 : GEOM 0 0
73 : SURCHARGE 0 0 0 0
74 : WATER -40 0 -20 0 0
75 : ENDSTEP
76 : STEP Stage1_909
77 : SETWALL LeftWall_910
78 : GEOM 0 0
79 : SURCHARGE 0 0 0 0
80 : WATER -40 0 -20 0 0
81 : ADD WallElement_911
82 : ENDSTEP
83 : STEP Stage2_1078
84 : SETWALL LeftWall_910
85 : GEOM 0 -8
86 : SURCHARGE 0 0 0 0
87 : WATER -40 0 -20 0 0
88 : ENDSTEP
89 : STEP Stage3_3941534
90 : SETWALL LeftWall_910
91 : GEOM 0 -8
92 : SURCHARGE 0 0 0 0
93 : WATER -40 0 -20 0 0
94 : CHANGE Arenariepococementate_2_12_L_0 U-KAED=0.35322 LeftWall_910
95 : CHANGE Arenariepococementate_2_12_L_0 U-KAEW=0.53946 LeftWall_910
96 : CHANGE Arenariepococementate_2_12_L_0 U-KPED=10.991 LeftWall_910
97 : CHANGE Arenariepococementate_2_12_L_0 U-KPEW=10.24 LeftWall_910
98 : CHANGE Arenariepococementate_2_12_L_0 D-KAED=0.27146 LeftWall_910
99 : CHANGE Arenariepococementate_2_12_L_0 D-KAEW=0.4044 LeftWall_910
100 : CHANGE Arenariepococementate_2_12_L_0 D-KPED=5.696 LeftWall_910
101 : CHANGE Arenariepococementate_2_12_L_0 D-KPEW=4.8732 LeftWall_910
102 : CHANGE Argillamarnosal_1057_1068_L_0 U-KAED=0.59404 LeftWall_910
103 : CHANGE Argillamarnosal_1057_1068_L_0 U-KAEW=1.1988 LeftWall_910
104 : CHANGE Argillamarnosal_1057_1068_L_0 U-KPED=4.7791 LeftWall_910
105 : CHANGE Argillamarnosal_1057_1068_L_0 U-KPEW=4.4184 LeftWall_910
106 : CHANGE Argillamarnosal_1057_1068_L_0 D-KAED=0.41648 LeftWall_910
107 : CHANGE Argillamarnosal_1057_1068_L_0 D-KAEW=0.58754 LeftWall_910
108 : CHANGE Argillamarnosal_1057_1068_L_0 D-KPED=2.7982 LeftWall_910
109 : CHANGE Argillamarnosal_1057_1068_L_0 D-KPEW=2.2962 LeftWall_910
110 : CHANGE Argillamarnosa_1061_1069_L_0 U-KAED=0.66041 LeftWall_910
111 : CHANGE Argillamarnosa_1061_1069_L_0 U-KAEW=1.1977 LeftWall_910
112 : CHANGE Argillamarnosa_1061_1069_L_0 U-KPED=4.1808 LeftWall_910
113 : CHANGE Argillamarnosa_1061_1069_L_0 U-KPEW=3.8704 LeftWall_910
114 : CHANGE Argillamarnosa_1061_1069_L_0 D-KAED=0.44995 LeftWall_910
115 : CHANGE Argillamarnosa_1061_1069_L_0 D-KAEW=0.62658 LeftWall_910
116 : CHANGE Argillamarnosa_1061_1069_L_0 D-KPED=2.4924 LeftWall_910
117 : CHANGE Argillamarnosa_1061_1069_L_0 D-KPEW=2.0341 LeftWall_910
118 : EQK USER 0.1407 0.07035 -0.07035 11.31 0.667 0 0.5 0 0
119 : DLOAD step LeftWall_910 -20 42.115 0 0
120 : DLOAD step LeftWall_910 -20 2.3022 0 2.3022
121 : ENDSTEP



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 575 di 731
------------------	-------------	-----------	----------------	----------------------	----------	----------------------

```

-----+-----
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*  |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|          ParatiePlus  |
|          Exe Time :17 November 2022  18:38:05  |
|                                                                                               |
-----+-----

```

ELEMENT GROUP NO. 1

```

0_L
 5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....

```

element group behaviour throughout stage analysis

```

stage  status
-----
 1  active
 2  active
 3  active
 4  active

```

```

material set no.  1

prop( 1) angle          0.00000
prop( 2) layer as foreseen  1.00000

```

```

material set no.  2

prop( 1) angle          0.00000
prop( 2) layer as foreseen  2.00000

```

```

material set no.  3

prop( 1) angle          0.00000
prop( 2) layer as foreseen  3.00000

```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	1	0.2000	0.000	0.000	0.000	1.000
16	16	1	0.2000	0.000	0.000	0.000	1.000
17	17	1	0.2000	0.000	0.000	0.000	1.000
18	18	1	0.2000	0.000	0.000	0.000	1.000
19	19	1	0.2000	0.000	0.000	0.000	1.000
20	20	1	0.2000	0.000	0.000	0.000	1.000
21	21	1	0.2000	0.000	0.000	0.000	1.000
22	22	1	0.2000	0.000	0.000	0.000	1.000
23	23	1	0.2000	0.000	0.000	0.000	1.000
24	24	1	0.2000	0.000	0.000	0.000	1.000
25	25	1	0.2000	0.000	0.000	0.000	1.000
26	26	1	0.2000	0.000	0.000	0.000	1.000
27	27	1	0.2000	0.000	0.000	0.000	1.000
28	28	1	0.2000	0.000	0.000	0.000	1.000
29	29	1	0.2000	0.000	0.000	0.000	1.000
30	30	1	0.2000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	576 di 731

31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	3	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.2000	0.000	0.000	0.000	1.000
62	62	3	0.2000	0.000	0.000	0.000	1.000
63	63	3	0.2000	0.000	0.000	0.000	1.000
64	64	3	0.2000	0.000	0.000	0.000	1.000
65	65	3	0.2000	0.000	0.000	0.000	1.000
66	66	3	0.2000	0.000	0.000	0.000	1.000
67	67	3	0.2000	0.000	0.000	0.000	1.000
68	68	3	0.2000	0.000	0.000	0.000	1.000
69	69	3	0.2000	0.000	0.000	0.000	1.000
70	70	3	0.2000	0.000	0.000	0.000	1.000
71	71	3	0.2000	0.000	0.000	0.000	1.000
72	72	3	0.2000	0.000	0.000	0.000	1.000
73	73	3	0.2000	0.000	0.000	0.000	1.000
74	74	3	0.2000	0.000	0.000	0.000	1.000
75	75	3	0.2000	0.000	0.000	0.000	1.000
76	76	3	0.2000	0.000	0.000	0.000	1.000
77	77	3	0.2000	0.000	0.000	0.000	1.000
78	78	3	0.2000	0.000	0.000	0.000	1.000
79	79	3	0.2000	0.000	0.000	0.000	1.000
80	80	3	0.2000	0.000	0.000	0.000	1.000
81	81	3	0.2000	0.000	0.000	0.000	1.000
82	82	3	0.2000	0.000	0.000	0.000	1.000
83	83	3	0.2000	0.000	0.000	0.000	1.000
84	84	3	0.2000	0.000	0.000	0.000	1.000
85	85	3	0.2000	0.000	0.000	0.000	1.000
86	86	3	0.2000	0.000	0.000	0.000	1.000
87	87	3	0.2000	0.000	0.000	0.000	1.000
88	88	3	0.2000	0.000	0.000	0.000	1.000
89	89	3	0.2000	0.000	0.000	0.000	1.000
90	90	3	0.2000	0.000	0.000	0.000	1.000
91	91	3	0.2000	0.000	0.000	0.000	1.000
92	92	3	0.2000	0.000	0.000	0.000	1.000
93	93	3	0.2000	0.000	0.000	0.000	1.000
94	94	3	0.2000	0.000	0.000	0.000	1.000
95	95	3	0.2000	0.000	0.000	0.000	1.000
96	96	3	0.2000	0.000	0.000	0.000	1.000
97	97	3	0.2000	0.000	0.000	0.000	1.000
98	98	3	0.2000	0.000	0.000	0.000	1.000
99	99	3	0.2000	0.000	0.000	0.000	1.000
100	100	3	0.2000	0.000	0.000	0.000	1.000
101	101	3	0.1000	0.000	0.000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	578 di 731

31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	3	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.2000	0.000	0.000	0.000	2.000
62	62	3	0.2000	0.000	0.000	0.000	2.000
63	63	3	0.2000	0.000	0.000	0.000	2.000
64	64	3	0.2000	0.000	0.000	0.000	2.000
65	65	3	0.2000	0.000	0.000	0.000	2.000
66	66	3	0.2000	0.000	0.000	0.000	2.000
67	67	3	0.2000	0.000	0.000	0.000	2.000
68	68	3	0.2000	0.000	0.000	0.000	2.000
69	69	3	0.2000	0.000	0.000	0.000	2.000
70	70	3	0.2000	0.000	0.000	0.000	2.000
71	71	3	0.2000	0.000	0.000	0.000	2.000
72	72	3	0.2000	0.000	0.000	0.000	2.000
73	73	3	0.2000	0.000	0.000	0.000	2.000
74	74	3	0.2000	0.000	0.000	0.000	2.000
75	75	3	0.2000	0.000	0.000	0.000	2.000
76	76	3	0.2000	0.000	0.000	0.000	2.000
77	77	3	0.2000	0.000	0.000	0.000	2.000
78	78	3	0.2000	0.000	0.000	0.000	2.000
79	79	3	0.2000	0.000	0.000	0.000	2.000
80	80	3	0.2000	0.000	0.000	0.000	2.000
81	81	3	0.2000	0.000	0.000	0.000	2.000
82	82	3	0.2000	0.000	0.000	0.000	2.000
83	83	3	0.2000	0.000	0.000	0.000	2.000
84	84	3	0.2000	0.000	0.000	0.000	2.000
85	85	3	0.2000	0.000	0.000	0.000	2.000
86	86	3	0.2000	0.000	0.000	0.000	2.000
87	87	3	0.2000	0.000	0.000	0.000	2.000
88	88	3	0.2000	0.000	0.000	0.000	2.000
89	89	3	0.2000	0.000	0.000	0.000	2.000
90	90	3	0.2000	0.000	0.000	0.000	2.000
91	91	3	0.2000	0.000	0.000	0.000	2.000
92	92	3	0.2000	0.000	0.000	0.000	2.000
93	93	3	0.2000	0.000	0.000	0.000	2.000
94	94	3	0.2000	0.000	0.000	0.000	2.000
95	95	3	0.2000	0.000	0.000	0.000	2.000
96	96	3	0.2000	0.000	0.000	0.000	2.000
97	97	3	0.2000	0.000	0.000	0.000	2.000
98	98	3	0.2000	0.000	0.000	0.000	2.000
99	99	3	0.2000	0.000	0.000	0.000	2.000
100	100	3	0.2000	0.000	0.000	0.000	2.000
101	101	3	0.1000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 579 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
|
|                                     ParatiePlus
|
|          Exe Time :17 November 2022  18:38:05
|
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```

ELEMENT GROUP NO. 3

```

WallElement_911          :
  2 100  0  1  0  0  0  0  0  0  0  0  0  0  0  1  0  0  1  0
.....
.....2D WALL ELEMENT.....
.....

```

element group behaviour throughout stage analysis

stage status

```

-----
1  inactive
2  active
3  active
4  active

```

material set no. 1

```

prop( 1) young modulus      0.314800E+08
prop( 2) modification time  0.00000
prop( 3) new young modulus  0.00000
prop( 4) poisson ratio      0.00000
prop( 5) future .....      0.00000

```

```

no. of step variable items:  1
step inertia multiplier

```

```

-----
1  1.000
2  1.000
3  1.000
4  1.000

```

element data

el	na	nb	mat	erc1	erc2	thick	area	inertia	wgt(-z)	by-i	by-j
1	1	2	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
2	2	3	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
3	3	4	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
4	4	5	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
5	5	6	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
6	6	7	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
7	7	8	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
8	8	9	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
9	9	10	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
10	10	11	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
11	11	12	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
12	12	13	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
13	13	14	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
14	14	15	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
15	15	16	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
16	16	17	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
17	17	18	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
18	18	19	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
19	19	20	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
20	20	21	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
21	21	22	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
22	22	23	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
23	23	24	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
24	24	25	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
25	25	26	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
26	26	27	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
27	27	28	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
28	28	29	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
29	29	30	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
30	30	31	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
31	31	32	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
32	32	33	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	580 di 731

33	33	34	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
34	34	35	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
35	35	36	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
36	36	37	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
37	37	38	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
38	38	39	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
39	39	40	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
40	40	41	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
41	41	42	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
42	42	43	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
43	43	44	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
44	44	45	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
45	45	46	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
46	46	47	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
47	47	48	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
48	48	49	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
49	49	50	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
50	50	51	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
51	51	52	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
52	52	53	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
53	53	54	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
54	54	55	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
55	55	56	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
56	56	57	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
57	57	58	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
58	58	59	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
59	59	60	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
60	60	61	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
61	61	62	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
62	62	63	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
63	63	64	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
64	64	65	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
65	65	66	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
66	66	67	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
67	67	68	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
68	68	69	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
69	69	70	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
70	70	71	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
71	71	72	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
72	72	73	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
73	73	74	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
74	74	75	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
75	75	76	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
76	76	77	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
77	77	78	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
78	78	79	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
79	79	80	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
80	80	81	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
81	81	82	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
82	82	83	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
83	83	84	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
84	84	85	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
85	85	86	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
86	86	87	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
87	87	88	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
88	88	89	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
89	89	90	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
90	90	91	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
91	91	92	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
92	92	93	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
93	93	94	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
94	94	95	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
95	95	96	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
96	96	97	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
97	97	98	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
98	98	99	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
99	99	100	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
100	100	101	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000



**LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
	IABH	00	F	CL	MU04 00 001	A	581 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
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|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:05                                                         |
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NO. OF NODAL LOADS (NLOAD) 0
 NO. OF LOAD CURVES (NLCUR) 8
 MAXIMUM POINTS/LCURVE (NPTM) 5



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	582 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
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|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:05                                               |
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L O A D D A T A

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 4



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 583 di 731
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TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 7
 NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 8
 NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
5.00000	0.1000E+01

PROCESSING DISTRIBUTED LOADS CARD NO. 1
 AT Y-COORD 0.000 Z-COORD -20.00 PRESSURE 42.12
 Z-COORD 0.000 PRESSURE 0.000
 L.CURVE 4

NO. OF GENERATED NODAL FORCES		101							
NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	
101	-.2000E+02	0.4212000E+01 /	100	-.1980E+02	0.8339760E+01 /	99	-.1960E+02	0.8255520E+01 /	
98	-.1940E+02	0.8171280E+01 /	97	-.1920E+02	0.8087040E+01 /	96	-.1900E+02	0.8002800E+01 /	
95	-.1880E+02	0.7918560E+01 /	94	-.1860E+02	0.7834320E+01 /	93	-.1840E+02	0.7750080E+01 /	
92	-.1820E+02	0.7665840E+01 /	91	-.1800E+02	0.7581600E+01 /	90	-.1780E+02	0.7497547E+01 /	
89	-.1760E+02	0.7413301E+01 /	88	-.1740E+02	0.7328876E+01 /	87	-.1720E+02	0.7244636E+01 /	
86	-.1700E+02	0.7160396E+01 /	85	-.1680E+02	0.7076156E+01 /	84	-.1660E+02	0.6991916E+01 /	
83	-.1640E+02	0.6907676E+01 /	82	-.1620E+02	0.6823436E+01 /	81	-.1600E+02	0.6739196E+01 /	
80	-.1580E+02	0.6654956E+01 /	79	-.1560E+02	0.6570716E+01 /	78	-.1540E+02	0.6486476E+01 /	
77	-.1520E+02	0.6402236E+01 /	76	-.1500E+02	0.6317996E+01 /	75	-.1480E+02	0.6233756E+01 /	
74	-.1460E+02	0.6149516E+01 /	73	-.1440E+02	0.6065276E+01 /	72	-.1420E+02	0.5981036E+01 /	
71	-.1400E+02	0.5896796E+01 /	70	-.1380E+02	0.5812556E+01 /	69	-.1360E+02	0.5728316E+01 /	
68	-.1340E+02	0.5644076E+01 /	67	-.1320E+02	0.5559836E+01 /	66	-.1300E+02	0.5475596E+01 /	
65	-.1280E+02	0.5391356E+01 /	64	-.1260E+02	0.5307116E+01 /	63	-.1240E+02	0.5222876E+01 /	
62	-.1220E+02	0.5138636E+01 /	61	-.1200E+02	0.5054396E+01 /	60	-.1180E+02	0.4970156E+01 /	
59	-.1160E+02	0.4885916E+01 /	58	-.1140E+02	0.4801676E+01 /	57	-.1120E+02	0.4717436E+01 /	
56	-.1100E+02	0.4633196E+01 /	55	-.1080E+02	0.4548956E+01 /	54	-.1060E+02	0.4464716E+01 /	
53	-.1040E+02	0.4380376E+01 /	52	-.1020E+02	0.4296156E+01 /	51	-.1000E+02	0.4212051E+01 /	
50	-.9800E+01	0.4127748E+01 /	49	-.9600E+01	0.4043508E+01 /	48	-.9400E+01	0.3959278E+01 /	
47	-.9200E+01	0.3875038E+01 /	46	-.9000E+01	0.3790798E+01 /	45	-.8800E+01	0.3706549E+01 /	
44	-.8600E+01	0.3622310E+01 /	43	-.8400E+01	0.3538079E+01 /	42	-.8200E+01	0.3453839E+01 /	
41	-.8000E+01	0.3369599E+01 /	40	-.7800E+01	0.3285359E+01 /	39	-.7600E+01	0.3201119E+01 /	
38	-.7400E+01	0.3116879E+01 /	37	-.7200E+01	0.3032631E+01 /	36	-.7000E+01	0.2948392E+01 /	
35	-.6800E+01	0.2864159E+01 /	34	-.6600E+01	0.2779919E+01 /	33	-.6400E+01	0.2695679E+01 /	
32	-.6200E+01	0.2611433E+01 /	31	-.6000E+01	0.2527193E+01 /	30	-.5800E+01	0.2442960E+01 /	
29	-.5600E+01	0.2358720E+01 /	28	-.5400E+01	0.2274480E+01 /	27	-.5200E+01	0.2190234E+01 /	
26	-.5000E+01	0.2105995E+01 /	25	-.4800E+01	0.2021760E+01 /	24	-.4600E+01	0.1937520E+01 /	
23	-.4400E+01	0.1853280E+01 /	22	-.4200E+01	0.1769040E+01 /	21	-.4000E+01	0.1684796E+01 /	
20	-.3800E+01	0.1600556E+01 /	19	-.3600E+01	0.1516320E+01 /	18	-.3400E+01	0.1432080E+01 /	
17	-.3200E+01	0.1347844E+01 /	16	-.3000E+01	0.1263603E+01 /	15	-.2800E+01	0.1179360E+01 /	
14	-.2600E+01	0.1095120E+01 /	13	-.2400E+01	0.1010880E+01 /	12	-.2200E+01	0.9266400E+00 /	
11	-.2000E+01	0.8424000E+00 /	10	-.1800E+01	0.7581600E+00 /	9	-.1600E+01	0.6739200E+00 /	
8	-.1400E+01	0.5896800E+00 /	7	-.1200E+01	0.5054400E+00 /	6	-.1000E+01	0.4212000E+00 /	
5	-.8000E+00	0.3369600E+00 /	4	-.6000E+00	0.2527200E+00 /	3	-.4000E+00	0.1684800E+00 /	
2	-.2000E+00	0.8424000E-01 /	1	0.0000E+00	0.0000000E+00 /				

OVERALL APPLIED Y FORCE FOR CURRENT DISTRIBUTED LOAD 421.20



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 584 di 731
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PROCESSING DISTRIBUTED LOADS CARD NO. 2
 AT Y-COORD 0.000 Z-COORD -20.00 PRESSURE 2.302
 Z-COORD 0.000 PRESSURE 2.302
 L.CURVE 4

NO. OF GENERATED NODAL FORCES 101

NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /
101	-.2000E+02	0.2302000E+00 /	100	-.1980E+02	0.4604000E+00 /	99	-.1960E+02	0.4604000E+00 /
98	-.1940E+02	0.4604000E+00 /	97	-.1920E+02	0.4604000E+00 /	96	-.1900E+02	0.4604000E+00 /
95	-.1880E+02	0.4604000E+00 /	94	-.1860E+02	0.4604000E+00 /	93	-.1840E+02	0.4604000E+00 /
92	-.1820E+02	0.4604000E+00 /	91	-.1800E+02	0.4604000E+00 /	90	-.1780E+02	0.4604115E+00 /
89	-.1760E+02	0.4604115E+00 /	88	-.1740E+02	0.4604000E+00 /	87	-.1720E+02	0.4604000E+00 /
86	-.1700E+02	0.4604000E+00 /	85	-.1680E+02	0.4604000E+00 /	84	-.1660E+02	0.4604000E+00 /
83	-.1640E+02	0.4604000E+00 /	82	-.1620E+02	0.4604000E+00 /	81	-.1600E+02	0.4604000E+00 /
80	-.1580E+02	0.4604000E+00 /	79	-.1560E+02	0.4604000E+00 /	78	-.1540E+02	0.4604000E+00 /
77	-.1520E+02	0.4604000E+00 /	76	-.1500E+02	0.4604000E+00 /	75	-.1480E+02	0.4604000E+00 /
74	-.1460E+02	0.4604000E+00 /	73	-.1440E+02	0.4604000E+00 /	72	-.1420E+02	0.4604000E+00 /
71	-.1400E+02	0.4604000E+00 /	70	-.1380E+02	0.4604000E+00 /	69	-.1360E+02	0.4604000E+00 /
68	-.1340E+02	0.4604000E+00 /	67	-.1320E+02	0.4604000E+00 /	66	-.1300E+02	0.4604000E+00 /
65	-.1280E+02	0.4604000E+00 /	64	-.1260E+02	0.4604000E+00 /	63	-.1240E+02	0.4604000E+00 /
62	-.1220E+02	0.4604000E+00 /	61	-.1200E+02	0.4604000E+00 /	60	-.1180E+02	0.4604000E+00 /
59	-.1160E+02	0.4604000E+00 /	58	-.1140E+02	0.4604000E+00 /	57	-.1120E+02	0.4604000E+00 /
56	-.1100E+02	0.4604000E+00 /	55	-.1080E+02	0.4604000E+00 /	54	-.1060E+02	0.4604000E+00 /
53	-.1040E+02	0.4603988E+00 /	52	-.1020E+02	0.4603942E+00 /	51	-.1000E+02	0.4604058E+00 /
50	-.9800E+01	0.4603988E+00 /	49	-.9600E+01	0.4603988E+00 /	48	-.9400E+01	0.4604000E+00 /
47	-.9200E+01	0.4604000E+00 /	46	-.9000E+01	0.4604000E+00 /	45	-.8800E+01	0.4603988E+00 /
44	-.8600E+01	0.4603988E+00 /	43	-.8400E+01	0.4604000E+00 /	42	-.8200E+01	0.4604000E+00 /
41	-.8000E+01	0.4604000E+00 /	40	-.7800E+01	0.4604000E+00 /	39	-.7600E+01	0.4604000E+00 /
38	-.7400E+01	0.4604000E+00 /	37	-.7200E+01	0.4603988E+00 /	36	-.7000E+01	0.4603988E+00 /
35	-.6800E+01	0.4604000E+00 /	34	-.6600E+01	0.4604000E+00 /	33	-.6400E+01	0.4604000E+00 /
32	-.6200E+01	0.4603988E+00 /	31	-.6000E+01	0.4603988E+00 /	30	-.5800E+01	0.4604000E+00 /
29	-.5600E+01	0.4604000E+00 /	28	-.5400E+01	0.4604000E+00 /	27	-.5200E+01	0.4603988E+00 /
26	-.5000E+01	0.4603988E+00 /	25	-.4800E+01	0.4604000E+00 /	24	-.4600E+01	0.4604000E+00 /
23	-.4400E+01	0.4604000E+00 /	22	-.4200E+01	0.4604000E+00 /	21	-.4000E+01	0.4603988E+00 /
20	-.3800E+01	0.4603988E+00 /	19	-.3600E+01	0.4604000E+00 /	18	-.3400E+01	0.4604000E+00 /
17	-.3200E+01	0.4604012E+00 /	16	-.3000E+01	0.4604012E+00 /	15	-.2800E+01	0.4604000E+00 /
14	-.2600E+01	0.4604000E+00 /	13	-.2400E+01	0.4604000E+00 /	12	-.2200E+01	0.4604000E+00 /
11	-.2000E+01	0.4604000E+00 /	10	-.1800E+01	0.4604000E+00 /	9	-.1600E+01	0.4604000E+00 /
8	-.1400E+01	0.4604000E+00 /	7	-.1200E+01	0.4604000E+00 /	6	-.1000E+01	0.4604000E+00 /
5	-.8000E+00	0.4604000E+00 /	4	-.6000E+00	0.4604000E+00 /	3	-.4000E+00	0.4604000E+00 /
2	-.2000E+00	0.4604000E+00 /	1	0.0000E+00	0.2302000E+00 /			

OVERALL APPLIED Y FORCE FOR CURRENT DISTRIBUTED LOAD 46.040

NO. OF DISTRIBUTED LOAD CARDS 2



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	585 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022* |  
|                                                                                               |  
|                               ParatiePlus                                                    |  
|                               Exe Time :17 November 2022  18:38:05                            |  
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L O A D B A L A N C E

STEP	1	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	1	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	467.24000
STEP	4	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000

LOAD INPUT SECTION COMPLETED



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	586 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
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|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:05                                                         |
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NO. OF LAYERS 3
NO. OF DATA PER LAYER..... 160



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	587 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                           |
|                                                                                               Exe Time :17 November 2022 18:38:05          |
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LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.33100	WALL NO.	1
ITEM NO.	91	D-KP	= 3.4040	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

ITEM NO.	1	NAME	= 14.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -10.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	588 di 731

ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.500	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.500	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.43400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.0960	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.48500	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.36000	WALL NO.	1
ITEM NO.	91	D-KP	= 3.0510	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	589 di 731

ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 10.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 26.0000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.33100 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.4040 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO. 1 <NAME > = 14.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.500 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.500 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.43400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.0960 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.48500 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.36000 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.0510 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO. 1 <NAME > = 12.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = 10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 19.000 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 9.0000 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.23300 WALL NO. 1
 ITEM NO. 11 <U-KP > = 10.673 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.40000 (BOTH WALLS)
 ITEM NO. 13 <NEXP > = 0.50000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 20000. (BOTH WALLS)
 ITEM NO. 18 <EUR > = 32000. (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 58 <U-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 60 <U-TZDELT> = 25.000 (BOTH WALLS)
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.20500 WALL NO. 1
 ITEM NO. 91 <D-KP > = 6.7380 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138 <D-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 140 <D-TZDELT> = 25.000 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO. 1 <NAME > = 13.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -5.9000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.000 (BOTH WALLS)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	590 di 731

ITEM NO.	6	<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.39400	WALL NO.	1
ITEM NO.	11	<U-KP	>= 4.6760	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.56200	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14	<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 90000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>= 10.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>= 0.33100	WALL NO.	1
ITEM NO.	91	<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	107	<D-PERM	>= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO.	1	<NAME	>= 14.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>= -10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>= 20.500	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>= 10.500	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>= 20.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 24.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.43400	WALL NO.	1
ITEM NO.	11	<U-KP	>= 4.0960	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.48500	(BOTH WALLS)	
ITEM NO.	14	<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>= 20.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>= 24.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>= 0.36000	WALL NO.	1
ITEM NO.	91	<D-KP	>= 3.0510	WALL NO.	1
ITEM NO.	107	<D-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO.	1	<NAME	>= 12.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>= 10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>= 9.0000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 37.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.23300	WALL NO.	1
ITEM NO.	11	<U-KP	>= 10.673	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.40000	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 32000.	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	47	<U-KAED	>= 0.35322	WALL NO.	1
ITEM NO.	48	<U-KAEW	>= 0.53946	WALL NO.	1
ITEM NO.	49	<U-KPED	>= 10.991	WALL NO.	1
ITEM NO.	50	<U-KPEW	>= 10.240	WALL NO.	1
ITEM NO.	58	<U-TZKZ	>= 10000.	(BOTH WALLS)	
ITEM NO.	60	<U-TZDELTA	>= 25.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	591 di 731

ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.20500 WALL NO. 1
 ITEM NO. 91 <D-KP > = 6.7380 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 127 <D-KAED > = 0.27146 WALL NO. 1
 ITEM NO. 128 <D-KAEW > = 0.40440 WALL NO. 1
 ITEM NO. 129 <D-KPED > = 5.6960 WALL NO. 1
 ITEM NO. 130 <D-KPEW > = 4.8732 WALL NO. 1
 ITEM NO. 138 <D-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 140 <D-TZDELTA> = 25.000 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO. 1 <NAME > = 13.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -5.9000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.000 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.000 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 10.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 26.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.39400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.6760 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.56200 (BOTH WALLS)
 ITEM NO. 13 <NEXP > = 0.50000 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 90000. (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.14400E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 47 <U-KAED > = 0.59404 WALL NO. 1
 ITEM NO. 48 <U-KAEW > = 1.1988 WALL NO. 1
 ITEM NO. 49 <U-KPED > = 4.7791 WALL NO. 1
 ITEM NO. 50 <U-KPEW > = 4.4184 WALL NO. 1
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 10.000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 26.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.33100 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.4040 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 127 <D-KAED > = 0.41648 WALL NO. 1
 ITEM NO. 128 <D-KAEW > = 0.58754 WALL NO. 1
 ITEM NO. 129 <D-KPED > = 2.7982 WALL NO. 1
 ITEM NO. 130 <D-KPEW > = 2.2962 WALL NO. 1
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO. 1 <NAME > = 14.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.500 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.500 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.43400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.0960 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.48500 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 47 <U-KAED > = 0.66041 WALL NO. 1
 ITEM NO. 48 <U-KAEW > = 1.1977 WALL NO. 1
 ITEM NO. 49 <U-KPED > = 4.1808 WALL NO. 1
 ITEM NO. 50 <U-KPEW > = 3.8704 WALL NO. 1
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	592 di 731

ITEM NO. 88 $D-COHE >= 20.000$ (BOTH WALLS)
ITEM NO. 89 $D-FRICT >= 24.000$ (BOTH WALLS)
ITEM NO. 90 $D-KA >= 0.36000$ WALL NO. 1
ITEM NO. 91 $D-KP >= 3.0510$ WALL NO. 1
ITEM NO. 107 $D-PERM >= 0.50000E-04$ (BOTH WALLS)
ITEM NO. 127 $D-KAED >= 0.44995$ WALL NO. 1
ITEM NO. 128 $D-KAEW >= 0.62658$ WALL NO. 1
ITEM NO. 129 $D-KPED >= 2.4924$ WALL NO. 1
ITEM NO. 130 $D-KPEW >= 2.0341$ WALL NO. 1
ITEM NO. 141 $D-TZALPH >= 0.50000$ (BOTH WALLS)

DEFAULT WATER UNIT WEIGHT = 10.000
AVERAGED ON 12 VALUES



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 593 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:05                                                                 |
|-----+-----

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PHASE DESCRIPTORS

STEP NO.	1 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000
DYN.WATER BEHAVIOUR			0.000	0.000
Excess pore pressure RATIO Ru			0.000	0.000
SEISMIC PRESSURE LOWER VALUE			0.000	0.000
SEISMIC PRESSURE UPPER VALUE			0.000	0.000
SEISMIC PRESSURE LOWER LEVEL			0.000	0.000
SEISMIC PRESSURE UPPER LEVEL			0.000	0.000

=====
 =====end of step 1

STEP NO.	2 no. of subincrements	1	LEFT WALL	RIGHT WALL
Y			0.000	-0.9990E+30
Z-PC			0.000	0.000
Z-EXCAVATION			0.000	0.000
Z-WATER_TABLE			-40.00	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL			0.000	0.000
ZQ			0.000	0.000
DZW_OF_THE_WATER_TABLE			0.000	0.000
QS_ON_THE_EXCAVATION_SIDE			0.000	0.000
ZQS			0.000	-0.9990E+30
ZCUT			0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES			-20.00	-20.00
WATER_BEHAVIOUR_FLAG (LINING OPT)			0.000	0.000
PORE_UPDATE_FLAG			0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)			0.000	0.000
lateral thrusts reduction elevatio			0.000	0.000
Downhill reduction factor for effe			0.000	0.000
Downhill reduction factor for pore			0.000	0.000
Uphill reduction factor for effect			0.000	0.000
Uphill reduction factor for pore p			0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]			0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]			0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]			0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
UPHILL DELTA/PHI RATIO			0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]			0.000	0.000
DOWNHILL DELTA/PHI RATIO			0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	594 di 731

DYN.WATER BEHAVIOUR	0.000	0.000
Excess pore pressure RATIO Ru	0.000	0.000
SEISMIC PRESSURE LOWER VALUE	0.000	0.000
SEISMIC PRESSURE UPPER VALUE	0.000	0.000
SEISMIC PRESSURE LOWER LEVEL	0.000	0.000
SEISMIC PRESSURE UPPER LEVEL	0.000	0.000

=====end of step 2

STEP NO.	3 no. of subincrements	1	
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-8.000	0.000
Z-WATER_TABLE		-40.000	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		0.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		0.000	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.000	-20.000
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		0.000	0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.000	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		0.000	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
UPHILL DELTA/PHI RATIO		0.000	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000
SEISMIC PRESSURE LOWER VALUE		0.000	0.000
SEISMIC PRESSURE UPPER VALUE		0.000	0.000
SEISMIC PRESSURE LOWER LEVEL		0.000	0.000
SEISMIC PRESSURE UPPER LEVEL		0.000	0.000

=====end of step 3

STEP NO.	4 no. of subincrements	1	
		LEFT WALL	RIGHT WALL
Y		0.000	-0.9990E+30
Z-PC		0.000	0.000
Z-EXCAVATION		-8.000	0.000
Z-WATER_TABLE		-40.000	-0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL		0.000	0.000
ZQ		0.000	0.000
DZW_OF_THE_WATER_TABLE		0.000	0.000
QS_ON_THE_EXCAVATION_SIDE		0.000	0.000
ZQS		0.000	-0.9990E+30
ZCUT		0.000	0.000
BALANCE LEVEL FOR PORE PRESSURES		-20.000	-20.000
WATER_BEHAVIOUR_FLAG (LINING OPT)		0.000	0.000
PORE_UPDATE_FLAG		0.000	0.000
PORE_TAB._FLAG (gt.0= use tabs)		0.000	0.000
lateral thrusts reduction elevatio		0.000	0.000
Downhill reduction factor for effe		0.000	0.000
Downhill reduction factor for pore		0.000	0.000
Uphill reduction factor for effect		0.000	0.000
Uphill reduction factor for pore p		0.000	0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]		-0.1407	0.000
		MANUAL	
UPHILL VERTICAL ACCEL. Kv_uh [g]		0.7035E-01	0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g]		-0.7035E-01	0.000
UPHILL BETA ANGLE (SLOPE) [deg]		11.31	0.000
UPHILL DELTA/PHI RATIO		0.6670	0.000
DOWNHILL BETA ANGLE (SLOPE) [deg]		0.000	0.000
DOWNHILL DELTA/PHI RATIO		0.5000	0.000
DYN.WATER BEHAVIOUR		0.000	0.000
Excess pore pressure RATIO Ru		0.000	0.000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	595 di 731

SEISMIC PRESSURE LOWER VALUE 0.000 0.000
 SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====
 =====end of step 4

LEFT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

RIGHT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
 POSITION 5881

NO. OF D.P.W FOR THIS AREA 15427
 MAX NO. OF D.P.W. AVAILABLE 81920
 ** MAX NO OF ITERATIONS SET TO 40

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIO= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIO= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIO= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	596 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|          Exe Time :17 November 2022 18:38:05                                                                                                     |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 1 (AT TIME 1.000) SUBINCREMENT 0001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 597 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
|
|
|          ParatiePlus
|          Exe Time :17 November 2022  18:38:05
|
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New Project

STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	V-C	1.5043E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	V-C	1.5043E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	V-C	1.5043E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	V-C	1.5043E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	V-C	1.5043E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	V-C	1.5043E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	V-C	1.5043E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	V-C	1.5043E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	V-C	1.5043E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	V-C	1.5043E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	V-C	1.5043E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	V-C	1.5043E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	V-C	1.5043E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	V-C	1.5043E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	V-C	1.5043E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	V-C	1.5043E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	V-C	1.5043E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)						COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
						IABH	00	F	CL	MU04 00 001	A	598 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	1.5043E+04	-3.400	0.000	1.000	
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	1.5043E+04	-3.600	0.000	1.000	
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	1.5043E+04	-3.800	0.000	1.000	
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	1.5043E+04	-4.000	0.000	1.000	
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	1.5043E+04	-4.200	0.000	1.000	
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	1.5043E+04	-4.400	0.000	1.000	
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	1.5043E+04	-4.600	0.000	1.000	
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	1.5043E+04	-4.800	0.000	1.000	
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	1.5043E+04	-5.000	0.000	1.000	
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	1.5043E+04	-5.200	0.000	1.000	
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	1.5043E+04	-5.400	0.000	1.000	
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	1.5043E+04	-5.600	0.000	1.000	
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	1.5043E+04	-5.800	0.000	1.000	
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	5.4011E+04	-6.000	0.000	1.000	
1.000	64.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	5.4011E+04	-6.200	0.000	1.000	
1.000	66.37	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	5.4011E+04	-6.400	0.000	1.000	
1.000	68.62	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	5.4011E+04	-6.600	0.000	1.000	
1.000	70.87	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	5.4011E+04	-6.800	0.000	1.000	
1.000	73.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	5.4011E+04	-7.000	0.000	1.000	
1.000	75.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	5.4011E+04	-7.200	0.000	1.000	
1.000	77.61	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	5.4011E+04	-7.400	0.000	1.000	
1.000	79.86	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	5.4011E+04	-7.600	0.000	1.000	
1.000	82.11	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	5.4011E+04	-7.800	0.000	1.000	
1.000	84.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	5.4011E+04	-8.000	0.000	1.000	
1.000	86.60	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	5.4011E+04	-8.200	0.000	1.000	
1.000	88.85	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	5.4011E+04	-8.400	0.000	1.000	
1.000	91.10	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000										
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	5.4011E+04	-8.600	0.000	1.000	

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
	IABH	00	F	CL	MU04 00 001	A	599 di 731

1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 5.4011E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 5.4011E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 5.4011E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 5.4011E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 5.4011E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 5.4011E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 5.4011E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 5.7745E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 5.7745E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 5.7745E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 5.7745E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 5.7745E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 5.7745E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 5.7745E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 5.7745E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 5.7745E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 5.7745E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 5.7745E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 5.7745E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 5.7745E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 5.7745E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 5.7745E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 5.7745E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 5.7745E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 5.7745E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 5.7745E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	603 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C	7479.	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C	7479.	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C	7479.	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C	7479.	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C	7479.	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C	7479.	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C	7479.	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C	7479.	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C	7479.	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C	7479.	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C	7479.	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C	7479.	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C	7479.	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C	4.2179E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C	4.2179E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C	4.2179E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C	4.2179E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C	4.2179E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C	4.2179E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C	4.2179E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C	4.2179E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C	4.2179E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C	4.2179E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C	4.2179E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C	4.2179E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C	4.2179E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000	Argillamarnosal_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C	4.2179E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	604 di 731
1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 4.2179E+04	-8.800	0.000		1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 4.2179E+04	-9.000	0.000		1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 4.2179E+04	-9.200	0.000		1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 4.2179E+04	-9.400	0.000		1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 4.2179E+04	-9.600	0.000		1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 4.2179E+04	-9.800	0.000		1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 4.2179E+04	-10.00	0.000		1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 4.8706E+04	-10.20	0.000		1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 4.8706E+04	-10.40	0.000		1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 4.8706E+04	-10.60	0.000		1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 4.8706E+04	-10.80	0.000		1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 4.8706E+04	-11.00	0.000		1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 4.8706E+04	-11.20	0.000		1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 4.8706E+04	-11.40	0.000		1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 4.8706E+04	-11.60	0.000		1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 4.8706E+04	-11.80	0.000		1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 4.8706E+04	-12.00	0.000		1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 4.8706E+04	-12.20	0.000		1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 4.8706E+04	-12.40	0.000		1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 4.8706E+04	-12.60	0.000		1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 4.8706E+04	-12.80	0.000		1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 4.8706E+04	-13.00	0.000		1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 4.8706E+04	-13.20	0.000		1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 4.8706E+04	-13.40	0.000		1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 4.8706E+04	-13.60	0.000		1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 4.8706E+04	-13.80	0.000		1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 607 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:05          |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
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***** NO ONE ELEMENT ACTIVE AT CURRENT STEP *****

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ITER 0 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE     1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0
  
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ITER 1 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE     1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0
  
```

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ITER 2 RNORM = 0.000    RMNORM= 0.000
      RINORM=0.9946E+05 RIMNOR= 0.000
      RENORM= 0.000    REMNOR= 0.000    RATIO = 0.000    TOLER =0.1000E-03    CONVERGED !
      RFMAX = 38.31    RMMAX = 0.000
      RTSMAL=0.1000E-03 RMSMAL= 0.000
      RDT =0.9946E+05 RDR = 0.000
      RATIOT= 0.000    RATIOR= 0.000
      MAX UN= 0.000    IEQ= 202 NODE    101 DOF 2 X-ROT. F
      MIN UN= 0.000    IEQ= 1 NODE     1 DOF 1 Y-DISPL.F
      NO. OF CONTACT CONSTRAINT VIOLATIONS 0
  
```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	608 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
|                                                                                               |
|                                                                                               |
|          ParatiePlus                                                                           |
|          Exe Time :17 November 2022 18:38:05                                               |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F	X-ROT. F
02	04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	610 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	2.4068E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	2.4068E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	2.4068E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	2.4068E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	2.4068E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	2.4068E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	2.4068E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	2.4068E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	2.4068E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	2.4068E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	2.4068E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	2.4068E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	2.4068E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	8.6418E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	8.6418E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	8.6418E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	8.6418E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	8.6418E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	8.6418E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	8.6418E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	8.6418E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	8.6418E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	8.6418E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	8.6418E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	8.6418E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	8.6418E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	8.6418E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	611 di 731

1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 8.6418E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 8.6418E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 8.6418E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 8.6418E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 8.6418E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 8.6418E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 8.6418E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 9.2392E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 9.2392E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 9.2392E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 9.2392E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 9.2392E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 9.2392E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 9.2392E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 9.2392E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 9.2392E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 9.2392E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 9.2392E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 9.2392E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 9.2392E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 9.2392E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 9.2392E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 9.2392E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 9.2392E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 9.2392E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 9.2392E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA

TRATTA FERROVIARIA ROCCHETTA-POTENZA

AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)	COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
	IABH	00	F	CL	MU04 00.001	A	615 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	1.1966E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	1.1966E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	1.1966E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	1.1966E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	1.1966E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	1.1966E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	1.1966E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	1.1966E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	1.1966E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	1.1966E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	1.1966E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	1.1966E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	1.1966E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariiepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	6.7486E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	6.7486E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	6.7486E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	6.7486E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	6.7486E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	6.7486E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	6.7486E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	6.7486E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	6.7486E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	6.7486E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	6.7486E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	6.7486E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	6.7486E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	6.7486E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	616 di 731

1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 6.7486E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 6.7486E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 6.7486E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 6.7486E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 6.7486E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 6.7486E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 6.7486E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 7.7929E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 7.7929E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 7.7929E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 7.7929E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 7.7929E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 7.7929E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 7.7929E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 7.7929E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 7.7929E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 7.7929E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 7.7929E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 7.7929E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 7.7929E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 7.7929E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 7.7929E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 7.7929E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 7.7929E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 7.7929E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 7.7929E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 619 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:05          |
|                                                                                                                                            |
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New Project

STRESS RESULTS FOR GROUP NO. 3

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WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

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WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000
57	0.0000	0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	620 di 731

58	0.0000	0.0000	0.0000	0.0000
59	0.0000	0.0000	0.0000	0.0000
60	0.0000	0.0000	0.0000	0.0000
61	0.0000	0.0000	0.0000	0.0000
62	0.0000	0.0000	0.0000	0.0000
63	0.0000	0.0000	0.0000	0.0000
64	0.0000	0.0000	0.0000	0.0000
65	0.0000	0.0000	0.0000	0.0000
66	0.0000	0.0000	0.0000	0.0000
67	0.0000	0.0000	0.0000	0.0000
68	0.0000	0.0000	0.0000	0.0000
69	0.0000	0.0000	0.0000	0.0000
70	0.0000	0.0000	0.0000	0.0000
71	0.0000	0.0000	0.0000	0.0000
72	0.0000	0.0000	0.0000	0.0000
73	0.0000	0.0000	0.0000	0.0000
74	0.0000	0.0000	0.0000	0.0000
75	0.0000	0.0000	0.0000	0.0000
76	0.0000	0.0000	0.0000	0.0000
77	0.0000	0.0000	0.0000	0.0000
78	0.0000	0.0000	0.0000	0.0000
79	0.0000	0.0000	0.0000	0.0000
80	0.0000	0.0000	0.0000	0.0000
81	0.0000	0.0000	0.0000	0.0000
82	0.0000	0.0000	0.0000	0.0000
83	0.0000	0.0000	0.0000	0.0000
84	0.0000	0.0000	0.0000	0.0000
85	0.0000	0.0000	0.0000	0.0000
86	0.0000	0.0000	0.0000	0.0000
87	0.0000	0.0000	0.0000	0.0000
88	0.0000	0.0000	0.0000	0.0000
89	0.0000	0.0000	0.0000	0.0000
90	0.0000	0.0000	0.0000	0.0000
91	0.0000	0.0000	0.0000	0.0000
92	0.0000	0.0000	0.0000	0.0000
93	0.0000	0.0000	0.0000	0.0000
94	0.0000	0.0000	0.0000	0.0000
95	0.0000	0.0000	0.0000	0.0000
96	0.0000	0.0000	0.0000	0.0000
97	0.0000	0.0000	0.0000	0.0000
98	0.0000	0.0000	0.0000	0.0000
99	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.1602E+05 REMNOR= 0.000 RATIO =0.5113 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5113 RATIO= 0.000
 MAX UN= 17.32 IEQ= 81 NODE 41 DOF 1 Y-DISPL.F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 503.4 REMNOR=0.9692E-18 RATIO =0.9063E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.9063E-01 RATIO= 0.000
 MAX UN= 6.564 IEQ= 61 NODE 31 DOF 1 Y-DISPL.F
 MIN UN=-.1502E-08 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1103. REMNOR=0.2276E-16 RATIO =0.1342 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1342 RATIO= 0.000
 MAX UN= 18.93 IEQ= 85 NODE 43 DOF 1 Y-DISPL.F
 MIN UN=-.2222E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	621 di 731

ITER 4 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 76.02 REMNOR=0.2342E-16 RATIO =0.3522E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.3522E-01 RATIO= 0.000
 MAX UN= 6.545 IEQ= 95 NODE 48 DOF 1 Y-DISPL.F
 MIN UN=-.1757E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1.634 REMNOR=0.8775E-17 RATIO =0.5164E-02 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5164E-02 RATIO= 0.000
 MAX UN= 1.139 IEQ= 99 NODE 50 DOF 1 Y-DISPL.F
 MIN UN=-.1767E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 6 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.2226E-14 REMNOR=0.5797E-17 RATIO =0.1906E-09 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1906E-09 RATIO= 0.000
 MAX UN=0.1596E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 MIN UN=-.1821E-07 IEQ= 7 NODE 4 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	622 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                           |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:05          |
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New Project
SOLUTION REACHED USING 6 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	4.6573506E-02	-4.0866567E-03
2	4.5756175E-02	-4.0866567E-03
3	4.4938844E-02	-4.0866540E-03
4	4.4121514E-02	-4.0866402E-03
5	4.3304189E-02	-4.0866017E-03
6	4.2486876E-02	-4.0865192E-03
7	4.1669586E-02	-4.0863679E-03
8	4.0852336E-02	-4.0861176E-03
9	4.0035148E-02	-4.0857326E-03
10	3.9218054E-02	-4.0851715E-03
11	3.8401094E-02	-4.0843877E-03
12	3.7584318E-02	-4.0833288E-03
13	3.6767785E-02	-4.0819372E-03
14	3.5951569E-02	-4.0801495E-03
15	3.5135756E-02	-4.0778970E-03
16	3.4320446E-02	-4.0751055E-03
17	3.3505751E-02	-4.0716951E-03
18	3.2691811E-02	-4.0675806E-03
19	3.1878772E-02	-4.0626714E-03
20	3.1066802E-02	-4.0568710E-03
21	3.0256094E-02	-4.0500778E-03
22	2.9446848E-02	-4.0421844E-03
23	2.8639301E-02	-4.0330782E-03
24	2.7833706E-02	-4.0226409E-03
25	2.7030342E-02	-4.0107486E-03
26	2.6229512E-02	-3.9972721E-03
27	2.5431551E-02	-3.9820768E-03
28	2.4636809E-02	-3.9650223E-03
29	2.3845676E-02	-3.9459627E-03
30	2.3058568E-02	-3.9247470E-03
31	2.2275931E-02	-3.9012182E-03
32	2.1498251E-02	-3.8751962E-03
33	2.0726037E-02	-3.8464744E-03
34	1.9959855E-02	-3.8148371E-03
35	1.9200311E-02	-3.7800584E-03
36	1.8448057E-02	-3.7419028E-03
37	1.7703795E-02	-3.7001252E-03
38	1.6968269E-02	-3.6544699E-03
39	1.6242284E-02	-3.6046723E-03
40	1.5526695E-02	-3.5504576E-03
41	1.4822414E-02	-3.4915413E-03
42	1.4130411E-02	-3.4276291E-03
43	1.3451705E-02	-3.3585738E-03
44	1.2787322E-02	-3.2844176E-03
45	1.2138274E-02	-3.2052780E-03
46	1.1505533E-02	-3.1213460E-03
47	1.0890037E-02	-3.0328886E-03
48	1.0292657E-02	-2.9402474E-03
49	9.7141893E-03	-2.8438384E-03
50	9.1553427E-03	-2.7441532E-03
51	8.6167116E-03	-2.6417567E-03
52	8.0987675E-03	-2.5372552E-03
53	7.6019220E-03	-2.4312406E-03
54	7.1263627E-03	-2.3242306E-03
55	6.6722628E-03	-2.2167257E-03
56	6.2396746E-03	-2.1091874E-03
57	5.8285614E-03	-2.0020450E-03
58	5.4388037E-03	-1.8956970E-03
59	5.0702050E-03	-1.7905131E-03
60	4.7224980E-03	-1.6868355E-03
61	4.3953493E-03	-1.5849806E-03

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	623 di 731

62	4.0883648E-03	-1.4852408E-03
63	3.8010940E-03	-1.3878854E-03
64	3.5330351E-03	-1.2931621E-03
65	3.2836390E-03	-1.2012918E-03
66	3.0523155E-03	-1.1124655E-03
67	2.8384390E-03	-1.0268464E-03
68	2.6413539E-03	-9.4457191E-04
69	2.4603796E-03	-8.6575605E-04
70	2.2948148E-03	-7.9049118E-04
71	2.1439416E-03	-7.1884998E-04
72	2.0070296E-03	-6.5088731E-04
73	1.8833389E-03	-5.8664188E-04
74	1.7721234E-03	-5.2613795E-04
75	1.6726335E-03	-4.6938647E-04
76	1.5841192E-03	-4.1637874E-04
77	1.5058347E-03	-3.6708121E-04
78	1.4370431E-03	-3.2143825E-04
79	1.3770207E-03	-2.7937478E-04
80	1.3250607E-03	-2.4079870E-04
81	1.2804759E-03	-2.0560308E-04
82	1.2426021E-03	-1.7366823E-04
83	1.2107999E-03	-1.4486355E-04
84	1.1844573E-03	-1.1904922E-04
85	1.1629907E-03	-9.6077741E-05
86	1.1458469E-03	-7.5795278E-05
87	1.1325039E-03	-5.8042896E-05
88	1.1224720E-03	-4.2657626E-05
89	1.1152941E-03	-2.9473409E-05
90	1.1105469E-03	-1.8321399E-05
91	1.1078411E-03	-9.0327974E-06
92	1.1068210E-03	-1.4360977E-06
93	1.1071653E-03	4.6400924E-06
94	1.1085871E-03	9.3672548E-06
95	1.1108337E-03	1.2916638E-05
96	1.1136866E-03	1.5459004E-05
97	1.1169615E-03	1.7164443E-05
98	1.1205079E-03	1.8202233E-05
99	1.1242091E-03	1.8740748E-05
100	1.1279820E-03	1.8947407E-05
101	1.1317770E-03	1.8988639E-05

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	625 di 731
18 D	3.010	-3.2692E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	3.187	-3.1879E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	3.365	-3.1067E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	3.542	-3.0256E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	3.719	-2.9447E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	3.896	-2.8639E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	4.073	-2.7834E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	4.250	-2.7030E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	4.427	-2.6230E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	4.604	-2.5432E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	4.781	-2.4637E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	4.958	-2.3846E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	5.135	-2.3059E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	6.480	-2.2276E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
32 D	6.796	-2.1498E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
33 D	7.111	-2.0726E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
34 D	7.426	-1.9960E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
35 D	7.741	-1.9200E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
36 D	8.056	-1.8448E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
37 D	8.371	-1.7704E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
38 D	8.687	-1.6968E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
39 D	9.002	-1.6242E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
40 D	9.317	-1.5527E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
41 D	9.632	-1.4822E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
42 D	9.947	-1.4130E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
43 D	10.26	-1.3452E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
44 D	10.58	-1.2787E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	626 di 731

1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	10.89	-1.2138E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	11.21	-1.1506E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	11.52	-1.0890E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	11.84	-1.0293E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	12.15	-9.7142E-03	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	12.47	-9.1553E-03	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	12.78	-8.6167E-03	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	11.93	-8.0988E-03	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	12.29	-7.6019E-03	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	12.65	-7.1264E-03	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	13.00	-6.6723E-03	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	13.36	-6.2397E-03	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	13.71	-5.8286E-03	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	14.07	-5.4388E-03	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	14.42	-5.0702E-03	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	14.78	-4.7225E-03	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	15.14	-4.3953E-03	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	15.49	-4.0884E-03	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	15.85	-3.8011E-03	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	16.20	-3.5330E-03	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	16.56	-3.2836E-03	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	16.92	-3.0523E-03	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	17.27	-2.8384E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	17.63	-2.6414E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	17.98	-2.4604E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	18.34	-2.2948E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	629 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                  |
|                                                                                                  |
|                                                                                                  |
|                                                                                                  |
|          ParatiePlus                                                                              |
|                                                                                                  |
|          Exe Time :17 November 2022  18:38:05                                                  |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Coha_a	MAX-H-P Coha_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
6	0.000	--	--	--	--	--		REMOVED	--	-1.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
7	0.000	--	--	--	--	--		REMOVED	--	-1.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
8	0.000	--	--	--	--	--		REMOVED	--	-1.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
9	0.000	--	--	--	--	--		REMOVED	--	-1.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
10	0.000	--	--	--	--	--		REMOVED	--	-1.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
11	0.000	--	--	--	--	--		REMOVED	--	-2.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
12	0.000	--	--	--	--	--		REMOVED	--	-2.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
13	0.000	--	--	--	--	--		REMOVED	--	-2.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
14	0.000	--	--	--	--	--		REMOVED	--	-2.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
15	0.000	--	--	--	--	--		REMOVED	--	-2.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
16	0.000	--	--	--	--	--		REMOVED	--	-3.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
17	0.000	--	--	--	--	--		REMOVED	--	-3.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
18	0.000	--	--	--	--	--		REMOVED	--	-3.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
19	0.000	--	--	--	--	--		REMOVED	--	-3.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
20	0.000	--	--	--	--	--		REMOVED	--	-3.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
21	0.000	--	--	--	--	--		REMOVED	--	-4.0000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
22	0.000	--	--	--	--	--		REMOVED	--	-4.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
23	0.000	--	--	--	--	--		REMOVED	--	-4.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
24	0.000	--	--	--	--	--		REMOVED	--	-4.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
25	0.000	--	--	--	--	--		REMOVED	--	-4.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available		--			
26	0.000	--	--	--	--	--		REMOVED	--	-5.0000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	631 di 731

58 D	25.51	5.4388E-03	68.70	127.6	222.8	127.6	V-C	1.2176E+04	-11.40	0.000	1.000
1.000	127.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	25.01	5.0702E-03	72.80	125.1	226.9	125.1	V-C	1.2176E+04	-11.60	0.000	1.000
1.000	125.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	24.57	4.7225E-03	76.90	122.8	231.0	122.8	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	122.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	24.17	4.3953E-03	81.00	120.8	235.1	120.8	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	120.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.82	4.0884E-03	85.10	119.1	239.2	119.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	119.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.46	3.8011E-03	89.20	117.3	243.3	118.0	UL-RL	1.9482E+04	-12.40	0.000	1.000
1.000	117.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	22.82	3.5330E-03	93.30	114.1	247.4	120.0	UL-RL	1.9482E+04	-12.60	0.000	1.000
1.000	114.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	22.24	3.2836E-03	97.40	111.2	251.5	122.0	UL-RL	1.9482E+04	-12.80	0.000	1.000
1.000	111.2	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	21.74	3.0523E-03	101.5	108.7	255.6	124.0	UL-RL	1.9482E+04	-13.00	0.000	1.000
1.000	108.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	21.30	2.8384E-03	105.6	106.5	259.7	126.0	UL-RL	1.9482E+04	-13.20	0.000	1.000
1.000	106.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	20.93	2.6414E-03	109.7	104.7	263.8	127.9	UL-RL	1.9482E+04	-13.40	0.000	1.000
1.000	104.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	20.63	2.4604E-03	113.8	103.1	267.9	129.9	UL-RL	1.9482E+04	-13.60	0.000	1.000
1.000	103.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	20.38	2.2948E-03	117.9	101.9	272.0	131.9	UL-RL	1.9482E+04	-13.80	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	20.19	2.1439E-03	122.0	100.9	276.1	133.9	UL-RL	1.9482E+04	-14.00	0.000	1.000
1.000	100.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	20.05	2.0070E-03	126.1	100.3	280.2	135.9	UL-RL	1.9482E+04	-14.20	0.000	1.000
1.000	100.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	19.97	1.8833E-03	130.2	99.84	284.3	137.9	UL-RL	1.9482E+04	-14.40	0.000	1.000
1.000	99.84	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	19.93	1.7721E-03	134.3	99.66	288.4	139.9	UL-RL	1.9482E+04	-14.60	0.000	1.000
1.000	99.66	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	19.94	1.6726E-03	138.4	99.71	292.5	141.9	UL-RL	1.9482E+04	-14.80	0.000	1.000
1.000	99.71	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	19.99	1.5841E-03	142.5	99.97	296.6	143.9	UL-RL	1.9482E+04	-15.00	0.000	1.000
1.000	99.97	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	20.09	1.5058E-03	146.6	100.4	300.7	145.8	UL-RL	1.9482E+04	-15.20	0.000	1.000
1.000	100.4	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	20.22	1.4370E-03	150.7	101.1	304.8	147.8	UL-RL	1.9482E+04	-15.40	0.000	1.000
1.000	101.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	20.38	1.3770E-03	154.8	101.9	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	20.58	1.3251E-03	158.9	102.9	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	102.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	20.80	1.2805E-03	163.0	104.0	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	104.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	21.05	1.2426E-03	167.1	105.3	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	105.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	21.32	1.2108E-03	171.2	106.6	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	106.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	21.62	1.1845E-03	175.3	108.1	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	632 di 731

1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	21.93	1.1630E-03	179.4	109.7	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	109.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	22.26	1.1458E-03	183.5	111.3	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	111.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	22.61	1.1325E-03	187.6	113.0	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	113.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	22.97	1.1225E-03	191.7	114.8	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	114.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	23.34	1.1153E-03	195.8	116.7	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	116.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	23.72	1.1105E-03	199.9	118.6	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	118.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.10	1.1078E-03	204.0	120.5	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	120.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.50	1.1068E-03	208.1	122.5	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.90	1.1072E-03	212.2	124.5	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	124.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	25.30	1.1086E-03	216.3	126.5	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	126.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	25.71	1.1108E-03	220.4	128.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	128.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	26.12	1.1137E-03	224.5	130.6	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	130.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	26.53	1.1170E-03	228.6	132.6	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	132.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	26.94	1.1205E-03	232.7	134.7	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	134.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	27.35	1.1242E-03	236.8	136.8	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	136.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	27.76	1.1280E-03	240.9	138.8	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	138.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	14.09	1.1318E-03	245.0	140.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	140.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 633 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:05                                                                 |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-2.62889E-09	2.62889E-09	-2.60371E-10	3.99666E-10
2	0.17708	-0.17708	-1.64363E-10	3.54160E-02
3	0.53124	-0.53124	-3.54160E-02	0.14166
4	1.0625	-1.0625	-0.14166	0.35416
5	1.7708	-1.7708	-0.35416	0.70832
6	2.6562	-2.6562	-0.70832	1.2396
7	3.7187	-3.7187	-1.2396	1.9833
8	4.9582	-4.9582	-1.9833	2.9749
9	6.3749	-6.3749	-2.9749	4.2499
10	7.9686	-7.9686	-4.2499	5.8436
11	9.7394	-9.7394	-5.8436	7.7915
12	11.687	-11.687	-7.7915	10.129
13	13.812	-13.812	-10.129	12.891
14	16.114	-16.114	-12.891	16.114
15	18.593	-18.593	-16.114	19.833
16	21.250	-21.250	-19.833	24.083
17	24.083	-24.083	-24.083	28.899
18	27.093	-27.093	-28.899	34.318
19	30.281	-30.281	-34.318	40.374
20	33.645	-33.645	-40.374	47.103
21	37.187	-37.187	-47.103	54.541
22	40.905	-40.905	-54.541	62.722
23	44.801	-44.801	-62.722	71.682
24	48.874	-48.874	-71.682	81.457
25	53.124	-53.124	-81.457	92.082
26	57.551	-57.551	-92.082	103.59
27	62.155	-62.155	-103.59	116.02
28	66.936	-66.936	-116.02	129.41
29	71.894	-71.894	-129.41	143.79
30	77.030	-77.030	-143.79	159.19
31	83.510	-83.510	-159.19	175.90
32	90.306	-90.306	-175.90	193.96
33	97.416	-97.416	-193.96	213.44
34	104.84	-104.84	-213.44	234.41
35	112.58	-112.58	-234.41	256.93
36	120.64	-120.64	-256.93	281.05
37	129.01	-129.01	-281.05	306.86
38	137.70	-137.70	-306.86	334.40
39	146.70	-146.70	-334.40	363.74
40	156.02	-156.02	-363.74	394.94
41	165.65	-165.65	-394.94	428.07
42	165.49	-165.49	-428.07	461.17
43	162.93	-162.93	-461.17	493.75
44	157.96	-157.96	-493.75	525.35
45	150.58	-150.58	-525.35	555.46
46	140.79	-140.79	-555.46	583.62
47	128.60	-128.60	-583.62	609.34
48	113.99	-113.99	-609.34	632.14
49	96.980	-96.980	-632.14	651.53
50	77.560	-77.560	-651.53	667.04
51	57.801	-57.801	-667.04	678.61
52	40.129	-40.129	-678.61	686.63
53	23.625	-23.625	-686.63	691.36
54	8.2369	-8.2369	-691.36	693.00
55	-6.0870	6.0870	-693.00	691.79
56	-19.399	19.399	-691.79	687.91
57	-31.752	31.752	-687.91	681.56

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	634 di 731

58	-43.198	43.198	-681.56	672.92
59	-53.787	53.787	-672.92	662.16
60	-63.572	63.572	-662.16	649.44
61	-72.602	72.602	-649.44	634.92
62	-80.926	80.926	-634.92	618.74
63	-88.541	88.541	-618.74	601.03
64	-95.154	95.154	-601.03	582.00
65	-100.84	100.84	-582.00	561.83
66	-105.66	105.66	-561.83	540.70
67	-109.69	109.69	-540.70	518.76
68	-113.00	113.00	-518.76	496.16
69	-115.64	115.64	-496.16	473.04
70	-117.68	117.68	-473.04	449.50
71	-119.17	119.17	-449.50	425.67
72	-120.17	120.17	-425.67	401.63
73	-120.73	120.73	-401.63	377.49
74	-120.87	120.87	-377.49	353.31
75	-120.17	120.17	-353.31	329.28
76	-118.71	118.71	-329.28	305.53
77	-116.59	116.59	-305.53	282.22
78	-113.88	113.88	-282.22	259.44
79	-110.66	110.66	-259.44	237.31
80	-107.00	107.00	-237.31	215.91
81	-102.95	102.95	-215.91	195.32
82	-98.586	98.586	-195.32	175.60
83	-93.950	93.950	-175.60	156.81
84	-89.089	89.089	-156.81	138.99
85	-84.045	84.045	-138.99	122.19
86	-78.856	78.856	-122.19	106.41
87	-73.553	73.553	-106.41	91.704
88	-68.164	68.164	-91.704	78.071
89	-62.714	62.714	-78.071	65.528
90	-57.224	57.224	-65.528	54.083
91	-51.711	51.711	-54.083	43.741
92	-46.189	46.189	-43.741	34.503
93	-40.670	40.670	-34.503	26.369
94	-35.163	35.163	-26.369	19.337
95	-29.675	29.675	-19.337	13.402
96	-24.211	24.211	-13.402	8.5595
97	-18.776	18.776	-8.5595	4.8043
98	-13.370	13.370	-4.8043	2.1302
99	-7.9965	7.9965	-2.1302	0.53094
100	-2.6547	2.6547	-0.53094	-2.08615E-11

ITER 0 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 3107. REMNOR=0.5797E-17 RATIO =0.4588E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.4588E-01 RATIO= 0.000
MAX UN= 9.390 IEQ= 99 NODE 50 DOF 1 Y-DISPL.F
MIN UN=-.7008E-09 IEQ= 10 NODE 5 DOF 2 X-ROT. F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 1446. REMNOR=0.1091E-15 RATIO =0.3130E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.3130E-01 RATIO= 0.000
MAX UN= 21.25 IEQ= 103 NODE 52 DOF 1 Y-DISPL.F
MIN UN=-.7316E-07 IEQ= 39 NODE 20 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 72.27 REMNOR=0.3615E-16 RATIO =0.6997E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.6997E-02 RATIO= 0.000
MAX UN= 6.874 IEQ= 115 NODE 58 DOF 1 Y-DISPL.F
MIN UN=-.4880E-07 IEQ= 43 NODE 22 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	635 di 731

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ITER      4  RNORM = 2755.      RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM=0.1555E-02 REMNOR=0.5570E-16  RATIO =0.3246E-04  TOLER =0.1000E-03  CONVERGED !
RFMAX = 165.6      RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT      =0.1476E+07  RDR      =0.2603E+08
RATIOT=0.3246E-04  RATIOR= 0.000
MAX UN=0.4317E-07  IEQ=    11  NODE      6  DOF    1  Y-DISPL.F
MIN UN=-.3944E-01  IEQ=   201  NODE     101  DOF    1  Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS      0
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LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 636 di 731
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|          PARATIEPLUS(TM)   NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*
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|                               ParatiePlus
|                               Exe Time :17 November 2022  18:38:05
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New Project
 SOLUTION REACHED USING 4 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 4 (AT TIME 4.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	0.1136639	-9.2340469E-03
2	0.1118171	-9.2340433E-03
3	0.1099703	-9.2340214E-03
4	0.1081235	-9.2339546E-03
5	0.1062767	-9.2338084E-03
6	0.1044300	-9.2335401E-03
7	0.1025833	-9.2330988E-03
8	0.1007368	-9.2324255E-03
9	9.8890386E-02	-9.2314533E-03
10	9.7044223E-02	-9.2301069E-03
11	9.5198374E-02	-9.2283031E-03
12	9.3352939E-02	-9.2259503E-03
13	9.1508037E-02	-9.2229492E-03
14	8.9663810E-02	-9.2191920E-03
15	8.7820419E-02	-9.2145629E-03
16	8.5978051E-02	-9.2089382E-03
17	8.4136909E-02	-9.2021857E-03
18	8.2297252E-02	-9.1941654E-03
19	8.0459337E-02	-9.1847290E-03
20	7.8623465E-02	-9.1737202E-03
21	7.6789974E-02	-9.1609746E-03
22	7.4959212E-02	-9.1463194E-03
23	7.3131586E-02	-9.1295740E-03
24	7.1307534E-02	-9.1105496E-03
25	6.9487531E-02	-9.0890492E-03
26	6.7672093E-02	-9.0648678E-03
27	6.5861786E-02	-9.0377924E-03
28	6.4057193E-02	-9.0076014E-03
29	6.2258969E-02	-8.9740654E-03
30	6.0467806E-02	-8.9369471E-03
31	5.8684445E-02	-8.8960006E-03
32	5.6909687E-02	-8.8509545E-03
33	5.5144365E-02	-8.8015078E-03
34	5.3389399E-02	-8.7473482E-03
35	5.1645762E-02	-8.6881504E-03
36	4.9914497E-02	-8.6235771E-03
37	4.8196721E-02	-8.5532785E-03
38	4.6493600E-02	-8.4768918E-03
39	4.4806396E-02	-8.3940423E-03
40	4.3136440E-02	-8.3043431E-03
41	4.1485142E-02	-8.2073945E-03
42	3.9853993E-02	-8.1027845E-03
43	3.8244557E-02	-7.9902314E-03
44	3.6658437E-02	-7.8696182E-03
45	3.5097259E-02	-7.7408858E-03
46	3.3562632E-02	-7.6040302E-03
47	3.2056185E-02	-7.4591065E-03
48	3.0579520E-02	-7.3062263E-03
49	2.9134214E-02	-7.1455584E-03
50	2.7721808E-02	-6.9773294E-03
51	2.6343774E-02	-6.8018207E-03
52	2.5001509E-02	-6.6193685E-03
53	2.3696488E-02	-6.4304615E-03
54	2.2429782E-02	-6.2356726E-03
55	2.1202568E-02	-6.0356570E-03
56	2.0015821E-02	-5.8311107E-03
57	1.8870376E-02	-5.6227793E-03
58	1.7766909E-02	-5.4114582E-03
59	1.6705936E-02	-5.1979927E-03
60	1.5687795E-02	-4.9832778E-03
61	1.4712645E-02	-4.7682561E-03



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	637 di 731

62	1.3780452E-02	-4.5538546E-03
63	1.2891005E-02	-4.3409271E-03
64	1.2043930E-02	-4.1302571E-03
65	1.1238704E-02	-3.9225612E-03
66	1.0474664E-02	-3.7184920E-03
67	9.7510256E-03	-3.5186416E-03
68	9.0668904E-03	-3.3235444E-03
69	8.4212589E-03	-3.1336803E-03
70	7.8130408E-03	-2.9494777E-03
71	7.2410651E-03	-2.7713159E-03
72	6.7040895E-03	-2.5995287E-03
73	6.2008093E-03	-2.4344062E-03
74	5.7298661E-03	-2.2761982E-03
75	5.2898550E-03	-2.1251161E-03
76	4.8793328E-03	-1.9813357E-03
77	4.4968245E-03	-1.8449991E-03
78	4.1408296E-03	-1.7162173E-03
79	3.8098285E-03	-1.5950719E-03
80	3.5022881E-03	-1.4816167E-03
81	3.2166677E-03	-1.3758724E-03
82	2.9514262E-03	-1.2778225E-03
83	2.7050292E-03	-1.1874159E-03
84	2.4759558E-03	-1.1045690E-03
85	2.2627052E-03	-1.0291683E-03
86	2.0638015E-03	-9.6107235E-04
87	1.8778004E-03	-9.0011313E-04
88	1.7032934E-03	-8.4609692E-04
89	1.5389142E-03	-7.9879242E-04
90	1.3833400E-03	-7.5791899E-04
91	1.2353313E-03	-7.2315703E-04
92	1.0936943E-03	-6.9413788E-04
93	9.5732049E-04	-6.7045416E-04
94	8.2518676E-04	-6.5165910E-04
95	6.9636327E-04	-6.3726780E-04
96	5.7002086E-04	-6.2675822E-04
97	4.4543843E-04	-6.1957197E-04
98	3.2201013E-04	-6.1511485E-04
99	1.9925252E-04	-6.1275723E-04
100	7.6811593E-05	-6.1183430E-04
101	-4.5530189E-05	-6.1164621E-04

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	639 di 731

18 D	3.010	-8.2297E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	3.187	-8.0459E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	3.365	-7.8623E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	3.542	-7.6790E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	3.719	-7.4959E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	3.896	-7.3132E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	4.073	-7.1308E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	4.250	-6.9488E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	4.427	-6.7672E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	4.604	-6.5862E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	4.781	-6.4057E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	4.958	-6.2259E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	5.135	-6.0468E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	6.480	-5.8684E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	6.796	-5.6910E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	7.111	-5.5144E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	7.426	-5.3389E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	7.741	-5.1646E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	8.056	-4.9914E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	8.371	-4.8197E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	8.687	-4.6494E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	9.002	-4.4806E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	9.317	-4.3136E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	9.632	-4.1485E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	9.947	-3.9854E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	10.26	-3.8245E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	10.58	-3.6658E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	640 di 731
1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	10.89	-3.5097E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	11.21	-3.3563E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	11.52	-3.2056E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	11.84	-3.0580E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	12.15	-2.9134E-02	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	12.47	-2.7722E-02	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	12.78	-2.6344E-02	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	11.93	-2.5002E-02	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	12.29	-2.3696E-02	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	12.65	-2.2430E-02	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	13.00	-2.1203E-02	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	13.36	-2.0016E-02	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	13.71	-1.8870E-02	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	14.07	-1.7767E-02	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	14.42	-1.6706E-02	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	14.78	-1.5688E-02	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	15.14	-1.4713E-02	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	15.49	-1.3780E-02	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	15.85	-1.2891E-02	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	16.20	-1.2044E-02	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	16.56	-1.1239E-02	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	16.92	-1.0475E-02	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	17.27	-9.7510E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	17.63	-9.0669E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	17.98	-8.4213E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	18.34	-7.8130E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 643 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:05                                                                 |
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	645 di 731
58 D	47.34	1.7767E-02	68.70	236.7	222.8	236.7	PASSIVE	0.000	-11.40	0.000	1.000
1.000	236.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	49.39	1.6706E-02	72.80	246.9	226.9	246.9	PASSIVE	0.000	-11.60	0.000	1.000
1.000	246.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	51.27	1.5688E-02	76.90	256.3	231.0	256.3	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	256.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	49.29	1.4713E-02	81.00	246.5	235.1	246.5	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	246.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	47.42	1.3780E-02	85.10	237.1	239.2	237.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	237.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	45.65	1.2891E-02	89.20	228.3	243.3	228.3	V-C	1.2176E+04	-12.40	0.000	1.000
1.000	228.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	43.99	1.2044E-02	93.30	219.9	247.4	219.9	V-C	1.2176E+04	-12.60	0.000	1.000
1.000	219.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	42.42	1.1239E-02	97.40	212.1	251.5	212.1	V-C	1.2176E+04	-12.80	0.000	1.000
1.000	212.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	40.96	1.0475E-02	101.5	204.8	255.6	204.8	V-C	1.2176E+04	-13.00	0.000	1.000
1.000	204.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	39.60	9.7510E-03	105.6	198.0	259.7	198.0	V-C	1.2176E+04	-13.20	0.000	1.000
1.000	198.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	38.33	9.0669E-03	109.7	191.6	263.8	191.6	V-C	1.2176E+04	-13.40	0.000	1.000
1.000	191.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	37.15	8.4213E-03	113.8	185.8	267.9	185.8	V-C	1.2176E+04	-13.60	0.000	1.000
1.000	185.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	36.07	7.8130E-03	117.9	180.3	272.0	180.3	V-C	1.2176E+04	-13.80	0.000	1.000
1.000	180.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	35.07	7.2411E-03	122.0	175.4	276.1	175.4	V-C	1.2176E+04	-14.00	0.000	1.000
1.000	175.4	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	34.16	6.7041E-03	126.1	170.8	280.2	170.8	V-C	1.2176E+04	-14.20	0.000	1.000
1.000	170.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	33.34	6.2008E-03	130.2	166.7	284.3	166.7	V-C	1.2176E+04	-14.40	0.000	1.000
1.000	166.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	32.59	5.7299E-03	134.3	162.9	288.4	162.9	V-C	1.2176E+04	-14.60	0.000	1.000
1.000	162.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	31.91	5.2899E-03	138.4	159.6	292.5	159.6	V-C	1.2176E+04	-14.80	0.000	1.000
1.000	159.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	31.31	4.8793E-03	142.5	156.6	296.6	156.6	V-C	1.2176E+04	-15.00	0.000	1.000
1.000	156.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	30.78	4.4968E-03	146.6	153.9	300.7	153.9	V-C	1.2176E+04	-15.20	0.000	1.000
1.000	153.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	30.31	4.1408E-03	150.7	151.5	304.8	151.5	V-C	1.2176E+04	-15.40	0.000	1.000
1.000	151.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	29.86	3.8098E-03	154.8	149.3	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	149.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	29.06	3.5023E-03	158.9	145.3	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	145.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	28.34	3.2167E-03	163.0	141.7	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	141.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	27.71	2.9514E-03	167.1	138.5	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	138.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	27.15	2.7050E-03	171.2	135.7	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	135.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	26.65	2.4760E-03	175.3	133.3	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	646 di 731

1.000	133.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	26.22	2.2627E-03	179.4	131.1	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	131.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	25.84	2.0638E-03	183.5	129.2	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	129.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	25.51	1.8778E-03	187.6	127.6	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	127.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	25.23	1.7033E-03	191.7	126.2	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	126.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	24.99	1.5389E-03	195.8	124.9	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	124.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	24.78	1.3833E-03	199.9	123.9	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	123.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.60	1.2353E-03	204.0	123.0	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	123.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.45	1.0937E-03	208.1	122.2	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.31	9.5732E-04	212.2	121.6	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	121.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	24.20	8.2519E-04	216.3	121.0	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	121.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	24.09	6.9636E-04	220.4	120.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	120.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	24.00	5.7002E-04	224.5	120.0	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	120.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	23.91	4.4544E-04	228.6	119.5	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	119.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	23.83	3.2201E-04	232.7	119.1	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	119.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	23.75	1.9925E-04	236.8	118.7	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	118.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	23.67	7.6812E-05	240.9	118.3	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	118.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	11.79	-4.5530E-05	245.0	117.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	117.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 647 di 731
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| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
| |
| ParatiePlus |
Exe Time :17 November 2022 18:38:05

New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.23020	-0.23020	7.34616E-10	4.60400E-02
2	0.95192	-0.95192	-4.60400E-02	0.23642
3	1.9350	-1.9350	-0.23642	0.62342
4	3.1793	-3.1793	-0.62342	1.2593
5	4.6850	-4.6850	-1.2593	2.1963
6	6.4520	-6.4520	-2.1963	3.4867
7	8.4803	-8.4803	-3.4867	5.1827
8	10.770	-10.770	-5.1827	7.3367
9	13.321	-13.321	-7.3367	10.001
10	16.133	-16.133	-10.001	13.228
11	19.207	-19.207	-13.228	17.069
12	22.542	-22.542	-17.069	21.577
13	26.138	-26.138	-21.577	26.805
14	29.996	-29.996	-26.805	32.804
15	34.114	-34.114	-32.804	39.627
16	38.495	-38.495	-39.627	47.326
17	43.136	-43.136	-47.326	55.953
18	48.039	-48.039	-55.953	65.561
19	53.203	-53.203	-65.561	76.201
20	58.629	-58.629	-76.201	87.927
21	64.315	-64.315	-87.927	100.79
22	70.264	-70.264	-100.79	114.84
23	76.473	-76.473	-114.84	130.14
24	82.944	-82.944	-130.14	146.73
25	89.676	-89.676	-146.73	164.66
26	96.669	-96.669	-164.66	184.00
27	103.92	-103.92	-184.00	204.78
28	111.44	-111.44	-204.78	227.07
29	119.22	-119.22	-227.07	250.91
30	127.26	-127.26	-250.91	276.36
31	136.72	-136.72	-276.36	303.71
32	146.59	-146.59	-303.71	333.03
33	156.86	-156.86	-333.03	364.40
34	167.52	-167.52	-364.40	397.90
35	178.59	-178.59	-397.90	433.62
36	190.05	-190.05	-433.62	471.63
37	201.92	-201.92	-471.63	512.01
38	214.18	-214.18	-512.01	554.85
39	226.85	-226.85	-554.85	600.22
40	239.91	-239.91	-600.22	648.20
41	253.37	-253.37	-648.20	698.88
42	258.06	-258.06	-698.88	750.49
43	260.90	-260.90	-750.49	802.67
44	261.91	-261.91	-802.67	855.05
45	261.07	-261.07	-855.05	907.26
46	258.40	-258.40	-907.26	958.94
47	253.89	-253.89	-958.94	1009.7
48	247.54	-247.54	-1009.7	1059.2
49	239.34	-239.34	-1059.2	1107.1
50	229.32	-229.32	-1107.1	1153.0
51	217.45	-217.45	-1153.0	1196.4
52	199.06	-199.06	-1196.4	1236.3
53	179.06	-179.06	-1236.3	1272.1
54	157.46	-157.46	-1272.1	1303.6
55	134.26	-134.26	-1303.6	1330.4
56	109.45	-109.45	-1330.4	1352.3
57	83.041	-83.041	-1352.3	1368.9

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	648 di 731

58	55.027	-55.027	-1368.9	1379.9
59	25.410	-25.410	-1379.9	1385.0
60	-5.6477	5.6477	-1385.0	1383.9
61	-34.288	34.288	-1383.9	1377.0
62	-60.616	60.616	-1377.0	1364.9
63	-84.736	84.736	-1364.9	1347.9
64	-106.75	106.75	-1347.9	1326.6
65	-126.76	126.76	-1326.6	1301.2
66	-144.87	144.87	-1301.2	1272.3
67	-161.17	161.17	-1272.3	1240.0
68	-175.77	175.77	-1240.0	1204.9
69	-188.75	188.75	-1204.9	1167.1
70	-200.20	200.20	-1167.1	1127.1
71	-210.22	210.22	-1127.1	1085.0
72	-218.89	218.89	-1085.0	1041.3
73	-226.30	226.30	-1041.3	996.01
74	-232.51	232.51	-996.01	949.50
75	-237.61	237.61	-949.50	901.98
76	-241.67	241.67	-901.98	853.65
77	-244.75	244.75	-853.65	804.70
78	-246.93	246.93	-804.70	755.31
79	-248.21	248.21	-755.31	705.67
80	-248.26	248.26	-705.67	656.02
81	-247.15	247.15	-656.02	606.59
82	-244.97	244.97	-606.59	557.59
83	-241.78	241.78	-557.59	509.24
84	-237.66	237.66	-509.24	461.71
85	-232.66	232.66	-461.71	415.18
86	-226.85	226.85	-415.18	369.81
87	-220.19	220.19	-369.81	325.77
88	-211.95	211.95	-325.77	283.38
89	-202.24	202.24	-283.38	242.93
90	-191.11	191.11	-242.93	204.71
91	-178.64	178.64	-204.71	168.98
92	-164.88	164.88	-168.98	136.00
93	-149.88	149.88	-136.00	106.03
94	-133.66	133.66	-106.03	79.293
95	-116.27	116.27	-79.293	56.040
96	-97.709	97.709	-56.040	36.498
97	-78.008	78.008	-36.498	20.897
98	-57.170	57.170	-20.897	9.4627
99	-35.204	35.204	-9.4627	2.4220
100	-12.110	12.110	-2.4220	6.42331E-12



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	649 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                               |
|                                                                                               Exe Time :17 November 2022 18:38:05                                                                                               |
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F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	2
3	CONVERGENCE :YES	6
4	CONVERGENCE :YES	4

END OF PROCESS FOR PROBLEM
New Project
NONLINEAR SOLUTION CPU TIME 0.08 [sec]
DATABASE CREATION CPU TIME..... 0.38 [sec]



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	650 di 731

9.11. Design Assumption : NTC2018: SISMICA GEO - File di Paratie - File di input (.d)

* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: SISMICA GEO

* Time:giovedì 17 novembre 2022 18:38:06

* 1: Defining general settings

UNIT m kN

TITLE New Project

DELTA 0.2

option param itemax 40

option control contact lagrange

option control hinges 0 0.0001 0.001

* 2: Defining wall(s)

WALL LeftWall_910 0 -20 0 1

* 3: Defining surfaces for wall(s)

SOIL 0_L LeftWall_910 -20 0 1 0

SOIL 0_R LeftWall_910 -20 0 2 180

* 4: Defining soil layers

*

* Soil Profile (Arenariepococementate_2_12_L_0)

*

LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910

ATREST 0.4 0.5 0

WEIGHT 19 9 10

PERMEABILITY 5E-05

RESISTANCE 0 37 0 0 0

TZDATA LINEAR 10000 0 25 0.5 0

KSCALE 0 0

YOUNG 20000 32000

ENDL

*

* Soil Profile (Argillamarnosal_1057_1068_L_0)

*

LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910

ATREST 0.562 0.5 1

WEIGHT 20 10 10

PERMEABILITY 1E-05

RESISTANCE 10 26 0 0 0

TZDATA LINEAR 0 0 0 0.5 0

KSCALE 0 0

YOUNG 90000 1.44E+05

ENDL

*

* Soil Profile (Argillamarnosa_1061_1069_L_0)

*

LDATA Argillamarnosa_1061_1069_L_0 -10 LeftWall_910

ATREST 0.485 0 1

WEIGHT 20.5 10.5 10

PERMEABILITY 5E-05

RESISTANCE 20 24 0 0 0

TZDATA LINEAR 0 0 0 0.5 0

KSCALE 0 0

YOUNG 1E+05 1.6E+05

ENDL

* 5: Defining structural materials

* Steel material: 988 Name=Fe360 E=206000200 kPa

MATERIAL Fe360_988 2.06E+08

* Concrete material: 984 Name=C25/30 E=31475800 kPa

MATERIAL C2530_984 3.1476E+07

* 6: Defining structural elements

* 6.1: Beams and combined Wall Elements

** rev 2021 and later

BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0

* 6.2: Supports



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	651 di 731

* 6.3: Strips

* 7: Defining Steps

```

STEP Stage0_3964977
CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP

STEP Stage1_909
SETWALL LeftWall_910
GEOM 0 0
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ADD WallElement_911
ENDSTEP

STEP Stage2_1078
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
ENDSTEP

STEP Stage3_3941534
SETWALL LeftWall_910
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -40 0 -20 0 0
CHANGE Arenariepococementate_2_12_L_0 U-KAED=0.35322 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KAEW=0.53946 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KPED=10.991 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 U-KPEW=10.24 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KAED=0.27146 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KAEW=0.4044 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KPED=5.696 LeftWall_910
CHANGE Arenariepococementate_2_12_L_0 D-KPEW=4.8732 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KAED=0.59404 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KAEW=1.1988 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KPED=4.7791 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 U-KPEW=4.4184 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KAED=0.41648 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KAEW=0.58754 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KPED=2.7982 LeftWall_910
CHANGE Argillamarnosal_1057_1068_L_0 D-KPEW=2.2962 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KAED=0.66041 LeftWall_910

```



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	652 di 731

```
CHANGE Argillamarnosa_1061_1069_L_0 U-KAEW=1.1977 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KPED=4.1808 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 U-KPEW=3.8704 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KAED=0.44995 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KAEW=0.62658 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KPED=2.4924 LeftWall_910
CHANGE Argillamarnosa_1061_1069_L_0 D-KPEW=2.0341 LeftWall_910
EQK USER 0.1407 0.07035 -0.07035 11.31 0.667 0 0.5 0 0
* Defining seismic surcharge pressures on wall LeftWall_910
*   min elevation = -20
*   max elevation = 0
*   average gamma = 19,955
*   kh = 0,1407
*   deltaQ = 421,150275
DLOAD step LeftWall_910 -20 42.115 0 0
* Include pressure contribution from wall: LeftWall_910
* Include wall contribution
DLOAD step LeftWall_910 -20 2.3022 0 2.3022
ENDSTEP
```

9.12. Design Assumption : NTC2018: SISMICA GEO - File di Paratie - File di output (.out)

```
-----+-----
|          PARATIEPLUS(TM)   NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                     |
|                               ParatiePlus                               |
|                               Exe Time :17 November 2022  18:38:06    |
|                                                                     |
|-----+-----
```

```
*****
*
*  PARATIE PLUS Non-Linear Spring Engine
*
*          AN ELASTOPLASTIC FINITE ELEMENT PROGRAM
*          FOR FLEXIBLE EARTH-RETAINING STRUCTURES
*
*
*****
*
*  RELEASE  2022.0.0  *Build date:Jan 24, 2022*
*
*
*  HARPACEAS S.R.L
*          M I L A N O  (ITALY)
*****
```

```
JOB : ParatiePlus
STARTING
ACCEPTED <<FILE,GENW >>
ACCEPTED <<FILE,PLOTTER,BINARY >>
ACCEPTED <<SOLVE TOTAL_STRESS >>
ACCEPTED <<PARAM ITEMAX 40 >>
ACCEPTED <<CONTROL CONTACT LAGRANGE >>
ACCEPTED <<CONTROL HINGES 0 0.0001 0.001 >>
```

```
*****
*
*  WARNING : PORE PRESSURES ARE AUTOMATICALLY COMPUTED
*           BY THE PROGRAM.
*****
```

PRELIMINARY OPERATIONS CPU TIME 0.00 [sec]



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	653 di 731

```

-----
|                 PARATIEPLUS(TM)   NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*  |
|                                                                                                       |
|                                           ParatiePlus                                            |
|                                                                                                       |
|                 Exe Time :17 November 2022  18:38:06                                          |
|                                                                                                       |
-----

```

INPUT FILE HAS BEEN GENERATED BY WALGEN PROGRAM

New Project

NO. OF NODAL POINTS (NUMNP)	101
NO. OF COORDINATES (NCOORD)	2
NO. OF NODE DOFS (NDOF)	2
NO. OF EQUATIONS (NEQ)	202
NO. OF CONSTRAINTS CARDS (NVINC)	0
NO. OF ELEMENT GROUPS (NEG)	3
NO. OF SOLUTION STEPS (NSTE)	4
NO. OF ELEMENT SETS ATTACHED TO SLAVE NODES	0
NO. OF RECORD FROM WALGEN	121
NO. OF LONG NAMES (LASTNAME)	17
LENGTH UNIT CHOICE	3 (M)
FORCE UNIT CHOICE	3 (KN)
MAX PORE PRESSURE TABLE LENGTH	1
MAX INELASTIC DISPL. TABLE LENGTH	0
NO. OF ELEMENT GROUPS REQUIRING ADD. SLIP DOF	0

IDOFA (01) = 2 Y-DISPL.F
IDOFA (02) = 4 X-ROT. F

RELEVANT ITEMS UNITS

STRESSES	kPa
Y-DISPLACEMENTS	m
ROTATIONS	RADIANS
BEAM AND SLAB MOMENTS	kN*m/m
BEAM SHEAR FORCES	kN/m
ANCHOR FORCES	kN/m
AXIAL FORCES IN TRUSSES	kN/m
AXIAL FORCES SPRINGS	kN/m
Y-REACTIONS	kN/m
X-MOMENT REACTIONS	kN*m/m
ETC.	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	654 di 731

| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
| |
| ParatiePlus |
| Exe Time :17 November 2022 18:38:06 |

P R E P R O C E S S O R D A T A

N O . O F C O M M A N D S 121

1 : UNIT m kN
2 : TITLE New Project
3 : DELTA 0.2
4 : option param itemax 40
5 : option control contact lagrange
6 : option control hinges 0 0.0001 0.001
7 : WALL LeftWall_910 0 -20 0 1
8 : SOIL 0_L LeftWall_910 -20 0 1 0
9 : SOIL 0_R LeftWall_910 -20 0 2 180
10 : LDATA Arenariepococementate_2_12_L_0 10 LeftWall_910
11 : ATREST 0.4 0.5 0
12 : WEIGHT 19 9 10
13 : PERMEABILITY 5E-05
14 : RESISTANCE 0 37 0 0 0
15 : TZDATA LINEAR 10000 0 25 0.5 0
16 : KSCALE 0 0
17 : YOUNG 20000 32000
18 : ENDL
19 : LDATA Argillamarnosal_1057_1068_L_0 -5.9 LeftWall_910
20 : ATREST 0.562 0.5 1
21 : WEIGHT 20 10 10
22 : PERMEABILITY 1E-05
23 : RESISTANCE 10 26 0 0 0
24 : TZDATA LINEAR 0 0 0 0.5 0
25 : KSCALE 0 0
26 : YOUNG 90000 1.44E+05
27 : ENDL
28 : LDATA Argillamarnosa_1061_1069_L_0 -10 LeftWall_910
29 : ATREST 0.485 0 1
30 : WEIGHT 20.5 10.5 10
31 : PERMEABILITY 5E-05
32 : RESISTANCE 20 24 0 0 0
33 : TZDATA LINEAR 0 0 0 0.5 0
34 : KSCALE 0 0
35 : YOUNG 1E+05 1.6E+05
36 : ENDL
37 : MATERIAL Fe360_988 2.06E+08
38 : MATERIAL C2530_984 3.1476E+07
39 : BEAM WallElement_911 LeftWall_910 -20 0 C2530_984 0.78884 0.6545 0.040906 16.362 00 00 0
40 : STEP Stage0_3964977
41 : CHANGE Arenariepococementate_2_12_L_0 U-FRICT=37 LeftWall_910
42 : CHANGE Arenariepococementate_2_12_L_0 D-FRICT=37 LeftWall_910
43 : CHANGE Arenariepococementate_2_12_L_0 U-KA=0.233 LeftWall_910
44 : CHANGE Arenariepococementate_2_12_L_0 U-KP=10.673 LeftWall_910
45 : CHANGE Arenariepococementate_2_12_L_0 D-KA=0.205 LeftWall_910
46 : CHANGE Arenariepococementate_2_12_L_0 D-KP=6.738 LeftWall_910
47 : CHANGE Argillamarnosal_1057_1068_L_0 U-FRICT=26 LeftWall_910
48 : CHANGE Argillamarnosal_1057_1068_L_0 D-FRICT=26 LeftWall_910
49 : CHANGE Argillamarnosal_1057_1068_L_0 U-KA=0.394 LeftWall_910
50 : CHANGE Argillamarnosal_1057_1068_L_0 U-KP=4.676 LeftWall_910
51 : CHANGE Argillamarnosal_1057_1068_L_0 D-KA=0.331 LeftWall_910
52 : CHANGE Argillamarnosal_1057_1068_L_0 D-KP=3.404 LeftWall_910
53 : CHANGE Argillamarnosa_1061_1069_L_0 U-FRICT=24 LeftWall_910
54 : CHANGE Argillamarnosa_1061_1069_L_0 D-FRICT=24 LeftWall_910
55 : CHANGE Argillamarnosa_1061_1069_L_0 U-KA=0.434 LeftWall_910
56 : CHANGE Argillamarnosa_1061_1069_L_0 U-KP=4.096 LeftWall_910
57 : CHANGE Argillamarnosa_1061_1069_L_0 D-KA=0.36 LeftWall_910
58 : CHANGE Argillamarnosa_1061_1069_L_0 D-KP=3.051 LeftWall_910
59 : CHANGE Arenariepococementate_2_12_L_0 U-COHE=0 LeftWall_910
60 : CHANGE Arenariepococementate_2_12_L_0 U-ADHES=0 LeftWall_910
61 : CHANGE Arenariepococementate_2_12_L_0 D-COHE=0 LeftWall_910
62 : CHANGE Arenariepococementate_2_12_L_0 D-ADHES=0 LeftWall_910
63 : CHANGE Argillamarnosal_1057_1068_L_0 U-COHE=10 LeftWall_910
64 : CHANGE Argillamarnosal_1057_1068_L_0 U-ADHES=0 LeftWall_910
65 : CHANGE Argillamarnosal_1057_1068_L_0 D-COHE=10 LeftWall_910
66 : CHANGE Argillamarnosal_1057_1068_L_0 D-ADHES=0 LeftWall_910



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	655 di 731

```

67 : CHANGE Argillamarnosa_1061_1069_L_0 U-COHE=20 LeftWall_910
68 : CHANGE Argillamarnosa_1061_1069_L_0 U-ADHES=0 LeftWall_910
69 : CHANGE Argillamarnosa_1061_1069_L_0 D-COHE=20 LeftWall_910
70 : CHANGE Argillamarnosa_1061_1069_L_0 D-ADHES=0 LeftWall_910
71 : SETWALL LeftWall_910
72 : GEOM 0 0
73 : SURCHARGE 0 0 0 0
74 : WATER -40 0 -20 0 0
75 : ENDSTEP
76 : STEP Stage1_909
77 : SETWALL LeftWall_910
78 : GEOM 0 0
79 : SURCHARGE 0 0 0 0
80 : WATER -40 0 -20 0 0
81 : ADD WallElement_911
82 : ENDSTEP
83 : STEP Stage2_1078
84 : SETWALL LeftWall_910
85 : GEOM 0 -8
86 : SURCHARGE 0 0 0 0
87 : WATER -40 0 -20 0 0
88 : ENDSTEP
89 : STEP Stage3_3941534
90 : SETWALL LeftWall_910
91 : GEOM 0 -8
92 : SURCHARGE 0 0 0 0
93 : WATER -40 0 -20 0 0
94 : CHANGE Arenariepococementate_2_12_L_0 U-KAED=0.35322 LeftWall_910
95 : CHANGE Arenariepococementate_2_12_L_0 U-KAEW=0.53946 LeftWall_910
96 : CHANGE Arenariepococementate_2_12_L_0 U-KPED=10.991 LeftWall_910
97 : CHANGE Arenariepococementate_2_12_L_0 U-KPEW=10.24 LeftWall_910
98 : CHANGE Arenariepococementate_2_12_L_0 D-KAED=0.27146 LeftWall_910
99 : CHANGE Arenariepococementate_2_12_L_0 D-KAEW=0.4044 LeftWall_910
100 : CHANGE Arenariepococementate_2_12_L_0 D-KPED=5.696 LeftWall_910
101 : CHANGE Arenariepococementate_2_12_L_0 D-KPEW=4.8732 LeftWall_910
102 : CHANGE Argillamarnosal_1057_1068_L_0 U-KAED=0.59404 LeftWall_910
103 : CHANGE Argillamarnosal_1057_1068_L_0 U-KAEW=1.1988 LeftWall_910
104 : CHANGE Argillamarnosal_1057_1068_L_0 U-KPED=4.7791 LeftWall_910
105 : CHANGE Argillamarnosal_1057_1068_L_0 U-KPEW=4.4184 LeftWall_910
106 : CHANGE Argillamarnosal_1057_1068_L_0 D-KAED=0.41648 LeftWall_910
107 : CHANGE Argillamarnosal_1057_1068_L_0 D-KAEW=0.58754 LeftWall_910
108 : CHANGE Argillamarnosal_1057_1068_L_0 D-KPED=2.7982 LeftWall_910
109 : CHANGE Argillamarnosal_1057_1068_L_0 D-KPEW=2.2962 LeftWall_910
110 : CHANGE Argillamarnosa_1061_1069_L_0 U-KAED=0.66041 LeftWall_910
111 : CHANGE Argillamarnosa_1061_1069_L_0 U-KAEW=1.1977 LeftWall_910
112 : CHANGE Argillamarnosa_1061_1069_L_0 U-KPED=4.1808 LeftWall_910
113 : CHANGE Argillamarnosa_1061_1069_L_0 U-KPEW=3.8704 LeftWall_910
114 : CHANGE Argillamarnosa_1061_1069_L_0 D-KAED=0.44995 LeftWall_910
115 : CHANGE Argillamarnosa_1061_1069_L_0 D-KAEW=0.62658 LeftWall_910
116 : CHANGE Argillamarnosa_1061_1069_L_0 D-KPED=2.4924 LeftWall_910
117 : CHANGE Argillamarnosa_1061_1069_L_0 D-KPEW=2.0341 LeftWall_910
118 : EQK USER 0.1407 0.07035 -0.07035 11.31 0.667 0 0.5 0 0
119 : DLOAD step LeftWall_910 -20 42.115 0 0
120 : DLOAD step LeftWall_910 -20 2.3022 0 2.3022
121 : ENDSTEP

```




LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	657 di 731

```
-----+-----+-----+
|                PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*    |
|                                                                                                                                                  |
|                                ParatiePlus                                                                 |
|                                Exe Time :17 November 2022  18:38:06                                     |
|                                                                                                                                                  |
|-----+-----+-----+
ELEMENT GROUP NO.  1
```

```
0_L      :
_5 101   0  1  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0  0
```

.....2D PLASTIC SOIL

element group behaviour throughout stage analysis

stage	status
-----	-----
1	active
2	active
3	active
4	active

material set no. 1

prop(1) angle 0.00000
prop(2) layer as foreseen 1.00000

material set no. 2

prop(1) angle 0.00000
prop(2) layer as foreseen 2.00000

material set no. 3

prop(1) angle 0.00000
prop(2) layer as foreseen 3.00000

element data

el	n	mat	area	.....	.....	.....	flag
-----	-----	-----	-----	-----	-----	-----	-----
1	1	1	0.1000	0.000	0.000	0.000	1.000
2	2	1	0.2000	0.000	0.000	0.000	1.000
3	3	1	0.2000	0.000	0.000	0.000	1.000
4	4	1	0.2000	0.000	0.000	0.000	1.000
5	5	1	0.2000	0.000	0.000	0.000	1.000
6	6	1	0.2000	0.000	0.000	0.000	1.000
7	7	1	0.2000	0.000	0.000	0.000	1.000
8	8	1	0.2000	0.000	0.000	0.000	1.000
9	9	1	0.2000	0.000	0.000	0.000	1.000
10	10	1	0.2000	0.000	0.000	0.000	1.000
11	11	1	0.2000	0.000	0.000	0.000	1.000
12	12	1	0.2000	0.000	0.000	0.000	1.000
13	13	1	0.2000	0.000	0.000	0.000	1.000
14	14	1	0.2000	0.000	0.000	0.000	1.000
15	15	1	0.2000	0.000	0.000	0.000	1.000
16	16	1	0.2000	0.000	0.000	0.000	1.000
17	17	1	0.2000	0.000	0.000	0.000	1.000
18	18	1	0.2000	0.000	0.000	0.000	1.000
19	19	1	0.2000	0.000	0.000	0.000	1.000
20	20	1	0.2000	0.000	0.000	0.000	1.000
21	21	1	0.2000	0.000	0.000	0.000	1.000
22	22	1	0.2000	0.000	0.000	0.000	1.000
23	23	1	0.2000	0.000	0.000	0.000	1.000
24	24	1	0.2000	0.000	0.000	0.000	1.000
25	25	1	0.2000	0.000	0.000	0.000	1.000
26	26	1	0.2000	0.000	0.000	0.000	1.000
27	27	1	0.2000	0.000	0.000	0.000	1.000
28	28	1	0.2000	0.000	0.000	0.000	1.000
29	29	1	0.2000	0.000	0.000	0.000	1.000
30	30	1	0.2000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	658 di 731

31	31	2	0.2000	0.000	0.000	0.000	1.000
32	32	2	0.2000	0.000	0.000	0.000	1.000
33	33	2	0.2000	0.000	0.000	0.000	1.000
34	34	2	0.2000	0.000	0.000	0.000	1.000
35	35	2	0.2000	0.000	0.000	0.000	1.000
36	36	2	0.2000	0.000	0.000	0.000	1.000
37	37	2	0.2000	0.000	0.000	0.000	1.000
38	38	2	0.2000	0.000	0.000	0.000	1.000
39	39	2	0.2000	0.000	0.000	0.000	1.000
40	40	2	0.2000	0.000	0.000	0.000	1.000
41	41	2	0.2000	0.000	0.000	0.000	1.000
42	42	2	0.2000	0.000	0.000	0.000	1.000
43	43	2	0.2000	0.000	0.000	0.000	1.000
44	44	2	0.2000	0.000	0.000	0.000	1.000
45	45	2	0.2000	0.000	0.000	0.000	1.000
46	46	2	0.2000	0.000	0.000	0.000	1.000
47	47	2	0.2000	0.000	0.000	0.000	1.000
48	48	2	0.2000	0.000	0.000	0.000	1.000
49	49	2	0.2000	0.000	0.000	0.000	1.000
50	50	2	0.2000	0.000	0.000	0.000	1.000
51	51	2	0.2000	0.000	0.000	0.000	1.000
52	52	3	0.2000	0.000	0.000	0.000	1.000
53	53	3	0.2000	0.000	0.000	0.000	1.000
54	54	3	0.2000	0.000	0.000	0.000	1.000
55	55	3	0.2000	0.000	0.000	0.000	1.000
56	56	3	0.2000	0.000	0.000	0.000	1.000
57	57	3	0.2000	0.000	0.000	0.000	1.000
58	58	3	0.2000	0.000	0.000	0.000	1.000
59	59	3	0.2000	0.000	0.000	0.000	1.000
60	60	3	0.2000	0.000	0.000	0.000	1.000
61	61	3	0.2000	0.000	0.000	0.000	1.000
62	62	3	0.2000	0.000	0.000	0.000	1.000
63	63	3	0.2000	0.000	0.000	0.000	1.000
64	64	3	0.2000	0.000	0.000	0.000	1.000
65	65	3	0.2000	0.000	0.000	0.000	1.000
66	66	3	0.2000	0.000	0.000	0.000	1.000
67	67	3	0.2000	0.000	0.000	0.000	1.000
68	68	3	0.2000	0.000	0.000	0.000	1.000
69	69	3	0.2000	0.000	0.000	0.000	1.000
70	70	3	0.2000	0.000	0.000	0.000	1.000
71	71	3	0.2000	0.000	0.000	0.000	1.000
72	72	3	0.2000	0.000	0.000	0.000	1.000
73	73	3	0.2000	0.000	0.000	0.000	1.000
74	74	3	0.2000	0.000	0.000	0.000	1.000
75	75	3	0.2000	0.000	0.000	0.000	1.000
76	76	3	0.2000	0.000	0.000	0.000	1.000
77	77	3	0.2000	0.000	0.000	0.000	1.000
78	78	3	0.2000	0.000	0.000	0.000	1.000
79	79	3	0.2000	0.000	0.000	0.000	1.000
80	80	3	0.2000	0.000	0.000	0.000	1.000
81	81	3	0.2000	0.000	0.000	0.000	1.000
82	82	3	0.2000	0.000	0.000	0.000	1.000
83	83	3	0.2000	0.000	0.000	0.000	1.000
84	84	3	0.2000	0.000	0.000	0.000	1.000
85	85	3	0.2000	0.000	0.000	0.000	1.000
86	86	3	0.2000	0.000	0.000	0.000	1.000
87	87	3	0.2000	0.000	0.000	0.000	1.000
88	88	3	0.2000	0.000	0.000	0.000	1.000
89	89	3	0.2000	0.000	0.000	0.000	1.000
90	90	3	0.2000	0.000	0.000	0.000	1.000
91	91	3	0.2000	0.000	0.000	0.000	1.000
92	92	3	0.2000	0.000	0.000	0.000	1.000
93	93	3	0.2000	0.000	0.000	0.000	1.000
94	94	3	0.2000	0.000	0.000	0.000	1.000
95	95	3	0.2000	0.000	0.000	0.000	1.000
96	96	3	0.2000	0.000	0.000	0.000	1.000
97	97	3	0.2000	0.000	0.000	0.000	1.000
98	98	3	0.2000	0.000	0.000	0.000	1.000
99	99	3	0.2000	0.000	0.000	0.000	1.000
100	100	3	0.2000	0.000	0.000	0.000	1.000
101	101	3	0.1000	0.000	0.000	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 659 di 731
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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                                       ParatiePlus                                                                                                       |
|                                                                                                       Exe Time :17 November 2022  18:38:06                                                                                                       |
+-----+
  
```

ELEMENT GROUP NO. 2

```

0_R
 5 101  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  3  0  0  0  0  0
.....
.....2D PLASTIC SOIL .....
.....
  
```

element group behaviour throughout stage analysis

stage status

```

-----
1 active
2 active
3 active
4 active
  
```

material set no. 1

```

prop( 1) angle      180.000
prop( 2) layer as foreseen  1.00000
  
```

material set no. 2

```

prop( 1) angle      180.000
prop( 2) layer as foreseen  2.00000
  
```

material set no. 3

```

prop( 1) angle      180.000
prop( 2) layer as foreseen  3.00000
  
```

element data

el	n	mat	area	.....	.....	.....	flag
1	1	1	0.1000	0.000	0.000	0.000	2.000
2	2	1	0.2000	0.000	0.000	0.000	2.000
3	3	1	0.2000	0.000	0.000	0.000	2.000
4	4	1	0.2000	0.000	0.000	0.000	2.000
5	5	1	0.2000	0.000	0.000	0.000	2.000
6	6	1	0.2000	0.000	0.000	0.000	2.000
7	7	1	0.2000	0.000	0.000	0.000	2.000
8	8	1	0.2000	0.000	0.000	0.000	2.000
9	9	1	0.2000	0.000	0.000	0.000	2.000
10	10	1	0.2000	0.000	0.000	0.000	2.000
11	11	1	0.2000	0.000	0.000	0.000	2.000
12	12	1	0.2000	0.000	0.000	0.000	2.000
13	13	1	0.2000	0.000	0.000	0.000	2.000
14	14	1	0.2000	0.000	0.000	0.000	2.000
15	15	1	0.2000	0.000	0.000	0.000	2.000
16	16	1	0.2000	0.000	0.000	0.000	2.000
17	17	1	0.2000	0.000	0.000	0.000	2.000
18	18	1	0.2000	0.000	0.000	0.000	2.000
19	19	1	0.2000	0.000	0.000	0.000	2.000
20	20	1	0.2000	0.000	0.000	0.000	2.000
21	21	1	0.2000	0.000	0.000	0.000	2.000
22	22	1	0.2000	0.000	0.000	0.000	2.000
23	23	1	0.2000	0.000	0.000	0.000	2.000
24	24	1	0.2000	0.000	0.000	0.000	2.000
25	25	1	0.2000	0.000	0.000	0.000	2.000
26	26	1	0.2000	0.000	0.000	0.000	2.000
27	27	1	0.2000	0.000	0.000	0.000	2.000
28	28	1	0.2000	0.000	0.000	0.000	2.000
29	29	1	0.2000	0.000	0.000	0.000	2.000
30	30	1	0.2000	0.000	0.000	0.000	2.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	660 di 731

31	31	2	0.2000	0.000	0.000	0.000	2.000
32	32	2	0.2000	0.000	0.000	0.000	2.000
33	33	2	0.2000	0.000	0.000	0.000	2.000
34	34	2	0.2000	0.000	0.000	0.000	2.000
35	35	2	0.2000	0.000	0.000	0.000	2.000
36	36	2	0.2000	0.000	0.000	0.000	2.000
37	37	2	0.2000	0.000	0.000	0.000	2.000
38	38	2	0.2000	0.000	0.000	0.000	2.000
39	39	2	0.2000	0.000	0.000	0.000	2.000
40	40	2	0.2000	0.000	0.000	0.000	2.000
41	41	2	0.2000	0.000	0.000	0.000	2.000
42	42	2	0.2000	0.000	0.000	0.000	2.000
43	43	2	0.2000	0.000	0.000	0.000	2.000
44	44	2	0.2000	0.000	0.000	0.000	2.000
45	45	2	0.2000	0.000	0.000	0.000	2.000
46	46	2	0.2000	0.000	0.000	0.000	2.000
47	47	2	0.2000	0.000	0.000	0.000	2.000
48	48	2	0.2000	0.000	0.000	0.000	2.000
49	49	2	0.2000	0.000	0.000	0.000	2.000
50	50	2	0.2000	0.000	0.000	0.000	2.000
51	51	2	0.2000	0.000	0.000	0.000	2.000
52	52	3	0.2000	0.000	0.000	0.000	2.000
53	53	3	0.2000	0.000	0.000	0.000	2.000
54	54	3	0.2000	0.000	0.000	0.000	2.000
55	55	3	0.2000	0.000	0.000	0.000	2.000
56	56	3	0.2000	0.000	0.000	0.000	2.000
57	57	3	0.2000	0.000	0.000	0.000	2.000
58	58	3	0.2000	0.000	0.000	0.000	2.000
59	59	3	0.2000	0.000	0.000	0.000	2.000
60	60	3	0.2000	0.000	0.000	0.000	2.000
61	61	3	0.2000	0.000	0.000	0.000	2.000
62	62	3	0.2000	0.000	0.000	0.000	2.000
63	63	3	0.2000	0.000	0.000	0.000	2.000
64	64	3	0.2000	0.000	0.000	0.000	2.000
65	65	3	0.2000	0.000	0.000	0.000	2.000
66	66	3	0.2000	0.000	0.000	0.000	2.000
67	67	3	0.2000	0.000	0.000	0.000	2.000
68	68	3	0.2000	0.000	0.000	0.000	2.000
69	69	3	0.2000	0.000	0.000	0.000	2.000
70	70	3	0.2000	0.000	0.000	0.000	2.000
71	71	3	0.2000	0.000	0.000	0.000	2.000
72	72	3	0.2000	0.000	0.000	0.000	2.000
73	73	3	0.2000	0.000	0.000	0.000	2.000
74	74	3	0.2000	0.000	0.000	0.000	2.000
75	75	3	0.2000	0.000	0.000	0.000	2.000
76	76	3	0.2000	0.000	0.000	0.000	2.000
77	77	3	0.2000	0.000	0.000	0.000	2.000
78	78	3	0.2000	0.000	0.000	0.000	2.000
79	79	3	0.2000	0.000	0.000	0.000	2.000
80	80	3	0.2000	0.000	0.000	0.000	2.000
81	81	3	0.2000	0.000	0.000	0.000	2.000
82	82	3	0.2000	0.000	0.000	0.000	2.000
83	83	3	0.2000	0.000	0.000	0.000	2.000
84	84	3	0.2000	0.000	0.000	0.000	2.000
85	85	3	0.2000	0.000	0.000	0.000	2.000
86	86	3	0.2000	0.000	0.000	0.000	2.000
87	87	3	0.2000	0.000	0.000	0.000	2.000
88	88	3	0.2000	0.000	0.000	0.000	2.000
89	89	3	0.2000	0.000	0.000	0.000	2.000
90	90	3	0.2000	0.000	0.000	0.000	2.000
91	91	3	0.2000	0.000	0.000	0.000	2.000
92	92	3	0.2000	0.000	0.000	0.000	2.000
93	93	3	0.2000	0.000	0.000	0.000	2.000
94	94	3	0.2000	0.000	0.000	0.000	2.000
95	95	3	0.2000	0.000	0.000	0.000	2.000
96	96	3	0.2000	0.000	0.000	0.000	2.000
97	97	3	0.2000	0.000	0.000	0.000	2.000
98	98	3	0.2000	0.000	0.000	0.000	2.000
99	99	3	0.2000	0.000	0.000	0.000	2.000
100	100	3	0.2000	0.000	0.000	0.000	2.000
101	101	3	0.1000	0.000	0.000	0.000	2.000



**LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	661 di 731

 | PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
 | |
 | ParatiePlus |
Exe Time :17 November 2022 18:38:06

ELEMENT GROUP NO. 3

WallElement_911 :
 2 100 0 1 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0
2D WALL ELEMENT.....

element group behaviour throughout stage analysis

stage	status
1	inactive
2	active
3	active
4	active

material set no. 1

prop(1) young modulus 0.314800E+08
 prop(2) modification time 0.00000
 prop(3) new young modulus 0.00000
 prop(4) poisson ratio 0.00000
 prop(5) future 0.00000

no. of step variable items: 1
 step inertia multiplier

1	1.000
2	1.000
3	1.000
4	1.000

element data

el	na	nb	mat	erc1	erc2	thick	area	inertia	wgt(-z)	by-i	by-j
1	1	2	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
2	2	3	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
3	3	4	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
4	4	5	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
5	5	6	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
6	6	7	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
7	7	8	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
8	8	9	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
9	9	10	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
10	10	11	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
11	11	12	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
12	12	13	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
13	13	14	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
14	14	15	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
15	15	16	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
16	16	17	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
17	17	18	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
18	18	19	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
19	19	20	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
20	20	21	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
21	21	22	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
22	22	23	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
23	23	24	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
24	24	25	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
25	25	26	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
26	26	27	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
27	27	28	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
28	28	29	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
29	29	30	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
30	30	31	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
31	31	32	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
32	32	33	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE
RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	662 di 731

33	33	34	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
34	34	35	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
35	35	36	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
36	36	37	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
37	37	38	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
38	38	39	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
39	39	40	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
40	40	41	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
41	41	42	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
42	42	43	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
43	43	44	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
44	44	45	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
45	45	46	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
46	46	47	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
47	47	48	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
48	48	49	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
49	49	50	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
50	50	51	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
51	51	52	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
52	52	53	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
53	53	54	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
54	54	55	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
55	55	56	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
56	56	57	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
57	57	58	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
58	58	59	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
59	59	60	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
60	60	61	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
61	61	62	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
62	62	63	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
63	63	64	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
64	64	65	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
65	65	66	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
66	66	67	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
67	67	68	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
68	68	69	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
69	69	70	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
70	70	71	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
71	71	72	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
72	72	73	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
73	73	74	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
74	74	75	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
75	75	76	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
76	76	77	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
77	77	78	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
78	78	79	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
79	79	80	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
80	80	81	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
81	81	82	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
82	82	83	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
83	83	84	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
84	84	85	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
85	85	86	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
86	86	87	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
87	87	88	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
88	88	89	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
89	89	90	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
90	90	91	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
91	91	92	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
92	92	93	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
93	93	94	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
94	94	95	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
95	95	96	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
96	96	97	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
97	97	98	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
98	98	99	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
99	99	100	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000
100	100	101	1	0.000	0.000	0.7888	0.6545	0.4091E-01	16.36	0.000	0.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	663 di 731

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+-----+
| PARATIEPLUS(TM) NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                       |
|                               ParatiePlus                                           |
|                               Exe Time :17 November 2022 18:38:06                   |
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NO. OF NODAL LOADS (NLOAD) 0
NO. OF LOAD CURVES (NLCUR) 8
MAXIMUM POINTS/LCURVE (NPTM) 5



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	664 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022 18:38:06                                                                 |
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L O A D D A T A

LOAD FUNCTION NUMBER = 1
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
1.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 2
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
2.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 3
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
3.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 4
NUMBER OF TIME POINTS = 5

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
4.20000	0.0000E+00
5.00000	0.0000E+00

LOAD FUNCTION NUMBER = 5
NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
0.80000	0.0000E+00
1.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 6
NUMBER OF TIME POINTS = 4



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 665 di 731
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TIME VALUE	FUNCTION
0.00000	0.0000E+00
1.80000	0.0000E+00
2.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 7
 NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
2.80000	0.0000E+00
3.00000	0.1000E+01
5.00000	0.1000E+01

LOAD FUNCTION NUMBER = 8
 NUMBER OF TIME POINTS = 4

TIME VALUE	FUNCTION
0.00000	0.0000E+00
3.80000	0.0000E+00
4.00000	0.1000E+01
5.00000	0.1000E+01

PROCESSING DISTRIBUTED LOADS CARD NO. 1
 AT Y-COORD 0.000 Z-COORD -20.00 PRESSURE 42.12
 Z-COORD 0.000 PRESSURE 0.000
 L.CURVE 4

NO. OF GENERATED NODAL FORCES		101							
NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	
101	-.2000E+02	0.4212000E+01 /	100	-.1980E+02	0.8339760E+01 /	99	-.1960E+02	0.8255520E+01 /	
98	-.1940E+02	0.8171280E+01 /	97	-.1920E+02	0.8087040E+01 /	96	-.1900E+02	0.8002800E+01 /	
95	-.1880E+02	0.7918560E+01 /	94	-.1860E+02	0.7834320E+01 /	93	-.1840E+02	0.7750080E+01 /	
92	-.1820E+02	0.7665840E+01 /	91	-.1800E+02	0.7581600E+01 /	90	-.1780E+02	0.7497547E+01 /	
89	-.1760E+02	0.7413301E+01 /	88	-.1740E+02	0.7328876E+01 /	87	-.1720E+02	0.7244636E+01 /	
86	-.1700E+02	0.7160396E+01 /	85	-.1680E+02	0.7076156E+01 /	84	-.1660E+02	0.6991916E+01 /	
83	-.1640E+02	0.6907676E+01 /	82	-.1620E+02	0.6823436E+01 /	81	-.1600E+02	0.6739196E+01 /	
80	-.1580E+02	0.6654956E+01 /	79	-.1560E+02	0.6570716E+01 /	78	-.1540E+02	0.6486476E+01 /	
77	-.1520E+02	0.6402236E+01 /	76	-.1500E+02	0.6317996E+01 /	75	-.1480E+02	0.6233756E+01 /	
74	-.1460E+02	0.6149516E+01 /	73	-.1440E+02	0.6065276E+01 /	72	-.1420E+02	0.5981036E+01 /	
71	-.1400E+02	0.5896796E+01 /	70	-.1380E+02	0.5812556E+01 /	69	-.1360E+02	0.5728316E+01 /	
68	-.1340E+02	0.5644076E+01 /	67	-.1320E+02	0.5559836E+01 /	66	-.1300E+02	0.5475596E+01 /	
65	-.1280E+02	0.5391356E+01 /	64	-.1260E+02	0.5307116E+01 /	63	-.1240E+02	0.5222876E+01 /	
62	-.1220E+02	0.5138636E+01 /	61	-.1200E+02	0.5054396E+01 /	60	-.1180E+02	0.4970156E+01 /	
59	-.1160E+02	0.4885916E+01 /	58	-.1140E+02	0.4801676E+01 /	57	-.1120E+02	0.4717436E+01 /	
56	-.1100E+02	0.4633196E+01 /	55	-.1080E+02	0.4548956E+01 /	54	-.1060E+02	0.4464716E+01 /	
53	-.1040E+02	0.4380376E+01 /	52	-.1020E+02	0.4296156E+01 /	51	-.1000E+02	0.4212051E+01 /	
50	-.9800E+01	0.4127748E+01 /	49	-.9600E+01	0.4043508E+01 /	48	-.9400E+01	0.3959278E+01 /	
47	-.9200E+01	0.3875038E+01 /	46	-.9000E+01	0.3790798E+01 /	45	-.8800E+01	0.3706549E+01 /	
44	-.8600E+01	0.3622310E+01 /	43	-.8400E+01	0.3538079E+01 /	42	-.8200E+01	0.3453839E+01 /	
41	-.8000E+01	0.3369599E+01 /	40	-.7800E+01	0.3285359E+01 /	39	-.7600E+01	0.3201119E+01 /	
38	-.7400E+01	0.3116879E+01 /	37	-.7200E+01	0.3032631E+01 /	36	-.7000E+01	0.2948392E+01 /	
35	-.6800E+01	0.2864159E+01 /	34	-.6600E+01	0.2779919E+01 /	33	-.6400E+01	0.2695679E+01 /	
32	-.6200E+01	0.2611433E+01 /	31	-.6000E+01	0.2527193E+01 /	30	-.5800E+01	0.2442960E+01 /	
29	-.5600E+01	0.2358720E+01 /	28	-.5400E+01	0.2274480E+01 /	27	-.5200E+01	0.2190234E+01 /	
26	-.5000E+01	0.2105995E+01 /	25	-.4800E+01	0.2021760E+01 /	24	-.4600E+01	0.1937520E+01 /	
23	-.4400E+01	0.1853280E+01 /	22	-.4200E+01	0.1769040E+01 /	21	-.4000E+01	0.1684796E+01 /	
20	-.3800E+01	0.1600556E+01 /	19	-.3600E+01	0.1516320E+01 /	18	-.3400E+01	0.1432080E+01 /	
17	-.3200E+01	0.1347844E+01 /	16	-.3000E+01	0.1263603E+01 /	15	-.2800E+01	0.1179360E+01 /	
14	-.2600E+01	0.1095120E+01 /	13	-.2400E+01	0.1010880E+01 /	12	-.2200E+01	0.9266400E+00 /	
11	-.2000E+01	0.8424000E+00 /	10	-.1800E+01	0.7581600E+00 /	9	-.1600E+01	0.6739200E+00 /	
8	-.1400E+01	0.5896800E+00 /	7	-.1200E+01	0.5054400E+00 /	6	-.1000E+01	0.4212000E+00 /	
5	-.8000E+00	0.3369600E+00 /	4	-.6000E+00	0.2527200E+00 /	3	-.4000E+00	0.1684800E+00 /	
2	-.2000E+00	0.8424000E-01 /	1	0.0000E+00	0.0000000E+00 /				

OVERALL APPLIED Y FORCE FOR CURRENT DISTRIBUTED LOAD 421.20



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 666 di 731
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PROCESSING DISTRIBUTED LOADS CARD NO. 2
 AT Y-COORD 0.000 Z-COORD -20.00 PRESSURE 2.302
 Z-COORD 0.000 PRESSURE 2.302
 L.CURVE 4

NO. OF GENERATED NODAL FORCES 101

NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /	NODE	Z-LVL	FORCE /
101	-.2000E+02	0.2302000E+00 /	100	-.1980E+02	0.4604000E+00 /	99	-.1960E+02	0.4604000E+00 /
98	-.1940E+02	0.4604000E+00 /	97	-.1920E+02	0.4604000E+00 /	96	-.1900E+02	0.4604000E+00 /
95	-.1880E+02	0.4604000E+00 /	94	-.1860E+02	0.4604000E+00 /	93	-.1840E+02	0.4604000E+00 /
92	-.1820E+02	0.4604000E+00 /	91	-.1800E+02	0.4604000E+00 /	90	-.1780E+02	0.4604115E+00 /
89	-.1760E+02	0.4604115E+00 /	88	-.1740E+02	0.4604000E+00 /	87	-.1720E+02	0.4604000E+00 /
86	-.1700E+02	0.4604000E+00 /	85	-.1680E+02	0.4604000E+00 /	84	-.1660E+02	0.4604000E+00 /
83	-.1640E+02	0.4604000E+00 /	82	-.1620E+02	0.4604000E+00 /	81	-.1600E+02	0.4604000E+00 /
80	-.1580E+02	0.4604000E+00 /	79	-.1560E+02	0.4604000E+00 /	78	-.1540E+02	0.4604000E+00 /
77	-.1520E+02	0.4604000E+00 /	76	-.1500E+02	0.4604000E+00 /	75	-.1480E+02	0.4604000E+00 /
74	-.1460E+02	0.4604000E+00 /	73	-.1440E+02	0.4604000E+00 /	72	-.1420E+02	0.4604000E+00 /
71	-.1400E+02	0.4604000E+00 /	70	-.1380E+02	0.4604000E+00 /	69	-.1360E+02	0.4604000E+00 /
68	-.1340E+02	0.4604000E+00 /	67	-.1320E+02	0.4604000E+00 /	66	-.1300E+02	0.4604000E+00 /
65	-.1280E+02	0.4604000E+00 /	64	-.1260E+02	0.4604000E+00 /	63	-.1240E+02	0.4604000E+00 /
62	-.1220E+02	0.4604000E+00 /	61	-.1200E+02	0.4604000E+00 /	60	-.1180E+02	0.4604000E+00 /
59	-.1160E+02	0.4604000E+00 /	58	-.1140E+02	0.4604000E+00 /	57	-.1120E+02	0.4604000E+00 /
56	-.1100E+02	0.4604000E+00 /	55	-.1080E+02	0.4604000E+00 /	54	-.1060E+02	0.4604000E+00 /
53	-.1040E+02	0.4603988E+00 /	52	-.1020E+02	0.4603942E+00 /	51	-.1000E+02	0.4604058E+00 /
50	-.9800E+01	0.4603988E+00 /	49	-.9600E+01	0.4603988E+00 /	48	-.9400E+01	0.4604000E+00 /
47	-.9200E+01	0.4604000E+00 /	46	-.9000E+01	0.4604000E+00 /	45	-.8800E+01	0.4603988E+00 /
44	-.8600E+01	0.4603988E+00 /	43	-.8400E+01	0.4604000E+00 /	42	-.8200E+01	0.4604000E+00 /
41	-.8000E+01	0.4604000E+00 /	40	-.7800E+01	0.4604000E+00 /	39	-.7600E+01	0.4604000E+00 /
38	-.7400E+01	0.4604000E+00 /	37	-.7200E+01	0.4603988E+00 /	36	-.7000E+01	0.4603988E+00 /
35	-.6800E+01	0.4604000E+00 /	34	-.6600E+01	0.4604000E+00 /	33	-.6400E+01	0.4604000E+00 /
32	-.6200E+01	0.4603988E+00 /	31	-.6000E+01	0.4603988E+00 /	30	-.5800E+01	0.4604000E+00 /
29	-.5600E+01	0.4604000E+00 /	28	-.5400E+01	0.4604000E+00 /	27	-.5200E+01	0.4603988E+00 /
26	-.5000E+01	0.4603988E+00 /	25	-.4800E+01	0.4604000E+00 /	24	-.4600E+01	0.4604000E+00 /
23	-.4400E+01	0.4604000E+00 /	22	-.4200E+01	0.4604000E+00 /	21	-.4000E+01	0.4603988E+00 /
20	-.3800E+01	0.4603988E+00 /	19	-.3600E+01	0.4604000E+00 /	18	-.3400E+01	0.4604000E+00 /
17	-.3200E+01	0.4604012E+00 /	16	-.3000E+01	0.4604012E+00 /	15	-.2800E+01	0.4604000E+00 /
14	-.2600E+01	0.4604000E+00 /	13	-.2400E+01	0.4604000E+00 /	12	-.2200E+01	0.4604000E+00 /
11	-.2000E+01	0.4604000E+00 /	10	-.1800E+01	0.4604000E+00 /	9	-.1600E+01	0.4604000E+00 /
8	-.1400E+01	0.4604000E+00 /	7	-.1200E+01	0.4604000E+00 /	6	-.1000E+01	0.4604000E+00 /
5	-.8000E+00	0.4604000E+00 /	4	-.6000E+00	0.4604000E+00 /	3	-.4000E+00	0.4604000E+00 /
2	-.2000E+00	0.4604000E+00 /	1	0.0000E+00	0.2302000E+00 /			

OVERALL APPLIED Y FORCE FOR CURRENT DISTRIBUTED LOAD 46.040

NO. OF DISTRIBUTED LOAD CARDS 2



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	667 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022 18:38:06          |
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L O A D B A L A N C E

STEP	1	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	1	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	2	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	0.0000000
STEP	3	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000
STEP	4	TOTAL APPLIED LOAD IN DIR.	2	Y-DISPL.F	467.24000
STEP	4	TOTAL APPLIED LOAD IN DIR.	4	X-ROT. F	0.0000000

LOAD INPUT SECTION COMPLETED



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	668 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022  18:38:06                                                         |
+-----+
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NO. OF LAYERS 3
NO. OF DATA PER LAYER..... 160



**LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	669 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*  |
|                                                                                               |
|                                                                                               |
|                               ParatiePlus                                                    |
|                               Exe Time :17 November 2022  18:38:06                            |
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LAYER DESCRIPTORS FOR STEP NO. 1

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 1

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 1

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPHA	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.33100	WALL NO.	1
ITEM NO.	91	D-KP	= 3.4040	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPHA	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 1

ITEM NO.	1	NAME	= 14.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -10.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	670 di 731

ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.500	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.500	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.43400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.0960	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.48500	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	88	D-COHE	= 20.000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 24.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.36000	WALL NO.	1
ITEM NO.	91	D-KP	= 3.0510	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 2

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 2

ITEM NO.	1	NAME	= 12.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= 10.000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 19.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 9.0000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.23300	WALL NO.	1
ITEM NO.	11	U-KP	= 10.673	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.40000	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 20000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 32000.	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	58	U-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	60	U-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	
ITEM NO.	82	D-NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	83	D-LEVEL	= 0.0000	(BOTH WALLS)	
ITEM NO.	89	D-FRICT	= 37.000	(BOTH WALLS)	
ITEM NO.	90	D-KA	= 0.20500	WALL NO.	1
ITEM NO.	91	D-KP	= 6.7380	WALL NO.	1
ITEM NO.	107	D-PERM	= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	138	D-TZKZ	= 10000.	(BOTH WALLS)	
ITEM NO.	140	D-TZDELTA	= 25.000	(BOTH WALLS)	
ITEM NO.	141	D-TZALPH	= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 2

ITEM NO.	1	NAME	= 13.000	(BOTH WALLS)	
ITEM NO.	2	NATURE	= 1.0000	(BOTH WALLS)	
ITEM NO.	3	LEVEL	= -5.9000	(BOTH WALLS)	
ITEM NO.	4	WALL	= 1.0000	(BOTH WALLS)	
ITEM NO.	5	GAMMAD	= 20.000	(BOTH WALLS)	
ITEM NO.	6	GAMMAB	= 10.000	(BOTH WALLS)	
ITEM NO.	7	GAMMAW	= 10.000	(BOTH WALLS)	
ITEM NO.	8	U-COHE	= 10.000	(BOTH WALLS)	
ITEM NO.	9	U-FRICT	= 26.000	(BOTH WALLS)	
ITEM NO.	10	U-KA	= 0.39400	WALL NO.	1
ITEM NO.	11	U-KP	= 4.6760	WALL NO.	1
ITEM NO.	12	K0-NC	= 0.56200	(BOTH WALLS)	
ITEM NO.	13	NEXP	= 0.50000	(BOTH WALLS)	
ITEM NO.	14	OCR	= 1.0000	(BOTH WALLS)	
ITEM NO.	16	MODEL	= 1.0000	(BOTH WALLS)	
ITEM NO.	17	EVC	= 90000.	(BOTH WALLS)	
ITEM NO.	18	EUR	= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	U-PERM	= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	U-TZALPH	= 0.50000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	671 di 731

ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 10.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 26.0000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.33100 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.4040 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 2

ITEM NO. 1 <NAME > = 14.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.500 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.500 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.43400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.0960 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.48500 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.36000 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.0510 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

LAYER DESCRIPTORS FOR STEP NO. 3

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 3

ITEM NO. 1 <NAME > = 12.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = 10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 19.000 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 9.0000 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.23300 WALL NO. 1
 ITEM NO. 11 <U-KP > = 10.673 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.40000 (BOTH WALLS)
 ITEM NO. 13 <NEXP > = 0.50000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 20000. (BOTH WALLS)
 ITEM NO. 18 <EUR > = 32000. (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 58 <U-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 60 <U-TZDELT> = 25.000 (BOTH WALLS)
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.20500 WALL NO. 1
 ITEM NO. 91 <D-KP > = 6.7380 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 138 <D-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 140 <D-TZDELT> = 25.000 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 3

ITEM NO. 1 <NAME > = 13.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -5.9000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.000 (BOTH WALLS)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	672 di 731

ITEM NO.	6	<GAMMAB	>= 10.000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.39400	WALL NO.	1
ITEM NO.	11	<U-KP	>= 4.6760	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.56200	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	14	<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 90000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 0.14400E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>= 10.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>= 26.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>= 0.33100	WALL NO.	1
ITEM NO.	91	<D-KP	>= 3.4040	WALL NO.	1
ITEM NO.	107	<D-PERM	>= 0.10000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>= 0.50000	(BOTH WALLS)	

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 3

ITEM NO.	1	<NAME	>= 14.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>= -10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>= 20.500	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>= 10.500	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	8	<U-COHE	>= 20.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 24.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.43400	WALL NO.	1
ITEM NO.	11	<U-KP	>= 4.0960	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.48500	(BOTH WALLS)	
ITEM NO.	14	<OCR	>= 1.0000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 0.10000E+06	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 0.16000E+06	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	61	<U-TZALPH	>= 0.50000	(BOTH WALLS)	
ITEM NO.	82	<D-NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	83	<D-LEVEL	>= 0.0000	(BOTH WALLS)	
ITEM NO.	88	<D-COHE	>= 20.000	(BOTH WALLS)	
ITEM NO.	89	<D-FRICT	>= 24.000	(BOTH WALLS)	
ITEM NO.	90	<D-KA	>= 0.36000	WALL NO.	1
ITEM NO.	91	<D-KP	>= 3.0510	WALL NO.	1
ITEM NO.	107	<D-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	141	<D-TZALPH	>= 0.50000	(BOTH WALLS)	

LAYER DESCRIPTORS FOR STEP NO. 4

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 1 FOR STEP NO. 4

ITEM NO.	1	<NAME	>= 12.000	(BOTH WALLS)	
ITEM NO.	2	<NATURE	>= 1.0000	(BOTH WALLS)	
ITEM NO.	3	<LEVEL	>= 10.000	(BOTH WALLS)	
ITEM NO.	4	<WALL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	5	<GAMMAD	>= 19.000	(BOTH WALLS)	
ITEM NO.	6	<GAMMAB	>= 9.0000	(BOTH WALLS)	
ITEM NO.	7	<GAMMAW	>= 10.000	(BOTH WALLS)	
ITEM NO.	9	<U-FRICT	>= 37.000	(BOTH WALLS)	
ITEM NO.	10	<U-KA	>= 0.23300	WALL NO.	1
ITEM NO.	11	<U-KP	>= 10.673	WALL NO.	1
ITEM NO.	12	<K0-NC	>= 0.40000	(BOTH WALLS)	
ITEM NO.	13	<NEXP	>= 0.50000	(BOTH WALLS)	
ITEM NO.	16	<MODEL	>= 1.0000	(BOTH WALLS)	
ITEM NO.	17	<EVC	>= 20000.	(BOTH WALLS)	
ITEM NO.	18	<EUR	>= 32000.	(BOTH WALLS)	
ITEM NO.	27	<U-PERM	>= 0.50000E-04	(BOTH WALLS)	
ITEM NO.	47	<U-KAED	>= 0.35322	WALL NO.	1
ITEM NO.	48	<U-KAEW	>= 0.53946	WALL NO.	1
ITEM NO.	49	<U-KPED	>= 10.991	WALL NO.	1
ITEM NO.	50	<U-KPEW	>= 10.240	WALL NO.	1
ITEM NO.	58	<U-TZKZ	>= 10000.	(BOTH WALLS)	
ITEM NO.	60	<U-TZDELTA	>= 25.000	(BOTH WALLS)	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	673 di 731

ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 37.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.20500 WALL NO. 1
 ITEM NO. 91 <D-KP > = 6.7380 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 127 <D-KAED > = 0.27146 WALL NO. 1
 ITEM NO. 128 <D-KAEW > = 0.40440 WALL NO. 1
 ITEM NO. 129 <D-KPED > = 5.6960 WALL NO. 1
 ITEM NO. 130 <D-KPEW > = 4.8732 WALL NO. 1
 ITEM NO. 138 <D-TZKZ > = 10000. (BOTH WALLS)
 ITEM NO. 140 <D-TZDELTA> = 25.000 (BOTH WALLS)
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 2 FOR STEP NO. 4

ITEM NO. 1 <NAME > = 13.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -5.9000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.000 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.000 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 10.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 26.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.39400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.6760 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.56200 (BOTH WALLS)
 ITEM NO. 13 <NEXP > = 0.50000 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 90000. (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.14400E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 47 <U-KAED > = 0.59404 WALL NO. 1
 ITEM NO. 48 <U-KAEW > = 1.1988 WALL NO. 1
 ITEM NO. 49 <U-KPED > = 4.7791 WALL NO. 1
 ITEM NO. 50 <U-KPEW > = 4.4184 WALL NO. 1
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)
 ITEM NO. 88 <D-COHE > = 10.000 (BOTH WALLS)
 ITEM NO. 89 <D-FRICT > = 26.000 (BOTH WALLS)
 ITEM NO. 90 <D-KA > = 0.33100 WALL NO. 1
 ITEM NO. 91 <D-KP > = 3.4040 WALL NO. 1
 ITEM NO. 107 <D-PERM > = 0.10000E-04 (BOTH WALLS)
 ITEM NO. 127 <D-KAED > = 0.41648 WALL NO. 1
 ITEM NO. 128 <D-KAEW > = 0.58754 WALL NO. 1
 ITEM NO. 129 <D-KPED > = 2.7982 WALL NO. 1
 ITEM NO. 130 <D-KPEW > = 2.2962 WALL NO. 1
 ITEM NO. 141 <D-TZALPH> = 0.50000 (BOTH WALLS)

NON ZERO LAYER DESCRIPTORS FOR LAYER NO. 3 FOR STEP NO. 4

ITEM NO. 1 <NAME > = 14.000 (BOTH WALLS)
 ITEM NO. 2 <NATURE > = 1.0000 (BOTH WALLS)
 ITEM NO. 3 <LEVEL > = -10.000 (BOTH WALLS)
 ITEM NO. 4 <WALL > = 1.0000 (BOTH WALLS)
 ITEM NO. 5 <GAMMAD > = 20.500 (BOTH WALLS)
 ITEM NO. 6 <GAMMAB > = 10.500 (BOTH WALLS)
 ITEM NO. 7 <GAMMAW > = 10.000 (BOTH WALLS)
 ITEM NO. 8 <U-COHE > = 20.000 (BOTH WALLS)
 ITEM NO. 9 <U-FRICT > = 24.000 (BOTH WALLS)
 ITEM NO. 10 <U-KA > = 0.43400 WALL NO. 1
 ITEM NO. 11 <U-KP > = 4.0960 WALL NO. 1
 ITEM NO. 12 <K0-NC > = 0.48500 (BOTH WALLS)
 ITEM NO. 14 <OCR > = 1.0000 (BOTH WALLS)
 ITEM NO. 16 <MODEL > = 1.0000 (BOTH WALLS)
 ITEM NO. 17 <EVC > = 0.10000E+06 (BOTH WALLS)
 ITEM NO. 18 <EUR > = 0.16000E+06 (BOTH WALLS)
 ITEM NO. 27 <U-PERM > = 0.50000E-04 (BOTH WALLS)
 ITEM NO. 47 <U-KAED > = 0.66041 WALL NO. 1
 ITEM NO. 48 <U-KAEW > = 1.1977 WALL NO. 1
 ITEM NO. 49 <U-KPED > = 4.1808 WALL NO. 1
 ITEM NO. 50 <U-KPEW > = 3.8704 WALL NO. 1
 ITEM NO. 61 <U-TZALPH> = 0.50000 (BOTH WALLS)
 ITEM NO. 82 <D-NATURE> = 1.0000 (BOTH WALLS)
 ITEM NO. 83 <D-LEVEL > = 0.0000 (BOTH WALLS)



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	674 di 731

ITEM NO. 88ϵD-COHE ϵ= 20.000 (BOTH WALLS)
ITEM NO. 89ϵD-FRICT ϵ= 24.000 (BOTH WALLS)
ITEM NO. 90ϵD-KA ϵ= 0.36000 WALL NO. 1
ITEM NO. 91ϵD-KP ϵ= 3.0510 WALL NO. 1
ITEM NO. 107ϵD-PERM ϵ= 0.50000E-04 (BOTH WALLS)
ITEM NO. 127ϵD-KAED ϵ= 0.44995 WALL NO. 1
ITEM NO. 128ϵD-KAEW ϵ= 0.62658 WALL NO. 1
ITEM NO. 129ϵD-KPED ϵ= 2.4924 WALL NO. 1
ITEM NO. 130ϵD-KPEW ϵ= 2.0341 WALL NO. 1
ITEM NO. 141ϵD-TZALPHϵ= 0.50000 (BOTH WALLS)

DEFAULT WATER UNIT WEIGHT = 10.000
AVERAGED ON 12 VALUES



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	676 di 731

```
DYN.WATER BEHAVIOUR          0.000    0.000
Excess pore pressure RATIO Ru 0.000    0.000
SEISMIC PRESSURE LOWER VALUE  0.000    0.000
SEISMIC PRESSURE UPPER VALUE  0.000    0.000
SEISMIC PRESSURE LOWER LEVEL  0.000    0.000
SEISMIC PRESSURE UPPER LEVEL  0.000    0.000
```

=====end of step 2

```
STEP NO.      3 no. of subincrements      1
LEFT WALL    RIGHT WALL
Y            0.000    -0.9990E+30
Z-PC        0.000    0.000
Z-EXCAVATION -8.000    0.000
Z-WATER TABLE -40.000    -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000    0.000
ZQ          0.000    0.000
DZW_OF_THE_WATER_TABLE      0.000    0.000
QS_ON_THE_EXCAVATION_SIDE    0.000    0.000
ZQS        0.000    -0.9990E+30
ZCUT       0.000    0.000
BALANCE LEVEL FOR PORE PRESSURES -20.000    -20.000
WATER_BEHAVIOUR_FLAG (LINING OPT) 0.000    0.000
PORE_UPDATE_FLAG            0.000    0.000
PORE_TAB._FLAG (gt.0= use tabs) 0.000    0.000
lateral thrusts reduction elevatio 0.000    0.000
Downhill reduction factor for effe 0.000    0.000
Downhill reduction factor for pore 0.000    0.000
Uphill reduction factor for effect 0.000    0.000
Uphill reduction factor for pore p 0.000    0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]  0.000    0.000
UPHILL VERTICAL ACCEL. Kv_uh [g]  0.000    0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g] 0.000    0.000
UPHILL BETA ANGLE (SLOPE) [deg]   0.000    0.000
UPHILL DELTA/PHI RATIO           0.000    0.000
DOWNHILL BETA ANGLE (SLOPE) [deg] 0.000    0.000
DOWNHILL DELTA/PHI RATIO         0.000    0.000
DYN.WATER BEHAVIOUR             0.000    0.000
Excess pore pressure RATIO Ru    0.000    0.000
SEISMIC PRESSURE LOWER VALUE     0.000    0.000
SEISMIC PRESSURE UPPER VALUE     0.000    0.000
SEISMIC PRESSURE LOWER LEVEL     0.000    0.000
SEISMIC PRESSURE UPPER LEVEL     0.000    0.000
```

=====end of step 3

```
STEP NO.      4 no. of subincrements      1
LEFT WALL    RIGHT WALL
Y            0.000    -0.9990E+30
Z-PC        0.000    0.000
Z-EXCAVATION -8.000    0.000
Z-WATER TABLE -40.000    -0.9990E+30
Q_AT_THE_FREE_FIELD_LEVEL  0.000    0.000
ZQ          0.000    0.000
DZW_OF_THE_WATER_TABLE      0.000    0.000
QS_ON_THE_EXCAVATION_SIDE    0.000    0.000
ZQS        0.000    -0.9990E+30
ZCUT       0.000    0.000
BALANCE LEVEL FOR PORE PRESSURES -20.000    -20.000
WATER_BEHAVIOUR_FLAG (LINING OPT) 0.000    0.000
PORE_UPDATE_FLAG            0.000    0.000
PORE_TAB._FLAG (gt.0= use tabs) 0.000    0.000
lateral thrusts reduction elevatio 0.000    0.000
Downhill reduction factor for effe 0.000    0.000
Downhill reduction factor for pore 0.000    0.000
Uphill reduction factor for effect 0.000    0.000
Uphill reduction factor for pore p 0.000    0.000
SEISMIC HORIZONTAL ACCEL. Kh [g]  -0.1407    0.000
MANUAL
UPHILL VERTICAL ACCEL. Kv_uh [g]  0.7035E-01    0.000
DOWNHILL VERTICAL ACCEL.Kv_dh [g] -0.7035E-01    0.000
UPHILL BETA ANGLE (SLOPE) [deg]   11.31    0.000
UPHILL DELTA/PHI RATIO           0.6670    0.000
DOWNHILL BETA ANGLE (SLOPE) [deg] 0.000    0.000
DOWNHILL DELTA/PHI RATIO         0.5000    0.000
DYN.WATER BEHAVIOUR             0.000    0.000
Excess pore pressure RATIO Ru    0.000    0.000
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LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	677 di 731

SEISMIC PRESSURE LOWER VALUE 0.000 0.000
 SEISMIC PRESSURE UPPER VALUE 0.000 0.000
 SEISMIC PRESSURE LOWER LEVEL 0.000 0.000
 SEISMIC PRESSURE UPPER LEVEL 0.000 0.000

=====
 =====end of step 4

LEFT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

RIGHT-HAND WALL

LOWER LEVEL -20.00000
 UPPER LEVEL 0.00000

ELEMENT GROUPS BACKUP AREA CAN STAY IN CORE AT
 POSITION 5881

NO. OF D.P.W FOR THIS AREA 15427
 MAX NO. OF D.P.W. AVAILABLE 81920
 ** MAX NO OF ITERATIONS SET TO 40

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIO= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIO= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.9946E+05 RIMNOR= 0.000
 RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.9946E+05 RDR = 0.000
 RATIOT= 0.000 RATIO= 0.000
 MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	678 di 731

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+-----+
|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|          Exe Time :17 November 2022 18:38:06                                                                                                     |
+-----+
```

New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 1 (AT TIME 1.000) SUBINCREMENT 0001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	680 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C 1.5043E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C 1.5043E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C 1.5043E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C 1.5043E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C 1.5043E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C 1.5043E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C 1.5043E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C 1.5043E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C 1.5043E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C 1.5043E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C 1.5043E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C 1.5043E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C 1.5043E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C 5.4011E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C 5.4011E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C 5.4011E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C 5.4011E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C 5.4011E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C 5.4011E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C 5.4011E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C 5.4011E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C 5.4011E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C 5.4011E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C 5.4011E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C 5.4011E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C 5.4011E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000								
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C 5.4011E+04	-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	681 di 731
1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 5.4011E+04	-8.800	0.000	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 5.4011E+04	-9.000	0.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 5.4011E+04	-9.200	0.000	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 5.4011E+04	-9.400	0.000	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 5.4011E+04	-9.600	0.000	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 5.4011E+04	-9.800	0.000	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 5.4011E+04	-10.00	0.000	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 5.7745E+04	-10.20	0.000	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 5.7745E+04	-10.40	0.000	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 5.7745E+04	-10.60	0.000	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 5.7745E+04	-10.80	0.000	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 5.7745E+04	-11.00	0.000	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 5.7745E+04	-11.20	0.000	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 5.7745E+04	-11.40	0.000	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 5.7745E+04	-11.60	0.000	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 5.7745E+04	-11.80	0.000	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 5.7745E+04	-12.00	0.000	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 5.7745E+04	-12.20	0.000	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 5.7745E+04	-12.40	0.000	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 5.7745E+04	-12.60	0.000	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 5.7745E+04	-12.80	0.000	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 5.7745E+04	-13.00	0.000	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 5.7745E+04	-13.20	0.000	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 5.7745E+04	-13.40	0.000	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 5.7745E+04	-13.60	0.000	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 5.7745E+04	-13.80	0.000	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	685 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	V-C 7479.		-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	V-C 7479.		-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	V-C 7479.		-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	V-C 7479.		-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	V-C 7479.		-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	V-C 7479.		-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	V-C 7479.		-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	V-C 7479.		-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	V-C 7479.		-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	V-C 7479.		-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	V-C 7479.		-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	V-C 7479.		-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	V-C 7479.		-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	V-C 4.2179E+04		-6.000	0.000	1.000
1.000	64.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	V-C 4.2179E+04		-6.200	0.000	1.000
1.000	66.37	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	V-C 4.2179E+04		-6.400	0.000	1.000
1.000	68.62	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	V-C 4.2179E+04		-6.600	0.000	1.000
1.000	70.87	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	V-C 4.2179E+04		-6.800	0.000	1.000
1.000	73.12	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	V-C 4.2179E+04		-7.000	0.000	1.000
1.000	75.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	V-C 4.2179E+04		-7.200	0.000	1.000
1.000	77.61	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	V-C 4.2179E+04		-7.400	0.000	1.000
1.000	79.86	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	V-C 4.2179E+04		-7.600	0.000	1.000
1.000	82.11	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	V-C 4.2179E+04		-7.800	0.000	1.000
1.000	84.36	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	V-C 4.2179E+04		-8.000	0.000	1.000
1.000	86.60	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	V-C 4.2179E+04		-8.200	0.000	1.000
1.000	88.85	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	V-C 4.2179E+04		-8.400	0.000	1.000
1.000	91.10	0.000	0.000	0.000	0.000		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	V-C 4.2179E+04		-8.600	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	686 di 731

1.000	93.35	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
45 D	19.12	0.000	170.1	95.60	170.1	95.60	V-C 4.2179E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
46 D	19.57	0.000	174.1	97.84	174.1	97.84	V-C 4.2179E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
47 D	20.02	0.000	178.1	100.1	178.1	100.1	V-C 4.2179E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
48 D	20.47	0.000	182.1	102.3	182.1	102.3	V-C 4.2179E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
49 D	20.92	0.000	186.1	104.6	186.1	104.6	V-C 4.2179E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
50 D	21.37	0.000	190.1	106.8	190.1	106.8	V-C 4.2179E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
51 D	21.82	0.000	194.1	109.1	194.1	109.1	V-C 4.2179E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	0.000	0.000	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
52 D	19.23	0.000	198.2	96.13	198.2	96.13	V-C 4.8706E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
53 D	19.62	0.000	202.3	98.12	202.3	98.12	V-C 4.8706E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
54 D	20.02	0.000	206.4	100.1	206.4	100.1	V-C 4.8706E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
55 D	20.42	0.000	210.5	102.1	210.5	102.1	V-C 4.8706E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
56 D	20.82	0.000	214.6	104.1	214.6	104.1	V-C 4.8706E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
57 D	21.21	0.000	218.7	106.1	218.7	106.1	V-C 4.8706E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
58 D	21.61	0.000	222.8	108.1	222.8	108.1	V-C 4.8706E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
59 D	22.01	0.000	226.9	110.0	226.9	110.0	V-C 4.8706E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
60 D	22.41	0.000	231.0	112.0	231.0	112.0	V-C 4.8706E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
61 D	22.80	0.000	235.1	114.0	235.1	114.0	V-C 4.8706E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
62 D	23.20	0.000	239.2	116.0	239.2	116.0	V-C 4.8706E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
63 D	23.60	0.000	243.3	118.0	243.3	118.0	V-C 4.8706E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
64 D	24.00	0.000	247.4	120.0	247.4	120.0	V-C 4.8706E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
65 D	24.40	0.000	251.5	122.0	251.5	122.0	V-C 4.8706E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
66 D	24.79	0.000	255.6	124.0	255.6	124.0	V-C 4.8706E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
67 D	25.19	0.000	259.7	126.0	259.7	126.0	V-C 4.8706E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
68 D	25.59	0.000	263.8	127.9	263.8	127.9	V-C 4.8706E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
69 D	25.99	0.000	267.9	129.9	267.9	129.9	V-C 4.8706E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
70 D	26.38	0.000	272.0	131.9	272.0	131.9	V-C 4.8706E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	0.000	0.000	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	689 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022* |
|                                                                                               |
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|                                                                                               |
|                                                                                               |
|          ParatiePlus |
|          Exe Time :17 November 2022 18:38:06 |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 1.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL TA TB MA MB

***** NO ONE ELEMENT ACTIVE AT CURRENT STEP *****

ITER 0 RNORM = 0.000 RMNORM= 0.000
RINORM=0.9946E+05 RIMNOR= 0.000
RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.9946E+05 RDR = 0.000
RATIOT= 0.000 RATIO= 0.000
MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 1 RNORM = 0.000 RMNORM= 0.000
RINORM=0.9946E+05 RIMNOR= 0.000
RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.9946E+05 RDR = 0.000
RATIOT= 0.000 RATIO= 0.000
MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
RINORM=0.9946E+05 RIMNOR= 0.000
RENORM= 0.000 REMNOR= 0.000 RATIO = 0.000 TOLER =0.1000E-03 CONVERGED !
RFMAX = 38.31 RMMAX = 0.000
RTSMAL=0.1000E-03 RMSMAL= 0.000
RDT =0.9946E+05 RDR = 0.000
RATIOT= 0.000 RATIO= 0.000
MAX UN= 0.000 IEQ= 202 NODE 101 DOF 2 X-ROT. F
MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	690 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
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|                                                                                                     |
|          Exe Time :17 November 2022 18:38:06          |
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New Project

SOLUTION REACHED USING 2 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 2 (AT TIME 2.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

Y-DISPL.F X-ROT. F
02 04

ALL NODAL POINTS HAVE ZERO DISPLACEMENT COMPONENTS



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 691 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
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|
|          ParatiePlus
|          Exe Time :17 November 2022  18:38:06
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New Project

STRESS RESULTS FOR GROUP NO. 1

O_L :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	UL-RL	2.4068E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	UL-RL	2.4068E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	UL-RL	2.4068E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	UL-RL	2.4068E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	UL-RL	2.4068E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	UL-RL	2.4068E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	UL-RL	2.4068E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	UL-RL	2.4068E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	UL-RL	2.4068E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	UL-RL	2.4068E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	UL-RL	2.4068E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	UL-RL	2.4068E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	UL-RL	2.4068E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	UL-RL	2.4068E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	UL-RL	2.4068E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	UL-RL	2.4068E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	UL-RL	2.4068E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	692 di 731
18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	2.4068E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	2.4068E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	2.4068E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	2.4068E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	2.4068E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	2.4068E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	2.4068E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	2.4068E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	2.4068E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	2.4068E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	2.4068E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	2.4068E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	2.4068E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	8.6418E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	8.6418E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	8.6418E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	8.6418E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	8.6418E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	8.6418E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	8.6418E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	8.6418E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	8.6418E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	8.6418E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	8.6418E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	8.6418E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	8.6418E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	8.6418E+04	-8.600	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	693 di 731
1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL	8.6418E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL	8.6418E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL	8.6418E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL	8.6418E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL	8.6418E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL	8.6418E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL	8.6418E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL	9.2392E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL	9.2392E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL	9.2392E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL	9.2392E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL	9.2392E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL	9.2392E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL	9.2392E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL	9.2392E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL	9.2392E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL	9.2392E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL	9.2392E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL	9.2392E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL	9.2392E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL	9.2392E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL	9.2392E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL	9.2392E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL	9.2392E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL	9.2392E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL	9.2392E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 696 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*
|
|                                     ParatiePlus
|                                     Exe Time :17 November 2022  18:38:06
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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Cohes_a	MAX-H-P Cohes_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1 D	0.000	0.000	0.000	0.000	0.000	0.000	UL-RL	1.1966E+04	0.000	0.000	1.000	
1.000	0.000	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
2 D	0.3040	0.000	3.800	1.520	3.800	1.520	UL-RL	1.1966E+04	-0.2000	0.000	1.000	
1.000	1.520	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
3 D	0.6080	0.000	7.600	3.040	7.600	3.040	UL-RL	1.1966E+04	-0.4000	0.000	1.000	
1.000	3.040	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
4 D	0.9120	0.000	11.40	4.560	11.40	4.560	UL-RL	1.1966E+04	-0.6000	0.000	1.000	
1.000	4.560	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
5 D	1.216	0.000	15.20	6.080	15.20	6.080	UL-RL	1.1966E+04	-0.8000	0.000	1.000	
1.000	6.080	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
6 D	1.520	0.000	19.00	7.600	19.00	7.600	UL-RL	1.1966E+04	-1.000	0.000	1.000	
1.000	7.600	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
7 D	1.824	0.000	22.80	9.120	22.80	9.120	UL-RL	1.1966E+04	-1.200	0.000	1.000	
1.000	9.120	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8 D	2.128	0.000	26.60	10.64	26.60	10.64	UL-RL	1.1966E+04	-1.400	0.000	1.000	
1.000	10.64	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
9 D	2.432	0.000	30.40	12.16	30.40	12.16	UL-RL	1.1966E+04	-1.600	0.000	1.000	
1.000	12.16	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
10 D	2.736	0.000	34.20	13.68	34.20	13.68	UL-RL	1.1966E+04	-1.800	0.000	1.000	
1.000	13.68	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
11 D	3.040	0.000	38.00	15.20	38.00	15.20	UL-RL	1.1966E+04	-2.000	0.000	1.000	
1.000	15.20	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
12 D	3.344	0.000	41.80	16.72	41.80	16.72	UL-RL	1.1966E+04	-2.200	0.000	1.000	
1.000	16.72	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
13 D	3.648	0.000	45.60	18.24	45.60	18.24	UL-RL	1.1966E+04	-2.400	0.000	1.000	
1.000	18.24	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
14 D	3.952	0.000	49.40	19.76	49.40	19.76	UL-RL	1.1966E+04	-2.600	0.000	1.000	
1.000	19.76	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
15 D	4.256	0.000	53.20	21.28	53.20	21.28	UL-RL	1.1966E+04	-2.800	0.000	1.000	
1.000	21.28	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
16 D	4.560	0.000	57.00	22.80	57.00	22.80	UL-RL	1.1966E+04	-3.000	0.000	1.000	
1.000	22.80	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
17 D	4.864	0.000	60.80	24.32	60.80	24.32	UL-RL	1.1966E+04	-3.200	0.000	1.000	
1.000	24.32	0.000	0.000	0.000	0.000	0.000	Arenariepococementate_2_12_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	697 di 731

18 D	5.168	0.000	64.60	25.84	64.60	25.84	UL-RL	1.1966E+04	-3.400	0.000	1.000
1.000	25.84	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	5.472	0.000	68.40	27.36	68.40	27.36	UL-RL	1.1966E+04	-3.600	0.000	1.000
1.000	27.36	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	5.776	0.000	72.20	28.88	72.20	28.88	UL-RL	1.1966E+04	-3.800	0.000	1.000
1.000	28.88	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	6.080	0.000	76.00	30.40	76.00	30.40	UL-RL	1.1966E+04	-4.000	0.000	1.000
1.000	30.40	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	6.384	0.000	79.80	31.92	79.80	31.92	UL-RL	1.1966E+04	-4.200	0.000	1.000
1.000	31.92	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	6.688	0.000	83.60	33.44	83.60	33.44	UL-RL	1.1966E+04	-4.400	0.000	1.000
1.000	33.44	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	6.992	0.000	87.40	34.96	87.40	34.96	UL-RL	1.1966E+04	-4.600	0.000	1.000
1.000	34.96	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	7.296	0.000	91.20	36.48	91.20	36.48	UL-RL	1.1966E+04	-4.800	0.000	1.000
1.000	36.48	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	7.600	0.000	95.00	38.00	95.00	38.00	UL-RL	1.1966E+04	-5.000	0.000	1.000
1.000	38.00	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	7.904	0.000	98.80	39.52	98.80	39.52	UL-RL	1.1966E+04	-5.200	0.000	1.000
1.000	39.52	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	8.208	0.000	102.6	41.04	102.6	41.04	UL-RL	1.1966E+04	-5.400	0.000	1.000
1.000	41.04	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	8.512	0.000	106.4	42.56	106.4	42.56	UL-RL	1.1966E+04	-5.600	0.000	1.000
1.000	42.56	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	8.816	0.000	110.2	44.08	110.2	44.08	UL-RL	1.1966E+04	-5.800	0.000	1.000
1.000	44.08	0.000	0.000	0.000	0.000		Arenariepococementate_2_12_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	12.82	0.000	114.1	64.12	114.1	64.12	UL-RL	6.7486E+04	-6.000	0.000	1.000
1.000	64.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	13.27	0.000	118.1	66.37	118.1	66.37	UL-RL	6.7486E+04	-6.200	0.000	1.000
1.000	66.37	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	13.72	0.000	122.1	68.62	122.1	68.62	UL-RL	6.7486E+04	-6.400	0.000	1.000
1.000	68.62	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	14.17	0.000	126.1	70.87	126.1	70.87	UL-RL	6.7486E+04	-6.600	0.000	1.000
1.000	70.87	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	14.62	0.000	130.1	73.12	130.1	73.12	UL-RL	6.7486E+04	-6.800	0.000	1.000
1.000	73.12	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	15.07	0.000	134.1	75.36	134.1	75.36	UL-RL	6.7486E+04	-7.000	0.000	1.000
1.000	75.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	15.52	0.000	138.1	77.61	138.1	77.61	UL-RL	6.7486E+04	-7.200	0.000	1.000
1.000	77.61	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	15.97	0.000	142.1	79.86	142.1	79.86	UL-RL	6.7486E+04	-7.400	0.000	1.000
1.000	79.86	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	16.42	0.000	146.1	82.11	146.1	82.11	UL-RL	6.7486E+04	-7.600	0.000	1.000
1.000	82.11	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	16.87	0.000	150.1	84.36	150.1	84.36	UL-RL	6.7486E+04	-7.800	0.000	1.000
1.000	84.36	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	17.32	0.000	154.1	86.60	154.1	86.60	UL-RL	6.7486E+04	-8.000	0.000	1.000
1.000	86.60	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	17.77	0.000	158.1	88.85	158.1	88.85	UL-RL	6.7486E+04	-8.200	0.000	1.000
1.000	88.85	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	18.22	0.000	162.1	91.10	162.1	91.10	UL-RL	6.7486E+04	-8.400	0.000	1.000
1.000	91.10	0.000	0.000	10.00	10.00		Argillamarnosal_1057_1068_L_0		0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	18.67	0.000	166.1	93.35	166.1	93.35	UL-RL	6.7486E+04	-8.600	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE
RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	698 di 731

1.000	93.35	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
45 D	19.12	0.000	170.1	95.60	170.1	95.60	UL-RL 6.7486E+04	-8.800	0.000	1.000
1.000	95.60	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
46 D	19.57	0.000	174.1	97.84	174.1	97.84	UL-RL 6.7486E+04	-9.000	0.000	1.000
1.000	97.84	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
47 D	20.02	0.000	178.1	100.1	178.1	100.1	UL-RL 6.7486E+04	-9.200	0.000	1.000
1.000	100.1	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
48 D	20.47	0.000	182.1	102.3	182.1	102.3	UL-RL 6.7486E+04	-9.400	0.000	1.000
1.000	102.3	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
49 D	20.92	0.000	186.1	104.6	186.1	104.6	UL-RL 6.7486E+04	-9.600	0.000	1.000
1.000	104.6	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
50 D	21.37	0.000	190.1	106.8	190.1	106.8	UL-RL 6.7486E+04	-9.800	0.000	1.000
1.000	106.8	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
51 D	21.82	0.000	194.1	109.1	194.1	109.1	UL-RL 6.7486E+04	-10.00	0.000	1.000
1.000	109.1	0.000	0.000	10.00	10.00	Argillamarnosa_1057_1068_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
52 D	19.23	0.000	198.2	96.13	198.2	96.13	UL-RL 7.7929E+04	-10.20	0.000	1.000
1.000	96.13	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
53 D	19.62	0.000	202.3	98.12	202.3	98.12	UL-RL 7.7929E+04	-10.40	0.000	1.000
1.000	98.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
54 D	20.02	0.000	206.4	100.1	206.4	100.1	UL-RL 7.7929E+04	-10.60	0.000	1.000
1.000	100.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
55 D	20.42	0.000	210.5	102.1	210.5	102.1	UL-RL 7.7929E+04	-10.80	0.000	1.000
1.000	102.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
56 D	20.82	0.000	214.6	104.1	214.6	104.1	UL-RL 7.7929E+04	-11.00	0.000	1.000
1.000	104.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
57 D	21.21	0.000	218.7	106.1	218.7	106.1	UL-RL 7.7929E+04	-11.20	0.000	1.000
1.000	106.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
58 D	21.61	0.000	222.8	108.1	222.8	108.1	UL-RL 7.7929E+04	-11.40	0.000	1.000
1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
59 D	22.01	0.000	226.9	110.0	226.9	110.0	UL-RL 7.7929E+04	-11.60	0.000	1.000
1.000	110.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
60 D	22.41	0.000	231.0	112.0	231.0	112.0	UL-RL 7.7929E+04	-11.80	0.000	1.000
1.000	112.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
61 D	22.80	0.000	235.1	114.0	235.1	114.0	UL-RL 7.7929E+04	-12.00	0.000	1.000
1.000	114.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
62 D	23.20	0.000	239.2	116.0	239.2	116.0	UL-RL 7.7929E+04	-12.20	0.000	1.000
1.000	116.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
63 D	23.60	0.000	243.3	118.0	243.3	118.0	UL-RL 7.7929E+04	-12.40	0.000	1.000
1.000	118.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
64 D	24.00	0.000	247.4	120.0	247.4	120.0	UL-RL 7.7929E+04	-12.60	0.000	1.000
1.000	120.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
65 D	24.40	0.000	251.5	122.0	251.5	122.0	UL-RL 7.7929E+04	-12.80	0.000	1.000
1.000	122.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
66 D	24.79	0.000	255.6	124.0	255.6	124.0	UL-RL 7.7929E+04	-13.00	0.000	1.000
1.000	124.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
67 D	25.19	0.000	259.7	126.0	259.7	126.0	UL-RL 7.7929E+04	-13.20	0.000	1.000
1.000	126.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
68 D	25.59	0.000	263.8	127.9	263.8	127.9	UL-RL 7.7929E+04	-13.40	0.000	1.000
1.000	127.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
69 D	25.99	0.000	267.9	129.9	267.9	129.9	UL-RL 7.7929E+04	-13.60	0.000	1.000
1.000	129.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000	0.0000							
70 D	26.38	0.000	272.0	131.9	272.0	131.9	UL-RL 7.7929E+04	-13.80	0.000	1.000
1.000	131.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 701 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:06          |
+-----+
  
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
 ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
 CURRENT TIME IS 2.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000
57	0.0000	0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	702 di 731

58	0.0000	0.0000	0.0000	0.0000
59	0.0000	0.0000	0.0000	0.0000
60	0.0000	0.0000	0.0000	0.0000
61	0.0000	0.0000	0.0000	0.0000
62	0.0000	0.0000	0.0000	0.0000
63	0.0000	0.0000	0.0000	0.0000
64	0.0000	0.0000	0.0000	0.0000
65	0.0000	0.0000	0.0000	0.0000
66	0.0000	0.0000	0.0000	0.0000
67	0.0000	0.0000	0.0000	0.0000
68	0.0000	0.0000	0.0000	0.0000
69	0.0000	0.0000	0.0000	0.0000
70	0.0000	0.0000	0.0000	0.0000
71	0.0000	0.0000	0.0000	0.0000
72	0.0000	0.0000	0.0000	0.0000
73	0.0000	0.0000	0.0000	0.0000
74	0.0000	0.0000	0.0000	0.0000
75	0.0000	0.0000	0.0000	0.0000
76	0.0000	0.0000	0.0000	0.0000
77	0.0000	0.0000	0.0000	0.0000
78	0.0000	0.0000	0.0000	0.0000
79	0.0000	0.0000	0.0000	0.0000
80	0.0000	0.0000	0.0000	0.0000
81	0.0000	0.0000	0.0000	0.0000
82	0.0000	0.0000	0.0000	0.0000
83	0.0000	0.0000	0.0000	0.0000
84	0.0000	0.0000	0.0000	0.0000
85	0.0000	0.0000	0.0000	0.0000
86	0.0000	0.0000	0.0000	0.0000
87	0.0000	0.0000	0.0000	0.0000
88	0.0000	0.0000	0.0000	0.0000
89	0.0000	0.0000	0.0000	0.0000
90	0.0000	0.0000	0.0000	0.0000
91	0.0000	0.0000	0.0000	0.0000
92	0.0000	0.0000	0.0000	0.0000
93	0.0000	0.0000	0.0000	0.0000
94	0.0000	0.0000	0.0000	0.0000
95	0.0000	0.0000	0.0000	0.0000
96	0.0000	0.0000	0.0000	0.0000
97	0.0000	0.0000	0.0000	0.0000
98	0.0000	0.0000	0.0000	0.0000
99	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

ITER 0 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.1602E+05 REMNOR= 0.000 RATIO =0.5113 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5113 RATIO= 0.000
 MAX UN= 17.32 IEQ= 81 NODE 41 DOF 1 Y-DISPL.F
 MIN UN= 0.000 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 503.4 REMNOR=0.9692E-18 RATIO =0.9063E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.9063E-01 RATIO= 0.000
 MAX UN= 6.564 IEQ= 61 NODE 31 DOF 1 Y-DISPL.F
 MIN UN=-.1502E-08 IEQ= 1 NODE 1 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1103. REMNOR=0.2276E-16 RATIO =0.1342 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1342 RATIO= 0.000
 MAX UN= 18.93 IEQ= 85 NODE 43 DOF 1 Y-DISPL.F
 MIN UN=-.2222E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
 TRATTA FERROVIARIA ROCCHETTA-POTENZA
 AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
 PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	703 di 731

ITER 4 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 76.02 REMNOR=0.2342E-16 RATIO =0.3522E-01 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.3522E-01 RATIO= 0.000
 MAX UN= 6.545 IEQ= 95 NODE 48 DOF 1 Y-DISPL.F
 MIN UN=-.1757E-07 IEQ= 23 NODE 12 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 5 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM= 1.634 REMNOR=0.8775E-17 RATIO =0.5164E-02 TOLER =0.1000E-03 NOT CONVERGED
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.5164E-02 RATIO= 0.000
 MAX UN= 1.139 IEQ= 99 NODE 50 DOF 1 Y-DISPL.F
 MIN UN=-.1767E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 6 RNORM = 0.000 RMNORM= 0.000
 RINORM=0.6129E+05 RIMNOR= 0.000
 RENORM=0.2226E-14 REMNOR=0.5797E-17 RATIO =0.1906E-09 TOLER =0.1000E-03 CONVERGED !
 RFMAX = 38.31 RMMAX = 0.000
 RTSMAL=0.1000E-03 RMSMAL= 0.000
 RDT =0.6129E+05 RDR = 0.000
 RATIOT=0.1906E-09 RATIO= 0.000
 MAX UN=0.1596E-07 IEQ= 5 NODE 3 DOF 1 Y-DISPL.F
 MIN UN=-.1821E-07 IEQ= 7 NODE 4 DOF 1 Y-DISPL.F
 NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 704 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                     |
|                                                                                                     |
|                                                                                                     |
|          ParatiePlus                                                                                   |
|          Exe Time :17 November 2022 18:38:06                                                         |
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New Project
SOLUTION REACHED USING 6 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 3 (AT TIME 3.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F 02	X-ROT. F 04
1	4.6573506E-02	-4.0866567E-03
2	4.5756175E-02	-4.0866567E-03
3	4.4938844E-02	-4.0866540E-03
4	4.4121514E-02	-4.0866402E-03
5	4.3304189E-02	-4.0866017E-03
6	4.2486876E-02	-4.0865192E-03
7	4.1669588E-02	-4.0863679E-03
8	4.0852336E-02	-4.0861176E-03
9	4.0035148E-02	-4.0857326E-03
10	3.9218054E-02	-4.0851715E-03
11	3.8401094E-02	-4.0843877E-03
12	3.7584318E-02	-4.0833288E-03
13	3.6767785E-02	-4.0819372E-03
14	3.5951569E-02	-4.0801495E-03
15	3.5135756E-02	-4.0778970E-03
16	3.4320446E-02	-4.0751055E-03
17	3.3505751E-02	-4.0716951E-03
18	3.2691811E-02	-4.0675806E-03
19	3.1878772E-02	-4.0626714E-03
20	3.1066802E-02	-4.0568710E-03
21	3.0256094E-02	-4.0500778E-03
22	2.9446848E-02	-4.0421844E-03
23	2.8639301E-02	-4.0330782E-03
24	2.7833706E-02	-4.0226409E-03
25	2.7030342E-02	-4.0107486E-03
26	2.6229512E-02	-3.9972721E-03
27	2.5431551E-02	-3.9820768E-03
28	2.4636809E-02	-3.9650223E-03
29	2.3845676E-02	-3.9459627E-03
30	2.3058568E-02	-3.9247470E-03
31	2.2275931E-02	-3.9012182E-03
32	2.1498251E-02	-3.8751962E-03
33	2.0726037E-02	-3.8464744E-03
34	1.9959855E-02	-3.8148371E-03
35	1.9200311E-02	-3.7800584E-03
36	1.8448057E-02	-3.7419028E-03
37	1.7703795E-02	-3.7001252E-03
38	1.6968269E-02	-3.6544699E-03
39	1.6242284E-02	-3.6046723E-03
40	1.5526695E-02	-3.5504576E-03
41	1.4822414E-02	-3.4915413E-03
42	1.4130411E-02	-3.4276291E-03
43	1.3451705E-02	-3.3585738E-03
44	1.2787322E-02	-3.2844176E-03
45	1.2138274E-02	-3.2052780E-03
46	1.1505533E-02	-3.1213460E-03
47	1.0890037E-02	-3.0328886E-03
48	1.0292657E-02	-2.9402474E-03
49	9.7141893E-03	-2.8438384E-03
50	9.1553427E-03	-2.7441532E-03
51	8.6167116E-03	-2.6417567E-03
52	8.0987675E-03	-2.5372552E-03
53	7.6019220E-03	-2.4312406E-03
54	7.1263627E-03	-2.3242306E-03
55	6.6722628E-03	-2.2167257E-03
56	6.2396746E-03	-2.1091874E-03
57	5.8285614E-03	-2.0020450E-03
58	5.4388037E-03	-1.8956970E-03
59	5.0702050E-03	-1.7905131E-03
60	4.7224980E-03	-1.6868355E-03
61	4.3953493E-03	-1.5849806E-03



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	705 di 731

62	4.0883648E-03	-1.4852408E-03
63	3.8010940E-03	-1.3878854E-03
64	3.5330351E-03	-1.2931621E-03
65	3.2836390E-03	-1.2012918E-03
66	3.0523155E-03	-1.1124655E-03
67	2.8384390E-03	-1.0268464E-03
68	2.6413539E-03	-9.4457191E-04
69	2.4603796E-03	-8.6575605E-04
70	2.2948148E-03	-7.9049118E-04
71	2.1439416E-03	-7.1884998E-04
72	2.0070296E-03	-6.5088731E-04
73	1.8833389E-03	-5.8664188E-04
74	1.7721234E-03	-5.2613795E-04
75	1.6726335E-03	-4.6938647E-04
76	1.5841192E-03	-4.1637874E-04
77	1.5058347E-03	-3.6708121E-04
78	1.4370431E-03	-3.2143825E-04
79	1.3770207E-03	-2.7937478E-04
80	1.3250607E-03	-2.4079870E-04
81	1.2804759E-03	-2.0560308E-04
82	1.2426021E-03	-1.7366823E-04
83	1.2107999E-03	-1.4486355E-04
84	1.1844573E-03	-1.1904922E-04
85	1.1629907E-03	-9.6077741E-05
86	1.1458469E-03	-7.5795278E-05
87	1.1325039E-03	-5.8042896E-05
88	1.1224720E-03	-4.2657626E-05
89	1.1152941E-03	-2.9473409E-05
90	1.1105469E-03	-1.8321399E-05
91	1.1078411E-03	-9.0327974E-06
92	1.1068210E-03	-1.4360977E-06
93	1.1071653E-03	4.6400924E-06
94	1.1085871E-03	9.3672548E-06
95	1.1108337E-03	1.2916638E-05
96	1.1136866E-03	1.5459004E-05
97	1.1169615E-03	1.7164443E-05
98	1.1205079E-03	1.8202233E-05
99	1.1242091E-03	1.8740748E-05
100	1.1279820E-03	1.8947407E-05
101	1.1317770E-03	1.8988639E-05



**LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE**

**RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)**

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	707 di 731

18 D	3.010	-3.2692E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
19 D	3.187	-3.1879E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
20 D	3.365	-3.1067E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
21 D	3.542	-3.0256E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
22 D	3.719	-2.9447E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
23 D	3.896	-2.8639E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
24 D	4.073	-2.7834E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
25 D	4.250	-2.7030E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
26 D	4.427	-2.6230E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
27 D	4.604	-2.5432E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
28 D	4.781	-2.4637E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
29 D	4.958	-2.3846E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
30 D	5.135	-2.3059E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
31 D	6.480	-2.2276E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
32 D	6.796	-2.1498E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
33 D	7.111	-2.0726E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
34 D	7.426	-1.9960E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
35 D	7.741	-1.9200E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
36 D	8.056	-1.8448E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
37 D	8.371	-1.7704E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
38 D	8.687	-1.6968E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
39 D	9.002	-1.6242E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
40 D	9.317	-1.5527E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
41 D	9.632	-1.4822E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
42 D	9.947	-1.4130E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
43 D	10.26	-1.3452E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00				0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
44 D	10.58	-1.2787E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO PT07 (NV24)					COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
					IABH	00	F	CL	MU04 00 001	A	708 di 731
1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
45 D	10.89	-1.2138E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
46 D	11.21	-1.1506E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
47 D	11.52	-1.0890E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
48 D	11.84	-1.0293E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
49 D	12.15	-9.7142E-03	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
50 D	12.47	-9.1553E-03	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
51 D	12.78	-8.6167E-03	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
52 D	11.93	-8.0988E-03	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
53 D	12.29	-7.6019E-03	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
54 D	12.65	-7.1264E-03	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
55 D	13.00	-6.6723E-03	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
56 D	13.36	-6.2397E-03	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
57 D	13.71	-5.8286E-03	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
58 D	14.07	-5.4388E-03	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	14.42	-5.0702E-03	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	14.78	-4.7225E-03	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	15.14	-4.3953E-03	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	15.49	-4.0884E-03	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	15.85	-3.8011E-03	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	16.20	-3.5330E-03	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	16.56	-3.2836E-03	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	16.92	-3.0523E-03	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	17.27	-2.8384E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	17.63	-2.6414E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	17.98	-2.4604E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	18.34	-2.2948E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 711 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:06                                                                 |
|-----+-----

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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Coh_e_a	MAX-H-P Coh_e_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	713 di 731

58 D	25.51	5.4388E-03	68.70	127.6	222.8	127.6	V-C	1.2176E+04	-11.40	0.000	1.000
1.000	127.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	25.01	5.0702E-03	72.80	125.1	226.9	125.1	V-C	1.2176E+04	-11.60	0.000	1.000
1.000	125.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	24.57	4.7225E-03	76.90	122.8	231.0	122.8	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	122.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	24.17	4.3953E-03	81.00	120.8	235.1	120.8	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	120.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	23.82	4.0884E-03	85.10	119.1	239.2	119.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	119.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	23.46	3.8011E-03	89.20	117.3	243.3	118.0	UL-RL	1.9482E+04	-12.40	0.000	1.000
1.000	117.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	22.82	3.5330E-03	93.30	114.1	247.4	120.0	UL-RL	1.9482E+04	-12.60	0.000	1.000
1.000	114.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	22.24	3.2836E-03	97.40	111.2	251.5	122.0	UL-RL	1.9482E+04	-12.80	0.000	1.000
1.000	111.2	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	21.74	3.0523E-03	101.5	108.7	255.6	124.0	UL-RL	1.9482E+04	-13.00	0.000	1.000
1.000	108.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	21.30	2.8384E-03	105.6	106.5	259.7	126.0	UL-RL	1.9482E+04	-13.20	0.000	1.000
1.000	106.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	20.93	2.6414E-03	109.7	104.7	263.8	127.9	UL-RL	1.9482E+04	-13.40	0.000	1.000
1.000	104.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	20.63	2.4604E-03	113.8	103.1	267.9	129.9	UL-RL	1.9482E+04	-13.60	0.000	1.000
1.000	103.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	20.38	2.2948E-03	117.9	101.9	272.0	131.9	UL-RL	1.9482E+04	-13.80	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	20.19	2.1439E-03	122.0	100.9	276.1	133.9	UL-RL	1.9482E+04	-14.00	0.000	1.000
1.000	100.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	20.05	2.0070E-03	126.1	100.3	280.2	135.9	UL-RL	1.9482E+04	-14.20	0.000	1.000
1.000	100.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	19.97	1.8833E-03	130.2	99.84	284.3	137.9	UL-RL	1.9482E+04	-14.40	0.000	1.000
1.000	99.84	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	19.93	1.7721E-03	134.3	99.66	288.4	139.9	UL-RL	1.9482E+04	-14.60	0.000	1.000
1.000	99.66	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	19.94	1.6726E-03	138.4	99.71	292.5	141.9	UL-RL	1.9482E+04	-14.80	0.000	1.000
1.000	99.71	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	19.99	1.5841E-03	142.5	99.97	296.6	143.9	UL-RL	1.9482E+04	-15.00	0.000	1.000
1.000	99.97	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	20.09	1.5058E-03	146.6	100.4	300.7	145.8	UL-RL	1.9482E+04	-15.20	0.000	1.000
1.000	100.4	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	20.22	1.4370E-03	150.7	101.1	304.8	147.8	UL-RL	1.9482E+04	-15.40	0.000	1.000
1.000	101.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	20.38	1.3770E-03	154.8	101.9	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	101.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	20.58	1.3251E-03	158.9	102.9	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	102.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	20.80	1.2805E-03	163.0	104.0	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	104.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	21.05	1.2426E-03	167.1	105.3	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	105.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	21.32	1.2108E-03	171.2	106.6	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	106.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	21.62	1.1845E-03	175.3	108.1	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	714 di 731

1.000	108.1	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	21.93	1.1630E-03	179.4	109.7	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	109.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	22.26	1.1458E-03	183.5	111.3	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	111.3	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	22.61	1.1325E-03	187.6	113.0	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	113.0	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	22.97	1.1225E-03	191.7	114.8	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	114.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	23.34	1.1153E-03	195.8	116.7	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	116.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	23.72	1.1105E-03	199.9	118.6	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	118.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.10	1.1078E-03	204.0	120.5	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	120.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.50	1.1068E-03	208.1	122.5	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.90	1.1072E-03	212.2	124.5	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	124.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	25.30	1.1086E-03	216.3	126.5	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	126.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	25.71	1.1108E-03	220.4	128.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	128.5	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	26.12	1.1137E-03	224.5	130.6	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	130.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	26.53	1.1170E-03	228.6	132.6	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	132.6	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	26.94	1.1205E-03	232.7	134.7	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	134.7	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	27.35	1.1242E-03	236.8	136.8	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	136.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	27.76	1.1280E-03	240.9	138.8	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	138.8	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	14.09	1.1318E-03	245.0	140.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	140.9	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 715 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:06          |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 3.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	-2.62889E-09	2.62889E-09	-2.60371E-10	3.99666E-10
2	0.17708	-0.17708	-1.64363E-10	3.54160E-02
3	0.53124	-0.53124	-3.54160E-02	0.14166
4	1.0625	-1.0625	-0.14166	0.35416
5	1.7708	-1.7708	-0.35416	0.70832
6	2.6562	-2.6562	-0.70832	1.2396
7	3.7187	-3.7187	-1.2396	1.9833
8	4.9582	-4.9582	-1.9833	2.9749
9	6.3749	-6.3749	-2.9749	4.2499
10	7.9686	-7.9686	-4.2499	5.8436
11	9.7394	-9.7394	-5.8436	7.7915
12	11.687	-11.687	-7.7915	10.129
13	13.812	-13.812	-10.129	12.891
14	16.114	-16.114	-12.891	16.114
15	18.593	-18.593	-16.114	19.833
16	21.250	-21.250	-19.833	24.083
17	24.083	-24.083	-24.083	28.899
18	27.093	-27.093	-28.899	34.318
19	30.281	-30.281	-34.318	40.374
20	33.645	-33.645	-40.374	47.103
21	37.187	-37.187	-47.103	54.541
22	40.905	-40.905	-54.541	62.722
23	44.801	-44.801	-62.722	71.682
24	48.874	-48.874	-71.682	81.457
25	53.124	-53.124	-81.457	92.082
26	57.551	-57.551	-92.082	103.59
27	62.155	-62.155	-103.59	116.02
28	66.936	-66.936	-116.02	129.41
29	71.894	-71.894	-129.41	143.79
30	77.030	-77.030	-143.79	159.19
31	83.510	-83.510	-159.19	175.90
32	90.306	-90.306	-175.90	193.96
33	97.416	-97.416	-193.96	213.44
34	104.84	-104.84	-213.44	234.41
35	112.58	-112.58	-234.41	256.93
36	120.64	-120.64	-256.93	281.05
37	129.01	-129.01	-281.05	306.86
38	137.70	-137.70	-306.86	334.40
39	146.70	-146.70	-334.40	363.74
40	156.02	-156.02	-363.74	394.94
41	165.65	-165.65	-394.94	428.07
42	165.49	-165.49	-428.07	461.17
43	162.93	-162.93	-461.17	493.75
44	157.96	-157.96	-493.75	525.35
45	150.58	-150.58	-525.35	555.46
46	140.79	-140.79	-555.46	583.62
47	128.60	-128.60	-583.62	609.34
48	113.99	-113.99	-609.34	632.14
49	96.980	-96.980	-632.14	651.53
50	77.560	-77.560	-651.53	667.04
51	57.801	-57.801	-667.04	678.61
52	40.129	-40.129	-678.61	686.63
53	23.625	-23.625	-686.63	691.36
54	8.2369	-8.2369	-691.36	693.00
55	-6.0870	6.0870	-693.00	691.79
56	-19.399	19.399	-691.79	687.91
57	-31.752	31.752	-687.91	681.56

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	716 di 731

58	-43.198	43.198	-681.56	672.92
59	-53.787	53.787	-672.92	662.16
60	-63.572	63.572	-662.16	649.44
61	-72.602	72.602	-649.44	634.92
62	-80.926	80.926	-634.92	618.74
63	-88.541	88.541	-618.74	601.03
64	-95.154	95.154	-601.03	582.00
65	-100.84	100.84	-582.00	561.83
66	-105.66	105.66	-561.83	540.70
67	-109.69	109.69	-540.70	518.76
68	-113.00	113.00	-518.76	496.16
69	-115.64	115.64	-496.16	473.04
70	-117.68	117.68	-473.04	449.50
71	-119.17	119.17	-449.50	425.67
72	-120.17	120.17	-425.67	401.63
73	-120.73	120.73	-401.63	377.49
74	-120.87	120.87	-377.49	353.31
75	-120.17	120.17	-353.31	329.28
76	-118.71	118.71	-329.28	305.53
77	-116.59	116.59	-305.53	282.22
78	-113.88	113.88	-282.22	259.44
79	-110.66	110.66	-259.44	237.31
80	-107.00	107.00	-237.31	215.91
81	-102.95	102.95	-215.91	195.32
82	-98.586	98.586	-195.32	175.60
83	-93.950	93.950	-175.60	156.81
84	-89.089	89.089	-156.81	138.99
85	-84.045	84.045	-138.99	122.19
86	-78.856	78.856	-122.19	106.41
87	-73.553	73.553	-106.41	91.704
88	-68.164	68.164	-91.704	78.071
89	-62.714	62.714	-78.071	65.528
90	-57.224	57.224	-65.528	54.083
91	-51.711	51.711	-54.083	43.741
92	-46.189	46.189	-43.741	34.503
93	-40.670	40.670	-34.503	26.369
94	-35.163	35.163	-26.369	19.337
95	-29.675	29.675	-19.337	13.402
96	-24.211	24.211	-13.402	8.5595
97	-18.776	18.776	-8.5595	4.8043
98	-13.370	13.370	-4.8043	2.1302
99	-7.9965	7.9965	-2.1302	0.53094
100	-2.6547	2.6547	-0.53094	-2.08615E-11

ITER 0 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 3107. REMNOR=0.5797E-17 RATIO =0.4588E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.4588E-01 RATIO= 0.000
MAX UN= 9.390 IEQ= 99 NODE 50 DOF 1 Y-DISPL.F
MIN UN=-.7008E-09 IEQ= 10 NODE 5 DOF 2 X-ROT. F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 2 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 1446. REMNOR=0.1091E-15 RATIO =0.3130E-01 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.3130E-01 RATIO= 0.000
MAX UN= 21.25 IEQ= 103 NODE 52 DOF 1 Y-DISPL.F
MIN UN=-.7316E-07 IEQ= 39 NODE 20 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0

ITER 3 RNORM = 2755. RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM= 72.27 REMNOR=0.3615E-16 RATIO =0.6997E-02 TOLER =0.1000E-03 NOT CONVERGED
RFMAX = 165.6 RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT =0.1476E+07 RDR =0.2603E+08
RATIOT=0.6997E-02 RATIO= 0.000
MAX UN= 6.874 IEQ= 115 NODE 58 DOF 1 Y-DISPL.F
MIN UN=-.4880E-07 IEQ= 43 NODE 22 DOF 1 Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS 0



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	717 di 731

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ITER      4  RNORM = 2755.      RMNORM= 0.000
RINORM=0.1476E+07 RIMNOR=0.2603E+08
RENORM=0.1555E-02 REMNOR=0.5570E-16  RATIO =0.3246E-04  TOLER =0.1000E-03  CONVERGED !
RFMAX = 165.6      RMMAX = 693.0
RTSMAL=0.1000E-02 RMSMAL=0.1000E-02
RDT      =0.1476E+07  RDR      =0.2603E+08
RATIOT=0.3246E-04  RATIOR= 0.000
MAX UN=0.4317E-07  IEQ=    11  NODE      6  DOF    1  Y-DISPL.F
MIN UN=-.3944E-01  IEQ=   201  NODE     101  DOF    1  Y-DISPL.F
NO. OF CONTACT CONSTRAINT VIOLATIONS      0
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LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 718 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE  2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                   |
|                                                                                               Exe Time :17 November 2022  18:38:06                                                                 |
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New Project
SOLUTION REACHED USING 4 ITERATIONS ON 40

PRINT OUT FOR TIME STEP 4 (AT TIME 4.000) SUBINCREMENT 00001/00001

PRINT OUT OF ACTIVE COMPONENTS (FIXED NODES ARE NOT PRINTED OUT)

	Y-DISPL.F	X-ROT. F
	02	04
1	0.1136639	-9.2340469E-03
2	0.1118171	-9.2340433E-03
3	0.1099703	-9.2340214E-03
4	0.1081235	-9.2339546E-03
5	0.1062767	-9.2338084E-03
6	0.1044300	-9.2335401E-03
7	0.1025833	-9.2330988E-03
8	0.1007368	-9.2324255E-03
9	9.8890386E-02	-9.2314533E-03
10	9.7044223E-02	-9.2301069E-03
11	9.5198374E-02	-9.2283031E-03
12	9.3352939E-02	-9.2259503E-03
13	9.1508037E-02	-9.2229492E-03
14	8.9663810E-02	-9.2191920E-03
15	8.7820419E-02	-9.2145629E-03
16	8.5978051E-02	-9.2089382E-03
17	8.4136909E-02	-9.2021857E-03
18	8.2297252E-02	-9.1941654E-03
19	8.0459337E-02	-9.1847290E-03
20	7.8623465E-02	-9.1737202E-03
21	7.6789974E-02	-9.1609746E-03
22	7.4959212E-02	-9.1463194E-03
23	7.3131586E-02	-9.1295740E-03
24	7.1307534E-02	-9.1105496E-03
25	6.9487531E-02	-9.0890492E-03
26	6.7672093E-02	-9.0648678E-03
27	6.5861786E-02	-9.0377924E-03
28	6.4057193E-02	-9.0076014E-03
29	6.2258969E-02	-8.9740654E-03
30	6.0467806E-02	-8.9369471E-03
31	5.8684445E-02	-8.8960006E-03
32	5.6909687E-02	-8.8509545E-03
33	5.5144365E-02	-8.8015078E-03
34	5.3389399E-02	-8.7473482E-03
35	5.1645762E-02	-8.6881504E-03
36	4.9914497E-02	-8.6235771E-03
37	4.8196721E-02	-8.5532785E-03
38	4.6493600E-02	-8.4768918E-03
39	4.4806396E-02	-8.3940423E-03
40	4.3136440E-02	-8.3043431E-03
41	4.1485142E-02	-8.2073945E-03
42	3.9853993E-02	-8.1027845E-03
43	3.8244557E-02	-7.9902314E-03
44	3.6658437E-02	-7.8696182E-03
45	3.5097259E-02	-7.7408858E-03
46	3.3562632E-02	-7.6040302E-03
47	3.2056185E-02	-7.4591065E-03
48	3.0579520E-02	-7.3062263E-03
49	2.9134214E-02	-7.1455584E-03
50	2.7721808E-02	-6.9773294E-03
51	2.6343774E-02	-6.8018207E-03
52	2.5001509E-02	-6.6193685E-03
53	2.3696488E-02	-6.4304615E-03
54	2.2429782E-02	-6.2356726E-03
55	2.1202568E-02	-6.0356570E-03
56	2.0015821E-02	-5.8311107E-03
57	1.8870376E-02	-5.6227793E-03
58	1.7766909E-02	-5.4114582E-03
59	1.6705936E-02	-5.1979927E-03
60	1.5687795E-02	-4.9832778E-03
61	1.4712645E-02	-4.7682561E-03



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	719 di 731

62	1.3780452E-02	-4.5538546E-03
63	1.2891005E-02	-4.3409271E-03
64	1.2043930E-02	-4.1302571E-03
65	1.1238704E-02	-3.9225612E-03
66	1.0474664E-02	-3.7184920E-03
67	9.7510256E-03	-3.5186416E-03
68	9.0668904E-03	-3.3235444E-03
69	8.4212589E-03	-3.1336803E-03
70	7.8130408E-03	-2.9494777E-03
71	7.2410651E-03	-2.7713159E-03
72	6.7040895E-03	-2.5995287E-03
73	6.2008093E-03	-2.4344062E-03
74	5.7298661E-03	-2.2761982E-03
75	5.2898550E-03	-2.1251161E-03
76	4.8793328E-03	-1.9813357E-03
77	4.4968245E-03	-1.8449991E-03
78	4.1408296E-03	-1.7162173E-03
79	3.8098285E-03	-1.5950719E-03
80	3.5022881E-03	-1.4816167E-03
81	3.2166677E-03	-1.3758724E-03
82	2.9514262E-03	-1.2778225E-03
83	2.7050292E-03	-1.1874159E-03
84	2.4759558E-03	-1.1045690E-03
85	2.2627052E-03	-1.0291683E-03
86	2.0638015E-03	-9.6107235E-04
87	1.8778004E-03	-9.0011313E-04
88	1.7032934E-03	-8.4609692E-04
89	1.5389142E-03	-7.9879242E-04
90	1.3833400E-03	-7.5791899E-04
91	1.2353313E-03	-7.2315703E-04
92	1.0936943E-03	-6.9413788E-04
93	9.5732049E-04	-6.7045416E-04
94	8.2518676E-04	-6.5165910E-04
95	6.9636327E-04	-6.3726780E-04
96	5.7002086E-04	-6.2675822E-04
97	4.4543843E-04	-6.1957197E-04
98	3.2201013E-04	-6.1511485E-04
99	1.9925252E-04	-6.1275723E-04
100	7.6811593E-05	-6.1183430E-04
101	-4.5530189E-05	-6.1164621E-04

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	721 di 731

18 D	3.010	-8.2297E-02	64.60	15.05	64.60	25.84	ACTIVE	0.000	-3.400	0.000	1.000
1.000	15.05	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
19 D	3.187	-8.0459E-02	68.40	15.94	68.40	27.36	ACTIVE	0.000	-3.600	0.000	1.000
1.000	15.94	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
20 D	3.365	-7.8623E-02	72.20	16.82	72.20	28.88	ACTIVE	0.000	-3.800	0.000	1.000
1.000	16.82	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
21 D	3.542	-7.6790E-02	76.00	17.71	76.00	30.40	ACTIVE	0.000	-4.000	0.000	1.000
1.000	17.71	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
22 D	3.719	-7.4959E-02	79.80	18.59	79.80	31.92	ACTIVE	0.000	-4.200	0.000	1.000
1.000	18.59	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
23 D	3.896	-7.3132E-02	83.60	19.48	83.60	33.44	ACTIVE	0.000	-4.400	0.000	1.000
1.000	19.48	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
24 D	4.073	-7.1308E-02	87.40	20.36	87.40	34.96	ACTIVE	0.000	-4.600	0.000	1.000
1.000	20.36	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
25 D	4.250	-6.9488E-02	91.20	21.25	91.20	36.48	ACTIVE	0.000	-4.800	0.000	1.000
1.000	21.25	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
26 D	4.427	-6.7672E-02	95.00	22.14	95.00	38.00	ACTIVE	0.000	-5.000	0.000	1.000
1.000	22.14	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
27 D	4.604	-6.5862E-02	98.80	23.02	98.80	39.52	ACTIVE	0.000	-5.200	0.000	1.000
1.000	23.02	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
28 D	4.781	-6.4057E-02	102.6	23.91	102.6	41.04	ACTIVE	0.000	-5.400	0.000	1.000
1.000	23.91	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
29 D	4.958	-6.2259E-02	106.4	24.79	106.4	42.56	ACTIVE	0.000	-5.600	0.000	1.000
1.000	24.79	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
30 D	5.135	-6.0468E-02	110.2	25.68	110.2	44.08	ACTIVE	0.000	-5.800	0.000	1.000
1.000	25.68	0.000	0.000	0.000	0.000						
0.0000	0.0000	0.0000									
31 D	6.480	-5.8684E-02	114.1	32.40	114.1	64.12	ACTIVE	0.000	-6.000	0.000	1.000
1.000	32.40	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
32 D	6.796	-5.6910E-02	118.1	33.98	118.1	66.37	ACTIVE	0.000	-6.200	0.000	1.000
1.000	33.98	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
33 D	7.111	-5.5144E-02	122.1	35.55	122.1	68.62	ACTIVE	0.000	-6.400	0.000	1.000
1.000	35.55	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
34 D	7.426	-5.3389E-02	126.1	37.13	126.1	70.87	ACTIVE	0.000	-6.600	0.000	1.000
1.000	37.13	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
35 D	7.741	-5.1646E-02	130.1	38.71	130.1	73.12	ACTIVE	0.000	-6.800	0.000	1.000
1.000	38.71	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
36 D	8.056	-4.9914E-02	134.1	40.28	134.1	75.36	ACTIVE	0.000	-7.000	0.000	1.000
1.000	40.28	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
37 D	8.371	-4.8197E-02	138.1	41.86	138.1	77.61	ACTIVE	0.000	-7.200	0.000	1.000
1.000	41.86	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
38 D	8.687	-4.6494E-02	142.1	43.43	142.1	79.86	ACTIVE	0.000	-7.400	0.000	1.000
1.000	43.43	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
39 D	9.002	-4.4806E-02	146.1	45.01	146.1	82.11	ACTIVE	0.000	-7.600	0.000	1.000
1.000	45.01	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
40 D	9.317	-4.3136E-02	150.1	46.59	150.1	84.36	ACTIVE	0.000	-7.800	0.000	1.000
1.000	46.59	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
41 D	9.632	-4.1485E-02	154.1	48.16	154.1	86.60	ACTIVE	0.000	-8.000	0.000	1.000
1.000	48.16	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
42 D	9.947	-3.9854E-02	158.1	49.74	158.1	88.85	ACTIVE	0.000	-8.200	0.000	1.000
1.000	49.74	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
43 D	10.26	-3.8245E-02	162.1	51.31	162.1	91.10	ACTIVE	0.000	-8.400	0.000	1.000
1.000	51.31	0.000	0.000	10.00	10.00						
0.0000	0.0000	0.0000									
44 D	10.58	-3.6658E-02	166.1	52.89	166.1	93.35	ACTIVE	0.000	-8.600	0.000	1.000



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	722 di 731

1.000	52.89	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000									
45 D	10.89	-3.5097E-02	170.1	54.47	170.1	95.60	ACTIVE	0.000	-8.800	0.000	1.000
1.000	54.47	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
46 D	11.21	-3.3563E-02	174.1	56.04	174.1	97.84	ACTIVE	0.000	-9.000	0.000	1.000
1.000	56.04	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
47 D	11.52	-3.2056E-02	178.1	57.62	178.1	100.1	ACTIVE	0.000	-9.200	0.000	1.000
1.000	57.62	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
48 D	11.84	-3.0580E-02	182.1	59.19	182.1	102.3	ACTIVE	0.000	-9.400	0.000	1.000
1.000	59.19	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
49 D	12.15	-2.9134E-02	186.1	60.77	186.1	104.6	ACTIVE	0.000	-9.600	0.000	1.000
1.000	60.77	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
50 D	12.47	-2.7722E-02	190.1	62.35	190.1	106.8	ACTIVE	0.000	-9.800	0.000	1.000
1.000	62.35	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
51 D	12.78	-2.6344E-02	194.1	63.92	194.1	109.1	ACTIVE	0.000	-10.00	0.000	1.000
1.000	63.92	0.000	0.000	10.00	10.00	Argillamarnosa1_1057_1068_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
52 D	11.93	-2.5002E-02	198.2	59.67	198.2	96.13	ACTIVE	0.000	-10.20	0.000	1.000
1.000	59.67	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
53 D	12.29	-2.3696E-02	202.3	61.45	202.3	98.12	ACTIVE	0.000	-10.40	0.000	1.000
1.000	61.45	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
54 D	12.65	-2.2430E-02	206.4	63.23	206.4	100.1	ACTIVE	0.000	-10.60	0.000	1.000
1.000	63.23	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
55 D	13.00	-2.1203E-02	210.5	65.01	210.5	102.1	ACTIVE	0.000	-10.80	0.000	1.000
1.000	65.01	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
56 D	13.36	-2.0016E-02	214.6	66.78	214.6	104.1	ACTIVE	0.000	-11.00	0.000	1.000
1.000	66.78	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
57 D	13.71	-1.8870E-02	218.7	68.56	218.7	106.1	ACTIVE	0.000	-11.20	0.000	1.000
1.000	68.56	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
58 D	14.07	-1.7767E-02	222.8	70.34	222.8	108.1	ACTIVE	0.000	-11.40	0.000	1.000
1.000	70.34	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
59 D	14.42	-1.6706E-02	226.9	72.12	226.9	110.0	ACTIVE	0.000	-11.60	0.000	1.000
1.000	72.12	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
60 D	14.78	-1.5688E-02	231.0	73.90	231.0	112.0	ACTIVE	0.000	-11.80	0.000	1.000
1.000	73.90	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
61 D	15.14	-1.4713E-02	235.1	75.68	235.1	114.0	ACTIVE	0.000	-12.00	0.000	1.000
1.000	75.68	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
62 D	15.49	-1.3780E-02	239.2	77.46	239.2	116.0	ACTIVE	0.000	-12.20	0.000	1.000
1.000	77.46	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
63 D	15.85	-1.2891E-02	243.3	79.24	243.3	118.0	ACTIVE	0.000	-12.40	0.000	1.000
1.000	79.24	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
64 D	16.20	-1.2044E-02	247.4	81.02	247.4	120.0	ACTIVE	0.000	-12.60	0.000	1.000
1.000	81.02	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
65 D	16.56	-1.1239E-02	251.5	82.80	251.5	122.0	ACTIVE	0.000	-12.80	0.000	1.000
1.000	82.80	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
66 D	16.92	-1.0475E-02	255.6	84.58	255.6	124.0	ACTIVE	0.000	-13.00	0.000	1.000
1.000	84.58	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
67 D	17.27	-9.7510E-03	259.7	86.36	259.7	126.0	ACTIVE	0.000	-13.20	0.000	1.000
1.000	86.36	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
68 D	17.63	-9.0669E-03	263.8	88.14	263.8	127.9	ACTIVE	0.000	-13.40	0.000	1.000
1.000	88.14	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
69 D	17.98	-8.4213E-03	267.9	89.92	267.9	129.9	ACTIVE	0.000	-13.60	0.000	1.000
1.000	89.92	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000									
70 D	18.34	-7.8130E-03	272.0	91.70	272.0	131.9	ACTIVE	0.000	-13.80	0.000	1.000
1.000	91.70	0.000	0.000	20.00	20.00	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	0.0000	



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA IABH	LOTTO 00	FASE F	TIPO DOC CL	OPERA MU04 00 001	REV A	FOGLIO 725 di 731
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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0  FULL VERSION  *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:06          |
|-----+-----

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New Project

STRESS RESULTS FOR GROUP NO. 2

O_R :
ELEMENT TYPE 5 NO.OF ELEMENTS. IN THIS GROUP 101
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

HARDENING 2D SOIL ELEMENT

***** TOTAL STRESS FORMULATION *****

EL * UFACTOR ZD	FORCE Peq ZPL	DISPL-Y Kz	VERTICAL-P Su_a	HORIZON.-P Su_p	MAX-V-P Coh_e_a	MAX-H-P Coh_e_p	LAYER	STATE	STIFFNESS	Z-LEVEL ZFO	PORE QS	E FACTOR QSL
1	0.000	--	--	--	--	--		REMOVED	--	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
2	0.000	--	--	--	--	--		REMOVED	--	-0.2000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
3	0.000	--	--	--	--	--		REMOVED	--	-0.4000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
4	0.000	--	--	--	--	--		REMOVED	--	-0.6000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
5	0.000	--	--	--	--	--		REMOVED	--	-0.8000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
6	0.000	--	--	--	--	--		REMOVED	--	-1.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
7	0.000	--	--	--	--	--		REMOVED	--	-1.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
8	0.000	--	--	--	--	--		REMOVED	--	-1.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
9	0.000	--	--	--	--	--		REMOVED	--	-1.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
10	0.000	--	--	--	--	--		REMOVED	--	-1.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
11	0.000	--	--	--	--	--		REMOVED	--	-2.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
12	0.000	--	--	--	--	--		REMOVED	--	-2.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
13	0.000	--	--	--	--	--		REMOVED	--	-2.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
14	0.000	--	--	--	--	--		REMOVED	--	-2.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
15	0.000	--	--	--	--	--		REMOVED	--	-2.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
16	0.000	--	--	--	--	--		REMOVED	--	-3.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
17	0.000	--	--	--	--	--		REMOVED	--	-3.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
18	0.000	--	--	--	--	--		REMOVED	--	-3.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
19	0.000	--	--	--	--	--		REMOVED	--	-3.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
20	0.000	--	--	--	--	--		REMOVED	--	-3.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
21	0.000	--	--	--	--	--		REMOVED	--	-4.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
22	0.000	--	--	--	--	--		REMOVED	--	-4.200	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
23	0.000	--	--	--	--	--		REMOVED	--	-4.400	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
24	0.000	--	--	--	--	--		REMOVED	--	-4.600	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
25	0.000	--	--	--	--	--		REMOVED	--	-4.800	0.000	1.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	not available					
26	0.000	--	--	--	--	--		REMOVED	--	-5.000	0.000	1.000

LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE
RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	727 di 731

58 D	47.34	1.7767E-02	68.70	236.7	222.8	236.7	PASSIVE	0.000	-11.40	0.000	1.000
1.000	236.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
59 D	49.39	1.6706E-02	72.80	246.9	226.9	246.9	PASSIVE	0.000	-11.60	0.000	1.000
1.000	246.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
60 D	51.27	1.5688E-02	76.90	256.3	231.0	256.3	V-C	1.2176E+04	-11.80	0.000	1.000
1.000	256.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
61 D	49.29	1.4713E-02	81.00	246.5	235.1	246.5	V-C	1.2176E+04	-12.00	0.000	1.000
1.000	246.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
62 D	47.42	1.3780E-02	85.10	237.1	239.2	237.1	V-C	1.2176E+04	-12.20	0.000	1.000
1.000	237.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
63 D	45.65	1.2891E-02	89.20	228.3	243.3	228.3	V-C	1.2176E+04	-12.40	0.000	1.000
1.000	228.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
64 D	43.99	1.2044E-02	93.30	219.9	247.4	219.9	V-C	1.2176E+04	-12.60	0.000	1.000
1.000	219.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
65 D	42.42	1.1239E-02	97.40	212.1	251.5	212.1	V-C	1.2176E+04	-12.80	0.000	1.000
1.000	212.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
66 D	40.96	1.0475E-02	101.5	204.8	255.6	204.8	V-C	1.2176E+04	-13.00	0.000	1.000
1.000	204.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
67 D	39.60	9.7510E-03	105.6	198.0	259.7	198.0	V-C	1.2176E+04	-13.20	0.000	1.000
1.000	198.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
68 D	38.33	9.0669E-03	109.7	191.6	263.8	191.6	V-C	1.2176E+04	-13.40	0.000	1.000
1.000	191.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
69 D	37.15	8.4213E-03	113.8	185.8	267.9	185.8	V-C	1.2176E+04	-13.60	0.000	1.000
1.000	185.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
70 D	36.07	7.8130E-03	117.9	180.3	272.0	180.3	V-C	1.2176E+04	-13.80	0.000	1.000
1.000	180.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
71 D	35.07	7.2411E-03	122.0	175.4	276.1	175.4	V-C	1.2176E+04	-14.00	0.000	1.000
1.000	175.4	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
72 D	34.16	6.7041E-03	126.1	170.8	280.2	170.8	V-C	1.2176E+04	-14.20	0.000	1.000
1.000	170.8	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
73 D	33.34	6.2008E-03	130.2	166.7	284.3	166.7	V-C	1.2176E+04	-14.40	0.000	1.000
1.000	166.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
74 D	32.59	5.7299E-03	134.3	162.9	288.4	162.9	V-C	1.2176E+04	-14.60	0.000	1.000
1.000	162.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
75 D	31.91	5.2899E-03	138.4	159.6	292.5	159.6	V-C	1.2176E+04	-14.80	0.000	1.000
1.000	159.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
76 D	31.31	4.8793E-03	142.5	156.6	296.6	156.6	V-C	1.2176E+04	-15.00	0.000	1.000
1.000	156.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
77 D	30.78	4.4968E-03	146.6	153.9	300.7	153.9	V-C	1.2176E+04	-15.20	0.000	1.000
1.000	153.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
78 D	30.31	4.1408E-03	150.7	151.5	304.8	151.5	V-C	1.2176E+04	-15.40	0.000	1.000
1.000	151.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
79 D	29.86	3.8098E-03	154.8	149.3	308.9	149.8	UL-RL	1.9482E+04	-15.60	0.000	1.000
1.000	149.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
80 D	29.06	3.5023E-03	158.9	145.3	313.0	151.8	UL-RL	1.9482E+04	-15.80	0.000	1.000
1.000	145.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
81 D	28.34	3.2167E-03	163.0	141.7	317.1	153.8	UL-RL	1.9482E+04	-16.00	0.000	1.000
1.000	141.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
82 D	27.71	2.9514E-03	167.1	138.5	321.2	155.8	UL-RL	1.9482E+04	-16.20	0.000	1.000
1.000	138.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
83 D	27.15	2.7050E-03	171.2	135.7	325.3	157.8	UL-RL	1.9482E+04	-16.40	0.000	1.000
1.000	135.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0			0.0000	0.0000	0.0000
0.0000	0.0000	0.0000									
84 D	26.65	2.4760E-03	175.3	133.3	329.4	159.8	UL-RL	1.9482E+04	-16.60	0.000	1.000

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	728 di 731

1.000	133.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
85 D	26.22	2.2627E-03	179.4	131.1	333.5	161.7	UL-RL 1.9482E+04	-16.80	0.000	1.000
1.000	131.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
86 D	25.84	2.0638E-03	183.5	129.2	337.6	163.7	UL-RL 1.9482E+04	-17.00	0.000	1.000
1.000	129.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
87 D	25.51	1.8778E-03	187.6	127.6	341.7	165.7	UL-RL 1.9482E+04	-17.20	0.000	1.000
1.000	127.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
88 D	25.23	1.7033E-03	191.7	126.2	345.8	167.7	UL-RL 1.9482E+04	-17.40	0.000	1.000
1.000	126.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
89 D	24.99	1.5389E-03	195.8	124.9	349.9	169.7	UL-RL 1.9482E+04	-17.60	0.000	1.000
1.000	124.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
90 D	24.78	1.3833E-03	199.9	123.9	354.0	171.7	UL-RL 1.9482E+04	-17.80	0.000	1.000
1.000	123.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
91 D	24.60	1.2353E-03	204.0	123.0	358.1	173.7	UL-RL 1.9482E+04	-18.00	0.000	1.000
1.000	123.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
92 D	24.45	1.0937E-03	208.1	122.2	362.2	175.7	UL-RL 1.9482E+04	-18.20	0.000	1.000
1.000	122.2	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
93 D	24.31	9.5732E-04	212.2	121.6	366.3	177.7	UL-RL 1.9482E+04	-18.40	0.000	1.000
1.000	121.6	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
94 D	24.20	8.2519E-04	216.3	121.0	370.4	179.6	UL-RL 1.9482E+04	-18.60	0.000	1.000
1.000	121.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
95 D	24.09	6.9636E-04	220.4	120.5	374.5	181.6	UL-RL 1.9482E+04	-18.80	0.000	1.000
1.000	120.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
96 D	24.00	5.7002E-04	224.5	120.0	378.6	183.6	UL-RL 1.9482E+04	-19.00	0.000	1.000
1.000	120.0	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
97 D	23.91	4.4544E-04	228.6	119.5	382.7	185.6	UL-RL 1.9482E+04	-19.20	0.000	1.000
1.000	119.5	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
98 D	23.83	3.2201E-04	232.7	119.1	386.8	187.6	UL-RL 1.9482E+04	-19.40	0.000	1.000
1.000	119.1	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
99 D	23.75	1.9925E-04	236.8	118.7	390.9	189.6	UL-RL 1.9482E+04	-19.60	0.000	1.000
1.000	118.7	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
100 D	23.67	7.6812E-05	240.9	118.3	395.0	191.6	UL-RL 1.9482E+04	-19.80	0.000	1.000
1.000	118.3	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								
101 D	11.79	-4.5530E-05	245.0	117.9	399.1	193.6	UL-RL 1.9482E+04	-20.00	0.000	1.000
1.000	117.9	0.000	0.000	20.74	20.74	Argillamarnosa_1061_1069_L_0	0.0000	0.0000	0.0000	
0.0000	0.0000	0.0000								



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	729 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                               |
|                                                                                               Exe Time :17 November 2022  18:38:06          |
|                                                                                                                                            |
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New Project

STRESS RESULTS FOR GROUP NO. 3

WallElement_911 :
ELEMENT TYPE 2 NO.OF ELEMENTS. IN THIS GROUP 100
CURRENT TIME IS 4.0000 SUBINCREMENT 00001/00001

WALL2D ELEMENT

EL	TA	TB	MA	MB
1	0.23020	-0.23020	7.34616E-10	4.60400E-02
2	0.95192	-0.95192	-4.60400E-02	0.23642
3	1.9350	-1.9350	-0.23642	0.62342
4	3.1793	-3.1793	-0.62342	1.2593
5	4.6850	-4.6850	-1.2593	2.1963
6	6.4520	-6.4520	-2.1963	3.4867
7	8.4803	-8.4803	-3.4867	5.1827
8	10.770	-10.770	-5.1827	7.3367
9	13.321	-13.321	-7.3367	10.001
10	16.133	-16.133	-10.001	13.228
11	19.207	-19.207	-13.228	17.069
12	22.542	-22.542	-17.069	21.577
13	26.138	-26.138	-21.577	26.805
14	29.996	-29.996	-26.805	32.804
15	34.114	-34.114	-32.804	39.627
16	38.495	-38.495	-39.627	47.326
17	43.136	-43.136	-47.326	55.953
18	48.039	-48.039	-55.953	65.561
19	53.203	-53.203	-65.561	76.201
20	58.629	-58.629	-76.201	87.927
21	64.315	-64.315	-87.927	100.79
22	70.264	-70.264	-100.79	114.84
23	76.473	-76.473	-114.84	130.14
24	82.944	-82.944	-130.14	146.73
25	89.676	-89.676	-146.73	164.66
26	96.669	-96.669	-164.66	184.00
27	103.92	-103.92	-184.00	204.78
28	111.44	-111.44	-204.78	227.07
29	119.22	-119.22	-227.07	250.91
30	127.26	-127.26	-250.91	276.36
31	136.72	-136.72	-276.36	303.71
32	146.59	-146.59	-303.71	333.03
33	156.86	-156.86	-333.03	364.40
34	167.52	-167.52	-364.40	397.90
35	178.59	-178.59	-397.90	433.62
36	190.05	-190.05	-433.62	471.63
37	201.92	-201.92	-471.63	512.01
38	214.18	-214.18	-512.01	554.85
39	226.85	-226.85	-554.85	600.22
40	239.91	-239.91	-600.22	648.20
41	253.37	-253.37	-648.20	698.88
42	258.06	-258.06	-698.88	750.49
43	260.90	-260.90	-750.49	802.67
44	261.91	-261.91	-802.67	855.05
45	261.07	-261.07	-855.05	907.26
46	258.40	-258.40	-907.26	958.94
47	253.89	-253.89	-958.94	1009.7
48	247.54	-247.54	-1009.7	1059.2
49	239.34	-239.34	-1059.2	1107.1
50	229.32	-229.32	-1107.1	1153.0
51	217.45	-217.45	-1153.0	1196.4
52	199.06	-199.06	-1196.4	1236.3
53	179.06	-179.06	-1236.3	1272.1
54	157.46	-157.46	-1272.1	1303.6
55	134.26	-134.26	-1303.6	1330.4
56	109.45	-109.45	-1330.4	1352.3
57	83.041	-83.041	-1352.3	1368.9

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	730 di 731

58	55.027	-55.027	-1368.9	1379.9
59	25.410	-25.410	-1379.9	1385.0
60	-5.6477	5.6477	-1385.0	1383.9
61	-34.288	34.288	-1383.9	1377.0
62	-60.616	60.616	-1377.0	1364.9
63	-84.736	84.736	-1364.9	1347.9
64	-106.75	106.75	-1347.9	1326.6
65	-126.76	126.76	-1326.6	1301.2
66	-144.87	144.87	-1301.2	1272.3
67	-161.17	161.17	-1272.3	1240.0
68	-175.77	175.77	-1240.0	1204.9
69	-188.75	188.75	-1204.9	1167.1
70	-200.20	200.20	-1167.1	1127.1
71	-210.22	210.22	-1127.1	1085.0
72	-218.89	218.89	-1085.0	1041.3
73	-226.30	226.30	-1041.3	996.01
74	-232.51	232.51	-996.01	949.50
75	-237.61	237.61	-949.50	901.98
76	-241.67	241.67	-901.98	853.65
77	-244.75	244.75	-853.65	804.70
78	-246.93	246.93	-804.70	755.31
79	-248.21	248.21	-755.31	705.67
80	-248.26	248.26	-705.67	656.02
81	-247.15	247.15	-656.02	606.59
82	-244.97	244.97	-606.59	557.59
83	-241.78	241.78	-557.59	509.24
84	-237.66	237.66	-509.24	461.71
85	-232.66	232.66	-461.71	415.18
86	-226.85	226.85	-415.18	369.81
87	-220.19	220.19	-369.81	325.77
88	-211.95	211.95	-325.77	283.38
89	-202.24	202.24	-283.38	242.93
90	-191.11	191.11	-242.93	204.71
91	-178.64	178.64	-204.71	168.98
92	-164.88	164.88	-168.98	136.00
93	-149.88	149.88	-136.00	106.03
94	-133.66	133.66	-106.03	79.293
95	-116.27	116.27	-79.293	56.040
96	-97.709	97.709	-56.040	36.498
97	-78.008	78.008	-36.498	20.897
98	-57.170	57.170	-20.897	9.4627
99	-35.204	35.204	-9.4627	2.4220
100	-12.110	12.110	-2.4220	6.42331E-12



LINEA POTENZA-FOGGIA
TRATTA FERROVIARIA ROCCHETTA-POTENZA
AMMODERNAMENTO - ADEGUAMENTO ALLE STI SRT/ENE

RELAZIONE DI CALCOLO OPERE DI SOSTEGNO
PT07 (NV24)

COMMESSA	LOTTO	FASE	TIPO DOC	OPERA	REV	FOGLIO
IABH	00	F	CL	MU04 00 001	A	731 di 731

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|          PARATIEPLUS(TM)  NLS ENGINE RELEASE 2022.0.0 FULL VERSION *Build date:Jan 24, 2022*          |
|                                                                                                                                            |
|                                                                                               ParatiePlus                                                                                               |
|                                                                                               Exe Time :17 November 2022 18:38:06                                                                                               |
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F I N A L I N C R E M E N T A L A N A L Y S I S

S U M M A R Y

STEP		NO. OF ITERATIONS
1	CONVERGENCE :YES	2
2	CONVERGENCE :YES	2
3	CONVERGENCE :YES	6
4	CONVERGENCE :YES	4

END OF PROCESS FOR PROBLEM
New Project
NONLINEAR SOLUTION CPU TIME 0.07 [sec]
DATABASE CREATION CPU TIME..... 0.38 [sec]