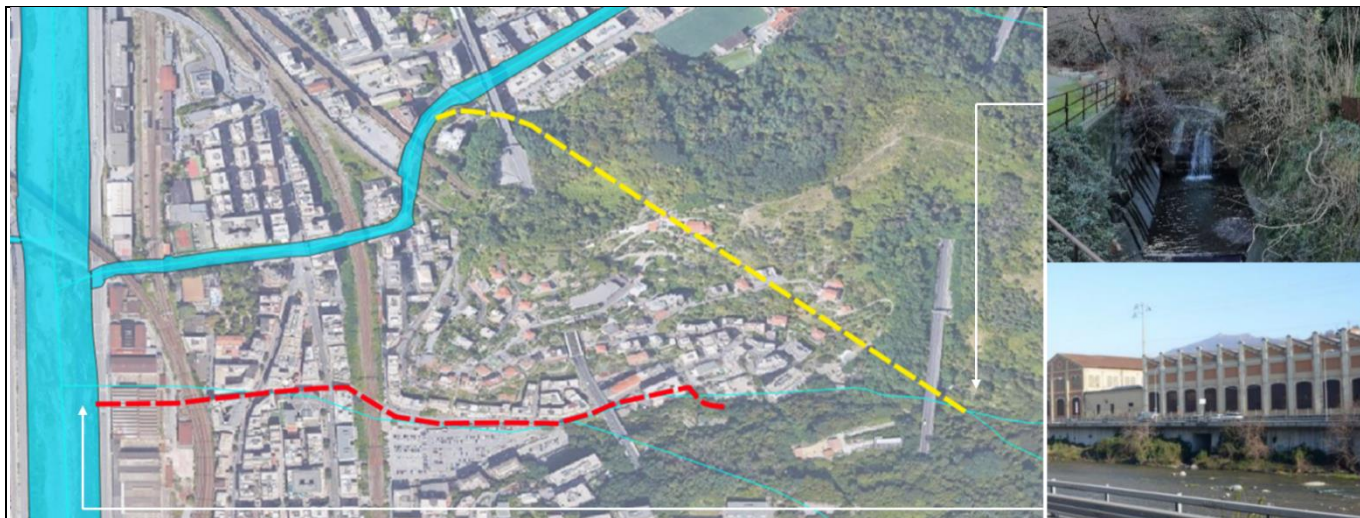





COMUNE DI GENOVA





Servizio di Progettazione di Fattibilità Tecnica ed Economica e definitiva (per appalto integrato) nonché del coordinamento della sicurezza in fase di progettazione delle “Opere di adeguamento idraulico del tratto tombinato di valle del rio Maltempo, affluente del torrente Polcevera”

PROGETTO DEFINITIVO

RESPONSABILE UNICO DEL PROCEDIMENTO: Arch. Roberto Valcalda

PROGETTAZIONE:	MANDATARIA: 	MANDANTE: Dott.ssa Claudia Pizzinato
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RESPONSABILE DELLE INTEGRAZIONI DELLE PRESTAZIONI SPECIALISTICHE: Ing. Simone Venturini

TITOLO: SISTEMAZIONE T.TORBELLA SOSTITUZIONE PONTE STRADALE ESISTENTE VIA CANEPARI RELAZIONE DI CALCOLO - SPALLA	 
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Comittente:



Comune di Genova
"Opere di adeguamento idraulico del tratto tombinato di valle del rio Maltempo, affluente del torrente Polcevera"

Rev. 1 03/2023

Progetto Definitivo
Sostituzione ponte stradale esistente Via Canepari
Relazione di calcolo - Spalla

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Progettista:



Mandataria

Mandante

Dott.ssa Claudia Pizzinato



1. PREMESSA

La presente relazione illustra l'analisi e le verifiche strutturali e geotecniche effettuate per la progettazione della fondazione dell'impalcato relativo al nuovo ponte stradale su Via Giacomo Rossini, Genova, costruito in sostituzione a un ponte stradale ad arco esistente.

Il nuovo ponte è previsto nell'ambito delle opere di adeguamento idraulico del tratto tombinato di valle del rio Maltempo, affluente del torrente Polcevera.

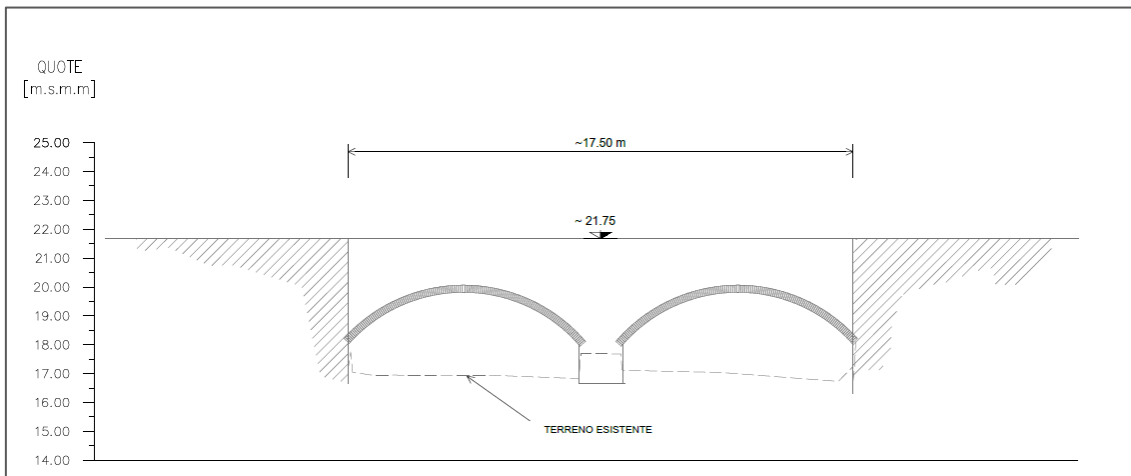


Figura 1-1 – Profilo longitudinale del ponte esistente

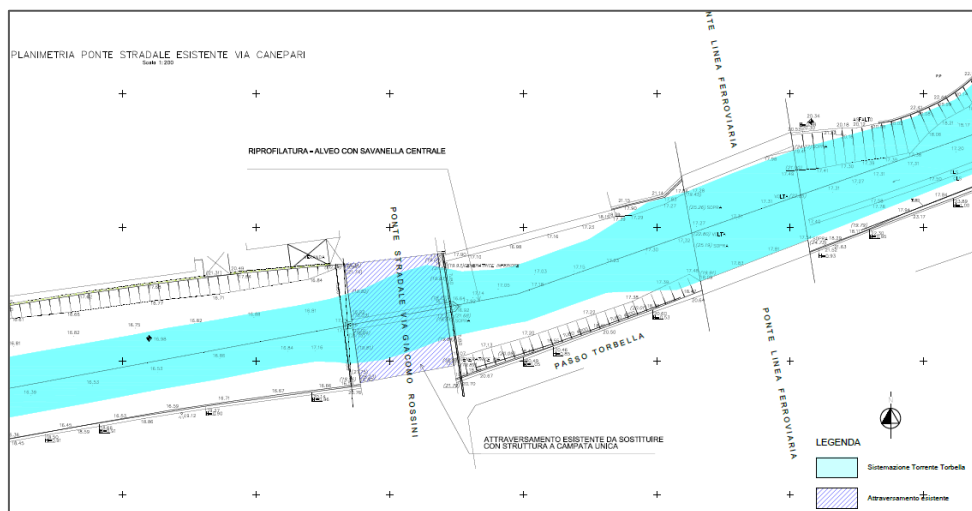


Figura 1-2 – Planimetria dell'intervento



2. DESCRIZIONE DELL'OPERA

Le opere oggetto della presente relazione sono le spalle a sostegno del nuovo ponte sul Rio Maltempo.

La struttura in studio viene costruita in sostituzione a un ponte stradale ad arco esistente, per cui si prevede la completa demolizione dello stesso. Si prevede l'impiego di un ponte provvisorio in una sola carreggiata sopraelevata rispetto al ponte ad arco esistente per garantire la continuità del traffico stradale concomitante alla costruzione parziale (metà carreggiata) del nuovo ponte. Le spalle sono costruite in analogia con l'impalcato: ciascuna spalla, di larghezza totale 16,20 m, sarà realizzata in 2 fasi. Le due parti (di 8,10 m ciascuna) sono separate tramite un giunto strutturale.

La spalla è costituita da un paramento in C.A. di larghezza 2,30 m ed altezza 4,22 m su cui poggiano 6 baglioli a sezione quadrata 1 m x 1 m e altezza 0,25 m circa e da un paraghiaia di larghezza 0,40 m ed altezza 1,47 m.

L'opera poggia su 24 pali di fondazione (12 per ogni metà) disposti su 2 file distanti 1,31 m. Lungo la fila i pali hanno interasse di 1,4 m. I pali hanno diametro 600 mm e lunghezza 29 m.

Nelle figure seguenti sono mostrate le dimensioni dell'opera e la configurazione dei pali.

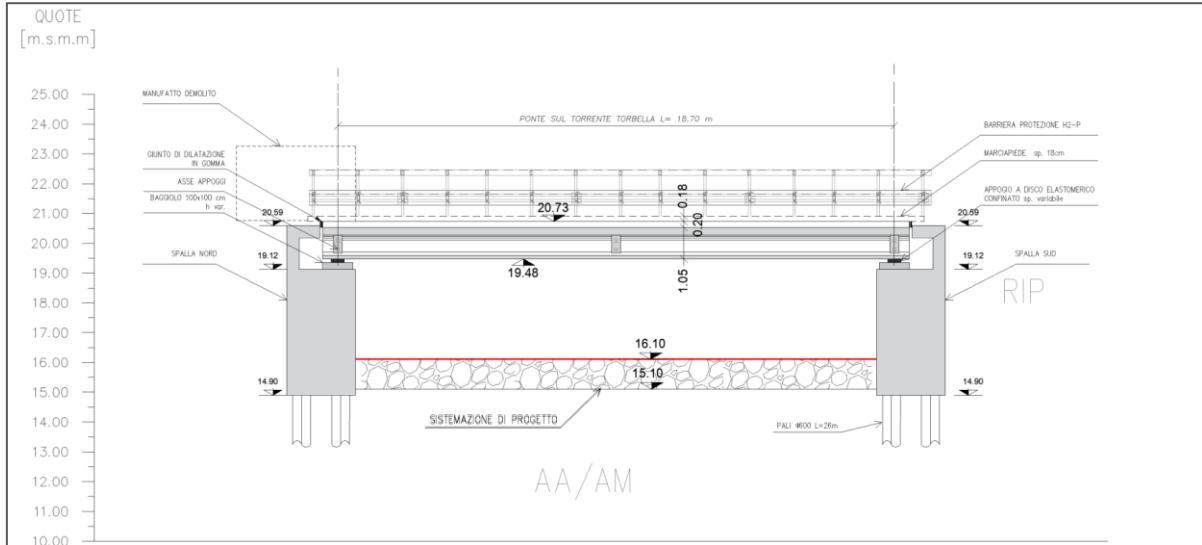


Figura 2-1 – Profilo longitudinale del ponte

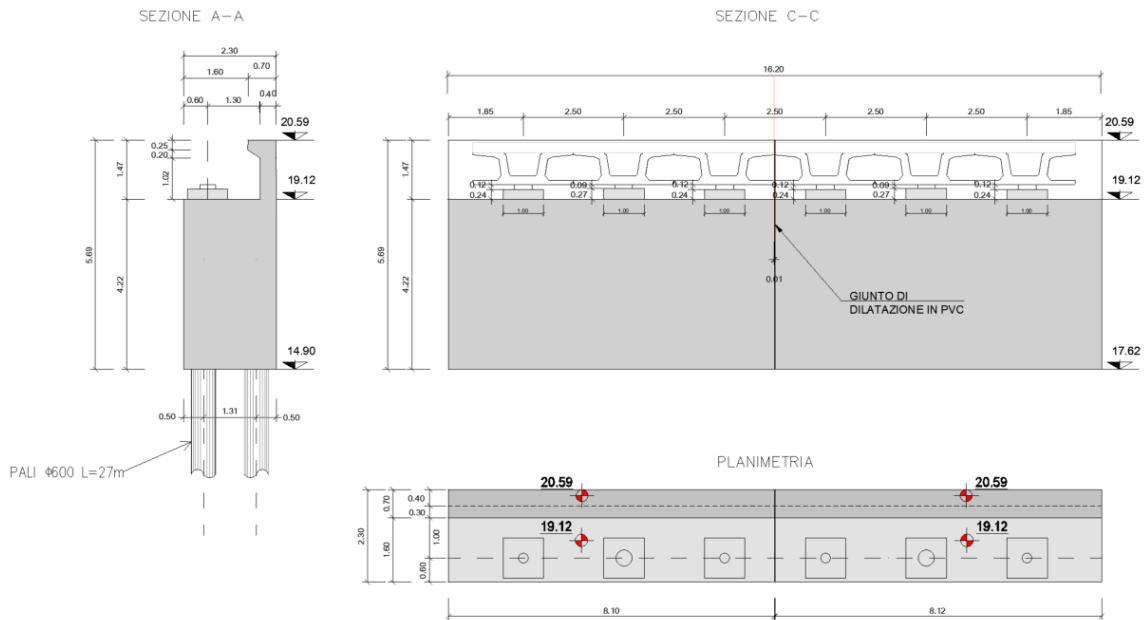


Figura 2-2 – Sezioni e planimetria della spalla del ponte

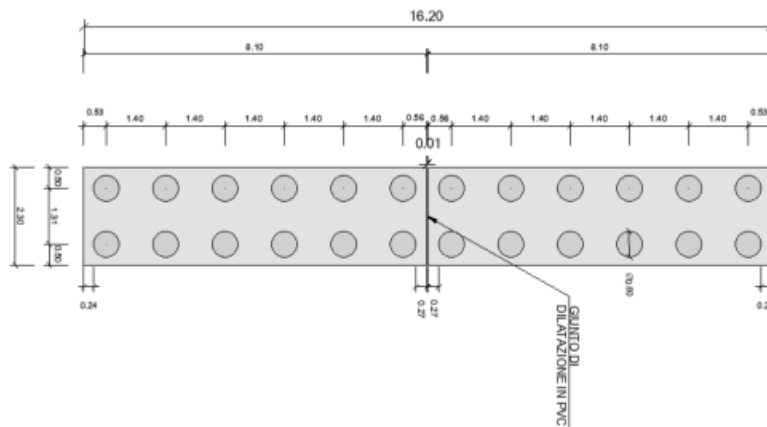


Figura 2-3 – Schema posizionamento pali di fondazione



3. DOCUMENTI DI RIFERIMENTO

3.1 Normativa di riferimento

Il progetto è sviluppato nell'osservanza della vigente normativa tecnica:

- D.P.R. n° 380 del 06/06/2001, integrato ai sensi del D.Lgs. n° 301 del 27/12/2002 - Norme per la disciplina delle opere in conglomerato cementizio armato, normale e precompresso ed a struttura metallica.
- UNI EN 206-1:2016 – “Calcestruzzo-Parte 1: Specificazione, prestazione, produzione e conformità”.
- UNI 11104:2016 – “Calcestruzzo - Specificazione, prestazione, produzione e conformità - Specificazioni complementari per l'applicazione della EN 206”.
- D.M. 17/01/2018 “Aggiornamento delle norme tecniche per le costruzioni” - GU n°42 del 20/2/2018.
- Circolare 21 gennaio 2019, n. 7 del Ministero delle Infrastrutture e dei Trasporti approvata dal Consiglio Superiore dei Lavori Pubblici "Istruzioni per l'applicazione dell'«Aggiornamento delle Norme tecniche per le costruzioni» - Gazzetta Ufficiale del 11.02.2019 n. 35, supplemento ordinario n. 5.
- UNI EN 1990 (Eurocodice 0): “Criteri generali di progettazione strutturale”;
- UNI EN 1991-2-4 (Eurocodice 1): “Azioni in generale: Pesi per unità di volume, pesi propri e sovraccarichi per gli edifici”;
- UNI EN 1991-1-1 (Eurocodice 1): “Azioni in generale – Parte 1-1: Pesi per unità di volume, pesi propri e sovraccarichi per gli edifici”;
- UNI EN 1991-2 (Eurocodice 1): “Azioni sulle strutture – Parte 2: Carico da traffico sui ponti”;
- UNI EN 1992-1-1 (Eurocodice 2): “Progettazione delle strutture di calcestruzzo – Parte 1-1: Regole generali e regole per gli edifici”;
- UNI EN 1997-1-1 (Eurocodice 7): “Progettazione geotecnica – Parte 1: Regole generali”
- UNI EN 1998-1 (Eurocodice 8): “Progettazione delle strutture per la resistenza sismica – Parte 1: Regole generali – Azioni sismiche e regole per gli edifici”;

Il metodo di calcolo adottato è quello semiprobabilistico agli stati limite, con applicazione di coefficienti parziali per le azioni o per l'effetto delle azioni, variabili in ragione dello stato limite indagato.



4. SOFTWARE DI CALCOLO UTILIZZATI

In accordo con la normativa tecnica per le costruzioni (D.M. 17 gennaio 2018), per le verifiche di sicurezza agli stati limite delle sezioni in cemento armato si ricorre a seconda del caso studiato ai seguenti programmi:

"**VCASLU**" – ver. 7.6 del 25 Giugno 2010, sviluppato dal Prof. Piero Gelfi. Il programma consente la verifica di sezioni in cemento armato normale e precompresso, soggette a presso-flessione o tensoflessione retta o deviata sia allo Stato Limite Ultimo che con il Metodo n e permette inoltre di tracciare il domino M-N.

Ensoft GROUP 2019 – v11, software per il calcolo di gruppi di pali.

Microsoft Office Excel + Visual Basic for Application (VBA): programma utilizzato per il calcolo delle azioni interne alla spalla, l'elaborazione dei dati di input/output e la creazione di tabelle riepilogative opportunamente implementate in fogli elettronici.

Di seguito si riportano le dichiarazioni dei software per il calcolo dei pali di fondazione.

4.1 Group

Origine e caratteristiche dei codici di calcolo

- Titolo Group
- Versione 2019
- Produttore Ensoft, Inc.

Tipo di analisi svolta

L'analisi della risposta tenso-deformativa della fondazione è condotta con l'ausilio di un codice di calcolo automatico. Le verifiche degli elementi strutturali e geotecnici sono state valutate con i metodi della scienza delle costruzioni, attraverso il software VCASLU - ver 7.7 e tramite fogli Excel opportunamente predisposti.

Affidabilità dei codici di calcolo

Un attento esame preliminare della documentazione a corredo del software ha consentito di valutarne l'affidabilità. La documentazione fornita dal produttore del software contiene un'esauriente descrizione delle basi teoriche, degli algoritmi impiegati e l'individuazione dei campi d'impiego.

La società produttrice ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.

Informazioni generali sull'elaborazione

Il software prevede una serie di controlli automatici che consentono l'individuazione di errori di modellazione, di non rispetto di limitazioni geometriche e di armatura e di presenza di elementi non verificati se viene svolta la verifica strutturale con esso.

Il codice di calcolo consente di visualizzare e controllare, sia in forma grafica che tabellare, i dati del modello strutturale, in modo da avere una visione consapevole del comportamento corretto del modello



strutturale.

Giudizio motivato di accettabilità dei risultati

I risultati delle elaborazioni sono stati sottoposti a controlli dal sottoscritto utente del software. Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali.

Inoltre, sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni. In base a quanto sopra, si asserisce che l'elaborazione è corretta ed idonea al caso specifico, pertanto i risultati di calcolo sono da ritenersi validi ed accettabili.

Il software tiene conto del vincolo esercitato dal terreno di fondazione e di rinfiaccio, modellato con molle di rigidità pari alla costante di sottofondo.

Strategia di soluzione

Il programma si basa sul metodo delle curve di trasferimento (note anche come curve p-y e curve t-z): tali curve, valutate a partire da prove a scala reale e ridotta e da analisi numeriche, esprimono l'andamento della reazione del terreno in funzione degli spostamenti accumulati.

Essendo un palo soggetto a carichi assiali e trasversali un complesso problema di interazione struttura-terreno dipendente da molteplici fattori (rigidità del terreno e della struttura, caratteristiche meccaniche del terreno, storia di carico, stato di sforzo, effetto di gruppo, natura del carico, ecc.) e fortemente non lineare, questo metodo si è rivelato molto funzionale alla risoluzione del problema, poiché riassume tutte le variabili in gioco all'interno di una sola curva.

Convenzione adottata

Per i carichi provenienti dalla sovrastruttura e per la valutazione delle azioni in fondazione si adotta il seguente sistema di riferimento:

- L'asse X coincide con la direzione longitudinale dell'opera (perpendicolare alla strada)
- L'asse Y coincide con la direzione trasversale dell'opera (parallelo alla strada)
- L'asse Z coincide con la direzione verticale (verso l'alto)

Nel software Group si adotta il seguente sistema di riferimento dei carichi:

- L'asse Y coincide con la direzione longitudinale dell'opera (perpendicolare alla strada)
- L'asse Z coincide con la direzione trasversale dell'opera (parallelo alla strada)
- L'asse X coincide con la direzione verticale della palificata (verso il basso)

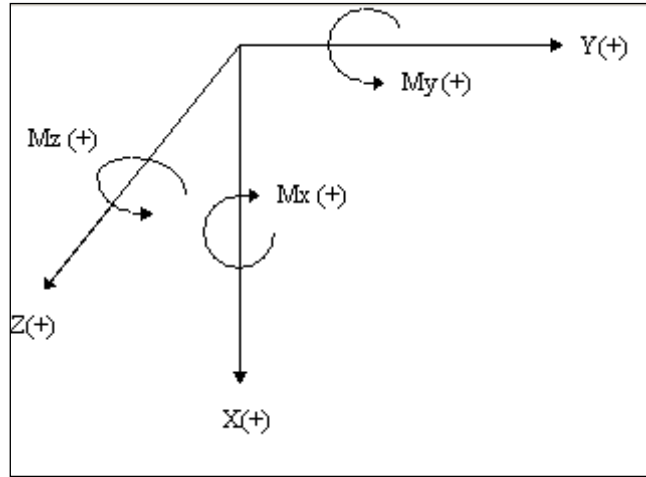


Figura 4-1 – Sistema di riferimento in Group



5. MATERIALI

5.1 Calcestruzzo

5.1.1 Calcestruzzo magro – magrone

Classe di resistenza minima	C12/15
R_{ck}	12 MPa
f_{ck}	15 MPa
Classe di esposizione	X0
Dim. max. nominale aggregato	20 mm

5.1.2 Calcestruzzo per spalla e paraghiaia

Classe di resistenza minima	C30/37
R_{ck}	37 MPa
f_{ck}	30 MPa
Classe di esposizione	XF2
Dim. max. nominale aggregato	20 mm
Classe consistenza	S4
Copriferro minimo	40 mm

5.1.3 Calcestruzzo per pali

Classe di resistenza minima	C30/37
R_{ck}	37 MPa
f_{ck}	30 MPa
Classe di esposizione	XC4
Dim. max. nominale aggregato	20 mm
Classe consistenza	S5
Copriferro minimo	60 mm

5.2 Acciaio

5.2.1 Acciaio per armatura ordinaria

Tipo B450C	
Tensione caratteristica di snervamento (f_{yk})	$\geq 450 \text{ N/mm}^2$
Tensione caratteristica a rottura (f_{tk})	$\geq 540 \text{ N/mm}^2$



6. CARATTERISTICHE GEOTECNICHE DEI TERRENI

6.1 Stratigrafia di progetto

La stratigrafia di progetto è dedotta dal profilo geologico (Doc. II151F-PD-GEO-D005), di cui si riporta la sezione di riferimento.

La quota del piano campagna è a 20.59 mslm. Dalla sezione geologica, si evince che il terreno è costituito da uno strato superficiale di terreno di riporto dello spessore di circa 4,00 m, al di sotto del quale è presente uno strato di Alluvioni Torbella.

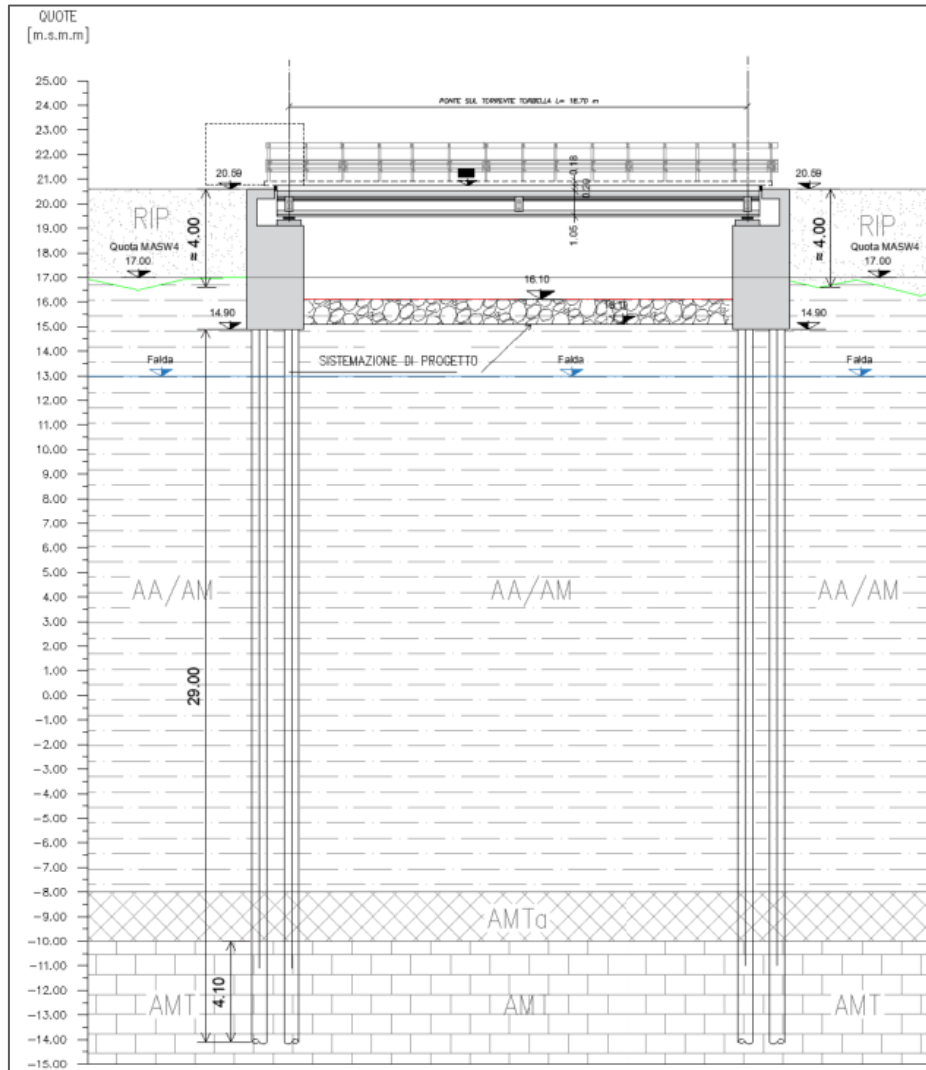


Figura 6-1: Sezione geologica di progetto

Sulla base delle indagini geognostiche eseguite per il presente progetto, di cui all'elaborato II151F-PD-IND-R002 (pag. 288) nella prova MASW4, ubicata immediatamente a valle del ponte di via Canepari ad una quota del piano campagna di circa 17 m s.m.m., si riscontra a circa 25 m di profondità un marcato incremento di velocità della velocità delle onde sismiche di taglio, da 573 m/s a 818 m/s, che può essere attribuito al passaggio fra alluvioni e substrato in posto. Inoltre, nel profilo geologico-geotecnico, costruito con il supporto delle indagini eseguite e indagini pregresse, si attesta la presenza del substrato roccioso in facies alterata e sana (unità AMTa e AMT) fra 9-10 m da p.c. più a monte, in corrispondenza del



sondaggio S05. Tale substrato nello stesso profilo geologico in corrispondenza del ponte di via Canepari non è indicato, ma ha comunque un andamento ottimamente coerente con quanto restituito dalla prova MASW descritta sopra.

Di conseguenza, il tetto del substrato roccioso si prevede ubicato come segue:

- substrato alterato AMTa: ad una quota di $17 - 25 = -8$ m s.m.m.;
- substrato AMT: sano 2 m più in profondità, quindi ad una quota di -10 m s.m.m..

Sulla base di tali dati, di seguito si riportano i parametri geotecnici e la stratigrafia adottati nelle analisi.

Sigla	Unità stratigrafica	γ [$\frac{kN}{m^3}$]	c' [kPa]	Φ' [°]	E [MPa]	K [m/s]	Res. Compr. monoassiale [Mpa]	RQD [%]
RIP	Terreno di riporto	18	0	28	20	1.0E-5	-	-
AA/AM	Alluvioni Torbella	19	0	31	28	1.0E-4	-	-
AMTa	Argilliti di Montanesi, materiale alterato e zona di faglia	25	25	28	350	4.0E-7	1	10
AMT	Argilliti di Montanesi	27	100	38	1200	1.5e-5	5	25

Tabella 6-1: Parametri geotecnici dei terreni in sito

Strato	Da [mslm]	A [mslm]	Spessore	Unità
1	17	20.59	3.6	RIP
2	-8	17	25	AA/AM
3	-10	-8	2	AMTa
4	-	-10	-	AMT

Tabella 6-2: Stratigrafia di progetto

Di seguito si riportano inoltre i grafici delle prove geotecniche da cui sono stati dedotti i valori sopra citati.



• Prove SPT

○ Unità RIP:

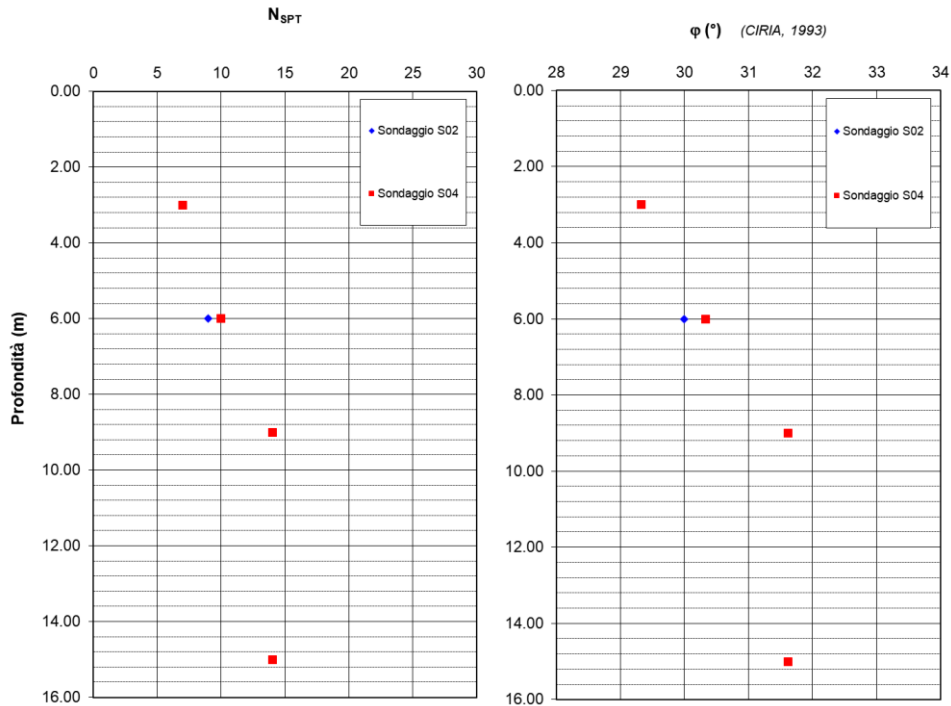


Figura 6-2: Risultati delle prove SPT eseguite per l'unità RIP

○ Unità A/M:

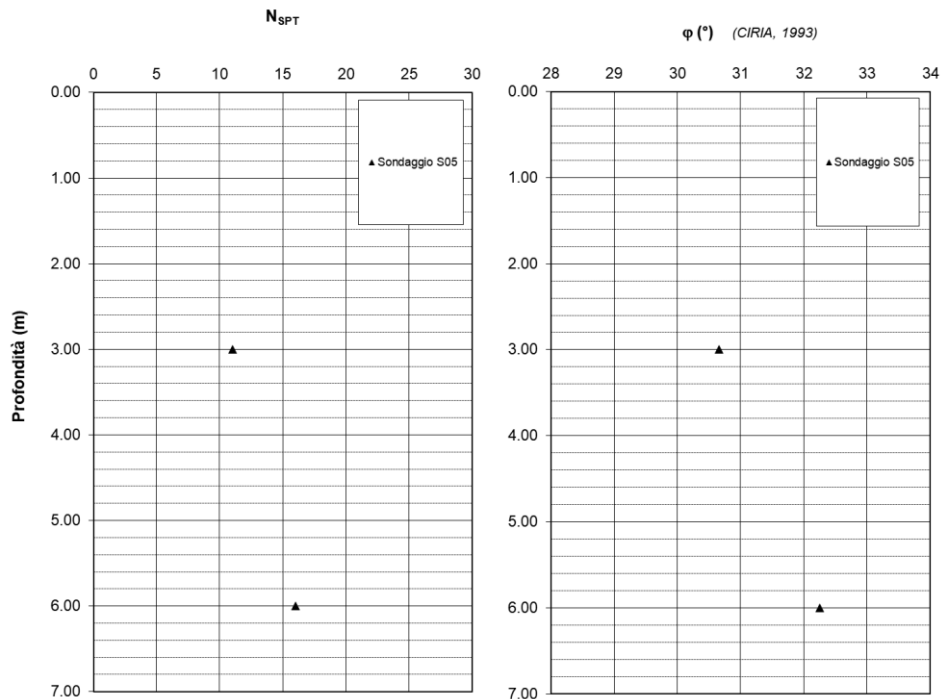
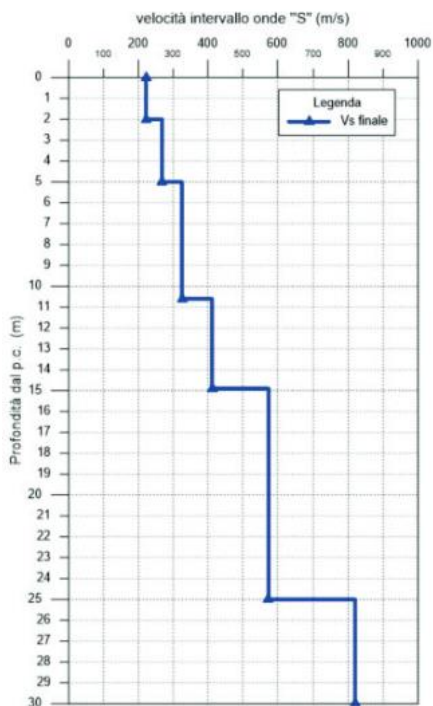


Figura 6-3: Risultati delle prove SPT eseguite per l'unità A/M



- Indagine MASW 4:



Numero di Strati	V _s finale (m/s)	Spessore (m)	Profondità (m)	h/ V _s
1	221	2.0	2.0	0.00905
2	267	3.0	5.0	0.01124
3	324	5.6	10.6	0.01728
4	411	4.3	14.9	0.01046
5	573	10.1	25.0	0.01763
6	818	5.0	30.0	0.00611

6.2 Livello di falda

Il livello di falda è posto ad una quota di 13 mslm (7.6 m dal p.c.).



7. VALUTAZIONE SISMICA

7.1 Vita nominale, classe d'uso e periodo di riferimento

Le azioni sismiche di progetto, in base alle quali valutare il rispetto dei diversi stati limite considerati, si definiscono a partire dalla “pericolosità sismica di base” del sito di costruzione.

La pericolosità sismica è definita in termini di accelerazione orizzontale massima attesa a_g in condizioni di campo libero su sito di riferimento rigido con superficie topografica orizzontale, nonché di ordinate dello spettro di risposta elastico in accelerazione ad essa corrispondente $S_e(T)$, con riferimento a prefissate probabilità di eccedenza P_{VR} , nel periodo di riferimento V_R . Ai fini della normativa vigente le forme spettrali sono definite, per ciascuna delle probabilità di superamento nel periodo di riferimento P_{VR} , a partire dai valori dei seguenti parametri su sito di riferimento rigido orizzontale:

- a_g accelerazione orizzontale massima al sito;
- F_0 valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;
- T_c^* periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale.

Ai fini delle verifiche strutturali, si considera lo Stato Limite di Salvaguardia della Vita (SLV). Per la valutazione degli spostamenti si considera lo Stato Limite di Danno (SLD).

Per la definizione delle azioni sismiche di progetto si sono adottati i seguenti parametri:

- Vita nominale $V_N = 50$ anni
- Classe d'uso: IV
- Coefficiente d'uso $C_U = 2,0$
- Vita di riferimento per l'azione sismica $V_R = V_N \cdot C_U = 100$ anni.

La strategia di progettazione per i differenti stati limite di cui al punto 3.2.1 delle NTC 2018 è quindi ricavata dalla seguente formula (formula 3.2.0 delle NTC 2018), in funzione delle probabilità di superamento P_{VR} indicate in tabella 3.2.I nel periodo di riferimento V_R (si veda anche la *figura seguente*):

$$T_R = - \frac{V_R}{\ln(1 - P_{VR})}$$

Tab. 3.2.I – Probabilità di superamento P_{VR} in funzione dello stato limite considerato

Stati Limite	P_{VR} : Probabilità di superamento nel periodo di riferimento V_R	
Stati limite di esercizio	SLO	81%
	SLD	63%
Stati limite ultimi	SLV	10%
	SLC	5%

Figura 7-1 – Probabilità di superamento nel periodo di riferimento V_R per differenti stati limite (NTC18)

7.2 Pericolosità sismica

Nelle norme tecniche NTC 2018 (Allegato B) sono forniti, secondo un reticolo di riferimento e per differenti intervalli di riferimento, i parametri sismici a_g , F_0 e T_c^* per un sito rigido orizzontale (come definiti al paragrafo 3.2 delle NTC 2018) necessari per la determinazione delle azioni sismiche.

Qualora l'area in esame non ricada in corrispondenza dei nodi del reticolo di riferimento, i valori dei



parametri di interesse possono essere calcolati come media pesata dei valori assunti nei quattro vertici della maglia elementare del reticolo di riferimento, mediante la seguente espressione:

$$p = \frac{\sum_{i=1}^4 \frac{p_i}{d_i}}{\sum_{i=1}^4 \frac{1}{d_i}}$$

in cui:

- p è il valore del parametro di interesse nel punto in esame;
- p_i è il valore del parametro di interesse nell' i -esimo punto della maglia elementare contenente il punto in esame;
- d_i è la distanza del punto in esame dall' i -esimo punto della maglia suddetta.

Inoltre, qualora le tabelle di pericolosità sismica su reticolo di riferimento non contemplino il periodo di ritorno T_R corrispondente alla V_R e P_{VR} prefissati, il valore del generico parametro p (a_g, F_O, T_C^*) ad esso corrispondente potrà essere ricavato per interpolazione a partire dai dati relativi di T_R previsti nella pericolosità sismica, utilizzando la seguente espressione, in allegato A alle NTC 2018:

$$\log(p) = \log(p_1) + \log\left(\frac{p_2}{p_1}\right) \cdot \log\left(\frac{T_R}{T_{R1}}\right) \cdot \left[\log\left(\frac{T_{R2}}{T_{R1}}\right)\right]^{-1}$$

in cui:

- p è il valore del parametro di interesse al T_R desiderato;
- T_{R1}, T_{R2} sono i periodi di ritorno più prossimi a T_R per i quali si dispone dei valori di p_1 e p_2 del generico parametro p .

Di seguito si riportano i valori dei parametri sismici a_g, F_O, T_C^* riferiti alle coordinate geografiche dell'opera oggetto di verifica.

	T_R (anni)	a_g [g]	F_O	T_C^* (s)
SLD	101	0.038	2.555	0.243
SLV	949	0.087	2.532	0.297

7.3 Categoria di sottosuolo e condizioni topografiche

Le categorie di sottosuolo sono definite al punto 3.2.2 delle NTC 2018 sulla base del parametro di velocità equivalente delle onde di taglio $V_{S,30}$ relativo ai primi 30 metri di profondità.

È altresì specificato che “Per le fondazioni superficiali, tale profondità è riferita al piano di imposta delle stesse, mentre per le fondazioni su pali è riferita alla testa dei pali. Nel caso di opere di sostegno di terreni naturali, la profondità è riferita alla testa dell'opera. Per muri di sostegno di terrapieni, la profondità è riferita al piano di imposta della fondazione”.

Sulla base dei risultati delle indagini eseguite (Tabella 22 dell'elaborato di riferimento “Report sismica Rio Maltempo.pdf”), si evince, dalla tabella e dal calcolo esposti di seguito, che la categoria per la struttura in studio è la classe B, ai sensi del punto 3.2.2 delle NTC 2018 (Tab. 3.2.II).



Numero di Strati	V _s finale (m/s)	Spessore (m)	Profondità (m)	h/ V _s
1	221	2.0	2.0	0.00905
2	267	3.0	5.0	0.01124
3	324	5.6	10.6	0.01728
4	411	4.3	14.9	0.01046
5	573	10.1	25.0	0.01763
6	818	5.0	30.0	0.00611

Figura 7-2 – Riepilogo spessore degli strati e velocità delle onde di taglio. Indagini MASW4.

La classificazione del sottosuolo si effettua in base alle condizioni stratigrafiche ed ai valori della velocità equivalente di propagazione delle onde di taglio, V_{s,eq} (in m/s), definita dall'espressione:

$$V_{s,eq} = \frac{30}{\sum_i^N \frac{h_i}{V_{s_i}}} = 418 \text{ m/s}$$

Tabella 7-1 – Definizione della categoria di sottosuolo

Tab. 3.2.II – Categorie di sottosuolo che permettono l'utilizzo dell'approccio semplificato.

Categoria	Caratteristiche della superficie topografica
A	Ammassi rocciosi affioranti o terreni molto rigidi caratterizzati da valori di velocità delle onde di taglio superiori a 800 m/s, eventualmente comprendenti in superficie terreni di caratteristiche meccaniche più scadenti con spessore massimo pari a 3 m.
B	Rocce tenere e depositi di terreni a grana grossa molto addensati o terreni a grana fina molto consistenti, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 360 m/s e 800 m/s.
C	Depositati di terreni a grana grossa mediamente addensati o terreni a grana fina mediamente consistenti con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 180 m/s e 360 m/s.
D	Depositati di terreni a grana grossa scarsamente addensati o di terreni a grana fina scarsamente consistenti, con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 100 e 180 m/s.
E	Terreni con caratteristiche e valori di velocità equivalente riconducibili a quelle definite per le categorie C o D, con profondità del substrato non superiore a 30 m.

Per quanto attiene infine al coefficiente di amplificazione topografica, ai sensi del punto 3.2.2 delle NTC 2018 si assume che le aree in esame siano sempre riferibili alla categoria T1, ovvero quali "superfici pianeggianti, pendii e rilievi isolati con inclinazione media $i \leq 15^\circ$ ".

7.4 Azioni sismiche di progetto

Le azioni sismiche di progetto sono definite sulla base dei dati derivanti dalla pericolosità sismica (a_g, F_0, T_c^*), della categoria di sottosuolo e delle condizioni topografiche del sito come definite al paragrafo 3.2.2 delle NTC 2018. Da questi valori possono essere calcolati gli spettri di risposta elastici in accelerazione (paragrafo 3.2.3.2 delle NTC 2018) e gli spettri di progetto (paragrafi 3.2.3.4 e 3.2.3.5 delle NTC 2018).



Di seguito si riportano gli spettri di risposta e le accelerazioni utilizzati in fase di calcolo.

Categoria di sottosuolo		Coordinate 44,5858° N / 11,4027° O			
B		T_R (anni)	a_g [g]	$S = S_S \cdot S_T$	a_{max} [g]
	SLD	101	0,038	1,2	0,046
	SLV	949	0,087	1,2	0,105

Tabella 7-2: Massime accelerazioni attese in sito agli stati limite di progetto

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

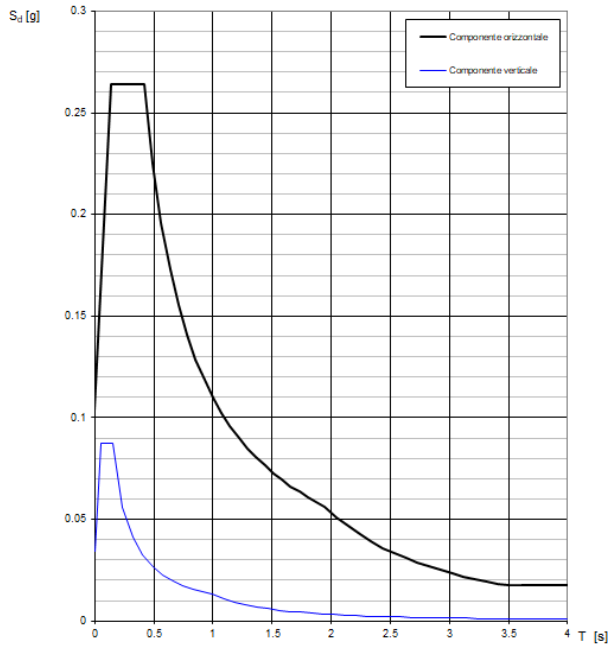


Figura 7-3 – Spettri di risposta SLV

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

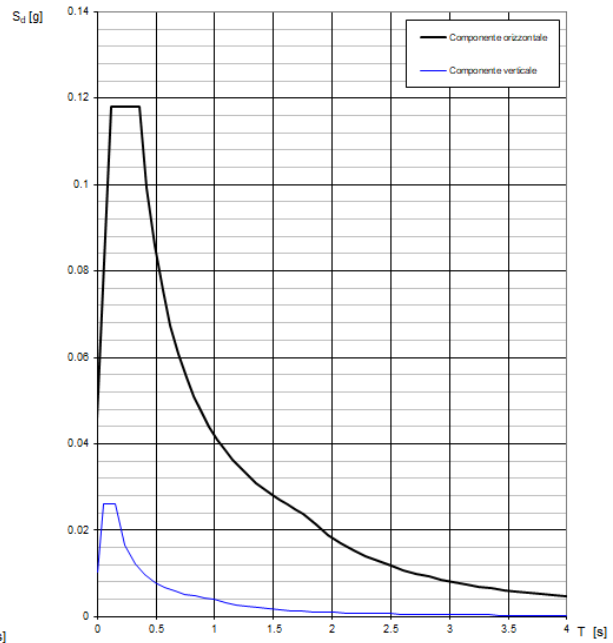


Figura 7-4 – Spettri di risposta SLD



8. CRITERI GENERALI DI VERIFICA DELLE SEZIONI IN C.A.

Il presente paragrafo illustra nel dettaglio i criteri generali adottati per le verifiche strutturali condotte. Ulteriori dettagli di carattere specifico, laddove impiegati, sono dichiarati e motivati nelle relative risultanze delle verifiche.

Per le sezioni in cemento armato si effettuano:

- Verifiche per gli Stati Limite Ultimi a presso-flessione ed a taglio;
- Verifiche per gli Stati Limite di Esercizio per la fessurazione.

8.1 Verifica agli Stati Limite Ultimi

8.1.1 Verifiche a flessione e pressoflessione

La verifica alle sollecitazioni che provocano tensioni normali (sforzo normale, flessione semplice e flessione composta) è stata fatta con uno specifico programma in cui, inserendo le caratteristiche geometriche della sezione, delle armature e delle sollecitazioni desunte dai precitati tabulati di calcolo, si ottiene, per i materiali ipotizzati, il momento resistente che dovrà risultare maggiore del momento agente.

Con riferimento alla sezione pressoinflessa retta, la capacità, in termini di resistenza e duttilità, si determina in base alle ipotesi di calcolo e ai modelli $\sigma - \varepsilon$:

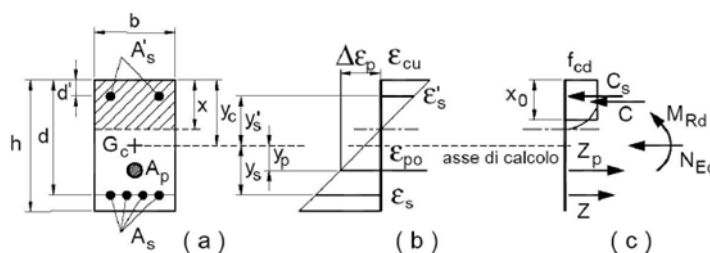


Figura 8-1 – Schema verifica a pressoflessione

Le verifiche a pressoflessione vengono condotte confrontando le resistenze ultime e le sollecitazioni massime agenti, valutando il corrispondente fattore di sicurezza (FS) come rapporto tra la sollecitazione resistente e quella massima agente.

$$FS = \frac{M_{Rd}}{M_{Ed}} \geq 1$$

Le verifiche flessionali agli SLU sono eseguite adottando le seguenti ipotesi:

- Conservazione delle sezioni piane;
- Perfetta aderenza tra acciaio e calcestruzzo;
- Resistenza a trazione del calcestruzzo nulla;
- Rottura del calcestruzzo determinata dal raggiungimento della sua capacità deformativa ultima a compressione;
- Rottura dell'armatura tesa determinata dal raggiungimento della sua capacità deformativa ultima.

8.1.2 Verifiche a taglio

Per la verifica di resistenza agli SLU, con riferimento alle sollecitazioni taglianti, deve risultare:

$$FS = \frac{V_{Rd}}{V_{Ed}} \geq 1$$



Si fariferiemnto ai seguenti valori della resistenza di calcolo:

- $V_{Rd,c} = \max \left\{ \left[\frac{0.18}{\gamma_c} \cdot k \cdot (100 \cdot \rho_l \cdot f_{ck})^{\frac{1}{3}} + k_1 \cdot \sigma_{cp} \right] \cdot b_w \cdot d; (v_{min} + 0.15 \cdot \sigma_{cp}) \cdot b_w \cdot d \right\}$, resistenza di calcolo dell'elemento privo di armatura a taglio;
- $V_{Rd,s} = 0.9 \cdot d \cdot \frac{A_{sw}}{s} \cdot f_{yd} \cdot (ctg(\alpha) + ctg(\theta)) \cdot \sin \alpha$, valore di progetto dello sforzo di taglio che può essere sopportato dall'armatura a taglio alla tensione di snervamento;
- $V_{Rd,max} = 0.9 \cdot d \cdot b_w \cdot f'_{cd} \cdot \frac{ctg(\alpha) + ctg(\theta)}{1 + ctg^2(\theta)}$, valore di progetto del massimo di sforzo di taglio che può essere sopportato dall'elemento, limitato dalla rottura delle bielle compresse.

Nelle espressioni precedenti, i simboli hanno i seguenti significati:

- $k = 1 + \sqrt{\frac{200}{d}} \leq 2.0$, con d espresso in mm;
- $\rho_l = \frac{A_{Sl}}{b_w \cdot d} \leq 0.02$ è il rapporto geometrico di armatura longitudinale;
- A_{Sl} è l'area dell'armatura tesa;
- b_w è la larghezza minima della sezione in zona tesa;
- $\sigma_{cp} = \frac{N_{Ed}}{A_c} < 0.2 \cdot f_{cd}$ è la tensione media di compressione della sezione;
- A_c è l'area della sezione in calcestruzzo;
- $v_{min} = 0.035 \cdot k^{3/2} \cdot f_{ck}^{1/2}$;
- A_{sw} è l'area della sezione trasversale dell'armatura a taglio;
- s è il passo delle staffe;
- f_{yd} è la tensione di snervamento di progetto dell'armatura a taglio
- α è l'inclinazione dell'armatura resistente a taglio rispetto all'asse dell'elemento;
- θ è l'inclinazione della bielal di calcestruzzo compressa e deve essere $1 \leq \cot \theta \leq 2.5$

8.2 Verifica agli Stati Limite di Esercizio

Per gli Stati Limite di Esercizio occorre verificare che l'ampiezza delle fessure w_k , per gli elementi con armature lente, sia al di sotto del valore limite fissato per le classi di esposizione in oggetto.

Le NTC 2018 presentano le seguenti condizioni ambientali in relazione alla classe di esposizione:

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

Tabella 8-1 – Descrizione delle condizioni ambientali (NTC 2018)

Elemento strutturale	Classe di esposizione	Classe di resistenza	Condizioni ambientali
Pali di fondazione	XC2	C25/30	Ordinarie
Strutture di fondazione	XC2	C30/37	
Elevazioni Spalle	XF2	C32/40	Aggressive
Elevazioni Muri	XF2	C30/37	

Tabella 8-2 – Condizioni ambientali per gli elementi in progetto

La tabella 4.1.IV delle NTC 2018 definisce i criteri di scelta dello stato limite di fessurazione a seconda delle condizioni ambientali e del tipo di armatura che per le armature ordinarie viene definito "poco sensibile". I valri di w_1 , w_2 e w_3 sono definiti al paragrafo 4.1.2.2.4 delle NTC 2018 e sono pari a $w_1 = 0,2 \text{ mm}$, $w_2 = 0,3 \text{ mm}$ e $w_3 = 0,4 \text{ mm}$.



Tab. 4.1.IV - Criteri di scelta dello stato limite di fessurazione

Gruppi di Esigenze	Condizioni ambientali	Combinazione di azioni	Armatura			
			Sensibile		Poco sensibile	
			Stato limite	w_k	Stato limite	w_k
A	Ordinarie	frequente	apertura fessure	$\leq w_2$	apertura fessure	$\leq w_3$
		quasi permanente	apertura fessure	$\leq w_1$	apertura fessure	$\leq w_2$
B	Aggressive	frequente	apertura fessure	$\leq w_1$	apertura fessure	$\leq w_2$
		quasi permanente	decompressione	-	apertura fessure	$\leq w_1$
C	Molto aggressive	frequente	formazione fessure	-	apertura fessure	$\leq w_1$
		quasi permanente	decompressione	-	apertura fessure	$\leq w_1$

Tabella 8-3 – Criteri di scelta dello stato limite di fessurazione (NTC 2018)

Si distinguono quindi i seguenti casi per l'opera in oggetto:

- Pali e strutture di fondazione
 - Combinazione di carico quasi permanente: $w_k \leq 0,3mm$
 - Combinazione di carico frequente: $w_k \leq 0,4mm$
- Strutture di elevazione spalle e muri
 - Combinazione di carico quasi permanente: $w_k \leq 0,2mm$
 - Combinazione di carico frequente: $w_k \leq 0,3mm$

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9. CRITERI GENERALI DI VERIFICA E CALCOLO DEI PALI

Ai fini delle verifiche delle fondazioni, verranno considerati sia gli Stati Limite di Esercizio (SLE) sia gli Stati Limite Ultimi (SLU).

In generale, le analisi agli SLE sono utilizzate per ottenere informazioni circa gli spostamenti attesi sotto i carichi di esercizio e per verificarne l'ammissibilità nei confronti della funzionalità dell'opera.

Le analisi agli SLU sono invece impiegate per le verifiche di resistenza degli elementi strutturali e per le verifiche geotecniche.

Le verifiche constano del dimensionamento geotecnico e strutturale della palificata di fondazione, in termini di diametro, lunghezza, numero e disposizione dei pali.

In particolare, si esegue la seguente procedura di calcolo:

- Calcolo delle azioni risultanti dalle combinazioni di carico descritte in precedenza (F_x , F_y , F_z , M_x , M_y e M_z) all'intradosso della zattera di fondazione;
- Calcolo delle azioni interne (momento e taglio) dei pali;
- Dimensionamento dei pali ai fini del soddisfacimento delle verifiche di resistenza e di capacità portante degli stessi.

9.1 Verifiche geotecniche nei confronti degli stati limite ultimi

Per ogni stato limite ultimo geotecnico deve essere rispettata la condizione:

$$E_d \leq R_d$$

dove E_d è il valore di progetto dell'azione o dell'effetto dell'azione, ovvero:

$$E_d = E \left(\gamma_F \cdot F_k; \frac{X_k}{\gamma_M}; a_d \right)$$

$$E_d = \gamma_E \cdot E \left(F_k; \frac{X_k}{\gamma_M}; a_d \right)$$

con $\gamma_E = \gamma_F$, e dove R_d è il valore di progetto della resistenza del sistema geotecnico:

$$R_d = \frac{1}{\gamma_R} \cdot R \left(\gamma_F \cdot F_k; \frac{X_k}{\gamma_M}; a_d \right)$$

Gli effetti delle azioni e la resistenza sono espressi in funzione delle azioni di progetto ($\gamma_F \cdot F_k$), dei parametri di progetto (X_k/γ_M) e della geometria di progetto (a_d). L'effetto delle azioni può anche essere valutato direttamente come $E_d = \gamma_E \cdot E_k$. Nella formulazione delle resistenze R_d , compare esplicitamente un coefficiente γ_R che opera direttamente sulla resistenza del sistema. La verifica della suddetta condizione deve essere effettuata impiegando diverse combinazioni di gruppi di coefficienti parziali, rispettivamente definiti per le azioni (A1 e A2), per i parametri geotecnici (M1 e M2) e per le resistenze (R1, R2 e R3). I diversi gruppi di coefficienti di sicurezza parziali sono scelti nell'ambito degli approcci previsti dalla normativa. Per la verifica dei pali si utilizza l'Approccio 2: A1+M1+R3. Per ogni stato limite ultimo SLU deve essere rispettata la condizione:

$$E_d \leq R_d$$

Dove E_d è il valore di progetto delle azioni e R_d il valore di progetto della resistenza del sistema.



Gli effetti delle azioni sono espressi in funzione delle azioni di progetto $E_d = E_k \cdot \gamma_E$, dei parametri di progetto X_k/γ_M e della geometria di progetto. Nella formulazione della resistenza appare esplicitamente il coefficiente γ_R che opera direttamente sulla resistenza.

9.1.1 Resistenze di pali soggetti a carichi assiali

La resistenza dei pali soggetti a carichi assiali è calcolata come prescritto al punto 6.4.3.1.1 delle NTC2018.

Il valore di progetto R_d della resistenza si ottiene a partire dal valore caratteristico R_k applicando i coefficienti parziali riportati nelle NTC 2018 (Tabella 9-1). Nel caso specifico si utilizzano i coefficienti di resistenza relativi ai pali trivellati.

Resistenza	Simbolo	Pali infissi	Pali trivellati	Pali ad elica continua
	γ_R	(R3)	(R3)	(R3)
Base	γ_b	1,15	1,35	1,3
Laterale in compressione	γ_s	1,15	1,15	1,15
Totale (*)	γ	1,15	1,30	1,25
Laterale in trazione	γ_{st}	1,25	1,25	1,25

* da applicare alle resistenze caratteristiche dedotte dai risultati di prove di carico di progetto.

Tabella 9-1 – Coefficienti parziali γ_R da applicare alle resistenze caratteristiche (NTC 2018)

La resistenza caratteristica (R_k) del palo singolo può essere dedotta da:

- a) risultati di prove di carico statico di progetto su pali pilota;
- b) metodi di calcolo analitici, dove R_k è calcolata a partire dai valori caratteristici dei parametri geotecnici oppure con l'impiego di relazioni empiriche che utilizzino direttamente i risultati di prove in sito (prove penetrometriche, pressiometriche, ecc.);
- c) risultati da prove dinamiche di progetto, ad alto livello di deformazione, eseguite su pali pilota.

Nelle analisi condotte si è proceduto considerando l'approccio di tipo (b) e come di seguito descritto. Con riferimento alle procedure analitiche che prevedano l'utilizzo dei parametri geotecnici o dei risultati di prove in sito, il valore caratteristico della resistenza a compressione e a trazione ($R_{c,k}$ ovvero $R_{t,k}$) è ottenuto come:

$$R_{c,k} = \min \left\{ \frac{(R_{c,cal})_{media}}{\xi_3}; \frac{(R_{c,cal})_{min}}{\xi_4} \right\}$$

$$R_{t,k} = \min \left\{ \frac{(R_{c,cal})_{media}}{\xi_3}; \frac{(R_{c,cal})_{min}}{\xi_4} \right\}$$

Con

- R_{MEDIA} e R_{MIN} le resistenze calcolate;
- ξ_3 e ξ_4 i fattori di correlazione funzione del numero n di verticali indagate riportati alla Tab.6.4.IV delle NTC2018.

Tab. 6.4.IV - Fattori di correlazione ξ per la determinazione della resistenza caratteristica in funzione del numero di verticali indagate

Numero di verticali indagate	1	2	3	4	5	7	≥ 10
ξ_3	1,70	1,65	1,60	1,55	1,50	1,45	1,40
ξ_4	1,70	1,55	1,48	1,42	1,34	1,28	1,21

Tabella 9-2 – Fattori di correlazione ξ per la determinazione della resistenza caratteristica in funzione del numero di verticali indagate (Tab.6.4.IV delle NTC2018)

Qualora si abbiano a disposizione prove in sito continue (prova tipo CPT o DMT) o discontinue (SPT, pressiometriche, ecc.) ma con passi di campionamenti sufficientemente fitti da considerare una misura continua con la profondità, la stima della resistenza caratteristica è così condotta:

1. per ogni verticale di indagine si calcola il profilo di resistenza con la profondità in funzione delle prove in sito e di laboratorio assumendo i valori medi a disposizione nella singola verticale;
2. stima, tra quelli calcolati, del profilo di resistenza medio (R_{media}) e di resistenza minimo (R_{min});



3. la resistenza caratteristica R_k , a compressione o a trazione, sarà il minore dei valori ottenuti:

$$R_k = \min \left\{ \frac{(R_{c,m})_{media}}{\xi_5}; \frac{(R_{c,m})_{min}}{\xi_6} \right\}$$

con ξ_5 e ξ_6 fattori di correlazione funzione del numero di verticali indagate.

Tab. 6.4.V - Fattori di correlazione ξ per la determinazione della resistenza caratteristica a partire dai risultati di prove dinamiche su pali pilota

Numero di prove di carico	≥ 2	≥ 5	≥ 10	≥ 15	≥ 20
ξ_5	1,60	1,50	1,45	1,42	1,40
ξ_6	1,50	1,35	1,30	1,25	1,25

Tabella 9-3 – Fattori di correlazione ξ per la determinazione della resistenza caratteristica in funzione del numero di verticali indagate (Tab.6.4.V delle NTC2018)

Qualora, invece, si abbiano a disposizione prove in sito o di laboratorio discrete, si procederà secondo il seguente schema:

1. per ogni strato vengono scelti il valore medio e minimo tra tutti i valori a disposizione necessari per il calcolo del profilo di resistenza con la profondità;
2. stima del profilo di resistenza medio (R_{media}) e di resistenza minimo (R_{min}) adottando i parametri medi e minimi ottenuti al punto precedente;
3. la resistenza caratteristica (R_k), a compressione o a trazione, sarà il minore dei valori ottenuti:

$$R_k = \min \left\{ \frac{(R_{c,m})_{media}}{\xi_1}; \frac{(R_{c,m})_{min}}{\xi_2} \right\}$$

con ξ_1 e ξ_2 fattori di correlazione funzione del numero di verticali indagate.

Tab. 6.4.III - Fattori di correlazione ξ per la determinazione della resistenza caratteristica a partire dai risultati di prove di carico statico su pali pilota

Numero di prove di carico	1	2	3	4	≥ 5
ξ_1	1,40	1,30	1,20	1,10	1,0
ξ_2	1,40	1,20	1,05	1,00	1,0

Tabella 9-4 – Fattori di correlazione ξ per la determinazione della resistenza caratteristica in funzione del numero di verticali indagate (Tab.6.4.III delle NTC2018)

Il valore di progetto R_d della resistenza si ottiene a partire dal valore caratteristico R_k applicando i coefficienti parziali γ_R della Tabella 6.4.II delle NTC2018. I criteri utilizzati per la stima delle curve di capacità portante a compressione e trazione sono illustrati nei successivi paragrafi.

9.1.1.A Resistenze di pali soggetti a carichi assiali di compressione

Nel caso di pali soggetti ad azioni di compressione risulta:

$$R_{c,d} = \frac{R_{c,k-BASE}}{\gamma_{R-BASE}} + \frac{R_{c,k-LAT}}{\gamma_{R-LAT}}$$

Dove:

$$R_{c,k-BASE} = \min \left\{ \frac{(R_{c,cal-BASE})_{media}}{\xi_3}; \frac{(R_{c,cal-BASE})_{min}}{\xi_4} \right\} : \text{resistenza caratteristica di base};$$

$$R_{c,k-LAT} = \min \left\{ \frac{(R_{c,cal-LAT})_{media}}{\xi_3}; \frac{(R_{c,cal-LAT})_{min}}{\xi_4} \right\} : \text{resistenza caratteristica laterale}.$$

Vista l'uguaglianza tra ξ_3 e ξ_4 si avrà:

$$R_{c,k-BASE} = \frac{(R_{c,cal-BASE})_{min}}{\xi_4}$$

$$R_{c,k-LAT} = \frac{(R_{c,cal-LAT})_{min}}{\xi_4}$$



9.1.1.B Resistenze di pali soggetti a carichi assiali di trazione

Nel caso di pali soggetti ad azioni di trazione risulta:

$$R_{c,d} = \frac{R_{c,k-LAT}}{\gamma_{Rt-LAT}}$$

Dove:

$$R_{t,k-LAT} = \min \left\{ \frac{(R_{t,cal-LAT})_{media}}{\xi_3}; \frac{(R_{t,cal-LAT})_{min}}{\xi_4} \right\}; \text{ resistenza caratteristica laterale.}$$

Vista l'uguaglianza tra ξ_3 e ξ_4 si avrà:

$$R_{t,k-LAT} = \frac{(R_{t,cal-LAT})_{min}}{\xi_4}$$

9.2 Criteri di calcolo della capacità portante limite verticale del palo singolo

La capacità portante del palo di fondazione è valutata come somma della portata laterale e di base.

$$R_{c,tot} = R_{c,cal-BASE} + R_{c,cal-LAT}$$

dove:

- $R_{c,cal-BASE}$ = resistenza limite di base;
- $R_{c,cal-LAT}$ = resistenza limite laterale.

Le resistenze limite di base sono valutate con le seguenti relazioni:

$$(R_{c,cal-BASE})_{min} = \frac{\pi \cdot \varnothing_{palo}^2}{4} \cdot (q_{b,lim})_{min}; \quad (R_{c,cal-BASE})_{media} = \frac{\pi \cdot \varnothing_{palo}^2}{4} \cdot (q_{b,lim})_{media}$$

Le resistenze limite laterali sono valutate con le seguenti relazioni:

$$(R_{c,cal-LAT})_{min} = \pi \cdot \varnothing_{palo} \cdot \sum_{i=1}^n \Delta L_i \cdot (\tau_{i,lim})_{min}$$

$$(R_{c,cal-LAT})_{media} = \pi \cdot \varnothing_{palo} \cdot \sum_{i=1}^n \Delta L_i \cdot (\tau_{i,lim})_{media}$$

Dove:

- \varnothing_{palo} diametro del palo (m);
- ΔL_i lunghezza del palo corrispondente allo strato i (m);
- n numero totali di strati;
- $(q_{b,lim})_{min}$ pressione limite di base ottenuta considerando i parametri geotecnici minimi (kPa);
- $(q_{b,lim})_{media}$ pressione limite di base ottenuta considerando i parametri geotecnici medi (kPa);
- $(\tau_{i,lim})_{min}$ sforzi tangenziali limite ottenuti considerando i parametri geotecnici minimi (kPa);
- $(\tau_{i,lim})_{media}$ sforzi tangenziali limite ottenuti considerando i parametri geotecnici medi (kPa).

9.2.1 Portanza laterale – Strati argillosi

Per le unità argillose si ha:

$$\tau_{i,lim} = \min (\alpha_i \cdot c_{u,i}; 100 \text{ kPa})$$

Dove:

- $\tau_{i,lim}$ sforzi tangenziali limite dello strato i-esimo (kPa);
- $c_{u,i}$ coesione caratteristica non drenata dello strato i-esimo (kPa);
- α_i è un coefficiente empirico nello strato i-esimo funzione della $c_{u,i}$. Si assume valida la seguente legge di variazione (Raccomandazioni AGI):
 - $\alpha = 0,9$ $c_u \leq 25 \text{ kPa}$
 - $\alpha = 0,8$ $c_u = 25 \div 50 \text{ kPa}$
 - $\alpha = 0,6$ $c_u = 50 \div 75 \text{ kPa}$



- $\alpha = 0,4$ $c_u \geq 75$ kPa

9.2.2 Portanza laterale – Strati sabbiosi e ghiaiosi

Per le unità sabbiose e ghiaiose si ha:

$$\tau_{i,lim} = \min (k_i(z) \cdot \sigma'_v(z) \cdot \tan \varphi'_i ; \tau_{wright}(N_{spt}))$$

Dove:

- $\sigma'_v(z)$ pressione geostatica verticale efficace (kPa);
- φ'_i angolo di resistenza al taglio del terreno naturale corrispondente allo strato i (°);
- $k_i(z)$ il coefficiente k è valutato in accordo alle curve riportate nel grafico seguente, in accordo alla variabilità 0,7 ÷ 0,4 indicata dalle Raccomandazioni AGI (1984), con valori decrescenti con la profondità. Di volta in volta, in funzione delle caratteristiche litostratigrafiche del sottosuolo, verrà scelta una specifica curva k(z/L).

Limiti Consigliati
 Raccomandazione AGI 1984

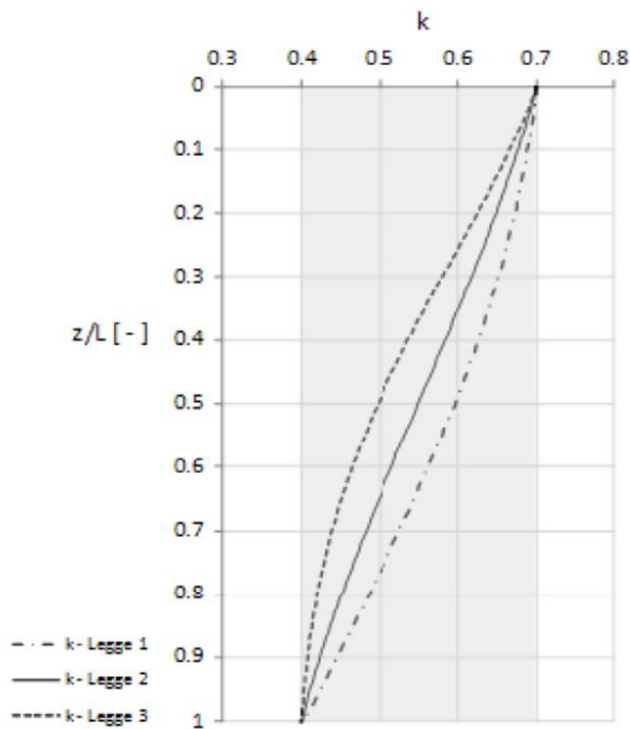


Figura 9-1 – Curve di variazione di k con la profondità in accordo alla variabilità 0.7-0.4 (AGI 1984)

$$k_i(z) = \frac{\sigma'_h(z)}{\sigma'_v(z)}$$

$$k_i(z) = a \cdot \left(\frac{z}{L}\right)^4 + b \cdot \left(\frac{z}{L}\right)^3 + c \cdot \left(\frac{z}{L}\right)^2 + d \cdot \left(\frac{z}{L}\right) + e$$

dove:

- $\sigma'_h(z)$: pressione geostatica orizzontale efficace (kPa);
- z: quota considerata da testa palo (m);
- L: lunghezza palo (m);
- a, b, c, d, e: parametri polinomiale, i cui valori sono indicati nella seguente tabella:



Legge variabilità K	Legge 1	Legge 3
a =	0.06054	-0.42714
b =	-0.03632	1.114648
c =	-0.23278	-0.71566
d =	-0.08914	-0.27243
e =	0.7	0.7

Figura 9-2 – Leggi di variabilità coefficienti k e parametri polinomiale

- $\tau_{wright}(N_{spt})$ sforzi tangenziali in funzione numero di colpi (Nspt) registrato in prova penetrometrica dinamica SPT (n°colpi/30cm), secondo le relazioni sotto riportate:

$$\tau_{wright} = 3 \cdot N_{spt} \text{ (kPa)} \quad \text{se } N_{spt} \leq 53 \text{ colpi/30cm}$$

$$\tau_{wright} = 142 + 0.32 \cdot N_{spt} \text{ (kPa)} \quad \text{se } N_{spt} > 53 \text{ colpi/30cm}$$

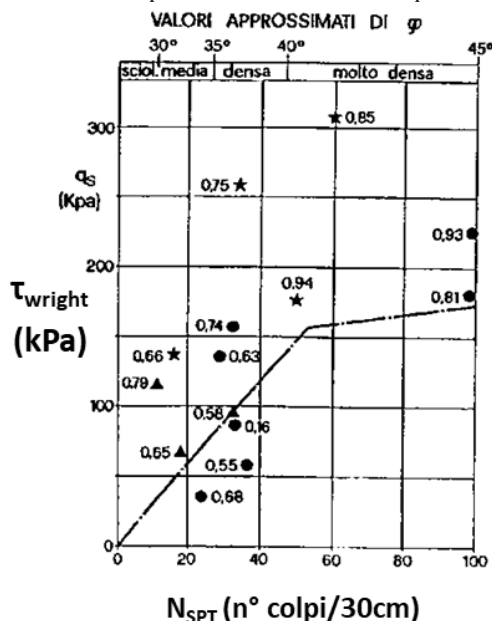


Figura 9-3 – Sforzo tangenziale (Wright 1977)

9.2.3 Capacità portante di base – Strati argillosi

La portanza di base negli strati argillosi è valutata con la seguente relazione:

$$q_{b,lim} = 9 \cdot c_{u,base} + \sigma_{v,base} \leq q_{blim} = 4000 \text{ kPa}$$

Dove:

- $\sigma_{v,base}$ sforzo verticale totale agente in corrispondenza della punta del palo (kPa)
- $c_{u,base}$ coesione non drenata valore rappresentativo della profondità $z = z_{base}$ (kPa)

9.2.4 Capacità portante di base – Strati sabbiosie ghiaiosi

La portanza di base negli strati incoerenti è valutata con la seguente relazione:

$$q_{b,lim} = \min(N_q \cdot \sigma'_{v,base}; q_{Reese})$$

Dove:

N_q coefficiente di Berezantzev (1965), funzione del rapporto L/D (L/ϕ_{palo}) e dell'angolo d'attrito del terreno ϕ' , determinato come segue:

- Pali intermedi:

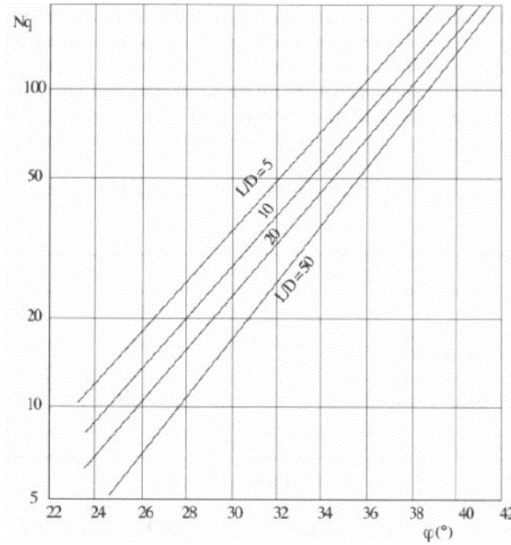


Figura 9-4: Pali trivellati di medio diametro in cls (terreni granulari): resistenza specifica alla punta, coefficiente N_q (Berezantzev, 1965) corrispondente all'insorgere delle deformazioni plastiche alla punta.

- Pali di grande diametro: il coefficiente N_q è ridotto per tenere in conto del fatto che la resistenza alla punta è mobilitata per cedimenti non compatibili con l'operabilità del manufatto:

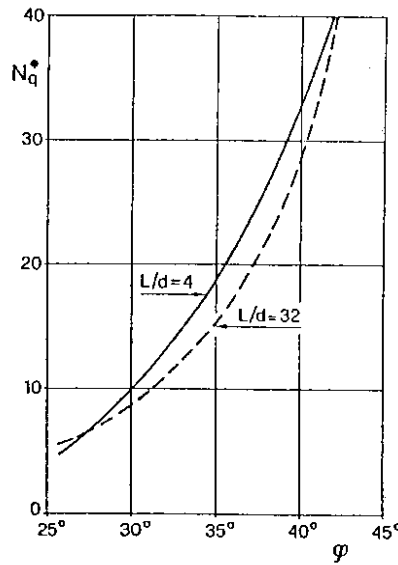


Figura 9-5: Pali trivellati di grande diametro in cls (terreni granulari): resistenza specifica alla punta, coefficiente N_q^* (Berezantzev, 1965) corrispondente all'insorgere delle deformazioni plastiche alla punta.

$$N_q = a \cdot \varphi'^3 + b \cdot \varphi'^2 + c \cdot \varphi' + d$$

Con $28^\circ \leq \varphi' \leq 43^\circ$

Legge variabilità N_q^*	L/D = 4 (L/D < 4)	L/D = 32 (L/D > 32)
a =	0.0028	0.00838
b =	-0.1967	-0.72697
c =	5.6612	21.87956
d =	-58.5520	-219.5848



Figura 9-6 – Legge di variabilità N_q^* e parametri polinomiale

- $\sigma'_{v,base}$ pressione geostatica verticale efficace agente in corrispondenza della punta del palo (kPa)
- φ'_i angolo di resistenza al taglio che caratterizza la formazione in corrispondenza della base del palo (°);
- q_{Reese} pressione di base in funzione numero di colpi (N_{spt}) registrato in prova penetrometrica dinamica SPT (n°colpi/30cm), secondo le relazioni sotto riportate:
 - $q_{Reese} = 66.7 \cdot N_{spt}$ (kPa) se $N_{spt} \leq 60$ colpi/30cm;
 - $q_{Reese} = 4000$ kPa se $N_{spt} > 60$ colpi/30cm.

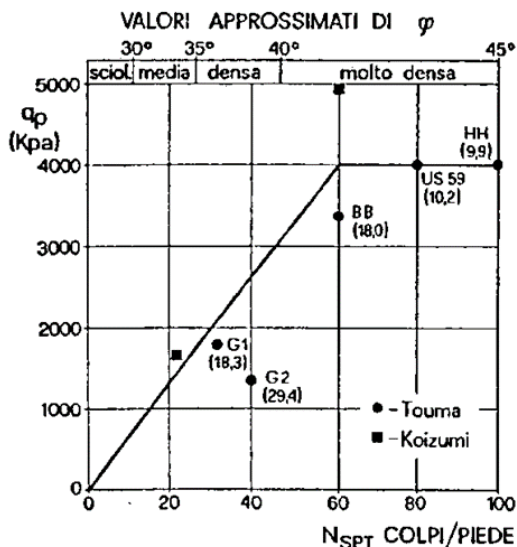


Figura 9-7 – Resistenza alla punta (Reese, 1978)

9.2.5 Correzione della portanza di base per la presenza di strati di consistenza differente

La costruzione dell'andamento della portata di base con la profondità in condizioni stratigrafiche particolari (pali che attraversano uno strato di terreno sciolto fino a immorsarsi in uno strato compatto di base di notevole spessore, piuttosto che pali immorsati in uno strato compatto di base di modesto spessore sovrastante uno strato di terreno sciolto) è condotta in accordo alle indicazioni riportate nella figura sottostante.

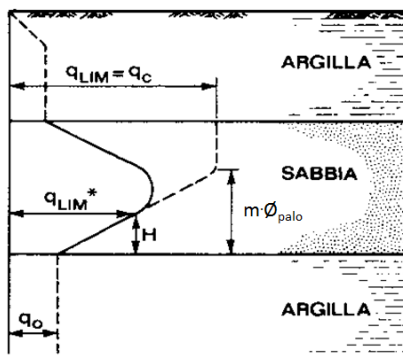


Figura 9-8 – Criterio di correzione della resistenza di punta - Meyerhof, Sastry [1976]

Il valore di m è valutato dalla figura seguente, dove $z_c / \phi_{palo} = m$.

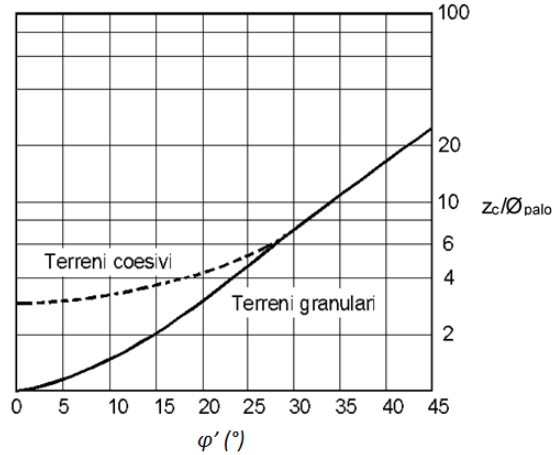


Figura 9-9 – Criterio per il calcolo di $m = z_c / \phi_{palo}$

9.3 Riduzione capacità portante dei pali: effetti della vicinanza tra i pali

Il criterio analitico mostrato di seguito permette di stimare in maniera quantitativa gli effetti di mutua interferenza ricollegabili a pali realizzati in terreni coesivi deformabili ed eccessivamente prossimi gli uni agli altri in termini di riduzione degli sforzi tangenziali mobilitabili lungo il fusto del palo e di diminuzione della pressione ultima alla base.

Il criterio illustrato si basa sul concetto che la capacità portante di un palo realizzato a distanza interassiale relativa (i/ϕ), espressa in funzione del diametro di perforazione ϕ , rispetto agli altri pali della palificata inferiore ad un certo limite subisce degli effetti negativi.

Resistenza laterale

Il criterio di calcolo si fonda sul principio che i pali posti oltre ad una certa distanza relativa non presentano compromissione degli sforzi tangenziali τ agenti sul fusto del palo. Per tali pali si può quindi considerare come valore limite quello tipico del "palo isolato" $\tau_{p.i.}$.

Salvo casi particolari, in prima approssimazione si può assumere che la distanza interassiale limite è data da:

- $\left(\frac{i}{\phi}\right)_{lim,comp} = 3$ per pali in compressione;
- $\left(\frac{i}{\phi}\right)_{lim,traz} = 4$ per pali in trazione.

Quando due pali si trovano ad una distanza minore di quella limite, gli sforzi tangenziali ridotti sono definiti da un coefficiente α_τ definito da una legge di variazione lineare tra 0 e 1 (0 nel caso in cui i pali si tocchino, 1 nel caso in cui $\tau = \tau_{p.i.}$).

Nel caso in cui si abbia $1 \leq \left(\frac{i}{\phi}\right) \leq \left(\frac{i}{\phi}\right)_{lim}$ (sia in trazione che in compressione) il palo sarà caratterizzato da un'area A in cui $\tau = \tau_{p.i.}$, e da un'area A_α dove $\tau = \alpha_\tau \cdot \tau_{p.i.}$.

$$A = \pi \cdot \phi - A_\alpha$$

$$A_\alpha = \frac{\phi}{2} \cdot \alpha$$

- $\alpha = \pi/2 - 0,7850 \cdot \left(\frac{i}{\phi} - 1\right)$ per pali in compressione
- $\alpha = \pi/2 - 0,5236 \cdot \left(\frac{i}{\phi} - 1\right)$ per pali in trazione
- $\alpha_\tau = 1/2 \cdot \left(\frac{i}{\phi} - 1\right)$ per pali in compressione
- $\alpha_\tau = 1/3 \cdot \left(\frac{i}{\phi} - 1\right)$ per pali in trazione

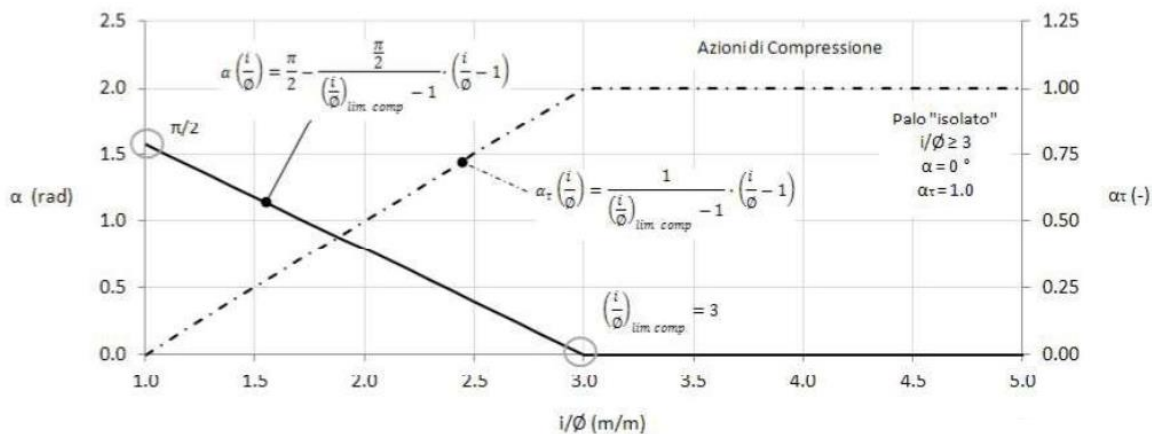


Figura 9-10 - Pali trivellati in cls: effetti "analitici" del "mutuo disturbo" in termini di compromissione degli sforzi tangenziali attritivi agenti sulla superficie laterale imputabili alla ridotta distanza tra i pali (azioni assiali di compressione)

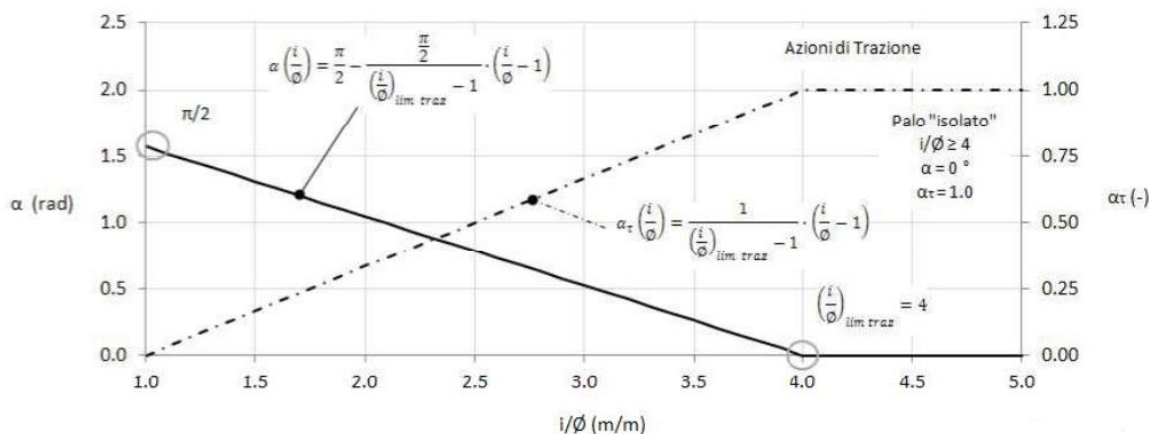


Figura 9-11: Pali trivellati in cls: effetti "analitici" del "mutuo disturbo" in termini di compromissione degli sforzi tangenziali attritivi agenti sulla superficie laterale imputabili alla ridotta distanza tra i pali (azione assiale di trazione)

In caso di più pali a distanza ravvicinata, il coefficiente di riduzione dello sforzo equivalente è dato da:

$$\alpha_{\tau,eq} = \frac{\left(\phi \cdot \pi - \sum \left(\frac{\phi}{2} \cdot \alpha_i\right)\right) + \sum \left(\frac{\phi}{2} \cdot \alpha_i \cdot \alpha_{\tau,i}\right)}{\phi \cdot \pi}$$

Dove la sommatoria è riferita al numero di pali adiacenti presenti.

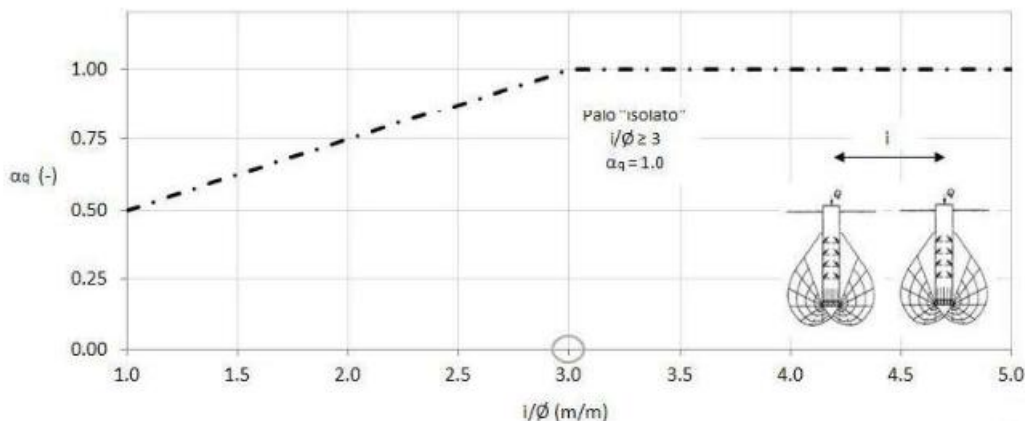
Resistenza alla base

Definita q_{bpi} la pressione ultima di base valida per il "palo isolato", è possibile definire la portata ultima di un palo non isolato come il prodotto di q_b per un coefficiente riduttivo α_{qi} definito approssimativamente come segue:

$$\alpha_q = 0.5 + \frac{0.5}{\left(\frac{i}{\phi}\right)_{lim\ compr} - 1} \cdot \left(\frac{1}{\phi} - 1\right)$$

Dunque:

$$q_b = \alpha_q \cdot q_{bpi}$$



9.4 Peso del palo

Il peso del palo viene incluso fra le azioni permanenti. A seconda dello stato limite considerato il peso del palo viene così assunto:

- Verifiche SLE

$$W_{palo,k} = \frac{\pi \cdot \phi_{palo}^2}{4} \cdot L_{palo} \cdot (V_{cls} - \bar{V}_{soil})$$

- Verifiche SLU - Statiche

$$W_{palo,k} = \gamma_F \cdot \frac{\pi \cdot \phi_{palo}^2}{4} \cdot L_{palo} \cdot (V_{cls} - \bar{V}_{soil})$$

Dove:

$\gamma_F = 1,3$ (Approccio 2: A1+M1+R3) Permanente sfavorevole per carichi assiali di compressione;

$\gamma_F = 1$ (Approccio 2: A1+M1+R3) Permanente favorevole per carichi assiali di trazioni.

- Verifiche SLU - Sismiche

$$W_{palo,k} = (1 \pm kv) \gamma_F \cdot \frac{\pi \cdot \phi_{palo}^2}{4} \cdot L_{palo} \cdot (V_{cls} - \bar{V}_{soil})$$

dove:

$\gamma_F = 1,0$ (Approccio 2: A1+M1+R3) per azioni sismiche.



9.5 Definizione del modello di calcolo delle fondazioni profonde

Il calcolo delle azioni interne è effettuato tramite il software GROUP. Il programma si basa sul metodo delle curve di trasferimento, note anche come curve $t - z$, $p - y$ e $T - q$; tali curve, valutate a partire da prove a scala reale ridotta e da analisi numeriche, esprimono l'andamento della reazione del terreno in funzione degli spostamenti accumulati. Essendo un palo soggetto a carico laterale un problema complesso di interazione struttura-terreno dipendente da molteplici fattori (rigidezza del terreno e della struttura, natura del carico, ecc.) e fortemente non lineare, questo metodo si rivela funzionale alla risoluzione del problema. Esso riassume, infatti, tutte le variabili in gioco all'interno di una sola curva.

Il programma, utilizzando un database di curve interno, genera delle curve per lo specifico problema in esame e, attraverso un processo iterativo, risolve la risposta del gruppo di pali soddisfacendo congruenza ed equilibrio.

Le curve p-y, che esprimono la resistenza del terreno in funzione della profondità e dello spostamento del palo, possono essere ricavate in relazione alla tipologia di terreni e alle proprietà meccaniche che li caratterizzano, in accordo alle procedure proposte da:

- Reese et al. (1974) per sabbie
- Matlock (1970) per argille tenere tenere (soft clay)
- Reese (1997) Rocce deboli (resistenza a compressione monoassiale < 6.9 MPa)

Il programma permette di scegliere tra uno dei modelli sopra esposti.

I metodi di calcolo sono descritti sinteticamente nelle pagine seguenti con riferimento sia a carichi statici sia a carichi ciclici.



- Sabbie (Reese et al., 1974)

$$\alpha = \frac{\phi}{2}, \beta = 45^\circ + \frac{\phi}{2}, K_0 = 0.4, \text{ and } K_A = \tan^2\left(45^\circ - \frac{\phi}{2}\right).$$

$$p_z = \min[p_{st}, p_{sd}]$$

where:

$$p_{st} = \gamma x \left[\frac{K_0 x \tan \phi \sin \beta}{\tan(\beta - \phi) \cos \alpha} + \frac{\tan \beta}{\tan(\beta - \phi)} (b + x \tan \beta \tan \alpha) + K_0 x \tan \beta (\tan \phi \sin \beta - \tan \alpha) - K_A b \right]$$

$$p_{sd} = K_A b \gamma x (\tan^8 \beta - 1) + K_0 b \gamma x \tan \phi \tan^4 \beta$$

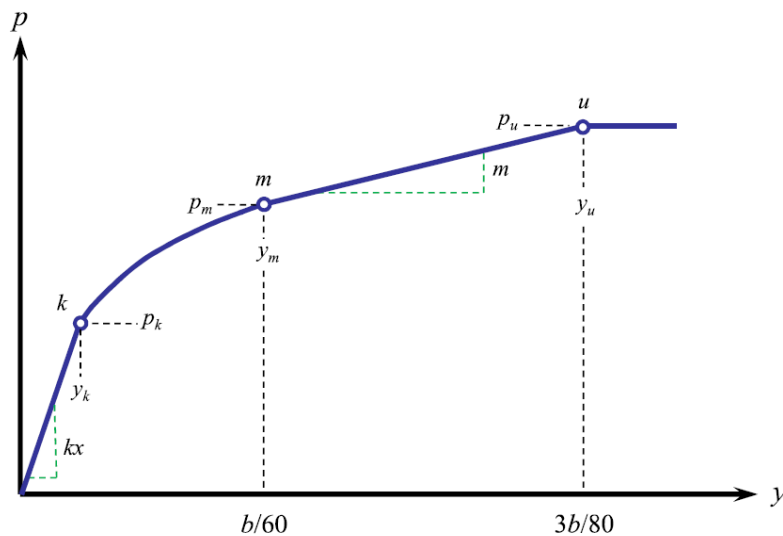


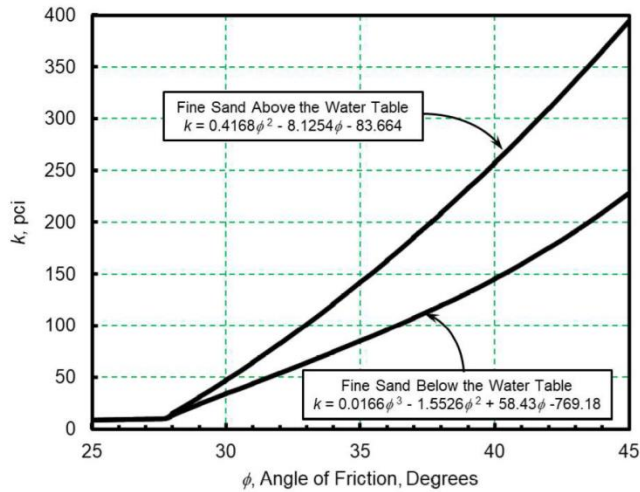
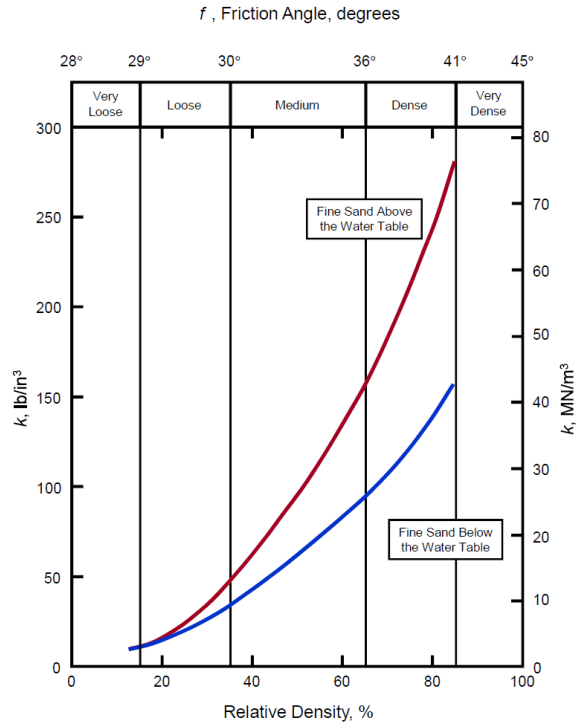
Figure 3-27 Characteristic Shape of p - y Curves for Static and Cyclic Loading in Sand

La stima del modulo di reazione iniziale k per sabbie è eseguita seguendo le relazioni contenute nell'approccio proposto da API RP2A (2010) per il calcolo delle curve p - y .

Il parametro k è calcolato nell'ipotesi cautelativa che la sabbia sia fine indipendentemente dall'effettiva granulometria del terreno, pertanto questi valori possono essere considerati come limite inferiore.

Sulla base di queste ipotesi, il modulo k è funzione solo dell'angolo d'attrito del terreno (o della densità relativa) e del livello di falda, secondo le relazioni riportate di seguito:

- Sabbie sopra falda: $k = 0,4168 \phi^2 - 8,1254\phi - 83,664$
- Sabbie sotto falda: $k = 0,0166\phi^3 - 1,5526\phi^2 + 58,43\phi - 769,18$



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- Soft clay (Matlock, 1970)

$$p_u = \left[3 + \frac{\gamma'_{avg}}{c} x + \frac{J}{b} x \right] cb \dots\dots\dots (3-20)$$

$$p_u = 9cb \dots\dots\dots (3-21)$$

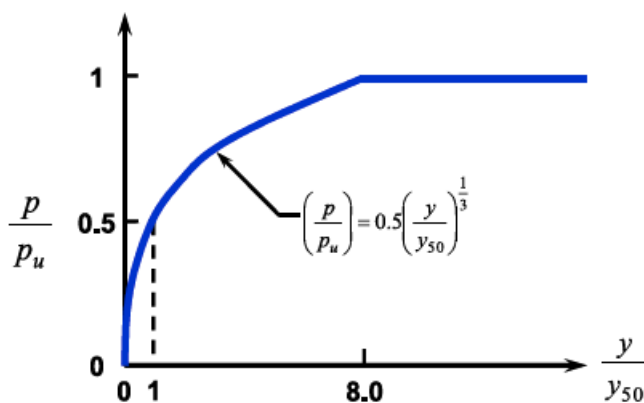
where

γ'_{avg} = average effective unit weight from ground surface to p - y curve,¹

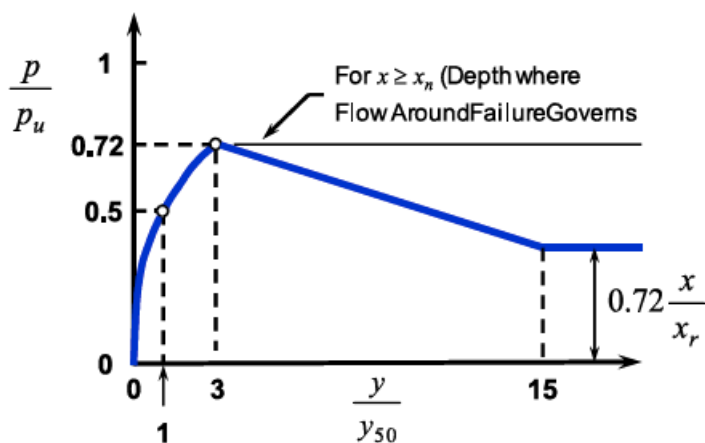
x = depth from the ground surface to p - y curve,

c = shear strength at depth x , and

b = width of pile.



(a)



(b)

Figure 3-12 p - y Curves in Soft Clay, (a) Static Loading, (b) Cyclic Loading

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- Weak rock (Reese, 1997)

$$p_{ur} = \alpha_r q_{ur} b \left(1 + 1.4 \frac{x_r}{b} \right) \quad \text{for } 0 \leq x_r \leq 3b \quad (4.59)$$

$$p_{ur} = 5.2 \alpha_r q_{ur} b \quad \text{for } x_r > 3b \quad (4.60)$$

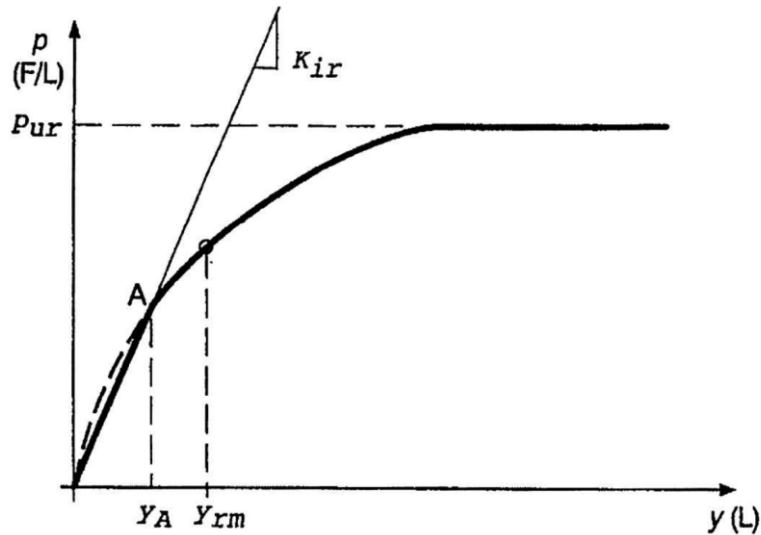
where

q_{ur} = compressive strength of the rock, usually lower-bound as a function of depth,

α_r = strength reduction factor,

b = diameter of the pile, and

x_r = depth below the rock surface.





9.6 Individuazione delle combinazioni dimensionanti

Le combinazioni dimensionanti per le verifiche dei pali sono valutate preliminarmente dalle sollecitazioni agenti in testa al palo più sollecitato nell'ipotesi di fondazione infinitamente rigida.

Per quanto riguarda l'azione assiale si ha:

$$R(x, y) = \frac{N}{n} + \frac{M_x}{J_y} \cdot y + \frac{M_y}{J_x} \cdot x$$

dove N , M_x e M_y sono lo sforzo normale e i momenti flettenti attorno agli assi x e y (disposti rispettivamente longitudinalmente e trasversalmente all'asse stradale) agenti al baricentro della palificata. n è il numero di pali e J_x e J_y sono le inerzie longitudinale e trasversale della palificata

$$J_x = \sum x_i^2$$

$$J_y = \sum y_i^2$$

Per quanto riguarda le sollecitazioni orizzontali in testa al palo si assume che le azioni di taglio si ripartiscano uniformemente tra i pali e si tiene in conto del momento torsionale M_z :

$$T(x, y) = \frac{\sqrt{H_x^2 + H_y^2}}{n} + \frac{M_z}{J_z} \cdot d$$

Dove d è la distanza dal baricentro, pari a $\sqrt{x^2 + y^2}$, e $J_z = J_x + J_y$ è l'inerzia torsionale della palificata.



10. ANALISI DEI CARICHI

Il calcolo degli elementi delle spalle è stato condotto tenendo conto delle seguenti azioni agenti sull'opera:

- Peso proprio della struttura;
- Peso del terreno a monte dell'opera;
- Spinte del terreno a monte dell'opera;
- Spinta dovuta al sovraccarico stradale;
- Incremento di spinta sismica del terreno a tergo della spalla;
- Forze di inerzia della struttura e del terreno solidale con l'opera;
- Azioni trasmesse dall'impalcato;
- Forza di frenamento (per il calcolo locale del paraghiaia);

In Figura 10-1 sono presentati i valori numerici dei carichi applicati alla fondazione (esclusi quelli derivanti dall'impalcato), mentre nei paragrafi successivi si mostrano i criteri di calcolo.

CARICHI STATICI			x [m]	z [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	14.73	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	242.65 kN/m	1.15	2.11	90.00	242.65	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	163.39 kN/m	2.30	1.92	18.67	52.29	154.79	-237.58	0.00
Sovraspinta pavimentazione	Sg2	12.24 kN/m	2.30	2.89	18.67	3.92	11.60	-28.96	0.00
Sovraspinta traffico	Sg1	61.22 kN/m	2.30	2.89	18.67	19.60	58.00	-144.81	0.00
Impronta su paraghiaia	Fr1	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Frenamento Orizzontale	Fr2	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
CARICHI SISMICI k _v negativo			x [m]	z [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	14.73	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	242.65 kN/m	1.15	2.11	90.00	242.65	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia paraghiaia orizzontale	G1a _{ih}	0.71 kN/m	2.10	5.00	0.00	0.00	0.71	-3.56	0.00
Inerzia paraghiaia verticale	G1a _{iv}	-0.36 kN/m	2.10	5.00	90.00	-0.36	0.00	-0.34	0.00
Inerzia muro orizzontale	G1b _{ih}	0.00 kN/m	0.92	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia muro verticale	G1b _{iv}	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia platea orizzontale	G1c _{ih}	11.16 kN/m	1.15	2.11	0.00	0.00	11.16	-23.55	0.00
Inerzia platea verticale	G1c _{iv}	-5.58 kN/m	1.15	2.11	90.00	-5.58	0.00	0.00	0.00
Inerzia terreno piede muro orizzontale	G1t _{ih}	0.00 kN/m	2.30	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro verticale	G1t _{iv}	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	163.39 kN/m	2.30	1.92	18.67	52.29	154.79	-237.58	0.00
Delta Spinta sismica (Wood)	ΔS	64.67 kN/m	2.30	2.89	18.67	20.70	61.27	-152.97	0.00
Sovraspinta pavimentazione	Sg2	9.06 kN/m	2.30	2.89	18.67	2.90	8.59	-21.43	0.00
Sovraspinta traffico	Sg1	9.06 kN/m	2.30	2.89	18.67	2.90	8.59	-21.43	0.00
Impronta su paraghiaia	Fr1	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Inerzia impronta orizzontale	Fr1 _{ih}	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia impronta verticale	Fr1 _{iv}	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Frenamento Orizzontale	Fr2	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia direzione Y	I _y	11.87 kN/m	1.21	2.28		0.00	0.00	0.00	11.87
CARICHI SISMICI k _v positivo			x [m]	z [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	14.73	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	242.65 kN/m	1.15	2.11	90.00	242.65	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia paraghiaia orizzontale	G1a _{ih}	0.71 kN/m	2.10	5.00	0.00	0.00	0.71	-3.56	0.00
Inerzia paraghiaia verticale	G1a _{iv}	0.36 kN/m	2.10	5.00	90.00	0.36	0.00	0.34	0.00
Inerzia muro orizzontale	G1b _{ih}	0.00 kN/m	0.92	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia muro verticale	G1b _{iv}	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia platea orizzontale	G1c _{ih}	11.16 kN/m	1.15	2.11	0.00	0.00	11.16	-23.55	0.00
Inerzia platea verticale	G1c _{iv}	5.58 kN/m	1.15	2.11	90.00	5.58	0.00	0.00	0.00
Inerzia terreno piede muro orizzontale	G1t _{ih}	0.00 kN/m	2.30	5.00	0.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro verticale	G1t _{iv}	0.00 kN/m	2.30	5.00	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	163.39 kN/m	2.30	1.92	18.67	52.29	154.79	-237.58	0.00
Delta Spinta sismica (Wood)	ΔS	64.67 kN/m	2.30	2.89	18.67	20.70	61.27	-152.97	0.00
Sovraspinta pavimentazione	Sg2	9.27 kN/m	2.30	2.89	18.67	2.97	8.79	-21.94	0.00
Sovraspinta traffico	Sg1	9.27 kN/m	2.30	2.89	18.67	2.97	8.79	-21.94	0.00
Impronta su paraghiaia	Fr1	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Inerzia Impronta orizzontale	Fr1 _{ih}	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia impronta verticale	Fr1 _{iv}	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Frenamento Orizzontale	Fr2	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia direzione Y	I _y	11.87 kN/m	0.00	0.00		0.00	0.00	0.00	11.87

Figura 10-1: Carichi trasmessi dalla spalla alla fondazione (esclusi i carichi provenienti dall'impalcato)



10.1 Peso proprio degli elementi strutturali

Gli elementi strutturali, in calcestruzzo armato, presentano un peso specifico pari a $\gamma_{cls} = 25 \text{ kN/m}^3$

10.2 Peso del terreno a monte dell'opera

Il terreno preso in considerazione è quello a tergo della spalla, costituito da terreno di riporto con un peso specifico di $\gamma_t = 18 \text{ kN/m}^3$ e un angolo di attrito interno $\phi' = 28^\circ$. L'angolo di attrito muro-terreno è posto pari a 2/3 di quest'ultimo valore ($\delta = 18,7^\circ$).

10.3 Spinta statica del terreno a monte

L'entità e la distribuzione delle spinte del terreno sulla spalla dipendono dallo spostamento relativo che lo stesso può subire. Avendo previsto una platea su pali, si può considerare che le deformazioni del terreno siano impedito dalla struttura che non cede in nessun punto; per questo motivo la pressione esercitata è una spinta a riposo espressa secondo la teoria di Coulomb dalla seguente relazione:

$$S = \frac{1}{2} \cdot \gamma_t \cdot H^2 \cdot K_0$$

K_0 rappresenta il coefficiente di spinta a riposo, calcolabile tramite la formula di Jacky:

$$K_0 = 1 - \sin \phi' = 0.53$$

Dove ϕ' è l'angolo di attrito interno del terreno.

Il diagramma delle pressioni del terreno sulla parete risulta triangolare con il vertice in alto; il punto di applicazione della risultante si trova quindi in corrispondenza del baricentro del diagramma delle pressioni ($1/3 \cdot H$ rispetto alla base della platea).

10.4 Incremento di spinta dovuto al sovraccarico stradale

La presenza di un sovraccarico stradale uniformemente distribuito sul rilevato comporta un'ulteriore spinta sulla spalla risultante da un diagramma delle pressioni costante con la profondità.

Intendendo per q il sovraccarico per metro lineare di proiezione orizzontale del valore di 20 kN/m^2 , la spinta in esame vale:

$$S_q = q \cdot H \cdot K_0$$

La distribuzione delle pressioni legate al traffico è uniforme lungo tutta l'opera, pertanto la risultante è applicata a metà dell'altezza.

10.5 Incremento di spinta dovuto al sisma

Per il calcolo della sovraspinta dovuta alle forze d'inerzia si fa riferimento al Par. E.9 dell'Eurocodice 8-5. Considerando una struttura rigida, ossia in presenza della quale il terreno retrostante non ha possibilità di sviluppare spinta attiva, la sovraspinta sismica del terreno può essere calcolata secondo la seguente formula (spinta di Wood):

$$\Delta S = k_h \cdot \gamma \cdot H^2 \quad [\text{kN/m}]$$

Dove:

- k_h = coefficiente sismico orizzontale;
- γ = peso specifico del terreno
- H = altezza del muro



In tale contesto le pressioni applicate sulla spalla sono assunte essere uniformi, e di conseguenza il punto di applicazione della forza è a metà dell'altezza dell'opera.

10.6 Forze di inerzia della struttura e del terreno ad essa solidale

In presenza di sisma, l'opera è soggetta alle forze di inerzia della parete e del terreno a monte solidale con la stessa, ovvero quella porzione di terreno posta al di sopra della platea di fondazione. L'intensità delle forze di inerzia è pari, per la componente orizzontale e per quella verticale, a:

$$F_h = k_h \cdot W$$

$$F = \pm k_v \cdot W$$

Dove W è il peso dell'elemento considerato.

10.7 Azioni trasmesse dall'impalcato

Le azioni trasmesse dall'impalcato sono inserite considerando direttamente le combinazioni di carico. La terna di assi di riferimento per le sollecitazioni è costituita da x nella direzione dell'asse longitudinale dell'impalcato, da y disposto trasversalmente all'impalcato e da z verticale positivo verso l'alto.

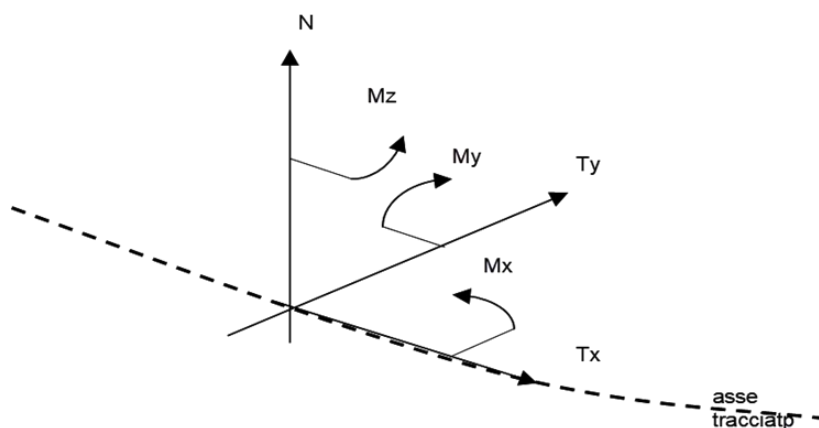


Figura 10-2 – Convenzione azioni da impalcato



	CARICHI	Fx [kN]	Fy [kN]	Fz [kN]	Mx [kNm]	My [kNm]	Mz [kNm]
1	SLU161-Max	-8.974	0	2106.70	2	0	194.45406
2	SLU162-Max	-14.417	0	2306.66	5	0	144.40506
3	SLU163-Max	20.793	0	2106.70	2	0	436.00398
4	SLU164-Max	15.35	0	2306.66	4	0	385.95249
5	SLU165-Max	-96.185	0	2106.70	2	0	511.42608
6	SLU166-Max	101.627	0	2306.66	4	0	561.47508
7	SLU167-Max	-66.418	0	2106.70	3	0	269.87865
8	SLU168-Max	-71.86	0	2306.66	5	0	319.92765
9	SLU169-Max	-60.625	0	2120.46	8	0	234.32394
10	SLU170-Max	-65.318	0	2292.89	8	0	191.16477
11	SLU171-Max	-30.42	0	2120.46	8	0	479.42709
12	SLU172-Max	-35.113	0	2292.89	9	0	436.26543
13	SLU173-Max	147.836	0	2120.46	7	0	471.5562
14	SLU174-Max	152.529	0	2292.89	9	0	514.71537
15	SLU175-Max	117.631	0	2120.46	8	0	226.45554
16	SLU176-Max	122.324	0	2292.89	8	0	269.61471
17	SLU177-Max	-8.974	0	2106.70	2	0	194.45406
18	SLU178-Max	-14.417	0	2306.66	5	0	144.40506
19	SLU179-Max	20.793	0	2106.70	2	0	436.00398
20	SLU180-Max	15.35	0	2306.66	4	0	385.95249
21	SLU181-Max	-96.185	0	2106.70	2	0	511.42608
22	SLU182-Max	101.627	0	2306.66	4	0	561.47508
23	SLU183-Max	-66.418	0	2106.70	3	0	269.87865
24	SLU184-Max	-71.86	0	2306.66	5	0	319.92765
25	SLU185-Max	-60.625	0	2120.46	8	0	234.32394
26	SLU186-Max	-65.318	0	2292.89	8	0	191.16477
27	SLU187-Max	-30.42	0	2120.46	8	0	479.42709
28	SLU188-Max	-35.113	0	2292.89	9	0	436.26543
29	SLU189-Max	147.836	0	2120.46	7	0	471.5562
30	SLU190-Max	152.529	0	2292.89	9	0	514.71537
31	SLU191-Max	117.631	0	2120.46	8	0	226.45554
32	SLU192-Max	122.324	0	2292.89	8	0	269.61471
33	SLU193-Max	-8.974	0	2106.70	2	0	194.45655
34	SLU194-Max	-14.417	0	2306.66	5	0	144.40506
35	SLU195-Max	20.793	0	2106.70	3	0	436.00398
36	SLU196-Max	15.35	0	2306.66	4	0	385.95249
37	SLU197-Max	-96.185	0	2106.70	2	0	511.42608
38	SLU198-Max	101.627	0	2306.66	4	0	561.47508
39	SLU199-Max	-66.418	0	2106.70	2	0	269.87616
40	SLU200-Max	-71.86	0	2306.66	4	0	319.93014
41	SLU201-Max	-60.625	0	2120.46	7	0	234.32643
42	SLU202-Max	-65.318	0	2292.89	8	0	191.16477
43	SLU203-Max	-30.42	0	2120.46	8	0	479.42709

44	SLU204-Max	-35.113	0	2292.89	9	0	436.26543	0
45	SLU205-Max	147.836	0	2120.46	8	0	471.5562	0
46	SLU206-Max	152.529	0	2292.89	9	0	514.71786	0
47	SLU207-Max	117.631	0	2120.46	8	0	226.45554	0
48	SLU208-Max	122.324	0	2292.89	8	0	269.61471	0
49	SLU209-Max	-8.974	0	2106.70	2	0	194.45406	0
50	SLU210-Max	-14.417	0	2306.66	4	0	144.40506	0
51	SLU211-Max	20.793	0	2106.70	2	0	436.00398	0
52	SLU212-Max	15.35	0	2306.66	4	0	385.95498	0
53	SLU213-Max	-96.185	0	2106.70	1	0	511.42608	0
54	SLU214-Max	101.627	0	2306.66	5	0	561.47757	0
55	SLU215-Max	-66.418	0	2106.70	2	0	269.87865	0
56	SLU216-Max	-71.86	0	2306.66	5	0	319.92765	0
57	SLU217-Max	-60.625	0	2120.46	8	0	234.32394	0
58	SLU218-Max	-65.318	0	2292.89	9	0	191.16726	0
59	SLU219-Max	-30.42	0	2120.46	8	0	479.42709	0
60	SLU220-Max	-35.113	0	2292.89	9	0	436.26543	0
61	SLU221-Max	147.836	0	2120.46	7	0	471.5562	0
62	SLU222-Max	152.529	0	2292.89	9	0	514.71537	0
63	SLU223-Max	117.631	0	2120.46	8	0	226.45554	0
64	SLU224-Max	122.324	0	2292.89	9	0	269.6172	0
65	SLU225-Max	3.081	0	1855.57	8	0	45.45744	0
66	SLU226-Max	-2.362	0	2055.54	1	0	95.50644	0
67	SLU227-Max	32.848	0	1855.57	8	0	196.09248	0
68	SLU228-Max	27.405	0	2055.54	0	0	146.04099	0
69	SLU229-Max	-93.067	0	1855.57	9	0	332.07387	0
70	SLU230-Max	-98.51	0	2055.54	1	0	382.12287	0
71	SLU231-Max	-63.3	0	1855.57	9	0	90.52395	0
72	SLU232-Max	-68.743	0	2055.54	0	0	140.57544	0
73	SLU233-Max	-48.57	0	1869.34	4	0	5.58756	0
74	SLU234-Max	-53.263	0	2041.77	4	0	48.74673	0
75	SLU235-Max	-18.365	0	1869.34	5	0	-239.5131	0
76	SLU236-Max	-23.059	0	2041.77	5	0	196.35393	0
77	SLU237-Max	144.718	0	1869.34	4	0	292.2015	0
78	SLU238-Max	149.411	0	2041.77	5	0	335.36316	0
79	SLU239-Max	114.513	0	1869.34	4	0	47.10084	0
80	SLU240-Max	119.207	0	2041.77	5	0	90.2625	0
81	SLU241-Max	3.081	0	1855.57	8	0	45.45744	0
82	SLU242-Max	-2.362	0	2055.54	1	0	95.50644	0
83	SLU243-Max	32.848	0	1855.57	8	0	196.09248	0
84	SLU244-Max	27.405	0	2055.54	0	0	146.04099	0
85	SLU245-Max	-93.067	0	1855.57	9	0	332.07387	0
86	SLU246-Max	-98.51	0	2055.54	1	0	382.12287	0
87	SLU247-Max	-63.3	0	1855.57	9	0	90.52395	0
88	SLU248-Max	-68.743	0	2055.54	0	0	140.57544	0

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89	SLU249-Max	-48.57	0	1869.344	0	5.58756	0
90	SLU250-Max	-53.263	0	2041.774	0	48.74673	0
91	SLU251-Max	-18.365	0	1869.345	0	-239.5131	0
92	SLU252-Max	-23.059	0	2041.775	0	196.35393	0
93	SLU253-Max	144.718	0	1869.344	0	292.2015	0
94	SLU254-Max	149.411	0	2041.775	0	335.36316	0
95	SLU255-Max	114.513	0	1869.344	0	47.10084	0
96	SLU256-Max	119.207	0	2041.775	0	90.2625	0
97	SLU257-Max	3.081	0	1855.579	0	45.45744	0
98	SLU258-Max	-2.362	0	2055.541	0	95.50644	0
99	SLU259-Max	32.848	0	1855.579	0	196.09248	0
100	SLU260-Max	27.405	0	2055.540	0	146.04099	0
101	SLU261-Max	-93.067	0	1855.578	0	332.07138	0
102	SLU262-Max	-98.51	0	2055.541	0	382.12287	0
103	SLU263-Max	-63.3	0	1855.579	0	90.52395	0
104	SLU264-Max	-68.743	0	2055.540	0	140.57544	0
105	SLU265-Max	-48.57	0	1869.344	0	5.58756	0
106	SLU266-Max	-53.263	0	2041.774	0	48.74673	0
107	SLU267-Max	-18.365	0	1869.344	0	239.51559	0
108	SLU268-Max	-23.059	0	2041.775	0	196.35393	0
109	SLU269-Max	144.718	0	1869.344	0	292.2015	0
110	SLU270-Max	149.411	0	2041.775	0	335.36316	0
111	SLU271-Max	114.513	0	1869.344	0	47.10333	0
112	SLU272-Max	119.207	0	2041.776	0	90.2625	0
113	SLU273-Max	3.081	0	1855.578	0	45.45744	0
114	SLU274-Max	-2.362	0	2055.540	0	95.50644	0
115	SLU275-Max	32.848	0	1855.578	0	196.09248	0
116	SLU276-Max	27.405	0	2055.541	0	146.04099	0
117	SLU277-Max	-93.067	0	1855.579	0	332.07387	0
118	SLU278-Max	-98.51	0	2055.541	0	382.12287	0
119	SLU279-Max	-63.3	0	1855.579	0	90.52395	0
120	SLU280-Max	-68.743	0	2055.540	0	140.57544	0
121	SLU281-Max	-48.57	0	1869.344	0	5.58756	0
122	SLU282-Max	-53.263	0	2041.776	0	48.74673	0
123	SLU283-Max	-18.365	0	1869.345	0	-239.5131	0
124	SLU284-Max	-23.059	0	2041.775	0	196.35393	0
125	SLU285-Max	144.718	0	1869.344	0	292.20399	0
126	SLU286-Max	149.411	0	2041.774	0	335.36316	0
127	SLU287-Max	114.513	0	1869.344	0	47.10084	0
128	SLU288-Max	119.207	0	2041.775	0	90.2625	0
129	SLV1-Max	67.413	0	1365.051	0	53.23122	0
130	SLV2-Max	20.999	0	1382.413	0	53.84376	0
131	SLV3-Max	20.319	0	1361.891	0	53.32335	0
132	SLV4-Max	67.413	0	1365.051	0	53.23122	0
133	SLV5-Max	20.999	0	1382.413	0	53.84376	0

134	SLV6-Max	20.319	0	1361.891	0	53.32335	0
135	SLV7-Max	67.413	0	1365.049	0	53.23122	0
136	SLV8-Max	20.999	0	1382.413	0	53.84127	0
137	SLV9-Max	20.319	0	1361.891	0	53.32335	0
138	SLV10-Max	67.413	0	1365.051	0	53.23122	0
139	SLV11-Max	20.999	0	1382.413	0	53.84376	0
140	SLV12-Max	20.319	0	1361.890	0	53.32335	0
141	SLD1-Max	67.241	0	1353.623	0	53.03949	0
142	SLD2-Max	20.444	0	1353.643	0	53.30592	0
143	SLD3-Max	20.127	0	1341.143	0	53.03451	0
144	SLD4-Max	67.241	0	1353.623	0	53.03949	0
145	SLD5-Max	20.444	0	1353.643	0	53.30592	0
146	SLD6-Max	20.127	0	1341.143	0	53.03451	0
147	SLD7-Max	67.241	0	1353.623	0	53.04198	0
148	SLD8-Max	20.444	0	1353.643	0	53.30592	0
149	SLD9-Max	20.127	0	1341.143	0	53.03451	0
150	SLD10-Max	67.241	0	1353.623	0	53.03949	0
151	SLD11-Max	20.444	0	1353.642	0	53.30592	0
152	SLD12-Max	20.127	0	1341.142	0	53.03451	0
153	SLV13-Max	54.493	0	1365.051	0	157.80624	0
154	SLV14-Max	8.079	0	1382.413	0	158.41878	0
155	SLV15-Max	7.399	0	1361.890	0	157.89837	0
156	SLV16-Max	54.493	0	1365.051	0	157.80624	0
157	SLV17-Max	8.079	0	1382.413	0	158.41878	0
158	SLV18-Max	7.399	0	1361.890	0	157.89837	0
159	SLV19-Max	54.493	0	1365.051	0	157.80624	0
160	SLV20-Max	8.079	0	1382.413	0	158.41878	0
161	SLV21-Max	7.399	0	1361.891	0	157.89837	0
162	SLV22-Max	54.493	0	1365.050	0	157.80624	0
163	SLV23-Max	8.079	0	1382.412	0	158.41878	0
164	SLV24-Max	7.399	0	1361.891	0	157.89588	0
165	SLEr161-Max	-3.275	0	1536.662	0	147.81138	0
166	SLEr162-Max	-6.904	0	1669.970	0	114.44289	0
167	SLEr163-Max	16.569	0	1536.662	0	308.84466	0
168	SLEr164-Max	12.941	0	1669.969	0	275.47617	0
169	SLEr165-Max	-67.876	0	1536.662	0	375.06372	0
170	SLEr166-Max	-71.505	0	1669.970	0	408.43221	0
171	SLEr167-Max	-48.031	0	1536.662	0	214.03293	0
172	SLEr168-Max	-51.66	0	1669.969	0	247.39893	0
173	SLEr169-Max	-37.709	0	1545.838	0	174.39213	0
174	SLEr170-Max	-40.838	0	1660.792	0	145.61769	0
175	SLEr171-Max	-17.573	0	1545.839	0	337.79091	0
176	SLEr172-Max	-20.702	0	1660.792	0	309.01896	0
177	SLEr173-Max	-102.31	0	1545.839	0	348.48546	0
178	SLEr174-Max	105.439	0	1660.792	0	377.25741	0

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17	SLEr175-9	Max	-82.174	0	1545.839	0	185.08419	0	22	SLEr220-4	Max	-20.702	0	1660.793	0	309.01647	0
18	SLEr176-0	Max	-85.302	0	1660.792	0	213.85614	0	22	SLEr221-5	Max	-102.31	0	1545.838	0	348.48546	0
18	SLEr177-1	Max	-3.275	0	1536.662	0	147.81138	0	22	SLEr222-6	Max	105.439	0	1660.793	0	377.25741	0
18	SLEr178-2	Max	-6.904	0	1669.97	0	114.44289	0	22	SLEr223-7	Max	-82.174	0	1545.838	0	185.08419	0
18	SLEr179-3	Max	16.569	0	1536.662	0	308.84466	0	22	SLEr224-8	Max	-85.302	0	1660.792	0	213.85863	0
18	SLEr180-4	Max	12.941	0	1669.969	0	275.47617	0	22	SLEr225-9	Max	5.654	0	1350.644	0	29.90241	0
18	SLEr181-5	Max	-67.876	0	1536.662	0	375.06372	0	23	SLEr226-0	Max	2.026	0	1483.952	0	63.2709	0
18	SLEr182-6	Max	-71.505	0	1669.97	0	408.43221	0	23	SLEr227-1	Max	25.499	0	1350.644	0	131.13087	0
18	SLEr183-7	Max	-48.031	0	1536.662	0	214.03293	0	23	SLEr228-2	Max	21.87	0	1483.952	0	-97.76238	0
18	SLEr184-8	Max	-51.66	0	1669.969	0	247.39893	0	23	SLEr229-3	Max	-65.567	0	1350.643	0	242.20977	0
18	SLEr185-9	Max	-37.709	0	1545.838	0	174.39213	0	23	SLEr230-4	Max	-69.195	0	1483.952	0	275.57577	0
19	SLEr186-0	Max	-40.838	0	1660.792	0	145.61769	0	23	SLEr231-5	Max	-45.722	0	1350.644	0	81.17898	0
19	SLEr187-1	Max	-17.573	0	1545.839	0	337.79091	0	23	SLEr232-6	Max	-49.35	0	1483.953	0	114.54498	0
19	SLEr188-2	Max	-20.702	0	1660.792	0	309.01896	0	23	SLEr233-7	Max	-28.78	0	1359.821	0	3.32166	0
19	SLEr189-3	Max	-102.31	0	1545.839	0	348.48546	0	23	SLEr234-8	Max	-31.909	0	1474.775	0	32.0961	0
19	SLEr190-4	Max	105.439	0	1660.792	0	377.25741	0	23	SLEr235-9	Max	-8.643	0	1359.822	0	160.07712	0
19	SLEr191-5	Max	-82.174	0	1545.839	0	185.08419	0	24	SLEr236-0	Max	-11.772	0	1474.775	0	131.30517	0
19	SLEr192-6	Max	-85.302	0	1660.792	0	213.85614	0	24	SLEr237-1	Max	100.001	0	1359.821	0	215.63151	0
19	SLEr193-7	Max	-3.275	0	1536.661	0	147.81138	0	24	SLEr238-2	Max	103.129	0	1474.776	0	244.40346	0
19	SLEr194-8	Max	-6.904	0	1669.97	0	114.44538	0	24	SLEr239-3	Max	-79.864	0	1359.821	0	52.23024	0
19	SLEr195-9	Max	16.569	0	1536.661	0	308.84217	0	24	SLEr240-4	Max	-82.993	0	1474.776	0	81.00219	0
20	SLEr196-0	Max	12.941	0	1669.97	0	275.47617	0	24	SLEr241-5	Max	5.654	0	1350.644	0	29.90241	0
20	SLEr197-1	Max	-67.876	0	1536.662	0	375.06621	0	24	SLEr242-6	Max	2.026	0	1483.952	0	63.2709	0
20	SLEr198-2	Max	-71.505	0	1669.969	0	408.42972	0	24	SLEr243-7	Max	25.499	0	1350.644	0	131.13087	0
20	SLEr199-3	Max	-48.031	0	1536.661	0	214.03293	0	24	SLEr244-8	Max	21.87	0	1483.952	0	-97.76238	0
20	SLEr200-4	Max	-51.66	0	1669.97	0	247.39893	0	24	SLEr245-9	Max	-65.567	0	1350.643	0	242.20977	0
20	SLEr201-5	Max	-37.709	0	1545.838	0	174.38964	0	25	SLEr246-0	Max	-69.195	0	1483.952	0	275.57577	0
20	SLEr202-6	Max	-40.838	0	1660.793	0	145.61769	0	25	SLEr247-1	Max	-45.722	0	1350.644	0	81.17898	0
20	SLEr203-7	Max	-17.573	0	1545.838	0	337.79091	0	25	SLEr248-2	Max	-49.35	0	1483.953	0	114.54498	0
20	SLEr204-8	Max	-20.702	0	1660.792	0	309.01647	0	25	SLEr249-3	Max	-28.78	0	1359.821	0	3.32166	0
20	SLEr205-9	Max	-102.31	0	1545.838	0	348.48546	0	25	SLEr250-4	Max	-31.909	0	1474.775	0	32.0961	0
21	SLEr206-0	Max	105.439	0	1660.793	0	377.25741	0	25	SLEr251-5	Max	-8.643	0	1359.822	0	160.07712	0
21	SLEr207-1	Max	-82.174	0	1545.838	0	185.08419	0	25	SLEr252-6	Max	-11.772	0	1474.775	0	131.30517	0
21	SLEr208-2	Max	-85.302	0	1660.793	0	213.85614	0	25	SLEr253-7	Max	100.001	0	1359.821	0	215.63151	0
21	SLEr209-3	Max	-3.275	0	1536.661	0	147.81138	0	25	SLEr254-8	Max	103.129	0	1474.776	0	244.40346	0
21	SLEr210-4	Max	-6.904	0	1669.969	0	114.44289	0	25	SLEr255-9	Max	-79.864	0	1359.821	0	52.23024	0
21	SLEr211-5	Max	16.569	0	1536.662	0	308.84217	0	26	SLEr256-0	Max	-82.993	0	1474.776	0	81.00219	0
21	SLEr212-6	Max	12.941	0	1669.97	0	275.47368	0	26	SLEr257-1	Max	5.654	0	1350.643	0	29.90241	0
21	SLEr213-7	Max	-67.876	0	1536.661	0	375.06372	0	26	SLEr258-2	Max	2.026	0	1483.952	0	63.26841	0
21	SLEr214-8	Max	-71.505	0	1669.97	0	408.42972	0	26	SLEr259-3	Max	25.499	0	1350.645	0	131.13087	0
21	SLEr215-9	Max	-48.031	0	1536.661	0	214.03293	0	26	SLEr260-4	Max	21.87	0	1483.952	0	-97.76238	0
22	SLEr216-0	Max	-51.66	0	1669.97	0	247.39893	0	26	SLEr261-5	Max	-65.567	0	1350.644	0	242.20977	0
22	SLEr217-1	Max	-37.709	0	1545.839	0	174.38964	0	26	SLEr262-6	Max	-69.195	0	1483.952	0	275.57826	0
22	SLEr218-2	Max	-40.838	0	1660.793	0	-145.6152	0	26	SLEr263-7	Max	-45.722	0	1350.645	0	81.17898	0
22	SLEr219-3	Max	-17.573	0	1545.839	0	337.79091	0	26	SLEr264-8	Max	-49.35	0	1483.951	0	114.54498	0

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Figura 10-3 – Azioni trasmesse dall'impalcato

26	SLEr265-9	-28.78	0	1359.82	1	0	3.32166	0
27	SLEr266-0	-31.909	0	1474.77	5	0	32.0961	0
27	SLEr267-1	-8.643	0	1359.82	1	0	160.07712	0
27	SLEr268-2	-11.772	0	1474.77	5	0	131.30517	0
27	SLEr269-3	100.001	0	1359.82	1	0	215.63151	0
27	SLEr270-4	103.129	0	1474.77	4	0	244.40346	0
27	SLEr271-5	-79.864	0	1359.82	2	0	52.23024	0
27	SLEr272-6	-82.993	0	1474.77	4	0	81.00219	0
27	SLEr273-7	5.654	0	1350.64	4	0	29.90241	0
27	SLEr274-8	2.026	0	1483.95	2	0	63.26841	0
27	SLEr275-9	25.499	0	1350.64	4	0	131.12838	0
28	SLEr276-0	21.87	0	1483.95	3	0	-97.76238	0
28	SLEr277-1	-65.567	0	1350.64	5	0	242.20977	0
28	SLEr278-2	-69.195	0	1483.95	2	0	275.57826	0
28	SLEr279-3	-45.722	0	1350.64	4	0	81.17649	0
28	SLEr280-4	-49.35	0	1483.95	2	0	114.54498	0
28	SLEr281-5	-28.78	0	1359.82	2	0	3.32166	0
28	SLEr282-6	-31.909	0	1474.77	6	0	32.0961	0
28	SLEr283-7	-8.643	0	1359.82	1	0	160.07712	0
28	SLEr284-8	-11.772	0	1474.77	6	0	131.30517	0
28	SLEr285-9	100.001	0	1359.82	1	0	215.62902	0
29	SLEr286-0	103.129	0	1474.77	5	0	244.40346	0
29	SLEr287-1	-79.864	0	1359.82	2	0	52.23024	0
29	SLEr288-2	-82.993	0	1474.77	5	0	81.00219	0
29	SLEf21-Max	7.545	0	1395.74	6	0	-7.51731	0
29	SLEf22-Max	-18.295	0	1395.74	6	0	201.63024	0
29	SLEf24-Max	7.545	0	1395.74	6	0	-7.51731	0
29	SLEf25-Max	-18.295	0	1395.74	6	0	201.63024	0
29	SLEf27-Max	7.545	0	1395.74	5	0	-7.5198	0
29	SLEf28-Max	-18.295	0	1395.74	6	0	201.63024	0
29	SLEf30-Max	7.545	0	1395.74	5	0	-7.51731	0
30	SLEf31-Max	-18.295	0	1395.74	5	0	201.63024	0
30	SLD13-Max	54.321	0	1353.62	3	0	157.61451	0
30	SLD14-Max	7.524	0	1353.64	3	0	157.88343	0
30	SLD15-Max	7.207	0	1341.14	2	0	157.60953	0
30	SLD16-Max	54.321	0	1353.62	3	0	157.61451	0
30	SLD17-Max	7.524	0	1353.64	3	0	157.88343	0
30	SLD18-Max	7.207	0	1341.14	2	0	157.60953	0
30	SLD19-Max	54.321	0	1353.62	3	0	157.61451	0
30	SLD20-Max	7.524	0	1353.64	3	0	157.88094	0
30	SLD21-Max	7.207	0	1341.14	2	0	157.60953	0
31	SLD22-Max	54.321	0	1353.62	3	0	157.617	0
31	SLD23-Max	7.524	0	1353.64	3	0	157.88343	0
31	SLD24-Max	7.207	0	1341.14	3	0	157.61202	0

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10.8 Forza di frenamento sul paraghiaia

La circolare 21/01/2019, al paragrafo C5.1.3.3.5.2, definisce che per il calcolo dei muri paraghiaia si deve considerare un'azione orizzontale longitudinale di frenamento, applicata alla testa del muro paraghiaia. Il valore caratteristico di tale azione deve essere uguale al 60% del carico asse Q_{1k} , pertanto si considera un carico orizzontale di $180kN$ concomitante con un carico verticale di $300kN$.

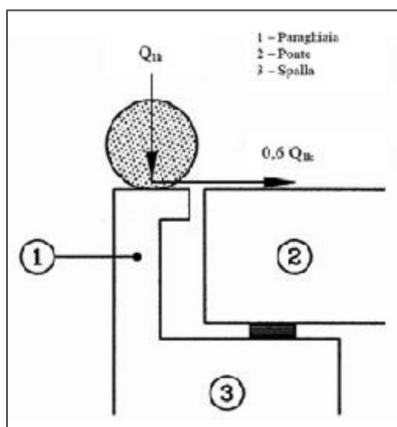


Figura 10-4 – Azione di frenamento sul paraghiaia

Assumendo che il carico si diffonda con un angolo di 45° all'interno dell'elemento strutturale, e poiché l'altezza del paraghiaia è sufficientemente alta da garantire la diffusione dei carichi, nei calcoli si considera un carico uniformemente distribuito pari a:

$$P_{par} = \frac{300 \text{ kN}}{2 \cdot 1,47 \text{ m}} = 102 \frac{\text{kN}}{\text{m}}$$

$$T_{par} = \frac{180 \text{ kN}}{2 \cdot 1,47 \text{ m}} = 61 \frac{\text{kN}}{\text{m}}$$



11. COMBINAZIONI DELLE AZIONI

11.1 Premessa

Le verifiche contenute nel presente documento fanno riferimento a quanto prescritto nelle NTC2018 e successiva circolare esplicativa e negli Eurocodici.

Le verifiche strutturali sono eseguite nei confronti degli Stati Limite Ultimi (SLU) e degli Stati Limite di Salvaguardia della Vita (SLV). Gli stati limite di esercizio esaminati per il soddisfacimento delle prestazioni richieste ai manufatti sono: danneggiamenti locali che possono ridurre la durabilità della struttura, la sua efficienza o il suo aspetto (controllo delle tensioni massime e della fessurazione del calcestruzzo con verifiche sezionali); eccessive deformazioni che possono limitare l'uso della costruzione, la sua efficienza e il suo aspetto (verifica dei rapporti limite deformazione massima o spessore/luce di calcolo).

Per ogni stato limite deve essere rispettata la condizione:

$$E_d \leq R_d \quad (\text{eq. 6.2.1 delle NTC2018})$$

Dove:

E_d valore di progetto dell'azione o dell'effetto dell'azione;

R_d valore di progetto della resistenza del sistema geotecnico.

11.2 Combinazioni delle azioni

Ai fini delle verifiche agli stati limite, la combinazione delle azioni è effettuata secondo quanto disposto dalle NTC-2018.

In particolare, si fa riferimento alle seguenti combinazioni:

- Combinazione fondamentale, impiegata per gli stati limite ultimi (SLU)

$$\gamma_{G1} \cdot G_1 + \gamma_{G2} \cdot G_2 + \gamma_P \cdot P + \gamma_{Q1} \cdot Q_{k1} + \sum_{i>1} \gamma_{Qi} \cdot \psi_{oi} \cdot Q_{ki}$$

- Combinazione caratteristica (rara), impiegata per gli stati limite di esercizio (SLE) irreversibili, quali le verifiche tensionali:

$$G_1 + G_2 + P + Q_{k1} + \sum_{i>1} \psi_{oi} \cdot Q_{ki}$$

- Combinazione frequente, impiegata per gli stati limite di esercizio (SLE) reversibili, quali le verifiche a fessurazione:

$$G_1 + G_2 + P + \psi_{11} Q_{k1} + \sum_{i>1} \psi_{2i} \cdot Q_{ki}$$

- Combinazione quasi permanente, impiegata per gli stati limite di esercizio (SLE) che descrivono effetti a lungo termine, quali le verifiche tensionali e a fessurazione:

$$G_1 + G_2 + P + \sum_{i \geq 1} \psi_{2i} \cdot Q_{ki}$$

- Combinazione sismica, impiegata per gli stati limite ultimi (SLU) connessi all'azione sismica E:



$$E + G_1 + G_2 + P + \sum_{i \geq 1} \psi_{2i} \cdot Q_{ki}$$

11.3 Coefficienti delle azioni agli Stati Limite

I coefficienti parziali γ e i coefficienti ψ per le azioni variabili impiegati sono quelli riportati dal DM 2018 al capitolo 2:

- Tabella 2.5.I: Valori dei coefficienti di combinazione
- Tabella 2.6.I: Coefficienti parziali per le azioni o per l'effetto delle azioni nelle verifiche SLU

Tab. 2.5.I – Valori dei coefficienti di combinazione

Categoria/Azione variabile	Ψ_{0j}	Ψ_{1j}	Ψ_{2j}
Categoria A - Ambienti ad uso residenziale	0,7	0,5	0,3
Categoria B - Uffici	0,7	0,5	0,3
Categoria C - Ambienti suscettibili di affollamento	0,7	0,7	0,6
Categoria D - Ambienti ad uso commerciale	0,7	0,7	0,6
Categoria E – Aree per immagazzinamento, uso commerciale e uso industriale Biblioteche, archivi, magazzini e ambienti ad uso industriale	1,0	0,9	0,8
Categoria F - Rimesse , parcheggi ed aree per il traffico di veicoli (per autoveicoli di peso ≤ 30 kN)	0,7	0,7	0,6
Categoria G – Rimesse, parcheggi ed aree per il traffico di veicoli (per autoveicoli di peso > 30 kN)	0,7	0,5	0,3
Categoria H - Coperture accessibili per sola manutenzione	0,0	0,0	0,0
Categoria I – Coperture praticabili	da valutarsi caso per caso		
Categoria K – Coperture per usi speciali (impianti, eliporti, ...)			
Vento	0,6	0,2	0,0
Neve (a quota ≤ 1000 m s.l.m.)	0,5	0,2	0,0
Neve (a quota > 1000 m s.l.m.)	0,7	0,5	0,2
Variazioni termiche	0,6	0,5	0,0

Tab. 2.6.I – Coefficienti parziali per le azioni o per l'effetto delle azioni nelle verifiche SLU

		Coefficiente	EQU	A1	A2
		γ_F			
Carichi permanenti G_1	Favorevoli	γ_{G1}	0,9	1,0	1,0
	Sfavorevoli		1,1	1,3	1,0
Carichi permanenti non strutturali $G_2^{(1)}$	Favorevoli	γ_{G2}	0,8	0,8	0,8
	Sfavorevoli		1,5	1,5	1,3
Azioni variabili Q	Favorevoli	γ_{Qk}	0,0	0,0	0,0
	Sfavorevoli		1,5	1,5	1,3

⁽¹⁾ Nel caso in cui l'intensità dei carichi permanenti non strutturali o di una parte di essi (ad es. carichi permanenti portati) sia ben definita in fase di progetto, per detti carichi o per la parte di essi nota si potranno adottare gli stessi coefficienti parziali validi per le azioni permanenti.

Per le combinazioni dei carichi provenienti dall'impalcato, invece, si usa quanto previsto dal capitolo relativo ai ponti (capitolo 5):

- Tabella 5.1.V: Coefficienti parziali di sicurezza per le combinazioni di carico agli SLU
- Tabella 5.1.IV: Coefficienti ψ per le azioni variabili per ponti stradali e pedonali



Tab. 5.1.V – Coefficienti parziali di sicurezza per le combinazioni di carico agli SLU

		Coefficiente	EQU ⁽¹⁾	A1	A2
Azioni permanenti g_1 e g_3	favorevoli	γ_{G1} e γ_{G3}	0,90	1,00	1,00
	sfavorevoli		1,10	1,35	1,00
Azioni permanenti non strutturali ⁽²⁾ g_2	favorevoli	γ_{G2}	0,00	0,00	0,00
	sfavorevoli		1,50	1,50	1,30
Azioni variabili da traffico	favorevoli	γ_Q	0,00	0,00	0,00
	sfavorevoli		1,35	1,35	1,15
Azioni variabili	favorevoli	γ_{Qi}	0,00	0,00	0,00
	sfavorevoli		1,50	1,50	1,30
Distorsioni e presollecitazioni di progetto	favorevoli	$\gamma_{\epsilon 1}$	0,90	1,00	1,00
	sfavorevoli		1,00 ⁽³⁾	1,00 ⁽⁴⁾	1,00
Ritiro e viscosità, Cedimenti vincolari	favorevoli	$\gamma_{\epsilon 2}, \gamma_{\epsilon 3}, \gamma_{\epsilon 4}$	0,00	0,00	0,00
	sfavorevoli		1,20	1,20	1,00

Tab. 5.1.VI - Coefficienti ψ per le azioni variabili per ponti stradali e pedonali

Azioni	Gruppo di azioni (Tab. 5.1.IV)	Coefficiente ψ_0 di combinazione	Coefficiente ψ_1 (valori frequenti)	Coefficiente ψ_2 (valori quasi permanenti)
Azioni da traffico (Tab. 5.1.IV)	Schema 1 (carichi tandem)	0,75	0,75	0,0
	Schemi 1, 5 e 6 (carichi distribuiti)	0,40	0,40	0,0
	Schemi 3 e 4 (carichi concentrati)	0,40	0,40	0,0
	Schema 2	0,0	0,75	0,0
	2	0,0	0,0	0,0
	3	0,0	0,0	0,0
	4 (folla)	--	0,75	0,0
	5	0,0	0,0	0,0
Vento	a ponte scarico SLU e SLE	0,6	0,2	0,0
	in esecuzione	0,8	0,0	0,0
	a ponte carico SLU e SLE	0,6	0,0	0,0
Neve	SLU e SLE	0,0	0,0	0,0
	in esecuzione	0,8	0,6	0,5
Temperatura	SLU e SLE	0,6	0,6	0,5

Ai fini della determinazione dei valori caratteristici delle azioni dovute al traffico, si considerano le combinazioni riportate nella Tabella 5.1.IV (Valori caratteristici delle azioni dovute al traffico), in particolare i Gruppi di azioni '1' e '2a'.



Tab. 5.1.IV - Valori caratteristici delle azioni dovute al traffico

Gruppo di azioni	Carichi sulla superficie carrabile					Carichi su marciapiedi e piste ciclabili non sormontabili
	Carichi verticali			Carichi orizzontali		Carichi verticali
	Modello principale (schemi di carico 1, 2, 3, 4 e 6)	Veicoli speciali	Folla (Schema di carico 5)	Frenatura	Forza centrifuga	Carico uniformemente distribuito
1	Valore caratteristico					Schema di carico 5 con valore di combinazione 2,5KN/m ²
2a	Valore frequente			Valore caratteristico		
2b	Valore frequente				Valore caratteristico	
3 (*)						Schema di carico 5 con valore caratteristico 5,0KN/m ²
4 (**)			Schema di carico 5 con valore caratteristico 5,0KN/m ²			Schema di carico 5 con valore caratteristico 5,0KN/m ²
5 (***)	Da definirsi per il singolo progetto	Valore caratteristico o nominale				

(*) Ponti pedonali
 (**) Da considerare solo se richiesto dal particolare progetto (ad es. ponti in zona urbana)
 (***) Da considerare solo se si considerano veicoli speciali

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12. IMPOSTAZIONE DEL MODELLO

Nel presente capitolo si presentano i modelli realizzati per la spalla e per la fondazione (geometria, parametri di progetto, carichi agenti).

Poiché a causa delle fasi costruttive la spalla presenta un giunto strutturale in mezzzeria, nei seguenti capitoli si realizzeranno i modelli ed eseguiranno i calcoli considerando unicamente metà della lunghezza totale (8,10 m).



12.1 Geometria dei modelli

12.1.1 Spalla (Microsoft Excel)

Le azioni provenienti dalla spalla sono valutate utilizzando fogli di calcolo opportunamente predisposti di Microsoft Excel. L'opera ha forma prismatica, motivo per cui le azioni (ad eccezione dei carichi concentrati provenienti dall'impalcato) sono state calcolate per unità di lunghezza, e le verifiche strutturali del paraghiaia sono eseguite considerando una sezione di larghezza unitaria.

Di seguito sono mostrati i parametri geometrici di calcolo della spalla.

PARAMETRI GEOMETRICI SPALLA			
Altezza paraghiaia (lato valle)	h1	1.55	m
Altezza paraghiaia (lato monte)	h4	1.55	m
Spessore paraghiaia	s1	0.40	m
Altezza testa paraghiaia	h7	0.00	m
Spessore testa paraghiaia	s5	0.40	m
Spessore transizione	s6	0.00	m
Inclinazione muro monte	i	0.00%	
Inclinazione terreno a monte	i _m	0.00%	
Altezza muro (lato valle)	h2	0.00	m
Altezza muro (lato monte)	h6	0.00	m
Spessore piano appoggio	s2	1.90	m
Spessore muro alla base	s3	1.90	m
Altezza fondazione	h3	4.22	m
Sbalzo fondazione contro terra	L1	0.00	m
Larghezza totale fondazione	L2	2.30	m
Lunghezza fuori piano muro spalla	L _{ms}	8.10	m
Lunghezza fuori piano fondazione spalla	L _{fs}	8.10	m

Tabella 12-1: Geometria della spalla

PARAMETRI DEI MATERIALI		
Angolo attrito interno terreno	φ	28.00 °
Rapporto δ/φ	δ/φ	0.67
Angolo attrito terreno-muro	δ	18.67 °
Angolo di attrito fondazione	φ_f	30.00 °
Peso specifico terreno	γ_t	18.50 kN/mc
Peso specifico spalla	γ_m	25.00 kN/mc
PARAMETRI SISMICI		
Coefficiente sismico verticale SLV	k_v	0.053
Coefficiente sismico orizzontale SLV	k_h	0.105
Coefficiente sismico verticale SLD	k_v	0.023
Coefficiente sismico orizzontale SLD	k_h	0.046
AZIONI DA IMPALCATO SLU		
Azione verticale 1	N_{11}	0.00 kN/m
Azione orizzontale 1	V_{11}	0.00 kN/m
Azione verticale 2	N_{12}	0.00 kN/m
Azione orizzontale 2	V_{12}	0.00 kN/m
Punto di applicazione della forza	dN	0.60 m
AZIONI DA IMPALCATO SLEfreq-qp		
Azione verticale 1	N_{11}	0.00 kN/m
Azione orizzontale 1	V_{11}	0.00 kN/m
Azione verticale 2	N_{12}	0.00 kN/m
Azione orizzontale 2	V_{12}	0.00 kN/m
Punto di applicazione della forza	dN	0.60 m
SOVRACCARICHI		
Carico pavimentazione	G2	4.00 kN/mq
Carico da traffico	q1	20.00 kN/mq
Impronta di carico su paraghiaia	Fr1	102.04 kN/m
Frenamento su paraghiaia	Fr2	61.22 kN/m

Tabella 12-2: Parametri di calcolo della spalla

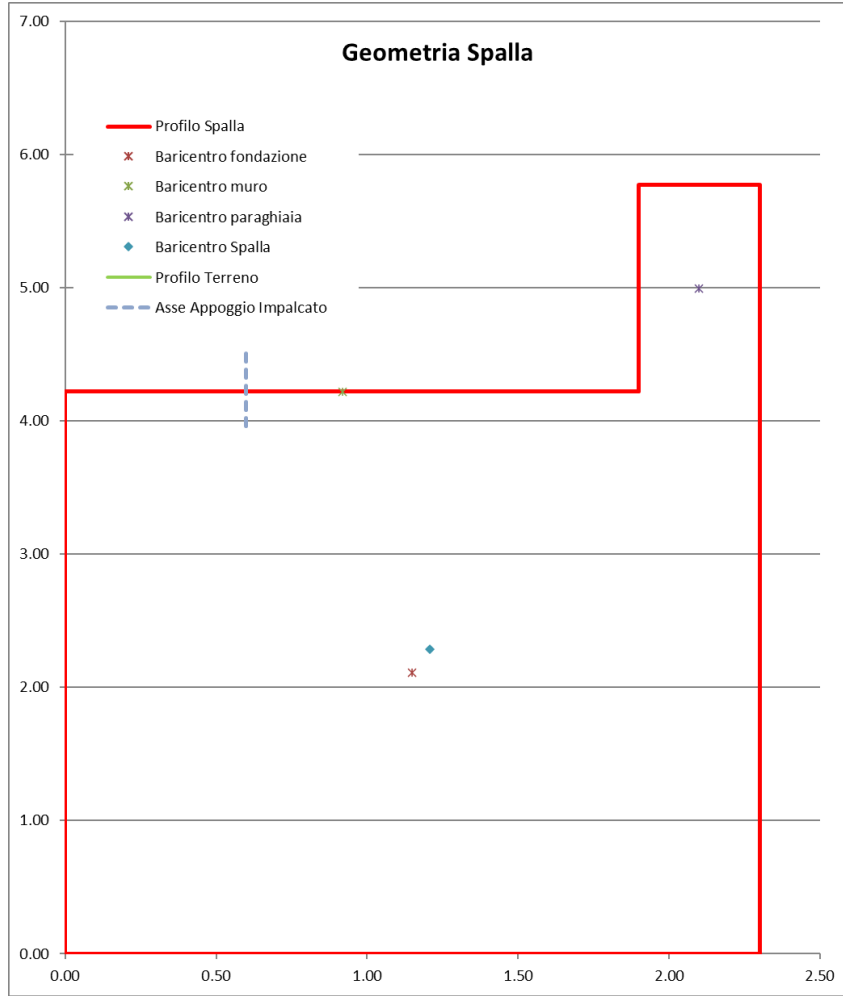


Figura 12-1: Geometria del modello della spalla

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12.1.2 Pali (Group)

Il modello è sviluppato all'interno del software Group, messo in commercio dalla società Ensoft Inc., le cui dichiarazioni sono riportate al Cap. 4

Nel modello Group i pali sono stati modellati tramite elementi elastici lineari (le cui resistenze saranno valutate nei capitoli seguenti), aventi la geometria congruente a quella del palo reale:

- Diametro = 600 mm
- Lunghezza = 29 m

Le caratteristiche sezionali del singolo palo sono le seguenti:

PROPRIETÀ GEOMETRICHE PALO CIRCOLARE				
L	D	A _{circ}	I _{circ}	J
m	m	m ²	m ⁴	m ⁴
29.00	0.60	0.2827	0.00636	0.01272
	mm	mm ²	mm ⁴	mm ⁴
	600	2.83E+05	6.36E+09	1.27E+10

RIGIDENZE				
Classe di resistenza	E	G	EA	GJ
	MPa	MPa	kN	kNm ²
C30/37	33000	13760	9.33E+06	1.75E+05

Tabella 12-3: Caratteristiche geometriche e di rigidezza della sezione trasversale del singolo palo

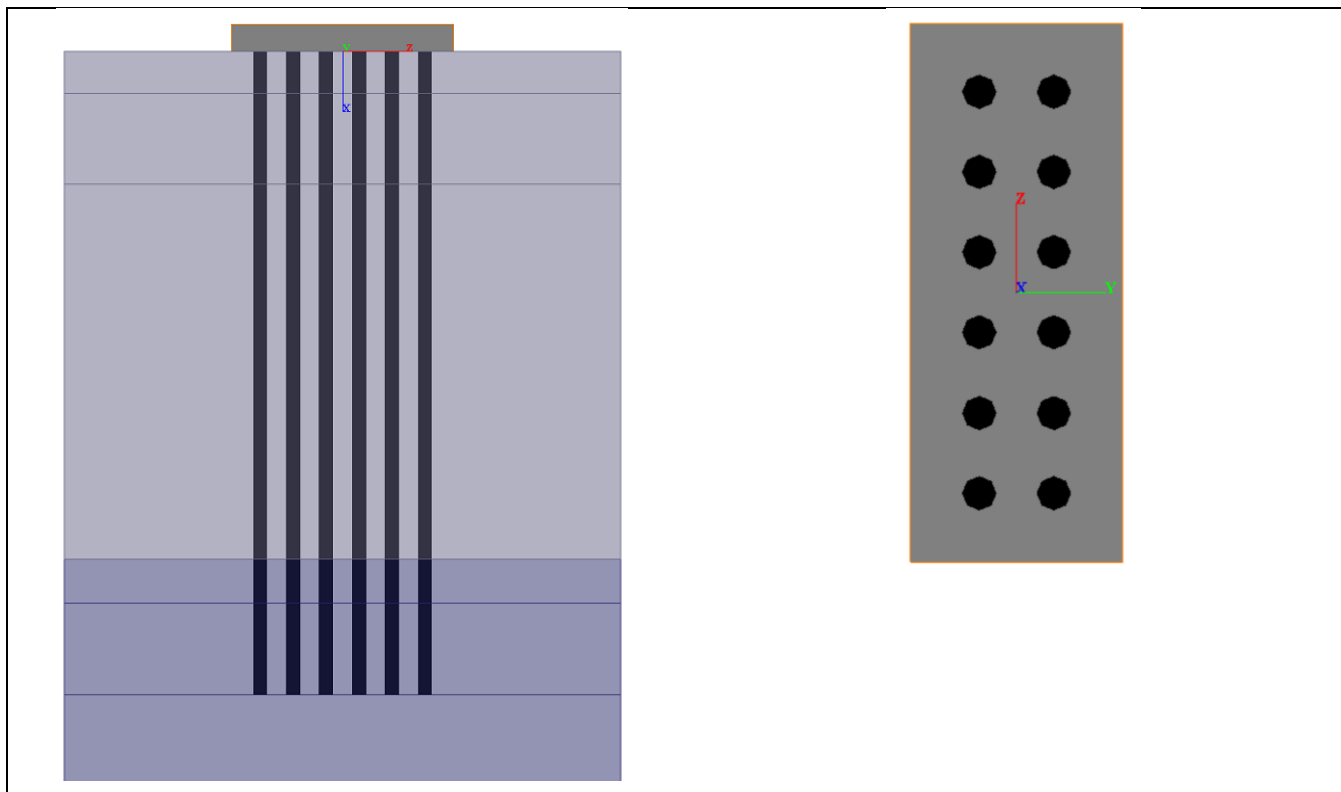


Figura 12-2 – Geometria del modello implementato in Group e numerazione dei pali



Il sistema di riferimento è posto in corrispondenza del baricentro della fondazione. Le coordinate dei pali sono riportate nella figura seguente:

Pile #	Pile-Top Vertical X-Coordinates, (m)	Pile-Top Horizontal Y-Coordinates, (m)	Pile-Top Horizontal Z-Coordinates, (m)	Angle Alpha* (use 0 for vertical pile) (DEG)	Angle Beta** (use 90 for vertical pile) (DEG)	Angle Theta (section rotation) (DEG)	Vert. Dist. from Pile Top to Ground Line ****, (m)
1	0	-0.65	-3.5	0	90	0	0
2	0	-0.65	-2.1	0	90	0	0
3	0	-0.65	-0.7	0	90	0	0
4	0	-0.65	0.7	0	90	0	0
5	0	-0.65	2.1	0	90	0	0
6	0	-0.65	3.5	0	90	0	0
7	0	0.65	-3.5	0	90	0	0
8	0	0.65	-2.1	0	90	0	0
9	0	0.65	-0.7	0	90	0	0
10	0	0.65	0.7	0	90	0	0
11	0	0.65	2.1	0	90	0	0
12	0	0.65	3.5	0	90	0	0

Figura 12-3: Coordinate dei pali rispetto al baricentro della fondazione

12.2 Modellazione delle fondazioni profonde

I pali sono trivellati, pertanto nel software sono stati considerati come tali (*Drilled shafts*). In testa ai pali inoltre è applicato il vincolo di incastro in entrambe le direzioni.

La platea di fondazione non è stata considerata nel modello per i seguenti motivi:

- Non si considera alcun contributo legato alla spinta passiva esercitata da quest'ultima;
- Le combinazioni di carico inserite nel software tengono già conto del peso proprio della spalla;

Di seguito si riporta la stratigrafia e la geometria dei pali utilizzata nei modelli. Per i terreni coesivi è stato utilizzato il modello *soft clay* (Matlock, 1970), per gli strati incoerenti è stato utilizzato il modello *sand* (Reese et al. 1974), mentre è stato utilizzato il modello *weak rock* per gli strati rocciosi. È da notare che la stratigrafia inserita si riferisce alla testa dei pali, quindi nel caso in oggetto la stratigrafia parte dalla quota di 14.90 mslm.

Strato	Da m	A m	Spessore m	Falda	Condizioni	γ kN/m ³	γ' kN/m ³	ϕ' °	C_u kPa	N_{SPT} -	Tipo valutazione	N_s	N_c -	z_c -	k -	μ -
io 1	0	1.9	1.9	No	Drenate	19.0	19.0	31.0		13	Formule statiche	19.58	0	2.4	Legge 1	0.60
io 2	1.9	22.9	21	No	Drenate	19.0	19.0	31.0		13	Formule statiche	19.58	0	2.4	Legge 1	0.60
io 3	22.9	24.9	2	Si	Drenate	25.0	15.0	28.0		100	Formule statiche	10.56	0	2.4	Legge 1	0.53
io 4	24.9	29.9	5	Si	Drenate	27.0	17.0	38.0		100	Formule statiche	82.83	0	2.4	Legge 1	0.78

Layer	Soil Type	Depth for Top of Soil Layer (m)	Depth for Bottom of Soil Layer (m)	Properties of Layer
1	Sand (Reese)	0	1.5	1: Sand (Reese, et al.)
2	Sand (Reese)	1.5	6	2: Sand (Reese, et al.)
3	Sand (Reese)	6	22.9	3: Sand (Reese, et al.)
4	Weak Rock (Reese)	22.9	24.9	4: Weak Rock
5	Weak Rock (Reese)	24.9	29	5: Weak Rock
6	Weak Rock (Reese)	29	40	6: Weak Rock

Figura 12-4 – Stratigrafia utilizzata nel modello

La valutazione delle tensioni limite alla base e tangenziale sono state definite utilizzando le formule



statiche di cui al Cap. 9.2, mentre per la valutazione del modulo di reazione è stato adottato il calcolo automatico del software (vedasi Cap. 9.5).

Come detto in precedenza, la valutazione delle tensioni limite è calcolata secondo le formule statiche riportate al Cap. 9.2. Il valore limitante dell' N_{SPT} è ricavato dai grafici al Cap. 6.1. Considerando unicamente la profondità appartenente allo strato A/M, si ottiene un valor medio di N_{SPT} pari a 13. Per gli strati in roccia si assume un valore di N_{SPT} pari a 100 (rifiuto).

Facendo riferimento alle motivazioni riportate al Par. C6.2.4.1 della circolare applicativa, per il calcolo delle azioni si utilizzano i valori caratteristici delle tensioni, mentre per il calcolo della capacità portante saranno utilizzati, in accordo con la normativa vigente, i valori di progetto.

Nel seguito si riporta una tabella contenente i parametri geotecnici di progetto utilizzati nel programma e i diagrammi delle tensioni limite agli SLU e agli SLU.

N	Da [m]	A [m]	Terreno	γ [$\frac{kN}{m^3}$]	c' [kPa]	Φ' [°]	k [$\frac{kN}{m^3}$]	q_u [$\frac{kN}{m^2}$]	K_{ir} [$\frac{kN}{m^2}$]	k_m [-]	RQD [%]	q_b [$\frac{kN}{m^2}$]	q_s [$\frac{kN}{m^2}$]
1	0	1.9	A/M	19	0	1	1	-	-	-	-	0÷159.2	0÷7.7
2	1.9	6.0	A/M	9	0	31	Def.	-	-	-	-	159.2÷404	7.7÷20
3	6.0	22.9	A/M	9	0	31	Def.	-	-	-	-	404	20
4	22.9	24.9	AMTa	15	0	31	Def.	1	350 000	0.0005	10	404÷1133	67.6÷89
5	24.9	29	AMT	17	0	31	Def.	5	1 200 000	0.0005	25	1133÷1863	89
6	29	40	AMT	17	0	31	Def.	5	1 200 000	0.0005	25	1863	89

Tabella 12-4: Parametri geotecnici dei terreni utilizzati nel modello Group

- SLU/SLV:

Strato 1:

Strato 2:

Strato 3:

Strato 4:

Strato 5:

Strato 6:

Figura 12-5: Parametri geotecnici inseriti nel modello Group



CURVA DELLE TENSIONI LIMITE DI PROGETTO

VALUTATA SECONDO IL D.M. 17/01/2018

PALO CIRCOLARE IN CLS A SEZIONE PIENA

$\Phi = 600$ mm



Figura 12-6 – Curva delle tensioni limite



12.3 Combinazioni di carico dimensionanti

Le azioni di progetto provenienti dall'impalcato e dalla spalla coincidono con le reazioni vincolari che si otterrebbero vincolando la platea nel baricentro della palificata. Le azioni provenienti dall'impalcato sono già state presentate nel Par. 10.7, mentre nei restanti paragrafi del Cap. 10 sono stati descritti i carichi applicati sull'opera di fondazione dalla spalla. I valori numerici di tali azioni sono mostrati nella tabella seguente.

CARICHI STATICI			x [m]	z [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	14.73	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	242.65 kN/m	1.15	2.11	90.00	242.65	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	163.39 kN/m	2.30	1.92	18.67	52.29	154.79	-237.58	0.00
Sovraspinta pavimentazione	S ₀₂	12.24 kN/m	2.30	2.89	18.67	3.92	11.60	-28.96	0.00
Sovraspinta traffico	S ₀₁	61.22 kN/m	2.30	2.89	18.67	19.60	58.00	-144.81	0.00
Impronta su paraghiaia	Fr ₁	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Frenamento Orizzontale	Fr ₂	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
CARICHI SISMICI k _v negativo			x [m]	z [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	14.73	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	242.65 kN/m	1.15	2.11	90.00	242.65	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia paraghiaia orizzontale	G1 _{ah}	0.71 kN/m	2.10	5.00	0.00	0.00	0.71	-3.56	0.00
Inerzia paraghiaia verticale	G1 _{av}	-0.36 kN/m	2.10	5.00	90.00	-0.36	0.00	-0.34	0.00
Inerzia muro orizzontale	G1 _{bh}	0.00 kN/m	0.92	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia muro verticale	G1 _{bv}	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia platea orizzontale	G1 _{ch}	11.16 kN/m	1.15	2.11	0.00	0.00	11.16	-23.55	0.00
Inerzia platea verticale	G1 _{cv}	-5.58 kN/m	1.15	2.11	90.00	-5.58	0.00	0.00	0.00
Inerzia terreno piede muro orizzontale	G1 _{th}	0.00 kN/m	2.30	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro verticale	G1 _{tv}	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	163.39 kN/m	2.30	1.92	18.67	52.29	154.79	-237.58	0.00
Delta Spinta sismica (Wood)	ΔS	64.67 kN/m	2.30	2.89	18.67	20.70	61.27	-152.97	0.00
Sovraspinta pavimentazione	S ₀₂	9.06 kN/m	2.30	2.89	18.67	2.90	8.59	-21.43	0.00
Sovraspinta traffico	S ₀₁	9.06 kN/m	2.30	2.89	18.67	2.90	8.59	-21.43	0.00
Impronta su paraghiaia	Fr ₁	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Inerzia impronta orizzontale	Fr _{1h}	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia impronta verticale	Fr _{1v}	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Frenamento Orizzontale	Fr ₂	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia direzione Y	I _v	11.87 kN/m	1.21	2.28	0.00	0.00	0.00	0.00	11.87
CARICHI SISMICI k _v positivo			x [m]	z [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	14.73	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	242.65 kN/m	1.15	2.11	90.00	242.65	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	5.00	90.00	0.00	0.00	0.00	0.00
Inerzia paraghiaia orizzontale	G1 _{ah}	0.71 kN/m	2.10	5.00	0.00	0.00	0.71	-3.56	0.00
Inerzia paraghiaia verticale	G1 _{av}	0.36 kN/m	2.10	5.00	90.00	0.36	0.00	0.34	0.00
Inerzia muro orizzontale	G1 _{bh}	0.00 kN/m	0.92	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia muro verticale	G1 _{bv}	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia platea orizzontale	G1 _{ch}	11.16 kN/m	1.15	2.11	0.00	0.00	11.16	-23.55	0.00
Inerzia platea verticale	G1 _{cv}	5.58 kN/m	1.15	2.11	90.00	5.58	0.00	0.00	0.00
Inerzia terreno piede muro orizzontale	G1 _{th}	0.00 kN/m	2.30	5.00	0.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro verticale	G1 _{tv}	0.00 kN/m	2.30	5.00	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	163.39 kN/m	2.30	1.92	18.67	52.29	154.79	-237.58	0.00
Delta Spinta sismica (Wood)	ΔS	64.67 kN/m	2.30	2.89	18.67	20.70	61.27	-152.97	0.00
Sovraspinta pavimentazione	S ₀₂	9.27 kN/m	2.30	2.89	18.67	2.97	8.79	-21.94	0.00
Sovraspinta traffico	S ₀₁	9.27 kN/m	2.30	2.89	18.67	2.97	8.79	-21.94	0.00
Impronta su paraghiaia	Fr ₁	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Inerzia Impronta orizzontale	Fr _{1h}	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia impronta verticale	Fr _{1v}	0.00 kN/m	2.10	5.77	90.00	0.00	0.00	0.00	0.00
Frenamento Orizzontale	Fr ₂	0.00 kN/m	2.10	5.77	0.00	0.00	0.00	0.00	0.00
Inerzia direzione Y	I _v	11.87 kN/m	1.21	2.28	0.00	0.00	0.00	0.00	11.87

Tabella 12-5: Carichi caratteristici derivanti dalla spalla

La risultante delle azioni in corrispondenza del baricentro della fondazione è ottenuta sommando i carichi dell'impalcato e quelli della spalla. In Tabella 12-6 sono mostrate le azioni risultanti in corrispondenza del baricentro della fondazione per le combinazioni ritenute dimensionanti (massimo taglio, massima e minima azione assiale sul singolo palo).



		Combinazione		Fx [kN]	Fy [kN]	Mz [kNm]	Fz [kN]	Mx [kNm]	My [kNm]
SLU	max V	C52	SLU52	5985.83	2498.45	-6118.47	0.00	0.00	0.00
	min V	C3	SLU3	5785.87	2503.90	-6081.53	0.00	0.00	0.00
	max H	C67	SLU67	5534.74	2515.95	-5754.40	0.00	0.00	0.00
SLV	max V	C280	SLV16	4265.69	2151.06	-4939.44	66.27	3.78	151.32
	min V	C287	SLV23	4071.35	2108.91	-4779.45	220.91	12.60	504.39
	max H	C280	SLV16	4265.69	2151.06	-4939.44	66.27	3.78	151.32
SLEr/SLD	max V	C168	SLEr40	4391.73	1841.77	-4480.92	0.00	0.00	0.00
	min V	C299	SLD11	4127.32	2005.19	-4441.03	96.78	5.52	220.97
	max H	C301	SLD13	4115.34	2055.25	-4456.67	29.03	1.66	66.29
SLEf	max V	C264	SLEf8	4165.78	1732.52	-3943.55	0.00	0.00	0.00
	min V	C263	SLEf7	4032.48	1736.15	-3918.93	0.00	0.00	0.00
	max H	C263	SLEf7	4032.48	1736.15	-3918.93	0.00	0.00	0.00

Tabella 12-6: Risultanti in corrispondenza del baricentro della fondazione per le combinazioni dimensionanti



13. RISULTATI DELL'ANALISI GROUP

Nel seguito si riportano le massime azioni e spostamenti ed i grafici degli involuipi ai vari Stati Limite.

Si nota che la massima azione assiale per gli SLU è leggermente inferiore a quella agli SLE. Questo risultato dev'essere interpretato considerando che, poiché le tensioni massime applicate per i due stati limite sono diverse, il complesso fondazione terreno agli SLE è più rigido rispetto a quello agli SLU

STATO LIMITE	M [kNm]	V [kN]	N _{MAX} [kN]	N _{MIN} [kN]	δ _{MAX} [m]	U _{MAX} [m]	U _{MIN} [m]
SLU	312	266	1560	-578	-	-	-
SLV	249	229	1251	-565	-	-	-
SLE rara / SLD	231	219	1163	-481	0.014	0.003	-0.001
SLE frequente	191	186	1038	-354	0.012	0.003	-0.0009

Tabella 13-1 – Massimi valori delle azioni interne e degli spostamenti ai vari Stati Limite



13.1 SLU

- Spostamento laterale, momento flettente, taglio lungo i pali

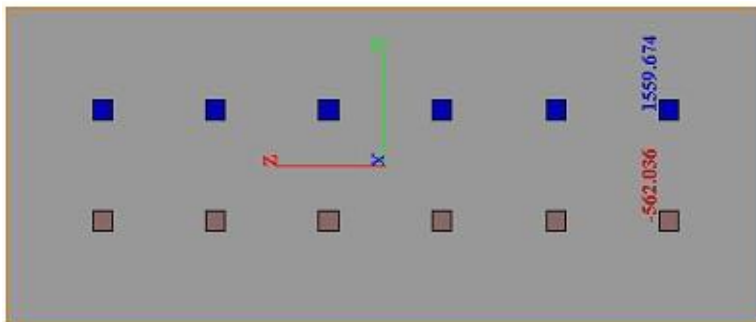


Figura 13-1: Andamento dello spostamento laterale, del momento flettente e del taglio lungo il palo – Involuppo SLU

- Massime azioni assiali in testa ai pali

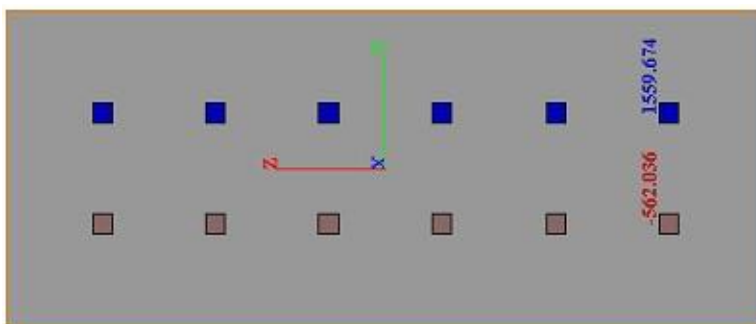


Figura 13-2: Massime azioni assiali in testa ai pali – Involuppo SLU

- Minime azioni assiali in testa ai pali

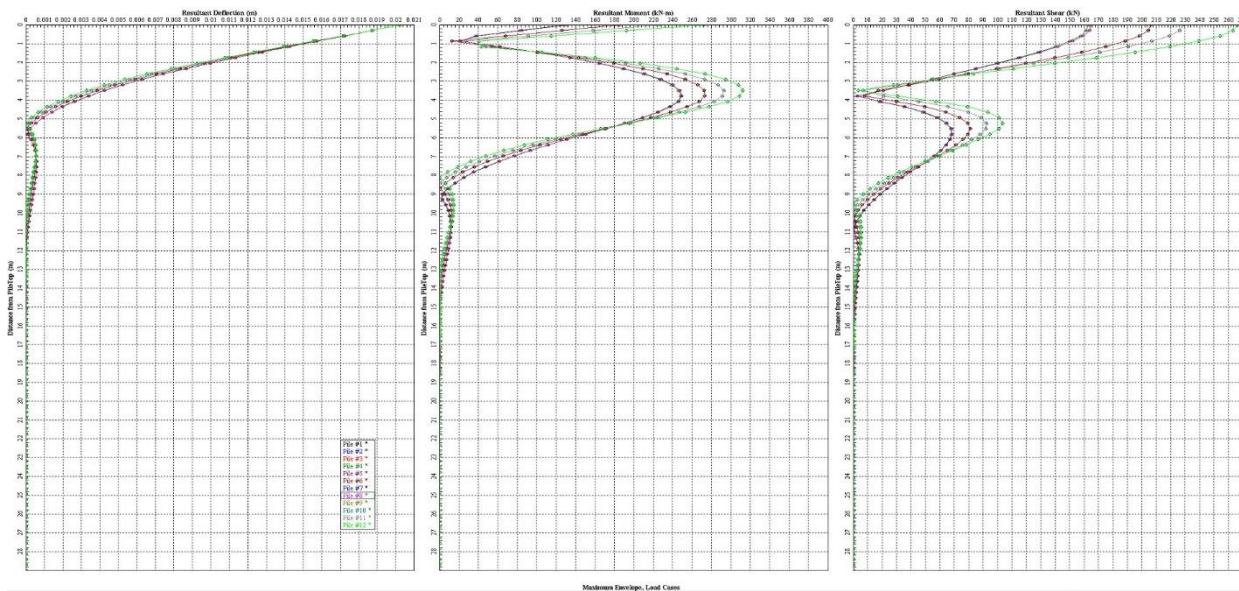


Figura 13-3: Minime azioni assiali in testa ai pali – Involuppo SLU



13.2 SLV

- Spostamento laterale, momento flettente, taglio lungo i pali

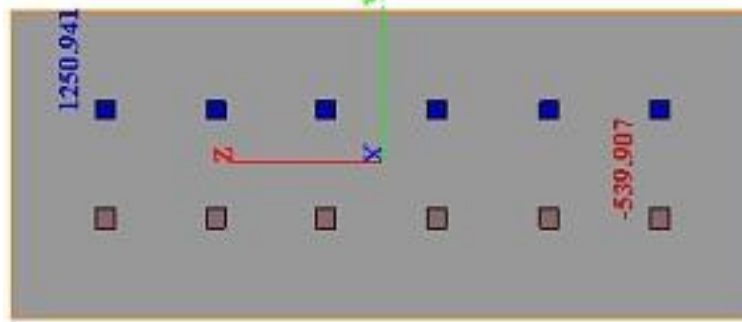


Figura 13-4: Andamento dello spostamento laterale, del momento flettente e del taglio lungo il palo – Involuppo SLV

- Massime azioni assiali in testa ai pali

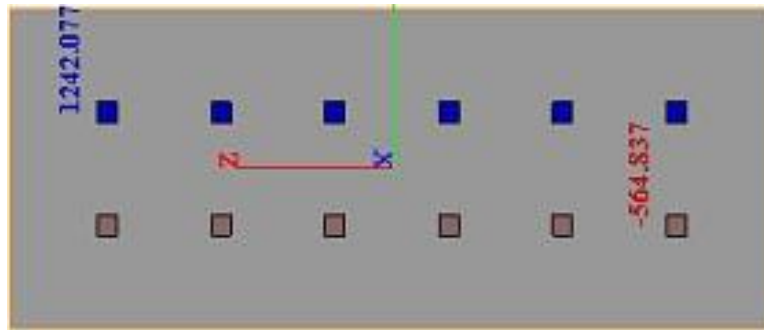


Figura 13-5: Massime azioni assiali in testa ai pali – Involuppo SLV

- Minime azioni assiali in testa ai pali

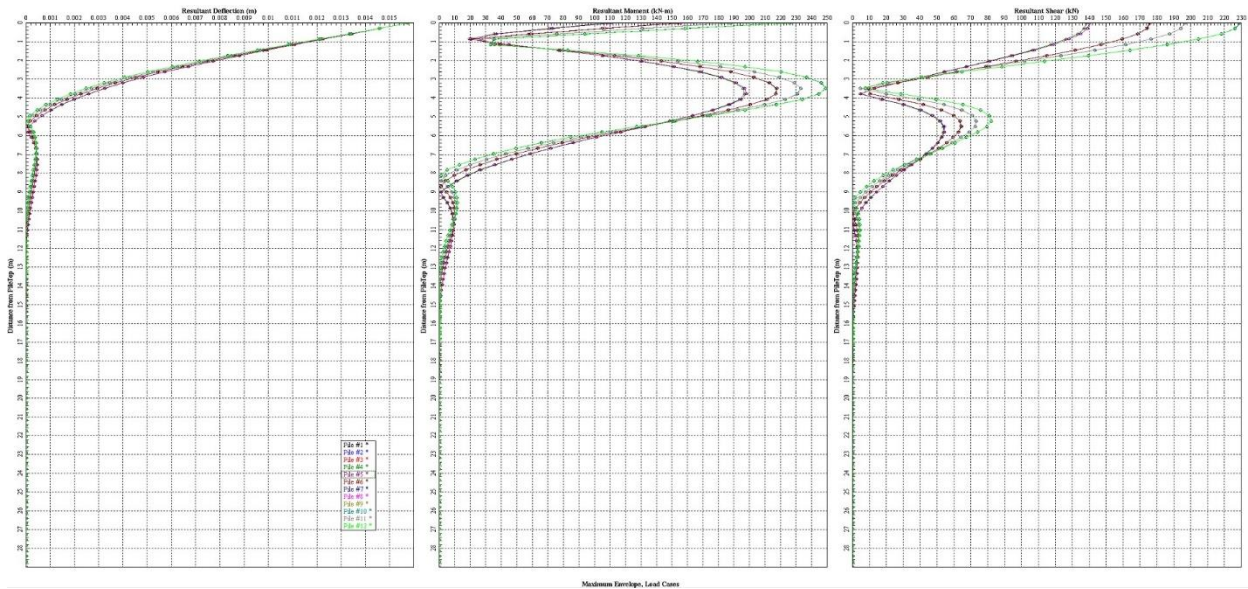


Figura 13-6: Minime azioni assiali in testa ai pali – Involuppo SLV



13.3 SLE rara/SLD

- Spostamento laterale, momento flettente, taglio lungo i pali

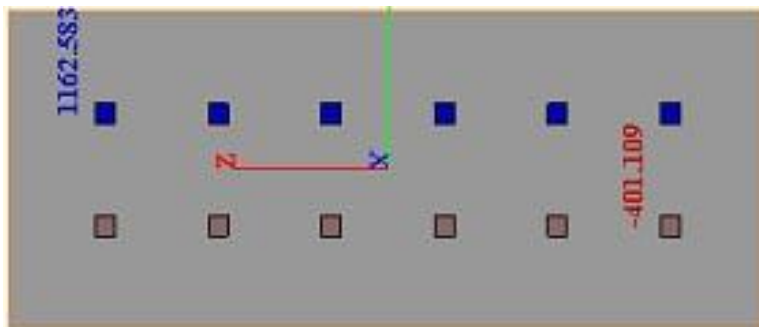


Figura 13-7: Andamento dello spostamento laterale, del momento flettente e del taglio lungo il palo – Inviluppo SLE rara/SLD

- Massimi cedimenti

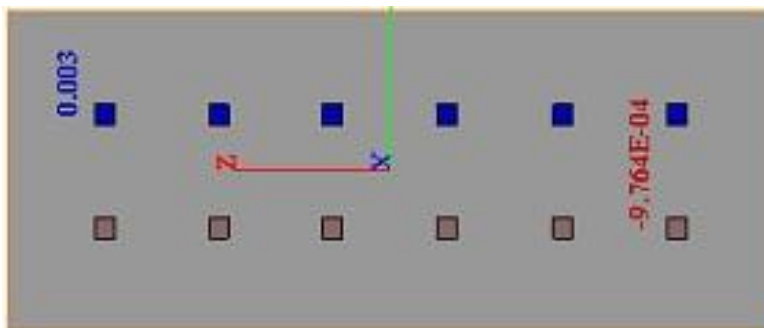


Figura 13-8: Massimi cedimenti in testa ai pali – Inviluppo SLE rara/SLD

- Minimi cedimenti

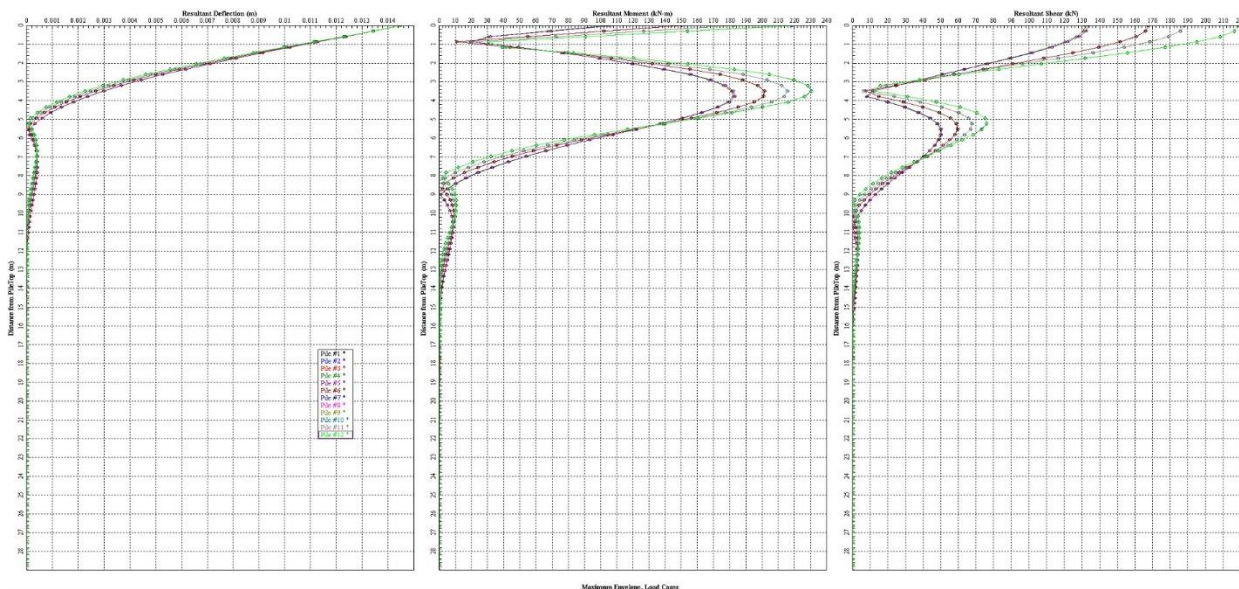


Figura 13-9: Minimi cedimenti in testa ai pali – Inviluppo SLE rara/SLD



13.4 SLE frequente

- Spostamento laterale, momento flettente, taglio lungo i pali

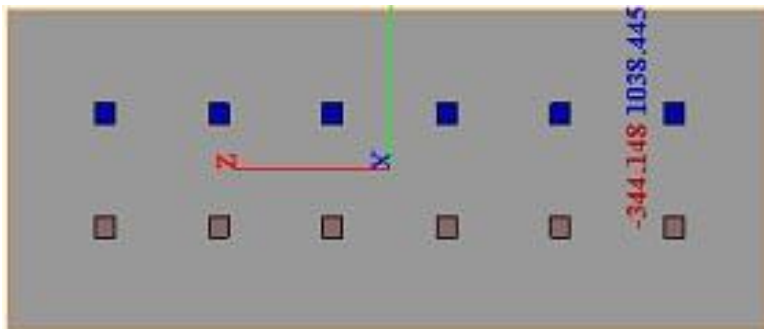


Figura 13-10: Andamento dello spostamento laterale, del momento flettente e del taglio lungo il palo – Involuppo SLE frequente

- Massimi cedimenti

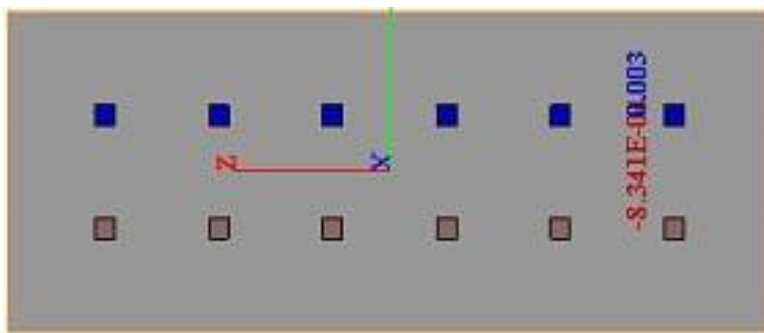


Figura 13-11: Massimi cedimenti in testa ai pali – Involuppo SLE frequente

- Minimi cedimenti

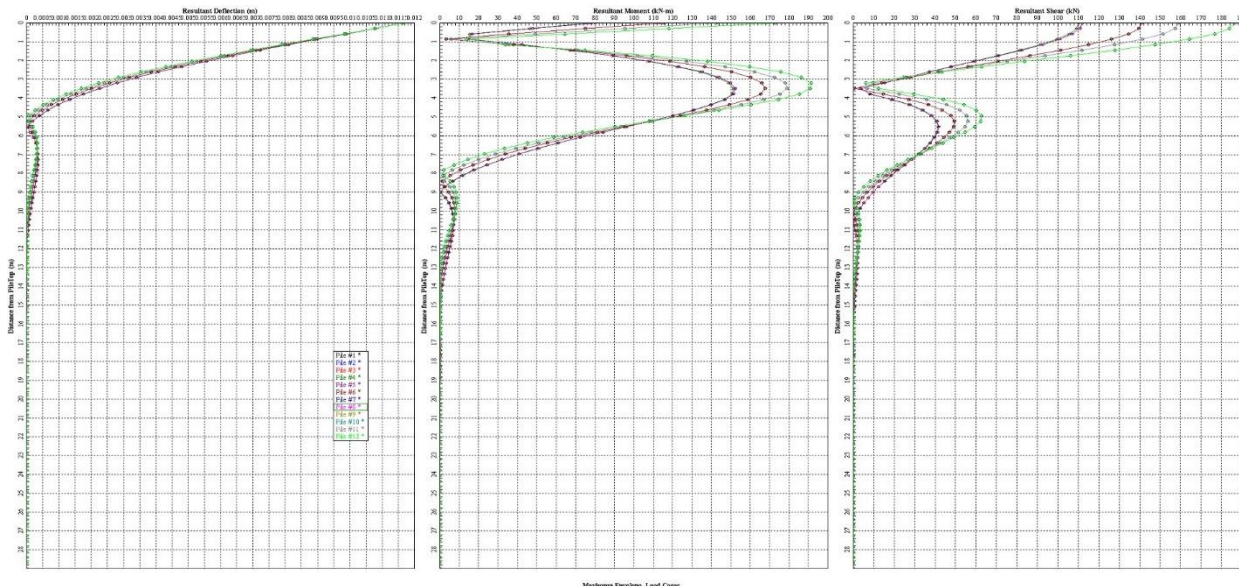


Figura 13-12: Minimi cedimenti in testa ai pali – Involuppo SLE frequente



14. VERIFICHE DELLE FONDAZIONI PROFONDE

14.1 Verifica capacità portante dei pali

Di seguito sono presentate le verifiche di capacità portante a compressione e a trazione dei pali. Per il calcolo della capacità portante si è fatto riferimento a quanto presentato nel capitolo relativo ai criteri generali di verifica. Di seguito si riportano i coefficienti di progetto:

Fattori parziali e di riduzione (γ e ξ , validi sia per gli SLU che per gli SLV):

VALORI DI NORMATIVA				
Fattori xi		Fattori parziali	SLU	
Valori inseriti	Minimo	R3	γ_b	1.35
n° verticali	1		γ_s	1.15
ξ_3	1.7		γ_t	1.3
ξ_4	1.7		$\gamma_{s,t}$	1.25
Secondo NTC2018 (6.4.IV e Tab. 6.4.II)				

Tabella 14-1: Coefficienti riduttivi assunti nel calcolo della capacità portante dei pali

Dal momento che in tutte le condizioni di carico agli SLU e agli SLV il rapporto tra resistenza e azione di progetto è sempre maggiore dell'unità, la verifica a capacità portante risulta soddisfatta. Nel seguito si riportano quindi le valutazioni caso per caso.



14.1.1 SLU

14.1.1.A Compressione

- Carico di testa = 1560 kN
- Peso del palo = 50,7 kN
- Fattori di riduzione legati alla vicinanza dei pali a compressione:
 - Capacità di base: $\alpha_q = 0.79$
 - Capacità laterale: $\alpha_{\tau,eq} = 0.87$

AZIONE ASSIALE	RESISTENZA SINGOLO PALO				
	N_{ed}	$Q_{b,d}$	$Q_{s,d}$	Q_d	F_s
kN		kN	kN	kN	
1611	390	1446	1836	1.14	

Figura 14-1 – Verifica capacità portante (statica, compressione)

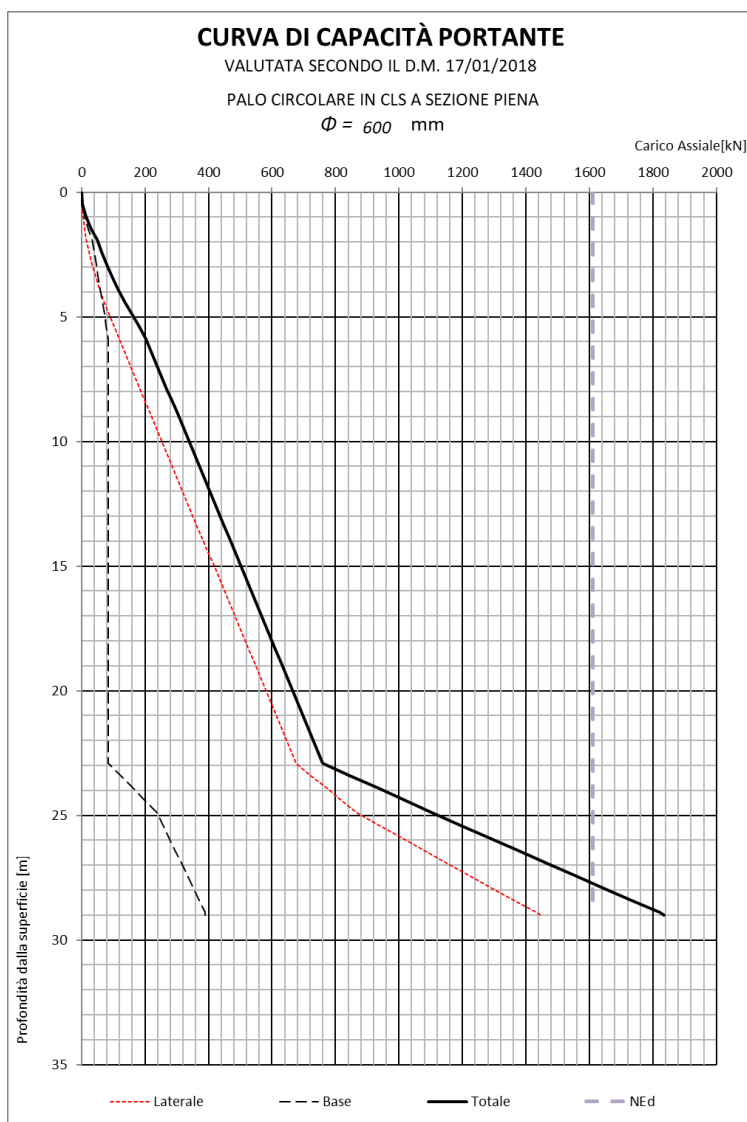


Figura 14-2 – Curva di capacità portante (statica, compressione)



14.1.1.B Trazione

- Carico di testa = -578 kN
- Peso del palo = 39 kN
- Fattori di riduzione legati alla vicinanza dei pali a compressione:
 - Capacità di base: $\alpha_q = 0.79$
 - Capacità laterale: $\alpha_{\tau,eq} = 0.72$

AZIONE ASSIALE	RESISTENZA SINGOLO PALO			
N_{ed}	$Q_{b,d}$	$Q_{s,d}$	Q_d	F_s
kN	kN	kN	kN	
-527	0	991	991	1.88

Figura 14-3 – Verifica capacità portante (statica, trazione)

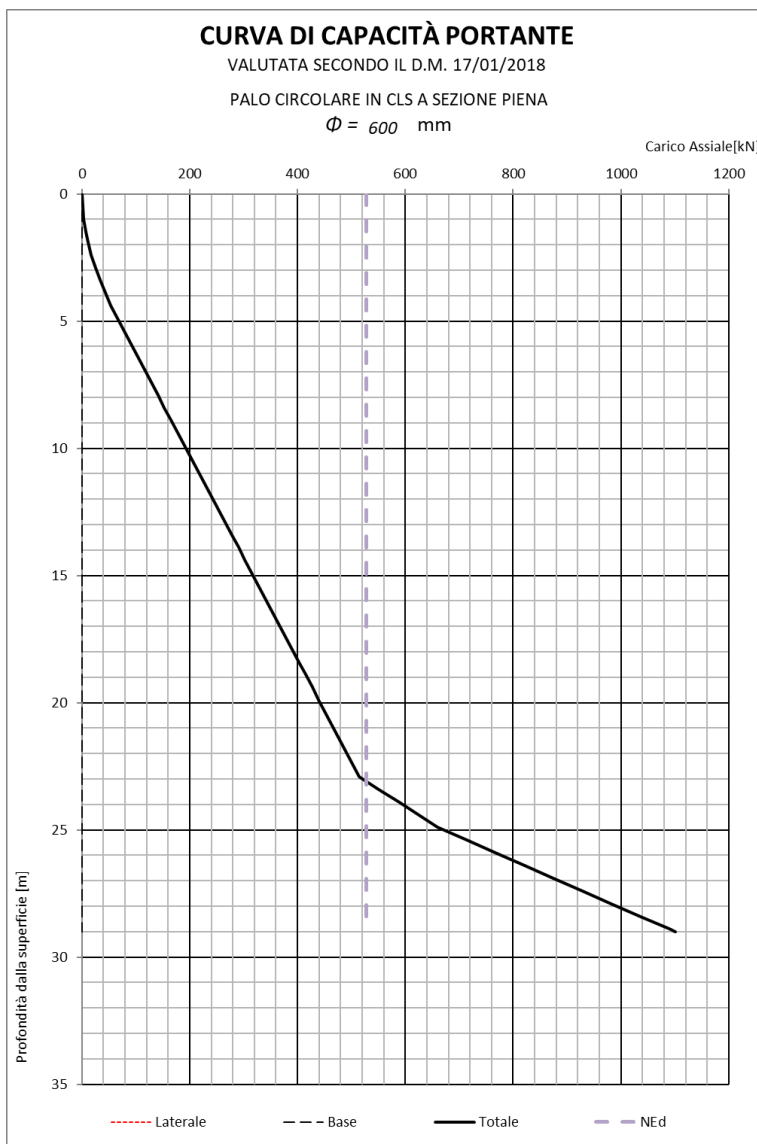


Figura 14-4 – Curva di capacità portante (statica, trazione)



14.1.2 SLV

14.1.2.A Compressione

- Carico di verifica = 1251 kN
- Peso del palo = 41 kN
- Fattori di riduzione legati alla vicinanza dei pali a compressione:
 - Capacità di base: $\alpha_q = 0.79$
 - Capacità laterale: $\alpha_{\tau,eq} = 0.87$

AZIONE ASSIALE	RESISTENZA SINGOLO PALO			
N_{ed}	$Q_{b,d}$	$Q_{s,d}$	Q_d	F_s
kN	kN	kN	kN	
1292	390	1446	1836	1.42

Figura 14-5 – Verifica capacità portante (sismica, compressione)

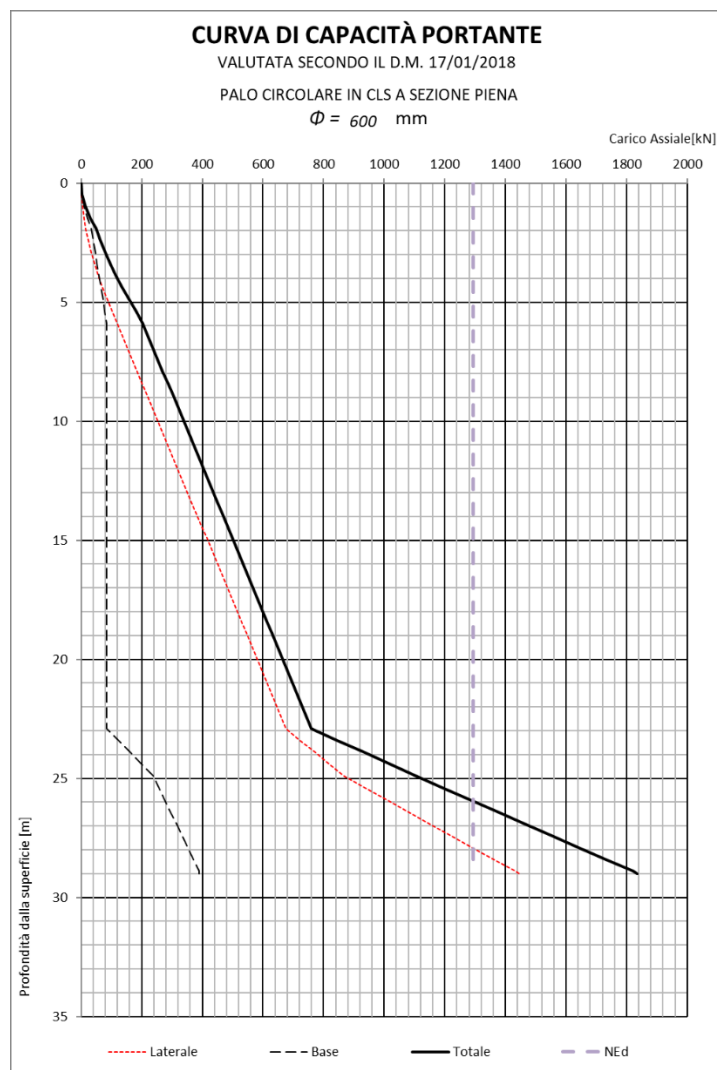


Figura 14-6 – Curva di capacità portante (sismica, compressione)



14.1.2.B Trazione

- Carico di verifica = -565 kN
- Peso del palo = 37 kN
- Fattori di riduzione legati alla vicinanza dei pali a compressione:
 - Capacità di base: $\alpha_q = 0.79$
 - Capacità laterale: $\alpha_{\tau,eq} = 0.72$

AZIONE ASSIALE	RESISTENZA SINGOLO PALO			
N_{ed}	$Q_{b,d}$	$Q_{s,d}$	Q_d	F_s
kN	kN	kN	kN	1.8
-528	0	991	991	

Figura 14-7 – Verifica capacità portante (sismica, trazione)

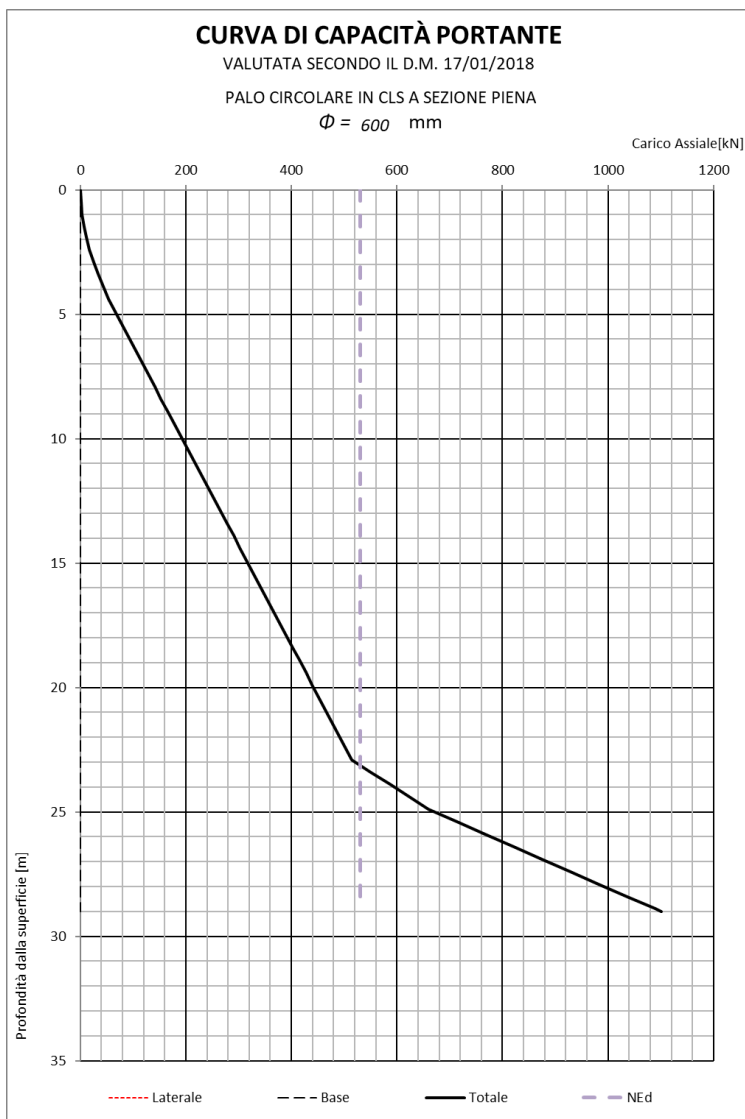


Figura 14-8 – Curva di capacità portante (sismica, trazione)



14.2 Verifiche strutturali

Di seguito si presentano le verifiche strutturali per i pali di fondazione. Al fine di ottimizzare le armaturem per le verifiche si considerano 2 zone di carico distinte:

- Entro i primi 9 m: massimi valori delle azioni;
- Oltre i 9 m: flessione e taglio modesti.

14.2.1 Primi 9 m

14.2.1.A Verifiche a flessione

$$M_{Ed} = 312 \text{ kNm}$$

$$A_S = 24\emptyset 18 = 6107 \text{ mm}^2$$

$$|M_{Rd}| = 451 \text{ kNm} > |M_{Ed}|$$

A favore di sicurezza, si trascura l'azione di compressione in testa al palo.

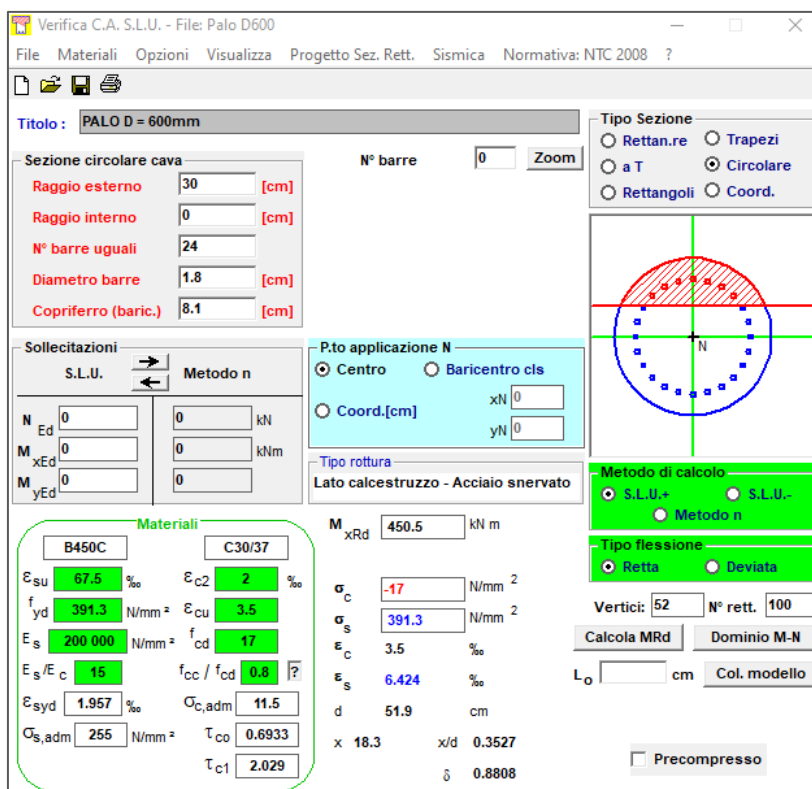


Figura 14-9 – Momento resistente pali



14.2.1.B Verifica della tensione media nelle zone dissipative

Secondo quanto riportato al Cap. 7.2.5 della normativa cogente è necessario verificare che la duttilità dell'opera di fondazione. Nel caso presente si assume che la struttura sia non dissipativa, pertanto si verifica che i pali rimangano in campo sostanzialmente elastico agli SLV.

Il palo più sollecitato è il palo 1 per la combinazione SLV 16 (massima trazione):

$$M_{Ed} = 153 \text{ kNm}$$

$$N_{Ed} = -540 \text{ kN}$$

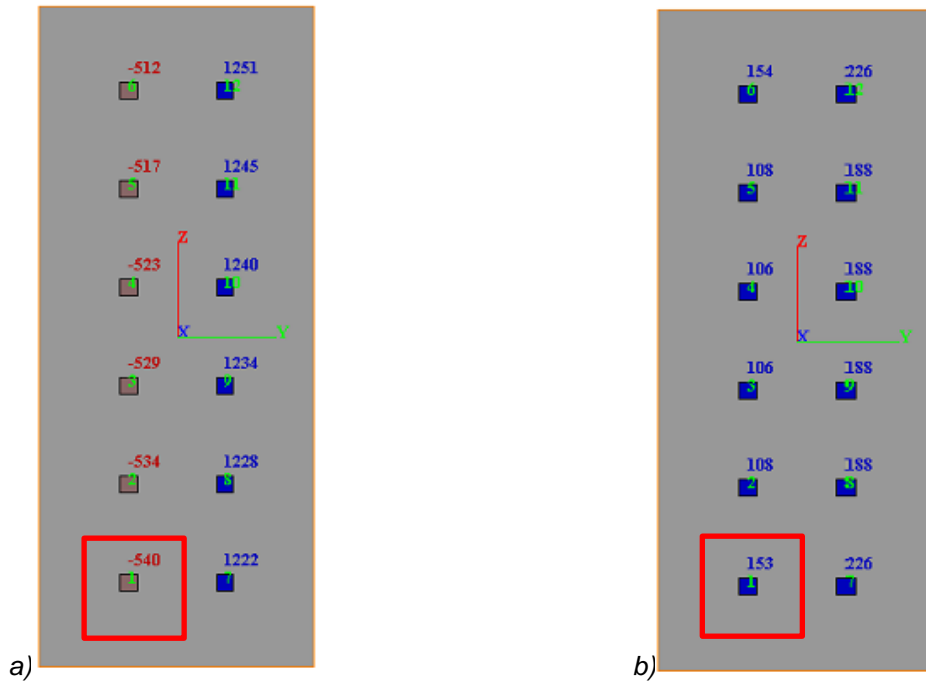


Figura 14-10: a) Azioni assiali e b) Momenti flettenti in testa ai pali nella combinazione SLV16

Come mostrato nella figura sottostante, il momento di snervamento è pari a circa 244 kNm. Il fattore di sicurezza vale:

$$F_s = \frac{R_d}{E_d} = \frac{244 \text{ kN}}{153 \text{ kN}} = 1.59 \geq 1$$

Pertanto la verifica è soddisfatta.



Verifica C.A. S.L.U. - File: Palo D600

File Materiali Opzioni Visualizza Progetto Sez. Rett. Sismica Normativa: NTC 2008 ?

Titolo : PALO D = 600mm

Sezione circolare cava

Raggio esterno 30 [cm]
 Raggio interno 0 [cm]
 N° barre uguali 24
 Diametro barre 1.8 [cm]
 Copriferro (baric.) 8.1 [cm]

N° barre 0 Zoom

Tipo Sezione
 Rettan.re Trapezi
 a T Circolare
 Rettangoli Coord.

Sollecitazioni
 S.L.U. Metodo n

N Ed 0 -540 kN
 M xEd 0 244 kNm
 M yEd 0 0

P.to applicazione N
 Centro Baricentro cls
 Coord.[cm] xN 0 yN 0

Metodo di calcolo
 S.L.U.+ S.L.U.-
 Metodo n

Materiali

B450C C30/37

ϵ_{su} 67.5 ‰ ϵ_{c2} 2 ‰
 f_{yd} 391.3 N/mm² ϵ_{cu} 3.5 ‰
 E_s 200 000 N/mm² f_{cd} 17
 E_s/E_c 15 f_{cc}/f_{cd} 0.8
 ϵ_{syd} 1.957 ‰ $\sigma_{c,adm}$ 11.5
 $\sigma_{s,adm}$ 255 N/mm² τ_{co} 0.6933
 τ_{c1} 2.029

σ_c -12.81 N/mm²
 σ_s 391.6 N/mm²

ϵ_s 1.958 ‰
 d 51.9 cm
 x 17.08 x/d 0.3291
 δ 0.8513

Vertici: 52
 Verifica
 N° iterazioni: 4
 Precompresso

Figura 14-11: Verifica della tensione media nelle zone dissipative

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14.2.1.C Verifica a taglio

$$V_{Ed,SLU} = 266 \text{ kN}$$

$$V_{Ed,SLV} = 229 \text{ kN}$$

$$A_{Sw} = \text{spirale } \phi 12 \text{ passo } 10 \text{ cm}$$

$$|V_{Rd}| = 350 \text{ kN} > |V_{Ed}|$$

Inoltre, secondo quanto riportato al Par. 7.2.5 delle NTC 2018, la capacità a taglio è superiore di 1,3 volte l'azione sollecitante:

$$F_s = \frac{V_{Rd}}{V_{Ed}} = \frac{350}{229} = 1,53 \geq 1,3$$

Per la valutazione del taglio resistente, la sezione viene assimilata ad una sezione rettangolare equivalente, tramite la formula di Clarke e Birjandi.



Sezione circolare (Clarke & Birjandi)

D	60	cm	diametro sezione
d'	8.1	cm	copriferro meccanico - rispetto al centro delle barre longitudinali
r	30	cm	raggio sezione
r _s	21.9	cm	raggio del cerchio passante per i centri delle armature longitudinali
senα	0.46		
α	0.48	RAD	
d	43.9	cm	altezza utile effettiva
A	2219.1	cm ²	area effettiva
b	50.5	cm	base effettiva

Tabella 14-12 – Calcolo della sezione rettangolare equivalente

VERIFICA A TAGLIO SECONDO D.M. 2018 ED EUROCODICE 2 (UNI EN 1992 1-1)					
Dati di input					
Rck		37	N/mm ²		
fck		31	N/mm ²		
Valore medio della resistenza a trazione	f _{ctm} =	2.9	N/mm ²	= 0.3 x fck ^(2/3)	
Coefficiente sicurezza cls	γ _c =	1.5			
Coefficiente carichi lunga durata	α _{cc} =	0.85			
fcd=resistenza di calcolo del cls	fcd =	17.40	N/mm ²	= α _{cc} x fck / γ _c	
Resistenza caratteristica di snervamento acciaio	f _{yk} =	450	N/mm ²		
Coefficiente sicurezza acciaio	γ _s =	1.15			
Snervamento di calcolo acciaio	f _{yd} =	391	N/mm ²	= f _{yk} / γ _s	
Forza di taglio di calcolo	V _{sd} =	266	kN		121.2
Forza assiale di calcolo	N _{sd} =	0	kN		
Larghezza sezione	b _w =	50.50	cm	=	505 mm
altezza della sezione	H =	54.10	cm	=	541 mm
Copriferro	c =	8.10	cm		
Diametro barre superiori	φ ₂ =	18	mm		(armatura compressa)
Diametro barre inferiori	φ ₁ =	18	mm		(armatura tesa)
Diametro staffe	φ _{st} =	12	mm		
Numero di barre superiori	N ₂ =	12			
Numero di barre inferiori	N ₁ =	12			
altezza utile della sezione	d =	43.9	cm	=	439 mm
Verifica delle bielle compresse: V_rcd					
V _r cd = [0.9 x d x b _w x α _c x f _{cd} x (cotgα + cotgθ)] / [1 + (cotgθ) ²]					
Definizione del coefficiente maggiorativo α _c					
	σ _{cp} <	0.00	=>	α _c =	1 membrane non compresse
	0.00 =< σ _{cp} <	4.35	=>	α _c =	1.00
	4.35 =< σ _{cp} <=	8.70	=>	α _c =	1.25
	8.70 < σ _{cp} <	17.40	=>	α _c =	2.50 membrane fortemente compresse
Essendo	σ _{cp} =	0.00	N/mm ²	si assume quindi	α _c = 1
Resistenza a compressione ridotta	f' _{cd} =	8.70	N/mm ²	= 0.5 x f _{cd}	
Angolo di inclinazione dell'armatura a taglio	α =	90	°	(45° per ferri piegati e 90° per staffe)	
	α =	1.57	rad		
Angolo di inclinazione dei puntoni compressi	θ =	45	°	(compreso tra 21.8° e 45°)	
	θ =	0.79	rad		
		V_rcd =	868.05	kN	OK - VERIFICA SODDISFATTA
Verifica dell'armatura a taglio: V_rsd					
V _r sd = 0.9 x d x (A _{sw} / s) x f _{yd} x (cotgα + cotgθ) x sinα					
Passo delle staffe	s =	10	cm		100 mm
Diametro staffe	φ _{st} =	12	mm		
Braccia resistenti	n =	2			
Area armatura a taglio	A _{sw} =	2.26	cm ²		226 mm ²
Percentuale minima di armatura	ρ _{w,min} =	0.0010		= 0.08 x (F _{ck} ^{0.5}) / F _{yk}	
Area minima di armatura a taglio	A _{w,min} =	49.75	mm ²	= ρ _{w,min} x s x B _w x senα (EC2-Par.9.2.2)	
		V_rsd =	349.71	kN	OK - VERIFICA SODDISFATTA

Tabella 14-2 – Verifica a taglio del palo



14.2.1.D Verifica delle tensioni in esercizio – SLE rara/SLD

Secondo quanto riportato al Capitolo 4.1.2.2.5 del D.M. 17/01/2018, alle combinazioni caratteristiche le massime azioni interne non devono eccedere i seguenti valori:

- $\sigma_{c,max} \leq 0.60 f_{ck} = 18 \text{ MPa}$
- $\sigma_{s,max} \leq 0.80 f_{yk} = 360 \text{ MPa}$

Le azioni utilizzate per la verifica sono quelle riferite al palo 1 ella combinazione SLD 11 (massima trazione)

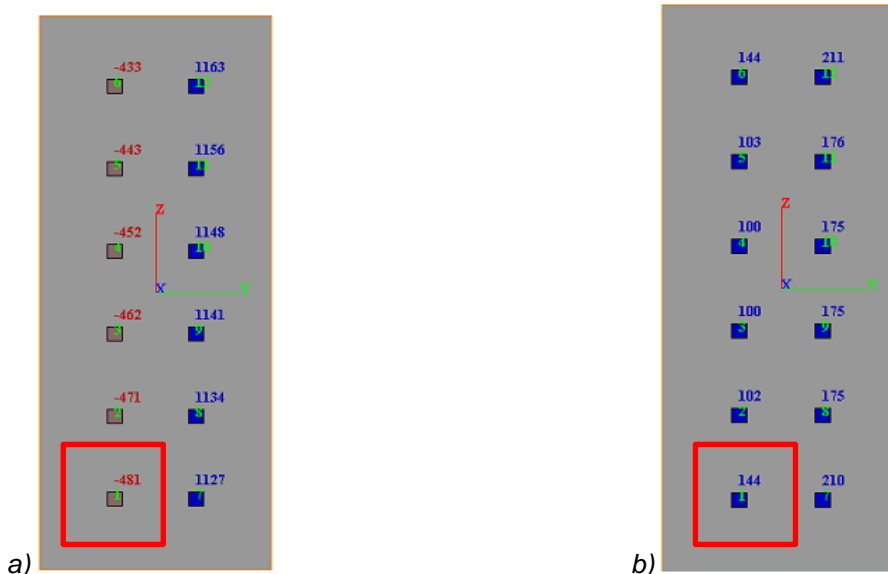


Figura 14-13: a) Azioni assiali e b) Momenti flettenti in testa ai pali nella combinazione SLD11

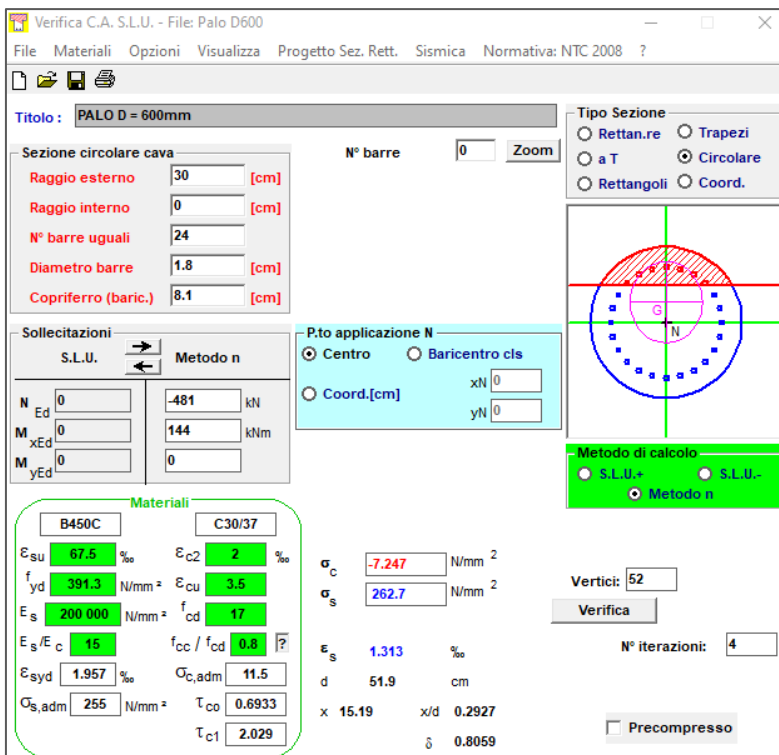


Figura 14-14: Paraghiaia – SLEr/SLD – Verifica delle tensioni di esercizio



Le tensioni agenti sono:

- $\sigma_{c,max} = 7,25 \text{ MPa} \leq 0.60 f_{ck} = 18 \text{ MPa}$
- $\sigma_{s,max} = 263 \text{ MPa} \leq 0.80 f_{yk} = 360 \text{ MPa}$

Pertanto la verifica è soddisfatta.

Inoltre, poiché la massima tensione di compressione nel calcestruzzo è inferiore anche ai limiti imposti per la combinazione quasi permanente ($0.45 f_{ck} = 13,5 \text{ MPa}$), si ritiene anche quest'ultima verifica soddisfatta.



14.2.1.E Verifica allo Stato Limite di Fessurazione – SLE frequente

Le azioni utilizzate per la verifica sono quelle riferite al palo 1 e alla combinazione SLEf 11 (massima trazione)

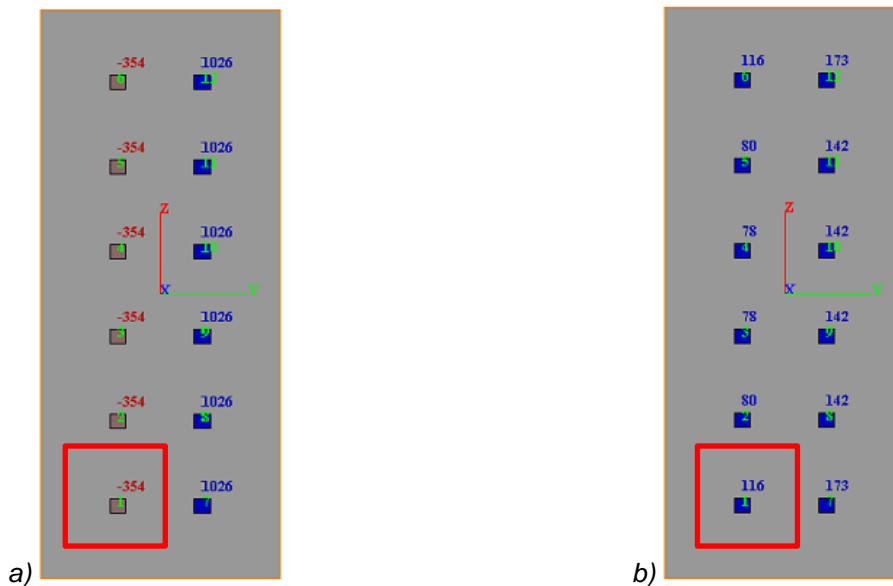


Figura 14-15: a) Azioni assiali e b) Momenti flettenti in testa ai pali nella combinazione SLEf11

$\sigma_s = 205,1 \text{ MPa}$

$w = 0,229 \text{ mm} \leq 0,3 \text{ mm}$

Figura 14-16 – Calcolo delle tensioni in esercizio sul palo – SLE frequente



Dati	<u>Verifica fessurazione sezione circolare</u> <u>CIRCOLARE 2/02/2009 N°617 Par.C.4.1.2.2.4.6</u>	
	σ_s	205 N/mm ²
Rck	37.0 N/mm ²	Resistenza caratteristica cubica cls
ϕ_l	18 mm	Diametro barre longitudinali
ϕ_s	12 mm	Diametro staffe o spirale
n	24	Numero ferri longitudinali
c	60 mm	Ricoprimento del calcestruzzo
D	600 mm	Diametro
k_t	0.4	$k_t=0,6 ; 0,4$ carichi breve durata/lunga durata
k_2	0.5	$k_2=0,5 ; 1,0$ caso flessione/trazione semplice
k_1	0.8	$k_1=0,8 ; 1,6$ barre aderenza migliorata/lisce
w	0.3 mm	Valore limite apertura fessure
Dati		
fck	30.7 N/mm ²	Resistenza caratteristica cilindrica cls
i	57 mm	Interasse ferri longitudinali
A_ϕ	254 mm ²	Area barra longitudinale
E_s	210000.0 N/mm ²	Modulo elastico acciaio da c.a
f_{ctm}	2.9 N/mm ²	Resistenza a trazione media cls
E_{cm}	33019.4 N/mm ²	Modulo elastico medio cls
α_e	6.36	Rapporto E_s/E_{cm}
f_{cm}	38.7 N/mm ²	Resistenza media cls
ρ_{eff}	0.0322	Rapporto area acciaio/area efficace
ϵ_{sm1}	0.000766	Deformazione unitaria media barre di calcolo
ϵ_{sm2}	0.000586	Deformazione unitaria media barre valore minimo
ϵ_{sm}	0.000766	Deformazione unitaria media
k_3	3.4	Coefficiente
k_4	0.4	Coefficiente
Δs_{max}	299.1 mm	Distanza massima tra le fessure
w_d	✓ 0.229 mm	Valore di calcolo apertura fessure

Figura 14-17 – Verifica a fessurazione del palo – SLE frequente



14.2.2 Oltre 9 m

14.2.2.A Verifiche a flessione

$$M_{Ed} = 15 \text{ kNm}$$

$$A_S = 12\emptyset 18 = 3054 \text{ mm}^2$$

$$|M_{Rd}| = 251 \text{ kNm} > |M_{Ed}|$$

A favore di sicurezza, si trascura l'azione di compressione in testa al palo.

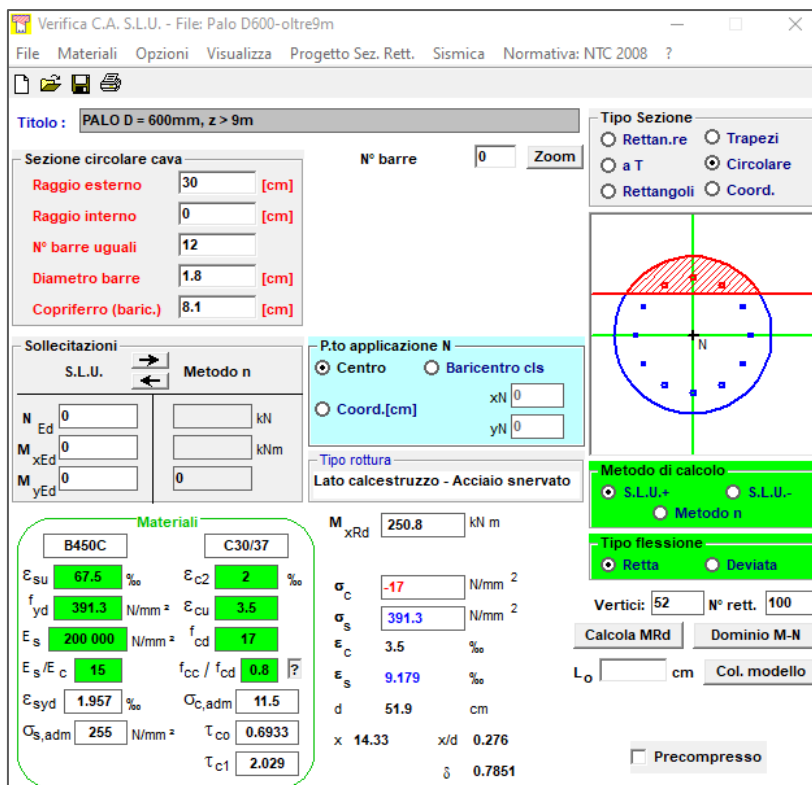


Figura 14-18 – Momento resistente pali



14.2.2.B Verifica della tensione media nelle zone dissipative

Secondo quanto riportato al Cap. 7.2.5 della normativa cogente è necessario verificare che la duttilità dell'opera di fondazione. Nel caso presente si assume che la struttura sia non dissipativa, pertanto si verifica che i pali rimangano in campo sostanzialmente elastico agli SLV.

Il palo più sollecitato è il palo 1 per la combinazione SLV 16 (massima trazione). Inoltre, si assume cautelativamente che l'azione assiale sia interamente trasmessa nel palo:

$$M_{Ed} = 16 \text{ kNm}$$

$$N_{Ed} = -540 \text{ kN}$$

Come mostrato nella figura sottostante, la sezione è interamente tesa, e la tensione nell'acciaio è inferiore a quella di snervamento. Il fattore di sicurezza, calcolato come il rapporto tra la massima tensione agente e quella a snervamento dell'acciaio, vale:

$$F_s = \frac{f_{yd}}{f_{Ed}} = \frac{391 \text{ kN}}{224 \text{ kN}} = 1.75 \geq 1$$

Pertanto la verifica è soddisfatta.

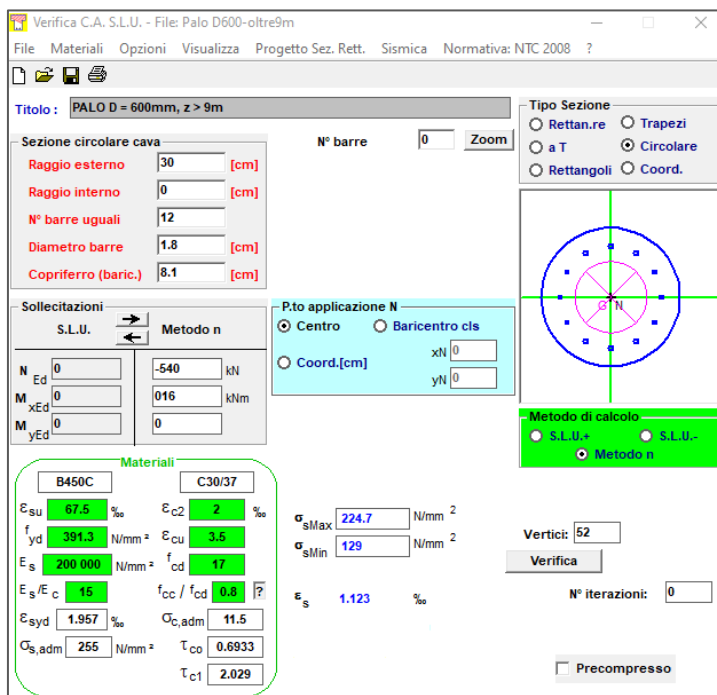


Figura 14-19: Verifica della tensione media nelle zone dissipative



14.2.2.C Verifica a taglio

$$V_{Ed} = 6 \text{ kN}$$

$A_{Sw} =$ minimo da normativa (Par. 4.1.6.1.1 NTC 2018)

$$|V_{Rd}| = 123 \text{ kN} > |V_{Ed}|$$

Inoltre, secondo quanto riportato al Par. 7.2.5 delle NTC 2018, la capacità a taglio è superiore di 1,3 volte l'azione sollecitante:

$$F_S = \frac{V_{Rd}}{V_{Ed}} = \frac{123}{6} = 20,5 \geq 1,3$$

Per la valutazione del taglio resistente, la sezione viene assimilata ad una sezione rettangolare equivalente, tramite la formula di Clarke e Birjandi.

Sezione circolare (Clarke & Birjandi)			
D	60	cm	diametro sezione
d'	8.1	cm	copriferro meccanico - rispetto al centro delle barre longitudinali
r	30	cm	raggio sezione
r _s	21.9	cm	raggio del cerchio passante per i centri delle armature longitudinali
senα	0.46		
α	0.48	RAD	
d	43.9	cm	altezza utile effettiva
A	2219.1	cm ²	area effettiva
b	50.5	cm	base effettiva

Tabella 14-20 – Calcolo della sezione rettangolare equivalente

VERIFICA A TAGLIO SECONDO D.M. 2018 ED EUROCODICE 2 (UNI EN 1992 1-1)			
Dati di input			
Rck		37	N/mm ²
fck		31	N/mm ²
Valore medio della resistenza a trazione	f _{ctm} =	2.9	N/mm ² = 0.3 x fck ^(2/3)
Coefficiente sicurezza cls	γ _c =	1.5	
Coefficiente carichi lunga durata	α _{cc} =	0.85	
fcd=resistenza di calcolo del cls	fcd =	17.40	N/mm ² = α _{cc} x fck / γ _c
Resistenza caratteristica di snervamento acciaio	f _{yk} =	450	N/mm ²
Coefficiente sicurezza acciaio	γ _s =	1.15	
Snervamento di calcolo acciaio	f _{yd} =	391	N/mm ² = f _{yd} / γ _s
Forza di taglio di calcolo	V _{sd} =	6	kN
Forza assiale di calcolo	N _{sd} =	0	kN
Larghezza sezione	b _w =	50.50	cm = 505 mm
altezza della sezione	H =	54.10	cm = 541 mm
Copriferro	c =	8.10	cm
Diametro barre superiori	φ ₂ =	18	mm (armatura compressa)
Diametro barre inferiori	φ ₁ =	18	mm (armatura tesa)
Diametro staffe	φ _{st} =	12	mm
Numero di barre superiori	N ₂ =	6	
Numero di barre inferiori	N ₁ =	6	
altezza utile della sezione	d =	43.9	cm = 439 mm
Resistenza di calcolo dell'elemento senza armatura a taglio: Vrd1 (rif. cap. 4.1.2.1.3.1 del D.M. 2008)			
Vrd1 = { [0.18 x k x (100 x ρ _l x fck) ^(1/3) / γ _c] + 0.15 x σ _{cp} } x (b _w x d)			
con Vrd1 >= Vrd1min = { Vmin + 0.15 x σ _{cp} } x (b _w x d)			
K = 1+ (200 / d) ^{0.5} < 2.00	K =	1.67	
Vmin = 0.035 x K ^{1.5} x fck ^{0.5}	Vmin =	0.42	N/mm ²
ρ _l = A _{s1} / (b _w d) ≤ 0.02			
A _{s1} = area delle armature di trazione che si estendono non meno di d + l _{bet} oltre la sezione considerata	A _{s1} =	15.27	cm ² = 1526.814 mm ²
	ρ _l =	0.0069	
σ _{cp} = -N _{sd} / A _c ≤ 0.2 fcd	σ _{cp} =	0.00	N/mm ²
	Vrd1 =	123	kN
	Vrdmin =	93	kN
	Vrd1 =	123.23	kN
OK - VERIFICA SODDISFATTA			

Tabella 14-3 – Verifica a taglio del palo



14.2.2.D Verifica delle tensioni in esercizio – SLE rara/SLD

Secondo quanto riportato al Capitolo 4.1.2.2.5 del D.M. 17/01/2018, alle combinazioni caratteristiche le massime azioni interne non devono eccedere i seguenti valori:

- $\sigma_{c,max} \leq 0.60 f_{ck} = 18 \text{ MPa}$
- $\sigma_{s,max} \leq 0.80 f_{yk} = 360 \text{ MPa}$

Le azioni utilizzate per la verifica sono quelle riferite al palo 1 ella combinazione SLD 11 (massima trazione):

$M_{Ed} = 11 \text{ kNm}$

$N_{Ed} = -481 \text{ kN}$

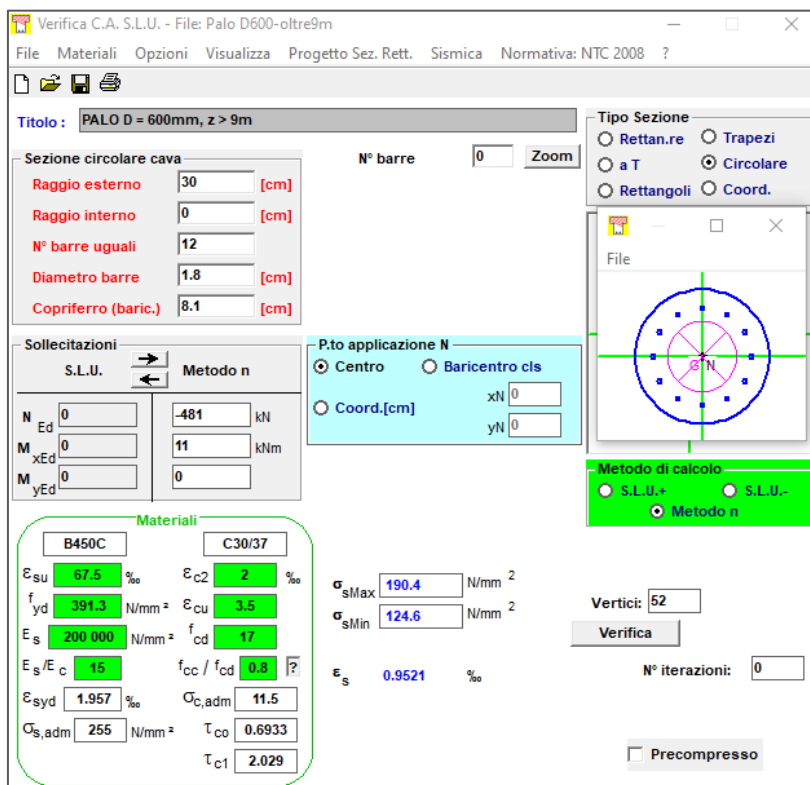


Figura 14-21: Paraghiaia – SLEr/SLD – Verifica delle tensioni di esercizio

La tensione è interamente tesa

Le tensioni agenti sono:

- $\sigma_{s,max} = 190 \text{ MPa} \leq 0.80 f_{yk} = 360 \text{ MPa}$

Pertanto la verifica è soddisfatta.



14.2.2.E Verifica a fessurazione – SLE frequente

Le azioni utilizzate per la verifica sono quelle riferite al palo 1 ella combinazione SLEf 11 (massima trazione)

$$M_{Ed} = 9 \text{ kNm}$$

$$N_{Ed} = -354 \text{ kN}$$

$$\sigma_s = 143 \text{ MPa}$$

$$w = 0,161 \text{ mm} \leq 0,3 \text{ mm}$$

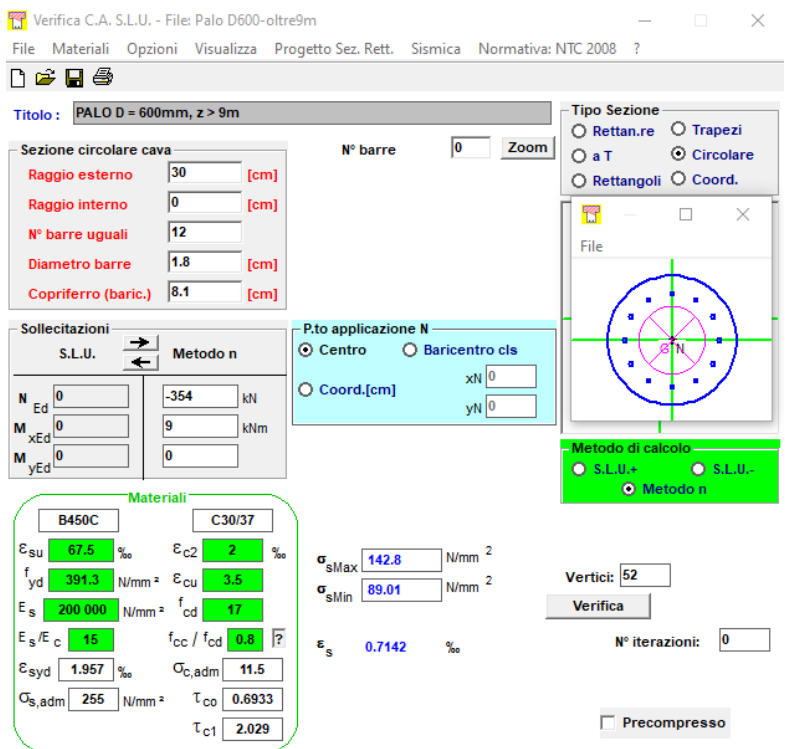


Figura 14-22 – Calcolo delle tensioni in esercizio sul palo – SLE frequente

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Verifica fessurazione sezione circolare CIRCOLARE 2/02/2009 N°617 Par.C.4.1.2.2.4.6		
σ_s	143 N/mm ²	Tensione massima armatura tesa sezione fessurata
R _{ck}	37.0 N/mm ²	Resistenza caratteristica cubica cls
ϕ_l	18 mm	Diametro barre longitudinali
ϕ_s	12 mm	Diametro staffe o spirale
n	12	Numero ferri longitudinali
c	60 mm	Ricoprimento del calcestruzzo
D	600 mm	Diametro
k _t	0.4	k _t =0,6 ;0,4 carichi breve durata/lunga durata
k ₂	0.5	k ₂ =0,5 ;1,0 caso flessione/trazione semplice
k ₁	0.8	k ₁ =0,8 ;1,6 barre aderenza migliorata/lisce
w	0.3 mm	Valore limite apertura fessure
Dati		
f _{ck}	30.7 N/mm ²	Resistenza caratteristica cilindrica cls
i	115 mm	Interasse ferri longitudinali
A _{sp}	254 mm ²	Area barra longitudinale
E _s	210000.0 N/mm ²	Modulo elastico acciaio da c.a
f _{ctm}	2.9 N/mm ²	Resistenza a trazione media cls
E _{cm}	33019.4 N/mm ²	Modulo elastico medio cls
α_e	6.36	Rapporto E _s /E _{cm}
f _{cm}	38.7 N/mm ²	Resistenza media cls
ρ_{eff}	0.0161	Rapporto area acciaio/area efficace
ϵ_{sm1}	0.000297	Deformazione unitaria media barre di calcolo
ϵ_{sm2}	0.000409	Deformazione unitaria media barre valore minimo
ϵ_{sm}	0.000409	Deformazione unitaria media
k ₃	3.4	Coefficiente
k ₄	0.4	Coefficiente
Δs_{max}	394.3 mm	Distanza massima tra le fessure
w _d	✓ 0.161 mm	Valore di calcolo apertura fessure

Figura 14-23 – Verifica a fessurazione del palo – SLE frequente

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14.3 Verifica degli spostamenti

A seguito di quanto mostrato nei capitoli precedenti si possono riassumere gli spostamenti della platea di fondazione nelle seguenti tabelle:

- Spigolo più compresso (involuppo massimo):

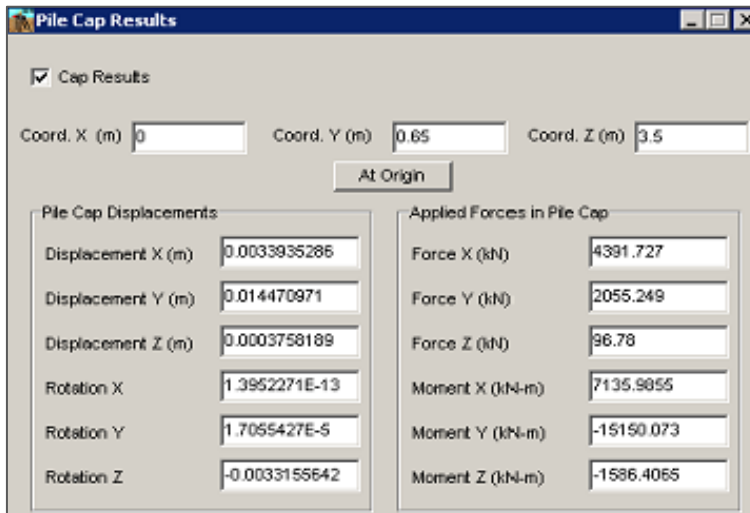


Figura 14-24: Spostamenti e rotazioni dello spigolo più compresso (SLer - Inviluppo massimo)

- Spigolo più teso (involuppo minimo):

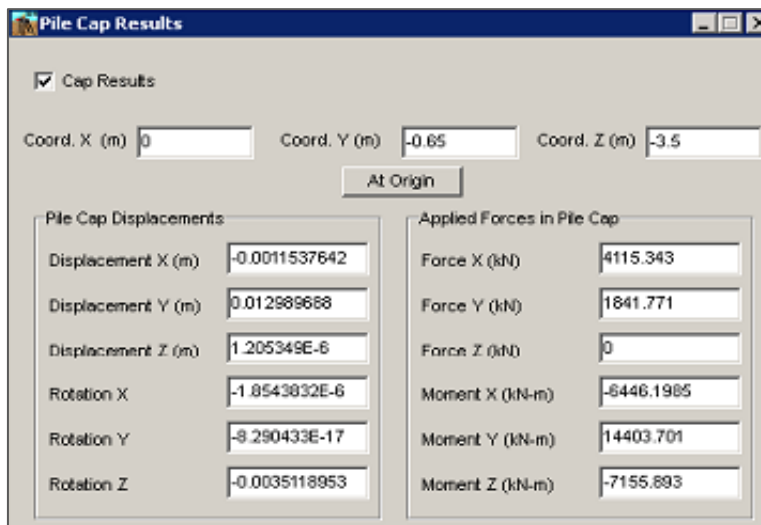


Figura 14-25: Spostamenti e rotazioni dello spigolo più teso (SLer - Inviluppo minimo)



- Centro (involuppo massimo):

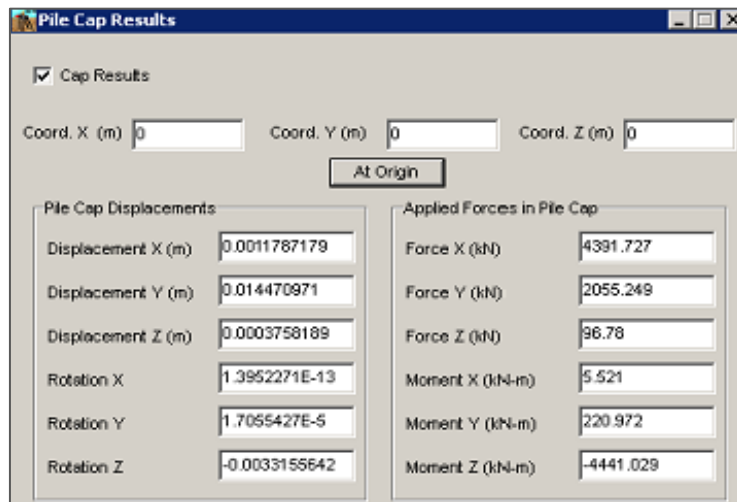


Figura 14-26: Spostamenti e rotazioni del centro della fondazione (SLER - Involuppo massimo)

Riferendosi al centro della fondazione, si può affermare che il cedimento medio è di 1.1 mm.

Riferendosi ai nodi più sollecitati, si può affermare che il cedimento differenziale massimo tra gli spigoli della fondazione vale:

$$\delta_{diff} = 3,4 \text{ mm} - 1,1 \text{ mm} = 4,5 \text{ mm}$$

Le rotazioni nel centro della fondazione sono pari a:

$$\text{Torsionale: } \Delta\alpha_x \approx 0^\circ$$

$$\text{Flessione trasversale all'asse della fondazione: } \Delta\alpha_y \approx 0^\circ$$

$$\text{Flessione longitudinale all'asse della fondazione: } \Delta\alpha_z = 0.003^\circ$$

I valori si ritengono compatibili con l'esercizio dell'opera e comunque tali da garantire l'operabilità della struttura in elevazione.



15. VERIFICA DEGLI ELEMENTI DELLA SPALLA

15.1 Verifica del paraghiaia

Il paraghiaia viene calcolato per unità di lunghezza, considerando agenti i pesi propri, il sovraccarico stradale a monte della parete, la spinta del terreno, le spinte sismiche, le forze di inerzia e l'azione di frenamento.

Vista la geometria a mensola della struttura e la natura dei carichi applicati, le verifiche sono condotte alla sezione di incastro tra il paraghiaia e il muro a spessore maggiore.

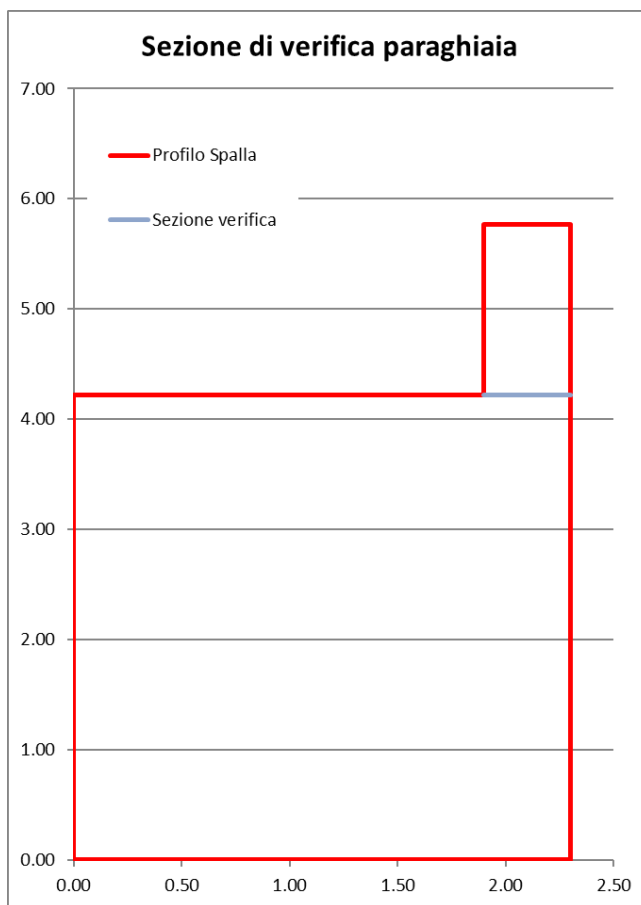


Figura 15-1 – Sezione di verifica paraghiaia

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15.1.1 Azioni di progetto

Nelle tabelle seguenti sono riportate le azioni agenti sul paraghiaia e le reazioni da esse causate alla base dell'elemento. Queste reazioni sono mostrate in forma caratteristica, prima di essere combinate secondo i coefficienti parziali.

CALCOLO SPINTE TERRENO			
Angolo attrito interno di progetto	φ_d	28.00 °	0.49 rad
Inclinazione muro a monte	β	0.00 °	0.00 rad
Angolo attrito terreno-muro	δ	18.67 °	0.33 rad
Inclinazione terreno a monte	i_m	0.00 °	0.00 rad
Coefficiente di spinta a riposo	K_0	0.53	
Coefficiente di spinta attiva	K_A	0.32	
$k_h + k_v$ negativo (spinta sismica verso l'alto)			
Inclinazione della risultante della forza peso e delle forze di inerzia agenti sul cuneo	θ	2.70 °	0.05 rad
Coefficiente di spinta attiva sismica	K_{AE}	0.35	Mononobe-Okabe
Delta spinta sismica	ΔK_{AE}	0.024	
Angolo del cuneo sismico	α_{AE}	69.67 °	1.22 rad
	C_{IE}	1.50	
	C_{ZE}	2.01	
$k_h + k_v$ positivo (spinta sismica verso il basso)			
Inclinazione della risultante della forza peso e delle forze di inerzia agenti sul cuneo	θ	2.57 °	0.04 rad
Coefficiente di spinta attiva sismica	K_{AE}	0.35	Mononobe-Okabe
Delta spinta sismica	ΔK_{AE}	0.038	
Angolo del cuneo sismico	α_{AE}	69.93 °	1.22 rad
	C_{IE}	1.49	
	C_{ZE}	2.00	

Tabella 15-1 – Coefficienti di spinta terreno

PARAMETRI GEOMETRICI			Contributi al piede del paraghiaia							
Altezza paraghiaia	$h1+h7$	1.55 m								
Altezza muro	$h2$	0.00 m								
Altezza platea fondazione	$h3$	4.22 m								
Altezza complessiva	h	1.55 m								
Posizione incastro	x_i	2.1001 m								
	y_i	4.22 m								
Posizione appoggio	x_s	0.60 m								
	y_s	4.22 m								
CARICHI STATICI			x [m]	y [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]	
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	0.00	0.00	
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00	
Peso proprio platea	G1c	0.00 kN/m	1.15	2.11	90.00	0.00	0.00	0.00	0.00	
Peso terreno piede muro	G1t	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00	
Spinta a riposo	S0	11.79 kN/m	2.30	4.74	18.67	3.77	11.17	-5.02	0.00	
Sovrappinta pavimentazione	S ₀₂	3.29 kN/m	2.30	5.00	18.67	1.05	3.12	-2.20	0.00	
Sovrappinta traffico	S ₀₁	16.45 kN/m	2.30	5.00	18.67	5.26	15.58	-11.02	0.00	
Impronta su paraghiaia	Fr ₁	102.04 kN/m	2.10	5.77	90.00	102.04	0.00	0.00	0.00	
Frenamento Orizzontale	Fr ₂	61.22 kN/m	2.10	5.77	0.00	0.00	61.22	-94.90	0.00	

Tabella 15-2 – Dati geometrici e carichi statici Paraghiaia (SLU)



CARICHI SISMICI k_v negativo (alto)			x [m]	y [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	0.00	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	0.00 kN/m	1.15	2.11	90.00	0.00	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia paraghiaia orizzontale	G1a _{oh}	0.71 kN/m	2.10	5.00	0.00	0.00	0.71	-0.55	0.00
Inerzia paraghiaia verticale	G1a _{ov}	-0.36 kN/m	2.10	5.00	90.00	-0.36	0.00	0.00	0.00
Inerzia muro orizzontale	G1b _{oh}	0.00 kN/m	0.92	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia muro verticale	G1b _{ov}	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia platea orizzontale	G1c _{oh}	0.00 kN/m	1.15	2.11	0.00	0.00	0.00	0.00	0.00
Inerzia platea verticale	G1c _{ov}	0.00 kN/m	1.15	2.11	90.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro orizzontale	G1t _{oh}	0.00 kN/m	2.30	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro verticale	G1t _{ov}	0.00 kN/m	2.30	4.22	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	11.79 kN/m	2.30	4.74	18.67	3.77	11.17	-5.02	0.00
Delta Spinta sismica (Wood)	ΔS	4.67 kN/m	2.30	5.00	18.67	1.49	4.42	-3.13	0.00
Sovraspinta pavimentazione	S _{G2}	2.14 kN/m	2.30	5.00	18.67	0.68	2.03	-1.43	0.00
Sovraspinta traffico	S _{a1}	2.14 kN/m	2.30	5.00	18.67	0.68	2.03	-1.43	0.00
Impronta su paraghiaia	Fr ₁	20.41 kN/m	2.10	5.77	90.00	20.41	0.00	0.00	0.00
Inerzia impronta orizzontale	Fr _{1oh}	0.94 kN/m	2.10	5.77	0.00	0.00	0.94	-1.46	0.00
Inerzia impronta verticale	Fr _{1ov}	-0.47 kN/m	2.10	5.77	90.00	-0.47	0.00	0.00	0.00
Frenamento Orizzontale	Fr ₂	12.24 kN/m	2.10	5.77	0.00	0.00	12.24	-18.98	0.00
Inerzia direzione Y	I _y	0.00 kN/m	1.21	2.28		0.00	0.00	0.00	0.00
CARICHI SISMICI k_v positivo (basso)			x [m]	y [m]	angolo [°]	N [kN/m]	T [kN/m]	M [kNm/m]	Fy [kN/m]
Peso proprio paraghiaia	G1a	15.50 kN/m	2.10	5.00	90.00	15.50	0.00	0.00	0.00
Peso proprio muro	G1b	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Peso proprio platea	G1c	0.00 kN/m	1.15	2.11	90.00	0.00	0.00	0.00	0.00
Peso terreno piede muro	G1t	0.00 kN/m	2.30	5.00	90.00	0.00	0.00	0.00	0.00
Inerzia paraghiaia orizzontale	G1a _{oh}	0.71 kN/m	2.10	5.00	0.00	0.00	0.71	-0.55	0.00
Inerzia paraghiaia verticale	G1a _{ov}	0.36 kN/m	2.10	5.00	90.00	0.36	0.00	0.00	0.00
Inerzia muro orizzontale	G1b _{oh}	0.00 kN/m	0.92	4.22	0.00	0.00	0.00	0.00	0.00
Inerzia muro verticale	G1b _{ov}	0.00 kN/m	0.92	4.22	90.00	0.00	0.00	0.00	0.00
Inerzia platea orizzontale	G1c _{oh}	0.00 kN/m	1.15	2.11	0.00	0.00	0.00	0.00	0.00
Inerzia platea verticale	G1c _{ov}	0.00 kN/m	1.15	2.11	90.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro orizzontale	G1t _{oh}	0.00 kN/m	2.30	5.00	0.00	0.00	0.00	0.00	0.00
Inerzia terreno piede muro verticale	G1t _{ov}	0.00 kN/m	2.30	5.00	90.00	0.00	0.00	0.00	0.00
Spinta a riposo	S0	11.79 kN/m	2.30	4.74	18.67	3.77	11.17	-5.02	0.00
Delta Spinta sismica (Wood)	ΔS	4.67 kN/m	2.30	5.00	18.67	1.49	4.42	-3.13	0.00
Sovraspinta pavimentazione	S _{G2}	2.23 kN/m	2.30	5.00	18.67	0.71	2.11	-1.49	0.00
Sovraspinta traffico	S _{a1}	2.23 kN/m	2.30	5.00	18.67	0.71	2.11	-1.49	0.00
Impronta su paraghiaia	Fr ₁	20.41 kN/m	2.10	5.77	90.00	20.41	0.00	0.00	0.00
Inerzia Impronta orizzontale	Fr _{1oh}	0.94 kN/m	2.10	5.77	0.00	0.00	0.94	-1.46	0.00
Inerzia impronta verticale	Fr _{1ov}	0.47 kN/m	2.10	5.77	90.00	0.47	0.00	0.00	0.00
Frenamento Orizzontale	Fr ₂	12.24 kN/m	2.10	5.77	0.00	0.00	12.24	-18.98	0.00
Inerzia direzione Y	I _y	0.00 kN/m	0.00	0.00		0.00	0.00	0.00	0.00

Tabella 15-3 – Carichi sismici Paraghiaia (SLV)

15.1.2 Verifiche SLU/SLV

Le seguenti tabelle mostrano gli involuppi delle reazioni alla base del paraghiaia e il fattore di sicurezza (F_s , inteso come rapporto tra la resistenza e la sollecitazione) riferito al momento flettente e associato alla sezione di progetto. Come convenzioni si assume segno positivo per le azioni di taglio che agiscono verso valle e per i momenti flettenti che agiscono in senso antiorario.

INVILUPPO REAZIONI ALLA BASE SLU-SLV		valore	x [m]	y [m]	verso
Azione verticale	N [kN/m]	172.46 kN/m	2.10	4.22	+y
Azione orizzontale	T [kN/m]	123.44 kN/m			+x
Momento	M [kNm/m]	-15.01 kNm/m			orario
Azione verticale	N [kN/m]	34.71 kN/m	2.10	4.22	+y
Azione orizzontale	T [kN/m]	22.70 kN/m			+x
Momento	M [kNm/m]	-153.08 kNm/m			orario

Figura 15-2: Paraghiaia - Azioni massime agli SLU/SLV



15.1.2.A Verifica a flessione

In particolare, si ipotizzano 5 $\phi 20$ al metro su entrambi i lembi del paraghiaia che, come mostrato nella figura riportata di seguito, restituiscono un momento resistente di $M_{Rd} = 201$ kNm/m. Si nota come nella verifica si trascura, a favore di sicurezza, il contributo dovuto all'azione assiale N.

Figura 15-3 – Verifica paraghiaia agli SLU

VERIFICA MOMENTO FLETTENTE SEZIONE SIMMETRICA (GELFI)					
Altezza sezione	h	40.00	cm		
Base sezione	b	100	cm		
Copriferro	c	4	cm	numero	diametro
Acciaio superiore	A_{sup}	15.71	cmq	5	$\phi 20$ (armatura compressa)
Acciaio Inferiore	A_{inf}	15.71	cmq	5	$\phi 20$ (armatura tesa)
Azione di compressione	N_{Ed}	0	kN		$\phi 12$ (armatura ripartizione)
Momento flettente	M_{Rd}	201	kNm/m		
Fattore di sicurezza	FS	1.31			VERIFICA SODDISFATTA

Tabella 15-4 –Inviluppo reazioni SLU/SLV e Fattore di Sicurezza (Fs) momento flettente (paraghiaia)



15.1.2.B Verifica a taglio

Per quanto riguarda la verifica a taglio, le tabelle seguenti mostrano come la sezione sia verificata a taglio senza l'utilizzo di armatura specifica ($V_{Rd} = 170 \text{ kN} \geq V_{Ed}$).

VERIFICA A TAGLIO SECONDO NTC 2018 ED EUROCODICE 2 (UNI EN 1992 1-1)
 Note e convenzioni N > 0 → trazione

INPUT			
Fattore di confidenza	FC	1	
	R_{ck}	37 N/mm ²	
	f_{ck}	30 N/mm ²	
Valore medio della resistenza a trazione	f_{ctm}	2.9 N/mm ²	= 0.3 * $f_{ck}^{2/3}$
Coefficiente sicurezza cls	γ_c	1.5	
Coefficiente carichi lunga durata	α_{cc}	0.85	
Resistenza di calcolo del cls	f_{cd}	17.00 N/mm ²	= $\alpha_{cc} * f_{ck} / \gamma_c$
Resistenza caratteristica di snervamento acciaio	f_{yk}	450 N/mm ²	
Coefficiente sicurezza acciaio	γ_s	1.15	
Snervamento di calcolo acciaio	f_{yd}	391 N/mm ²	= f_{yk} / γ_s
Forza di taglio di calcolo	V_{sd}	123.4 kN	
Forza assiale di calcolo	N_{sd}	0.00 kN	
Larghezza sezione	b_w	100 cm	1000 mm
altezza della sezione	H	40 cm	400 mm
Copriferro	c	4 cm	
Diametro barre superiori	ϕ_2	20 mm	
Diametro barre inferiori	ϕ_1	20 mm	
Diametro staffe	ϕ_{st}	12 mm	
Numero di barre superiori	N_2	5	
Numero di barre inferiori	N_1	5	
altezza utile della sezione	d	32.6 cm	326 mm

RESISTENZA DI CALCOLO DELL'ELEMENTO SENZA ARMATURA A TAGLIO: V_{Rd} (rif. cap. 4.1.2.3.5.1)			
$V_{Rd} = \max\{[0.18 * k * (100 * \rho_1 * f_{ck})^{1/3} / \gamma_c + 0.15 * \sigma_{cp}] * b_w * d; [V_{min} + 0.15 * \sigma_{cp}] * b_w * d\}$			
$K = 1 + (200 / d)^{0.5} \leq 2.00$	K	1.78	
$V_{min} = 0.035 * K^{1.5} * f_{ck}^{0.5}$	V_{min}	0.46 N/mm ²	
A_{s1} =area delle armature di trazione che si estendono non meno di $d+l_{b,net}$ oltre la sezione considerata	A_{s1}	15.71 cm ²	1570.796 mm ²
$\rho_1 = A_{s1} / (b_w d) \leq 0.02$	ρ_1	0.0048	
$\sigma_{cp} = -N_{sd} / A_c \leq 0.2 f_{cd}$	σ_{cp}	0.0000 N/mm ²	
	V_{Rd1}	170 kN	
	V_{Rd2}	149 kN	
	V_{Rd}	169.94 kN	
Fattore di sicurezza	FS	1.38	OK - VERIFICA SODDISFATTA

Tabella 15-5 – Verifica a taglio (paraghiaia)

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15.1.3 Verifiche delle tensioni di esercizio – SLEr/SLD

Secondo quanto riportato al Capitolo 4.1.2.2.5 del D.M. 17/01/2018, alle combinazioni caratteristiche le massime azioni interne non devono eccedere i seguenti valori:

- $\sigma_{c,max} \leq 0.60 f_{ck} = 18\text{MPa}$
- $\sigma_{s,max} \leq 0.80 f_{yk} = 360\text{MPa}$

Le azioni massime nelle presenti combinazioni sono riportate nella tabella seguente:

INVILUPPO REAZIONI ALLA BASE SLEr-SLD		valore	x [m]	y [m]	verso	
Azione verticale	N [kN/m]	126.32 kN/m	2.1001	4.22	+y	MAX
Azione orizzontale	T [kN/m]	87.20 kN/m				
Momento	M [kNm/m]	-12.63 kNm/m				
Azione verticale	N [kN/m]	25.59 kN/m	2.1001	4.22	+y	MIN
Azione orizzontale	T [kN/m]	20.80 kN/m				
Momento	M [kNm/m]	-110.39 kNm/m				
	σ_c limite [N/mm ²]	18.00 N/mm ²				
	σ_s limite [N/mm ²]	360.00 N/mm ²				

Figura 15-4: Paraghiaia - Massime azioni nelle combinazioni SLEr/SLD

Figura 15-5: Paraghiaia - SLEr/SLD – Verifica delle tensioni di esercizio

Le tensioni agenti sono:

- $\sigma_{c,max} = 6,15\text{MPa} \leq 0.60 f_{ck} = 18\text{MPa}$
- $\sigma_{s,max} = 229\text{MPa} \leq 0.80 f_{yk} = 360\text{MPa}$

Pertanto la verifica è soddisfatta.

Comittente:



Comune di Genova
"Opere di adeguamento idraulico del tratto tombinato di valle del rio Maltempo, affluente del torrente Polcevera"

Rev. 1

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Progetto Definitivo
Sostituzione ponte stradale esistente Via Canepari
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Progettista:



Mandataria

Mandante

Dott.ssa Claudia Pizzinato



15.1.4 Verifica allo Stato Limite di Fessurazione – SLEf

Si riportano nell'immagine seguente gli involuppi delle sollecitazioni agli stati limite di esercizio frequenti per la valutazione dell'apertura delle fessure.

INVILUPPO REAZIONI ALLA BASE SLEf		valore	x [m]	y [m]	verso	
Azione verticale	N [kN/m]	24.28 kN/m	2.1001	4.22	+y	MAX
Azione orizzontale	T [kN/m]	25.97 kN/m			+x	
Momento	M [kNm/m]	-15.49 kNm/m			orario	
Azione verticale	N [kN/m]	24.28 kN/m	2.1001	4.22	+y	MIN
Azione orizzontale	T [kN/m]	25.97 kN/m			+x	
Momento	M [kNm/m]	-15.49 kNm/m			orario	

Secondo quanto riportato in Tab. 4.1.IV del D.M. 17/01/2018, ed essendo in ambiente aggressivo, è necessario verificare che l'apertura delle fessure sia inferiore di $w_1 = 0,3 \text{ mm}$.

Tab. 4.1.IV - Criteri di scelta dello stato limite di fessurazione

Gruppi di Esigenze	Condizioni ambientali	Combinazione di azioni	Armatura			
			Sensibile		Poco sensibile	
			Stato limite	w_k	Stato limite	w_k
A	Ordinarie	frequente	apertura fessure	$\leq w_2$	apertura fessure	$\leq w_3$
		quasi permanente	apertura fessure	$\leq w_1$	apertura fessure	$\leq w_2$
B	Aggressive	frequente	apertura fessure	$\leq w_1$	apertura fessure	$\leq w_2$
		quasi permanente	decompressione	-	apertura fessure	$\leq w_1$
C	Molto aggressive	frequente	formazione fessure	-	apertura fessure	$\leq w_1$
		quasi permanente	decompressione	-	apertura fessure	$\leq w_1$

w_1, w_2, w_3 sono definiti al § 4.1.2.2.4, il valore w_k è definito al § 4.1.2.2.4.5.

Le tensioni agenti sulla sezione trasversale sono le seguenti:

Figura 15-6 – Calcolo tensioni combinazione SLEf (paraghiaia)



La verifica è stata effettuata seguendo l'approccio proposto al Capitolo 7.3 dell'Eurocodice 2-1-1. L'apertura delle fessure è uguale a 0,03 mm.

STATO LIMITE DI APERTURA DELLE FESSURE - Rif. UNI EN 1992-1-1: 2005 Par.7.3	
Geometria della sezione	
Altezza della sezione	h = 400 [mm]
Larghezza della sezione	b = 1000 [mm]
Altezza utile della sezione	d = 360 [mm]
Distanza tra asse armatura e lembo compresso	d' = 58 [mm]
Ricoprimento dell'armatura	c = 40 [mm]
Armatura tesa ordinaria	
Numero di ferri tesi presenti nella sezione	n _{t,1} = 5 [-]
Diametro dei ferri tesi presenti nella sezione	φ _{t,1} = 20 [mm]
Area dei ferri tesi presenti nella sezione	A _{st,1} = 1571 [mm ²]
Armatura tesa di infittimento	
Numero di ferri tesi presenti nella sezione	n _{t,2} = 0 [-]
Diametro dei ferri tesi presenti nella sezione	φ _{t,2} = 0 [mm]
Area dei ferri tesi presenti nella sezione	A _{st,2} = 0 [mm ²]
Caratteristiche dei materiali	
Resistenza caratteristica cilindrica dal calcestruzzo	f _{ck} = 30 [MPa]
Resistenza a trazione media del calcestruzzo	f _{ctm} = 2.9 [MPa]
Modulo di elasticità del calcestruzzo	E _{cm} = 32837 [MPa]
Resistenza a snervamento dell'acciaio	f _{yk} = 450 [MPa]
Modulo di elasticità dell'acciaio	E _s = 200000 [MPa]
DETERMINAZIONE DELL'AMPIEZZA DELLE FESSURE	
Tensione nell'armatura tesa considerando la sezione fessurata	σ _s = 31.3 [MPa]
Asse neutro della sezione	X = 98.04 [mm]
Tipo e durata dei carichi applicati	
Coefficiente di omogeneizzazione	α _e = 6.09 [-]
Area totale delle armature presenti nella zona tesa	A _s = 1571 [mm ²]
Area efficace tesa di calcestruzzo	A _{c,eff.1} = 100000 [mm ²] A _{c,eff.2} = 100653 [mm ²] A _{c,eff.3} = 200000 [mm ²] A _{c,eff.min} = 100000 [mm ²]
figura 7.1 Area tesa efficace (casi tipici) Legenda a) Trave A Livello del baricentro dell'acciaio B Area tesa efficace, A _{c,eff} b) Piastra B Area tesa efficace, A _{c,eff}	
Rapporto tra l'area di acciaio teso e quella di calcestruzzo teso	ρ _{D,eff} = 0.01571 [-]
Resistenza efficace media del calcestruzzo	f _{ct,eff} = 2.9 [MPa]
Fattore di durata del carico	k _t = 0.4 [-]
Differenza tra la deformazione nell'acciaio e nel cls	
	[ε _{sm} -ε _{cm}] _{min} = 0.000094 [-]
	[ε _{sm} -ε _{cm}] _{calc.} = -0.000248 [-]
	[ε _{sm} -ε _{cm}] = 0.000094 [-]
Spaziatura tra le barre (calcolata tra i baricentri dei ferri)	s = 200 [mm]
Diametro equivalente delle barre	φ _{eq} = 20.00 [mm]
Spaziatura massima di riferimento	s _{max,rif} = 250 [mm]
Coefficienti k per il calcolo dell'ampiezza di fessurazione	
	k ₁ = 0.800 [-]
	k ₂ = 0.500 [-]
	k ₃ = 3.400 [-]
	k ₄ = 0.425 [-]
Distanza massima tra le fessure	
	S _{r,max.1} = 352 [mm]
	S _{r,max.2} = 393 [mm]
	S _{r,max} = 352 [mm]
Ampiezza limite delle fessure per la combinazione di calcolo pertinente	w _{k,lim} = 0.20 [mm]
Ampiezza delle fessure (di calcolo)	w _k = 0.03 [mm]

Figura 15-7 – Verifica a fessurazione combinazione SLEf (paraghaia)



16. INCIDENZE

Di seguito si riportano le incidenze dei vari elementi strutturali:

N	Elemento	Incidenza [kg/m ³]
1	Pali - Entro 9m	240
2	Pali - Oltre 9m	110
3	Paramento	60
4	Paraghiaia	115

Tabella 16-1: Incidenze dei diversi elementi strutturali



17. ALLEGATO: OUTPUT DELLE ANALISI GROUP

17.1 SLU

=====

GROUP for Windows, Version 2019.11.11

Serial Number : 447513991

Analysis of A Group of Piles

Subjected to Axial and Lateral Loading

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=====

Name of input data file : Fondazione impalcato Maltempo-pali 600-SLU-aggstrat.gp11d

Name of output echo file : Fondazione impalcato Maltempo-pali 600-SLU-aggstrat.gp11e

Name of output results file : Fondazione impalcato Maltempo-pali 600-SLU-aggstrat.gp11o

Name of output summary file : Fondazione impalcato Maltempo-pali 600-SLU-aggstrat.gp11t

Name of plot output file : Fondazione impalcato Maltempo-pali 600-SLU-aggstrat.gp11p

Name of runtime file : Fondazione impalcato Maltempo-pali 600-SLU-aggstrat.gp11r

Time and Date of Analysis



Date: March 20, 2023 Time: 10:22:18

***** COMPUTATION RESULTS *****

New Group

***** LOAD CASES RESULTS *****

LOAD CASE : 1

CASE NAME : SLU52

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000



4	0.3353	1.0000
5	0.3414	1.0000
6	0.4646	1.0000
7	0.6923	1.0000
8	0.5600	1.0000
9	0.5600	1.0000
10	0.5600	1.0000
11	0.5600	1.0000
12	0.6923	1.0000

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

5985.83 2498.45 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

0.00000 0.00000 -6118.47

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.80221E-03 0.0202003 -1.24273E-13



ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

1.63418E-12 -1.28162E-15 -4.98012E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE : 2

CASE NAME : SLU3

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO P-FACTOR Y-FACTOR

1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000
4	0.3353	1.0000
5	0.3414	1.0000
6	0.4646	1.0000
7	0.6923	1.0000
8	0.5600	1.0000
9	0.5600	1.0000
10	0.5600	1.0000
11	0.5600	1.0000
12	0.6923	1.0000

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* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

5785.87 2503.90 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

0.00000 0.00000 -6081.53

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.71847E-03 0.0201202 -1.62748E-13

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

2.15759E-12 -1.65858E-15 -4.93699E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE : 3

CASE NAME : SLU67

LOAD TYPE : Dead, DL



REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000
4	0.3353	1.0000
5	0.3414	1.0000
6	0.4646	1.0000
7	0.6923	1.0000
8	0.5600	1.0000
9	0.5600	1.0000
10	0.5600	1.0000
11	0.5600	1.0000
12	0.6923	1.0000

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN	HOR. LOAD Y, KN	HOR. LOAD Z, KN
5534.74	2515.95	0.00000

MOMENT X, KN- M	MOMENT Y, KN- M	MOMENT Z, KN- M



0.00000 0.00000 -5754.40

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M	HORIZONTAL Y, M	HORIZONTAL Z, M
1.57782E-03	0.0196324	-1.51781E-14

ANGLE ROT. X,RAD	ANGLE ROT. Y,RAD	ANGLE ROT. Z,RAD
2.04495E-13	-1.50037E-16	-4.71135E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE ENV : 1

CASE NAME : MINIMUM ENVELOPE

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN	HOR. LOAD Y, KN	HOR. LOAD Z, KN
5534.74	2498.45	0.00000



MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

0.00000 0.00000 -6118.47

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.57782E-03 0.0196324 -1.62748E-13

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

2.04495E-13 -1.65858E-15 -4.98012E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE

* PILE GROUP * 1

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

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FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-578.39 205.14 -3.3323E-08 2.9809E-09 6.7005E-09 169.20

STR, KN/ M**2

9966.9

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-578.39 205.14 -3.3323E-08 2.9809E-09 6.7005E-09 169.20

STR, KN/ M**2

9966.9

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT
y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR
M M M KN- M KN KN/ M KN/ M

0.0000 1.9632E-02 -1.5652E-12 169.20 205.08 0.0000 0.0000

0.2900 1.8229E-02 -1.5505E-12 110.54 203.19 13.320 -1.1180E-09

0.5800 1.6775E-02 -1.5115E-12 53.039 197.14 27.949 -2.4863E-09

0.8700 1.5294E-02 -1.4517E-12 0.4992 187.01 41.259 -3.8685E-09



1.1600	1.3808E-02	-1.3751E-12	39.734	173.28	52.614	-5.1785E-09
1.4500	1.2338E-02	-1.2853E-12	87.403	156.67	61.001	-6.2830E-09
1.7400	1.0904E-02	-1.1855E-12	129.96	137.98	67.021	-7.2121E-09
2.0300	9.5206E-03	-1.0791E-12	166.92	117.66	72.048	-8.0999E-09
2.3200	8.2046E-03	-9.6905E-13	197.85	97.295	67.177	-7.8853E-09
2.6100	6.9678E-03	-8.5798E-13	223.18	77.278	69.680	-8.5354E-09
2.9000	5.8205E-03	-7.4834E-13	242.70	56.814	70.295	-9.0003E-09
3.1900	4.7703E-03	-6.4227E-13	256.36	35.887	72.944	-9.7893E-09
3.4800	3.8229E-03	-5.4161E-13	263.95	14.320	74.792	-1.0575E-08
3.7700	2.9812E-03	-4.4786E-13	265.31	4.6476	75.927	-1.1405E-08
4.0600	2.2457E-03	-3.6218E-13	260.34	26.746	76.476	-1.2334E-08
4.3500	1.6095E-03	-2.8535E-13	249.01	46.364	58.634	-1.0396E-08
4.6400	1.0712E-03	-2.1771E-13	232.78	60.989	41.570	-8.4489E-09
4.9300	6.2821E-04	-1.5928E-13	213.07	70.937	25.873	-6.5598E-09
5.2200	2.7234E-04	-1.0978E-13	191.18	76.635	11.864	-4.7821E-09
5.5100	-5.5132E-06	-6.8716E-14	168.26	78.589	-0.2533	-3.1568E-09
5.8000	-2.1483E-04	-3.5447E-14	145.32	77.346	-10.380	-1.7127E-09
6.0900	-3.6505E-04	-9.2113E-15	123.20	74.092	-13.970	-3.5250E-10
6.3800	-4.6525E-04	1.0325E-15	102.20	69.616	-18.563	4.1194E-11
6.6700	-5.2405E-04	2.4127E-15	82.725	64.005	-21.764	1.0020E-10
6.9600	-5.4939E-04	3.3587E-15	65.029	57.637	-23.712	1.4497E-10
7.2500	-5.4851E-04	3.9434E-15	49.279	50.847	-24.569	1.7663E-10
7.5400	-5.2782E-04	4.2346E-15	35.491	43.923	-24.503	1.9658E-10
7.8300	-4.9292E-04	4.2941E-15	23.612	37.106	-23.687	2.0635E-10
8.1200	-4.4856E-04	4.1772E-15	13.731	30.589	-22.287	2.0755E-10
8.4100	-3.9869E-04	3.9320E-15	5.7265	24.518	-20.460	2.0178E-10
8.7000	-3.4653E-04	3.5996E-15	9.3585E-02	18.996	-18.348	1.9059E-10
8.9900	-2.9460E-04	3.2145E-15	4.8155	14.089	-16.079	1.7545E-10
9.2800	-2.4479E-04	2.8046E-15	8.2080	9.7846	-13.760	1.5765E-10
9.5700	-1.9845E-04	2.3918E-15	10.462	6.1251	-11.479	1.3834E-10
9.8600	-1.5649E-04	1.9928E-15	11.764	3.1112	-9.3068	1.1852E-10



10.150	-1.1941E-04	1.6196E-15	12.295	0.7037	-7.2966	9.8964E-11
10.440	-8.7476E-05	1.2803E-15	12.219	0.9909	-5.4878	8.0322E-11
10.730	-6.0548E-05	9.7966E-16	11.687	2.3478	-3.8972	6.3057E-11
11.020	-3.8643E-05	7.1959E-16	10.829	3.2825	-2.5503	4.7491E-11
11.310	-2.1103E-05	5.0003E-16	9.7601	3.8592	-1.4271	3.3816E-11
11.600	-7.4725E-06	3.1929E-16	8.5731	4.1412	-0.5175	2.2114E-11
11.890	2.7234E-06	1.7455E-16	7.3445	4.1883	0.1931	1.2374E-11
12.180	9.9771E-06	6.2245E-17	6.1338	4.0553	0.7236	4.5141E-12
12.470	1.4774E-05	-2.2397E-16	4.9854	3.7916	1.0955	-1.6608E-11
12.760	1.7573E-05	-8.5353E-16	3.9303	3.4396	1.3318	-6.4684E-11
13.050	1.8798E-05	-1.2683E-15	2.9881	3.0355	1.4552	-9.8185E-11
13.340	1.8826E-05	-1.5088E-15	2.1690	2.6087	1.4881	-1.1927E-10
13.630	1.7985E-05	-1.6125E-15	1.4714	2.1826	1.4510	-1.3009E-10
13.920	1.6553E-05	-1.6123E-15	0.8926	1.7746	1.3624	-1.3271E-10
14.210	1.4758E-05	-1.5372E-15	0.4311	1.3975	1.2388	-1.2903E-10
14.500	1.2784E-05	-1.4115E-15	7.6104E-02	1.0592	1.0939	-1.2078E-10
14.790	1.0772E-05	-1.2551E-15	0.1639	0.7644	0.9393	-1.0945E-10
15.080	8.8248E-06	-1.0839E-15	0.3450	0.5127	0.7839	-9.6285E-11
15.370	7.0162E-06	-9.1004E-16	0.4602	0.3042	0.6347	-8.2327E-11
15.660	5.3919E-06	-7.4252E-16	0.5221	0.1383	0.4966	-6.8383E-11
15.950	3.9768E-06	-5.8747E-16	0.5424	1.1244E-02	0.3727	-5.5062E-11
16.240	2.7789E-06	-4.4878E-16	0.5315	7.3741E-02	0.2650	-4.2795E-11
16.530	1.7842E-06	-3.2845E-16	0.4984	0.1374	0.1730	-3.1856E-11
16.820	9.8908E-07	-2.2706E-16	0.4507	0.1770	9.7543E-02	-2.2392E-11
17.110	3.7839E-07	-1.4412E-16	0.3949	0.1973	3.7934E-02	-1.4448E-11
17.400	-7.1065E-08	-7.8391E-17	0.3357	0.2026	-7.2403E-03	-7.9866E-12
17.690	-3.8374E-07	-2.8148E-17	0.2769	0.1966	-3.9723E-02	-2.9137E-12
17.980	-5.8382E-07	8.2829E-19	0.2213	0.1828	-6.1385E-02	8.7090E-14
18.270	-6.9410E-07	3.2211E-18	0.1707	0.1640	-7.4113E-02	3.4394E-13
18.560	-7.3531E-07	4.7289E-18	0.1261	0.1425	-7.9713E-02	5.1265E-13
18.850	-7.2567E-07	5.5340E-18	8.8060E-02	0.1200	-7.9852E-02	6.0895E-13



19.140 -6.8069E-07 5.8012E-18 5.6229E-02 9.7987E-02 -7.6012E-02 6.4782E-13
 19.430 -6.1318E-07 5.6748E-18 3.0640E-02 7.7378E-02 -6.9474E-02 6.4296E-13
 19.720 -5.3340E-07 5.2771E-18 1.0902E-02 5.8808E-02 -6.1305E-02 6.0651E-13
 20.010 -4.4925E-07 4.7087E-18 2.7291E-03 4.2635E-02 -5.2366E-02 5.4886E-13
 20.300 -3.6657E-07 4.0497E-18 1.2884E-02 2.8971E-02 -4.3327E-02 4.7865E-13
 20.590 -2.8945E-07 3.3618E-18 1.9455E-02 1.7660E-02 -3.4683E-02 4.0282E-13
 20.880 -2.2049E-07 2.6903E-18 2.3154E-02 8.7477E-03 -2.6780E-02 3.2676E-13
 21.170 -1.6116E-07 2.0673E-18 2.4633E-02 1.9883E-03 -1.9836E-02 2.5446E-13
 21.460 -1.1199E-07 1.5136E-18 2.4466E-02 2.4899E-03 -1.3968E-02 1.8877E-13
 21.750 -7.2929E-08 1.0415E-18 2.3139E-02 5.8289E-03 -9.2146E-03 1.3159E-13
 22.040 -4.3313E-08 6.5716E-19 2.1046E-02 7.9590E-03 -5.5432E-03 8.4104E-14
 22.330 -2.2261E-08 3.6210E-19 1.8494E-02 9.1785E-03 -2.8853E-03 4.6933E-14
 22.620 -8.7420E-09 1.5512E-19 1.5703E-02 9.7631E-03 -1.1473E-03 2.0359E-14
 22.910 -1.5186E-09 3.3457E-20 1.2810E-02 1.7808E-02 -5.4333E-02 1.1970E-12
 23.200 5.6947E-10 -6.7037E-20 5.3312E-03 2.0869E-02 3.3219E-02 -3.9105E-12
 23.490 5.0672E-10 -8.4802E-20 6.9282E-04 1.0051E-02 4.0988E-02 -6.8595E-12
 23.780 1.5711E-10 -3.0075E-20 4.9364E-04 1.7514E-03 1.6252E-02 -3.1111E-12
 24.070 7.0975E-12 -2.7505E-21 3.2272E-04 7.2524E-04 8.9429E-04 -3.4657E-13
 24.360 -1.3639E-11 1.9678E-22 7.2026E-05 5.7081E-04 -2.0262E-03 2.9233E-14
 24.650 -5.5323E-12 9.4887E-23 8.1152E-06 1.4062E-04 -9.4665E-04 1.6236E-14
 24.940 -7.4541E-13 1.6709E-23 9.5174E-06 9.2784E-06 -9.7401E-05 2.1833E-15
 25.230 2.2888E-13 -2.8544E-23 2.7034E-06 1.6499E-05 4.7606E-05 -5.9371E-15
 25.520 1.0898E-13 -1.9337E-23 5.2242E-08 5.0252E-06 3.1096E-05 -5.5174E-15
 25.810 1.0497E-14 -2.5867E-24 2.1080E-07 1.9006E-08 3.8069E-06 -9.3812E-16
 26.100 -3.4151E-15 4.4256E-26 4.0666E-08 3.6913E-07 -1.5026E-06 1.9473E-17
 26.390 -1.0428E-15 1.8180E-26 3.3009E-09 7.4224E-08 -5.3947E-07 9.4051E-18
 26.680 -2.4845E-17 1.0125E-27 2.3819E-09 5.2928E-09 -1.4775E-08 6.0207E-19
 26.970 3.7002E-17 -5.9038E-27 2.2556E-10 4.2086E-09 2.2201E-08 -3.5423E-18
 27.260 6.4631E-18 -1.3070E-27 5.8582E-11 4.1945E-10 3.8778E-09 -7.8421E-19
 27.550 -4.7698E-19 3.2275E-30 1.7706E-11 1.0032E-10 -2.8619E-10 1.9365E-21
 27.840 -3.2493E-19 5.3094E-30 3.5289E-13 3.1628E-11 -1.9496E-10 3.1856E-21

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28.130 -3.0797E-20 6.7246E-31 6.3715E-13 7.9804E-13 -1.8478E-11 4.0348E-22
 28.420 8.0845E-21 -1.1278E-30 1.0979E-13 1.1107E-12 4.8507E-12 -6.7665E-22
 28.710 2.4662E-21 -4.5980E-31 7.0899E-15 1.8930E-13 1.4797E-12 -2.7588E-22
 29.000 -2.9036E-22 1.7755E-33 0.0000 0.0000 -1.7422E-13 1.0653E-24

* PILE GROUP * 2

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-578.39 163.52 -2.8351E-08 2.9809E-09 6.0273E-09 115.59

STR, KN/ M**2

7438.9

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD



-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-578.39 163.52 -2.8351E-08 2.9809E-09 6.0273E-09 115.59

STR, KN/ M**2

7438.9

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M

0.0000	1.9632E-02	-1.5652E-12	115.59	163.47	0.0000	0.0000
0.2900	1.8240E-02	-1.5520E-12	68.999	162.08	9.7923	-8.2214E-10
0.5800	1.6813E-02	-1.5166E-12	23.252	157.63	20.581	-1.8329E-09
0.8700	1.5371E-02	-1.4622E-12	6.2922	150.16	30.466	-2.8628E-09
1.1600	1.3932E-02	-1.3922E-12	48.243	140.00	39.002	-3.8518E-09
1.4500	1.2512E-02	-1.3095E-12	86.925	127.66	45.449	-4.7030E-09
1.7400	1.1127E-02	-1.2171E-12	121.80	113.68	50.250	-5.4397E-09
2.0300	9.7908E-03	-1.1178E-12	152.49	98.392	54.436	-6.1642E-09
2.3200	8.5155E-03	-1.0142E-12	178.63	82.947	51.226	-6.0636E-09
2.6100	7.3118E-03	-9.0881E-13	200.50	67.605	53.722	-6.6426E-09
2.9000	6.1885E-03	-8.0372E-13	217.90	51.733	54.912	-7.1020E-09
3.1900	5.1524E-03	-7.0093E-13	230.73	35.265	57.885	-7.8493E-09
3.4800	4.2087E-03	-6.0219E-13	238.75	17.996	60.497	-8.6387E-09
3.7700	3.3607E-03	-5.0897E-13	241.73	9.0316E-03	62.886	-9.5225E-09
4.0600	2.6096E-03	-4.2245E-13	239.49	15.724	65.290	-1.0570E-08
4.3500	1.9476E-03	-3.4350E-13	231.80	32.776	52.130	-9.1943E-09



4.6400	1.3778E-03	-2.7263E-13	219.78	46.115	39.285	-7.7734E-09
4.9300	8.9815E-04	-2.1004E-13	204.46	55.896	27.177	-6.3555E-09
5.2200	5.0218E-04	-1.5566E-13	186.86	62.360	16.073	-4.9822E-09
5.5100	1.8255E-04	-1.0925E-13	167.88	65.813	6.1615	-3.6874E-09
5.8000	-6.8622E-05	-7.0349E-14	148.36	66.610	-2.4360	-2.4973E-09
6.0900	-2.5940E-04	-3.8410E-14	128.99	65.438	-7.2932	-1.0799E-09
6.3800	-3.9775E-04	-1.2791E-14	110.21	62.901	-11.660	-3.7494E-10
6.6700	-4.9140E-04	6.8928E-16	92.376	59.246	-14.994	2.1032E-11
6.9600	-5.4765E-04	2.1082E-15	75.761	54.758	-17.366	6.6855E-11
7.2500	-5.7330E-04	3.1226E-15	60.566	49.698	-18.867	1.0276E-10
7.5400	-5.7455E-04	3.7942E-15	46.918	44.301	-19.597	1.2941E-10
7.8300	-5.5697E-04	4.1814E-15	34.775	38.773	-19.665	1.4763E-10
8.1200	-5.2547E-04	4.3379E-15	24.205	33.288	-19.182	1.5835E-10
8.4100	-4.8426E-04	4.3127E-15	15.254	27.988	-18.258	1.6260E-10
8.7000	-4.3695E-04	4.1492E-15	7.8424	22.987	-16.998	1.6141E-10
8.9900	-3.8649E-04	3.8853E-15	1.8617	18.369	-15.498	1.5580E-10
9.2800	-3.3529E-04	3.5536E-15	2.3264	14.190	-13.847	1.4676E-10
9.5700	-2.8521E-04	3.1812E-15	5.8412	10.453	-12.121	1.3519E-10
9.8600	-2.3768E-04	2.7905E-15	8.3534	7.1901	-10.385	1.2193E-10
10.150	-1.9367E-04	2.3991E-15	10.006	4.4235	-8.6945	1.0770E-10
10.440	-1.5385E-04	2.0207E-15	10.937	2.1346	-7.0913	9.3136E-11
10.730	-1.1862E-04	1.6652E-15	11.279	0.2933	-5.6096	7.8746E-11
11.020	-8.8071E-05	1.3395E-15	11.156	0.9850	-4.2704	6.4949E-11
11.310	-6.2215E-05	1.0477E-15	10.676	2.0509	-3.0913	5.2059E-11
11.600	-4.0866E-05	7.9201E-16	9.9390	2.8006	-2.0795	4.0302E-11
11.890	-2.3498E-05	5.7257E-16	9.0294	3.2796	-1.2239	2.9822E-11
12.180	-9.7477E-06	3.8833E-16	8.0189	3.5324	-0.5194	2.0691E-11
12.470	7.9058E-07	2.3723E-16	6.9666	3.6014	4.3071E-02	1.2925E-11
12.760	8.5381E-06	1.1651E-16	5.9195	3.5263	0.4754	6.4871E-12
13.050	1.3914E-05	2.2971E-17	4.9138	3.3426	0.7914	1.3065E-12
13.340	1.7322E-05	-4.9119E-16	3.9757	3.0820	1.0060	-2.8527E-11



13.630	1.9137E-05	-1.0142E-15	3.1232	2.7716	1.1343	-6.0113E-11
13.920	1.9701E-05	-1.3573E-15	2.3668	2.4344	1.1914	-8.2079E-11
14.210	1.9317E-05	-1.5538E-15	1.7090	2.0889	1.1913	-9.5827E-11
14.500	1.8247E-05	-1.6343E-15	1.1458	1.7498	1.1472	-1.0275E-10
14.790	1.6714E-05	-1.6259E-15	0.6819	1.4282	1.0708	-1.0417E-10
15.080	1.4902E-05	-1.5523E-15	0.3102	1.1319	0.9726	-1.0131E-10
15.370	1.2957E-05	-1.4337E-15	2.2116E-02	0.8660	0.8612	-9.5291E-11
15.660	1.0995E-05	-1.2870E-15	0.1704	0.6333	0.7440	-8.7080E-11
15.950	9.1018E-06	-1.1256E-15	0.3216	0.4315	0.6268	-7.7511E-11
16.240	7.3371E-06	-9.6025E-16	0.4203	0.2639	0.5140	-6.7275E-11
16.530	5.7407E-06	-7.9891E-16	0.4758	0.1287	0.4091	-5.6930E-11
16.820	4.3348E-06	-6.4735E-16	0.4970	2.3064E-02	0.3141	-4.6905E-11
17.110	3.1281E-06	-5.0938E-16	0.4919	4.8580E-02	0.2304	-3.7519E-11
17.400	2.1058E-06	-3.8728E-16	0.4675	0.1050	0.1576	-2.8989E-11
17.690	1.2729E-06	-2.8202E-16	0.4299	0.1423	9.6809E-02	-2.1448E-11
17.980	6.1624E-07	-1.9363E-16	0.3841	0.1638	4.7605E-02	-1.4958E-11
18.270	1.1659E-07	-1.2142E-16	0.3343	0.1727	9.1464E-03	-9.5250E-12
18.560	-2.4672E-07	-6.4182E-17	0.2835	0.1720	-1.9651E-02	-5.1120E-12
18.850	-4.9468E-07	-2.0412E-17	0.2342	0.1641	-3.9993E-02	-1.6502E-12
19.140	-6.4755E-07	1.1080E-18	0.1881	0.1513	-5.3128E-02	9.0907E-14
19.430	-7.2427E-07	3.1814E-18	0.1463	0.1356	-6.0290E-02	2.6483E-13
19.720	-7.4194E-07	4.4661E-18	0.1094	0.1184	-6.2651E-02	3.7712E-13
20.010	-7.1563E-07	5.1139E-18	7.7474E-02	0.1010	-6.1286E-02	4.3795E-13
20.300	-6.5829E-07	5.2640E-18	5.0330E-02	8.4290E-02	-5.7164E-02	4.5712E-13
20.590	-5.8078E-07	5.0406E-18	2.8004E-02	6.8979E-02	-5.1130E-02	4.4376E-13
20.880	-4.9205E-07	4.5525E-18	9.9852E-03	5.5514E-02	-4.3908E-02	4.0624E-13
21.170	-3.9932E-07	3.8933E-18	3.3324E-03	4.4155E-02	-3.6112E-02	3.5209E-13
21.460	-3.0833E-07	3.1432E-18	1.4598E-02	3.5003E-02	-2.8253E-02	2.8802E-13
21.750	-2.2361E-07	2.3701E-18	2.3535E-02	2.7898E-02	-2.0757E-02	2.2002E-13
22.040	-1.4871E-07	1.6326E-18	3.0762E-02	2.2860E-02	-1.3983E-02	1.5351E-13
22.330	-8.6518E-08	9.8160E-19	3.6839E-02	1.9638E-02	-8.2389E-03	9.3475E-14



22.620	-3.9440E-08	4.6300E-19	4.2241E-02	1.7892E-02	-3.8030E-03	4.4645E-14
22.910	-9.6057E-09	1.1952E-19	4.7338E-02	3.1657E-02	-0.3437	4.2762E-12
23.200	9.4973E-10	-7.9760E-20	2.3857E-02	7.2915E-02	5.5401E-02	-4.6527E-12
23.490	1.8437E-09	-2.2159E-19	5.0409E-03	4.3258E-02	0.1491	-1.7924E-11
23.780	7.1824E-10	-9.0683E-20	1.2321E-03	1.0860E-02	7.4298E-02	-9.3807E-12
24.070	8.6399E-11	-1.2186E-20	1.2570E-03	1.4914E-03	1.0886E-02	-1.5354E-12
24.360	-4.2596E-11	4.5436E-22	3.6670E-04	2.1679E-03	-6.3278E-03	6.7497E-14
24.650	-2.3570E-11	2.7329E-22	4.1702E-07	6.8922E-04	-4.0331E-03	4.6763E-14
24.940	-4.8363E-12	6.0389E-23	3.3028E-05	2.1591E-05	-6.3194E-04	7.8908E-15
25.230	4.4529E-13	-4.1647E-23	1.3070E-05	5.5379E-05	9.2620E-05	-8.6625E-15
25.520	4.3908E-13	-5.4038E-23	9.0493E-07	2.3783E-05	1.2529E-04	-1.5419E-14
25.810	7.0366E-14	-9.4140E-24	7.2376E-07	1.9166E-06	2.5519E-05	-3.4141E-15
26.100	-8.5874E-15	8.4435E-26	2.0643E-07	1.2467E-06	-3.7785E-06	3.7151E-17
26.390	-4.5675E-15	5.3283E-26	4.8320E-10	3.7176E-07	-2.3629E-06	2.7565E-17
26.680	-3.5396E-16	4.7486E-27	9.1859E-09	3.2983E-09	-2.1049E-07	2.8238E-18
26.970	1.2319E-16	-1.4456E-26	1.4114E-09	1.6090E-08	7.3913E-08	-8.6734E-18
27.260	3.2252E-17	-4.1362E-27	1.4658E-10	2.5667E-09	1.9351E-08	-2.4817E-18
27.550	2.0706E-20	-5.7347E-29	7.7189E-11	2.4255E-10	1.2423E-11	-3.4408E-20
27.840	-1.2728E-18	1.4469E-29	5.8829E-12	1.3676E-10	-7.6370E-10	8.6812E-21
28.130	-1.9225E-19	2.3877E-30	2.1306E-12	1.1092E-11	-1.1535E-10	1.4326E-21
28.420	2.0475E-20	-2.1871E-30	5.4993E-13	3.6689E-12	1.2285E-11	-1.3122E-21
28.710	1.0797E-20	-1.3520E-30	2.2831E-15	9.4817E-13	6.4785E-12	-8.1118E-22
29.000	9.0732E-23	-4.6565E-32	0.0000	0.0000	5.4439E-14	-2.7939E-23

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-578.39 161.33 -2.8084E-08 2.9809E-09 5.9900E-09 112.69

STR, KN/ M**2

7302.1

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-578.39 161.33 -2.8084E-08 2.9809E-09 5.9900E-09 112.69

STR, KN/ M**2

7302.1

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT



y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR		
M	M	KN- M	KN	KN/ M	KN/ M		
0.0000	1.9632E-02	-1.5652E-12	112.69	161.28	0.0000	0.0000	
0.2900	1.8240E-02	-1.5520E-12	66.733	159.92	9.6175	-8.0747E-10	
0.5800	1.6815E-02	-1.5168E-12	21.605	155.55	20.215	-1.8004E-09	
0.8700	1.5376E-02	-1.4628E-12	7.3515	148.21	29.929	-2.8127E-09	
1.1600	1.3939E-02	-1.3931E-12	48.764	138.22	38.323	-3.7855E-09	
1.4500	1.2522E-02	-1.3108E-12	86.965	126.10	44.670	-4.6237E-09	
1.7400	1.1139E-02	-1.2188E-12	121.43	112.36	49.406	-5.3503E-09	
2.0300	9.8057E-03	-1.1200E-12	151.77	97.323	53.544	-6.0658E-09	
2.3200	8.5328E-03	-1.0168E-12	177.64	82.127	50.412	-5.9702E-09	
2.6100	7.3311E-03	-9.1172E-13	199.31	67.025	52.900	-6.5447E-09	
2.9000	6.2092E-03	-8.0691E-13	216.57	51.390	54.111	-7.0027E-09	
3.1900	5.1741E-03	-7.0434E-13	229.34	35.156	57.089	-7.7464E-09	
3.4800	4.2308E-03	-6.0574E-13	237.36	18.116	59.726	-8.5342E-09	
3.7700	3.3826E-03	-5.1258E-13	240.41	0.3480	62.164	-9.4185E-09	
4.0600	2.6308E-03	-4.2605E-13	238.29	15.195	64.644	-1.0469E-08	
4.3500	1.9675E-03	-3.4700E-13	230.78	32.094	51.721	-9.1218E-09	
4.6400	1.3961E-03	-2.7597E-13	218.97	45.347	39.095	-7.7280E-09	
4.9300	9.1452E-04	-2.1317E-13	203.88	55.099	27.178	-6.3349E-09	
5.2200	5.1638E-04	-1.5854E-13	186.51	61.584	16.232	-4.9834E-09	
5.5100	1.9445E-04	-1.1183E-13	167.75	65.099	6.4458	-3.7070E-09	
5.8000	-5.9070E-05	-7.2616E-14	148.42	65.989	-2.0594	-2.5317E-09	
6.0900	-2.5216E-04	-4.0353E-14	129.22	64.918	-6.9630	-1.1143E-09	
6.3800	-3.9274E-04	-1.4408E-14	110.58	62.479	-11.307	-4.1481E-10	
6.6700	-4.8846E-04	5.6631E-16	92.847	58.925	-14.637	1.6970E-11	
6.9600	-5.4658E-04	2.0138E-15	76.310	54.538	-17.023	6.2718E-11	
7.2500	-5.7388E-04	3.0547E-15	61.164	49.573	-18.548	9.8730E-11	
7.5400	-5.7654E-04	3.7503E-15	47.538	44.263	-19.313	1.2563E-10	
7.8300	-5.6012E-04	4.1587E-15	35.401	38.810	-19.422	1.4420E-10	

c_d969 - Comune di Genova - Prot. 29/03/2023. 0139153.E



8.1200	-5.2952E-04	4.3335E-15	24.809	33.388	-18.984	1.5536E-10
8.4100	-4.8898E-04	4.3236E-15	15.818	28.140	-18.106	1.6010E-10
8.7000	-4.4210E-04	4.1724E-15	8.3540	23.177	-16.891	1.5941E-10
8.9900	-3.9188E-04	3.9180E-15	2.3122	18.583	-15.433	1.5430E-10
9.2800	-3.4073E-04	3.5931E-15	1.9420	14.419	-13.820	1.4574E-10
9.5700	-2.9055E-04	3.2252E-15	5.5242	10.689	-12.127	1.3461E-10
9.8600	-2.4278E-04	2.8369E-15	8.1034	7.4201	-10.419	1.2174E-10
10.150	-1.9845E-04	2.4461E-15	9.8199	4.6406	-8.7499	1.0785E-10
10.440	-1.5823E-04	2.0668E-15	10.811	2.3333	-7.1628	9.3558E-11
10.730	-1.2255E-04	1.7092E-15	11.208	0.4696	-5.6917	7.9383E-11
11.020	-9.1524E-05	1.3805E-15	11.131	0.8340	-4.3585	6.5740E-11
11.310	-6.5159E-05	1.0851E-15	10.691	1.9251	-3.1797	5.2951E-11
11.600	-4.3344E-05	8.2530E-16	9.9866	2.7003	-2.1661	4.1245E-11
11.890	-2.5530E-05	6.0159E-16	9.1021	3.2037	-1.3059	3.0773E-11
12.180	-1.1362E-05	4.1305E-16	8.1100	3.4793	-0.5946	2.1615E-11
12.470	-4.4337E-07	2.5777E-16	7.0697	3.5690	-2.3723E-02	1.3793E-11
12.760	7.6435E-06	1.3310E-16	6.0290	3.5118	0.4180	7.2781E-12
13.050	1.3315E-05	3.5914E-17	5.0249	3.3433	0.7438	2.0062E-12
13.340	1.6974E-05	-3.8892E-16	4.0845	3.0951	0.9681	-2.2183E-11
13.630	1.8996E-05	-9.4230E-16	3.2264	2.7944	1.1059	-5.4855E-11
13.920	1.9726E-05	-1.3115E-15	2.4621	2.4642	1.1716	-7.7891E-11
14.210	1.9470E-05	-1.5298E-15	1.7960	2.1233	1.1793	-9.2658E-11
14.500	1.8494E-05	-1.6279E-15	1.2220	1.7867	1.1419	-1.0052E-10
14.790	1.7024E-05	-1.6333E-15	0.7468	1.4658	1.0712	-1.0277E-10
15.080	1.5250E-05	-1.5700E-15	0.3640	1.1687	0.9775	-1.0063E-10
15.370	1.3322E-05	-1.4587E-15	6.5167E-02	0.9009	0.8696	-9.5217E-11
15.660	1.1359E-05	-1.3165E-15	0.1372	0.6654	0.7548	-8.7488E-11
15.950	9.4510E-06	-1.1576E-15	0.2973	0.4607	0.6392	-7.8288E-11
16.240	7.6624E-06	-9.9285E-16	0.4038	0.2893	0.5272	-6.8315E-11
16.530	6.0354E-06	-8.3074E-16	0.4660	0.1501	0.4224	-5.8139E-11
16.820	4.5952E-06	-6.7736E-16	0.4927	4.0557E-02	0.3270	-4.8202E-11



17.110	3.3523E-06	-5.3685E-16	0.4921	3.4820E-02	0.2425	-3.8835E-11
17.400	2.2961E-06	-4.1174E-16	0.4712	9.4569E-02	0.1688	-3.0269E-11
17.690	1.4279E-06	-3.0326E-16	0.4362	0.1349	0.1066	-2.2651E-11
17.980	7.3843E-07	-2.1161E-16	0.3921	0.1590	5.6024E-02	-1.6055E-11
18.270	2.0936E-07	-1.3623E-16	0.3432	0.1701	1.6131E-02	-1.0496E-11
18.560	-1.7963E-07	-7.6041E-17	0.2929	0.1712	-1.4051E-02	-5.9481E-12
18.850	-4.4936E-07	-2.9592E-17	0.2436	0.1648	-3.5679E-02	-2.3496E-12
19.140	-6.2015E-07	4.6264E-19	0.1971	0.1531	-4.9970E-02	3.7278E-14
19.430	-7.1109E-07	2.7256E-18	0.1546	0.1381	-5.8134E-02	2.2283E-13
19.720	-7.3955E-07	4.1666E-18	0.1169	0.1214	-6.1332E-02	3.4554E-13
20.010	-7.2096E-07	4.9388E-18	8.4175E-02	0.1043	-6.0639E-02	4.1539E-13
20.300	-6.6865E-07	5.1834E-18	5.6001E-02	8.7753E-02	-5.7026E-02	4.4206E-13
20.590	-5.9390E-07	5.0275E-18	3.2636E-02	7.2444E-02	-5.1350E-02	4.3469E-13
20.880	-5.0608E-07	4.5835E-18	1.3597E-02	5.8894E-02	-4.4352E-02	4.0169E-13
21.170	-4.1281E-07	3.9486E-18	7.0696E-04	4.7401E-02	-3.6664E-02	3.5070E-13
21.460	-3.2023E-07	3.2070E-18	1.2891E-02	3.8096E-02	-2.8819E-02	2.8861E-13
21.750	-2.3323E-07	2.4306E-18	2.2702E-02	3.0887E-02	-2.1263E-02	2.2159E-13
22.040	-1.5574E-07	1.6817E-18	3.0761E-02	2.5718E-02	-1.4382E-02	1.5530E-13
22.330	-9.0962E-08	1.0152E-18	3.7637E-02	2.2400E-02	-8.5071E-03	9.4944E-14
22.620	-4.1640E-08	4.8077E-19	4.3818E-02	2.0594E-02	-3.9434E-03	4.5530E-14
22.910	-1.0218E-08	1.2492E-19	4.9682E-02	3.2110E-02	-0.3656	4.4695E-12
23.200	9.5905E-10	-7.7836E-20	2.5170E-02	7.6390E-02	5.5944E-02	-4.5405E-12
23.490	1.9340E-09	-2.2879E-19	5.3692E-03	4.5594E-02	0.1564	-1.8506E-11
23.780	7.5817E-10	-9.4203E-20	1.2738E-03	1.1537E-02	7.8428E-02	-9.7448E-12
24.070	9.2585E-11	-1.2818E-20	1.3213E-03	1.5264E-03	1.1666E-02	-1.6151E-12
24.360	-4.4458E-11	4.6629E-22	3.8805E-04	2.2771E-03	-6.6046E-03	6.9270E-14
24.650	-2.4847E-11	2.8337E-22	2.2021E-07	7.2873E-04	-4.2515E-03	4.8488E-14
24.940	-5.1468E-12	6.3143E-23	3.4594E-05	2.4546E-05	-6.7251E-04	8.2507E-15
25.230	4.5426E-13	-4.1441E-23	1.3815E-05	5.7940E-05	9.4486E-05	-8.6198E-15
25.520	4.6198E-13	-5.5960E-23	9.8564E-07	2.5126E-05	1.3182E-04	-1.5967E-14
25.810	7.4852E-14	-9.8456E-24	7.5781E-07	2.0765E-06	2.7146E-05	-3.5707E-15

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26.100	-8.8824E-15	8.5702E-26	2.1843E-07	1.3047E-06	-3.9082E-06	3.7709E-17
26.390	-4.8185E-15	5.5288E-26	9.3437E-10	3.9326E-07	-2.4928E-06	2.8602E-17
26.680	-3.8038E-16	5.0025E-27	9.6529E-09	4.2321E-09	-2.2620E-07	2.9748E-18
26.970	1.2885E-16	-1.4880E-26	1.4997E-09	1.6904E-08	7.7309E-08	-8.9278E-18
27.260	3.4115E-17	-4.3047E-27	1.5156E-10	2.7261E-09	2.0469E-08	-2.5828E-18
27.550	8.0009E-20	-6.6138E-29	8.1384E-11	2.5038E-10	4.8006E-11	-3.9683E-20
27.840	-1.3385E-18	1.4967E-29	6.3194E-12	1.4416E-10	-8.0312E-10	8.9802E-21
28.130	-2.0445E-19	2.4951E-30	2.2289E-12	1.1900E-11	-1.2267E-10	1.4971E-21
28.420	2.1183E-20	-2.2222E-30	5.8173E-13	3.8364E-12	1.2710E-11	-1.3333E-21
28.710	1.1386E-20	-1.4030E-30	3.3560E-15	1.0030E-12	6.8313E-12	-8.4182E-22
29.000	1.3327E-22	-5.2599E-32	0.0000	0.0000	7.9961E-14	-3.1559E-23

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-578.39 161.33 -2.8084E-08 2.9809E-09 5.9900E-09 112.69

STR, KN/ M**2

7302.1



THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -578.39 161.33 -2.8084E-08 2.9809E-09 5.9900E-09 112.69

STR, KN/ M**2

7302.1

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.9632E-02	-1.5652E-12	112.69	161.28	0.0000	0.0000
0.2900	1.8240E-02	-1.5520E-12	66.733	159.92	9.6175	-8.0747E-10
0.5800	1.6815E-02	-1.5168E-12	21.605	155.55	20.215	-1.8004E-09
0.8700	1.5376E-02	-1.4628E-12	7.3515	148.21	29.929	-2.8127E-09
1.1600	1.3939E-02	-1.3931E-12	48.764	138.22	38.323	-3.7855E-09
1.4500	1.2522E-02	-1.3108E-12	86.965	126.10	44.670	-4.6237E-09
1.7400	1.1139E-02	-1.2188E-12	121.43	112.36	49.406	-5.3503E-09
2.0300	9.8057E-03	-1.1200E-12	151.77	97.323	53.544	-6.0658E-09
2.3200	8.5328E-03	-1.0168E-12	177.64	82.127	50.412	-5.9702E-09



2.6100	7.3311E-03	-9.1172E-13	199.31	67.025	52.900	-6.5447E-09
2.9000	6.2092E-03	-8.0691E-13	216.57	51.390	54.111	-7.0027E-09
3.1900	5.1741E-03	-7.0434E-13	229.34	35.156	57.089	-7.7464E-09
3.4800	4.2308E-03	-6.0574E-13	237.36	18.116	59.726	-8.5342E-09
3.7700	3.3826E-03	-5.1258E-13	240.41	0.3480	62.164	-9.4185E-09
4.0600	2.6308E-03	-4.2605E-13	238.29	15.195	64.644	-1.0469E-08
4.3500	1.9675E-03	-3.4700E-13	230.78	32.094	51.721	-9.1218E-09
4.6400	1.3961E-03	-2.7597E-13	218.97	45.347	39.095	-7.7280E-09
4.9300	9.1452E-04	-2.1317E-13	203.88	55.099	27.178	-6.3349E-09
5.2200	5.1638E-04	-1.5854E-13	186.51	61.584	16.232	-4.9834E-09
5.5100	1.9445E-04	-1.1183E-13	167.75	65.099	6.4458	-3.7070E-09
5.8000	-5.9070E-05	-7.2616E-14	148.42	65.989	-2.0594	-2.5317E-09
6.0900	-2.5216E-04	-4.0353E-14	129.22	64.918	-6.9630	-1.1143E-09
6.3800	-3.9274E-04	-1.4408E-14	110.58	62.479	-11.307	-4.1481E-10
6.6700	-4.8846E-04	5.6631E-16	92.847	58.925	-14.637	1.6970E-11
6.9600	-5.4658E-04	2.0138E-15	76.310	54.538	-17.023	6.2718E-11
7.2500	-5.7388E-04	3.0547E-15	61.164	49.573	-18.548	9.8730E-11
7.5400	-5.7654E-04	3.7503E-15	47.538	44.263	-19.313	1.2563E-10
7.8300	-5.6012E-04	4.1587E-15	35.401	38.810	-19.422	1.4420E-10
8.1200	-5.2952E-04	4.3335E-15	24.809	33.388	-18.984	1.5536E-10
8.4100	-4.8898E-04	4.3236E-15	15.818	28.140	-18.106	1.6010E-10
8.7000	-4.4210E-04	4.1724E-15	8.3540	23.177	-16.891	1.5941E-10
8.9900	-3.9188E-04	3.9180E-15	2.3122	18.583	-15.433	1.5430E-10
9.2800	-3.4073E-04	3.5931E-15	1.9420	14.419	-13.820	1.4574E-10
9.5700	-2.9055E-04	3.2252E-15	5.5242	10.689	-12.127	1.3461E-10
9.8600	-2.4278E-04	2.8369E-15	8.1034	7.4201	-10.419	1.2174E-10
10.150	-1.9845E-04	2.4461E-15	9.8199	4.6406	-8.7499	1.0785E-10
10.440	-1.5823E-04	2.0668E-15	10.811	2.3333	-7.1628	9.3558E-11
10.730	-1.2255E-04	1.7092E-15	11.208	0.4696	-5.6917	7.9383E-11
11.020	-9.1524E-05	1.3805E-15	11.131	0.8340	-4.3585	6.5740E-11
11.310	-6.5159E-05	1.0851E-15	10.691	1.9251	-3.1797	5.2951E-11



11.600	-4.3344E-05	8.2530E-16	9.9866	2.7003	-2.1661	4.1245E-11
11.890	-2.5530E-05	6.0159E-16	9.1021	3.2037	-1.3059	3.0773E-11
12.180	-1.1362E-05	4.1305E-16	8.1100	3.4793	-0.5946	2.1615E-11
12.470	-4.4337E-07	2.5777E-16	7.0697	3.5690	-2.3723E-02	1.3793E-11
12.760	7.6435E-06	1.3310E-16	6.0290	3.5118	0.4180	7.2781E-12
13.050	1.3315E-05	3.5914E-17	5.0249	3.3433	0.7438	2.0062E-12
13.340	1.6974E-05	-3.8892E-16	4.0845	3.0951	0.9681	-2.2183E-11
13.630	1.8996E-05	-9.4230E-16	3.2264	2.7944	1.1059	-5.4855E-11
13.920	1.9726E-05	-1.3115E-15	2.4621	2.4642	1.1716	-7.7891E-11
14.210	1.9470E-05	-1.5298E-15	1.7960	2.1233	1.1793	-9.2658E-11
14.500	1.8494E-05	-1.6279E-15	1.2220	1.7867	1.1419	-1.0052E-10
14.790	1.7024E-05	-1.6333E-15	0.7468	1.4658	1.0712	-1.0277E-10
15.080	1.5250E-05	-1.5700E-15	0.3640	1.1687	0.9775	-1.0063E-10
15.370	1.3322E-05	-1.4587E-15	6.5167E-02	0.9009	0.8696	-9.5217E-11
15.660	1.1359E-05	-1.3165E-15	0.1372	0.6654	0.7548	-8.7488E-11
15.950	9.4510E-06	-1.1576E-15	0.2973	0.4607	0.6392	-7.8288E-11
16.240	7.6624E-06	-9.9285E-16	0.4038	0.2893	0.5272	-6.8315E-11
16.530	6.0354E-06	-8.3074E-16	0.4660	0.1501	0.4224	-5.8139E-11
16.820	4.5952E-06	-6.7736E-16	0.4927	4.0557E-02	0.3270	-4.8202E-11
17.110	3.3523E-06	-5.3685E-16	0.4921	3.4820E-02	0.2425	-3.8835E-11
17.400	2.2961E-06	-4.1174E-16	0.4712	9.4569E-02	0.1688	-3.0269E-11
17.690	1.4279E-06	-3.0326E-16	0.4362	0.1349	0.1066	-2.2651E-11
17.980	7.3843E-07	-2.1161E-16	0.3921	0.1590	5.6024E-02	-1.6055E-11
18.270	2.0936E-07	-1.3623E-16	0.3432	0.1701	1.6131E-02	-1.0496E-11
18.560	-1.7963E-07	-7.6041E-17	0.2929	0.1712	-1.4051E-02	-5.9481E-12
18.850	-4.4936E-07	-2.9592E-17	0.2436	0.1648	-3.5679E-02	-2.3496E-12
19.140	-6.2015E-07	4.6264E-19	0.1971	0.1531	-4.9970E-02	3.7278E-14
19.430	-7.1109E-07	2.7256E-18	0.1546	0.1381	-5.8134E-02	2.2283E-13
19.720	-7.3955E-07	4.1666E-18	0.1169	0.1214	-6.1332E-02	3.4554E-13
20.010	-7.2096E-07	4.9388E-18	8.4175E-02	0.1043	-6.0639E-02	4.1539E-13
20.300	-6.6865E-07	5.1834E-18	5.6001E-02	8.7753E-02	-5.7026E-02	4.4206E-13

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20.590	-5.9390E-07	5.0275E-18	3.2636E-02	7.2444E-02	-5.1350E-02	4.3469E-13
20.880	-5.0608E-07	4.5835E-18	1.3597E-02	5.8894E-02	-4.4352E-02	4.0169E-13
21.170	-4.1281E-07	3.9486E-18	7.0696E-04	4.7401E-02	-3.6664E-02	3.5070E-13
21.460	-3.2023E-07	3.2070E-18	1.2891E-02	3.8096E-02	-2.8819E-02	2.8861E-13
21.750	-2.3323E-07	2.4306E-18	2.2702E-02	3.0887E-02	-2.1263E-02	2.2159E-13
22.040	-1.5574E-07	1.6817E-18	3.0761E-02	2.5718E-02	-1.4382E-02	1.5530E-13
22.330	-9.0962E-08	1.0152E-18	3.7637E-02	2.2400E-02	-8.5071E-03	9.4944E-14
22.620	-4.1640E-08	4.8077E-19	4.3818E-02	2.0594E-02	-3.9434E-03	4.5530E-14
22.910	-1.0218E-08	1.2492E-19	4.9682E-02	3.2110E-02	-0.3656	4.4695E-12
23.200	9.5905E-10	-7.7836E-20	2.5170E-02	7.6390E-02	5.5944E-02	-4.5405E-12
23.490	1.9340E-09	-2.2879E-19	5.3692E-03	4.5594E-02	0.1564	-1.8506E-11
23.780	7.5817E-10	-9.4203E-20	1.2738E-03	1.1537E-02	7.8428E-02	-9.7448E-12
24.070	9.2585E-11	-1.2818E-20	1.3213E-03	1.5264E-03	1.1666E-02	-1.6151E-12
24.360	-4.4458E-11	4.6629E-22	3.8805E-04	2.2771E-03	-6.6046E-03	6.9270E-14
24.650	-2.4847E-11	2.8337E-22	2.2021E-07	7.2873E-04	-4.2515E-03	4.8488E-14
24.940	-5.1468E-12	6.3143E-23	3.4594E-05	2.4546E-05	-6.7251E-04	8.2507E-15
25.230	4.5426E-13	-4.1441E-23	1.3815E-05	5.7940E-05	9.4486E-05	-8.6198E-15
25.520	4.6198E-13	-5.5960E-23	9.8564E-07	2.5126E-05	1.3182E-04	-1.5967E-14
25.810	7.4852E-14	-9.8456E-24	7.5781E-07	2.0765E-06	2.7146E-05	-3.5707E-15
26.100	-8.8824E-15	8.5702E-26	2.1843E-07	1.3047E-06	-3.9082E-06	3.7709E-17
26.390	-4.8185E-15	5.5288E-26	9.3437E-10	3.9326E-07	-2.4928E-06	2.8602E-17
26.680	-3.8038E-16	5.0025E-27	9.6529E-09	4.2321E-09	-2.2620E-07	2.9748E-18
26.970	1.2885E-16	-1.4880E-26	1.4997E-09	1.6904E-08	7.7309E-08	-8.9278E-18
27.260	3.4115E-17	-4.3047E-27	1.5156E-10	2.7261E-09	2.0469E-08	-2.5828E-18
27.550	8.0009E-20	-6.6138E-29	8.1384E-11	2.5038E-10	4.8006E-11	-3.9683E-20
27.840	-1.3385E-18	1.4967E-29	6.3194E-12	1.4416E-10	-8.0312E-10	8.9802E-21
28.130	-2.0445E-19	2.4951E-30	2.2289E-12	1.1900E-11	-1.2267E-10	1.4971E-21
28.420	2.1183E-20	-2.2222E-30	5.8173E-13	3.8364E-12	1.2710E-11	-1.3333E-21
28.710	1.1386E-20	-1.4030E-30	3.3560E-15	1.0030E-12	6.8313E-12	-8.4182E-22
29.000	1.3327E-22	-5.2599E-32	0.0000	0.0000	7.9961E-14	-3.1559E-23

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* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-578.39 163.52 -2.8351E-08 2.9809E-09 6.0273E-09 115.59

STR, KN/ M**2

7438.9

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-578.39 163.52 -2.8351E-08 2.9809E-09 6.0273E-09 115.59

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



STR, KN/ M**2

7438.9

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.9632E-02	-1.5652E-12	115.59	163.47	0.0000	0.0000
0.2900	1.8240E-02	-1.5520E-12	68.999	162.08	9.7923	-8.2214E-10
0.5800	1.6813E-02	-1.5166E-12	23.252	157.63	20.581	-1.8329E-09
0.8700	1.5371E-02	-1.4622E-12	6.2922	150.16	30.466	-2.8628E-09
1.1600	1.3932E-02	-1.3922E-12	48.243	140.00	39.002	-3.8518E-09
1.4500	1.2512E-02	-1.3095E-12	86.925	127.66	45.449	-4.7030E-09
1.7400	1.1127E-02	-1.2171E-12	121.80	113.68	50.250	-5.4397E-09
2.0300	9.7908E-03	-1.1178E-12	152.49	98.392	54.436	-6.1642E-09
2.3200	8.5155E-03	-1.0142E-12	178.63	82.947	51.226	-6.0636E-09
2.6100	7.3118E-03	-9.0881E-13	200.50	67.605	53.722	-6.6426E-09
2.9000	6.1885E-03	-8.0372E-13	217.90	51.733	54.912	-7.1020E-09
3.1900	5.1524E-03	-7.0093E-13	230.73	35.265	57.885	-7.8493E-09
3.4800	4.2087E-03	-6.0219E-13	238.75	17.996	60.497	-8.6387E-09
3.7700	3.3607E-03	-5.0897E-13	241.73	9.0315E-03	62.886	-9.5225E-09
4.0600	2.6096E-03	-4.2245E-13	239.49	15.724	65.290	-1.0570E-08
4.3500	1.9476E-03	-3.4350E-13	231.80	32.776	52.130	-9.1943E-09
4.6400	1.3778E-03	-2.7263E-13	219.78	46.115	39.285	-7.7734E-09
4.9300	8.9815E-04	-2.1004E-13	204.46	55.896	27.177	-6.3555E-09
5.2200	5.0218E-04	-1.5566E-13	186.86	62.360	16.073	-4.9822E-09
5.5100	1.8255E-04	-1.0925E-13	167.88	65.813	6.1615	-3.6874E-09
5.8000	-6.8622E-05	-7.0349E-14	148.36	66.610	-2.4360	-2.4973E-09

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6.0900	-2.5940E-04	-3.8410E-14	128.99	65.438	-7.2932	-1.0799E-09
6.3800	-3.9775E-04	-1.2791E-14	110.21	62.901	-11.660	-3.7494E-10
6.6700	-4.9140E-04	6.8928E-16	92.376	59.246	-14.994	2.1032E-11
6.9600	-5.4765E-04	2.1082E-15	75.761	54.758	-17.366	6.6855E-11
7.2500	-5.7330E-04	3.1226E-15	60.566	49.698	-18.867	1.0276E-10
7.5400	-5.7455E-04	3.7942E-15	46.918	44.301	-19.597	1.2941E-10
7.8300	-5.5697E-04	4.1814E-15	34.775	38.773	-19.665	1.4763E-10
8.1200	-5.2547E-04	4.3379E-15	24.205	33.288	-19.182	1.5835E-10
8.4100	-4.8426E-04	4.3127E-15	15.254	27.988	-18.258	1.6260E-10
8.7000	-4.3695E-04	4.1492E-15	7.8424	22.987	-16.998	1.6141E-10
8.9900	-3.8649E-04	3.8853E-15	1.8617	18.369	-15.498	1.5580E-10
9.2800	-3.3529E-04	3.5536E-15	2.3264	14.190	-13.847	1.4676E-10
9.5700	-2.8521E-04	3.1812E-15	5.8412	10.453	-12.121	1.3519E-10
9.8600	-2.3768E-04	2.7905E-15	8.3534	7.1901	-10.385	1.2193E-10
10.150	-1.9367E-04	2.3991E-15	10.006	4.4235	-8.6945	1.0770E-10
10.440	-1.5385E-04	2.0207E-15	10.937	2.1346	-7.0913	9.3136E-11
10.730	-1.1862E-04	1.6652E-15	11.279	0.2933	-5.6096	7.8746E-11
11.020	-8.8071E-05	1.3395E-15	11.156	0.9850	-4.2704	6.4949E-11
11.310	-6.2215E-05	1.0477E-15	10.676	2.0509	-3.0913	5.2059E-11
11.600	-4.0866E-05	7.9201E-16	9.9390	2.8006	-2.0795	4.0302E-11
11.890	-2.3498E-05	5.7257E-16	9.0294	3.2796	-1.2239	2.9822E-11
12.180	-9.7477E-06	3.8833E-16	8.0189	3.5324	-0.5194	2.0691E-11
12.470	7.9058E-07	2.3723E-16	6.9666	3.6014	4.3071E-02	1.2925E-11
12.760	8.5381E-06	1.1651E-16	5.9195	3.5263	0.4754	6.4871E-12
13.050	1.3914E-05	2.2971E-17	4.9138	3.3426	0.7914	1.3065E-12
13.340	1.7322E-05	-4.9119E-16	3.9757	3.0820	1.0060	-2.8527E-11
13.630	1.9137E-05	-1.0142E-15	3.1232	2.7716	1.1343	-6.0113E-11
13.920	1.9701E-05	-1.3573E-15	2.3668	2.4344	1.1914	-8.2079E-11
14.210	1.9317E-05	-1.5538E-15	1.7090	2.0889	1.1913	-9.5827E-11
14.500	1.8247E-05	-1.6343E-15	1.1458	1.7498	1.1472	-1.0275E-10
14.790	1.6714E-05	-1.6259E-15	0.6819	1.4282	1.0708	-1.0417E-10



15.080	1.4902E-05	-1.5523E-15	0.3102	1.1319	0.9726	-1.0131E-10
15.370	1.2957E-05	-1.4337E-15	2.2116E-02	0.8660	0.8612	-9.5291E-11
15.660	1.0995E-05	-1.2870E-15	0.1704	0.6333	0.7440	-8.7080E-11
15.950	9.1018E-06	-1.1256E-15	0.3216	0.4315	0.6268	-7.7511E-11
16.240	7.3371E-06	-9.6025E-16	0.4203	0.2639	0.5140	-6.7275E-11
16.530	5.7407E-06	-7.9891E-16	0.4758	0.1287	0.4091	-5.6930E-11
16.820	4.3348E-06	-6.4735E-16	0.4970	2.3064E-02	0.3141	-4.6905E-11
17.110	3.1281E-06	-5.0938E-16	0.4919	4.8580E-02	0.2304	-3.7519E-11
17.400	2.1058E-06	-3.8728E-16	0.4675	0.1050	0.1576	-2.8989E-11
17.690	1.2729E-06	-2.8202E-16	0.4299	0.1423	9.6809E-02	-2.1448E-11
17.980	6.1624E-07	-1.9363E-16	0.3841	0.1638	4.7605E-02	-1.4958E-11
18.270	1.1659E-07	-1.2142E-16	0.3343	0.1727	9.1464E-03	-9.5250E-12
18.560	-2.4672E-07	-6.4182E-17	0.2835	0.1720	-1.9651E-02	-5.1120E-12
18.850	-4.9468E-07	-2.0412E-17	0.2342	0.1641	-3.9993E-02	-1.6502E-12
19.140	-6.4755E-07	1.1080E-18	0.1881	0.1513	-5.3128E-02	9.0907E-14
19.430	-7.2427E-07	3.1814E-18	0.1463	0.1356	-6.0290E-02	2.6483E-13
19.720	-7.4194E-07	4.4661E-18	0.1094	0.1184	-6.2651E-02	3.7712E-13
20.010	-7.1563E-07	5.1139E-18	7.7474E-02	0.1010	-6.1286E-02	4.3795E-13
20.300	-6.5829E-07	5.2640E-18	5.0330E-02	8.4290E-02	-5.7164E-02	4.5712E-13
20.590	-5.8078E-07	5.0406E-18	2.8004E-02	6.8979E-02	-5.1130E-02	4.4376E-13
20.880	-4.9205E-07	4.5525E-18	9.9852E-03	5.5514E-02	-4.3908E-02	4.0624E-13
21.170	-3.9932E-07	3.8933E-18	3.3324E-03	4.4155E-02	-3.6112E-02	3.5209E-13
21.460	-3.0833E-07	3.1432E-18	1.4598E-02	3.5003E-02	-2.8253E-02	2.8802E-13
21.750	-2.2361E-07	2.3701E-18	2.3535E-02	2.7898E-02	-2.0757E-02	2.2002E-13
22.040	-1.4871E-07	1.6326E-18	3.0762E-02	2.2860E-02	-1.3983E-02	1.5351E-13
22.330	-8.6518E-08	9.8160E-19	3.6839E-02	1.9638E-02	-8.2389E-03	9.3475E-14
22.620	-3.9440E-08	4.6300E-19	4.2241E-02	1.7892E-02	-3.8030E-03	4.4645E-14
22.910	-9.6057E-09	1.1952E-19	4.7338E-02	3.1657E-02	-0.3437	4.2762E-12
23.200	9.4973E-10	-7.9760E-20	2.3857E-02	7.2915E-02	5.5401E-02	-4.6527E-12
23.490	1.8437E-09	-2.2159E-19	5.0409E-03	4.3258E-02	0.1491	-1.7924E-11
23.780	7.1824E-10	-9.0683E-20	1.2321E-03	1.0860E-02	7.4298E-02	-9.3807E-12



24.070	8.6399E-11	-1.2186E-20	1.2570E-03	1.4914E-03	1.0886E-02	-1.5354E-12
24.360	-4.2596E-11	4.5436E-22	3.6670E-04	2.1679E-03	-6.3278E-03	6.7497E-14
24.650	-2.3570E-11	2.7329E-22	4.1702E-07	6.8922E-04	-4.0331E-03	4.6763E-14
24.940	-4.8363E-12	6.0389E-23	3.3028E-05	2.1591E-05	-6.3194E-04	7.8908E-15
25.230	4.4529E-13	-4.1647E-23	1.3070E-05	5.5379E-05	9.2620E-05	-8.6625E-15
25.520	4.3908E-13	-5.4038E-23	9.0493E-07	2.3783E-05	1.2529E-04	-1.5419E-14
25.810	7.0366E-14	-9.4140E-24	7.2376E-07	1.9166E-06	2.5519E-05	-3.4141E-15
26.100	-8.5874E-15	8.4435E-26	2.0643E-07	1.2467E-06	-3.7785E-06	3.7151E-17
26.390	-4.5675E-15	5.3283E-26	4.8320E-10	3.7176E-07	-2.3629E-06	2.7565E-17
26.680	-3.5396E-16	4.7486E-27	9.1859E-09	3.2983E-09	-2.1049E-07	2.8238E-18
26.970	1.2319E-16	-1.4456E-26	1.4114E-09	1.6090E-08	7.3913E-08	-8.6734E-18
27.260	3.2252E-17	-4.1362E-27	1.4658E-10	2.5667E-09	1.9351E-08	-2.4817E-18
27.550	2.0706E-20	-5.7347E-29	7.7189E-11	2.4255E-10	1.2423E-11	-3.4408E-20
27.840	-1.2728E-18	1.4469E-29	5.8829E-12	1.3676E-10	-7.6370E-10	8.6812E-21
28.130	-1.9225E-19	2.3877E-30	2.1306E-12	1.1092E-11	-1.1535E-10	1.4326E-21
28.420	2.0475E-20	-2.1871E-30	5.4993E-13	3.6689E-12	1.2285E-11	-1.3122E-21
28.710	1.0797E-20	-1.3520E-30	2.2831E-15	9.4817E-13	6.4785E-12	-8.1118E-22
29.000	9.0732E-23	-4.6565E-32	0.0000	0.0000	5.4439E-14	-2.7939E-23

* PILE GROUP * 6

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD



-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-578.39 205.14 -3.3323E-08 2.9809E-09 6.7005E-09 169.20

STR, KN/ M**2

9966.9

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4906E-03 0.019632 -1.5652E-12 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-578.39 205.14 -3.3323E-08 2.9809E-09 6.7005E-09 169.20

STR, KN/ M**2

9966.9

* EFFECTS FOR Laterally Loaded Pile *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT

y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR

M M M KN- M KN KN/ M KN/ M

0.0000 1.9632E-02 -1.5652E-12 169.20 205.08 0.0000 0.0000

0.2900 1.8229E-02 -1.5505E-12 110.54 203.19 13.320 -1.1180E-09



0.5800	1.6775E-02	-1.5115E-12	53.039	197.14	27.949	-2.4863E-09
0.8700	1.5294E-02	-1.4517E-12	0.4992	187.01	41.259	-3.8685E-09
1.1600	1.3808E-02	-1.3751E-12	39.734	173.28	52.614	-5.1785E-09
1.4500	1.2338E-02	-1.2853E-12	87.403	156.67	61.001	-6.2830E-09
1.7400	1.0904E-02	-1.1855E-12	129.96	137.98	67.021	-7.2121E-09
2.0300	9.5206E-03	-1.0791E-12	166.92	117.66	72.048	-8.0999E-09
2.3200	8.2046E-03	-9.6905E-13	197.85	97.295	67.177	-7.8853E-09
2.6100	6.9678E-03	-8.5798E-13	223.18	77.278	69.680	-8.5354E-09
2.9000	5.8205E-03	-7.4834E-13	242.70	56.814	70.295	-9.0003E-09
3.1900	4.7703E-03	-6.4227E-13	256.36	35.887	72.944	-9.7893E-09
3.4800	3.8229E-03	-5.4161E-13	263.95	14.320	74.792	-1.0575E-08
3.7700	2.9812E-03	-4.4786E-13	265.31	4.6476	75.927	-1.1405E-08
4.0600	2.2457E-03	-3.6218E-13	260.34	26.746	76.476	-1.2334E-08
4.3500	1.6095E-03	-2.8535E-13	249.01	46.364	58.634	-1.0396E-08
4.6400	1.0712E-03	-2.1771E-13	232.78	60.989	41.570	-8.4489E-09
4.9300	6.2821E-04	-1.5928E-13	213.07	70.937	25.873	-6.5598E-09
5.2200	2.7234E-04	-1.0978E-13	191.18	76.635	11.864	-4.7821E-09
5.5100	-5.5132E-06	-6.8716E-14	168.26	78.589	-0.2533	-3.1568E-09
5.8000	-2.1483E-04	-3.5447E-14	145.32	77.346	-10.380	-1.7127E-09
6.0900	-3.6505E-04	-9.2113E-15	123.20	74.092	-13.970	-3.5250E-10
6.3800	-4.6525E-04	1.0325E-15	102.20	69.616	-18.563	4.1194E-11
6.6700	-5.2405E-04	2.4127E-15	82.725	64.005	-21.764	1.0020E-10
6.9600	-5.4939E-04	3.3587E-15	65.029	57.637	-23.712	1.4497E-10
7.2500	-5.4851E-04	3.9434E-15	49.279	50.847	-24.569	1.7663E-10
7.5400	-5.2782E-04	4.2346E-15	35.491	43.923	-24.503	1.9658E-10
7.8300	-4.9292E-04	4.2941E-15	23.612	37.106	-23.687	2.0635E-10
8.1200	-4.4856E-04	4.1772E-15	13.731	30.589	-22.287	2.0755E-10
8.4100	-3.9869E-04	3.9320E-15	5.7265	24.518	-20.460	2.0178E-10
8.7000	-3.4653E-04	3.5996E-15	9.3585E-02	18.996	-18.348	1.9059E-10
8.9900	-2.9460E-04	3.2145E-15	4.8155	14.089	-16.079	1.7545E-10
9.2800	-2.4479E-04	2.8046E-15	8.2080	9.7846	-13.760	1.5765E-10



9.5700	-1.9845E-04	2.3918E-15	10.462	6.1251	-11.479	1.3834E-10
9.8600	-1.5649E-04	1.9928E-15	11.764	3.1112	-9.3068	1.1852E-10
10.150	-1.1941E-04	1.6196E-15	12.295	0.7037	-7.2966	9.8964E-11
10.440	-8.7476E-05	1.2803E-15	12.219	0.9909	-5.4878	8.0322E-11
10.730	-6.0548E-05	9.7966E-16	11.687	2.3478	-3.8972	6.3057E-11
11.020	-3.8643E-05	7.1959E-16	10.829	3.2825	-2.5503	4.7491E-11
11.310	-2.1103E-05	5.0003E-16	9.7601	3.8592	-1.4271	3.3816E-11
11.600	-7.4725E-06	3.1929E-16	8.5731	4.1412	-0.5175	2.2114E-11
11.890	2.7234E-06	1.7455E-16	7.3445	4.1883	0.1931	1.2374E-11
12.180	9.9771E-06	6.2245E-17	6.1338	4.0553	0.7236	4.5141E-12
12.470	1.4774E-05	-2.2397E-16	4.9854	3.7916	1.0955	-1.6608E-11
12.760	1.7573E-05	-8.5353E-16	3.9303	3.4396	1.3318	-6.4684E-11
13.050	1.8798E-05	-1.2683E-15	2.9881	3.0355	1.4552	-9.8185E-11
13.340	1.8826E-05	-1.5088E-15	2.1690	2.6087	1.4881	-1.1927E-10
13.630	1.7985E-05	-1.6125E-15	1.4714	2.1826	1.4510	-1.3009E-10
13.920	1.6553E-05	-1.6123E-15	0.8926	1.7746	1.3624	-1.3271E-10
14.210	1.4758E-05	-1.5372E-15	0.4311	1.3975	1.2388	-1.2903E-10
14.500	1.2784E-05	-1.4115E-15	7.6104E-02	1.0592	1.0939	-1.2078E-10
14.790	1.0772E-05	-1.2551E-15	0.1639	0.7644	0.9393	-1.0945E-10
15.080	8.8248E-06	-1.0839E-15	0.3450	0.5127	0.7839	-9.6285E-11
15.370	7.0162E-06	-9.1004E-16	0.4602	0.3042	0.6347	-8.2327E-11
15.660	5.3919E-06	-7.4252E-16	0.5221	0.1383	0.4966	-6.8383E-11
15.950	3.9768E-06	-5.8747E-16	0.5424	1.1244E-02	0.3727	-5.5062E-11
16.240	2.7789E-06	-4.4878E-16	0.5315	7.3741E-02	0.2650	-4.2795E-11
16.530	1.7842E-06	-3.2845E-16	0.4984	0.1374	0.1730	-3.1856E-11
16.820	9.8908E-07	-2.2706E-16	0.4507	0.1770	9.7543E-02	-2.2392E-11
17.110	3.7839E-07	-1.4412E-16	0.3949	0.1973	3.7934E-02	-1.4448E-11
17.400	-7.1065E-08	-7.8391E-17	0.3357	0.2026	-7.2403E-03	-7.9866E-12
17.690	-3.8374E-07	-2.8148E-17	0.2769	0.1966	-3.9723E-02	-2.9137E-12
17.980	-5.8382E-07	8.2829E-19	0.2213	0.1828	-6.1385E-02	8.7090E-14
18.270	-6.9410E-07	3.2211E-18	0.1707	0.1640	-7.4113E-02	3.4394E-13



18.560	-7.3531E-07	4.7289E-18	0.1261	0.1425	-7.9713E-02	5.1265E-13
18.850	-7.2567E-07	5.5340E-18	8.8060E-02	0.1200	-7.9852E-02	6.0895E-13
19.140	-6.8069E-07	5.8012E-18	5.6229E-02	9.7987E-02	-7.6012E-02	6.4782E-13
19.430	-6.1318E-07	5.6748E-18	3.0640E-02	7.7378E-02	-6.9474E-02	6.4296E-13
19.720	-5.3340E-07	5.2771E-18	1.0902E-02	5.8808E-02	-6.1305E-02	6.0651E-13
20.010	-4.4925E-07	4.7087E-18	2.7291E-03	4.2635E-02	-5.2366E-02	5.4886E-13
20.300	-3.6657E-07	4.0497E-18	1.2884E-02	2.8971E-02	-4.3327E-02	4.7865E-13
20.590	-2.8945E-07	3.3618E-18	1.9455E-02	1.7660E-02	-3.4683E-02	4.0282E-13
20.880	-2.2049E-07	2.6903E-18	2.3154E-02	8.7477E-03	-2.6780E-02	3.2676E-13
21.170	-1.6116E-07	2.0673E-18	2.4633E-02	1.9883E-03	-1.9836E-02	2.5446E-13
21.460	-1.1199E-07	1.5136E-18	2.4466E-02	2.4899E-03	-1.3968E-02	1.8877E-13
21.750	-7.2929E-08	1.0415E-18	2.3139E-02	5.8289E-03	-9.2146E-03	1.3159E-13
22.040	-4.3313E-08	6.5716E-19	2.1046E-02	7.9590E-03	-5.5432E-03	8.4104E-14
22.330	-2.2261E-08	3.6210E-19	1.8494E-02	9.1785E-03	-2.8853E-03	4.6933E-14
22.620	-8.7420E-09	1.5512E-19	1.5703E-02	9.7631E-03	-1.1473E-03	2.0359E-14
22.910	-1.5186E-09	3.3457E-20	1.2810E-02	1.7808E-02	-5.4333E-02	1.1970E-12
23.200	5.6947E-10	-6.7037E-20	5.3312E-03	2.0869E-02	3.3219E-02	-3.9105E-12
23.490	5.0672E-10	-8.4802E-20	6.9282E-04	1.0051E-02	4.0988E-02	-6.8595E-12
23.780	1.5711E-10	-3.0075E-20	4.9364E-04	1.7514E-03	1.6252E-02	-3.1111E-12
24.070	7.0975E-12	-2.7505E-21	3.2272E-04	7.2524E-04	8.9429E-04	-3.4657E-13
24.360	-1.3639E-11	1.9678E-22	7.2026E-05	5.7081E-04	-2.0262E-03	2.9233E-14
24.650	-5.5323E-12	9.4887E-23	8.1152E-06	1.4062E-04	-9.4665E-04	1.6236E-14
24.940	-7.4541E-13	1.6709E-23	9.5174E-06	9.2784E-06	-9.7401E-05	2.1833E-15
25.230	2.2888E-13	-2.8544E-23	2.7034E-06	1.6499E-05	4.7606E-05	-5.9371E-15
25.520	1.0898E-13	-1.9337E-23	5.2242E-08	5.0252E-06	3.1096E-05	-5.5174E-15
25.810	1.0497E-14	-2.5867E-24	2.1080E-07	1.9006E-08	3.8069E-06	-9.3812E-16
26.100	-3.4151E-15	4.4256E-26	4.0666E-08	3.6913E-07	-1.5026E-06	1.9473E-17
26.390	-1.0428E-15	1.8180E-26	3.3009E-09	7.4224E-08	-5.3947E-07	9.4051E-18
26.680	-2.4845E-17	1.0125E-27	2.3819E-09	5.2928E-09	-1.4775E-08	6.0207E-19
26.970	3.7002E-17	-5.9038E-27	2.2556E-10	4.2086E-09	2.2201E-08	-3.5423E-18
27.260	6.4631E-18	-1.3070E-27	5.8582E-11	4.1945E-10	3.8778E-09	-7.8421E-19

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27.550 -4.7698E-19 3.2275E-30 1.7706E-11 1.0032E-10 -2.8619E-10 1.9365E-21
 27.840 -3.2493E-19 5.3094E-30 3.5289E-13 3.1628E-11 -1.9496E-10 3.1856E-21
 28.130 -3.0797E-20 6.7246E-31 6.3715E-13 7.9804E-13 -1.8478E-11 4.0348E-22
 28.420 8.0845E-21 -1.1278E-30 1.0979E-13 1.1107E-12 4.8507E-12 -6.7665E-22
 28.710 2.4662E-21 -4.5980E-31 7.0899E-15 1.8930E-13 1.4797E-12 -2.7588E-22
 29.000 -2.9036E-22 1.7755E-33 0.0000 0.0000 -1.7422E-13 1.0653E-24

* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1499.1 265.08 3.0745E-09 2.9809E-09 -6.4631E-08 257.17

STR, KN/ M**2
 1.7643E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1499.1 265.08 3.0745E-09 2.9809E-09 -6.4631E-08 257.17

STR, KN/ M**2

1.7643E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M

0.0000	1.9632E-02	1.1774E-13	257.17	265.35	0.0000	0.0000
0.2900	1.8212E-02	1.1656E-13	177.96	262.17	19.828	1.2690E-10
0.5800	1.6714E-02	1.1326E-13	100.33	253.18	41.495	2.8119E-10
0.8700	1.5170E-02	1.0822E-13	26.164	238.18	60.991	4.3509E-10
1.1600	1.3610E-02	1.0177E-13	28.894	217.94	77.308	5.7807E-10
1.4500	1.2062E-02	9.4249E-14	91.634	193.64	88.933	6.9493E-10
1.7400	1.0550E-02	8.5971E-14	146.84	166.51	96.759	7.8850E-10
2.0300	9.0969E-03	7.7227E-14	193.82	137.35	102.76	8.7236E-10
2.3200	7.7217E-03	6.8280E-14	232.04	108.50	94.405	8.3479E-10
2.6100	6.4394E-03	5.9366E-14	262.19	80.605	96.224	8.8711E-10
2.9000	5.2621E-03	5.0693E-14	284.08	52.626	95.048	9.1564E-10
3.1900	4.1987E-03	4.2436E-14	297.81	24.673	96.162	9.7192E-10
3.4800	3.2545E-03	3.4743E-14	303.27	0.1005	95.576	1.0203E-09
3.7700	2.4318E-03	2.7726E-14	300.52	27.286	93.294	1.0637E-09



4.0600	1.7296E-03	2.1464E-14	289.73	53.537	87.753	1.0890E-09
4.3500	1.1365E-03	1.5998E-14	271.40	75.260	61.688	8.6833E-10
4.6400	6.5304E-04	1.1332E-14	247.68	89.842	37.760	6.5524E-10
4.9300	2.7088E-04	7.4428E-15	220.57	97.983	16.622	4.5671E-10
5.2200	-2.1235E-05	4.2818E-15	191.85	100.52	-1.3782	2.7791E-10
5.5100	-2.3516E-04	1.7857E-15	163.02	98.361	-16.096	1.2223E-10
5.8000	-3.8276E-04	-1.1717E-15	135.34	92.433	-27.554	-8.4349E-11
6.0900	-4.7539E-04	-1.5838E-14	109.78	84.867	-27.105	-9.0303E-10
6.3800	-5.2352E-04	-2.5903E-14	86.333	76.728	-31.121	-1.5398E-09
6.6700	-5.3673E-04	-3.2157E-14	65.370	67.689	-33.211	-1.9897E-09
6.9600	-5.2357E-04	-3.5340E-14	47.079	58.257	-33.669	-2.2726E-09
7.2500	-4.9151E-04	-3.6128E-14	31.411	48.858	-32.802	-2.4111E-09
7.5400	-4.4685E-04	-3.5122E-14	18.349	39.829	-30.908	-2.4293E-09
7.8300	-3.9485E-04	-3.2842E-14	7.8756	31.427	-28.271	-2.3514E-09
8.1200	-3.3970E-04	-2.9727E-14	0.1301	23.828	-25.147	-2.2007E-09
8.4100	-2.8463E-04	-2.6139E-14	5.7025	17.144	-21.762	-1.9985E-09
8.7000	-2.3205E-04	-2.2364E-14	9.8510	11.380	-18.306	-1.7643E-09
8.9900	-1.8363E-04	-1.8621E-14	12.477	6.5603	-14.932	-1.5143E-09
9.2800	-1.4040E-04	-1.5072E-14	13.855	2.6902	-11.758	-1.2622E-09
9.5700	-1.0291E-04	-1.1824E-14	14.245	0.1190	-8.8685	-1.0190E-09
9.8600	-7.1340E-05	-8.9444E-15	13.887	2.3088	-6.3215	-7.9256E-10
10.150	-4.5535E-05	-6.4647E-15	12.991	3.8230	-4.1455	-5.8855E-10
10.440	-2.5207E-05	-4.3898E-15	11.739	4.7657	-2.3561	-4.1031E-10
10.730	-9.5805E-06	-2.7043E-15	10.281	5.2406	-0.9188	-2.5934E-10
11.020	1.9271E-06	-1.3790E-15	8.7399	5.3463	0.1895	-1.3559E-10
11.310	9.9335E-06	-3.7549E-16	7.2094	5.1737	1.0009	-3.7834E-11
11.600	1.5052E-05	3.3271E-17	5.7588	4.8033	1.5532	3.4333E-12
11.890	1.7863E-05	7.9754E-17	4.4353	4.3046	1.8868	8.4238E-12
12.180	1.8898E-05	1.0814E-16	3.2679	3.7349	2.0420	1.1685E-11
12.470	1.8623E-05	1.2228E-16	2.2703	3.1405	2.0576	1.3509E-11
12.760	1.7440E-05	1.2563E-16	1.4390	2.5566	1.9691	1.4185E-11

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13.050	1.5677E-05	1.2121E-16	0.7687	2.0089	1.8082	1.3980E-11
13.340	1.3601E-05	1.1156E-16	0.2534	1.5144	1.6018	1.3139E-11
13.630	1.1415E-05	9.8759E-17	0.1017	1.0832	1.3721	1.1871E-11
13.920	9.2702E-06	8.4436E-17	0.3614	0.7192	1.1368	1.0355E-11
14.210	7.2700E-06	6.9826E-17	0.5252	0.4181	0.9092	8.7328E-12
14.500	5.4802E-06	5.5816E-17	0.6122	0.1821	0.6987	7.1162E-12
14.790	3.9357E-06	4.2995E-17	0.6402	4.9502E-03	0.5113	5.5861E-12
15.080	2.6477E-06	3.1715E-17	0.6247	0.1108	0.3504	4.1976E-12
15.370	1.6007E-06	2.2137E-17	0.5793	0.1931	0.2157	2.9837E-12
15.660	7.8453E-07	1.4279E-17	0.5154	0.2406	0.1076	1.9593E-12
15.950	1.7924E-07	8.0598E-18	0.4419	0.2607	2.5030E-02	1.1255E-12
16.240	-2.4563E-07	3.3293E-18	0.3657	0.2604	-3.4898E-02	4.7302E-13
16.530	-5.2149E-07	-1.0297E-18	0.2919	0.2456	-7.5358E-02	-1.4880E-13
16.820	-6.7867E-07	-2.5659E-17	0.2240	0.2214	-9.9721E-02	-3.7702E-12
17.110	-7.4504E-07	-4.0902E-17	0.1639	0.1919	-0.1113	-6.1093E-12
17.400	-7.4515E-07	-4.8801E-17	0.1128	0.1603	-0.1131	-7.4078E-12
17.690	-6.9988E-07	-5.1197E-17	7.0708E-02	0.1291	-0.1079	-7.8960E-12
17.980	-6.2627E-07	-4.9686E-17	3.7126E-02	9.9910E-02	-9.8110E-02	-7.7837E-12
18.270	-5.3779E-07	-4.5600E-17	1.1772E-02	7.3839E-02	-8.5556E-02	-7.2544E-12
18.560	-4.4460E-07	-4.0008E-17	5.3379E-03	5.1451E-02	-7.1811E-02	-6.4620E-12
18.850	-3.5397E-07	-3.3739E-17	1.7425E-02	3.2901E-02	-5.8032E-02	-5.5314E-12
19.140	-2.7075E-07	-2.7402E-17	2.4696E-02	1.7954E-02	-4.5048E-02	-4.5590E-12
19.430	-1.9786E-07	-2.1421E-17	2.8213E-02	6.5795E-03	-3.3400E-02	-3.6160E-12
19.720	-1.3669E-07	-1.6066E-17	2.8932E-02	1.2030E-03	-2.3406E-02	-2.7512E-12
20.010	-8.7493E-08	-1.1486E-17	2.7678E-02	6.7749E-03	-1.5195E-02	-1.9947E-12
20.300	-4.9961E-08	-7.7333E-18	2.5131E-02	1.0250E-02	-8.7982E-03	-1.3618E-12
20.590	-2.2644E-08	-4.7965E-18	2.1830E-02	1.2112E-02	-4.0426E-03	-8.5632E-13
20.880	-4.0717E-09	-2.6155E-18	1.8175E-02	1.2805E-02	-7.3682E-04	-4.7330E-13
21.170	7.2197E-09	-1.1015E-18	1.4448E-02	1.2720E-02	1.3240E-03	-2.0200E-13
21.460	1.2724E-08	-1.4934E-19	1.0823E-02	1.2185E-02	2.3643E-03	-2.7750E-14
21.750	1.3892E-08	3.3507E-20	7.3902E-03	1.1463E-02	2.6151E-03	6.3078E-15



22.040	1.2100E-08	4.9312E-20	4.1690E-03	1.0749E-02	2.3072E-03	9.4029E-15
22.330	8.6355E-09	4.3842E-20	1.0853E-03	1.0173E-02	1.6676E-03	8.4663E-15
22.620	4.7118E-09	2.7365E-20	1.7383E-03	9.7977E-03	9.2135E-04	5.3510E-15
22.910	1.4844E-09	9.8729E-21	4.5457E-03	1.9219E-03	5.3109E-02	3.5323E-13
23.200	7.7049E-11	1.1771E-21	2.8839E-03	6.3975E-03	4.4945E-03	6.8666E-14
23.490	-1.7951E-10	-8.6155E-21	8.3765E-04	5.0274E-03	-1.4520E-02	-6.9690E-13
23.780	-9.1425E-11	-5.4937E-21	3.1691E-05	1.6680E-03	-9.4574E-03	-5.6829E-13
24.070	-1.7286E-11	-1.2864E-21	1.3001E-04	2.7737E-05	-2.1781E-03	-1.6209E-13
24.360	2.8188E-12	7.9049E-24	4.9557E-05	2.1680E-04	4.1874E-04	1.1743E-15
24.650	2.6481E-12	1.4750E-23	4.2927E-06	9.0379E-05	4.5312E-04	2.5239E-15
24.940	7.5786E-13	5.0720E-24	2.8661E-06	1.0317E-05	9.9027E-05	6.6274E-16
25.230	1.4963E-14	3.5338E-25	1.6950E-06	4.5162E-06	3.1123E-06	7.3502E-17
25.520	-4.9033E-14	-2.6750E-24	2.4786E-07	3.0287E-06	-1.3991E-05	-7.6327E-16
25.810	-1.1564E-14	-7.9777E-25	6.1636E-08	4.7523E-07	-4.1940E-06	-2.8932E-16
26.100	2.1366E-16	-1.8921E-26	2.7839E-08	1.0297E-07	9.4010E-08	-8.3252E-18
26.390	5.2954E-16	3.0138E-27	1.9312E-09	4.9616E-08	2.7395E-07	1.5592E-18
26.680	7.1789E-17	5.2702E-28	9.3876E-10	3.7039E-09	4.2690E-08	3.1340E-19
26.970	-1.0301E-17	-4.0606E-28	2.1788E-10	1.6255E-09	-6.1805E-09	-2.4364E-19
27.260	-4.4227E-18	-2.7824E-28	3.9121E-12	3.9132E-10	-2.6536E-09	-1.6694E-19
27.550	-2.6264E-19	-2.5977E-29	9.1010E-12	4.6603E-12	-1.5758E-10	-1.5586E-20
27.840	1.2876E-19	6.6028E-31	1.2158E-12	1.5990E-11	7.7258E-11	3.9617E-22
28.130	2.9483E-20	1.9553E-31	1.7273E-13	2.2224E-12	1.7690E-11	1.1732E-22
28.420	-6.5579E-22	3.5898E-33	7.3413E-14	2.9023E-13	-3.9347E-13	2.1539E-24
28.710	-1.3203E-21	-7.7164E-32	4.4420E-15	1.2657E-13	-7.9217E-13	-4.6298E-23
29.000	-1.7863E-22	-1.7299E-32	0.0000	0.0000	-1.0718E-13	-1.0380E-23

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72

STR, KN/ M**2
 1.5500E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72

STR, KN/ M**2
 1.5500E+04

* EFFECTS FOR Laterally LOADED PILE *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.9632E-02	1.1774E-13	211.72	227.31	0.0000	0.0000
0.2900	1.8221E-02	1.1664E-13	143.55	224.73	16.046	1.0272E-10
0.5800	1.6746E-02	1.1357E-13	76.653	217.45	33.628	2.2806E-10
0.8700	1.5234E-02	1.0884E-13	12.566	205.27	49.541	3.5397E-10
1.1600	1.3711E-02	1.0277E-13	33.406	188.81	62.999	4.7221E-10
1.4500	1.2202E-02	9.5662E-14	88.305	168.96	72.776	5.7053E-10
1.7400	1.0729E-02	8.7790E-14	137.03	146.70	79.594	6.5129E-10
2.0300	9.3101E-03	7.9423E-14	178.98	122.64	85.067	7.2570E-10
2.3200	7.9631E-03	7.0807E-14	213.67	98.682	78.749	7.0022E-10
2.6100	6.7016E-03	6.2159E-14	241.60	75.312	81.002	7.5131E-10
2.9000	5.5369E-03	5.3676E-14	262.58	51.640	80.897	7.8422E-10
3.1900	4.4775E-03	4.5528E-14	276.60	27.699	82.948	8.4343E-10
3.4800	3.5288E-03	3.7859E-14	283.48	3.3504	83.824	8.9932E-10
3.7700	2.6937E-03	3.0785E-14	283.14	17.622	83.589	9.5528E-10
4.0600	1.9720E-03	2.4389E-14	275.59	41.478	80.932	1.0009E-09
4.3500	1.3532E-03	1.8723E-14	261.08	61.876	59.413	8.2205E-10
4.6400	8.4015E-04	1.3806E-14	241.38	76.330	39.294	6.4570E-10
4.9300	4.2587E-04	9.6263E-15	218.18	85.318	21.138	4.7780E-10
5.2200	1.0073E-04	6.1517E-15	192.99	89.438	5.2883	3.2297E-10
5.5100	-1.4571E-04	3.3331E-15	167.16	89.369	-8.0671	1.8454E-10
5.8000	-3.2410E-04	1.1099E-15	141.79	85.823	-18.872	6.4630E-11
6.0900	-4.4487E-04	-6.1034E-15	117.83	80.439	-20.517	-2.8148E-10
6.3800	-5.1784E-04	-1.9139E-14	95.434	74.134	-24.900	-9.2027E-10
6.6700	-5.5217E-04	-2.8062E-14	74.996	66.786	-27.636	-1.4045E-09
6.9600	-5.5623E-04	-3.3570E-14	56.761	58.836	-28.933	-1.7462E-09
7.2500	-5.3743E-04	-3.6316E-14	40.855	50.665	-29.012	-1.9604E-09

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7.5400	-5.0227E-04	-3.6892E-14	27.105	42.590	-28.101	-2.0640E-09
7.8300	-4.5626E-04	-3.5831E-14	15.696	34.863	-26.423	-2.0751E-09
8.1200	-4.0395E-04	-3.3592E-14	6.5005	27.677	-24.188	-2.0114E-09
8.4100	-3.4904E-04	-3.0568E-14	0.1709	21.166	-21.586	-1.8905E-09
8.7000	-2.9440E-04	-2.7084E-14	5.4972	15.412	-18.786	-1.7282E-09
8.9900	-2.4217E-04	-2.3401E-14	9.2660	10.396	-15.929	-1.5393E-09
9.2800	-1.9385E-04	-1.9724E-14	11.709	6.1825	-13.132	-1.3362E-09
9.5700	-1.5042E-04	-1.6203E-14	13.054	2.7580	-10.486	-1.1295E-09
9.8600	-1.1242E-04	-1.2946E-14	13.518	6.9341E-02	-8.0577	-9.2786E-10
10.150	-8.0050E-05	-1.0019E-14	13.301	1.7654	-5.8949	-7.3781E-10
10.440	-5.3211E-05	-7.4608E-15	12.581	3.2004	-4.0231	-5.6408E-10
10.730	-3.1697E-05	-5.2823E-15	11.516	4.1403	-2.4588	-4.0975E-10
11.020	-1.4796E-05	-3.4760E-15	10.238	4.6675	-1.1768	-2.7647E-10
11.310	-1.9958E-06	-2.0204E-15	8.8538	4.8617	-0.1627	-1.6466E-10
11.600	7.2572E-06	-8.8434E-16	7.4510	4.7974	0.6057	-7.3815E-11
11.890	1.3525E-05	-3.1071E-17	6.0946	4.5420	1.1555	-2.6545E-12
12.180	1.7352E-05	5.5001E-17	4.8317	4.1546	1.5166	4.8071E-12
12.470	1.9243E-05	9.3543E-17	3.6935	3.6853	1.7197	8.3595E-12
12.760	1.9655E-05	1.1641E-16	2.6977	3.1757	1.7951	1.0632E-11
13.050	1.8986E-05	1.2694E-16	1.8507	2.6585	1.7713	1.1843E-11
13.340	1.7575E-05	1.2814E-16	1.1418	2.1589	1.6743	1.2207E-11
13.630	1.5703E-05	1.2261E-16	0.5763	1.6948	1.5268	1.1921E-11
13.920	1.3592E-05	1.1256E-16	0.1417	1.2779	1.3483	1.1165E-11
14.210	1.1416E-05	9.9770E-17	0.1535	0.9149	1.1549	1.0093E-11
14.500	9.3020E-06	8.5678E-17	0.3734	0.6063	0.9593	8.8357E-12
14.790	7.3371E-06	7.1365E-17	0.5125	0.3519	0.7711	7.4999E-12
15.080	5.5775E-06	5.7619E-17	0.5864	0.1512	0.5971	6.1686E-12
15.370	4.0528E-06	4.4975E-17	0.6097	7.2422E-04	0.4419	4.9033E-12
15.660	2.7723E-06	3.3757E-17	0.5955	0.1002	0.3077	3.7467E-12
15.950	1.7181E-06	2.4127E-17	0.5550	0.1732	0.1941	2.7253E-12
16.240	8.8814E-07	1.6118E-17	0.4978	0.2167	0.1021	1.8523E-12

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



16.530	2.6193E-07	9.6685E-18	0.4315	0.2368	3.0616E-02	1.1301E-12
16.820	-1.8805E-07	4.6563E-18	0.3620	0.2391	-2.2350E-02	5.5341E-13
17.110	-4.9048E-07	9.1898E-19	0.2939	0.2283	-5.9259E-02	1.1103E-13
17.400	-6.7339E-07	-1.8189E-17	0.2303	0.2088	-8.2681E-02	-2.2333E-12
17.690	-7.6287E-07	-3.6506E-17	0.1732	0.1841	-9.5168E-02	-4.5541E-12
17.980	-7.8229E-07	-4.7149E-17	0.1238	0.1568	-9.9128E-02	-5.9745E-12
18.270	-7.5186E-07	-5.1861E-17	8.2245E-02	0.1292	-9.6750E-02	-6.6735E-12
18.560	-6.8849E-07	-5.2186E-17	4.8142E-02	0.1028	-8.9949E-02	-6.8180E-12
18.850	-6.0583E-07	-4.9449E-17	2.1573E-02	7.8687E-02	-8.0340E-02	-6.5576E-12
19.140	-5.1452E-07	-4.4746E-17	1.7476E-03	5.7435E-02	-6.9244E-02	-6.0218E-12
19.430	-4.2252E-07	-3.8951E-17	1.1127E-02	3.9359E-02	-5.7693E-02	-5.3185E-12
19.720	-3.3543E-07	-3.2738E-17	2.0283E-02	2.4324E-02	-4.6461E-02	-4.5346E-12
20.010	-2.5691E-07	-2.6603E-17	2.5576E-02	1.2355E-02	-3.6090E-02	-3.7371E-12
20.300	-1.8906E-07	-2.0888E-17	2.7854E-02	3.2168E-03	-2.6929E-02	-2.9753E-12
20.590	-1.3280E-07	-1.5807E-17	2.7870E-02	2.9945E-03	-1.9177E-02	-2.2827E-12
20.880	-8.8034E-08	-1.1477E-17	2.6266E-02	7.6250E-03	-1.2886E-02	-1.6799E-12
21.170	-5.4247E-08	-7.9340E-18	2.3564E-02	1.0657E-02	-8.0470E-03	-1.1769E-12
21.460	-3.0044E-08	-5.1600E-18	2.0172E-02	1.2479E-02	-4.5158E-03	-7.7557E-13
21.750	-1.3922E-08	-3.0952E-18	1.6387E-02	1.3441E-02	-2.1199E-03	-4.7131E-13
22.040	-4.3643E-09	-1.6536E-18	1.2414E-02	1.3846E-02	-6.7314E-04	-2.5504E-13
22.330	2.2027E-10	-7.3283E-19	8.3775E-03	1.3939E-02	3.4407E-05	-1.1447E-13
22.620	1.4489E-09	-2.2178E-19	4.2620E-03	1.3900E-02	2.2917E-04	-3.5078E-14
22.910	9.3948E-10	-5.1344E-21	1.3107E-04	8.9933E-03	3.3613E-02	-1.8370E-13
23.200	3.0335E-10	3.2018E-21	8.7927E-04	1.2913E-03	1.7695E-02	1.8677E-13
23.490	1.2386E-11	1.6967E-21	5.8617E-04	1.2403E-03	1.0019E-03	1.3724E-13
23.780	-3.3191E-11	3.6567E-22	1.5887E-04	1.0241E-03	-3.4334E-03	3.7826E-14
24.070	-1.5125E-11	-4.4914E-22	7.7612E-06	3.1556E-04	-1.9057E-03	-5.6591E-14
24.360	-2.3997E-12	-5.7046E-22	2.2686E-05	2.8984E-07	-3.5649E-04	-8.4746E-14
24.650	5.7144E-13	-1.5719E-22	7.6157E-06	3.7803E-05	9.7780E-05	-2.6898E-14
24.940	4.9179E-13	-9.9276E-25	6.4667E-07	1.4307E-05	6.4260E-05	-1.2972E-16
25.230	1.0595E-13	1.2149E-24	6.8320E-07	1.6076E-06	2.2039E-05	2.5270E-16

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25.520 -8.1099E-15 3.1840E-25 2.7686E-07 1.1457E-06 -2.3140E-06 9.0851E-17
 25.810 -7.8730E-15 -1.9044E-27 1.6328E-08 4.9917E-07 -2.8553E-06 -6.9065E-19
 26.100 -1.1053E-15 -1.6701E-25 1.2670E-08 3.3935E-08 -4.8635E-07 -7.3483E-17
 26.390 1.3909E-16 -2.8107E-26 3.2925E-09 2.1909E-08 7.1954E-08 -1.4541E-17
 26.680 6.4555E-17 2.1922E-28 3.5573E-11 5.9093E-09 3.8389E-08 1.3036E-19
 26.970 3.8652E-18 1.3716E-28 1.3512E-10 2.8868E-11 2.3191E-09 8.2298E-20
 27.260 -2.0516E-18 1.2062E-29 1.8744E-11 2.3717E-10 -1.2310E-09 7.2372E-21
 27.550 -4.5953E-19 -3.7397E-29 2.4325E-12 3.4300E-11 -2.7572E-10 -2.2438E-20
 27.840 5.8177E-21 -1.0588E-29 1.1054E-12 4.0724E-12 3.4906E-12 -6.3527E-21
 28.130 1.8442E-20 -1.3102E-31 6.4057E-14 1.9617E-12 1.1065E-11 -7.8610E-23
 28.420 2.5215E-21 3.7446E-32 3.2434E-14 1.2341E-13 1.5129E-12 2.2468E-23
 28.710 -4.0182E-22 6.2586E-33 7.3827E-15 5.5928E-14 -2.4109E-13 3.7552E-24
 29.000 -2.9937E-22 -2.3681E-32 0.0000 0.0000 -1.7962E-13 -1.4209E-23

* PILE GROUP * 9

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72



STR, KN/ M**2

1.5500E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72

STR, KN/ M**2

1.5500E+04

* EFFECTS FOR Laterally LOADED PILE *

Table header with columns: x, DISPL., DISPL., MOMENT, SHEAR, SOIL REACT, SOIL REACT. Sub-headers: y-DIR, z-DIR, y-z-DIR, y-z-DIR, y-DIR, z-DIR. Units: M, M, M, KN- M, KN, KN/ M, KN/ M

Table with 7 columns and 7 rows of numerical data representing pile effects.



2.0300	9.3101E-03	7.9423E-14	178.98	122.64	85.067	7.2570E-10
2.3200	7.9631E-03	7.0807E-14	213.67	98.682	78.749	7.0022E-10
2.6100	6.7016E-03	6.2159E-14	241.60	75.312	81.002	7.5131E-10
2.9000	5.5369E-03	5.3676E-14	262.58	51.640	80.897	7.8422E-10
3.1900	4.4775E-03	4.5528E-14	276.60	27.699	82.948	8.4343E-10
3.4800	3.5288E-03	3.7859E-14	283.48	3.3504	83.824	8.9932E-10
3.7700	2.6937E-03	3.0785E-14	283.14	17.622	83.589	9.5528E-10
4.0600	1.9720E-03	2.4389E-14	275.59	41.478	80.932	1.0009E-09
4.3500	1.3532E-03	1.8723E-14	261.08	61.876	59.413	8.2205E-10
4.6400	8.4015E-04	1.3806E-14	241.38	76.330	39.294	6.4570E-10
4.9300	4.2587E-04	9.6263E-15	218.18	85.318	21.138	4.7780E-10
5.2200	1.0073E-04	6.1517E-15	192.99	89.438	5.2883	3.2297E-10
5.5100	-1.4571E-04	3.3331E-15	167.16	89.369	-8.0671	1.8454E-10
5.8000	-3.2410E-04	1.1099E-15	141.79	85.823	-18.872	6.4630E-11
6.0900	-4.4487E-04	-6.1034E-15	117.83	80.439	-20.517	-2.8148E-10
6.3800	-5.1784E-04	-1.9139E-14	95.434	74.134	-24.900	-9.2027E-10
6.6700	-5.5217E-04	-2.8062E-14	74.996	66.786	-27.636	-1.4045E-09
6.9600	-5.5623E-04	-3.3570E-14	56.761	58.836	-28.933	-1.7462E-09
7.2500	-5.3743E-04	-3.6316E-14	40.855	50.665	-29.012	-1.9604E-09
7.5400	-5.0227E-04	-3.6892E-14	27.105	42.590	-28.101	-2.0640E-09
7.8300	-4.5626E-04	-3.5831E-14	15.696	34.863	-26.423	-2.0751E-09
8.1200	-4.0395E-04	-3.3592E-14	6.5005	27.677	-24.188	-2.0114E-09
8.4100	-3.4904E-04	-3.0568E-14	0.1709	21.166	-21.586	-1.8905E-09
8.7000	-2.9440E-04	-2.7084E-14	5.4972	15.412	-18.786	-1.7282E-09
8.9900	-2.4217E-04	-2.3401E-14	9.2660	10.396	-15.929	-1.5393E-09
9.2800	-1.9385E-04	-1.9724E-14	11.709	6.1825	-13.132	-1.3362E-09
9.5700	-1.5042E-04	-1.6203E-14	13.054	2.7580	-10.486	-1.1295E-09
9.8600	-1.1242E-04	-1.2946E-14	13.518	6.9341E-02	-8.0577	-9.2786E-10
10.150	-8.0050E-05	-1.0019E-14	13.301	1.7654	-5.8949	-7.3781E-10
10.440	-5.3211E-05	-7.4608E-15	12.581	3.2004	-4.0231	-5.6408E-10
10.730	-3.1697E-05	-5.2823E-15	11.516	4.1403	-2.4588	-4.0975E-10



11.020	-1.4796E-05	-3.4760E-15	10.238	4.6675	-1.1768	-2.7647E-10
11.310	-1.9958E-06	-2.0204E-15	8.8538	4.8617	-0.1627	-1.6466E-10
11.600	7.2572E-06	-8.8434E-16	7.4510	4.7974	0.6057	-7.3815E-11
11.890	1.3525E-05	-3.1071E-17	6.0946	4.5420	1.1555	-2.6545E-12
12.180	1.7352E-05	5.5001E-17	4.8317	4.1546	1.5166	4.8071E-12
12.470	1.9243E-05	9.3543E-17	3.6935	3.6853	1.7197	8.3595E-12
12.760	1.9655E-05	1.1641E-16	2.6977	3.1757	1.7951	1.0632E-11
13.050	1.8986E-05	1.2694E-16	1.8507	2.6585	1.7713	1.1843E-11
13.340	1.7575E-05	1.2814E-16	1.1418	2.1589	1.6743	1.2207E-11
13.630	1.5703E-05	1.2261E-16	0.5763	1.6948	1.5268	1.1921E-11
13.920	1.3592E-05	1.1256E-16	0.1417	1.2779	1.3483	1.1165E-11
14.210	1.1416E-05	9.9770E-17	0.1535	0.9149	1.1549	1.0093E-11
14.500	9.3020E-06	8.5678E-17	0.3734	0.6063	0.9593	8.8357E-12
14.790	7.3371E-06	7.1365E-17	0.5125	0.3519	0.7711	7.4999E-12
15.080	5.5775E-06	5.7619E-17	0.5864	0.1512	0.5971	6.1686E-12
15.370	4.0528E-06	4.4975E-17	0.6097	7.2422E-04	0.4419	4.9033E-12
15.660	2.7723E-06	3.3757E-17	0.5955	0.1002	0.3077	3.7467E-12
15.950	1.7181E-06	2.4127E-17	0.5550	0.1732	0.1941	2.7253E-12
16.240	8.8814E-07	1.6118E-17	0.4978	0.2167	0.1021	1.8523E-12
16.530	2.6193E-07	9.6685E-18	0.4315	0.2368	3.0616E-02	1.1301E-12
16.820	-1.8805E-07	4.6563E-18	0.3620	0.2391	-2.2350E-02	5.5341E-13
17.110	-4.9048E-07	9.1898E-19	0.2939	0.2283	-5.9259E-02	1.1103E-13
17.400	-6.7339E-07	-1.8189E-17	0.2303	0.2088	-8.2681E-02	-2.2333E-12
17.690	-7.6287E-07	-3.6506E-17	0.1732	0.1841	-9.5168E-02	-4.5541E-12
17.980	-7.8229E-07	-4.7149E-17	0.1238	0.1568	-9.9128E-02	-5.9745E-12
18.270	-7.5186E-07	-5.1861E-17	8.2245E-02	0.1292	-9.6750E-02	-6.6735E-12
18.560	-6.8849E-07	-5.2186E-17	4.8142E-02	0.1028	-8.9949E-02	-6.8180E-12
18.850	-6.0583E-07	-4.9449E-17	2.1573E-02	7.8687E-02	-8.0340E-02	-6.5576E-12
19.140	-5.1452E-07	-4.4746E-17	1.7476E-03	5.7435E-02	-6.9244E-02	-6.0218E-12
19.430	-4.2252E-07	-3.8951E-17	1.1127E-02	3.9359E-02	-5.7693E-02	-5.3185E-12
19.720	-3.3543E-07	-3.2738E-17	2.0283E-02	2.4324E-02	-4.6461E-02	-4.5346E-12



20.010 -2.5691E-07 -2.6603E-17 2.5576E-02 1.2355E-02 -3.6090E-02 -3.7371E-12
 20.300 -1.8906E-07 -2.0888E-17 2.7854E-02 3.2168E-03 -2.6929E-02 -2.9753E-12
 20.590 -1.3280E-07 -1.5807E-17 2.7870E-02 2.9945E-03 -1.9177E-02 -2.2827E-12
 20.880 -8.8034E-08 -1.1477E-17 2.6266E-02 7.6250E-03 -1.2886E-02 -1.6799E-12
 21.170 -5.4247E-08 -7.9340E-18 2.3564E-02 1.0657E-02 -8.0470E-03 -1.1769E-12
 21.460 -3.0044E-08 -5.1600E-18 2.0172E-02 1.2479E-02 -4.5158E-03 -7.7557E-13
 21.750 -1.3922E-08 -3.0952E-18 1.6387E-02 1.3441E-02 -2.1199E-03 -4.7131E-13
 22.040 -4.3643E-09 -1.6536E-18 1.2414E-02 1.3846E-02 -6.7314E-04 -2.5504E-13
 22.330 2.2027E-10 -7.3283E-19 8.3775E-03 1.3939E-02 3.4407E-05 -1.1447E-13
 22.620 1.4489E-09 -2.2178E-19 4.2620E-03 1.3900E-02 2.2917E-04 -3.5078E-14
 22.910 9.3948E-10 -5.1344E-21 1.3107E-04 8.9933E-03 3.3613E-02 -1.8370E-13
 23.200 3.0335E-10 3.2018E-21 8.7927E-04 1.2913E-03 1.7695E-02 1.8677E-13
 23.490 1.2386E-11 1.6967E-21 5.8617E-04 1.2403E-03 1.0019E-03 1.3724E-13
 23.780 -3.3191E-11 3.6567E-22 1.5887E-04 1.0241E-03 -3.4334E-03 3.7826E-14
 24.070 -1.5125E-11 -4.4914E-22 7.7612E-06 3.1556E-04 -1.9057E-03 -5.6591E-14
 24.360 -2.3997E-12 -5.7046E-22 2.2686E-05 2.8984E-07 -3.5649E-04 -8.4746E-14
 24.650 5.7144E-13 -1.5719E-22 7.6157E-06 3.7803E-05 9.7780E-05 -2.6898E-14
 24.940 4.9179E-13 -9.9276E-25 6.4667E-07 1.4307E-05 6.4260E-05 -1.2972E-16
 25.230 1.0595E-13 1.2149E-24 6.8320E-07 1.6076E-06 2.2039E-05 2.5270E-16
 25.520 -8.1099E-15 3.1840E-25 2.7686E-07 1.1457E-06 -2.3140E-06 9.0851E-17
 25.810 -7.8730E-15 -1.9044E-27 1.6328E-08 4.9917E-07 -2.8553E-06 -6.9065E-19
 26.100 -1.1053E-15 -1.6701E-25 1.2670E-08 3.3935E-08 -4.8635E-07 -7.3483E-17
 26.390 1.3909E-16 -2.8107E-26 3.2925E-09 2.1909E-08 7.1954E-08 -1.4541E-17
 26.680 6.4555E-17 2.1922E-28 3.5573E-11 5.9093E-09 3.8389E-08 1.3036E-19
 26.970 3.8652E-18 1.3716E-28 1.3512E-10 2.8868E-11 2.3191E-09 8.2298E-20
 27.260 -2.0516E-18 1.2062E-29 1.8744E-11 2.3717E-10 -1.2310E-09 7.2372E-21
 27.550 -4.5953E-19 -3.7397E-29 2.4325E-12 3.4300E-11 -2.7572E-10 -2.2438E-20
 27.840 5.8177E-21 -1.0588E-29 1.1054E-12 4.0724E-12 3.4906E-12 -6.3527E-21
 28.130 1.8442E-20 -1.3102E-31 6.4057E-14 1.9617E-12 1.1065E-11 -7.8610E-23
 28.420 2.5215E-21 3.7446E-32 3.2434E-14 1.2341E-13 1.5129E-12 2.2468E-23
 28.710 -4.0182E-22 6.2586E-33 7.3827E-15 5.5928E-14 -2.4109E-13 3.7552E-24

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



29.000 -2.9937E-22 -2.3681E-32 0.0000 0.0000 -1.7962E-13 -1.4209E-23

* PILE GROUP * 10

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72

STR, KN/ M**2

1.5500E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72

STR, KN/ M**2

1.5500E+04

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
	M	M	KN-M	KN	KN/M	KN/M
0.0000	1.9632E-02	1.1774E-13	211.72	227.31	0.0000	0.0000
0.2900	1.8221E-02	1.1664E-13	143.55	224.73	16.046	1.0272E-10
0.5800	1.6746E-02	1.1357E-13	76.653	217.45	33.628	2.2806E-10
0.8700	1.5234E-02	1.0884E-13	12.566	205.27	49.541	3.5397E-10
1.1600	1.3711E-02	1.0277E-13	33.406	188.81	62.999	4.7221E-10
1.4500	1.2202E-02	9.5662E-14	88.305	168.96	72.776	5.7053E-10
1.7400	1.0729E-02	8.7790E-14	137.03	146.70	79.594	6.5129E-10
2.0300	9.3101E-03	7.9423E-14	178.98	122.64	85.067	7.2570E-10
2.3200	7.9631E-03	7.0807E-14	213.67	98.682	78.749	7.0022E-10
2.6100	6.7016E-03	6.2159E-14	241.60	75.312	81.002	7.5131E-10
2.9000	5.5369E-03	5.3676E-14	262.58	51.640	80.897	7.8422E-10
3.1900	4.4775E-03	4.5528E-14	276.60	27.699	82.948	8.4343E-10
3.4800	3.5288E-03	3.7859E-14	283.48	3.3504	83.824	8.9932E-10
3.7700	2.6937E-03	3.0785E-14	283.14	17.622	83.589	9.5528E-10
4.0600	1.9720E-03	2.4389E-14	275.59	41.478	80.932	1.0009E-09
4.3500	1.3532E-03	1.8723E-14	261.08	61.876	59.413	8.2205E-10
4.6400	8.4015E-04	1.3806E-14	241.38	76.330	39.294	6.4570E-10
4.9300	4.2587E-04	9.6263E-15	218.18	85.318	21.138	4.7780E-10
5.2200	1.0073E-04	6.1517E-15	192.99	89.438	5.2883	3.2297E-10

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



5.5100	-1.4571E-04	3.3331E-15	167.16	89.369	-8.0671	1.8454E-10
5.8000	-3.2410E-04	1.1099E-15	141.79	85.823	-18.872	6.4630E-11
6.0900	-4.4487E-04	-6.1034E-15	117.83	80.439	-20.517	-2.8148E-10
6.3800	-5.1784E-04	-1.9139E-14	95.434	74.134	-24.900	-9.2027E-10
6.6700	-5.5217E-04	-2.8062E-14	74.996	66.786	-27.636	-1.4045E-09
6.9600	-5.5623E-04	-3.3570E-14	56.761	58.836	-28.933	-1.7462E-09
7.2500	-5.3743E-04	-3.6316E-14	40.855	50.665	-29.012	-1.9604E-09
7.5400	-5.0227E-04	-3.6892E-14	27.105	42.590	-28.101	-2.0640E-09
7.8300	-4.5626E-04	-3.5831E-14	15.696	34.863	-26.423	-2.0751E-09
8.1200	-4.0395E-04	-3.3592E-14	6.5005	27.677	-24.188	-2.0114E-09
8.4100	-3.4904E-04	-3.0568E-14	0.1709	21.166	-21.586	-1.8905E-09
8.7000	-2.9440E-04	-2.7084E-14	5.4972	15.412	-18.786	-1.7282E-09
8.9900	-2.4217E-04	-2.3401E-14	9.2660	10.396	-15.929	-1.5393E-09
9.2800	-1.9385E-04	-1.9724E-14	11.709	6.1825	-13.132	-1.3362E-09
9.5700	-1.5042E-04	-1.6203E-14	13.054	2.7580	-10.486	-1.1295E-09
9.8600	-1.1242E-04	-1.2946E-14	13.518	6.9341E-02	-8.0577	-9.2786E-10
10.150	-8.0050E-05	-1.0019E-14	13.301	1.7654	-5.8949	-7.3781E-10
10.440	-5.3211E-05	-7.4608E-15	12.581	3.2004	-4.0231	-5.6408E-10
10.730	-3.1697E-05	-5.2823E-15	11.516	4.1403	-2.4588	-4.0975E-10
11.020	-1.4796E-05	-3.4760E-15	10.238	4.6675	-1.1768	-2.7647E-10
11.310	-1.9958E-06	-2.0204E-15	8.8538	4.8617	-0.1627	-1.6466E-10
11.600	7.2572E-06	-8.8434E-16	7.4510	4.7974	0.6057	-7.3815E-11
11.890	1.3525E-05	-3.1071E-17	6.0946	4.5420	1.1555	-2.6545E-12
12.180	1.7352E-05	5.5001E-17	4.8317	4.1546	1.5166	4.8071E-12
12.470	1.9243E-05	9.3543E-17	3.6935	3.6853	1.7197	8.3595E-12
12.760	1.9655E-05	1.1641E-16	2.6977	3.1757	1.7951	1.0632E-11
13.050	1.8986E-05	1.2694E-16	1.8507	2.6585	1.7713	1.1843E-11
13.340	1.7575E-05	1.2814E-16	1.1418	2.1589	1.6743	1.2207E-11
13.630	1.5703E-05	1.2261E-16	0.5763	1.6948	1.5268	1.1921E-11
13.920	1.3592E-05	1.1256E-16	0.1417	1.2779	1.3483	1.1165E-11
14.210	1.1416E-05	9.9770E-17	0.1535	0.9149	1.1549	1.0093E-11



14.500	9.3020E-06	8.5678E-17	0.3734	0.6063	0.9593	8.8357E-12
14.790	7.3371E-06	7.1365E-17	0.5125	0.3519	0.7711	7.4999E-12
15.080	5.5775E-06	5.7619E-17	0.5864	0.1512	0.5971	6.1686E-12
15.370	4.0528E-06	4.4975E-17	0.6097	7.2422E-04	0.4419	4.9033E-12
15.660	2.7723E-06	3.3757E-17	0.5955	0.1002	0.3077	3.7467E-12
15.950	1.7181E-06	2.4127E-17	0.5550	0.1732	0.1941	2.7253E-12
16.240	8.8814E-07	1.6118E-17	0.4978	0.2167	0.1021	1.8523E-12
16.530	2.6193E-07	9.6685E-18	0.4315	0.2368	3.0616E-02	1.1301E-12
16.820	-1.8805E-07	4.6563E-18	0.3620	0.2391	-2.2350E-02	5.5341E-13
17.110	-4.9048E-07	9.1898E-19	0.2939	0.2283	-5.9259E-02	1.1103E-13
17.400	-6.7339E-07	-1.8189E-17	0.2303	0.2088	-8.2681E-02	-2.2333E-12
17.690	-7.6287E-07	-3.6506E-17	0.1732	0.1841	-9.5168E-02	-4.5541E-12
17.980	-7.8229E-07	-4.7149E-17	0.1238	0.1568	-9.9128E-02	-5.9745E-12
18.270	-7.5186E-07	-5.1861E-17	8.2245E-02	0.1292	-9.6750E-02	-6.6735E-12
18.560	-6.8849E-07	-5.2186E-17	4.8142E-02	0.1028	-8.9949E-02	-6.8180E-12
18.850	-6.0583E-07	-4.9449E-17	2.1573E-02	7.8687E-02	-8.0340E-02	-6.5576E-12
19.140	-5.1452E-07	-4.4746E-17	1.7476E-03	5.7435E-02	-6.9244E-02	-6.0218E-12
19.430	-4.2252E-07	-3.8951E-17	1.1127E-02	3.9359E-02	-5.7693E-02	-5.3185E-12
19.720	-3.3543E-07	-3.2738E-17	2.0283E-02	2.4324E-02	-4.6461E-02	-4.5346E-12
20.010	-2.5691E-07	-2.6603E-17	2.5576E-02	1.2355E-02	-3.6090E-02	-3.7371E-12
20.300	-1.8906E-07	-2.0888E-17	2.7854E-02	3.2168E-03	-2.6929E-02	-2.9753E-12
20.590	-1.3280E-07	-1.5807E-17	2.7870E-02	2.9945E-03	-1.9177E-02	-2.2827E-12
20.880	-8.8034E-08	-1.1477E-17	2.6266E-02	7.6250E-03	-1.2886E-02	-1.6799E-12
21.170	-5.4247E-08	-7.9340E-18	2.3564E-02	1.0657E-02	-8.0470E-03	-1.1769E-12
21.460	-3.0044E-08	-5.1600E-18	2.0172E-02	1.2479E-02	-4.5158E-03	-7.7557E-13
21.750	-1.3922E-08	-3.0952E-18	1.6387E-02	1.3441E-02	-2.1199E-03	-4.7131E-13
22.040	-4.3643E-09	-1.6536E-18	1.2414E-02	1.3846E-02	-6.7314E-04	-2.5504E-13
22.330	2.2027E-10	-7.3283E-19	8.3775E-03	1.3939E-02	3.4407E-05	-1.1447E-13
22.620	1.4489E-09	-2.2178E-19	4.2620E-03	1.3900E-02	2.2917E-04	-3.5078E-14
22.910	9.3948E-10	-5.1344E-21	1.3107E-04	8.9933E-03	3.3613E-02	-1.8370E-13
23.200	3.0335E-10	3.2018E-21	8.7927E-04	1.2913E-03	1.7695E-02	1.8677E-13



23.490	1.2386E-11	1.6967E-21	5.8617E-04	1.2403E-03	1.0019E-03	1.3724E-13
23.780	-3.3191E-11	3.6567E-22	1.5887E-04	1.0241E-03	-3.4334E-03	3.7826E-14
24.070	-1.5125E-11	-4.4914E-22	7.7612E-06	3.1556E-04	-1.9057E-03	-5.6591E-14
24.360	-2.3997E-12	-5.7046E-22	2.2686E-05	2.8984E-07	-3.5649E-04	-8.4746E-14
24.650	5.7144E-13	-1.5719E-22	7.6157E-06	3.7803E-05	9.7780E-05	-2.6898E-14
24.940	4.9179E-13	-9.9276E-25	6.4667E-07	1.4307E-05	6.4260E-05	-1.2972E-16
25.230	1.0595E-13	1.2149E-24	6.8320E-07	1.6076E-06	2.2039E-05	2.5270E-16
25.520	-8.1099E-15	3.1840E-25	2.7686E-07	1.1457E-06	-2.3140E-06	9.0851E-17
25.810	-7.8730E-15	-1.9044E-27	1.6328E-08	4.9917E-07	-2.8553E-06	-6.9065E-19
26.100	-1.1053E-15	-1.6701E-25	1.2670E-08	3.3935E-08	-4.8635E-07	-7.3483E-17
26.390	1.3909E-16	-2.8107E-26	3.2925E-09	2.1909E-08	7.1954E-08	-1.4541E-17
26.680	6.4555E-17	2.1922E-28	3.5573E-11	5.9093E-09	3.8389E-08	1.3036E-19
26.970	3.8652E-18	1.3716E-28	1.3512E-10	2.8868E-11	2.3191E-09	8.2298E-20
27.260	-2.0516E-18	1.2062E-29	1.8744E-11	2.3717E-10	-1.2310E-09	7.2372E-21
27.550	-4.5953E-19	-3.7397E-29	2.4325E-12	3.4300E-11	-2.7572E-10	-2.2438E-20
27.840	5.8177E-21	-1.0588E-29	1.1054E-12	4.0724E-12	3.4906E-12	-6.3527E-21
28.130	1.8442E-20	-1.3102E-31	6.4057E-14	1.9617E-12	1.1065E-11	-7.8610E-23
28.420	2.5215E-21	3.7446E-32	3.2434E-14	1.2341E-13	1.5129E-12	2.2468E-23
28.710	-4.0182E-22	6.2586E-33	7.3827E-15	5.5928E-14	-2.4109E-13	3.7552E-24
29.000	-2.9937E-22	-2.3681E-32	0.0000	0.0000	-1.7962E-13	-1.4209E-23

* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72

STR, KN/ M**2

1.5500E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1499.1 227.08 2.7444E-09 2.9809E-09 -6.0098E-08 211.72

STR, KN/ M**2

1.5500E+04

* EFFECTS FOR Laterally LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT

y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR

M M M KN- M KN KN/ M KN/ M



0.0000	1.9632E-02	1.1774E-13	211.72	227.31	0.0000	0.0000
0.2900	1.8221E-02	1.1664E-13	143.55	224.73	16.046	1.0272E-10
0.5800	1.6746E-02	1.1357E-13	76.653	217.45	33.628	2.2806E-10
0.8700	1.5234E-02	1.0884E-13	12.566	205.27	49.541	3.5397E-10
1.1600	1.3711E-02	1.0277E-13	33.406	188.81	62.999	4.7221E-10
1.4500	1.2202E-02	9.5662E-14	88.305	168.96	72.776	5.7053E-10
1.7400	1.0729E-02	8.7790E-14	137.03	146.70	79.594	6.5129E-10
2.0300	9.3101E-03	7.9423E-14	178.98	122.64	85.067	7.2570E-10
2.3200	7.9631E-03	7.0807E-14	213.67	98.682	78.749	7.0022E-10
2.6100	6.7016E-03	6.2159E-14	241.60	75.312	81.002	7.5131E-10
2.9000	5.5369E-03	5.3676E-14	262.58	51.640	80.897	7.8422E-10
3.1900	4.4775E-03	4.5528E-14	276.60	27.699	82.948	8.4343E-10
3.4800	3.5288E-03	3.7859E-14	283.48	3.3504	83.824	8.9932E-10
3.7700	2.6937E-03	3.0785E-14	283.14	17.622	83.589	9.5528E-10
4.0600	1.9720E-03	2.4389E-14	275.59	41.478	80.932	1.0009E-09
4.3500	1.3532E-03	1.8723E-14	261.08	61.876	59.413	8.2205E-10
4.6400	8.4015E-04	1.3806E-14	241.38	76.330	39.294	6.4570E-10
4.9300	4.2587E-04	9.6263E-15	218.18	85.318	21.138	4.7780E-10
5.2200	1.0073E-04	6.1517E-15	192.99	89.438	5.2883	3.2297E-10
5.5100	-1.4571E-04	3.3331E-15	167.16	89.369	-8.0671	1.8454E-10
5.8000	-3.2410E-04	1.1099E-15	141.79	85.823	-18.872	6.4630E-11
6.0900	-4.4487E-04	-6.1034E-15	117.83	80.439	-20.517	-2.8148E-10
6.3800	-5.1784E-04	-1.9139E-14	95.434	74.134	-24.900	-9.2027E-10
6.6700	-5.5217E-04	-2.8062E-14	74.996	66.786	-27.636	-1.4045E-09
6.9600	-5.5623E-04	-3.3570E-14	56.761	58.836	-28.933	-1.7462E-09
7.2500	-5.3743E-04	-3.6316E-14	40.855	50.665	-29.012	-1.9604E-09
7.5400	-5.0227E-04	-3.6892E-14	27.105	42.590	-28.101	-2.0640E-09
7.8300	-4.5626E-04	-3.5831E-14	15.696	34.863	-26.423	-2.0751E-09
8.1200	-4.0395E-04	-3.3592E-14	6.5005	27.677	-24.188	-2.0114E-09
8.4100	-3.4904E-04	-3.0568E-14	0.1709	21.166	-21.586	-1.8905E-09
8.7000	-2.9440E-04	-2.7084E-14	5.4972	15.412	-18.786	-1.7282E-09



8.9900	-2.4217E-04	-2.3401E-14	9.2660	10.396	-15.929	-1.5393E-09
9.2800	-1.9385E-04	-1.9724E-14	11.709	6.1825	-13.132	-1.3362E-09
9.5700	-1.5042E-04	-1.6203E-14	13.054	2.7580	-10.486	-1.1295E-09
9.8600	-1.1242E-04	-1.2946E-14	13.518	6.9341E-02	-8.0577	-9.2786E-10
10.150	-8.0050E-05	-1.0019E-14	13.301	1.7654	-5.8949	-7.3781E-10
10.440	-5.3211E-05	-7.4608E-15	12.581	3.2004	-4.0231	-5.6408E-10
10.730	-3.1697E-05	-5.2823E-15	11.516	4.1403	-2.4588	-4.0975E-10
11.020	-1.4796E-05	-3.4760E-15	10.238	4.6675	-1.1768	-2.7647E-10
11.310	-1.9958E-06	-2.0204E-15	8.8538	4.8617	-0.1627	-1.6466E-10
11.600	7.2572E-06	-8.8434E-16	7.4510	4.7974	0.6057	-7.3815E-11
11.890	1.3525E-05	-3.1071E-17	6.0946	4.5420	1.1555	-2.6545E-12
12.180	1.7352E-05	5.5001E-17	4.8317	4.1546	1.5166	4.8071E-12
12.470	1.9243E-05	9.3543E-17	3.6935	3.6853	1.7197	8.3595E-12
12.760	1.9655E-05	1.1641E-16	2.6977	3.1757	1.7951	1.0632E-11
13.050	1.8986E-05	1.2694E-16	1.8507	2.6585	1.7713	1.1843E-11
13.340	1.7575E-05	1.2814E-16	1.1418	2.1589	1.6743	1.2207E-11
13.630	1.5703E-05	1.2261E-16	0.5763	1.6948	1.5268	1.1921E-11
13.920	1.3592E-05	1.1256E-16	0.1417	1.2779	1.3483	1.1165E-11
14.210	1.1416E-05	9.9770E-17	0.1535	0.9149	1.1549	1.0093E-11
14.500	9.3020E-06	8.5678E-17	0.3734	0.6063	0.9593	8.8357E-12
14.790	7.3371E-06	7.1365E-17	0.5125	0.3519	0.7711	7.4999E-12
15.080	5.5775E-06	5.7619E-17	0.5864	0.1512	0.5971	6.1686E-12
15.370	4.0528E-06	4.4975E-17	0.6097	7.2422E-04	0.4419	4.9033E-12
15.660	2.7723E-06	3.3757E-17	0.5955	0.1002	0.3077	3.7467E-12
15.950	1.7181E-06	2.4127E-17	0.5550	0.1732	0.1941	2.7253E-12
16.240	8.8814E-07	1.6118E-17	0.4978	0.2167	0.1021	1.8523E-12
16.530	2.6193E-07	9.6685E-18	0.4315	0.2368	3.0616E-02	1.1301E-12
16.820	-1.8805E-07	4.6563E-18	0.3620	0.2391	-2.2350E-02	5.5341E-13
17.110	-4.9048E-07	9.1898E-19	0.2939	0.2283	-5.9259E-02	1.1103E-13
17.400	-6.7339E-07	-1.8189E-17	0.2303	0.2088	-8.2681E-02	-2.2333E-12
17.690	-7.6287E-07	-3.6506E-17	0.1732	0.1841	-9.5168E-02	-4.5541E-12



17.980	-7.8229E-07	-4.7149E-17	0.1238	0.1568	-9.9128E-02	-5.9745E-12
18.270	-7.5186E-07	-5.1861E-17	8.2245E-02	0.1292	-9.6750E-02	-6.6735E-12
18.560	-6.8849E-07	-5.2186E-17	4.8142E-02	0.1028	-8.9949E-02	-6.8180E-12
18.850	-6.0583E-07	-4.9449E-17	2.1573E-02	7.8687E-02	-8.0340E-02	-6.5576E-12
19.140	-5.1452E-07	-4.4746E-17	1.7476E-03	5.7435E-02	-6.9244E-02	-6.0218E-12
19.430	-4.2252E-07	-3.8951E-17	1.1127E-02	3.9359E-02	-5.7693E-02	-5.3185E-12
19.720	-3.3543E-07	-3.2738E-17	2.0283E-02	2.4324E-02	-4.6461E-02	-4.5346E-12
20.010	-2.5691E-07	-2.6603E-17	2.5576E-02	1.2355E-02	-3.6090E-02	-3.7371E-12
20.300	-1.8906E-07	-2.0888E-17	2.7854E-02	3.2168E-03	-2.6929E-02	-2.9753E-12
20.590	-1.3280E-07	-1.5807E-17	2.7870E-02	2.9945E-03	-1.9177E-02	-2.2827E-12
20.880	-8.8034E-08	-1.1477E-17	2.6266E-02	7.6250E-03	-1.2886E-02	-1.6799E-12
21.170	-5.4247E-08	-7.9340E-18	2.3564E-02	1.0657E-02	-8.0470E-03	-1.1769E-12
21.460	-3.0044E-08	-5.1600E-18	2.0172E-02	1.2479E-02	-4.5158E-03	-7.7557E-13
21.750	-1.3922E-08	-3.0952E-18	1.6387E-02	1.3441E-02	-2.1199E-03	-4.7131E-13
22.040	-4.3643E-09	-1.6536E-18	1.2414E-02	1.3846E-02	-6.7314E-04	-2.5504E-13
22.330	2.2027E-10	-7.3283E-19	8.3775E-03	1.3939E-02	3.4407E-05	-1.1447E-13
22.620	1.4489E-09	-2.2178E-19	4.2620E-03	1.3900E-02	2.2917E-04	-3.5078E-14
22.910	9.3948E-10	-5.1344E-21	1.3107E-04	8.9933E-03	3.3613E-02	-1.8370E-13
23.200	3.0335E-10	3.2018E-21	8.7927E-04	1.2913E-03	1.7695E-02	1.8677E-13
23.490	1.2386E-11	1.6967E-21	5.8617E-04	1.2403E-03	1.0019E-03	1.3724E-13
23.780	-3.3191E-11	3.6567E-22	1.5887E-04	1.0241E-03	-3.4334E-03	3.7826E-14
24.070	-1.5125E-11	-4.4914E-22	7.7612E-06	3.1556E-04	-1.9057E-03	-5.6591E-14
24.360	-2.3997E-12	-5.7046E-22	2.2686E-05	2.8984E-07	-3.5649E-04	-8.4746E-14
24.650	5.7144E-13	-1.5719E-22	7.6157E-06	3.7803E-05	9.7780E-05	-2.6898E-14
24.940	4.9179E-13	-9.9276E-25	6.4667E-07	1.4307E-05	6.4260E-05	-1.2972E-16
25.230	1.0595E-13	1.2149E-24	6.8320E-07	1.6076E-06	2.2039E-05	2.5270E-16
25.520	-8.1099E-15	3.1840E-25	2.7686E-07	1.1457E-06	-2.3140E-06	9.0851E-17
25.810	-7.8730E-15	-1.9044E-27	1.6328E-08	4.9917E-07	-2.8553E-06	-6.9065E-19
26.100	-1.1053E-15	-1.6701E-25	1.2670E-08	3.3935E-08	-4.8635E-07	-7.3483E-17
26.390	1.3909E-16	-2.8107E-26	3.2925E-09	2.1909E-08	7.1954E-08	-1.4541E-17
26.680	6.4555E-17	2.1922E-28	3.5573E-11	5.9093E-09	3.8389E-08	1.3036E-19

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26.970	3.8652E-18	1.3716E-28	1.3512E-10	2.8868E-11	2.3191E-09	8.2298E-20
27.260	-2.0516E-18	1.2062E-29	1.8744E-11	2.3717E-10	-1.2310E-09	7.2372E-21
27.550	-4.5953E-19	-3.7397E-29	2.4325E-12	3.4300E-11	-2.7572E-10	-2.2438E-20
27.840	5.8177E-21	-1.0588E-29	1.1054E-12	4.0724E-12	3.4906E-12	-6.3527E-21
28.130	1.8442E-20	-1.3102E-31	6.4057E-14	1.9617E-12	1.1065E-11	-7.8610E-23
28.420	2.5215E-21	3.7446E-32	3.2434E-14	1.2341E-13	1.5129E-12	2.2468E-23
28.710	-4.0182E-22	6.2586E-33	7.3827E-15	5.5928E-14	-2.4109E-13	3.7552E-24
29.000	-2.9937E-22	-2.3681E-32	0.0000	0.0000	-1.7962E-13	-1.4209E-23

* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1499.1 265.08 3.0745E-09 2.9809E-09 -6.4631E-08 257.17

STR, KN/ M**2

1.7643E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

4.6402E-03 0.019632 1.1774E-13 2.0449E-13 -1.6586E-15 -4.9801E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1499.1 265.08 3.0745E-09 2.9809E-09 -6.4631E-08 257.17

STR, KN/ M**2

1.7643E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.9632E-02	1.1774E-13	257.17	265.35	0.0000	0.0000
0.2900	1.8212E-02	1.1656E-13	177.96	262.17	19.828	1.2690E-10
0.5800	1.6714E-02	1.1326E-13	100.33	253.18	41.495	2.8119E-10
0.8700	1.5170E-02	1.0822E-13	26.164	238.18	60.991	4.3509E-10
1.1600	1.3610E-02	1.0177E-13	28.894	217.94	77.308	5.7807E-10
1.4500	1.2062E-02	9.4249E-14	91.634	193.64	88.933	6.9493E-10
1.7400	1.0550E-02	8.5971E-14	146.84	166.51	96.759	7.8850E-10
2.0300	9.0969E-03	7.7227E-14	193.82	137.35	102.76	8.7236E-10
2.3200	7.7217E-03	6.8280E-14	232.04	108.50	94.405	8.3479E-10
2.6100	6.4394E-03	5.9366E-14	262.19	80.605	96.224	8.8711E-10
2.9000	5.2621E-03	5.0693E-14	284.08	52.626	95.048	9.1564E-10
3.1900	4.1987E-03	4.2436E-14	297.81	24.673	96.162	9.7192E-10



3.4800	3.2545E-03	3.4743E-14	303.27	0.1005	95.576	1.0203E-09
3.7700	2.4318E-03	2.7726E-14	300.52	27.286	93.294	1.0637E-09
4.0600	1.7296E-03	2.1464E-14	289.73	53.537	87.753	1.0890E-09
4.3500	1.1365E-03	1.5998E-14	271.40	75.260	61.688	8.6833E-10
4.6400	6.5304E-04	1.1332E-14	247.68	89.842	37.760	6.5524E-10
4.9300	2.7088E-04	7.4428E-15	220.57	97.983	16.622	4.5671E-10
5.2200	-2.1235E-05	4.2818E-15	191.85	100.52	-1.3782	2.7791E-10
5.5100	-2.3516E-04	1.7857E-15	163.02	98.361	-16.096	1.2223E-10
5.8000	-3.8276E-04	-1.1717E-15	135.34	92.433	-27.554	-8.4349E-11
6.0900	-4.7539E-04	-1.5838E-14	109.78	84.867	-27.105	-9.0303E-10
6.3800	-5.2352E-04	-2.5903E-14	86.333	76.728	-31.121	-1.5398E-09
6.6700	-5.3673E-04	-3.2157E-14	65.370	67.689	-33.211	-1.9897E-09
6.9600	-5.2357E-04	-3.5340E-14	47.079	58.257	-33.669	-2.2726E-09
7.2500	-4.9151E-04	-3.6128E-14	31.411	48.858	-32.802	-2.4111E-09
7.5400	-4.4685E-04	-3.5122E-14	18.349	39.829	-30.908	-2.4293E-09
7.8300	-3.9485E-04	-3.2842E-14	7.8756	31.427	-28.271	-2.3514E-09
8.1200	-3.3970E-04	-2.9727E-14	0.1301	23.828	-25.147	-2.2007E-09
8.4100	-2.8463E-04	-2.6139E-14	5.7025	17.144	-21.762	-1.9985E-09
8.7000	-2.3205E-04	-2.2364E-14	9.8510	11.380	-18.306	-1.7643E-09
8.9900	-1.8363E-04	-1.8621E-14	12.477	6.5603	-14.932	-1.5143E-09
9.2800	-1.4040E-04	-1.5072E-14	13.855	2.6902	-11.758	-1.2622E-09
9.5700	-1.0291E-04	-1.1824E-14	14.245	0.1190	-8.8685	-1.0190E-09
9.8600	-7.1340E-05	-8.9444E-15	13.887	2.3088	-6.3215	-7.9256E-10
10.150	-4.5535E-05	-6.4647E-15	12.991	3.8230	-4.1455	-5.8855E-10
10.440	-2.5207E-05	-4.3898E-15	11.739	4.7657	-2.3561	-4.1031E-10
10.730	-9.5805E-06	-2.7043E-15	10.281	5.2406	-0.9188	-2.5934E-10
11.020	1.9271E-06	-1.3790E-15	8.7399	5.3463	0.1895	-1.3559E-10
11.310	9.9335E-06	-3.7549E-16	7.2094	5.1737	1.0009	-3.7834E-11
11.600	1.5052E-05	3.3271E-17	5.7588	4.8033	1.5532	3.4333E-12
11.890	1.7863E-05	7.9754E-17	4.4353	4.3046	1.8868	8.4238E-12
12.180	1.8898E-05	1.0814E-16	3.2679	3.7349	2.0420	1.1685E-11

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12.470	1.8623E-05	1.2228E-16	2.2703	3.1405	2.0576	1.3509E-11
12.760	1.7440E-05	1.2563E-16	1.4390	2.5566	1.9691	1.4185E-11
13.050	1.5677E-05	1.2121E-16	0.7687	2.0089	1.8082	1.3980E-11
13.340	1.3601E-05	1.1156E-16	0.2534	1.5144	1.6018	1.3139E-11
13.630	1.1415E-05	9.8759E-17	0.1017	1.0832	1.3721	1.1871E-11
13.920	9.2702E-06	8.4436E-17	0.3614	0.7192	1.1368	1.0355E-11
14.210	7.2700E-06	6.9826E-17	0.5252	0.4181	0.9092	8.7328E-12
14.500	5.4802E-06	5.5816E-17	0.6122	0.1821	0.6987	7.1162E-12
14.790	3.9357E-06	4.2995E-17	0.6402	4.9502E-03	0.5113	5.5861E-12
15.080	2.6477E-06	3.1715E-17	0.6247	0.1108	0.3504	4.1976E-12
15.370	1.6007E-06	2.2137E-17	0.5793	0.1931	0.2157	2.9837E-12
15.660	7.8453E-07	1.4279E-17	0.5154	0.2406	0.1076	1.9593E-12
15.950	1.7924E-07	8.0598E-18	0.4419	0.2607	2.5030E-02	1.1255E-12
16.240	-2.4563E-07	3.3293E-18	0.3657	0.2604	-3.4898E-02	4.7302E-13
16.530	-5.2149E-07	-1.0297E-18	0.2919	0.2456	-7.5358E-02	-1.4880E-13
16.820	-6.7867E-07	-2.5659E-17	0.2240	0.2214	-9.9721E-02	-3.7702E-12
17.110	-7.4504E-07	-4.0902E-17	0.1639	0.1919	-0.1113	-6.1093E-12
17.400	-7.4515E-07	-4.8801E-17	0.1128	0.1603	-0.1131	-7.4078E-12
17.690	-6.9988E-07	-5.1197E-17	7.0708E-02	0.1291	-0.1079	-7.8960E-12
17.980	-6.2627E-07	-4.9686E-17	3.7126E-02	9.9910E-02	-9.8110E-02	-7.7837E-12
18.270	-5.3779E-07	-4.5600E-17	1.1772E-02	7.3839E-02	-8.5556E-02	-7.2544E-12
18.560	-4.4460E-07	-4.0008E-17	5.3379E-03	5.1451E-02	-7.1811E-02	-6.4620E-12
18.850	-3.5397E-07	-3.3739E-17	1.7425E-02	3.2901E-02	-5.8032E-02	-5.5314E-12
19.140	-2.7075E-07	-2.7402E-17	2.4696E-02	1.7954E-02	-4.5048E-02	-4.5590E-12
19.430	-1.9786E-07	-2.1421E-17	2.8213E-02	6.5795E-03	-3.3400E-02	-3.6160E-12
19.720	-1.3669E-07	-1.6066E-17	2.8932E-02	1.2030E-03	-2.3406E-02	-2.7512E-12
20.010	-8.7493E-08	-1.1486E-17	2.7678E-02	6.7749E-03	-1.5195E-02	-1.9947E-12
20.300	-4.9961E-08	-7.7333E-18	2.5131E-02	1.0250E-02	-8.7982E-03	-1.3618E-12
20.590	-2.2644E-08	-4.7965E-18	2.1830E-02	1.2112E-02	-4.0426E-03	-8.5632E-13
20.880	-4.0717E-09	-2.6155E-18	1.8175E-02	1.2805E-02	-7.3682E-04	-4.7330E-13
21.170	7.2197E-09	-1.1015E-18	1.4448E-02	1.2720E-02	1.3240E-03	-2.0200E-13



21.460	1.2724E-08	-1.4934E-19	1.0823E-02	1.2185E-02	2.3643E-03	-2.7750E-14
21.750	1.3892E-08	3.3507E-20	7.3902E-03	1.1463E-02	2.6151E-03	6.3078E-15
22.040	1.2100E-08	4.9312E-20	4.1690E-03	1.0749E-02	2.3072E-03	9.4029E-15
22.330	8.6355E-09	4.3842E-20	1.0853E-03	1.0173E-02	1.6676E-03	8.4663E-15
22.620	4.7118E-09	2.7365E-20	1.7383E-03	9.7977E-03	9.2135E-04	5.3510E-15
22.910	1.4844E-09	9.8729E-21	4.5457E-03	1.9219E-03	5.3109E-02	3.5323E-13
23.200	7.7049E-11	1.1771E-21	2.8839E-03	6.3975E-03	4.4945E-03	6.8666E-14
23.490	-1.7951E-10	-8.6155E-21	8.3765E-04	5.0274E-03	-1.4520E-02	-6.9690E-13
23.780	-9.1425E-11	-5.4937E-21	3.1691E-05	1.6680E-03	-9.4574E-03	-5.6829E-13
24.070	-1.7286E-11	-1.2864E-21	1.3001E-04	2.7737E-05	-2.1781E-03	-1.6209E-13
24.360	2.8188E-12	7.9049E-24	4.9557E-05	2.1680E-04	4.1874E-04	1.1743E-15
24.650	2.6481E-12	1.4750E-23	4.2927E-06	9.0379E-05	4.5312E-04	2.5239E-15
24.940	7.5786E-13	5.0720E-24	2.8661E-06	1.0317E-05	9.9027E-05	6.6274E-16
25.230	1.4963E-14	3.5338E-25	1.6950E-06	4.5162E-06	3.1123E-06	7.3502E-17
25.520	-4.9033E-14	-2.6750E-24	2.4786E-07	3.0287E-06	-1.3991E-05	-7.6327E-16
25.810	-1.1564E-14	-7.9777E-25	6.1636E-08	4.7523E-07	-4.1940E-06	-2.8932E-16
26.100	2.1366E-16	-1.8921E-26	2.7839E-08	1.0297E-07	9.4010E-08	-8.3252E-18
26.390	5.2954E-16	3.0138E-27	1.9312E-09	4.9616E-08	2.7395E-07	1.5592E-18
26.680	7.1789E-17	5.2702E-28	9.3876E-10	3.7039E-09	4.2690E-08	3.1340E-19
26.970	-1.0301E-17	-4.0606E-28	2.1788E-10	1.6255E-09	-6.1805E-09	-2.4364E-19
27.260	-4.4227E-18	-2.7824E-28	3.9121E-12	3.9132E-10	-2.6536E-09	-1.6694E-19
27.550	-2.6264E-19	-2.5977E-29	9.1010E-12	4.6603E-12	-1.5758E-10	-1.5586E-20
27.840	1.2876E-19	6.6028E-31	1.2158E-12	1.5990E-11	7.7258E-11	3.9617E-22
28.130	2.9483E-20	1.9553E-31	1.7273E-13	2.2224E-12	1.7690E-11	1.1732E-22
28.420	-6.5579E-22	3.5898E-33	7.3413E-14	2.9023E-13	-3.9347E-13	2.1539E-24
28.710	-1.3203E-21	-7.7164E-32	4.4420E-15	1.2657E-13	-7.9217E-13	-4.6298E-23
29.000	-1.7863E-22	-1.7299E-32	0.0000	0.0000	-1.0718E-13	-1.0380E-23

LOAD CASE ENV : 2



CASE NAME : MAXIMUM ENVELOPE

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

5985.83 2515.95 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

0.00000 0.00000 -5754.40

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.80221E-03 0.0202003 -1.51781E-14

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

2.15759E-12 -1.50037E-16 -4.71135E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE



* PILE GROUP * 1

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-562.04 206.49 -3.1643E-09 3.1451E-08 7.0683E-08 184.91

STR, KN/ M**2

1.0759E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-562.04 206.49 -3.1643E-09 3.1451E-08 7.0683E-08 184.91

STR, KN/ M**2



1.0759E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN-M	KN	KN/M	KN/M
0.0000	2.0200E-02	-1.4810E-13	184.91	206.42	0.0000	0.0000
0.2900	1.8722E-02	-1.4671E-13	125.83	204.56	13.471	-1.0721E-10
0.5800	1.7200E-02	-1.4301E-13	67.908	198.57	28.237	-2.3827E-10
0.8700	1.5656E-02	-1.3736E-13	12.351	188.54	41.643	-3.7053E-10
1.1600	1.4113E-02	-1.3010E-13	53.692	174.93	53.057	-4.9571E-10
1.4500	1.2592E-02	-1.2159E-13	100.86	158.45	61.458	-6.0112E-10
1.7400	1.1111E-02	-1.1214E-13	142.88	139.89	67.499	-6.8930E-10
2.0300	9.6874E-03	-1.0207E-13	179.25	119.73	72.637	-7.7241E-10
2.3200	8.3355E-03	-9.1648E-14	209.56	99.539	67.778	-7.5039E-10
2.6100	7.0676E-03	-8.1135E-14	234.21	79.694	70.273	-8.1137E-10
2.9000	5.8935E-03	-7.0759E-14	253.00	59.398	70.858	-8.5458E-10
3.1900	4.8207E-03	-6.0723E-14	265.90	38.628	73.468	-9.2853E-10
3.4800	3.8545E-03	-5.1200E-14	272.67	17.207	75.273	-1.0017E-09
3.7700	2.9988E-03	-4.2333E-14	273.18	7.6696	76.377	-1.0782E-09
4.0600	2.2526E-03	-3.4229E-14	267.32	29.854	76.709	-1.1656E-09
4.3500	1.6146E-03	-2.6963E-14	255.08	49.466	58.822	-9.8229E-10
4.6400	1.0832E-03	-2.0567E-14	237.97	63.995	42.038	-7.9817E-10
4.9300	6.4508E-04	-1.5042E-14	217.41	73.774	26.568	-6.1952E-10
5.2200	2.9230E-04	-1.0363E-14	194.73	79.246	12.734	-4.5143E-10
5.5100	1.6111E-05	-6.4817E-15	171.10	80.930	0.7402	-2.9777E-10
5.8000	-1.9267E-04	-3.3374E-15	147.52	79.388	-9.3095	-1.6125E-10
6.0900	-3.4325E-04	-8.5831E-16	124.85	75.857	-13.135	-3.2846E-11

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6.3800	-4.4447E-04	1.0802E-14	103.38	71.140	-17.734	4.3100E-10
6.6700	-5.0474E-04	2.5417E-14	83.498	65.293	-20.962	1.0556E-09
6.9600	-5.3188E-04	3.5438E-14	65.472	58.699	-22.957	1.5295E-09
7.2500	-5.3297E-04	4.1636E-14	49.480	51.698	-23.873	1.8650E-09
7.5400	-5.1432E-04	4.4729E-14	35.555	44.582	-23.876	2.0765E-09
7.8300	-4.8142E-04	4.5371E-14	23.833	37.595	-23.135	2.1803E-09
8.1200	-4.3898E-04	4.4145E-14	14.070	30.929	-21.811	2.1934E-09
8.4100	-3.9090E-04	4.1561E-14	6.1439	24.730	-20.060	2.1328E-09
8.7000	-3.4037E-04	3.8054E-14	0.5557	19.112	-18.022	2.0149E-09
8.9900	-2.8987E-04	3.3988E-14	5.2949	14.129	-15.821	1.8550E-09
9.2800	-2.4129E-04	2.9657E-14	8.6830	9.8281	-13.563	1.6670E-09
9.5700	-1.9601E-04	2.5295E-14	10.916	6.2176	-11.337	1.4631E-09
9.8600	-1.5492E-04	2.1078E-14	12.186	3.2377	-9.2133	1.2535E-09
10.150	-1.1854E-04	1.7133E-14	12.676	0.8515	-7.2430	1.0469E-09
10.440	-8.7081E-05	1.3546E-14	12.555	1.1493	-5.4630	8.4983E-10
10.730	-6.0432E-05	1.0367E-14	11.976	2.5084	-3.8898	6.6729E-10
11.020	-3.8257E-05	7.6168E-15	11.073	3.4385	-2.5248	5.0269E-10
11.310	-2.0517E-05	5.2947E-15	9.9594	4.0058	-1.3875	3.5807E-10
11.600	-6.7669E-06	3.3828E-15	8.7317	4.2750	-0.4687	2.3429E-10
11.890	3.4853E-06	1.8515E-15	7.4665	4.3071	0.2471	1.3126E-10
12.180	1.0746E-05	6.6324E-16	6.2237	4.1583	0.7794	4.8099E-11
12.470	1.5514E-05	-2.1582E-17	5.0479	3.8785	1.1504	-1.6004E-12
12.760	1.8260E-05	-8.1047E-17	3.9700	3.5110	1.3838	-6.1421E-12
13.050	1.9416E-05	-1.2020E-16	3.0095	3.0924	1.5031	-9.3056E-12
13.340	1.9366E-05	-1.4289E-16	2.1777	2.6525	1.5308	-1.1295E-11
13.630	1.8444E-05	-1.5264E-16	1.4755	2.2148	1.4880	-1.2315E-11
13.920	1.6933E-05	-1.5258E-16	0.9044	1.7969	1.3937	-1.2559E-11
14.210	1.5064E-05	-1.4544E-16	0.4481	1.4115	1.2645	-1.2209E-11
14.500	1.3023E-05	-1.3352E-16	9.6091E-02	1.0667	1.1144	-1.1426E-11
14.790	1.0951E-05	-1.1871E-16	0.1852	0.7673	0.9550	-1.0352E-11
15.080	8.9534E-06	-1.0250E-16	0.3662	0.5145	0.7954	-9.1056E-12



15.370	7.1024E-06	-8.6050E-17	0.4804	0.3088	0.6425	-7.7844E-12
15.660	5.4438E-06	-7.0199E-17	0.5406	0.1448	0.5014	-6.4650E-12
15.950	4.0029E-06	-5.5532E-17	0.5588	1.8729E-02	0.3752	-5.2048E-12
16.240	2.7872E-06	-4.2413E-17	0.5456	8.1634E-02	0.2658	-4.0444E-12
16.530	1.7940E-06	-3.1034E-17	0.5102	0.1452	0.1740	-3.0099E-12
16.820	1.0087E-06	-2.1446E-17	0.4604	0.1845	9.9475E-02	-2.1150E-12
17.110	4.0393E-07	-1.3605E-17	0.4025	0.2041	4.0495E-02	-1.3639E-12
17.400	-4.2619E-08	-7.3920E-18	0.3414	0.2085	-4.3421E-03	-7.5312E-13
17.690	-3.5469E-07	-2.6437E-18	0.2811	0.2017	-3.6716E-02	-2.7366E-13
17.980	-5.5583E-07	8.5973E-18	0.2241	0.1871	-5.8443E-02	9.0396E-13
18.270	-6.6830E-07	3.3931E-17	0.1724	0.1674	-7.1358E-02	3.6230E-12
18.560	-7.1238E-07	4.9903E-17	0.1270	0.1451	-7.7227E-02	5.4098E-12
18.850	-7.0594E-07	5.8441E-17	8.8327E-02	0.1220	-7.7680E-02	6.4307E-12
19.140	-6.6421E-07	6.1288E-17	5.6549E-02	9.9387E-02	-7.4172E-02	6.8440E-12
19.430	-5.9984E-07	5.9969E-17	3.1288E-02	7.8292E-02	-6.7962E-02	6.7946E-12
19.720	-5.2293E-07	5.5778E-17	1.1751E-02	5.9329E-02	-6.0102E-02	6.4107E-12
20.010	-4.4132E-07	4.9779E-17	3.6782E-03	4.2871E-02	-5.1441E-02	5.8024E-12
20.300	-3.6080E-07	4.2819E-17	1.3855E-02	2.9025E-02	-4.2644E-02	5.0609E-12
20.590	-2.8544E-07	3.5549E-17	2.0392E-02	1.7850E-02	-3.4202E-02	4.2597E-12
20.880	-2.1787E-07	2.8452E-17	2.4016E-02	9.0533E-03	-2.6462E-02	3.4557E-12
21.170	-1.5958E-07	2.1866E-17	2.5393E-02	2.3683E-03	-1.9642E-02	2.6914E-12
21.460	-1.1115E-07	1.6011E-17	2.5108E-02	2.9133E-03	-1.3863E-02	1.9969E-12
21.750	-7.2531E-08	1.1019E-17	2.3654E-02	6.2740E-03	-9.1643E-03	1.3922E-12
22.040	-4.3178E-08	6.9534E-18	2.1431E-02	8.4121E-03	-5.5260E-03	8.8990E-13
22.330	-2.2215E-08	3.8319E-18	1.8747E-02	9.6324E-03	-2.8793E-03	4.9666E-13
22.620	-8.6801E-09	1.6419E-18	1.5824E-02	1.0215E-02	-1.1392E-03	2.1548E-13
22.910	-1.4848E-09	3.5423E-19	1.2833E-02	1.8083E-02	-5.3122E-02	1.2674E-11
23.200	5.7879E-10	-6.3404E-21	5.3688E-03	2.0920E-02	3.3763E-02	-3.6986E-13
23.490	5.0759E-10	-8.0139E-21	7.1359E-04	1.0108E-02	4.1058E-02	-6.4824E-13
23.780	1.5834E-10	-2.8414E-21	4.9827E-04	1.7885E-03	1.6379E-02	-2.9393E-13
24.070	7.5946E-12	-2.5965E-22	3.2347E-04	7.3475E-04	9.5692E-04	-3.2716E-14

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24.360	-1.3570E-11	2.0819E-21	7.2898E-05	5.7195E-04	-2.0159E-03	3.0928E-13
24.650	-5.5048E-12	1.0042E-21	8.3588E-06	1.4211E-04	-9.4194E-04	1.7183E-13
24.940	-7.2777E-13	1.7691E-22	9.5420E-06	9.7451E-06	-9.5095E-05	2.3117E-14
25.230	2.3209E-13	-2.6993E-24	2.7304E-06	1.6553E-05	4.8275E-05	-5.6145E-16
25.520	1.0935E-13	-1.8272E-24	6.1463E-08	5.0713E-06	3.1203E-05	-5.2135E-16
25.810	1.0763E-14	-2.4430E-25	2.1140E-07	3.5748E-08	3.9032E-06	-8.8600E-17
26.100	-3.3830E-15	4.6811E-25	4.1153E-08	3.7031E-07	-1.4885E-06	2.0597E-16
26.390	-1.0365E-15	1.9241E-25	3.4066E-09	7.5072E-08	-5.3624E-07	9.9541E-17
26.680	-2.2639E-17	1.0727E-26	2.3869E-09	5.4834E-09	-1.3463E-08	6.3788E-18
26.970	3.7132E-17	-5.5797E-28	2.3044E-10	4.2172E-09	2.2279E-08	-3.3478E-19
27.260	6.5360E-18	-1.2348E-28	5.9131E-11	4.2806E-10	3.9216E-09	-7.4086E-20
27.550	-4.6256E-19	3.4065E-29	1.7814E-11	1.0133E-10	-2.7754E-10	2.0439E-20
27.840	-3.2424E-19	5.6186E-29	3.9061E-13	3.1813E-11	-1.9454E-10	3.3712E-20
28.130	-3.0131E-20	7.1198E-30	6.3932E-13	8.6526E-13	-1.8079E-11	4.2719E-21
28.420	8.1582E-21	-1.0662E-31	1.1105E-13	1.1148E-12	4.8949E-12	-6.3971E-23
28.710	2.4817E-21	-4.3443E-32	7.3274E-15	1.9147E-13	1.4890E-12	-2.6066E-23
29.000	-2.8095E-22	1.8731E-32	0.0000	0.0000	-1.6857E-13	1.1239E-23

* PILE GROUP * 2

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03



FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-562.04 165.16 -2.6913E-09 3.1451E-08 6.3592E-08 131.57

STR, KN/ M**2

8243.6

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-562.04 165.16 -2.6913E-09 3.1451E-08 6.3592E-08 131.57

STR, KN/ M**2

8243.6

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT

y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR

M M M KN- M KN KN/ M KN/ M

0.0000 2.0200E-02 -1.4810E-13 131.57 165.11 0.0000 0.0000

0.2900 1.8733E-02 -1.4685E-13 84.471 163.74 9.9027 -7.8839E-11

0.5800 1.7238E-02 -1.4350E-13 38.219 159.34 20.792 -1.7565E-10



0.8700	1.5734E-02	-1.3835E-13	20.741	151.94	30.747	-2.7421E-10
1.1600	1.4237E-02	-1.3171E-13	62.153	141.86	39.324	-3.6872E-10
1.4500	1.2766E-02	-1.2388E-13	100.27	129.62	45.779	-4.4998E-10
1.7400	1.1335E-02	-1.1513E-13	134.56	115.74	50.593	-5.1995E-10
2.0300	9.9583E-03	-1.0573E-13	164.63	100.56	54.860	-5.8787E-10
2.3200	8.6472E-03	-9.5931E-14	190.12	85.243	51.659	-5.7708E-10
2.6100	7.4123E-03	-8.5953E-14	211.31	70.025	54.148	-6.3152E-10
2.9000	6.2620E-03	-7.6008E-14	227.99	54.273	55.315	-6.7444E-10
3.1900	5.2030E-03	-6.6282E-14	240.07	37.918	58.258	-7.4465E-10
3.4800	4.2402E-03	-5.6940E-14	247.31	20.753	60.838	-8.1846E-10
3.7700	3.3783E-03	-4.8121E-14	249.48	2.8620	63.209	-9.0044E-10
4.0600	2.6159E-03	-3.9937E-14	246.40	18.635	65.450	-9.9920E-10
4.3500	1.9543E-03	-3.2469E-14	237.87	35.672	52.310	-8.6907E-10
4.6400	1.3920E-03	-2.5766E-14	225.01	48.927	39.688	-7.3466E-10
4.9300	9.1762E-04	-1.9847E-14	208.90	58.564	27.767	-6.0055E-10
5.2200	5.2520E-04	-1.4705E-14	190.55	64.835	16.809	-4.7066E-10
5.5100	2.0763E-04	-1.0317E-14	170.90	68.059	7.0079	-3.4821E-10
5.8000	-4.2691E-05	-6.6392E-15	150.76	68.599	-1.5155	-2.3568E-10
6.0900	-2.3358E-04	-3.6200E-15	130.86	67.189	-6.5672	-1.0178E-10
6.3800	-3.7279E-04	-1.1985E-15	111.60	64.440	-10.928	-3.5132E-11
6.6700	-4.6785E-04	7.1851E-15	93.355	60.576	-14.275	2.1924E-10
6.9600	-5.2591E-04	2.2204E-14	76.387	55.883	-16.677	7.0410E-10
7.2500	-5.5362E-04	3.2943E-14	60.916	50.630	-18.219	1.0841E-09
7.5400	-5.5706E-04	4.0058E-14	47.055	45.052	-19.000	1.3663E-09
7.8300	-5.4171E-04	4.4163E-14	34.878	39.359	-19.126	1.5592E-09
8.1200	-5.1239E-04	4.5829E-14	24.455	33.727	-18.705	1.6730E-09
8.4100	-4.7327E-04	4.5572E-14	15.611	28.298	-17.844	1.7182E-09
8.7000	-4.2789E-04	4.3851E-14	8.2709	23.186	-16.646	1.7059E-09
8.9900	-3.7921E-04	4.1067E-14	2.3325	18.480	-15.206	1.6468E-09
9.2800	-3.2959E-04	3.7565E-14	2.8153	14.235	-13.611	1.5514E-09
9.5700	-2.8090E-04	3.3632E-14	6.3283	10.486	-11.937	1.4293E-09



9.8600	-2.3455E-04	2.9505E-14	8.8234	7.2689	-10.249	1.2892E-09
10.150	-1.9154E-04	2.5369E-14	10.447	4.5360	-8.5991	1.1389E-09
10.440	-1.5255E-04	2.1369E-14	11.342	2.2695	-7.0313	9.8496E-10
10.730	-1.1794E-04	1.7612E-14	11.643	0.4413	-5.5773	8.3287E-10
11.020	-8.7841E-05	1.4169E-14	11.475	1.1383	-4.2593	6.8703E-10
11.310	-6.1947E-05	1.1085E-14	10.951	2.2030	-3.0780	5.5076E-10
11.600	-4.0318E-05	8.3807E-15	10.170	2.9468	-2.0516	4.2646E-10
11.890	-2.2764E-05	6.0602E-15	9.2197	3.4162	-1.1856	3.1564E-10
12.180	-8.9033E-06	4.1118E-15	8.1714	3.6569	-0.4744	2.1909E-10
12.470	1.6841E-06	2.5136E-15	7.0850	3.7124	9.1750E-02	1.3694E-10
12.760	9.4332E-06	1.2366E-15	6.0079	3.6229	0.5252	6.8851E-11
13.050	1.4776E-05	2.4693E-16	4.9763	3.4249	0.8404	1.4045E-11
13.340	1.8125E-05	-4.6780E-17	4.0165	3.1504	1.0526	-2.7168E-12
13.630	1.9864E-05	-9.6185E-17	3.1462	2.8271	1.1775	-5.7013E-12
13.920	2.0344E-05	-1.2859E-16	2.3772	2.4780	1.2303	-7.7759E-12
14.210	1.9872E-05	-1.4713E-16	1.7119	2.1219	1.2255	-9.0736E-12
14.500	1.8715E-05	-1.5470E-16	1.1561	1.7736	1.1766	-9.7258E-12
14.790	1.7099E-05	-1.5386E-16	0.6978	1.4441	1.0955	-9.8578E-12
15.080	1.5211E-05	-1.4687E-16	0.3297	1.1413	0.9927	-9.5859E-12
15.370	1.3197E-05	-1.3564E-16	4.3437E-02	0.8706	0.8772	-9.0150E-12
15.660	1.1175E-05	-1.2174E-16	0.1922	0.6343	0.7562	-8.2372E-12
15.950	9.2304E-06	-1.0646E-16	0.3430	0.4345	0.6356	-7.3312E-12
16.240	7.4228E-06	-9.0812E-17	0.4404	0.2691	0.5200	-6.3623E-12
16.530	5.7916E-06	-7.5546E-17	0.4941	0.1352	0.4127	-5.3833E-12
16.820	4.3600E-06	-6.1206E-17	0.5133	3.0372E-02	0.3159	-4.4348E-12
17.110	3.1350E-06	-4.8155E-17	0.5060	5.6162E-02	0.2309	-3.5469E-12
17.400	2.1184E-06	-3.6605E-17	0.4795	0.1125	0.1586	-2.7400E-12
17.690	1.2960E-06	-2.6650E-17	0.4398	0.1493	9.8563E-02	-2.0268E-12
17.980	6.4580E-07	-1.8291E-17	0.3920	0.1703	4.9888E-02	-1.4130E-12
18.270	1.4949E-07	-1.1464E-17	0.3403	0.1785	1.1728E-02	-8.9931E-13
18.560	-2.1291E-07	-6.0526E-18	0.2880	0.1770	-1.6958E-02	-4.8208E-13



18.850	-4.6175E-07	-1.9152E-18	0.2373	0.1683	-3.7331E-02	-1.5484E-13
19.140	-6.1679E-07	1.1579E-17	0.1901	0.1548	-5.0604E-02	9.5000E-13
19.430	-6.9648E-07	3.3526E-17	0.1474	0.1384	-5.7977E-02	2.7908E-12
19.720	-7.1759E-07	4.7131E-17	0.1099	0.1206	-6.0595E-02	3.9798E-12
20.010	-6.9490E-07	5.4001E-17	7.7613E-02	0.1026	-5.9511E-02	4.6246E-12
20.300	-6.4112E-07	5.5605E-17	5.0824E-02	8.5423E-02	-5.5674E-02	4.8286E-12
20.590	-5.6699E-07	5.3258E-17	2.8764E-02	6.9720E-02	-4.9916E-02	4.6886E-12
20.880	-4.8133E-07	4.8108E-17	1.0909E-02	5.5940E-02	-4.2951E-02	4.2929E-12
21.170	-3.9130E-07	4.1148E-17	4.3390E-03	4.4367E-02	-3.5387E-02	3.7211E-12
21.460	-3.0261E-07	3.3223E-17	1.5627E-02	3.5060E-02	-2.7728E-02	3.0443E-12
21.750	-2.1976E-07	2.5054E-17	2.4543E-02	2.8024E-02	-2.0401E-02	2.3258E-12
22.040	-1.4635E-07	1.7259E-17	3.1718E-02	2.3071E-02	-1.3761E-02	1.6229E-12
22.330	-8.5252E-08	1.0378E-17	3.7725E-02	1.9899E-02	-8.1183E-03	9.8825E-13
22.620	-3.8916E-08	4.8953E-18	4.3047E-02	1.8177E-02	-3.7525E-03	4.7203E-13
22.910	-9.5013E-09	1.2638E-18	4.8059E-02	3.2492E-02	-0.3399	4.5217E-11
23.200	9.7611E-10	-7.5515E-21	2.4179E-02	7.4068E-02	5.6939E-02	-4.4050E-13
23.490	1.8720E-09	-2.0960E-20	5.0928E-03	4.3855E-02	0.1514	-1.6954E-12
23.780	7.2779E-10	-8.5768E-21	1.2570E-03	1.0982E-02	7.5286E-02	-8.8722E-13
24.070	8.7111E-11	-1.1523E-21	1.2755E-03	1.5264E-03	1.0976E-02	-1.4518E-13
24.360	-4.1873E-11	4.8030E-21	3.7128E-04	2.2004E-03	-6.2204E-03	7.1351E-13
24.650	-2.3245E-11	2.8894E-21	7.2910E-07	6.9802E-04	-3.9775E-03	4.9441E-13
24.940	-4.7844E-12	6.3857E-22	3.3553E-05	2.1840E-05	-6.2516E-04	8.3440E-14
25.230	4.5621E-13	-3.9418E-24	1.3238E-05	5.6281E-05	9.4893E-05	-8.1990E-16
25.520	4.4541E-13	-5.1112E-24	9.0827E-07	2.4093E-05	1.2709E-04	-1.4584E-15
25.810	7.1121E-14	-8.9026E-25	7.3535E-07	1.9264E-06	2.5793E-05	-3.2287E-16
26.100	-8.4169E-15	8.9239E-25	2.0901E-07	1.2669E-06	-3.7034E-06	3.9265E-16
26.390	-4.5056E-15	5.6335E-25	6.0659E-10	3.7644E-07	-2.3309E-06	2.9144E-16
26.680	-3.5130E-16	5.0220E-26	9.3220E-09	3.4840E-09	-2.0891E-07	2.9864E-17
26.970	1.2520E-16	-1.3674E-27	1.4271E-09	1.6330E-08	7.5123E-08	-8.2046E-19
27.260	3.2660E-17	-3.9119E-28	1.4954E-10	2.5956E-09	1.9596E-08	-2.3471E-19
27.550	3.8243E-20	-5.4134E-30	7.8247E-11	2.4758E-10	2.2946E-11	-3.2481E-21



27.840 -1.2543E-18 1.5297E-28 5.9265E-12 1.3864E-10 -7.5257E-10 9.1780E-20
 28.130 -1.9015E-19 2.5248E-29 2.1654E-12 1.1179E-11 -1.1409E-10 1.5149E-20
 28.420 2.0885E-20 -2.0693E-31 5.5686E-13 3.7293E-12 1.2531E-11 -1.2416E-22
 28.710 1.0945E-20 -1.2787E-31 2.5425E-15 9.6012E-13 6.5671E-12 -7.6723E-23
 29.000 1.0102E-22 -4.3974E-33 0.0000 0.0000 6.0611E-14 -2.6384E-24

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -562.04 162.99 -2.6660E-09 3.1451E-08 6.3199E-08 128.68

STR, KN/ M**2

8107.4

THE PILE COORDINATE SYSTEM (LOCAL AXES)

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -562.04 162.99 -2.6660E-09 3.1451E-08 6.3199E-08 128.68

STR, KN/ M**2
 8107.4

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	2.0200E-02	-1.4810E-13	128.68	162.94	0.0000	0.0000
0.2900	1.8733E-02	-1.4686E-13	82.213	161.60	9.7259	-7.7433E-11
0.5800	1.7240E-02	-1.4352E-13	36.576	157.27	20.423	-1.7254E-10
0.8700	1.5738E-02	-1.3841E-13	21.800	150.00	30.205	-2.6941E-10
1.1600	1.4244E-02	-1.3180E-13	62.671	140.10	38.640	-3.6238E-10
1.4500	1.2776E-02	-1.2401E-13	100.31	128.07	44.994	-4.4239E-10
1.7400	1.1348E-02	-1.1530E-13	134.18	114.43	49.743	-5.1140E-10
2.0300	9.9733E-03	-1.0594E-13	163.90	99.499	53.960	-5.7850E-10
2.3200	8.6646E-03	-9.6176E-14	189.12	84.425	50.837	-5.6821E-10
2.6100	7.4316E-03	-8.6230E-14	210.10	69.445	53.318	-6.2222E-10
2.9000	6.2827E-03	-7.6311E-14	226.65	53.928	54.506	-6.6501E-10
3.1900	5.2247E-03	-6.6605E-14	238.67	37.805	57.454	-7.3489E-10
3.4800	4.2623E-03	-5.7276E-14	245.91	20.866	60.060	-8.0856E-10
3.7700	3.4002E-03	-4.8462E-14	248.15	3.1921	62.481	-8.9062E-10
4.0600	2.6371E-03	-4.0277E-14	245.19	18.096	64.800	-9.8968E-10

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



4.3500	1.9744E-03	-3.2800E-14	236.85	34.979	51.901	-8.6224E-10
4.6400	1.4104E-03	-2.6083E-14	224.21	48.148	39.495	-7.3039E-10
4.9300	9.3417E-04	-2.0143E-14	208.33	57.757	27.762	-5.9862E-10
5.2200	5.3960E-04	-1.4977E-14	190.22	64.052	16.962	-4.7079E-10
5.5100	2.1975E-04	-1.0561E-14	170.78	67.340	7.2846	-3.5008E-10
5.8000	-3.2894E-05	-6.8537E-15	150.84	67.976	-1.1468	-2.3895E-10
6.0900	-2.2608E-04	-3.8037E-15	131.10	66.668	-6.2429	-1.0503E-10
6.3800	-3.6751E-04	-1.3515E-15	111.98	64.019	-10.581	-3.8908E-11
6.6700	-4.6464E-04	5.8846E-15	93.838	60.257	-13.924	1.7634E-10
6.9600	-5.2457E-04	2.1205E-14	76.947	55.666	-16.337	6.6039E-10
7.2500	-5.5393E-04	3.2224E-14	61.523	50.508	-17.904	1.0415E-09
7.5400	-5.5879E-04	3.9593E-14	47.683	45.018	-18.718	1.3263E-09
7.8300	-5.4461E-04	4.3922E-14	35.497	39.402	-18.884	1.5230E-09
8.1200	-5.1621E-04	4.5781E-14	25.053	33.833	-18.507	1.6413E-09
8.4100	-4.7777E-04	4.5686E-14	16.171	28.455	-17.691	1.6917E-09
8.7000	-4.3285E-04	4.4095E-14	8.7798	23.380	-16.538	1.6847E-09
8.9900	-3.8442E-04	4.1412E-14	2.7820	18.699	-15.140	1.6309E-09
9.2800	-3.3487E-04	3.7983E-14	2.4311	14.467	-13.582	1.5406E-09
9.5700	-2.8610E-04	3.4098E-14	6.0127	10.718	-11.941	1.4231E-09
9.8600	-2.3955E-04	2.9995E-14	8.5757	7.4957	-10.280	1.2872E-09
10.150	-1.9624E-04	2.5866E-14	10.265	4.7506	-8.6522	1.1404E-09
10.440	-1.5686E-04	2.1857E-14	11.220	2.4665	-7.1006	9.8940E-10
10.730	-1.2181E-04	1.8077E-14	11.575	0.6165	-5.6575	8.3958E-10
11.020	-9.1256E-05	1.4602E-14	11.455	0.9867	-4.3458	6.9538E-10
11.310	-6.4919E-05	1.1479E-14	10.971	2.0773	-3.1680	5.6018E-10
11.600	-4.2814E-05	8.7326E-15	10.222	2.8469	-2.1397	4.3641E-10
11.890	-2.4804E-05	6.3670E-15	9.2968	3.3411	-1.2688	3.2569E-10
12.180	-1.0519E-05	4.3732E-15	8.2665	3.6049	-0.5504	2.2885E-10
12.470	4.5557E-07	2.7308E-15	7.1917	3.6812	2.4376E-02	1.4612E-10
12.760	8.5488E-06	1.4120E-15	6.1207	3.6099	0.4675	7.7212E-11
13.050	1.4190E-05	3.8384E-16	5.0903	3.4271	0.7927	2.1442E-11



13.340	1.7792E-05	-3.7114E-17	4.1277	3.1651	1.0148	-2.1169E-12
13.630	1.9741E-05	-8.9396E-17	3.2515	2.8513	1.1492	-5.2041E-12
13.920	2.0387E-05	-1.2426E-16	2.4740	2.5091	1.2108	-7.3801E-12
14.210	2.0042E-05	-1.4486E-16	1.7988	2.1575	1.2139	-8.7741E-12
14.500	1.8978E-05	-1.5410E-16	1.2314	1.8116	1.1718	-9.5149E-12
14.790	1.7425E-05	-1.5457E-16	0.7621	1.4827	1.0964	-9.7259E-12
15.080	1.5572E-05	-1.4855E-16	0.3831	1.1790	0.9982	-9.5223E-12
15.370	1.3574E-05	-1.3800E-16	8.6339E-02	0.9061	0.8860	-9.0083E-12
15.660	1.1549E-05	-1.2454E-16	0.1591	0.6669	0.7675	-8.2761E-12
15.950	9.5883E-06	-1.0949E-16	0.3189	0.4632	0.6485	-7.4049E-12
16.240	7.7552E-06	-9.3898E-17	0.4242	0.2941	0.5336	-6.4609E-12
16.530	6.0920E-06	-7.8558E-17	0.4847	0.1564	0.4263	-5.4978E-12
16.820	4.6241E-06	-6.4045E-17	0.5094	4.7757E-02	0.3291	-4.5576E-12
17.110	3.3620E-06	-5.0753E-17	0.5067	4.2367E-02	0.2432	-3.6714E-12
17.400	2.3065E-06	-3.8920E-17	0.4836	0.1021	0.1696	-2.8612E-12
17.690	1.4496E-06	-2.8659E-17	0.4464	0.1420	0.1083	-2.1406E-12
17.980	7.6731E-07	-1.9992E-17	0.4003	0.1656	5.8215E-02	-1.5168E-12
18.270	2.4214E-07	-1.2865E-17	0.3497	0.1761	1.8656E-02	-9.9117E-13
18.560	-1.4553E-07	-7.1738E-18	0.2977	0.1764	-1.1384E-02	-5.6116E-13
18.850	-4.1587E-07	-2.7831E-18	0.2470	0.1691	-3.3020E-02	-2.2098E-13
19.140	-5.8863E-07	4.7507E-18	0.1993	0.1567	-4.7430E-02	3.8280E-13
19.430	-6.8244E-07	2.8702E-17	0.1559	0.1411	-5.5792E-02	2.3465E-12
19.720	-7.1430E-07	4.3961E-17	0.1175	0.1237	-5.9238E-02	3.6457E-12
20.010	-6.9934E-07	5.2145E-17	8.4301E-02	0.1060	-5.8820E-02	4.3858E-12
20.300	-6.5065E-07	5.4748E-17	5.6424E-02	8.8983E-02	-5.5491E-02	4.6692E-12
20.590	-5.7936E-07	5.3116E-17	3.3350E-02	7.3268E-02	-5.0093E-02	4.5925E-12
20.880	-4.9472E-07	4.8433E-17	1.4497E-02	5.9391E-02	-4.3356E-02	4.2446E-12
21.170	-4.0426E-07	4.1730E-17	1.7090E-03	4.7666E-02	-3.5905E-02	3.7063E-12
21.460	-3.1409E-07	3.3896E-17	1.3932E-02	3.8198E-02	-2.8266E-02	3.0504E-12
21.750	-2.2908E-07	2.5692E-17	2.3734E-02	3.0969E-02	-2.0885E-02	2.3423E-12
22.040	-1.5317E-07	1.7777E-17	3.1754E-02	2.5890E-02	-1.4144E-02	1.6417E-12



22.330	-8.9574E-08	1.0732E-17	3.8571E-02	2.2624E-02	-8.3773E-03	1.0037E-12
22.620	-4.1060E-08	5.0830E-18	4.4682E-02	2.0846E-02	-3.8884E-03	4.8137E-13
22.910	-1.0099E-08	1.3209E-18	5.0470E-02	3.2985E-02	-0.3613	4.7260E-11
23.200	9.8661E-10	-7.3701E-21	2.5527E-02	7.7646E-02	5.7552E-02	-4.2993E-13
23.490	1.9650E-09	-2.1642E-20	5.4286E-03	4.6254E-02	0.1589	-1.7506E-12
23.780	7.6877E-10	-8.9101E-21	1.3004E-03	1.1675E-02	7.9525E-02	-9.2170E-13
24.070	9.3429E-11	-1.2121E-21	1.3416E-03	1.5634E-03	1.1772E-02	-1.5273E-13
24.360	-4.3677E-11	4.9289E-21	3.9316E-04	2.3127E-03	-6.4884E-03	7.3222E-13
24.650	-2.4488E-11	2.9959E-21	5.2866E-07	7.3853E-04	-4.1902E-03	5.1263E-13
24.940	-5.0878E-12	6.6767E-22	3.5166E-05	2.4756E-05	-6.6480E-04	8.7242E-14
25.230	4.6577E-13	-3.9226E-24	1.4002E-05	5.8920E-05	9.6879E-05	-8.1591E-16
25.520	4.6894E-13	-5.2932E-24	9.9023E-07	2.5471E-05	1.3380E-04	-1.5103E-15
25.810	7.5711E-14	-9.3112E-25	7.7043E-07	2.0888E-06	2.7458E-05	-3.3769E-16
26.100	-8.7004E-15	9.0573E-25	2.2131E-07	1.3266E-06	-3.8282E-06	3.9852E-16
26.390	-4.7501E-15	5.8453E-25	1.0551E-09	3.9848E-07	-2.4574E-06	3.0240E-16
26.680	-3.7718E-16	5.2902E-26	9.8022E-09	4.4096E-09	-2.2430E-07	3.1459E-17
26.970	1.3104E-16	-1.4076E-27	1.5175E-09	1.7167E-08	7.8623E-08	-8.4455E-19
27.260	3.4569E-17	-4.0714E-28	1.5472E-10	2.7588E-09	2.0742E-08	-2.4429E-19
27.550	9.7245E-20	-6.2448E-30	8.2554E-11	2.5573E-10	5.8347E-11	-3.7469E-21
27.840	-1.3182E-18	1.5823E-28	6.3720E-12	1.4624E-10	-7.9091E-10	9.4938E-20
28.130	-2.0206E-19	2.6383E-29	2.2667E-12	1.2004E-11	-1.2124E-10	1.5830E-20
28.420	2.1620E-20	-2.1026E-31	5.8947E-13	3.9020E-12	1.2972E-11	-1.2616E-22
28.710	1.1549E-20	-1.3271E-31	3.6077E-15	1.0163E-12	6.9293E-12	-7.9624E-23
29.000	1.4325E-22	-4.9681E-33	0.0000	0.0000	8.5950E-14	-2.9808E-24

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-562.04 162.99 -2.6660E-09 3.1451E-08 6.3199E-08 128.68

STR, KN/ M**2

8107.4

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-562.04 162.99 -2.6660E-09 3.1451E-08 6.3199E-08 128.68

STR, KN/ M**2

8107.4

* EFFECTS FOR Laterally LOADED PILE *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	2.0200E-02	-1.4810E-13	128.68	162.94	0.0000	0.0000
0.2900	1.8733E-02	-1.4686E-13	82.213	161.60	9.7259	-7.7433E-11
0.5800	1.7240E-02	-1.4352E-13	36.576	157.27	20.423	-1.7254E-10
0.8700	1.5738E-02	-1.3841E-13	21.800	150.00	30.205	-2.6941E-10
1.1600	1.4244E-02	-1.3180E-13	62.671	140.10	38.640	-3.6238E-10
1.4500	1.2776E-02	-1.2401E-13	100.31	128.07	44.994	-4.4239E-10
1.7400	1.1348E-02	-1.1530E-13	134.18	114.43	49.743	-5.1140E-10
2.0300	9.9733E-03	-1.0594E-13	163.90	99.499	53.960	-5.7850E-10
2.3200	8.6646E-03	-9.6176E-14	189.12	84.425	50.837	-5.6821E-10
2.6100	7.4316E-03	-8.6230E-14	210.10	69.445	53.318	-6.2222E-10
2.9000	6.2827E-03	-7.6311E-14	226.65	53.928	54.506	-6.6501E-10
3.1900	5.2247E-03	-6.6605E-14	238.67	37.805	57.454	-7.3489E-10
3.4800	4.2623E-03	-5.7276E-14	245.91	20.866	60.060	-8.0856E-10
3.7700	3.4002E-03	-4.8462E-14	248.15	3.1921	62.481	-8.9062E-10
4.0600	2.6371E-03	-4.0277E-14	245.19	18.096	64.800	-9.8968E-10
4.3500	1.9744E-03	-3.2800E-14	236.85	34.979	51.901	-8.6224E-10
4.6400	1.4104E-03	-2.6083E-14	224.21	48.148	39.495	-7.3039E-10
4.9300	9.3417E-04	-2.0143E-14	208.33	57.757	27.762	-5.9862E-10
5.2200	5.3960E-04	-1.4977E-14	190.22	64.052	16.962	-4.7079E-10
5.5100	2.1975E-04	-1.0561E-14	170.78	67.340	7.2846	-3.5008E-10
5.8000	-3.2894E-05	-6.8537E-15	150.84	67.976	-1.1468	-2.3895E-10
6.0900	-2.2608E-04	-3.8037E-15	131.10	66.668	-6.2429	-1.0503E-10
6.3800	-3.6751E-04	-1.3515E-15	111.98	64.019	-10.581	-3.8908E-11
6.6700	-4.6464E-04	5.8846E-15	93.838	60.257	-13.924	1.7634E-10
6.9600	-5.2457E-04	2.1205E-14	76.947	55.666	-16.337	6.6039E-10
7.2500	-5.5393E-04	3.2224E-14	61.523	50.508	-17.904	1.0415E-09
7.5400	-5.5879E-04	3.9593E-14	47.683	45.018	-18.718	1.3263E-09

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7.8300	-5.4461E-04	4.3922E-14	35.497	39.402	-18.884	1.5230E-09
8.1200	-5.1621E-04	4.5781E-14	25.053	33.833	-18.507	1.6413E-09
8.4100	-4.7777E-04	4.5686E-14	16.171	28.455	-17.691	1.6917E-09
8.7000	-4.3285E-04	4.4095E-14	8.7798	23.380	-16.538	1.6847E-09
8.9900	-3.8442E-04	4.1412E-14	2.7820	18.699	-15.140	1.6309E-09
9.2800	-3.3487E-04	3.7983E-14	2.4311	14.467	-13.582	1.5406E-09
9.5700	-2.8610E-04	3.4098E-14	6.0127	10.718	-11.941	1.4231E-09
9.8600	-2.3955E-04	2.9995E-14	8.5757	7.4957	-10.280	1.2872E-09
10.150	-1.9624E-04	2.5866E-14	10.265	4.7506	-8.6522	1.1404E-09
10.440	-1.5686E-04	2.1857E-14	11.220	2.4665	-7.1006	9.8940E-10
10.730	-1.2181E-04	1.8077E-14	11.575	0.6165	-5.6575	8.3958E-10
11.020	-9.1256E-05	1.4602E-14	11.455	0.9867	-4.3458	6.9538E-10
11.310	-6.4919E-05	1.1479E-14	10.971	2.0773	-3.1680	5.6018E-10
11.600	-4.2814E-05	8.7326E-15	10.222	2.8469	-2.1397	4.3641E-10
11.890	-2.4804E-05	6.3670E-15	9.2968	3.3411	-1.2688	3.2569E-10
12.180	-1.0519E-05	4.3732E-15	8.2665	3.6049	-0.5504	2.2885E-10
12.470	4.5557E-07	2.7308E-15	7.1917	3.6812	2.4376E-02	1.4612E-10
12.760	8.5488E-06	1.4120E-15	6.1207	3.6099	0.4675	7.7212E-11
13.050	1.4190E-05	3.8384E-16	5.0903	3.4271	0.7927	2.1442E-11
13.340	1.7792E-05	-3.7114E-17	4.1277	3.1651	1.0148	-2.1169E-12
13.630	1.9741E-05	-8.9396E-17	3.2515	2.8513	1.1492	-5.2041E-12
13.920	2.0387E-05	-1.2426E-16	2.4740	2.5091	1.2108	-7.3801E-12
14.210	2.0042E-05	-1.4486E-16	1.7988	2.1575	1.2139	-8.7741E-12
14.500	1.8978E-05	-1.5410E-16	1.2314	1.8116	1.1718	-9.5149E-12
14.790	1.7425E-05	-1.5457E-16	0.7621	1.4827	1.0964	-9.7259E-12
15.080	1.5572E-05	-1.4855E-16	0.3831	1.1790	0.9982	-9.5223E-12
15.370	1.3574E-05	-1.3800E-16	8.6339E-02	0.9061	0.8860	-9.0083E-12
15.660	1.1549E-05	-1.2454E-16	0.1591	0.6669	0.7675	-8.2761E-12
15.950	9.5883E-06	-1.0949E-16	0.3189	0.4632	0.6485	-7.4049E-12
16.240	7.7552E-06	-9.3898E-17	0.4242	0.2941	0.5336	-6.4609E-12
16.530	6.0920E-06	-7.8558E-17	0.4847	0.1564	0.4263	-5.4978E-12



16.820	4.6241E-06	-6.4045E-17	0.5094	4.7757E-02	0.3291	-4.5576E-12
17.110	3.3620E-06	-5.0753E-17	0.5067	4.2367E-02	0.2432	-3.6714E-12
17.400	2.3065E-06	-3.8920E-17	0.4836	0.1021	0.1696	-2.8612E-12
17.690	1.4496E-06	-2.8659E-17	0.4464	0.1420	0.1083	-2.1406E-12
17.980	7.6731E-07	-1.9992E-17	0.4003	0.1656	5.8215E-02	-1.5168E-12
18.270	2.4214E-07	-1.2865E-17	0.3497	0.1761	1.8656E-02	-9.9117E-13
18.560	-1.4553E-07	-7.1738E-18	0.2977	0.1764	-1.1384E-02	-5.6116E-13
18.850	-4.1587E-07	-2.7831E-18	0.2470	0.1691	-3.3020E-02	-2.2098E-13
19.140	-5.8863E-07	4.7507E-18	0.1993	0.1567	-4.7430E-02	3.8280E-13
19.430	-6.8244E-07	2.8702E-17	0.1559	0.1411	-5.5792E-02	2.3465E-12
19.720	-7.1430E-07	4.3961E-17	0.1175	0.1237	-5.9238E-02	3.6457E-12
20.010	-6.9934E-07	5.2145E-17	8.4301E-02	0.1060	-5.8820E-02	4.3858E-12
20.300	-6.5065E-07	5.4748E-17	5.6424E-02	8.8983E-02	-5.5491E-02	4.6692E-12
20.590	-5.7936E-07	5.3116E-17	3.3350E-02	7.3268E-02	-5.0093E-02	4.5925E-12
20.880	-4.9472E-07	4.8433E-17	1.4497E-02	5.9391E-02	-4.3356E-02	4.2446E-12
21.170	-4.0426E-07	4.1730E-17	1.7090E-03	4.7666E-02	-3.5905E-02	3.7063E-12
21.460	-3.1409E-07	3.3896E-17	1.3932E-02	3.8198E-02	-2.8266E-02	3.0504E-12
21.750	-2.2908E-07	2.5692E-17	2.3734E-02	3.0969E-02	-2.0885E-02	2.3423E-12
22.040	-1.5317E-07	1.7777E-17	3.1754E-02	2.5890E-02	-1.4144E-02	1.6417E-12
22.330	-8.9574E-08	1.0732E-17	3.8571E-02	2.2624E-02	-8.3773E-03	1.0037E-12
22.620	-4.1060E-08	5.0830E-18	4.4682E-02	2.0846E-02	-3.8884E-03	4.8137E-13
22.910	-1.0099E-08	1.3209E-18	5.0470E-02	3.2985E-02	-0.3613	4.7260E-11
23.200	9.8661E-10	-7.3701E-21	2.5527E-02	7.7646E-02	5.7552E-02	-4.2993E-13
23.490	1.9650E-09	-2.1642E-20	5.4286E-03	4.6254E-02	0.1589	-1.7506E-12
23.780	7.6877E-10	-8.9101E-21	1.3004E-03	1.1675E-02	7.9525E-02	-9.2170E-13
24.070	9.3429E-11	-1.2121E-21	1.3416E-03	1.5634E-03	1.1772E-02	-1.5273E-13
24.360	-4.3677E-11	4.9289E-21	3.9316E-04	2.3127E-03	-6.4884E-03	7.3222E-13
24.650	-2.4488E-11	2.9959E-21	5.2866E-07	7.3853E-04	-4.1902E-03	5.1263E-13
24.940	-5.0878E-12	6.6767E-22	3.5166E-05	2.4756E-05	-6.6480E-04	8.7242E-14
25.230	4.6577E-13	-3.9226E-24	1.4002E-05	5.8920E-05	9.6879E-05	-8.1591E-16
25.520	4.6894E-13	-5.2932E-24	9.9023E-07	2.5471E-05	1.3380E-04	-1.5103E-15

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25.810	7.5711E-14	-9.3112E-25	7.7043E-07	2.0888E-06	2.7458E-05	-3.3769E-16
26.100	-8.7004E-15	9.0573E-25	2.2131E-07	1.3266E-06	-3.8282E-06	3.9852E-16
26.390	-4.7501E-15	5.8453E-25	1.0551E-09	3.9848E-07	-2.4574E-06	3.0240E-16
26.680	-3.7718E-16	5.2902E-26	9.8022E-09	4.4096E-09	-2.2430E-07	3.1459E-17
26.970	1.3104E-16	-1.4076E-27	1.5175E-09	1.7167E-08	7.8623E-08	-8.4455E-19
27.260	3.4569E-17	-4.0714E-28	1.5472E-10	2.7588E-09	2.0742E-08	-2.4429E-19
27.550	9.7245E-20	-6.2448E-30	8.2554E-11	2.5573E-10	5.8347E-11	-3.7469E-21
27.840	-1.3182E-18	1.5823E-28	6.3720E-12	1.4624E-10	-7.9091E-10	9.4938E-20
28.130	-2.0206E-19	2.6383E-29	2.2667E-12	1.2004E-11	-1.2124E-10	1.5830E-20
28.420	2.1620E-20	-2.1026E-31	5.8947E-13	3.9020E-12	1.2972E-11	-1.2616E-22
28.710	1.1549E-20	-1.3271E-31	3.6077E-15	1.0163E-12	6.9293E-12	-7.9624E-23
29.000	1.4325E-22	-4.9681E-33	0.0000	0.0000	8.5950E-14	-2.9808E-24

* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-562.04 165.16 -2.6913E-09 3.1451E-08 6.3592E-08 131.57

STR, KN/ M**2



8243.6

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-562.04 165.16 -2.6913E-09 3.1451E-08 6.3592E-08 131.57

STR, KN/ M**2

8243.6

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M

0.0000	2.0200E-02	-1.4810E-13	131.57	165.11	0.0000	0.0000
0.2900	1.8733E-02	-1.4685E-13	84.471	163.74	9.9027	-7.8839E-11
0.5800	1.7238E-02	-1.4350E-13	38.219	159.34	20.792	-1.7565E-10
0.8700	1.5734E-02	-1.3835E-13	20.741	151.94	30.747	-2.7421E-10
1.1600	1.4237E-02	-1.3171E-13	62.153	141.86	39.324	-3.6872E-10
1.4500	1.2766E-02	-1.2388E-13	100.27	129.62	45.779	-4.4998E-10
1.7400	1.1335E-02	-1.1513E-13	134.56	115.74	50.593	-5.1995E-10
2.0300	9.9583E-03	-1.0573E-13	164.63	100.56	54.860	-5.8787E-10



2.3200	8.6472E-03	-9.5931E-14	190.12	85.243	51.659	-5.7708E-10
2.6100	7.4123E-03	-8.5953E-14	211.31	70.025	54.148	-6.3152E-10
2.9000	6.2620E-03	-7.6008E-14	227.99	54.273	55.315	-6.7444E-10
3.1900	5.2030E-03	-6.6282E-14	240.07	37.918	58.258	-7.4465E-10
3.4800	4.2402E-03	-5.6940E-14	247.31	20.753	60.838	-8.1846E-10
3.7700	3.3783E-03	-4.8121E-14	249.48	2.8620	63.209	-9.0044E-10
4.0600	2.6159E-03	-3.9937E-14	246.40	18.635	65.450	-9.9920E-10
4.3500	1.9543E-03	-3.2469E-14	237.87	35.672	52.310	-8.6907E-10
4.6400	1.3920E-03	-2.5766E-14	225.01	48.927	39.688	-7.3466E-10
4.9300	9.1762E-04	-1.9847E-14	208.90	58.564	27.767	-6.0055E-10
5.2200	5.2520E-04	-1.4705E-14	190.55	64.835	16.809	-4.7066E-10
5.5100	2.0763E-04	-1.0317E-14	170.90	68.059	7.0079	-3.4821E-10
5.8000	-4.2691E-05	-6.6392E-15	150.76	68.599	-1.5155	-2.3568E-10
6.0900	-2.3358E-04	-3.6200E-15	130.86	67.189	-6.5672	-1.0178E-10
6.3800	-3.7279E-04	-1.1985E-15	111.60	64.440	-10.928	-3.5132E-11
6.6700	-4.6785E-04	7.1851E-15	93.355	60.576	-14.275	2.1924E-10
6.9600	-5.2591E-04	2.2204E-14	76.387	55.883	-16.677	7.0410E-10
7.2500	-5.5362E-04	3.2943E-14	60.916	50.630	-18.219	1.0841E-09
7.5400	-5.5706E-04	4.0058E-14	47.055	45.052	-19.000	1.3663E-09
7.8300	-5.4171E-04	4.4163E-14	34.878	39.359	-19.126	1.5592E-09
8.1200	-5.1239E-04	4.5829E-14	24.455	33.727	-18.705	1.6730E-09
8.4100	-4.7327E-04	4.5572E-14	15.611	28.298	-17.844	1.7182E-09
8.7000	-4.2789E-04	4.3851E-14	8.2709	23.186	-16.646	1.7059E-09
8.9900	-3.7921E-04	4.1067E-14	2.3325	18.480	-15.206	1.6468E-09
9.2800	-3.2959E-04	3.7565E-14	2.8153	14.235	-13.611	1.5514E-09
9.5700	-2.8090E-04	3.3632E-14	6.3283	10.486	-11.937	1.4293E-09
9.8600	-2.3455E-04	2.9505E-14	8.8234	7.2689	-10.249	1.2892E-09
10.150	-1.9154E-04	2.5369E-14	10.447	4.5360	-8.5991	1.1389E-09
10.440	-1.5255E-04	2.1369E-14	11.342	2.2695	-7.0313	9.8496E-10
10.730	-1.1794E-04	1.7612E-14	11.643	0.4413	-5.5773	8.3287E-10
11.020	-8.7841E-05	1.4169E-14	11.475	1.1383	-4.2593	6.8703E-10



11.310	-6.1947E-05	1.1085E-14	10.951	2.2030	-3.0780	5.5076E-10
11.600	-4.0318E-05	8.3807E-15	10.170	2.9468	-2.0516	4.2646E-10
11.890	-2.2764E-05	6.0602E-15	9.2197	3.4162	-1.1856	3.1564E-10
12.180	-8.9033E-06	4.1118E-15	8.1714	3.6569	-0.4744	2.1909E-10
12.470	1.6841E-06	2.5136E-15	7.0850	3.7124	9.1750E-02	1.3694E-10
12.760	9.4332E-06	1.2366E-15	6.0079	3.6229	0.5252	6.8851E-11
13.050	1.4776E-05	2.4693E-16	4.9763	3.4249	0.8404	1.4045E-11
13.340	1.8125E-05	-4.6780E-17	4.0165	3.1504	1.0526	-2.7168E-12
13.630	1.9864E-05	-9.6185E-17	3.1462	2.8271	1.1775	-5.7013E-12
13.920	2.0344E-05	-1.2859E-16	2.3772	2.4780	1.2303	-7.7759E-12
14.210	1.9872E-05	-1.4713E-16	1.7119	2.1219	1.2255	-9.0736E-12
14.500	1.8715E-05	-1.5470E-16	1.1561	1.7736	1.1766	-9.7258E-12
14.790	1.7099E-05	-1.5386E-16	0.6978	1.4441	1.0955	-9.8578E-12
15.080	1.5211E-05	-1.4687E-16	0.3297	1.1413	0.9927	-9.5859E-12
15.370	1.3197E-05	-1.3564E-16	4.3437E-02	0.8706	0.8772	-9.0150E-12
15.660	1.1175E-05	-1.2174E-16	0.1922	0.6343	0.7562	-8.2372E-12
15.950	9.2304E-06	-1.0646E-16	0.3430	0.4345	0.6356	-7.3312E-12
16.240	7.4228E-06	-9.0812E-17	0.4404	0.2691	0.5200	-6.3623E-12
16.530	5.7916E-06	-7.5546E-17	0.4941	0.1352	0.4127	-5.3833E-12
16.820	4.3600E-06	-6.1206E-17	0.5133	3.0372E-02	0.3159	-4.4348E-12
17.110	3.1350E-06	-4.8155E-17	0.5060	5.6162E-02	0.2309	-3.5469E-12
17.400	2.1184E-06	-3.6605E-17	0.4795	0.1125	0.1586	-2.7400E-12
17.690	1.2960E-06	-2.6650E-17	0.4398	0.1493	9.8563E-02	-2.0268E-12
17.980	6.4580E-07	-1.8291E-17	0.3920	0.1703	4.9888E-02	-1.4130E-12
18.270	1.4949E-07	-1.1464E-17	0.3403	0.1785	1.1728E-02	-8.9931E-13
18.560	-2.1291E-07	-6.0526E-18	0.2880	0.1770	-1.6958E-02	-4.8208E-13
18.850	-4.6175E-07	-1.9152E-18	0.2373	0.1683	-3.7331E-02	-1.5484E-13
19.140	-6.1679E-07	1.1579E-17	0.1901	0.1548	-5.0604E-02	9.5000E-13
19.430	-6.9648E-07	3.3526E-17	0.1474	0.1384	-5.7977E-02	2.7908E-12
19.720	-7.1759E-07	4.7131E-17	0.1099	0.1206	-6.0595E-02	3.9798E-12
20.010	-6.9490E-07	5.4001E-17	7.7613E-02	0.1026	-5.9511E-02	4.6246E-12



20.300	-6.4112E-07	5.5605E-17	5.0824E-02	8.5423E-02	-5.5674E-02	4.8286E-12
20.590	-5.6699E-07	5.3258E-17	2.8764E-02	6.9720E-02	-4.9916E-02	4.6886E-12
20.880	-4.8133E-07	4.8108E-17	1.0909E-02	5.5940E-02	-4.2951E-02	4.2929E-12
21.170	-3.9130E-07	4.1148E-17	4.3390E-03	4.4367E-02	-3.5387E-02	3.7211E-12
21.460	-3.0261E-07	3.3223E-17	1.5627E-02	3.5060E-02	-2.7728E-02	3.0443E-12
21.750	-2.1976E-07	2.5054E-17	2.4543E-02	2.8024E-02	-2.0401E-02	2.3258E-12
22.040	-1.4635E-07	1.7259E-17	3.1718E-02	2.3071E-02	-1.3761E-02	1.6229E-12
22.330	-8.5252E-08	1.0378E-17	3.7725E-02	1.9899E-02	-8.1183E-03	9.8825E-13
22.620	-3.8916E-08	4.8953E-18	4.3047E-02	1.8177E-02	-3.7525E-03	4.7203E-13
22.910	-9.5013E-09	1.2638E-18	4.8059E-02	3.2492E-02	-0.3399	4.5217E-11
23.200	9.7611E-10	-7.5515E-21	2.4179E-02	7.4068E-02	5.6939E-02	-4.4050E-13
23.490	1.8720E-09	-2.0960E-20	5.0928E-03	4.3855E-02	0.1514	-1.6954E-12
23.780	7.2779E-10	-8.5768E-21	1.2570E-03	1.0982E-02	7.5286E-02	-8.8722E-13
24.070	8.7111E-11	-1.1523E-21	1.2755E-03	1.5264E-03	1.0976E-02	-1.4518E-13
24.360	-4.1873E-11	4.8030E-21	3.7128E-04	2.2004E-03	-6.2204E-03	7.1351E-13
24.650	-2.3245E-11	2.8894E-21	7.2910E-07	6.9802E-04	-3.9775E-03	4.9441E-13
24.940	-4.7844E-12	6.3857E-22	3.3553E-05	2.1840E-05	-6.2516E-04	8.3440E-14
25.230	4.5621E-13	-3.9418E-24	1.3238E-05	5.6281E-05	9.4893E-05	-8.1990E-16
25.520	4.4541E-13	-5.1112E-24	9.0827E-07	2.4093E-05	1.2709E-04	-1.4584E-15
25.810	7.1121E-14	-8.9026E-25	7.3535E-07	1.9264E-06	2.5793E-05	-3.2287E-16
26.100	-8.4169E-15	8.9239E-25	2.0901E-07	1.2669E-06	-3.7034E-06	3.9265E-16
26.390	-4.5056E-15	5.6335E-25	6.0659E-10	3.7644E-07	-2.3309E-06	2.9144E-16
26.680	-3.5130E-16	5.0220E-26	9.3220E-09	3.4840E-09	-2.0891E-07	2.9864E-17
26.970	1.2520E-16	-1.3674E-27	1.4271E-09	1.6330E-08	7.5123E-08	-8.2046E-19
27.260	3.2660E-17	-3.9119E-28	1.4954E-10	2.5956E-09	1.9596E-08	-2.3471E-19
27.550	3.8243E-20	-5.4134E-30	7.8247E-11	2.4758E-10	2.2946E-11	-3.2481E-21
27.840	-1.2543E-18	1.5297E-28	5.9265E-12	1.3864E-10	-7.5257E-10	9.1780E-20
28.130	-1.9015E-19	2.5248E-29	2.1654E-12	1.1179E-11	-1.1409E-10	1.5149E-20
28.420	2.0885E-20	-2.0693E-31	5.5686E-13	3.7293E-12	1.2531E-11	-1.2416E-22
28.710	1.0945E-20	-1.2787E-31	2.5425E-15	9.6012E-13	6.5671E-12	-7.6723E-23
29.000	1.0102E-22	-4.3974E-33	0.0000	0.0000	6.0611E-14	-2.6384E-24

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* PILE GROUP * 6

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-562.04 206.49 -3.1643E-09 3.1451E-08 7.0683E-08 184.91

STR, KN/ M**2

1.0759E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.4349E-03 0.020200 -1.4810E-13 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-562.04 206.49 -3.1643E-09 3.1451E-08 7.0683E-08 184.91

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STR, KN/ M**2

1.0759E+04

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	2.0200E-02	-1.4810E-13	184.91	206.42	0.0000	0.0000
0.2900	1.8722E-02	-1.4671E-13	125.83	204.56	13.471	-1.0721E-10
0.5800	1.7200E-02	-1.4301E-13	67.908	198.57	28.237	-2.3827E-10
0.8700	1.5656E-02	-1.3736E-13	12.351	188.54	41.643	-3.7053E-10
1.1600	1.4113E-02	-1.3010E-13	53.692	174.93	53.057	-4.9571E-10
1.4500	1.2592E-02	-1.2159E-13	100.86	158.45	61.458	-6.0112E-10
1.7400	1.1111E-02	-1.1214E-13	142.88	139.89	67.499	-6.8930E-10
2.0300	9.6874E-03	-1.0207E-13	179.25	119.73	72.637	-7.7241E-10
2.3200	8.3355E-03	-9.1648E-14	209.56	99.539	67.778	-7.5039E-10
2.6100	7.0676E-03	-8.1135E-14	234.21	79.694	70.273	-8.1137E-10
2.9000	5.8935E-03	-7.0759E-14	253.00	59.398	70.858	-8.5458E-10
3.1900	4.8207E-03	-6.0723E-14	265.90	38.628	73.468	-9.2853E-10
3.4800	3.8545E-03	-5.1200E-14	272.67	17.207	75.273	-1.0017E-09
3.7700	2.9988E-03	-4.2333E-14	273.18	7.6696	76.377	-1.0782E-09
4.0600	2.2526E-03	-3.4229E-14	267.32	29.854	76.709	-1.1656E-09
4.3500	1.6146E-03	-2.6963E-14	255.08	49.466	58.822	-9.8229E-10
4.6400	1.0832E-03	-2.0567E-14	237.97	63.995	42.038	-7.9817E-10
4.9300	6.4508E-04	-1.5042E-14	217.41	73.774	26.568	-6.1952E-10
5.2200	2.9230E-04	-1.0363E-14	194.73	79.246	12.734	-4.5143E-10
5.5100	1.6111E-05	-6.4817E-15	171.10	80.930	0.7402	-2.9777E-10

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5.8000	-1.9267E-04	-3.3374E-15	147.52	79.388	-9.3095	-1.6125E-10
6.0900	-3.4325E-04	-8.5831E-16	124.85	75.857	-13.135	-3.2846E-11
6.3800	-4.4447E-04	1.0802E-14	103.38	71.140	-17.734	4.3100E-10
6.6700	-5.0474E-04	2.5417E-14	83.498	65.293	-20.962	1.0556E-09
6.9600	-5.3188E-04	3.5438E-14	65.472	58.699	-22.957	1.5295E-09
7.2500	-5.3297E-04	4.1636E-14	49.480	51.698	-23.873	1.8650E-09
7.5400	-5.1432E-04	4.4729E-14	35.555	44.582	-23.876	2.0765E-09
7.8300	-4.8142E-04	4.5371E-14	23.833	37.595	-23.135	2.1803E-09
8.1200	-4.3898E-04	4.4145E-14	14.070	30.929	-21.811	2.1934E-09
8.4100	-3.9090E-04	4.1561E-14	6.1439	24.730	-20.060	2.1328E-09
8.7000	-3.4037E-04	3.8054E-14	0.5557	19.112	-18.022	2.0149E-09
8.9900	-2.8987E-04	3.3988E-14	5.2949	14.129	-15.821	1.8550E-09
9.2800	-2.4129E-04	2.9657E-14	8.6830	9.8281	-13.563	1.6670E-09
9.5700	-1.9601E-04	2.5295E-14	10.916	6.2176	-11.337	1.4631E-09
9.8600	-1.5492E-04	2.1078E-14	12.186	3.2377	-9.2133	1.2535E-09
10.150	-1.1854E-04	1.7133E-14	12.676	0.8515	-7.2430	1.0469E-09
10.440	-8.7081E-05	1.3546E-14	12.555	1.1493	-5.4630	8.4983E-10
10.730	-6.0432E-05	1.0367E-14	11.976	2.5084	-3.8898	6.6729E-10
11.020	-3.8257E-05	7.6168E-15	11.073	3.4385	-2.5248	5.0269E-10
11.310	-2.0517E-05	5.2947E-15	9.9594	4.0058	-1.3875	3.5807E-10
11.600	-6.7669E-06	3.3828E-15	8.7317	4.2750	-0.4687	2.3429E-10
11.890	3.4853E-06	1.8515E-15	7.4665	4.3071	0.2471	1.3126E-10
12.180	1.0746E-05	6.6324E-16	6.2237	4.1583	0.7794	4.8099E-11
12.470	1.5514E-05	-2.1582E-17	5.0479	3.8785	1.1504	-1.6004E-12
12.760	1.8260E-05	-8.1047E-17	3.9700	3.5110	1.3838	-6.1421E-12
13.050	1.9416E-05	-1.2020E-16	3.0095	3.0924	1.5031	-9.3056E-12
13.340	1.9366E-05	-1.4289E-16	2.1777	2.6525	1.5308	-1.1295E-11
13.630	1.8444E-05	-1.5264E-16	1.4755	2.2148	1.4880	-1.2315E-11
13.920	1.6933E-05	-1.5258E-16	0.9044	1.7969	1.3937	-1.2559E-11
14.210	1.5064E-05	-1.4544E-16	0.4481	1.4115	1.2645	-1.2209E-11
14.500	1.3023E-05	-1.3352E-16	9.6091E-02	1.0667	1.1144	-1.1426E-11



14.790	1.0951E-05	-1.1871E-16	0.1852	0.7673	0.9550	-1.0352E-11
15.080	8.9534E-06	-1.0250E-16	0.3662	0.5145	0.7954	-9.1056E-12
15.370	7.1024E-06	-8.6050E-17	0.4804	0.3088	0.6425	-7.7844E-12
15.660	5.4438E-06	-7.0199E-17	0.5406	0.1448	0.5014	-6.4650E-12
15.950	4.0029E-06	-5.5532E-17	0.5588	1.8729E-02	0.3752	-5.2048E-12
16.240	2.7872E-06	-4.2413E-17	0.5456	8.1634E-02	0.2658	-4.0444E-12
16.530	1.7940E-06	-3.1034E-17	0.5102	0.1452	0.1740	-3.0099E-12
16.820	1.0087E-06	-2.1446E-17	0.4604	0.1845	9.9475E-02	-2.1150E-12
17.110	4.0393E-07	-1.3605E-17	0.4025	0.2041	4.0495E-02	-1.3639E-12
17.400	-4.2619E-08	-7.3920E-18	0.3414	0.2085	-4.3421E-03	-7.5312E-13
17.690	-3.5469E-07	-2.6437E-18	0.2811	0.2017	-3.6716E-02	-2.7366E-13
17.980	-5.5583E-07	8.5973E-18	0.2241	0.1871	-5.8443E-02	9.0396E-13
18.270	-6.6830E-07	3.3931E-17	0.1724	0.1674	-7.1358E-02	3.6230E-12
18.560	-7.1238E-07	4.9903E-17	0.1270	0.1451	-7.7227E-02	5.4098E-12
18.850	-7.0594E-07	5.8441E-17	8.8327E-02	0.1220	-7.7680E-02	6.4307E-12
19.140	-6.6421E-07	6.1288E-17	5.6549E-02	9.9387E-02	-7.4172E-02	6.8440E-12
19.430	-5.9984E-07	5.9969E-17	3.1288E-02	7.8292E-02	-6.7962E-02	6.7946E-12
19.720	-5.2293E-07	5.5778E-17	1.1751E-02	5.9329E-02	-6.0102E-02	6.4107E-12
20.010	-4.4132E-07	4.9779E-17	3.6782E-03	4.2871E-02	-5.1441E-02	5.8024E-12
20.300	-3.6080E-07	4.2819E-17	1.3855E-02	2.9025E-02	-4.2644E-02	5.0609E-12
20.590	-2.8544E-07	3.5549E-17	2.0392E-02	1.7850E-02	-3.4202E-02	4.2597E-12
20.880	-2.1787E-07	2.8452E-17	2.4016E-02	9.0533E-03	-2.6462E-02	3.4557E-12
21.170	-1.5958E-07	2.1866E-17	2.5393E-02	2.3683E-03	-1.9642E-02	2.6914E-12
21.460	-1.1115E-07	1.6011E-17	2.5108E-02	2.9133E-03	-1.3863E-02	1.9969E-12
21.750	-7.2531E-08	1.1019E-17	2.3654E-02	6.2740E-03	-9.1643E-03	1.3922E-12
22.040	-4.3178E-08	6.9534E-18	2.1431E-02	8.4121E-03	-5.5260E-03	8.8990E-13
22.330	-2.2215E-08	3.8319E-18	1.8747E-02	9.6324E-03	-2.8793E-03	4.9666E-13
22.620	-8.6801E-09	1.6419E-18	1.5824E-02	1.0215E-02	-1.1392E-03	2.1548E-13
22.910	-1.4848E-09	3.5423E-19	1.2833E-02	1.8083E-02	-5.3122E-02	1.2674E-11
23.200	5.7879E-10	-6.3404E-21	5.3688E-03	2.0920E-02	3.3763E-02	-3.6986E-13
23.490	5.0759E-10	-8.0139E-21	7.1359E-04	1.0108E-02	4.1058E-02	-6.4824E-13



23.780	1.5834E-10	-2.8414E-21	4.9827E-04	1.7885E-03	1.6379E-02	-2.9393E-13
24.070	7.5946E-12	-2.5965E-22	3.2347E-04	7.3475E-04	9.5692E-04	-3.2716E-14
24.360	-1.3570E-11	2.0819E-21	7.2898E-05	5.7195E-04	-2.0159E-03	3.0928E-13
24.650	-5.5048E-12	1.0042E-21	8.3588E-06	1.4211E-04	-9.4194E-04	1.7183E-13
24.940	-7.2777E-13	1.7691E-22	9.5420E-06	9.7451E-06	-9.5095E-05	2.3117E-14
25.230	2.3209E-13	-2.6993E-24	2.7304E-06	1.6553E-05	4.8275E-05	-5.6145E-16
25.520	1.0935E-13	-1.8272E-24	6.1463E-08	5.0713E-06	3.1203E-05	-5.2135E-16
25.810	1.0763E-14	-2.4430E-25	2.1140E-07	3.5748E-08	3.9032E-06	-8.8600E-17
26.100	-3.3830E-15	4.6811E-25	4.1153E-08	3.7031E-07	-1.4885E-06	2.0597E-16
26.390	-1.0365E-15	1.9241E-25	3.4066E-09	7.5072E-08	-5.3624E-07	9.9541E-17
26.680	-2.2639E-17	1.0727E-26	2.3869E-09	5.4834E-09	-1.3463E-08	6.3788E-18
26.970	3.7132E-17	-5.5797E-28	2.3044E-10	4.2172E-09	2.2279E-08	-3.3478E-19
27.260	6.5360E-18	-1.2348E-28	5.9131E-11	4.2806E-10	3.9216E-09	-7.4086E-20
27.550	-4.6256E-19	3.4065E-29	1.7814E-11	1.0133E-10	-2.7754E-10	2.0439E-20
27.840	-3.2424E-19	5.6186E-29	3.9061E-13	3.1813E-11	-1.9454E-10	3.3712E-20
28.130	-3.0131E-20	7.1198E-30	6.3932E-13	8.6526E-13	-1.8079E-11	4.2719E-21
28.420	8.1582E-21	-1.0662E-31	1.1105E-13	1.1148E-12	4.8949E-12	-6.3971E-23
28.710	2.4817E-21	-4.3443E-32	7.3274E-15	1.9147E-13	1.4890E-12	-2.6066E-23
29.000	-2.8095E-22	1.8731E-32	0.0000	0.0000	-1.6857E-13	1.1239E-23

* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1559.7 266.23 3.2239E-08 3.1451E-08 -6.1492E-09 271.85

STR, KN/ M**2

1.8122E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1559.7 266.23 3.2239E-08 3.1451E-08 -6.1492E-09 271.85

STR, KN/ M**2

1.8122E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M

0.0000 2.0200E-02 1.2397E-12 271.85 266.51 0.0000 0.0000

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0.2900	1.8705E-02	1.2272E-12	192.52	263.36	20.052	1.3184E-09
0.5800	1.7138E-02	1.1926E-12	114.73	254.47	41.925	2.9233E-09
0.8700	1.5530E-02	1.1396E-12	40.366	239.61	61.565	4.5259E-09
1.1600	1.3913E-02	1.0718E-12	42.842	219.55	77.973	6.0172E-09
1.4500	1.2312E-02	9.9271E-13	105.26	195.45	89.623	7.2377E-09
1.7400	1.0754E-02	9.0563E-13	160.08	168.52	97.485	8.2213E-09
2.0300	9.2594E-03	8.1362E-13	206.60	139.59	103.64	9.1166E-09
2.3200	7.8479E-03	7.1945E-13	244.28	111.00	95.297	8.7426E-09
2.6100	6.5343E-03	6.2561E-13	273.78	83.362	97.097	9.3012E-09
2.9000	5.3303E-03	5.3428E-13	294.95	55.628	95.865	9.6120E-09
3.1900	4.2445E-03	4.4732E-13	307.88	27.902	96.912	1.0214E-08
3.4800	3.2821E-03	3.6628E-13	312.46	3.3351	96.246	1.0739E-08
3.7700	2.4459E-03	2.9235E-13	308.75	30.905	93.891	1.1220E-08
4.0600	1.7335E-03	2.2636E-13	296.95	57.255	87.952	1.1485E-08
4.3500	1.1433E-03	1.6875E-13	277.58	78.936	62.060	9.1594E-09
4.6400	6.6586E-04	1.1957E-13	252.85	93.356	38.501	6.9137E-09
4.9300	2.8759E-04	7.8567E-14	224.79	101.24	17.647	4.8211E-09
5.2200	-2.3217E-06	4.5237E-14	195.18	103.45	-0.1507	2.9361E-09
5.5100	-2.1538E-04	1.8914E-14	165.57	100.92	-14.742	1.2946E-09
5.8000	-3.6313E-04	-1.1860E-16	137.21	94.589	-26.141	-8.5379E-12
6.0900	-4.5666E-04	-1.5088E-15	111.09	86.663	-26.037	-8.6023E-11
6.3800	-5.0622E-04	-2.4624E-15	87.169	78.220	-30.093	-1.4638E-10
6.6700	-5.2119E-04	-3.0546E-15	65.824	68.892	-32.249	-1.8901E-10
6.9600	-5.0997E-04	-3.3556E-15	47.256	59.194	-32.795	-2.1579E-10
7.2500	-4.7990E-04	-3.4295E-15	31.519	49.556	-32.027	-2.2888E-10
7.5400	-4.3720E-04	-3.3334E-15	18.632	40.318	-30.240	-2.3056E-10
7.8300	-3.8703E-04	-3.1165E-15	8.2783	31.737	-27.711	-2.2314E-10
8.1200	-3.3355E-04	-2.8206E-15	0.2497	23.996	-24.692	-2.0880E-10
8.4100	-2.7997E-04	-2.4799E-15	6.2115	17.207	-21.406	-1.8961E-10
8.7000	-2.2867E-04	-2.1215E-15	10.363	11.424	-18.039	-1.6736E-10
8.9900	-1.8132E-04	-1.7663E-15	12.969	6.6707	-14.745	-1.4363E-10



9.2800	-1.3897E-04	-1.4295E-15	14.311	2.8452	-11.638	-1.1972E-10
9.5700	-1.0216E-04	-1.1213E-15	14.656	0.3005	-8.8044	-9.6634E-11
9.8600	-7.1068E-05	-8.4813E-16	14.245	2.5021	-6.2973	-7.5153E-11
10.150	-4.5352E-05	-6.1291E-16	13.294	4.0165	-4.1288	-5.5799E-11
10.440	-2.4757E-05	-4.1611E-16	11.988	4.9507	-2.3141	-3.8894E-11
10.730	-8.9648E-06	-2.5626E-16	10.479	5.4109	-0.8597	-2.4575E-11
11.020	2.6295E-06	-1.3058E-16	8.8923	5.4981	0.2586	-1.2840E-11
11.310	1.0662E-05	-3.5432E-17	7.3212	5.3048	1.0743	-3.5702E-12
11.600	1.5761E-05	3.4921E-16	5.8360	4.9132	1.6264	3.6036E-11
11.890	1.8522E-05	8.3963E-16	4.4838	4.3937	1.9563	8.8683E-11
12.180	1.9487E-05	1.1392E-15	3.2934	3.8047	2.1056	1.2309E-10
12.470	1.9133E-05	1.2885E-15	2.2799	3.1929	2.1139	1.4236E-10
12.760	1.7866E-05	1.3241E-15	1.4443	2.5939	2.0173	1.4950E-10
13.050	1.6023E-05	1.2777E-15	0.7830	2.0334	1.8481	1.4737E-10
13.340	1.3872E-05	1.1761E-15	0.2734	1.5285	1.6337	1.3851E-10
13.630	1.1619E-05	1.0412E-15	0.1247	1.0896	1.3967	1.2516E-10
13.920	9.4167E-06	8.9027E-16	0.3853	0.7203	1.1548	1.0918E-10
14.210	7.3683E-06	7.3628E-16	0.5485	0.4227	0.9215	9.2082E-11
14.500	5.5397E-06	5.8859E-16	0.6338	0.1896	0.7063	7.5041E-11
14.790	3.9652E-06	4.5342E-16	0.6594	1.4114E-02	0.5152	5.8910E-11
15.080	2.6572E-06	3.3449E-16	0.6412	0.1207	0.3517	4.4271E-11
15.370	1.6098E-06	2.3349E-16	0.5930	0.2029	0.2170	3.1470E-11
15.660	8.0408E-07	1.5063E-16	0.5264	0.2498	0.1103	2.0668E-11
15.950	2.0481E-07	8.5040E-17	0.4504	0.2690	2.8601E-02	1.1875E-11
16.240	-2.1742E-07	3.5149E-17	0.3720	0.2676	-3.0890E-02	4.9939E-12
16.530	-4.9314E-07	-1.0078E-19	0.2963	0.2516	-7.1262E-02	-1.4563E-14
16.820	-6.5191E-07	-2.4356E-18	0.2267	0.2262	-9.5789E-02	-3.5788E-13
17.110	-7.2097E-07	-3.8804E-18	0.1654	0.1956	-0.1077	-5.7960E-13
17.400	-7.2437E-07	-4.6288E-18	0.1134	0.1631	-0.1100	-7.0264E-13
17.690	-6.8258E-07	-4.8556E-18	7.0865E-02	0.1311	-0.1053	-7.4887E-13
17.980	-6.1241E-07	-4.7120E-18	3.7752E-02	0.1012	-9.5939E-02	-7.3817E-13



18.270 -5.2712E-07 -4.3242E-18 1.2685E-02 7.4547E-02 -8.3858E-02 -6.8793E-13
 18.560 -4.3674E-07 -3.7938E-18 6.3941E-03 5.1752E-02 -7.0542E-02 -6.1276E-13
 18.850 -3.4850E-07 -3.1992E-18 1.8517E-02 3.2961E-02 -5.7137E-02 -5.2450E-13
 19.140 -2.6725E-07 -2.5982E-18 2.5748E-02 1.8206E-02 -4.4464E-02 -4.3229E-13
 19.430 -1.9588E-07 -2.0311E-18 2.9174E-02 6.9640E-03 -3.3066E-02 -3.4286E-13
 19.720 -1.3582E-07 -1.5233E-18 2.9773E-02 1.6562E-03 -2.3257E-02 -2.6085E-13
 20.010 -8.7346E-08 -1.0890E-18 2.8386E-02 7.2488E-03 -1.5169E-02 -1.8912E-13
 20.300 -4.9443E-08 -7.3320E-19 2.5705E-02 1.0711E-02 -8.7070E-03 -1.2912E-13
 20.590 -2.1827E-08 -4.5474E-19 2.2276E-02 1.2539E-02 -3.8967E-03 -8.1185E-14
 20.880 -3.1334E-09 -2.4796E-19 1.8505E-02 1.3186E-02 -5.6702E-04 -4.4870E-14
 21.170 8.1470E-09 -1.0442E-19 1.4674E-02 1.3052E-02 1.4941E-03 -1.9149E-14
 21.460 1.3549E-08 -1.4147E-20 1.0961E-02 1.2470E-02 2.5177E-03 -2.6287E-15
 21.750 1.4560E-08 3.5333E-19 7.4520E-03 1.1707E-02 2.7409E-03 6.6515E-14
 22.040 1.2586E-08 5.2007E-19 4.1764E-03 1.0962E-02 2.3998E-03 9.9168E-14
 22.330 8.9413E-09 4.6239E-19 1.1477E-03 1.0364E-02 1.7267E-03 8.9294E-14
 22.620 4.8622E-09 2.8862E-19 1.8539E-03 9.9754E-03 9.5076E-04 5.6437E-14
 22.910 1.5258E-09 1.0413E-19 4.7120E-03 1.9633E-03 5.4590E-02 3.7256E-12
 23.200 7.8021E-11 1.2416E-20 2.9761E-03 6.6454E-03 4.5512E-03 7.2426E-13
 23.490 -1.7308E-10 -8.1686E-22 8.6033E-04 5.1917E-03 -1.4000E-02 -6.6075E-14
 23.780 -8.8625E-11 -5.2086E-22 3.4812E-05 1.7149E-03 -9.1677E-03 -5.3880E-14
 24.070 -1.6863E-11 -1.2197E-22 1.3456E-04 3.0567E-05 -2.1247E-03 -1.5368E-14
 24.360 2.9494E-12 8.3374E-23 5.1047E-05 2.2455E-04 4.3815E-04 1.2386E-14
 24.650 2.7357E-12 1.5557E-22 4.3515E-06 9.3141E-05 4.6811E-04 2.6621E-14
 24.940 7.7884E-13 5.3496E-23 2.9781E-06 1.0508E-05 1.0177E-04 6.9901E-15
 25.230 1.5721E-14 3.7271E-24 1.7471E-06 4.7002E-06 3.2699E-06 7.7523E-16
 25.520 -4.7414E-14 -2.5362E-25 2.5328E-07 3.1228E-06 -1.3529E-05 -7.2366E-17
 25.810 -1.1254E-14 -7.5637E-26 6.4076E-08 4.8601E-07 -4.0816E-06 -2.7431E-17
 26.100 2.3510E-16 -1.7941E-27 2.8677E-08 1.0713E-07 1.0344E-07 -7.8940E-19
 26.390 5.4675E-16 3.1788E-26 1.9592E-09 5.1118E-08 2.8285E-07 1.6445E-17
 26.680 7.3552E-17 5.5586E-27 9.7192E-10 3.7626E-09 4.3739E-08 3.3055E-18
 26.970 -9.8933E-18 -3.8497E-29 2.2399E-10 1.6833E-09 -5.9360E-09 -2.3098E-20

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27.260 -4.2926E-18 -2.6380E-29 4.2887E-12 4.0237E-10 -2.5755E-09 -1.5828E-20
 27.550 -2.5899E-19 -2.4630E-30 9.3964E-12 5.2591E-12 -1.5539E-10 -1.4778E-21
 27.840 1.3330E-19 6.9645E-30 1.2455E-12 1.6511E-11 7.9981E-11 4.1787E-21
 28.130 3.0308E-20 2.0623E-30 1.7981E-13 2.2774E-12 1.8185E-11 1.2374E-21
 28.420 -6.0230E-22 3.7853E-32 7.5636E-14 3.0232E-13 -3.6138E-13 2.2712E-23
 28.710 -1.2789E-21 -7.3158E-33 4.5086E-15 1.3040E-13 -7.6732E-13 -4.3895E-24
 29.000 -1.7599E-22 -1.6402E-33 0.0000 0.0000 -1.0560E-13 -9.8413E-25

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72

STR, KN/ M**2

1.5993E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72

STR, KN/ M**2
 1.5993E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	2.0200E-02	1.2397E-12	226.72	228.78	0.0000	0.0000
0.2900	1.8714E-02	1.2281E-12	158.32	226.22	16.227	1.0672E-09
0.5800	1.7170E-02	1.1958E-12	91.179	219.02	33.975	2.3710E-09
0.8700	1.5595E-02	1.1462E-12	26.812	206.96	50.005	3.6820E-09
1.1600	1.4015E-02	1.0824E-12	47.324	190.64	63.534	4.9151E-09
1.4500	1.2454E-02	1.0075E-12	101.84	170.95	73.329	5.9419E-09
1.7400	1.0934E-02	9.2473E-13	150.13	148.86	80.173	6.7902E-09
2.0300	9.4737E-03	8.3669E-13	191.58	124.98	85.775	7.5833E-09
2.3200	8.0905E-03	7.4600E-13	225.69	101.23	79.465	7.3326E-09
2.6100	6.7976E-03	6.5496E-13	252.99	78.068	81.704	7.8764E-09
2.9000	5.6061E-03	5.6564E-13	273.25	54.592	81.555	8.2312E-09
3.1900	4.5241E-03	4.7983E-13	286.48	30.835	83.553	8.8626E-09
3.4800	3.5568E-03	3.9905E-13	292.51	6.6528	84.369	9.4636E-09

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3.7700	2.7081E-03	3.2452E-13	291.26	21.075	84.084	1.0074E-08
4.0600	1.9760E-03	2.5713E-13	282.76	45.011	81.095	1.0553E-08
4.3500	1.3607E-03	1.9743E-13	267.27	65.368	59.743	8.6683E-09
4.6400	8.5405E-04	1.4561E-13	246.61	79.681	39.944	6.8101E-09
4.9300	4.4405E-04	1.0155E-13	222.50	88.444	22.040	5.0406E-09
5.2200	1.2145E-04	6.4927E-14	196.47	92.275	6.3763	3.4087E-09
5.5100	-1.2383E-04	3.5211E-14	169.87	91.872	-6.8559	1.9494E-09
5.8000	-3.0215E-04	1.1769E-14	143.84	87.966	-17.594	6.8531E-10
6.0900	-4.2367E-04	-5.8482E-16	119.32	82.255	-19.539	-2.6971E-11
6.3800	-4.9799E-04	-1.8206E-15	96.438	75.670	-23.946	-8.7542E-11
6.6700	-5.3408E-04	-2.6663E-15	75.595	68.052	-26.731	-1.3345E-10
6.9600	-5.4012E-04	-3.1881E-15	57.058	59.849	-28.095	-1.6583E-10
7.2500	-5.2343E-04	-3.4478E-15	40.918	51.447	-28.256	-1.8612E-10
7.5400	-4.9037E-04	-3.5018E-15	27.301	43.166	-27.435	-1.9592E-10
7.8300	-4.4637E-04	-3.4006E-15	16.037	35.260	-25.851	-1.9694E-10
8.1200	-3.9595E-04	-3.1877E-15	6.9383	27.921	-23.709	-1.9088E-10
8.4100	-3.4275E-04	-2.9005E-15	0.6652	21.292	-21.198	-1.7938E-10
8.7000	-2.8962E-04	-2.5697E-15	6.0151	15.450	-18.481	-1.6397E-10
8.9900	-2.3869E-04	-2.2201E-15	9.7813	10.456	-15.700	-1.4603E-10
9.2800	-1.9147E-04	-1.8711E-15	12.202	6.2988	-12.971	-1.2675E-10
9.5700	-1.4895E-04	-1.5370E-15	13.510	2.9125	-10.383	-1.0714E-10
9.8600	-1.1165E-04	-1.2279E-15	13.928	0.2467	-8.0023	-8.8008E-11
10.150	-7.9766E-05	-9.5025E-16	13.660	1.9528	-5.8739	-6.9976E-11
10.440	-5.3010E-05	-7.0754E-16	12.888	3.3879	-4.0078	-5.3494E-11
10.730	-3.1210E-05	-5.0089E-16	11.771	4.3200	-2.4210	-3.8854E-11
11.020	-1.4125E-05	-3.2955E-16	10.443	4.8340	-1.1235	-2.6212E-11
11.310	-1.2246E-06	-1.9150E-16	9.0145	5.0114	-9.9811E-02	-1.5607E-11
11.600	8.0649E-06	-8.3758E-17	7.5715	4.9282	0.6732	-6.9911E-12
11.890	1.4321E-05	-2.8423E-18	6.1804	4.6532	1.2235	-2.4283E-13
12.180	1.8102E-05	5.7896E-16	4.8883	4.2464	1.5821	5.0601E-11
12.470	1.9924E-05	9.8551E-16	3.7262	3.7588	1.7806	8.8071E-11



12.760	2.0254E-05	1.2267E-15	2.7127	3.2324	1.8498	1.1204E-10
13.050	1.9498E-05	1.3379E-15	1.8536	2.7004	1.8191	1.2482E-10
13.340	1.8000E-05	1.3507E-15	1.1526	2.1880	1.7147	1.2867E-10
13.630	1.6045E-05	1.2926E-15	0.5941	1.7132	1.5600	1.2567E-10
13.920	1.3858E-05	1.1866E-15	0.1637	1.2876	1.3747	1.1771E-10
14.210	1.1615E-05	1.0519E-15	0.1774	0.9187	1.1750	1.0641E-10
14.500	9.4437E-06	9.0333E-16	0.3976	0.6084	0.9739	9.3157E-11
14.790	7.4311E-06	7.5245E-16	0.5356	0.3575	0.7810	7.9077E-11
15.080	5.6332E-06	6.0754E-16	0.6076	0.1591	0.6031	6.5042E-11
15.370	4.0795E-06	4.7423E-16	0.6286	8.4436E-03	0.4448	5.1702E-11
15.660	2.7793E-06	3.5596E-16	0.6117	0.1099	0.3085	3.9508E-11
15.950	1.7304E-06	2.5442E-16	0.5685	0.1827	0.1955	2.8738E-11
16.240	9.1085E-07	1.6997E-16	0.5087	0.2256	0.1047	1.9533E-11
16.530	2.9068E-07	1.0196E-16	0.4399	0.2449	3.3977E-02	1.1918E-11
16.820	-1.5664E-07	4.9107E-17	0.3683	0.2461	-1.8617E-02	5.8365E-12
17.110	-4.5893E-07	9.6954E-18	0.2984	0.2342	-5.5447E-02	1.1714E-12
17.400	-6.4347E-07	-1.7251E-18	0.2332	0.2136	-7.9007E-02	-2.1182E-13
17.690	-7.3573E-07	-3.4620E-18	0.1749	0.1879	-9.1782E-02	-4.3189E-13
17.980	-7.5858E-07	-4.4712E-18	0.1245	0.1597	-9.6124E-02	-5.6657E-13
18.270	-7.3186E-07	-4.9179E-18	8.2378E-02	0.1313	-9.4177E-02	-6.3284E-13
18.560	-6.7217E-07	-4.9487E-18	4.8695E-02	0.1042	-8.7817E-02	-6.4653E-13
18.850	-5.9297E-07	-4.6891E-18	2.2451E-02	7.9522E-02	-7.8636E-02	-6.2184E-13
19.140	-5.0478E-07	-4.2430E-18	2.8059E-03	5.7839E-02	-6.7932E-02	-5.7102E-13
19.430	-4.1546E-07	-3.6935E-18	1.2256E-02	3.9473E-02	-5.6729E-02	-5.0433E-13
19.720	-3.3060E-07	-3.1044E-18	2.1399E-02	2.4493E-02	-4.5792E-02	-4.2999E-13
20.010	-2.5387E-07	-2.5227E-18	2.6622E-02	1.2682E-02	-3.5663E-02	-3.5438E-13
20.300	-1.8738E-07	-1.9807E-18	2.8793E-02	3.6408E-03	-2.6691E-02	-2.8214E-13
20.590	-1.3205E-07	-1.4989E-18	2.8682E-02	3.4673E-03	-1.9070E-02	-2.1646E-13
20.880	-8.7890E-08	-1.0883E-18	2.6940E-02	8.1124E-03	-1.2865E-02	-1.5930E-13
21.170	-5.3865E-08	-7.5239E-19	2.4099E-02	1.1137E-02	-7.9903E-03	-1.1161E-13
21.460	-2.9480E-08	-4.8935E-19	2.0572E-02	1.2938E-02	-4.4311E-03	-7.3552E-14

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21.750	-1.3337E-08	-2.9355E-19	1.6659E-02	1.3875E-02	-2.0308E-03	-4.4700E-14
22.040	-3.8661E-09	-1.5684E-19	1.2564E-02	1.4256E-02	-5.9630E-04	-2.4191E-14
22.330	5.7111E-10	-6.9518E-20	8.4176E-03	1.4329E-02	8.9209E-05	-1.0859E-14
22.620	1.6385E-09	-2.1045E-20	4.3386E-03	1.4279E-02	2.5916E-04	-3.3287E-15
22.910	9.9856E-10	-4.9162E-22	3.1634E-04	9.0608E-03	3.5726E-02	-1.7589E-14
23.200	3.0611E-10	3.3768E-20	9.9535E-04	1.5537E-03	1.7856E-02	1.9698E-12
23.490	1.9453E-11	1.7887E-20	6.1943E-04	1.4431E-03	1.5735E-03	1.4469E-12
23.780	-2.9627E-11	3.8532E-21	1.6038E-04	1.0905E-03	-3.0647E-03	3.9859E-13
24.070	-1.4459E-11	-4.2533E-23	1.3039E-05	3.1668E-04	-1.8218E-03	-5.3592E-15
24.360	-2.2817E-12	-5.4102E-23	2.4670E-05	9.1093E-06	-3.3897E-04	-8.0372E-15
24.650	6.7839E-13	-1.4914E-23	7.7798E-06	4.1428E-05	1.1608E-04	-2.5520E-15
24.940	5.2194E-13	-9.6674E-26	7.6431E-07	1.4707E-05	6.8201E-05	-1.2632E-17
25.230	1.0651E-13	1.2813E-23	7.5122E-07	1.7938E-06	2.2154E-05	2.6651E-15
25.520	-6.1891E-15	3.3562E-24	2.8656E-07	1.2674E-06	-1.7660E-06	9.5765E-16
25.810	-7.4253E-15	-1.1667E-28	1.8862E-08	5.1782E-07	-2.6929E-06	-4.2312E-20
26.100	-1.0951E-15	-1.5837E-26	1.3785E-08	3.8178E-08	-4.8185E-07	-6.9681E-18
26.390	1.6044E-16	-2.6669E-27	3.3665E-09	2.3898E-08	8.3004E-08	-1.3797E-18
26.680	6.7387E-17	2.3145E-27	7.3729E-11	6.0519E-09	4.0073E-08	1.3764E-18
26.970	4.2738E-18	1.4462E-27	1.4380E-10	9.4988E-11	2.5643E-09	8.6772E-19
27.260	-1.8795E-18	1.2705E-28	1.8930E-11	2.5277E-10	-1.1277E-09	7.6232E-20
27.550	-4.4962E-19	-3.5451E-30	2.7995E-12	3.4538E-11	-2.6977E-10	-2.1271E-21
27.840	1.1051E-20	-1.0044E-30	1.1533E-12	4.7176E-12	6.6307E-12	-6.0263E-22
28.130	1.9617E-20	-1.2526E-32	7.1188E-14	2.0495E-12	1.1770E-11	-7.5155E-24
28.420	2.5496E-21	3.9489E-31	3.5377E-14	1.3542E-13	1.5298E-12	2.3694E-22
28.710	-3.5024E-22	6.5958E-32	7.5532E-15	6.1003E-14	-2.1014E-13	3.9575E-23
29.000	-2.9261E-22	-2.2449E-33	0.0000	0.0000	-1.7557E-13	-1.3469E-24

* PILE GROUP * 9



* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72

STR, KN/ M**2

1.5993E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72

STR, KN/ M**2

1.5993E+04

* EFFECTS FOR LATERALLY LOADED PILE *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	2.0200E-02	1.2397E-12	226.72	228.78	0.0000	0.0000
0.2900	1.8714E-02	1.2281E-12	158.32	226.22	16.227	1.0672E-09
0.5800	1.7170E-02	1.1958E-12	91.179	219.02	33.975	2.3710E-09
0.8700	1.5595E-02	1.1462E-12	26.812	206.96	50.005	3.6820E-09
1.1600	1.4015E-02	1.0824E-12	47.324	190.64	63.534	4.9151E-09
1.4500	1.2454E-02	1.0075E-12	101.84	170.95	73.329	5.9419E-09
1.7400	1.0934E-02	9.2473E-13	150.13	148.86	80.173	6.7902E-09
2.0300	9.4737E-03	8.3669E-13	191.58	124.98	85.775	7.5833E-09
2.3200	8.0905E-03	7.4600E-13	225.69	101.23	79.465	7.3326E-09
2.6100	6.7976E-03	6.5496E-13	252.99	78.068	81.704	7.8764E-09
2.9000	5.6061E-03	5.6564E-13	273.25	54.592	81.555	8.2312E-09
3.1900	4.5241E-03	4.7983E-13	286.48	30.835	83.553	8.8626E-09
3.4800	3.5568E-03	3.9905E-13	292.51	6.6528	84.369	9.4636E-09
3.7700	2.7081E-03	3.2452E-13	291.26	21.075	84.084	1.0074E-08
4.0600	1.9760E-03	2.5713E-13	282.76	45.011	81.095	1.0553E-08
4.3500	1.3607E-03	1.9743E-13	267.27	65.368	59.743	8.6683E-09
4.6400	8.5405E-04	1.4561E-13	246.61	79.681	39.944	6.8101E-09
4.9300	4.4405E-04	1.0155E-13	222.50	88.444	22.040	5.0406E-09
5.2200	1.2145E-04	6.4927E-14	196.47	92.275	6.3763	3.4087E-09
5.5100	-1.2383E-04	3.5211E-14	169.87	91.872	-6.8559	1.9494E-09
5.8000	-3.0215E-04	1.1769E-14	143.84	87.966	-17.594	6.8531E-10
6.0900	-4.2367E-04	-5.8482E-16	119.32	82.255	-19.539	-2.6971E-11
6.3800	-4.9799E-04	-1.8206E-15	96.438	75.670	-23.946	-8.7542E-11
6.6700	-5.3408E-04	-2.6663E-15	75.595	68.052	-26.731	-1.3345E-10
6.9600	-5.4012E-04	-3.1881E-15	57.058	59.849	-28.095	-1.6583E-10

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7.2500	-5.2343E-04	-3.4478E-15	40.918	51.447	-28.256	-1.8612E-10
7.5400	-4.9037E-04	-3.5018E-15	27.301	43.166	-27.435	-1.9592E-10
7.8300	-4.4637E-04	-3.4006E-15	16.037	35.260	-25.851	-1.9694E-10
8.1200	-3.9595E-04	-3.1877E-15	6.9383	27.921	-23.709	-1.9088E-10
8.4100	-3.4275E-04	-2.9005E-15	0.6652	21.292	-21.198	-1.7938E-10
8.7000	-2.8962E-04	-2.5697E-15	6.0151	15.450	-18.481	-1.6397E-10
8.9900	-2.3869E-04	-2.2201E-15	9.7813	10.456	-15.700	-1.4603E-10
9.2800	-1.9147E-04	-1.8711E-15	12.202	6.2988	-12.971	-1.2675E-10
9.5700	-1.4895E-04	-1.5370E-15	13.510	2.9125	-10.383	-1.0714E-10
9.8600	-1.1165E-04	-1.2279E-15	13.928	0.2467	-8.0023	-8.8008E-11
10.150	-7.9766E-05	-9.5025E-16	13.660	1.9528	-5.8739	-6.9976E-11
10.440	-5.3010E-05	-7.0754E-16	12.888	3.3879	-4.0078	-5.3494E-11
10.730	-3.1210E-05	-5.0089E-16	11.771	4.3200	-2.4210	-3.8854E-11
11.020	-1.4125E-05	-3.2955E-16	10.443	4.8340	-1.1235	-2.6212E-11
11.310	-1.2246E-06	-1.9150E-16	9.0145	5.0114	-9.9811E-02	-1.5607E-11
11.600	8.0649E-06	-8.3758E-17	7.5715	4.9282	0.6732	-6.9911E-12
11.890	1.4321E-05	-2.8423E-18	6.1804	4.6532	1.2235	-2.4283E-13
12.180	1.8102E-05	5.7896E-16	4.8883	4.2464	1.5821	5.0601E-11
12.470	1.9924E-05	9.8551E-16	3.7262	3.7588	1.7806	8.8071E-11
12.760	2.0254E-05	1.2267E-15	2.7127	3.2324	1.8498	1.1204E-10
13.050	1.9498E-05	1.3379E-15	1.8536	2.7004	1.8191	1.2482E-10
13.340	1.8000E-05	1.3507E-15	1.1526	2.1880	1.7147	1.2867E-10
13.630	1.6045E-05	1.2926E-15	0.5941	1.7132	1.5600	1.2567E-10
13.920	1.3858E-05	1.1866E-15	0.1637	1.2876	1.3747	1.1771E-10
14.210	1.1615E-05	1.0519E-15	0.1774	0.9187	1.1750	1.0641E-10
14.500	9.4437E-06	9.0333E-16	0.3976	0.6084	0.9739	9.3157E-11
14.790	7.4311E-06	7.5245E-16	0.5356	0.3575	0.7810	7.9077E-11
15.080	5.6332E-06	6.0754E-16	0.6076	0.1591	0.6031	6.5042E-11
15.370	4.0795E-06	4.7423E-16	0.6286	8.4436E-03	0.4448	5.1702E-11
15.660	2.7793E-06	3.5596E-16	0.6117	0.1099	0.3085	3.9508E-11
15.950	1.7304E-06	2.5442E-16	0.5685	0.1827	0.1955	2.8738E-11

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16.240	9.1085E-07	1.6997E-16	0.5087	0.2256	0.1047	1.9533E-11
16.530	2.9068E-07	1.0196E-16	0.4399	0.2449	3.3977E-02	1.1918E-11
16.820	-1.5664E-07	4.9107E-17	0.3683	0.2461	-1.8617E-02	5.8365E-12
17.110	-4.5893E-07	9.6954E-18	0.2984	0.2342	-5.5447E-02	1.1714E-12
17.400	-6.4347E-07	-1.7251E-18	0.2332	0.2136	-7.9007E-02	-2.1182E-13
17.690	-7.3573E-07	-3.4620E-18	0.1749	0.1879	-9.1782E-02	-4.3189E-13
17.980	-7.5858E-07	-4.4712E-18	0.1245	0.1597	-9.6124E-02	-5.6657E-13
18.270	-7.3186E-07	-4.9179E-18	8.2378E-02	0.1313	-9.4177E-02	-6.3284E-13
18.560	-6.7217E-07	-4.9487E-18	4.8695E-02	0.1042	-8.7817E-02	-6.4653E-13
18.850	-5.9297E-07	-4.6891E-18	2.2451E-02	7.9522E-02	-7.8636E-02	-6.2184E-13
19.140	-5.0478E-07	-4.2430E-18	2.8059E-03	5.7839E-02	-6.7932E-02	-5.7102E-13
19.430	-4.1546E-07	-3.6935E-18	1.2256E-02	3.9473E-02	-5.6729E-02	-5.0433E-13
19.720	-3.3060E-07	-3.1044E-18	2.1399E-02	2.4493E-02	-4.5792E-02	-4.2999E-13
20.010	-2.5387E-07	-2.5227E-18	2.6622E-02	1.2682E-02	-3.5663E-02	-3.5438E-13
20.300	-1.8738E-07	-1.9807E-18	2.8793E-02	3.6408E-03	-2.6691E-02	-2.8214E-13
20.590	-1.3205E-07	-1.4989E-18	2.8682E-02	3.4673E-03	-1.9070E-02	-2.1646E-13
20.880	-8.7890E-08	-1.0883E-18	2.6940E-02	8.1124E-03	-1.2865E-02	-1.5930E-13
21.170	-5.3865E-08	-7.5239E-19	2.4099E-02	1.1137E-02	-7.9903E-03	-1.1161E-13
21.460	-2.9480E-08	-4.8935E-19	2.0572E-02	1.2938E-02	-4.4311E-03	-7.3552E-14
21.750	-1.3337E-08	-2.9355E-19	1.6659E-02	1.3875E-02	-2.0308E-03	-4.4700E-14
22.040	-3.8661E-09	-1.5684E-19	1.2564E-02	1.4256E-02	-5.9630E-04	-2.4191E-14
22.330	5.7111E-10	-6.9518E-20	8.4176E-03	1.4329E-02	8.9209E-05	-1.0859E-14
22.620	1.6385E-09	-2.1045E-20	4.3386E-03	1.4279E-02	2.5916E-04	-3.3287E-15
22.910	9.9856E-10	-4.9162E-22	3.1634E-04	9.0608E-03	3.5726E-02	-1.7589E-14
23.200	3.0611E-10	3.3768E-20	9.9535E-04	1.5537E-03	1.7856E-02	1.9698E-12
23.490	1.9453E-11	1.7887E-20	6.1943E-04	1.4431E-03	1.5735E-03	1.4469E-12
23.780	-2.9627E-11	3.8532E-21	1.6038E-04	1.0905E-03	-3.0647E-03	3.9859E-13
24.070	-1.4459E-11	-4.2533E-23	1.3039E-05	3.1668E-04	-1.8218E-03	-5.3592E-15
24.360	-2.2817E-12	-5.4102E-23	2.4670E-05	9.1093E-06	-3.3897E-04	-8.0372E-15
24.650	6.7839E-13	-1.4914E-23	7.7798E-06	4.1428E-05	1.1608E-04	-2.5520E-15
24.940	5.2194E-13	-9.6674E-26	7.6431E-07	1.4707E-05	6.8201E-05	-1.2632E-17

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25.230	1.0651E-13	1.2813E-23	7.5122E-07	1.7938E-06	2.2154E-05	2.6651E-15
25.520	-6.1891E-15	3.3562E-24	2.8656E-07	1.2674E-06	-1.7660E-06	9.5765E-16
25.810	-7.4253E-15	-1.1667E-28	1.8862E-08	5.1782E-07	-2.6929E-06	-4.2312E-20
26.100	-1.0951E-15	-1.5837E-26	1.3785E-08	3.8178E-08	-4.8185E-07	-6.9681E-18
26.390	1.6044E-16	-2.6669E-27	3.3665E-09	2.3898E-08	8.3004E-08	-1.3797E-18
26.680	6.7387E-17	2.3145E-27	7.3729E-11	6.0519E-09	4.0073E-08	1.3764E-18
26.970	4.2738E-18	1.4462E-27	1.4380E-10	9.4988E-11	2.5643E-09	8.6772E-19
27.260	-1.8795E-18	1.2705E-28	1.8930E-11	2.5277E-10	-1.1277E-09	7.6232E-20
27.550	-4.4962E-19	-3.5451E-30	2.7995E-12	3.4538E-11	-2.6977E-10	-2.1271E-21
27.840	1.1051E-20	-1.0044E-30	1.1533E-12	4.7176E-12	6.6307E-12	-6.0263E-22
28.130	1.9617E-20	-1.2526E-32	7.1188E-14	2.0495E-12	1.1770E-11	-7.5155E-24
28.420	2.5496E-21	3.9489E-31	3.5377E-14	1.3542E-13	1.5298E-12	2.3694E-22
28.710	-3.5024E-22	6.5958E-32	7.5532E-15	6.1003E-14	-2.1014E-13	3.9575E-23
29.000	-2.9261E-22	-2.2449E-33	0.0000	0.0000	-1.7557E-13	-1.3469E-24

* PILE GROUP * 10

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72



STR, KN/ M**2

1.5993E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72

STR, KN/ M**2

1.5993E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	2.0200E-02	1.2397E-12	226.72	228.78	0.0000	0.0000
0.2900	1.8714E-02	1.2281E-12	158.32	226.22	16.227	1.0672E-09
0.5800	1.7170E-02	1.1958E-12	91.179	219.02	33.975	2.3710E-09
0.8700	1.5595E-02	1.1462E-12	26.812	206.96	50.005	3.6820E-09
1.1600	1.4015E-02	1.0824E-12	47.324	190.64	63.534	4.9151E-09
1.4500	1.2454E-02	1.0075E-12	101.84	170.95	73.329	5.9419E-09



1.7400	1.0934E-02	9.2473E-13	150.13	148.86	80.173	6.7902E-09
2.0300	9.4737E-03	8.3669E-13	191.58	124.98	85.775	7.5833E-09
2.3200	8.0905E-03	7.4600E-13	225.69	101.23	79.465	7.3326E-09
2.6100	6.7976E-03	6.5496E-13	252.99	78.068	81.704	7.8764E-09
2.9000	5.6061E-03	5.6564E-13	273.25	54.592	81.555	8.2312E-09
3.1900	4.5241E-03	4.7983E-13	286.48	30.835	83.553	8.8626E-09
3.4800	3.5568E-03	3.9905E-13	292.51	6.6528	84.369	9.4636E-09
3.7700	2.7081E-03	3.2452E-13	291.26	21.075	84.084	1.0074E-08
4.0600	1.9760E-03	2.5713E-13	282.76	45.011	81.095	1.0553E-08
4.3500	1.3607E-03	1.9743E-13	267.27	65.368	59.743	8.6683E-09
4.6400	8.5405E-04	1.4561E-13	246.61	79.681	39.944	6.8101E-09
4.9300	4.4405E-04	1.0155E-13	222.50	88.444	22.040	5.0406E-09
5.2200	1.2145E-04	6.4927E-14	196.47	92.275	6.3763	3.4087E-09
5.5100	-1.2383E-04	3.5211E-14	169.87	91.872	-6.8559	1.9494E-09
5.8000	-3.0215E-04	1.1769E-14	143.84	87.966	-17.594	6.8531E-10
6.0900	-4.2367E-04	-5.8482E-16	119.32	82.255	-19.539	-2.6971E-11
6.3800	-4.9799E-04	-1.8206E-15	96.438	75.670	-23.946	-8.7542E-11
6.6700	-5.3408E-04	-2.6663E-15	75.595	68.052	-26.731	-1.3345E-10
6.9600	-5.4012E-04	-3.1881E-15	57.058	59.849	-28.095	-1.6583E-10
7.2500	-5.2343E-04	-3.4478E-15	40.918	51.447	-28.256	-1.8612E-10
7.5400	-4.9037E-04	-3.5018E-15	27.301	43.166	-27.435	-1.9592E-10
7.8300	-4.4637E-04	-3.4006E-15	16.037	35.260	-25.851	-1.9694E-10
8.1200	-3.9595E-04	-3.1877E-15	6.9383	27.921	-23.709	-1.9088E-10
8.4100	-3.4275E-04	-2.9005E-15	0.6652	21.292	-21.198	-1.7938E-10
8.7000	-2.8962E-04	-2.5697E-15	6.0151	15.450	-18.481	-1.6397E-10
8.9900	-2.3869E-04	-2.2201E-15	9.7813	10.456	-15.700	-1.4603E-10
9.2800	-1.9147E-04	-1.8711E-15	12.202	6.2988	-12.971	-1.2675E-10
9.5700	-1.4895E-04	-1.5370E-15	13.510	2.9125	-10.383	-1.0714E-10
9.8600	-1.1165E-04	-1.2279E-15	13.928	0.2467	-8.0023	-8.8008E-11
10.150	-7.9766E-05	-9.5025E-16	13.660	1.9528	-5.8739	-6.9976E-11
10.440	-5.3010E-05	-7.0754E-16	12.888	3.3879	-4.0078	-5.3494E-11



10.730	-3.1210E-05	-5.0089E-16	11.771	4.3200	-2.4210	-3.8854E-11
11.020	-1.4125E-05	-3.2955E-16	10.443	4.8340	-1.1235	-2.6212E-11
11.310	-1.2246E-06	-1.9150E-16	9.0145	5.0114	-9.9811E-02	-1.5607E-11
11.600	8.0649E-06	-8.3758E-17	7.5715	4.9282	0.6732	-6.9911E-12
11.890	1.4321E-05	-2.8423E-18	6.1804	4.6532	1.2235	-2.4283E-13
12.180	1.8102E-05	5.7896E-16	4.8883	4.2464	1.5821	5.0601E-11
12.470	1.9924E-05	9.8551E-16	3.7262	3.7588	1.7806	8.8071E-11
12.760	2.0254E-05	1.2267E-15	2.7127	3.2324	1.8498	1.1204E-10
13.050	1.9498E-05	1.3379E-15	1.8536	2.7004	1.8191	1.2482E-10
13.340	1.8000E-05	1.3507E-15	1.1526	2.1880	1.7147	1.2867E-10
13.630	1.6045E-05	1.2926E-15	0.5941	1.7132	1.5600	1.2567E-10
13.920	1.3858E-05	1.1866E-15	0.1637	1.2876	1.3747	1.1771E-10
14.210	1.1615E-05	1.0519E-15	0.1774	0.9187	1.1750	1.0641E-10
14.500	9.4437E-06	9.0333E-16	0.3976	0.6084	0.9739	9.3157E-11
14.790	7.4311E-06	7.5245E-16	0.5356	0.3575	0.7810	7.9077E-11
15.080	5.6332E-06	6.0754E-16	0.6076	0.1591	0.6031	6.5042E-11
15.370	4.0795E-06	4.7423E-16	0.6286	8.4436E-03	0.4448	5.1702E-11
15.660	2.7793E-06	3.5596E-16	0.6117	0.1099	0.3085	3.9508E-11
15.950	1.7304E-06	2.5442E-16	0.5685	0.1827	0.1955	2.8738E-11
16.240	9.1085E-07	1.6997E-16	0.5087	0.2256	0.1047	1.9533E-11
16.530	2.9068E-07	1.0196E-16	0.4399	0.2449	3.3977E-02	1.1918E-11
16.820	-1.5664E-07	4.9107E-17	0.3683	0.2461	-1.8617E-02	5.8365E-12
17.110	-4.5893E-07	9.6954E-18	0.2984	0.2342	-5.5447E-02	1.1714E-12
17.400	-6.4347E-07	-1.7251E-18	0.2332	0.2136	-7.9007E-02	-2.1182E-13
17.690	-7.3573E-07	-3.4620E-18	0.1749	0.1879	-9.1782E-02	-4.3189E-13
17.980	-7.5858E-07	-4.4712E-18	0.1245	0.1597	-9.6124E-02	-5.6657E-13
18.270	-7.3186E-07	-4.9179E-18	8.2378E-02	0.1313	-9.4177E-02	-6.3284E-13
18.560	-6.7217E-07	-4.9487E-18	4.8695E-02	0.1042	-8.7817E-02	-6.4653E-13
18.850	-5.9297E-07	-4.6891E-18	2.2451E-02	7.9522E-02	-7.8636E-02	-6.2184E-13
19.140	-5.0478E-07	-4.2430E-18	2.8059E-03	5.7839E-02	-6.7932E-02	-5.7102E-13
19.430	-4.1546E-07	-3.6935E-18	1.2256E-02	3.9473E-02	-5.6729E-02	-5.0433E-13

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19.720	-3.3060E-07	-3.1044E-18	2.1399E-02	2.4493E-02	-4.5792E-02	-4.2999E-13
20.010	-2.5387E-07	-2.5227E-18	2.6622E-02	1.2682E-02	-3.5663E-02	-3.5438E-13
20.300	-1.8738E-07	-1.9807E-18	2.8793E-02	3.6408E-03	-2.6691E-02	-2.8214E-13
20.590	-1.3205E-07	-1.4989E-18	2.8682E-02	3.4673E-03	-1.9070E-02	-2.1646E-13
20.880	-8.7890E-08	-1.0883E-18	2.6940E-02	8.1124E-03	-1.2865E-02	-1.5930E-13
21.170	-5.3865E-08	-7.5239E-19	2.4099E-02	1.1137E-02	-7.9903E-03	-1.1161E-13
21.460	-2.9480E-08	-4.8935E-19	2.0572E-02	1.2938E-02	-4.4311E-03	-7.3552E-14
21.750	-1.3337E-08	-2.9355E-19	1.6659E-02	1.3875E-02	-2.0308E-03	-4.4700E-14
22.040	-3.8661E-09	-1.5684E-19	1.2564E-02	1.4256E-02	-5.9630E-04	-2.4191E-14
22.330	5.7111E-10	-6.9518E-20	8.4176E-03	1.4329E-02	8.9209E-05	-1.0859E-14
22.620	1.6385E-09	-2.1045E-20	4.3386E-03	1.4279E-02	2.5916E-04	-3.3287E-15
22.910	9.9856E-10	-4.9162E-22	3.1634E-04	9.0608E-03	3.5726E-02	-1.7589E-14
23.200	3.0611E-10	3.3768E-20	9.9535E-04	1.5537E-03	1.7856E-02	1.9698E-12
23.490	1.9453E-11	1.7887E-20	6.1943E-04	1.4431E-03	1.5735E-03	1.4469E-12
23.780	-2.9627E-11	3.8532E-21	1.6038E-04	1.0905E-03	-3.0647E-03	3.9859E-13
24.070	-1.4459E-11	-4.2533E-23	1.3039E-05	3.1668E-04	-1.8218E-03	-5.3592E-15
24.360	-2.2817E-12	-5.4102E-23	2.4670E-05	9.1093E-06	-3.3897E-04	-8.0372E-15
24.650	6.7839E-13	-1.4914E-23	7.7798E-06	4.1428E-05	1.1608E-04	-2.5520E-15
24.940	5.2194E-13	-9.6674E-26	7.6431E-07	1.4707E-05	6.8201E-05	-1.2632E-17
25.230	1.0651E-13	1.2813E-23	7.5122E-07	1.7938E-06	2.2154E-05	2.6651E-15
25.520	-6.1891E-15	3.3562E-24	2.8656E-07	1.2674E-06	-1.7660E-06	9.5765E-16
25.810	-7.4253E-15	-1.1667E-28	1.8862E-08	5.1782E-07	-2.6929E-06	-4.2312E-20
26.100	-1.0951E-15	-1.5837E-26	1.3785E-08	3.8178E-08	-4.8185E-07	-6.9681E-18
26.390	1.6044E-16	-2.6669E-27	3.3665E-09	2.3898E-08	8.3004E-08	-1.3797E-18
26.680	6.7387E-17	2.3145E-27	7.3729E-11	6.0519E-09	4.0073E-08	1.3764E-18
26.970	4.2738E-18	1.4462E-27	1.4380E-10	9.4988E-11	2.5643E-09	8.6772E-19
27.260	-1.8795E-18	1.2705E-28	1.8930E-11	2.5277E-10	-1.1277E-09	7.6232E-20
27.550	-4.4962E-19	-3.5451E-30	2.7995E-12	3.4538E-11	-2.6977E-10	-2.1271E-21
27.840	1.1051E-20	-1.0044E-30	1.1533E-12	4.7176E-12	6.6307E-12	-6.0263E-22
28.130	1.9617E-20	-1.2526E-32	7.1188E-14	2.0495E-12	1.1770E-11	-7.5155E-24
28.420	2.5496E-21	3.9489E-31	3.5377E-14	1.3542E-13	1.5298E-12	2.3694E-22

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28.710 -3.5024E-22 6.5958E-32 7.5532E-15 6.1003E-14 -2.1014E-13 3.9575E-23

29.000 -2.9261E-22 -2.2449E-33 0.0000 0.0000 -1.7557E-13 -1.3469E-24

* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72

STR, KN/ M**2

1.5993E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03



AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1559.7 228.55 2.8784E-08 3.1451E-08 -5.7171E-09 226.72

STR, KN/ M**2

1.5993E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	2.0200E-02	1.2397E-12	226.72	228.78	0.0000	0.0000
0.2900	1.8714E-02	1.2281E-12	158.32	226.22	16.227	1.0672E-09
0.5800	1.7170E-02	1.1958E-12	91.179	219.02	33.975	2.3710E-09
0.8700	1.5595E-02	1.1462E-12	26.812	206.96	50.005	3.6820E-09
1.1600	1.4015E-02	1.0824E-12	47.324	190.64	63.534	4.9151E-09
1.4500	1.2454E-02	1.0075E-12	101.84	170.95	73.329	5.9419E-09
1.7400	1.0934E-02	9.2473E-13	150.13	148.86	80.173	6.7902E-09
2.0300	9.4737E-03	8.3669E-13	191.58	124.98	85.775	7.5833E-09
2.3200	8.0905E-03	7.4600E-13	225.69	101.23	79.465	7.3326E-09
2.6100	6.7976E-03	6.5496E-13	252.99	78.068	81.704	7.8764E-09
2.9000	5.6061E-03	5.6564E-13	273.25	54.592	81.555	8.2312E-09
3.1900	4.5241E-03	4.7983E-13	286.48	30.835	83.553	8.8626E-09
3.4800	3.5568E-03	3.9905E-13	292.51	6.6528	84.369	9.4636E-09
3.7700	2.7081E-03	3.2452E-13	291.26	21.075	84.084	1.0074E-08
4.0600	1.9760E-03	2.5713E-13	282.76	45.011	81.095	1.0553E-08
4.3500	1.3607E-03	1.9743E-13	267.27	65.368	59.743	8.6683E-09
4.6400	8.5405E-04	1.4561E-13	246.61	79.681	39.944	6.8101E-09
4.9300	4.4405E-04	1.0155E-13	222.50	88.444	22.040	5.0406E-09

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5.2200	1.2145E-04	6.4927E-14	196.47	92.275	6.3763	3.4087E-09
5.5100	-1.2383E-04	3.5211E-14	169.87	91.872	-6.8559	1.9494E-09
5.8000	-3.0215E-04	1.1769E-14	143.84	87.966	-17.594	6.8531E-10
6.0900	-4.2367E-04	-5.8482E-16	119.32	82.255	-19.539	-2.6971E-11
6.3800	-4.9799E-04	-1.8206E-15	96.438	75.670	-23.946	-8.7542E-11
6.6700	-5.3408E-04	-2.6663E-15	75.595	68.052	-26.731	-1.3345E-10
6.9600	-5.4012E-04	-3.1881E-15	57.058	59.849	-28.095	-1.6583E-10
7.2500	-5.2343E-04	-3.4478E-15	40.918	51.447	-28.256	-1.8612E-10
7.5400	-4.9037E-04	-3.5018E-15	27.301	43.166	-27.435	-1.9592E-10
7.8300	-4.4637E-04	-3.4006E-15	16.037	35.260	-25.851	-1.9694E-10
8.1200	-3.9595E-04	-3.1877E-15	6.9383	27.921	-23.709	-1.9088E-10
8.4100	-3.4275E-04	-2.9005E-15	0.6652	21.292	-21.198	-1.7938E-10
8.7000	-2.8962E-04	-2.5697E-15	6.0151	15.450	-18.481	-1.6397E-10
8.9900	-2.3869E-04	-2.2201E-15	9.7813	10.456	-15.700	-1.4603E-10
9.2800	-1.9147E-04	-1.8711E-15	12.202	6.2988	-12.971	-1.2675E-10
9.5700	-1.4895E-04	-1.5370E-15	13.510	2.9125	-10.383	-1.0714E-10
9.8600	-1.1165E-04	-1.2279E-15	13.928	0.2467	-8.0023	-8.8008E-11
10.150	-7.9766E-05	-9.5025E-16	13.660	1.9528	-5.8739	-6.9976E-11
10.440	-5.3010E-05	-7.0754E-16	12.888	3.3879	-4.0078	-5.3494E-11
10.730	-3.1210E-05	-5.0089E-16	11.771	4.3200	-2.4210	-3.8854E-11
11.020	-1.4125E-05	-3.2955E-16	10.443	4.8340	-1.1235	-2.6212E-11
11.310	-1.2246E-06	-1.9150E-16	9.0145	5.0114	-9.9811E-02	-1.5607E-11
11.600	8.0649E-06	-8.3758E-17	7.5715	4.9282	0.6732	-6.9911E-12
11.890	1.4321E-05	-2.8423E-18	6.1804	4.6532	1.2235	-2.4283E-13
12.180	1.8102E-05	5.7896E-16	4.8883	4.2464	1.5821	5.0601E-11
12.470	1.9924E-05	9.8551E-16	3.7262	3.7588	1.7806	8.8071E-11
12.760	2.0254E-05	1.2267E-15	2.7127	3.2324	1.8498	1.1204E-10
13.050	1.9498E-05	1.3379E-15	1.8536	2.7004	1.8191	1.2482E-10
13.340	1.8000E-05	1.3507E-15	1.1526	2.1880	1.7147	1.2867E-10
13.630	1.6045E-05	1.2926E-15	0.5941	1.7132	1.5600	1.2567E-10
13.920	1.3858E-05	1.1866E-15	0.1637	1.2876	1.3747	1.1771E-10



14.210	1.1615E-05	1.0519E-15	0.1774	0.9187	1.1750	1.0641E-10
14.500	9.4437E-06	9.0333E-16	0.3976	0.6084	0.9739	9.3157E-11
14.790	7.4311E-06	7.5245E-16	0.5356	0.3575	0.7810	7.9077E-11
15.080	5.6332E-06	6.0754E-16	0.6076	0.1591	0.6031	6.5042E-11
15.370	4.0795E-06	4.7423E-16	0.6286	8.4436E-03	0.4448	5.1702E-11
15.660	2.7793E-06	3.5596E-16	0.6117	0.1099	0.3085	3.9508E-11
15.950	1.7304E-06	2.5442E-16	0.5685	0.1827	0.1955	2.8738E-11
16.240	9.1085E-07	1.6997E-16	0.5087	0.2256	0.1047	1.9533E-11
16.530	2.9068E-07	1.0196E-16	0.4399	0.2449	3.3977E-02	1.1918E-11
16.820	-1.5664E-07	4.9107E-17	0.3683	0.2461	-1.8617E-02	5.8365E-12
17.110	-4.5893E-07	9.6954E-18	0.2984	0.2342	-5.5447E-02	1.1714E-12
17.400	-6.4347E-07	-1.7251E-18	0.2332	0.2136	-7.9007E-02	-2.1182E-13
17.690	-7.3573E-07	-3.4620E-18	0.1749	0.1879	-9.1782E-02	-4.3189E-13
17.980	-7.5858E-07	-4.4712E-18	0.1245	0.1597	-9.6124E-02	-5.6657E-13
18.270	-7.3186E-07	-4.9179E-18	8.2378E-02	0.1313	-9.4177E-02	-6.3284E-13
18.560	-6.7217E-07	-4.9487E-18	4.8695E-02	0.1042	-8.7817E-02	-6.4653E-13
18.850	-5.9297E-07	-4.6891E-18	2.2451E-02	7.9522E-02	-7.8636E-02	-6.2184E-13
19.140	-5.0478E-07	-4.2430E-18	2.8059E-03	5.7839E-02	-6.7932E-02	-5.7102E-13
19.430	-4.1546E-07	-3.6935E-18	1.2256E-02	3.9473E-02	-5.6729E-02	-5.0433E-13
19.720	-3.3060E-07	-3.1044E-18	2.1399E-02	2.4493E-02	-4.5792E-02	-4.2999E-13
20.010	-2.5387E-07	-2.5227E-18	2.6622E-02	1.2682E-02	-3.5663E-02	-3.5438E-13
20.300	-1.8738E-07	-1.9807E-18	2.8793E-02	3.6408E-03	-2.6691E-02	-2.8214E-13
20.590	-1.3205E-07	-1.4989E-18	2.8682E-02	3.4673E-03	-1.9070E-02	-2.1646E-13
20.880	-8.7890E-08	-1.0883E-18	2.6940E-02	8.1124E-03	-1.2865E-02	-1.5930E-13
21.170	-5.3865E-08	-7.5239E-19	2.4099E-02	1.1137E-02	-7.9903E-03	-1.1161E-13
21.460	-2.9480E-08	-4.8935E-19	2.0572E-02	1.2938E-02	-4.4311E-03	-7.3552E-14
21.750	-1.3337E-08	-2.9355E-19	1.6659E-02	1.3875E-02	-2.0308E-03	-4.4700E-14
22.040	-3.8661E-09	-1.5684E-19	1.2564E-02	1.4256E-02	-5.9630E-04	-2.4191E-14
22.330	5.7111E-10	-6.9518E-20	8.4176E-03	1.4329E-02	8.9209E-05	-1.0859E-14
22.620	1.6385E-09	-2.1045E-20	4.3386E-03	1.4279E-02	2.5916E-04	-3.3287E-15
22.910	9.9856E-10	-4.9162E-22	3.1634E-04	9.0608E-03	3.5726E-02	-1.7589E-14



23.200	3.0611E-10	3.3768E-20	9.9535E-04	1.5537E-03	1.7856E-02	1.9698E-12
23.490	1.9453E-11	1.7887E-20	6.1943E-04	1.4431E-03	1.5735E-03	1.4469E-12
23.780	-2.9627E-11	3.8532E-21	1.6038E-04	1.0905E-03	-3.0647E-03	3.9859E-13
24.070	-1.4459E-11	-4.2533E-23	1.3039E-05	3.1668E-04	-1.8218E-03	-5.3592E-15
24.360	-2.2817E-12	-5.4102E-23	2.4670E-05	9.1093E-06	-3.3897E-04	-8.0372E-15
24.650	6.7839E-13	-1.4914E-23	7.7798E-06	4.1428E-05	1.1608E-04	-2.5520E-15
24.940	5.2194E-13	-9.6674E-26	7.6431E-07	1.4707E-05	6.8201E-05	-1.2632E-17
25.230	1.0651E-13	1.2813E-23	7.5122E-07	1.7938E-06	2.2154E-05	2.6651E-15
25.520	-6.1891E-15	3.3562E-24	2.8656E-07	1.2674E-06	-1.7660E-06	9.5765E-16
25.810	-7.4253E-15	-1.1667E-28	1.8862E-08	5.1782E-07	-2.6929E-06	-4.2312E-20
26.100	-1.0951E-15	-1.5837E-26	1.3785E-08	3.8178E-08	-4.8185E-07	-6.9681E-18
26.390	1.6044E-16	-2.6669E-27	3.3665E-09	2.3898E-08	8.3004E-08	-1.3797E-18
26.680	6.7387E-17	2.3145E-27	7.3729E-11	6.0519E-09	4.0073E-08	1.3764E-18
26.970	4.2738E-18	1.4462E-27	1.4380E-10	9.4988E-11	2.5643E-09	8.6772E-19
27.260	-1.8795E-18	1.2705E-28	1.8930E-11	2.5277E-10	-1.1277E-09	7.6232E-20
27.550	-4.4962E-19	-3.5451E-30	2.7995E-12	3.4538E-11	-2.6977E-10	-2.1271E-21
27.840	1.1051E-20	-1.0044E-30	1.1533E-12	4.7176E-12	6.6307E-12	-6.0263E-22
28.130	1.9617E-20	-1.2526E-32	7.1188E-14	2.0495E-12	1.1770E-11	-7.5155E-24
28.420	2.5496E-21	3.9489E-31	3.5377E-14	1.3542E-13	1.5298E-12	2.3694E-22
28.710	-3.5024E-22	6.5958E-32	7.5532E-15	6.1003E-14	-2.1014E-13	3.9575E-23
29.000	-2.9261E-22	-2.2449E-33	0.0000	0.0000	-1.7557E-13	-1.3469E-24

* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1559.7 266.23 3.2239E-08 3.1451E-08 -6.1492E-09 271.85

STR, KN/ M**2

1.8122E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

5.0393E-03 0.020200 1.2397E-12 2.1576E-12 -1.5004E-16 -4.7114E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1559.7 266.23 3.2239E-08 3.1451E-08 -6.1492E-09 271.85

STR, KN/ M**2

1.8122E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT

y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR

M M M KN- M KN KN/ M KN/ M

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0.0000	2.0200E-02	1.2397E-12	271.85	266.51	0.0000	0.0000
0.2900	1.8705E-02	1.2272E-12	192.52	263.36	20.052	1.3184E-09
0.5800	1.7138E-02	1.1926E-12	114.73	254.47	41.925	2.9233E-09
0.8700	1.5530E-02	1.1396E-12	40.366	239.61	61.565	4.5259E-09
1.1600	1.3913E-02	1.0718E-12	42.842	219.55	77.973	6.0172E-09
1.4500	1.2312E-02	9.9271E-13	105.26	195.45	89.623	7.2377E-09
1.7400	1.0754E-02	9.0563E-13	160.08	168.52	97.485	8.2213E-09
2.0300	9.2594E-03	8.1362E-13	206.60	139.59	103.64	9.1166E-09
2.3200	7.8479E-03	7.1945E-13	244.28	111.00	95.297	8.7426E-09
2.6100	6.5343E-03	6.2561E-13	273.78	83.362	97.097	9.3012E-09
2.9000	5.3303E-03	5.3428E-13	294.95	55.628	95.865	9.6120E-09
3.1900	4.2445E-03	4.4732E-13	307.88	27.902	96.912	1.0214E-08
3.4800	3.2821E-03	3.6628E-13	312.46	3.3351	96.246	1.0739E-08
3.7700	2.4459E-03	2.9235E-13	308.75	30.905	93.891	1.1220E-08
4.0600	1.7335E-03	2.2636E-13	296.95	57.255	87.952	1.1485E-08
4.3500	1.1433E-03	1.6875E-13	277.58	78.936	62.060	9.1594E-09
4.6400	6.6586E-04	1.1957E-13	252.85	93.356	38.501	6.9137E-09
4.9300	2.8759E-04	7.8567E-14	224.79	101.24	17.647	4.8211E-09
5.2200	-2.3217E-06	4.5237E-14	195.18	103.45	-0.1507	2.9361E-09
5.5100	-2.1538E-04	1.8914E-14	165.57	100.92	-14.742	1.2946E-09
5.8000	-3.6313E-04	-1.1860E-16	137.21	94.589	-26.141	-8.5379E-12
6.0900	-4.5666E-04	-1.5088E-15	111.09	86.663	-26.037	-8.6023E-11
6.3800	-5.0622E-04	-2.4624E-15	87.169	78.220	-30.093	-1.4638E-10
6.6700	-5.2119E-04	-3.0546E-15	65.824	68.892	-32.249	-1.8901E-10
6.9600	-5.0997E-04	-3.3556E-15	47.256	59.194	-32.795	-2.1579E-10
7.2500	-4.7990E-04	-3.4295E-15	31.519	49.556	-32.027	-2.2888E-10
7.5400	-4.3720E-04	-3.3334E-15	18.632	40.318	-30.240	-2.3056E-10
7.8300	-3.8703E-04	-3.1165E-15	8.2783	31.737	-27.711	-2.2314E-10
8.1200	-3.3355E-04	-2.8206E-15	0.2497	23.996	-24.692	-2.0880E-10
8.4100	-2.7997E-04	-2.4799E-15	6.2115	17.207	-21.406	-1.8961E-10



8.7000	-2.2867E-04	-2.1215E-15	10.363	11.424	-18.039	-1.6736E-10
8.9900	-1.8132E-04	-1.7663E-15	12.969	6.6707	-14.745	-1.4363E-10
9.2800	-1.3897E-04	-1.4295E-15	14.311	2.8452	-11.638	-1.1972E-10
9.5700	-1.0216E-04	-1.1213E-15	14.656	0.3005	-8.8044	-9.6634E-11
9.8600	-7.1068E-05	-8.4813E-16	14.245	2.5021	-6.2973	-7.5153E-11
10.150	-4.5352E-05	-6.1291E-16	13.294	4.0165	-4.1288	-5.5799E-11
10.440	-2.4757E-05	-4.1611E-16	11.988	4.9507	-2.3141	-3.8894E-11
10.730	-8.9648E-06	-2.5626E-16	10.479	5.4109	-0.8597	-2.4575E-11
11.020	2.6295E-06	-1.3058E-16	8.8923	5.4981	0.2586	-1.2840E-11
11.310	1.0662E-05	-3.5432E-17	7.3212	5.3048	1.0743	-3.5702E-12
11.600	1.5761E-05	3.4921E-16	5.8360	4.9132	1.6264	3.6036E-11
11.890	1.8522E-05	8.3963E-16	4.4838	4.3937	1.9563	8.8683E-11
12.180	1.9487E-05	1.1392E-15	3.2934	3.8047	2.1056	1.2309E-10
12.470	1.9133E-05	1.2885E-15	2.2799	3.1929	2.1139	1.4236E-10
12.760	1.7866E-05	1.3241E-15	1.4443	2.5939	2.0173	1.4950E-10
13.050	1.6023E-05	1.2777E-15	0.7830	2.0334	1.8481	1.4737E-10
13.340	1.3872E-05	1.1761E-15	0.2734	1.5285	1.6337	1.3851E-10
13.630	1.1619E-05	1.0412E-15	0.1247	1.0896	1.3967	1.2516E-10
13.920	9.4167E-06	8.9027E-16	0.3853	0.7203	1.1548	1.0918E-10
14.210	7.3683E-06	7.3628E-16	0.5485	0.4227	0.9215	9.2082E-11
14.500	5.5397E-06	5.8859E-16	0.6338	0.1896	0.7063	7.5041E-11
14.790	3.9652E-06	4.5342E-16	0.6594	1.4114E-02	0.5152	5.8910E-11
15.080	2.6572E-06	3.3449E-16	0.6412	0.1207	0.3517	4.4271E-11
15.370	1.6098E-06	2.3349E-16	0.5930	0.2029	0.2170	3.1470E-11
15.660	8.0408E-07	1.5063E-16	0.5264	0.2498	0.1103	2.0668E-11
15.950	2.0481E-07	8.5040E-17	0.4504	0.2690	2.8601E-02	1.1875E-11
16.240	-2.1742E-07	3.5149E-17	0.3720	0.2676	-3.0890E-02	4.9939E-12
16.530	-4.9314E-07	-1.0078E-19	0.2963	0.2516	-7.1262E-02	-1.4563E-14
16.820	-6.5191E-07	-2.4356E-18	0.2267	0.2262	-9.5789E-02	-3.5788E-13
17.110	-7.2097E-07	-3.8804E-18	0.1654	0.1956	-0.1077	-5.7960E-13
17.400	-7.2437E-07	-4.6288E-18	0.1134	0.1631	-0.1100	-7.0264E-13



17.690	-6.8258E-07	-4.8556E-18	7.0865E-02	0.1311	-0.1053	-7.4887E-13
17.980	-6.1241E-07	-4.7120E-18	3.7752E-02	0.1012	-9.5939E-02	-7.3817E-13
18.270	-5.2712E-07	-4.3242E-18	1.2685E-02	7.4547E-02	-8.3858E-02	-6.8793E-13
18.560	-4.3674E-07	-3.7938E-18	6.3941E-03	5.1752E-02	-7.0542E-02	-6.1276E-13
18.850	-3.4850E-07	-3.1992E-18	1.8517E-02	3.2961E-02	-5.7137E-02	-5.2450E-13
19.140	-2.6725E-07	-2.5982E-18	2.5748E-02	1.8206E-02	-4.4464E-02	-4.3229E-13
19.430	-1.9588E-07	-2.0311E-18	2.9174E-02	6.9640E-03	-3.3066E-02	-3.4286E-13
19.720	-1.3582E-07	-1.5233E-18	2.9773E-02	1.6562E-03	-2.3257E-02	-2.6085E-13
20.010	-8.7346E-08	-1.0890E-18	2.8386E-02	7.2488E-03	-1.5169E-02	-1.8912E-13
20.300	-4.9443E-08	-7.3320E-19	2.5705E-02	1.0711E-02	-8.7070E-03	-1.2912E-13
20.590	-2.1827E-08	-4.5474E-19	2.2276E-02	1.2539E-02	-3.8967E-03	-8.1185E-14
20.880	-3.1334E-09	-2.4796E-19	1.8505E-02	1.3186E-02	-5.6702E-04	-4.4870E-14
21.170	8.1470E-09	-1.0442E-19	1.4674E-02	1.3052E-02	1.4941E-03	-1.9149E-14
21.460	1.3549E-08	-1.4147E-20	1.0961E-02	1.2470E-02	2.5177E-03	-2.6287E-15
21.750	1.4560E-08	3.5333E-19	7.4520E-03	1.1707E-02	2.7409E-03	6.6515E-14
22.040	1.2586E-08	5.2007E-19	4.1764E-03	1.0962E-02	2.3998E-03	9.9168E-14
22.330	8.9413E-09	4.6239E-19	1.1477E-03	1.0364E-02	1.7267E-03	8.9294E-14
22.620	4.8622E-09	2.8862E-19	1.8539E-03	9.9754E-03	9.5076E-04	5.6437E-14
22.910	1.5258E-09	1.0413E-19	4.7120E-03	1.9633E-03	5.4590E-02	3.7256E-12
23.200	7.8021E-11	1.2416E-20	2.9761E-03	6.6454E-03	4.5512E-03	7.2426E-13
23.490	-1.7308E-10	-8.1686E-22	8.6033E-04	5.1917E-03	-1.4000E-02	-6.6075E-14
23.780	-8.8625E-11	-5.2086E-22	3.4812E-05	1.7149E-03	-9.1677E-03	-5.3880E-14
24.070	-1.6863E-11	-1.2197E-22	1.3456E-04	3.0567E-05	-2.1247E-03	-1.5368E-14
24.360	2.9494E-12	8.3374E-23	5.1047E-05	2.2455E-04	4.3815E-04	1.2386E-14
24.650	2.7357E-12	1.5557E-22	4.3515E-06	9.3141E-05	4.6811E-04	2.6621E-14
24.940	7.7884E-13	5.3496E-23	2.9781E-06	1.0508E-05	1.0177E-04	6.9901E-15
25.230	1.5721E-14	3.7271E-24	1.7471E-06	4.7002E-06	3.2699E-06	7.7523E-16
25.520	-4.7414E-14	-2.5362E-25	2.5328E-07	3.1228E-06	-1.3529E-05	-7.2366E-17
25.810	-1.1254E-14	-7.5637E-26	6.4076E-08	4.8601E-07	-4.0816E-06	-2.7431E-17
26.100	2.3510E-16	-1.7941E-27	2.8677E-08	1.0713E-07	1.0344E-07	-7.8940E-19
26.390	5.4675E-16	3.1788E-26	1.9592E-09	5.1118E-08	2.8285E-07	1.6445E-17

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26.680	7.3552E-17	5.5586E-27	9.7192E-10	3.7626E-09	4.3739E-08	3.3055E-18
26.970	-9.8933E-18	-3.8497E-29	2.2399E-10	1.6833E-09	-5.9360E-09	-2.3098E-20
27.260	-4.2926E-18	-2.6380E-29	4.2887E-12	4.0237E-10	-2.5755E-09	-1.5828E-20
27.550	-2.5899E-19	-2.4630E-30	9.3964E-12	5.2591E-12	-1.5539E-10	-1.4778E-21
27.840	1.3330E-19	6.9645E-30	1.2455E-12	1.6511E-11	7.9981E-11	4.1787E-21
28.130	3.0308E-20	2.0623E-30	1.7981E-13	2.2774E-12	1.8185E-11	1.2374E-21
28.420	-6.0230E-22	3.7853E-32	7.5636E-14	3.0232E-13	-3.6138E-13	2.2712E-23
28.710	-1.2789E-21	-7.3158E-33	4.5086E-15	1.3040E-13	-7.6732E-13	-4.3895E-24
29.000	-1.7599E-22	-1.6402E-33	0.0000	0.0000	-1.0560E-13	-9.8413E-25

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17.2 SLV

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GROUP for Windows, Version 2019.11.11

Serial Number : 447513991

Analysis of A Group of Piles

Subjected to Axial and Lateral Loading

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Name of input data file : Fondazione impalcato Maltempo-pali 600-SLV-aggstrat.gp11d
Name of output echo file : Fondazione impalcato Maltempo-pali 600-SLV-aggstrat.gp11e
Name of output results file : Fondazione impalcato Maltempo-pali 600-SLV-aggstrat.gp11o
Name of output summary file : Fondazione impalcato Maltempo-pali 600-SLV-aggstrat.gp11t
Name of plot output file : Fondazione impalcato Maltempo-pali 600-SLV-aggstrat.gp11p
Name of runtime file : Fondazione impalcato Maltempo-pali 600-SLV-aggstrat.gp11r

Time and Date of Analysis



Date: March 20, 2023 Time: 11:21:28

***** COMPUTATION RESULTS *****

New Group

***** LOAD CASES RESULTS *****

LOAD CASE : 1

CASE NAME : SLV16

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO P-FACTOR Y-FACTOR

1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000



4	0.3353	1.0000
5	0.3414	1.0000
6	0.4647	1.0000
7	0.6922	1.0000
8	0.5599	1.0000
9	0.5599	1.0000
10	0.5599	1.0000
11	0.5599	1.0000
12	0.6923	1.0000

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

4265.69 2151.06 66.2700

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

3.78000 151.320 -4939.44

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.18494E-03 0.0157308 2.68880E-04



ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD
 -1.37587E-06 1.38227E-05 -3.84603E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE : 2

CASE NAME : SLV23

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
1	0.4643	1.0000
2	0.3413	1.0000
3	0.3352	1.0000
4	0.3352	1.0000
5	0.3415	1.0000
6	0.4656	1.0000
7	0.6914	1.0000
8	0.5593	1.0000
9	0.5593	1.0000
10	0.5593	1.0000
11	0.5595	1.0000
12	0.6923	1.0000



* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

4071.35 2108.91 220.910

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

12.6000 504.390 -4779.45

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.12743E-03 0.0152448 8.86949E-04

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

-3.55166E-06 4.44885E-05 -3.72318E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE ENV : 1

CASE NAME : MINIMUM ENVELOPE



* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN	HOR. LOAD Y, KN	HOR. LOAD Z, KN
4071.35	2108.91	66.2700

MOMENT X , KN- M	MOMENT Y, KN- M	MOMENT Z, KN- M
3.78000	151.320	-4939.44

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M	HORIZONTAL Y, M	HORIZONTAL Z, M
1.12743E-03	0.0152448	2.68880E-04

ANGLE ROT. X,RAD	ANGLE ROT. Y,RAD	ANGLE ROT. Z,RAD
-3.55166E-06	1.38227E-05	-3.84603E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE

* PILE GROUP * 1



* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-1.4483E-03	0.015232	2.6977E-04	-3.5517E-06	1.3823E-05	-3.8460E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
-564.84	172.17	5.4578	-0.051521	-35.041	150.03

STR, KN/ M**2

9126.8

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-1.4483E-03	0.015232	2.6977E-04	-3.5517E-06	1.3823E-05	-3.8460E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-564.84	172.17	5.4578	-0.051521	-35.041	150.03

STR, KN/ M**2

9126.8



* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.5232E-02	2.6977E-04	153.05	173.06	0.0000	0.0000
0.2900	1.4123E-02	2.6366E-04	102.72	171.38	12.043	0.2207
0.5800	1.2972E-02	2.5395E-04	53.536	165.96	25.289	0.4859
0.8700	1.1801E-02	2.4128E-04	8.3178	156.86	37.386	0.7500
1.1600	1.0628E-02	2.2625E-04	38.328	144.50	47.702	0.9963
1.4500	9.4686E-03	2.0945E-04	76.300	129.54	55.294	1.2004
1.7400	8.3399E-03	1.9143E-04	110.13	112.79	60.053	1.3546
2.0300	7.2552E-03	1.7268E-04	139.30	94.931	62.901	1.4752
2.3200	6.2264E-03	1.5368E-04	163.35	77.505	57.108	1.3927
2.6100	5.2629E-03	1.3482E-04	182.69	60.707	58.628	1.4852
2.9000	4.3727E-03	1.1649E-04	197.17	43.732	58.480	1.5419
3.1900	3.5614E-03	9.8993E-05	206.78	26.584	60.332	1.6601
3.4800	2.8328E-03	8.2589E-05	211.36	8.7313	61.448	1.7739
3.7700	2.1888E-03	6.7488E-05	210.81	9.8030	61.877	1.8900
4.0600	1.6291E-03	5.3838E-05	205.09	26.896	55.441	1.8333
4.3500	1.1514E-03	4.1724E-05	194.73	40.967	41.919	1.5199
4.6400	7.5151E-04	3.1167E-05	180.88	51.288	29.146	1.2095
4.9300	4.2393E-04	2.2141E-05	164.60	58.074	17.449	0.9118
5.2200	1.6212E-04	1.4577E-05	146.88	61.657	7.0578	0.6350
5.5100	-4.1028E-05	8.3765E-06	128.59	62.432	-1.8836	0.3848
5.8000	-1.9608E-04	3.4194E-06	110.48	60.828	-9.4736	0.1652
6.0900	-3.0783E-04	-1.5257E-06	93.169	57.822	-11.779	-5.8348E-02
6.3800	-3.8113E-04	-1.0980E-05	76.846	54.015	-15.206	-0.4378

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6.6700	-4.2271E-04	-1.7678E-05	61.784	49.397	-17.554	-0.7337	
6.9600	-4.3879E-04	-2.2057E-05	48.170	44.255	-18.938	-0.9514	
7.2500	-4.3498E-04	-2.4530E-05	36.115	38.844	-19.483	-1.0981	
7.5400	-4.1626E-04	-2.5475E-05	25.660	33.380	-19.323	-1.1819	
7.8300	-3.8694E-04	-2.5234E-05	16.792	28.042	-18.593	-1.2119	
8.1200	-3.5070E-04	-2.4110E-05	9.4505	22.972	-17.424	-1.1972	
8.4100	-3.1056E-04	-2.2362E-05	3.5633	18.277	-15.936	-1.1468	
8.7000	-2.6897E-04	-2.0211E-05	1.1670	14.031	-14.241	-1.0695	
8.9900	-2.2785E-04	-1.7839E-05	4.6365	10.277	-12.435	-0.9730	
9.2800	-1.8862E-04	-1.5391E-05	7.0687	7.0366	-10.602	-0.8646	
9.5700	-1.5229E-04	-1.2981E-05	8.6479	4.3077	-8.8083	-0.7503	
9.8600	-1.1953E-04	-1.0690E-05	9.5135	2.0743	-7.1081	-0.6354	
10.150	-9.0680E-05	-8.5790E-06	9.8026	0.3000	-5.5406	-0.5239	
10.440	-6.5876E-05	-6.6835E-06	9.6426	1.0998	-4.1325	-0.4190	
10.730	-4.5047E-05	-5.0231E-06	9.1479	2.0783	-2.8994	-0.3231	
11.020	-2.7991E-05	-3.6033E-06	8.4190	2.7429	-1.8472	-0.2377	
11.310	-1.4408E-05	-2.4184E-06	7.5415	3.1382	-0.9743	-0.1634	
11.600	-3.9346E-06	-1.4550E-06	6.5864	3.3127	-0.2725	-0.1007	
11.890	3.7864E-06	-6.9416E-07	5.6107	3.3122	0.2682	-4.9178E-02	
12.180	9.0406E-06	-1.1360E-07	4.6585	3.1791	0.6552	-8.2332E-03	
12.470	1.2435E-05	9.3544E-08	3.7623	2.9508	0.9215	6.9362E-03	
12.760	1.4329E-05	1.8219E-07	2.9443	2.6599	1.0852	1.3806E-02	
13.050	1.5047E-05	2.3780E-07	2.2183	2.3335	1.1642	1.8408E-02	
13.340	1.4882E-05	2.6698E-07	1.5909	1.9938	1.1756	2.1103E-02	
13.630	1.4083E-05	2.7571E-07	1.0628	1.6581	1.1354	2.2242E-02	
13.920	1.2861E-05	2.6925E-07	0.6309	1.3394	1.0579	2.2160E-02	
14.210	1.1388E-05	2.5210E-07	0.2888	1.0468	0.9553	2.1160E-02	
14.500	9.8024E-06	2.2803E-07	2.6856E-02	0.7861	0.8383	1.9512E-02	
14.790	8.2079E-06	2.0009E-07	0.1693	0.5602	0.7153	1.7447E-02	
15.080	6.6810E-06	1.7064E-07	0.2994	0.3699	0.5931	1.5158E-02	
15.370	5.2741E-06	1.4150E-07	0.3804	0.2144	0.4768	1.2800E-02	

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15.660	4.0194E-06	1.1396E-07	0.4215	9.1488E-02	0.3699	1.0494E-02
15.950	2.9335E-06	8.8858E-08	0.4314	4.7213E-03	0.2748	8.3279E-03
16.240	2.0200E-06	6.6712E-08	0.4183	7.1923E-02	0.1925	6.3612E-03
16.530	1.2738E-06	4.7743E-08	0.3890	0.1177	0.1235	4.6303E-03
16.820	6.8313E-07	3.1961E-08	0.3494	0.1454	6.7328E-02	3.1519E-03
17.110	2.3203E-07	1.9221E-08	0.3041	0.1587	2.3247E-02	1.9268E-03
17.400	-9.8369E-08	9.2713E-09	0.2570	0.1607	-1.0021E-02	9.4453E-04
17.690	-3.3316E-07	1.7977E-09	0.2107	0.1544	-3.4485E-02	1.8608E-04
17.980	-4.8110E-07	-1.1719E-08	0.1672	0.1424	-5.0582E-02	-1.2315E-03
18.270	-5.6010E-07	-2.3480E-08	0.1279	0.1269	-5.9802E-02	-2.5055E-03
18.560	-5.8637E-07	-3.0495E-08	9.3573E-02	0.1095	-6.3563E-02	-3.3037E-03
18.850	-5.7408E-07	-3.3797E-08	6.4421E-02	9.1685E-02	-6.3167E-02	-3.7166E-03
19.140	-5.3525E-07	-3.4309E-08	4.0445E-02	7.4379E-02	-5.9768E-02	-3.8288E-03
19.430	-4.7978E-07	-3.2824E-08	2.1369E-02	5.8313E-02	-5.4357E-02	-3.7166E-03
19.720	-4.1555E-07	-3.0009E-08	6.8072E-03	4.3936E-02	-4.7757E-02	-3.4468E-03
20.010	-3.4859E-07	-2.6404E-08	4.2676E-03	3.1491E-02	-4.0630E-02	-3.0758E-03
20.300	-2.8334E-07	-2.2432E-08	1.1583E-02	2.1056E-02	-3.3487E-02	-2.6497E-03
20.590	-2.2285E-07	-1.8414E-08	1.6260E-02	1.2584E-02	-2.6702E-02	-2.2051E-03
20.880	-1.6907E-07	-1.4581E-08	1.8773E-02	5.9439E-03	-2.0534E-02	-1.7698E-03
21.170	-1.2304E-07	-1.1089E-08	1.9617E-02	9.0589E-04	-1.5144E-02	-1.3640E-03
21.460	-8.5095E-08	-8.0351E-09	1.9230E-02	2.7963E-03	-1.0612E-02	-1.0015E-03
21.750	-5.5082E-08	-5.4710E-09	1.7981E-02	5.2457E-03	-6.9592E-03	-6.9082E-04
22.040	-3.2483E-08	-3.4140E-09	1.6169E-02	6.8056E-03	-4.1570E-03	-4.3665E-04
22.330	-1.6550E-08	-1.8585E-09	1.4021E-02	7.6913E-03	-2.1449E-03	-2.4074E-04
22.620	-6.3941E-09	-7.8455E-10	1.1701E-02	8.1110E-03	-8.3913E-04	-1.0290E-04
22.910	-1.0569E-09	-1.6381E-10	9.3181E-03	1.3569E-02	-3.7813E-02	-5.8609E-03
23.200	4.3366E-10	1.0665E-11	3.8298E-03	1.5245E-02	2.5297E-02	6.2210E-04
23.490	3.6660E-10	1.2525E-11	4.7598E-04	7.2404E-03	2.9654E-02	1.0132E-03
23.780	1.1177E-10	4.3453E-12	3.6961E-04	1.2240E-03	1.1562E-02	4.4949E-04
24.070	4.3534E-12	3.6625E-13	2.3400E-04	5.4889E-04	5.4853E-04	4.6148E-05
24.360	-1.0290E-11	-1.0317E-12	5.1235E-05	4.1453E-04	-1.5286E-03	-1.5327E-04

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24.650	-4.0737E-12	-4.8262E-13	6.4450E-06	1.0034E-04	-6.9705E-04	-8.2581E-05
24.940	-5.1638E-13	-8.1620E-14	6.9567E-06	7.7921E-06	-6.7474E-05	-1.0665E-05
25.230	1.7306E-13	4.4796E-15	1.9309E-06	1.2094E-05	3.5997E-05	9.3177E-07
25.520	7.8298E-14	2.8280E-15	5.9410E-08	3.5952E-06	2.2341E-05	8.0691E-07
25.810	7.1792E-15	3.6081E-16	1.5423E-07	5.3548E-08	2.6037E-06	1.3086E-07
26.100	-2.6051E-15	-2.3691E-16	2.8934E-08	2.7044E-07	-1.1462E-06	-1.0424E-07
26.390	-7.6540E-16	-9.2215E-17	2.6361E-09	5.2868E-08	-3.9596E-07	-4.7706E-08
26.680	-1.3438E-17	-4.6467E-18	1.7281E-09	4.2743E-09	-7.9911E-09	-2.7632E-09
26.970	2.6986E-17	8.7978E-19	1.5749E-10	3.0551E-09	1.6192E-08	5.2787E-10
27.260	4.5632E-18	1.8728E-19	4.3857E-11	2.9352E-10	2.7379E-09	1.1237E-10
27.550	-3.7959E-19	-2.0452E-20	1.2743E-11	7.5263E-11	-2.2775E-10	-1.2271E-11
27.840	-2.4143E-19	-2.7231E-20	2.0550E-13	2.2776E-11	-1.4486E-10	-1.6339E-11
28.130	-2.1482E-20	-3.2966E-21	4.6719E-13	4.9253E-13	-1.2889E-11	-1.9779E-12
28.420	6.0210E-21	1.7266E-22	7.8201E-14	8.1526E-13	3.6126E-12	1.0360E-13
28.710	1.7607E-21	6.6709E-23	5.6855E-15	1.3484E-13	1.0564E-12	4.0025E-14
29.000	-2.3209E-22	-1.1641E-23	0.0000	0.0000	-1.3925E-13	-6.9847E-15

* PILE GROUP * 2

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.3861E-03 0.015237 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03



FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
-546.57 137.26 4.5951 -0.051521 -31.104 106.37

STR, KN/ M**2

6992.3

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
-1.3861E-03 0.015237 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
-546.57 137.26 4.5951 -0.051521 -31.104 106.37

STR, KN/ M**2

6992.3

* EFFECTS FOR LATERALLY LOADED PILE *

Table with 8 columns: x, DISPL., DISPL., MOMENT, SHEAR, SOIL REACT, SOIL REACT. Rows show data for x=0.0000, 0.2900, 0.5800, 0.8700.



1.1600	1.0733E-02	2.2906E-04	44.630	116.97	35.394	0.7410
1.4500	9.6137E-03	2.1342E-04	74.955	105.84	41.248	0.8986
1.7400	8.5244E-03	1.9658E-04	102.61	93.307	45.098	1.0220
2.0300	7.4761E-03	1.7896E-04	126.81	79.844	47.623	1.1233
2.3200	6.4786E-03	1.6098E-04	147.15	66.593	43.661	1.0718
2.6100	5.5400E-03	1.4300E-04	163.92	53.679	45.347	1.1573
2.9000	4.6671E-03	1.2535E-04	176.93	40.462	45.864	1.2189
3.1900	3.8651E-03	1.0832E-04	186.14	26.892	48.112	1.3345
3.4800	3.1375E-03	9.2155E-05	191.35	12.512	50.008	1.4542
3.7700	2.4865E-03	7.7071E-05	192.39	2.9247	51.652	1.5857
4.0600	1.9125E-03	6.3221E-05	189.12	17.467	47.834	1.5817
4.3500	1.4142E-03	5.0707E-05	181.85	29.756	37.838	1.3572
4.6400	9.8848E-04	3.9581E-05	171.42	39.317	28.174	1.1285
4.9300	6.3132E-04	2.9848E-05	158.65	46.188	19.097	0.9032
5.2200	3.3756E-04	2.1475E-05	144.30	50.547	10.800	0.6873
5.5100	1.0144E-04	1.4399E-05	129.06	52.633	3.4228	0.4860
5.8000	-8.3126E-05	8.5356E-06	113.55	52.721	-2.9498	0.3030
6.0900	-2.2687E-04	3.7820E-06	98.311	51.401	-6.3783	0.1063
6.3800	-3.3052E-04	-8.2803E-09	83.614	49.134	-9.6886	-2.4265E-04
6.6700	-3.9969E-04	-9.4653E-06	69.728	46.048	-12.195	-0.2887
6.9600	-4.4010E-04	-1.6388E-05	56.854	42.363	-13.956	-0.5195
7.2500	-4.5707E-04	-2.1146E-05	45.134	38.277	-15.041	-0.6957
7.5400	-4.5542E-04	-2.4090E-05	34.652	33.971	-15.533	-0.8214
7.8300	-4.3948E-04	-2.5546E-05	25.448	29.598	-15.516	-0.9016
8.1200	-4.1306E-04	-2.5815E-05	17.518	25.289	-15.078	-0.9420
8.4100	-3.7941E-04	-2.5163E-05	10.828	21.151	-14.305	-0.9484
8.7000	-3.4131E-04	-2.3829E-05	5.3229	17.268	-13.277	-0.9267
8.9900	-3.0104E-04	-2.2016E-05	0.8815	13.699	-12.071	-0.8825
9.2800	-2.6043E-04	-1.9897E-05	2.7062	10.485	-10.755	-0.8214
9.5700	-2.2090E-04	-1.7616E-05	5.2414	7.6495	-9.3873	-0.7484
9.8600	-1.8352E-04	-1.5288E-05	7.0422	5.2000	-8.0188	-0.6678

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10.150	-1.4904E-04	-1.3004E-05	8.1964	3.1316	-6.6909	-0.5836
10.440	-1.1794E-04	-1.0831E-05	8.8084	1.4326	-5.4359	-0.4991
10.730	-9.0464E-05	-8.8180E-06	8.9795	7.9665E-02	-4.2779	-0.4169
11.020	-6.6690E-05	-6.9958E-06	8.8039	1.0298	-3.2336	-0.3391
11.310	-4.6547E-05	-5.3821E-06	8.3666	1.8012	-2.3127	-0.2673
11.600	-2.9852E-05	-3.9830E-06	7.7424	2.3377	-1.5190	-0.2026
11.890	-1.6350E-05	-2.7956E-06	6.9961	2.6701	-0.8516	-0.1456
12.180	-5.7329E-06	-1.8102E-06	6.1819	2.8322	-0.3055	-9.6418E-02
12.470	2.3353E-06	-1.0122E-06	5.3441	2.8569	0.1272	-5.5129E-02
12.760	8.0183E-06	-3.8402E-07	4.5179	2.7744	0.4463	-2.1374E-02
13.050	1.1882E-05	2.7835E-08	3.7301	2.6122	0.6756	1.5831E-03
13.340	1.4256E-05	1.3350E-07	2.9998	2.3944	0.8276	7.7529E-03
13.630	1.5434E-05	2.0585E-07	2.3397	2.1418	0.9145	1.2201E-02
13.920	1.5679E-05	2.5069E-07	1.7571	1.8715	0.9478	1.5160E-02
14.210	1.5224E-05	2.7341E-07	1.2547	1.5976	0.9386	1.6861E-02
14.500	1.4270E-05	2.7888E-07	0.8317	1.3310	0.8968	1.7533E-02
14.790	1.2985E-05	2.7141E-07	0.4847	1.0799	0.8316	1.7388E-02
15.080	1.1508E-05	2.5469E-07	0.2087	0.8499	0.7508	1.6622E-02
15.370	9.9506E-06	2.3185E-07	1.2352E-02	0.6447	0.6611	1.5410E-02
15.660	8.3970E-06	2.0546E-07	0.1682	0.4660	0.5680	1.3901E-02
15.950	6.9107E-06	1.7753E-07	0.2774	0.3142	0.4757	1.2225E-02
16.240	5.5355E-06	1.4966E-07	0.3472	0.1887	0.3877	1.0485E-02
16.530	4.2993E-06	1.2298E-07	0.3846	8.8031E-02	0.3063	8.7635E-03
16.820	3.2170E-06	9.8322E-08	0.3962	9.3966E-03	0.2330	7.1239E-03
17.110	2.2932E-06	7.6178E-08	0.3883	5.0722E-02	0.1688	5.6107E-03
17.400	1.5247E-06	5.6823E-08	0.3662	9.1490E-02	0.1141	4.2533E-03
17.690	9.0261E-07	4.0341E-08	0.3346	0.1180	6.8621E-02	3.0679E-03
17.980	4.1423E-07	2.6670E-08	0.2972	0.1327	3.1989E-02	2.0602E-03
18.270	4.4612E-08	1.5648E-08	0.2572	0.1379	3.4985E-03	1.2275E-03
18.560	-2.2687E-07	7.0422E-09	0.2169	0.1359	-1.8069E-02	5.6088E-04
18.850	-4.1341E-07	5.7979E-10	0.1782	0.1286	-3.3422E-02	4.6872E-05

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19.140	-5.2651E-07	-1.3339E-08	0.1422	0.1179	-4.3196E-02	-1.0940E-03
19.430	-5.8101E-07	-2.3395E-08	0.1097	0.1050	-4.8363E-02	-1.9468E-03
19.720	-5.9029E-07	-2.9234E-08	8.1283E-02	9.1132E-02	-4.9843E-02	-2.4677E-03
20.010	-5.6609E-07	-3.1716E-08	5.6913E-02	7.7287E-02	-4.8478E-02	-2.7152E-03
20.300	-5.1846E-07	-3.1619E-08	3.6518E-02	6.4122E-02	-4.5020E-02	-2.7447E-03
20.590	-4.5581E-07	-2.9626E-08	1.9821E-02	5.2132E-02	-4.0126E-02	-2.6073E-03
20.880	-3.8503E-07	-2.6331E-08	6.4837E-03	4.1644E-02	-3.4357E-02	-2.3488E-03
21.170	-3.1166E-07	-2.2237E-08	4.4880E-03	3.2837E-02	-2.8184E-02	-2.0102E-03
21.460	-2.4009E-07	-1.7768E-08	1.2699E-02	2.5771E-02	-2.1999E-02	-1.6275E-03
21.750	-1.7375E-07	-1.3281E-08	1.9209E-02	2.0404E-02	-1.6129E-02	-1.2325E-03
22.040	-1.1532E-07	-9.0788E-09	2.4421E-02	1.6608E-02	-1.0843E-02	-8.5337E-04
22.330	-6.6964E-08	-5.4207E-09	2.8758E-02	1.4184E-02	-6.3766E-03	-5.1601E-04
22.620	-3.0463E-08	-2.5388E-09	3.2583E-02	1.2874E-02	-2.9373E-03	-2.4472E-04
22.910	-7.3918E-09	-6.4784E-10	3.6177E-02	2.4850E-02	-0.2645	-2.3178E-02
23.200	7.4662E-10	1.3871E-11	1.8155E-02	5.5803E-02	4.3553E-02	8.0912E-04
23.490	1.4047E-09	3.5179E-11	3.8066E-03	3.2945E-02	0.1136	2.8456E-03
23.780	5.4432E-10	1.4244E-11	9.5296E-04	8.2185E-03	5.6307E-02	1.4734E-03
24.070	6.4623E-11	1.8712E-12	9.5947E-04	1.1626E-03	8.1425E-03	2.3577E-04
24.360	-3.3088E-11	-2.5426E-12	2.7838E-04	1.6557E-03	-4.9153E-03	-3.7772E-04
24.650	-1.8219E-11	-1.5024E-12	9.2877E-07	5.2358E-04	-3.1175E-03	-2.5708E-04
24.940	-3.7207E-12	-3.2710E-13	2.5282E-05	1.5636E-05	-4.8617E-04	-4.2741E-05
25.230	3.4723E-13	7.0296E-15	9.9316E-06	4.2429E-05	7.2225E-05	1.4622E-06
25.520	3.3370E-13	8.5346E-15	6.7073E-07	1.8079E-05	9.5216E-05	2.4352E-06
25.810	5.2972E-14	1.4609E-15	5.5417E-07	1.4269E-06	1.9211E-05	5.2982E-07
26.100	-6.7000E-15	-4.8134E-16	1.5672E-07	9.5503E-07	-2.9480E-06	-2.1179E-07
26.390	-3.5293E-15	-2.9255E-16	2.2655E-10	2.8230E-07	-1.8258E-06	-1.5135E-07
26.680	-2.7096E-16	-2.5375E-17	7.0130E-09	2.2441E-09	-1.6113E-07	-1.5089E-08
26.970	9.4096E-17	2.3074E-18	1.0680E-09	1.2287E-08	5.6457E-08	1.3844E-09
27.260	2.4400E-17	6.4752E-19	1.1337E-10	1.9427E-09	1.4640E-08	3.8851E-10
27.550	-6.2675E-21	7.2465E-21	5.8773E-11	1.8783E-10	-3.7605E-12	4.3479E-12
27.840	-9.8508E-19	-7.9870E-20	4.4112E-12	1.0415E-10	-5.9105E-10	-4.7922E-11

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28.130 -1.4796E-19 -1.2946E-20 1.6326E-12 8.3264E-12 -8.8774E-11 -7.7678E-12
 28.420 1.5785E-20 3.5688E-22 4.1760E-13 2.8123E-12 9.4709E-12 2.1413E-13
 28.710 8.1906E-21 2.1273E-22 1.4267E-15 7.2001E-13 4.9143E-12 1.2764E-13
 29.000 5.3845E-23 6.1796E-24 0.0000 0.0000 3.2307E-14 3.7077E-15

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.3247E-03 0.015242 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -528.55 135.46 4.5486 -0.051521 -30.886 104.22

STR, KN/ M**2

6861.7

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD



-1.3247E-03 0.015242 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-528.55 135.46 4.5486 -0.051521 -30.886 104.22

STR, KN/ M**2

6861.7

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
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0.0000	1.5242E-02	2.6977E-04	105.87	136.26	0.0000	0.0000
0.2900	1.4142E-02	2.6391E-04	66.451	135.04	8.7004	0.1594
0.5800	1.3015E-02	2.5484E-04	28.043	131.12	18.305	0.3518
0.8700	1.1877E-02	2.4311E-04	11.302	124.52	27.145	0.5452
1.1600	1.0743E-02	2.2922E-04	44.982	115.53	34.786	0.7282
1.4500	9.6255E-03	2.1365E-04	74.855	104.59	40.551	0.8834
1.7400	8.5381E-03	1.9687E-04	102.20	92.264	44.354	1.0051
2.0300	7.4915E-03	1.7932E-04	126.15	79.020	46.860	1.1053
2.3200	6.4955E-03	1.6140E-04	146.30	65.979	42.986	1.0553
2.6100	5.5580E-03	1.4347E-04	162.94	53.260	44.675	1.1402
2.9000	4.6859E-03	1.2586E-04	175.87	40.234	45.219	1.2019
3.1900	3.8841E-03	1.0886E-04	185.06	26.849	47.478	1.3171
3.4800	3.1565E-03	9.2714E-05	190.30	12.655	49.405	1.4368
3.7700	2.5050E-03	7.7635E-05	191.41	2.6355	51.098	1.5687
4.0600	1.9300E-03	6.3778E-05	188.26	17.025	47.410	1.5671
4.3500	1.4304E-03	5.1247E-05	181.15	29.210	37.589	1.3471



4.6400	1.0032E-03	4.0093E-05	170.90	38.720	28.083	1.1227
4.9300	6.4424E-04	3.0323E-05	158.32	45.584	19.140	0.9011
5.2200	3.4860E-04	2.1906E-05	144.14	49.971	10.954	0.6886
5.5100	1.1054E-04	1.4783E-05	129.07	52.113	3.6630	0.4900
5.8000	-7.5978E-05	8.8681E-06	113.70	52.280	-2.6481	0.3092
6.0900	-2.2130E-04	4.0628E-06	98.577	51.041	-6.1104	0.1122
6.3800	-3.2675E-04	2.5634E-07	83.975	48.850	-9.4067	7.3798E-03
6.6700	-3.9758E-04	-8.8826E-06	70.160	45.842	-11.914	-0.2661
6.9600	-4.3948E-04	-1.5959E-05	57.335	42.233	-13.687	-0.4969
7.2500	-4.5775E-04	-2.0857E-05	45.640	38.218	-14.795	-0.6739
7.5400	-4.5721E-04	-2.3926E-05	35.165	33.975	-15.315	-0.8012
7.8300	-4.4217E-04	-2.5492E-05	25.950	29.657	-15.332	-0.8837
8.1200	-4.1644E-04	-2.5854E-05	17.995	25.393	-14.930	-0.9266
8.4100	-3.8330E-04	-2.5278E-05	11.268	21.290	-14.193	-0.9357
8.7000	-3.4552E-04	-2.4004E-05	5.7152	17.432	-13.200	-0.9168
8.9900	-3.0540E-04	-2.2235E-05	1.2286	13.878	-12.027	-0.8754
9.2800	-2.6481E-04	-2.0147E-05	2.4135	10.671	-10.740	-0.8169
9.5700	-2.2518E-04	-1.7884E-05	5.0090	7.8352	-9.3980	-0.7462
9.8600	-1.8760E-04	-1.5563E-05	6.8625	5.3787	-8.0504	-0.6677
10.150	-1.5284E-04	-1.3276E-05	8.0672	3.2981	-6.7388	-0.5852
10.440	-1.2141E-04	-1.1094E-05	8.7257	1.5821	-5.4957	-0.5020
10.730	-9.3566E-05	-9.0648E-06	8.9383	0.1962	-4.3455	-0.4209
11.020	-6.9407E-05	-7.2226E-06	8.7985	0.9196	-3.3052	-0.3438
11.310	-4.8873E-05	-5.5861E-06	8.3910	1.7095	-2.3849	-0.2725
11.600	-3.1797E-05	-4.1625E-06	7.7907	2.2658	-1.5890	-0.2080
11.890	-1.7932E-05	-2.9500E-06	7.0625	2.6172	-0.9172	-0.1509
12.180	-6.9775E-06	-1.9399E-06	6.2609	2.7969	-0.3651	-0.1015
12.470	1.3961E-06	-1.1183E-06	5.4310	2.8372	7.4699E-02	-5.9818E-02
12.760	7.3823E-06	-4.6804E-07	4.6084	2.7683	0.4036	-2.5586E-02
13.050	1.1473E-05	8.1849E-09	3.8204	2.6174	0.6407	4.5720E-04
13.340	1.4039E-05	1.1925E-07	3.0871	2.4086	0.8005	6.8015E-03



13.630	1.5373E-05	1.9629E-07	2.4217	2.1628	0.8946	1.1426E-02
13.920	1.5741E-05	2.4509E-07	1.8320	1.8974	0.9346	1.4556E-02
14.210	1.5380E-05	2.7107E-07	1.3215	1.6265	0.9312	1.6418E-02
14.500	1.4492E-05	2.7914E-07	0.8898	1.3614	0.8945	1.7235E-02
14.790	1.3251E-05	2.7366E-07	0.5337	1.1103	0.8335	1.7219E-02
15.080	1.1798E-05	2.5839E-07	0.2487	0.8793	0.7560	1.6562E-02
15.370	1.0248E-05	2.3652E-07	2.6523E-02	0.6722	0.6688	1.5439E-02
15.660	8.6899E-06	2.1069E-07	0.1443	0.4910	0.5773	1.4001E-02
15.950	7.1889E-06	1.8301E-07	0.2600	0.3364	0.4860	1.2377E-02
16.240	5.7921E-06	1.5510E-07	0.3358	0.2078	0.3984	1.0672E-02
16.530	4.5298E-06	1.2820E-07	0.3782	0.1040	0.3169	8.9720E-03
16.820	3.4189E-06	1.0317E-07	0.3941	2.2579E-02	0.2432	7.3413E-03
17.110	2.4656E-06	8.0551E-08	0.3895	4.0829E-02	0.1783	5.8268E-03
17.400	1.6681E-06	6.0669E-08	0.3700	8.3997E-02	0.1226	4.4600E-03
17.690	1.0185E-06	4.3638E-08	0.3402	0.1128	7.6054E-02	3.2593E-03
17.980	5.0493E-07	2.9424E-08	0.3040	0.1295	3.8297E-02	2.2323E-03
18.270	1.1279E-07	1.7884E-08	0.2647	0.1364	8.6873E-03	1.3779E-03
18.560	-1.7600E-07	8.8026E-09	0.2246	0.1357	-1.3767E-02	6.8855E-04
18.850	-3.7953E-07	1.9154E-09	0.1857	0.1295	-3.0134E-02	1.5208E-04
19.140	-5.0654E-07	-1.0187E-08	0.1493	0.1195	-4.0815E-02	-8.2059E-04
19.430	-5.7202E-07	-2.1259E-08	0.1163	0.1072	-4.6764E-02	-1.7375E-03
19.720	-5.8959E-07	-2.7923E-08	8.7160E-02	9.3673E-02	-4.8894E-02	-2.3150E-03
20.010	-5.7126E-07	-3.1048E-08	6.2011E-02	8.0012E-02	-4.8046E-02	-2.6106E-03
20.300	-5.2739E-07	-3.1426E-08	4.0806E-02	6.6904E-02	-4.4977E-02	-2.6794E-03
20.590	-4.6674E-07	-2.9762E-08	2.3295E-02	5.4881E-02	-4.0354E-02	-2.5725E-03
20.880	-3.9652E-07	-2.6668E-08	9.1331E-03	4.4298E-02	-3.4750E-02	-2.3365E-03
21.170	-3.2261E-07	-2.2670E-08	2.4931E-03	3.5366E-02	-2.8652E-02	-2.0128E-03
21.460	-2.4968E-07	-1.8214E-08	1.1484E-02	2.8164E-02	-2.2469E-02	-1.6386E-03
21.750	-1.8146E-07	-1.3679E-08	1.8662E-02	2.2668E-02	-1.6544E-02	-1.2468E-03
22.040	-1.2093E-07	-9.3904E-09	2.4512E-02	1.8766E-02	-1.1168E-02	-8.6691E-04
22.330	-7.0502E-08	-5.6286E-09	2.9461E-02	1.6265E-02	-6.5935E-03	-5.2625E-04



22.620	-3.2210E-08	-2.6467E-09	3.3880E-02	1.4907E-02	-3.0502E-03	-2.5057E-04
22.910	-7.8755E-09	-6.7977E-10	3.8059E-02	2.5282E-02	-0.2818	-2.4321E-02
23.200	7.5648E-10	1.3674E-11	1.9202E-02	5.8602E-02	4.4128E-02	7.9763E-04
23.490	1.4773E-09	3.6461E-11	4.0654E-03	3.4810E-02	0.1195	2.9493E-03
23.780	5.7607E-10	1.4852E-11	9.8764E-04	8.7537E-03	5.9591E-02	1.5363E-03
24.070	6.9463E-11	1.9762E-12	1.0110E-03	1.1931E-03	8.7523E-03	2.4901E-04
24.360	-3.4580E-11	-2.6207E-12	2.9533E-04	1.7433E-03	-5.1371E-03	-3.8932E-04
24.650	-1.9234E-11	-1.5640E-12	2.3231E-07	5.5499E-04	-3.2911E-03	-2.6761E-04
24.940	-3.9661E-12	-3.4335E-13	2.6544E-05	1.7862E-05	-5.1824E-04	-4.4865E-05
25.230	3.5527E-13	7.0434E-15	1.0524E-05	4.4498E-05	7.3897E-05	1.4650E-06
25.520	3.5199E-13	8.8716E-15	7.3333E-07	1.9148E-05	1.0044E-04	2.5314E-06
25.810	5.6506E-14	1.5337E-15	5.8164E-07	1.5513E-06	2.0493E-05	5.5622E-07
26.100	-6.9392E-15	-4.9109E-16	1.6625E-07	1.0018E-06	-3.0532E-06	-2.1608E-07
26.390	-3.7287E-15	-3.0476E-16	5.6946E-10	2.9938E-07	-1.9290E-06	-1.5766E-07
26.680	-2.9176E-16	-2.6840E-17	7.3875E-09	2.9362E-09	-1.7350E-07	-1.5961E-08
26.970	9.8665E-17	2.3843E-18	1.1377E-09	1.2939E-08	5.9199E-08	1.4306E-09
27.260	2.5877E-17	6.7644E-19	1.1751E-10	2.0687E-09	1.5526E-08	4.0586E-10
27.550	3.7353E-20	8.5879E-21	6.2120E-11	1.9439E-10	2.2412E-11	5.1528E-12
27.840	-1.0374E-18	-8.2953E-20	4.7528E-12	1.1005E-10	-6.2243E-10	-4.9772E-11
28.130	-1.5760E-19	-1.3582E-20	1.7120E-12	8.9589E-12	-9.4559E-11	-8.1490E-12
28.420	1.6372E-20	3.6429E-22	4.4286E-13	2.9478E-12	9.8234E-12	2.1858E-13
28.710	8.6589E-21	2.2160E-22	2.2271E-15	7.6357E-13	5.1954E-12	1.3296E-13
29.000	8.5291E-23	7.1077E-24	0.0000	0.0000	5.1175E-14	4.2646E-15

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
-1.3053E-03 0.015247 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
-522.88 135.48 4.5482 -0.051521 -30.884 104.45

STR, KN/ M**2

6845.6

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
-1.3053E-03 0.015247 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
-522.88 135.48 4.5482 -0.051521 -30.884 104.45

STR, KN/ M**2

6845.6

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT



	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR	
	M	M	KN- M	KN	KN/ M	KN/ M	
*****	*****	*****	*****	*****	*****	*****	*****
0.0000	1.5247E-02	2.6977E-04	105.95	136.29	0.0000	0.0000	
0.2900	1.4147E-02	2.6391E-04	66.523	135.06	8.7015	0.1593	
0.5800	1.3020E-02	2.5484E-04	28.104	131.14	18.307	0.3517	
0.8700	1.1882E-02	2.4311E-04	11.256	124.55	27.149	0.5451	
1.1600	1.0747E-02	2.2922E-04	44.940	115.55	34.791	0.7281	
1.4500	9.6295E-03	2.1365E-04	74.771	104.61	40.557	0.8833	
1.7400	8.5418E-03	1.9687E-04	102.14	92.283	44.362	1.0050	
2.0300	7.4949E-03	1.7932E-04	126.11	79.037	46.870	1.1052	
2.3200	6.4985E-03	1.6140E-04	146.29	65.992	42.998	1.0552	
2.6100	5.5607E-03	1.4347E-04	162.94	53.270	44.688	1.1401	
2.9000	4.6882E-03	1.2586E-04	175.90	40.240	45.233	1.2018	
3.1900	3.8861E-03	1.0886E-04	185.10	26.850	47.494	1.3170	
3.4800	3.1581E-03	9.2714E-05	190.35	12.656	49.421	1.4367	
3.7700	2.5063E-03	7.7635E-05	191.48	2.6355	51.116	1.5686	
4.0600	1.9310E-03	6.3778E-05	188.34	17.039	47.435	1.5671	
4.3500	1.4311E-03	5.1246E-05	181.23	29.230	37.609	1.3471	
4.6400	1.0037E-03	4.0092E-05	170.98	38.746	28.097	1.1226	
4.9300	6.4458E-04	3.0322E-05	158.39	45.613	19.150	0.9011	
5.2200	3.4877E-04	2.1905E-05	144.21	50.002	10.960	0.6885	
5.5100	1.1057E-04	1.4781E-05	129.13	52.145	3.6642	0.4900	
5.8000	-7.6049E-05	8.8668E-06	113.76	52.312	-2.6506	0.3091	
6.0900	-2.2133E-04	4.0614E-06	98.633	51.072	-6.1115	0.1121	
6.3800	-3.2681E-04	2.5502E-07	84.024	48.879	-9.4085	7.3417E-03	
6.6700	-3.9766E-04	-8.8971E-06	70.202	45.870	-11.916	-0.2665	
6.9600	-4.3958E-04	-1.5972E-05	57.369	42.258	-13.690	-0.4973	
7.2500	-4.5785E-04	-2.0870E-05	45.669	38.241	-14.798	-0.6743	
7.5400	-4.5731E-04	-2.3938E-05	35.188	33.995	-15.318	-0.8016	
7.8300	-4.4227E-04	-2.5503E-05	25.967	29.674	-15.335	-0.8840	

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8.1200	-4.1653E-04	-2.5863E-05	18.007	25.407	-14.933	-0.9270		
8.4100	-3.8338E-04	-2.5287E-05	11.275	21.302	-14.196	-0.9361		
8.7000	-3.4560E-04	-2.4011E-05	5.7188	17.441	-13.203	-0.9171		
8.9900	-3.0547E-04	-2.2241E-05	1.2293	13.885	-12.030	-0.8757		
9.2800	-2.6487E-04	-2.0152E-05	2.4137	10.676	-10.743	-0.8171		
9.5700	-2.2523E-04	-1.7888E-05	5.0125	7.8382	-9.4001	-0.7463		
9.8600	-1.8764E-04	-1.5566E-05	6.8673	5.3802	-8.0522	-0.6678		
10.150	-1.5288E-04	-1.3278E-05	8.0728	3.2984	-6.7403	-0.5853		
10.440	-1.2143E-04	-1.1095E-05	8.7318	1.5815	-5.4969	-0.5021		
10.730	-9.3586E-05	-9.0655E-06	8.9446	0.1959	-4.3464	-0.4209		
11.020	-6.9421E-05	-7.2228E-06	8.8047	0.9215	-3.3058	-0.3439		
11.310	-4.8882E-05	-5.5859E-06	8.3969	1.7119	-2.3853	-0.2725		
11.600	-3.1802E-05	-4.1620E-06	7.7962	2.2684	-1.5893	-0.2079		
11.890	-1.7934E-05	-2.9493E-06	7.0674	2.6199	-0.9173	-0.1508		
12.180	-6.9772E-06	-1.9390E-06	6.2653	2.7995	-0.3651	-0.1014		
12.470	1.3984E-06	-1.1174E-06	5.4347	2.8397	7.4819E-02	-5.9768E-02		
12.760	7.3948E-06	-4.6708E-07	4.6115	2.7706	0.4043	-2.5534E-02		
13.050	1.1487E-05	8.2715E-09	3.8230	2.6195	0.6415	4.6204E-04		
13.340	1.4054E-05	1.1933E-07	3.0891	2.4105	0.8013	6.8063E-03		
13.630	1.5388E-05	1.9636E-07	2.4232	2.1645	0.8955	1.1431E-02		
13.920	1.5756E-05	2.4516E-07	1.8331	1.8988	0.9355	1.4560E-02		
14.210	1.5393E-05	2.7114E-07	1.3222	1.6277	0.9321	1.6422E-02		
14.500	1.4505E-05	2.7920E-07	0.8902	1.3623	0.8953	1.7239E-02		
14.790	1.3262E-05	2.7370E-07	0.5339	1.1110	0.8342	1.7222E-02		
15.080	1.1808E-05	2.5843E-07	0.2487	0.8798	0.7566	1.6565E-02		
15.370	1.0256E-05	2.3655E-07	2.6491E-02	0.6725	0.6693	1.5441E-02		
15.660	8.6964E-06	2.1072E-07	0.1446	0.4912	0.5777	1.4002E-02		
15.950	7.1940E-06	1.8303E-07	0.2604	0.3365	0.4864	1.2378E-02		
16.240	5.7960E-06	1.5512E-07	0.3362	0.2078	0.3987	1.0673E-02		
16.530	4.5326E-06	1.2821E-07	0.3786	0.1039	0.3171	8.9727E-03		
16.820	3.4208E-06	1.0317E-07	0.3945	2.2551E-02	0.2434	7.3416E-03		



17.110	2.4668E-06	8.0553E-08	0.3899	4.0969E-02	0.1784	5.8269E-03
17.400	1.6687E-06	6.0669E-08	0.3703	8.4159E-02	0.1226	4.4600E-03
17.690	1.0186E-06	4.3636E-08	0.3405	0.1130	7.6062E-02	3.2592E-03
17.980	5.0469E-07	2.9421E-08	0.3043	0.1296	3.8279E-02	2.2321E-03
18.270	1.1230E-07	1.7881E-08	0.2649	0.1365	8.6500E-03	1.3776E-03
18.560	-1.7619E-07	8.7983E-09	0.2248	0.1358	-1.3781E-02	6.8821E-04
18.850	-3.7975E-07	1.9109E-09	0.1859	0.1296	-3.0152E-02	1.5172E-04
19.140	-5.0678E-07	-1.0235E-08	0.1494	0.1196	-4.0834E-02	-8.2443E-04
19.430	-5.7226E-07	-2.1304E-08	0.1164	0.1073	-4.6784E-02	-1.7412E-03
19.720	-5.8982E-07	-2.7963E-08	8.7212E-02	9.3753E-02	-4.8913E-02	-2.3183E-03
20.010	-5.7147E-07	-3.1083E-08	6.2042E-02	8.0077E-02	-4.8064E-02	-2.6136E-03
20.300	-5.2758E-07	-3.1457E-08	4.0820E-02	6.6954E-02	-4.4993E-02	-2.6820E-03
20.590	-4.6690E-07	-2.9787E-08	2.3295E-02	5.4918E-02	-4.0368E-02	-2.5747E-03
20.880	-3.9665E-07	-2.6688E-08	9.1235E-03	4.4325E-02	-3.4761E-02	-2.3382E-03
21.170	-3.2271E-07	-2.2685E-08	2.4978E-03	3.5384E-02	-2.8661E-02	-2.0142E-03
21.460	-2.4975E-07	-1.8225E-08	1.1507E-02	2.8175E-02	-2.2476E-02	-1.6396E-03
21.750	-1.8152E-07	-1.3687E-08	1.8688E-02	2.2675E-02	-1.6549E-02	-1.2475E-03
22.040	-1.2097E-07	-9.3953E-09	2.4541E-02	1.8769E-02	-1.1171E-02	-8.6736E-04
22.330	-7.0523E-08	-5.6313E-09	2.9491E-02	1.6266E-02	-6.5954E-03	-5.2650E-04
22.620	-3.2219E-08	-2.6478E-09	3.3911E-02	1.4907E-02	-3.0510E-03	-2.5067E-04
22.910	-7.8776E-09	-6.8001E-10	3.8091E-02	2.5310E-02	-0.2818	-2.4329E-02
23.200	7.5737E-10	1.3678E-11	1.9217E-02	5.8651E-02	4.4180E-02	7.9790E-04
23.490	1.4785E-09	3.6466E-11	4.0682E-03	3.4837E-02	0.1196	2.9497E-03
23.780	5.7652E-10	1.4854E-11	9.8859E-04	8.7599E-03	5.9638E-02	1.5365E-03
24.070	6.9507E-11	1.9764E-12	1.0118E-03	1.1944E-03	8.7579E-03	2.4903E-04
24.360	-3.4591E-11	-2.6222E-12	2.9555E-04	1.7448E-03	-5.1387E-03	-3.8955E-04
24.650	-1.9239E-11	-1.5647E-12	2.3401E-07	5.5541E-04	-3.2921E-03	-2.6774E-04
24.940	-3.9671E-12	-3.4347E-13	2.6567E-05	1.7863E-05	-5.1837E-04	-4.4880E-05
25.230	3.5567E-13	7.0455E-15	1.0532E-05	4.4536E-05	7.3980E-05	1.4655E-06
25.520	3.5228E-13	8.8729E-15	7.3366E-07	1.9163E-05	1.0052E-04	2.5317E-06
25.810	5.6546E-14	1.5339E-15	5.8214E-07	1.5521E-06	2.0507E-05	5.5628E-07

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26.100	-6.9415E-15	-4.9145E-16	1.6637E-07	1.0027E-06	-3.0543E-06	-2.1624E-07
26.390	-3.7297E-15	-3.0490E-16	5.6870E-10	2.9961E-07	-1.9295E-06	-1.5773E-07
26.680	-2.9182E-16	-2.6846E-17	7.3936E-09	2.9326E-09	-1.7354E-07	-1.5965E-08
26.970	9.8751E-17	2.3847E-18	1.1385E-09	1.2950E-08	5.9251E-08	1.4308E-09
27.260	2.5897E-17	6.7652E-19	1.1763E-10	2.0702E-09	1.5538E-08	4.0591E-10
27.550	3.6918E-20	8.5848E-21	6.2169E-11	1.9458E-10	2.2151E-11	5.1509E-12
27.840	-1.0377E-18	-8.2994E-20	4.7556E-12	1.1014E-10	-6.2261E-10	-4.9797E-11
28.130	-1.5764E-19	-1.3586E-20	1.7135E-12	8.9643E-12	-9.4584E-11	-8.1518E-12
28.420	1.6389E-20	3.6438E-22	4.4320E-13	2.9504E-12	9.8332E-12	2.1863E-13
28.710	8.6658E-21	2.2163E-22	2.2211E-15	7.6415E-13	5.1995E-12	1.3298E-13
29.000	8.5047E-23	7.1058E-24	0.0000	0.0000	5.1028E-14	4.2635E-15

* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.2860E-03 0.015252 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -517.20 137.42 4.5939 -0.051521 -31.108 107.15

STR, KN/ M**2
 6944.4



THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.2860E-03 0.015252 2.6977E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -517.20 137.42 4.5939 -0.051521 -31.108 107.15

STR, KN/ M**2

6944.4

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.5252E-02	2.6977E-04	108.47	138.23	0.0000	0.0000
0.2900	1.4151E-02	2.6389E-04	68.484	136.98	8.8675	0.1622
0.5800	1.3023E-02	2.5480E-04	29.501	132.99	18.655	0.3581
0.8700	1.1883E-02	2.4302E-04	10.478	126.27	27.660	0.5548
1.1600	1.0746E-02	2.2906E-04	44.502	117.11	35.437	0.7408
1.4500	9.6255E-03	2.1342E-04	74.703	105.96	41.299	0.8984
1.7400	8.5351E-03	1.9658E-04	102.45	93.411	45.157	1.0217
2.0300	7.4857E-03	1.7896E-04	126.73	79.930	47.691	1.1230
2.3200	6.4870E-03	1.6098E-04	147.15	66.659	43.729	1.0716

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2.6100	5.5473E-03	1.4300E-04	163.99	53.725	45.418	1.1571
2.9000	4.6732E-03	1.2535E-04	177.06	40.487	45.938	1.2187
3.1900	3.8701E-03	1.0831E-04	186.32	26.895	48.189	1.3343
3.4800	3.1415E-03	9.2153E-05	191.57	12.517	50.087	1.4540
3.7700	2.4896E-03	7.7068E-05	192.64	2.9259	51.732	1.5854
4.0600	1.9148E-03	6.3217E-05	189.38	17.532	47.929	1.5817
4.3500	1.4157E-03	5.0703E-05	182.12	29.846	37.910	1.3572
4.6400	9.8938E-04	3.9577E-05	171.69	39.425	28.223	1.1285
4.9300	6.3171E-04	2.9843E-05	158.90	46.307	19.124	0.9031
5.2200	3.3754E-04	2.1470E-05	144.53	50.671	10.808	0.6872
5.5100	1.0110E-04	1.4394E-05	129.27	52.757	3.4141	0.4859
5.8000	-8.3701E-05	8.5304E-06	113.74	52.841	-2.9727	0.3028
6.0900	-2.2700E-04	3.7770E-06	98.469	51.514	-6.3825	0.1062
6.3800	-3.3072E-04	-8.8597E-08	83.746	49.237	-9.6953	-2.5984E-03
6.6700	-3.9994E-04	-9.5364E-06	69.835	46.142	-12.204	-0.2911
6.9600	-4.4038E-04	-1.6450E-05	56.938	42.445	-13.965	-0.5219
7.2500	-4.5736E-04	-2.1199E-05	45.195	38.349	-15.052	-0.6980
7.5400	-4.5571E-04	-2.4133E-05	34.695	34.030	-15.544	-0.8235
7.8300	-4.3976E-04	-2.5581E-05	25.474	29.646	-15.527	-0.9036
8.1200	-4.1332E-04	-2.5841E-05	17.531	25.327	-15.089	-0.9438
8.4100	-3.7965E-04	-2.5183E-05	10.829	21.180	-14.315	-0.9499
8.7000	-3.4153E-04	-2.3842E-05	5.3151	17.287	-13.286	-0.9279
8.9900	-3.0123E-04	-2.2024E-05	0.8821	13.711	-12.080	-0.8836
9.2800	-2.6059E-04	-1.9900E-05	2.7140	10.490	-10.762	-0.8222
9.5700	-2.2103E-04	-1.7615E-05	5.2631	7.6497	-9.3936	-0.7489
9.8600	-1.8363E-04	-1.5284E-05	7.0655	5.1960	-8.0241	-0.6682
10.150	-1.4913E-04	-1.2998E-05	8.2199	3.1245	-6.6951	-0.5838
10.440	-1.1800E-04	-1.0823E-05	8.8311	1.4233	-5.4392	-0.4991
10.730	-9.0509E-05	-8.8087E-06	9.0008	7.8733E-02	-4.2804	-0.4168
11.020	-6.6721E-05	-6.9860E-06	8.8232	1.0411	-3.2353	-0.3389
11.310	-4.6564E-05	-5.3722E-06	8.3835	1.8128	-2.3137	-0.2671

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11.600	-2.9859E-05	-3.9734E-06	7.7569	2.3491	-1.5195	-0.2023
11.890	-1.6349E-05	-2.7865E-06	7.0081	2.6808	-0.8516	-0.1452
12.180	-5.7262E-06	-1.8017E-06	6.1914	2.8420	-0.3051	-9.6046E-02
12.470	2.3462E-06	-1.0046E-06	5.3514	2.8655	0.1278	-5.4758E-02
12.760	8.0865E-06	-3.7730E-07	4.5232	2.7818	0.4505	-2.1018E-02
13.050	1.1945E-05	2.8166E-08	3.7336	2.6184	0.6797	1.6021E-03
13.340	1.4313E-05	1.3380E-07	3.0018	2.3995	0.8316	7.7709E-03
13.630	1.5484E-05	2.0612E-07	2.3404	2.1457	0.9182	1.2218E-02
13.920	1.5721E-05	2.5092E-07	1.7569	1.8745	0.9511	1.5175E-02
14.210	1.5259E-05	2.7361E-07	1.2537	1.5997	0.9414	1.6874E-02
14.500	1.4297E-05	2.7904E-07	0.8302	1.3323	0.8993	1.7544E-02
14.790	1.3006E-05	2.7154E-07	0.4828	1.0806	0.8336	1.7398E-02
15.080	1.1523E-05	2.5479E-07	0.2067	0.8501	0.7524	1.6630E-02
15.370	9.9605E-06	2.3193E-07	1.2524E-02	0.6444	0.6623	1.5416E-02
15.660	8.4027E-06	2.0551E-07	0.1702	0.4654	0.5688	1.3906E-02
15.950	6.9130E-06	1.7757E-07	0.2793	0.3134	0.4763	1.2228E-02
16.240	5.5351E-06	1.4967E-07	0.3489	0.1878	0.3880	1.0487E-02
16.530	4.2969E-06	1.2299E-07	0.3860	8.7077E-02	0.3063	8.7644E-03
16.820	3.2133E-06	9.8317E-08	0.3975	9.2599E-03	0.2329	7.1240E-03
17.110	2.2886E-06	7.6166E-08	0.3894	5.1627E-02	0.1686	5.6103E-03
17.400	1.5197E-06	5.6807E-08	0.3671	9.2337E-02	0.1138	4.2524E-03
17.690	8.9749E-07	4.0322E-08	0.3352	0.1188	6.8288E-02	3.0667E-03
17.980	4.0927E-07	2.6650E-08	0.2977	0.1333	3.1631E-02	2.0588E-03
18.270	3.9976E-08	1.5628E-08	0.2575	0.1385	3.1375E-03	1.2260E-03
18.560	-2.2764E-07	7.0224E-09	0.2171	0.1363	-1.8132E-02	5.5934E-04
18.850	-4.1421E-07	5.6141E-10	0.1782	0.1290	-3.3489E-02	4.5390E-05
19.140	-5.2730E-07	-1.3621E-08	0.1422	0.1181	-4.3264E-02	-1.1181E-03
19.430	-5.8175E-07	-2.3622E-08	0.1097	0.1051	-4.8429E-02	-1.9673E-03
19.720	-5.9097E-07	-2.9410E-08	8.1163E-02	9.1250E-02	-4.9904E-02	-2.4846E-03
20.010	-5.6668E-07	-3.1849E-08	5.6766E-02	7.7349E-02	-4.8532E-02	-2.7288E-03
20.300	-5.1896E-07	-3.1714E-08	3.6358E-02	6.4138E-02	-4.5067E-02	-2.7553E-03

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20.590	-4.5622E-07	-2.9692E-08	1.9659E-02	5.2112E-02	-4.0166E-02	-2.6152E-03
20.880	-3.8536E-07	-2.6373E-08	6.3316E-03	4.1597E-02	-3.4389E-02	-2.3545E-03
21.170	-3.1191E-07	-2.2261E-08	4.5111E-03	3.2771E-02	-2.8209E-02	-2.0141E-03
21.460	-2.4027E-07	-1.7780E-08	1.2824E-02	2.5692E-02	-2.2018E-02	-1.6299E-03
21.750	-1.7387E-07	-1.3285E-08	1.9313E-02	2.0316E-02	-1.6141E-02	-1.2338E-03
22.040	-1.1540E-07	-9.0784E-09	2.4502E-02	1.6515E-02	-1.0851E-02	-8.5402E-04
22.330	-6.7007E-08	-5.4188E-09	2.8814E-02	1.4089E-02	-6.3812E-03	-5.1625E-04
22.620	-3.0481E-08	-2.5371E-09	3.2614E-02	1.2778E-02	-2.9393E-03	-2.4476E-04
22.910	-7.3956E-09	-6.4705E-10	3.6181E-02	2.4914E-02	-0.2646	-2.3150E-02
23.200	7.4878E-10	1.3885E-11	1.8150E-02	5.5817E-02	4.3679E-02	8.0995E-04
23.490	1.4050E-09	3.5189E-11	3.8027E-03	3.2939E-02	0.1136	2.8464E-03
23.780	5.4415E-10	1.4247E-11	9.5415E-04	8.2118E-03	5.6290E-02	1.4737E-03
24.070	6.4525E-11	1.8713E-12	9.5949E-04	1.1649E-03	8.1302E-03	2.3578E-04
24.360	-3.3112E-11	-2.5434E-12	2.7824E-04	1.6558E-03	-4.9190E-03	-3.7783E-04
24.650	-1.8230E-11	-1.5016E-12	9.3799E-07	5.2335E-04	-3.1194E-03	-2.5694E-04
24.940	-3.7226E-12	-3.2668E-13	2.5289E-05	1.5533E-05	-4.8642E-04	-4.2687E-05
25.230	3.4804E-13	7.0355E-15	9.9276E-06	4.2446E-05	7.2392E-05	1.4634E-06
25.520	3.3369E-13	8.5369E-15	6.6877E-07	1.8073E-05	9.5213E-05	2.4359E-06
25.810	5.2923E-14	1.4611E-15	5.5436E-07	1.4234E-06	1.9194E-05	5.2988E-07
26.100	-6.7057E-15	-4.8193E-16	1.5664E-07	9.5541E-07	-2.9505E-06	-2.1205E-07
26.390	-3.5314E-15	-2.9238E-16	2.2282E-10	2.8217E-07	-1.8269E-06	-1.5126E-07
26.680	-2.7106E-16	-2.5325E-17	7.0135E-09	2.2009E-09	-1.6119E-07	-1.5060E-08
26.970	9.4137E-17	2.3082E-18	1.0671E-09	1.2288E-08	5.6482E-08	1.3849E-09
27.260	2.4389E-17	6.4765E-19	1.1352E-10	1.9412E-09	1.4633E-08	3.8859E-10
27.550	-9.6207E-21	7.2317E-21	5.8761E-11	1.8811E-10	-5.7724E-12	4.3390E-12
27.840	-9.8572E-19	-7.9845E-20	4.4034E-12	1.0413E-10	-5.9143E-10	-4.7907E-11
28.130	-1.4803E-19	-1.2931E-20	1.6333E-12	8.3126E-12	-8.8819E-11	-7.7583E-12
28.420	1.5806E-20	3.5708E-22	4.1740E-13	2.8136E-12	9.4835E-12	2.1425E-13
28.710	8.1889E-21	2.1278E-22	1.3948E-15	7.1967E-13	4.9133E-12	1.2767E-13
29.000	5.1633E-23	6.1701E-24	0.0000	0.0000	3.0980E-14	3.7020E-15

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* PILE GROUP * 6

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-1.2666E-03	0.015257	2.6977E-04	-3.5517E-06	1.3823E-05	-3.8460E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
-511.52	172.66	5.4559	-0.051521	-35.065	151.66

STR, KN/ M**2

8986.5

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-1.2666E-03	0.015257	2.6977E-04	-3.5517E-06	1.3823E-05	-3.8460E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-511.52	172.66	5.4559	-0.051521	-35.065	151.66

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STR, KN/ M**2

8986.5

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5257E-02	2.6977E-04	153.53	173.56	0.0000	0.0000
0.2900	1.4147E-02	2.6366E-04	103.14	171.86	12.082	0.2206
0.5800	1.2996E-02	2.5395E-04	53.888	166.42	25.372	0.4857
0.8700	1.1824E-02	2.4128E-04	8.5254	157.29	37.509	0.7498
1.1600	1.0648E-02	2.2625E-04	38.104	144.90	47.858	0.9960
1.4500	9.4873E-03	2.0945E-04	75.891	129.89	55.476	1.2001
1.7400	8.3565E-03	1.9142E-04	109.92	113.08	60.254	1.3543
2.0300	7.2697E-03	1.7268E-04	139.28	95.160	63.122	1.4749
2.3200	6.2386E-03	1.5367E-04	163.48	77.671	57.318	1.3924
2.6100	5.2731E-03	1.3482E-04	182.96	60.811	58.843	1.4849
2.9000	4.3808E-03	1.1649E-04	197.55	43.774	58.693	1.5417
3.1900	3.5676E-03	9.8987E-05	207.24	26.565	60.546	1.6598
3.4800	2.8373E-03	8.2582E-05	211.88	8.7371	61.658	1.7736
3.7700	2.1918E-03	6.7481E-05	211.36	9.8117	62.077	1.8896
4.0600	1.6309E-03	5.3830E-05	205.65	27.091	55.649	1.8334
4.3500	1.1521E-03	4.1715E-05	195.28	41.213	42.058	1.5200
4.6400	7.5146E-04	3.1158E-05	181.38	51.566	29.221	1.2094
4.9300	4.2327E-04	2.2132E-05	165.05	58.366	17.467	0.9117
5.2200	1.6102E-04	1.4568E-05	147.27	61.948	7.0285	0.6347
5.5100	-4.2405E-05	8.3678E-06	128.92	62.708	-1.9520	0.3845
5.8000	-1.9628E-04	3.4112E-06	110.75	61.079	-9.4853	0.1648

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6.0900	-3.0814E-04	-1.6941E-06	93.379	58.046	-11.794	-6.4960E-02
6.3800	-3.8151E-04	-1.1121E-05	77.001	54.211	-15.225	-0.4446
6.6700	-4.2313E-04	-1.7792E-05	61.890	49.564	-17.576	-0.7404
6.9600	-4.3922E-04	-2.2147E-05	48.234	44.393	-18.961	-0.9578
7.2500	-4.3540E-04	-2.4596E-05	36.143	38.952	-19.506	-1.1039
7.5400	-4.1666E-04	-2.5520E-05	25.660	33.461	-19.346	-1.1871
7.8300	-3.8731E-04	-2.5260E-05	16.768	28.098	-18.615	-1.2163
8.1200	-3.5103E-04	-2.4120E-05	9.4111	23.006	-17.444	-1.2008
8.4100	-3.1084E-04	-2.2359E-05	3.5137	18.293	-15.954	-1.1497
8.7000	-2.6921E-04	-2.0198E-05	1.1700	14.031	-14.257	-1.0716
8.9900	-2.2804E-04	-1.7818E-05	4.6941	10.265	-12.449	-0.9744
9.2800	-1.8877E-04	-1.5365E-05	7.1254	7.0160	-10.613	-0.8654
9.5700	-1.5241E-04	-1.2950E-05	8.7012	4.2810	-8.8171	-0.7506
9.8600	-1.1961E-04	-1.0658E-05	9.5616	2.0443	-7.1149	-0.6351
10.150	-9.0738E-05	-8.5465E-06	9.8444	0.2967	-5.5454	-0.5233
10.440	-6.5911E-05	-6.6518E-06	9.6775	1.1171	-4.1356	-0.4181
10.730	-4.5063E-05	-4.9933E-06	9.1758	2.1081	-2.9011	-0.3220
11.020	-2.7993E-05	-3.5760E-06	8.4403	2.7702	-1.8478	-0.2365
11.310	-1.4398E-05	-2.3940E-06	7.5566	3.1624	-0.9739	-0.1622
11.600	-3.9180E-06	-1.4338E-06	6.5959	3.3334	-0.2714	-9.9506E-02
11.890	3.8427E-06	-6.7625E-07	5.6155	3.3293	0.2725	-4.8036E-02
12.180	9.1826E-06	-9.8866E-08	4.6594	3.1926	0.6673	-7.1843E-03
12.470	1.2552E-05	9.4086E-08	3.7601	2.9609	0.9326	6.9780E-03
12.760	1.4421E-05	1.8264E-07	2.9399	2.6669	1.0951	1.3844E-02
13.050	1.5117E-05	2.3818E-07	2.2124	2.3379	1.1726	1.8442E-02
13.340	1.4931E-05	2.6728E-07	1.5840	1.9959	1.1826	2.1131E-02
13.630	1.4114E-05	2.7594E-07	1.0556	1.6584	1.1410	2.2266E-02
13.920	1.2877E-05	2.6942E-07	0.6237	1.3383	1.0620	2.2179E-02
14.210	1.1393E-05	2.5222E-07	0.2820	1.0447	0.9582	2.1175E-02
14.500	9.7977E-06	2.2811E-07	2.6292E-02	0.7833	0.8401	1.9523E-02
14.790	8.1964E-06	2.0012E-07	0.1731	0.5570	0.7162	1.7454E-02



15.080	6.6650E-06	1.7065E-07	0.3041	0.3666	0.5933	1.5162E-02
15.370	5.2554E-06	1.4149E-07	0.3843	0.2111	0.4764	1.2802E-02
15.660	3.9996E-06	1.1392E-07	0.4245	8.8385E-02	0.3691	1.0494E-02
15.950	2.9137E-06	8.8816E-08	0.4337	4.9774E-03	0.2736	8.3259E-03
16.240	2.0012E-06	6.6665E-08	0.4199	7.3977E-02	0.1912	6.3582E-03
16.530	1.2566E-06	4.7695E-08	0.3900	0.1198	0.1221	4.6267E-03
16.820	6.6793E-07	3.1914E-08	0.3499	0.1471	6.6004E-02	3.1479E-03
17.110	2.1904E-07	1.9176E-08	0.3042	0.1600	2.2003E-02	1.9228E-03
17.400	-1.0832E-07	9.2307E-09	0.2568	0.1616	-1.1059E-02	9.4061E-04
17.690	-3.3453E-07	1.7622E-09	0.2102	0.1551	-3.4635E-02	1.8245E-04
17.980	-4.8239E-07	-1.2393E-08	0.1667	0.1428	-5.0730E-02	-1.3056E-03
18.270	-5.6127E-07	-2.3975E-08	0.1273	0.1271	-5.9941E-02	-2.5651E-03
18.560	-5.8739E-07	-3.0837E-08	9.2914E-02	0.1096	-6.3688E-02	-3.3496E-03
18.850	-5.7494E-07	-3.4012E-08	6.3772E-02	9.1595E-02	-6.3276E-02	-3.7502E-03
19.140	-5.3595E-07	-3.4422E-08	3.9834E-02	7.4199E-02	-5.9860E-02	-3.8516E-03
19.430	-4.8033E-07	-3.2859E-08	2.0818E-02	5.8073E-02	-5.4431E-02	-3.7304E-03
19.720	-4.1596E-07	-2.9986E-08	6.3349E-03	4.3664E-02	-4.7816E-02	-3.4533E-03
20.010	-3.4889E-07	-2.6343E-08	4.3180E-03	3.1208E-02	-4.0674E-02	-3.0767E-03
20.300	-2.8354E-07	-2.2348E-08	1.1912E-02	2.0777E-02	-3.3518E-02	-2.6467E-03
20.590	-2.2298E-07	-1.8320E-08	1.6516E-02	1.2319E-02	-2.6723E-02	-2.1996E-03
20.880	-1.6914E-07	-1.4487E-08	1.8960E-02	5.7009E-03	-2.0547E-02	-1.7630E-03
21.170	-1.2306E-07	-1.1002E-08	1.9742E-02	8.7566E-04	-1.5150E-02	-1.3570E-03
21.460	-8.5096E-08	-7.9613E-09	1.9298E-02	2.8789E-03	-1.0615E-02	-9.9491E-04
21.750	-5.5069E-08	-5.4127E-09	1.7998E-02	5.4224E-03	-6.9592E-03	-6.8527E-04
22.040	-3.2467E-08	-3.3723E-09	1.6139E-02	6.9666E-03	-4.1558E-03	-4.3245E-04
22.330	-1.6536E-08	-1.8326E-09	1.3948E-02	7.8410E-03	-2.1436E-03	-2.3801E-04
22.620	-6.3853E-09	-7.7191E-10	1.1587E-02	8.2540E-03	-8.3817E-04	-1.0151E-04
22.910	-1.0537E-09	-1.6038E-10	9.1639E-03	1.3519E-02	-3.7700E-02	-5.7379E-03
23.200	4.3235E-10	1.0668E-11	3.7460E-03	1.5014E-02	2.5220E-02	6.2228E-04
23.490	3.6067E-10	1.2512E-11	4.5593E-04	7.0904E-03	2.9174E-02	1.0121E-03
23.780	1.0924E-10	4.3387E-12	3.6651E-04	1.1821E-03	1.1300E-02	4.4881E-04

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24.070	3.9831E-12	3.6508E-13	2.2981E-04	5.4589E-04	5.0187E-04	4.6000E-05
24.360	-1.0287E-11	-1.0206E-12	4.9892E-05	4.0739E-04	-1.5283E-03	-1.5161E-04
24.650	-4.0689E-12	-4.7526E-13	6.4897E-06	9.7838E-05	-6.9624E-04	-8.1322E-05
24.940	-5.1475E-13	-7.9873E-14	6.8526E-06	7.9509E-06	-6.7260E-05	-1.0437E-05
25.230	1.7225E-13	4.4800E-15	1.8838E-06	1.1922E-05	3.5827E-05	9.3184E-07
25.520	7.6821E-14	2.8244E-15	6.1246E-08	3.5100E-06	2.1920E-05	8.0588E-07
25.810	6.9033E-15	3.6001E-16	1.5196E-07	5.4731E-08	2.5036E-06	1.3056E-07
26.100	-2.6057E-15	-2.3507E-16	2.8178E-08	2.6657E-07	-1.1465E-06	-1.0343E-07
26.390	-7.6443E-16	-9.0772E-17	2.6583E-09	5.1511E-08	-3.9546E-07	-4.6959E-08
26.680	-1.3267E-17	-4.5004E-18	1.6977E-09	4.3221E-09	-7.8893E-09	-2.6762E-09
26.970	2.6609E-17	8.7899E-19	1.5203E-10	3.0020E-09	1.5965E-08	5.2740E-10
27.260	4.4460E-18	1.8696E-19	4.3492E-11	2.8363E-10	2.6676E-09	1.1218E-10
27.550	-3.8040E-19	-2.0748E-20	1.2474E-11	7.4679E-11	-2.2824E-10	-1.2449E-11
27.840	-2.4122E-19	-2.6850E-20	1.8540E-13	2.2302E-11	-1.4473E-10	-1.6110E-11
28.130	-2.1419E-20	-3.2277E-21	4.6063E-13	4.4768E-13	-1.2851E-11	-1.9366E-12
28.420	5.9698E-21	1.7260E-22	7.6194E-14	8.0405E-13	3.5819E-12	1.0356E-13
28.710	1.7232E-21	6.6613E-23	5.7398E-15	1.3137E-13	1.0339E-12	3.9968E-14
29.000	-2.3263E-22	-1.1859E-23	0.0000	0.0000	-1.3958E-13	-7.1151E-15

* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD



3.3918E-03 0.015232 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1150.2 224.29 6.6847 -0.051521 -40.626 220.89

STR, KN/ M**2

1.4659E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

3.3918E-03 0.015232 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1150.2 224.29 6.6847 -0.051521 -40.626 220.89

STR, KN/ M**2

1.4659E+04

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M

0.0000	1.5232E-02	2.6799E-04	224.59	225.57	0.0000	0.0000
0.2900	1.4108E-02	2.6153E-04	157.97	222.79	17.915	0.3261



0.5800	1.2922E-02	2.5098E-04	91.682	214.74	37.517	0.7155
0.8700	1.1701E-02	2.3708E-04	28.852	201.28	55.212	1.0982
1.1600	1.0468E-02	2.2060E-04	30.730	183.09	70.001	1.4480
1.4500	9.2465E-03	2.0225E-04	81.169	161.23	80.476	1.7285
1.7400	8.0576E-03	1.8268E-04	125.10	136.98	86.504	1.9285
2.0300	6.9187E-03	1.6252E-04	162.12	111.42	89.459	2.0719
2.3200	5.8448E-03	1.4229E-04	191.66	86.811	79.974	1.9248
2.6100	4.8476E-03	1.2247E-04	214.45	63.507	80.609	2.0150
2.9000	3.9363E-03	1.0348E-04	230.37	40.448	78.641	2.0472
3.1900	3.1172E-03	8.5640E-05	239.57	17.543	78.982	2.1494
3.4800	2.3939E-03	6.9232E-05	242.00	6.0288	77.810	2.2297
3.7700	1.7675E-03	5.4449E-05	237.77	28.279	75.090	2.2934
4.0600	1.2361E-03	4.1412E-05	227.09	48.172	62.641	2.1009
4.3500	7.9550E-04	3.0164E-05	211.01	63.533	43.127	1.6371
4.6400	4.3922E-04	2.0676E-05	191.19	73.506	25.366	1.1954
4.9300	1.5934E-04	1.2862E-05	169.13	78.639	9.7656	0.7892
5.2200	-5.2991E-05	6.5961E-06	146.16	79.588	-3.4352	0.4281
5.5100	-2.1095E-04	1.7253E-06	123.40	77.059	-14.437	0.1181
5.8000	-3.1965E-04	-6.4432E-06	101.77	71.769	-23.009	-0.4633
6.0900	-3.8633E-04	-1.4980E-05	81.973	65.420	-22.025	-0.8530
6.3800	-4.1915E-04	-2.0600E-05	63.940	58.809	-24.914	-1.2231
6.6700	-4.2556E-04	-2.3836E-05	47.913	51.595	-26.329	-1.4731
6.9600	-4.1217E-04	-2.5178E-05	34.014	44.159	-26.503	-1.6172
7.2500	-3.8474E-04	-2.5069E-05	22.264	36.818	-25.674	-1.6710
7.5400	-3.4810E-04	-2.3897E-05	12.603	29.819	-24.075	-1.6509
7.8300	-3.0627E-04	-2.1994E-05	4.9207	23.349	-21.926	-1.5728
8.1200	-2.6241E-04	-1.9639E-05	1.0854	17.533	-19.424	-1.4520
8.4100	-2.1898E-04	-1.7055E-05	5.4306	12.448	-16.741	-1.3024
8.7000	-1.7777E-04	-1.4418E-05	8.3862	8.1221	-14.023	-1.1361
8.9900	-1.4002E-04	-1.1861E-05	10.204	4.5515	-11.385	-0.9634
9.2800	-1.0647E-04	-9.4773E-06	11.091	1.7074	-8.9158	-0.7927



9.5700	-7.7493E-05	-7.3272E-06	11.247	0.5273	-6.6776	-0.6307
9.8600	-5.3154E-05	-5.4454E-06	10.853	2.1190	-4.7095	-0.4819
10.150	-3.3294E-05	-3.8448E-06	10.071	3.2029	-3.0307	-0.3496
10.440	-1.7588E-05	-2.5218E-06	9.0371	3.8587	-1.6438	-0.2354
10.730	-5.6113E-06	-1.4612E-06	7.8649	4.1650	-0.5381	-0.1400
11.020	3.0779E-06	-6.3945E-07	6.6451	4.1973	0.3023	-6.2802E-02
11.310	8.8668E-06	-2.8297E-08	5.4473	4.0251	0.8923	-2.8477E-03
11.600	1.2481E-05	1.2184E-07	4.3217	3.7095	1.2864	1.2572E-02
11.890	1.4370E-05	2.0712E-07	3.3024	3.3030	1.5160	2.1874E-02
12.180	1.4942E-05	2.5600E-07	2.4091	2.8489	1.6126	2.7659E-02
12.470	1.4554E-05	2.7666E-07	1.6506	2.3815	1.6060	3.0563E-02
12.760	1.3507E-05	2.7634E-07	1.0267	1.9268	1.5233	3.1199E-02
13.050	1.2053E-05	2.6126E-07	0.5309	1.5036	1.3885	3.0131E-02
13.340	1.0388E-05	2.3660E-07	0.1538	1.1242	1.2219	2.7862E-02
13.630	8.6637E-06	2.0654E-07	0.1293	0.7953	1.0401	2.4825E-02
13.920	6.9911E-06	1.7431E-07	0.3157	0.5195	0.8563	2.1375E-02
14.210	5.4449E-06	1.4232E-07	0.4315	0.2961	0.6801	1.7797E-02
14.500	4.0714E-06	1.1223E-07	0.4899	0.1220	0.5185	1.4307E-02
14.790	2.8940E-06	8.5135E-08	0.5044	1.0628E-02	0.3755	1.1060E-02
15.080	1.9182E-06	6.1624E-08	0.4870	0.1012	0.2536	8.1554E-03
15.370	1.1372E-06	4.1920E-08	0.4480	0.1602	0.1531	5.6496E-03
15.660	5.3521E-07	2.5968E-08	0.3958	0.1931	7.3350E-02	3.5628E-03
15.950	9.1349E-08	1.3519E-08	0.3372	0.2057	1.2741E-02	1.8877E-03
16.240	-2.2476E-07	4.2050E-09	0.2774	0.2032	-3.1929E-02	5.9737E-04
16.530	-4.2959E-07	-7.8481E-09	0.2200	0.1900	-6.2071E-02	-1.1327E-03
16.820	-5.4375E-07	-2.2308E-08	0.1675	0.1701	-7.9889E-02	-3.2738E-03
17.110	-5.8890E-07	-3.0822E-08	0.1215	0.1465	-8.7953E-02	-4.5982E-03
17.400	-5.8402E-07	-3.4753E-08	8.2601E-02	0.1217	-8.8642E-02	-5.2689E-03
17.690	-5.4515E-07	-3.5309E-08	5.0886E-02	9.7426E-02	-8.4068E-02	-5.4390E-03
17.980	-4.8539E-07	-3.3525E-08	2.6017E-02	7.4904E-02	-7.6032E-02	-5.2455E-03
18.270	-4.1499E-07	-3.0250E-08	7.3610E-03	5.4914E-02	-6.6012E-02	-4.8066E-03

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18.560	-3.4164E-07	-2.6161E-08	6.1694E-03	3.7854E-02	-5.5176E-02	-4.2204E-03
18.850	-2.7084E-07	-2.1771E-08	1.4879E-02	2.3831E-02	-4.4400E-02	-3.5650E-03
19.140	-2.0620E-07	-1.7451E-08	2.0026E-02	1.2746E-02	-3.4304E-02	-2.8999E-03
19.430	-1.4985E-07	-1.3452E-08	2.2369E-02	4.3676E-03	-2.5293E-02	-2.2681E-03
19.720	-1.0273E-07	-9.9289E-09	2.2636E-02	1.8136E-03	-1.7589E-02	-1.6982E-03
20.010	-6.4958E-08	-6.9575E-09	2.1454E-02	5.8273E-03	-1.1280E-02	-1.2068E-03
20.300	-3.6041E-08	-4.5573E-09	1.9337E-02	8.3131E-03	-6.3462E-03	-8.0157E-04
20.590	-1.5101E-08	-2.7069E-09	1.6691E-02	9.5946E-03	-2.6956E-03	-4.8268E-04
20.880	-1.0872E-09	-1.3576E-09	1.3813E-02	1.0009E-02	-1.9650E-04	-2.4537E-04
21.170	7.0385E-09	-4.4390E-10	1.0912E-02	9.8541E-03	1.2892E-03	-8.1309E-05
21.460	1.0808E-08	3.4815E-11	8.1125E-03	9.3780E-03	2.0059E-03	6.4686E-06
21.750	1.1340E-08	1.1478E-10	5.4782E-03	8.7786E-03	2.1323E-03	2.1606E-05
22.040	9.6883E-09	1.3154E-10	3.0211E-03	8.2018E-03	1.8451E-03	2.5079E-05
22.330	6.8334E-09	1.0744E-10	7.2201E-04	7.7428E-03	1.3180E-03	2.0745E-05
22.620	3.6963E-09	6.4022E-11	1.4821E-03	7.4467E-03	7.2190E-04	1.2518E-05
22.910	1.1528E-09	2.2134E-11	3.6119E-03	1.3535E-03	4.1245E-02	7.9189E-04
23.200	5.4483E-11	2.1963E-12	2.2661E-03	5.1086E-03	3.1782E-03	1.2812E-04
23.490	-1.4216E-10	-6.7526E-12	6.5052E-04	3.9571E-03	-1.1499E-02	-5.4621E-04
23.780	-7.1766E-11	-3.9957E-12	2.8964E-05	1.2987E-03	-7.4238E-03	-4.1333E-04
24.070	-1.3427E-11	-8.8021E-13	1.0289E-04	1.6965E-05	-1.6919E-03	-1.1091E-04
24.360	2.2891E-12	2.5005E-14	3.8763E-05	1.7187E-04	3.4006E-04	3.7146E-06
24.650	2.0830E-12	3.4990E-14	3.2285E-06	7.0777E-05	3.5642E-04	5.9872E-06
24.940	5.8828E-13	1.1350E-14	2.2898E-06	7.8513E-06	7.6869E-05	1.4830E-06
25.230	9.9253E-15	6.2522E-16	1.3279E-06	3.6215E-06	2.0645E-06	1.3005E-07
25.520	-3.8640E-14	-2.0060E-15	1.9014E-07	2.3746E-06	-1.1025E-05	-5.7239E-07
25.810	-9.0190E-15	-5.5721E-16	4.9294E-08	3.6530E-07	-3.2709E-06	-2.0208E-07
26.100	1.9535E-16	-6.3841E-18	2.1777E-08	8.2500E-08	8.5953E-08	-2.8090E-09
26.390	4.1590E-16	7.0973E-18	1.4559E-09	3.8827E-08	2.1516E-07	3.6717E-09
26.680	5.5301E-17	1.1483E-18	7.4330E-10	2.8017E-09	3.2886E-08	6.8284E-10
26.970	-8.2043E-18	-3.4278E-19	1.6961E-10	1.2878E-09	-4.9226E-09	-2.0567E-10
27.260	-3.4643E-18	-1.9956E-19	3.5458E-12	3.0476E-10	-2.0786E-09	-1.1973E-10

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27.550 -2.0044E-19 -1.6618E-20 7.1580E-12 4.5124E-12 -1.2026E-10 -9.9710E-12
 27.840 1.0179E-19 1.6117E-21 9.3849E-13 1.2581E-11 6.1072E-11 9.6699E-13
 28.130 2.2903E-20 4.3872E-22 1.3854E-13 1.7169E-12 1.3742E-11 2.6323E-13
 28.420 -5.5769E-22 2.9604E-24 5.7447E-14 2.3312E-13 -3.3462E-13 1.7762E-15
 28.710 -1.0374E-21 -5.6595E-23 3.3540E-15 9.9046E-14 -6.2246E-13 -3.3957E-14
 29.000 -1.3656E-22 -1.1118E-23 0.0000 0.0000 -8.1933E-14 -6.6708E-15

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.4541E-03 0.015237 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1168.5 192.29 5.9268 -0.051521 -37.440 183.79

STR, KN/ M**2

1.2978E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.4541E-03 0.015237 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1168.5 192.29 5.9268 -0.051521 -37.440 183.79

STR, KN/ M**2

1.2978E+04

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.5237E-02	2.6799E-04	187.56	193.46	0.0000	0.0000
0.2900	1.4121E-02	2.6173E-04	129.33	191.20	14.501	0.2640
0.5800	1.2953E-02	2.5165E-04	72.269	184.68	30.413	0.5802
0.8700	1.1758E-02	2.3846E-04	18.328	173.75	44.867	0.8934
1.1600	1.0555E-02	2.2280E-04	33.801	158.95	57.081	1.1828
1.4500	9.3654E-03	2.0532E-04	77.669	141.08	65.916	1.4192
1.7400	8.2065E-03	1.8661E-04	116.36	121.16	71.247	1.5933
2.0300	7.0942E-03	1.6724E-04	149.41	100.04	74.182	1.7244
2.3200	6.0417E-03	1.4769E-04	176.29	79.559	66.857	1.6159
2.6100	5.0599E-03	1.2840E-04	197.51	59.985	68.046	1.7087
2.9000	4.1571E-03	1.0977E-04	212.94	40.403	67.168	1.7565
3.1900	3.3396E-03	9.2118E-05	222.63	20.724	68.433	1.8700
3.4800	2.6111E-03	7.5713E-05	226.45	1.4278	68.637	1.9723
3.7700	1.9733E-03	6.0759E-05	224.38	19.951	67.799	2.0700

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4.0600	1.4251E-03	4.7396E-05	216.48	38.078	58.418	1.9449	
4.3500	9.6355E-04	3.5688E-05	203.55	52.675	42.254	1.5667	
4.6400	5.8334E-04	2.5637E-05	186.96	62.785	27.250	1.1989	
4.9300	2.7783E-04	1.7189E-05	167.96	68.769	13.773	0.8531	
5.2200	3.9416E-05	1.0250E-05	147.72	71.097	2.0669	0.5381	
5.5100	-1.4178E-04	4.6962E-06	127.23	70.297	-7.8489	0.2600	
5.8000	-2.7507E-04	3.8495E-07	107.32	66.925	-16.015	2.2413E-02	
6.0900	-3.6406E-04	-9.4419E-06	88.671	62.300	-16.788	-0.4349	
6.3800	-4.1647E-04	-1.6969E-05	71.352	57.114	-20.024	-0.8150	
6.6700	-4.3943E-04	-2.1896E-05	55.636	51.199	-21.991	-1.0946	
6.9600	-4.3943E-04	-2.4690E-05	41.689	44.886	-22.855	-1.2827	
7.2500	-4.2223E-04	-2.5783E-05	29.589	38.462	-22.790	-1.3902	
7.5400	-3.9281E-04	-2.5564E-05	19.338	32.163	-21.975	-1.4285	
7.8300	-3.5542E-04	-2.4374E-05	10.876	26.174	-20.582	-1.4099	
8.1200	-3.1356E-04	-2.2510E-05	4.1156	20.636	-18.774	-1.3463	
8.4100	-2.7002E-04	-2.0218E-05	1.2629	15.645	-16.698	-1.2489	
8.7000	-2.2698E-04	-1.7702E-05	5.1551	11.258	-14.482	-1.1282	
8.9900	-1.8606E-04	-1.5122E-05	7.8572	7.4996	-12.237	-0.9935	
9.2800	-1.4837E-04	-1.2601E-05	9.5670	4.3658	-10.050	-0.8526	
9.5700	-1.1462E-04	-1.0228E-05	10.455	1.8358	-7.9891	-0.7121	
9.8600	-8.5184E-05	-8.0628E-06	10.687	0.1905	-6.1048	-0.5772	
10.150	-6.0155E-05	-6.1424E-06	10.417	1.6634	-4.4294	-0.4518	
10.440	-3.9423E-05	-4.4832E-06	9.7796	2.7002	-2.9803	-0.3386	
10.730	-2.2724E-05	-3.0868E-06	8.8949	3.3662	-1.7626	-0.2392	
11.020	-9.6941E-06	-1.9429E-06	7.8621	3.7224	-0.7710	-0.1543	
11.310	9.3460E-08	-1.0331E-06	6.7625	3.8300	7.6164E-03	-8.4103E-02	
11.600	6.9093E-06	-3.3398E-07	5.6602	3.7460	0.5760	-2.7844E-02	
11.890	1.1421E-05	5.4975E-08	4.6034	3.5218	0.9746	4.6962E-03	
12.180	1.4095E-05	1.6355E-07	3.6263	3.2022	1.2304	1.4293E-02	
12.470	1.5322E-05	2.3299E-07	2.7510	2.8253	1.3676	2.0819E-02	
12.760	1.5452E-05	2.7105E-07	1.9896	2.4221	1.4096	2.4753E-02	

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13.050	1.4789E-05	2.8480E-07	1.3460	2.0172	1.3782	2.6569E-02
13.340	1.3591E-05	2.8050E-07	0.8180	1.6291	1.2931	2.6719E-02
13.630	1.2067E-05	2.6350E-07	0.3989	1.2708	1.1718	2.5617E-02
13.920	1.0386E-05	2.3827E-07	7.7584E-02	0.9509	1.0290	2.3633E-02
14.210	8.6749E-06	2.0843E-07	0.1605	0.6738	0.8765	2.1083E-02
14.500	7.0283E-06	1.7679E-07	0.3193	0.4411	0.7239	1.8230E-02
14.790	5.5096E-06	1.4546E-07	0.4179	0.2517	0.5783	1.5286E-02
15.080	4.1582E-06	1.1594E-07	0.4678	0.1033	0.4446	1.2411E-02
15.370	2.9940E-06	8.9187E-08	0.4800	1.1570E-02	0.3260	9.7225E-03
15.660	2.0217E-06	6.5774E-08	0.4644	9.0552E-02	0.2241	7.2994E-03
15.950	1.2351E-06	4.5925E-08	0.4297	0.1433	0.1393	5.1869E-03
16.240	6.2022E-07	2.9622E-08	0.3831	0.1739	7.1191E-02	3.4038E-03
16.530	1.5841E-07	1.6668E-08	0.3302	0.1870	1.8494E-02	1.9480E-03
16.820	-1.7733E-07	6.7507E-09	0.2756	0.1868	-2.1074E-02	8.0226E-04
17.110	-4.0411E-07	-1.5315E-09	0.2225	0.1771	-4.8819E-02	-1.8481E-04
17.400	-5.3924E-07	-1.8114E-08	0.1733	0.1609	-6.6204E-02	-2.2215E-03
17.690	-6.0303E-07	-2.8603E-08	0.1294	0.1411	-7.5220E-02	-3.5640E-03
17.980	-6.1357E-07	-3.4269E-08	9.1564E-02	0.1196	-7.7741E-02	-4.3373E-03
18.270	-5.8647E-07	-3.6264E-08	6.0036E-02	9.8033E-02	-7.5460E-02	-4.6610E-03
18.560	-5.3472E-07	-3.5597E-08	3.4642E-02	7.7588E-02	-6.9852E-02	-4.6451E-03
18.850	-4.6879E-07	-3.3120E-08	1.4959E-02	5.9006E-02	-6.2161E-02	-4.3869E-03
19.140	-3.9680E-07	-2.9529E-08	4.2928E-04	4.2733E-02	-5.3396E-02	-3.9692E-03
19.430	-3.2479E-07	-2.5374E-08	1.0139E-02	2.8964E-02	-4.4344E-02	-3.4606E-03
19.720	-2.5698E-07	-2.1071E-08	1.6760E-02	1.7700E-02	-3.5590E-02	-2.9151E-03
20.010	-1.9610E-07	-1.6920E-08	2.0488E-02	8.8048E-03	-2.7545E-02	-2.3741E-03
20.300	-1.4370E-07	-1.3122E-08	2.1960E-02	1.9906E-03	-2.0466E-02	-1.8669E-03
20.590	-1.0036E-07	-9.7981E-09	2.1748E-02	2.9815E-03	-1.4492E-02	-1.4132E-03
20.880	-6.6003E-08	-7.0058E-09	2.0340E-02	6.3669E-03	-9.6602E-03	-1.0242E-03
21.170	-4.0035E-08	-4.7554E-09	1.8129E-02	8.5688E-03	-5.9382E-03	-7.0458E-04
21.460	-2.1541E-08	-3.0224E-09	1.5423E-02	9.8683E-03	-3.2374E-03	-4.5373E-04
21.750	-9.4011E-09	-1.7579E-09	1.2443E-02	1.0532E-02	-1.4314E-03	-2.6736E-04

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22.040	-2.3841E-09	-8.9793E-10	9.3380E-03	1.0791E-02	-3.6768E-04	-1.3833E-04
22.330	7.3780E-10	-3.6908E-10	6.1983E-03	1.0829E-02	1.1511E-04	-5.7582E-05
22.620	1.3685E-09	-9.3191E-11	3.0680E-03	1.0781E-02	2.1619E-04	-1.4722E-05
22.910	7.8226E-10	3.1753E-12	1.1641E-04	6.7006E-03	2.7987E-02	1.1361E-04
23.200	2.2575E-10	6.4058E-12	8.3407E-04	7.0815E-04	1.3169E-02	3.7367E-04
23.490	1.9718E-12	2.7987E-12	4.8225E-04	1.2440E-03	1.5950E-04	2.2638E-04
23.780	-2.8601E-11	4.6056E-13	1.1539E-04	8.5606E-04	-2.9587E-03	4.7642E-05
24.070	-1.2041E-11	-4.2142E-13	1.5244E-05	2.3274E-04	-1.5171E-03	-5.3099E-05
24.360	-1.5902E-12	-3.2168E-13	1.9808E-05	1.6228E-05	-2.3624E-04	-4.7788E-05
24.650	5.9235E-13	-7.2152E-14	5.8391E-06	3.3535E-05	1.0136E-04	-1.2346E-05
24.940	4.0816E-13	1.9182E-15	3.6797E-07	1.1113E-05	5.3333E-05	2.5064E-07
25.230	7.8083E-14	2.3918E-15	6.1026E-07	1.0193E-06	1.6241E-05	4.9748E-07
25.520	-8.0726E-15	4.8372E-16	2.1814E-07	1.0361E-06	-2.3034E-06	1.3802E-07
25.810	-6.3716E-15	-1.0010E-16	9.7199E-09	3.9513E-07	-2.3108E-06	-3.6304E-08
26.100	-8.1135E-16	-9.9554E-17	1.1072E-08	2.1212E-08	-3.5699E-07	-4.3804E-08
26.390	1.3647E-16	-1.2408E-17	2.5292E-09	1.9246E-08	7.0599E-08	-6.4193E-09
26.680	5.1727E-17	6.2301E-19	9.5479E-11	4.5546E-09	3.0760E-08	3.7049E-10
26.970	2.4472E-18	2.3762E-19	1.1279E-10	1.4115E-10	1.4683E-09	1.4257E-10
27.260	-1.7175E-18	1.1394E-20	1.3611E-11	1.9856E-10	-1.0305E-09	6.8364E-12
27.550	-3.5514E-19	-2.4992E-20	2.3851E-12	2.4985E-11	-2.1309E-10	-1.4995E-11
27.840	1.2819E-20	-5.2969E-21	8.8552E-13	4.0459E-12	7.6913E-12	-3.1781E-12
28.130	1.5376E-20	5.7637E-23	4.0924E-14	1.5758E-12	9.2256E-12	3.4582E-14
28.420	1.8137E-21	7.0696E-23	2.8487E-14	8.0577E-14	1.0882E-12	4.2418E-14
28.710	-3.5478E-22	8.5456E-24	5.6785E-15	4.9119E-14	-2.1287E-13	5.1274E-15
29.000	-2.3167E-22	-1.5931E-23	0.0000	0.0000	-1.3900E-13	-9.5583E-15

* PILE GROUP * 9

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.5164E-03 0.015242 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1186.9 192.33 5.9262 -0.051521 -37.437 184.04

STR, KN/ M**2

1.3054E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.5164E-03 0.015242 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1186.9 192.33 5.9262 -0.051521 -37.437 184.04

STR, KN/ M**2

1.3054E+04

* EFFECTS FOR LATERALLY LOADED PILE *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5242E-02	2.6799E-04	187.72	193.50	0.0000	0.0000
0.2900	1.4126E-02	2.6173E-04	129.41	191.24	14.503	0.2639
0.5800	1.2958E-02	2.5165E-04	72.339	184.72	30.417	0.5802
0.8700	1.1762E-02	2.3846E-04	18.383	173.79	44.873	0.8933
1.1600	1.0559E-02	2.2280E-04	33.756	158.98	57.089	1.1827
1.4500	9.3694E-03	2.0532E-04	77.582	141.12	65.926	1.4191
1.7400	8.2102E-03	1.8661E-04	116.30	121.19	71.260	1.5932
2.0300	7.0975E-03	1.6724E-04	149.38	100.06	74.199	1.7243
2.3200	6.0446E-03	1.4769E-04	176.29	79.579	66.876	1.6157
2.6100	5.0623E-03	1.2840E-04	197.54	59.998	68.067	1.7086
2.9000	4.1592E-03	1.0977E-04	212.99	40.410	67.190	1.7564
3.1900	3.3413E-03	9.2118E-05	222.69	20.728	68.457	1.8699
3.4800	2.6125E-03	7.5713E-05	226.52	1.4278	68.661	1.9721
3.7700	1.9743E-03	6.0760E-05	224.46	19.962	67.824	2.0698
4.0600	1.4259E-03	4.7396E-05	216.57	38.098	58.450	1.9449
4.3500	9.6410E-04	3.5688E-05	203.64	52.704	42.278	1.5667
4.6400	5.8368E-04	2.5636E-05	187.04	62.820	27.266	1.1989
4.9300	2.7800E-04	1.7188E-05	168.05	68.807	13.782	0.8530
5.2200	3.9453E-05	1.0249E-05	147.80	71.136	2.0688	0.5380
5.5100	-1.4179E-04	4.6954E-06	127.30	70.336	-7.8493	0.2599
5.8000	-2.7511E-04	3.8412E-07	107.38	66.962	-16.018	2.2365E-02
6.0900	-3.6413E-04	-9.4518E-06	88.722	62.335	-16.791	-0.4354
6.3800	-4.1655E-04	-1.6978E-05	71.395	57.146	-20.027	-0.8154
6.6700	-4.3951E-04	-2.1905E-05	55.669	51.227	-21.996	-1.0950
6.9600	-4.3952E-04	-2.4698E-05	41.715	44.911	-22.860	-1.2832
7.2500	-4.2231E-04	-2.5790E-05	29.608	38.483	-22.795	-1.3906

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7.5400	-3.9289E-04	-2.5570E-05	19.351	32.180	-21.979	-1.4289		
7.8300	-3.5550E-04	-2.4380E-05	10.884	26.188	-20.586	-1.4102		
8.1200	-3.1363E-04	-2.2514E-05	4.1189	20.647	-18.778	-1.3465		
8.4100	-2.7008E-04	-2.0222E-05	1.2625	15.653	-16.701	-1.2491		
8.7000	-2.2703E-04	-1.7705E-05	5.1577	11.264	-14.486	-1.1284		
8.9900	-1.8610E-04	-1.5124E-05	7.8617	7.5025	-12.240	-0.9936		
9.2800	-1.4840E-04	-1.2603E-05	9.5728	4.3669	-10.052	-0.8527		
9.5700	-1.1464E-04	-1.0229E-05	10.461	1.8354	-7.9909	-0.7122		
9.8600	-8.5202E-05	-8.0632E-06	10.694	0.1908	-6.1061	-0.5772		
10.150	-6.0168E-05	-6.1424E-06	10.423	1.6656	-4.4303	-0.4518		
10.440	-3.9431E-05	-4.4830E-06	9.7859	2.7029	-2.9809	-0.3385		
10.730	-2.2728E-05	-3.0863E-06	8.9006	3.3692	-1.7629	-0.2391		
11.020	-9.6952E-06	-1.9423E-06	7.8671	3.7255	-0.7710	-0.1543		
11.310	9.4517E-08	-1.0325E-06	6.7668	3.8331	7.7026E-03	-8.4048E-02		
11.600	6.9186E-06	-3.3327E-07	5.6638	3.7489	0.5768	-2.7784E-02		
11.890	1.1432E-05	5.5038E-08	4.6063	3.5244	0.9756	4.7016E-03		
12.180	1.4108E-05	1.6361E-07	3.6286	3.2045	1.2315	1.4298E-02		
12.470	1.5335E-05	2.3305E-07	2.7527	2.8272	1.3688	2.0824E-02		
12.760	1.5465E-05	2.7110E-07	1.9907	2.4237	1.4107	2.4758E-02		
13.050	1.4801E-05	2.8485E-07	1.3467	2.0185	1.3792	2.6573E-02		
13.340	1.3601E-05	2.8054E-07	0.8183	1.6301	1.2941	2.6722E-02		
13.630	1.2076E-05	2.6353E-07	0.3991	1.2715	1.1727	2.5620E-02		
13.920	1.0393E-05	2.3830E-07	7.7578E-02	0.9514	1.0297	2.3636E-02		
14.210	8.6809E-06	2.0845E-07	0.1608	0.6741	0.8771	2.1085E-02		
14.500	7.0330E-06	1.7681E-07	0.3196	0.4412	0.7244	1.8232E-02		
14.790	5.5131E-06	1.4547E-07	0.4183	0.2518	0.5787	1.5287E-02		
15.080	4.1607E-06	1.1594E-07	0.4682	0.1032	0.4449	1.2411E-02		
15.370	2.9956E-06	8.9190E-08	0.4804	1.1601E-02	0.3262	9.7228E-03		
15.660	2.0226E-06	6.5774E-08	0.4648	9.0719E-02	0.2242	7.2995E-03		
15.950	1.2355E-06	4.5924E-08	0.4301	0.1434	0.1394	5.1868E-03		
16.240	6.2020E-07	2.9620E-08	0.3834	0.1741	7.1189E-02	3.4036E-03		

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16.530	1.5811E-07	1.6665E-08	0.3304	0.1872	1.8458E-02	1.9477E-03
16.820	-1.7747E-07	6.7474E-09	0.2758	0.1870	-2.1090E-02	8.0186E-04
17.110	-4.0429E-07	-1.5700E-09	0.2226	0.1772	-4.8841E-02	-1.8945E-04
17.400	-5.3945E-07	-1.8151E-08	0.1734	0.1611	-6.6229E-02	-2.2260E-03
17.690	-6.0324E-07	-2.8638E-08	0.1295	0.1412	-7.5246E-02	-3.5683E-03
17.980	-6.1377E-07	-3.4300E-08	9.1617E-02	0.1197	-7.7766E-02	-4.3411E-03
18.270	-5.8665E-07	-3.6290E-08	6.0065E-02	9.8103E-02	-7.5483E-02	-4.6643E-03
18.560	-5.3488E-07	-3.5619E-08	3.4652E-02	7.7640E-02	-6.9873E-02	-4.6479E-03
18.850	-4.6893E-07	-3.3137E-08	1.4956E-02	5.9041E-02	-6.2179E-02	-4.3891E-03
19.140	-3.9692E-07	-2.9542E-08	4.2866E-04	4.2755E-02	-5.3411E-02	-3.9710E-03
19.430	-3.2488E-07	-2.5384E-08	1.0159E-02	2.8976E-02	-4.4356E-02	-3.4619E-03
19.720	-2.5704E-07	-2.1078E-08	1.6782E-02	1.7703E-02	-3.5599E-02	-2.9161E-03
20.010	-1.9615E-07	-1.6925E-08	2.0512E-02	8.8021E-03	-2.7552E-02	-2.3747E-03
20.300	-1.4373E-07	-1.3125E-08	2.1983E-02	1.9889E-03	-2.0471E-02	-1.8673E-03
20.590	-1.0038E-07	-9.7993E-09	2.1770E-02	2.9910E-03	-1.4495E-02	-1.4134E-03
20.880	-6.6015E-08	-7.0060E-09	2.0359E-02	6.3781E-03	-9.6619E-03	-1.0243E-03
21.170	-4.0040E-08	-4.7550E-09	1.8146E-02	8.5808E-03	-5.9389E-03	-7.0451E-04
21.460	-2.1542E-08	-3.0216E-09	1.5436E-02	9.8805E-03	-3.2375E-03	-4.5362E-04
21.750	-9.4000E-09	-1.7571E-09	1.2452E-02	1.0544E-02	-1.4312E-03	-2.6724E-04
22.040	-2.3822E-09	-8.9723E-10	9.3444E-03	1.0803E-02	-3.6738E-04	-1.3822E-04
22.330	7.4430E-10	-3.6858E-10	6.2015E-03	1.0840E-02	1.1612E-04	-5.7504E-05
22.620	1.3724E-09	-9.2915E-11	3.0679E-03	1.0793E-02	2.1681E-04	-1.4679E-05
22.910	7.8362E-10	3.1833E-12	1.1712E-04	6.7045E-03	2.8036E-02	1.1389E-04
23.200	2.2589E-10	6.4063E-12	8.3645E-04	7.0703E-04	1.3177E-02	3.7370E-04
23.490	1.9383E-12	2.7978E-12	4.8303E-04	1.2480E-03	1.5679E-04	2.2631E-04
23.780	-2.8624E-11	4.6009E-13	1.1541E-04	8.5759E-04	-2.9610E-03	4.7594E-05
24.070	-1.2046E-11	-4.2243E-13	1.5335E-05	2.3285E-04	-1.5178E-03	-5.3226E-05
24.360	-1.5900E-12	-3.2152E-13	1.9851E-05	1.6272E-05	-2.3620E-04	-4.7764E-05
24.650	5.9450E-13	-7.1998E-14	5.8444E-06	3.3613E-05	1.0173E-04	-1.2320E-05
24.940	4.0887E-13	1.9223E-15	3.6748E-07	1.1125E-05	5.3425E-05	2.5117E-07
25.230	7.8124E-14	2.3919E-15	6.1171E-07	1.0186E-06	1.6250E-05	4.9751E-07



25.520	-8.0833E-15	4.8347E-16	2.1840E-07	1.0387E-06	-2.3064E-06	1.3795E-07
25.810	-6.3749E-15	-1.0077E-16	9.7094E-09	3.9562E-07	-2.3120E-06	-3.6547E-08
26.100	-8.1144E-16	-9.9544E-17	1.1097E-08	2.1195E-08	-3.5703E-07	-4.3799E-08
26.390	1.3690E-16	-1.2377E-17	2.5316E-09	1.9289E-08	7.0825E-08	-6.4032E-09
26.680	5.1799E-17	6.2341E-19	9.5678E-11	4.5590E-09	3.0803E-08	3.7072E-10
26.970	2.4409E-18	2.3757E-19	1.1299E-10	1.4149E-10	1.4645E-09	1.4254E-10
27.260	-1.7187E-18	1.1371E-20	1.3613E-11	1.9892E-10	-1.0312E-09	6.8227E-12
27.550	-3.5526E-19	-2.5009E-20	2.3925E-12	2.4991E-11	-2.1315E-10	-1.5005E-11
27.840	1.2918E-20	-5.2894E-21	8.8674E-13	4.0590E-12	7.7506E-12	-3.1737E-12
28.130	1.5403E-20	5.7797E-23	4.0897E-14	1.5780E-12	9.2419E-12	3.4678E-14
28.420	1.8139E-21	7.0694E-23	2.8551E-14	8.0533E-14	1.0884E-12	4.2417E-14
28.710	-3.5510E-22	8.5389E-24	5.6838E-15	4.9229E-14	-2.1306E-13	5.1233E-15
29.000	-2.3175E-22	-1.5942E-23	0.0000	0.0000	-1.3905E-13	-9.5649E-15

* PILE GROUP * 10

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.5786E-03	0.015247	2.6799E-04	-3.5517E-06	1.3823E-05	-3.8460E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1205.3	192.37	5.9256	-0.051521	-37.434	184.29



STR, KN/ M**2

1.3131E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.5786E-03 0.015247 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1205.3 192.37 5.9256 -0.051521 -37.434 184.29

STR, KN/ M**2

1.3131E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.5247E-02	2.6799E-04	187.81	193.54	0.0000	0.0000
0.2900	1.4131E-02	2.6173E-04	129.50	191.28	14.504	0.2639
0.5800	1.2963E-02	2.5166E-04	72.409	184.76	30.421	0.5801
0.8700	1.1767E-02	2.3846E-04	18.437	173.83	44.879	0.8932
1.1600	1.0564E-02	2.2280E-04	33.711	159.02	57.097	1.1825
1.4500	9.3734E-03	2.0532E-04	77.496	141.15	65.936	1.4189
1.7400	8.2138E-03	1.8662E-04	116.25	121.22	71.273	1.5930



2.0300	7.1007E-03	1.6724E-04	149.36	100.09	74.216	1.7241
2.3200	6.0474E-03	1.4769E-04	176.29	79.598	66.895	1.6156
2.6100	5.0648E-03	1.2840E-04	197.56	60.012	68.087	1.7085
2.9000	4.1612E-03	1.0977E-04	213.03	40.418	67.212	1.7563
3.1900	3.3430E-03	9.2119E-05	222.75	20.732	68.480	1.8697
3.4800	2.6139E-03	7.5713E-05	226.60	1.4278	68.686	1.9720
3.7700	1.9754E-03	6.0760E-05	224.55	19.974	67.849	2.0697
4.0600	1.4267E-03	4.7395E-05	216.66	38.118	58.482	1.9449
4.3500	9.6465E-04	3.5687E-05	203.73	52.733	42.302	1.5667
4.6400	5.8402E-04	2.5636E-05	187.13	62.854	27.282	1.1989
4.9300	2.7817E-04	1.7188E-05	168.13	68.845	13.791	0.8530
5.2200	3.9491E-05	1.0249E-05	147.88	71.176	2.0708	0.5380
5.5100	-1.4180E-04	4.6946E-06	127.37	70.376	-7.8497	0.2599
5.8000	-2.7514E-04	3.8330E-07	107.44	67.000	-16.020	2.2317E-02
6.0900	-3.6419E-04	-9.4618E-06	88.773	62.370	-16.794	-0.4358
6.3800	-4.1662E-04	-1.6988E-05	71.437	57.178	-20.031	-0.8159
6.6700	-4.3960E-04	-2.1914E-05	55.703	51.256	-22.000	-1.0955
6.9600	-4.3960E-04	-2.4707E-05	41.741	44.936	-22.864	-1.2836
7.2500	-4.2240E-04	-2.5798E-05	29.627	38.504	-22.799	-1.3910
7.5400	-3.9298E-04	-2.5577E-05	19.364	32.197	-21.984	-1.4292
7.8300	-3.5557E-04	-2.4385E-05	10.892	26.202	-20.590	-1.4106
8.1200	-3.1369E-04	-2.2519E-05	4.1221	20.658	-18.782	-1.3468
8.4100	-2.7014E-04	-2.0226E-05	1.2620	15.661	-16.705	-1.2494
8.7000	-2.2708E-04	-1.7708E-05	5.1603	11.269	-14.489	-1.1286
8.9900	-1.8614E-04	-1.5127E-05	7.8663	7.5053	-12.242	-0.9938
9.2800	-1.4843E-04	-1.2604E-05	9.5786	4.3679	-10.054	-0.8528
9.5700	-1.1467E-04	-1.0230E-05	10.468	1.8351	-7.9926	-0.7122
9.8600	-8.5220E-05	-8.0637E-06	10.701	0.1911	-6.1074	-0.5773
10.150	-6.0180E-05	-6.1425E-06	10.430	1.6678	-4.4312	-0.4518
10.440	-3.9439E-05	-4.4828E-06	9.7922	2.7057	-2.9815	-0.3385
10.730	-2.2732E-05	-3.0859E-06	8.9064	3.3722	-1.7632	-0.2391



11.020	-9.6963E-06	-1.9417E-06	7.8722	3.7286	-0.7711	-0.1543	
11.310	9.5577E-08	-1.0318E-06	6.7712	3.8361	7.7890E-03	-8.3994E-02	
11.600	6.9280E-06	-3.3256E-07	5.6674	3.7517	0.5776	-2.7725E-02	
11.890	1.1444E-05	5.5101E-08	4.6092	3.5269	0.9766	4.7070E-03	
12.180	1.4120E-05	1.6367E-07	3.6308	3.2068	1.2327	1.4304E-02	
12.470	1.5348E-05	2.3311E-07	2.7544	2.8292	1.3700	2.0830E-02	
12.760	1.5477E-05	2.7116E-07	1.9919	2.4253	1.4119	2.4763E-02	
13.050	1.4812E-05	2.8490E-07	1.3474	2.0198	1.3803	2.6577E-02	
13.340	1.3611E-05	2.8058E-07	0.8187	1.6311	1.2951	2.6726E-02	
13.630	1.2085E-05	2.6356E-07	0.3992	1.2723	1.1736	2.5623E-02	
13.920	1.0400E-05	2.3832E-07	7.7572E-02	0.9519	1.0304	2.3638E-02	
14.210	8.6869E-06	2.0847E-07	0.1610	0.6744	0.8777	2.1087E-02	
14.500	7.0377E-06	1.7682E-07	0.3199	0.4414	0.7249	1.8233E-02	
14.790	5.5166E-06	1.4548E-07	0.4187	0.2518	0.5791	1.5288E-02	
15.080	4.1631E-06	1.1595E-07	0.4686	0.1031	0.4452	1.2412E-02	
15.370	2.9972E-06	8.9193E-08	0.4808	1.1633E-02	0.3264	9.7231E-03	
15.660	2.0235E-06	6.5775E-08	0.4652	9.0887E-02	0.2243	7.2996E-03	
15.950	1.2358E-06	4.5923E-08	0.4304	0.1436	0.1394	5.1867E-03	
16.240	6.2018E-07	2.9617E-08	0.3837	0.1743	7.1186E-02	3.4033E-03	
16.530	1.5780E-07	1.6662E-08	0.3307	0.1874	1.8423E-02	1.9473E-03	
16.820	-1.7760E-07	6.7441E-09	0.2760	0.1872	-2.1107E-02	8.0147E-04	
17.110	-4.0448E-07	-1.6084E-09	0.2228	0.1774	-4.8863E-02	-1.9410E-04	
17.400	-5.3965E-07	-1.8188E-08	0.1735	0.1612	-6.6254E-02	-2.2306E-03	
17.690	-6.0345E-07	-2.8672E-08	0.1296	0.1413	-7.5272E-02	-3.5725E-03	
17.980	-6.1397E-07	-3.4330E-08	9.1669E-02	0.1198	-7.7792E-02	-4.3450E-03	
18.270	-5.8683E-07	-3.6317E-08	6.0093E-02	9.8174E-02	-7.5507E-02	-4.6677E-03	
18.560	-5.3504E-07	-3.5640E-08	3.4662E-02	7.7692E-02	-6.9894E-02	-4.6508E-03	
18.850	-4.6906E-07	-3.3154E-08	1.4952E-02	5.9077E-02	-6.2197E-02	-4.3914E-03	
19.140	-3.9703E-07	-2.9555E-08	4.2806E-04	4.2778E-02	-5.3426E-02	-3.9728E-03	
19.430	-3.2496E-07	-2.5394E-08	1.0178E-02	2.8987E-02	-4.4367E-02	-3.4632E-03	
19.720	-2.5711E-07	-2.1085E-08	1.6805E-02	1.7707E-02	-3.5609E-02	-2.9170E-03	



20.010	-1.9620E-07	-1.6929E-08	2.0536E-02	8.7994E-03	-2.7558E-02	-2.3753E-03
20.300	-1.4376E-07	-1.3127E-08	2.2007E-02	1.9872E-03	-2.0476E-02	-1.8677E-03
20.590	-1.0040E-07	-9.8004E-09	2.1791E-02	3.0006E-03	-1.4498E-02	-1.4136E-03
20.880	-6.6027E-08	-7.0061E-09	2.0378E-02	6.3894E-03	-9.6636E-03	-1.0243E-03
21.170	-4.0046E-08	-4.7545E-09	1.8162E-02	8.5929E-03	-5.9397E-03	-7.0444E-04
21.460	-2.1543E-08	-3.0209E-09	1.5449E-02	9.8927E-03	-3.2377E-03	-4.5351E-04
21.750	-9.3989E-09	-1.7563E-09	1.2462E-02	1.0556E-02	-1.4310E-03	-2.6711E-04
22.040	-2.3802E-09	-8.9652E-10	9.3508E-03	1.0814E-02	-3.6708E-04	-1.3811E-04
22.330	7.5081E-10	-3.6807E-10	6.2046E-03	1.0851E-02	1.1714E-04	-5.7426E-05
22.620	1.3763E-09	-9.2639E-11	3.0678E-03	1.0804E-02	2.1743E-04	-1.4635E-05
22.910	7.8499E-10	3.1912E-12	1.1784E-04	6.7084E-03	2.8085E-02	1.1418E-04
23.200	2.2603E-10	6.4068E-12	8.3883E-04	7.0591E-04	1.3185E-02	3.7373E-04
23.490	1.9048E-12	2.7969E-12	4.8382E-04	1.2521E-03	1.5408E-04	2.2624E-04
23.780	-2.8646E-11	4.5962E-13	1.1543E-04	8.5912E-04	-2.9633E-03	4.7545E-05
24.070	-1.2051E-11	-4.2343E-13	1.5388E-05	2.3295E-04	-1.5185E-03	-5.3352E-05
24.360	-1.5897E-12	-3.2136E-13	1.9894E-05	1.6316E-05	-2.3616E-04	-4.7740E-05
24.650	5.9664E-13	-7.1843E-14	5.8497E-06	3.3691E-05	1.0209E-04	-1.2293E-05
24.940	4.0957E-13	1.9263E-15	3.6698E-07	1.1136E-05	5.3517E-05	2.5171E-07
25.230	7.8164E-14	2.3920E-15	6.1317E-07	1.0179E-06	1.6258E-05	4.9753E-07
25.520	-8.0940E-15	4.8322E-16	2.1866E-07	1.0412E-06	-2.3095E-06	1.3788E-07
25.810	-6.3782E-15	-1.0144E-16	9.6990E-09	3.9611E-07	-2.3132E-06	-3.6790E-08
26.100	-8.1154E-16	-9.9534E-17	1.1121E-08	2.1178E-08	-3.5708E-07	-4.3795E-08
26.390	1.3734E-16	-1.2346E-17	2.5339E-09	1.9332E-08	7.1052E-08	-6.3872E-09
26.680	5.1870E-17	6.2380E-19	9.5877E-11	4.5634E-09	3.0846E-08	3.7096E-10
26.970	2.4346E-18	2.3753E-19	1.1319E-10	1.4183E-10	1.4607E-09	1.4252E-10
27.260	-1.7198E-18	1.1348E-20	1.3615E-11	1.9928E-10	-1.0319E-09	6.8089E-12
27.550	-3.5537E-19	-2.5025E-20	2.4000E-12	2.4996E-11	-2.1322E-10	-1.5015E-11
27.840	1.3017E-20	-5.2819E-21	8.8796E-13	4.0720E-12	7.8101E-12	-3.1692E-12
28.130	1.5431E-20	5.7957E-23	4.0869E-14	1.5802E-12	9.2583E-12	3.4774E-14
28.420	1.8142E-21	7.0692E-23	2.8615E-14	8.0489E-14	1.0885E-12	4.2415E-14
28.710	-3.5541E-22	8.5321E-24	5.6892E-15	4.9340E-14	-2.1325E-13	5.1193E-15

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29.000 -2.3182E-22 -1.5953E-23 0.0000 0.0000 -1.3909E-13 -9.5715E-15

* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.6409E-03	0.015252	2.6799E-04	-3.5517E-06	1.3823E-05	-3.8460E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1223.7	192.46	5.9252	-0.051521	-37.436	184.59

STR, KN/ M**2

1.3210E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
3.6409E-03	0.015252	2.6799E-04	-3.5517E-06	1.3823E-05	-3.8460E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
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c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



1223.7 192.46 5.9252 -0.051521 -37.436 184.59

STR, KN/ M**2

1.3210E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.5252E-02	2.6799E-04	187.91	193.63	0.0000	0.0000
0.2900	1.4136E-02	2.6173E-04	129.58	191.36	14.511	0.2639
0.5800	1.2968E-02	2.5166E-04	72.481	184.84	30.434	0.5801
0.8700	1.1771E-02	2.3846E-04	18.493	173.90	44.899	0.8932
1.1600	1.0568E-02	2.2280E-04	33.665	159.08	57.122	1.1825
1.4500	9.3772E-03	2.0532E-04	77.414	141.21	65.965	1.4188
1.7400	8.2172E-03	1.8662E-04	116.20	121.27	71.306	1.5929
2.0300	7.1037E-03	1.6724E-04	149.35	100.13	74.253	1.7240
2.3200	6.0500E-03	1.4769E-04	176.31	79.628	66.931	1.6156
2.6100	5.0669E-03	1.2840E-04	197.60	60.032	68.124	1.7084
2.9000	4.1630E-03	1.0977E-04	213.10	40.427	67.249	1.7562
3.1900	3.3444E-03	9.2118E-05	222.83	20.735	68.517	1.8696
3.4800	2.6149E-03	7.5713E-05	226.69	1.4276	68.723	1.9719
3.7700	1.9762E-03	6.0759E-05	224.65	19.996	67.885	2.0696
4.0600	1.4272E-03	4.7395E-05	216.77	38.152	58.521	1.9449
4.3500	9.6495E-04	3.5686E-05	203.84	52.776	42.328	1.5667
4.6400	5.8415E-04	2.5635E-05	187.23	62.904	27.296	1.1988
4.9300	2.7817E-04	1.7186E-05	168.22	68.897	13.795	0.8530
5.2200	3.9386E-05	1.0247E-05	147.95	71.227	2.0659	0.5379

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5.5100	-1.4181E-04	4.6934E-06	127.43	70.425	-7.8508	0.2598		
5.8000	-2.7519E-04	3.8215E-07	107.49	67.045	-16.023	2.2251E-02		
6.0900	-3.6425E-04	-9.4809E-06	88.816	62.410	-16.798	-0.4369		
6.3800	-4.1670E-04	-1.7004E-05	71.469	57.213	-20.035	-0.8169		
6.6700	-4.3968E-04	-2.1927E-05	55.727	51.286	-22.005	-1.0965		
6.9600	-4.3969E-04	-2.4717E-05	41.756	44.961	-22.869	-1.2845		
7.2500	-4.2248E-04	-2.5805E-05	29.636	38.524	-22.804	-1.3918		
7.5400	-3.9305E-04	-2.5581E-05	19.367	32.212	-21.989	-1.4299		
7.8300	-3.5564E-04	-2.4388E-05	10.891	26.212	-20.595	-1.4111		
8.1200	-3.1375E-04	-2.2520E-05	4.1179	20.664	-18.786	-1.3473		
8.4100	-2.7019E-04	-2.0225E-05	1.2622	15.664	-16.708	-1.2497		
8.7000	-2.2712E-04	-1.7706E-05	5.1681	11.269	-14.492	-1.1289		
8.9900	-1.8617E-04	-1.5124E-05	7.8747	7.5041	-12.245	-0.9939		
9.2800	-1.4846E-04	-1.2601E-05	9.5871	4.3651	-10.056	-0.8529		
9.5700	-1.1469E-04	-1.0226E-05	10.476	1.8313	-7.9942	-0.7122		
9.8600	-8.5234E-05	-8.0601E-06	10.708	0.1916	-6.1086	-0.5772		
10.150	-6.0189E-05	-6.1390E-06	10.436	1.6725	-4.4320	-0.4517		
10.440	-3.9443E-05	-4.4794E-06	9.7978	2.7103	-2.9819	-0.3384		
10.730	-2.2734E-05	-3.0828E-06	8.9110	3.3766	-1.7634	-0.2389		
11.020	-9.6955E-06	-1.9389E-06	7.8758	3.7327	-0.7711	-0.1541		
11.310	9.8090E-08	-1.0293E-06	6.7738	3.8397	7.9940E-03	-8.3820E-02		
11.600	6.9486E-06	-3.3048E-07	5.6692	3.7547	0.5795	-2.7560E-02		
11.890	1.1463E-05	5.5190E-08	4.6103	3.5294	0.9784	4.7148E-03		
12.180	1.4137E-05	1.6375E-07	3.6313	3.2087	1.2345	1.4311E-02		
12.470	1.5362E-05	2.3317E-07	2.7544	2.8306	1.3716	2.0836E-02		
12.760	1.5488E-05	2.7121E-07	1.9916	2.4263	1.4133	2.4768E-02		
13.050	1.4821E-05	2.8494E-07	1.3469	2.0204	1.3815	2.6582E-02		
13.340	1.3617E-05	2.8061E-07	0.8180	1.6314	1.2961	2.6730E-02		
13.630	1.2089E-05	2.6359E-07	0.3984	1.2723	1.1743	2.5627E-02		
13.920	1.0403E-05	2.3834E-07	7.7503E-02	0.9517	1.0310	2.3641E-02		
14.210	8.6880E-06	2.0848E-07	0.1618	0.6742	0.8781	2.1089E-02		

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14.500	7.0377E-06	1.7683E-07	0.3207	0.4410	0.7251	1.8234E-02
14.790	5.5158E-06	1.4549E-07	0.4193	0.2514	0.5792	1.5288E-02
15.080	4.1618E-06	1.1595E-07	0.4691	0.1027	0.4452	1.2412E-02
15.370	2.9956E-06	8.9189E-08	0.4812	1.1688E-02	0.3263	9.7230E-03
15.660	2.0217E-06	6.5770E-08	0.4655	9.1261E-02	0.2242	7.2992E-03
15.950	1.2340E-06	4.5917E-08	0.4307	0.1440	0.1393	5.1862E-03
16.240	6.1847E-07	2.9611E-08	0.3838	0.1746	7.1012E-02	3.4027E-03
16.530	1.5625E-07	1.6656E-08	0.3308	0.1876	1.8247E-02	1.9467E-03
16.820	-1.7782E-07	6.7382E-09	0.2760	0.1874	-2.1133E-02	8.0080E-04
17.110	-4.0471E-07	-1.7154E-09	0.2228	0.1775	-4.8892E-02	-2.0706E-04
17.400	-5.3988E-07	-1.8271E-08	0.1735	0.1613	-6.6284E-02	-2.2414E-03
17.690	-6.0366E-07	-2.8733E-08	0.1295	0.1414	-7.5301E-02	-3.5812E-03
17.980	-6.1416E-07	-3.4372E-08	9.1608E-02	0.1198	-7.7818E-02	-4.3516E-03
18.270	-5.8700E-07	-3.6343E-08	6.0026E-02	9.8183E-02	-7.5530E-02	-4.6725E-03
18.560	-5.3518E-07	-3.5654E-08	3.4595E-02	7.7683E-02	-6.9914E-02	-4.6540E-03
18.850	-4.6917E-07	-3.3158E-08	1.4888E-02	5.9057E-02	-6.2214E-02	-4.3933E-03
19.140	-3.9711E-07	-2.9553E-08	4.2681E-04	4.2750E-02	-5.3439E-02	-3.9736E-03
19.430	-3.2503E-07	-2.5386E-08	1.0229E-02	2.8956E-02	-4.4377E-02	-3.4632E-03
19.720	-2.5715E-07	-2.1074E-08	1.6848E-02	1.7674E-02	-3.5616E-02	-2.9164E-03
20.010	-1.9623E-07	-1.6917E-08	2.0571E-02	8.7678E-03	-2.7563E-02	-2.3743E-03
20.300	-1.4378E-07	-1.3115E-08	2.2033E-02	1.9835E-03	-2.0478E-02	-1.8665E-03
20.590	-1.0041E-07	-9.7885E-09	2.1811E-02	3.0263E-03	-1.4499E-02	-1.4123E-03
20.880	-6.6027E-08	-6.9955E-09	2.0391E-02	6.4119E-03	-9.6639E-03	-1.0230E-03
21.170	-4.0042E-08	-4.7455E-09	1.8169E-02	8.6119E-03	-5.9393E-03	-7.0332E-04
21.460	-2.1538E-08	-3.0136E-09	1.5452E-02	9.9086E-03	-3.2370E-03	-4.5256E-04
21.750	-9.3934E-09	-1.7509E-09	1.2461E-02	1.0570E-02	-1.4302E-03	-2.6637E-04
22.040	-2.3755E-09	-8.9282E-10	9.3462E-03	1.0825E-02	-3.6637E-04	-1.3758E-04
22.330	7.7418E-10	-3.6587E-10	6.1969E-03	1.0861E-02	1.2082E-04	-5.7099E-05
22.620	1.3873E-09	-9.1607E-11	3.0575E-03	1.0813E-02	2.1924E-04	-1.4476E-05
22.910	7.8786E-10	3.2038E-12	1.1924E-04	6.7023E-03	2.8188E-02	1.1462E-04
23.200	2.2586E-10	6.4067E-12	8.4555E-04	7.0345E-04	1.3175E-02	3.7372E-04

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23.490	1.8250E-12	2.7950E-12	4.8537E-04	1.2641E-03	1.4762E-04	2.2609E-04
23.780	-2.8680E-11	4.5879E-13	1.1513E-04	8.6238E-04	-2.9668E-03	4.7459E-05
24.070	-1.2058E-11	-4.2594E-13	1.5438E-05	2.3263E-04	-1.5193E-03	-5.3668E-05
24.360	-1.5886E-12	-3.2033E-13	2.0001E-05	1.6398E-05	-2.3599E-04	-4.7586E-05
24.650	6.0318E-13	-7.1231E-14	5.8518E-06	3.3890E-05	1.0321E-04	-1.2188E-05
24.940	4.1102E-13	1.9327E-15	3.6588E-07	1.1147E-05	5.3707E-05	2.5254E-07
25.230	7.8072E-14	2.3918E-15	6.1693E-07	1.0161E-06	1.6239E-05	4.9750E-07
25.520	-8.1123E-15	4.8275E-16	2.1899E-07	1.0481E-06	-2.3147E-06	1.3774E-07
25.810	-6.3825E-15	-1.0340E-16	9.6751E-09	3.9678E-07	-2.3147E-06	-3.7501E-08
26.100	-8.1144E-16	-9.9337E-17	1.1181E-08	2.1138E-08	-3.5704E-07	-4.3708E-08
26.390	1.3862E-16	-1.2227E-17	2.5350E-09	1.9440E-08	7.1712E-08	-6.3255E-09
26.680	5.1985E-17	6.2436E-19	9.6236E-11	4.5660E-09	3.0914E-08	3.7128E-10
26.970	2.4019E-18	2.3741E-19	1.1362E-10	1.4245E-10	1.4412E-09	1.4245E-10
27.260	-1.7214E-18	1.1309E-20	1.3580E-11	2.0005E-10	-1.0329E-09	6.7855E-12
27.550	-3.5546E-19	-2.5034E-20	2.4216E-12	2.4939E-11	-2.1328E-10	-1.5021E-11
27.840	1.3363E-20	-5.2494E-21	8.8989E-13	4.1102E-12	8.0179E-12	-3.1496E-12
28.130	1.5488E-20	5.8209E-23	4.0802E-14	1.5838E-12	9.2927E-12	3.4925E-14
28.420	1.8092E-21	7.0678E-23	2.8775E-14	8.0375E-14	1.0855E-12	4.2407E-14
28.710	-3.5590E-22	8.5198E-24	5.6919E-15	4.9616E-14	-2.1354E-13	5.1119E-15
29.000	-2.3188E-22	-1.5961E-23	0.0000	0.0000	-1.3913E-13	-9.5764E-15

* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
3.7032E-03 0.015257 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
1242.1 224.72 6.6820 -0.051521 -40.630 222.43

STR, KN/ M**2

1.5056E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
3.7032E-03 0.015257 2.6799E-04 -3.5517E-06 1.3823E-05 -3.8460E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1242.1 224.72 6.6820 -0.051521 -40.630 222.43

STR, KN/ M**2

1.5056E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
*****	*****	*****	*****	*****	*****	*****

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0.0000	1.5257E-02	2.6799E-04	226.11	226.02	0.0000	0.0000
0.2900	1.4133E-02	2.6153E-04	158.42	223.22	17.948	0.3260
0.5800	1.2946E-02	2.5098E-04	92.057	215.16	37.586	0.7152
0.8700	1.1723E-02	2.3708E-04	29.149	201.67	55.314	1.0978
1.1600	1.0489E-02	2.2061E-04	30.498	183.45	70.131	1.4474
1.4500	9.2655E-03	2.0225E-04	80.761	161.55	80.629	1.7278
1.7400	8.0745E-03	1.8269E-04	124.88	137.24	86.678	1.9278
2.0300	6.9335E-03	1.6252E-04	162.08	111.63	89.657	2.0712
2.3200	5.8575E-03	1.4229E-04	191.78	86.967	80.167	1.9243
2.6100	4.8582E-03	1.2247E-04	214.70	63.606	80.808	2.0145
2.9000	3.9449E-03	1.0348E-04	230.72	40.489	78.839	2.0468
3.1900	3.1240E-03	8.5640E-05	240.01	17.560	79.181	2.1489
3.4800	2.3991E-03	6.9231E-05	242.50	6.0279	78.003	2.2291
3.7700	1.7712E-03	5.4447E-05	238.29	28.402	75.273	2.2928
4.0600	1.2386E-03	4.1409E-05	227.62	48.352	62.840	2.1010
4.3500	7.9693E-04	3.0161E-05	211.52	63.761	43.256	1.6371
4.6400	4.3983E-04	2.0672E-05	191.66	73.762	25.431	1.1953
4.9300	1.5930E-04	1.2857E-05	169.55	78.906	9.7752	0.7890
5.2200	-5.3488E-05	6.5917E-06	146.53	79.851	-3.4716	0.4278
5.5100	-2.1108E-04	1.7209E-06	123.71	77.306	-14.448	0.1178
5.8000	-3.1991E-04	-6.5224E-06	102.02	71.991	-23.030	-0.4695
6.0900	-3.8667E-04	-1.5047E-05	82.170	65.615	-22.046	-0.8579
6.3800	-4.1953E-04	-2.0655E-05	64.087	58.977	-24.940	-1.2278
6.6700	-4.2596E-04	-2.3879E-05	48.016	51.735	-26.357	-1.4775
6.9600	-4.1257E-04	-2.5210E-05	34.078	44.273	-26.531	-1.6211
7.2500	-3.8511E-04	-2.5091E-05	22.297	36.905	-25.701	-1.6744
7.5400	-3.4844E-04	-2.3910E-05	12.610	29.883	-24.101	-1.6537
7.8300	-3.0656E-04	-2.2000E-05	4.9091	23.392	-21.949	-1.5751
8.1200	-2.6266E-04	-1.9638E-05	1.0848	17.558	-19.444	-1.4537
8.4100	-2.1919E-04	-1.7049E-05	5.4642	12.457	-16.759	-1.3035
8.7000	-1.7794E-04	-1.4409E-05	8.4247	8.1203	-14.038	-1.1367



8.9900	-1.4015E-04	-1.1850E-05	10.244	4.5411	-11.397	-0.9636		
9.2800	-1.0657E-04	-9.4644E-06	11.130	1.6911	-8.9247	-0.7926		
9.5700	-7.7559E-05	-7.3138E-06	11.283	0.5300	-6.6840	-0.6303		
9.8600	-5.3196E-05	-5.4321E-06	10.886	2.1408	-4.7137	-0.4813		
10.150	-3.3316E-05	-3.8321E-06	10.099	3.2250	-3.0331	-0.3489		
10.440	-1.7595E-05	-2.5102E-06	9.0599	3.8800	-1.6446	-0.2346		
10.730	-5.6073E-06	-1.4509E-06	7.8828	4.1845	-0.5377	-0.1391		
11.020	3.1322E-06	-6.3054E-07	6.6584	4.2145	0.3080	-6.2000E-02		
11.310	8.9482E-06	-2.0842E-08	5.4565	4.0396	0.9016	-2.1001E-03		
11.600	1.2556E-05	1.2219E-07	4.3275	3.7213	1.2956	1.2609E-02		
11.890	1.4436E-05	2.0742E-07	3.3053	3.3122	1.5247	2.1908E-02		
12.180	1.4997E-05	2.5626E-07	2.4098	2.8557	1.6205	2.7689E-02		
12.470	1.4598E-05	2.7687E-07	1.6496	2.3861	1.6128	3.0589E-02		
12.760	1.3542E-05	2.7651E-07	1.0245	1.9296	1.5290	3.1221E-02		
13.050	1.2078E-05	2.6138E-07	0.5280	1.5050	1.3931	3.0149E-02		
13.340	1.0405E-05	2.3669E-07	0.1505	1.1244	1.2254	2.7876E-02		
13.630	8.6739E-06	2.0660E-07	0.1315	0.7946	1.0426	2.4834E-02		
13.920	6.9958E-06	1.7435E-07	0.3189	0.5182	0.8579	2.1381E-02		
14.210	5.4454E-06	1.4233E-07	0.4344	0.2944	0.6810	1.7801E-02		
14.500	4.0688E-06	1.1223E-07	0.4925	0.1202	0.5187	1.4309E-02		
14.790	2.8894E-06	8.5123E-08	0.5065	1.0871E-02	0.3754	1.1060E-02		
15.080	1.9125E-06	6.1605E-08	0.4887	0.1029	0.2531	8.1537E-03		
15.370	1.1309E-06	4.1897E-08	0.4493	0.1617	0.1524	5.6471E-03		
15.660	5.2896E-07	2.5943E-08	0.3967	0.1945	7.2580E-02	3.5598E-03		
15.950	8.5489E-08	1.3494E-08	0.3378	0.2069	1.1938E-02	1.8844E-03		
16.240	-2.2566E-07	4.1819E-09	0.2777	0.2041	-3.2061E-02	5.9415E-04		
16.530	-4.3059E-07	-8.2434E-09	0.2201	0.1907	-6.2222E-02	-1.1912E-03		
16.820	-5.4476E-07	-2.2609E-08	0.1675	0.1706	-8.0045E-02	-3.3221E-03		
17.110	-5.8985E-07	-3.1040E-08	0.1214	0.1468	-8.8103E-02	-4.6363E-03		
17.400	-5.8486E-07	-3.4900E-08	8.2385E-02	0.1219	-8.8780E-02	-5.2975E-03		
17.690	-5.4588E-07	-3.5397E-08	5.0634E-02	9.7489E-02	-8.4189E-02	-5.4591E-03		

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17.980	-4.8599E-07	-3.3566E-08	2.5754E-02	7.4885E-02	-7.6134E-02	-5.2583E-03
18.270	-4.1546E-07	-3.0257E-08	7.1621E-03	5.4838E-02	-6.6094E-02	-4.8134E-03
18.560	-3.4200E-07	-2.6143E-08	6.3822E-03	3.7741E-02	-5.5239E-02	-4.2224E-03
18.850	-2.7110E-07	-2.1736E-08	1.5081E-02	2.3700E-02	-4.4446E-02	-3.5635E-03
19.140	-2.0637E-07	-1.7406E-08	2.0194E-02	1.2610E-02	-3.4336E-02	-2.8960E-03
19.430	-1.4995E-07	-1.3404E-08	2.2504E-02	4.2377E-03	-2.5312E-02	-2.2627E-03
19.720	-1.0278E-07	-9.8808E-09	2.2738E-02	1.8743E-03	-1.7599E-02	-1.6919E-03
20.010	-6.4967E-08	-6.9123E-09	2.1527E-02	5.9308E-03	-1.1283E-02	-1.2004E-03
20.300	-3.6024E-08	-4.5171E-09	1.9385E-02	8.3996E-03	-6.3438E-03	-7.9544E-04
20.590	-1.5068E-08	-2.6726E-09	1.6718E-02	9.6638E-03	-2.6901E-03	-4.7713E-04
20.880	-1.0016E-09	-1.3295E-09	1.3824E-02	1.0062E-02	-1.8125E-04	-2.4058E-04
21.170	7.2757E-09	-4.2199E-10	1.0910E-02	9.8928E-03	1.3343E-03	-7.7387E-05
21.460	1.0989E-08	3.5620E-11	8.1017E-03	9.4049E-03	2.0420E-03	6.6188E-06
21.750	1.1470E-08	1.1539E-10	5.4611E-03	8.7963E-03	2.1592E-03	2.1722E-05
22.040	9.7731E-09	1.3195E-10	2.9998E-03	8.2129E-03	1.8635E-03	2.5161E-05
22.330	6.8818E-09	1.0769E-10	6.9900E-04	7.7497E-03	1.3289E-03	2.0796E-05
22.620	3.7178E-09	6.4139E-11	1.5078E-03	7.4512E-03	7.2698E-04	1.2542E-05
22.910	1.1578E-09	2.2164E-11	3.6391E-03	1.3313E-03	4.1424E-02	7.9296E-04
23.200	5.3804E-11	2.1942E-12	2.2794E-03	5.1511E-03	3.1386E-03	1.2799E-04
23.490	-1.4245E-10	-6.8414E-12	6.5315E-04	3.9814E-03	-1.1523E-02	-5.5339E-04
23.780	-7.1896E-11	-4.0275E-12	2.9738E-05	1.3045E-03	-7.4372E-03	-4.1662E-04
24.070	-1.3447E-11	-8.8320E-13	1.0361E-04	1.6568E-05	-1.6943E-03	-1.1128E-04
24.360	2.3143E-12	2.5124E-14	3.8964E-05	1.7312E-04	3.4380E-04	3.7323E-06
24.650	2.0960E-12	3.5060E-14	3.2246E-06	7.1156E-05	3.5866E-04	5.9991E-06
24.940	5.9079E-13	1.1365E-14	2.3092E-06	7.8566E-06	7.7197E-05	1.4850E-06
25.230	9.6156E-15	6.2409E-16	1.3351E-06	3.6544E-06	2.0001E-06	1.2981E-07
25.520	-3.8715E-14	-2.0264E-15	1.9053E-07	2.3877E-06	-1.1047E-05	-5.7821E-07
25.810	-9.0334E-15	-5.5998E-16	4.9722E-08	3.6615E-07	-3.2761E-06	-2.0308E-07
26.100	2.0078E-16	-5.8953E-18	2.1890E-08	8.3242E-08	8.8343E-08	-2.5940E-09
26.390	4.1843E-16	7.1109E-18	1.4545E-09	3.9031E-08	2.1647E-07	3.6787E-09
26.680	5.5470E-17	1.1494E-18	7.4860E-10	2.8006E-09	3.2986E-08	6.8352E-10

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26.970	-8.2233E-18	-3.4900E-19	1.7036E-10	1.2971E-09	-4.9340E-09	-2.0940E-10
27.260	-3.4704E-18	-2.0095E-19	3.6404E-12	3.0613E-10	-2.0822E-09	-1.2057E-10
27.550	-2.0061E-19	-1.6584E-20	7.2015E-12	4.6706E-12	-1.2036E-10	-9.9503E-12
27.840	1.0251E-19	1.6154E-21	9.4130E-13	1.2658E-11	6.1506E-11	9.6925E-13
28.130	2.3003E-20	4.3932E-22	1.3981E-13	1.7223E-12	1.3802E-11	2.6359E-13
28.420	-5.6022E-22	2.9031E-24	5.7749E-14	2.3534E-13	-3.3613E-13	1.7419E-15
28.710	-1.0394E-21	-5.7083E-23	3.3513E-15	9.9566E-14	-6.2362E-13	-3.4250E-14
29.000	-1.3667E-22	-1.1099E-23	0.0000	0.0000	-8.2005E-14	-6.6593E-15

LOAD CASE ENV : 2

CASE NAME : MAXIMUM ENVELOPE

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN	HOR. LOAD Y, KN	HOR. LOAD Z, KN
4265.69	2151.06	220.910

MOMENT X, KN- M	MOMENT Y, KN- M	MOMENT Z, KN- M
12.6000	504.390	-4779.45

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *



VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.18494E-03 0.0157308 8.86949E-04

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

-1.37587E-06 4.44885E-05 -3.72318E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE

* PILE GROUP * 1

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.3634E-03 0.015726 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-539.91 175.77 18.178 -0.019958 -10.536 152.68

STR, KN/ M**2

9263.3

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THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.3634E-03 0.015726 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -539.91 175.77 18.178 -0.019958 -10.536 152.68

STR, KN/ M**2

9263.3

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.5726E-02	8.8926E-04	154.07	175.80	0.0000	0.0000
0.2900	1.4580E-02	8.6934E-04	105.04	174.09	12.203	0.7413
0.5800	1.3393E-02	8.3749E-04	57.943	168.60	25.624	1.6327
0.8700	1.2185E-02	7.9579E-04	20.544	159.39	37.875	2.5210
1.1600	1.0974E-02	7.4626E-04	39.484	146.89	48.323	3.3496
1.4500	9.7792E-03	6.9084E-04	78.029	131.76	56.047	4.0343
1.7400	8.6151E-03	6.3134E-04	113.18	114.79	60.965	4.5461
2.0300	7.4964E-03	5.6946E-04	143.27	96.658	64.044	4.9371
2.3200	6.4351E-03	5.0673E-04	168.01	78.914	58.318	4.6477
2.6100	5.4411E-03	4.4450E-04	187.89	61.765	59.937	4.9517

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2.9000	4.5224E-03	3.8399E-04	202.77	44.396	59.858	5.1356
3.1900	3.6849E-03	3.2624E-04	212.66	26.764	61.794	5.5268
3.4800	2.9326E-03	2.7212E-04	217.40	9.5429	62.988	5.9028
3.7700	2.2673E-03	2.2231E-04	216.89	10.399	63.497	6.2847
4.0600	1.6889E-03	1.7729E-04	211.09	27.300	57.512	6.0337
4.3500	1.1951E-03	1.3735E-04	200.49	41.947	43.537	5.0007
4.6400	7.8160E-04	1.0256E-04	186.27	52.660	30.331	3.9775
4.9300	4.4268E-04	7.2809E-05	169.55	59.704	18.231	2.9968
5.2200	1.7167E-04	4.7886E-05	151.32	63.434	7.4782	2.0847
5.5100	-3.8735E-05	2.7461E-05	132.49	64.263	-1.7794	1.2608
5.8000	-1.9282E-04	1.1136E-05	113.85	62.633	-9.3109	0.5377
6.0900	-3.0052E-04	-4.2660E-07	96.022	59.552	-11.493	-1.6324E-02
6.3800	-3.7102E-04	-3.2994E-06	79.208	55.640	-14.794	-0.1316
6.6700	-4.1087E-04	-5.3361E-06	63.690	50.889	-17.053	-0.2216
6.9600	-4.2607E-04	-6.6691E-06	49.662	45.598	-18.378	-0.2878
7.2500	-4.2207E-04	-7.4232E-06	37.237	40.026	-18.894	-0.3325
7.5400	-4.0369E-04	-7.7134E-06	26.459	34.399	-18.729	-0.3581
7.8300	-3.7509E-04	-7.6434E-06	17.313	28.900	-18.014	-0.3673
8.1200	-3.3983E-04	-7.3049E-06	9.7345	23.676	-16.874	-0.3629
8.4100	-3.0083E-04	-6.7769E-06	3.6265	18.838	-15.428	-0.3478
8.7000	-2.6046E-04	-6.1264E-06	1.3088	14.462	-13.782	-0.3244
8.9900	-2.2057E-04	-5.4083E-06	4.7261	10.593	-12.031	-0.2952
9.2800	-1.8253E-04	-4.6670E-06	7.2520	7.2514	-10.254	-0.2623
9.5700	-1.4733E-04	-3.9366E-06	8.8886	4.4363	-8.5163	-0.2277
9.8600	-1.1559E-04	-3.2425E-06	9.7864	2.1282	-6.8698	-0.1928
10.150	-8.7649E-05	-2.6025E-06	10.088	0.3584	-5.3523	-0.1590
10.440	-6.3634E-05	-2.0278E-06	9.9265	1.1127	-3.9896	-0.1272
10.730	-4.3475E-05	-1.5244E-06	9.4191	2.1318	-2.7965	-9.8113E-02
11.020	-2.6972E-05	-1.0938E-06	8.6699	2.8201	-1.7789	-7.2184E-02
11.310	-1.3834E-05	-7.3443E-07	7.7670	3.2294	-0.9350	-4.9665E-02
11.600	-3.7082E-06	-4.4219E-07	6.7839	3.4104	-0.2567	-3.0624E-02

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11.890	3.8214E-06	-2.1137E-07	5.7792	3.4107	0.2709	-1.4983E-02
12.180	9.2629E-06	-3.5201E-08	4.7986	3.2741	0.6717	-2.5527E-03
12.470	1.2783E-05	3.1059E-07	3.8755	3.0393	0.9478	2.3017E-02
12.760	1.4750E-05	6.0255E-07	3.0329	2.7398	1.1178	4.5635E-02
13.050	1.5504E-05	7.8562E-07	2.2849	2.4036	1.2002	6.0781E-02
13.340	1.5342E-05	8.8158E-07	1.6385	2.0537	1.2127	6.9642E-02
13.630	1.4524E-05	9.1013E-07	1.0943	1.7080	1.1717	7.3381E-02
13.920	1.3269E-05	8.8862E-07	0.6490	1.3796	1.0921	7.3095E-02
14.210	1.1753E-05	8.3191E-07	0.2958	1.0782	0.9865	6.9787E-02
14.500	1.0119E-05	7.5240E-07	3.8668E-02	0.8095	0.8659	6.4343E-02
14.790	8.4752E-06	6.6012E-07	0.1724	0.5768	0.7390	5.7528E-02
15.080	6.9004E-06	5.6294E-07	0.3076	0.3807	0.6129	4.9976E-02
15.370	5.4487E-06	4.6678E-07	0.3914	0.2203	0.4929	4.2200E-02
15.660	4.1538E-06	3.7589E-07	0.4338	9.3373E-02	0.3825	3.4596E-02
15.950	3.0327E-06	2.9309E-07	0.4442	1.1227E-02	0.2842	2.7453E-02
16.240	2.0895E-06	2.2003E-07	0.4307	7.3605E-02	0.1992	2.0968E-02
16.530	1.3188E-06	1.5745E-07	0.4006	0.1210	0.1279	1.5262E-02
16.820	7.0855E-07	1.0540E-07	0.3598	0.1497	6.9874E-02	1.0388E-02
17.110	2.4238E-07	6.3371E-08	0.3132	0.1634	2.4298E-02	6.3490E-03
17.400	-9.7587E-08	3.0554E-08	0.2646	0.1655	-9.9361E-03	3.1110E-03
17.690	-3.2460E-07	5.9047E-09	0.2169	0.1590	-3.3579E-02	6.1083E-04
17.980	-4.6751E-07	-3.5460E-09	0.1721	0.1467	-4.9125E-02	-3.7282E-04
18.270	-5.4370E-07	-7.1119E-09	0.1317	0.1307	-5.8017E-02	-7.5934E-04
18.560	-5.6886E-07	-9.2392E-09	9.6295E-02	0.1128	-6.1629E-02	-1.0015E-03
18.850	-5.5671E-07	-1.0241E-08	6.6268E-02	9.4404E-02	-6.1221E-02	-1.1268E-03
19.140	-5.1891E-07	-1.0397E-08	4.1570E-02	7.6576E-02	-5.7910E-02	-1.1609E-03
19.430	-4.6504E-07	-9.9470E-09	2.1908E-02	6.0025E-02	-5.2655E-02	-1.1269E-03
19.720	-4.0270E-07	-9.0940E-09	6.8306E-03	4.5215E-02	-4.6254E-02	-1.0451E-03
20.010	-3.3776E-07	-8.0014E-09	4.2864E-03	3.2396E-02	-3.9345E-02	-9.3262E-04
20.300	-2.7449E-07	-6.7978E-09	1.1906E-02	2.1646E-02	-3.2423E-02	-8.0341E-04
20.590	-2.1587E-07	-5.5801E-09	1.6739E-02	1.2917E-02	-2.5850E-02	-6.6859E-04



20.880	-1.6375E-07	-4.4183E-09	1.9332E-02	6.0670E-03	-1.9876E-02	-5.3660E-04
21.170	-1.1915E-07	-3.3600E-09	2.0201E-02	1.0543E-03	-1.4656E-02	-4.1356E-04
21.460	-8.2392E-08	-2.4346E-09	1.9801E-02	2.8515E-03	-1.0269E-02	-3.0363E-04
21.750	-5.3323E-08	-1.6576E-09	1.8513E-02	5.3979E-03	-6.7331E-03	-2.0943E-04
22.040	-3.1440E-08	-1.0343E-09	1.6643E-02	7.0098E-03	-4.0212E-03	-1.3237E-04
22.330	-1.6015E-08	-5.6305E-10	1.4427E-02	7.9238E-03	-2.0744E-03	-7.2973E-05
22.620	-6.1852E-09	-2.3766E-10	1.2034E-02	8.3566E-03	-8.1125E-04	-3.1189E-05
22.910	-1.0213E-09	-4.9614E-11	9.5725E-03	1.3965E-02	-3.6541E-02	-1.7751E-03
23.200	4.4768E-10	3.5187E-11	3.9304E-03	1.5665E-02	2.6114E-02	2.0526E-03
23.490	3.7882E-10	4.1343E-11	4.8594E-04	7.4324E-03	3.0642E-02	3.3442E-03
23.780	1.1555E-10	1.4344E-11	3.8017E-04	1.2525E-03	1.1953E-02	1.4839E-03
24.070	4.5210E-12	1.2097E-12	2.4033E-04	5.6479E-04	5.6964E-04	1.5242E-04
24.360	-9.9609E-12	-3.1260E-13	5.2532E-05	4.2580E-04	-1.4797E-03	-4.6439E-05
24.650	-3.9411E-12	-1.4620E-13	6.6386E-06	1.0291E-04	-6.7437E-04	-2.5017E-05
24.940	-4.9896E-13	-2.4719E-14	7.1486E-06	8.0283E-06	-6.5198E-05	-3.2300E-06
25.230	1.7868E-13	1.4781E-14	1.9806E-06	1.2429E-05	3.7166E-05	3.0744E-06
25.520	8.0923E-14	9.3349E-15	6.0613E-08	3.6882E-06	2.3090E-05	2.6636E-06
25.810	7.4303E-15	1.1914E-15	1.5849E-07	5.5407E-08	2.6947E-06	4.3207E-07
26.100	-2.5225E-15	-7.1790E-17	2.9667E-08	2.7793E-07	-1.1099E-06	-3.1588E-08
26.390	-7.4045E-16	-2.7935E-17	2.7156E-09	5.4213E-08	-3.8306E-07	-1.4452E-08
26.680	-1.2909E-17	-1.4067E-18	1.7750E-09	4.4037E-09	-7.6768E-09	-8.3651E-10
26.970	2.7881E-17	2.9038E-18	1.6114E-10	3.1381E-09	1.6729E-08	1.7423E-09
27.260	4.7185E-18	6.1827E-19	4.5112E-11	3.0040E-10	2.8311E-09	3.7096E-10
27.550	-3.6797E-19	-6.2037E-21	1.3080E-11	7.7422E-11	-2.2078E-10	-3.7222E-12
27.840	-2.3362E-19	-8.2497E-21	2.1044E-13	2.3379E-11	-1.4017E-10	-4.9498E-12
28.130	-2.0761E-20	-9.9841E-22	4.8015E-13	4.9511E-13	-1.2456E-11	-5.9905E-13
28.420	6.2184E-21	5.6977E-22	8.0191E-14	8.3792E-13	3.7311E-12	3.4186E-13
28.710	1.8201E-21	2.2021E-22	5.8573E-15	1.3827E-13	1.0921E-12	1.3213E-13
29.000	-2.2500E-22	-3.5318E-24	0.0000	0.0000	-1.3500E-13	-2.1191E-15

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* PILE GROUP * 2

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.3440E-03 0.015728 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-534.23 140.10 15.300 -0.019958 -9.3516 107.80

STR, KN/ M**2

7159.2

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.3440E-03 0.015728 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-534.23 140.10 15.300 -0.019958 -9.3516 107.80

STR, KN/ M**2



7159.2

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5728E-02	8.8926E-04	110.82	140.13	0.0000	0.0000
0.2900	1.4591E-02	8.7013E-04	72.270	138.87	8.9717	0.5452
0.5800	1.3427E-02	8.4031E-04	36.364	134.83	18.872	1.2036
0.8700	1.2251E-02	8.0155E-04	19.790	128.04	27.977	1.8657
1.1600	1.1079E-02	7.5558E-04	44.912	118.78	35.841	2.4917
1.4500	9.9254E-03	7.0402E-04	76.795	107.53	41.791	3.0207
1.7400	8.8021E-03	6.4845E-04	105.56	94.831	45.760	3.4306
2.0300	7.7210E-03	5.9031E-04	130.52	81.167	48.460	3.7603
2.3200	6.6922E-03	5.3096E-04	151.45	67.679	44.556	3.5783
2.6100	5.7241E-03	4.7160E-04	168.67	54.500	46.324	3.8602
2.9000	4.8236E-03	4.1334E-04	182.03	40.983	46.906	4.0619
3.1900	3.9960E-03	3.5712E-04	191.49	27.048	49.232	4.4454
3.4800	3.2451E-03	3.0379E-04	196.84	12.953	51.208	4.8421
3.7700	2.5730E-03	2.5402E-04	197.94	4.7573	52.940	5.2768
4.0600	1.9803E-03	2.0833E-04	194.62	17.564	49.544	5.2106
4.3500	1.4654E-03	1.6706E-04	187.17	30.423	39.223	4.4700
4.6400	1.0256E-03	1.3037E-04	176.47	40.349	29.241	3.7159
4.9300	6.5638E-04	9.8277E-05	163.34	47.470	19.861	2.9727
5.2200	3.5262E-04	7.0673E-05	148.58	51.989	11.286	2.2612
5.5100	1.0837E-04	4.7350E-05	132.90	54.157	3.6575	1.5976
5.8000	-8.2665E-05	2.8025E-05	116.94	54.264	-2.9344	0.9945
6.0900	-2.2235E-04	1.2362E-05	101.24	52.915	-6.2495	0.3474

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6.3800	-3.2234E-04	2.6901E-08	86.112	50.586	-9.4457	7.8855E-04
6.6700	-3.8895E-04	-2.8447E-06	71.813	47.413	-11.864	-8.6797E-02
6.9600	-4.2775E-04	-4.9478E-06	58.555	43.621	-13.560	-0.1569
7.2500	-4.4387E-04	-6.3940E-06	46.482	39.417	-14.602	-0.2104
7.5400	-4.4201E-04	-7.2898E-06	35.685	34.983	-15.071	-0.2486
7.8300	-4.2634E-04	-7.7343E-06	26.202	30.481	-15.047	-0.2731
8.1200	-4.0055E-04	-7.8182E-06	18.030	26.044	-14.617	-0.2854
8.4100	-3.6780E-04	-7.6230E-06	11.130	21.783	-13.862	-0.2874
8.7000	-3.3077E-04	-7.2202E-06	5.4377	17.782	-12.863	-0.2809
8.9900	-2.9166E-04	-6.6720E-06	1.0797	14.106	-11.692	-0.2675
9.2800	-2.5225E-04	-6.0308E-06	2.7121	10.796	-10.414	-0.2491
9.5700	-2.1390E-04	-5.3401E-06	5.3652	7.8743	-9.0870	-0.2269
9.8600	-1.7766E-04	-4.6351E-06	7.2327	5.3498	-7.7601	-0.2025
10.150	-1.4423E-04	-3.9430E-06	8.4277	3.2165	-6.4729	-0.1770
10.440	-1.1409E-04	-3.2846E-06	9.0618	1.4583	-5.2569	-0.1514
10.730	-8.7475E-05	-2.6744E-06	9.2407	0.2158	-4.1353	-0.1265
11.020	-6.4450E-05	-2.1221E-06	9.0616	1.0437	-3.1240	-0.1029
11.310	-4.4945E-05	-1.6329E-06	8.6125	1.8474	-2.2324	-8.1132E-02
11.600	-2.8785E-05	-1.2087E-06	7.9707	2.4031	-1.4642	-6.1504E-02
11.890	-1.5720E-05	-8.4866E-07	7.2027	2.7469	-0.8185	-4.4200E-02
12.180	-5.4494E-06	-5.4982E-07	6.3647	2.9148	-0.2903	-2.9295E-02
12.470	2.3515E-06	-3.0779E-07	5.5022	2.9408	0.1281	-1.6768E-02
12.760	8.2000E-06	-1.1722E-07	4.6516	2.8562	0.4566	-6.5264E-03
13.050	1.2202E-05	9.4057E-08	3.8404	2.6894	0.6940	5.3479E-03
13.340	1.4666E-05	4.4223E-07	3.0883	2.4653	0.8517	2.5674E-02
13.630	1.5893E-05	6.8054E-07	2.4086	2.2052	0.9420	4.0325E-02
13.920	1.6155E-05	8.2815E-07	1.8085	1.9269	0.9769	5.0063E-02
14.210	1.5694E-05	9.0283E-07	1.2911	1.6449	0.9678	5.5659E-02
14.500	1.4715E-05	9.2065E-07	0.8553	1.3704	0.9251	5.7861E-02
14.790	1.3395E-05	8.9580E-07	0.4975	1.1118	0.8581	5.7372E-02
15.080	1.1875E-05	8.4051E-07	0.2122	0.8749	0.7750	5.4838E-02

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15.370	1.0270E-05	7.6505E-07	3.1063E-02	0.6635	0.6826	5.0831E-02
15.660	8.6688E-06	6.7787E-07	0.1714	0.4795	0.5865	4.5851E-02
15.950	7.1362E-06	5.8569E-07	0.2848	0.3231	0.4914	4.0318E-02
16.240	5.7177E-06	4.9369E-07	0.3571	0.1938	0.4006	3.4576E-02
16.530	4.4422E-06	4.0567E-07	0.3957	8.9774E-02	0.3165	2.8897E-02
16.820	3.3253E-06	3.2429E-07	0.4078	1.3659E-02	0.2409	2.3489E-02
17.110	2.3717E-06	2.5122E-07	0.3997	5.1529E-02	0.1747	1.8498E-02
17.400	1.5782E-06	1.8737E-07	0.3770	9.3963E-02	0.1181	1.4021E-02
17.690	9.3565E-07	1.3300E-07	0.3445	0.1214	7.1156E-02	1.0112E-02
17.980	4.3110E-07	8.7909E-08	0.3060	0.1366	3.3302E-02	6.7887E-03
18.270	4.9092E-08	5.1555E-08	0.2648	0.1420	3.8511E-03	4.0430E-03
18.560	-2.2228E-07	2.3173E-08	0.2233	0.1399	-1.7698E-02	1.8450E-03
18.850	-4.0256E-07	1.8622E-09	0.1834	0.1324	-3.2534E-02	1.5050E-04
19.140	-5.1173E-07	-4.0305E-09	0.1463	0.1213	-4.1969E-02	-3.3067E-04
19.430	-5.6417E-07	-7.0811E-09	0.1129	0.1081	-4.6946E-02	-5.8943E-04
19.720	-5.7285E-07	-8.8531E-09	8.3620E-02	9.3814E-02	-4.8355E-02	-7.4754E-04
20.010	-5.4915E-07	-9.6073E-09	5.8524E-02	7.9556E-02	-4.7012E-02	-8.2274E-04
20.300	-5.0279E-07	-9.5793E-09	3.7519E-02	6.5997E-02	-4.3646E-02	-8.3183E-04
20.590	-4.4192E-07	-8.9767E-09	2.0309E-02	5.3648E-02	-3.8892E-02	-7.9025E-04
20.880	-3.7323E-07	-7.9789E-09	6.4858E-03	4.2846E-02	-3.3293E-02	-7.1197E-04
21.170	-3.0206E-07	-6.7386E-09	4.5105E-03	3.3776E-02	-2.7307E-02	-6.0938E-04
21.460	-2.3266E-07	-5.3847E-09	1.3046E-02	2.6498E-02	-2.1311E-02	-4.9339E-04
21.750	-1.6835E-07	-4.0251E-09	1.9767E-02	2.0969E-02	-1.5622E-02	-3.7364E-04
22.040	-1.1172E-07	-2.7516E-09	2.5137E-02	1.7057E-02	-1.0501E-02	-2.5872E-04
22.330	-6.4866E-08	-1.6429E-09	2.9601E-02	1.4560E-02	-6.1748E-03	-1.5645E-04
22.620	-2.9505E-08	-7.6950E-10	3.3535E-02	1.3209E-02	-2.8440E-03	-7.4197E-05
22.910	-7.1576E-09	-1.9636E-10	3.7229E-02	2.5580E-02	-0.2561	-7.0254E-03
23.200	7.6989E-10	4.5780E-11	1.8682E-02	5.7427E-02	4.4910E-02	2.6705E-03
23.490	1.4501E-09	1.1607E-10	3.9163E-03	3.3901E-02	0.1173	9.3888E-03
23.780	5.6201E-10	4.6994E-11	9.8085E-04	8.4559E-03	5.8137E-02	4.8613E-03
24.070	6.6754E-11	6.1733E-12	9.8736E-04	1.1967E-03	8.4110E-03	7.7784E-04

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24.360	-3.2058E-11	-7.7059E-13	2.8644E-04	1.7039E-03	-4.7623E-03	-1.1448E-04
24.650	-1.7647E-11	-4.5536E-13	9.7530E-07	5.3875E-04	-3.0196E-03	-7.7917E-05
24.940	-3.6028E-12	-9.9144E-14	2.6018E-05	1.6052E-05	-4.7077E-04	-1.2955E-05
25.230	3.5817E-13	2.3198E-14	1.0219E-05	4.3666E-05	7.4499E-05	4.8252E-06
25.520	3.4451E-13	2.8159E-14	6.8968E-07	1.8603E-05	9.8301E-05	8.0347E-06
25.810	5.4707E-14	4.8198E-15	5.7031E-07	1.4675E-06	1.9840E-05	1.7480E-06
26.100	-6.4931E-15	-1.4587E-16	1.6126E-07	9.8286E-07	-2.8569E-06	-6.4185E-08
26.390	-3.4183E-15	-8.8671E-17	2.8187E-10	2.9048E-07	-1.7684E-06	-4.5872E-08
26.680	-2.6230E-16	-7.6914E-18	7.2170E-09	2.2792E-09	-1.5598E-07	-4.5738E-09
26.970	9.7127E-17	7.6131E-18	1.0988E-09	1.2644E-08	5.8276E-08	4.5678E-09
27.260	2.5194E-17	2.1364E-18	1.1669E-10	1.9989E-09	1.5117E-08	1.2818E-09
27.550	-5.2265E-21	2.3892E-20	6.0478E-11	1.9334E-10	-3.1359E-12	1.4335E-11
27.840	-9.5420E-19	-2.4208E-20	4.5375E-12	1.0717E-10	-5.7252E-10	-1.4525E-11
28.130	-1.4327E-19	-3.9241E-21	1.6802E-12	8.5651E-12	-8.5963E-11	-2.3544E-12
28.420	1.6288E-20	1.1776E-21	4.2969E-13	2.8942E-12	9.7731E-12	7.0654E-13
28.710	8.4565E-21	7.0188E-22	1.4483E-15	7.4087E-13	5.0739E-12	4.2113E-13
29.000	5.6388E-23	2.0379E-23	0.0000	0.0000	3.3833E-14	1.2227E-14

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-1.3238E-03	0.015730	8.8926E-04	-1.3759E-06	4.4489E-05	-3.7232E-03



FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-528.29 138.24 15.143 -0.019958 -9.2861 105.46

STR, KN/ M**2

6994.6

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.3238E-03 0.015730 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-528.29 138.24 15.143 -0.019958 -9.2861 105.46

STR, KN/ M**2

6994.6

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5730E-02	8.8926E-04	108.70	138.27	0.0000	0.0000
0.2900	1.4593E-02	8.7017E-04	70.681	137.03	8.8120	0.5354
0.5800	1.3430E-02	8.4046E-04	35.380	133.07	18.538	1.1821



0.8700	1.2257E-02	8.0188E-04	20.006	126.39	27.486	1.8327
1.1600	1.1087E-02	7.5610E-04	45.155	117.30	35.220	2.4483
1.4500	9.9349E-03	7.0476E-04	76.753	106.23	41.079	2.9691
1.7400	8.8138E-03	6.4941E-04	105.18	93.752	44.997	3.3736
2.0300	7.7347E-03	5.9149E-04	129.87	80.313	47.674	3.6998
2.3200	6.7077E-03	5.3234E-04	150.59	67.040	43.857	3.5229
2.6100	5.7410E-03	4.7315E-04	167.66	54.064	45.627	3.8031
2.9000	4.8415E-03	4.1502E-04	180.93	40.745	46.234	4.0050
3.1900	4.0144E-03	3.5891E-04	190.35	27.004	48.571	4.3872
3.4800	3.2636E-03	3.0564E-04	195.73	13.080	50.575	4.7838
3.7700	2.5912E-03	2.5588E-04	196.89	4.5881	52.357	5.2197
4.0600	1.9977E-03	2.1017E-04	193.69	17.094	49.085	5.1628
4.3500	1.4817E-03	1.6884E-04	186.41	29.846	38.949	4.4369
4.6400	1.0404E-03	1.3205E-04	175.88	39.717	29.133	3.6966
4.9300	6.6954E-04	9.9834E-05	162.94	46.827	19.897	2.9660
5.2200	3.6394E-04	7.2086E-05	148.37	51.373	11.440	2.2652
5.5100	1.1776E-04	4.8604E-05	132.86	53.600	3.9037	1.6107
5.8000	-7.5203E-05	2.9111E-05	117.05	53.788	-2.6218	1.0146
6.0900	-2.1709E-04	1.3277E-05	101.48	52.523	-5.9927	0.3665
6.3800	-3.1885E-04	7.3741E-07	86.451	50.274	-9.1769	2.1223E-02
6.6700	-3.8710E-04	-2.6648E-06	72.230	47.183	-11.597	-7.9853E-02
6.9600	-4.2735E-04	-4.8144E-06	59.026	43.471	-13.305	-0.1499
7.2500	-4.4474E-04	-6.3035E-06	46.986	39.341	-14.370	-0.2037
7.5400	-4.4394E-04	-7.2376E-06	36.200	34.974	-14.867	-0.2424
7.8300	-4.2914E-04	-7.7156E-06	26.709	30.530	-14.876	-0.2675
8.1200	-4.0401E-04	-7.8280E-06	18.514	26.142	-14.480	-0.2806
8.4100	-3.7172E-04	-7.6561E-06	11.580	21.918	-13.760	-0.2835
8.7000	-3.3499E-04	-7.2718E-06	5.8423	17.945	-12.794	-0.2778
8.9900	-2.9601E-04	-6.7373E-06	1.3641	14.287	-11.654	-0.2653
9.2800	-2.5659E-04	-6.1056E-06	2.4272	10.985	-10.404	-0.2476
9.5700	-2.1813E-04	-5.4206E-06	5.1214	8.0638	-9.1013	-0.2262



9.8600	-1.8167E-04	-4.7179E-06	7.0433	5.5332	-7.7939	-0.2025		
10.150	-1.4797E-04	-4.0253E-06	8.2902	3.3884	-6.5220	-0.1775		
10.440	-1.1749E-04	-3.3640E-06	8.9722	1.6144	-5.3169	-0.1523		
10.730	-9.0505E-05	-2.7492E-06	9.1938	0.2776	-4.2022	-0.1277		
11.020	-6.7096E-05	-2.1909E-06	9.0518	0.9263	-3.1942	-0.1043		
11.310	-4.7205E-05	-1.6949E-06	8.6337	1.7507	-2.3029	-8.2705E-02		
11.600	-3.0669E-05	-1.2633E-06	8.0168	2.3269	-1.5323	-6.3133E-02		
11.890	-1.7247E-05	-8.9569E-07	7.2679	2.6905	-0.8820	-4.5815E-02		
12.180	-6.6472E-06	-5.8938E-07	6.4433	2.8765	-0.3477	-3.0841E-02		
12.470	1.4520E-06	-3.4020E-07	5.5893	2.9187	7.7669E-02	-1.8202E-02		
12.760	7.5313E-06	-1.4294E-07	4.7428	2.8483	0.4118	-7.8165E-03		
13.050	1.1767E-05	3.0044E-08	3.9319	2.6933	0.6573	1.6777E-03		
13.340	1.4428E-05	3.9598E-07	3.1771	2.4787	0.8229	2.2579E-02		
13.630	1.5817E-05	6.4968E-07	2.4921	2.2258	0.9208	3.7809E-02		
13.920	1.6208E-05	8.1028E-07	1.8852	1.9527	0.9626	4.8109E-02		
14.210	1.5844E-05	8.9564E-07	1.3596	1.6740	0.9596	5.4231E-02		
14.500	1.4936E-05	9.2195E-07	0.9150	1.4011	0.9222	5.6909E-02		
14.790	1.3662E-05	9.0358E-07	0.5482	1.1427	0.8596	5.6838E-02		
15.080	1.2168E-05	8.5298E-07	0.2538	0.9049	0.7799	5.4659E-02		
15.370	1.0572E-05	7.8067E-07	3.9010E-02	0.6917	0.6901	5.0944E-02		
15.660	8.9671E-06	6.9531E-07	0.1461	0.5052	0.5959	4.6192E-02		
15.950	7.4204E-06	6.0386E-07	0.2666	0.3460	0.5018	4.0827E-02		
16.240	5.9805E-06	5.1173E-07	0.3450	0.2135	0.4115	3.5200E-02		
16.530	4.6788E-06	4.2292E-07	0.3889	0.1064	0.3274	2.9589E-02		
16.820	3.5329E-06	3.4028E-07	0.4053	2.4226E-02	0.2514	2.4207E-02		
17.110	2.5493E-06	2.6564E-07	0.4007	4.0977E-02	0.1844	1.9210E-02		
17.400	1.7262E-06	2.0003E-07	0.3807	8.6074E-02	0.1269	1.4701E-02		
17.690	1.0556E-06	1.4384E-07	0.3500	0.1159	7.8845E-02	1.0741E-02		
17.980	5.2521E-07	9.6950E-08	0.3128	0.1331	3.9846E-02	7.3532E-03		
18.270	1.2008E-07	5.8887E-08	0.2723	0.1403	9.2512E-03	4.5356E-03		
18.560	-1.7364E-07	2.8935E-08	0.2311	0.1396	-1.3579E-02	2.2627E-03		



18.850	-3.7040E-07	6.2247E-09	0.1911	0.1332	-2.9401E-02	4.9409E-04
19.140	-4.9302E-07	-3.0629E-09	0.1536	0.1230	-3.9714E-02	-2.4679E-04
19.430	-5.5605E-07	-6.4229E-09	0.1197	0.1103	-4.5446E-02	-5.2508E-04
19.720	-5.7270E-07	-8.4462E-09	8.9650E-02	9.6383E-02	-4.7480E-02	-7.0043E-04
20.010	-5.5461E-07	-9.3967E-09	6.3765E-02	8.2325E-02	-4.6633E-02	-7.9032E-04
20.300	-5.1183E-07	-9.5145E-09	4.1936E-02	6.8835E-02	-4.3638E-02	-8.1142E-04
20.590	-4.5283E-07	-9.0126E-09	2.3899E-02	5.6461E-02	-3.9141E-02	-7.7923E-04
20.880	-3.8462E-07	-8.0769E-09	9.2659E-03	4.5569E-02	-3.3697E-02	-7.0784E-04
21.170	-3.1285E-07	-6.8668E-09	2.7341E-03	3.6374E-02	-2.7778E-02	-6.0986E-04
21.460	-2.4208E-07	-5.5176E-09	1.1769E-02	2.8960E-02	-2.1779E-02	-4.9653E-04
21.750	-1.7591E-07	-4.1443E-09	1.9183E-02	2.3302E-02	-1.6033E-02	-3.7783E-04
22.040	-1.1722E-07	-2.8451E-09	2.5212E-02	1.9283E-02	-1.0821E-02	-2.6273E-04
22.330	-6.8326E-08	-1.7055E-09	3.0306E-02	1.6707E-02	-6.3882E-03	-1.5950E-04
22.620	-3.1210E-08	-8.0200E-10	3.4853E-02	1.5309E-02	-2.9547E-03	-7.5948E-05
22.910	-7.6290E-09	-2.0601E-10	3.9151E-02	2.6007E-02	-0.2729	-7.3706E-03
23.200	7.7941E-10	4.5166E-11	1.9752E-02	6.0283E-02	4.5466E-02	2.6347E-03
23.490	1.5242E-09	1.2033E-10	4.1816E-03	3.5807E-02	0.1233	9.7337E-03
23.780	5.9453E-10	4.9012E-11	1.0160E-03	9.0040E-03	6.1501E-02	5.0700E-03
24.070	7.1730E-11	6.5203E-12	1.0400E-03	1.2274E-03	9.0380E-03	8.2156E-04
24.360	-3.3522E-11	-7.9399E-13	3.0379E-04	1.7933E-03	-4.9799E-03	-1.1795E-04
24.650	-1.8638E-11	-4.7391E-13	4.6373E-07	5.7088E-04	-3.1892E-03	-8.1092E-05
24.940	-3.8419E-12	-1.0406E-13	2.7306E-05	1.8351E-05	-5.0200E-04	-1.3597E-05
25.230	3.6618E-13	2.3259E-14	1.0825E-05	4.5775E-05	7.6166E-05	4.8379E-06
25.520	3.6323E-13	2.9278E-14	7.5406E-07	1.9696E-05	1.0364E-04	8.3540E-06
25.810	5.8334E-14	5.0607E-15	5.9832E-07	1.5953E-06	2.1156E-05	1.8354E-06
26.100	-6.7291E-15	-1.4876E-16	1.7101E-07	1.0306E-06	-2.9608E-06	-6.5453E-08
26.390	-3.6131E-15	-9.2349E-17	5.8237E-10	3.0795E-07	-1.8692E-06	-4.7775E-08
26.680	-2.8251E-16	-8.1351E-18	7.5993E-09	2.9999E-09	-1.6800E-07	-4.8377E-09
26.970	1.0179E-16	7.8695E-18	1.1702E-09	1.3310E-08	6.1074E-08	4.7217E-09
27.260	2.6708E-17	2.2322E-18	1.2088E-10	2.1279E-09	1.6025E-08	1.3393E-09
27.550	4.0258E-20	2.8284E-20	6.3900E-11	1.9997E-10	2.4155E-11	1.6971E-11

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27.840	-1.0053E-18	-2.5135E-20	4.8882E-12	1.1321E-10	-6.0320E-10	-1.5081E-11
28.130	-1.5267E-19	-4.1160E-21	1.7611E-12	9.2142E-12	-9.1600E-11	-2.4696E-12
28.420	1.6884E-20	1.2026E-21	4.5554E-13	3.0323E-12	1.0130E-11	7.2157E-13
28.710	8.9360E-21	7.3129E-22	2.2511E-15	7.8544E-13	5.3616E-12	4.3878E-13
29.000	8.9124E-23	2.3420E-23	0.0000	0.0000	5.3474E-14	1.4052E-14

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.2615E-03 0.015732 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-510.02 138.25 15.138 -0.019958 -9.2858 105.54

STR, KN/ M**2

6940.1

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.2615E-03 0.015732 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -510.02 138.25 15.138 -0.019958 -9.2858 105.54

STR, KN/ M**2
 6940.1

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5732E-02	8.8926E-04	108.92	138.29	0.0000	0.0000
0.2900	1.4595E-02	8.7017E-04	70.863	137.05	8.8124	0.5352
0.5800	1.3432E-02	8.4047E-04	35.510	133.08	18.539	1.1818
0.8700	1.2258E-02	8.0188E-04	19.945	126.41	27.487	1.8322
1.1600	1.1089E-02	7.5610E-04	45.049	117.31	35.222	2.4477
1.4500	9.9365E-03	7.0476E-04	76.720	106.25	41.081	2.9683
1.7400	8.8152E-03	6.4941E-04	105.16	93.763	45.000	3.3727
2.0300	7.7360E-03	5.9149E-04	129.86	80.323	47.678	3.6990
2.3200	6.7089E-03	5.3234E-04	150.58	67.049	43.862	3.5223
2.6100	5.7421E-03	4.7315E-04	167.66	54.071	45.632	3.8024
2.9000	4.8424E-03	4.1502E-04	180.94	40.751	46.240	4.0043
3.1900	4.0152E-03	3.5890E-04	190.36	27.008	48.577	4.3864
3.4800	3.2643E-03	3.0563E-04	195.75	13.077	50.582	4.7829
3.7700	2.5917E-03	2.5588E-04	196.91	4.5906	52.364	5.2187
4.0600	1.9981E-03	2.1016E-04	193.72	17.097	49.096	5.1625

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4.3500	1.4820E-03	1.6882E-04	186.43	29.851	38.958	4.4366
4.6400	1.0406E-03	1.3204E-04	175.91	39.724	29.140	3.6963
4.9300	6.6970E-04	9.9820E-05	162.97	46.837	19.902	2.9656
5.2200	3.6404E-04	7.2072E-05	148.39	51.384	11.443	2.2648
5.5100	1.1781E-04	4.8589E-05	132.88	53.611	3.9050	1.6102
5.8000	-7.5206E-05	2.9096E-05	117.07	53.799	-2.6219	1.0141
6.0900	-2.1724E-04	1.3261E-05	101.50	52.534	-5.9969	0.3661
6.3800	-3.1906E-04	7.2231E-07	86.470	50.284	-9.1830	2.0789E-02
6.6700	-3.8735E-04	-2.6661E-06	72.246	47.193	-11.604	-7.9892E-02
6.9600	-4.2763E-04	-4.8157E-06	59.040	43.480	-13.314	-0.1500
7.2500	-4.4503E-04	-6.3046E-06	46.997	39.349	-14.379	-0.2038
7.5400	-4.4423E-04	-7.2387E-06	36.208	34.982	-14.876	-0.2425
7.8300	-4.2941E-04	-7.7166E-06	26.716	30.537	-14.885	-0.2676
8.1200	-4.0426E-04	-7.8289E-06	18.519	26.147	-14.489	-0.2807
8.4100	-3.7196E-04	-7.6568E-06	11.583	21.923	-13.769	-0.2835
8.7000	-3.3520E-04	-7.2724E-06	5.8442	17.949	-12.803	-0.2778
8.9900	-2.9620E-04	-6.7379E-06	1.3647	14.289	-11.662	-0.2653
9.2800	-2.5675E-04	-6.1061E-06	2.4287	10.987	-10.411	-0.2477
9.5700	-2.1826E-04	-5.4210E-06	5.1223	8.0653	-9.1069	-0.2262
9.8600	-1.8178E-04	-4.7181E-06	7.0448	5.5341	-7.7987	-0.2025
10.150	-1.4805E-04	-4.0255E-06	8.2920	3.3887	-6.5258	-0.1775
10.440	-1.1756E-04	-3.3641E-06	8.9742	1.6144	-5.3199	-0.1523
10.730	-9.0554E-05	-2.7493E-06	9.1960	0.2767	-4.2045	-0.1277
11.020	-6.7130E-05	-2.1910E-06	9.0540	0.9269	-3.1958	-0.1043
11.310	-4.7226E-05	-1.6949E-06	8.6358	1.7514	-2.3039	-8.2705E-02
11.600	-3.0680E-05	-1.2633E-06	8.0188	2.3278	-1.5328	-6.3131E-02
11.890	-1.7249E-05	-8.9563E-07	7.2697	2.6913	-0.8821	-4.5812E-02
12.180	-6.6424E-06	-5.8930E-07	6.4449	2.8774	-0.3475	-3.0837E-02
12.470	1.4614E-06	-3.4011E-07	5.5907	2.9196	7.8170E-02	-1.8198E-02
12.760	7.5349E-06	-1.4286E-07	4.7440	2.8491	0.4120	-7.8118E-03
13.050	1.1771E-05	3.0998E-08	3.9329	2.6940	0.6575	1.7310E-03



13.340	1.4433E-05	3.9689E-07	3.1779	2.4794	0.8232	2.2631E-02
13.630	1.5822E-05	6.5053E-07	2.4927	2.2264	0.9211	3.7859E-02
13.920	1.6213E-05	8.1106E-07	1.8856	1.9532	0.9629	4.8156E-02
14.210	1.5849E-05	8.9633E-07	1.3599	1.6744	0.9599	5.4273E-02
14.500	1.4940E-05	9.2255E-07	0.9152	1.4014	0.9225	5.6946E-02
14.790	1.3665E-05	9.0410E-07	0.5483	1.1429	0.8598	5.6871E-02
15.080	1.2171E-05	8.5341E-07	0.2538	0.9051	0.7801	5.4686E-02
15.370	1.0575E-05	7.8101E-07	3.8900E-02	0.6918	0.6903	5.0966E-02
15.660	8.9695E-06	6.9558E-07	0.1462	0.5053	0.5960	4.6209E-02
15.950	7.4223E-06	6.0407E-07	0.2667	0.3460	0.5020	4.0841E-02
16.240	5.9820E-06	5.1187E-07	0.3451	0.2135	0.4116	3.5210E-02
16.530	4.6799E-06	4.2301E-07	0.3890	0.1064	0.3275	2.9595E-02
16.820	3.5336E-06	3.4033E-07	0.4055	2.4125E-02	0.2515	2.4211E-02
17.110	2.5498E-06	2.6566E-07	0.4008	4.1018E-02	0.1844	1.9211E-02
17.400	1.7265E-06	2.0003E-07	0.3808	8.6124E-02	0.1269	1.4701E-02
17.690	1.0557E-06	1.4382E-07	0.3501	0.1160	7.8853E-02	1.0739E-02
17.980	5.2519E-07	9.6913E-08	0.3129	0.1332	3.9845E-02	7.3505E-03
18.270	1.1996E-07	5.8843E-08	0.2724	0.1403	9.2420E-03	4.5322E-03
18.560	-1.7428E-07	2.8887E-08	0.2312	0.1397	-1.3629E-02	2.2589E-03
18.850	-3.7112E-07	6.1756E-09	0.1911	0.1333	-2.9458E-02	4.9019E-04
19.140	-4.9377E-07	-3.0673E-09	0.1537	0.1230	-3.9774E-02	-2.4715E-04
19.430	-5.5679E-07	-6.4270E-09	0.1197	0.1103	-4.5506E-02	-5.2542E-04
19.720	-5.7339E-07	-8.4499E-09	8.9671E-02	9.6412E-02	-4.7538E-02	-7.0074E-04
20.010	-5.5524E-07	-9.4000E-09	6.3779E-02	8.2349E-02	-4.6686E-02	-7.9060E-04
20.300	-5.1238E-07	-9.5173E-09	4.1943E-02	6.8854E-02	-4.3685E-02	-8.1166E-04
20.590	-4.5329E-07	-9.0150E-09	2.3901E-02	5.6475E-02	-3.9181E-02	-7.7943E-04
20.880	-3.8499E-07	-8.0788E-09	9.2641E-03	4.5579E-02	-3.3730E-02	-7.0800E-04
21.170	-3.1315E-07	-6.8682E-09	2.7492E-03	3.6381E-02	-2.7804E-02	-6.0999E-04
21.460	-2.4230E-07	-5.5187E-09	1.1776E-02	2.8965E-02	-2.1799E-02	-4.9663E-04
21.750	-1.7607E-07	-4.1451E-09	1.9192E-02	2.3305E-02	-1.6047E-02	-3.7789E-04
22.040	-1.1732E-07	-2.8456E-09	2.5221E-02	1.9285E-02	-1.0831E-02	-2.6278E-04



22.330	-6.8381E-08	-1.7057E-09	3.0317E-02	1.6709E-02	-6.3934E-03	-1.5952E-04
22.620	-3.1235E-08	-8.0211E-10	3.4864E-02	1.5310E-02	-2.9570E-03	-7.5959E-05
22.910	-7.6345E-09	-2.0603E-10	3.9162E-02	2.6016E-02	-0.2731	-7.3714E-03
23.200	7.7971E-10	4.5217E-11	1.9757E-02	6.0301E-02	4.5483E-02	2.6377E-03
23.490	1.5247E-09	1.2039E-10	4.1826E-03	3.5817E-02	0.1233	9.7386E-03
23.780	5.9469E-10	4.9033E-11	1.0163E-03	9.0063E-03	6.1518E-02	5.0721E-03
24.070	7.1747E-11	6.5221E-12	1.0403E-03	1.2278E-03	9.0401E-03	8.2178E-04
24.360	-3.3552E-11	-7.9414E-13	3.0387E-04	1.7938E-03	-4.9843E-03	-1.1797E-04
24.650	-1.8653E-11	-4.7398E-13	4.6669E-07	5.7103E-04	-3.1917E-03	-8.1103E-05
24.940	-3.8446E-12	-1.0407E-13	2.7314E-05	1.8352E-05	-5.0236E-04	-1.3598E-05
25.230	3.6632E-13	2.3281E-14	1.0828E-05	4.5788E-05	7.6194E-05	4.8425E-06
25.520	3.6333E-13	2.9292E-14	7.5421E-07	1.9702E-05	1.0367E-04	8.3580E-06
25.810	5.8349E-14	5.0624E-15	5.9850E-07	1.5956E-06	2.1161E-05	1.8360E-06
26.100	-6.7358E-15	-1.4879E-16	1.7106E-07	1.0309E-06	-2.9638E-06	-6.5468E-08
26.390	-3.6160E-15	-9.2362E-17	5.7967E-10	3.0804E-07	-1.8707E-06	-4.7782E-08
26.680	-2.8268E-16	-8.1358E-18	7.6015E-09	2.9991E-09	-1.6810E-07	-4.8381E-09
26.970	1.0182E-16	7.8739E-18	1.1705E-09	1.3314E-08	6.1093E-08	4.7244E-09
27.260	2.6715E-17	2.2331E-18	1.2092E-10	2.1285E-09	1.6029E-08	1.3399E-09
27.550	4.0136E-20	2.8249E-20	6.3918E-11	2.0004E-10	2.4082E-11	1.6950E-11
27.840	-1.0062E-18	-2.5139E-20	4.8893E-12	1.1324E-10	-6.0370E-10	-1.5084E-11
28.130	-1.5278E-19	-4.1165E-21	1.7616E-12	9.2163E-12	-9.1665E-11	-2.4699E-12
28.420	1.6890E-20	1.2035E-21	4.5567E-13	3.0333E-12	1.0134E-11	7.2210E-13
28.710	8.9385E-21	7.3162E-22	2.2495E-15	7.8565E-13	5.3631E-12	4.3897E-13
29.000	8.9059E-23	2.3398E-23	0.0000	0.0000	5.3435E-14	1.4039E-14

* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.1992E-03 0.015734 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -490.29 140.14 15.293 -0.019958 -9.3511 108.07

STR, KN/ M**2

6995.8

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.1992E-03 0.015734 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -490.29 140.14 15.293 -0.019958 -9.3511 108.07

STR, KN/ M**2

6995.8

* EFFECTS FOR Laterally Loaded PILE *

c_0969.Comune di Genova - Prot. 29/03/2023.0139153.E



x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
*****	*****	*****	*****	*****	*****	*****
0.0000	1.5734E-02	8.8926E-04	111.58	140.18	0.0000	0.0000
0.2900	1.4597E-02	8.7013E-04	72.901	138.92	8.9736	0.5453
0.5800	1.3432E-02	8.4030E-04	36.817	134.88	18.876	1.2037
0.8700	1.2257E-02	8.0155E-04	19.610	128.08	27.983	1.8658
1.1600	1.1085E-02	7.5556E-04	44.576	118.83	35.849	2.4917
1.4500	9.9301E-03	7.0400E-04	76.697	107.57	41.801	3.0206
1.7400	8.8064E-03	6.4841E-04	105.49	94.868	45.773	3.4306
2.0300	7.7250E-03	5.9027E-04	130.48	81.200	48.476	3.7606
2.3200	6.6958E-03	5.3090E-04	151.44	67.707	44.573	3.5788
2.6100	5.7273E-03	4.7153E-04	168.68	54.523	46.343	3.8607
2.9000	4.8263E-03	4.1326E-04	182.06	41.000	46.926	4.0623
3.1900	3.9983E-03	3.5703E-04	191.54	27.060	49.253	4.4456
3.4800	3.2470E-03	3.0369E-04	196.91	12.934	51.230	4.8420
3.7700	2.5746E-03	2.5392E-04	198.01	4.7763	52.964	5.2762
4.0600	1.9815E-03	2.0822E-04	194.70	17.574	49.577	5.2121
4.3500	1.4663E-03	1.6695E-04	187.26	30.441	39.250	4.4706
4.6400	1.0262E-03	1.3026E-04	176.56	40.375	29.261	3.7157
4.9300	6.5681E-04	9.8165E-05	163.43	47.501	19.875	2.9718
5.2200	3.5286E-04	7.0564E-05	148.66	52.022	11.294	2.2595
5.5100	1.0845E-04	4.7247E-05	132.97	54.193	3.6606	1.5954
5.8000	-8.2706E-05	2.7928E-05	117.01	54.300	-2.9361	0.9919
6.0900	-2.2309E-04	1.2273E-05	101.31	52.950	-6.2753	0.3452
6.3800	-3.2317E-04	2.2098E-08	86.168	50.619	-9.4779	6.4780E-04
6.6700	-3.8983E-04	-2.8492E-06	71.860	47.444	-11.900	-8.6941E-02
6.9600	-4.2863E-04	-4.9519E-06	58.594	43.650	-13.599	-0.1570
7.2500	-4.4472E-04	-6.3978E-06	46.514	39.442	-14.642	-0.2106
7.5400	-4.4280E-04	-7.2932E-06	35.710	35.005	-15.110	-0.2488

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7.8300	-4.2706E-04	-7.7373E-06	26.220	30.500	-15.085	-0.2732	
8.1200	-4.0119E-04	-7.8208E-06	18.043	26.060	-14.652	-0.2855	
8.4100	-3.6835E-04	-7.6251E-06	11.138	21.796	-13.894	-0.2875	
8.7000	-3.3123E-04	-7.2219E-06	5.4415	17.793	-12.891	-0.2810	
8.9900	-2.9203E-04	-6.6733E-06	1.0681	14.114	-11.716	-0.2676	
9.2800	-2.5253E-04	-6.0318E-06	2.7246	10.801	-10.434	-0.2491	
9.5700	-2.1411E-04	-5.3409E-06	5.3691	7.8777	-9.1034	-0.2270	
9.8600	-1.7780E-04	-4.6355E-06	7.2379	5.3516	-7.7728	-0.2026	
10.150	-1.4432E-04	-3.9433E-06	8.4337	3.2169	-6.4822	-0.1770	
10.440	-1.1414E-04	-3.2847E-06	9.0683	1.4576	-5.2632	-0.1514	
10.730	-8.7481E-05	-2.6743E-06	9.2473	0.2136	-4.1389	-0.1265	
11.020	-6.4427E-05	-2.1219E-06	9.0681	1.0458	-3.1254	-0.1029	
11.310	-4.4901E-05	-1.6326E-06	8.6187	1.8500	-2.2320	-8.1124E-02	
11.600	-2.8727E-05	-1.2084E-06	7.9763	2.4058	-1.4624	-6.1492E-02	
11.890	-1.5652E-05	-8.4830E-07	7.2078	2.7498	-0.8156	-4.4185E-02	
12.180	-5.3783E-06	-5.4944E-07	6.3690	2.9176	-0.2867	-2.9277E-02	
12.470	2.4226E-06	-3.0742E-07	5.5059	2.9434	0.1320	-1.6749E-02	
12.760	8.2136E-06	-1.1686E-07	4.6547	2.8586	0.4573	-6.5071E-03	
13.050	1.2217E-05	9.9838E-08	3.8429	2.6916	0.6949	5.6812E-03	
13.340	1.4681E-05	4.4708E-07	3.0902	2.4672	0.8527	2.5977E-02	
13.630	1.5908E-05	6.8451E-07	2.4100	2.2069	0.9430	4.0593E-02	
13.920	1.6170E-05	8.3129E-07	1.8095	1.9283	0.9779	5.0294E-02	
14.210	1.5707E-05	9.0522E-07	1.2917	1.6460	0.9687	5.5852E-02	
14.500	1.4727E-05	9.2238E-07	0.8556	1.3713	0.9259	5.8017E-02	
14.790	1.3405E-05	8.9696E-07	0.4976	1.1124	0.8589	5.7493E-02	
15.080	1.1883E-05	8.4119E-07	0.2120	0.8754	0.7756	5.4927E-02	
15.370	1.0277E-05	7.6535E-07	3.1616E-02	0.6638	0.6831	5.0892E-02	
15.660	8.6744E-06	6.7786E-07	0.1717	0.4796	0.5870	4.5888E-02	
15.950	7.1405E-06	5.8545E-07	0.2852	0.3232	0.4917	4.0334E-02	
16.240	5.7209E-06	4.9328E-07	0.3575	0.1937	0.4008	3.4575E-02	
16.530	4.4444E-06	4.0515E-07	0.3961	8.9671E-02	0.3167	2.8884E-02	



16.820	3.3266E-06	3.2371E-07	0.4082	1.3059E-02	0.2410	2.3466E-02
17.110	2.3724E-06	2.5062E-07	0.4001	5.1700E-02	0.1747	1.8468E-02
17.400	1.5783E-06	1.8678E-07	0.3773	9.4146E-02	0.1181	1.3988E-02
17.690	9.3543E-07	1.3244E-07	0.3447	0.1216	7.1145E-02	1.0077E-02
17.980	4.3061E-07	8.7390E-08	0.3062	0.1367	3.3266E-02	6.7541E-03
18.270	4.8425E-08	5.1091E-08	0.2650	0.1421	3.7990E-03	4.0099E-03
18.560	-2.2647E-07	2.2769E-08	0.2235	0.1401	-1.8046E-02	1.8143E-03
18.850	-4.0622E-07	1.5197E-09	0.1835	0.1326	-3.2857E-02	1.2292E-04
19.140	-5.1484E-07	-4.0470E-09	0.1464	0.1214	-4.2259E-02	-3.3205E-04
19.430	-5.6674E-07	-7.0956E-09	0.1130	0.1081	-4.7199E-02	-5.9068E-04
19.720	-5.7491E-07	-8.8654E-09	8.3654E-02	9.3886E-02	-4.8569E-02	-7.4864E-04
20.010	-5.5075E-07	-9.6176E-09	5.8540E-02	7.9611E-02	-4.7188E-02	-8.2368E-04
20.300	-5.0398E-07	-9.5876E-09	3.7519E-02	6.6037E-02	-4.3785E-02	-8.3260E-04
20.590	-4.4278E-07	-8.9831E-09	2.0299E-02	5.3677E-02	-3.8999E-02	-7.9088E-04
20.880	-3.7381E-07	-7.9837E-09	6.4678E-03	4.2865E-02	-3.3372E-02	-7.1246E-04
21.170	-3.0242E-07	-6.7422E-09	4.6472E-03	3.3786E-02	-2.7362E-02	-6.0974E-04
21.460	-2.3287E-07	-5.3871E-09	1.3073E-02	2.6502E-02	-2.1348E-02	-4.9365E-04
21.750	-1.6845E-07	-4.0267E-09	1.9795E-02	2.0968E-02	-1.5644E-02	-3.7381E-04
22.040	-1.1176E-07	-2.7525E-09	2.5165E-02	1.7053E-02	-1.0513E-02	-2.5882E-04
22.330	-6.4868E-08	-1.6434E-09	2.9628E-02	1.4554E-02	-6.1801E-03	-1.5650E-04
22.620	-2.9496E-08	-7.6967E-10	3.3561E-02	1.3202E-02	-2.8455E-03	-7.4219E-05
22.910	-7.1516E-09	-1.9639E-10	3.7253E-02	2.5606E-02	-0.2559	-7.0262E-03
23.200	7.7072E-10	4.5954E-11	1.8693E-02	5.7466E-02	4.4959E-02	2.6806E-03
23.490	1.4511E-09	1.1605E-10	3.9182E-03	3.3922E-02	0.1174	9.3868E-03
23.780	5.6234E-10	4.6961E-11	9.8167E-04	8.4602E-03	5.8171E-02	4.8579E-03
24.070	6.6781E-11	6.1623E-12	9.8799E-04	1.1979E-03	8.4144E-03	7.7645E-04
24.360	-3.2077E-11	-7.7090E-13	2.8660E-04	1.7050E-03	-4.7653E-03	-1.1452E-04
24.650	-1.7644E-11	-4.5547E-13	1.0248E-06	5.3906E-04	-3.0191E-03	-7.7936E-05
24.940	-3.5996E-12	-9.9155E-14	2.6036E-05	1.6045E-05	-4.7034E-04	-1.2956E-05
25.230	3.5853E-13	2.3260E-14	1.0225E-05	4.3696E-05	7.4574E-05	4.8381E-06
25.520	3.4473E-13	2.8147E-14	6.8981E-07	1.8614E-05	9.8363E-05	8.0312E-06

c_d969.Comune di Genova - Prot. 29/03/2023.0139153.E



25.810	5.4734E-14	4.8136E-15	5.7071E-07	1.4678E-06	1.9850E-05	1.7457E-06
26.100	-6.5018E-15	-1.4596E-16	1.6135E-07	9.8355E-07	-2.8608E-06	-6.4222E-08
26.390	-3.4176E-15	-8.8692E-17	2.6341E-10	2.9064E-07	-1.7681E-06	-4.5883E-08
26.680	-2.6185E-16	-7.6913E-18	7.2217E-09	2.2735E-09	-1.5571E-07	-4.5738E-09
26.970	9.7197E-17	7.6138E-18	1.0994E-09	1.2652E-08	5.8318E-08	4.5683E-09
27.260	2.5209E-17	2.1345E-18	1.1679E-10	1.9999E-09	1.5125E-08	1.2807E-09
27.550	-5.7904E-21	2.3587E-20	6.0515E-11	1.9351E-10	-3.4742E-12	1.4152E-11
27.840	-9.5426E-19	-2.4215E-20	4.5391E-12	1.0724E-10	-5.7256E-10	-1.4529E-11
28.130	-1.4315E-19	-3.9245E-21	1.6814E-12	8.5683E-12	-8.5889E-11	-2.3547E-12
28.420	1.6302E-20	1.1790E-21	4.2994E-13	2.8963E-12	9.7815E-12	7.0738E-13
28.710	8.4616E-21	7.0146E-22	1.4183E-15	7.4128E-13	5.0770E-12	4.2088E-13
29.000	5.6049E-23	2.0175E-23	0.0000	0.0000	3.3630E-14	1.2105E-14

* PILE GROUP * 6

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.1369E-03 0.015736 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -465.36 175.89 18.178 -0.019958 -10.535 153.17

STR, KN/ M**2



9049.3

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.1369E-03 0.015736 8.8926E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -465.36 175.89 18.178 -0.019958 -10.535 153.17

STR, KN/ M**2

9049.3

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5736E-02	8.8926E-04	155.66	175.92	0.0000	0.0000
0.2900	1.4590E-02	8.6933E-04	106.37	174.20	12.209	0.7424
0.5800	1.3402E-02	8.3747E-04	58.969	168.71	25.636	1.6350
0.8700	1.2194E-02	7.9575E-04	20.844	159.50	37.893	2.5244
1.1600	1.0983E-02	7.4619E-04	38.899	146.99	48.347	3.3537
1.4500	9.7869E-03	6.9074E-04	77.866	131.85	56.076	4.0390
1.7400	8.6222E-03	6.3121E-04	113.08	114.87	60.999	4.5513
2.0300	7.5027E-03	5.6930E-04	143.22	96.731	64.085	4.9432

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2.3200	6.4407E-03	5.0653E-04	168.01	78.975	58.360	4.6538
2.6100	5.4459E-03	4.4427E-04	187.93	61.814	59.982	4.9577
2.9000	4.5265E-03	3.8374E-04	202.85	44.431	59.906	5.1413
3.1900	3.6883E-03	3.2597E-04	212.78	26.784	61.844	5.5321
3.4800	2.9353E-03	2.7183E-04	217.54	9.4693	63.039	5.9072
3.7700	2.2695E-03	2.2201E-04	217.05	10.524	63.550	6.2878
4.0600	1.6906E-03	1.7700E-04	211.26	27.326	57.580	6.0395
4.3500	1.1963E-03	1.3706E-04	200.66	41.992	43.589	5.0032
4.6400	7.8237E-04	1.0227E-04	186.44	52.717	30.368	3.9770
4.9300	4.4312E-04	7.2542E-05	169.70	59.769	18.253	2.9937
5.2200	1.7184E-04	4.7641E-05	151.46	63.504	7.4873	2.0795
5.5100	-3.8774E-05	2.7239E-05	132.62	64.334	-1.7816	1.2539
5.8000	-1.9435E-04	1.0941E-05	113.96	62.702	-9.4091	0.5297
6.0900	-3.0207E-04	-4.3426E-07	96.120	59.617	-11.583	-1.6621E-02
6.3800	-3.7253E-04	-3.3064E-06	79.290	55.700	-14.894	-0.1319
6.6700	-4.1227E-04	-5.3423E-06	63.756	50.944	-17.156	-0.2219
6.9600	-4.2732E-04	-6.6744E-06	49.713	45.646	-18.481	-0.2881
7.2500	-4.2314E-04	-7.4277E-06	37.275	40.068	-18.992	-0.3328
7.5400	-4.0457E-04	-7.7171E-06	26.486	34.433	-18.819	-0.3583
7.8300	-3.7578E-04	-7.6464E-06	17.330	28.928	-18.094	-0.3675
8.1200	-3.4034E-04	-7.3072E-06	9.7432	23.698	-16.944	-0.3631
8.4100	-3.0117E-04	-6.7785E-06	3.6286	18.855	-15.486	-0.3479
8.7000	-2.6066E-04	-6.1274E-06	1.3570	14.473	-13.829	-0.3245
8.9900	-2.2064E-04	-5.4089E-06	4.7329	10.600	-12.067	-0.2953
9.2800	-1.8250E-04	-4.6671E-06	7.2614	7.2550	-10.279	-0.2624
9.5700	-1.4722E-04	-3.9364E-06	8.8996	4.4370	-8.5326	-0.2277
9.8600	-1.1542E-04	-3.2421E-06	9.7981	2.1266	-6.8783	-0.1928
10.150	-8.7449E-05	-2.6019E-06	10.100	0.3339	-5.3542	-0.1590
10.440	-6.3414E-05	-2.0271E-06	9.9378	1.1307	-3.9862	-0.1272
10.730	-4.3248E-05	-1.5236E-06	9.4296	2.1369	-2.7893	-9.8085E-02
11.020	-2.6750E-05	-1.0930E-06	8.6793	2.8256	-1.7689	-7.2147E-02

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11.310	-1.3624E-05	-7.3363E-07	7.7752	3.2349	-0.9233	-4.9623E-02
11.600	-3.5183E-06	-4.4144E-07	6.7908	3.4156	-0.2442	-3.0579E-02
11.890	3.9533E-06	-2.1067E-07	5.7849	3.4156	0.2808	-1.4937E-02
12.180	9.2867E-06	-3.4579E-08	4.8030	3.2785	0.6736	-2.5082E-03
12.470	1.2807E-05	3.2232E-07	3.8788	3.0431	0.9499	2.3949E-02
12.760	1.4774E-05	6.1154E-07	3.0353	2.7430	1.1198	4.6438E-02
13.050	1.5526E-05	7.9216E-07	2.2865	2.4063	1.2022	6.1449E-02
13.340	1.5362E-05	8.8600E-07	1.6393	2.0558	1.2145	7.0176E-02
13.630	1.4542E-05	9.1277E-07	1.0947	1.7095	1.1734	7.3788E-02
13.920	1.3283E-05	8.8981E-07	0.6489	1.3808	1.0935	7.3386E-02
14.210	1.1765E-05	8.3196E-07	0.2954	1.0789	0.9877	6.9975E-02
14.500	1.0128E-05	7.5159E-07	3.4959E-02	0.8100	0.8669	6.4444E-02
14.790	8.4822E-06	6.5870E-07	0.1747	0.5769	0.7398	5.7556E-02
15.080	6.9053E-06	5.6113E-07	0.3084	0.3807	0.6135	4.9947E-02
15.370	5.4520E-06	4.6475E-07	0.3922	0.2201	0.4933	4.2128E-02
15.660	4.1557E-06	3.7379E-07	0.4346	9.3083E-02	0.3828	3.4494E-02
15.950	3.0335E-06	2.9103E-07	0.4448	1.2312E-02	0.2844	2.7332E-02
16.240	2.0894E-06	2.1809E-07	0.4313	7.4383E-02	0.1993	2.0839E-02
16.530	1.3182E-06	1.5570E-07	0.4011	0.1214	0.1279	1.5131E-02
16.820	7.0750E-07	1.0385E-07	0.3602	0.1501	6.9786E-02	1.0262E-02
17.110	2.4110E-07	6.2053E-08	0.3135	0.1637	2.4175E-02	6.2334E-03
17.400	-9.9744E-08	2.9463E-08	0.2648	0.1657	-1.0164E-02	3.0078E-03
17.690	-3.3315E-07	5.0312E-09	0.2171	0.1593	-3.4555E-02	5.2185E-04
17.980	-4.7405E-07	-3.5761E-09	0.1723	0.1469	-4.9944E-02	-3.7608E-04
18.270	-5.4844E-07	-7.1368E-09	0.1318	0.1308	-5.8678E-02	-7.6217E-04
18.560	-5.7206E-07	-9.2590E-09	9.6323E-02	0.1129	-6.2139E-02	-1.0039E-03
18.850	-5.5863E-07	-1.0256E-08	6.6266E-02	9.4492E-02	-6.1594E-02	-1.1288E-03
19.140	-5.1980E-07	-1.0408E-08	4.1546E-02	7.6634E-02	-5.8163E-02	-1.1624E-03
19.430	-4.6515E-07	-9.9546E-09	2.1870E-02	6.0059E-02	-5.2807E-02	-1.1281E-03
19.720	-4.0225E-07	-9.0988E-09	6.7838E-03	4.5230E-02	-4.6324E-02	-1.0459E-03
20.010	-3.3694E-07	-8.0040E-09	4.6753E-03	3.2396E-02	-3.9353E-02	-9.3313E-04

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20.300	-2.7346E-07	-6.7987E-09	1.1956E-02	2.1636E-02	-3.2387E-02	-8.0370E-04
20.590	-2.1476E-07	-5.5798E-09	1.6787E-02	1.2899E-02	-2.5786E-02	-6.6872E-04
20.880	-1.6268E-07	-4.4174E-09	1.9375E-02	6.0437E-03	-1.9798E-02	-5.3661E-04
21.170	-1.1817E-07	-3.3587E-09	2.0238E-02	8.8023E-04	-1.4575E-02	-4.1349E-04
21.460	-8.1571E-08	-2.4332E-09	1.9831E-02	2.9905E-03	-1.0194E-02	-3.0352E-04
21.750	-5.2681E-08	-1.6564E-09	1.8536E-02	5.4257E-03	-6.6696E-03	-2.0932E-04
22.040	-3.0984E-08	-1.0333E-09	1.6658E-02	7.0375E-03	-3.9734E-03	-1.3227E-04
22.330	-1.5733E-08	-5.6237E-10	1.4435E-02	7.9511E-03	-2.0433E-03	-7.2903E-05
22.620	-6.0488E-09	-2.3731E-10	1.2034E-02	8.3835E-03	-7.9546E-04	-3.1150E-05
22.910	-9.8455E-10	-4.9508E-11	9.5654E-03	1.3975E-02	-3.5225E-02	-1.7713E-03
23.200	4.4805E-10	3.5085E-11	3.9251E-03	1.5656E-02	2.6136E-02	2.0466E-03
23.490	3.7855E-10	4.0799E-11	4.8412E-04	7.4232E-03	3.0621E-02	3.3001E-03
23.780	1.1538E-10	1.4110E-11	3.8025E-04	1.2490E-03	1.1936E-02	1.4596E-03
24.070	4.4818E-12	1.1747E-12	2.4011E-04	5.6510E-04	5.6471E-04	1.4802E-04
24.360	-9.8380E-12	-3.1236E-13	5.2434E-05	4.2545E-04	-1.4615E-03	-4.6403E-05
24.650	-3.8614E-12	-1.4600E-13	6.6519E-06	1.0273E-04	-6.6074E-04	-2.4983E-05
24.940	-4.8030E-13	-2.4665E-14	7.1446E-06	8.0571E-06	-6.2759E-05	-3.2229E-06
25.230	1.7880E-13	1.4713E-14	1.9773E-06	1.2423E-05	3.7190E-05	3.0603E-06
25.520	8.0842E-14	9.1989E-15	6.3984E-08	3.6824E-06	2.3067E-05	2.6247E-06
25.810	7.4059E-15	1.1656E-15	1.5841E-07	6.4032E-08	2.6859E-06	4.2271E-07
26.100	-2.5016E-15	-7.1765E-17	2.9612E-08	2.7780E-07	-1.1007E-06	-3.1577E-08
26.390	-7.2484E-16	-2.7895E-17	2.7216E-09	5.4115E-08	-3.7498E-07	-1.4431E-08
26.680	-1.1363E-17	-1.4017E-18	1.7735E-09	4.4148E-09	-6.7572E-09	-8.3352E-10
26.970	2.7869E-17	2.8694E-18	1.6067E-10	3.1355E-09	1.6722E-08	1.7216E-09
27.260	4.7100E-18	6.0739E-19	4.5122E-11	2.9957E-10	2.8260E-09	3.6443E-10
27.550	-3.7086E-19	-6.2204E-21	1.3063E-11	7.7445E-11	-2.2252E-10	-3.7322E-12
27.840	-2.2948E-19	-8.2399E-21	2.0259E-13	2.3350E-11	-1.3769E-10	-4.9439E-12
28.130	-2.0024E-20	-9.9628E-22	4.7994E-13	4.8724E-13	-1.2015E-11	-5.9777E-13
28.420	6.2198E-21	5.6524E-22	8.0045E-14	8.3758E-13	3.7319E-12	3.3915E-13
28.710	1.8177E-21	2.1674E-22	5.8710E-15	1.3801E-13	1.0906E-12	1.3005E-13
29.000	-2.2715E-22	-3.5434E-24	0.0000	0.0000	-1.3629E-13	-2.1260E-15

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* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.6365E-03	0.015726	8.8464E-04	-1.3759E-06	4.4489E-05	-3.7232E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1222.4	228.86	22.311	-0.019958	-12.197	225.43

STR, KN/ M**2

1.4969E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
3.6365E-03	0.015726	8.8464E-04	-1.3759E-06	4.4489E-05	-3.7232E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
1222.4	228.86	22.311	-0.019958	-12.197	225.43



STR, KN/ M**2

1.4969E+04

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5726E-02	8.8464E-04	225.76	229.15	0.0000	0.0000
0.2900	1.4565E-02	8.6360E-04	158.28	226.32	18.163	1.0966
0.5800	1.3342E-02	8.2889E-04	93.837	218.17	38.034	2.4065
0.8700	1.2082E-02	7.8308E-04	35.186	204.54	55.965	3.6951
1.1600	1.0810E-02	7.2865E-04	33.167	186.14	70.955	4.8727
1.4500	9.5508E-03	6.6800E-04	82.935	164.01	81.624	5.8139
1.7400	8.3247E-03	6.0333E-04	128.49	139.43	87.879	6.4771
2.0300	7.1500E-03	5.3665E-04	166.63	113.46	91.153	6.9390
2.3200	6.0421E-03	4.6978E-04	197.04	88.392	81.733	6.4280
2.6100	5.0131E-03	4.0428E-04	220.48	64.580	82.480	6.7225
2.9000	4.0725E-03	3.4149E-04	236.87	40.940	80.571	6.8225
3.1900	3.2267E-03	2.8256E-04	246.38	17.890	80.984	7.1593
3.4800	2.4796E-03	2.2835E-04	248.95	7.3999	79.861	7.4221
3.7700	1.8323E-03	1.7953E-04	244.68	28.665	77.177	7.6273
4.0600	1.2829E-03	1.3650E-04	233.80	49.285	65.083	6.9170
4.3500	8.2716E-04	9.9371E-05	217.33	65.234	44.893	5.3873
4.6400	4.5848E-04	6.8063E-05	196.97	75.591	26.507	3.9307
4.9300	1.6869E-04	4.2288E-05	174.29	80.938	10.350	2.5918
5.2200	-5.1297E-05	2.1625E-05	150.65	81.959	-3.3291	1.4019
5.5100	-2.0695E-04	5.5676E-06	127.22	79.385	-14.148	0.3806

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5.8000	-3.1165E-04	-1.9193E-06	104.94	73.956	-22.408	-0.1382
6.0900	-3.7572E-04	-4.5109E-06	84.542	67.427	-21.396	-0.2572
6.3800	-4.0709E-04	-6.2187E-06	65.954	60.620	-24.170	-0.3696
6.6700	-4.1295E-04	-7.2034E-06	49.430	53.189	-25.521	-0.4457
6.9600	-3.9971E-04	-7.6137E-06	35.097	45.527	-25.673	-0.4896
7.2500	-3.7293E-04	-7.5838E-06	22.976	37.960	-24.858	-0.5061
7.5400	-3.3728E-04	-7.2312E-06	13.003	30.745	-23.301	-0.5001
7.8300	-2.9665E-04	-6.6569E-06	5.0508	24.074	-21.214	-0.4766
8.1200	-2.5409E-04	-5.9450E-06	1.2480	18.077	-18.787	-0.4400
8.4100	-2.1198E-04	-5.1635E-06	5.5481	12.832	-16.188	-0.3947
8.7000	-1.7205E-04	-4.3657E-06	8.6140	8.3699	-13.556	-0.3444
8.9900	-1.3547E-04	-3.5918E-06	10.497	4.6849	-11.003	-0.2921
9.2800	-1.0298E-04	-2.8701E-06	11.417	1.7413	-8.6138	-0.2403
9.5700	-7.4922E-05	-2.2191E-06	11.582	0.5596	-6.4489	-0.1912
9.8600	-5.1363E-05	-1.6493E-06	11.179	2.1751	-4.5458	-0.1461
10.150	-3.2144E-05	-1.1646E-06	10.375	3.2975	-2.9228	-0.1060
10.440	-1.6949E-05	-7.6391E-07	9.3101	3.9756	-1.5823	-7.1395E-02
10.730	-5.3647E-06	-4.4269E-07	8.1027	4.2921	-0.5138	-4.2450E-02
11.020	3.1204E-06	-1.9380E-07	6.8460	4.3258	0.3068	-1.9055E-02
11.310	9.1103E-06	-8.7027E-09	5.6118	4.1483	0.9179	-8.7680E-04
11.600	1.2853E-05	4.0273E-07	4.4519	3.8230	1.3262	4.1508E-02
11.890	1.4813E-05	6.8429E-07	3.4015	3.4038	1.5644	7.2189E-02
12.180	1.5410E-05	8.4571E-07	2.4809	2.9355	1.6649	9.1270E-02
12.470	1.5014E-05	9.1393E-07	1.6991	2.4536	1.6586	0.1009
12.760	1.3938E-05	9.1287E-07	1.0560	1.9848	1.5736	0.1029
13.050	1.2439E-05	8.6309E-07	0.5448	1.5485	1.4346	9.9430E-02
13.340	1.0722E-05	7.8168E-07	0.1542	1.1574	1.2626	9.1949E-02
13.630	8.9433E-06	6.8243E-07	0.1311	0.8183	1.0749	8.1930E-02
13.920	7.2172E-06	5.7600E-07	0.3251	0.5341	0.8850	7.0551E-02
14.210	5.6213E-06	4.7033E-07	0.4447	0.3038	0.7029	5.8750E-02
14.500	4.2035E-06	3.7096E-07	0.5049	0.1241	0.5359	4.7238E-02

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14.790	2.9880E-06	2.8146E-07	0.5198	1.5024E-02	0.3882	3.6524E-02
15.080	1.9806E-06	2.0379E-07	0.5018	0.1044	0.2621	2.6939E-02
15.370	1.1742E-06	1.3868E-07	0.4615	0.1653	0.1583	1.8670E-02
15.660	5.5269E-07	8.5967E-08	0.4077	0.1993	7.5830E-02	1.1782E-02
15.950	9.4433E-08	4.4821E-08	0.3473	0.2122	1.3186E-02	6.2514E-03
16.240	-2.1782E-07	1.4027E-08	0.2856	0.2095	-3.0909E-02	1.9904E-03
16.530	-4.1623E-07	-2.4086E-09	0.2264	0.1959	-6.0075E-02	-3.4803E-04
16.820	-5.2684E-07	-6.7779E-09	0.1723	0.1753	-7.7318E-02	-9.9582E-04
17.110	-5.7059E-07	-9.3480E-09	0.1249	0.1509	-8.5124E-02	-1.3961E-03
17.400	-5.6589E-07	-1.0531E-08	8.4861E-02	0.1253	-8.5796E-02	-1.5985E-03
17.690	-5.2827E-07	-1.0694E-08	5.2200E-02	0.1003	-8.1375E-02	-1.6492E-03
17.980	-4.7040E-07	-1.0150E-08	2.6586E-02	7.7053E-02	-7.3603E-02	-1.5899E-03
18.270	-4.0222E-07	-9.1553E-09	7.4117E-03	5.6452E-02	-6.3910E-02	-1.4563E-03
18.560	-3.3118E-07	-7.9151E-09	6.3473E-03	3.8875E-02	-5.3426E-02	-1.2783E-03
18.850	-2.6259E-07	-6.5845E-09	1.5379E-02	2.4433E-02	-4.2999E-02	-1.0794E-03
19.140	-1.9996E-07	-5.2760E-09	2.0674E-02	1.3018E-02	-3.3229E-02	-8.7771E-04
19.430	-1.4535E-07	-4.0653E-09	2.3074E-02	4.3761E-03	-2.4507E-02	-6.8619E-04
19.720	-9.9687E-08	-2.9989E-09	2.3335E-02	1.8555E-03	-1.7050E-02	-5.1348E-04
20.010	-6.3075E-08	-2.0999E-09	2.2105E-02	6.0377E-03	-1.0941E-02	-3.6465E-04
20.300	-3.5039E-08	-1.3741E-09	1.9915E-02	8.5940E-03	-6.1628E-03	-2.4195E-04
20.590	-1.4729E-08	-8.1478E-10	1.7182E-02	9.9057E-03	-2.6264E-03	-1.4545E-04
20.880	-1.0413E-09	-4.0717E-10	1.4213E-02	1.0324E-02	-1.8841E-04	-7.3673E-05
21.170	7.3260E-09	-1.3142E-10	1.1221E-02	1.0157E-02	1.3434E-03	-2.4099E-05
21.460	1.1200E-08	1.0779E-10	8.3367E-03	9.6608E-03	2.0809E-03	2.0005E-05
21.750	1.1735E-08	3.7416E-10	5.6232E-03	9.0389E-03	2.2088E-03	7.0351E-05
22.040	1.0018E-08	4.3134E-10	3.0928E-03	8.4416E-03	1.9100E-03	8.2149E-05
22.330	7.0626E-09	3.5315E-10	7.2278E-04	7.9669E-03	1.3637E-03	6.8115E-05
22.620	3.8189E-09	2.1073E-10	1.5360E-03	7.6609E-03	7.4669E-04	4.1157E-05
22.910	1.1906E-09	7.2952E-11	3.7293E-03	1.3754E-03	4.2596E-02	2.6101E-03
23.200	5.6002E-11	7.2863E-12	2.3379E-03	5.2766E-03	3.2668E-03	4.2503E-04
23.490	-1.3752E-10	-2.0560E-12	6.7050E-04	4.0830E-03	-1.1124E-02	-1.6631E-04

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23.780	-6.9462E-11	-1.2138E-12	3.0089E-05	1.3389E-03	-7.1855E-03	-1.2556E-04
24.070	-1.3005E-11	-2.6684E-13	1.0621E-04	1.7552E-05	-1.6387E-03	-3.3622E-05
24.360	2.3686E-12	8.1630E-14	3.9977E-05	1.7743E-04	3.5187E-04	1.2127E-05
24.650	2.1524E-12	1.1512E-13	3.3178E-06	7.3000E-05	3.6830E-04	1.9698E-05
24.940	6.0754E-13	3.7410E-14	2.3653E-06	8.0772E-06	7.9385E-05	4.8883E-06
25.230	1.0145E-14	2.0788E-15	1.3697E-06	3.7420E-06	2.1101E-06	4.3240E-07
25.520	-3.7389E-14	-6.0999E-16	1.9577E-07	2.4494E-06	-1.0668E-05	-1.7405E-07
25.810	-8.7333E-15	-1.6904E-16	5.0925E-08	3.7617E-07	-3.1673E-06	-6.1305E-08
26.100	2.0314E-16	-1.8655E-18	2.2459E-08	8.5242E-08	8.9380E-08	-8.2084E-10
26.390	4.2974E-16	2.3355E-17	1.4964E-09	4.0045E-08	2.2232E-07	1.2082E-08
26.680	5.7091E-17	3.7883E-18	7.6733E-10	2.8805E-09	3.3950E-08	2.2528E-09
26.970	-7.9325E-18	-1.0461E-19	1.7486E-10	1.3295E-09	-4.7595E-09	-6.2764E-11
27.260	-3.3535E-18	-6.0594E-20	3.6849E-12	3.1419E-10	-2.0121E-09	-3.6356E-11
27.550	-1.9440E-19	-5.0254E-21	7.3856E-12	4.6949E-12	-1.1664E-10	-3.0152E-12
27.840	1.0521E-19	5.2975E-21	9.6676E-13	1.2981E-11	6.3125E-11	3.1785E-12
28.130	2.3653E-20	1.4460E-21	1.4316E-13	1.7688E-12	1.4192E-11	8.6759E-13
28.420	-5.3672E-22	1.0319E-23	5.9249E-14	2.4093E-13	-3.2203E-13	6.1917E-15
28.710	-1.0040E-21	-1.7198E-23	3.4474E-15	1.0215E-13	-6.0241E-13	-1.0319E-14
29.000	-1.3243E-22	-3.3626E-24	0.0000	0.0000	-7.9458E-14	-2.0176E-15

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
3.6558E-03 0.015728 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
1228.1 196.18 19.776 -0.019958 -11.240 187.29

STR, KN/ M**2
1.3191E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
3.6558E-03 0.015728 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1228.1 196.18 19.776 -0.019958 -11.240 187.29

STR, KN/ M**2
1.3191E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5728E-02	8.8464E-04	187.63	196.43	0.0000	0.0000



0.2900	1.4575E-02	8.6424E-04	130.62	194.14	14.700	0.8875
0.5800	1.3371E-02	8.3115E-04	75.423	187.53	30.828	1.9514
0.8700	1.2137E-02	7.8765E-04	26.854	176.47	45.472	3.0056
1.1600	1.0897E-02	7.3596E-04	35.576	161.49	57.849	3.9800
1.4500	9.6702E-03	6.7821E-04	79.432	143.40	66.842	4.7734
1.7400	8.4751E-03	6.1640E-04	119.61	123.22	72.361	5.3514
2.0300	7.3280E-03	5.5235E-04	153.67	101.76	75.560	5.7757
2.3200	6.2425E-03	4.8772E-04	181.32	80.903	68.299	5.3971
2.6100	5.2296E-03	4.2398E-04	203.13	60.908	69.591	5.7017
2.9000	4.2980E-03	3.6239E-04	219.00	40.847	68.777	5.8554
3.1900	3.4542E-03	3.0406E-04	228.97	20.924	70.119	6.2307
3.4800	2.7021E-03	2.4986E-04	232.94	4.6395	70.388	6.5679
3.7700	2.0433E-03	2.0046E-04	230.87	20.059	69.611	6.8877
4.0600	1.4770E-03	1.5633E-04	222.83	38.925	60.608	6.4082
4.3500	9.9989E-04	1.1768E-04	209.58	54.078	43.896	5.1604
4.6400	6.0675E-04	8.4497E-05	192.54	64.560	28.375	3.9472
4.9300	2.9073E-04	5.6616E-05	173.01	70.770	14.429	2.8068
5.2200	4.4001E-05	3.3720E-05	152.18	73.200	2.3098	1.7682
5.5100	-1.3999E-04	1.5398E-05	131.09	72.399	-7.7415	0.8515
5.8000	-2.6860E-04	1.1781E-06	110.58	68.940	-15.622	6.8518E-02
6.0900	-3.5437E-04	-2.8358E-06	91.375	64.184	-16.323	-0.1308
6.3800	-4.0475E-04	-5.1194E-06	73.532	58.846	-19.439	-0.2461
6.6700	-4.2666E-04	-6.6151E-06	57.337	52.754	-21.329	-0.3311
6.9600	-4.2639E-04	-7.4645E-06	42.964	46.250	-22.153	-0.3882
7.2500	-4.0951E-04	-7.7981E-06	30.492	39.631	-22.080	-0.4209
7.5400	-3.8084E-04	-7.7338E-06	19.922	33.139	-21.282	-0.4326
7.8300	-3.4449E-04	-7.3754E-06	11.191	26.967	-19.927	-0.4271
8.1200	-3.0384E-04	-6.8122E-06	4.1880	21.259	-18.172	-0.4079
8.4100	-2.6159E-04	-6.1193E-06	1.3869	16.115	-16.159	-0.3784
8.7000	-2.1985E-04	-5.3582E-06	5.2735	11.592	-14.012	-0.3419
8.9900	-1.8017E-04	-4.5775E-06	8.0748	7.7172	-11.837	-0.3011



9.2800	-1.4365E-04	-3.8145E-06	9.8437	4.4849	-9.7193	-0.2584	
9.5700	-1.1095E-04	-3.0961E-06	10.762	1.8692	-7.7247	-0.2158	
9.8600	-8.2433E-05	-2.4407E-06	11.004	0.2877	-5.9012	-0.1749	
10.150	-5.8192E-05	-1.8594E-06	10.727	1.7061	-4.2801	-0.1369	
10.440	-3.8115E-05	-1.3571E-06	10.071	2.7803	-2.8783	-0.1026	
10.730	-2.1948E-05	-9.3432E-07	9.1601	3.4682	-1.7005	-7.2468E-02	
11.020	-9.3346E-06	-5.8801E-07	8.0962	3.8358	-0.7416	-4.6763E-02	
11.310	1.3774E-07	-3.1261E-07	6.9634	3.9466	1.1213E-02	-2.5476E-02	
11.600	7.0922E-06	-1.0096E-07	5.8278	3.8598	0.5919	-8.4261E-03	
11.890	1.1757E-05	1.8118E-07	4.7391	3.6284	1.0043	1.5460E-02	
12.180	1.4524E-05	5.3993E-07	3.7325	3.2987	1.2693	4.7134E-02	
12.470	1.5796E-05	7.6942E-07	2.8308	2.9100	1.4115	6.8678E-02	
12.760	1.5935E-05	8.9526E-07	2.0464	2.4943	1.4552	8.1668E-02	
13.050	1.5254E-05	9.4080E-07	1.3835	2.0769	1.4230	8.7670E-02	
13.340	1.4019E-05	9.2668E-07	0.8396	1.6768	1.3354	8.8174E-02	
13.630	1.2449E-05	8.7062E-07	0.4076	1.3077	1.2102	8.4548E-02	
13.920	1.0715E-05	7.8736E-07	8.2703E-02	0.9780	1.0627	7.8009E-02	
14.210	8.9502E-06	6.8885E-07	0.1643	0.6926	0.9053	6.9601E-02	
14.500	7.2514E-06	5.8437E-07	0.3290	0.4528	0.7477	6.0192E-02	
14.790	5.6844E-06	4.8089E-07	0.4308	0.2577	0.5973	5.0478E-02	
15.080	4.2900E-06	3.8335E-07	0.4821	0.1045	0.4592	4.0992E-02	
15.370	3.0887E-06	2.9498E-07	0.4945	1.5277E-02	0.3367	3.2121E-02	
15.660	2.0855E-06	2.1761E-07	0.4784	9.3481E-02	0.2314	2.4124E-02	
15.950	1.2738E-06	1.5201E-07	0.4425	0.1479	0.1439	1.7150E-02	
16.240	6.3944E-07	9.8120E-08	0.3944	0.1794	7.3478E-02	1.1263E-02	
16.530	1.6300E-07	5.5288E-08	0.3398	0.1929	1.9051E-02	6.4547E-03	
16.820	-1.7151E-07	2.2487E-08	0.2835	0.1926	-2.0360E-02	2.6695E-03	
17.110	-3.9139E-07	-5.0832E-10	0.2289	0.1824	-4.7231E-02	-6.1408E-05	
17.400	-5.2246E-07	-5.5172E-09	0.1782	0.1658	-6.4073E-02	-6.7735E-04	
17.690	-5.8438E-07	-8.6825E-09	0.1330	0.1453	-7.2814E-02	-1.0830E-03	
17.980	-5.9468E-07	-1.0389E-08	9.4011E-02	0.1231	-7.5266E-02	-1.3163E-03	

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18.270	-5.6850E-07	-1.0986E-08	6.1558E-02	0.1009	-7.3068E-02	-1.4135E-03
18.560	-5.1841E-07	-1.0778E-08	3.5422E-02	7.9780E-02	-6.7648E-02	-1.4080E-03
18.850	-4.5456E-07	-1.0024E-08	1.5146E-02	6.0634E-02	-6.0208E-02	-1.3292E-03
19.140	-3.8482E-07	-8.9337E-09	1.4118E-03	4.3874E-02	-5.1727E-02	-1.2022E-03
19.430	-3.1504E-07	-7.6740E-09	1.0491E-02	2.9699E-02	-4.2965E-02	-1.0477E-03
19.720	-2.4932E-07	-6.3704E-09	1.7318E-02	1.8105E-02	-3.4492E-02	-8.8228E-04
20.010	-1.9031E-07	-5.1135E-09	2.1145E-02	8.9488E-03	-2.6701E-02	-7.1825E-04
20.300	-1.3950E-07	-3.9639E-09	2.2644E-02	2.0896E-03	-1.9846E-02	-5.6457E-04
20.590	-9.7470E-08	-2.9583E-09	2.2411E-02	3.0924E-03	-1.4059E-02	-4.2716E-04
20.880	-6.4140E-08	-2.1140E-09	2.0948E-02	6.5933E-03	-9.3772E-03	-3.0940E-04
21.170	-3.8940E-08	-1.4339E-09	1.8662E-02	8.8556E-03	-5.7695E-03	-2.1268E-04
21.460	-2.0985E-08	-9.1041E-10	1.5867E-02	1.0187E-02	-3.1504E-03	-1.3683E-04
21.750	-9.1898E-09	-5.2881E-10	1.2791E-02	1.0864E-02	-1.3977E-03	-8.0513E-05
22.040	-2.3630E-09	-2.6955E-10	9.5893E-03	1.1125E-02	-3.6402E-04	-4.1570E-05
22.330	7.9274E-10	-1.1038E-10	6.3515E-03	1.1161E-02	1.2382E-04	-1.7240E-05
22.620	1.4264E-09	-2.7586E-11	3.1213E-03	1.1110E-02	2.2558E-04	-4.3627E-06
22.910	8.1064E-10	9.9685E-12	2.4115E-04	6.8726E-03	2.9003E-02	3.5665E-04
23.200	2.3258E-10	2.1202E-11	8.6752E-04	8.1450E-04	1.3567E-02	1.2368E-03
23.490	2.5729E-12	9.3404E-12	4.9935E-04	1.2937E-03	2.0812E-04	7.5554E-04
23.780	-2.7462E-11	1.5596E-12	1.1774E-04	8.8726E-04	-2.8408E-03	1.6133E-04
24.070	-1.1638E-11	-1.2906E-13	1.5332E-05	2.3838E-04	-1.4664E-03	-1.6262E-05
24.360	-1.5563E-12	-9.6741E-14	2.0570E-05	1.7603E-05	-2.3120E-04	-1.4371E-05
24.650	6.1982E-13	-2.1471E-14	6.0099E-06	3.4844E-05	1.0606E-04	-3.6739E-06
24.940	4.2292E-13	6.0729E-15	4.1107E-07	1.1454E-05	5.5261E-05	7.9352E-07
25.230	8.0400E-14	7.9209E-15	6.3420E-07	1.0615E-06	1.6723E-05	1.6475E-06
25.520	-7.6655E-15	1.6209E-15	2.2513E-07	1.0770E-06	-2.1872E-06	4.6251E-07
25.810	-6.1499E-15	-3.1480E-17	1.0516E-08	4.0795E-07	-2.2304E-06	-1.1417E-08
26.100	-7.8939E-16	-3.0014E-17	1.1499E-08	2.2267E-08	-3.4733E-07	-1.3206E-08
26.390	1.4249E-16	-3.6840E-18	2.6037E-09	1.9991E-08	7.3712E-08	-1.9059E-09
26.680	5.3502E-17	2.0378E-18	9.6800E-11	4.6904E-09	3.1816E-08	1.2118E-09
26.970	2.4791E-18	7.9125E-19	1.1689E-10	1.4740E-10	1.4874E-09	4.7475E-10

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27.260 -1.6529E-18 3.9376E-20 1.3886E-11 2.0582E-10 -9.9176E-10 2.3625E-11
 27.550 -3.4419E-19 -7.5705E-21 2.4809E-12 2.5516E-11 -2.0651E-10 -4.5423E-12
 27.840 1.3695E-20 -1.5836E-21 9.1520E-13 4.2082E-12 8.2169E-12 -9.5019E-13
 28.130 1.5936E-20 1.7993E-22 4.2454E-14 1.6289E-12 9.5615E-12 1.0796E-13
 28.420 1.8637E-21 2.3453E-22 2.9590E-14 8.2680E-14 1.1182E-12 1.4072E-13
 28.710 -3.3994E-22 2.8803E-23 5.8465E-15 5.1022E-14 -2.0396E-13 1.7282E-14
 29.000 -2.2450E-22 -4.8268E-24 0.0000 0.0000 -1.3470E-13 -2.8961E-15

* PILE GROUP * 9

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.6752E-03 0.015730 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1233.8 196.20 19.770 -0.019958 -11.240 187.38

STR, KN/ M**2
 1.3216E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.6752E-03 0.015730 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1233.8 196.20 19.770 -0.019958 -11.240 187.38

STR, KN/ M**2

1.3216E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5730E-02	8.8464E-04	187.81	196.45	0.0000	0.0000
0.2900	1.4577E-02	8.6424E-04	130.83	194.16	14.700	0.8873
0.5800	1.3372E-02	8.3115E-04	75.598	187.55	30.829	1.9510
0.8700	1.2139E-02	7.8765E-04	26.953	176.49	45.475	3.0049
1.1600	1.0899E-02	7.3597E-04	35.468	161.50	57.852	3.9789
1.4500	9.6717E-03	6.7822E-04	79.399	143.42	66.846	4.7721
1.7400	8.4765E-03	6.1640E-04	119.58	123.23	72.366	5.3501
2.0300	7.3293E-03	5.5235E-04	153.66	101.78	75.567	5.7745
2.3200	6.2436E-03	4.8773E-04	181.31	80.914	68.307	5.3961
2.6100	5.2305E-03	4.2398E-04	203.14	60.916	69.599	5.7007
2.9000	4.2988E-03	3.6240E-04	219.02	40.853	68.785	5.8544
3.1900	3.4549E-03	3.0406E-04	229.00	20.925	70.129	6.2296
3.4800	2.7026E-03	2.4986E-04	232.97	4.6371	70.398	6.5667

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3.7700	2.0437E-03	2.0046E-04	230.90	20.061	69.621	6.8865
4.0600	1.4773E-03	1.5633E-04	222.86	38.930	60.622	6.4080
4.3500	1.0001E-03	1.1767E-04	209.62	54.087	43.906	5.1601
4.6400	6.0691E-04	8.4490E-05	192.57	64.571	28.382	3.9469
4.9300	2.9082E-04	5.6608E-05	173.04	70.783	14.433	2.8064
5.2200	4.4037E-05	3.3710E-05	152.21	73.214	2.3117	1.7677
5.5100	-1.4006E-04	1.5388E-05	131.11	72.413	-7.7452	0.8509
5.8000	-2.6875E-04	1.1680E-06	110.61	68.953	-15.630	6.7932E-02
6.0900	-3.5456E-04	-2.8366E-06	91.395	64.197	-16.333	-0.1308
6.3800	-4.0498E-04	-5.1202E-06	73.549	58.858	-19.450	-0.2462
6.6700	-4.2691E-04	-6.6159E-06	57.351	52.764	-21.341	-0.3311
6.9600	-4.2664E-04	-7.4652E-06	42.974	46.260	-22.166	-0.3883
7.2500	-4.0975E-04	-7.7988E-06	30.500	39.639	-22.093	-0.4210
7.5400	-3.8107E-04	-7.7344E-06	19.927	33.146	-21.294	-0.4327
7.8300	-3.4469E-04	-7.3759E-06	11.194	26.972	-19.939	-0.4271
8.1200	-3.0402E-04	-6.8126E-06	4.1898	21.263	-18.183	-0.4079
8.4100	-2.6174E-04	-6.1197E-06	1.3868	16.118	-16.168	-0.3784
8.7000	-2.1998E-04	-5.3585E-06	5.2741	11.595	-14.020	-0.3419
8.9900	-1.8028E-04	-4.5777E-06	8.0762	7.7186	-11.844	-0.3011
9.2800	-1.4373E-04	-3.8146E-06	9.8456	4.4856	-9.7249	-0.2584
9.5700	-1.1101E-04	-3.0962E-06	10.765	1.8694	-7.7291	-0.2158
9.8600	-8.2477E-05	-2.4408E-06	11.006	0.2886	-5.9044	-0.1749
10.150	-5.8221E-05	-1.8594E-06	10.729	1.7067	-4.2823	-0.1369
10.440	-3.8132E-05	-1.3571E-06	10.073	2.7812	-2.8796	-0.1026
10.730	-2.1955E-05	-9.3428E-07	9.1622	3.4692	-1.7011	-7.2466E-02
11.020	-9.3345E-06	-5.8796E-07	8.0980	3.8368	-0.7416	-4.6760E-02
11.310	1.4334E-07	-3.1255E-07	6.9650	3.9477	1.1669E-02	-2.5471E-02
11.600	7.0948E-06	-1.0090E-07	5.8292	3.8608	0.5921	-8.4209E-03
11.890	1.1761E-05	1.8189E-07	4.7402	3.6293	1.0047	1.5521E-02
12.180	1.4528E-05	5.4061E-07	3.7334	3.2996	1.2696	4.7193E-02
12.470	1.5801E-05	7.7005E-07	2.8315	2.9107	1.4119	6.8734E-02

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12.760	1.5939E-05	8.9582E-07	2.0469	2.4949	1.4556	8.1719E-02
13.050	1.5258E-05	9.4129E-07	1.3838	2.0774	1.4234	8.7715E-02
13.340	1.4023E-05	9.2710E-07	0.8397	1.6772	1.3357	8.8213E-02
13.630	1.2452E-05	8.7096E-07	0.4076	1.3079	1.2106	8.4581E-02
13.920	1.0717E-05	7.8763E-07	8.2608E-02	0.9782	1.0630	7.8036E-02
14.210	8.9524E-06	6.8905E-07	0.1644	0.6927	0.9055	6.9622E-02
14.500	7.2532E-06	5.8452E-07	0.3291	0.4529	0.7479	6.0207E-02
14.790	5.6858E-06	4.8100E-07	0.4309	0.2578	0.5975	5.0489E-02
15.080	4.2910E-06	3.8342E-07	0.4822	0.1045	0.4593	4.0999E-02
15.370	3.0894E-06	2.9501E-07	0.4947	1.5359E-02	0.3368	3.2125E-02
15.660	2.0859E-06	2.1762E-07	0.4785	9.3531E-02	0.2315	2.4124E-02
15.950	1.2740E-06	1.5200E-07	0.4427	0.1480	0.1439	1.7149E-02
16.240	6.3949E-07	9.8094E-08	0.3945	0.1795	7.3483E-02	1.1260E-02
16.530	1.6294E-07	5.5254E-08	0.3399	0.1929	1.9044E-02	6.4507E-03
16.820	-1.7200E-07	2.2450E-08	0.2836	0.1926	-2.0418E-02	2.6650E-03
17.110	-3.9199E-07	-5.1178E-10	0.2289	0.1825	-4.7303E-02	-6.1826E-05
17.400	-5.2309E-07	-5.5205E-09	0.1782	0.1658	-6.4151E-02	-6.7777E-04
17.690	-5.8500E-07	-8.6857E-09	0.1330	0.1453	-7.2892E-02	-1.0834E-03
17.980	-5.9527E-07	-1.0392E-08	9.4032E-02	0.1231	-7.5341E-02	-1.3167E-03
18.270	-5.6903E-07	-1.0988E-08	6.1570E-02	0.1009	-7.3136E-02	-1.4138E-03
18.560	-5.1886E-07	-1.0780E-08	3.5427E-02	7.9799E-02	-6.7707E-02	-1.4083E-03
18.850	-4.5494E-07	-1.0025E-08	1.5147E-02	6.0648E-02	-6.0259E-02	-1.3294E-03
19.140	-3.8513E-07	-8.9350E-09	1.4097E-03	4.3883E-02	-5.1768E-02	-1.2023E-03
19.430	-3.1528E-07	-7.6749E-09	1.0497E-02	2.9704E-02	-4.2998E-02	-1.0479E-03
19.720	-2.4949E-07	-6.3711E-09	1.7325E-02	1.8108E-02	-3.4516E-02	-8.8237E-04
20.010	-1.9043E-07	-5.1139E-09	2.1153E-02	8.9487E-03	-2.6719E-02	-7.1831E-04
20.300	-1.3958E-07	-3.9642E-09	2.2652E-02	2.0829E-03	-1.9858E-02	-5.6461E-04
20.590	-9.7520E-08	-2.9584E-09	2.2419E-02	3.0953E-03	-1.4066E-02	-4.2718E-04
20.880	-6.4166E-08	-2.1140E-09	2.0955E-02	6.5969E-03	-9.3810E-03	-3.0940E-04
21.170	-3.8949E-08	-1.4338E-09	1.8667E-02	8.8595E-03	-5.7708E-03	-2.1267E-04
21.460	-2.0983E-08	-9.1035E-10	1.5871E-02	1.0191E-02	-3.1501E-03	-1.3682E-04

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21.750	-9.1832E-09	-5.2874E-10	1.2795E-02	1.0868E-02	-1.3967E-03	-8.0503E-05
22.040	-2.3551E-09	-2.6949E-10	9.5917E-03	1.1129E-02	-3.6281E-04	-4.1561E-05
22.330	7.9456E-10	-1.1034E-10	6.3528E-03	1.1164E-02	1.2410E-04	-1.7233E-05
22.620	1.4275E-09	-2.7561E-11	3.1215E-03	1.1114E-02	2.2576E-04	-4.3588E-06
22.910	8.1107E-10	1.0056E-11	2.4193E-04	6.8742E-03	2.9018E-02	3.5978E-04
23.200	2.3263E-10	2.1207E-11	8.6824E-04	8.1055E-04	1.3570E-02	1.2371E-03
23.490	2.4487E-12	9.3304E-12	4.9960E-04	1.2949E-03	1.9807E-04	7.5473E-04
23.780	-2.7536E-11	1.5544E-12	1.1775E-04	8.8774E-04	-2.8485E-03	1.6080E-04
24.070	-1.1655E-11	-1.2915E-13	1.5360E-05	2.3843E-04	-1.4685E-03	-1.6273E-05
24.360	-1.5548E-12	-9.6727E-14	2.0583E-05	1.7732E-05	-2.3098E-04	-1.4369E-05
24.650	6.2045E-13	-2.1457E-14	6.0117E-06	3.4868E-05	1.0617E-04	-3.6715E-06
24.940	4.2314E-13	6.1178E-15	4.0927E-07	1.1458E-05	5.5290E-05	7.9939E-07
25.230	8.0417E-14	7.9220E-15	6.3464E-07	1.0586E-06	1.6727E-05	1.6478E-06
25.520	-7.7029E-15	1.6182E-15	2.2521E-07	1.0778E-06	-2.1979E-06	4.6172E-07
25.810	-6.1604E-15	-3.1541E-17	1.0477E-08	4.0812E-07	-2.2342E-06	-1.1439E-08
26.100	-7.8953E-16	-3.0014E-17	1.1507E-08	2.2202E-08	-3.4739E-07	-1.3206E-08
26.390	1.4261E-16	-3.6812E-18	2.6046E-09	2.0005E-08	7.3779E-08	-1.9044E-09
26.680	5.3526E-17	2.0421E-18	9.7435E-11	4.6919E-09	3.1830E-08	1.2144E-09
26.970	2.4775E-18	7.9069E-19	1.1696E-10	1.4844E-10	1.4865E-09	4.7441E-10
27.260	-1.6567E-18	3.9122E-20	1.3888E-11	2.0593E-10	-9.9401E-10	2.3473E-11
27.550	-3.4451E-19	-7.5720E-21	2.4831E-12	2.5519E-11	-2.0670E-10	-4.5432E-12
27.840	1.3723E-20	-1.5830E-21	9.1559E-13	4.2121E-12	8.2336E-12	-9.4979E-13
28.130	1.5944E-20	1.8169E-22	4.2345E-14	1.6296E-12	9.5666E-12	1.0901E-13
28.420	1.8639E-21	2.3450E-22	2.9610E-14	8.2500E-14	1.1183E-12	1.4070E-13
28.710	-3.4100E-22	2.8728E-23	5.8484E-15	5.1056E-14	-2.0460E-13	1.7237E-14
29.000	-2.2471E-22	-4.8278E-24	0.0000	0.0000	-1.3483E-13	-2.8967E-15

* PILE GROUP * 10



* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.6945E-03 0.015732 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1239.5 196.22 19.765 -0.019958 -11.240 187.48

STR, KN/ M**2

1.3241E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.6945E-03 0.015732 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1239.5 196.22 19.765 -0.019958 -11.240 187.48

STR, KN/ M**2

1.3241E+04

* EFFECTS FOR LATERALLY LOADED PILE *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5732E-02	8.8464E-04	188.05	196.47	0.0000	0.0000
0.2900	1.4579E-02	8.6424E-04	131.04	194.17	14.701	0.8871
0.5800	1.3374E-02	8.3115E-04	75.773	187.57	30.831	1.9505
0.8700	1.2141E-02	7.8765E-04	27.053	176.51	45.477	3.0041
1.1600	1.0900E-02	7.3597E-04	35.360	161.52	57.855	3.9779
1.4500	9.6733E-03	6.7822E-04	79.365	143.44	66.850	4.7709
1.7400	8.4780E-03	6.1641E-04	119.56	123.25	72.370	5.3488
2.0300	7.3306E-03	5.5236E-04	153.65	101.79	75.574	5.7732
2.3200	6.2447E-03	4.8773E-04	181.31	80.925	68.314	5.3951
2.6100	5.2315E-03	4.2398E-04	203.15	60.925	69.607	5.6997
2.9000	4.2997E-03	3.6240E-04	219.03	40.859	68.794	5.8534
3.1900	3.4556E-03	3.0406E-04	229.02	20.925	70.138	6.2286
3.4800	2.7032E-03	2.4985E-04	232.99	4.6348	70.407	6.5656
3.7700	2.0442E-03	2.0046E-04	230.93	20.063	69.631	6.8852
4.0600	1.4776E-03	1.5632E-04	222.90	38.935	60.636	6.4078
4.3500	1.0004E-03	1.1766E-04	209.65	54.095	43.916	5.1599
4.6400	6.0707E-04	8.4482E-05	192.60	64.583	28.390	3.9465
4.9300	2.9091E-04	5.6599E-05	173.07	70.796	14.438	2.8059
5.2200	4.4072E-05	3.3701E-05	152.24	73.227	2.3135	1.7672
5.5100	-1.4013E-04	1.5378E-05	131.14	72.427	-7.7489	0.8504
5.8000	-2.6889E-04	1.1579E-06	110.63	68.967	-15.639	6.7345E-02
6.0900	-3.5476E-04	-2.8375E-06	91.415	64.210	-16.342	-0.1308
6.3800	-4.0521E-04	-5.1210E-06	73.565	58.870	-19.461	-0.2462
6.6700	-4.2715E-04	-6.6167E-06	57.364	52.775	-21.354	-0.3311
6.9600	-4.2689E-04	-7.4660E-06	42.985	46.269	-22.179	-0.3883

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7.2500	-4.0999E-04	-7.7995E-06	30.507	39.647	-22.106	-0.4210		
7.5400	-3.8129E-04	-7.7350E-06	19.933	33.152	-21.307	-0.4327		
7.8300	-3.4490E-04	-7.3764E-06	11.198	26.978	-19.950	-0.4271		
8.1200	-3.0420E-04	-6.8130E-06	4.1916	21.268	-18.193	-0.4079		
8.4100	-2.6190E-04	-6.1200E-06	1.3868	16.121	-16.178	-0.3785		
8.7000	-2.2011E-04	-5.3587E-06	5.2748	11.597	-14.029	-0.3419		
8.9900	-1.8038E-04	-4.5779E-06	8.0776	7.7200	-11.851	-0.3011		
9.2800	-1.4381E-04	-3.8148E-06	9.8474	4.4863	-9.7305	-0.2584		
9.5700	-1.1107E-04	-3.0963E-06	10.767	1.8695	-7.7334	-0.2158		
9.8600	-8.2522E-05	-2.4408E-06	11.009	0.2894	-5.9076	-0.1749		
10.150	-5.8251E-05	-1.8594E-06	10.731	1.7073	-4.2845	-0.1369		
10.440	-3.8150E-05	-1.3571E-06	10.076	2.7820	-2.8809	-0.1026		
10.730	-2.1963E-05	-9.3425E-07	9.1642	3.4702	-1.7016	-7.2464E-02		
11.020	-9.3344E-06	-5.8791E-07	8.0999	3.8379	-0.7415	-4.6756E-02		
11.310	1.4896E-07	-3.1249E-07	6.9666	3.9487	1.2126E-02	-2.5466E-02		
11.600	7.0974E-06	-1.0084E-07	5.8305	3.8618	0.5923	-8.4157E-03		
11.890	1.1764E-05	1.8260E-07	4.7413	3.6302	1.0050	1.5582E-02		
12.180	1.4532E-05	5.4130E-07	3.7342	3.3004	1.2700	4.7253E-02		
12.470	1.5805E-05	7.7068E-07	2.8321	2.9114	1.4123	6.8790E-02		
12.760	1.5943E-05	8.9639E-07	2.0474	2.4955	1.4560	8.1771E-02		
13.050	1.5262E-05	9.4179E-07	1.3841	2.0779	1.4238	8.7761E-02		
13.340	1.4027E-05	9.2752E-07	0.8399	1.6776	1.3361	8.8253E-02		
13.630	1.2455E-05	8.7130E-07	0.4077	1.3082	1.2109	8.4615E-02		
13.920	1.0720E-05	7.8791E-07	8.2514E-02	0.9784	1.0633	7.8063E-02		
14.210	8.9546E-06	6.8926E-07	0.1645	0.6928	0.9058	6.9643E-02		
14.500	7.2549E-06	5.8467E-07	0.3292	0.4530	0.7481	6.0223E-02		
14.790	5.6871E-06	4.8110E-07	0.4310	0.2578	0.5976	5.0499E-02		
15.080	4.2920E-06	3.8348E-07	0.4824	0.1045	0.4594	4.1005E-02		
15.370	3.0900E-06	2.9504E-07	0.4948	1.5442E-02	0.3369	3.2128E-02		
15.660	2.0863E-06	2.1762E-07	0.4786	9.3581E-02	0.2315	2.4125E-02		
15.950	1.2742E-06	1.5199E-07	0.4428	0.1480	0.1439	1.7147E-02		

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16.240	6.3954E-07	9.8068E-08	0.3946	0.1796	7.3489E-02	1.1257E-02
16.530	1.6288E-07	5.5220E-08	0.3400	0.1930	1.9036E-02	6.4468E-03
16.820	-1.7249E-07	2.2412E-08	0.2837	0.1927	-2.0476E-02	2.6606E-03
17.110	-3.9258E-07	-5.1524E-10	0.2290	0.1825	-4.7374E-02	-6.2244E-05
17.400	-5.2373E-07	-5.5239E-09	0.1783	0.1659	-6.4229E-02	-6.7818E-04
17.690	-5.8563E-07	-8.6888E-09	0.1330	0.1453	-7.2970E-02	-1.0838E-03
17.980	-5.9586E-07	-1.0395E-08	9.4054E-02	0.1231	-7.5415E-02	-1.3170E-03
18.270	-5.6955E-07	-1.0991E-08	6.1583E-02	0.1009	-7.3204E-02	-1.4142E-03
18.560	-5.1932E-07	-1.0782E-08	3.5433E-02	7.9819E-02	-6.7767E-02	-1.4085E-03
18.850	-4.5532E-07	-1.0027E-08	1.5147E-02	6.0662E-02	-6.0309E-02	-1.3296E-03
19.140	-3.8543E-07	-8.9362E-09	1.4077E-03	4.3893E-02	-5.1809E-02	-1.2025E-03
19.430	-3.1552E-07	-7.6759E-09	1.0503E-02	2.9709E-02	-4.3031E-02	-1.0480E-03
19.720	-2.4967E-07	-6.3717E-09	1.7332E-02	1.8110E-02	-3.4541E-02	-8.8246E-04
20.010	-1.9056E-07	-5.1143E-09	2.1160E-02	8.9486E-03	-2.6737E-02	-7.1837E-04
20.300	-1.3966E-07	-3.9645E-09	2.2660E-02	2.0762E-03	-1.9870E-02	-5.6465E-04
20.590	-9.7570E-08	-2.9586E-09	2.2426E-02	3.0981E-03	-1.4073E-02	-4.2719E-04
20.880	-6.4191E-08	-2.1140E-09	2.0961E-02	6.6004E-03	-9.3847E-03	-3.0941E-04
21.170	-3.8958E-08	-1.4338E-09	1.8673E-02	8.8634E-03	-5.7721E-03	-2.1267E-04
21.460	-2.0982E-08	-9.1029E-10	1.5876E-02	1.0195E-02	-3.1499E-03	-1.3681E-04
21.750	-9.1766E-09	-5.2867E-10	1.2798E-02	1.0872E-02	-1.3957E-03	-8.0492E-05
22.040	-2.3473E-09	-2.6943E-10	9.5941E-03	1.1133E-02	-3.6161E-04	-4.1551E-05
22.330	7.9637E-10	-1.1029E-10	6.3542E-03	1.1168E-02	1.2438E-04	-1.7226E-05
22.620	1.4287E-09	-2.7536E-11	3.1217E-03	1.1118E-02	2.2595E-04	-4.3548E-06
22.910	8.1150E-10	1.0143E-11	2.4276E-04	6.8757E-03	2.9034E-02	3.6291E-04
23.200	2.3269E-10	2.1212E-11	8.6895E-04	8.0660E-04	1.3573E-02	1.2373E-03
23.490	2.3242E-12	9.3204E-12	4.9985E-04	1.2961E-03	1.8800E-04	7.5391E-04
23.780	-2.7611E-11	1.5492E-12	1.1777E-04	8.8822E-04	-2.8562E-03	1.6026E-04
24.070	-1.1672E-11	-1.2924E-13	1.5426E-05	2.3848E-04	-1.4706E-03	-1.6285E-05
24.360	-1.5534E-12	-9.6714E-14	2.0597E-05	1.7862E-05	-2.3076E-04	-1.4367E-05
24.650	6.2107E-13	-2.1443E-14	6.0136E-06	3.4891E-05	1.0627E-04	-3.6691E-06
24.940	4.2336E-13	6.1628E-15	4.0748E-07	1.1462E-05	5.5319E-05	8.0527E-07

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25.230	8.0434E-14	7.9232E-15	6.3508E-07	1.0558E-06	1.6730E-05	1.6480E-06
25.520	-7.7403E-15	1.6154E-15	2.2530E-07	1.0786E-06	-2.2086E-06	4.6093E-07
25.810	-6.1709E-15	-3.1602E-17	1.0438E-08	4.0828E-07	-2.2380E-06	-1.1461E-08
26.100	-7.8966E-16	-3.0013E-17	1.1514E-08	2.2137E-08	-3.4745E-07	-1.3206E-08
26.390	1.4274E-16	-3.6784E-18	2.6054E-09	2.0018E-08	7.3846E-08	-1.9030E-09
26.680	5.3549E-17	2.0464E-18	9.8072E-11	4.6935E-09	3.1844E-08	1.2169E-09
26.970	2.4760E-18	7.9012E-19	1.1702E-10	1.4949E-10	1.4856E-09	4.7407E-10
27.260	-1.6604E-18	3.8868E-20	1.3889E-11	2.0605E-10	-9.9626E-10	2.3321E-11
27.550	-3.4482E-19	-7.5735E-21	2.4854E-12	2.5522E-11	-2.0689E-10	-4.5441E-12
27.840	1.3751E-20	-1.5823E-21	9.1599E-13	4.2160E-12	8.2503E-12	-9.4939E-13
28.130	1.5953E-20	1.8344E-22	4.2236E-14	1.6303E-12	9.5717E-12	1.1007E-13
28.420	1.8641E-21	2.3447E-22	2.9630E-14	8.2319E-14	1.1184E-12	1.4068E-13
28.710	-3.4206E-22	2.8653E-23	5.8502E-15	5.1090E-14	-2.0524E-13	1.7192E-14
29.000	-2.2492E-22	-4.8289E-24	0.0000	0.0000	-1.3495E-13	-2.8973E-15

* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

3.7139E-03 0.015734 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1245.2 196.24 19.763 -0.019958 -11.240 187.58



STR, KN/ M**2

1.3266E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
3.7139E-03	0.015734	8.8464E-04	-1.3759E-06	4.4489E-05	-3.7232E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
1245.2	196.24	19.763	-0.019958	-11.240	187.58

STR, KN/ M**2

1.3266E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.5734E-02	8.8464E-04	188.35	196.49	0.0000	0.0000
0.2900	1.4581E-02	8.6424E-04	131.29	194.20	14.702	0.8872
0.5800	1.3376E-02	8.3115E-04	75.973	187.59	30.833	1.9506
0.8700	1.2143E-02	7.8765E-04	27.164	176.53	45.481	3.0043
1.1600	1.0902E-02	7.3596E-04	35.249	161.54	57.860	3.9780
1.4500	9.6748E-03	6.7821E-04	79.332	143.45	66.855	4.7710



1.7400	8.4794E-03	6.1640E-04	119.54	123.26	72.377	5.3489
2.0300	7.3318E-03	5.5234E-04	153.64	101.81	75.582	5.7735
2.3200	6.2458E-03	4.8771E-04	181.31	80.937	68.323	5.3955
2.6100	5.2325E-03	4.2396E-04	203.16	60.935	69.617	5.7001
2.9000	4.3005E-03	3.6237E-04	219.05	40.866	68.804	5.8537
3.1900	3.4562E-03	3.0403E-04	229.04	20.923	70.148	6.2288
3.4800	2.7037E-03	2.4982E-04	233.02	4.6321	70.418	6.5656
3.7700	2.0446E-03	2.0043E-04	230.96	20.065	69.642	6.8850
4.0600	1.4779E-03	1.5629E-04	222.93	38.942	60.650	6.4084
4.3500	1.0006E-03	1.1763E-04	209.69	54.105	43.927	5.1600
4.6400	6.0721E-04	8.4450E-05	192.64	64.595	28.397	3.9462
4.9300	2.9099E-04	5.6569E-05	173.11	70.810	14.442	2.8053
5.2200	4.4095E-05	3.3673E-05	152.27	73.242	2.3148	1.7663
5.5100	-1.4030E-04	1.5353E-05	131.17	72.442	-7.7609	0.8492
5.8000	-2.6911E-04	1.1357E-06	110.65	68.981	-15.656	6.6070E-02
6.0900	-3.5500E-04	-2.8386E-06	91.434	64.223	-16.358	-0.1309
6.3800	-4.0545E-04	-5.1220E-06	73.581	58.882	-19.479	-0.2463
6.6700	-4.2739E-04	-6.6176E-06	57.377	52.786	-21.372	-0.3312
6.9600	-4.2711E-04	-7.4668E-06	42.994	46.279	-22.197	-0.3884
7.2500	-4.1018E-04	-7.8002E-06	30.514	39.655	-22.123	-0.4210
7.5400	-3.8146E-04	-7.7356E-06	19.937	33.159	-21.323	-0.4328
7.8300	-3.4504E-04	-7.3769E-06	11.200	26.983	-19.965	-0.4272
8.1200	-3.0431E-04	-6.8134E-06	4.1927	21.272	-18.205	-0.4079
8.4100	-2.6198E-04	-6.1203E-06	1.3923	16.124	-16.188	-0.3785
8.7000	-2.2017E-04	-5.3589E-06	5.2758	11.599	-14.037	-0.3419
8.9900	-1.8042E-04	-4.5780E-06	8.0793	7.7210	-11.857	-0.3011
9.2800	-1.4383E-04	-3.8148E-06	9.8496	4.4867	-9.7348	-0.2584
9.5700	-1.1108E-04	-3.0963E-06	10.769	1.8693	-7.7362	-0.2158
9.8600	-8.2517E-05	-2.4408E-06	11.011	0.2919	-5.9091	-0.1749
10.150	-5.8238E-05	-1.8593E-06	10.734	1.7081	-4.2848	-0.1369
10.440	-3.8132E-05	-1.3570E-06	10.078	2.7831	-2.8804	-0.1026



10.730	-2.1942E-05	-9.3415E-07	9.1662	3.4713	-1.7005	-7.2457E-02
11.020	-9.3122E-06	-5.8781E-07	8.1016	3.8390	-0.7400	-4.6749E-02
11.310	1.7089E-07	-3.1239E-07	6.9681	3.9498	1.3916E-02	-2.5458E-02
11.600	7.1010E-06	-1.0074E-07	5.8317	3.8628	0.5927	-8.4078E-03
11.890	1.1768E-05	1.8431E-07	4.7423	3.6311	1.0054	1.5732E-02
12.180	1.4537E-05	5.4265E-07	3.7350	3.3012	1.2704	4.7385E-02
12.470	1.5809E-05	7.7171E-07	2.8326	2.9121	1.4127	6.8903E-02
12.760	1.5948E-05	8.9713E-07	2.0477	2.4960	1.4564	8.1864E-02
13.050	1.5266E-05	9.4228E-07	1.3843	2.0783	1.4242	8.7834E-02
13.340	1.4030E-05	9.2781E-07	0.8400	1.6779	1.3364	8.8307E-02
13.630	1.2458E-05	8.7142E-07	0.4077	1.3085	1.2112	8.4652E-02
13.920	1.0722E-05	7.8790E-07	8.1761E-02	0.9786	1.0635	7.8086E-02
14.210	8.9564E-06	6.8916E-07	0.1646	0.6929	0.9060	6.9654E-02
14.500	7.2562E-06	5.8450E-07	0.3294	0.4530	0.7483	6.0224E-02
14.790	5.6881E-06	4.8089E-07	0.4312	0.2578	0.5977	5.0493E-02
15.080	4.2926E-06	3.8325E-07	0.4825	0.1045	0.4595	4.0993E-02
15.370	3.0904E-06	2.9480E-07	0.4949	1.5706E-02	0.3369	3.2112E-02
15.660	2.0864E-06	2.1740E-07	0.4788	9.3650E-02	0.2316	2.4107E-02
15.950	1.2742E-06	1.5178E-07	0.4429	0.1481	0.1439	1.7129E-02
16.240	6.3944E-07	9.7883E-08	0.3947	0.1796	7.3479E-02	1.1239E-02
16.530	1.6271E-07	5.5060E-08	0.3401	0.1930	1.9017E-02	6.4301E-03
16.820	-1.7384E-07	2.2279E-08	0.2837	0.1927	-2.0643E-02	2.6456E-03
17.110	-3.9372E-07	-5.2048E-10	0.2290	0.1826	-4.7526E-02	-6.2879E-05
17.400	-5.2465E-07	-5.5285E-09	0.1783	0.1659	-6.4361E-02	-6.7876E-04
17.690	-5.8634E-07	-8.6926E-09	0.1330	0.1454	-7.3081E-02	-1.0843E-03
17.980	-5.9638E-07	-1.0398E-08	9.4065E-02	0.1232	-7.5504E-02	-1.3175E-03
18.270	-5.6991E-07	-1.0993E-08	6.1587E-02	0.1009	-7.3272E-02	-1.4145E-03
18.560	-5.1954E-07	-1.0784E-08	3.5432E-02	7.9833E-02	-6.7816E-02	-1.4088E-03
18.850	-4.5543E-07	-1.0028E-08	1.5142E-02	6.0671E-02	-6.0342E-02	-1.3298E-03
19.140	-3.8546E-07	-8.9371E-09	1.3999E-03	4.3897E-02	-5.1828E-02	-1.2026E-03
19.430	-3.1548E-07	-7.6763E-09	1.0511E-02	2.9711E-02	-4.3038E-02	-1.0481E-03

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19.720	-2.4959E-07	-6.3719E-09	1.7341E-02	1.8109E-02	-3.4540E-02	-8.8251E-04
20.010	-1.9045E-07	-5.1143E-09	2.1169E-02	8.9459E-03	-2.6730E-02	-7.1839E-04
20.300	-1.3955E-07	-3.9643E-09	2.2668E-02	2.0481E-03	-1.9860E-02	-5.6464E-04
20.590	-9.7458E-08	-2.9583E-09	2.2433E-02	3.1024E-03	-1.4061E-02	-4.2717E-04
20.880	-6.4087E-08	-2.1138E-09	2.0967E-02	6.6049E-03	-9.3724E-03	-3.0938E-04
21.170	-3.8868E-08	-1.4335E-09	1.8678E-02	8.8679E-03	-5.7605E-03	-2.1263E-04
21.460	-2.0908E-08	-9.1006E-10	1.5880E-02	1.0199E-02	-3.1398E-03	-1.3678E-04
21.750	-9.1207E-09	-5.2848E-10	1.2801E-02	1.0876E-02	-1.3876E-03	-8.0465E-05
22.040	-2.3086E-09	-2.6929E-10	9.5955E-03	1.1137E-02	-3.5575E-04	-4.1531E-05
22.330	7.9969E-10	-1.1020E-10	6.3545E-03	1.1172E-02	1.2490E-04	-1.7213E-05
22.620	1.4305E-09	-2.7491E-11	3.1210E-03	1.1121E-02	2.2624E-04	-4.3479E-06
22.910	8.1206E-10	1.0406E-11	2.4621E-04	6.8764E-03	2.9054E-02	3.7232E-04
23.200	2.3272E-10	2.1193E-11	8.7005E-04	7.8892E-04	1.3575E-02	1.2362E-03
23.490	1.8379E-12	9.2731E-12	5.0016E-04	1.2980E-03	1.4867E-04	7.5009E-04
23.780	-2.7816E-11	1.5301E-12	1.1775E-04	8.8885E-04	-2.8774E-03	1.5828E-04
24.070	-1.1699E-11	-1.2938E-13	1.5742E-05	2.3848E-04	-1.4741E-03	-1.6301E-05
24.360	-1.5426E-12	-9.6677E-14	2.0616E-05	1.8335E-05	-2.2916E-04	-1.4362E-05
24.650	6.2209E-13	-2.1417E-14	6.0152E-06	3.4926E-05	1.0645E-04	-3.6647E-06
24.940	4.2365E-13	6.2958E-15	3.9929E-07	1.1465E-05	5.5357E-05	8.2265E-07
25.230	8.0439E-14	7.9137E-15	6.3572E-07	1.0415E-06	1.6731E-05	1.6460E-06
25.520	-7.8625E-15	1.6040E-15	2.2539E-07	1.0798E-06	-2.2434E-06	4.5766E-07
25.810	-6.1923E-15	-3.1696E-17	1.0254E-08	4.0846E-07	-2.2457E-06	-1.1495E-08
26.100	-7.8766E-16	-3.0007E-17	1.1525E-08	2.1815E-08	-3.4657E-07	-1.3203E-08
26.390	1.4295E-16	-3.6733E-18	2.6061E-09	2.0037E-08	7.3951E-08	-1.9003E-09
26.680	5.3576E-17	2.0568E-18	1.0031E-10	4.6948E-09	3.1860E-08	1.2231E-09
26.970	2.4721E-18	7.8702E-19	1.1710E-10	1.5322E-10	1.4833E-09	4.7221E-10
27.260	-1.6698E-18	3.7998E-20	1.3888E-11	2.0620E-10	-1.0019E-09	2.2799E-11
27.550	-3.4496E-19	-7.5748E-21	2.4888E-12	2.5520E-11	-2.0698E-10	-4.5449E-12
27.840	1.3800E-20	-1.5810E-21	9.1645E-13	4.2221E-12	8.2802E-12	-9.4859E-13
28.130	1.5964E-20	1.8872E-22	4.1683E-14	1.6312E-12	9.5784E-12	1.1323E-13
28.420	1.8638E-21	2.3399E-22	2.9658E-14	8.1363E-14	1.1183E-12	1.4039E-13

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28.710 -3.4513E-22 2.8367E-23 5.8519E-15 5.1138E-14 -2.0708E-13 1.7020E-14

29.000 -2.2503E-22 -4.8298E-24 0.0000 0.0000 -1.3502E-13 -2.8979E-15

* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

3.7332E-03 0.015736 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1250.9 228.99 22.296 -0.019958 -12.195 225.95

STR, KN/ M**2

1.5095E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

3.7332E-03 0.015736 8.8464E-04 -1.3759E-06 4.4489E-05 -3.7232E-03



AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1250.9 228.99 22.296 -0.019958 -12.195 225.95

STR, KN/ M**2

1.5095E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.5736E-02	8.8464E-04	226.28	229.28	0.0000	0.0000
0.2900	1.4575E-02	8.6360E-04	159.56	226.45	18.169	1.0967
0.5800	1.3351E-02	8.2889E-04	94.873	218.30	38.047	2.4065
0.8700	1.2090E-02	7.8307E-04	35.867	204.66	55.985	3.6948
1.1600	1.0818E-02	7.2864E-04	32.619	186.25	70.981	4.8719
1.4500	9.5584E-03	6.6797E-04	82.769	164.11	81.656	5.8127
1.7400	8.3315E-03	6.0328E-04	128.39	139.52	87.917	6.4761
2.0300	7.1561E-03	5.3660E-04	166.59	113.54	91.201	6.9387
2.3200	6.0475E-03	4.6971E-04	197.05	88.458	81.784	6.4285
2.6100	5.0177E-03	4.0419E-04	220.54	64.630	82.534	6.7230
2.9000	4.0763E-03	3.4140E-04	236.97	40.975	80.628	6.8227
3.1900	3.2298E-03	2.8245E-04	246.51	17.873	81.043	7.1588
3.4800	2.4821E-03	2.2824E-04	249.11	7.4489	79.921	7.4208
3.7700	1.8342E-03	1.7941E-04	244.85	28.681	77.237	7.6248
4.0600	1.2843E-03	1.3637E-04	233.98	49.322	65.161	6.9190
4.3500	8.2811E-04	9.9249E-05	217.51	65.290	44.949	5.3870
4.6400	4.5906E-04	6.7945E-05	197.15	75.660	26.543	3.9286
4.9300	1.6897E-04	4.2177E-05	174.46	81.016	10.368	2.5880

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5.2200	-5.1254E-05	2.1523E-05	150.80	82.040	-3.3267	1.3969
5.5100	-2.0776E-04	5.4765E-06	127.35	79.464	-14.220	0.3748
5.8000	-3.1265E-04	-1.9236E-06	105.05	74.031	-22.507	-0.1385
6.0900	-3.7681E-04	-4.5150E-06	84.631	67.495	-21.484	-0.2574
6.3800	-4.0819E-04	-6.2224E-06	66.026	60.682	-24.265	-0.3699
6.6700	-4.1400E-04	-7.2067E-06	49.486	53.243	-25.617	-0.4459
6.9600	-4.0068E-04	-7.6166E-06	35.137	45.573	-25.766	-0.4898
7.2500	-3.7377E-04	-7.5862E-06	23.003	37.998	-24.944	-0.5063
7.5400	-3.3800E-04	-7.2332E-06	13.019	30.776	-23.378	-0.5003
7.8300	-2.9724E-04	-6.6585E-06	5.0584	24.097	-21.281	-0.4767
8.1200	-2.5455E-04	-5.9461E-06	1.2686	18.094	-18.844	-0.4402
8.4100	-2.1232E-04	-5.1643E-06	5.5527	12.843	-16.234	-0.3948
8.7000	-1.7228E-04	-4.3662E-06	8.6223	8.3763	-13.591	-0.3444
8.9900	-1.3562E-04	-3.5920E-06	10.508	4.6874	-11.028	-0.2921
9.2800	-1.0305E-04	-2.8701E-06	11.429	1.7408	-8.6304	-0.2404
9.5700	-7.4940E-05	-2.2189E-06	11.594	0.5777	-6.4582	-0.1912
9.8600	-5.1339E-05	-1.6490E-06	11.191	2.1794	-4.5490	-0.1461
10.150	-3.2089E-05	-1.1642E-06	10.386	3.3027	-2.9214	-0.1060
10.440	-1.6876E-05	-7.6351E-07	9.3200	3.9812	-1.5774	-7.1366E-02
10.730	-5.2824E-06	-4.4228E-07	8.1113	4.2979	-0.5066	-4.2415E-02
11.020	3.1624E-06	-1.9340E-07	6.8532	4.3314	0.3110	-1.9017E-02
11.310	9.1270E-06	-8.3226E-09	5.6176	4.1534	0.9196	-8.3859E-04
11.600	1.2872E-05	4.0876E-07	4.4564	3.8275	1.3283	4.2179E-02
11.890	1.4833E-05	6.8897E-07	3.4048	3.4077	1.5666	7.2769E-02
12.180	1.5430E-05	8.4917E-07	2.4832	2.9388	1.6672	9.1753E-02
12.470	1.5032E-05	9.1633E-07	1.7006	2.4562	1.6608	0.1012
12.760	1.3954E-05	9.1437E-07	1.0568	1.9868	1.5756	0.1032
13.050	1.2453E-05	8.6385E-07	0.5451	1.5500	1.4363	9.9637E-02
13.340	1.0733E-05	7.8187E-07	0.1540	1.1583	1.2641	9.2081E-02
13.630	8.9525E-06	6.8218E-07	0.1325	0.8189	1.0761	8.1999E-02
13.920	7.2242E-06	5.7546E-07	0.3257	0.5344	0.8859	7.0569E-02

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14.210	5.6264E-06	4.6959E-07	0.4454	0.3038	0.7037	5.8728E-02
14.500	4.2069E-06	3.7012E-07	0.5056	0.1240	0.5364	4.7187E-02
14.790	2.9901E-06	2.8059E-07	0.5205	1.6157E-02	0.3885	3.6454E-02
15.080	1.9816E-06	2.0294E-07	0.5024	0.1047	0.2623	2.6860E-02
15.370	1.1745E-06	1.3790E-07	0.4621	0.1657	0.1583	1.8586E-02
15.660	5.5238E-07	8.5269E-08	0.4081	0.1996	7.5795E-02	1.1700E-02
15.950	9.3745E-08	4.4221E-08	0.3476	0.2125	1.3091E-02	6.1751E-03
16.240	-2.2306E-07	1.3530E-08	0.2859	0.2098	-3.1690E-02	1.9223E-03
16.530	-4.2071E-07	-2.4295E-09	0.2266	0.1961	-6.0794E-02	-3.5107E-04
16.820	-5.3051E-07	-6.7960E-09	0.1725	0.1755	-7.7950E-02	-9.9857E-04
17.110	-5.7348E-07	-9.3630E-09	0.1250	0.1511	-8.5656E-02	-1.3985E-03
17.400	-5.6804E-07	-1.0544E-08	8.4916E-02	0.1255	-8.6225E-02	-1.6005E-03
17.690	-5.2977E-07	-1.0704E-08	5.2219E-02	0.1004	-8.1703E-02	-1.6508E-03
17.980	-4.7135E-07	-1.0157E-08	2.6579E-02	7.7121E-02	-7.3839E-02	-1.5911E-03
18.270	-4.0272E-07	-9.1600E-09	7.3368E-03	5.6493E-02	-6.4067E-02	-1.4572E-03
18.560	-3.3134E-07	-7.9180E-09	6.3963E-03	3.8895E-02	-5.3517E-02	-1.2789E-03
18.850	-2.6251E-07	-6.5860E-09	1.5419E-02	2.4437E-02	-4.3036E-02	-1.0798E-03
19.140	-1.9971E-07	-5.2764E-09	2.0715E-02	1.3011E-02	-3.3227E-02	-8.7787E-04
19.430	-1.4500E-07	-4.0650E-09	2.3114E-02	4.3615E-03	-2.4476E-02	-6.8620E-04
19.720	-9.9285E-08	-2.9981E-09	2.3371E-02	1.9275E-03	-1.7001E-02	-5.1339E-04
20.010	-6.2666E-08	-2.0988E-09	2.2136E-02	6.0584E-03	-1.0883E-02	-3.6449E-04
20.300	-3.4652E-08	-1.3728E-09	1.9941E-02	8.6148E-03	-6.1020E-03	-2.4175E-04
20.590	-1.4383E-08	-8.1353E-10	1.7203E-02	9.9253E-03	-2.5678E-03	-1.4524E-04
20.880	-7.9355E-10	-4.0602E-10	1.4229E-02	1.0342E-02	-1.4360E-04	-7.3473E-05
21.170	7.3665E-09	-1.3043E-10	1.1232E-02	1.0173E-02	1.3509E-03	-2.3920E-05
21.460	1.1236E-08	1.2405E-10	8.3438E-03	9.6743E-03	2.0879E-03	2.3050E-05
21.750	1.1765E-08	3.8548E-10	5.6268E-03	9.0505E-03	2.2147E-03	7.2565E-05
22.040	1.0040E-08	4.3854E-10	3.0932E-03	8.4518E-03	1.9144E-03	8.3620E-05
22.330	7.0767E-09	3.5715E-10	7.1948E-04	7.9760E-03	1.3666E-03	6.8969E-05
22.620	3.8259E-09	2.1246E-10	1.5412E-03	7.6694E-03	7.4812E-04	4.1544E-05
22.910	1.1925E-09	7.3331E-11	3.7369E-03	1.3737E-03	4.2665E-02	2.6236E-03

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23.200	5.5963E-11	7.2185E-12	2.3422E-03	5.2880E-03	3.2645E-03	4.2108E-04
23.490	-1.3858E-10	-2.0614E-12	6.7156E-04	4.0906E-03	-1.1210E-02	-1.6675E-04
23.780	-6.9860E-11	-1.2160E-12	3.0230E-05	1.3411E-03	-7.2266E-03	-1.2578E-04
24.070	-1.3048E-11	-2.6712E-13	1.0642E-04	1.6838E-05	-1.6441E-03	-3.3658E-05
24.360	2.3746E-12	8.3803E-14	4.0046E-05	1.7779E-04	3.5276E-04	1.2449E-05
24.650	2.1565E-12	1.1618E-13	3.3206E-06	7.3129E-05	3.6900E-04	1.9879E-05
24.940	6.0852E-13	3.7599E-14	2.3705E-06	8.0862E-06	7.9513E-05	4.9130E-06
25.230	1.0110E-14	2.0493E-15	1.3721E-06	3.7506E-06	2.1028E-06	4.2626E-07
25.520	-3.7639E-14	-6.1131E-16	1.9602E-07	2.4538E-06	-1.0740E-05	-1.7443E-07
25.810	-8.7701E-15	-1.6926E-16	5.1039E-08	3.7667E-07	-3.1806E-06	-6.1386E-08
26.100	2.0413E-16	-1.8424E-18	2.2498E-08	8.5436E-08	8.9819E-08	-8.1067E-10
26.390	4.3054E-16	2.3559E-17	1.4977E-09	4.0115E-08	2.2273E-07	1.2188E-08
26.680	5.7173E-17	3.7999E-18	7.6888E-10	2.8832E-09	3.3999E-08	2.2597E-09
26.970	-8.0061E-18	-1.0497E-19	1.7514E-10	1.3322E-09	-4.8036E-09	-6.2980E-11
27.260	-3.3712E-18	-6.0693E-20	3.7025E-12	3.1471E-10	-2.0227E-09	-3.6416E-11
27.550	-1.9418E-19	-5.0263E-21	7.3994E-12	4.7230E-12	-1.1651E-10	-3.0158E-12
27.840	1.0542E-19	5.3570E-21	9.6814E-13	1.3005E-11	6.3252E-11	3.2142E-12
28.130	2.3692E-20	1.4536E-21	1.4349E-13	1.7713E-12	1.4215E-11	8.7215E-13
28.420	-5.5002E-22	9.1322E-24	5.9352E-14	2.4150E-13	-3.3001E-13	5.4793E-15
28.710	-1.0101E-21	-1.7230E-23	3.4505E-15	1.0233E-13	-6.0605E-13	-1.0338E-14
29.000	-1.3232E-22	-3.3634E-24	0.0000	0.0000	-7.9394E-14	-2.0180E-15

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17.3 SLEr/SLD

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GROUP for Windows, Version 2019.11.11

Serial Number : 447513991

Analysis of A Group of Piles

Subjected to Axial and Lateral Loading

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Name of input data file : Fondazione impalcato Maltempo-pali 600-SLEr-aggstrat.gp11d

Name of output echo file : Fondazione impalcato Maltempo-pali 600-SLEr-aggstrat.gp11e

Name of output results file : Fondazione impalcato Maltempo-pali 600-SLEr-aggstrat.gp11o

Name of output summary file : Fondazione impalcato Maltempo-pali 600-SLEr-aggstrat.gp11t

Name of plot output file : Fondazione impalcato Maltempo-pali 600-SLEr-aggstrat.gp11p

Name of runtime file : Fondazione impalcato Maltempo-pali 600-SLEr-aggstrat.gp11r

Time and Date of Analysis

Date: March 20, 2023 Time: 11:25:57



***** COMPUTATION RESULTS *****

New Group

***** LOAD CASES RESULTS *****

LOAD CASE : 1

CASE NAME : SLEr40

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000
4	0.3353	1.0000
5	0.3414	1.0000
6	0.4646	1.0000



7	0.6923	1.0000
8	0.5600	1.0000
9	0.5600	1.0000
10	0.5600	1.0000
11	0.5600	1.0000
12	0.6923	1.0000

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

4391.73 1841.77 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

0.00000 0.00000 -4480.92

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.17872E-03 0.0129962 -1.11592E-14

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

1.39523E-13 -8.29043E-17 -3.31556E-03



NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE : 2

CASE NAME : SLD11

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000
4	0.3353	1.0000
5	0.3414	1.0000
6	0.4648	1.0000
7	0.6921	1.0000
8	0.5598	1.0000
9	0.5598	1.0000
10	0.5598	1.0000
11	0.5599	1.0000
12	0.6923	1.0000

* TABLE L * COMPUTATION ON PILE CAP



* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

4127.32 2005.19 96.7800

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

5.52100 220.972 -4441.03

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.12897E-03 0.0140972 3.75819E-04

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

-1.85438E-06 1.70554E-05 -3.45415E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE : 3

CASE NAME : SLD13

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z



DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000
4	0.3353	1.0000
5	0.3414	1.0000
6	0.4647	1.0000
7	0.6923	1.0000
8	0.5600	1.0000
9	0.5600	1.0000
10	0.5600	1.0000
11	0.5600	1.0000
12	0.6923	1.0000

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN
 4115.34 2055.25 29.0340

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M
 1.65600 66.2920 -4456.67



* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.13177E-03 0.0144710 1.13595E-04

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

-6.18014E-07 5.12512E-06 -3.51190E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE ENV : 1

CASE NAME : MINIMUM ENVELOPE

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

4115.34 1841.77 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

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0.00000 0.00000 -4480.92

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M
1.12897E-03 0.0129962 -1.11592E-14

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD
-1.85438E-06 -8.29043E-17 -3.51190E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE

* PILE GROUP * 1

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
-1.1759E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

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-480.97 150.04 -2.4267E-09 -0.026900 -15.332 118.28

STR, KN/ M**2

6996.1

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-1.1759E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-480.97 150.04 -2.4267E-09 -0.026900 -15.332 118.28

STR, KN/ M**2

6996.1

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.2996E-02	-1.0185E-13	118.28	150.00	0.0000	0.0000
0.2900	1.2011E-02	-1.0084E-13	75.160	148.38	11.418	-9.5868E-11
0.5800	1.0996E-02	-9.8152E-14	33.017	143.25	23.977	-2.1402E-10
0.8700	9.9671E-03	-9.4056E-14	7.1047	134.63	35.451	-3.3454E-10
1.1600	8.9414E-03	-8.8826E-14	32.294	122.95	45.102	-4.4806E-10



1.4500	7.9335E-03	-8.2721E-14	70.217	108.87	52.013	-5.4232E-10
1.7400	6.9566E-03	-7.5984E-14	103.61	93.219	55.923	-6.1083E-10
2.0300	6.0224E-03	-6.8842E-14	130.90	76.777	57.473	-6.5698E-10
2.3200	5.1407E-03	-6.1501E-14	150.40	61.026	51.151	-6.1195E-10
2.6100	4.3192E-03	-5.4141E-14	165.61	46.062	52.055	-6.5252E-10
2.9000	3.5640E-03	-4.6927E-14	176.48	31.057	51.421	-6.7706E-10
3.1900	2.8796E-03	-3.9999E-14	183.05	15.955	52.736	-7.3254E-10
3.4800	2.2684E-03	-3.3473E-14	185.21	0.5713	53.356	-7.8732E-10
3.7700	1.7315E-03	-2.7444E-14	182.92	9.9103	53.322	-8.4513E-10
4.0600	1.2679E-03	-2.1977E-14	176.17	26.186	43.176	-7.4841E-10
4.3500	8.7479E-04	-1.7111E-14	165.82	39.441	31.870	-6.2338E-10
4.6400	5.4815E-04	-1.2859E-14	152.82	47.476	21.273	-4.9903E-10
4.9300	2.8272E-04	-9.2126E-15	138.05	52.249	11.644	-3.7943E-10
5.2200	7.2588E-05	-6.1477E-15	122.32	54.396	3.1621	-2.6781E-10
5.5100	-8.8538E-05	-3.6269E-15	106.35	54.265	-4.0674	-1.6662E-10
5.8000	-2.0706E-04	-1.6040E-15	90.736	52.224	-10.005	-7.7503E-11
6.0900	-2.8975E-04	-8.6936E-07	75.979	49.169	-11.088	-3.3264E-02
6.3800	-3.5614E-04	-4.8548E-06	62.164	45.591	-14.209	-0.1937
6.6700	-3.9342E-04	-7.6707E-06	49.504	41.403	-16.339	-0.3185
6.9600	-4.0732E-04	-9.5034E-06	38.137	36.843	-17.580	-0.4101
7.2500	-4.0303E-04	-1.0528E-05	28.136	32.116	-18.052	-0.4715
7.5400	-3.8511E-04	-1.0907E-05	19.520	27.400	-17.878	-0.5063
7.8300	-3.5754E-04	-1.0784E-05	12.263	22.837	-17.181	-0.5182
8.1200	-3.2370E-04	-1.0289E-05	6.2989	18.540	-16.083	-0.5111
8.4100	-2.8636E-04	-9.5312E-06	1.5367	14.590	-14.695	-0.4890
8.7000	-2.4777E-04	-8.6052E-06	1.2478	11.044	-13.119	-0.4556
8.9900	-2.0967E-04	-7.5877E-06	4.5090	7.9319	-11.444	-0.4141
9.2800	-1.7339E-04	-6.5401E-06	6.7088	5.2647	-9.7461	-0.3676
9.5700	-1.3983E-04	-5.5101E-06	7.8691	3.0359	-8.0880	-0.3187
9.8600	-1.0960E-04	-4.5330E-06	8.4469	1.2252	-6.5179	-0.2696
10.150	-8.3007E-05	-3.6333E-06	8.5596	0.1521	-5.0720	-0.2220



10.440	-6.0165E-05	-2.8264E-06	8.3148	1.0842	-3.7744	-0.1773
10.730	-4.1004E-05	-2.1204E-06	7.8082	2.0094	-2.6393	-0.1365
11.020	-2.5332E-05	-1.5173E-06	7.1229	2.5331	-1.6718	-0.1001
11.310	-1.2867E-05	-1.0145E-06	6.3293	2.8109	-0.8701	-6.8601E-02
11.600	-3.2705E-06	-6.0621E-07	5.4851	2.9094	-0.2265	-4.1981E-02
11.890	3.8218E-06	-2.8420E-07	4.6362	2.8678	0.2709	-2.0145E-02
12.180	8.7835E-06	-3.8898E-08	3.8177	2.7216	0.6370	-2.8206E-03
12.470	1.1577E-05	-3.1807E-17	3.0550	2.5021	0.8584	-2.3586E-12
12.760	1.2890E-05	-6.8543E-17	2.3650	2.2360	0.9768	-5.1945E-12
13.050	1.3256E-05	-9.1906E-17	1.7574	1.9455	1.0262	-7.1149E-12
13.340	1.2918E-05	-1.0453E-16	1.2365	1.6487	1.0211	-8.2626E-12
13.630	1.2084E-05	-1.0881E-16	0.8017	1.3593	0.9749	-8.7783E-12
13.920	1.0929E-05	-1.0685E-16	0.4489	1.0875	0.8996	-8.7950E-12
14.210	9.5947E-06	-1.0049E-16	0.1719	0.8403	0.8054	-8.4348E-12
14.500	8.1913E-06	-9.1224E-17	1.3545E-02	0.6218	0.7009	-7.8062E-12
14.790	6.8028E-06	-8.0305E-17	0.1665	0.4342	0.5932	-7.0027E-12
15.080	5.4895E-06	-6.8699E-17	0.2880	0.2775	0.4876	-6.1027E-12
15.370	4.2915E-06	-5.7143E-17	0.3475	0.1505	0.3882	-5.1694E-12
15.660	3.2328E-06	-4.6168E-17	0.3744	5.0991E-02	0.2977	-4.2519E-12
15.950	2.3241E-06	-3.6131E-17	0.3763	6.8153E-03	0.2178	-3.3864E-12
16.240	1.5660E-06	-2.7245E-17	0.3599	7.0734E-02	0.1493	-2.5980E-12
16.530	9.5224E-07	-1.9609E-17	0.3311	0.1120	9.2357E-02	-1.9019E-12
16.820	4.7106E-07	-1.3236E-17	0.2945	0.1322	4.6456E-02	-1.3053E-12
17.110	1.0787E-07	-8.0745E-18	0.2541	0.1405	1.0814E-02	-8.0948E-13
17.400	-1.5353E-07	-4.0288E-18	0.2128	0.1398	-1.5642E-02	-4.1046E-13
17.690	-3.2969E-07	-9.7646E-19	0.1728	0.1326	-3.4128E-02	-1.0108E-13
17.980	-4.5134E-07	-5.3143E-09	0.1358	0.1210	-4.7455E-02	-5.5869E-04
18.270	-5.2229E-07	-1.0249E-08	0.1026	0.1067	-5.5767E-02	-1.0942E-03
18.560	-5.4488E-07	-1.3173E-08	7.3863E-02	9.1287E-02	-5.9068E-02	-1.4278E-03
18.850	-5.3219E-07	-1.4524E-08	4.9678E-02	7.5722E-02	-5.8560E-02	-1.5980E-03
19.140	-4.9530E-07	-1.4697E-08	2.9966E-02	6.0831E-02	-5.5309E-02	-1.6410E-03

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19.430	-4.4330E-07	-1.4029E-08	1.4431E-02	4.7161E-02	-5.0226E-02	-1.5893E-03
19.720	-3.8344E-07	-1.2803E-08	2.6555E-03	3.5045E-02	-4.4069E-02	-1.4712E-03
20.010	-3.2126E-07	-1.1247E-08	4.3247E-03	2.4650E-02	-3.7446E-02	-1.3109E-03
20.300	-2.6080E-07	-9.5425E-09	1.1301E-02	1.6005E-02	-3.0825E-02	-1.1277E-03
20.590	-2.0488E-07	-7.8233E-09	1.5091E-02	9.0434E-03	-2.4549E-02	-9.3730E-04
20.880	-1.5524E-07	-6.1871E-09	1.6804E-02	3.6267E-03	-1.8854E-02	-7.5136E-04
21.170	-1.1281E-07	-4.6995E-09	1.7162E-02	4.2709E-04	-1.3885E-02	-5.7837E-04
21.460	-7.7899E-08	-3.4011E-09	1.6529E-02	2.8013E-03	-9.7154E-03	-4.2412E-04
21.750	-5.0334E-08	-2.3127E-09	1.5212E-02	5.1319E-03	-6.3596E-03	-2.9217E-04
22.040	-2.9621E-08	-1.4411E-09	1.3452E-02	6.4982E-03	-3.7909E-03	-1.8441E-04
22.330	-1.5052E-08	-7.8333E-10	1.1431E-02	7.1789E-03	-1.9509E-03	-1.0152E-04
22.620	-5.7929E-09	-3.3003E-10	9.2799E-03	7.4947E-03	-7.6027E-04	-4.3309E-05
22.910	-9.4607E-10	-6.8610E-11	7.0796E-03	1.1153E-02	-3.3848E-02	-2.4547E-03
23.200	3.5906E-10	-4.2885E-21	2.8094E-03	1.1686E-02	2.0945E-02	-2.5016E-13
23.490	2.8100E-10	-5.1244E-21	3.0117E-04	5.3534E-03	2.2730E-02	-4.1450E-13
23.780	8.2290E-11	-1.7872E-21	2.9546E-04	8.2331E-04	8.5125E-03	-1.8487E-13
24.070	1.9390E-12	-1.5374E-22	1.7623E-04	4.4643E-04	2.4431E-04	-1.9371E-14
24.360	-9.4004E-12	-4.3607E-13	3.6493E-05	3.1355E-04	-1.3965E-03	-6.4780E-05
24.650	-3.6965E-12	-2.0318E-13	5.6244E-06	7.2129E-05	-6.3251E-04	-3.4766E-05
24.940	-4.6168E-13	-3.4172E-14	5.3385E-06	7.2942E-06	-6.0326E-05	-4.4651E-06
25.230	1.4188E-13	-1.8073E-24	1.3926E-06	9.3269E-06	2.9510E-05	-3.7591E-16
25.520	5.9035E-14	-1.1598E-24	5.9669E-08	2.6054E-06	1.6845E-05	-3.3092E-16
25.810	4.7599E-15	-1.4968E-25	1.1855E-07	5.6715E-08	1.7263E-06	-5.4284E-17
26.100	-2.3881E-15	-1.0040E-16	2.0623E-08	2.0838E-07	-1.0508E-06	-4.4176E-08
26.390	-6.9402E-16	-3.8807E-17	2.3181E-09	3.7807E-08	-3.5904E-07	-2.0076E-08
26.680	-1.1162E-17	-1.9278E-18	1.3038E-09	3.8144E-09	-6.6374E-09	-1.1464E-09
26.970	2.0958E-17	-3.5922E-28	1.0560E-10	2.3084E-09	1.2575E-08	-2.1553E-19
27.260	3.2960E-18	-7.7182E-29	3.5056E-11	1.9828E-10	1.9776E-09	-4.6309E-20
27.550	-3.5274E-19	-8.8386E-21	9.3979E-12	6.0363E-11	-2.1164E-10	-5.3032E-12
27.840	-2.1955E-19	-1.1477E-20	4.3915E-14	1.6825E-11	-1.3173E-10	-6.8861E-12
28.130	-1.9239E-20	-1.3808E-21	3.6052E-13	1.7226E-13	-1.1543E-11	-8.2850E-13

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28.420 4.8285E-21 -7.0062E-32 5.5922E-14 6.3025E-13 2.8971E-12 -4.2037E-23
 28.710 1.3075E-21 -2.7410E-32 5.0278E-15 9.6420E-14 7.8452E-13 -1.6446E-23
 29.000 -2.1597E-22 -5.0492E-24 0.0000 0.0000 -1.2958E-13 -3.0295E-15

* PILE GROUP * 2

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.1617E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -475.29 118.78 -2.0513E-09 -0.026900 -13.614 79.929

STR, KN/ M**2

5187.9

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.1617E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

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AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -475.29 118.78 -2.0513E-09 -0.026900 -13.614 79.929

STR, KN/ M**2

5187.9

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.2996E-02	-1.0185E-13	79.929	118.76	0.0000	0.0000
0.2900	1.2019E-02	-1.0094E-13	45.876	117.56	8.3946	-7.0507E-11
0.5800	1.1023E-02	-9.8519E-14	12.536	113.78	17.659	-1.5783E-10
0.8700	1.0022E-02	-9.4806E-14	4.9765	107.42	26.189	-2.4775E-10
1.1600	9.0286E-03	-9.0037E-14	38.114	98.775	33.460	-3.3368E-10
1.4500	8.0551E-03	-8.4434E-14	68.858	88.298	38.800	-4.0670E-10
1.7400	7.1119E-03	-7.8205E-14	96.223	76.581	42.005	-4.6190E-10
2.0300	6.2085E-03	-7.1548E-14	119.32	64.178	43.531	-5.0166E-10
2.3200	5.3530E-03	-6.4643E-14	135.93	52.192	39.134	-4.7258E-10
2.6100	4.5520E-03	-5.7654E-14	149.10	40.673	40.307	-5.1051E-10
2.9000	3.8106E-03	-5.0729E-14	158.90	28.971	40.394	-5.3773E-10
3.1900	3.1330E-03	-4.3998E-14	165.34	17.002	42.156	-5.9201E-10
3.4800	2.5216E-03	-3.7574E-14	168.25	4.5708	43.575	-6.4931E-10
3.7700	1.9775E-03	-3.1549E-14	167.52	3.1028	44.742	-7.1381E-10
4.0600	1.5006E-03	-2.5995E-14	163.06	16.894	37.545	-6.5040E-10
4.3500	1.0890E-03	-2.0959E-14	155.47	28.665	29.149	-5.6098E-10
4.6400	7.3969E-04	-1.6464E-14	145.45	37.122	21.091	-4.6944E-10

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4.9300	4.4864E-04	-1.2518E-14	133.68	42.149	13.576	-3.7879E-10
5.2200	2.1114E-04	-9.1112E-15	120.79	45.097	6.7577	-2.9161E-10
5.5100	2.2031E-05	-6.2209E-15	107.35	46.185	0.7436	-2.0997E-10
5.8000	-1.2407E-04	-3.8155E-15	93.871	45.654	-4.4045	-1.3545E-10
6.0900	-2.3257E-04	-1.8561E-15	80.773	44.067	-6.5389	-5.2185E-11
6.3800	-3.0958E-04	-1.6973E-07	68.238	41.807	-9.0750	-4.9750E-03
6.6700	-3.7248E-04	-4.1708E-06	56.475	38.913	-11.365	-0.1273
6.9600	-4.0896E-04	-7.0948E-06	45.639	35.567	-12.968	-0.2250
7.2500	-4.2390E-04	-9.0989E-06	35.833	31.934	-13.950	-0.2994
7.5400	-4.2177E-04	-1.0333E-05	27.117	28.160	-14.386	-0.3524
7.8300	-4.0655E-04	-1.0936E-05	19.510	24.372	-14.354	-0.3861
8.1200	-3.8175E-04	-1.1035E-05	12.998	20.675	-13.935	-0.4028
8.4100	-3.5036E-04	-1.0745E-05	7.5403	17.154	-13.210	-0.4051
8.7000	-3.1494E-04	-1.0166E-05	3.0742	13.873	-12.252	-0.3954
8.9900	-2.7758E-04	-9.3851E-06	0.4786	10.878	-11.131	-0.3763
9.2800	-2.3996E-04	-8.4759E-06	2.6185	8.1993	-9.9098	-0.3500
9.5700	-2.0339E-04	-7.4991E-06	5.0487	5.8519	-8.6431	-0.3187
9.8600	-1.6884E-04	-6.5038E-06	6.5756	3.8379	-7.3772	-0.2842
10.150	-1.3699E-04	-5.5282E-06	7.4092	2.1493	-6.1500	-0.2482
10.440	-1.0829E-04	-4.6011E-06	7.8006	0.7698	-4.9911	-0.2121
10.730	-8.2952E-05	-3.7427E-06	7.8366	2.7756E-02	-3.9228	-0.1770
11.020	-6.1046E-05	-2.9665E-06	7.5965	1.0021	-2.9600	-0.1438
11.310	-4.2499E-05	-2.2795E-06	7.1515	1.7350	-2.1116	-0.1133
11.600	-2.7140E-05	-1.6843E-06	6.5637	2.1646	-1.3811	-8.5698E-02
11.890	-1.4731E-05	-1.1795E-06	5.8864	2.4005	-0.7672	-6.1426E-02
12.180	-4.9834E-06	-7.6086E-07	5.1639	2.4978	-0.2655	-4.0538E-02
12.470	2.4133E-06	-4.2220E-07	4.4319	2.4845	0.1315	-2.3000E-02
12.760	7.7794E-06	-1.5584E-07	3.7186	2.3861	0.4332	-8.6764E-03
13.050	1.1280E-05	-1.9826E-18	3.0450	2.2257	0.6416	-1.1277E-13
13.340	1.2995E-05	-4.6177E-17	2.4258	2.0233	0.7547	-2.6818E-12
13.630	1.3739E-05	-7.6825E-17	1.8705	1.7957	0.8143	-4.5538E-12

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13.920	1.3733E-05	-9.6238E-17	1.3840	1.5573	0.8305	-5.8198E-12
14.210	1.3172E-05	-1.0657E-16	0.9675	1.3190	0.8124	-6.5725E-12
14.500	1.2225E-05	-1.0979E-16	0.6196	1.0898	0.7686	-6.9024E-12
14.790	1.1029E-05	-1.0762E-16	0.3363	0.8759	0.7066	-6.8951E-12
15.080	9.6978E-06	-1.0158E-16	0.1125	0.6817	0.6329	-6.6295E-12
15.370	8.3219E-06	-9.2919E-17	1.4891E-02	0.5097	0.5531	-6.1759E-12
15.660	6.9693E-06	-8.2700E-17	0.1635	0.3611	0.4716	-5.5958E-12
15.950	5.6895E-06	-7.1756E-17	0.2659	0.2359	0.3918	-4.9412E-12
16.240	4.5165E-06	-6.0736E-17	0.3179	0.1332	0.3164	-4.2552E-12
16.530	3.4708E-06	-5.0123E-17	0.3428	5.1504E-02	0.2473	-3.5717E-12
16.820	2.5624E-06	-4.0258E-17	0.3469	5.0954E-03	0.1857	-2.9170E-12
17.110	1.7930E-06	-3.1359E-17	0.3356	4.9620E-02	0.1321	-2.3097E-12
17.400	1.1581E-06	-2.3547E-17	0.3131	8.8146E-02	8.6685E-02	-1.7626E-12
17.690	6.4851E-07	-1.6868E-17	0.2834	0.1088	4.9321E-02	-1.2828E-12
17.980	2.5250E-07	-1.1304E-17	0.2496	0.1188	1.9506E-02	-8.7323E-13
18.270	-4.3494E-08	-6.7974E-18	0.2143	0.1211	-3.4121E-03	-5.3325E-13
18.560	-2.5366E-07	-3.2606E-18	0.1792	0.1177	-2.0203E-02	-2.5970E-13
18.850	-3.9203E-07	-5.8768E-19	0.1459	0.1102	-3.1694E-02	-4.7511E-14
19.140	-4.9177E-07	-5.9235E-09	0.1152	9.9945E-02	-4.0347E-02	-4.8596E-04
19.430	-5.4064E-07	-1.0160E-08	8.7858E-02	8.8226E-02	-4.5005E-02	-8.4569E-04
19.720	-5.4800E-07	-1.2605E-08	6.4043E-02	7.5946E-02	-4.6274E-02	-1.0643E-03
20.010	-5.2468E-07	-1.3626E-08	4.3820E-02	6.3845E-02	-4.4933E-02	-1.1668E-03
20.300	-4.7993E-07	-1.3553E-08	2.7042E-02	5.2471E-02	-4.1676E-02	-1.1768E-03
20.590	-4.2150E-07	-1.2679E-08	1.3427E-02	4.2209E-02	-3.7108E-02	-1.1161E-03
20.880	-3.5575E-07	-1.1255E-08	2.6076E-03	3.3301E-02	-3.1745E-02	-1.0043E-03
21.170	-2.8774E-07	-9.4960E-09	4.4306E-03	2.5871E-02	-2.6021E-02	-8.5869E-04
21.460	-2.2152E-07	-7.5815E-09	1.2233E-02	1.9945E-02	-2.0298E-02	-6.9466E-04
21.750	-1.6020E-07	-5.6632E-09	1.7360E-02	1.5467E-02	-1.4872E-02	-5.2568E-04
22.040	-1.0627E-07	-3.8688E-09	2.1279E-02	1.2314E-02	-9.9923E-03	-3.6376E-04
22.330	-6.1672E-08	-2.3087E-09	2.4468E-02	1.0312E-02	-5.8728E-03	-2.1983E-04
22.620	-2.8038E-08	-1.0807E-09	2.7232E-02	9.2334E-03	-2.7035E-03	-1.0420E-04

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22.910	-6.7955E-09	-2.7548E-10	2.9804E-02	2.1319E-02	-0.2431	-9.8560E-03
23.200	6.4485E-10	-5.4433E-21	1.4857E-02	4.6078E-02	3.7616E-02	-3.1753E-13
23.490	1.1620E-09	-1.4202E-20	3.0761E-03	2.6995E-02	9.3990E-02	-1.1488E-12
23.780	4.4679E-10	-5.7701E-21	7.9981E-04	6.6646E-03	4.6218E-02	-5.9689E-13
24.070	5.2022E-11	-7.6360E-22	7.8893E-04	9.8742E-04	6.5548E-03	-9.6214E-14
24.360	-3.0507E-11	-1.0842E-12	2.2692E-04	1.3627E-03	-4.5320E-03	-1.6106E-04
24.650	-1.6773E-11	-6.3965E-13	9.5411E-07	4.2726E-04	-2.8700E-03	-1.0945E-04
24.940	-3.4202E-12	-1.3908E-13	2.0883E-05	1.1460E-05	-4.4691E-04	-1.8173E-05
25.230	2.9672E-13	-2.7849E-24	8.1080E-06	3.5097E-05	6.1718E-05	-5.7926E-16
25.520	2.7504E-13	-3.4515E-24	5.2497E-07	1.4769E-05	7.8478E-05	-9.8481E-16
25.810	4.3056E-14	-5.9411E-25	4.5797E-07	1.1256E-06	1.5615E-05	-2.1546E-16
26.100	-6.1862E-15	-2.0558E-16	1.2776E-07	7.8981E-07	-2.7219E-06	-9.0454E-08
26.390	-3.2487E-15	-1.2454E-16	1.2410E-10	2.3022E-07	-1.6807E-06	-6.4430E-08
26.680	-2.4868E-16	-1.0776E-17	5.7690E-09	1.2510E-09	-1.4788E-07	-6.4080E-09
26.970	7.8122E-17	-9.3005E-28	8.6584E-10	1.0110E-08	4.6873E-08	-5.5803E-19
27.260	1.9977E-17	-2.6260E-28	9.5159E-11	1.5759E-09	1.1986E-08	-1.5756E-19
27.550	-4.7490E-20	-3.1602E-30	4.8139E-11	1.5798E-10	-2.8494E-11	-1.8961E-21
27.840	-9.0724E-19	-3.4018E-20	3.5225E-12	8.5327E-11	-5.4435E-10	-2.0411E-11
28.130	-1.3602E-19	-5.5052E-21	1.3508E-12	6.6611E-12	-8.1613E-11	-3.3031E-12
28.420	1.3279E-20	-1.4288E-31	3.4056E-13	2.3281E-12	7.9671E-12	-8.5729E-23
28.710	6.7324E-21	-8.6135E-32	4.2271E-16	5.8718E-13	4.0394E-12	-5.1681E-23
29.000	1.6861E-23	-2.6471E-33	0.0000	0.0000	1.0117E-14	-1.5883E-24

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.1545E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -472.42 117.14 -2.0312E-09 -0.026900 -13.518 77.862

STR, KN/ M**2
 5090.4

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.1545E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -472.42 117.14 -2.0312E-09 -0.026900 -13.518 77.862

STR, KN/ M**2
 5090.4

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR



M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.2996E-02	-1.0185E-13	77.862	117.12	0.0000	0.0000
0.2900	1.2019E-02	-1.0095E-13	44.284	115.94	8.2448	-6.9249E-11
0.5800	1.1024E-02	-9.8539E-14	11.406	112.23	17.346	-1.5504E-10
0.8700	1.0025E-02	-9.4848E-14	5.6664	105.99	25.728	-2.4342E-10
1.1600	9.0334E-03	-9.0105E-14	38.460	97.489	32.879	-3.2796E-10
1.4500	8.0617E-03	-8.4530E-14	68.823	87.192	38.137	-3.9988E-10
1.7400	7.1204E-03	-7.8330E-14	95.866	75.673	41.303	-4.5436E-10
2.0300	6.2188E-03	-7.1701E-14	118.70	63.475	42.823	-4.9374E-10
2.3200	5.3648E-03	-6.4822E-14	135.18	51.680	38.518	-4.6541E-10
2.6100	4.5650E-03	-5.7855E-14	148.23	40.338	39.699	-5.0314E-10
2.9000	3.8245E-03	-5.0948E-14	157.96	28.809	39.816	-5.3040E-10
3.1900	3.1474E-03	-4.4230E-14	164.37	17.005	41.592	-5.8450E-10
3.4800	2.5360E-03	-3.7814E-14	167.31	4.7329	43.041	-6.4178E-10
3.7700	1.9917E-03	-3.1792E-14	166.65	2.7959	44.257	-7.0644E-10
4.0600	1.5142E-03	-2.6235E-14	162.30	16.443	37.207	-6.4466E-10
4.3500	1.1017E-03	-2.1191E-14	154.85	28.117	28.960	-5.5706E-10
4.6400	7.5116E-04	-1.6685E-14	144.98	36.581	21.035	-4.6721E-10
4.9300	4.5875E-04	-1.2723E-14	133.37	41.608	13.633	-3.7810E-10
5.2200	2.1976E-04	-9.2977E-15	120.64	44.586	6.9079	-2.9226E-10
5.5100	2.9103E-05	-6.3872E-15	107.34	45.728	0.9647	-2.1173E-10
5.8000	-1.1856E-04	-3.9603E-15	93.979	45.268	-4.1334	-1.3807E-10
6.0900	-2.2857E-04	-1.9790E-15	80.981	43.754	-6.3115	-5.4646E-11
6.3800	-3.0614E-04	-4.0033E-16	68.526	41.561	-8.8137	-1.1526E-11
6.6700	-3.7050E-04	-3.9184E-06	56.824	38.735	-11.103	-0.1174
6.9600	-4.0836E-04	-6.9084E-06	46.029	35.454	-12.718	-0.2151
7.2500	-4.2451E-04	-8.9731E-06	36.246	31.882	-13.720	-0.2900
7.5400	-4.2340E-04	-1.0261E-05	27.536	28.163	-14.183	-0.3437
7.8300	-4.0902E-04	-1.0911E-05	19.920	24.422	-14.182	-0.3783
8.1200	-3.8485E-04	-1.1051E-05	13.388	20.763	-13.798	-0.3962

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8.4100	-3.5393E-04	-1.0793E-05	7.8996	17.271	-13.106	-0.3996		
8.7000	-3.1881E-04	-1.0240E-05	3.3958	14.011	-12.180	-0.3912		
8.9900	-2.8160E-04	-9.4786E-06	0.1996	11.029	-11.090	-0.3733		
9.2800	-2.4399E-04	-8.5826E-06	2.3416	8.3558	-9.8962	-0.3481		
9.5700	-2.0733E-04	-7.6135E-06	4.8231	6.0076	-8.6531	-0.3177		
9.8600	-1.7259E-04	-6.6213E-06	6.4318	3.9874	-7.4066	-0.2841		
10.150	-1.4049E-04	-5.6447E-06	7.3075	2.2884	-6.1945	-0.2489		
10.440	-1.1149E-04	-4.7134E-06	7.7373	0.8953	-5.0466	-0.2134		
10.730	-8.5811E-05	-3.8484E-06	7.8073	0.1075	-3.9854	-0.1787		
11.020	-6.3549E-05	-3.0636E-06	7.5966	0.8933	-3.0263	-0.1459		
11.310	-4.4642E-05	-2.3668E-06	7.1759	1.6478	-2.1785	-0.1155		
11.600	-2.8932E-05	-1.7611E-06	6.6074	2.1060	-1.4459	-8.8007E-02		
11.890	-1.6188E-05	-1.2456E-06	5.9446	2.3579	-0.8280	-6.3711E-02		
12.180	-6.1297E-06	-8.1642E-07	5.2320	2.4699	-0.3208	-4.2720E-02		
12.470	1.5487E-06	-4.6764E-07	4.5060	2.4696	8.2866E-02	-2.5020E-02		
12.760	7.1644E-06	-1.9185E-07	3.7952	2.3825	0.3918	-1.0491E-02		
13.050	1.0970E-05	6.4018E-18	3.1210	2.2314	0.6128	3.5761E-13		
13.340	1.2842E-05	-4.0019E-17	2.4989	2.0363	0.7325	-2.2826E-12		
13.630	1.3712E-05	-7.2608E-17	1.9389	1.8144	0.7983	-4.2268E-12		
13.920	1.3806E-05	-9.3671E-17	1.4462	1.5798	0.8200	-5.5633E-12		
14.210	1.3320E-05	-1.0537E-16	1.0228	1.3439	0.8068	-6.3822E-12		
14.500	1.2425E-05	-1.0968E-16	0.6673	1.1156	0.7672	-6.7724E-12		
14.790	1.1262E-05	-1.0836E-16	0.3765	0.9016	0.7087	-6.8183E-12		
15.080	9.9489E-06	-1.0294E-16	0.1454	0.7064	0.6377	-6.5982E-12		
15.370	8.5772E-06	-9.4706E-17	1.4790E-02	0.5328	0.5599	-6.1821E-12		
15.660	7.2184E-06	-8.4746E-17	0.1402	0.3820	0.4797	-5.6316E-12		
15.950	5.9246E-06	-7.3922E-17	0.2500	0.2544	0.4007	-4.9994E-12		
16.240	4.7321E-06	-6.2912E-17	0.3091	0.1491	0.3256	-4.3288E-12		
16.530	3.6634E-06	-5.2223E-17	0.3382	6.4673E-02	0.2564	-3.6548E-12		
16.820	2.7302E-06	-4.2218E-17	0.3458	6.7357E-04	0.1943	-3.0043E-12		
17.110	1.9355E-06	-3.3138E-17	0.3371	3.9879E-02	0.1400	-2.3971E-12		

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17.400	1.2759E-06	-2.5120E-17	0.3167	8.1148E-02	9.3796E-02	-1.8467E-12
17.690	7.4311E-07	-1.8222E-17	0.2885	0.1047	5.5505E-02	-1.3611E-12
17.980	3.2590E-07	-1.2441E-17	0.2556	0.1163	2.4726E-02	-9.4389E-13
18.270	1.1093E-08	-7.7261E-18	0.2207	0.1200	8.5467E-04	-5.9527E-13
18.560	-2.1531E-07	-3.9964E-18	0.1858	0.1177	-1.6842E-02	-3.1261E-13
18.850	-3.6729E-07	-1.1504E-18	0.1523	0.1111	-2.9163E-02	-9.1341E-14
19.140	-4.7353E-07	-4.5768E-09	0.1213	0.1015	-3.8155E-02	-3.6876E-04
19.430	-5.3252E-07	-9.2479E-09	9.3369E-02	9.0179E-02	-4.3535E-02	-7.5601E-04
19.720	-5.4750E-07	-1.2045E-08	6.8936E-02	7.8163E-02	-4.5404E-02	-9.9887E-04
20.010	-5.2956E-07	-1.3341E-08	4.8041E-02	6.6191E-02	-4.4540E-02	-1.1220E-03
20.300	-4.8827E-07	-1.3472E-08	3.0571E-02	5.4844E-02	-4.1642E-02	-1.1489E-03
20.590	-4.3167E-07	-1.2738E-08	1.6270E-02	4.4535E-02	-3.7323E-02	-1.1013E-03
20.880	-3.6642E-07	-1.1400E-08	4.7864E-03	3.5533E-02	-3.2112E-02	-9.9902E-04
21.170	-2.9789E-07	-9.6816E-09	2.5839E-03	2.7986E-02	-2.6457E-02	-8.5982E-04
21.460	-2.3039E-07	-7.7726E-09	1.1102E-02	2.1936E-02	-2.0734E-02	-6.9943E-04
21.750	-1.6735E-07	-5.8337E-09	1.6966E-02	1.7345E-02	-1.5257E-02	-5.3183E-04
22.040	-1.1146E-07	-4.0023E-09	2.1413E-02	1.4099E-02	-1.0293E-02	-3.6958E-04
22.330	-6.4944E-08	-2.3977E-09	2.5107E-02	1.2029E-02	-6.0738E-03	-2.2423E-04
22.620	-2.9653E-08	-1.1268E-09	2.8361E-02	1.0910E-02	-2.8081E-03	-1.0670E-04
22.910	-7.2425E-09	-2.8915E-10	3.1415E-02	2.1729E-02	-0.2591	-1.0345E-02
23.200	6.5462E-10	-5.3466E-21	1.5748E-02	4.8478E-02	3.8186E-02	-3.1189E-13
23.490	1.2242E-09	-1.4703E-20	3.2947E-03	2.8583E-02	9.9021E-02	-1.1893E-12
23.780	4.7385E-10	-6.0102E-21	8.3019E-04	7.1175E-03	4.9017E-02	-6.2173E-13
24.070	5.6104E-11	-8.0565E-22	8.3294E-04	1.0150E-03	7.0691E-03	-1.0151E-13
24.360	-3.1889E-11	-1.1176E-12	2.4131E-04	1.4376E-03	-4.7373E-03	-1.6603E-04
24.650	-1.7711E-11	-6.6602E-13	2.8895E-07	4.5394E-04	-3.0306E-03	-1.1396E-04
24.940	-3.6470E-12	-1.4604E-13	2.1965E-05	1.3300E-05	-4.7654E-04	-1.9083E-05
25.230	3.0406E-13	-2.7834E-24	8.6112E-06	3.6874E-05	6.3244E-05	-5.7896E-16
25.520	2.9067E-13	-3.5838E-24	5.7724E-07	1.5677E-05	8.2939E-05	-1.0226E-15
25.810	4.6050E-14	-6.2310E-25	4.8153E-07	1.2297E-06	1.6701E-05	-2.2598E-16
26.100	-6.4080E-15	-2.0975E-16	1.3585E-07	8.2997E-07	-2.8195E-06	-9.2291E-08

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26.390	-3.4331E-15	-1.2977E-16	1.2940E-10	2.4472E-07	-1.7761E-06	-6.7134E-08
26.680	-2.6789E-16	-1.1403E-17	6.0889E-09	1.8198E-09	-1.5930E-07	-6.7812E-09
26.970	8.2052E-17	-9.5991E-28	9.2484E-10	1.0668E-08	4.9231E-08	-5.7595E-19
27.260	2.1233E-17	-2.7404E-28	9.8785E-11	1.6825E-09	1.2740E-08	-1.6442E-19
27.550	-1.2056E-20	-3.7145E-30	5.0989E-11	1.6374E-10	-7.2333E-12	-2.2287E-21
27.840	-9.5561E-19	-3.5338E-20	3.8096E-12	9.0359E-11	-5.7337E-10	-2.1203E-11
28.130	-1.4493E-19	-5.7772E-21	1.4190E-12	7.1930E-12	-8.6960E-11	-3.4663E-12
28.420	1.3792E-20	-1.4562E-31	3.6201E-13	2.4446E-12	8.2753E-12	-8.7373E-23
28.710	7.1318E-21	-8.9628E-32	1.0706E-15	6.2417E-13	4.2791E-12	-5.3777E-23
29.000	4.2546E-23	-3.0294E-33	0.0000	0.0000	2.5528E-14	-1.8177E-24

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-1.1474E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-469.55 117.14 -2.0312E-09 -0.026900 -13.518 77.862

STR, KN/ M**2

5090.4



THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.1474E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -469.55 117.14 -2.0312E-09 -0.026900 -13.518 77.862

STR, KN/ M**2

5090.4

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.2996E-02	-1.0185E-13	77.862	117.12	0.0000	0.0000
0.2900	1.2019E-02	-1.0095E-13	44.284	115.94	8.2448	-6.9249E-11
0.5800	1.1024E-02	-9.8539E-14	11.406	112.23	17.346	-1.5504E-10
0.8700	1.0025E-02	-9.4848E-14	5.6447	105.99	25.728	-2.4342E-10
1.1600	9.0334E-03	-9.0105E-14	38.440	97.489	32.879	-3.2796E-10
1.4500	8.0617E-03	-8.4530E-14	68.809	87.192	38.137	-3.9988E-10
1.7400	7.1204E-03	-7.8330E-14	95.856	75.673	41.303	-4.5436E-10
2.0300	6.2188E-03	-7.1701E-14	118.68	63.475	42.823	-4.9374E-10
2.3200	5.3648E-03	-6.4822E-14	135.18	51.680	38.518	-4.6541E-10
2.6100	4.5650E-03	-5.7855E-14	148.23	40.338	39.699	-5.0314E-10



2.9000	3.8245E-03	-5.0948E-14	157.96	28.809	39.816	-5.3040E-10
3.1900	3.1474E-03	-4.4230E-14	164.37	17.005	41.592	-5.8450E-10
3.4800	2.5360E-03	-3.7814E-14	167.31	4.7329	43.041	-6.4178E-10
3.7700	1.9917E-03	-3.1792E-14	166.65	2.7962	44.257	-7.0644E-10
4.0600	1.5142E-03	-2.6235E-14	162.30	16.444	37.207	-6.4466E-10
4.3500	1.1017E-03	-2.1191E-14	154.85	28.120	28.960	-5.5706E-10
4.6400	7.5116E-04	-1.6685E-14	144.98	36.581	21.035	-4.6721E-10
4.9300	4.5875E-04	-1.2723E-14	133.37	41.608	13.633	-3.7810E-10
5.2200	2.1976E-04	-9.2977E-15	120.64	44.586	6.9079	-2.9226E-10
5.5100	2.9103E-05	-6.3872E-15	107.34	45.728	0.9647	-2.1173E-10
5.8000	-1.1856E-04	-3.9603E-15	93.979	45.268	-4.1334	-1.3807E-10
6.0900	-2.2857E-04	-1.9790E-15	80.981	43.754	-6.3115	-5.4646E-11
6.3800	-3.0614E-04	-4.0033E-16	68.526	41.561	-8.8137	-1.1526E-11
6.6700	-3.7054E-04	-3.9216E-06	56.824	38.735	-11.104	-0.1175
6.9600	-4.0840E-04	-6.9114E-06	46.029	35.454	-12.719	-0.2152
7.2500	-4.2455E-04	-8.9759E-06	36.246	31.882	-13.722	-0.2901
7.5400	-4.2345E-04	-1.0264E-05	27.536	28.163	-14.184	-0.3438
7.8300	-4.0906E-04	-1.0914E-05	19.920	24.422	-14.184	-0.3784
8.1200	-3.8490E-04	-1.1053E-05	13.388	20.763	-13.799	-0.3962
8.4100	-3.5397E-04	-1.0795E-05	7.8996	17.271	-13.107	-0.3997
8.7000	-3.1885E-04	-1.0242E-05	3.3958	14.011	-12.182	-0.3913
8.9900	-2.8163E-04	-9.4799E-06	0.1996	11.029	-11.091	-0.3733
9.2800	-2.4402E-04	-8.5836E-06	2.3417	8.3558	-9.8973	-0.3481
9.5700	-2.0735E-04	-7.6144E-06	4.8235	6.0076	-8.6540	-0.3178
9.8600	-1.7261E-04	-6.6219E-06	6.4318	3.9874	-7.4074	-0.2842
10.150	-1.4051E-04	-5.6452E-06	7.3075	2.2884	-6.1951	-0.2489
10.440	-1.1150E-04	-4.7137E-06	7.7373	0.8953	-5.0472	-0.2134
10.730	-8.5820E-05	-3.8486E-06	7.8073	0.1072	-3.9859	-0.1787
11.020	-6.3555E-05	-3.0636E-06	7.5966	0.8935	-3.0266	-0.1459
11.310	-4.4646E-05	-2.3668E-06	7.1759	1.6482	-2.1787	-0.1155
11.600	-2.8935E-05	-1.7610E-06	6.6074	2.1060	-1.4460	-8.8003E-02



11.890	-1.6189E-05	-1.2455E-06	5.9446	2.3579	-0.8281	-6.3704E-02
12.180	-6.1293E-06	-8.1624E-07	5.2320	2.4699	-0.3207	-4.2711E-02
12.470	1.5499E-06	-4.6744E-07	4.5060	2.4696	8.2928E-02	-2.5009E-02
12.760	7.1661E-06	-1.9164E-07	3.7952	2.3825	0.3919	-1.0479E-02
13.050	1.0970E-05	6.4018E-18	3.1210	2.2314	0.6128	3.5761E-13
13.340	1.2842E-05	-4.0019E-17	2.4989	2.0363	0.7325	-2.2826E-12
13.630	1.3712E-05	-7.2608E-17	1.9389	1.8144	0.7983	-4.2268E-12
13.920	1.3806E-05	-9.3671E-17	1.4462	1.5798	0.8200	-5.5633E-12
14.210	1.3320E-05	-1.0537E-16	1.0228	1.3439	0.8068	-6.3822E-12
14.500	1.2425E-05	-1.0968E-16	0.6673	1.1156	0.7672	-6.7724E-12
14.790	1.1262E-05	-1.0836E-16	0.3765	0.9016	0.7087	-6.8183E-12
15.080	9.9489E-06	-1.0294E-16	0.1454	0.7064	0.6377	-6.5982E-12
15.370	8.5772E-06	-9.4706E-17	1.4758E-02	0.5328	0.5599	-6.1821E-12
15.660	7.2184E-06	-8.4746E-17	0.1403	0.3820	0.4797	-5.6316E-12
15.950	5.9246E-06	-7.3922E-17	0.2501	0.2544	0.4007	-4.9994E-12
16.240	4.7321E-06	-6.2912E-17	0.3091	0.1491	0.3256	-4.3288E-12
16.530	3.6634E-06	-5.2223E-17	0.3382	6.4673E-02	0.2564	-3.6548E-12
16.820	2.7302E-06	-4.2218E-17	0.3458	6.7357E-04	0.1943	-3.0043E-12
17.110	1.9355E-06	-3.3138E-17	0.3371	3.9899E-02	0.1400	-2.3971E-12
17.400	1.2759E-06	-2.5120E-17	0.3167	8.1172E-02	9.3796E-02	-1.8467E-12
17.690	7.4311E-07	-1.8222E-17	0.2885	0.1047	5.5505E-02	-1.3611E-12
17.980	3.2590E-07	-1.2441E-17	0.2556	0.1163	2.4726E-02	-9.4389E-13
18.270	1.1093E-08	-7.7261E-18	0.2207	0.1200	8.5467E-04	-5.9527E-13
18.560	-2.1531E-07	-3.9964E-18	0.1858	0.1177	-1.6842E-02	-3.1261E-13
18.850	-3.6729E-07	-1.1504E-18	0.1523	0.1111	-2.9163E-02	-9.1341E-14
19.140	-4.7364E-07	-4.5873E-09	0.1213	0.1015	-3.8164E-02	-3.6961E-04
19.430	-5.3263E-07	-9.2578E-09	9.3369E-02	9.0179E-02	-4.3544E-02	-7.5681E-04
19.720	-5.4760E-07	-1.2054E-08	6.8936E-02	7.8163E-02	-4.5413E-02	-9.9961E-04
20.010	-5.2966E-07	-1.3349E-08	4.8041E-02	6.6191E-02	-4.4549E-02	-1.1227E-03
20.300	-4.8836E-07	-1.3478E-08	3.0571E-02	5.4844E-02	-4.1649E-02	-1.1494E-03
20.590	-4.3175E-07	-1.2743E-08	1.6270E-02	4.4535E-02	-3.7330E-02	-1.1017E-03

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20.880	-3.6648E-07	-1.1404E-08	4.7864E-03	3.5533E-02	-3.2118E-02	-9.9940E-04
21.170	-2.9794E-07	-9.6850E-09	2.5862E-03	2.7986E-02	-2.6461E-02	-8.6013E-04
21.460	-2.3043E-07	-7.7751E-09	1.1105E-02	2.1936E-02	-2.0737E-02	-6.9966E-04
21.750	-1.6737E-07	-5.8354E-09	1.6966E-02	1.7345E-02	-1.5259E-02	-5.3198E-04
22.040	-1.1148E-07	-4.0034E-09	2.1413E-02	1.4099E-02	-1.0295E-02	-3.6968E-04
22.330	-6.4953E-08	-2.3983E-09	2.5107E-02	1.2029E-02	-6.0747E-03	-2.2428E-04
22.620	-2.9657E-08	-1.1271E-09	2.8361E-02	1.0910E-02	-2.8085E-03	-1.0673E-04
22.910	-7.2434E-09	-2.8921E-10	3.1415E-02	2.1729E-02	-0.2592	-1.0347E-02
23.200	6.5462E-10	-5.3466E-21	1.5748E-02	4.8478E-02	3.8186E-02	-3.1189E-13
23.490	1.2242E-09	-1.4703E-20	3.2947E-03	2.8583E-02	9.9021E-02	-1.1893E-12
23.780	4.7385E-10	-6.0102E-21	8.3019E-04	7.1175E-03	4.9017E-02	-6.2173E-13
24.070	5.6104E-11	-8.0565E-22	8.3294E-04	1.0150E-03	7.0691E-03	-1.0151E-13
24.360	-3.1894E-11	-1.1180E-12	2.4131E-04	1.4376E-03	-4.7380E-03	-1.6608E-04
24.650	-1.7714E-11	-6.6618E-13	2.8993E-07	4.5394E-04	-3.0310E-03	-1.1399E-04
24.940	-3.6474E-12	-1.4607E-13	2.1965E-05	1.3300E-05	-4.7660E-04	-1.9086E-05
25.230	3.0406E-13	-2.7834E-24	8.6112E-06	3.6874E-05	6.3244E-05	-5.7896E-16
25.520	2.9067E-13	-3.5838E-24	5.7724E-07	1.5677E-05	8.2939E-05	-1.0226E-15
25.810	4.6050E-14	-6.2310E-25	4.8153E-07	1.2297E-06	1.6701E-05	-2.2598E-16
26.100	-6.4090E-15	-2.0983E-16	1.3585E-07	8.2997E-07	-2.8200E-06	-9.2326E-08
26.390	-3.4336E-15	-1.2980E-16	1.2940E-10	2.4472E-07	-1.7763E-06	-6.7150E-08
26.680	-2.6792E-16	-1.1405E-17	6.0889E-09	1.8198E-09	-1.5932E-07	-6.7820E-09
26.970	8.2052E-17	-9.5991E-28	9.2484E-10	1.0668E-08	4.9231E-08	-5.7595E-19
27.260	2.1233E-17	-2.7404E-28	9.8785E-11	1.6825E-09	1.2740E-08	-1.6442E-19
27.550	-1.2056E-20	-3.7145E-30	5.0989E-11	1.6374E-10	-7.2333E-12	-2.2287E-21
27.840	-9.5575E-19	-3.5347E-20	3.8096E-12	9.0359E-11	-5.7345E-10	-2.1208E-11
28.130	-1.4495E-19	-5.7783E-21	1.4190E-12	7.1930E-12	-8.6970E-11	-3.4670E-12
28.420	1.3792E-20	-1.4562E-31	3.6201E-13	2.4446E-12	8.2753E-12	-8.7373E-23
28.710	7.1318E-21	-8.9628E-32	1.0706E-15	6.2417E-13	4.2791E-12	-5.3777E-23
29.000	4.2546E-23	-3.0294E-33	0.0000	0.0000	2.5528E-14	-1.8177E-24

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* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.1402E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -466.67 118.78 -2.0513E-09 -0.026900 -13.613 79.929

STR, KN/ M**2

5187.9

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -1.1402E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -466.67 118.78 -2.0513E-09 -0.026900 -13.613 79.929

STR, KN/ M**2



5187.9

* EFFECTS FOR Laterally Loaded PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.2996E-02	-1.0185E-13	79.929	118.76	0.0000	0.0000
0.2900	1.2019E-02	-1.0094E-13	45.876	117.56	8.3946	-7.0507E-11
0.5800	1.1023E-02	-9.8519E-14	12.536	113.78	17.659	-1.5783E-10
0.8700	1.0022E-02	-9.4806E-14	4.9131	107.42	26.189	-2.4775E-10
1.1600	9.0286E-03	-9.0037E-14	38.056	98.775	33.460	-3.3368E-10
1.4500	8.0551E-03	-8.4434E-14	68.814	88.298	38.800	-4.0670E-10
1.7400	7.1119E-03	-7.8205E-14	96.193	76.581	42.005	-4.6190E-10
2.0300	6.2085E-03	-7.1548E-14	119.27	64.178	43.531	-5.0166E-10
2.3200	5.3530E-03	-6.4643E-14	135.93	52.192	39.134	-4.7258E-10
2.6100	4.5520E-03	-5.7654E-14	149.10	40.673	40.307	-5.1051E-10
2.9000	3.8106E-03	-5.0729E-14	158.90	28.971	40.394	-5.3773E-10
3.1900	3.1330E-03	-4.3998E-14	165.34	17.002	42.156	-5.9201E-10
3.4800	2.5216E-03	-3.7574E-14	168.25	4.5708	43.575	-6.4931E-10
3.7700	1.9775E-03	-3.1549E-14	167.52	3.1040	44.742	-7.1381E-10
4.0600	1.5006E-03	-2.5995E-14	163.06	16.899	37.545	-6.5040E-10
4.3500	1.0890E-03	-2.0959E-14	155.47	28.673	29.149	-5.6098E-10
4.6400	7.3969E-04	-1.6464E-14	145.45	37.122	21.091	-4.6944E-10
4.9300	4.4864E-04	-1.2518E-14	133.68	42.149	13.576	-3.7879E-10
5.2200	2.1114E-04	-9.1112E-15	120.79	45.097	6.7577	-2.9161E-10
5.5100	2.2031E-05	-6.2209E-15	107.35	46.185	0.7436	-2.0997E-10
5.8000	-1.2407E-04	-3.8155E-15	93.871	45.654	-4.4045	-1.3545E-10
6.0900	-2.3257E-04	-1.8561E-15	80.773	44.067	-6.5389	-5.2185E-11

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6.3800	-3.0967E-04	-1.8233E-07	68.238	41.807	-9.0779	-5.3454E-03
6.6700	-3.7260E-04	-4.1825E-06	56.475	38.913	-11.369	-0.1276
6.9600	-4.0908E-04	-7.1054E-06	45.639	35.567	-12.973	-0.2253
7.2500	-4.2403E-04	-9.1084E-06	35.833	31.934	-13.955	-0.2998
7.5400	-4.2191E-04	-1.0341E-05	27.117	28.160	-14.390	-0.3527
7.8300	-4.0668E-04	-1.0943E-05	19.510	24.372	-14.359	-0.3864
8.1200	-3.8187E-04	-1.1041E-05	12.998	20.675	-13.940	-0.4031
8.4100	-3.5047E-04	-1.0750E-05	7.5403	17.154	-13.214	-0.4053
8.7000	-3.1504E-04	-1.0170E-05	3.0742	13.873	-12.256	-0.3957
8.9900	-2.7767E-04	-9.3880E-06	0.4786	10.878	-11.135	-0.3765
9.2800	-2.4003E-04	-8.4779E-06	2.6193	8.1993	-9.9131	-0.3502
9.5700	-2.0345E-04	-7.5004E-06	5.0504	5.8519	-8.6460	-0.3188
9.8600	-1.6889E-04	-6.5045E-06	6.5756	3.8379	-7.3796	-0.2842
10.150	-1.3703E-04	-5.5284E-06	7.4092	2.1493	-6.1519	-0.2482
10.440	-1.0832E-04	-4.6008E-06	7.8006	0.7698	-4.9927	-0.2121
10.730	-8.2975E-05	-3.7422E-06	7.8366	2.7843E-02	-3.9239	-0.1770
11.020	-6.1062E-05	-2.9657E-06	7.5965	1.0030	-2.9608	-0.1438
11.310	-4.2508E-05	-2.2785E-06	7.1515	1.7385	-2.1121	-0.1132
11.600	-2.7145E-05	-1.6832E-06	6.5637	2.1646	-1.3813	-8.5660E-02
11.890	-1.4732E-05	-1.1784E-06	5.8864	2.4005	-0.7673	-6.1381E-02
12.180	-4.9812E-06	-7.5980E-07	5.1639	2.4978	-0.2654	-4.0488E-02
12.470	2.4177E-06	-4.2117E-07	4.4319	2.4845	0.1317	-2.2948E-02
12.760	7.7853E-06	-1.5488E-07	3.7186	2.3861	0.4335	-8.6245E-03
13.050	1.1280E-05	-1.9826E-18	3.0450	2.2257	0.6416	-1.1277E-13
13.340	1.2995E-05	-4.6177E-17	2.4258	2.0233	0.7547	-2.6818E-12
13.630	1.3739E-05	-7.6825E-17	1.8705	1.7957	0.8143	-4.5538E-12
13.920	1.3733E-05	-9.6238E-17	1.3840	1.5573	0.8305	-5.8198E-12
14.210	1.3172E-05	-1.0657E-16	0.9675	1.3190	0.8124	-6.5725E-12
14.500	1.2225E-05	-1.0979E-16	0.6196	1.0898	0.7686	-6.9024E-12
14.790	1.1029E-05	-1.0762E-16	0.3363	0.8759	0.7066	-6.8951E-12
15.080	9.6978E-06	-1.0158E-16	0.1125	0.6817	0.6329	-6.6295E-12

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15.370	8.3219E-06	-9.2919E-17	1.4980E-02	0.5097	0.5531	-6.1759E-12
15.660	6.9693E-06	-8.2700E-17	0.1637	0.3611	0.4716	-5.5958E-12
15.950	5.6895E-06	-7.1756E-17	0.2664	0.2359	0.3918	-4.9412E-12
16.240	4.5165E-06	-6.0736E-17	0.3179	0.1332	0.3164	-4.2552E-12
16.530	3.4708E-06	-5.0123E-17	0.3428	5.1504E-02	0.2473	-3.5717E-12
16.820	2.5624E-06	-4.0258E-17	0.3469	4.9818E-03	0.1857	-2.9170E-12
17.110	1.7930E-06	-3.1359E-17	0.3356	4.9690E-02	0.1321	-2.3097E-12
17.400	1.1581E-06	-2.3547E-17	0.3131	8.8449E-02	8.6685E-02	-1.7626E-12
17.690	6.4851E-07	-1.6868E-17	0.2834	0.1088	4.9321E-02	-1.2828E-12
17.980	2.5250E-07	-1.1304E-17	0.2496	0.1188	1.9506E-02	-8.7323E-13
18.270	-4.3494E-08	-6.7974E-18	0.2143	0.1211	-3.4121E-03	-5.3325E-13
18.560	-2.5366E-07	-3.2606E-18	0.1792	0.1177	-2.0203E-02	-2.5970E-13
18.850	-3.9203E-07	-5.8768E-19	0.1459	0.1102	-3.1694E-02	-4.7511E-14
19.140	-4.9212E-07	-5.9668E-09	0.1152	9.9945E-02	-4.0376E-02	-4.8959E-04
19.430	-5.4098E-07	-1.0197E-08	8.7858E-02	8.8226E-02	-4.5033E-02	-8.4892E-04
19.720	-5.4832E-07	-1.2636E-08	6.4043E-02	7.5946E-02	-4.6301E-02	-1.0671E-03
20.010	-5.2496E-07	-1.3651E-08	4.3820E-02	6.3845E-02	-4.4957E-02	-1.1691E-03
20.300	-4.8017E-07	-1.3573E-08	2.7042E-02	5.2471E-02	-4.1697E-02	-1.1787E-03
20.590	-4.2171E-07	-1.2694E-08	1.3427E-02	4.2209E-02	-3.7126E-02	-1.1176E-03
20.880	-3.5591E-07	-1.1266E-08	2.6076E-03	3.3301E-02	-3.1760E-02	-1.0054E-03
21.170	-2.8787E-07	-9.5037E-09	4.4396E-03	2.5871E-02	-2.6033E-02	-8.5953E-04
21.460	-2.2161E-07	-7.5866E-09	1.2276E-02	1.9945E-02	-2.0307E-02	-6.9525E-04
21.750	-1.6027E-07	-5.6663E-09	1.7360E-02	1.5467E-02	-1.4878E-02	-5.2606E-04
22.040	-1.0631E-07	-3.8706E-09	2.1279E-02	1.2314E-02	-9.9963E-03	-3.6398E-04
22.330	-6.1695E-08	-2.3094E-09	2.4468E-02	1.0312E-02	-5.8751E-03	-2.1994E-04
22.620	-2.8047E-08	-1.0809E-09	2.7232E-02	9.2334E-03	-2.7045E-03	-1.0424E-04
22.910	-6.7977E-09	-2.7549E-10	2.9804E-02	2.1319E-02	-0.2432	-9.8565E-03
23.200	6.4485E-10	-5.4433E-21	1.4857E-02	4.6078E-02	3.7616E-02	-3.1753E-13
23.490	1.1620E-09	-1.4202E-20	3.0761E-03	2.6995E-02	9.3990E-02	-1.1488E-12
23.780	4.4679E-10	-5.7701E-21	7.9981E-04	6.6646E-03	4.6218E-02	-5.9689E-13
24.070	5.2022E-11	-7.6360E-22	7.8893E-04	9.8742E-04	6.5548E-03	-9.6214E-14

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24.360	-3.0520E-11	-1.0848E-12	2.2692E-04	1.3627E-03	-4.5339E-03	-1.6115E-04
24.650	-1.6779E-11	-6.3982E-13	9.5781E-07	4.2726E-04	-2.8711E-03	-1.0948E-04
24.940	-3.4213E-12	-1.3908E-13	2.0883E-05	1.1460E-05	-4.4705E-04	-1.8174E-05
25.230	2.9672E-13	-2.7849E-24	8.1080E-06	3.5097E-05	6.1718E-05	-5.7926E-16
25.520	2.7504E-13	-3.4515E-24	5.2497E-07	1.4769E-05	7.8478E-05	-9.8481E-16
25.810	4.3056E-14	-5.9411E-25	4.5797E-07	1.1256E-06	1.5615E-05	-2.1546E-16
26.100	-6.1891E-15	-2.0576E-16	1.2776E-07	7.8981E-07	-2.7232E-06	-9.0535E-08
26.390	-3.2499E-15	-1.2458E-16	1.1866E-10	2.3022E-07	-1.6813E-06	-6.4447E-08
26.680	-2.4875E-16	-1.0774E-17	5.7690E-09	1.2510E-09	-1.4792E-07	-6.4066E-09
26.970	7.8122E-17	-9.3005E-28	8.6584E-10	1.0110E-08	4.6873E-08	-5.5803E-19
27.260	1.9977E-17	-2.6260E-28	9.5159E-11	1.5759E-09	1.1986E-08	-1.5756E-19
27.550	-4.7490E-20	-3.1602E-30	4.8139E-11	1.5798E-10	-2.8494E-11	-1.8961E-21
27.840	-9.0759E-19	-3.4030E-20	3.5225E-12	8.5327E-11	-5.4455E-10	-2.0418E-11
28.130	-1.3606E-19	-5.5054E-21	1.3508E-12	6.6611E-12	-8.1639E-11	-3.3032E-12
28.420	1.3279E-20	-1.4288E-31	3.4056E-13	2.3281E-12	7.9671E-12	-8.5729E-23
28.710	6.7324E-21	-8.6135E-32	4.2271E-16	5.8718E-13	4.0394E-12	-5.1681E-23
29.000	1.6861E-23	-2.6471E-33	0.0000	0.0000	1.0117E-14	-1.5883E-24

* PILE GROUP * 6

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -1.1330E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03



FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
-463.80 150.04 -2.4267E-09 -0.026900 -15.332 118.28

STR, KN/ M**2

6996.1

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
-1.1330E-03 0.012996 -1.0185E-13 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-463.80 150.04 -2.4267E-09 -0.026900 -15.332 118.28

STR, KN/ M**2

6996.1

* EFFECTS FOR LATERALLY LOADED PILE *

Table with 7 columns: x, DISPL., DISPL., MOMENT, SHEAR, SOIL REACT, SOIL REACT. Rows show data for different pile depths (0.0000, 0.2900, 0.5800).



0.8700	9.9671E-03	-9.4056E-14	7.1047	134.63	35.451	-3.3454E-10
1.1600	8.9414E-03	-8.8826E-14	32.193	122.95	45.102	-4.4806E-10
1.4500	7.9335E-03	-8.2721E-14	70.143	108.87	52.013	-5.4232E-10
1.7400	6.9566E-03	-7.5984E-14	103.56	93.219	55.923	-6.1083E-10
2.0300	6.0224E-03	-6.8842E-14	130.90	76.777	57.473	-6.5698E-10
2.3200	5.1407E-03	-6.1501E-14	150.40	61.026	51.151	-6.1195E-10
2.6100	4.3192E-03	-5.4141E-14	165.61	46.062	52.055	-6.5252E-10
2.9000	3.5640E-03	-4.6927E-14	176.48	31.057	51.421	-6.7706E-10
3.1900	2.8796E-03	-3.9999E-14	183.05	15.955	52.736	-7.3254E-10
3.4800	2.2684E-03	-3.3473E-14	185.21	0.5713	53.356	-7.8732E-10
3.7700	1.7315E-03	-2.7444E-14	182.92	9.9143	53.322	-8.4513E-10
4.0600	1.2679E-03	-2.1977E-14	176.17	26.197	43.176	-7.4841E-10
4.3500	8.7479E-04	-1.7111E-14	165.82	39.520	31.870	-6.2338E-10
4.6400	5.4815E-04	-1.2859E-14	152.82	47.476	21.273	-4.9903E-10
4.9300	2.8272E-04	-9.2126E-15	138.05	52.249	11.644	-3.7943E-10
5.2200	7.2588E-05	-6.1477E-15	122.32	54.396	3.1621	-2.6781E-10
5.5100	-8.8538E-05	-3.6269E-15	106.35	54.265	-4.0674	-1.6662E-10
5.8000	-2.0706E-04	-1.6040E-15	90.736	52.224	-10.005	-7.7503E-11
6.0900	-2.8988E-04	-8.9086E-07	75.979	49.169	-11.094	-3.4106E-02
6.3800	-3.5631E-04	-4.8738E-06	62.164	45.591	-14.217	-0.1945
6.6700	-3.9361E-04	-7.6872E-06	49.504	41.403	-16.347	-0.3194
6.9600	-4.0753E-04	-9.5172E-06	38.137	36.843	-17.590	-0.4109
7.2500	-4.0323E-04	-1.0539E-05	28.136	32.116	-18.062	-0.4723
7.5400	-3.8530E-04	-1.0915E-05	19.520	27.400	-17.888	-0.5069
7.8300	-3.5772E-04	-1.0791E-05	12.263	22.837	-17.191	-0.5188
8.1200	-3.2386E-04	-1.0293E-05	6.2989	18.540	-16.092	-0.5116
8.4100	-2.8650E-04	-9.5341E-06	1.5367	14.590	-14.703	-0.4895
8.7000	-2.4789E-04	-8.6066E-06	1.2483	11.044	-13.126	-0.4559
8.9900	-2.0978E-04	-7.5878E-06	4.5113	7.9319	-11.450	-0.4143
9.2800	-1.7347E-04	-6.5393E-06	6.7088	5.2647	-9.7513	-0.3677
9.5700	-1.3990E-04	-5.5085E-06	7.8691	3.0359	-8.0921	-0.3188



9.8600	-1.0965E-04	-4.5309E-06	8.4469	1.2252	-6.5212	-0.2696
10.150	-8.3042E-05	-3.6308E-06	8.5596	0.1465	-5.0744	-0.2220
10.440	-6.0188E-05	-2.8238E-06	8.3148	1.0859	-3.7761	-0.1772
10.730	-4.1018E-05	-2.1177E-06	7.8082	2.0162	-2.6403	-0.1364
11.020	-2.5338E-05	-1.5146E-06	7.1229	2.5331	-1.6723	-0.1000
11.310	-1.2866E-05	-1.0120E-06	6.3293	2.8109	-0.8702	-6.8470E-02
11.600	-3.2660E-06	-6.0392E-07	5.4851	2.9094	-0.2262	-4.1845E-02
11.890	3.8293E-06	-2.8216E-07	4.6362	2.8678	0.2715	-2.0011E-02
12.180	8.7929E-06	-3.7122E-08	3.8177	2.7216	0.6377	-2.6933E-03
12.470	1.1577E-05	-3.1807E-17	3.0550	2.5021	0.8584	-2.3586E-12
12.760	1.2890E-05	-6.8543E-17	2.3650	2.2360	0.9768	-5.1945E-12
13.050	1.3256E-05	-9.1906E-17	1.7574	1.9455	1.0262	-7.1149E-12
13.340	1.2918E-05	-1.0453E-16	1.2365	1.6487	1.0211	-8.2626E-12
13.630	1.2084E-05	-1.0881E-16	0.8017	1.3593	0.9749	-8.7783E-12
13.920	1.0929E-05	-1.0685E-16	0.4489	1.0875	0.8996	-8.7950E-12
14.210	9.5947E-06	-1.0049E-16	0.1719	0.8403	0.8054	-8.4348E-12
14.500	8.1913E-06	-9.1224E-17	1.3255E-02	0.6218	0.7009	-7.8062E-12
14.790	6.8028E-06	-8.0305E-17	0.1668	0.4342	0.5932	-7.0027E-12
15.080	5.4895E-06	-6.8699E-17	0.2880	0.2775	0.4876	-6.1027E-12
15.370	4.2915E-06	-5.7143E-17	0.3475	0.1505	0.3882	-5.1694E-12
15.660	3.2328E-06	-4.6168E-17	0.3744	5.0991E-02	0.2977	-4.2519E-12
15.950	2.3241E-06	-3.6131E-17	0.3763	6.9289E-03	0.2178	-3.3864E-12
16.240	1.5660E-06	-2.7245E-17	0.3599	7.0872E-02	0.1493	-2.5980E-12
16.530	9.5224E-07	-1.9609E-17	0.3311	0.1120	9.2357E-02	-1.9019E-12
16.820	4.7106E-07	-1.3236E-17	0.2945	0.1322	4.6456E-02	-1.3053E-12
17.110	1.0787E-07	-8.0745E-18	0.2541	0.1405	1.0814E-02	-8.0948E-13
17.400	-1.5353E-07	-4.0288E-18	0.2128	0.1398	-1.5642E-02	-4.1046E-13
17.690	-3.2969E-07	-9.7646E-19	0.1728	0.1326	-3.4128E-02	-1.0108E-13
17.980	-4.5187E-07	-5.3985E-09	0.1358	0.1210	-4.7514E-02	-5.6786E-04
18.270	-5.2280E-07	-1.0316E-08	0.1026	0.1067	-5.5825E-02	-1.1020E-03
18.560	-5.4535E-07	-1.3224E-08	7.3863E-02	9.1287E-02	-5.9122E-02	-1.4341E-03

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18.850	-5.3261E-07	-1.4561E-08	4.9678E-02	7.5722E-02	-5.8610E-02	-1.6030E-03
19.140	-4.9566E-07	-1.4722E-08	2.9966E-02	6.0831E-02	-5.5352E-02	-1.6447E-03
19.430	-4.4360E-07	-1.4045E-08	1.4431E-02	4.7161E-02	-5.0262E-02	-1.5919E-03
19.720	-3.8368E-07	-1.2811E-08	2.6555E-03	3.5045E-02	-4.4099E-02	-1.4730E-03
20.010	-3.2144E-07	-1.1250E-08	4.3412E-03	2.4650E-02	-3.7470E-02	-1.3118E-03
20.300	-2.6094E-07	-9.5407E-09	1.1319E-02	1.6005E-02	-3.0843E-02	-1.1281E-03
20.590	-2.0498E-07	-7.8189E-09	1.5091E-02	9.0434E-03	-2.4562E-02	-9.3730E-04
20.880	-1.5530E-07	-6.1814E-09	1.6804E-02	3.6267E-03	-1.8863E-02	-7.5108E-04
21.170	-1.1285E-07	-4.6935E-09	1.7162E-02	4.2709E-04	-1.3891E-02	-5.7795E-04
21.460	-7.7923E-08	-3.3954E-09	1.6529E-02	2.8109E-03	-9.7188E-03	-4.2365E-04
21.750	-5.0345E-08	-2.3079E-09	1.5212E-02	5.1423E-03	-6.3614E-03	-2.9173E-04
22.040	-2.9625E-08	-1.4375E-09	1.3452E-02	6.4982E-03	-3.7915E-03	-1.8406E-04
22.330	-1.5052E-08	-7.8100E-10	1.1431E-02	7.1789E-03	-1.9510E-03	-1.0127E-04
22.620	-5.7919E-09	-3.2885E-10	9.2799E-03	7.4947E-03	-7.6018E-04	-4.3177E-05
22.910	-9.4537E-10	-6.8269E-11	7.0796E-03	1.1153E-02	-3.3823E-02	-2.4425E-03
23.200	3.5906E-10	-4.2885E-21	2.8094E-03	1.1686E-02	2.0945E-02	-2.5016E-13
23.490	2.8100E-10	-5.1244E-21	3.0117E-04	5.3534E-03	2.2730E-02	-4.1450E-13
23.780	8.2290E-11	-1.7872E-21	2.9546E-04	8.2331E-04	8.5125E-03	-1.8487E-13
24.070	1.9390E-12	-1.5374E-22	1.7623E-04	4.4643E-04	2.4431E-04	-1.9371E-14
24.360	-9.4025E-12	-4.3516E-13	3.6493E-05	3.1355E-04	-1.3968E-03	-6.4645E-05
24.650	-3.6961E-12	-2.0250E-13	5.6244E-06	7.2129E-05	-6.3245E-04	-3.4649E-05
24.940	-4.6131E-13	-3.3998E-14	5.3385E-06	7.2942E-06	-6.0277E-05	-4.4424E-06
25.230	1.4188E-13	-1.8073E-24	1.3926E-06	9.3269E-06	2.9510E-05	-3.7591E-16
25.520	5.9035E-14	-1.1598E-24	5.9886E-08	2.6054E-06	1.6845E-05	-3.3092E-16
25.810	4.7599E-15	-1.4968E-25	1.1855E-07	5.7108E-08	1.7263E-06	-5.4284E-17
26.100	-2.3891E-15	-1.0028E-16	2.0623E-08	2.0838E-07	-1.0512E-06	-4.4122E-08
26.390	-6.9393E-16	-3.8673E-17	2.3181E-09	3.7807E-08	-3.5899E-07	-2.0007E-08
26.680	-1.1111E-17	-1.9124E-18	1.3038E-09	3.8144E-09	-6.6074E-09	-1.1372E-09
26.970	2.0958E-17	-3.5922E-28	1.0560E-10	2.3084E-09	1.2575E-08	-2.1553E-19
27.260	3.2960E-18	-7.7182E-29	3.5056E-11	1.9828E-10	1.9776E-09	-4.6309E-20
27.550	-3.5311E-19	-8.8820E-21	9.3979E-12	6.0363E-11	-2.1186E-10	-5.3292E-12

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27.840 -2.1955E-19 -1.1443E-20 4.3915E-14 1.6825E-11 -1.3173E-10 -6.8656E-12
 28.130 -1.9225E-20 -1.3740E-21 3.6052E-13 1.7226E-13 -1.1535E-11 -8.2439E-13
 28.420 4.8285E-21 -7.0062E-32 5.5922E-14 6.3025E-13 2.8971E-12 -4.2037E-23
 28.710 1.3075E-21 -2.7410E-32 5.0278E-15 9.6420E-14 7.8452E-13 -1.6446E-23
 29.000 -2.1621E-22 -5.0798E-24 0.0000 0.0000 -1.2973E-13 -3.0479E-15

* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.3145E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1127.3 197.51 2.3432E-09 -0.026900 -17.747 180.24

STR, KN/ M**2

1.2507E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.3145E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1127.3 197.51 2.3432E-09 -0.026900 -17.747 180.24

STR, KN/ M**2

1.2507E+04

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.2996E-02	7.9531E-14	180.24	197.65	0.0000	0.0000
0.2900	1.1999E-02	7.8665E-14	121.83	195.04	16.996	1.1143E-10
0.5800	1.0952E-02	7.6292E-14	64.798	187.42	35.586	2.4789E-10
0.8700	9.8798E-03	7.2681E-14	10.728	174.67	52.370	3.8527E-10
1.1600	8.8031E-03	6.8095E-14	25.461	157.47	66.192	5.1202E-10
1.4500	7.7420E-03	6.2782E-14	75.221	136.90	75.685	6.1375E-10
1.7400	6.7142E-03	5.6975E-14	118.34	114.25	80.511	6.8320E-10
2.0300	5.7347E-03	5.0885E-14	151.57	90.739	81.659	7.2457E-10
2.3200	4.8160E-03	4.4702E-14	175.49	68.528	71.521	6.6386E-10
2.6100	3.9676E-03	3.8590E-14	193.32	47.803	71.407	6.9453E-10
2.9000	3.1966E-03	3.2691E-14	205.05	27.456	68.918	7.0483E-10
3.1900	2.5077E-03	2.7124E-14	210.90	7.4997	68.710	7.4319E-10
3.4800	1.9033E-03	2.1984E-14	210.87	6.1695	67.094	7.7495E-10
3.7700	1.3834E-03	1.7340E-14	205.10	27.550	64.031	8.0257E-10
4.0600	9.4572E-04	1.3236E-14	193.85	46.627	47.983	6.7155E-10

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4.3500	5.8564E-04	9.6870E-15	178.48	59.014	31.788	5.2581E-10
4.6400	2.9706E-04	6.6867E-15	160.36	66.114	17.177	3.8664E-10
4.9300	7.2729E-05	4.2101E-15	140.72	69.252	4.4629	2.5835E-10
5.2200	-9.5235E-05	2.2190E-15	120.64	69.002	-6.1812	1.4402E-10
5.5100	-2.1487E-04	6.6626E-16	101.02	65.974	-14.707	4.5603E-11
5.8000	-3.0012E-04	-2.9721E-06	82.600	60.772	-21.605	-0.2139
6.0900	-3.6017E-04	-6.5467E-06	65.918	54.891	-20.535	-0.3732
6.3800	-3.8922E-04	-8.8887E-06	50.838	48.978	-23.137	-0.5283
6.6700	-3.9414E-04	-1.0224E-05	37.533	42.655	-24.387	-0.6325
6.9600	-3.8100E-04	-1.0761E-05	26.079	36.231	-24.500	-0.6918
7.2500	-3.5508E-04	-1.0688E-05	16.471	29.960	-23.696	-0.7131
7.5400	-3.2084E-04	-1.0168E-05	8.6357	24.038	-22.191	-0.7031
7.8300	-2.8193E-04	-9.3438E-06	2.4508	18.609	-20.185	-0.6688
8.1200	-2.4128E-04	-8.3313E-06	1.2196	13.768	-17.861	-0.6166
8.4100	-2.0112E-04	-7.2255E-06	5.2959	9.5678	-15.377	-0.5523
8.7000	-1.6307E-04	-6.1005E-06	7.8700	6.0238	-12.864	-0.4811
8.9900	-1.2827E-04	-5.0118E-06	9.1856	3.1228	-10.430	-0.4074
9.2800	-9.7375E-05	-3.9985E-06	9.7471	0.8290	-8.1549	-0.3348
9.5700	-7.0727E-05	-3.0860E-06	9.7237	0.5601	-6.0951	-0.2659
9.8600	-4.8372E-05	-2.2886E-06	9.2676	2.0648	-4.2861	-0.2027
10.150	-3.0152E-05	-1.6112E-06	8.5119	2.9835	-2.7450	-0.1466
10.440	-1.5764E-05	-1.0521E-06	7.5690	3.4568	-1.4734	-9.8318E-02
10.730	-4.8099E-06	-6.0461E-07	6.5314	3.6467	-0.4613	-5.7967E-02
11.020	3.1598E-06	-2.5849E-07	5.4720	3.6174	0.3107	-2.5411E-02
11.310	8.6109E-06	-2.1102E-09	4.4459	3.4271	0.8676	-2.1262E-04
11.600	1.1495E-05	3.4862E-17	3.4924	3.1265	1.1861	3.5974E-12
11.890	1.2787E-05	6.2410E-17	2.6370	2.7586	1.3506	6.5918E-12
12.180	1.3024E-05	7.8436E-17	1.8941	2.3588	1.4072	8.4752E-12
12.470	1.2501E-05	8.5498E-17	1.2686	1.9544	1.3812	9.4460E-12
12.760	1.1471E-05	8.5870E-17	0.7588	1.5664	1.2952	9.6958E-12
13.050	1.0136E-05	8.1513E-17	0.3575	1.2090	1.1691	9.4020E-12

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13.340	8.6583E-06	7.4063E-17	5.4335E-02	0.8917	1.0197	8.7226E-12
13.630	7.1588E-06	6.4840E-17	0.1297	0.6190	0.8605	7.7939E-12
13.920	5.7245E-06	5.4870E-17	0.3053	0.3925	0.7020	6.7289E-12
14.210	4.4137E-06	4.4920E-17	0.3938	0.2106	0.5520	5.6179E-12
14.500	3.2606E-06	3.5527E-17	0.4330	7.0312E-02	0.4157	4.5295E-12
14.790	2.2810E-06	2.7040E-17	0.4370	1.3151E-02	0.2964	3.5132E-12
15.080	1.4764E-06	1.9656E-17	0.4159	9.9039E-02	0.1954	2.6015E-12
15.370	8.3846E-07	1.3450E-17	0.3782	0.1490	0.1130	1.8128E-12
15.660	3.5200E-07	8.4111E-18	0.3308	0.1724	4.8299E-02	1.1541E-12
15.950	-1.9625E-09	4.4673E-18	0.2792	0.1793	-2.7405E-04	6.2384E-13
16.240	-2.4409E-07	1.5059E-18	0.2274	0.1743	-3.4679E-02	2.1395E-13
16.530	-4.0244E-07	-3.7064E-09	0.1785	0.1609	-5.8153E-02	-5.3545E-04
16.820	-5.0544E-07	-9.7417E-09	0.1344	0.1426	-7.4265E-02	-1.4310E-03
17.110	-5.4527E-07	-1.3269E-08	9.5978E-02	0.1216	-8.1443E-02	-1.9814E-03
17.400	-5.3941E-07	-1.4867E-08	6.3840E-02	0.1000	-8.1879E-02	-2.2561E-03
17.690	-5.0259E-07	-1.5047E-08	3.7896E-02	7.9268E-02	-7.7512E-02	-2.3201E-03
17.980	-4.4683E-07	-1.4248E-08	1.7760E-02	6.0237E-02	-6.9998E-02	-2.2315E-03
18.270	-3.8151E-07	-1.2828E-08	2.8288E-03	4.3524E-02	-6.0693E-02	-2.0403E-03
18.560	-3.1369E-07	-1.1073E-08	6.2224E-03	2.9399E-02	-5.0665E-02	-1.7880E-03
18.850	-2.4836E-07	-9.1981E-09	1.4345E-02	1.7903E-02	-4.0717E-02	-1.5076E-03
19.140	-1.8881E-07	-7.3593E-09	1.8133E-02	8.9098E-03	-3.1413E-02	-1.2241E-03
19.430	-1.3696E-07	-5.6616E-09	1.9639E-02	2.1806E-03	-2.3120E-02	-9.5548E-04
19.720	-9.3678E-08	-4.1688E-09	1.9492E-02	1.8662E-03	-1.6041E-02	-7.1367E-04
20.010	-5.9026E-08	-2.9122E-09	1.8215E-02	5.6539E-03	-1.0251E-02	-5.0564E-04
20.300	-3.2536E-08	-1.8993E-09	1.6230E-02	7.5766E-03	-5.7294E-03	-3.3439E-04
20.590	-1.3388E-08	-1.1202E-09	1.3865E-02	8.4495E-03	-2.3900E-03	-1.9993E-04
20.880	-5.6485E-10	-5.5349E-10	1.1359E-02	8.6338E-03	-1.0221E-04	-1.0013E-04
21.170	7.0324E-09	-1.7127E-10	8.8760E-03	8.3772E-03	1.2897E-03	-3.1401E-05
21.460	1.0440E-08	6.4030E-21	6.5105E-03	7.8847E-03	1.9394E-03	1.1898E-15
21.750	1.0447E-08	3.2849E-20	4.3057E-03	7.3172E-03	1.9667E-03	6.1838E-15
22.040	8.6909E-09	3.9242E-20	2.2645E-03	6.7917E-03	1.6572E-03	7.4827E-15

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22.330	6.0273E-09	3.2574E-20	3.6153E-04	6.3827E-03	1.1639E-03	6.2904E-15
22.620	3.2188E-09	1.9592E-20	1.4339E-03	6.1226E-03	6.2942E-04	3.8311E-15
22.910	9.8874E-10	6.8339E-21	3.1953E-03	9.0202E-04	3.5375E-02	2.4450E-13
23.200	3.8672E-11	7.0715E-22	1.9705E-03	4.5544E-03	2.2559E-03	4.1251E-14
23.490	-1.3175E-10	-2.9265E-12	5.5499E-04	3.4502E-03	-1.0657E-02	-2.3672E-04
23.780	-6.6334E-11	-1.7160E-12	2.8589E-05	1.1127E-03	-6.8619E-03	-1.7751E-04
24.070	-1.2371E-11	-3.7501E-13	9.0491E-05	4.8938E-06	-1.5588E-03	-4.7251E-05
24.360	2.0960E-12	7.2414E-24	3.3462E-05	1.5156E-04	3.1137E-04	1.0757E-15
24.650	1.8215E-12	1.0677E-23	2.6034E-06	6.1213E-05	3.1168E-04	1.8269E-15
24.940	5.0417E-13	3.5056E-24	2.0436E-06	6.4667E-06	6.5878E-05	4.5807E-16
25.230	5.4692E-15	2.0404E-25	1.1493E-06	3.2506E-06	1.1376E-06	4.2441E-17
25.520	-3.5758E-14	-8.6482E-16	1.5885E-07	2.0576E-06	-1.0203E-05	-2.4676E-07
25.810	-8.3198E-15	-2.3805E-16	4.4069E-08	3.0622E-07	-3.0173E-06	-8.6333E-08
26.100	1.9304E-16	-2.3400E-18	1.8801E-08	7.3965E-08	8.4937E-08	-1.0296E-09
26.390	3.6292E-16	2.1688E-27	1.1786E-09	3.3543E-08	1.8775E-07	1.1220E-18
26.680	4.6824E-17	3.5673E-28	6.5436E-10	2.2818E-09	2.7845E-08	2.1213E-19
26.970	-7.6171E-18	-1.4980E-19	1.4527E-10	1.1347E-09	-4.5703E-09	-8.9879E-11
27.260	-3.2001E-18	-8.5551E-20	3.4964E-12	2.6121E-10	-1.9200E-09	-5.1331E-11
27.550	-1.8365E-19	-7.0131E-21	6.2350E-12	4.4999E-12	-1.1019E-10	-4.2079E-12
27.840	8.9699E-20	4.8891E-31	7.9238E-13	1.0965E-11	5.3819E-11	2.9335E-22
28.130	1.9650E-20	1.3543E-31	1.2443E-13	1.4516E-12	1.1790E-11	8.1259E-23
28.420	-5.5320E-22	1.2509E-33	4.9628E-14	2.0988E-13	-3.3192E-13	7.5056E-25
28.710	-9.5923E-22	-2.4332E-23	2.7217E-15	8.5565E-14	-5.7554E-13	-1.4599E-14
29.000	-1.2518E-22	-4.6951E-24	0.0000	0.0000	-7.5107E-14	-2.8170E-15

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

3.3338E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1133.1 168.71 2.0839E-09 -0.026900 -16.358 147.43

STR, KN/ M**2

1.0960E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

3.3338E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1133.1 168.71 2.0839E-09 -0.026900 -16.358 147.43

STR, KN/ M**2

1.0960E+04

* EFFECTS FOR Laterally Loaded Pile *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
*****	*****	*****	*****	*****	*****	*****
0.0000	1.2996E-02	7.9531E-14	147.43	168.83	0.0000	0.0000
0.2900	1.2005E-02	7.8730E-14	97.385	166.72	13.755	9.0204E-11
0.5800	1.0975E-02	7.6522E-14	48.448	160.54	28.845	2.0111E-10
0.8700	9.9256E-03	7.3147E-14	1.9151	150.19	42.557	3.1363E-10
1.1600	8.8754E-03	6.8838E-14	28.245	136.19	53.981	4.1868E-10
1.4500	7.8416E-03	6.3820E-14	71.743	119.37	62.007	5.0466E-10
1.7400	6.8396E-03	5.8303E-14	109.80	100.76	66.340	5.6550E-10
2.0300	5.8827E-03	5.2478E-14	140.10	81.317	67.756	6.0443E-10
2.3200	4.9820E-03	4.6521E-14	161.85	62.815	59.845	5.5883E-10
2.6100	4.1461E-03	4.0586E-14	178.50	45.385	60.358	5.9085E-10
2.9000	3.3817E-03	3.4807E-14	189.99	28.082	58.975	6.0702E-10
3.1900	2.6934E-03	2.9300E-14	196.43	10.875	59.693	6.4937E-10
3.4800	2.0838E-03	2.4159E-14	197.77	0.6291	59.416	6.8886E-10
3.7700	1.5534E-03	1.9457E-14	194.01	19.314	58.155	7.2842E-10
4.0600	1.1007E-03	1.5242E-14	185.28	36.819	45.174	6.2554E-10
4.3500	7.2230E-04	1.1539E-14	172.67	49.574	31.713	5.0664E-10
4.6400	4.1303E-04	8.3516E-15	157.31	56.974	19.317	3.9060E-10
4.9300	1.6678E-04	5.6644E-15	140.25	60.975	8.2781	2.8115E-10
5.2200	-2.3286E-05	3.4502E-15	122.44	61.998	-1.2225	1.8113E-10
5.5100	-1.6430E-04	1.6716E-15	104.67	60.502	-9.0966	9.2546E-11
5.8000	-2.6339E-04	2.8482E-16	87.618	56.959	-15.337	1.6585E-11
6.0900	-3.3980E-04	-4.1974E-06	71.817	52.546	-15.671	-0.1935
6.3800	-3.8701E-04	-7.3549E-06	57.254	47.829	-18.609	-0.3536
6.6700	-4.0724E-04	-9.4125E-06	44.131	42.580	-20.382	-0.4710
6.9600	-4.0647E-04	-1.0569E-05	32.565	37.072	-21.142	-0.5496
7.2500	-3.8998E-04	-1.1007E-05	22.602	31.538	-21.051	-0.5940
7.5400	-3.6238E-04	-1.0892E-05	14.222	26.165	-20.274	-0.6092

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7.8300	-3.2754E-04	-1.0370E-05	7.3572	21.102	-18.969	-0.6004		
8.1200	-2.8868E-04	-9.5643E-06	1.9037	16.457	-17.286	-0.5726		
8.4100	-2.4837E-04	-8.5809E-06	1.3354	12.301	-15.360	-0.5306		
8.7000	-2.0859E-04	-7.5050E-06	5.0046	8.6742	-13.310	-0.4788		
8.9900	-1.7082E-04	-6.4045E-06	7.3806	5.5901	-11.236	-0.4212		
9.2800	-1.3607E-04	-5.3310E-06	8.6289	3.0388	-9.2176	-0.3610		
9.5700	-1.0499E-04	-4.3219E-06	9.2093	0.9934	-7.3186	-0.3012		
9.8600	-7.7907E-05	-3.4026E-06	9.2631	0.2248	-5.5838	-0.2438		
10.150	-5.4900E-05	-2.5880E-06	8.9189	1.6189	-4.0428	-0.1905		
10.440	-3.5861E-05	-1.8851E-06	8.2902	2.5483	-2.7113	-0.1425		
10.730	-2.0543E-05	-1.2941E-06	7.4745	3.0402	-1.5935	-0.1004		
11.020	-8.6039E-06	-8.1057E-07	6.5533	3.2795	-0.6843	-6.4454E-02		
11.310	3.5059E-07	-4.2654E-07	5.5924	3.3186	2.8573E-02	-3.4756E-02		
11.600	6.7410E-06	-1.3187E-07	4.6430	3.2055	0.5626	-1.1004E-02		
11.890	1.0783E-05	1.1888E-17	3.7431	2.9831	0.9212	1.0157E-12		
12.180	1.2720E-05	4.7142E-17	2.9189	2.6883	1.1118	4.1202E-12		
12.470	1.3489E-05	6.9973E-17	2.1870	2.3523	1.2055	6.2532E-12		
12.760	1.3381E-05	8.2807E-17	1.5554	2.0003	1.2221	7.5629E-12		
13.050	1.2651E-05	8.7864E-17	1.0259	1.6519	1.1803	8.1975E-12		
13.340	1.1509E-05	8.7112E-17	0.5951	1.3218	1.0964	8.2986E-12		
13.630	1.0129E-05	8.2246E-17	0.2564	1.0200	0.9848	7.9967E-12		
13.920	8.6465E-06	7.4684E-17	2.7487E-04	0.7529	0.8577	7.4082E-12		
14.210	7.1637E-06	6.5574E-17	0.1580	0.5234	0.7247	6.6335E-12		
14.500	5.7544E-06	5.5816E-17	0.3064	0.3323	0.5934	5.7561E-12		
14.790	4.4680E-06	4.6087E-17	0.3795	0.1782	0.4696	4.8434E-12		
15.080	3.3336E-06	3.6871E-17	0.4127	5.8325E-02	0.3569	3.9474E-12		
15.370	2.3645E-06	2.8487E-17	0.4157	1.3040E-02	0.2578	3.1057E-12		
15.660	1.5619E-06	2.1121E-17	0.3968	8.8221E-02	0.1734	2.3442E-12		
15.950	9.1831E-07	1.4853E-17	0.3632	0.1335	0.1037	1.6778E-12		
16.240	4.2018E-07	9.6871E-18	0.3207	0.1555	4.8287E-02	1.1132E-12		
16.530	5.0500E-08	5.5661E-18	0.2739	0.1634	5.9028E-03	6.5061E-13		

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16.820	-2.0944E-07	2.3972E-18	0.2266	0.1606	-2.4892E-02	2.8492E-13
17.110	-3.7859E-07	-1.0009E-09	0.1813	0.1504	-4.5741E-02	-1.2090E-04
17.400	-5.0087E-07	-7.9518E-09	0.1397	0.1353	-6.1498E-02	-9.7611E-04
17.690	-5.5812E-07	-1.2328E-08	0.1029	0.1175	-6.9624E-02	-1.5375E-03
17.980	-5.6664E-07	-1.4669E-08	7.1560E-02	9.8730E-02	-7.1801E-02	-1.8583E-03
18.270	-5.4077E-07	-1.5465E-08	4.5639E-02	8.0202E-02	-6.9586E-02	-1.9895E-03
18.560	-4.9245E-07	-1.5141E-08	2.4955E-02	6.2838E-02	-6.4336E-02	-1.9777E-03
18.850	-4.3128E-07	-1.4060E-08	9.0745E-03	4.7219E-02	-5.7191E-02	-1.8641E-03
19.140	-3.6469E-07	-1.2515E-08	3.2551E-04	3.3669E-02	-4.9079E-02	-1.6839E-03
19.430	-2.9822E-07	-1.0739E-08	9.9178E-03	2.2307E-02	-4.0720E-02	-1.4659E-03
19.720	-2.3572E-07	-8.9052E-09	1.5636E-02	1.3095E-02	-3.2649E-02	-1.2331E-03
20.010	-1.7969E-07	-7.1407E-09	1.8306E-02	5.8874E-03	-2.5241E-02	-1.0028E-03
20.300	-1.3150E-07	-5.5295E-09	1.9155E-02	4.6550E-04	-1.8731E-02	-7.8743E-04
20.590	-9.1699E-08	-4.1218E-09	1.8663E-02	2.9551E-03	-1.3242E-02	-5.9506E-04
20.880	-6.0178E-08	-2.9413E-09	1.7235E-02	6.0763E-03	-8.8083E-03	-4.3042E-04
21.170	-3.6387E-08	-1.9917E-09	1.5193E-02	7.7436E-03	-5.3974E-03	-2.9538E-04
21.460	-1.9473E-08	-1.2619E-09	1.2783E-02	8.6864E-03	-2.9268E-03	-1.8962E-04
21.750	-8.3994E-09	-7.3081E-10	1.0181E-02	9.1308E-03	-1.2790E-03	-1.1125E-04
22.040	-2.0280E-09	-3.7086E-10	7.5029E-03	9.2678E-03	-3.1279E-04	-5.7186E-05
22.330	8.2501E-10	-1.5065E-10	4.8138E-03	9.2486E-03	1.2887E-04	-2.3526E-05
22.620	1.3556E-09	-3.6803E-11	2.1412E-03	9.1815E-03	2.1440E-04	-5.8196E-06
22.910	7.4513E-10	5.9631E-22	1.4265E-04	5.2811E-03	2.6659E-02	2.1335E-14
23.200	1.7991E-10	2.0386E-21	8.2456E-04	1.0622E-04	1.0495E-02	1.1892E-13
23.490	-1.5388E-11	9.5002E-22	4.5151E-04	1.2380E-03	-1.2447E-03	7.6846E-14
23.780	-2.9818E-11	1.7357E-22	8.4089E-05	8.1976E-04	-3.0845E-03	1.7955E-14
24.070	-1.1170E-11	-1.8505E-13	1.5456E-05	1.7952E-04	-1.4075E-03	-2.3316E-05
24.360	-1.4154E-12	-1.3360E-13	1.9330E-05	1.7165E-05	-2.1026E-04	-1.9847E-05
24.650	5.9616E-13	-2.8983E-14	4.8697E-06	3.2819E-05	1.0201E-04	-4.9593E-06
24.940	3.8712E-13	3.9986E-25	9.6140E-09	9.4893E-06	5.0584E-05	5.2248E-17
25.230	6.1104E-14	7.6496E-25	5.9792E-07	3.1180E-07	1.2710E-05	1.5911E-16
25.520	-1.0595E-14	1.6921E-25	1.9091E-07	1.0172E-06	-3.0232E-06	4.8282E-17

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25.810	-5.9388E-15	-4.7490E-17	1.1407E-09	3.4850E-07	-2.1538E-06	-1.7223E-08
26.100	-7.3669E-16	-4.1667E-17	1.0807E-08	5.6048E-09	-3.2414E-07	-1.8334E-08
26.390	1.3610E-16	-4.9483E-18	2.1168E-09	1.8803E-08	7.0409E-08	-2.5599E-09
26.680	4.6630E-17	1.7985E-28	9.7592E-11	3.8352E-09	2.7729E-08	1.0695E-19
26.970	8.7451E-19	7.9283E-29	1.0781E-10	1.4670E-10	5.2470E-10	4.7570E-20
27.260	-1.6903E-18	4.8966E-30	9.9020E-12	1.9059E-10	-1.0142E-09	2.9379E-21
27.550	-3.2665E-19	-1.0613E-20	2.3677E-12	1.8442E-11	-1.9599E-10	-6.3676E-12
27.840	1.4004E-20	-2.1597E-21	7.9639E-13	4.0225E-12	8.4021E-12	-1.2958E-12
28.130	1.4677E-20	1.0086E-32	1.3373E-14	1.4232E-12	8.8060E-12	6.0517E-24
28.420	1.3225E-21	2.2916E-32	2.7830E-14	3.1241E-14	7.9348E-13	1.3750E-23
28.710	-3.8729E-22	3.1160E-33	4.7636E-15	4.7986E-14	-2.3238E-13	1.8696E-24
29.000	-2.1317E-22	-6.7700E-24	0.0000	0.0000	-1.2790E-13	-4.0620E-15

* PILE GROUP * 9

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.3338E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1133.1 168.71 2.0839E-09 -0.026900 -16.357 147.43

STR, KN/ M**2



1.0960E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

3.3338E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1133.1 168.71 2.0839E-09 -0.026900 -16.357 147.43

STR, KN/ M**2

1.0960E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.2996E-02	7.9531E-14	147.43	168.83	0.0000	0.0000
0.2900	1.2005E-02	7.8730E-14	97.385	166.72	13.755	9.0204E-11
0.5800	1.0975E-02	7.6522E-14	48.448	160.54	28.845	2.0111E-10
0.8700	9.9256E-03	7.3147E-14	1.9151	150.19	42.557	3.1363E-10
1.1600	8.8754E-03	6.8838E-14	28.224	136.19	53.981	4.1868E-10
1.4500	7.8416E-03	6.3820E-14	71.728	119.37	62.007	5.0466E-10
1.7400	6.8396E-03	5.8303E-14	109.79	100.76	66.340	5.6550E-10
2.0300	5.8827E-03	5.2478E-14	140.10	81.317	67.756	6.0443E-10



2.3200	4.9820E-03	4.6521E-14	161.85	62.815	59.845	5.5883E-10
2.6100	4.1461E-03	4.0586E-14	178.50	45.385	60.358	5.9085E-10
2.9000	3.3817E-03	3.4807E-14	189.99	28.082	58.975	6.0702E-10
3.1900	2.6934E-03	2.9300E-14	196.43	10.875	59.693	6.4937E-10
3.4800	2.0838E-03	2.4159E-14	197.77	0.6285	59.416	6.8886E-10
3.7700	1.5534E-03	1.9457E-14	194.01	19.314	58.155	7.2842E-10
4.0600	1.1007E-03	1.5242E-14	185.28	36.820	45.174	6.2554E-10
4.3500	7.2230E-04	1.1539E-14	172.67	49.574	31.713	5.0664E-10
4.6400	4.1303E-04	8.3516E-15	157.31	56.974	19.317	3.9060E-10
4.9300	1.6678E-04	5.6644E-15	140.25	60.975	8.2781	2.8115E-10
5.2200	-2.3286E-05	3.4502E-15	122.44	61.998	-1.2225	1.8113E-10
5.5100	-1.6430E-04	1.6716E-15	104.67	60.502	-9.0966	9.2546E-11
5.8000	-2.6339E-04	2.8482E-16	87.618	56.959	-15.337	1.6585E-11
6.0900	-3.3982E-04	-4.1986E-06	71.817	52.546	-15.672	-0.1936
6.3800	-3.8704E-04	-7.3561E-06	57.254	47.829	-18.610	-0.3536
6.6700	-4.0727E-04	-9.4137E-06	44.131	42.580	-20.384	-0.4710
6.9600	-4.0650E-04	-1.0570E-05	32.565	37.072	-21.144	-0.5497
7.2500	-3.9002E-04	-1.1008E-05	22.602	31.538	-21.053	-0.5941
7.5400	-3.6241E-04	-1.0893E-05	14.222	26.165	-20.276	-0.6093
7.8300	-3.2757E-04	-1.0371E-05	7.3572	21.102	-18.970	-0.6004
8.1200	-2.8871E-04	-9.5651E-06	1.9037	16.457	-17.287	-0.5726
8.4100	-2.4840E-04	-8.5815E-06	1.3350	12.301	-15.362	-0.5306
8.7000	-2.0861E-04	-7.5055E-06	5.0046	8.6742	-13.312	-0.4788
8.9900	-1.7084E-04	-6.4049E-06	7.3806	5.5901	-11.237	-0.4212
9.2800	-1.3609E-04	-5.3313E-06	8.6289	3.0388	-9.2186	-0.3611
9.5700	-1.0500E-04	-4.3221E-06	9.2093	0.9934	-7.3194	-0.3012
9.8600	-7.7916E-05	-3.4027E-06	9.2631	0.2248	-5.5844	-0.2438
10.150	-5.4907E-05	-2.5881E-06	8.9189	1.6191	-4.0432	-0.1905
10.440	-3.5865E-05	-1.8851E-06	8.2902	2.5483	-2.7116	-0.1425
10.730	-2.0545E-05	-1.2941E-06	7.4745	3.0402	-1.5937	-0.1004
11.020	-8.6050E-06	-8.1051E-07	6.5533	3.2795	-0.6844	-6.4449E-02

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11.310	3.5053E-07	-4.2646E-07	5.5924	3.3186	2.8568E-02	-3.4749E-02
11.600	6.7416E-06	-1.3177E-07	4.6430	3.2055	0.5627	-1.0996E-02
11.890	1.0783E-05	1.1888E-17	3.7431	2.9831	0.9212	1.0157E-12
12.180	1.2720E-05	4.7142E-17	2.9189	2.6883	1.1118	4.1202E-12
12.470	1.3489E-05	6.9973E-17	2.1870	2.3523	1.2055	6.2532E-12
12.760	1.3381E-05	8.2807E-17	1.5554	2.0003	1.2221	7.5629E-12
13.050	1.2651E-05	8.7864E-17	1.0259	1.6519	1.1803	8.1975E-12
13.340	1.1509E-05	8.7112E-17	0.5951	1.3218	1.0964	8.2986E-12
13.630	1.0129E-05	8.2246E-17	0.2564	1.0200	0.9848	7.9967E-12
13.920	8.6465E-06	7.4684E-17	2.7487E-04	0.7529	0.8577	7.4082E-12
14.210	7.1637E-06	6.5574E-17	0.1580	0.5234	0.7247	6.6335E-12
14.500	5.7544E-06	5.5816E-17	0.3065	0.3323	0.5934	5.7561E-12
14.790	4.4680E-06	4.6087E-17	0.3795	0.1782	0.4696	4.8434E-12
15.080	3.3336E-06	3.6871E-17	0.4127	5.8325E-02	0.3569	3.9474E-12
15.370	2.3645E-06	2.8487E-17	0.4157	1.3046E-02	0.2578	3.1057E-12
15.660	1.5619E-06	2.1121E-17	0.3968	8.8236E-02	0.1734	2.3442E-12
15.950	9.1831E-07	1.4853E-17	0.3632	0.1335	0.1037	1.6778E-12
16.240	4.2018E-07	9.6871E-18	0.3207	0.1555	4.8287E-02	1.1132E-12
16.530	5.0500E-08	5.5661E-18	0.2739	0.1634	5.9028E-03	6.5061E-13
16.820	-2.0944E-07	2.3972E-18	0.2266	0.1606	-2.4892E-02	2.8492E-13
17.110	-3.7859E-07	-1.0065E-09	0.1813	0.1504	-4.5741E-02	-1.2157E-04
17.400	-5.0095E-07	-7.9573E-09	0.1397	0.1353	-6.1507E-02	-9.7678E-04
17.690	-5.5820E-07	-1.2333E-08	0.1029	0.1175	-6.9634E-02	-1.5382E-03
17.980	-5.6672E-07	-1.4674E-08	7.1560E-02	9.8730E-02	-7.1810E-02	-1.8589E-03
18.270	-5.4084E-07	-1.5469E-08	4.5639E-02	8.0202E-02	-6.9595E-02	-1.9900E-03
18.560	-4.9251E-07	-1.5145E-08	2.4955E-02	6.2838E-02	-6.4344E-02	-1.9781E-03
18.850	-4.3133E-07	-1.4063E-08	9.0745E-03	4.7219E-02	-5.7199E-02	-1.8645E-03
19.140	-3.6474E-07	-1.2518E-08	3.2596E-04	3.3669E-02	-4.9085E-02	-1.6842E-03
19.430	-2.9826E-07	-1.0740E-08	9.9195E-03	2.2307E-02	-4.0725E-02	-1.4662E-03
19.720	-2.3575E-07	-8.9063E-09	1.5636E-02	1.3095E-02	-3.2653E-02	-1.2333E-03
20.010	-1.7971E-07	-7.1415E-09	1.8306E-02	5.8874E-03	-2.5244E-02	-1.0030E-03

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20.300	-1.3152E-07	-5.5299E-09	1.9155E-02	4.6550E-04	-1.8733E-02	-7.8750E-04
20.590	-9.1709E-08	-4.1220E-09	1.8663E-02	2.9559E-03	-1.3243E-02	-5.9510E-04
20.880	-6.0184E-08	-2.9414E-09	1.7235E-02	6.0763E-03	-8.8092E-03	-4.3043E-04
21.170	-3.6390E-08	-1.9917E-09	1.5193E-02	7.7436E-03	-5.3979E-03	-2.9537E-04
21.460	-1.9474E-08	-1.2618E-09	1.2783E-02	8.6864E-03	-2.9270E-03	-1.8961E-04
21.750	-8.3996E-09	-7.3071E-10	1.0181E-02	9.1308E-03	-1.2790E-03	-1.1124E-04
22.040	-2.0277E-09	-3.7076E-10	7.5029E-03	9.2678E-03	-3.1274E-04	-5.7171E-05
22.330	8.2547E-10	-1.5058E-10	4.8138E-03	9.2486E-03	1.2894E-04	-2.3515E-05
22.620	1.3559E-09	-3.6763E-11	2.1412E-03	9.1815E-03	2.1446E-04	-5.8133E-06
22.910	7.4513E-10	5.9631E-22	1.4286E-04	5.2811E-03	2.6659E-02	2.1335E-14
23.200	1.7991E-10	2.0386E-21	8.2477E-04	1.0622E-04	1.0495E-02	1.1892E-13
23.490	-1.5388E-11	9.5002E-22	4.5151E-04	1.2384E-03	-1.2447E-03	7.6846E-14
23.780	-2.9818E-11	1.7357E-22	8.4089E-05	8.1976E-04	-3.0845E-03	1.7955E-14
24.070	-1.1172E-11	-1.8520E-13	1.5463E-05	1.7952E-04	-1.4077E-03	-2.3335E-05
24.360	-1.4154E-12	-1.3358E-13	1.9334E-05	1.7177E-05	-2.1026E-04	-1.9844E-05
24.650	5.9634E-13	-2.8961E-14	4.8697E-06	3.2826E-05	1.0204E-04	-4.9555E-06
24.940	3.8712E-13	3.9986E-25	9.6140E-09	9.4893E-06	5.0584E-05	5.2248E-17
25.230	6.1104E-14	7.6496E-25	5.9805E-07	3.1180E-07	1.2710E-05	1.5911E-16
25.520	-1.0595E-14	1.6921E-25	1.9091E-07	1.0174E-06	-3.0232E-06	4.8282E-17
25.810	-5.9398E-15	-4.7590E-17	1.1407E-09	3.4850E-07	-2.1542E-06	-1.7259E-08
26.100	-7.3675E-16	-4.1667E-17	1.0809E-08	5.6048E-09	-3.2417E-07	-1.8333E-08
26.390	1.3614E-16	-4.9437E-18	2.1168E-09	1.8807E-08	7.0428E-08	-2.5576E-09
26.680	4.6630E-17	1.7985E-28	9.7644E-11	3.8352E-09	2.7729E-08	1.0695E-19
26.970	8.7451E-19	7.9283E-29	1.0781E-10	1.4679E-10	5.2470E-10	4.7570E-20
27.260	-1.6903E-18	4.8966E-30	9.9020E-12	1.9059E-10	-1.0142E-09	2.9379E-21
27.550	-3.2669E-19	-1.0615E-20	2.3684E-12	1.8442E-11	-1.9602E-10	-6.3692E-12
27.840	1.4011E-20	-2.1587E-21	7.9639E-13	4.0237E-12	8.4064E-12	-1.2952E-12
28.130	1.4677E-20	1.0086E-32	1.3373E-14	1.4232E-12	8.8060E-12	6.0517E-24
28.420	1.3225E-21	2.2916E-32	2.7836E-14	3.1241E-14	7.9348E-13	1.3750E-23
28.710	-3.8729E-22	3.1160E-33	4.7636E-15	4.7997E-14	-2.3238E-13	1.8696E-24
29.000	-2.1320E-22	-6.7717E-24	0.0000	0.0000	-1.2792E-13	-4.0630E-15

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* PILE GROUP * 10

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.3338E-03	0.012996	7.9531E-14	-1.8544E-06	-8.2904E-17	-3.5119E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1133.1	168.71	2.0839E-09	-0.026900	-16.356	147.43

STR, KN/ M**2

1.0960E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
3.3338E-03	0.012996	7.9531E-14	-1.8544E-06	-8.2904E-17	-3.5119E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
1133.1	168.71	2.0839E-09	-0.026900	-16.356	147.43

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STR, KN/ M**2

1.0960E+04

* EFFECTS FOR Laterally Loaded PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.2996E-02	7.9531E-14	147.43	168.83	0.0000	0.0000
0.2900	1.2005E-02	7.8730E-14	97.385	166.72	13.755	9.0204E-11
0.5800	1.0975E-02	7.6522E-14	48.448	160.54	28.845	2.0111E-10
0.8700	9.9256E-03	7.3147E-14	1.9151	150.19	42.557	3.1363E-10
1.1600	8.8754E-03	6.8838E-14	28.204	136.19	53.981	4.1868E-10
1.4500	7.8416E-03	6.3820E-14	71.713	119.37	62.007	5.0466E-10
1.7400	6.8396E-03	5.8303E-14	109.78	100.76	66.340	5.6550E-10
2.0300	5.8827E-03	5.2478E-14	140.10	81.317	67.756	6.0443E-10
2.3200	4.9820E-03	4.6521E-14	161.85	62.815	59.845	5.5883E-10
2.6100	4.1461E-03	4.0586E-14	178.50	45.385	60.358	5.9085E-10
2.9000	3.3817E-03	3.4807E-14	189.99	28.082	58.975	6.0702E-10
3.1900	2.6934E-03	2.9300E-14	196.43	10.875	59.693	6.4937E-10
3.4800	2.0838E-03	2.4159E-14	197.77	0.6278	59.416	6.8886E-10
3.7700	1.5534E-03	1.9457E-14	194.01	19.313	58.155	7.2842E-10
4.0600	1.1007E-03	1.5242E-14	185.28	36.821	45.174	6.2554E-10
4.3500	7.2230E-04	1.1539E-14	172.67	49.574	31.713	5.0664E-10
4.6400	4.1303E-04	8.3516E-15	157.31	56.974	19.317	3.9060E-10
4.9300	1.6678E-04	5.6644E-15	140.25	60.975	8.2781	2.8115E-10
5.2200	-2.3286E-05	3.4502E-15	122.44	61.998	-1.2225	1.8113E-10
5.5100	-1.6430E-04	1.6716E-15	104.67	60.502	-9.0966	9.2546E-11

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5.8000	-2.6339E-04	2.8482E-16	87.618	56.959	-15.337	1.6585E-11
6.0900	-3.3985E-04	-4.1998E-06	71.817	52.546	-15.673	-0.1936
6.3800	-3.8707E-04	-7.3574E-06	57.254	47.829	-18.612	-0.3537
6.6700	-4.0731E-04	-9.4149E-06	44.131	42.580	-20.385	-0.4711
6.9600	-4.0653E-04	-1.0571E-05	32.565	37.072	-21.146	-0.5497
7.2500	-3.9005E-04	-1.1009E-05	22.602	31.538	-21.055	-0.5941
7.5400	-3.6244E-04	-1.0894E-05	14.222	26.165	-20.277	-0.6094
7.8300	-3.2761E-04	-1.0371E-05	7.3572	21.102	-18.972	-0.6005
8.1200	-2.8874E-04	-9.5658E-06	1.9037	16.457	-17.289	-0.5727
8.4100	-2.4842E-04	-8.5822E-06	1.3346	12.301	-15.363	-0.5306
8.7000	-2.0864E-04	-7.5060E-06	5.0047	8.6742	-13.313	-0.4788
8.9900	-1.7085E-04	-6.4053E-06	7.3806	5.5901	-11.238	-0.4212
9.2800	-1.3610E-04	-5.3316E-06	8.6289	3.0388	-9.2195	-0.3611
9.5700	-1.0501E-04	-4.3223E-06	9.2093	0.9934	-7.3201	-0.3012
9.8600	-7.7924E-05	-3.4028E-06	9.2631	0.2248	-5.5850	-0.2438
10.150	-5.4913E-05	-2.5881E-06	8.9189	1.6193	-4.0437	-0.1905
10.440	-3.5869E-05	-1.8851E-06	8.2902	2.5483	-2.7119	-0.1425
10.730	-2.0547E-05	-1.2940E-06	7.4745	3.0402	-1.5939	-0.1004
11.020	-8.6061E-06	-8.1044E-07	6.5533	3.2795	-0.6845	-6.4444E-02
11.310	3.5046E-07	-4.2638E-07	5.5924	3.3186	2.8563E-02	-3.4742E-02
11.600	6.7423E-06	-1.3168E-07	4.6430	3.2055	0.5628	-1.0988E-02
11.890	1.0783E-05	1.1888E-17	3.7431	2.9831	0.9212	1.0157E-12
12.180	1.2720E-05	4.7142E-17	2.9189	2.6883	1.1118	4.1202E-12
12.470	1.3489E-05	6.9973E-17	2.1870	2.3523	1.2055	6.2532E-12
12.760	1.3381E-05	8.2807E-17	1.5554	2.0003	1.2221	7.5629E-12
13.050	1.2651E-05	8.7864E-17	1.0259	1.6519	1.1803	8.1975E-12
13.340	1.1509E-05	8.7112E-17	0.5951	1.3218	1.0964	8.2986E-12
13.630	1.0129E-05	8.2246E-17	0.2564	1.0200	0.9848	7.9967E-12
13.920	8.6465E-06	7.4684E-17	2.7487E-04	0.7529	0.8577	7.4082E-12
14.210	7.1637E-06	6.5574E-17	0.1580	0.5234	0.7247	6.6335E-12
14.500	5.7544E-06	5.5816E-17	0.3066	0.3323	0.5934	5.7561E-12

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14.790	4.4680E-06	4.6087E-17	0.3795	0.1782	0.4696	4.8434E-12
15.080	3.3336E-06	3.6871E-17	0.4127	5.8325E-02	0.3569	3.9474E-12
15.370	2.3645E-06	2.8487E-17	0.4157	1.3053E-02	0.2578	3.1057E-12
15.660	1.5619E-06	2.1121E-17	0.3968	8.8251E-02	0.1734	2.3442E-12
15.950	9.1831E-07	1.4853E-17	0.3632	0.1335	0.1037	1.6778E-12
16.240	4.2018E-07	9.6871E-18	0.3207	0.1555	4.8287E-02	1.1132E-12
16.530	5.0500E-08	5.5661E-18	0.2739	0.1634	5.9028E-03	6.5061E-13
16.820	-2.0944E-07	2.3972E-18	0.2266	0.1606	-2.4892E-02	2.8492E-13
17.110	-3.7859E-07	-1.0121E-09	0.1813	0.1504	-4.5741E-02	-1.2225E-04
17.400	-5.0102E-07	-7.9628E-09	0.1397	0.1353	-6.1516E-02	-9.7746E-04
17.690	-5.5828E-07	-1.2338E-08	0.1029	0.1175	-6.9643E-02	-1.5388E-03
17.980	-5.6679E-07	-1.4678E-08	7.1560E-02	9.8730E-02	-7.1820E-02	-1.8595E-03
18.270	-5.4091E-07	-1.5473E-08	4.5639E-02	8.0202E-02	-6.9604E-02	-1.9906E-03
18.560	-4.9257E-07	-1.5148E-08	2.4955E-02	6.2838E-02	-6.4352E-02	-1.9786E-03
18.850	-4.3138E-07	-1.4066E-08	9.0745E-03	4.7219E-02	-5.7206E-02	-1.8648E-03
19.140	-3.6478E-07	-1.2520E-08	3.2640E-04	3.3669E-02	-4.9091E-02	-1.6845E-03
19.430	-2.9829E-07	-1.0742E-08	9.9212E-03	2.2307E-02	-4.0730E-02	-1.4664E-03
19.720	-2.3578E-07	-8.9075E-09	1.5636E-02	1.3095E-02	-3.2657E-02	-1.2335E-03
20.010	-1.7973E-07	-7.1423E-09	1.8306E-02	5.8874E-03	-2.5247E-02	-1.0031E-03
20.300	-1.3153E-07	-5.5304E-09	1.9155E-02	4.6550E-04	-1.8735E-02	-7.8756E-04
20.590	-9.1719E-08	-4.1222E-09	1.8663E-02	2.9568E-03	-1.3245E-02	-5.9513E-04
20.880	-6.0190E-08	-2.9415E-09	1.7235E-02	6.0763E-03	-8.8100E-03	-4.3045E-04
21.170	-3.6393E-08	-1.9917E-09	1.5193E-02	7.7436E-03	-5.3984E-03	-2.9537E-04
21.460	-1.9476E-08	-1.2617E-09	1.2783E-02	8.6864E-03	-2.9272E-03	-1.8960E-04
21.750	-8.3999E-09	-7.3060E-10	1.0181E-02	9.1308E-03	-1.2790E-03	-1.1122E-04
22.040	-2.0274E-09	-3.7067E-10	7.5029E-03	9.2678E-03	-3.1269E-04	-5.7156E-05
22.330	8.2593E-10	-1.5051E-10	4.8138E-03	9.2486E-03	1.2901E-04	-2.3504E-05
22.620	1.3563E-09	-3.6723E-11	2.1412E-03	9.1815E-03	2.1451E-04	-5.8069E-06
22.910	7.4513E-10	5.9631E-22	1.4307E-04	5.2811E-03	2.6659E-02	2.1335E-14
23.200	1.7991E-10	2.0386E-21	8.2498E-04	1.0622E-04	1.0495E-02	1.1892E-13
23.490	-1.5388E-11	9.5002E-22	4.5151E-04	1.2387E-03	-1.2447E-03	7.6846E-14

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23.780	-2.9818E-11	1.7357E-22	8.4089E-05	8.1976E-04	-3.0845E-03	1.7955E-14
24.070	-1.1174E-11	-1.8535E-13	1.5471E-05	1.7952E-04	-1.4079E-03	-2.3355E-05
24.360	-1.4154E-12	-1.3356E-13	1.9338E-05	1.7188E-05	-2.1027E-04	-1.9841E-05
24.650	5.9652E-13	-2.8938E-14	4.8697E-06	3.2833E-05	1.0207E-04	-4.9516E-06
24.940	3.8712E-13	3.9986E-25	9.6140E-09	9.4893E-06	5.0584E-05	5.2248E-17
25.230	6.1104E-14	7.6496E-25	5.9819E-07	3.1180E-07	1.2710E-05	1.5911E-16
25.520	-1.0595E-14	1.6921E-25	1.9091E-07	1.0177E-06	-3.0232E-06	4.8282E-17
25.810	-5.9409E-15	-4.7690E-17	1.1407E-09	3.4850E-07	-2.1546E-06	-1.7296E-08
26.100	-7.3682E-16	-4.1666E-17	1.0812E-08	5.6048E-09	-3.2420E-07	-1.8333E-08
26.390	1.3617E-16	-4.9392E-18	2.1168E-09	1.8811E-08	7.0448E-08	-2.5552E-09
26.680	4.6630E-17	1.7985E-28	9.7696E-11	3.8352E-09	2.7729E-08	1.0695E-19
26.970	8.7451E-19	7.9283E-29	1.0781E-10	1.4687E-10	5.2470E-10	4.7570E-20
27.260	-1.6903E-18	4.8966E-30	9.9020E-12	1.9059E-10	-1.0142E-09	2.9379E-21
27.550	-3.2674E-19	-1.0618E-20	2.3690E-12	1.8442E-11	-1.9604E-10	-6.3708E-12
27.840	1.4018E-20	-2.1576E-21	7.9639E-13	4.0248E-12	8.4108E-12	-1.2946E-12
28.130	1.4677E-20	1.0086E-32	1.3373E-14	1.4232E-12	8.8060E-12	6.0517E-24
28.420	1.3225E-21	2.2916E-32	2.7842E-14	3.1241E-14	7.9348E-13	1.3750E-23
28.710	-3.8729E-22	3.1160E-33	4.7636E-15	4.8007E-14	-2.3238E-13	1.8696E-24
29.000	-2.1322E-22	-6.7735E-24	0.0000	0.0000	-1.2793E-13	-4.0641E-15

* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
3.3338E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
1133.1 168.71 2.0839E-09 -0.026900 -16.356 147.43

STR, KN/ M**2
1.0960E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
3.3338E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1133.1 168.71 2.0839E-09 -0.026900 -16.356 147.43

STR, KN/ M**2
1.0960E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.2996E-02	7.9531E-14	147.43	168.83	0.0000	0.0000



0.2900	1.2005E-02	7.8730E-14	97.385	166.72	13.755	9.0204E-11
0.5800	1.0975E-02	7.6522E-14	48.448	160.54	28.845	2.0111E-10
0.8700	9.9256E-03	7.3147E-14	1.9151	150.19	42.557	3.1363E-10
1.1600	8.8754E-03	6.8838E-14	28.184	136.19	53.981	4.1868E-10
1.4500	7.8416E-03	6.3820E-14	71.698	119.37	62.007	5.0466E-10
1.7400	6.8396E-03	5.8303E-14	109.77	100.76	66.340	5.6550E-10
2.0300	5.8827E-03	5.2478E-14	140.10	81.317	67.756	6.0443E-10
2.3200	4.9820E-03	4.6521E-14	161.85	62.815	59.845	5.5883E-10
2.6100	4.1461E-03	4.0586E-14	178.50	45.385	60.358	5.9085E-10
2.9000	3.3817E-03	3.4807E-14	189.99	28.082	58.975	6.0702E-10
3.1900	2.6934E-03	2.9300E-14	196.43	10.875	59.693	6.4937E-10
3.4800	2.0838E-03	2.4159E-14	197.77	0.6273	59.416	6.8886E-10
3.7700	1.5534E-03	1.9457E-14	194.01	19.313	58.155	7.2842E-10
4.0600	1.1007E-03	1.5242E-14	185.28	36.822	45.174	6.2554E-10
4.3500	7.2230E-04	1.1539E-14	172.67	49.574	31.713	5.0664E-10
4.6400	4.1303E-04	8.3516E-15	157.31	56.974	19.317	3.9060E-10
4.9300	1.6678E-04	5.6644E-15	140.25	60.975	8.2781	2.8115E-10
5.2200	-2.3286E-05	3.4502E-15	122.44	61.998	-1.2225	1.8113E-10
5.5100	-1.6430E-04	1.6716E-15	104.67	60.502	-9.0966	9.2546E-11
5.8000	-2.6339E-04	2.8482E-16	87.618	56.959	-15.337	1.6585E-11
6.0900	-3.3987E-04	-4.2019E-06	71.817	52.546	-15.674	-0.1937
6.3800	-3.8710E-04	-7.3592E-06	57.254	47.829	-18.613	-0.3538
6.6700	-4.0734E-04	-9.4165E-06	44.131	42.580	-20.387	-0.4712
6.9600	-4.0657E-04	-1.0572E-05	32.565	37.072	-21.148	-0.5498
7.2500	-3.9008E-04	-1.1010E-05	22.602	31.538	-21.057	-0.5942
7.5400	-3.6248E-04	-1.0895E-05	14.222	26.165	-20.279	-0.6094
7.8300	-3.2764E-04	-1.0372E-05	7.3572	21.102	-18.974	-0.6006
8.1200	-2.8877E-04	-9.5663E-06	1.9037	16.457	-17.291	-0.5727
8.4100	-2.4845E-04	-8.5824E-06	1.3344	12.301	-15.365	-0.5307
8.7000	-2.0866E-04	-7.5061E-06	5.0049	8.6742	-13.314	-0.4789
8.9900	-1.7087E-04	-6.4053E-06	7.3806	5.5901	-11.239	-0.4212

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9.2800	-1.3611E-04	-5.3314E-06	8.6289	3.0388	-9.2205	-0.3611		
9.5700	-1.0502E-04	-4.3221E-06	9.2093	0.9934	-7.3209	-0.3012		
9.8600	-7.7932E-05	-3.4026E-06	9.2631	0.2249	-5.5856	-0.2438		
10.150	-5.4918E-05	-2.5879E-06	8.9189	1.6195	-4.0441	-0.1905		
10.440	-3.5873E-05	-1.8848E-06	8.2902	2.5483	-2.7121	-0.1425		
10.730	-2.0549E-05	-1.2938E-06	7.4745	3.0402	-1.5940	-0.1003		
11.020	-8.6067E-06	-8.1018E-07	6.5533	3.2795	-0.6845	-6.4427E-02		
11.310	3.5069E-07	-4.2614E-07	5.5924	3.3186	2.8581E-02	-3.4725E-02		
11.600	6.7432E-06	-1.3146E-07	4.6430	3.2055	0.5628	-1.0971E-02		
11.890	1.0783E-05	1.1888E-17	3.7431	2.9831	0.9212	1.0157E-12		
12.180	1.2720E-05	4.7142E-17	2.9189	2.6883	1.1118	4.1202E-12		
12.470	1.3489E-05	6.9973E-17	2.1870	2.3523	1.2055	6.2532E-12		
12.760	1.3381E-05	8.2807E-17	1.5554	2.0003	1.2221	7.5629E-12		
13.050	1.2651E-05	8.7864E-17	1.0259	1.6519	1.1803	8.1975E-12		
13.340	1.1509E-05	8.7112E-17	0.5951	1.3218	1.0964	8.2986E-12		
13.630	1.0129E-05	8.2246E-17	0.2564	1.0200	0.9848	7.9967E-12		
13.920	8.6465E-06	7.4684E-17	2.7487E-04	0.7529	0.8577	7.4082E-12		
14.210	7.1637E-06	6.5574E-17	0.1581	0.5234	0.7247	6.6335E-12		
14.500	5.7544E-06	5.5816E-17	0.3066	0.3323	0.5934	5.7561E-12		
14.790	4.4680E-06	4.6087E-17	0.3795	0.1782	0.4696	4.8434E-12		
15.080	3.3336E-06	3.6871E-17	0.4127	5.8325E-02	0.3569	3.9474E-12		
15.370	2.3645E-06	2.8487E-17	0.4157	1.3065E-02	0.2578	3.1057E-12		
15.660	1.5619E-06	2.1121E-17	0.3968	8.8269E-02	0.1734	2.3442E-12		
15.950	9.1831E-07	1.4853E-17	0.3632	0.1335	0.1037	1.6778E-12		
16.240	4.2018E-07	9.6871E-18	0.3207	0.1555	4.8287E-02	1.1132E-12		
16.530	5.0500E-08	5.5661E-18	0.2739	0.1634	5.9028E-03	6.5061E-13		
16.820	-2.0944E-07	2.3972E-18	0.2266	0.1606	-2.4892E-02	2.8492E-13		
17.110	-3.7859E-07	-1.0237E-09	0.1813	0.1504	-4.5741E-02	-1.2366E-04		
17.400	-5.0109E-07	-7.9724E-09	0.1397	0.1353	-6.1525E-02	-9.7870E-04		
17.690	-5.5835E-07	-1.2346E-08	0.1029	0.1175	-6.9653E-02	-1.5399E-03		
17.980	-5.6687E-07	-1.4684E-08	7.1560E-02	9.8730E-02	-7.1830E-02	-1.8604E-03		

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18.270	-5.4098E-07	-1.5477E-08	4.5639E-02	8.0202E-02	-6.9613E-02	-1.9912E-03
18.560	-4.9263E-07	-1.5151E-08	2.4955E-02	6.2838E-02	-6.4360E-02	-1.9791E-03
18.850	-4.3143E-07	-1.4067E-08	9.0745E-03	4.7219E-02	-5.7213E-02	-1.8652E-03
19.140	-3.6482E-07	-1.2520E-08	3.2750E-04	3.3669E-02	-4.9097E-02	-1.6847E-03
19.430	-2.9833E-07	-1.0742E-08	9.9234E-03	2.2307E-02	-4.0734E-02	-1.4665E-03
19.720	-2.3580E-07	-8.9071E-09	1.5636E-02	1.3095E-02	-3.2661E-02	-1.2335E-03
20.010	-1.7975E-07	-7.1416E-09	1.8306E-02	5.8874E-03	-2.5250E-02	-1.0030E-03
20.300	-1.3154E-07	-5.5295E-09	1.9155E-02	4.6550E-04	-1.8737E-02	-7.8749E-04
20.590	-9.1726E-08	-4.1213E-09	1.8663E-02	2.9579E-03	-1.3246E-02	-5.9504E-04
20.880	-6.0194E-08	-2.9406E-09	1.7235E-02	6.0763E-03	-8.8107E-03	-4.3034E-04
21.170	-3.6395E-08	-1.9909E-09	1.5193E-02	7.7436E-03	-5.3987E-03	-2.9527E-04
21.460	-1.9476E-08	-1.2611E-09	1.2783E-02	8.6864E-03	-2.9272E-03	-1.8951E-04
21.750	-8.3992E-09	-7.3009E-10	1.0181E-02	9.1308E-03	-1.2789E-03	-1.1115E-04
22.040	-2.0265E-09	-3.7030E-10	7.5029E-03	9.2678E-03	-3.1256E-04	-5.7104E-05
22.330	8.2669E-10	-1.5028E-10	4.8138E-03	9.2486E-03	1.2913E-04	-2.3470E-05
22.620	1.3567E-09	-3.6616E-11	2.1412E-03	9.1815E-03	2.1459E-04	-5.7904E-06
22.910	7.4513E-10	5.9631E-22	1.4344E-04	5.2811E-03	2.6659E-02	2.1335E-14
23.200	1.7991E-10	2.0386E-21	8.2526E-04	1.0622E-04	1.0495E-02	1.1892E-13
23.490	-1.5388E-11	9.5002E-22	4.5151E-04	1.2392E-03	-1.2447E-03	7.6846E-14
23.780	-2.9818E-11	1.7357E-22	8.4089E-05	8.1976E-04	-3.0845E-03	1.7955E-14
24.070	-1.1176E-11	-1.8564E-13	1.5482E-05	1.7952E-04	-1.4082E-03	-2.3391E-05
24.360	-1.4153E-12	-1.3346E-13	1.9343E-05	1.7207E-05	-2.1025E-04	-1.9826E-05
24.650	5.9677E-13	-2.8875E-14	4.8697E-06	3.2843E-05	1.0211E-04	-4.9409E-06
24.940	3.8712E-13	3.9986E-25	9.6140E-09	9.4893E-06	5.0584E-05	5.2248E-17
25.230	6.1104E-14	7.6496E-25	5.9836E-07	3.1180E-07	1.2710E-05	1.5911E-16
25.520	-1.0595E-14	1.6921E-25	1.9091E-07	1.0180E-06	-3.0232E-06	4.8282E-17
25.810	-5.9422E-15	-4.7905E-17	1.1407E-09	3.4850E-07	-2.1550E-06	-1.7373E-08
26.100	-7.3684E-16	-4.1649E-17	1.0815E-08	5.6048E-09	-3.2421E-07	-1.8325E-08
26.390	1.3623E-16	-4.9269E-18	2.1168E-09	1.8816E-08	7.0474E-08	-2.5489E-09
26.680	4.6630E-17	1.7985E-28	9.7779E-11	3.8352E-09	2.7729E-08	1.0695E-19
26.970	8.7451E-19	7.9283E-29	1.0781E-10	1.4702E-10	5.2470E-10	4.7570E-20

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27.260	-1.6903E-18	4.8966E-30	9.9020E-12	1.9059E-10	-1.0142E-09	2.9379E-21
27.550	-3.2678E-19	-1.0620E-20	2.3699E-12	1.8442E-11	-1.9607E-10	-6.3720E-12
27.840	1.4029E-20	-2.1543E-21	7.9639E-13	4.0263E-12	8.4176E-12	-1.2926E-12
28.130	1.4677E-20	1.0086E-32	1.3373E-14	1.4232E-12	8.8060E-12	6.0517E-24
28.420	1.3225E-21	2.2916E-32	2.7850E-14	3.1241E-14	7.9348E-13	1.3750E-23
28.710	-3.8729E-22	3.1160E-33	4.7636E-15	4.8021E-14	-2.3238E-13	1.8696E-24
29.000	-2.1325E-22	-6.7750E-24	0.0000	0.0000	-1.2795E-13	-4.0650E-15

* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.3338E-03	0.012996	7.9531E-14	-1.8544E-06	-8.2904E-17	-3.5119E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1133.1	197.51	2.3432E-09	-0.026900	-17.744	180.24

STR, KN/ M**2

1.2507E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.3338E-03 0.012996 7.9531E-14 -1.8544E-06 -8.2904E-17 -3.5119E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1133.1 197.51 2.3432E-09 -0.026900 -17.744 180.24

STR, KN/ M**2

1.2507E+04

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.2996E-02	7.9531E-14	180.24	197.65	0.0000	0.0000
0.2900	1.1999E-02	7.8665E-14	121.83	195.04	16.996	1.1143E-10
0.5800	1.0952E-02	7.6292E-14	64.798	187.42	35.586	2.4789E-10
0.8700	9.8798E-03	7.2681E-14	10.728	174.67	52.370	3.8527E-10
1.1600	8.8031E-03	6.8095E-14	25.358	157.47	66.192	5.1202E-10
1.4500	7.7420E-03	6.2782E-14	75.147	136.90	75.685	6.1375E-10
1.7400	6.7142E-03	5.6975E-14	118.29	114.25	80.511	6.8320E-10
2.0300	5.7347E-03	5.0885E-14	151.57	90.739	81.659	7.2457E-10
2.3200	4.8160E-03	4.4702E-14	175.49	68.528	71.521	6.6386E-10
2.6100	3.9676E-03	3.8590E-14	193.32	47.803	71.407	6.9453E-10
2.9000	3.1966E-03	3.2691E-14	205.05	27.456	68.918	7.0483E-10
3.1900	2.5077E-03	2.7124E-14	210.90	7.4997	68.710	7.4319E-10
3.4800	1.9033E-03	2.1984E-14	210.87	6.1606	67.094	7.7495E-10



3.7700	1.3834E-03	1.7340E-14	205.10	27.550	64.031	8.0257E-10
4.0600	9.4572E-04	1.3236E-14	193.85	46.635	47.983	6.7155E-10
4.3500	5.8564E-04	9.6870E-15	178.48	59.014	31.788	5.2581E-10
4.6400	2.9706E-04	6.6867E-15	160.36	66.114	17.177	3.8664E-10
4.9300	7.2729E-05	4.2101E-15	140.72	69.252	4.4629	2.5835E-10
5.2200	-9.5235E-05	2.2190E-15	120.64	69.002	-6.1812	1.4402E-10
5.5100	-2.1487E-04	6.6626E-16	101.02	65.974	-14.707	4.5603E-11
5.8000	-3.0020E-04	-2.9799E-06	82.600	60.772	-21.611	-0.2145
6.0900	-3.6029E-04	-6.5538E-06	65.918	54.891	-20.542	-0.3737
6.3800	-3.8937E-04	-8.8950E-06	50.838	48.978	-23.147	-0.5288
6.6700	-3.9430E-04	-1.0229E-05	37.533	42.655	-24.398	-0.6330
6.9600	-3.8116E-04	-1.0766E-05	26.079	36.231	-24.511	-0.6923
7.2500	-3.5524E-04	-1.0691E-05	16.471	29.960	-23.708	-0.7135
7.5400	-3.2098E-04	-1.0171E-05	8.6357	24.038	-22.202	-0.7035
7.8300	-2.8207E-04	-9.3458E-06	2.4508	18.609	-20.195	-0.6691
8.1200	-2.4140E-04	-8.3325E-06	1.2178	13.768	-17.870	-0.6168
8.4100	-2.0121E-04	-7.2262E-06	5.2965	9.5678	-15.384	-0.5525
8.7000	-1.6315E-04	-6.1007E-06	7.8700	6.0238	-12.871	-0.4813
8.9900	-1.2833E-04	-5.0115E-06	9.1856	3.1228	-10.436	-0.4075
9.2800	-9.7424E-05	-3.9979E-06	9.7471	0.8290	-8.1592	-0.3348
9.5700	-7.0763E-05	-3.0852E-06	9.7237	0.5604	-6.0983	-0.2659
9.8600	-4.8397E-05	-2.2876E-06	9.2676	2.0659	-4.2884	-0.2027
10.150	-3.0168E-05	-1.6102E-06	8.5119	2.9835	-2.7465	-0.1466
10.440	-1.5772E-05	-1.0511E-06	7.5690	3.4568	-1.4742	-9.8248E-02
10.730	-4.8123E-06	-6.0364E-07	6.5314	3.6467	-0.4615	-5.7889E-02
11.020	3.1616E-06	-2.5760E-07	5.4720	3.6174	0.3109	-2.5330E-02
11.310	8.6155E-06	-2.0652E-09	4.4459	3.4271	0.8681	-2.0810E-04
11.600	1.1495E-05	3.4862E-17	3.4924	3.1265	1.1861	3.5974E-12
11.890	1.2787E-05	6.2410E-17	2.6370	2.7586	1.3506	6.5918E-12
12.180	1.3024E-05	7.8436E-17	1.8941	2.3588	1.4072	8.4752E-12
12.470	1.2501E-05	8.5498E-17	1.2686	1.9544	1.3812	9.4460E-12



12.760	1.1471E-05	8.5870E-17	0.7588	1.5664	1.2952	9.6958E-12
13.050	1.0136E-05	8.1513E-17	0.3575	1.2090	1.1691	9.4020E-12
13.340	8.6583E-06	7.4063E-17	5.4335E-02	0.8917	1.0197	8.7226E-12
13.630	7.1588E-06	6.4840E-17	0.1298	0.6190	0.8605	7.7939E-12
13.920	5.7245E-06	5.4870E-17	0.3061	0.3925	0.7020	6.7289E-12
14.210	4.4137E-06	4.4920E-17	0.3938	0.2106	0.5520	5.6179E-12
14.500	3.2606E-06	3.5527E-17	0.4330	7.0312E-02	0.4157	4.5295E-12
14.790	2.2810E-06	2.7040E-17	0.4370	1.3199E-02	0.2964	3.5132E-12
15.080	1.4764E-06	1.9656E-17	0.4159	9.9128E-02	0.1954	2.6015E-12
15.370	8.3846E-07	1.3450E-17	0.3782	0.1490	0.1130	1.8128E-12
15.660	3.5200E-07	8.4111E-18	0.3308	0.1724	4.8299E-02	1.1541E-12
15.950	-1.9625E-09	4.4673E-18	0.2792	0.1793	-2.7405E-04	6.2384E-13
16.240	-2.4409E-07	1.5059E-18	0.2274	0.1743	-3.4679E-02	2.1395E-13
16.530	-4.0275E-07	-3.7504E-09	0.1785	0.1609	-5.8199E-02	-5.4196E-04
16.820	-5.0578E-07	-9.7777E-09	0.1344	0.1426	-7.4318E-02	-1.4367E-03
17.110	-5.4562E-07	-1.3297E-08	9.5978E-02	0.1216	-8.1497E-02	-1.9862E-03
17.400	-5.3974E-07	-1.4888E-08	6.3840E-02	0.1000	-8.1931E-02	-2.2599E-03
17.690	-5.0289E-07	-1.5062E-08	3.7896E-02	7.9268E-02	-7.7560E-02	-2.3230E-03
17.980	-4.4709E-07	-1.4258E-08	1.7760E-02	6.0237E-02	-7.0040E-02	-2.2335E-03
18.270	-3.8173E-07	-1.2834E-08	2.8288E-03	4.3524E-02	-6.0728E-02	-2.0417E-03
18.560	-3.1386E-07	-1.1075E-08	6.2303E-03	2.9399E-02	-5.0694E-02	-1.7888E-03
18.850	-2.4849E-07	-9.1978E-09	1.4359E-02	1.7903E-02	-4.0739E-02	-1.5080E-03
19.140	-1.8890E-07	-7.3573E-09	1.8133E-02	8.9098E-03	-3.1429E-02	-1.2241E-03
19.430	-1.3703E-07	-5.6585E-09	1.9639E-02	2.1806E-03	-2.3131E-02	-9.5520E-04
19.720	-9.3718E-08	-4.1652E-09	1.9492E-02	1.8707E-03	-1.6048E-02	-7.1323E-04
20.010	-5.9047E-08	-2.9085E-09	1.8215E-02	5.6808E-03	-1.0255E-02	-5.0512E-04
20.300	-3.2543E-08	-1.8957E-09	1.6230E-02	7.5766E-03	-5.7308E-03	-3.3384E-04
20.590	-1.3385E-08	-1.1169E-09	1.3865E-02	8.4495E-03	-2.3897E-03	-1.9940E-04
20.880	-5.5694E-10	-5.5068E-10	1.1359E-02	8.6338E-03	-1.0078E-04	-9.9651E-05
21.170	7.0430E-09	-1.6897E-10	8.8760E-03	8.3772E-03	1.2916E-03	-3.0987E-05
21.460	1.0479E-08	6.4030E-21	6.5105E-03	7.8847E-03	1.9472E-03	1.1898E-15

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21.750	1.0447E-08	3.2849E-20	4.3057E-03	7.3172E-03	1.9667E-03	6.1838E-15
22.040	8.6909E-09	3.9242E-20	2.2645E-03	6.7917E-03	1.6572E-03	7.4827E-15
22.330	6.0273E-09	3.2574E-20	3.6153E-04	6.3827E-03	1.1639E-03	6.2904E-15
22.620	3.2188E-09	1.9592E-20	1.4406E-03	6.1226E-03	6.2942E-04	3.8311E-15
22.910	9.8874E-10	6.8339E-21	3.1953E-03	9.0202E-04	3.5375E-02	2.4450E-13
23.200	3.8672E-11	7.0715E-22	1.9705E-03	4.5544E-03	2.2559E-03	4.1251E-14
23.490	-1.3185E-10	-2.9373E-12	5.5499E-04	3.4502E-03	-1.0665E-02	-2.3759E-04
23.780	-6.6382E-11	-1.7202E-12	2.8627E-05	1.1127E-03	-6.8669E-03	-1.7794E-04
24.070	-1.2379E-11	-3.7548E-13	9.0491E-05	4.8938E-06	-1.5598E-03	-4.7311E-05
24.360	2.0960E-12	7.2414E-24	3.3462E-05	1.5156E-04	3.1137E-04	1.0757E-15
24.650	1.8215E-12	1.0677E-23	2.6034E-06	6.1213E-05	3.1168E-04	1.8269E-15
24.940	5.0417E-13	3.5056E-24	2.0436E-06	6.4667E-06	6.5878E-05	4.5807E-16
25.230	5.4692E-15	2.0404E-25	1.1493E-06	3.2506E-06	1.1376E-06	4.2441E-17
25.520	-3.5785E-14	-8.6739E-16	1.5885E-07	2.0576E-06	-1.0211E-05	-2.4749E-07
25.810	-8.3254E-15	-2.3845E-16	4.4069E-08	3.0622E-07	-3.0194E-06	-8.6477E-08
26.100	1.9331E-16	-2.2876E-18	1.8801E-08	7.3965E-08	8.5057E-08	-1.0066E-09
26.390	3.6292E-16	2.1688E-27	1.1786E-09	3.3543E-08	1.8775E-07	1.1220E-18
26.680	4.6824E-17	3.5673E-28	6.5436E-10	2.2818E-09	2.7845E-08	2.1213E-19
26.970	-7.6235E-18	-1.5054E-19	1.4527E-10	1.1347E-09	-4.5741E-09	-9.0322E-11
27.260	-3.2023E-18	-8.5737E-20	3.5013E-12	2.6121E-10	-1.9214E-09	-5.1442E-11
27.550	-1.8374E-19	-7.0121E-21	6.2350E-12	4.5075E-12	-1.1024E-10	-4.2073E-12
27.840	8.9699E-20	4.8891E-31	7.9238E-13	1.0965E-11	5.3819E-11	2.9335E-22
28.130	1.9650E-20	1.3543E-31	1.2443E-13	1.4516E-12	1.1790E-11	8.1259E-23
28.420	-5.5320E-22	1.2509E-33	4.9628E-14	2.0988E-13	-3.3192E-13	7.5056E-25
28.710	-9.5993E-22	-2.4395E-23	2.7217E-15	8.5565E-14	-5.7596E-13	-1.4637E-14
29.000	-1.2524E-22	-4.6948E-24	0.0000	0.0000	-7.5145E-14	-2.8169E-15

LOAD CASE ENV : 2

CASE NAME : MAXIMUM ENVELOPE



* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN	HOR. LOAD Y, KN	HOR. LOAD Z, KN
4391.73	2055.25	96.7800

MOMENT X , KN- M	MOMENT Y, KN- M	MOMENT Z, KN- M
5.52100	220.972	-4441.03

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M	HORIZONTAL Y, M	HORIZONTAL Z, M
1.17872E-03	0.0144710	3.75819E-04

ANGLE ROT. X,RAD	ANGLE ROT. Y,RAD	ANGLE ROT. Z,RAD
1.39523E-13	1.70554E-05	-3.31556E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE

* PILE GROUP * 1



* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-9.7640E-04	0.014469	3.7702E-04	1.3952E-13	1.7055E-05	-3.3156E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
-401.11	167.72	7.9608	2.0239E-09	4.9061E-09	149.95

STR, KN/ M**2

8765.9

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-9.7640E-04	0.014469	3.7702E-04	1.3952E-13	1.7055E-05	-3.3156E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-401.11	167.72	7.9608	2.0239E-09	4.9061E-09	149.95

STR, KN/ M**2

8765.9



* EFFECTS FOR Laterally Loaded PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.4469E-02	3.7702E-04	150.03	167.68	0.0000	0.0000
0.2900	1.3420E-02	3.6901E-04	101.89	166.02	11.850	0.3316
0.5800	1.2331E-02	3.5577E-04	54.794	160.69	24.898	0.7315
0.8700	1.1220E-02	3.3823E-04	10.524	151.74	36.832	1.1313
1.1600	1.0105E-02	3.1726E-04	44.246	139.58	47.009	1.5044
1.4500	9.0027E-03	2.9372E-04	77.601	124.87	54.439	1.8101
1.7400	7.9286E-03	2.6841E-04	106.59	108.42	58.983	2.0331
2.0300	6.8961E-03	2.4204E-04	132.07	90.954	61.481	2.1921
2.3200	5.9165E-03	2.1530E-04	155.39	73.984	55.545	2.0484
2.6100	4.9991E-03	1.8877E-04	174.07	57.675	56.930	2.1776
2.9000	4.1515E-03	1.6297E-04	187.99	41.201	56.684	2.2531
3.1900	3.3792E-03	1.3836E-04	197.19	24.510	58.439	2.4236
3.4800	2.6858E-03	1.1531E-04	201.50	7.4271	59.472	2.5875
3.7700	2.0732E-03	9.4110E-05	200.85	14.897	59.826	2.7541
4.0600	1.5411E-03	7.4967E-05	195.21	28.889	52.478	2.5526
4.3500	1.0871E-03	5.7994E-05	185.20	39.771	39.604	2.1125
4.6400	7.0733E-04	4.3218E-05	171.88	49.260	27.450	1.6770
4.9300	3.9642E-04	3.0598E-05	156.30	55.608	16.326	1.2600
5.2200	1.4811E-04	2.0034E-05	139.36	58.911	6.4518	0.8726
5.5100	-4.4377E-05	1.1384E-05	121.92	59.552	-2.0387	0.5229
5.8000	-1.8802E-04	4.4787E-06	104.66	57.939	-9.0847	0.2164
6.0900	-2.8856E-04	-2.7327E-17	88.195	55.014	-11.041	-1.0458E-12
6.3800	-3.4097E-04	1.1575E-15	72.675	51.346	-13.605	4.6182E-11

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6.6700	-3.6781E-04	2.0046E-15	58.365	46.917	-15.275	8.3253E-11
6.9600	-3.7481E-04	2.5668E-15	45.439	41.999	-16.177	1.1078E-10
7.2500	-3.6654E-04	2.8937E-15	34.001	36.832	-16.418	1.2961E-10
7.5400	-3.4700E-04	3.0313E-15	24.087	31.622	-16.109	1.4072E-10
7.8300	-3.1963E-04	3.0214E-15	15.682	26.538	-15.360	1.4519E-10
8.1200	-2.8735E-04	2.9007E-15	8.7251	21.714	-14.277	1.4412E-10
8.4100	-2.5255E-04	2.7011E-15	3.1230	17.251	-12.960	1.3861E-10
8.7000	-2.1714E-04	2.4499E-15	2.1353	13.218	-11.497	1.2972E-10
8.9900	-1.8258E-04	2.1693E-15	4.8407	9.6566	-9.9650	1.1840E-10
9.2800	-1.4996E-04	1.8774E-15	6.8105	6.5839	-8.4291	1.0553E-10
9.5700	-1.2002E-04	1.5881E-15	8.2937	3.9978	-6.9423	9.1860E-11
9.8600	-9.3242E-05	1.3121E-15	9.0984	1.8799	-5.5453	7.8034E-11
10.150	-6.9844E-05	1.0566E-15	9.3566	0.2011	-4.2677	6.4564E-11
10.440	-4.9875E-05	8.2648E-16	9.1901	1.2702	-3.1289	5.1849E-11
10.730	-3.3238E-05	6.2424E-16	8.7078	2.0342	-2.1394	4.0180E-11
11.020	-1.9728E-05	4.5076E-16	8.0053	2.6392	-1.3020	2.9749E-11
11.310	-9.0714E-06	3.0553E-16	7.1636	3.0078	-0.6135	2.0662E-11
11.600	-9.5042E-07	1.8705E-16	6.2502	3.1669	-6.5826E-02	1.2955E-11
11.890	4.9732E-06	9.3118E-17	5.3189	3.1605	0.3526	6.6012E-12
12.180	9.0396E-06	2.1115E-17	4.4114	3.0288	0.6556	1.5313E-12
12.470	1.1978E-05	1.3993E-07	3.5583	2.8077	0.8882	1.0375E-02
12.760	1.3748E-05	2.6262E-07	2.7805	2.5278	1.0418	1.9900E-02
13.050	1.4403E-05	3.3912E-07	2.0910	2.2151	1.1150	2.6250E-02
13.340	1.4221E-05	3.7873E-07	1.4956	1.8904	1.1241	2.9933E-02
13.630	1.3440E-05	3.8983E-07	0.9950	1.5702	1.0843	3.1446E-02
13.920	1.2260E-05	3.7981E-07	0.5858	1.2666	1.0091	3.1257E-02
14.210	1.0846E-05	3.5497E-07	0.2616	0.9883	0.9104	2.9792E-02
14.500	9.3272E-06	3.2058E-07	3.7298E-02	0.7405	0.7981	2.7429E-02
14.790	7.8027E-06	2.8089E-07	0.1876	0.5261	0.6804	2.4491E-02
15.080	6.3448E-06	2.3924E-07	0.2898	0.3457	0.5636	2.1249E-02
15.370	5.0030E-06	1.9812E-07	0.3657	0.1984	0.4526	1.7920E-02

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15.660	3.8077E-06	1.5932E-07	0.4036	8.1901E-02	0.3507	1.4670E-02
15.950	2.7741E-06	1.2402E-07	0.4121	2.3764E-02	0.2600	1.1623E-02
16.240	1.9055E-06	9.2928E-08	0.3988	7.7003E-02	0.1817	8.8602E-03
16.530	1.1967E-06	6.6329E-08	0.3703	0.1139	0.1161	6.4323E-03
16.820	6.3628E-07	4.4228E-08	0.3321	0.1398	6.2749E-02	4.3612E-03
17.110	2.0886E-07	2.6413E-08	0.2887	0.1520	2.0938E-02	2.6475E-03
17.400	-1.0290E-07	1.2523E-08	0.2436	0.1535	-1.0484E-02	1.2757E-03
17.690	-3.1707E-07	2.1107E-09	0.1995	0.1472	-3.2820E-02	2.1846E-04
17.980	-4.3662E-07	1.2186E-18	0.1581	0.1356	-4.5908E-02	1.2813E-13
18.270	-4.8914E-07	2.6957E-18	0.1207	0.1206	-5.2228E-02	2.8784E-13
18.560	-5.0055E-07	3.5900E-18	8.8081E-02	0.1040	-5.4264E-02	3.8918E-13
18.850	-4.8238E-07	4.0265E-18	6.0424E-02	8.6901E-02	-5.3080E-02	4.4307E-13
19.140	-4.4430E-07	4.1173E-18	3.7703E-02	7.0390E-02	-4.9615E-02	4.5977E-13
19.430	-3.9422E-07	3.9593E-18	1.9641E-02	5.5087E-02	-4.4666E-02	4.4859E-13
19.720	-3.3836E-07	3.6342E-18	5.8083E-03	4.1413E-02	-3.8889E-02	4.1768E-13
20.010	-2.8144E-07	3.2081E-18	5.8496E-03	2.9593E-02	-3.2805E-02	3.7395E-13
20.300	-2.2686E-07	2.7335E-18	1.1597E-02	1.9693E-02	-2.6813E-02	3.2308E-13
20.590	-1.7692E-07	2.2498E-18	1.5688E-02	1.1664E-02	-2.1199E-02	2.6959E-13
20.880	-1.3303E-07	1.7860E-18	1.8014E-02	5.3701E-03	-1.6157E-02	2.1692E-13
21.170	-9.5869E-08	1.3616E-18	1.8758E-02	6.2640E-04	-1.1800E-02	1.6759E-13
21.460	-6.5584E-08	9.8906E-19	1.8338E-02	3.3242E-03	-8.1796E-03	1.2335E-13
21.750	-4.1922E-08	6.7514E-19	1.7104E-02	5.2782E-03	-5.2968E-03	8.5304E-14
22.040	-2.4353E-08	4.2242E-19	1.5339E-02	6.6038E-03	-3.1167E-03	5.4061E-14
22.330	-1.2173E-08	2.3063E-19	1.3257E-02	7.4364E-03	-1.5777E-03	2.9892E-14
22.620	-4.5718E-09	9.7703E-20	1.1014E-02	7.8295E-03	-6.0001E-04	1.2823E-14
22.910	-6.8832E-10	2.0563E-20	8.7095E-03	1.2848E-02	-2.4627E-02	7.3568E-13
23.200	4.1223E-10	1.4977E-11	3.5592E-03	1.4271E-02	2.4047E-02	8.7364E-04
23.490	3.4493E-10	1.7437E-11	4.3200E-04	6.7374E-03	2.7901E-02	1.4105E-03
23.780	1.0463E-10	6.0328E-12	3.4837E-04	1.1217E-03	1.0824E-02	6.2406E-04
24.070	3.8754E-12	5.0305E-13	2.1840E-04	5.1885E-04	4.8830E-04	6.3385E-05
24.360	-7.8134E-12	1.2740E-22	4.7387E-05	3.8718E-04	-1.1607E-03	1.8926E-14



24.650	-2.9467E-12	6.0022E-23	6.1637E-06	9.2939E-05	-5.0422E-04	1.0271E-14
24.940	-3.3313E-13	1.0250E-23	6.5132E-06	7.5387E-06	-4.3530E-05	1.3394E-15
25.230	1.6430E-13	6.2817E-15	1.7895E-06	1.1332E-05	3.4174E-05	1.3066E-06
25.520	7.3516E-14	3.9322E-15	7.1310E-08	3.3345E-06	2.0977E-05	1.1220E-06
25.810	6.6374E-15	4.9867E-16	1.4443E-07	8.7348E-08	2.4072E-06	1.8085E-07
26.100	-2.0262E-15	2.9117E-26	2.6764E-08	2.5337E-07	-8.9153E-07	1.2812E-17
26.390	-5.5062E-16	1.1476E-26	2.5244E-09	4.8928E-08	-2.8486E-07	5.9371E-18
26.680	-3.6809E-18	5.9268E-28	1.6134E-09	4.1032E-09	-2.1889E-09	3.5245E-19
26.970	2.5435E-17	1.2262E-18	1.4424E-10	2.8531E-09	1.5261E-08	7.3570E-10
27.260	4.2616E-18	2.5974E-19	4.1340E-11	2.6915E-10	2.5570E-09	1.5584E-10
27.550	-3.2307E-19	2.4255E-30	1.1853E-11	7.0983E-11	-1.9384E-10	1.4553E-21
27.840	-1.7736E-19	3.3802E-30	1.6781E-13	2.1191E-11	-1.0642E-10	2.0281E-21
28.130	-1.4053E-20	4.1362E-31	4.3782E-13	4.1423E-13	-8.4316E-12	2.4817E-22
28.420	5.6993E-21	2.4143E-22	7.2373E-14	7.6423E-13	3.4196E-12	1.4486E-13
28.710	1.6500E-21	9.2665E-23	5.4500E-15	1.2479E-13	9.9003E-13	5.5599E-14
29.000	-1.9926E-22	1.3718E-33	0.0000	0.0000	-1.1955E-13	8.2308E-25

* PILE GROUP * 2

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-9.7640E-04 0.014470 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03



FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
-401.11 133.71 6.6973 2.0239E-09 4.3937E-09 107.44

STR, KN/ M**2

6751.2

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
-9.7640E-04 0.014470 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
-401.11 133.71 6.6973 2.0239E-09 4.3937E-09 107.44

STR, KN/ M**2

6751.2

* EFFECTS FOR LATERALLY LOADED PILE *

Table with 8 columns: x, DISPL., DISPL., MOMENT, SHEAR, SOIL REACT, SOIL REACT. Rows show data for x=0.0000, 0.2900, 0.5800, 0.8700.



1.1600	1.0203E-02	3.2132E-04	48.970	112.94	34.873	1.1193
1.4500	9.1398E-03	2.9946E-04	75.818	101.99	40.604	1.3557
1.7400	8.1040E-03	2.7584E-04	99.414	89.682	44.292	1.5350
2.0300	7.1068E-03	2.5110E-04	119.89	76.510	46.549	1.6707
2.3200	6.1576E-03	2.2581E-04	139.66	63.602	42.471	1.5784
2.6100	5.2644E-03	2.0051E-04	155.89	51.057	44.045	1.6994
2.9000	4.4336E-03	1.7568E-04	168.45	38.222	44.475	1.7843
3.1900	3.6702E-03	1.5172E-04	177.30	25.012	46.633	1.9525
3.4800	2.9780E-03	1.2899E-04	182.26	11.232	48.445	2.1265
3.7700	2.3587E-03	1.0780E-04	183.18	8.2352	50.005	2.3177
4.0600	1.8128E-03	8.8348E-05	179.93	20.167	45.355	2.2103
4.3500	1.3390E-03	7.0787E-05	172.90	29.837	35.839	1.8945
4.6400	9.3440E-04	5.5183E-05	162.89	37.724	26.642	1.5733
4.9300	5.9509E-04	4.1542E-05	150.67	44.199	18.007	1.2569
5.2200	3.1613E-04	2.9814E-05	136.96	48.277	10.118	0.9542
5.5100	9.2029E-05	1.9912E-05	122.43	50.195	3.1062	0.6720
5.8000	-8.3028E-05	1.1712E-05	107.66	50.218	-2.9474	0.4157
6.0900	-2.1496E-04	5.0703E-06	93.153	48.915	-6.0437	0.1425
6.3800	-3.0823E-04	-2.9912E-16	79.177	46.723	-9.0348	-8.7685E-12
6.6700	-3.5752E-04	9.0041E-16	65.979	43.759	-10.909	2.7474E-11
6.9600	-3.8370E-04	1.7879E-15	53.750	40.231	-12.168	5.6696E-11
7.2500	-3.9160E-04	2.4077E-15	42.621	36.328	-12.887	7.9235E-11
7.5400	-3.8514E-04	2.8022E-15	32.674	32.219	-13.136	9.5576E-11
7.8300	-3.6783E-04	3.0111E-15	23.943	28.052	-12.987	1.0631E-10
8.1200	-3.4269E-04	3.0710E-15	16.423	23.949	-12.510	1.1211E-10
8.4100	-3.1235E-04	3.0146E-15	10.079	20.013	-11.777	1.1366E-10
8.7000	-2.7899E-04	2.8711E-15	4.8479	16.321	-10.853	1.1169E-10
8.9900	-2.4440E-04	2.6656E-15	0.6530	12.931	-9.8002	1.0689E-10
9.2800	-2.0999E-04	2.4196E-15	3.2072	9.8796	-8.6724	9.9924E-11
9.5700	-1.7688E-04	2.1509E-15	5.2071	7.1893	-7.5167	9.1405E-11
9.8600	-1.4585E-04	1.8740E-15	6.7535	4.8663	-6.3728	8.1884E-11

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10.150	-1.1745E-04	1.6003E-15	7.8392	2.9047	-5.2727	7.1842E-11
10.440	-9.2021E-05	1.3384E-15	8.4092	1.2893	-4.2414	6.1688E-11
10.730	-6.9718E-05	1.0945E-15	8.5610	0.3233	-3.2970	5.1759E-11
11.020	-5.0553E-05	8.7279E-16	8.3846	1.1568	-2.4513	4.2320E-11
11.310	-3.4432E-05	6.7563E-16	7.9607	1.7603	-1.7108	3.3570E-11
11.600	-2.1176E-05	5.0400E-16	7.3608	2.2438	-1.0775	2.5646E-11
11.890	-1.0549E-05	3.5774E-16	6.6462	2.5553	-0.5494	1.8633E-11
12.180	-2.2802E-06	2.3584E-16	5.8682	2.7051	-0.1215	1.2566E-11
12.470	3.9199E-06	1.3667E-16	5.0690	2.7246	0.2136	7.4459E-12
12.760	8.3447E-06	5.8163E-17	4.2819	2.6427	0.4646	3.2385E-12
13.050	1.1430E-05	4.6587E-08	3.5320	2.4856	0.6501	2.6496E-03
13.340	1.3667E-05	1.9375E-07	2.8374	2.2763	0.7937	1.1251E-02
13.630	1.4766E-05	2.9421E-07	2.2102	2.0343	0.8753	1.7438E-02
13.920	1.4980E-05	3.5613E-07	1.6569	1.7760	0.9059	2.1535E-02
14.210	1.4531E-05	3.8711E-07	1.1802	1.5147	0.8961	2.3872E-02
14.500	1.3609E-05	3.9399E-07	0.7790	1.2607	0.8556	2.4768E-02
14.790	1.2375E-05	3.8280E-07	0.4500	1.0217	0.7928	2.4524E-02
15.080	1.0960E-05	3.5876E-07	0.1878	0.8030	0.7153	2.3413E-02
15.370	9.4708E-06	3.2622E-07	5.7975E-02	0.6080	0.6295	2.1681E-02
15.660	7.9870E-06	2.8879E-07	0.1820	0.4383	0.5404	1.9539E-02
15.950	6.5687E-06	2.4930E-07	0.2672	0.2944	0.4523	1.7166E-02
16.240	5.2575E-06	2.0995E-07	0.3330	0.1754	0.3683	1.4708E-02
16.530	4.0796E-06	1.7236E-07	0.3678	7.9820E-02	0.2907	1.2281E-02
16.820	3.0491E-06	1.3763E-07	0.3782	1.1280E-02	0.2209	9.9719E-03
17.110	2.1701E-06	1.0649E-07	0.3701	5.7352E-02	0.1598	7.8433E-03
17.400	1.4393E-06	7.9302E-08	0.3487	8.9071E-02	0.1077	5.9357E-03
17.690	8.4822E-07	5.6169E-08	0.3182	0.1134	6.4509E-02	4.2715E-03
17.980	3.8458E-07	3.7001E-08	0.2824	0.1271	2.9709E-02	2.8581E-03
18.270	3.4058E-08	2.1563E-08	0.2441	0.1318	2.6718E-03	1.6915E-03
18.560	-2.1868E-07	9.5257E-09	0.2057	0.1296	-1.7417E-02	7.5865E-04
18.850	-3.8787E-07	5.0077E-10	0.1687	0.1225	-3.1355E-02	4.0482E-05

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19.140	-4.7197E-07	1.3355E-18	0.1345	0.1121	-3.8723E-02	1.0957E-13
19.430	-5.0575E-07	2.6245E-18	0.1036	9.9741E-02	-4.2100E-02	2.1847E-13
19.720	-5.0433E-07	3.3915E-18	7.6611E-02	8.6506E-02	-4.2586E-02	2.8638E-13
20.010	-4.7726E-07	3.7408E-18	5.3482E-02	7.3281E-02	-4.0872E-02	3.2036E-13
20.300	-4.3263E-07	3.7671E-18	3.4141E-02	6.0722E-02	-3.7569E-02	3.2713E-13
20.590	-3.7717E-07	3.5545E-18	1.8312E-02	4.9298E-02	-3.3205E-02	3.1292E-13
20.880	-3.1634E-07	3.1757E-18	5.6098E-03	3.9314E-02	-2.8228E-02	2.8338E-13
21.170	-2.5445E-07	2.6930E-18	5.8379E-03	3.0938E-02	-2.3011E-02	2.4354E-13
21.460	-1.9491E-07	2.1591E-18	1.2349E-02	2.4221E-02	-1.7860E-02	1.9785E-13
21.750	-1.4031E-07	1.6186E-18	1.8415E-02	1.9121E-02	-1.3025E-02	1.5026E-13
22.040	-9.2668E-08	1.1093E-18	2.3309E-02	1.5516E-02	-8.7135E-03	1.0430E-13
22.330	-5.3549E-08	6.6384E-19	2.7367E-02	1.3215E-02	-5.0993E-03	6.3215E-14
22.620	-2.4232E-08	3.1164E-19	3.0937E-02	1.1972E-02	-2.3366E-03	3.0050E-14
22.910	-5.8239E-09	7.9828E-20	3.4285E-02	2.3677E-02	-0.2084	2.8561E-12
23.200	7.1314E-10	1.9645E-11	1.7190E-02	5.2901E-02	4.1600E-02	1.1459E-03
23.490	1.3358E-09	4.9447E-11	3.5982E-03	3.1200E-02	0.1081	3.9997E-03
23.780	5.1723E-10	2.0002E-11	9.0537E-04	7.7722E-03	5.3504E-02	2.0691E-03
24.070	6.1287E-11	2.6224E-12	9.0907E-04	1.1063E-03	7.7222E-03	3.3042E-04
24.360	-2.6701E-11	3.1007E-22	2.6345E-04	1.5689E-03	-3.9666E-03	4.6063E-14
24.650	-1.4522E-11	1.8427E-22	1.4671E-06	4.9557E-04	-2.4848E-03	3.1531E-14
24.940	-2.9296E-12	4.0313E-23	2.3969E-05	1.4580E-05	-3.8280E-04	5.2676E-15
25.230	3.3134E-13	9.9335E-15	9.4009E-06	4.0234E-05	6.8918E-05	2.0662E-06
25.520	3.1723E-13	1.1991E-14	6.3121E-07	1.7115E-05	9.0516E-05	3.4214E-06
25.810	5.0286E-14	2.0493E-15	5.2543E-07	1.3443E-06	1.8237E-05	7.4320E-07
26.100	-5.4667E-15	5.8364E-26	1.4831E-07	9.0559E-07	-2.4054E-06	2.5680E-17
26.390	-2.8103E-15	3.5898E-26	1.5818E-10	2.6717E-07	-1.4539E-06	1.8571E-17
26.680	-2.1059E-16	3.1411E-27	6.6452E-09	2.0142E-09	-1.2523E-07	1.8679E-18
26.970	8.9519E-17	3.2449E-18	1.0099E-09	1.1643E-08	5.3711E-08	1.9470E-09
27.260	2.3180E-17	9.0904E-19	1.0772E-10	1.8373E-09	1.3908E-08	5.4542E-10
27.550	-1.1040E-20	9.9496E-21	5.5657E-11	1.7852E-10	-6.6238E-12	5.9697E-12
27.840	-7.8760E-19	9.7839E-30	4.1627E-12	9.8629E-11	-4.7256E-10	5.8703E-21

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28.130 -1.1660E-19 1.5950E-30 1.5482E-12 7.8593E-12 -6.9962E-11 9.5700E-22
 28.420 1.5038E-20 5.0289E-22 3.9522E-13 2.6671E-12 9.0230E-12 3.0173E-13
 28.710 7.7841E-21 2.9879E-22 1.2054E-15 6.8143E-13 4.6705E-12 1.7927E-13
 29.000 4.7850E-23 8.5306E-24 0.0000 0.0000 2.8710E-14 5.1183E-15

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -9.7640E-04 0.014471 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -401.11 131.93 6.6290 2.0239E-09 4.3654E-09 105.18

STR, KN/ M**2

6634.4

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD



-9.7640E-04 0.014471 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-401.11 131.93 6.6290 2.0239E-09 4.3654E-09 105.18

STR, KN/ M**2

6634.4

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.4471E-02	3.7702E-04	105.26	131.91	0.0000	0.0000
0.2900	1.3431E-02	3.6937E-04	67.499	130.71	8.5566	0.2394
0.5800	1.2365E-02	3.5707E-04	30.512	126.86	18.013	0.5296
0.8700	1.1286E-02	3.4088E-04	20.012	120.37	26.731	0.8226
1.1600	1.0209E-02	3.2155E-04	49.268	111.52	34.268	1.0999
1.4500	9.1480E-03	2.9978E-04	75.768	100.77	39.912	1.3327
1.7400	8.1143E-03	2.7626E-04	99.072	88.664	43.553	1.5096
2.0300	7.1190E-03	2.5161E-04	119.27	75.708	45.793	1.6440
2.3200	6.1715E-03	2.2641E-04	138.85	63.006	41.804	1.5541
2.6100	5.2797E-03	2.0118E-04	154.94	50.654	43.381	1.6744
2.9000	4.4499E-03	1.7641E-04	167.41	38.007	43.838	1.7595
3.1900	3.6871E-03	1.5249E-04	176.22	24.981	46.008	1.9271
3.4800	2.9950E-03	1.2979E-04	181.20	11.377	47.849	2.1013
3.7700	2.3754E-03	1.0860E-04	182.19	7.9254	49.458	2.2930
4.0600	1.8288E-03	8.9143E-05	179.06	19.738	44.938	2.1903
4.3500	1.3540E-03	7.1555E-05	172.18	29.332	35.593	1.8809

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4.6400	9.4811E-04	5.5910E-05	162.33	37.128	26.550	1.5655
4.9300	6.0726E-04	4.2215E-05	150.29	43.594	18.046	1.2545
5.2200	3.2661E-04	3.0426E-05	136.76	47.700	10.266	0.9563
5.5100	1.0074E-04	2.0454E-05	122.38	49.673	3.3394	0.6780
5.8000	-7.6104E-05	1.2181E-05	107.75	49.773	-2.6533	0.4247
6.0900	-2.0978E-04	5.4661E-06	93.369	48.549	-5.7927	0.1509
6.3800	-3.0501E-04	1.5303E-07	79.488	46.431	-8.7805	4.4053E-03
6.6700	-3.5626E-04	8.2017E-16	66.363	43.544	-10.676	2.4578E-11
6.9600	-3.8362E-04	1.7274E-15	54.184	40.090	-11.947	5.3798E-11
7.2500	-3.9253E-04	2.3654E-15	43.086	36.256	-12.687	7.6451E-11
7.5400	-3.8693E-04	2.7762E-15	33.149	32.210	-12.961	9.2998E-11
7.8300	-3.7030E-04	2.9995E-15	24.411	28.097	-12.840	1.0401E-10
8.1200	-3.4568E-04	3.0716E-15	16.871	24.040	-12.393	1.1012E-10
8.4100	-3.1571E-04	3.0253E-15	10.494	20.139	-11.690	1.1202E-10
8.7000	-2.8257E-04	2.8898E-15	5.2222	16.472	-10.796	1.1041E-10
8.9900	-2.4806E-04	2.6904E-15	0.9784	13.098	-9.7694	1.0596E-10
9.2800	-2.1364E-04	2.4487E-15	2.9733	10.055	-8.6653	9.9319E-11
9.5700	-1.8041E-04	2.1827E-15	5.0188	7.3649	-7.5298	9.1098E-11
9.8600	-1.4919E-04	1.9070E-15	6.5783	5.0361	-6.4023	8.1838E-11
10.150	-1.2055E-04	1.6334E-15	7.7120	3.0639	-5.3150	7.2017E-11
10.440	-9.4831E-05	1.3706E-15	8.3262	1.4340	-4.2928	6.2042E-11
10.730	-7.2214E-05	1.1250E-15	8.5176	0.2135	-3.3540	5.2249E-11
11.020	-5.2725E-05	9.0097E-16	8.3754	1.0639	-2.5109	4.2906E-11
11.310	-3.6279E-05	7.0112E-16	7.9802	1.6847	-1.7704	3.4214E-11
11.600	-2.2708E-05	5.2656E-16	7.4033	2.1734	-1.1348	2.6315E-11
11.890	-1.1784E-05	3.7727E-16	6.7063	2.5031	-0.6028	1.9298E-11
12.180	-3.2405E-06	2.5236E-16	5.9408	2.6697	-0.1696	1.3206E-11
12.470	3.2067E-06	1.5028E-16	5.1495	2.7042	0.1716	8.0407E-12
12.760	7.8487E-06	6.9041E-17	4.3661	2.6354	0.4292	3.7754E-12
13.050	1.1031E-05	1.9144E-08	3.6164	2.4893	0.6162	1.0693E-03
13.340	1.3449E-05	1.7391E-07	2.9193	2.2887	0.7671	9.9189E-03

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13.630	1.4698E-05	2.8096E-07	2.2873	2.0534	0.8556	1.6355E-02
13.920	1.5030E-05	3.4846E-07	1.7276	1.7999	0.8927	2.0694E-02
14.210	1.4671E-05	3.8401E-07	1.2434	1.5416	0.8886	2.3257E-02
14.500	1.3813E-05	3.9452E-07	0.8341	1.2891	0.8529	2.4358E-02
14.790	1.2622E-05	3.8612E-07	0.4967	1.0502	0.7942	2.4294E-02
15.080	1.1231E-05	3.6408E-07	0.2262	0.8307	0.7199	2.3336E-02
15.370	9.7501E-06	3.3290E-07	3.2141E-02	0.6340	0.6364	2.1729E-02
15.660	8.2625E-06	2.9624E-07	0.1626	0.4621	0.5491	1.9685E-02
15.950	6.8311E-06	2.5707E-07	0.2527	0.3155	0.4620	1.7384E-02
16.240	5.5000E-06	2.1767E-07	0.3219	0.1936	0.3784	1.4976E-02
16.530	4.2979E-06	1.7973E-07	0.3615	9.5132E-02	0.3008	1.2578E-02
16.820	3.2406E-06	1.4447E-07	0.3760	1.8116E-02	0.2306	1.0280E-02
17.110	2.3338E-06	1.1266E-07	0.3711	4.9147E-02	0.1688	8.1490E-03
17.400	1.5758E-06	8.4716E-08	0.3521	8.3049E-02	0.1158	6.2275E-03
17.690	9.5872E-07	6.0804E-08	0.3234	0.1083	7.1608E-02	4.5413E-03
17.980	4.7120E-07	4.0866E-08	0.2887	0.1239	3.5750E-02	3.1003E-03
18.270	9.9336E-08	2.4698E-08	0.2511	0.1302	7.6534E-03	1.9028E-03
18.560	-1.7195E-07	1.1989E-08	0.2129	0.1294	-1.3450E-02	9.3775E-04
18.850	-3.5796E-07	2.3654E-09	0.1759	0.1233	-2.8422E-02	1.8780E-04
19.140	-4.5827E-07	9.2350E-19	0.1412	0.1136	-3.6926E-02	7.4413E-14
19.430	-5.0067E-07	2.3399E-18	0.1099	0.1018	-4.0932E-02	1.9130E-13
19.720	-5.0567E-07	3.2110E-18	8.2174E-02	8.8886E-02	-4.1936E-02	2.6629E-13
20.010	-4.8306E-07	3.6421E-18	5.8315E-02	7.5844E-02	-4.0629E-02	3.0633E-13
20.300	-4.4120E-07	3.7298E-18	3.8213E-02	6.3347E-02	-3.7628E-02	3.1810E-13
20.590	-3.8710E-07	3.5602E-18	2.1620E-02	5.1897E-02	-3.3469E-02	3.0782E-13
20.880	-3.2647E-07	3.2085E-18	8.1720E-03	4.1828E-02	-2.8612E-02	2.8119E-13
21.170	-2.6393E-07	2.7397E-18	4.2901E-03	3.3336E-02	-2.3441E-02	2.4333E-13
21.460	-2.0311E-07	2.2093E-18	1.1396E-02	2.6493E-02	-1.8278E-02	1.9882E-13
21.750	-1.4685E-07	1.6644E-18	1.7882E-02	2.1274E-02	-1.3389E-02	1.5174E-13
22.040	-9.7393E-08	1.1456E-18	2.3383E-02	1.7569E-02	-8.9939E-03	1.0579E-13
22.330	-5.6510E-08	6.8835E-19	2.8023E-02	1.5196E-02	-5.2851E-03	6.4378E-14



22.620	-2.5686E-08	3.2447E-19	3.2158E-02	1.3908E-02	-2.4325E-03	3.0727E-14
22.910	-6.2235E-09	8.3667E-20	3.6062E-02	2.4075E-02	-0.2227	2.9934E-12
23.200	7.2208E-10	1.9383E-11	1.8180E-02	5.5543E-02	4.2121E-02	1.1307E-03
23.490	1.4044E-09	5.1273E-11	3.8433E-03	3.2962E-02	0.1136	4.1474E-03
23.780	5.4729E-10	2.0866E-11	9.3795E-04	8.2786E-03	5.6615E-02	2.1584E-03
24.070	6.5884E-11	2.7709E-12	9.5773E-04	1.1348E-03	8.3014E-03	3.4914E-04
24.360	-2.7965E-11	3.1908E-22	2.7948E-04	1.6517E-03	-4.1544E-03	4.7401E-14
24.650	-1.5368E-11	1.9158E-22	9.0334E-07	5.2526E-04	-2.6296E-03	3.2781E-14
24.940	-3.1322E-12	4.2269E-23	2.5160E-05	1.6700E-05	-4.0927E-04	5.5231E-15
25.230	3.3880E-13	9.9599E-15	9.9609E-06	4.2185E-05	7.0470E-05	2.0717E-06
25.520	3.3454E-13	1.2470E-14	6.9063E-07	1.8125E-05	9.5454E-05	3.5582E-06
25.810	5.3638E-14	2.1524E-15	5.5134E-07	1.4623E-06	1.9453E-05	7.8061E-07
26.100	-5.6735E-15	5.9421E-26	1.5733E-07	9.4972E-07	-2.4964E-06	2.6145E-17
26.390	-2.9765E-15	3.7347E-26	4.7624E-10	2.8333E-07	-1.5398E-06	1.9321E-17
26.680	-2.2762E-16	3.3190E-27	6.9988E-09	2.6783E-09	-1.3536E-07	1.9737E-18
26.970	9.3834E-17	3.3548E-18	1.0759E-09	1.2259E-08	5.6300E-08	2.0129E-09
27.260	2.4579E-17	9.5007E-19	1.1161E-10	1.9565E-09	1.4747E-08	5.7004E-10
27.550	3.0836E-20	1.1830E-20	5.8820E-11	1.8467E-10	1.8501E-11	7.0979E-12
27.840	-8.3136E-19	1.0148E-29	4.4865E-12	1.0421E-10	-4.9882E-10	6.0885E-21
28.130	-1.2457E-19	1.6713E-30	1.6231E-12	8.4588E-12	-7.4741E-11	1.0028E-21
28.420	1.5590E-20	5.1362E-22	4.1912E-13	2.7949E-12	9.3541E-12	3.0817E-13
28.710	8.2275E-21	3.1139E-22	1.9656E-15	7.2263E-13	4.9365E-12	1.8683E-13
29.000	7.8001E-23	9.8326E-24	0.0000	0.0000	4.6801E-14	5.8996E-15

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -9.7640E-04 0.014471 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -401.11 131.94 6.6279 2.0239E-09 4.3654E-09 105.22

STR, KN/ M**2

6626.1

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -9.7640E-04 0.014471 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -401.11 131.94 6.6279 2.0239E-09 4.3654E-09 105.22

STR, KN/ M**2

6626.1

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT



	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR	
	M	M	KN- M	KN	KN/ M	KN/ M	
*****	*****	*****	*****	*****	*****	*****	*****
0.0000	1.4471E-02	3.7702E-04	105.29	131.92	0.0000	0.0000	
0.2900	1.3432E-02	3.6937E-04	67.532	130.71	8.5568	0.2394	
0.5800	1.2365E-02	3.5707E-04	30.540	126.86	18.014	0.5295	
0.8700	1.1287E-02	3.4088E-04	20.012	120.37	26.731	0.8224	
1.1600	1.0210E-02	3.2155E-04	49.268	111.53	34.269	1.0997	
1.4500	9.1487E-03	2.9978E-04	75.768	100.77	39.913	1.3325	
1.7400	8.1149E-03	2.7626E-04	99.072	88.668	43.555	1.5094	
2.0300	7.1196E-03	2.5161E-04	119.26	75.712	45.795	1.6437	
2.3200	6.1721E-03	2.2641E-04	138.84	63.010	41.807	1.5539	
2.6100	5.2801E-03	2.0118E-04	154.94	50.657	43.384	1.6742	
2.9000	4.4503E-03	1.7641E-04	167.41	38.010	43.841	1.7593	
3.1900	3.6875E-03	1.5249E-04	176.23	24.982	46.011	1.9269	
3.4800	2.9953E-03	1.2979E-04	181.21	11.378	47.852	2.1010	
3.7700	2.3756E-03	1.0860E-04	182.20	7.9254	49.461	2.2928	
4.0600	1.8290E-03	8.9141E-05	179.07	19.738	44.943	2.1902	
4.3500	1.3541E-03	7.1553E-05	172.19	29.332	35.596	1.8808	
4.6400	9.4821E-04	5.5908E-05	162.35	37.131	26.552	1.5655	
4.9300	6.0732E-04	4.2213E-05	150.30	43.599	18.048	1.2544	
5.2200	3.2665E-04	3.0423E-05	136.77	47.705	10.268	0.9562	
5.5100	1.0075E-04	2.0451E-05	122.40	49.678	3.3399	0.6779	
5.8000	-7.6108E-05	1.2178E-05	107.77	49.778	-2.6534	0.4246	
6.0900	-2.0980E-04	5.4629E-06	93.379	48.554	-5.7932	0.1508	
6.3800	-3.0511E-04	1.4980E-07	79.497	46.436	-8.7835	4.3124E-03	
6.6700	-3.5626E-04	8.2017E-16	66.370	43.548	-10.676	2.4578E-11	
6.9600	-3.8362E-04	1.7274E-15	54.191	40.094	-11.947	5.3798E-11	
7.2500	-3.9253E-04	2.3654E-15	43.091	36.260	-12.687	7.6451E-11	
7.5400	-3.8693E-04	2.7762E-15	33.153	32.214	-12.961	9.2998E-11	
7.8300	-3.7030E-04	2.9995E-15	24.414	28.100	-12.840	1.0401E-10	

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8.1200	-3.4568E-04	3.0716E-15	16.873	24.042	-12.393	1.1012E-10
8.4100	-3.1571E-04	3.0253E-15	10.496	20.141	-11.690	1.1202E-10
8.7000	-2.8257E-04	2.8898E-15	5.2230	16.474	-10.796	1.1041E-10
8.9900	-2.4806E-04	2.6904E-15	0.9787	13.099	-9.7694	1.0596E-10
9.2800	-2.1364E-04	2.4487E-15	2.9733	10.056	-8.6653	9.9319E-11
9.5700	-1.8041E-04	2.1827E-15	5.0188	7.3655	-7.5298	9.1098E-11
9.8600	-1.4919E-04	1.9070E-15	6.5790	5.0365	-6.4023	8.1838E-11
10.150	-1.2055E-04	1.6334E-15	7.7129	3.0641	-5.3150	7.2017E-11
10.440	-9.4831E-05	1.3706E-15	8.3272	1.4339	-4.2928	6.2042E-11
10.730	-7.2214E-05	1.1250E-15	8.5186	0.2135	-3.3540	5.2249E-11
11.020	-5.2725E-05	9.0097E-16	8.3764	1.0639	-2.5109	4.2906E-11
11.310	-3.6279E-05	7.0112E-16	7.9812	1.6847	-1.7704	3.4214E-11
11.600	-2.2708E-05	5.2656E-16	7.4042	2.1737	-1.1348	2.6315E-11
11.890	-1.1784E-05	3.7727E-16	6.7071	2.5035	-0.6028	1.9298E-11
12.180	-3.2405E-06	2.5236E-16	5.9415	2.6701	-0.1696	1.3206E-11
12.470	3.2067E-06	1.5028E-16	5.1501	2.7046	0.1716	8.0407E-12
12.760	7.8487E-06	6.9041E-17	4.3666	2.6358	0.4292	3.7754E-12
13.050	1.1033E-05	1.9353E-08	3.6169	2.4896	0.6163	1.0810E-03
13.340	1.3451E-05	1.7411E-07	2.9197	2.2890	0.7672	9.9303E-03
13.630	1.4700E-05	2.8115E-07	2.2875	2.0537	0.8558	1.6366E-02
13.920	1.5033E-05	3.4863E-07	1.7278	1.8001	0.8928	2.0704E-02
14.210	1.4673E-05	3.8416E-07	1.2435	1.5418	0.8887	2.3267E-02
14.500	1.3815E-05	3.9466E-07	0.8342	1.2892	0.8530	2.4367E-02
14.790	1.2624E-05	3.8623E-07	0.4967	1.0504	0.7943	2.4301E-02
15.080	1.1233E-05	3.6418E-07	0.2262	0.8308	0.7200	2.3342E-02
15.370	9.7514E-06	3.3297E-07	3.2141E-02	0.6341	0.6365	2.1734E-02
15.660	8.2636E-06	2.9630E-07	0.1626	0.4621	0.5491	1.9689E-02
15.950	6.8320E-06	2.5711E-07	0.2527	0.3155	0.4620	1.7388E-02
16.240	5.5007E-06	2.1770E-07	0.3219	0.1936	0.3785	1.4978E-02
16.530	4.2984E-06	1.7976E-07	0.3616	9.5126E-02	0.3008	1.2579E-02
16.820	3.2409E-06	1.4449E-07	0.3760	1.8102E-02	0.2306	1.0281E-02

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17.110	2.3341E-06	1.1266E-07	0.3711	4.9147E-02	0.1688	8.1493E-03
17.400	1.5759E-06	8.4715E-08	0.3521	8.3049E-02	0.1159	6.2275E-03
17.690	9.5876E-07	6.0799E-08	0.3234	0.1084	7.1611E-02	4.5409E-03
17.980	4.7119E-07	4.0859E-08	0.2887	0.1239	3.5748E-02	3.0997E-03
18.270	9.9275E-08	2.4688E-08	0.2511	0.1302	7.6487E-03	1.9020E-03
18.560	-1.7204E-07	1.1978E-08	0.2129	0.1294	-1.3457E-02	9.3692E-04
18.850	-3.5806E-07	2.3546E-09	0.1759	0.1233	-2.8430E-02	1.8694E-04
19.140	-4.5827E-07	9.2350E-19	0.1413	0.1136	-3.6926E-02	7.4413E-14
19.430	-5.0067E-07	2.3399E-18	0.1099	0.1018	-4.0932E-02	1.9130E-13
19.720	-5.0567E-07	3.2110E-18	8.2183E-02	8.8899E-02	-4.1936E-02	2.6629E-13
20.010	-4.8306E-07	3.6421E-18	5.8321E-02	7.5855E-02	-4.0629E-02	3.0633E-13
20.300	-4.4120E-07	3.7298E-18	3.8216E-02	6.3356E-02	-3.7628E-02	3.1810E-13
20.590	-3.8710E-07	3.5602E-18	2.1621E-02	5.1903E-02	-3.3469E-02	3.0782E-13
20.880	-3.2647E-07	3.2085E-18	8.1710E-03	4.1833E-02	-2.8612E-02	2.8119E-13
21.170	-2.6393E-07	2.7397E-18	4.2901E-03	3.3339E-02	-2.3441E-02	2.4333E-13
21.460	-2.0311E-07	2.2093E-18	1.1396E-02	2.6495E-02	-1.8278E-02	1.9882E-13
21.750	-1.4685E-07	1.6644E-18	1.7886E-02	2.1275E-02	-1.3389E-02	1.5174E-13
22.040	-9.7393E-08	1.1456E-18	2.3388E-02	1.7570E-02	-8.9939E-03	1.0579E-13
22.330	-5.6510E-08	6.8835E-19	2.8028E-02	1.5196E-02	-5.2851E-03	6.4378E-14
22.620	-2.5686E-08	3.2447E-19	3.2163E-02	1.3908E-02	-2.4325E-03	3.0727E-14
22.910	-6.2235E-09	8.3667E-20	3.6067E-02	2.4080E-02	-0.2227	2.9934E-12
23.200	7.2222E-10	1.9394E-11	1.8182E-02	5.5551E-02	4.2129E-02	1.1313E-03
23.490	1.4046E-09	5.1287E-11	3.8437E-03	3.2966E-02	0.1136	4.1485E-03
23.780	5.4737E-10	2.0870E-11	9.3810E-04	8.2797E-03	5.6622E-02	2.1589E-03
24.070	6.5892E-11	2.7713E-12	9.5786E-04	1.1350E-03	8.3023E-03	3.4919E-04
24.360	-2.7965E-11	3.1908E-22	2.7952E-04	1.6519E-03	-4.1544E-03	4.7401E-14
24.650	-1.5368E-11	1.9158E-22	9.0334E-07	5.2533E-04	-2.6296E-03	3.2781E-14
24.940	-3.1322E-12	4.2269E-23	2.5164E-05	1.6701E-05	-4.0927E-04	5.5231E-15
25.230	3.3886E-13	9.9649E-15	9.9623E-06	4.2191E-05	7.0483E-05	2.0727E-06
25.520	3.3458E-13	1.2473E-14	6.9069E-07	1.8127E-05	9.5468E-05	3.5591E-06
25.810	5.3645E-14	2.1528E-15	5.5142E-07	1.4624E-06	1.9455E-05	7.8075E-07

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26.100	-5.6735E-15	5.9421E-26	1.5735E-07	9.4986E-07	-2.4964E-06	2.6145E-17
26.390	-2.9765E-15	3.7347E-26	4.7586E-10	2.8336E-07	-1.5398E-06	1.9321E-17
26.680	-2.2762E-16	3.3190E-27	6.9998E-09	2.6779E-09	-1.3536E-07	1.9737E-18
26.970	9.3848E-17	3.3557E-18	1.0761E-09	1.2261E-08	5.6309E-08	2.0134E-09
27.260	2.4582E-17	9.5028E-19	1.1163E-10	1.9568E-09	1.4749E-08	5.7017E-10
27.550	3.0776E-20	1.1822E-20	5.8828E-11	1.8470E-10	1.8466E-11	7.0933E-12
27.840	-8.3136E-19	1.0148E-29	4.4870E-12	1.0423E-10	-4.9882E-10	6.0885E-21
28.130	-1.2457E-19	1.6713E-30	1.6233E-12	8.4597E-12	-7.4741E-11	1.0028E-21
28.420	1.5593E-20	5.1381E-22	4.1917E-13	2.7953E-12	9.3557E-12	3.0829E-13
28.710	8.2286E-21	3.1146E-22	1.9648E-15	7.2272E-13	4.9372E-12	1.8688E-13
29.000	7.7969E-23	9.8280E-24	0.0000	0.0000	4.6782E-14	5.8968E-15

* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-9.7640E-04 0.014472 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-401.11 133.73 6.6947 2.0239E-09 4.3937E-09 107.56

STR, KN/ M**2

6726.2



THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -9.7640E-04 0.014472 3.7702E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -401.11 133.73 6.6947 2.0239E-09 4.3937E-09 107.56

STR, KN/ M**2

6726.2

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.4472E-02	3.7702E-04	107.63	133.71	0.0000	0.0000
0.2900	1.3432E-02	3.6935E-04	69.348	132.48	8.7126	0.2438
0.5800	1.2365E-02	3.5700E-04	31.843	128.56	18.340	0.5391
0.8700	1.1284E-02	3.4074E-04	19.317	121.96	27.211	0.8371
1.1600	1.0205E-02	3.2132E-04	48.970	112.95	34.876	1.1190
1.4500	9.1419E-03	2.9946E-04	75.818	102.01	40.608	1.3554
1.7400	8.1060E-03	2.7584E-04	99.414	89.697	44.297	1.5346
2.0300	7.1086E-03	2.5109E-04	119.87	76.523	46.555	1.6703
2.3200	6.1592E-03	2.2581E-04	139.66	63.613	42.478	1.5781

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2.6100	5.2658E-03	2.0051E-04	155.90	51.066	44.053	1.6991
2.9000	4.4348E-03	1.7567E-04	168.46	38.229	44.483	1.7840
3.1900	3.6713E-03	1.5171E-04	177.32	25.016	46.642	1.9521
3.4800	2.9788E-03	1.2898E-04	182.29	11.233	48.455	2.1261
3.7700	2.3594E-03	1.0779E-04	183.21	8.2352	50.016	2.3171
4.0600	1.8133E-03	8.8336E-05	179.97	20.167	45.369	2.2103
4.3500	1.3394E-03	7.0774E-05	172.94	29.837	35.850	1.8945
4.6400	9.3469E-04	5.5169E-05	162.93	37.736	26.651	1.5732
4.9300	5.9528E-04	4.1527E-05	150.71	44.212	18.013	1.2567
5.2200	3.1623E-04	2.9800E-05	137.00	48.292	10.121	0.9539
5.5100	9.2066E-05	1.9897E-05	122.46	50.211	3.1075	0.6716
5.8000	-8.3047E-05	1.1698E-05	107.69	50.234	-2.9481	0.4153
6.0900	-2.1502E-04	5.0569E-06	93.182	48.930	-6.0456	0.1422
6.3800	-3.0857E-04	-2.9912E-16	79.202	46.738	-9.0463	-8.7685E-12
6.6700	-3.5752E-04	9.0041E-16	66.001	43.773	-10.909	2.7474E-11
6.9600	-3.8370E-04	1.7879E-15	53.768	40.243	-12.168	5.6696E-11
7.2500	-3.9160E-04	2.4077E-15	42.636	36.339	-12.887	7.9235E-11
7.5400	-3.8514E-04	2.8022E-15	32.685	32.229	-13.136	9.5576E-11
7.8300	-3.6783E-04	3.0111E-15	23.951	28.060	-12.987	1.0631E-10
8.1200	-3.4269E-04	3.0710E-15	16.429	23.957	-12.510	1.1211E-10
8.4100	-3.1235E-04	3.0146E-15	10.083	20.019	-11.777	1.1366E-10
8.7000	-2.7899E-04	2.8711E-15	4.8498	16.326	-10.853	1.1169E-10
8.9900	-2.4440E-04	2.6656E-15	0.6535	12.934	-9.8002	1.0689E-10
9.2800	-2.0999E-04	2.4196E-15	3.2072	9.8822	-8.6724	9.9924E-11
9.5700	-1.7688E-04	2.1509E-15	5.2071	7.1910	-7.5167	9.1405E-11
9.8600	-1.4585E-04	1.8740E-15	6.7558	4.8671	-6.3728	8.1884E-11
10.150	-1.1745E-04	1.6003E-15	7.8419	2.9050	-5.2727	7.1842E-11
10.440	-9.2021E-05	1.3384E-15	8.4122	1.2891	-4.2414	6.1688E-11
10.730	-6.9718E-05	1.0945E-15	8.5641	0.3233	-3.2970	5.1759E-11
11.020	-5.0553E-05	8.7279E-16	8.3875	1.1568	-2.4513	4.2320E-11
11.310	-3.4432E-05	6.7563E-16	7.9636	1.7603	-1.7108	3.3570E-11

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11.600	-2.1176E-05	5.0400E-16	7.3634	2.2450	-1.0775	2.5646E-11
11.890	-1.0549E-05	3.5774E-16	6.6485	2.5566	-0.5494	1.8633E-11
12.180	-2.2802E-06	2.3584E-16	5.8703	2.7064	-0.1215	1.2566E-11
12.470	3.9199E-06	1.3667E-16	5.0708	2.7258	0.2136	7.4459E-12
12.760	8.3447E-06	5.8163E-17	4.2834	2.6438	0.4646	3.2385E-12
13.050	1.1437E-05	4.7461E-08	3.5332	2.4867	0.6505	2.6997E-03
13.340	1.3674E-05	1.9453E-07	2.8384	2.2772	0.7941	1.1298E-02
13.630	1.4773E-05	2.9488E-07	2.2109	2.0351	0.8757	1.7481E-02
13.920	1.4987E-05	3.5671E-07	1.6574	1.7767	0.9063	2.1573E-02
14.210	1.4537E-05	3.8758E-07	1.1805	1.5153	0.8965	2.3905E-02
14.500	1.3615E-05	3.9437E-07	0.7792	1.2611	0.8560	2.4796E-02
14.790	1.2380E-05	3.8310E-07	0.4501	1.0220	0.7932	2.4547E-02
15.080	1.0965E-05	3.5898E-07	0.1877	0.8032	0.7156	2.3431E-02
15.370	9.4743E-06	3.2638E-07	5.7975E-02	0.6081	0.6297	2.1695E-02
15.660	7.9898E-06	2.8889E-07	0.1820	0.4384	0.5406	1.9549E-02
15.950	6.5709E-06	2.4935E-07	0.2674	0.2944	0.4525	1.7172E-02
16.240	5.2592E-06	2.0997E-07	0.3331	0.1754	0.3685	1.4712E-02
16.530	4.0808E-06	1.7234E-07	0.3680	7.9785E-02	0.2908	1.2282E-02
16.820	3.0499E-06	1.3760E-07	0.3784	1.1280E-02	0.2210	9.9712E-03
17.110	2.1706E-06	1.0645E-07	0.3703	5.7352E-02	0.1599	7.8411E-03
17.400	1.4395E-06	7.9246E-08	0.3488	8.9071E-02	0.1078	5.9325E-03
17.690	8.4822E-07	5.6109E-08	0.3183	0.1135	6.4509E-02	4.2676E-03
17.980	3.8443E-07	3.6940E-08	0.2825	0.1271	2.9698E-02	2.8539E-03
18.270	3.3805E-08	2.1505E-08	0.2442	0.1318	2.6520E-03	1.6872E-03
18.560	-2.1899E-07	9.4712E-09	0.2058	0.1297	-1.7442E-02	7.5443E-04
18.850	-3.8919E-07	4.5153E-10	0.1688	0.1226	-3.1468E-02	3.6508E-05
19.140	-4.7197E-07	1.3355E-18	0.1345	0.1122	-3.8723E-02	1.0957E-13
19.430	-5.0575E-07	2.6245E-18	0.1037	9.9785E-02	-4.2100E-02	2.1847E-13
19.720	-5.0433E-07	3.3915E-18	7.6632E-02	8.6541E-02	-4.2586E-02	2.8638E-13
20.010	-4.7726E-07	3.7408E-18	5.3493E-02	7.3309E-02	-4.0872E-02	3.2036E-13
20.300	-4.3263E-07	3.7671E-18	3.4145E-02	6.0743E-02	-3.7569E-02	3.2713E-13

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20.590	-3.7717E-07	3.5545E-18	1.8311E-02	4.9314E-02	-3.3205E-02	3.1292E-13
20.880	-3.1634E-07	3.1757E-18	5.6038E-03	3.9325E-02	-2.8228E-02	2.8338E-13
21.170	-2.5445E-07	2.6930E-18	5.8379E-03	3.0944E-02	-2.3011E-02	2.4354E-13
21.460	-1.9491E-07	2.1591E-18	1.2349E-02	2.4225E-02	-1.7860E-02	1.9785E-13
21.750	-1.4031E-07	1.6186E-18	1.8428E-02	1.9123E-02	-1.3025E-02	1.5026E-13
22.040	-9.2668E-08	1.1093E-18	2.3322E-02	1.5516E-02	-8.7135E-03	1.0430E-13
22.330	-5.3549E-08	6.6384E-19	2.7380E-02	1.3215E-02	-5.0993E-03	6.3215E-14
22.620	-2.4232E-08	3.1164E-19	3.0950E-02	1.1971E-02	-2.3366E-03	3.0050E-14
22.910	-5.8239E-09	7.9828E-20	3.4297E-02	2.3689E-02	-0.2084	2.8561E-12
23.200	7.1353E-10	1.9679E-11	1.7196E-02	5.2921E-02	4.1623E-02	1.1480E-03
23.490	1.3363E-09	4.9466E-11	3.5993E-03	3.1211E-02	0.1081	4.0013E-03
23.780	5.1741E-10	2.0006E-11	9.0578E-04	7.7747E-03	5.3523E-02	2.0695E-03
24.070	6.1304E-11	2.6220E-12	9.0941E-04	1.1069E-03	7.7243E-03	3.3037E-04
24.360	-2.6701E-11	3.1007E-22	2.6354E-04	1.5695E-03	-3.9666E-03	4.6063E-14
24.650	-1.4522E-11	1.8427E-22	1.4671E-06	4.9574E-04	-2.4848E-03	3.1531E-14
24.940	-2.9296E-12	4.0313E-23	2.3978E-05	1.4579E-05	-3.8280E-04	5.2676E-15
25.230	3.3151E-13	9.9473E-15	9.4041E-06	4.0250E-05	6.8954E-05	2.0690E-06
25.520	3.1735E-13	1.1995E-14	6.3133E-07	1.7120E-05	9.0549E-05	3.4225E-06
25.810	5.0301E-14	2.0493E-15	5.2563E-07	1.3446E-06	1.8243E-05	7.4322E-07
26.100	-5.4667E-15	5.8364E-26	1.4836E-07	9.0595E-07	-2.4054E-06	2.5680E-17
26.390	-2.8103E-15	3.5898E-26	1.5671E-10	2.6727E-07	-1.4539E-06	1.8571E-17
26.680	-2.1059E-16	3.1411E-27	6.6477E-09	2.0121E-09	-1.2523E-07	1.8679E-18
26.970	8.9555E-17	3.2466E-18	1.0102E-09	1.1647E-08	5.3733E-08	1.9479E-09
27.260	2.3188E-17	9.0919E-19	1.0777E-10	1.8379E-09	1.3913E-08	5.4552E-10
27.550	-1.1263E-20	9.9085E-21	5.5677E-11	1.7861E-10	-6.7578E-12	5.9451E-12
27.840	-7.8760E-19	9.7839E-30	4.1638E-12	9.8665E-11	-4.7256E-10	5.8703E-21
28.130	-1.1660E-19	1.5950E-30	1.5488E-12	7.8613E-12	-6.9962E-11	9.5700E-22
28.420	1.5045E-20	5.0334E-22	3.9536E-13	2.6682E-12	9.0272E-12	3.0200E-13
28.710	7.7870E-21	2.9887E-22	1.2022E-15	6.8166E-13	4.6722E-12	1.7932E-13
29.000	4.7720E-23	8.5040E-24	0.0000	0.0000	2.8632E-14	5.1024E-15

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* PILE GROUP * 6

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-9.7640E-04	0.014473	3.7702E-04	1.3952E-13	1.7055E-05	-3.3156E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
-401.11	167.76	7.9573	2.0239E-09	4.9061E-09	150.17

STR, KN/ M**2

8725.1

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-9.7640E-04	0.014473	3.7702E-04	1.3952E-13	1.7055E-05	-3.3156E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-401.11	167.76	7.9573	2.0239E-09	4.9061E-09	150.17

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STR, KN/ M**2

8725.1

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.4473E-02	3.7702E-04	150.24	167.73	0.0000	0.0000
0.2900	1.3425E-02	3.6901E-04	102.08	166.06	11.852	0.3315
0.5800	1.2335E-02	3.5577E-04	54.950	160.73	24.902	0.7314
0.8700	1.1224E-02	3.3823E-04	10.768	151.78	36.838	1.1311
1.1600	1.0109E-02	3.1726E-04	44.246	139.62	47.018	1.5041
1.4500	9.0061E-03	2.9372E-04	77.601	124.90	54.449	1.8097
1.7400	7.9318E-03	2.6840E-04	106.59	108.45	58.996	2.0327
2.0300	6.8990E-03	2.4203E-04	132.05	90.983	61.497	2.1918
2.3200	5.9190E-03	2.1529E-04	155.39	74.009	55.561	2.0483
2.6100	5.0013E-03	1.8875E-04	174.09	57.695	56.948	2.1775
2.9000	4.1534E-03	1.6295E-04	188.03	41.215	56.703	2.2529
3.1900	3.3807E-03	1.3834E-04	197.23	24.518	58.459	2.4234
3.4800	2.6871E-03	1.1529E-04	201.56	7.4293	59.493	2.5870
3.7700	2.0742E-03	9.4084E-05	200.92	14.897	59.848	2.7535
4.0600	1.5418E-03	7.4939E-05	195.29	28.889	52.507	2.5530
4.3500	1.0877E-03	5.7965E-05	185.27	39.771	39.626	2.1126
4.6400	7.0771E-04	4.3189E-05	171.96	49.284	27.466	1.6768
4.9300	3.9663E-04	3.0570E-05	156.37	55.636	16.336	1.2596
5.2200	1.4820E-04	2.0006E-05	139.43	58.941	6.4562	0.8719
5.5100	-4.4382E-05	1.1358E-05	121.98	59.582	-2.0390	0.5220
5.8000	-1.8810E-04	4.4549E-06	104.72	57.969	-9.0890	0.2153

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6.0900	-2.8909E-04	-2.7327E-17	88.240	55.043	-11.068	-1.0458E-12
6.3800	-3.4097E-04	1.1575E-15	72.713	51.373	-13.605	4.6182E-11
6.6700	-3.6781E-04	2.0046E-15	58.396	46.941	-15.275	8.3253E-11
6.9600	-3.7481E-04	2.5668E-15	45.464	42.020	-16.177	1.1078E-10
7.2500	-3.6654E-04	2.8937E-15	34.020	36.850	-16.418	1.2961E-10
7.5400	-3.4700E-04	3.0313E-15	24.101	31.637	-16.109	1.4072E-10
7.8300	-3.1963E-04	3.0214E-15	15.691	26.551	-15.360	1.4519E-10
8.1200	-2.8735E-04	2.9007E-15	8.7303	21.725	-14.277	1.4412E-10
8.4100	-2.5255E-04	2.7011E-15	3.1250	17.259	-12.960	1.3861E-10
8.7000	-2.1714E-04	2.4499E-15	2.1353	13.224	-11.497	1.2972E-10
8.9900	-1.8258E-04	2.1693E-15	4.8407	9.6603	-9.9650	1.1840E-10
9.2800	-1.4996E-04	1.8774E-15	6.8142	6.5860	-8.4291	1.0553E-10
9.5700	-1.2002E-04	1.5881E-15	8.2983	3.9986	-6.9423	9.1860E-11
9.8600	-9.3242E-05	1.3121E-15	9.1035	1.8796	-5.5453	7.8034E-11
10.150	-6.9844E-05	1.0566E-15	9.3619	0.2000	-4.2677	6.4564E-11
10.440	-4.9875E-05	8.2648E-16	9.1952	1.2702	-3.1289	5.1849E-11
10.730	-3.3238E-05	6.2424E-16	8.7127	2.0342	-2.1394	4.0180E-11
11.020	-1.9728E-05	4.5076E-16	8.0097	2.6415	-1.3020	2.9749E-11
11.310	-9.0714E-06	3.0553E-16	7.1676	3.0102	-0.6135	2.0662E-11
11.600	-9.5042E-07	1.8705E-16	6.2536	3.1692	-6.5826E-02	1.2955E-11
11.890	4.9732E-06	9.3118E-17	5.3217	3.1626	0.3526	6.6012E-12
12.180	9.0396E-06	2.1115E-17	4.4137	3.0308	0.6556	1.5313E-12
12.470	1.1989E-05	1.4144E-07	3.5601	2.8095	0.8890	1.0492E-02
12.760	1.3758E-05	2.6385E-07	2.7819	2.5294	1.0427	2.0004E-02
13.050	1.4413E-05	3.4011E-07	2.0919	2.2164	1.1159	2.6340E-02
13.340	1.4231E-05	3.7948E-07	1.4962	1.8915	1.1249	3.0009E-02
13.630	1.3449E-05	3.9037E-07	0.9953	1.5710	1.0850	3.1508E-02
13.920	1.2268E-05	3.8017E-07	0.5859	1.2672	1.0098	3.1305E-02
14.210	1.0853E-05	3.5519E-07	0.2616	0.9887	0.9110	2.9827E-02
14.500	9.3324E-06	3.2068E-07	3.7298E-02	0.7408	0.7986	2.7452E-02
14.790	7.8068E-06	2.8090E-07	0.1876	0.5263	0.6808	2.4505E-02

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15.080	6.3479E-06	2.3917E-07	0.2901	0.3458	0.5639	2.1255E-02
15.370	5.0053E-06	1.9800E-07	0.3660	0.1984	0.4528	1.7920E-02
15.660	3.8093E-06	1.5917E-07	0.4039	8.1823E-02	0.3508	1.4665E-02
15.950	2.7750E-06	1.2386E-07	0.4124	2.3764E-02	0.2601	1.1614E-02
16.240	1.9060E-06	9.2760E-08	0.3991	7.7003E-02	0.1818	8.8492E-03
16.530	1.1968E-06	6.6165E-08	0.3706	0.1141	0.1161	6.4200E-03
16.820	6.3611E-07	4.4075E-08	0.3323	0.1400	6.2735E-02	4.3485E-03
17.110	2.0851E-07	2.6274E-08	0.2889	0.1521	2.0904E-02	2.6351E-03
17.400	-1.0336E-07	1.2402E-08	0.2438	0.1536	-1.0531E-02	1.2641E-03
17.690	-3.1759E-07	2.0082E-09	0.1996	0.1473	-3.2876E-02	2.0796E-04
17.980	-4.3662E-07	1.2186E-18	0.1582	0.1357	-4.5908E-02	1.2813E-13
18.270	-4.8914E-07	2.6957E-18	0.1208	0.1207	-5.2228E-02	2.8784E-13
18.560	-5.0055E-07	3.5900E-18	8.8114E-02	0.1040	-5.4264E-02	3.8918E-13
18.850	-4.8238E-07	4.0265E-18	6.0440E-02	8.6951E-02	-5.3080E-02	4.4307E-13
19.140	-4.4430E-07	4.1173E-18	3.7706E-02	7.0426E-02	-4.9615E-02	4.5977E-13
19.430	-3.9422E-07	3.9593E-18	1.9635E-02	5.5112E-02	-4.4666E-02	4.4859E-13
19.720	-3.3836E-07	3.6342E-18	5.7958E-03	4.1429E-02	-3.8889E-02	4.1768E-13
20.010	-2.8144E-07	3.2081E-18	5.8496E-03	2.9601E-02	-3.2805E-02	3.7395E-13
20.300	-2.2686E-07	2.7335E-18	1.1597E-02	1.9695E-02	-2.6813E-02	3.2308E-13
20.590	-1.7692E-07	2.2498E-18	1.5707E-02	1.1661E-02	-2.1199E-02	2.6959E-13
20.880	-1.3303E-07	1.7860E-18	1.8033E-02	5.3640E-03	-1.6157E-02	2.1692E-13
21.170	-9.5869E-08	1.3616E-18	1.8775E-02	6.1819E-04	-1.1800E-02	1.6759E-13
21.460	-6.5584E-08	9.8906E-19	1.8353E-02	3.3242E-03	-8.1796E-03	1.2335E-13
21.750	-4.1922E-08	6.7514E-19	1.7116E-02	5.2782E-03	-5.2968E-03	8.5304E-14
22.040	-2.4353E-08	4.2242E-19	1.5348E-02	6.6145E-03	-3.1167E-03	5.4061E-14
22.330	-1.2173E-08	2.3063E-19	1.3264E-02	7.4472E-03	-1.5777E-03	2.9892E-14
22.620	-4.5718E-09	9.7703E-20	1.1018E-02	7.8403E-03	-6.0001E-04	1.2823E-14
22.910	-6.8832E-10	2.0563E-20	8.7099E-03	1.2856E-02	-2.4627E-02	7.3568E-13
23.200	4.1247E-10	1.4978E-11	3.5586E-03	1.4272E-02	2.4061E-02	8.7372E-04
23.490	3.4495E-10	1.7389E-11	4.3156E-04	6.7366E-03	2.7903E-02	1.4066E-03
23.780	1.0461E-10	6.0107E-12	3.4850E-04	1.1209E-03	1.0821E-02	6.2177E-04



24.070	3.8643E-12	4.9941E-13	2.1840E-04	5.1911E-04	4.8690E-04	6.2926E-05
24.360	-7.8134E-12	1.2740E-22	4.7371E-05	3.8718E-04	-1.1607E-03	1.8926E-14
24.650	-2.9467E-12	6.0022E-23	6.1697E-06	9.2911E-05	-5.0422E-04	1.0271E-14
24.940	-3.3313E-13	1.0250E-23	6.5139E-06	7.5501E-06	-4.3530E-05	1.3394E-15
25.230	1.6438E-13	6.2795E-15	1.7890E-06	1.1334E-05	3.4192E-05	1.3061E-06
25.520	7.3513E-14	3.9199E-15	7.1310E-08	3.3337E-06	2.0976E-05	1.1185E-06
25.810	6.6317E-15	4.9609E-16	1.4445E-07	8.7348E-08	2.4051E-06	1.7992E-07
26.100	-2.0262E-15	2.9117E-26	2.6755E-08	2.5341E-07	-8.9153E-07	1.2812E-17
26.390	-5.5062E-16	1.1476E-26	2.5271E-09	4.8912E-08	-2.8486E-07	5.9371E-18
26.680	-3.6809E-18	5.9268E-28	1.6135E-09	4.1080E-09	-2.1889E-09	3.5245E-19
26.970	2.5439E-17	1.2233E-18	1.4414E-10	2.8531E-09	1.5263E-08	7.3396E-10
27.260	4.2602E-18	2.5870E-19	4.1356E-11	2.6897E-10	2.5561E-09	1.5522E-10
27.550	-3.2307E-19	2.4255E-30	1.1851E-11	7.1012E-11	-1.9384E-10	1.4553E-21
27.840	-1.7736E-19	3.3802E-30	1.6694E-13	2.1188E-11	-1.0642E-10	2.0281E-21
28.130	-1.4053E-20	4.1362E-31	4.3788E-13	4.1269E-13	-8.4316E-12	2.4817E-22
28.420	5.7014E-21	2.4112E-22	7.2349E-14	7.6436E-13	3.4209E-12	1.4467E-13
28.710	1.6498E-21	9.2343E-23	5.4560E-15	1.2474E-13	9.8989E-13	5.5406E-14
29.000	-1.9926E-22	1.3718E-33	0.0000	0.0000	-1.1955E-13	8.2308E-25

* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD



3.3966E-03 0.014469 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1151.6 218.84 9.7787 2.0239E-09 -4.4427E-09 218.44

STR, KN/ M**2

1.4377E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

3.3966E-03 0.014469 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1151.6 218.84 9.7787 2.0239E-09 -4.4427E-09 218.44

STR, KN/ M**2

1.4377E+04

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M

0.0000	1.4469E-02	3.7461E-04	218.51	219.04	0.0000	0.0000
0.2900	1.3407E-02	3.6611E-04	153.82	216.30	17.638	0.4901



0.5800	1.2283E-02	3.5164E-04	90.551	208.39	36.955	1.0772
0.8700	1.1123E-02	3.3233E-04	30.400	195.14	54.416	1.6565
1.1600	9.9506E-03	3.0926E-04	38.943	177.24	69.006	2.1857
1.4500	8.7886E-03	2.8349E-04	83.029	155.75	79.245	2.6047
1.7400	7.6567E-03	2.5596E-04	120.71	131.93	84.966	2.8917
2.0300	6.5723E-03	2.2756E-04	154.27	106.94	87.429	3.0748
2.3200	5.5496E-03	1.9908E-04	182.78	82.983	77.761	2.8266
2.6100	4.6002E-03	1.7119E-04	204.67	60.364	78.232	2.9487
2.9000	3.7327E-03	1.4446E-04	219.88	37.977	76.164	2.9842
3.1900	2.9533E-03	1.1939E-04	228.58	15.859	76.415	3.1286
3.4800	2.2655E-03	9.6362E-05	230.76	12.192	75.184	3.2403
3.7700	1.6702E-03	7.5640E-05	226.50	31.205	72.433	3.3264
4.0600	1.1655E-03	5.7394E-05	216.05	47.447	59.135	2.9113
4.3500	7.4746E-04	4.1674E-05	200.52	61.084	40.571	2.2615
4.6400	4.0970E-04	2.8434E-05	181.49	70.403	23.689	1.6436
4.9300	1.4464E-04	1.7547E-05	160.38	75.125	8.8751	1.0765
5.2200	-5.6181E-05	8.8330E-06	138.45	75.884	-3.6464	0.5732
5.5100	-2.0154E-04	2.0730E-06	116.77	73.355	-13.794	0.1419
5.8000	-2.9404E-04	-5.0018E-16	96.189	68.223	-21.167	-3.6007E-11
6.0900	-3.4012E-04	-1.3342E-15	77.382	62.112	-19.392	-7.6070E-11
6.3800	-3.5979E-04	-1.8885E-15	60.267	55.780	-21.388	-1.1227E-10
6.6700	-3.5909E-04	-2.2136E-15	45.069	48.889	-22.219	-1.3697E-10
6.9600	-3.4336E-04	-2.3560E-15	31.902	41.800	-22.081	-1.5151E-10
7.2500	-3.1718E-04	-2.3579E-15	20.780	34.811	-21.168	-1.5736E-10
7.5400	-2.8441E-04	-2.2564E-15	11.642	28.157	-19.672	-1.5607E-10
7.8300	-2.4817E-04	-2.0833E-15	4.3659	22.012	-17.769	-1.4916E-10
8.1200	-2.1096E-04	-1.8653E-15	2.2409	16.495	-15.617	-1.3809E-10
8.4100	-1.7464E-04	-1.6240E-15	5.6182	11.675	-13.353	-1.2417E-10
8.7000	-1.4057E-04	-1.3763E-15	8.0787	7.5803	-11.089	-1.0858E-10
8.9900	-1.0966E-04	-1.1351E-15	9.7759	4.2024	-8.9170	-9.2302E-11
9.2800	-8.2420E-05	-9.0936E-16	10.591	1.5076	-6.9026	-7.6158E-11

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9.5700	-5.9089E-05	-7.0523E-16	10.716	0.9103	-5.0922	-6.0776E-11
9.8600	-3.9653E-05	-5.2610E-16	10.323	2.1581	-3.5136	-4.6618E-11
10.150	-2.3929E-05	-3.7337E-16	9.5654	3.0844	-2.1785	-3.3991E-11
10.440	-1.1616E-05	-2.4681E-16	8.5721	3.6961	-1.0858	-2.3069E-11
10.730	-2.3348E-06	-1.4507E-16	7.4509	3.9766	-0.2239	-1.3913E-11
11.020	4.3301E-06	-6.6008E-17	6.2875	3.9985	0.4258	-6.4906E-12
11.310	8.8029E-06	-6.9811E-18	5.1472	3.8277	0.8870	-7.0342E-13
11.600	1.2000E-05	1.7896E-07	4.0776	3.5223	1.2383	1.8462E-02
11.890	1.3756E-05	2.9639E-07	3.1102	3.1321	1.4529	3.1297E-02
12.180	1.4266E-05	3.6312E-07	2.2636	2.6979	1.5414	3.9226E-02
12.470	1.3869E-05	3.9060E-07	1.5456	2.2522	1.5323	4.3143E-02
12.760	1.2854E-05	3.8897E-07	0.9557	1.8196	1.4513	4.3908E-02
13.050	1.1455E-05	3.6692E-07	0.4875	1.4175	1.3212	4.2311E-02
13.340	9.8611E-06	3.3169E-07	0.1302	1.0576	1.1613	3.9055E-02
13.630	8.2152E-06	2.8910E-07	0.1631	0.7460	0.9875	3.4741E-02
13.920	6.6213E-06	2.4363E-07	0.3080	0.4850	0.8120	2.9869E-02
14.210	5.1500E-06	1.9861E-07	0.4145	0.2739	0.6441	2.4833E-02
14.500	3.8448E-06	1.5638E-07	0.4684	0.1094	0.4902	1.9932E-02
14.790	2.7272E-06	1.1841E-07	0.4808	3.2938E-02	0.3543	1.5381E-02
15.080	1.8022E-06	8.5519E-08	0.4631	0.1042	0.2385	1.1316E-02
15.370	1.0628E-06	5.7994E-08	0.4252	0.1544	0.1432	7.8147E-03
15.660	4.9362E-07	3.5743E-08	0.3751	0.1850	6.7730E-02	4.9032E-03
15.950	7.4733E-08	1.8408E-08	0.3191	0.1963	1.0436E-02	2.5699E-03
16.240	-2.1634E-07	5.4627E-09	0.2620	0.1934	-3.0735E-02	7.7592E-04
16.530	-3.9511E-07	-6.0682E-19	0.2075	0.1805	-5.7095E-02	-8.7690E-14
16.820	-4.7460E-07	-2.0122E-18	0.1577	0.1613	-6.9736E-02	-2.9566E-13
17.110	-5.0027E-07	-2.8489E-18	0.1141	0.1387	-7.4724E-02	-4.2553E-13
17.400	-4.8749E-07	-3.2458E-18	7.7271E-02	0.1150	-7.4000E-02	-4.9271E-13
17.690	-4.4914E-07	-3.3180E-18	4.7312E-02	9.1921E-02	-6.9270E-02	-5.1172E-13
17.980	-3.9561E-07	-3.1636E-18	2.3851E-02	7.0531E-02	-6.1975E-02	-4.9560E-13
18.270	-3.3496E-07	-2.8641E-18	6.2667E-03	5.1580E-02	-5.3288E-02	-4.5563E-13

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18.560	-2.7318E-07	-2.4839E-18	7.6224E-03	3.5433E-02	-4.4123E-02	-4.0119E-13
18.850	-2.1445E-07	-2.0725E-18	1.4441E-02	2.2181E-02	-3.5159E-02	-3.3978E-13
19.140	-1.6148E-07	-1.6656E-18	1.9230E-02	1.1722E-02	-2.6866E-02	-2.7711E-13
19.430	-1.1577E-07	-1.2875E-18	2.1367E-02	3.8148E-03	-1.9542E-02	-2.1735E-13
19.720	-7.7923E-08	-9.5340E-19	2.1551E-02	2.5879E-03	-1.3343E-02	-1.6326E-13
20.010	-4.7887E-08	-6.7082E-19	2.0375E-02	5.7286E-03	-8.3166E-03	-1.1650E-13
20.300	-2.5149E-08	-4.4195E-19	1.8328E-02	7.9951E-03	-4.4288E-03	-7.7827E-14
20.590	-8.9124E-09	-2.6498E-19	1.5791E-02	9.1725E-03	-1.5911E-03	-4.7306E-14
20.880	1.7703E-09	-1.3544E-19	1.3045E-02	9.5340E-03	3.2035E-04	-2.4510E-14
21.170	7.9025E-09	-4.7288E-20	1.0285E-02	9.3619E-03	1.4492E-03	-8.6722E-15
21.460	1.0510E-08	5.8028E-11	7.6280E-03	8.8917E-03	1.9529E-03	1.0780E-05
21.750	1.0932E-08	1.6705E-10	5.1320E-03	8.3102E-03	2.0579E-03	3.1439E-05
22.040	9.2983E-09	1.8813E-10	2.8067E-03	7.7547E-03	1.7730E-03	3.5863E-05
22.330	6.5404E-09	1.5258E-10	6.2935E-04	7.3145E-03	1.2630E-03	2.9458E-05
22.620	3.5305E-09	9.0547E-11	1.4437E-03	7.0312E-03	6.9035E-04	1.7701E-05
22.910	1.0985E-09	3.1179E-11	3.4552E-03	1.2324E-03	3.9301E-02	1.1155E-03
23.200	5.0501E-11	3.0344E-12	2.1611E-03	4.8937E-03	2.9459E-03	1.7701E-04
23.490	-1.2204E-10	-6.2006E-22	6.1827E-04	3.7756E-03	-9.8713E-03	-5.0156E-14
23.780	-6.0415E-11	-3.7174E-22	3.0553E-05	1.2353E-03	-6.2496E-03	-3.8454E-14
24.070	-1.1034E-11	-8.2822E-23	9.8325E-05	1.4242E-05	-1.3903E-03	-1.0436E-14
24.360	2.2044E-12	3.6199E-14	3.6919E-05	1.6432E-04	3.2748E-04	5.3776E-06
24.650	1.9909E-12	4.9547E-14	3.0379E-06	6.7433E-05	3.4067E-04	8.4780E-06
24.940	5.6048E-13	1.5985E-14	2.1939E-06	7.4154E-06	7.3236E-05	2.0887E-06
25.230	8.9234E-15	8.5840E-16	1.2653E-06	3.4734E-06	1.8561E-06	1.7855E-07
25.520	-3.2822E-14	-1.8561E-25	1.8004E-07	2.2631E-06	-9.3653E-06	-5.2960E-17
25.810	-7.4807E-15	-5.2226E-26	4.7244E-08	3.4610E-07	-2.7130E-06	-1.8941E-17
26.100	2.0687E-16	-7.1830E-28	2.0741E-08	7.9110E-08	9.1022E-08	-3.1605E-19
26.390	3.9738E-16	1.0043E-17	1.3709E-09	3.6985E-08	2.0558E-07	5.1957E-09
26.680	5.2587E-17	1.6131E-18	7.1043E-10	2.6409E-09	3.1272E-08	9.5926E-10
26.970	-7.1375E-18	-3.1088E-29	1.6132E-10	1.2310E-09	-4.2825E-09	-1.8653E-20
27.260	-2.9028E-18	-1.8612E-29	3.7184E-12	2.8989E-10	-1.7417E-09	-1.1167E-20

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27.550 -1.5768E-19 -1.5844E-30 6.8285E-12 5.0507E-12 -9.4607E-11 -9.5066E-22
 27.840 9.7409E-20 2.2878E-21 8.9031E-13 1.2003E-11 5.8445E-11 1.3727E-12
 28.130 2.1824E-20 6.1807E-22 1.3289E-13 1.6292E-12 1.3095E-11 3.7084E-13
 28.420 -5.2771E-22 3.4937E-24 5.4721E-14 2.2371E-13 -3.1663E-13 2.0962E-15
 28.710 -8.7567E-22 -5.2570E-33 3.1594E-15 9.4346E-14 -5.2540E-13 -3.1542E-24
 29.000 -1.0784E-22 -1.0591E-33 0.0000 0.0000 -6.4704E-14 -6.3544E-25

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.4037E-03 0.014470 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1153.7 187.66 8.6667 2.0239E-09 -4.1180E-09 182.27

STR, KN/ M**2

1.2679E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.4037E-03 0.014470 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1153.7 187.66 8.6667 2.0239E-09 -4.1180E-09 182.27

STR, KN/ M**2

1.2679E+04

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.4470E-02	3.7461E-04	182.34	187.82	0.0000	0.0000
0.2900	1.3415E-02	3.6639E-04	126.70	185.61	14.275	0.3967
0.5800	1.2309E-02	3.5263E-04	72.219	179.19	29.955	0.8736
0.8700	1.1174E-02	3.3432E-04	20.306	168.44	44.218	1.3477
1.1600	1.0032E-02	3.1244E-04	41.040	153.87	56.269	1.7859
1.4500	8.9004E-03	2.8792E-04	79.436	136.30	64.912	2.1395
1.7400	7.7978E-03	2.6163E-04	112.58	116.74	69.989	2.3905
2.0300	6.7392E-03	2.3437E-04	141.92	96.072	72.511	2.5612
2.3200	5.7374E-03	2.0685E-04	167.88	76.129	65.024	2.3753
2.6100	4.8028E-03	1.7970E-04	188.30	57.121	66.065	2.5035
2.9000	3.9437E-03	1.5349E-04	203.08	38.105	65.087	2.5643
3.1900	3.1660E-03	1.2867E-04	212.29	19.063	66.258	2.7269
3.4800	2.4733E-03	1.0562E-04	215.82	6.3953	66.387	2.8725
3.7700	1.8670E-03	8.4641E-05	213.68	23.443	65.490	3.0105

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4.0600	1.3463E-03	6.5913E-05	205.92	38.426	55.252	2.7044
4.3500	9.0815E-04	4.9525E-05	193.43	50.612	39.872	2.1739
4.6400	5.4746E-04	3.5472E-05	177.49	60.107	25.604	1.6586
4.9300	2.5787E-04	2.3675E-05	159.32	65.676	12.799	1.1748
5.2200	3.2102E-05	1.3998E-05	139.99	67.777	1.6853	0.7347
5.5100	-1.3759E-04	6.2635E-06	120.46	66.917	-7.6176	0.3467
5.8000	-2.5903E-04	2.7004E-07	101.52	63.626	-15.082	1.5721E-02
6.0900	-3.2738E-04	-7.5702E-16	83.795	59.166	-15.098	-3.4913E-11
6.3800	-3.6260E-04	-1.5017E-15	67.350	54.196	-17.435	-7.2206E-11
6.6700	-3.7488E-04	-1.9957E-15	52.439	48.542	-18.763	-9.9886E-11
6.9600	-3.6949E-04	-2.2836E-15	39.218	42.521	-19.219	-1.1878E-10
7.2500	-3.5105E-04	-2.4062E-15	27.757	36.403	-18.950	-1.2989E-10
7.5400	-3.2355E-04	-2.4009E-15	18.054	30.410	-18.102	-1.3432E-10
7.8300	-2.9036E-04	-2.3003E-15	10.048	24.720	-16.816	-1.3322E-10
8.1200	-2.5422E-04	-2.1329E-15	3.6324	19.463	-15.222	-1.2772E-10
8.4100	-2.1732E-04	-1.9225E-15	2.2705	14.729	-13.440	-1.1890E-10
8.7000	-1.8132E-04	-1.6887E-15	5.3133	10.572	-11.570	-1.0776E-10
8.9900	-1.4746E-04	-1.4471E-15	7.5538	7.0122	-9.6993	-9.5182E-11
9.2800	-1.1655E-04	-1.2096E-15	9.1548	4.0463	-7.8954	-8.1941E-11
9.5700	-8.9100E-05	-9.8509E-16	9.9764	1.6486	-6.2110	-6.8668E-11
9.8600	-6.5339E-05	-7.7950E-16	10.178	0.5862	-4.6831	-5.5870E-11
10.150	-4.5288E-05	-5.9653E-16	9.9049	1.7489	-3.3350	-4.3928E-11
10.440	-2.8810E-05	-4.3794E-16	9.2875	2.5982	-2.1782	-3.3111E-11
10.730	-1.5652E-05	-3.0404E-16	8.4376	3.2225	-1.2142	-2.3585E-11
11.020	-5.4897E-06	-1.9399E-16	7.4499	3.5528	-0.4366	-1.5430E-11
11.310	2.0480E-06	-1.0615E-16	6.4011	3.6479	0.1669	-8.6516E-12
11.600	7.3453E-06	-3.8347E-17	5.3518	3.5622	0.6131	-3.2008E-12
11.890	1.0988E-05	8.4818E-08	4.3473	3.3445	0.9387	7.2445E-03
12.180	1.3493E-05	2.3529E-07	3.4198	3.0374	1.1792	2.0559E-02
12.470	1.4628E-05	3.3111E-07	2.5899	2.6769	1.3072	2.9582E-02
12.760	1.4726E-05	3.8316E-07	1.8687	2.2923	1.3449	3.4986E-02

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13.050	1.4075E-05	4.0135E-07	1.2597	1.9069	1.3132	3.7436E-02
13.340	1.2920E-05	3.9445E-07	0.7606	1.5380	1.2308	3.7567E-02
13.630	1.1460E-05	3.6994E-07	0.3647	1.1979	1.1143	3.5960E-02
13.920	9.8545E-06	3.3408E-07	6.2378E-02	0.8946	0.9775	3.3131E-02
14.210	8.2237E-06	2.9189E-07	0.1837	0.6322	0.8319	2.9521E-02
14.500	6.6563E-06	2.4731E-07	0.3082	0.4121	0.6864	2.5498E-02
14.790	5.2123E-06	2.0326E-07	0.4005	0.2331	0.5478	2.1355E-02
15.080	3.9286E-06	1.6181E-07	0.4465	9.2698E-02	0.4206	1.7318E-02
15.370	2.8239E-06	1.2431E-07	0.4570	3.0803E-02	0.3079	1.3549E-02
15.660	1.9022E-06	9.1525E-08	0.4413	9.3320E-02	0.2111	1.0156E-02
15.950	1.1573E-06	6.3765E-08	0.4077	0.1378	0.1307	7.2008E-03
16.240	5.7574E-07	4.0989E-08	0.3629	0.1663	6.6164E-02	4.7093E-03
16.530	1.3955E-07	2.2914E-08	0.3124	0.1783	1.6311E-02	2.6777E-03
16.820	-1.7149E-07	9.0964E-09	0.2604	0.1777	-2.0382E-02	1.0809E-03
17.110	-3.7638E-07	6.4634E-20	0.2099	0.1681	-4.5462E-02	7.8090E-15
17.400	-4.7514E-07	-1.5573E-18	0.1633	0.1526	-5.8339E-02	-1.9121E-13
17.690	-5.1572E-07	-2.5949E-18	0.1217	0.1336	-6.4337E-02	-3.2372E-13
17.980	-5.1508E-07	-3.1683E-18	8.5854E-02	0.1131	-6.5268E-02	-4.0147E-13
18.270	-4.8576E-07	-3.3869E-18	5.6055E-02	9.2565E-02	-6.2509E-02	-4.3583E-13
18.560	-4.3817E-07	-3.3466E-18	3.2081E-02	7.3146E-02	-5.7246E-02	-4.3723E-13
18.850	-3.8058E-07	-3.1291E-18	1.3505E-02	5.5524E-02	-5.0469E-02	-4.1496E-13
19.140	-3.1935E-07	-2.8011E-18	2.5662E-03	4.0114E-02	-4.2977E-02	-3.7697E-13
19.430	-2.5915E-07	-2.4155E-18	1.0591E-02	2.7093E-02	-3.5385E-02	-3.2983E-13
19.720	-2.0319E-07	-2.0126E-18	1.6134E-02	1.6453E-02	-2.8144E-02	-2.7877E-13
20.010	-1.5350E-07	-1.6215E-18	1.9596E-02	8.0590E-03	-2.1562E-02	-2.2778E-13
20.300	-1.1113E-07	-1.2619E-18	2.0927E-02	1.6838E-03	-1.5830E-02	-1.7975E-13
20.590	-7.6447E-08	-9.4582E-19	2.0673E-02	3.4306E-03	-1.1040E-02	-1.3658E-13
20.880	-4.9236E-08	-6.7925E-19	1.9296E-02	6.1522E-03	-7.2069E-03	-9.9424E-14
21.170	-2.8929E-08	-4.6353E-19	1.7169E-02	8.2121E-03	-4.2913E-03	-6.8759E-14
21.460	-1.4709E-08	-2.9661E-19	1.4580E-02	9.4192E-03	-2.2108E-03	-4.4583E-14
21.750	-5.6088E-09	-1.7414E-19	1.1738E-02	1.0029E-02	-8.5406E-04	-2.6516E-14

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22.040	-5.8747E-10	-9.0196E-20	8.7834E-03	1.0260E-02	-9.0609E-05	-1.3912E-14
22.330	1.4282E-09	-3.7989E-20	5.7981E-03	1.0287E-02	2.2309E-04	-5.9340E-15
22.620	1.5156E-09	-1.0225E-20	2.8211E-03	1.0237E-02	2.3971E-04	-1.6173E-15
22.910	7.5621E-10	4.9070E-12	5.1225E-04	6.2829E-03	2.7056E-02	1.7556E-04
23.200	2.1282E-10	8.9342E-12	9.2340E-04	5.6160E-04	1.2415E-02	5.2116E-04
23.490	-2.6098E-13	3.8347E-12	4.6490E-04	1.4475E-03	-2.1110E-05	3.1019E-04
23.780	-2.7112E-11	6.1118E-13	1.0684E-04	8.2819E-04	-2.8045E-03	6.3223E-05
24.070	-1.0563E-11	-3.6689E-23	2.3957E-05	2.1747E-04	-1.3309E-03	-4.6229E-15
24.360	-9.0393E-13	-3.1932E-23	2.0065E-05	3.2931E-05	-1.3428E-04	-4.7437E-15
24.650	7.1699E-13	-7.6667E-24	5.5255E-06	3.4613E-05	1.2268E-04	-1.3119E-15
24.940	3.9432E-13	2.9177E-15	2.9811E-07	1.0556E-05	5.1524E-05	3.8124E-07
25.230	7.3439E-14	3.3312E-15	6.3484E-07	8.7129E-07	1.5275E-05	6.9289E-07
25.520	-7.9176E-15	6.5701E-16	2.0803E-07	1.0927E-06	-2.2592E-06	1.8747E-07
25.810	-5.8163E-15	-6.9008E-27	8.0642E-09	3.7730E-07	-2.1094E-06	-2.5027E-18
26.100	-5.8041E-16	-9.7173E-27	1.1229E-08	1.8015E-08	-2.5538E-07	-4.2756E-18
26.390	1.5710E-16	-1.3370E-27	2.3948E-09	1.9641E-08	8.1274E-08	-6.9169E-19
26.680	4.9598E-17	8.9004E-19	1.6155E-10	4.3167E-09	2.9494E-08	5.2927E-10
26.970	2.1414E-18	3.2718E-19	1.0909E-10	2.6156E-10	1.2848E-09	1.9631E-10
27.260	-1.6157E-18	1.4429E-20	1.2599E-11	1.9217E-10	-9.6944E-10	8.6574E-12
27.550	-2.8836E-19	-2.3612E-30	2.7232E-12	2.3181E-11	-1.7302E-10	-1.4167E-21
27.840	2.2674E-20	-5.4640E-31	8.4821E-13	4.6727E-12	1.3604E-11	-3.2784E-22
28.130	1.4869E-20	8.9866E-23	3.5097E-14	1.5104E-12	8.9212E-12	5.3919E-14
28.420	1.6909E-21	9.8110E-23	2.9068E-14	6.9749E-14	1.0146E-12	5.8866E-14
28.710	-3.3840E-22	1.1462E-23	5.3786E-15	5.0120E-14	-2.0304E-13	6.8772E-15
29.000	-1.8880E-22	-1.5023E-33	0.0000	0.0000	-1.1328E-13	-9.0139E-25

* PILE GROUP * 9

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.4109E-03 0.014471 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1155.8 187.67 8.6656 2.0239E-09 -4.1180E-09 182.31

STR, KN/ M**2

1.2688E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.4109E-03 0.014471 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1155.8 187.67 8.6656 2.0239E-09 -4.1180E-09 182.31

STR, KN/ M**2

1.2688E+04

* EFFECTS FOR LATERALLY LOADED PILE *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.4471E-02	3.7461E-04	182.38	187.83	0.0000	0.0000
0.2900	1.3416E-02	3.6639E-04	126.74	185.62	14.275	0.3966
0.5800	1.2310E-02	3.5263E-04	72.250	179.21	29.955	0.8735
0.8700	1.1175E-02	3.3432E-04	20.331	168.45	44.219	1.3475
1.1600	1.0033E-02	3.1244E-04	41.040	153.88	56.271	1.7856
1.4500	8.9011E-03	2.8792E-04	79.436	136.31	64.913	2.1392
1.7400	7.7984E-03	2.6163E-04	112.58	116.74	69.991	2.3902
2.0300	6.7397E-03	2.3437E-04	141.92	96.080	72.514	2.5609
2.3200	5.7379E-03	2.0685E-04	167.88	76.136	65.028	2.3750
2.6100	4.8033E-03	1.7970E-04	188.31	57.127	66.069	2.5032
2.9000	3.9441E-03	1.5349E-04	203.08	38.109	65.091	2.5641
3.1900	3.1663E-03	1.2867E-04	212.29	19.066	66.262	2.7266
3.4800	2.4735E-03	1.0562E-04	215.83	6.3953	66.392	2.8722
3.7700	1.8672E-03	8.4642E-05	213.69	23.443	65.495	3.0102
4.0600	1.3465E-03	6.5914E-05	205.94	38.426	55.259	2.7044
4.3500	9.0827E-04	4.9525E-05	193.44	50.615	39.877	2.1739
4.6400	5.4755E-04	3.5472E-05	177.51	60.111	25.608	1.6586
4.9300	2.5792E-04	2.3675E-05	159.33	65.681	12.802	1.1748
5.2200	3.2127E-05	1.3997E-05	140.01	67.782	1.6866	0.7347
5.5100	-1.3759E-04	6.2625E-06	120.48	66.923	-7.6173	0.3466
5.8000	-2.5904E-04	2.6893E-07	101.53	63.631	-15.083	1.5656E-02
6.0900	-3.2738E-04	-7.5702E-16	83.804	59.172	-15.098	-3.4913E-11
6.3800	-3.6260E-04	-1.5017E-15	67.358	54.201	-17.435	-7.2206E-11
6.6700	-3.7488E-04	-1.9957E-15	52.445	48.547	-18.763	-9.9886E-11
6.9600	-3.6949E-04	-2.2836E-15	39.223	42.525	-19.219	-1.1878E-10
7.2500	-3.5105E-04	-2.4062E-15	27.761	36.406	-18.950	-1.2989E-10

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7.5400	-3.2355E-04	-2.4009E-15	18.057	30.413	-18.102	-1.3432E-10
7.8300	-2.9036E-04	-2.3003E-15	10.049	24.722	-16.816	-1.3322E-10
8.1200	-2.5422E-04	-2.1329E-15	3.6334	19.465	-15.222	-1.2772E-10
8.4100	-2.1732E-04	-1.9225E-15	2.2705	14.730	-13.440	-1.1890E-10
8.7000	-1.8132E-04	-1.6887E-15	5.3133	10.573	-11.570	-1.0776E-10
8.9900	-1.4746E-04	-1.4471E-15	7.5543	7.0130	-9.6993	-9.5182E-11
9.2800	-1.1655E-04	-1.2096E-15	9.1555	4.0468	-7.8954	-8.1941E-11
9.5700	-8.9100E-05	-9.8509E-16	9.9772	1.6488	-6.2110	-6.8668E-11
9.8600	-6.5339E-05	-7.7950E-16	10.179	0.5862	-4.6831	-5.5870E-11
10.150	-4.5288E-05	-5.9653E-16	9.9059	1.7489	-3.3350	-4.3928E-11
10.440	-2.8810E-05	-4.3794E-16	9.2884	2.5985	-2.1782	-3.3111E-11
10.730	-1.5652E-05	-3.0404E-16	8.4385	3.2228	-1.2142	-2.3585E-11
11.020	-5.4897E-06	-1.9399E-16	7.4507	3.5532	-0.4366	-1.5430E-11
11.310	2.0480E-06	-1.0615E-16	6.4018	3.6483	0.1669	-8.6516E-12
11.600	7.3453E-06	-3.8347E-17	5.3524	3.5626	0.6131	-3.2008E-12
11.890	1.0989E-05	8.4917E-08	4.3478	3.3449	0.9388	7.2530E-03
12.180	1.3494E-05	2.3539E-07	3.4202	3.0377	1.1794	2.0568E-02
12.470	1.4630E-05	3.3120E-07	2.5902	2.6772	1.3074	2.9591E-02
12.760	1.4728E-05	3.8324E-07	1.8689	2.2926	1.3451	3.4993E-02
13.050	1.4077E-05	4.0143E-07	1.2598	1.9071	1.3133	3.7443E-02
13.340	1.2922E-05	3.9452E-07	0.7607	1.5381	1.2309	3.7573E-02
13.630	1.1462E-05	3.7000E-07	0.3647	1.1981	1.1144	3.5966E-02
13.920	9.8556E-06	3.3413E-07	6.2390E-02	0.8947	0.9776	3.3135E-02
14.210	8.2247E-06	2.9193E-07	0.1837	0.6323	0.8320	2.9524E-02
14.500	6.6570E-06	2.4734E-07	0.3082	0.4121	0.6865	2.5500E-02
14.790	5.2128E-06	2.0328E-07	0.4005	0.2331	0.5478	2.1357E-02
15.080	3.9291E-06	1.6182E-07	0.4466	9.2703E-02	0.4206	1.7320E-02
15.370	2.8242E-06	1.2431E-07	0.4570	3.0803E-02	0.3079	1.3550E-02
15.660	1.9024E-06	9.1527E-08	0.4414	9.3320E-02	0.2111	1.0156E-02
15.950	1.1574E-06	6.3764E-08	0.4078	0.1378	0.1307	7.2007E-03
16.240	5.7579E-07	4.0986E-08	0.3630	0.1664	6.6169E-02	4.7090E-03



16.530	1.3955E-07	2.2910E-08	0.3125	0.1783	1.6311E-02	2.6772E-03
16.820	-1.7153E-07	9.0911E-09	0.2604	0.1777	-2.0386E-02	1.0802E-03
17.110	-3.7657E-07	6.4634E-20	0.2100	0.1682	-4.5485E-02	7.8090E-15
17.400	-4.7514E-07	-1.5573E-18	0.1633	0.1526	-5.8339E-02	-1.9121E-13
17.690	-5.1572E-07	-2.5949E-18	0.1217	0.1336	-6.4337E-02	-3.2372E-13
17.980	-5.1508E-07	-3.1683E-18	8.5864E-02	0.1131	-6.5268E-02	-4.0147E-13
18.270	-4.8576E-07	-3.3869E-18	5.6061E-02	9.2576E-02	-6.2509E-02	-4.3583E-13
18.560	-4.3817E-07	-3.3466E-18	3.2085E-02	7.3155E-02	-5.7246E-02	-4.3723E-13
18.850	-3.8058E-07	-3.1291E-18	1.3506E-02	5.5530E-02	-5.0469E-02	-4.1496E-13
19.140	-3.1935E-07	-2.8011E-18	2.5662E-03	4.0118E-02	-4.2977E-02	-3.7697E-13
19.430	-2.5915E-07	-2.4155E-18	1.0591E-02	2.7095E-02	-3.5385E-02	-3.2983E-13
19.720	-2.0319E-07	-2.0126E-18	1.6136E-02	1.6455E-02	-2.8144E-02	-2.7877E-13
20.010	-1.5350E-07	-1.6215E-18	1.9599E-02	8.0594E-03	-2.1562E-02	-2.2778E-13
20.300	-1.1113E-07	-1.2619E-18	2.0930E-02	1.6835E-03	-1.5830E-02	-1.7975E-13
20.590	-7.6447E-08	-9.4582E-19	2.0676E-02	3.4306E-03	-1.1040E-02	-1.3658E-13
20.880	-4.9236E-08	-6.7925E-19	1.9299E-02	6.1533E-03	-7.2069E-03	-9.9424E-14
21.170	-2.8929E-08	-4.6353E-19	1.7171E-02	8.2135E-03	-4.2913E-03	-6.8759E-14
21.460	-1.4709E-08	-2.9661E-19	1.4582E-02	9.4207E-03	-2.2108E-03	-4.4583E-14
21.750	-5.6088E-09	-1.7414E-19	1.1740E-02	1.0031E-02	-8.5406E-04	-2.6516E-14
22.040	-5.8747E-10	-9.0196E-20	8.7844E-03	1.0261E-02	-9.0609E-05	-1.3912E-14
22.330	1.4282E-09	-3.7989E-20	5.7988E-03	1.0288E-02	2.2309E-04	-5.9340E-15
22.620	1.5156E-09	-1.0225E-20	2.8213E-03	1.0238E-02	2.3971E-04	-1.6173E-15
22.910	7.5636E-10	4.9200E-12	5.1225E-04	6.2836E-03	2.7061E-02	1.7603E-04
23.200	2.1285E-10	8.9351E-12	9.2340E-04	5.6137E-04	1.2416E-02	5.2121E-04
23.490	-2.6867E-13	3.8333E-12	4.6498E-04	1.4475E-03	-2.1733E-05	3.1007E-04
23.780	-2.7118E-11	6.1042E-13	1.0685E-04	8.2835E-04	-2.8052E-03	6.3144E-05
24.070	-1.0563E-11	-3.6689E-23	2.3957E-05	2.1749E-04	-1.3309E-03	-4.6229E-15
24.360	-9.0393E-13	-3.1932E-23	2.0065E-05	3.2931E-05	-1.3428E-04	-4.7437E-15
24.650	7.1699E-13	-7.6667E-24	5.5262E-06	3.4613E-05	1.2268E-04	-1.3119E-15
24.940	3.9439E-13	2.9244E-15	2.9801E-07	1.0558E-05	5.1534E-05	3.8212E-07
25.230	7.3447E-14	3.3314E-15	6.3484E-07	8.7117E-07	1.5277E-05	6.9294E-07

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25.520	-7.9206E-15	6.5661E-16	2.0807E-07	1.0927E-06	-2.2600E-06	1.8735E-07
25.810	-5.8163E-15	-6.9008E-27	8.0622E-09	3.7736E-07	-2.1094E-06	-2.5027E-18
26.100	-5.8041E-16	-9.7173E-27	1.1229E-08	1.8013E-08	-2.5538E-07	-4.2756E-18
26.390	1.5710E-16	-1.3370E-27	2.3951E-09	1.9641E-08	8.1274E-08	-6.9169E-19
26.680	4.9606E-17	8.9069E-19	1.6155E-10	4.3173E-09	2.9499E-08	5.2967E-10
26.970	2.1412E-18	3.2710E-19	1.0911E-10	2.6156E-10	1.2847E-09	1.9626E-10
27.260	-1.6161E-18	1.4392E-20	1.2600E-11	1.9220E-10	-9.6966E-10	8.6350E-12
27.550	-2.8836E-19	-2.3612E-30	2.7232E-12	2.3183E-11	-1.7302E-10	-1.4167E-21
27.840	2.2674E-20	-5.4640E-31	8.4835E-13	4.6727E-12	1.3604E-11	-3.2784E-22
28.130	1.4872E-20	9.0128E-23	3.5093E-14	1.5106E-12	8.9229E-12	5.4077E-14
28.420	1.6911E-21	9.8108E-23	2.9068E-14	6.9743E-14	1.0146E-12	5.8865E-14
28.710	-3.3849E-22	1.1451E-23	5.3793E-15	5.0120E-14	-2.0309E-13	6.8706E-15
29.000	-1.8880E-22	-1.5023E-33	0.0000	0.0000	-1.1328E-13	-9.0139E-25

* PILE GROUP * 10

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

3.4181E-03 0.014471 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1157.9 187.68 8.6645 2.0239E-09 -4.1180E-09 182.36



STR, KN/ M**2

1.2698E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
3.4181E-03 0.014471 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1157.9 187.68 8.6645 2.0239E-09 -4.1180E-09 182.36

STR, KN/ M**2

1.2698E+04

* EFFECTS FOR Laterally LOADED PILE *

Table with 8 columns: x, DISPL., DISPL., MOMENT, SHEAR, SOIL REACT, SOIL REACT. Rows show data for various x values from 0.0000 to 1.7400.



2.0300	6.7403E-03	2.3437E-04	141.91	96.088	72.517	2.5605
2.3200	5.7384E-03	2.0685E-04	167.88	76.143	65.031	2.3748
2.6100	4.8037E-03	1.7971E-04	188.31	57.133	66.073	2.5030
2.9000	3.9445E-03	1.5349E-04	203.09	38.114	65.095	2.5639
3.1900	3.1666E-03	1.2867E-04	212.30	19.070	66.266	2.7264
3.4800	2.4738E-03	1.0563E-04	215.85	6.3953	66.397	2.8720
3.7700	1.8674E-03	8.4643E-05	213.70	23.443	65.500	3.0098
4.0600	1.3466E-03	6.5914E-05	205.95	38.426	55.265	2.7045
4.3500	9.0839E-04	4.9526E-05	193.46	50.618	39.882	2.1739
4.6400	5.4763E-04	3.5472E-05	177.52	60.115	25.612	1.6586
4.9300	2.5797E-04	2.3674E-05	159.35	65.686	12.804	1.1748
5.2200	3.2153E-05	1.3996E-05	140.02	67.788	1.6880	0.7346
5.5100	-1.3758E-04	6.2616E-06	120.49	66.928	-7.6169	0.3466
5.8000	-2.5905E-04	2.6781E-07	101.54	63.637	-15.084	1.5591E-02
6.0900	-3.2738E-04	-7.5702E-16	83.813	59.177	-15.098	-3.4913E-11
6.3800	-3.6260E-04	-1.5017E-15	67.365	54.206	-17.435	-7.2206E-11
6.6700	-3.7488E-04	-1.9957E-15	52.451	48.551	-18.763	-9.9886E-11
6.9600	-3.6949E-04	-2.2836E-15	39.228	42.529	-19.219	-1.1878E-10
7.2500	-3.5105E-04	-2.4062E-15	27.765	36.410	-18.950	-1.2989E-10
7.5400	-3.2355E-04	-2.4009E-15	18.059	30.416	-18.102	-1.3432E-10
7.8300	-2.9036E-04	-2.3003E-15	10.051	24.725	-16.816	-1.3322E-10
8.1200	-2.5422E-04	-2.1329E-15	3.6344	19.467	-15.222	-1.2772E-10
8.4100	-2.1732E-04	-1.9225E-15	2.2705	14.732	-13.440	-1.1890E-10
8.7000	-1.8132E-04	-1.6887E-15	5.3133	10.574	-11.570	-1.0776E-10
8.9900	-1.4746E-04	-1.4471E-15	7.5547	7.0137	-9.6993	-9.5182E-11
9.2800	-1.1655E-04	-1.2096E-15	9.1562	4.0472	-7.8954	-8.1941E-11
9.5700	-8.9100E-05	-9.8509E-16	9.9781	1.6490	-6.2110	-6.8668E-11
9.8600	-6.5339E-05	-7.7950E-16	10.180	0.5862	-4.6831	-5.5870E-11
10.150	-4.5288E-05	-5.9653E-16	9.9068	1.7489	-3.3350	-4.3928E-11
10.440	-2.8810E-05	-4.3794E-16	9.2893	2.5988	-2.1782	-3.3111E-11
10.730	-1.5652E-05	-3.0404E-16	8.4394	3.2232	-1.2142	-2.3585E-11



11.020	-5.4897E-06	-1.9399E-16	7.4515	3.5536	-0.4366	-1.5430E-11
11.310	2.0480E-06	-1.0615E-16	6.4025	3.6487	0.1669	-8.6516E-12
11.600	7.3453E-06	-3.8347E-17	5.3530	3.5630	0.6131	-3.2008E-12
11.890	1.0990E-05	8.5017E-08	4.3483	3.3452	0.9389	7.2615E-03
12.180	1.3496E-05	2.3549E-07	3.4206	3.0381	1.1795	2.0576E-02
12.470	1.4631E-05	3.3129E-07	2.5905	2.6775	1.3075	2.9599E-02
12.760	1.4729E-05	3.8333E-07	1.8691	2.2928	1.3452	3.5001E-02
13.050	1.4079E-05	4.0151E-07	1.2600	1.9073	1.3135	3.7450E-02
13.340	1.2923E-05	3.9458E-07	0.7608	1.5383	1.2311	3.7580E-02
13.630	1.1463E-05	3.7005E-07	0.3648	1.1982	1.1145	3.5971E-02
13.920	9.8567E-06	3.3417E-07	6.2402E-02	0.8948	0.9777	3.3140E-02
14.210	8.2256E-06	2.9196E-07	0.1837	0.6324	0.8321	2.9528E-02
14.500	6.6578E-06	2.4736E-07	0.3082	0.4122	0.6866	2.5503E-02
14.790	5.2134E-06	2.0329E-07	0.4005	0.2332	0.5479	2.1359E-02
15.080	3.9295E-06	1.6183E-07	0.4466	9.2708E-02	0.4207	1.7321E-02
15.370	2.8245E-06	1.2432E-07	0.4571	3.0803E-02	0.3079	1.3550E-02
15.660	1.9026E-06	9.1530E-08	0.4414	9.3320E-02	0.2112	1.0156E-02
15.950	1.1576E-06	6.3764E-08	0.4078	0.1378	0.1307	7.2006E-03
16.240	5.7584E-07	4.0983E-08	0.3630	0.1664	6.6175E-02	4.7087E-03
16.530	1.3955E-07	2.2905E-08	0.3125	0.1783	1.6311E-02	2.6767E-03
16.820	-1.7156E-07	9.0858E-09	0.2604	0.1778	-2.0390E-02	1.0796E-03
17.110	-3.7676E-07	6.4634E-20	0.2100	0.1682	-4.5509E-02	7.8090E-15
17.400	-4.7514E-07	-1.5573E-18	0.1633	0.1526	-5.8339E-02	-1.9121E-13
17.690	-5.1572E-07	-2.5949E-18	0.1217	0.1336	-6.4337E-02	-3.2372E-13
17.980	-5.1508E-07	-3.1683E-18	8.5874E-02	0.1131	-6.5268E-02	-4.0147E-13
18.270	-4.8576E-07	-3.3869E-18	5.6067E-02	9.2587E-02	-6.2509E-02	-4.3583E-13
18.560	-4.3817E-07	-3.3466E-18	3.2088E-02	7.3163E-02	-5.7246E-02	-4.3723E-13
18.850	-3.8058E-07	-3.1291E-18	1.3507E-02	5.5536E-02	-5.0469E-02	-4.1496E-13
19.140	-3.1935E-07	-2.8011E-18	2.5662E-03	4.0123E-02	-4.2977E-02	-3.7697E-13
19.430	-2.5915E-07	-2.4155E-18	1.0591E-02	2.7098E-02	-3.5385E-02	-3.2983E-13
19.720	-2.0319E-07	-2.0126E-18	1.6138E-02	1.6456E-02	-2.8144E-02	-2.7877E-13

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20.010	-1.5350E-07	-1.6215E-18	1.9602E-02	8.0598E-03	-2.1562E-02	-2.2778E-13
20.300	-1.1113E-07	-1.2619E-18	2.0933E-02	1.6832E-03	-1.5830E-02	-1.7975E-13
20.590	-7.6447E-08	-9.4582E-19	2.0679E-02	3.4306E-03	-1.1040E-02	-1.3658E-13
20.880	-4.9236E-08	-6.7925E-19	1.9301E-02	6.1545E-03	-7.2069E-03	-9.9424E-14
21.170	-2.8929E-08	-4.6353E-19	1.7174E-02	8.2148E-03	-4.2913E-03	-6.8759E-14
21.460	-1.4709E-08	-2.9661E-19	1.4584E-02	9.4221E-03	-2.2108E-03	-4.4583E-14
21.750	-5.6088E-09	-1.7414E-19	1.1741E-02	1.0032E-02	-8.5406E-04	-2.6516E-14
22.040	-5.8747E-10	-9.0196E-20	8.7855E-03	1.0263E-02	-9.0609E-05	-1.3912E-14
22.330	1.4282E-09	-3.7989E-20	5.7994E-03	1.0290E-02	2.2309E-04	-5.9340E-15
22.620	1.5156E-09	-1.0225E-20	2.8215E-03	1.0240E-02	2.3971E-04	-1.6173E-15
22.910	7.5650E-10	4.9331E-12	5.1225E-04	6.2844E-03	2.7066E-02	1.7650E-04
23.200	2.1287E-10	8.9360E-12	9.2340E-04	5.6114E-04	1.2418E-02	5.2127E-04
23.490	-2.7637E-13	3.8319E-12	4.6506E-04	1.4475E-03	-2.2355E-05	3.0996E-04
23.780	-2.7125E-11	6.0966E-13	1.0685E-04	8.2850E-04	-2.8059E-03	6.3066E-05
24.070	-1.0563E-11	-3.6689E-23	2.3957E-05	2.1752E-04	-1.3309E-03	-4.6229E-15
24.360	-9.0393E-13	-3.1932E-23	2.0065E-05	3.2931E-05	-1.3428E-04	-4.7437E-15
24.650	7.1699E-13	-7.6667E-24	5.5270E-06	3.4613E-05	1.2268E-04	-1.3119E-15
24.940	3.9446E-13	2.9311E-15	2.9791E-07	1.0559E-05	5.1543E-05	3.8300E-07
25.230	7.3455E-14	3.3317E-15	6.3484E-07	8.7106E-07	1.5279E-05	6.9298E-07
25.520	-7.9235E-15	6.5622E-16	2.0810E-07	1.0927E-06	-2.2608E-06	1.8724E-07
25.810	-5.8163E-15	-6.9008E-27	8.0603E-09	3.7741E-07	-2.1094E-06	-2.5027E-18
26.100	-5.8041E-16	-9.7173E-27	1.1229E-08	1.8010E-08	-2.5538E-07	-4.2756E-18
26.390	1.5710E-16	-1.3370E-27	2.3954E-09	1.9641E-08	8.1274E-08	-6.9169E-19
26.680	4.9614E-17	8.9135E-19	1.6155E-10	4.3179E-09	2.9504E-08	5.3006E-10
26.970	2.1409E-18	3.2702E-19	1.0913E-10	2.6156E-10	1.2846E-09	1.9621E-10
27.260	-1.6164E-18	1.4354E-20	1.2601E-11	1.9224E-10	-9.6987E-10	8.6126E-12
27.550	-2.8836E-19	-2.3612E-30	2.7232E-12	2.3185E-11	-1.7302E-10	-1.4167E-21
27.840	2.2674E-20	-5.4640E-31	8.4849E-13	4.6727E-12	1.3604E-11	-3.2784E-22
28.130	1.4874E-20	9.0391E-23	3.5088E-14	1.5109E-12	8.9246E-12	5.4235E-14
28.420	1.6912E-21	9.8106E-23	2.9068E-14	6.9737E-14	1.0147E-12	5.8863E-14
28.710	-3.3858E-22	1.1440E-23	5.3801E-15	5.0120E-14	-2.0315E-13	6.8641E-15

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29.000 -1.8880E-22 -1.5023E-33 0.0000 0.0000 -1.1328E-13 -9.0139E-25

* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.4253E-03	0.014472	3.7461E-04	1.3952E-13	1.7055E-05	-3.3156E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1160.0	187.69	8.6637	2.0239E-09	-4.1180E-09	182.40

STR, KN/ M**2

1.2707E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
3.4253E-03	0.014472	3.7461E-04	1.3952E-13	1.7055E-05	-3.3156E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
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1160.0 187.69 8.6637 2.0239E-09 -4.1180E-09 182.40

STR, KN/ M**2

1.2707E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.4472E-02	3.7461E-04	182.46	187.86	0.0000	0.0000
0.2900	1.3417E-02	3.6639E-04	126.81	185.64	14.276	0.3965
0.5800	1.2312E-02	3.5263E-04	72.312	179.23	29.957	0.8733
0.8700	1.1177E-02	3.3432E-04	20.382	168.47	44.221	1.3472
1.1600	1.0034E-02	3.1244E-04	41.040	153.90	56.274	1.7852
1.4500	8.9025E-03	2.8793E-04	79.436	136.32	64.917	2.1387
1.7400	7.7997E-03	2.6163E-04	112.58	116.76	69.997	2.3896
2.0300	6.7409E-03	2.3437E-04	141.91	96.096	72.521	2.5604
2.3200	5.7389E-03	2.0685E-04	167.88	76.150	65.035	2.3747
2.6100	4.8042E-03	1.7971E-04	188.31	57.138	66.077	2.5029
2.9000	3.9449E-03	1.5349E-04	203.10	38.118	65.099	2.5637
3.1900	3.1669E-03	1.2867E-04	212.31	19.073	66.271	2.7262
3.4800	2.4740E-03	1.0562E-04	215.86	6.3953	66.401	2.8718
3.7700	1.8676E-03	8.4642E-05	213.72	23.443	65.505	3.0096
4.0600	1.3468E-03	6.5912E-05	205.97	38.426	55.272	2.7045
4.3500	9.0850E-04	4.9523E-05	193.47	50.620	39.887	2.1739
4.6400	5.4770E-04	3.5469E-05	177.54	60.119	25.616	1.6586
4.9300	2.5802E-04	2.3672E-05	159.36	65.691	12.807	1.1747
5.2200	3.2176E-05	1.3994E-05	140.03	67.793	1.6892	0.7345

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5.5100	-1.3758E-04	6.2592E-06	120.50	66.934	-7.6168	0.3465
5.8000	-2.5906E-04	2.6560E-07	101.55	63.643	-15.085	1.5463E-02
6.0900	-3.2738E-04	-7.5702E-16	83.821	59.183	-15.098	-3.4913E-11
6.3800	-3.6260E-04	-1.5017E-15	67.372	54.211	-17.435	-7.2206E-11
6.6700	-3.7488E-04	-1.9957E-15	52.457	48.556	-18.763	-9.9886E-11
6.9600	-3.6949E-04	-2.2836E-15	39.233	42.533	-19.219	-1.1878E-10
7.2500	-3.5105E-04	-2.4062E-15	27.768	36.413	-18.950	-1.2989E-10
7.5400	-3.2355E-04	-2.4009E-15	18.062	30.419	-18.102	-1.3432E-10
7.8300	-2.9036E-04	-2.3003E-15	10.053	24.727	-16.816	-1.3322E-10
8.1200	-2.5422E-04	-2.1329E-15	3.6353	19.469	-15.222	-1.2772E-10
8.4100	-2.1732E-04	-1.9225E-15	2.2705	14.733	-13.440	-1.1890E-10
8.7000	-1.8132E-04	-1.6887E-15	5.3133	10.575	-11.570	-1.0776E-10
8.9900	-1.4746E-04	-1.4471E-15	7.5552	7.0144	-9.6993	-9.5182E-11
9.2800	-1.1655E-04	-1.2096E-15	9.1569	4.0476	-7.8954	-8.1941E-11
9.5700	-8.9100E-05	-9.8509E-16	9.9790	1.6491	-6.2110	-6.8668E-11
9.8600	-6.5339E-05	-7.7950E-16	10.181	0.5862	-4.6831	-5.5870E-11
10.150	-4.5288E-05	-5.9653E-16	9.9078	1.7489	-3.3350	-4.3928E-11
10.440	-2.8810E-05	-4.3794E-16	9.2902	2.5991	-2.1782	-3.3111E-11
10.730	-1.5652E-05	-3.0404E-16	8.4402	3.2235	-1.2142	-2.3585E-11
11.020	-5.4897E-06	-1.9399E-16	7.4522	3.5540	-0.4366	-1.5430E-11
11.310	2.0480E-06	-1.0615E-16	6.4032	3.6491	0.1669	-8.6516E-12
11.600	7.3453E-06	-3.8347E-17	5.3536	3.5634	0.6131	-3.2008E-12
11.890	1.0991E-05	8.5204E-08	4.3488	3.3456	0.9390	7.2780E-03
12.180	1.3497E-05	2.3565E-07	3.4209	3.0384	1.1796	2.0592E-02
12.470	1.4633E-05	3.3142E-07	2.5907	2.6777	1.3077	2.9612E-02
12.760	1.4731E-05	3.8343E-07	1.8693	2.2930	1.3454	3.5013E-02
13.050	1.4080E-05	4.0158E-07	1.2601	1.9075	1.3136	3.7460E-02
13.340	1.2924E-05	3.9464E-07	0.7609	1.5385	1.2312	3.7587E-02
13.630	1.1464E-05	3.7009E-07	0.3648	1.1983	1.1146	3.5977E-02
13.920	9.8578E-06	3.3419E-07	6.2403E-02	0.8949	0.9778	3.3144E-02
14.210	8.2265E-06	2.9197E-07	0.1837	0.6324	0.8322	2.9530E-02

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14.500	6.6584E-06	2.4736E-07	0.3083	0.4122	0.6866	2.5505E-02
14.790	5.2139E-06	2.0328E-07	0.4006	0.2332	0.5479	2.1360E-02
15.080	3.9299E-06	1.6182E-07	0.4467	9.2707E-02	0.4207	1.7320E-02
15.370	2.8248E-06	1.2430E-07	0.4571	3.0803E-02	0.3080	1.3550E-02
15.660	1.9028E-06	9.1512E-08	0.4415	9.3320E-02	0.2112	1.0155E-02
15.950	1.1576E-06	6.3746E-08	0.4079	0.1379	0.1308	7.1990E-03
16.240	5.7586E-07	4.0966E-08	0.3631	0.1664	6.6177E-02	4.7070E-03
16.530	1.3953E-07	2.2890E-08	0.3125	0.1784	1.6309E-02	2.6750E-03
16.820	-1.7161E-07	9.0721E-09	0.2605	0.1778	-2.0397E-02	1.0780E-03
17.110	-3.7706E-07	6.4634E-20	0.2100	0.1682	-4.5547E-02	7.8090E-15
17.400	-4.7514E-07	-1.5573E-18	0.1633	0.1526	-5.8339E-02	-1.9121E-13
17.690	-5.1572E-07	-2.5949E-18	0.1217	0.1336	-6.4337E-02	-3.2372E-13
17.980	-5.1508E-07	-3.1683E-18	8.5882E-02	0.1131	-6.5268E-02	-4.0147E-13
18.270	-4.8576E-07	-3.3869E-18	5.6072E-02	9.2597E-02	-6.2509E-02	-4.3583E-13
18.560	-4.3817E-07	-3.3466E-18	3.2090E-02	7.3170E-02	-5.7246E-02	-4.3723E-13
18.850	-3.8058E-07	-3.1291E-18	1.3507E-02	5.5542E-02	-5.0469E-02	-4.1496E-13
19.140	-3.1935E-07	-2.8011E-18	2.5662E-03	4.0126E-02	-4.2977E-02	-3.7697E-13
19.430	-2.5915E-07	-2.4155E-18	1.0591E-02	2.7100E-02	-3.5385E-02	-3.2983E-13
19.720	-2.0319E-07	-2.0126E-18	1.6141E-02	1.6457E-02	-2.8144E-02	-2.7877E-13
20.010	-1.5350E-07	-1.6215E-18	1.9605E-02	8.0597E-03	-2.1562E-02	-2.2778E-13
20.300	-1.1113E-07	-1.2619E-18	2.0936E-02	1.6825E-03	-1.5830E-02	-1.7975E-13
20.590	-7.6447E-08	-9.4582E-19	2.0682E-02	3.4306E-03	-1.1040E-02	-1.3658E-13
20.880	-4.9236E-08	-6.7925E-19	1.9304E-02	6.1558E-03	-7.2069E-03	-9.9424E-14
21.170	-2.8929E-08	-4.6353E-19	1.7176E-02	8.2163E-03	-4.2913E-03	-6.8759E-14
21.460	-1.4709E-08	-2.9661E-19	1.4586E-02	9.4237E-03	-2.2108E-03	-4.4583E-14
21.750	-5.6088E-09	-1.7414E-19	1.1742E-02	1.0034E-02	-8.5406E-04	-2.6516E-14
22.040	-5.8747E-10	-9.0196E-20	8.7863E-03	1.0264E-02	-9.0609E-05	-1.3912E-14
22.330	1.4282E-09	-3.7989E-20	5.7998E-03	1.0291E-02	2.2309E-04	-5.9340E-15
22.620	1.5156E-09	-1.0225E-20	2.8216E-03	1.0241E-02	2.3971E-04	-1.6173E-15
22.910	7.5666E-10	4.9617E-12	5.1225E-04	6.2849E-03	2.7072E-02	1.7752E-04
23.200	2.1289E-10	8.9348E-12	9.2340E-04	5.6066E-04	1.2419E-02	5.2120E-04

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23.490	-2.9050E-13	3.8272E-12	4.6516E-04	1.4475E-03	-2.3499E-05	3.0958E-04
23.780	-2.7134E-11	6.0767E-13	1.0686E-04	8.2869E-04	-2.8068E-03	6.2860E-05
24.070	-1.0563E-11	-3.6689E-23	2.3957E-05	2.1753E-04	-1.3309E-03	-4.6229E-15
24.360	-9.0393E-13	-3.1932E-23	2.0065E-05	3.2931E-05	-1.3428E-04	-4.7437E-15
24.650	7.1699E-13	-7.6667E-24	5.5277E-06	3.4613E-05	1.2268E-04	-1.3119E-15
24.940	3.9455E-13	2.9456E-15	2.9770E-07	1.0561E-05	5.1554E-05	3.8490E-07
25.230	7.3461E-14	3.3309E-15	6.3484E-07	8.7074E-07	1.5280E-05	6.9284E-07
25.520	-7.9278E-15	6.5505E-16	2.0813E-07	1.0927E-06	-2.2621E-06	1.8691E-07
25.810	-5.8163E-15	-6.9008E-27	8.0557E-09	3.7748E-07	-2.1094E-06	-2.5027E-18
26.100	-5.8041E-16	-9.7173E-27	1.1229E-08	1.8002E-08	-2.5538E-07	-4.2756E-18
26.390	1.5710E-16	-1.3370E-27	2.3957E-09	1.9641E-08	8.1274E-08	-6.9169E-19
26.680	4.9623E-17	8.9254E-19	1.6155E-10	4.3185E-09	2.9509E-08	5.3076E-10
26.970	2.1403E-18	3.2672E-19	1.0915E-10	2.6156E-10	1.2842E-09	1.9603E-10
27.260	-1.6169E-18	1.4262E-20	1.2601E-11	1.9228E-10	-9.7014E-10	8.5574E-12
27.550	-2.8836E-19	-2.3612E-30	2.7232E-12	2.3186E-11	-1.7302E-10	-1.4167E-21
27.840	2.2674E-20	-5.4640E-31	8.4864E-13	4.6727E-12	1.3604E-11	-3.2784E-22
28.130	1.4878E-20	9.0965E-23	3.5076E-14	1.5112E-12	8.9266E-12	5.4579E-14
28.420	1.6912E-21	9.8063E-23	2.9068E-14	6.9717E-14	1.0147E-12	5.8838E-14
28.710	-3.3871E-22	1.1411E-23	5.3807E-15	5.0120E-14	-2.0322E-13	6.8463E-15
29.000	-1.8880E-22	-1.5023E-33	0.0000	0.0000	-1.1328E-13	-9.0139E-25

* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
3.4339E-03 0.014473 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
1162.6 218.91 9.7739 2.0239E-09 -4.4427E-09 218.66

STR, KN/ M**2

1.4425E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
3.4339E-03 0.014473 3.7461E-04 1.3952E-13 1.7055E-05 -3.3156E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1162.6 218.91 9.7739 2.0239E-09 -4.4427E-09 218.66

STR, KN/ M**2

1.4425E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
*****	*****	*****	*****	*****	*****	*****

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0.0000	1.4473E-02	3.7461E-04	218.73	219.10	0.0000	0.0000
0.2900	1.3411E-02	3.6611E-04	154.01	216.37	17.640	0.4899
0.5800	1.2287E-02	3.5164E-04	90.714	208.45	36.960	1.0767
0.8700	1.1127E-02	3.3233E-04	30.532	195.20	54.424	1.6557
1.1600	9.9543E-03	3.0927E-04	38.943	177.30	69.016	2.1846
1.4500	8.7921E-03	2.8349E-04	83.029	155.80	79.258	2.6034
1.7400	7.6599E-03	2.5596E-04	120.71	131.98	84.982	2.8904
2.0300	6.5751E-03	2.2757E-04	154.25	106.98	87.449	3.0737
2.3200	5.5521E-03	1.9908E-04	182.78	83.021	77.783	2.8258
2.6100	4.6023E-03	1.7119E-04	204.69	60.395	78.256	2.9478
2.9000	3.7345E-03	1.4446E-04	219.92	38.001	76.189	2.9834
3.1900	2.9548E-03	1.1939E-04	228.64	15.876	76.442	3.1277
3.4800	2.2667E-03	9.6360E-05	230.82	12.192	75.212	3.2392
3.7700	1.6711E-03	7.5636E-05	226.58	31.205	72.461	3.3251
4.0600	1.1662E-03	5.7388E-05	216.13	47.447	59.172	2.9117
4.3500	7.4795E-04	4.1667E-05	200.60	61.102	40.598	2.2617
4.6400	4.1002E-04	2.8426E-05	181.57	70.427	23.708	1.6436
4.9300	1.4482E-04	1.7539E-05	160.45	75.154	8.8864	1.0762
5.2200	-5.6111E-05	8.8248E-06	138.52	75.915	-3.6419	0.5728
5.5100	-2.0155E-04	2.0648E-06	116.83	73.387	-13.796	0.1413
5.8000	-2.9404E-04	-5.0018E-16	96.238	68.253	-21.167	-3.6007E-11
6.0900	-3.4012E-04	-1.3342E-15	77.424	62.141	-19.392	-7.6070E-11
6.3800	-3.5979E-04	-1.8885E-15	60.300	55.806	-21.388	-1.1227E-10
6.6700	-3.5909E-04	-2.2136E-15	45.096	48.912	-22.219	-1.3697E-10
6.9600	-3.4336E-04	-2.3560E-15	31.922	41.820	-22.081	-1.5151E-10
7.2500	-3.1718E-04	-2.3579E-15	20.795	34.828	-21.168	-1.5736E-10
7.5400	-2.8441E-04	-2.2564E-15	11.652	28.171	-19.672	-1.5607E-10
7.8300	-2.4817E-04	-2.0833E-15	4.3710	22.023	-17.769	-1.4916E-10
8.1200	-2.1096E-04	-1.8653E-15	2.2409	16.504	-15.617	-1.3809E-10
8.4100	-1.7464E-04	-1.6240E-15	5.6182	11.681	-13.353	-1.2417E-10
8.7000	-1.4057E-04	-1.3763E-15	8.0811	7.5842	-11.089	-1.0858E-10

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8.9900	-1.0966E-04	-1.1351E-15	9.7796	4.2046	-8.9170	-9.2302E-11
9.2800	-8.2420E-05	-9.0936E-16	10.596	1.5084	-6.9026	-7.6158E-11
9.5700	-5.9089E-05	-7.0523E-16	10.721	0.9103	-5.0922	-6.0776E-11
9.8600	-3.9653E-05	-5.2610E-16	10.328	2.1581	-3.5136	-4.6618E-11
10.150	-2.3929E-05	-3.7337E-16	9.5701	3.0860	-2.1785	-3.3991E-11
10.440	-1.1616E-05	-2.4681E-16	8.5764	3.6981	-1.0858	-2.3069E-11
10.730	-2.3348E-06	-1.4507E-16	7.4547	3.9788	-0.2239	-1.3913E-11
11.020	4.3301E-06	-6.6008E-17	6.2907	4.0006	0.4258	-6.4906E-12
11.310	8.8029E-06	-6.9811E-18	5.1499	3.8297	0.8870	-7.0342E-13
11.600	1.2007E-05	1.7964E-07	4.0798	3.5242	1.2390	1.8538E-02
11.890	1.3763E-05	2.9696E-07	3.1119	3.1338	1.4537	3.1365E-02
12.180	1.4274E-05	3.6358E-07	2.2648	2.6993	1.5423	3.9285E-02
12.470	1.3877E-05	3.9095E-07	1.5464	2.2534	1.5331	4.3193E-02
12.760	1.2860E-05	3.8923E-07	0.9562	1.8205	1.4521	4.3948E-02
13.050	1.1461E-05	3.6710E-07	0.4877	1.4183	1.3219	4.2342E-02
13.340	9.8663E-06	3.3180E-07	0.1302	1.0581	1.1620	3.9077E-02
13.630	8.2195E-06	2.8915E-07	0.1631	0.7463	0.9880	3.4757E-02
13.920	6.6246E-06	2.4364E-07	0.3080	0.4852	0.8124	2.9878E-02
14.210	5.1526E-06	1.9859E-07	0.4147	0.2740	0.6444	2.4836E-02
14.500	3.8467E-06	1.5634E-07	0.4686	0.1094	0.4904	1.9932E-02
14.790	2.7285E-06	1.1835E-07	0.4810	3.2938E-02	0.3545	1.5377E-02
15.080	1.8030E-06	8.5454E-08	0.4634	0.1042	0.2386	1.1310E-02
15.370	1.0632E-06	5.7927E-08	0.4255	0.1545	0.1433	7.8076E-03
15.660	4.9374E-07	3.5678E-08	0.3753	0.1851	6.7748E-02	4.8956E-03
15.950	7.4646E-08	1.8349E-08	0.3193	0.1965	1.0424E-02	2.5623E-03
16.240	-2.1656E-07	5.4107E-09	0.2622	0.1935	-3.0768E-02	7.6873E-04
16.530	-3.9511E-07	-6.0682E-19	0.2076	0.1806	-5.7095E-02	-8.7690E-14
16.820	-4.7460E-07	-2.0122E-18	0.1578	0.1614	-6.9736E-02	-2.9566E-13
17.110	-5.0027E-07	-2.8489E-18	0.1141	0.1388	-7.4724E-02	-4.2553E-13
17.400	-4.8749E-07	-3.2458E-18	7.7308E-02	0.1151	-7.4000E-02	-4.9271E-13
17.690	-4.4914E-07	-3.3180E-18	4.7332E-02	9.1970E-02	-6.9270E-02	-5.1172E-13



17.980	-3.9561E-07	-3.1636E-18	2.3858E-02	7.0567E-02	-6.1975E-02	-4.9560E-13
18.270	-3.3496E-07	-2.8641E-18	6.2650E-03	5.1605E-02	-5.3288E-02	-4.5563E-13
18.560	-2.7318E-07	-2.4839E-18	7.6224E-03	3.5448E-02	-4.4123E-02	-4.0119E-13
18.850	-2.1445E-07	-2.0725E-18	1.4453E-02	2.2189E-02	-3.5159E-02	-3.3978E-13
19.140	-1.6148E-07	-1.6656E-18	1.9243E-02	1.1724E-02	-2.6866E-02	-2.7711E-13
19.430	-1.1577E-07	-1.2875E-18	2.1382E-02	3.8130E-03	-1.9542E-02	-2.1735E-13
19.720	-7.7923E-08	-9.5340E-19	2.1565E-02	2.5879E-03	-1.3343E-02	-1.6326E-13
20.010	-4.7887E-08	-6.7082E-19	2.0388E-02	5.7286E-03	-8.3166E-03	-1.1650E-13
20.300	-2.5149E-08	-4.4195E-19	1.8339E-02	8.0019E-03	-4.4288E-03	-7.7827E-14
20.590	-8.9124E-09	-2.6498E-19	1.5800E-02	9.1795E-03	-1.5911E-03	-4.7306E-14
20.880	1.7703E-09	-1.3544E-19	1.3052E-02	9.5407E-03	3.2035E-04	-2.4510E-14
21.170	7.9025E-09	-4.7288E-20	1.0290E-02	9.3681E-03	1.4492E-03	-8.6722E-15
21.460	1.0521E-08	5.9810E-11	7.6319E-03	8.8973E-03	1.9550E-03	1.1114E-05
21.750	1.0942E-08	1.6834E-10	5.1344E-03	8.3152E-03	2.0598E-03	3.1690E-05
22.040	9.3059E-09	1.8898E-10	2.8077E-03	7.7592E-03	1.7745E-03	3.6035E-05
22.330	6.5454E-09	1.5308E-10	6.2904E-04	7.3187E-03	1.2640E-03	2.9561E-05
22.620	3.5331E-09	9.0771E-11	1.4439E-03	7.0352E-03	6.9087E-04	1.7749E-05
22.910	1.0992E-09	3.1233E-11	3.4579E-03	1.2324E-03	3.9327E-02	1.1174E-03
23.200	5.0509E-11	3.0283E-12	2.1627E-03	4.8976E-03	2.9464E-03	1.7665E-04
23.490	-1.2204E-10	-6.2006E-22	6.1868E-04	3.7784E-03	-9.8713E-03	-5.0156E-14
23.780	-6.0415E-11	-3.7174E-22	3.0553E-05	1.2361E-03	-6.2496E-03	-3.8454E-14
24.070	-1.1034E-11	-8.2822E-23	9.8399E-05	1.4219E-05	-1.3903E-03	-1.0436E-14
24.360	2.2064E-12	3.6450E-14	3.6945E-05	1.6444E-04	3.2777E-04	5.4149E-06
24.650	1.9924E-12	4.9682E-14	3.0394E-06	6.7481E-05	3.4092E-04	8.5012E-06
24.940	5.6086E-13	1.6012E-14	2.1957E-06	7.4196E-06	7.3286E-05	2.0922E-06
25.230	8.9186E-15	8.5553E-16	1.2662E-06	3.4763E-06	1.8551E-06	1.7795E-07
25.520	-3.2822E-14	-1.8561E-25	1.8015E-07	2.2647E-06	-9.3653E-06	-5.2960E-17
25.810	-7.4807E-15	-5.2226E-26	4.7283E-08	3.4632E-07	-2.7130E-06	-1.8941E-17
26.100	2.0687E-16	-7.1830E-28	2.0756E-08	7.9175E-08	9.1022E-08	-3.1605E-19
26.390	3.9767E-16	1.0069E-17	1.3716E-09	3.7011E-08	2.0573E-07	5.2093E-09
26.680	5.2621E-17	1.6150E-18	7.1097E-10	2.6423E-09	3.1292E-08	9.6040E-10

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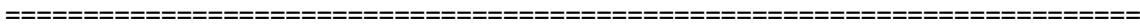


26.970	-7.1375E-18	-3.1088E-29	1.6143E-10	1.2320E-09	-4.2825E-09	-1.8653E-20
27.260	-2.9028E-18	-1.8612E-29	3.7184E-12	2.9009E-10	-1.7417E-09	-1.1167E-20
27.550	-1.5768E-19	-1.5844E-30	6.8335E-12	5.0507E-12	-9.4607E-11	-9.5066E-22
27.840	9.7484E-20	2.2952E-21	8.9087E-13	1.2012E-11	5.8490E-11	1.3771E-12
28.130	2.1839E-20	6.1914E-22	1.3300E-13	1.6302E-12	1.3103E-11	3.7149E-13
28.420	-5.2842E-22	3.3650E-24	5.4760E-14	2.2390E-13	-3.1705E-13	2.0190E-15
28.710	-8.7567E-22	-5.2570E-33	3.1610E-15	9.4413E-14	-5.2540E-13	-3.1542E-24
29.000	-1.0784E-22	-1.0591E-33	0.0000	0.0000	-6.4704E-14	-6.3544E-25

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17.4 SLEf



GROUP for Windows, Version 2019.11.11

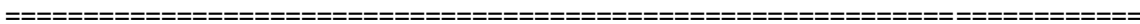
Serial Number : 447513991

Analysis of A Group of Piles

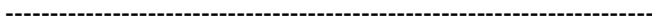
Subjected to Axial and Lateral Loading

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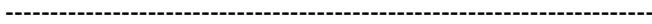
All Rights Reserved



Name of input data file : Fondazione impalcato Maltempo-pali 600-SLEf-aggstrat.gp11d
 Name of output echo file : Fondazione impalcato Maltempo-pali 600-SLEf-aggstrat.gp11e
 Name of output results file : Fondazione impalcato Maltempo-pali 600-SLEf-aggstrat.gp11o
 Name of output summary file : Fondazione impalcato Maltempo-pali 600-SLEf-aggstrat.gp11t
 Name of plot output file : Fondazione impalcato Maltempo-pali 600-SLEf-aggstrat.gp11p
 Name of runtime file : Fondazione impalcato Maltempo-pali 600-SLEf-aggstrat.gp11r



Time and Date of Analysis



Date: March 20, 2023 Time: 11:30:09



***** COMPUTATION RESULTS *****

New Group

***** LOAD CASES RESULTS *****

LOAD CASE : 1

CASE NAME : SLEf8

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
----------	----------	----------

1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000
4	0.3353	1.0000
5	0.3414	1.0000



6	0.4646	1.0000
7	0.6923	1.0000
8	0.5600	1.0000
9	0.5600	1.0000
10	0.5600	1.0000
11	0.5600	1.0000
12	0.6923	1.0000

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN
 4165.78 1732.52 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M
 0.00000 0.00000 -3943.55

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M
 1.08957E-03 0.0116578 -2.94738E-15

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD
 3.63155E-14 -2.24314E-17 -2.95949E-03



NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE : 2

CASE NAME : SLEf7

LOAD TYPE : Dead, DL

REDUCTION FACTORS FOR CLOSELY-SPACED PILE GROUPS, COMBINED Y AND Z DIRECTIONS

ESTIMATED USING MOVEMENT IN THE DIRECTION OF PILE CAP DISPLACEMENTS

GROUP NO	P-FACTOR	Y-FACTOR
----------	----------	----------

1	0.4646	1.0000
2	0.3414	1.0000
3	0.3353	1.0000
4	0.3353	1.0000
5	0.3414	1.0000
6	0.4646	1.0000
7	0.6923	1.0000
8	0.5600	1.0000
9	0.5600	1.0000
10	0.5600	1.0000
11	0.5600	1.0000
12	0.6923	1.0000



* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

4032.48 1736.15 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

0.00000 0.00000 -3918.93

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.05633E-03 0.0116425 4.96970E-16

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

-6.16142E-15 3.69255E-18 -2.94632E-03

NUMBER OF GLOBAL ITERATIONS = 4

LOAD CASE ENV : 1

CASE NAME : MINIMUM ENVELOPE



* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN HOR. LOAD Y, KN HOR. LOAD Z, KN

4032.48 1732.52 0.00000

MOMENT X , KN- M MOMENT Y, KN- M MOMENT Z, KN- M

0.00000 0.00000 -3943.55

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M HORIZONTAL Y, M HORIZONTAL Z, M

1.05633E-03 0.0116425 -2.94738E-15

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

-6.16142E-15 -2.24314E-17 -2.95949E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE

* PILE GROUP * 1

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* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-8.5878E-04	0.011642	-2.6552E-14	-6.1614E-15	-2.2431E-17	-2.9595E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
-354.03	140.92	-6.5054E-10	-8.9377E-11	-2.2028E-10	114.48

STR, KN/ M**2

6615.8

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-8.5878E-04	0.011642	-2.6552E-14	-6.1614E-15	-2.2431E-17	-2.9595E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-354.03	140.92	-6.5054E-10	-8.9377E-11	-2.2028E-10	114.48

STR, KN/ M**2

6615.8

* EFFECTS FOR LATERALLY LOADED PILE *

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x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
*****	*****	*****	*****	*****	*****	*****
0.0000	1.1642E-02	-2.6552E-14	114.48	140.89	0.0000	0.0000
0.2900	1.0765E-02	-2.6286E-14	73.919	139.32	11.037	-2.6930E-11
0.5800	9.8572E-03	-2.5574E-14	34.295	134.35	23.192	-6.0133E-11
0.8700	8.9353E-03	-2.4492E-14	2.3493	126.02	34.260	-9.3863E-11
1.1600	8.0143E-03	-2.3112E-14	37.216	114.74	43.484	-1.2536E-10
1.4500	7.1083E-03	-2.1504E-14	68.430	101.19	50.024	-1.5130E-10
1.7400	6.2297E-03	-1.9732E-14	95.448	86.174	53.500	-1.6945E-10
2.0300	5.3885E-03	-1.7857E-14	117.98	70.527	54.407	-1.8030E-10
2.3200	4.5945E-03	-1.5932E-14	135.95	55.692	47.908	-1.6613E-10
2.6100	3.8552E-03	-1.4006E-14	149.91	41.703	48.563	-1.7643E-10
2.9000	3.1761E-03	-1.2121E-14	159.81	27.736	47.763	-1.8228E-10
3.1900	2.5613E-03	-1.0314E-14	165.71	13.723	48.880	-1.9684E-10
3.4800	2.0129E-03	-8.6155E-15	167.52	0.2475	49.325	-2.1112E-10
3.7700	1.5319E-03	-7.0489E-15	165.20	14.457	48.524	-2.2328E-10
4.0600	1.1171E-03	-5.6310E-15	158.82	27.038	38.040	-1.9176E-10
4.3500	7.6594E-04	-4.3711E-15	149.25	36.630	27.904	-1.5924E-10
4.6400	4.7467E-04	-3.2721E-15	137.34	43.378	18.421	-1.2699E-10
4.9300	2.3845E-04	-2.3314E-15	123.90	47.502	9.8205	-9.6020E-11
5.2200	5.1873E-05	-1.5422E-15	109.64	49.281	2.2597	-6.7181E-11
5.5100	-9.0776E-05	-8.9439E-16	95.183	49.030	-4.1703	-4.1088E-11
5.8000	-1.9530E-04	-3.7580E-16	81.082	47.080	-9.4361	-1.8158E-11
6.0900	-2.6733E-04	-4.5250E-18	67.786	44.246	-10.230	-1.7316E-13
6.3800	-3.1222E-04	-5.5687E-17	55.359	40.970	-12.457	-2.2219E-12
6.6700	-3.3492E-04	-9.2071E-17	43.987	37.158	-13.909	-3.8237E-12
6.9600	-3.4001E-04	-1.1600E-16	33.791	33.023	-14.675	-5.0068E-12

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7.2500	-3.3156E-04	-1.2968E-16	24.835	28.742	-14.851	-5.8085E-12
7.5400	-3.1316E-04	-1.3512E-16	17.130	24.481	-14.538	-6.2727E-12
7.8300	-2.8790E-04	-1.3416E-16	10.651	20.367	-13.835	-6.4471E-12
8.1200	-2.5837E-04	-1.2842E-16	5.3363	16.499	-12.837	-6.3806E-12
8.4100	-2.2670E-04	-1.1929E-16	1.1021	12.951	-11.634	-6.1217E-12
8.7000	-1.9459E-04	-1.0796E-16	2.1151	9.7703	-10.303	-5.7163E-12
8.9900	-1.6339E-04	-9.5404E-17	4.5100	6.9836	-8.9177	-5.2071E-12
9.2800	-1.3400E-04	-8.2406E-17	6.1557	4.5993	-7.5320	-4.6321E-12
9.5700	-1.0707E-04	-6.9576E-17	7.1687	2.6106	-6.1929	-4.0244E-12
9.8600	-8.3011E-05	-5.7365E-17	7.6620	0.9984	-4.9369	-3.4117E-12
10.150	-6.2023E-05	-4.6092E-17	7.7412	0.2509	-3.7898	-2.8164E-12
10.440	-4.4137E-05	-3.5958E-17	7.5027	1.2020	-2.7689	-2.2558E-12
10.730	-2.9256E-05	-2.7070E-17	7.0324	1.8765	-1.8831	-1.7424E-12
11.020	-1.7192E-05	-1.9462E-17	6.4048	2.3141	-1.1346	-1.2844E-12
11.310	-7.6940E-06	-1.3105E-17	5.6826	2.5540	-0.5203	-8.8626E-13
11.600	-4.7243E-07	-7.9303E-18	4.9175	2.6342	-3.2720E-02	-5.4925E-13
11.890	4.7792E-06	-3.8383E-18	4.1495	2.5898	0.3388	-2.7210E-13
12.180	8.3682E-06	-7.1096E-19	3.4106	2.4527	0.6069	-5.1560E-14
12.470	1.0590E-05	-9.3332E-18	2.7234	2.2509	0.7853	-6.9209E-13
12.760	1.1720E-05	-1.8651E-17	2.1030	2.0082	0.8882	-1.4134E-12
13.050	1.2007E-05	-2.4520E-17	1.5577	1.7446	0.9295	-1.8982E-12
13.340	1.1668E-05	-2.7626E-17	1.0910	1.4759	0.9223	-2.1837E-12
13.630	1.0892E-05	-2.8591E-17	0.7021	1.2144	0.8787	-2.3067E-12
13.920	9.8328E-06	-2.7965E-17	0.3873	0.9694	0.8093	-2.3017E-12
14.210	8.6178E-06	-2.6215E-17	0.1407	0.7470	0.7234	-2.2005E-12
14.500	7.3455E-06	-2.3736E-17	4.3221E-02	0.5509	0.6286	-2.0311E-12
14.790	6.0894E-06	-2.0845E-17	0.1764	0.3827	0.5310	-1.8178E-12
15.080	4.9037E-06	-1.7793E-17	0.2649	0.2426	0.4356	-1.5806E-12
15.370	3.8247E-06	-1.4766E-17	0.3169	0.1293	0.3460	-1.3358E-12
15.660	2.8730E-06	-1.1902E-17	0.3397	4.0717E-02	0.2646	-1.0961E-12
15.950	2.0577E-06	-9.2888E-18	0.3403	2.4917E-02	0.1929	-8.7061E-13

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16.240	1.3789E-06	-6.9813E-18	0.3247	7.2057E-02	0.1315	-6.6572E-13
16.530	8.3045E-07	-5.0031E-18	0.2981	0.1029	8.0545E-02	-4.8525E-13
16.820	4.0150E-07	-3.3559E-18	0.2647	0.1204	3.9596E-02	-3.3096E-13
17.110	7.8638E-08	-2.0249E-18	0.2280	0.1274	7.8835E-03	-2.0300E-13
17.400	-1.5287E-07	-9.8461E-19	0.1906	0.1264	-1.5575E-02	-1.0031E-13
17.690	-3.0803E-07	-2.0232E-19	0.1545	0.1196	-3.1886E-02	-2.0943E-14
17.980	-4.0131E-07	-6.0492E-20	0.1211	0.1089	-4.2195E-02	-6.3605E-15
18.270	-4.4608E-07	-1.2402E-19	9.1242E-02	9.5883E-02	-4.7631E-02	-1.3242E-14
18.560	-4.5430E-07	-1.6206E-19	6.5423E-02	8.1869E-02	-4.9249E-02	-1.7569E-14
18.850	-4.3631E-07	-1.8014E-19	4.3754E-02	6.7779E-02	-4.8011E-02	-1.9823E-14
19.140	-4.0079E-07	-1.8320E-19	2.6129E-02	5.4328E-02	-4.4756E-02	-2.0458E-14
19.430	-3.5481E-07	-1.7549E-19	1.2272E-02	4.2009E-02	-4.0200E-02	-1.9884E-14
19.720	-3.0391E-07	-1.6060E-19	1.7974E-03	3.1116E-02	-3.4929E-02	-1.8458E-14
20.010	-2.5229E-07	-1.4142E-19	5.6594E-03	2.1787E-02	-2.9408E-02	-1.6484E-14
20.300	-2.0302E-07	-1.2023E-19	1.0738E-02	1.4044E-02	-2.3996E-02	-1.4210E-14
20.590	-1.5807E-07	-9.8753E-20	1.3800E-02	7.8208E-03	-1.8940E-02	-1.1833E-14
20.880	-1.1864E-07	-7.8240E-20	1.5270E-02	2.9885E-03	-1.4410E-02	-9.5027E-15
21.170	-8.5334E-08	-5.9534E-20	1.5532E-02	5.8179E-04	-1.0504E-02	-7.3279E-15
21.460	-5.8248E-08	-4.3162E-20	1.4912E-02	3.1582E-03	-7.2646E-03	-5.3831E-15
21.750	-3.7136E-08	-2.9403E-20	1.3683E-02	4.8919E-03	-4.6921E-03	-3.7151E-15
22.040	-2.1505E-08	-1.8358E-20	1.2061E-02	5.9713E-03	-2.7522E-03	-2.3494E-15
22.330	-1.0705E-08	-9.9996E-21	1.0204E-02	6.5716E-03	-1.3875E-03	-1.2961E-15
22.620	-3.9954E-09	-4.2240E-21	8.2297E-03	6.8488E-03	-5.2437E-04	-5.5437E-16
22.910	-5.8830E-10	-8.8326E-22	6.2130E-03	9.9736E-03	-2.1048E-02	-3.1601E-14
23.200	3.2141E-10	-1.1133E-21	2.4435E-03	1.0279E-02	1.8749E-02	-6.4942E-14
23.490	2.4676E-10	-1.3115E-21	2.5118E-04	4.6658E-03	1.9960E-02	-1.0609E-13
23.780	7.1489E-11	-4.5542E-22	2.6252E-04	6.9928E-04	7.3951E-03	-4.7110E-14
24.070	1.3828E-12	-3.8523E-23	1.5432E-04	3.9827E-04	1.7424E-04	-4.8539E-15
24.360	-6.9182E-12	-5.5467E-24	3.1494E-05	2.7486E-04	-1.0277E-03	-8.2400E-16
24.650	-2.5819E-12	-2.5979E-24	5.0882E-06	6.2402E-05	-4.4180E-04	-4.4452E-16
24.940	-2.8404E-13	-4.4008E-25	4.6967E-06	6.6805E-06	-3.7114E-05	-5.7504E-17

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25.230	1.2670E-13	-4.6801E-25	1.2058E-06	8.2158E-06	2.6354E-05	-9.7345E-17
25.520	5.1617E-14	-2.9625E-25	6.7830E-08	2.2589E-06	1.4728E-05	-8.4531E-17
25.810	4.0098E-15	-3.7870E-26	1.0434E-07	8.6035E-08	1.4542E-06	-1.3734E-17
26.100	-1.8030E-15	-1.2728E-27	1.7802E-08	1.8352E-07	-7.9331E-07	-5.6002E-19
26.390	-4.8187E-16	-4.9644E-28	2.1001E-09	3.2663E-08	-2.4929E-07	-2.5683E-19
26.680	-2.0499E-18	-2.5118E-29	1.1422E-09	3.4646E-09	-1.2190E-09	-1.4937E-20
26.970	1.8467E-17	-9.2101E-29	8.9605E-11	2.0230E-09	1.1080E-08	-5.5260E-20
27.260	2.8482E-18	-1.9635E-29	3.1147E-11	1.6861E-10	1.7089E-09	-1.1781E-20
27.550	-2.9310E-19	-1.0928E-31	8.1853E-12	5.3676E-11	-1.7586E-10	-6.5565E-23
27.840	-1.5593E-19	-1.4654E-31	1.4224E-14	1.4660E-11	-9.3559E-11	-8.7924E-23
28.130	-1.2024E-20	-1.7771E-32	3.1762E-13	1.0791E-13	-7.2143E-12	-1.0662E-23
28.420	4.2889E-21	-1.8058E-32	4.8312E-14	5.5549E-13	2.5734E-12	-1.0835E-23
28.710	1.1386E-21	-6.9906E-33	4.5595E-15	8.3299E-14	6.8314E-13	-4.1944E-24
29.000	-1.8111E-22	-6.2155E-35	0.0000	0.0000	-1.0867E-13	-3.7293E-26

* PILE GROUP * 2

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -8.5878E-04 0.011642 -2.6552E-14 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -354.03 111.57 -5.4897E-10 -8.9377E-11 -1.9704E-10 78.846



STR, KN/ M**2

4935.3

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-8.5878E-04	0.011642	-2.6552E-14	-6.1614E-15	-2.2431E-17	-2.9595E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-354.03	111.57	-5.4897E-10	-8.9377E-11	-1.9704E-10	78.846

STR, KN/ M**2

4935.3

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1642E-02	-2.6552E-14	78.846	111.55	0.0000	0.0000
0.2900	1.0772E-02	-2.6313E-14	46.792	110.39	8.1146	-1.9807E-11
0.5800	9.8823E-03	-2.5672E-14	15.427	106.74	17.083	-4.4350E-11
0.8700	8.9860E-03	-2.4692E-14	13.496	100.59	25.314	-6.9526E-11
1.1600	8.0952E-03	-2.3435E-14	41.370	92.238	32.270	-9.3387E-11
1.4500	7.2208E-03	-2.1960E-14	66.536	82.144	37.335	-1.1352E-10



1.7400	6.3732E-03	-2.0322E-14	88.571	70.900	40.211	-1.2822E-10
2.0300	5.5600E-03	-1.8575E-14	107.24	59.089	41.245	-1.3779E-10
2.3200	4.7898E-03	-1.6764E-14	122.45	47.787	36.695	-1.2843E-10
2.6100	4.0689E-03	-1.4935E-14	134.59	37.006	37.658	-1.3822E-10
2.9000	3.4022E-03	-1.3125E-14	143.59	26.095	37.590	-1.4501E-10
3.1900	2.7931E-03	-1.1368E-14	149.44	14.966	39.164	-1.5940E-10
3.4800	2.2441E-03	-9.6941E-15	152.01	3.4286	40.402	-1.7453E-10
3.7700	1.7561E-03	-8.1267E-15	151.21	8.1159	40.871	-1.8913E-10
4.0600	1.3288E-03	-6.6840E-15	146.98	18.888	33.247	-1.6723E-10
4.3500	9.6048E-04	-5.3776E-15	139.97	27.463	25.708	-1.4394E-10
4.6400	6.4826E-04	-4.2135E-15	130.81	33.898	18.484	-1.2014E-10
4.9300	3.8848E-04	-3.1928E-15	120.11	38.308	11.755	-9.6613E-11
5.2200	1.7683E-04	-2.3129E-15	108.42	40.859	5.6598	-7.4026E-11
5.5100	8.6362E-06	-1.5675E-15	96.271	41.745	0.2915	-5.2908E-11
5.8000	-1.2100E-04	-9.4828E-16	84.083	41.187	-4.2953	-3.3663E-11
6.0900	-2.1695E-04	-4.4481E-16	72.268	39.697	-6.0996	-1.2506E-11
6.3800	-2.8394E-04	-4.5712E-17	60.976	37.620	-8.3236	-1.3400E-12
6.6700	-3.2652E-04	-4.4140E-17	50.392	34.980	-9.9629	-1.3468E-12
6.9600	-3.4890E-04	-8.2446E-17	40.652	31.941	-11.064	-2.6144E-12
7.2500	-3.5500E-04	-1.0903E-16	31.849	28.651	-11.683	-3.5882E-12
7.5400	-3.4834E-04	-1.2577E-16	24.033	25.237	-11.881	-4.2899E-12
7.8300	-3.3206E-04	-1.3442E-16	17.220	21.815	-11.724	-4.7459E-12
8.1200	-3.0887E-04	-1.3658E-16	11.394	18.480	-11.275	-4.9857E-12
8.4100	-2.8112E-04	-1.3369E-16	6.5190	15.308	-10.599	-5.0404E-12
8.7000	-2.5076E-04	-1.2703E-16	2.5359	12.356	-9.7551	-4.9415E-12
8.9900	-2.1939E-04	-1.1770E-16	0.5848	9.6663	-8.7975	-4.7198E-12
9.2800	-1.8828E-04	-1.0665E-16	3.0126	7.2633	-7.7757	-4.4044E-12
9.5700	-1.5842E-04	-9.4649E-17	4.7870	5.1602	-6.7323	-4.0223E-12
9.8600	-1.3048E-04	-8.2332E-17	5.9958	3.3582	-5.7011	-3.5975E-12
10.150	-1.0493E-04	-7.0193E-17	6.7260	1.8498	-4.7109	-3.1512E-12
10.440	-8.2087E-05	-5.8605E-17	7.0610	0.6196	-3.7835	-2.7012E-12

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10.730	-6.2068E-05	-4.7837E-17	7.0788	0.3398	-2.9352	-2.2622E-12
11.020	-4.4885E-05	-3.8065E-17	6.8508	1.0810	-2.1764	-1.8457E-12
11.310	-3.0447E-05	-2.9389E-17	6.4407	1.6159	-1.5128	-1.4603E-12
11.600	-1.8588E-05	-2.1850E-17	5.9042	1.9724	-0.9459	-1.1118E-12
11.890	-9.0952E-06	-1.5436E-17	5.2891	2.1783	-0.4737	-8.0395E-13
12.180	-1.7209E-06	-1.0099E-17	4.6349	2.2603	-9.1692E-02	-5.3812E-13
12.470	3.7968E-06	-5.7664E-18	3.9732	2.2436	0.2069	-3.1416E-13
12.760	7.7226E-06	-2.3441E-18	3.3289	2.1512	0.4300	-1.3052E-13
13.050	1.0314E-05	-1.6209E-18	2.7215	2.0038	0.5867	-9.2194E-14
13.340	1.1815E-05	-1.2906E-17	2.1641	1.8192	0.6862	-7.4952E-13
13.630	1.2448E-05	-2.0687E-17	1.6650	1.6128	0.7378	-1.2262E-12
13.920	1.2413E-05	-2.5569E-17	1.2282	1.3969	0.7506	-1.5463E-12
14.210	1.1884E-05	-2.8113E-17	0.8549	1.1815	0.7329	-1.7338E-12
14.500	1.1012E-05	-2.8828E-17	0.5434	0.9745	0.6923	-1.8124E-12
14.790	9.9215E-06	-2.8164E-17	0.2903	0.7818	0.6357	-1.8044E-12
15.080	8.7135E-06	-2.6511E-17	9.0790E-02	0.6071	0.5687	-1.7303E-12
15.370	7.4683E-06	-2.4197E-17	5.9036E-02	0.4526	0.4964	-1.6083E-12
15.660	6.2457E-06	-2.1492E-17	0.1693	0.3193	0.4226	-1.4542E-12
15.950	5.0904E-06	-1.8612E-17	0.2440	0.2072	0.3505	-1.2817E-12
16.240	4.0334E-06	-1.5724E-17	0.2892	0.1154	0.2826	-1.1016E-12
16.530	3.0926E-06	-1.2951E-17	0.3107	4.2478E-02	0.2204	-9.2285E-13
16.820	2.2767E-06	-1.0379E-17	0.3137	1.2714E-02	0.1650	-7.5203E-13
17.110	1.5866E-06	-8.0641E-18	0.3028	5.3674E-02	0.1169	-5.9397E-13
17.400	1.0181E-06	-6.0363E-18	0.2821	8.1765E-02	7.6208E-02	-4.5184E-13
17.690	5.6266E-07	-4.3055E-18	0.2550	9.9110E-02	4.2791E-02	-3.2744E-13
17.980	2.0946E-07	-2.8667E-18	0.2243	0.1077	1.6181E-02	-2.2146E-13
18.270	-5.3848E-08	-1.7039E-18	0.1923	0.1096	-4.2244E-03	-1.3367E-13
18.560	-2.4012E-07	-7.9345E-19	0.1606	0.1062	-1.9125E-02	-6.3196E-14
18.850	-3.6207E-07	-1.0750E-19	0.1305	9.9271E-02	-2.9272E-02	-8.6909E-15
19.140	-4.3175E-07	-6.4924E-20	0.1029	8.9937E-02	-3.5423E-02	-5.3267E-15
19.430	-4.6023E-07	-1.2047E-19	7.8231E-02	7.9283E-02	-3.8311E-02	-1.0028E-14

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19.720	-4.5737E-07	-1.5315E-19	5.6840E-02	6.8157E-02	-3.8621E-02	-1.2933E-14
20.010	-4.3175E-07	-1.6759E-19	3.8705E-02	5.7204E-02	-3.6975E-02	-1.4353E-14
20.300	-3.9061E-07	-1.6797E-19	2.3684E-02	4.6924E-02	-3.3920E-02	-1.4586E-14
20.590	-3.3999E-07	-1.5796E-19	1.1520E-02	3.7666E-02	-2.9932E-02	-1.3906E-14
20.880	-2.8476E-07	-1.4078E-19	1.8748E-03	2.9641E-02	-2.5410E-02	-1.2562E-14
21.170	-2.2877E-07	-1.1915E-19	5.5507E-03	2.2957E-02	-2.0688E-02	-1.0775E-14
21.460	-1.7504E-07	-9.5375E-20	1.1335E-02	1.7631E-02	-1.6039E-02	-8.7393E-15
21.750	-1.2587E-07	-7.1400E-20	1.5772E-02	1.3611E-02	-1.1685E-02	-6.6281E-15
22.040	-8.3066E-08	-4.8872E-20	1.9228E-02	1.0785E-02	-7.8106E-03	-4.5954E-15
22.330	-4.7963E-08	-2.9215E-20	2.2031E-02	8.9903E-03	-4.5674E-03	-2.7821E-15
22.620	-2.1686E-08	-1.3700E-20	2.4452E-02	8.0253E-03	-2.0911E-03	-1.3210E-15
22.910	-5.2038E-09	-3.5027E-21	2.6692E-02	1.9221E-02	-0.1862	-1.2532E-13
23.200	5.8183E-10	-1.4347E-21	1.3288E-02	4.1286E-02	3.3940E-02	-8.3694E-14
23.490	1.0408E-09	-3.6889E-21	2.7442E-03	2.4150E-02	8.4188E-02	-2.9839E-13
23.780	3.9955E-10	-1.4961E-21	7.1866E-04	5.9497E-03	4.1331E-02	-1.5476E-13
24.070	4.6329E-11	-1.9724E-22	7.0630E-04	8.8890E-04	5.8374E-03	-2.4853E-14
24.360	-2.3951E-11	-1.3676E-23	2.0279E-04	1.2202E-03	-3.5581E-03	-2.0316E-15
24.650	-1.3000E-11	-8.1041E-24	1.4203E-06	3.8192E-04	-2.2244E-03	-1.3867E-15
24.940	-2.6174E-12	-1.7686E-24	1.8713E-05	1.0009E-05	-3.4200E-04	-2.3110E-16
25.230	2.6728E-13	-7.3067E-25	7.2482E-06	3.1460E-05	5.5594E-05	-1.5198E-16
25.520	2.4617E-13	-8.9574E-25	4.6519E-07	1.3205E-05	7.0241E-05	-2.5558E-16
25.810	3.8423E-14	-1.5373E-25	4.1042E-07	9.9906E-07	1.3935E-05	-5.5754E-17
26.100	-4.9148E-15	-2.5819E-27	1.1418E-07	7.0791E-07	-2.1625E-06	-1.1360E-18
26.390	-2.5155E-15	-1.5784E-27	1.7297E-10	2.0576E-07	-1.3013E-06	-8.1658E-19
26.680	-1.8773E-16	-1.3750E-28	5.1652E-09	1.0152E-09	-1.1164E-07	-8.1765E-20
26.970	7.0031E-17	-2.4180E-28	7.7292E-10	9.0530E-09	4.2018E-08	-1.4508E-19
27.260	1.7855E-17	-6.8050E-29	8.5509E-11	1.4069E-09	1.0713E-08	-4.0830E-20
27.550	-5.0539E-20	-7.8821E-31	4.3063E-11	1.4200E-10	-3.0323E-11	-4.7293E-22
27.840	-7.0544E-19	-4.3058E-31	3.1346E-12	7.6334E-11	-4.2326E-10	-2.5835E-22
28.130	-1.0419E-19	-6.9988E-32	1.2108E-12	5.9297E-12	-6.2514E-11	-4.1993E-23
28.420	1.1931E-20	-3.7285E-32	3.0438E-13	2.0872E-12	7.1585E-12	-2.2371E-23



28.710 6.0223E-21 -2.2340E-32 2.4660E-16 5.2480E-13 3.6134E-12 -1.3404E-23

29.000 9.8563E-24 -6.6619E-34 0.0000 0.0000 5.9138E-15 -3.9971E-25

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-8.5878E-04 0.011642 -2.6552E-14 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-354.03 110.03 -5.4356E-10 -8.9377E-11 -1.9576E-10 76.926

STR, KN/ M**2

4844.8

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-8.5878E-04 0.011642 -2.6552E-14 -6.1614E-15 -2.2431E-17 -2.9595E-03



AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -354.03 110.03 -5.4356E-10 -8.9377E-11 -1.9576E-10 76.926

STR, KN/ M**2

4844.8

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.1642E-02	-2.6552E-14	76.926	110.01	0.0000	0.0000
0.2900	1.0772E-02	-2.6315E-14	45.317	108.88	7.9698	-1.9453E-11
0.5800	9.8837E-03	-2.5678E-14	14.385	105.29	16.780	-4.3566E-11
0.8700	8.9888E-03	-2.4703E-14	14.131	99.245	24.869	-6.8313E-11
1.1600	8.0996E-03	-2.3453E-14	41.634	91.040	31.710	-9.1788E-11
1.4500	7.2270E-03	-2.1985E-14	66.477	81.120	36.699	-1.1162E-10
1.7400	6.3811E-03	-2.0356E-14	88.243	70.065	39.541	-1.2613E-10
2.0300	5.5695E-03	-1.8615E-14	106.70	58.448	40.577	-1.3562E-10
2.3200	4.8007E-03	-1.6812E-14	121.75	47.327	36.120	-1.2649E-10
2.6100	4.0809E-03	-1.4988E-14	133.78	36.711	37.093	-1.3623E-10
2.9000	3.4149E-03	-1.3183E-14	142.71	25.960	37.056	-1.4305E-10
3.1900	2.8063E-03	-1.1429E-14	148.55	14.983	38.645	-1.5739E-10
3.4800	2.2574E-03	-9.7573E-15	151.15	3.5921	39.913	-1.7252E-10
3.7700	1.7691E-03	-8.1905E-15	150.41	7.8191	40.436	-1.8721E-10
4.0600	1.3412E-03	-6.7470E-15	146.29	18.486	32.956	-1.6579E-10
4.3500	9.7198E-04	-5.4384E-15	139.41	26.996	25.551	-1.4296E-10
4.6400	6.5867E-04	-4.2710E-15	130.39	33.401	18.445	-1.1960E-10
4.9300	3.9764E-04	-3.2463E-15	119.83	37.815	11.817	-9.6473E-11

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5.2200	1.8463E-04	-2.3614E-15	108.29	40.395	5.8035	-7.4228E-11
5.5100	1.5013E-05	-1.6107E-15	96.267	41.333	0.4977	-5.3394E-11
5.8000	-1.1604E-04	-9.8584E-16	84.189	40.840	-4.0456	-3.4370E-11
6.0900	-2.1336E-04	-4.7662E-16	72.464	39.417	-5.8916	-1.3161E-11
6.3800	-2.8166E-04	-7.1830E-17	61.243	37.401	-8.1090	-2.0680E-12
6.6700	-3.2542E-04	-4.0640E-17	50.713	34.823	-9.7519	-1.2179E-12
6.9600	-3.4887E-04	-7.9821E-17	41.010	31.843	-10.865	-2.4859E-12
7.2500	-3.5589E-04	-1.0721E-16	32.227	28.608	-11.503	-3.4652E-12
7.5400	-3.5000E-04	-1.2467E-16	24.415	25.244	-11.724	-4.1763E-12
7.8300	-3.3433E-04	-1.3395E-16	17.593	21.863	-11.593	-4.6447E-12
8.1200	-3.1161E-04	-1.3664E-16	11.748	18.562	-11.172	-4.8989E-12
8.4100	-2.8418E-04	-1.3420E-16	6.8439	15.416	-10.523	-4.9691E-12
8.7000	-2.5402E-04	-1.2789E-16	2.8260	12.483	-9.7049	-4.8860E-12
8.9900	-2.2272E-04	-1.1883E-16	0.3330	9.8043	-8.7712	-4.6797E-12
9.2800	-1.9158E-04	-1.0796E-16	2.8019	7.4058	-7.7705	-4.3787E-12
9.5700	-1.6161E-04	-9.6071E-17	4.6178	5.3014	-6.7452	-4.0097E-12
9.8600	-1.3350E-04	-8.3805E-17	5.8670	3.4936	-5.7288	-3.5964E-12
10.150	-1.0773E-04	-7.1665E-17	6.6352	1.9754	-4.7498	-3.1597E-12
10.440	-8.4620E-05	-6.0033E-17	7.0049	0.7327	-3.8306	-2.7175E-12
10.730	-6.4317E-05	-4.9186E-17	7.0535	0.2409	-2.9872	-2.2844E-12
11.020	-4.6840E-05	-3.9310E-17	6.8518	0.9975	-2.2306	-1.8720E-12
11.310	-3.2108E-05	-3.0514E-17	6.4635	1.5481	-1.5668	-1.4890E-12
11.600	-1.9964E-05	-2.2843E-17	5.9444	1.9200	-0.9977	-1.1416E-12
11.890	-1.0202E-05	-1.6294E-17	5.3422	2.1403	-0.5219	-8.3350E-13
12.180	-2.5806E-06	-1.0824E-17	4.6969	2.2356	-0.1350	-5.6642E-13
12.470	3.1596E-06	-6.3621E-18	4.0406	2.2306	0.1691	-3.4041E-13
12.760	7.2811E-06	-2.8193E-18	3.3984	2.1484	0.3982	-1.5417E-13
13.050	1.0041E-05	-9.4753E-20	2.7904	2.0093	0.5609	-5.2930E-15
13.340	1.1682E-05	-1.1332E-17	2.2303	1.8314	0.6663	-6.4634E-13
13.630	1.2428E-05	-1.9617E-17	1.7266	1.6299	0.7235	-1.1420E-12
13.920	1.2482E-05	-2.4926E-17	1.2843	1.4175	0.7413	-1.4804E-12

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14.210	1.2021E-05	-2.7822E-17	0.9046	1.2041	0.7281	-1.6852E-12
14.500	1.1195E-05	-2.8819E-17	0.5864	0.9980	0.6913	-1.7795E-12
14.790	1.0134E-05	-2.8373E-17	0.3264	0.8051	0.6377	-1.7853E-12
15.080	8.9413E-06	-2.6879E-17	0.1202	0.6294	0.5731	-1.7229E-12
15.370	7.6994E-06	-2.4673E-17	3.5899E-02	0.4734	0.5026	-1.6106E-12
15.660	6.4711E-06	-2.2033E-17	0.1519	0.3381	0.4300	-1.4642E-12
15.950	5.3028E-06	-1.9182E-17	0.2317	0.2238	0.3586	-1.2973E-12
16.240	4.2279E-06	-1.6294E-17	0.2814	0.1296	0.2909	-1.1212E-12
16.530	3.2661E-06	-1.3500E-17	0.3067	5.4284E-02	0.2286	-9.4477E-13
16.820	2.4276E-06	-1.0891E-17	0.3127	3.2096E-03	0.1727	-7.7498E-13
17.110	1.7146E-06	-8.5274E-18	0.3043	4.6338E-02	0.1240	-6.1686E-13
17.400	1.1237E-06	-6.4449E-18	0.2854	7.6396E-02	8.2611E-02	-4.7380E-13
17.690	6.4733E-07	-4.6569E-18	0.2596	9.5476E-02	4.8350E-02	-3.4783E-13
17.980	2.7500E-07	-3.1611E-18	0.2297	0.1056	2.0864E-02	-2.3983E-13
18.270	-5.2460E-09	-1.9437E-18	0.1981	0.1086	-4.0418E-04	-1.4976E-13
18.560	-2.0612E-07	-9.8302E-19	0.1665	0.1063	-1.6123E-02	-7.6895E-14
18.850	-3.4028E-07	-2.5202E-19	0.1363	0.1001	-2.7018E-02	-2.0010E-14
19.140	-4.1986E-07	-4.7054E-20	0.1083	9.1337E-02	-3.3831E-02	-3.7915E-15
19.430	-4.5605E-07	-1.0820E-19	8.3199E-02	8.1065E-02	-3.7284E-02	-8.8454E-15
19.720	-4.5892E-07	-1.4544E-19	6.1244E-02	7.0171E-02	-3.8059E-02	-1.2062E-14
20.010	-4.3725E-07	-1.6346E-19	4.2498E-02	5.9334E-02	-3.6776E-02	-1.3749E-14
20.300	-3.9856E-07	-1.6651E-19	2.6851E-02	4.9073E-02	-3.3991E-02	-1.4201E-14
20.590	-3.4910E-07	-1.5837E-19	1.4066E-02	3.9768E-02	-3.0184E-02	-1.3693E-14
20.880	-2.9402E-07	-1.4235E-19	3.8215E-03	3.1655E-02	-2.5768E-02	-1.2475E-14
21.170	-2.3740E-07	-1.2130E-19	4.1692E-03	2.4861E-02	-2.1085E-02	-1.0774E-14
21.460	-1.8249E-07	-9.7655E-20	1.0488E-02	1.9422E-02	-1.6423E-02	-8.7883E-15
21.750	-1.3181E-07	-7.3468E-20	1.5428E-02	1.5298E-02	-1.2017E-02	-6.6980E-15
22.040	-8.7340E-08	-5.0507E-20	1.9359E-02	1.2386E-02	-8.0655E-03	-4.6641E-15
22.330	-5.0639E-08	-3.0313E-20	2.2615E-02	1.0531E-02	-4.7360E-03	-2.8350E-15
22.620	-2.2999E-08	-1.4273E-20	2.5476E-02	9.5284E-03	-2.1780E-03	-1.3516E-15
22.910	-5.5642E-09	-3.6736E-21	2.8151E-02	1.9599E-02	-0.1991	-1.3143E-13

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23.200	5.9089E-10	-1.4113E-21	1.4093E-02	4.3461E-02	3.4469E-02	-8.2327E-14
23.490	1.0971E-09	-3.8215E-21	2.9415E-03	2.5587E-02	8.8745E-02	-3.0912E-13
23.780	4.2401E-10	-1.5594E-21	7.4624E-04	6.3586E-03	4.3862E-02	-1.6131E-13
24.070	5.0009E-11	-2.0826E-22	7.4613E-04	9.1405E-04	6.3011E-03	-2.6241E-14
24.360	-2.5098E-11	-1.4082E-23	2.1579E-04	1.2880E-03	-3.7285E-03	-2.0920E-15
24.650	-1.3764E-11	-8.4306E-24	9.1682E-07	4.0603E-04	-2.3552E-03	-1.4426E-15
24.940	-2.8001E-12	-1.8557E-24	1.9694E-05	1.1660E-05	-3.6588E-04	-2.4247E-16
25.230	2.7400E-13	-7.3104E-25	7.7031E-06	3.3070E-05	5.6991E-05	-1.5206E-16
25.520	2.6032E-13	-9.3069E-25	5.1222E-07	1.4026E-05	7.4278E-05	-2.6556E-16
25.810	4.1125E-14	-1.6134E-25	4.3177E-07	1.0927E-06	1.4915E-05	-5.8514E-17
26.100	-5.1032E-15	-2.6305E-27	1.2149E-07	7.4431E-07	-2.2454E-06	-1.1574E-18
26.390	-2.6656E-15	-1.6432E-27	5.6678E-11	2.1887E-07	-1.3790E-06	-8.5009E-19
26.680	-2.0307E-16	-1.4539E-28	5.4549E-09	1.5238E-09	-1.2076E-07	-8.6461E-20
26.970	7.3593E-17	-2.4973E-28	8.2619E-10	9.5580E-09	4.4156E-08	-1.4984E-19
27.260	1.8991E-17	-7.1063E-29	8.8802E-11	1.5032E-09	1.1394E-08	-4.2638E-20
27.550	-1.8938E-20	-9.3158E-31	4.5641E-11	1.4724E-10	-1.1363E-11	-5.5895E-22
27.840	-7.4499E-19	-4.4687E-31	3.3933E-12	8.0885E-11	-4.4699E-10	-2.6812E-22
28.130	-1.1137E-19	-7.3387E-32	1.2726E-12	6.4091E-12	-6.6825E-11	-4.4032E-23
28.420	1.2397E-20	-3.8027E-32	3.2377E-13	2.1927E-12	7.4384E-12	-2.2816E-23
28.710	6.3836E-21	-2.3262E-32	8.2527E-16	5.5823E-13	3.8302E-12	-1.3957E-23
29.000	3.2797E-23	-7.6521E-34	0.0000	0.0000	1.9678E-14	-4.5912E-25

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
-8.5878E-04 0.011642 -2.6552E-14 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
-354.03 110.03 -5.4356E-10 -8.9377E-11 -1.9576E-10 76.926

STR, KN/ M**2
4844.8

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
-8.5878E-04 0.011642 -2.6552E-14 -6.1614E-15 -2.2431E-17 -2.9595E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
-354.03 110.03 -5.4356E-10 -8.9377E-11 -1.9576E-10 76.926

STR, KN/ M**2
4844.8

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M

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0.0000	1.1642E-02	-2.6552E-14	76.926	110.01	0.0000	0.0000
0.2900	1.0772E-02	-2.6315E-14	45.317	108.88	7.9698	-1.9453E-11
0.5800	9.8837E-03	-2.5678E-14	14.385	105.29	16.780	-4.3566E-11
0.8700	8.9888E-03	-2.4703E-14	14.131	99.245	24.869	-6.8313E-11
1.1600	8.0996E-03	-2.3453E-14	41.634	91.040	31.710	-9.1788E-11
1.4500	7.2270E-03	-2.1985E-14	66.477	81.120	36.699	-1.1162E-10
1.7400	6.3811E-03	-2.0356E-14	88.243	70.065	39.541	-1.2613E-10
2.0300	5.5695E-03	-1.8615E-14	106.70	58.448	40.577	-1.3562E-10
2.3200	4.8007E-03	-1.6812E-14	121.75	47.327	36.120	-1.2649E-10
2.6100	4.0809E-03	-1.4988E-14	133.78	36.711	37.093	-1.3623E-10
2.9000	3.4149E-03	-1.3183E-14	142.71	25.960	37.056	-1.4305E-10
3.1900	2.8063E-03	-1.1429E-14	148.55	14.983	38.645	-1.5739E-10
3.4800	2.2574E-03	-9.7573E-15	151.15	3.5921	39.913	-1.7252E-10
3.7700	1.7691E-03	-8.1905E-15	150.41	7.8191	40.436	-1.8721E-10
4.0600	1.3412E-03	-6.7470E-15	146.29	18.486	32.956	-1.6579E-10
4.3500	9.7198E-04	-5.4384E-15	139.41	26.996	25.551	-1.4296E-10
4.6400	6.5867E-04	-4.2710E-15	130.39	33.401	18.445	-1.1960E-10
4.9300	3.9764E-04	-3.2463E-15	119.83	37.815	11.817	-9.6473E-11
5.2200	1.8463E-04	-2.3614E-15	108.29	40.395	5.8035	-7.4228E-11
5.5100	1.5013E-05	-1.6107E-15	96.267	41.333	0.4977	-5.3394E-11
5.8000	-1.1604E-04	-9.8584E-16	84.189	40.840	-4.0456	-3.4370E-11
6.0900	-2.1336E-04	-4.7662E-16	72.464	39.417	-5.8916	-1.3161E-11
6.3800	-2.8166E-04	-7.1830E-17	61.243	37.401	-8.1090	-2.0680E-12
6.6700	-3.2542E-04	-4.0640E-17	50.713	34.823	-9.7519	-1.2179E-12
6.9600	-3.4887E-04	-7.9821E-17	41.010	31.843	-10.865	-2.4859E-12
7.2500	-3.5589E-04	-1.0721E-16	32.227	28.608	-11.503	-3.4652E-12
7.5400	-3.5000E-04	-1.2467E-16	24.415	25.244	-11.724	-4.1763E-12
7.8300	-3.3433E-04	-1.3395E-16	17.593	21.863	-11.593	-4.6447E-12
8.1200	-3.1161E-04	-1.3664E-16	11.748	18.562	-11.172	-4.8989E-12
8.4100	-2.8418E-04	-1.3420E-16	6.8439	15.416	-10.523	-4.9691E-12



8.7000	-2.5402E-04	-1.2789E-16	2.8260	12.483	-9.7049	-4.8860E-12
8.9900	-2.2272E-04	-1.1883E-16	0.3330	9.8043	-8.7712	-4.6797E-12
9.2800	-1.9158E-04	-1.0796E-16	2.8019	7.4058	-7.7705	-4.3787E-12
9.5700	-1.6161E-04	-9.6071E-17	4.6178	5.3014	-6.7452	-4.0097E-12
9.8600	-1.3350E-04	-8.3805E-17	5.8670	3.4936	-5.7288	-3.5964E-12
10.150	-1.0773E-04	-7.1665E-17	6.6352	1.9754	-4.7498	-3.1597E-12
10.440	-8.4620E-05	-6.0033E-17	7.0049	0.7327	-3.8306	-2.7175E-12
10.730	-6.4317E-05	-4.9186E-17	7.0535	0.2409	-2.9872	-2.2844E-12
11.020	-4.6840E-05	-3.9310E-17	6.8518	0.9975	-2.2306	-1.8720E-12
11.310	-3.2108E-05	-3.0514E-17	6.4635	1.5481	-1.5668	-1.4890E-12
11.600	-1.9964E-05	-2.2843E-17	5.9444	1.9200	-0.9977	-1.1416E-12
11.890	-1.0202E-05	-1.6294E-17	5.3422	2.1403	-0.5219	-8.3350E-13
12.180	-2.5806E-06	-1.0824E-17	4.6969	2.2356	-0.1350	-5.6642E-13
12.470	3.1596E-06	-6.3621E-18	4.0406	2.2306	0.1691	-3.4041E-13
12.760	7.2811E-06	-2.8193E-18	3.3984	2.1484	0.3982	-1.5417E-13
13.050	1.0041E-05	-9.4753E-20	2.7904	2.0093	0.5609	-5.2930E-15
13.340	1.1682E-05	-1.1332E-17	2.2303	1.8314	0.6663	-6.4634E-13
13.630	1.2428E-05	-1.9617E-17	1.7266	1.6299	0.7235	-1.1420E-12
13.920	1.2482E-05	-2.4926E-17	1.2843	1.4175	0.7413	-1.4804E-12
14.210	1.2021E-05	-2.7822E-17	0.9046	1.2041	0.7281	-1.6852E-12
14.500	1.1195E-05	-2.8819E-17	0.5864	0.9980	0.6913	-1.7795E-12
14.790	1.0134E-05	-2.8373E-17	0.3264	0.8051	0.6377	-1.7853E-12
15.080	8.9413E-06	-2.6879E-17	0.1202	0.6294	0.5731	-1.7229E-12
15.370	7.6994E-06	-2.4673E-17	3.5899E-02	0.4734	0.5026	-1.6106E-12
15.660	6.4711E-06	-2.2033E-17	0.1519	0.3381	0.4300	-1.4642E-12
15.950	5.3028E-06	-1.9182E-17	0.2317	0.2238	0.3586	-1.2973E-12
16.240	4.2279E-06	-1.6294E-17	0.2814	0.1296	0.2909	-1.1212E-12
16.530	3.2661E-06	-1.3500E-17	0.3067	5.4284E-02	0.2286	-9.4477E-13
16.820	2.4276E-06	-1.0891E-17	0.3127	3.2096E-03	0.1727	-7.7498E-13
17.110	1.7146E-06	-8.5274E-18	0.3043	4.6338E-02	0.1240	-6.1686E-13
17.400	1.1237E-06	-6.4449E-18	0.2854	7.6396E-02	8.2611E-02	-4.7380E-13

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17.690	6.4733E-07	-4.6569E-18	0.2596	9.5476E-02	4.8350E-02	-3.4783E-13
17.980	2.7500E-07	-3.1611E-18	0.2297	0.1056	2.0864E-02	-2.3983E-13
18.270	-5.2460E-09	-1.9437E-18	0.1981	0.1086	-4.0418E-04	-1.4976E-13
18.560	-2.0612E-07	-9.8302E-19	0.1665	0.1063	-1.6123E-02	-7.6895E-14
18.850	-3.4028E-07	-2.5202E-19	0.1363	0.1001	-2.7018E-02	-2.0010E-14
19.140	-4.1986E-07	-4.7054E-20	0.1083	9.1337E-02	-3.3831E-02	-3.7915E-15
19.430	-4.5605E-07	-1.0820E-19	8.3199E-02	8.1065E-02	-3.7284E-02	-8.8454E-15
19.720	-4.5892E-07	-1.4544E-19	6.1244E-02	7.0171E-02	-3.8059E-02	-1.2062E-14
20.010	-4.3725E-07	-1.6346E-19	4.2498E-02	5.9334E-02	-3.6776E-02	-1.3749E-14
20.300	-3.9856E-07	-1.6651E-19	2.6851E-02	4.9073E-02	-3.3991E-02	-1.4201E-14
20.590	-3.4910E-07	-1.5837E-19	1.4066E-02	3.9768E-02	-3.0184E-02	-1.3693E-14
20.880	-2.9402E-07	-1.4235E-19	3.8215E-03	3.1655E-02	-2.5768E-02	-1.2475E-14
21.170	-2.3740E-07	-1.2130E-19	4.1692E-03	2.4861E-02	-2.1085E-02	-1.0774E-14
21.460	-1.8249E-07	-9.7655E-20	1.0488E-02	1.9422E-02	-1.6423E-02	-8.7883E-15
21.750	-1.3181E-07	-7.3468E-20	1.5428E-02	1.5298E-02	-1.2017E-02	-6.6980E-15
22.040	-8.7340E-08	-5.0507E-20	1.9359E-02	1.2386E-02	-8.0655E-03	-4.6641E-15
22.330	-5.0639E-08	-3.0313E-20	2.2615E-02	1.0531E-02	-4.7360E-03	-2.8350E-15
22.620	-2.2999E-08	-1.4273E-20	2.5476E-02	9.5284E-03	-2.1780E-03	-1.3516E-15
22.910	-5.5642E-09	-3.6736E-21	2.8151E-02	1.9599E-02	-0.1991	-1.3143E-13
23.200	5.9089E-10	-1.4113E-21	1.4093E-02	4.3461E-02	3.4469E-02	-8.2327E-14
23.490	1.0971E-09	-3.8215E-21	2.9415E-03	2.5587E-02	8.8745E-02	-3.0912E-13
23.780	4.2401E-10	-1.5594E-21	7.4624E-04	6.3586E-03	4.3862E-02	-1.6131E-13
24.070	5.0009E-11	-2.0826E-22	7.4613E-04	9.1405E-04	6.3011E-03	-2.6241E-14
24.360	-2.5098E-11	-1.4082E-23	2.1579E-04	1.2880E-03	-3.7285E-03	-2.0920E-15
24.650	-1.3764E-11	-8.4306E-24	9.1682E-07	4.0603E-04	-2.3552E-03	-1.4426E-15
24.940	-2.8001E-12	-1.8557E-24	1.9694E-05	1.1660E-05	-3.6588E-04	-2.4247E-16
25.230	2.7400E-13	-7.3104E-25	7.7031E-06	3.3070E-05	5.6991E-05	-1.5206E-16
25.520	2.6032E-13	-9.3069E-25	5.1222E-07	1.4026E-05	7.4278E-05	-2.6556E-16
25.810	4.1125E-14	-1.6134E-25	4.3177E-07	1.0927E-06	1.4915E-05	-5.8514E-17
26.100	-5.1032E-15	-2.6305E-27	1.2149E-07	7.4431E-07	-2.2454E-06	-1.1574E-18
26.390	-2.6656E-15	-1.6432E-27	5.6678E-11	2.1887E-07	-1.3790E-06	-8.5009E-19

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26.680	-2.0307E-16	-1.4539E-28	5.4549E-09	1.5238E-09	-1.2076E-07	-8.6461E-20
26.970	7.3593E-17	-2.4973E-28	8.2619E-10	9.5580E-09	4.4156E-08	-1.4984E-19
27.260	1.8991E-17	-7.1063E-29	8.8802E-11	1.5032E-09	1.1394E-08	-4.2638E-20
27.550	-1.8938E-20	-9.3158E-31	4.5641E-11	1.4724E-10	-1.1363E-11	-5.5895E-22
27.840	-7.4499E-19	-4.4687E-31	3.3933E-12	8.0885E-11	-4.4699E-10	-2.6812E-22
28.130	-1.1137E-19	-7.3387E-32	1.2726E-12	6.4091E-12	-6.6825E-11	-4.4032E-23
28.420	1.2397E-20	-3.8027E-32	3.2377E-13	2.1927E-12	7.4384E-12	-2.2816E-23
28.710	6.3836E-21	-2.3262E-32	8.2527E-16	5.5823E-13	3.8302E-12	-1.3957E-23
29.000	3.2797E-23	-7.6521E-34	0.0000	0.0000	1.9678E-14	-4.5912E-25

* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -8.5878E-04 0.011642 -2.6552E-14 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -354.03 111.57 -5.4897E-10 -8.9377E-11 -1.9704E-10 78.846

STR, KN/ M**2
 4935.3



THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -8.5878E-04 0.011642 -2.6552E-14 -6.1614E-15 -2.2431E-17 -2.9595E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -354.03 111.57 -5.4897E-10 -8.9377E-11 -1.9704E-10 78.846

STR, KN/ M**2

4935.3

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1642E-02	-2.6552E-14	78.846	111.55	0.0000	0.0000
0.2900	1.0772E-02	-2.6313E-14	46.792	110.39	8.1146	-1.9807E-11
0.5800	9.8823E-03	-2.5672E-14	15.427	106.74	17.083	-4.4350E-11
0.8700	8.9860E-03	-2.4692E-14	13.496	100.59	25.314	-6.9526E-11
1.1600	8.0952E-03	-2.3435E-14	41.370	92.238	32.270	-9.3387E-11
1.4500	7.2208E-03	-2.1960E-14	66.536	82.144	37.335	-1.1352E-10
1.7400	6.3732E-03	-2.0322E-14	88.571	70.900	40.211	-1.2822E-10
2.0300	5.5600E-03	-1.8575E-14	107.24	59.089	41.245	-1.3779E-10
2.3200	4.7898E-03	-1.6764E-14	122.45	47.787	36.695	-1.2843E-10
2.6100	4.0689E-03	-1.4935E-14	134.59	37.006	37.658	-1.3822E-10
2.9000	3.4022E-03	-1.3125E-14	143.59	26.095	37.590	-1.4501E-10

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3.1900	2.7931E-03	-1.1368E-14	149.44	14.966	39.164	-1.5940E-10
3.4800	2.2441E-03	-9.6941E-15	152.01	3.4286	40.402	-1.7453E-10
3.7700	1.7561E-03	-8.1267E-15	151.21	8.1159	40.871	-1.8913E-10
4.0600	1.3288E-03	-6.6840E-15	146.98	18.888	33.247	-1.6723E-10
4.3500	9.6048E-04	-5.3776E-15	139.97	27.463	25.708	-1.4394E-10
4.6400	6.4826E-04	-4.2135E-15	130.81	33.898	18.484	-1.2014E-10
4.9300	3.8848E-04	-3.1928E-15	120.11	38.308	11.755	-9.6613E-11
5.2200	1.7683E-04	-2.3129E-15	108.42	40.859	5.6598	-7.4026E-11
5.5100	8.6362E-06	-1.5675E-15	96.271	41.745	0.2915	-5.2908E-11
5.8000	-1.2100E-04	-9.4828E-16	84.083	41.187	-4.2953	-3.3663E-11
6.0900	-2.1695E-04	-4.4481E-16	72.268	39.697	-6.0996	-1.2506E-11
6.3800	-2.8394E-04	-4.5712E-17	60.976	37.620	-8.3236	-1.3400E-12
6.6700	-3.2652E-04	-4.4140E-17	50.392	34.980	-9.9629	-1.3468E-12
6.9600	-3.4890E-04	-8.2446E-17	40.652	31.941	-11.064	-2.6144E-12
7.2500	-3.5500E-04	-1.0903E-16	31.849	28.651	-11.683	-3.5882E-12
7.5400	-3.4834E-04	-1.2577E-16	24.033	25.237	-11.881	-4.2899E-12
7.8300	-3.3206E-04	-1.3442E-16	17.220	21.815	-11.724	-4.7459E-12
8.1200	-3.0887E-04	-1.3658E-16	11.394	18.480	-11.275	-4.9857E-12
8.4100	-2.8112E-04	-1.3369E-16	6.5190	15.308	-10.599	-5.0404E-12
8.7000	-2.5076E-04	-1.2703E-16	2.5359	12.356	-9.7551	-4.9415E-12
8.9900	-2.1939E-04	-1.1770E-16	0.5848	9.6663	-8.7975	-4.7198E-12
9.2800	-1.8828E-04	-1.0665E-16	3.0126	7.2633	-7.7757	-4.4044E-12
9.5700	-1.5842E-04	-9.4649E-17	4.7870	5.1602	-6.7323	-4.0223E-12
9.8600	-1.3048E-04	-8.2332E-17	5.9958	3.3582	-5.7011	-3.5975E-12
10.150	-1.0493E-04	-7.0193E-17	6.7260	1.8498	-4.7109	-3.1512E-12
10.440	-8.2087E-05	-5.8605E-17	7.0610	0.6196	-3.7835	-2.7012E-12
10.730	-6.2068E-05	-4.7837E-17	7.0788	0.3398	-2.9352	-2.2622E-12
11.020	-4.4885E-05	-3.8065E-17	6.8508	1.0810	-2.1764	-1.8457E-12
11.310	-3.0447E-05	-2.9389E-17	6.4407	1.6159	-1.5128	-1.4603E-12
11.600	-1.8588E-05	-2.1850E-17	5.9042	1.9724	-0.9459	-1.1118E-12
11.890	-9.0952E-06	-1.5436E-17	5.2891	2.1783	-0.4737	-8.0395E-13

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12.180	-1.7209E-06	-1.0099E-17	4.6349	2.2603	-9.1692E-02	-5.3812E-13
12.470	3.7968E-06	-5.7664E-18	3.9732	2.2436	0.2069	-3.1416E-13
12.760	7.7226E-06	-2.3441E-18	3.3289	2.1512	0.4300	-1.3052E-13
13.050	1.0314E-05	-1.6209E-18	2.7215	2.0038	0.5867	-9.2194E-14
13.340	1.1815E-05	-1.2906E-17	2.1641	1.8192	0.6862	-7.4952E-13
13.630	1.2448E-05	-2.0687E-17	1.6650	1.6128	0.7378	-1.2262E-12
13.920	1.2413E-05	-2.5569E-17	1.2282	1.3969	0.7506	-1.5463E-12
14.210	1.1884E-05	-2.8113E-17	0.8549	1.1815	0.7329	-1.7338E-12
14.500	1.1012E-05	-2.8828E-17	0.5434	0.9745	0.6923	-1.8124E-12
14.790	9.9215E-06	-2.8164E-17	0.2903	0.7818	0.6357	-1.8044E-12
15.080	8.7135E-06	-2.6511E-17	9.0790E-02	0.6071	0.5687	-1.7303E-12
15.370	7.4683E-06	-2.4197E-17	5.9036E-02	0.4526	0.4964	-1.6083E-12
15.660	6.2457E-06	-2.1492E-17	0.1693	0.3193	0.4226	-1.4542E-12
15.950	5.0904E-06	-1.8612E-17	0.2440	0.2072	0.3505	-1.2817E-12
16.240	4.0334E-06	-1.5724E-17	0.2892	0.1154	0.2826	-1.1016E-12
16.530	3.0926E-06	-1.2951E-17	0.3107	4.2478E-02	0.2204	-9.2285E-13
16.820	2.2767E-06	-1.0379E-17	0.3137	1.2714E-02	0.1650	-7.5203E-13
17.110	1.5866E-06	-8.0641E-18	0.3028	5.3674E-02	0.1169	-5.9397E-13
17.400	1.0181E-06	-6.0363E-18	0.2821	8.1765E-02	7.6208E-02	-4.5184E-13
17.690	5.6266E-07	-4.3055E-18	0.2550	9.9110E-02	4.2791E-02	-3.2744E-13
17.980	2.0946E-07	-2.8667E-18	0.2243	0.1077	1.6181E-02	-2.2146E-13
18.270	-5.3848E-08	-1.7039E-18	0.1923	0.1096	-4.2244E-03	-1.3367E-13
18.560	-2.4012E-07	-7.9345E-19	0.1606	0.1062	-1.9125E-02	-6.3196E-14
18.850	-3.6207E-07	-1.0750E-19	0.1305	9.9271E-02	-2.9272E-02	-8.6909E-15
19.140	-4.3175E-07	-6.4924E-20	0.1029	8.9937E-02	-3.5423E-02	-5.3267E-15
19.430	-4.6023E-07	-1.2047E-19	7.8231E-02	7.9283E-02	-3.8311E-02	-1.0028E-14
19.720	-4.5737E-07	-1.5315E-19	5.6840E-02	6.8157E-02	-3.8621E-02	-1.2933E-14
20.010	-4.3175E-07	-1.6759E-19	3.8705E-02	5.7204E-02	-3.6975E-02	-1.4353E-14
20.300	-3.9061E-07	-1.6797E-19	2.3684E-02	4.6924E-02	-3.3920E-02	-1.4586E-14
20.590	-3.3999E-07	-1.5796E-19	1.1520E-02	3.7666E-02	-2.9932E-02	-1.3906E-14
20.880	-2.8476E-07	-1.4078E-19	1.8748E-03	2.9641E-02	-2.5410E-02	-1.2562E-14

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21.170	-2.2877E-07	-1.1915E-19	5.5507E-03	2.2957E-02	-2.0688E-02	-1.0775E-14
21.460	-1.7504E-07	-9.5375E-20	1.1335E-02	1.7631E-02	-1.6039E-02	-8.7393E-15
21.750	-1.2587E-07	-7.1400E-20	1.5772E-02	1.3611E-02	-1.1685E-02	-6.6281E-15
22.040	-8.3066E-08	-4.8872E-20	1.9228E-02	1.0785E-02	-7.8106E-03	-4.5954E-15
22.330	-4.7963E-08	-2.9215E-20	2.2031E-02	8.9903E-03	-4.5674E-03	-2.7821E-15
22.620	-2.1686E-08	-1.3700E-20	2.4452E-02	8.0253E-03	-2.0911E-03	-1.3210E-15
22.910	-5.2038E-09	-3.5027E-21	2.6692E-02	1.9221E-02	-0.1862	-1.2532E-13
23.200	5.8183E-10	-1.4347E-21	1.3288E-02	4.1286E-02	3.3940E-02	-8.3694E-14
23.490	1.0408E-09	-3.6889E-21	2.7442E-03	2.4150E-02	8.4188E-02	-2.9839E-13
23.780	3.9955E-10	-1.4961E-21	7.1866E-04	5.9497E-03	4.1331E-02	-1.5476E-13
24.070	4.6329E-11	-1.9724E-22	7.0630E-04	8.8890E-04	5.8374E-03	-2.4853E-14
24.360	-2.3951E-11	-1.3676E-23	2.0279E-04	1.2202E-03	-3.5581E-03	-2.0316E-15
24.650	-1.3000E-11	-8.1041E-24	1.4203E-06	3.8192E-04	-2.2244E-03	-1.3867E-15
24.940	-2.6174E-12	-1.7686E-24	1.8713E-05	1.0009E-05	-3.4200E-04	-2.3110E-16
25.230	2.6728E-13	-7.3067E-25	7.2482E-06	3.1460E-05	5.5594E-05	-1.5198E-16
25.520	2.4617E-13	-8.9574E-25	4.6519E-07	1.3205E-05	7.0241E-05	-2.5558E-16
25.810	3.8423E-14	-1.5373E-25	4.1042E-07	9.9906E-07	1.3935E-05	-5.5754E-17
26.100	-4.9148E-15	-2.5819E-27	1.1418E-07	7.0791E-07	-2.1625E-06	-1.1360E-18
26.390	-2.5155E-15	-1.5784E-27	1.7297E-10	2.0576E-07	-1.3013E-06	-8.1658E-19
26.680	-1.8773E-16	-1.3750E-28	5.1652E-09	1.0152E-09	-1.1164E-07	-8.1765E-20
26.970	7.0031E-17	-2.4180E-28	7.7292E-10	9.0530E-09	4.2018E-08	-1.4508E-19
27.260	1.7855E-17	-6.8050E-29	8.5509E-11	1.4069E-09	1.0713E-08	-4.0830E-20
27.550	-5.0539E-20	-7.8821E-31	4.3063E-11	1.4200E-10	-3.0323E-11	-4.7293E-22
27.840	-7.0544E-19	-4.3058E-31	3.1346E-12	7.6334E-11	-4.2326E-10	-2.5835E-22
28.130	-1.0419E-19	-6.9988E-32	1.2108E-12	5.9297E-12	-6.2514E-11	-4.1993E-23
28.420	1.1931E-20	-3.7285E-32	3.0438E-13	2.0872E-12	7.1585E-12	-2.2371E-23
28.710	6.0223E-21	-2.2340E-32	2.4660E-16	5.2480E-13	3.6134E-12	-1.3404E-23
29.000	9.8563E-24	-6.6619E-34	0.0000	0.0000	5.9138E-15	-3.9971E-25

* PILE GROUP * 6



* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-8.5878E-04	0.011642	-2.6552E-14	-6.1614E-15	-2.2431E-17	-2.9595E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
-354.03	140.92	-6.5054E-10	-8.9377E-11	-2.2028E-10	114.48

STR, KN/ M**2

6615.8

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-8.5878E-04	0.011642	-2.6552E-14	-6.1614E-15	-2.2431E-17	-2.9595E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-354.03	140.92	-6.5054E-10	-8.9377E-11	-2.2028E-10	114.48

STR, KN/ M**2

6615.8



* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1642E-02	-2.6552E-14	114.48	140.89	0.0000	0.0000
0.2900	1.0765E-02	-2.6286E-14	73.919	139.32	11.037	-2.6930E-11
0.5800	9.8572E-03	-2.5574E-14	34.295	134.35	23.192	-6.0133E-11
0.8700	8.9353E-03	-2.4492E-14	2.3493	126.02	34.260	-9.3863E-11
1.1600	8.0143E-03	-2.3112E-14	37.216	114.74	43.484	-1.2536E-10
1.4500	7.1083E-03	-2.1504E-14	68.430	101.19	50.024	-1.5130E-10
1.7400	6.2297E-03	-1.9732E-14	95.448	86.174	53.500	-1.6945E-10
2.0300	5.3885E-03	-1.7857E-14	117.98	70.527	54.407	-1.8030E-10
2.3200	4.5945E-03	-1.5932E-14	135.95	55.692	47.908	-1.6613E-10
2.6100	3.8552E-03	-1.4006E-14	149.91	41.703	48.563	-1.7643E-10
2.9000	3.1761E-03	-1.2121E-14	159.81	27.736	47.763	-1.8228E-10
3.1900	2.5613E-03	-1.0314E-14	165.71	13.723	48.880	-1.9684E-10
3.4800	2.0129E-03	-8.6155E-15	167.52	0.2475	49.325	-2.1112E-10
3.7700	1.5319E-03	-7.0489E-15	165.20	14.457	48.524	-2.2328E-10
4.0600	1.1171E-03	-5.6310E-15	158.82	27.038	38.040	-1.9176E-10
4.3500	7.6594E-04	-4.3711E-15	149.25	36.630	27.904	-1.5924E-10
4.6400	4.7467E-04	-3.2721E-15	137.34	43.378	18.421	-1.2699E-10
4.9300	2.3845E-04	-2.3314E-15	123.90	47.502	9.8205	-9.6020E-11
5.2200	5.1873E-05	-1.5422E-15	109.64	49.281	2.2597	-6.7181E-11
5.5100	-9.0776E-05	-8.9439E-16	95.183	49.030	-4.1703	-4.1088E-11
5.8000	-1.9530E-04	-3.7580E-16	81.082	47.080	-9.4361	-1.8158E-11
6.0900	-2.6733E-04	-4.5250E-18	67.786	44.246	-10.230	-1.7316E-13
6.3800	-3.1222E-04	-5.5687E-17	55.359	40.970	-12.457	-2.2219E-12

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6.6700	-3.3492E-04	-9.2071E-17	43.987	37.158	-13.909	-3.8237E-12
6.9600	-3.4001E-04	-1.1600E-16	33.791	33.023	-14.675	-5.0068E-12
7.2500	-3.3156E-04	-1.2968E-16	24.835	28.742	-14.851	-5.8085E-12
7.5400	-3.1316E-04	-1.3512E-16	17.130	24.481	-14.538	-6.2727E-12
7.8300	-2.8790E-04	-1.3416E-16	10.651	20.367	-13.835	-6.4471E-12
8.1200	-2.5837E-04	-1.2842E-16	5.3363	16.499	-12.837	-6.3806E-12
8.4100	-2.2670E-04	-1.1929E-16	1.1021	12.951	-11.634	-6.1217E-12
8.7000	-1.9459E-04	-1.0796E-16	2.1151	9.7703	-10.303	-5.7163E-12
8.9900	-1.6339E-04	-9.5404E-17	4.5100	6.9836	-8.9177	-5.2071E-12
9.2800	-1.3400E-04	-8.2406E-17	6.1557	4.5993	-7.5320	-4.6321E-12
9.5700	-1.0707E-04	-6.9576E-17	7.1687	2.6106	-6.1929	-4.0244E-12
9.8600	-8.3011E-05	-5.7365E-17	7.6620	0.9984	-4.9369	-3.4117E-12
10.150	-6.2023E-05	-4.6092E-17	7.7412	0.2509	-3.7898	-2.8164E-12
10.440	-4.4137E-05	-3.5958E-17	7.5027	1.2020	-2.7689	-2.2558E-12
10.730	-2.9256E-05	-2.7070E-17	7.0324	1.8765	-1.8831	-1.7424E-12
11.020	-1.7192E-05	-1.9462E-17	6.4048	2.3141	-1.1346	-1.2844E-12
11.310	-7.6940E-06	-1.3105E-17	5.6826	2.5540	-0.5203	-8.8626E-13
11.600	-4.7243E-07	-7.9303E-18	4.9175	2.6342	-3.2720E-02	-5.4925E-13
11.890	4.7792E-06	-3.8383E-18	4.1495	2.5898	0.3388	-2.7210E-13
12.180	8.3682E-06	-7.1096E-19	3.4106	2.4527	0.6069	-5.1560E-14
12.470	1.0590E-05	-9.3332E-18	2.7234	2.2509	0.7853	-6.9209E-13
12.760	1.1720E-05	-1.8651E-17	2.1030	2.0082	0.8882	-1.4134E-12
13.050	1.2007E-05	-2.4520E-17	1.5577	1.7446	0.9295	-1.8982E-12
13.340	1.1668E-05	-2.7626E-17	1.0910	1.4759	0.9223	-2.1837E-12
13.630	1.0892E-05	-2.8591E-17	0.7021	1.2144	0.8787	-2.3067E-12
13.920	9.8328E-06	-2.7965E-17	0.3873	0.9694	0.8093	-2.3017E-12
14.210	8.6178E-06	-2.6215E-17	0.1407	0.7470	0.7234	-2.2005E-12
14.500	7.3455E-06	-2.3736E-17	4.3221E-02	0.5509	0.6286	-2.0311E-12
14.790	6.0894E-06	-2.0845E-17	0.1764	0.3827	0.5310	-1.8178E-12
15.080	4.9037E-06	-1.7793E-17	0.2649	0.2426	0.4356	-1.5806E-12
15.370	3.8247E-06	-1.4766E-17	0.3169	0.1293	0.3460	-1.3358E-12

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15.660	2.8730E-06	-1.1902E-17	0.3397	4.0717E-02	0.2646	-1.0961E-12
15.950	2.0577E-06	-9.2888E-18	0.3403	2.4917E-02	0.1929	-8.7061E-13
16.240	1.3789E-06	-6.9813E-18	0.3247	7.2057E-02	0.1315	-6.6572E-13
16.530	8.3045E-07	-5.0031E-18	0.2981	0.1029	8.0545E-02	-4.8525E-13
16.820	4.0150E-07	-3.3559E-18	0.2647	0.1204	3.9596E-02	-3.3096E-13
17.110	7.8638E-08	-2.0249E-18	0.2280	0.1274	7.8835E-03	-2.0300E-13
17.400	-1.5287E-07	-9.8461E-19	0.1906	0.1264	-1.5575E-02	-1.0031E-13
17.690	-3.0803E-07	-2.0232E-19	0.1545	0.1196	-3.1886E-02	-2.0943E-14
17.980	-4.0131E-07	-6.0492E-20	0.1211	0.1089	-4.2195E-02	-6.3605E-15
18.270	-4.4608E-07	-1.2402E-19	9.1242E-02	9.5883E-02	-4.7631E-02	-1.3242E-14
18.560	-4.5430E-07	-1.6206E-19	6.5423E-02	8.1869E-02	-4.9249E-02	-1.7569E-14
18.850	-4.3631E-07	-1.8014E-19	4.3754E-02	6.7779E-02	-4.8011E-02	-1.9823E-14
19.140	-4.0079E-07	-1.8320E-19	2.6129E-02	5.4328E-02	-4.4756E-02	-2.0458E-14
19.430	-3.5481E-07	-1.7549E-19	1.2272E-02	4.2009E-02	-4.0200E-02	-1.9884E-14
19.720	-3.0391E-07	-1.6060E-19	1.7974E-03	3.1116E-02	-3.4929E-02	-1.8458E-14
20.010	-2.5229E-07	-1.4142E-19	5.6594E-03	2.1787E-02	-2.9408E-02	-1.6484E-14
20.300	-2.0302E-07	-1.2023E-19	1.0738E-02	1.4044E-02	-2.3996E-02	-1.4210E-14
20.590	-1.5807E-07	-9.8753E-20	1.3800E-02	7.8208E-03	-1.8940E-02	-1.1833E-14
20.880	-1.1864E-07	-7.8240E-20	1.5270E-02	2.9885E-03	-1.4410E-02	-9.5027E-15
21.170	-8.5334E-08	-5.9534E-20	1.5532E-02	5.8179E-04	-1.0504E-02	-7.3279E-15
21.460	-5.8248E-08	-4.3162E-20	1.4912E-02	3.1582E-03	-7.2646E-03	-5.3831E-15
21.750	-3.7136E-08	-2.9403E-20	1.3683E-02	4.8919E-03	-4.6921E-03	-3.7151E-15
22.040	-2.1505E-08	-1.8358E-20	1.2061E-02	5.9713E-03	-2.7522E-03	-2.3494E-15
22.330	-1.0705E-08	-9.9996E-21	1.0204E-02	6.5716E-03	-1.3875E-03	-1.2961E-15
22.620	-3.9954E-09	-4.2240E-21	8.2297E-03	6.8488E-03	-5.2437E-04	-5.5437E-16
22.910	-5.8830E-10	-8.8326E-22	6.2130E-03	9.9736E-03	-2.1048E-02	-3.1601E-14
23.200	3.2141E-10	-1.1133E-21	2.4435E-03	1.0279E-02	1.8749E-02	-6.4942E-14
23.490	2.4676E-10	-1.3115E-21	2.5118E-04	4.6658E-03	1.9960E-02	-1.0609E-13
23.780	7.1489E-11	-4.5542E-22	2.6252E-04	6.9928E-04	7.3951E-03	-4.7110E-14
24.070	1.3828E-12	-3.8523E-23	1.5432E-04	3.9827E-04	1.7424E-04	-4.8539E-15
24.360	-6.9182E-12	-5.5467E-24	3.1494E-05	2.7486E-04	-1.0277E-03	-8.2400E-16

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24.650	-2.5819E-12	-2.5979E-24	5.0882E-06	6.2402E-05	-4.4180E-04	-4.4452E-16
24.940	-2.8404E-13	-4.4008E-25	4.6967E-06	6.6805E-06	-3.7114E-05	-5.7504E-17
25.230	1.2670E-13	-4.6801E-25	1.2058E-06	8.2158E-06	2.6354E-05	-9.7345E-17
25.520	5.1617E-14	-2.9625E-25	6.7830E-08	2.2589E-06	1.4728E-05	-8.4531E-17
25.810	4.0098E-15	-3.7870E-26	1.0434E-07	8.6035E-08	1.4542E-06	-1.3734E-17
26.100	-1.8030E-15	-1.2728E-27	1.7802E-08	1.8352E-07	-7.9331E-07	-5.6002E-19
26.390	-4.8187E-16	-4.9644E-28	2.1001E-09	3.2663E-08	-2.4929E-07	-2.5683E-19
26.680	-2.0499E-18	-2.5118E-29	1.1422E-09	3.4646E-09	-1.2190E-09	-1.4937E-20
26.970	1.8467E-17	-9.2101E-29	8.9605E-11	2.0230E-09	1.1080E-08	-5.5260E-20
27.260	2.8482E-18	-1.9635E-29	3.1147E-11	1.6861E-10	1.7089E-09	-1.1781E-20
27.550	-2.9310E-19	-1.0928E-31	8.1853E-12	5.3676E-11	-1.7586E-10	-6.5565E-23
27.840	-1.5593E-19	-1.4654E-31	1.4224E-14	1.4660E-11	-9.3559E-11	-8.7924E-23
28.130	-1.2024E-20	-1.7771E-32	3.1762E-13	1.0791E-13	-7.2143E-12	-1.0662E-23
28.420	4.2889E-21	-1.8058E-32	4.8312E-14	5.5549E-13	2.5734E-12	-1.0835E-23
28.710	1.1386E-21	-6.9906E-33	4.5595E-15	8.3299E-14	6.8314E-13	-4.1944E-24
29.000	-1.8111E-22	-6.2155E-35	0.0000	0.0000	-1.0867E-13	-3.7293E-26

* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03



FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
1026.1 185.96 -1.0663E-10 -8.9377E-11 -1.1739E-09 171.69

STR, KN/ M**2

1.1769E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1026.1 185.96 -1.0663E-10 -8.9377E-11 -1.1739E-09 171.69

STR, KN/ M**2

1.1769E+04

* EFFECTS FOR LATERALLY LOADED PILE *

Table with 7 columns: x, DISPL., DISPL., MOMENT, SHEAR, SOIL REACT, SOIL REACT. Rows show data for different pile depths (0.0000, 0.2900, 0.5800, 0.8700).



1.1600	7.8872E-03	-2.9965E-15	32.784	147.29	63.788	-2.4234E-11
1.4500	6.9327E-03	-2.7596E-15	73.890	127.49	72.743	-2.8956E-11
1.7400	6.0077E-03	-2.5012E-15	108.85	105.78	76.951	-3.2037E-11
2.0300	5.1258E-03	-2.2308E-15	137.29	83.429	77.211	-3.3601E-11
2.3200	4.2986E-03	-1.9567E-15	159.18	62.534	66.886	-3.0441E-11
2.6100	3.5355E-03	-1.6863E-15	175.38	43.195	66.490	-3.1706E-11
2.9000	2.8428E-03	-1.4258E-15	185.92	24.293	63.864	-3.2022E-11
3.1900	2.2247E-03	-1.1806E-15	191.00	5.8266	63.493	-3.3677E-11
3.4800	1.6833E-03	-9.5462E-16	190.66	12.047	61.782	-3.5011E-11
3.7700	1.2185E-03	-7.5092E-16	185.05	29.370	57.505	-3.5440E-11
4.0600	8.2779E-04	-5.7127E-16	174.51	43.835	42.000	-2.8985E-11
4.3500	5.0709E-04	-4.1627E-16	160.35	53.953	27.524	-2.2595E-11
4.6400	2.5067E-04	-2.8551E-16	143.81	60.082	14.494	-1.6508E-11
4.9300	5.1872E-05	-1.7781E-16	125.97	62.679	3.1830	-1.0911E-11
5.2200	-9.6456E-05	-9.1446E-17	107.79	62.264	-6.2604	-5.9353E-12
5.5100	-2.0160E-04	-2.4293E-17	90.080	59.383	-13.799	-1.6628E-12
5.8000	-2.7066E-04	-1.5326E-16	73.493	54.582	-19.485	-1.1033E-11
6.0900	-3.1028E-04	-3.6378E-16	58.514	49.209	-17.691	-2.0741E-11
6.3800	-3.2646E-04	-5.0259E-16	44.999	43.843	-19.407	-2.9877E-11
6.6700	-3.2461E-04	-5.8273E-16	33.097	38.123	-20.086	-3.6058E-11
6.9600	-3.0951E-04	-6.1628E-16	22.870	32.324	-19.904	-3.9631E-11
7.2500	-2.8524E-04	-6.1409E-16	14.308	26.678	-19.036	-4.0983E-11
7.5400	-2.5524E-04	-5.8571E-16	7.3404	21.358	-17.655	-4.0512E-11
7.8300	-2.2230E-04	-5.3933E-16	1.8548	16.490	-15.916	-3.8615E-11
8.1200	-1.8862E-04	-4.8176E-16	2.2530	12.157	-13.963	-3.5663E-11
8.4100	-1.5590E-04	-4.1852E-16	5.2318	8.4048	-11.920	-3.1999E-11
8.7000	-1.2527E-04	-3.5394E-16	7.2060	5.2447	-9.8827	-2.7922E-11
8.9900	-9.7535E-05	-2.9127E-16	8.3461	2.6634	-7.9314	-2.3686E-11
9.2800	-7.3139E-05	-2.3281E-16	8.8157	0.6274	-6.1253	-1.9498E-11
9.5700	-5.2274E-05	-1.8007E-16	8.7666	0.8964	-4.5049	-1.5519E-11
9.8600	-3.4921E-05	-1.3390E-16	8.3350	1.9983	-3.0944	-1.1865E-11

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10.150	-2.0907E-05	-9.4613E-17	7.6398	2.7230	-1.9034	-8.6136E-12
10.440	-9.9541E-06	-6.2133E-17	6.7813	3.1339	-0.9304	-5.8076E-12
10.730	-1.7173E-06	-3.6085E-17	5.8418	3.2927	-0.1647	-3.4605E-12
11.020	4.1793E-06	-1.5895E-17	4.8853	3.2570	0.4109	-1.5629E-12
11.310	8.1185E-06	-8.7166E-19	3.9611	3.0788	0.8180	-8.7829E-14
11.600	1.0470E-05	-1.6497E-18	3.1044	2.8035	1.0804	-1.7023E-13
11.890	1.1578E-05	-2.8274E-18	2.3375	2.4695	1.2228	-2.9864E-13
12.180	1.1747E-05	-3.5042E-18	1.6728	2.1082	1.2693	-3.7863E-13
12.470	1.1246E-05	-3.7922E-18	1.1144	1.7435	1.2424	-4.1897E-13
12.760	1.0296E-05	-3.7912E-18	0.6601	1.3944	1.1626	-4.2807E-13
13.050	9.0818E-06	-3.5867E-18	0.3033	1.0737	1.0475	-4.1369E-13
13.340	7.7446E-06	-3.2499E-18	3.4643E-02	0.7895	0.9121	-3.8275E-13
13.630	6.3923E-06	-2.8384E-18	0.1556	0.5458	0.7684	-3.4119E-13
13.920	5.1012E-06	-2.3966E-18	0.2832	0.3436	0.6256	-2.9391E-13
14.210	3.9241E-06	-1.9577E-18	0.3581	0.1818	0.4908	-2.4483E-13
14.500	2.8909E-06	-1.5447E-18	0.3915	5.7173E-02	0.3686	-1.9694E-13
14.790	2.0150E-06	-1.1725E-18	0.3937	3.3427E-02	0.2618	-1.5234E-13
15.080	1.2969E-06	-8.4944E-19	0.3737	9.6414E-02	0.1717	-1.1243E-13
15.370	7.2883E-07	-5.7855E-19	0.3391	0.1357	9.8235E-02	-7.7980E-14
15.660	2.9668E-07	-3.5914E-19	0.2961	0.1560	4.0709E-02	-4.9279E-14
15.950	-1.6815E-08	-1.8781E-19	0.2494	0.1616	-2.3481E-03	-2.6227E-14
16.240	-2.3037E-07	-5.9543E-20	0.2028	0.1566	-3.2729E-02	-8.4596E-15
16.530	-3.6266E-07	-1.8706E-19	0.1589	0.1444	-5.2406E-02	-2.7031E-14
16.820	-4.3131E-07	-5.4217E-19	0.1192	0.1276	-6.3375E-02	-7.9665E-14
17.110	-4.5219E-07	-7.5156E-19	8.4898E-02	0.1087	-6.7541E-02	-1.1226E-13
17.400	-4.3905E-07	-8.4856E-19	5.6195E-02	8.9265E-02	-6.6647E-02	-1.2881E-13
17.690	-4.0341E-07	-8.6281E-19	3.3073E-02	7.0580E-02	-6.2217E-02	-1.3307E-13
17.980	-3.5452E-07	-8.1962E-19	1.5171E-02	5.3505E-02	-5.5538E-02	-1.2840E-13
18.270	-2.9955E-07	-7.3984E-19	1.9324E-03	3.8542E-02	-4.7655E-02	-1.1770E-13
18.560	-2.4382E-07	-6.4002E-19	7.2171E-03	2.5922E-02	-3.9381E-02	-1.0338E-13
18.850	-1.9107E-07	-5.3276E-19	1.3149E-02	1.5672E-02	-3.1325E-02	-8.7344E-14

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19.140	-1.4358E-07	-4.2715E-19	1.6442E-02	7.6707E-03	-2.3889E-02	-7.1068E-14
19.430	-1.0268E-07	-3.2936E-19	1.7718E-02	1.6995E-03	-1.7334E-02	-5.5600E-14
19.720	-6.8884E-08	-2.4317E-19	1.7529E-02	2.4803E-03	-1.1796E-02	-4.1641E-14
20.010	-4.2106E-08	-1.7047E-19	1.6342E-02	5.2510E-03	-7.3125E-03	-2.9605E-14
20.300	-2.1874E-08	-1.1172E-19	1.4532E-02	6.8698E-03	-3.8520E-03	-1.9675E-14
20.590	-7.4638E-09	-6.6426E-20	1.2393E-02	7.6216E-03	-1.3325E-03	-1.1859E-14
20.880	1.9819E-09	-3.3381E-20	1.0136E-02	7.7628E-03	3.5865E-04	-6.0406E-15
21.170	7.3672E-09	-1.0996E-20	7.9024E-03	7.5149E-03	1.3511E-03	-2.0165E-15
21.460	9.5855E-09	-4.2552E-22	5.7802E-03	7.0607E-03	1.7812E-03	-7.9070E-17
21.750	9.4862E-09	-1.5381E-21	3.8063E-03	6.5435E-03	1.7858E-03	-2.8955E-16
22.040	7.8596E-09	-1.7810E-21	1.9814E-03	6.0672E-03	1.4987E-03	-3.3960E-16
22.330	5.4366E-09	-1.4607E-21	2.8222E-04	5.6977E-03	1.0499E-03	-2.8208E-16
22.620	2.8975E-09	-8.7252E-22	1.3214E-03	5.4632E-03	5.6659E-04	-1.7061E-16
22.910	8.8790E-10	-3.0235E-22	2.8840E-03	7.6826E-04	3.1767E-02	-1.0817E-14
23.200	3.3371E-11	-3.0342E-23	1.7738E-03	4.1153E-03	1.9466E-03	-1.7700E-15
23.490	-1.1045E-10	-1.6457E-22	4.9813E-04	3.1071E-03	-8.9346E-03	-1.3312E-14
23.780	-5.4475E-11	-9.7512E-23	2.8254E-05	9.9936E-04	-5.6352E-03	-1.0087E-14
24.070	-9.9020E-12	-2.1507E-23	8.1599E-05	2.7706E-06	-1.2476E-03	-2.7099E-15
24.360	1.9010E-12	-3.3588E-25	3.0088E-05	1.3672E-04	2.8241E-04	-4.9896E-17
24.650	1.6407E-12	-4.7646E-25	2.3142E-06	5.5058E-05	2.8075E-04	-8.1527E-17
24.940	4.5270E-13	-1.5505E-25	1.8468E-06	5.7725E-06	5.9153E-05	-2.0260E-17
25.230	4.3924E-15	-8.6723E-27	1.0339E-06	2.9399E-06	9.1361E-07	-1.8038E-18
25.520	-2.9647E-14	-4.8925E-26	1.4211E-07	1.8512E-06	-8.4592E-06	-1.3960E-17
25.810	-6.7256E-15	-1.3609E-26	3.9834E-08	2.7411E-07	-2.4391E-06	-4.9356E-18
26.100	1.9129E-16	-1.5941E-28	1.6906E-08	6.6882E-08	8.4168E-08	-7.0141E-20
26.390	3.2678E-16	-9.6677E-29	1.0486E-09	3.0165E-08	1.6905E-07	-5.0014E-20
26.680	4.1965E-17	-1.5712E-29	5.9011E-10	2.0326E-09	2.4955E-08	-9.3433E-21
26.970	-6.4759E-18	-8.3413E-30	1.3047E-10	1.0234E-09	-3.8855E-09	-5.0048E-21
27.260	-2.6150E-18	-4.8712E-30	3.4341E-12	2.3462E-10	-1.5690E-09	-2.9227E-21
27.550	-1.4034E-19	-4.0667E-31	5.6139E-12	4.7013E-12	-8.4202E-11	-2.4400E-22
27.840	8.0886E-20	-2.1909E-32	7.1009E-13	9.8735E-12	4.8532E-11	-1.3145E-23

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28.130	1.7647E-20	-5.9926E-33	1.1254E-13	1.3011E-12	1.0588E-11	-3.5956E-24
28.420	-5.1336E-22	-4.4563E-35	4.4629E-14	1.8988E-13	-3.0802E-13	-2.6738E-26
28.710	-7.8996E-22	-1.3808E-33	2.4228E-15	7.6947E-14	-4.7397E-13	-8.2850E-25
29.000	-9.6048E-23	-2.7206E-34	0.0000	0.0000	-5.7629E-14	-1.6323E-25

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1026.1 158.89 -9.4732E-11 -8.9377E-11 -1.0873E-09 141.17

STR, KN/ M**2

1.0330E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD



2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1026.1 158.89 -9.4732E-11 -8.9377E-11 -1.0873E-09 141.17

STR, KN/ M**2

1.0330E+04

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.1642E-02	-3.5079E-15	141.17	158.99	0.0000	0.0000
0.2900	1.0760E-02	-3.4720E-15	94.170	156.96	13.295	-4.2904E-12
0.5800	9.8384E-03	-3.3732E-15	48.251	150.99	27.900	-9.5658E-12
0.8700	8.8974E-03	-3.2223E-15	4.6589	140.97	41.124	-1.4894E-11
1.1600	7.9542E-03	-3.0300E-15	34.523	127.46	52.034	-1.9822E-11
1.4500	7.0248E-03	-2.8064E-15	70.346	111.27	59.622	-2.3819E-11
1.7400	6.1236E-03	-2.5609E-15	101.13	93.428	63.444	-2.6533E-11
2.0300	5.2622E-03	-2.3023E-15	126.53	74.931	64.116	-2.8050E-11
2.3200	4.4513E-03	-2.0382E-15	146.49	57.511	56.024	-2.5649E-11
2.6100	3.6993E-03	-1.7756E-15	161.67	41.228	56.275	-2.7004E-11
2.9000	3.0124E-03	-1.5203E-15	172.06	25.131	54.740	-2.7618E-11
3.1900	2.3945E-03	-1.2775E-15	177.76	9.1783	55.277	-2.9477E-11
3.4800	1.8480E-03	-1.0513E-15	178.75	6.5080	54.861	-3.1189E-11
3.7700	1.3732E-03	-8.4484E-16	175.04	22.088	52.422	-3.2252E-11
4.0600	9.6862E-04	-6.6010E-16	166.84	35.486	39.752	-2.7091E-11
4.3500	6.3096E-04	-4.9811E-16	155.22	45.301	27.702	-2.1869E-11



4.6400	3.5552E-04	-3.5889E-16	141.19	51.762	16.627	-1.6785E-11
4.9300	1.3666E-04	-2.4176E-16	125.70	55.189	6.7832	-1.2000E-11
5.2200	-3.1826E-05	-1.4544E-16	109.58	55.960	-1.6708	-7.6358E-12
5.5100	-1.5642E-04	-6.8246E-17	93.519	54.489	-8.6600	-3.7784E-12
5.8000	-2.4355E-04	-8.2186E-18	78.151	51.201	-14.182	-4.7857E-13
6.0900	-2.9937E-04	-2.1660E-16	63.944	47.161	-13.806	-9.9891E-12
6.3800	-3.2957E-04	-4.0481E-16	50.871	42.875	-15.847	-1.9465E-11
6.6700	-3.3940E-04	-5.2872E-16	39.110	38.125	-16.987	-2.6463E-11
6.9600	-3.3356E-04	-5.9982E-16	28.761	33.149	-17.350	-3.1200E-11
7.2500	-3.1620E-04	-6.2872E-16	19.859	28.159	-17.069	-3.3939E-11
7.5400	-2.9088E-04	-6.2500E-16	12.384	23.324	-16.274	-3.4967E-11
7.8300	-2.6060E-04	-5.9712E-16	6.2733	18.776	-15.092	-3.4581E-11
8.1200	-2.2781E-04	-5.5236E-16	1.4290	14.609	-13.641	-3.3075E-11
8.4100	-1.9445E-04	-4.9684E-16	2.2287	10.888	-12.026	-3.0727E-11
8.7000	-1.6204E-04	-4.3559E-16	4.9201	7.6450	-10.340	-2.7795E-11
8.9900	-1.3160E-04	-3.7259E-16	6.7400	4.8918	-8.6560	-2.4507E-11
9.2800	-1.0386E-04	-3.1087E-16	7.8291	2.6181	-7.0355	-2.1059E-11
9.5700	-7.9254E-05	-2.5268E-16	8.3233	0.7988	-5.5246	-1.7614E-11
9.8600	-5.7985E-05	-1.9951E-16	8.3494	0.5877	-4.1560	-1.4300E-11
10.150	-4.0060E-05	-1.5228E-16	8.0227	1.6180	-2.9500	-1.1214E-11
10.440	-2.5350E-05	-1.1143E-16	7.4445	2.3237	-1.9166	-8.4248E-12
10.730	-1.3621E-05	-7.7001E-17	6.7020	2.7548	-1.0566	-5.9730E-12
11.020	-4.5780E-06	-4.8759E-17	5.8680	2.9608	-0.3641	-3.8781E-12
11.310	2.1148E-06	-2.6265E-17	5.0008	2.9886	0.1724	-2.1406E-12
11.600	6.8043E-06	-8.9456E-18	4.1450	2.8813	0.5679	-7.4667E-13
11.890	9.8327E-06	-6.4988E-19	3.3356	2.6771	0.8401	-5.5522E-14
12.180	1.1524E-05	-2.1677E-18	2.5958	2.4093	1.0072	-1.8946E-13
12.470	1.2175E-05	-3.1441E-18	1.9399	2.1055	1.0880	-2.8097E-13
12.760	1.2047E-05	-3.6855E-18	1.3749	1.7881	1.1003	-3.3660E-13
13.050	1.1367E-05	-3.8894E-18	0.9020	1.4743	1.0605	-3.6287E-13
13.340	1.0325E-05	-3.8420E-18	0.5180	1.1776	0.9836	-3.6600E-13

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13.630	9.0743E-06	-3.6173E-18	0.2166	0.9069	0.8823	-3.5171E-13
13.920	7.7359E-06	-3.2772E-18	8.6389E-03	0.6676	0.7674	-3.2508E-13
14.210	6.4003E-06	-2.8716E-18	0.1717	0.4624	0.6475	-2.9049E-13
14.500	5.1326E-06	-2.4397E-18	0.2802	0.2918	0.5293	-2.5159E-13
14.790	3.9776E-06	-2.0106E-18	0.3440	0.1544	0.4180	-2.1130E-13
15.080	2.9610E-06	-1.6053E-18	0.3725	4.7827E-02	0.3170	-1.7186E-13
15.370	2.0939E-06	-1.2375E-18	0.3742	3.0459E-02	0.2283	-1.3492E-13
15.660	1.3770E-06	-9.1497E-19	0.3565	8.5846E-02	0.1528	-1.0155E-13
15.950	8.0305E-07	-6.4111E-19	0.3257	0.1213	9.0708E-02	-7.2417E-14
16.240	3.5972E-07	-4.1579E-19	0.2872	0.1405	4.1339E-02	-4.7783E-14
16.530	3.1498E-08	-2.3643E-19	0.2450	0.1472	3.6816E-03	-2.7636E-14
16.820	-1.9855E-07	-9.8834E-20	0.2024	0.1444	-2.3598E-02	-1.1747E-14
17.110	-3.4753E-07	-1.3594E-20	0.1616	0.1349	-4.1988E-02	-1.6424E-15
17.400	-4.3178E-07	-4.2543E-19	0.1243	0.1212	-5.3016E-02	-5.2236E-14
17.690	-4.6625E-07	-6.8722E-19	9.1349E-02	0.1052	-5.8164E-02	-8.5730E-14
17.980	-4.6412E-07	-8.3006E-19	6.3287E-02	8.8228E-02	-5.8811E-02	-1.0518E-13
18.270	-4.3664E-07	-8.8222E-19	4.0144E-02	7.1556E-02	-5.6188E-02	-1.1353E-13
18.560	-3.9308E-07	-8.6845E-19	2.1711E-02	5.5963E-02	-5.1355E-02	-1.1346E-13
18.850	-3.4082E-07	-8.0971E-19	7.5866E-03	4.1962E-02	-4.5198E-02	-1.0738E-13
19.140	-2.8553E-07	-7.2316E-19	2.6468E-03	2.9837E-02	-3.8426E-02	-9.7322E-14
19.430	-2.3137E-07	-6.2235E-19	9.7552E-03	1.9685E-02	-3.1592E-02	-8.4979E-14
19.720	-1.8116E-07	-5.1755E-19	1.4203E-02	1.1469E-02	-2.5093E-02	-7.1686E-14
20.010	-1.3665E-07	-4.1618E-19	1.6534E-02	5.0513E-03	-1.9196E-02	-5.8463E-14
20.300	-9.8762E-08	-3.2324E-19	1.7244E-02	2.3369E-04	-1.4068E-02	-4.6043E-14
20.590	-6.7780E-08	-2.4175E-19	1.6764E-02	3.1842E-03	-9.7880E-03	-3.4910E-14
20.880	-4.3515E-08	-1.7318E-19	1.5454E-02	5.5270E-03	-6.3694E-03	-2.5349E-14
21.170	-2.5440E-08	-1.1782E-19	1.3602E-02	6.9977E-03	-3.7738E-03	-1.7478E-14
21.460	-1.2815E-08	-7.5108E-20	1.1427E-02	7.8242E-03	-1.9261E-03	-1.1289E-14
21.750	-4.7663E-09	-4.3865E-20	9.0831E-03	8.2087E-03	-7.2577E-04	-6.6793E-15
22.040	-3.5762E-10	-2.2545E-20	6.6724E-03	8.3220E-03	-5.5157E-05	-3.4773E-15
22.330	1.3757E-09	-9.3690E-21	4.2549E-03	8.2988E-03	2.1489E-04	-1.4635E-15

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22.620	1.4006E-09	-2.4364E-21	1.8540E-03	8.2355E-03	2.2153E-04	-3.8536E-16
22.910	6.7754E-10	-3.4488E-23	5.1267E-04	4.6805E-03	2.4241E-02	-1.2339E-15
23.200	1.5964E-10	-8.8654E-23	8.5352E-04	1.7870E-04	9.3125E-03	-5.1715E-15
23.490	-1.6508E-11	-4.0088E-23	4.0973E-04	1.3447E-03	-1.3353E-03	-3.2426E-15
23.780	-2.7756E-11	-6.9907E-24	7.3445E-05	7.4586E-04	-2.8712E-03	-7.2315E-16
24.070	-9.5831E-12	-9.9489E-24	2.2876E-05	1.5849E-04	-1.2075E-03	-1.2536E-15
24.360	-7.6066E-13	-8.0337E-24	1.8371E-05	3.1948E-05	-1.1300E-04	-1.1935E-15
24.650	6.6811E-13	-1.8584E-24	4.3562E-06	3.1757E-05	1.1432E-04	-3.1800E-16
24.940	3.5182E-13	-2.1729E-26	4.6493E-08	8.5146E-06	4.5971E-05	-2.8392E-18
25.230	5.4036E-14	-3.3185E-26	5.8295E-07	1.9706E-07	1.1240E-05	-6.9025E-18
25.520	-1.0135E-14	-7.0433E-27	1.7183E-07	1.0049E-06	-2.8918E-06	-2.0097E-18
25.810	-5.3106E-15	-2.1597E-27	5.1221E-11	3.1398E-07	-1.9260E-06	-7.8325E-19
26.100	-5.0961E-16	-2.4677E-27	1.0283E-08	3.1704E-09	-2.2423E-07	-1.0858E-18
26.390	1.4571E-16	-3.2169E-28	1.8945E-09	1.7997E-08	7.5382E-08	-1.6642E-19
26.680	4.2119E-17	-8.1995E-30	1.5506E-10	3.4352E-09	2.5047E-08	-4.8760E-21
26.970	6.0037E-19	-3.3720E-30	9.8073E-11	2.5243E-10	3.6022E-10	-2.0232E-21
27.260	-1.5608E-18	-1.8676E-31	8.6465E-12	1.7345E-10	-9.3647E-10	-1.1206E-22
27.550	-2.5818E-19	-6.1072E-31	2.5247E-12	1.6149E-11	-1.5491E-10	-3.6643E-22
27.840	2.1721E-20	-1.3459E-31	7.1922E-13	4.3369E-12	1.3033E-11	-8.0755E-23
28.130	1.3348E-20	-6.0844E-34	8.8160E-15	1.2859E-12	8.0089E-12	-3.6507E-25
28.420	1.1535E-21	-9.8783E-34	2.6635E-14	2.2533E-14	6.9208E-13	-5.9270E-25
28.710	-3.6266E-22	-1.2733E-34	4.2646E-15	4.5925E-14	-2.1760E-13	-7.6400E-26
29.000	-1.6915E-22	-3.8896E-34	0.0000	0.0000	-1.0149E-13	-2.3338E-25

* PILE GROUP * 9

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1026.1 158.89 -9.4732E-11 -8.9377E-11 -1.0873E-09 141.17

STR, KN/ M**2

1.0330E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1026.1 158.89 -9.4732E-11 -8.9377E-11 -1.0873E-09 141.17

STR, KN/ M**2

1.0330E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT



	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
	M	M	KN- M	KN	KN/ M	KN/ M
*****	*****	*****	*****	*****	*****	*****
0.0000	1.1642E-02	-3.5079E-15	141.17	158.99	0.0000	0.0000
0.2900	1.0760E-02	-3.4720E-15	94.170	156.96	13.295	-4.2904E-12
0.5800	9.8384E-03	-3.3732E-15	48.251	150.99	27.900	-9.5658E-12
0.8700	8.8974E-03	-3.2223E-15	4.6589	140.97	41.124	-1.4894E-11
1.1600	7.9542E-03	-3.0300E-15	34.523	127.46	52.034	-1.9822E-11
1.4500	7.0248E-03	-2.8064E-15	70.346	111.27	59.622	-2.3819E-11
1.7400	6.1236E-03	-2.5609E-15	101.13	93.428	63.444	-2.6533E-11
2.0300	5.2622E-03	-2.3023E-15	126.53	74.931	64.116	-2.8050E-11
2.3200	4.4513E-03	-2.0382E-15	146.49	57.511	56.024	-2.5649E-11
2.6100	3.6993E-03	-1.7756E-15	161.67	41.228	56.275	-2.7004E-11
2.9000	3.0124E-03	-1.5203E-15	172.06	25.131	54.740	-2.7618E-11
3.1900	2.3945E-03	-1.2775E-15	177.76	9.1783	55.277	-2.9477E-11
3.4800	1.8480E-03	-1.0513E-15	178.75	6.5080	54.861	-3.1189E-11
3.7700	1.3732E-03	-8.4484E-16	175.04	22.088	52.422	-3.2252E-11
4.0600	9.6862E-04	-6.6010E-16	166.84	35.486	39.752	-2.7091E-11
4.3500	6.3096E-04	-4.9811E-16	155.22	45.301	27.702	-2.1869E-11
4.6400	3.5552E-04	-3.5889E-16	141.19	51.762	16.627	-1.6785E-11
4.9300	1.3666E-04	-2.4176E-16	125.70	55.189	6.7832	-1.2000E-11
5.2200	-3.1826E-05	-1.4544E-16	109.58	55.960	-1.6708	-7.6358E-12
5.5100	-1.5642E-04	-6.8246E-17	93.519	54.489	-8.6600	-3.7784E-12
5.8000	-2.4355E-04	-8.2186E-18	78.151	51.201	-14.182	-4.7857E-13
6.0900	-2.9937E-04	-2.1660E-16	63.944	47.161	-13.806	-9.9891E-12
6.3800	-3.2957E-04	-4.0481E-16	50.871	42.875	-15.847	-1.9465E-11
6.6700	-3.3940E-04	-5.2872E-16	39.110	38.125	-16.987	-2.6463E-11
6.9600	-3.3356E-04	-5.9982E-16	28.761	33.149	-17.350	-3.1200E-11
7.2500	-3.1620E-04	-6.2872E-16	19.859	28.159	-17.069	-3.3939E-11
7.5400	-2.9088E-04	-6.2500E-16	12.384	23.324	-16.274	-3.4967E-11
7.8300	-2.6060E-04	-5.9712E-16	6.2733	18.776	-15.092	-3.4581E-11

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8.1200	-2.2781E-04	-5.5236E-16	1.4290	14.609	-13.641	-3.3075E-11
8.4100	-1.9445E-04	-4.9684E-16	2.2287	10.888	-12.026	-3.0727E-11
8.7000	-1.6204E-04	-4.3559E-16	4.9201	7.6450	-10.340	-2.7795E-11
8.9900	-1.3160E-04	-3.7259E-16	6.7400	4.8918	-8.6560	-2.4507E-11
9.2800	-1.0386E-04	-3.1087E-16	7.8291	2.6181	-7.0355	-2.1059E-11
9.5700	-7.9254E-05	-2.5268E-16	8.3233	0.7988	-5.5246	-1.7614E-11
9.8600	-5.7985E-05	-1.9951E-16	8.3494	0.5877	-4.1560	-1.4300E-11
10.150	-4.0060E-05	-1.5228E-16	8.0227	1.6180	-2.9500	-1.1214E-11
10.440	-2.5350E-05	-1.1143E-16	7.4445	2.3237	-1.9166	-8.4248E-12
10.730	-1.3621E-05	-7.7001E-17	6.7020	2.7548	-1.0566	-5.9730E-12
11.020	-4.5780E-06	-4.8759E-17	5.8680	2.9608	-0.3641	-3.8781E-12
11.310	2.1148E-06	-2.6265E-17	5.0008	2.9886	0.1724	-2.1406E-12
11.600	6.8043E-06	-8.9456E-18	4.1450	2.8813	0.5679	-7.4667E-13
11.890	9.8327E-06	-6.4988E-19	3.3356	2.6771	0.8401	-5.5522E-14
12.180	1.1524E-05	-2.1677E-18	2.5958	2.4093	1.0072	-1.8946E-13
12.470	1.2175E-05	-3.1441E-18	1.9399	2.1055	1.0880	-2.8097E-13
12.760	1.2047E-05	-3.6855E-18	1.3749	1.7881	1.1003	-3.3660E-13
13.050	1.1367E-05	-3.8894E-18	0.9020	1.4743	1.0605	-3.6287E-13
13.340	1.0325E-05	-3.8420E-18	0.5180	1.1776	0.9836	-3.6600E-13
13.630	9.0743E-06	-3.6173E-18	0.2166	0.9069	0.8823	-3.5171E-13
13.920	7.7359E-06	-3.2772E-18	8.6389E-03	0.6676	0.7674	-3.2508E-13
14.210	6.4003E-06	-2.8716E-18	0.1717	0.4624	0.6475	-2.9049E-13
14.500	5.1326E-06	-2.4397E-18	0.2802	0.2918	0.5293	-2.5159E-13
14.790	3.9776E-06	-2.0106E-18	0.3440	0.1544	0.4180	-2.1130E-13
15.080	2.9610E-06	-1.6053E-18	0.3725	4.7827E-02	0.3170	-1.7186E-13
15.370	2.0939E-06	-1.2375E-18	0.3742	3.0459E-02	0.2283	-1.3492E-13
15.660	1.3770E-06	-9.1497E-19	0.3565	8.5846E-02	0.1528	-1.0155E-13
15.950	8.0305E-07	-6.4111E-19	0.3257	0.1213	9.0708E-02	-7.2417E-14
16.240	3.5972E-07	-4.1579E-19	0.2872	0.1405	4.1339E-02	-4.7783E-14
16.530	3.1498E-08	-2.3643E-19	0.2450	0.1472	3.6816E-03	-2.7636E-14
16.820	-1.9855E-07	-9.8834E-20	0.2024	0.1444	-2.3598E-02	-1.1747E-14



17.110	-3.4753E-07	-1.3594E-20	0.1616	0.1349	-4.1988E-02	-1.6424E-15
17.400	-4.3178E-07	-4.2543E-19	0.1243	0.1212	-5.3016E-02	-5.2236E-14
17.690	-4.6625E-07	-6.8722E-19	9.1349E-02	0.1052	-5.8164E-02	-8.5730E-14
17.980	-4.6412E-07	-8.3006E-19	6.3287E-02	8.8228E-02	-5.8811E-02	-1.0518E-13
18.270	-4.3664E-07	-8.8222E-19	4.0144E-02	7.1556E-02	-5.6188E-02	-1.1353E-13
18.560	-3.9308E-07	-8.6845E-19	2.1711E-02	5.5963E-02	-5.1355E-02	-1.1346E-13
18.850	-3.4082E-07	-8.0971E-19	7.5866E-03	4.1962E-02	-4.5198E-02	-1.0738E-13
19.140	-2.8553E-07	-7.2316E-19	2.6468E-03	2.9837E-02	-3.8426E-02	-9.7322E-14
19.430	-2.3137E-07	-6.2235E-19	9.7552E-03	1.9685E-02	-3.1592E-02	-8.4979E-14
19.720	-1.8116E-07	-5.1755E-19	1.4203E-02	1.1469E-02	-2.5093E-02	-7.1686E-14
20.010	-1.3665E-07	-4.1618E-19	1.6534E-02	5.0513E-03	-1.9196E-02	-5.8463E-14
20.300	-9.8762E-08	-3.2324E-19	1.7244E-02	2.3369E-04	-1.4068E-02	-4.6043E-14
20.590	-6.7780E-08	-2.4175E-19	1.6764E-02	3.1842E-03	-9.7880E-03	-3.4910E-14
20.880	-4.3515E-08	-1.7318E-19	1.5454E-02	5.5270E-03	-6.3694E-03	-2.5349E-14
21.170	-2.5440E-08	-1.1782E-19	1.3602E-02	6.9977E-03	-3.7738E-03	-1.7478E-14
21.460	-1.2815E-08	-7.5108E-20	1.1427E-02	7.8242E-03	-1.9261E-03	-1.1289E-14
21.750	-4.7663E-09	-4.3865E-20	9.0831E-03	8.2087E-03	-7.2577E-04	-6.6793E-15
22.040	-3.5762E-10	-2.2545E-20	6.6724E-03	8.3220E-03	-5.5157E-05	-3.4773E-15
22.330	1.3757E-09	-9.3690E-21	4.2549E-03	8.2988E-03	2.1489E-04	-1.4635E-15
22.620	1.4006E-09	-2.4364E-21	1.8540E-03	8.2355E-03	2.2153E-04	-3.8536E-16
22.910	6.7754E-10	-3.4488E-23	5.1267E-04	4.6805E-03	2.4241E-02	-1.2339E-15
23.200	1.5964E-10	-8.8654E-23	8.5352E-04	1.7870E-04	9.3125E-03	-5.1715E-15
23.490	-1.6508E-11	-4.0088E-23	4.0973E-04	1.3447E-03	-1.3353E-03	-3.2426E-15
23.780	-2.7756E-11	-6.9907E-24	7.3445E-05	7.4586E-04	-2.8712E-03	-7.2315E-16
24.070	-9.5831E-12	-9.9489E-24	2.2876E-05	1.5849E-04	-1.2075E-03	-1.2536E-15
24.360	-7.6066E-13	-8.0337E-24	1.8371E-05	3.1948E-05	-1.1300E-04	-1.1935E-15
24.650	6.6811E-13	-1.8584E-24	4.3562E-06	3.1757E-05	1.1432E-04	-3.1800E-16
24.940	3.5182E-13	-2.1729E-26	4.6493E-08	8.5146E-06	4.5971E-05	-2.8392E-18
25.230	5.4036E-14	-3.3185E-26	5.8295E-07	1.9706E-07	1.1240E-05	-6.9025E-18
25.520	-1.0135E-14	-7.0433E-27	1.7183E-07	1.0049E-06	-2.8918E-06	-2.0097E-18
25.810	-5.3106E-15	-2.1597E-27	5.1221E-11	3.1398E-07	-1.9260E-06	-7.8325E-19

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26.100	-5.0961E-16	-2.4677E-27	1.0283E-08	3.1704E-09	-2.2423E-07	-1.0858E-18
26.390	1.4571E-16	-3.2169E-28	1.8945E-09	1.7997E-08	7.5382E-08	-1.6642E-19
26.680	4.2119E-17	-8.1995E-30	1.5506E-10	3.4352E-09	2.5047E-08	-4.8760E-21
26.970	6.0037E-19	-3.3720E-30	9.8073E-11	2.5243E-10	3.6022E-10	-2.0232E-21
27.260	-1.5608E-18	-1.8676E-31	8.6465E-12	1.7345E-10	-9.3647E-10	-1.1206E-22
27.550	-2.5818E-19	-6.1072E-31	2.5247E-12	1.6149E-11	-1.5491E-10	-3.6643E-22
27.840	2.1721E-20	-1.3459E-31	7.1922E-13	4.3369E-12	1.3033E-11	-8.0755E-23
28.130	1.3348E-20	-6.0844E-34	8.8160E-15	1.2859E-12	8.0089E-12	-3.6507E-25
28.420	1.1535E-21	-9.8783E-34	2.6635E-14	2.2533E-14	6.9208E-13	-5.9270E-25
28.710	-3.6266E-22	-1.2733E-34	4.2646E-15	4.5925E-14	-2.1760E-13	-7.6400E-26
29.000	-1.6915E-22	-3.8896E-34	0.0000	0.0000	-1.0149E-13	-2.3338E-25

* PILE GROUP * 10

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1026.1 158.89 -9.4732E-11 -8.9377E-11 -1.0873E-09 141.17

STR, KN/ M**2

1.0330E+04



THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1026.1 158.89 -9.4732E-11 -8.9377E-11 -1.0873E-09 141.17

STR, KN/ M**2

1.0330E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.1642E-02	-3.5079E-15	141.17	158.99	0.0000	0.0000
0.2900	1.0760E-02	-3.4720E-15	94.170	156.96	13.295	-4.2904E-12
0.5800	9.8384E-03	-3.3732E-15	48.251	150.99	27.900	-9.5658E-12
0.8700	8.8974E-03	-3.2223E-15	4.6589	140.97	41.124	-1.4894E-11
1.1600	7.9542E-03	-3.0300E-15	34.523	127.46	52.034	-1.9822E-11
1.4500	7.0248E-03	-2.8064E-15	70.346	111.27	59.622	-2.3819E-11
1.7400	6.1236E-03	-2.5609E-15	101.13	93.428	63.444	-2.6533E-11
2.0300	5.2622E-03	-2.3023E-15	126.53	74.931	64.116	-2.8050E-11
2.3200	4.4513E-03	-2.0382E-15	146.49	57.511	56.024	-2.5649E-11



2.6100	3.6993E-03	-1.7756E-15	161.67	41.228	56.275	-2.7004E-11
2.9000	3.0124E-03	-1.5203E-15	172.06	25.131	54.740	-2.7618E-11
3.1900	2.3945E-03	-1.2775E-15	177.76	9.1783	55.277	-2.9477E-11
3.4800	1.8480E-03	-1.0513E-15	178.75	6.5080	54.861	-3.1189E-11
3.7700	1.3732E-03	-8.4484E-16	175.04	22.088	52.422	-3.2252E-11
4.0600	9.6862E-04	-6.6010E-16	166.84	35.486	39.752	-2.7091E-11
4.3500	6.3096E-04	-4.9811E-16	155.22	45.301	27.702	-2.1869E-11
4.6400	3.5552E-04	-3.5889E-16	141.19	51.762	16.627	-1.6785E-11
4.9300	1.3666E-04	-2.4176E-16	125.70	55.189	6.7832	-1.2000E-11
5.2200	-3.1826E-05	-1.4544E-16	109.58	55.960	-1.6708	-7.6358E-12
5.5100	-1.5642E-04	-6.8246E-17	93.519	54.489	-8.6600	-3.7784E-12
5.8000	-2.4355E-04	-8.2186E-18	78.151	51.201	-14.182	-4.7857E-13
6.0900	-2.9937E-04	-2.1660E-16	63.944	47.161	-13.806	-9.9891E-12
6.3800	-3.2957E-04	-4.0481E-16	50.871	42.875	-15.847	-1.9465E-11
6.6700	-3.3940E-04	-5.2872E-16	39.110	38.125	-16.987	-2.6463E-11
6.9600	-3.3356E-04	-5.9982E-16	28.761	33.149	-17.350	-3.1200E-11
7.2500	-3.1620E-04	-6.2872E-16	19.859	28.159	-17.069	-3.3939E-11
7.5400	-2.9088E-04	-6.2500E-16	12.384	23.324	-16.274	-3.4967E-11
7.8300	-2.6060E-04	-5.9712E-16	6.2733	18.776	-15.092	-3.4581E-11
8.1200	-2.2781E-04	-5.5236E-16	1.4290	14.609	-13.641	-3.3075E-11
8.4100	-1.9445E-04	-4.9684E-16	2.2287	10.888	-12.026	-3.0727E-11
8.7000	-1.6204E-04	-4.3559E-16	4.9201	7.6450	-10.340	-2.7795E-11
8.9900	-1.3160E-04	-3.7259E-16	6.7400	4.8918	-8.6560	-2.4507E-11
9.2800	-1.0386E-04	-3.1087E-16	7.8291	2.6181	-7.0355	-2.1059E-11
9.5700	-7.9254E-05	-2.5268E-16	8.3233	0.7988	-5.5246	-1.7614E-11
9.8600	-5.7985E-05	-1.9951E-16	8.3494	0.5877	-4.1560	-1.4300E-11
10.150	-4.0060E-05	-1.5228E-16	8.0227	1.6180	-2.9500	-1.1214E-11
10.440	-2.5350E-05	-1.1143E-16	7.4445	2.3237	-1.9166	-8.4248E-12
10.730	-1.3621E-05	-7.7001E-17	6.7020	2.7548	-1.0566	-5.9730E-12
11.020	-4.5780E-06	-4.8759E-17	5.8680	2.9608	-0.3641	-3.8781E-12
11.310	2.1148E-06	-2.6265E-17	5.0008	2.9886	0.1724	-2.1406E-12

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11.600	6.8043E-06	-8.9456E-18	4.1450	2.8813	0.5679	-7.4667E-13
11.890	9.8327E-06	-6.4988E-19	3.3356	2.6771	0.8401	-5.5522E-14
12.180	1.1524E-05	-2.1677E-18	2.5958	2.4093	1.0072	-1.8946E-13
12.470	1.2175E-05	-3.1441E-18	1.9399	2.1055	1.0880	-2.8097E-13
12.760	1.2047E-05	-3.6855E-18	1.3749	1.7881	1.1003	-3.3660E-13
13.050	1.1367E-05	-3.8894E-18	0.9020	1.4743	1.0605	-3.6287E-13
13.340	1.0325E-05	-3.8420E-18	0.5180	1.1776	0.9836	-3.6600E-13
13.630	9.0743E-06	-3.6173E-18	0.2166	0.9069	0.8823	-3.5171E-13
13.920	7.7359E-06	-3.2772E-18	8.6389E-03	0.6676	0.7674	-3.2508E-13
14.210	6.4003E-06	-2.8716E-18	0.1717	0.4624	0.6475	-2.9049E-13
14.500	5.1326E-06	-2.4397E-18	0.2802	0.2918	0.5293	-2.5159E-13
14.790	3.9776E-06	-2.0106E-18	0.3440	0.1544	0.4180	-2.1130E-13
15.080	2.9610E-06	-1.6053E-18	0.3725	4.7827E-02	0.3170	-1.7186E-13
15.370	2.0939E-06	-1.2375E-18	0.3742	3.0459E-02	0.2283	-1.3492E-13
15.660	1.3770E-06	-9.1497E-19	0.3565	8.5846E-02	0.1528	-1.0155E-13
15.950	8.0305E-07	-6.4111E-19	0.3257	0.1213	9.0708E-02	-7.2417E-14
16.240	3.5972E-07	-4.1579E-19	0.2872	0.1405	4.1339E-02	-4.7783E-14
16.530	3.1498E-08	-2.3643E-19	0.2450	0.1472	3.6816E-03	-2.7636E-14
16.820	-1.9855E-07	-9.8834E-20	0.2024	0.1444	-2.3598E-02	-1.1747E-14
17.110	-3.4753E-07	-1.3594E-20	0.1616	0.1349	-4.1988E-02	-1.6424E-15
17.400	-4.3178E-07	-4.2543E-19	0.1243	0.1212	-5.3016E-02	-5.2236E-14
17.690	-4.6625E-07	-6.8722E-19	9.1349E-02	0.1052	-5.8164E-02	-8.5730E-14
17.980	-4.6412E-07	-8.3006E-19	6.3287E-02	8.8228E-02	-5.8811E-02	-1.0518E-13
18.270	-4.3664E-07	-8.8222E-19	4.0144E-02	7.1556E-02	-5.6188E-02	-1.1353E-13
18.560	-3.9308E-07	-8.6845E-19	2.1711E-02	5.5963E-02	-5.1355E-02	-1.1346E-13
18.850	-3.4082E-07	-8.0971E-19	7.5866E-03	4.1962E-02	-4.5198E-02	-1.0738E-13
19.140	-2.8553E-07	-7.2316E-19	2.6468E-03	2.9837E-02	-3.8426E-02	-9.7322E-14
19.430	-2.3137E-07	-6.2235E-19	9.7552E-03	1.9685E-02	-3.1592E-02	-8.4979E-14
19.720	-1.8116E-07	-5.1755E-19	1.4203E-02	1.1469E-02	-2.5093E-02	-7.1686E-14
20.010	-1.3665E-07	-4.1618E-19	1.6534E-02	5.0513E-03	-1.9196E-02	-5.8463E-14
20.300	-9.8762E-08	-3.2324E-19	1.7244E-02	2.3369E-04	-1.4068E-02	-4.6043E-14



20.590	-6.7780E-08	-2.4175E-19	1.6764E-02	3.1842E-03	-9.7880E-03	-3.4910E-14
20.880	-4.3515E-08	-1.7318E-19	1.5454E-02	5.5270E-03	-6.3694E-03	-2.5349E-14
21.170	-2.5440E-08	-1.1782E-19	1.3602E-02	6.9977E-03	-3.7738E-03	-1.7478E-14
21.460	-1.2815E-08	-7.5108E-20	1.1427E-02	7.8242E-03	-1.9261E-03	-1.1289E-14
21.750	-4.7663E-09	-4.3865E-20	9.0831E-03	8.2087E-03	-7.2577E-04	-6.6793E-15
22.040	-3.5762E-10	-2.2545E-20	6.6724E-03	8.3220E-03	-5.5157E-05	-3.4773E-15
22.330	1.3757E-09	-9.3690E-21	4.2549E-03	8.2988E-03	2.1489E-04	-1.4635E-15
22.620	1.4006E-09	-2.4364E-21	1.8540E-03	8.2355E-03	2.2153E-04	-3.8536E-16
22.910	6.7754E-10	-3.4488E-23	5.1267E-04	4.6805E-03	2.4241E-02	-1.2339E-15
23.200	1.5964E-10	-8.8654E-23	8.5352E-04	1.7870E-04	9.3125E-03	-5.1715E-15
23.490	-1.6508E-11	-4.0088E-23	4.0973E-04	1.3447E-03	-1.3353E-03	-3.2426E-15
23.780	-2.7756E-11	-6.9907E-24	7.3445E-05	7.4586E-04	-2.8712E-03	-7.2315E-16
24.070	-9.5831E-12	-9.9489E-24	2.2876E-05	1.5849E-04	-1.2075E-03	-1.2536E-15
24.360	-7.6066E-13	-8.0337E-24	1.8371E-05	3.1948E-05	-1.1300E-04	-1.1935E-15
24.650	6.6811E-13	-1.8584E-24	4.3562E-06	3.1757E-05	1.1432E-04	-3.1800E-16
24.940	3.5182E-13	-2.1729E-26	4.6493E-08	8.5146E-06	4.5971E-05	-2.8392E-18
25.230	5.4036E-14	-3.3185E-26	5.8295E-07	1.9706E-07	1.1240E-05	-6.9025E-18
25.520	-1.0135E-14	-7.0433E-27	1.7183E-07	1.0049E-06	-2.8918E-06	-2.0097E-18
25.810	-5.3106E-15	-2.1597E-27	5.1221E-11	3.1398E-07	-1.9260E-06	-7.8325E-19
26.100	-5.0961E-16	-2.4677E-27	1.0283E-08	3.1704E-09	-2.2423E-07	-1.0858E-18
26.390	1.4571E-16	-3.2169E-28	1.8945E-09	1.7997E-08	7.5382E-08	-1.6642E-19
26.680	4.2119E-17	-8.1995E-30	1.5506E-10	3.4352E-09	2.5047E-08	-4.8760E-21
26.970	6.0037E-19	-3.3720E-30	9.8073E-11	2.5243E-10	3.6022E-10	-2.0232E-21
27.260	-1.5608E-18	-1.8676E-31	8.6465E-12	1.7345E-10	-9.3647E-10	-1.1206E-22
27.550	-2.5818E-19	-6.1072E-31	2.5247E-12	1.6149E-11	-1.5491E-10	-3.6643E-22
27.840	2.1721E-20	-1.3459E-31	7.1922E-13	4.3369E-12	1.3033E-11	-8.0755E-23
28.130	1.3348E-20	-6.0844E-34	8.8160E-15	1.2859E-12	8.0089E-12	-3.6507E-25
28.420	1.1535E-21	-9.8783E-34	2.6635E-14	2.2533E-14	6.9208E-13	-5.9270E-25
28.710	-3.6266E-22	-1.2733E-34	4.2646E-15	4.5925E-14	-2.1760E-13	-7.6400E-26
29.000	-1.6915E-22	-3.8896E-34	0.0000	0.0000	-1.0149E-13	-2.3338E-25

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* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
2.9714E-03	0.011642	-3.5079E-15	-6.1614E-15	-2.2431E-17	-2.9595E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1026.1	158.89	-9.4732E-11	-8.9377E-11	-1.0873E-09	141.17

STR, KN/ M**2

1.0330E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
2.9714E-03	0.011642	-3.5079E-15	-6.1614E-15	-2.2431E-17	-2.9595E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
1026.1	158.89	-9.4732E-11	-8.9377E-11	-1.0873E-09	141.17

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STR, KN/ M**2

1.0330E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1642E-02	-3.5079E-15	141.17	158.99	0.0000	0.0000
0.2900	1.0760E-02	-3.4720E-15	94.170	156.96	13.295	-4.2904E-12
0.5800	9.8384E-03	-3.3732E-15	48.251	150.99	27.900	-9.5658E-12
0.8700	8.8974E-03	-3.2223E-15	4.6589	140.97	41.124	-1.4894E-11
1.1600	7.9542E-03	-3.0300E-15	34.523	127.46	52.034	-1.9822E-11
1.4500	7.0248E-03	-2.8064E-15	70.346	111.27	59.622	-2.3819E-11
1.7400	6.1236E-03	-2.5609E-15	101.13	93.428	63.444	-2.6533E-11
2.0300	5.2622E-03	-2.3023E-15	126.53	74.931	64.116	-2.8050E-11
2.3200	4.4513E-03	-2.0382E-15	146.49	57.511	56.024	-2.5649E-11
2.6100	3.6993E-03	-1.7756E-15	161.67	41.228	56.275	-2.7004E-11
2.9000	3.0124E-03	-1.5203E-15	172.06	25.131	54.740	-2.7618E-11
3.1900	2.3945E-03	-1.2775E-15	177.76	9.1783	55.277	-2.9477E-11
3.4800	1.8480E-03	-1.0513E-15	178.75	6.5080	54.861	-3.1189E-11
3.7700	1.3732E-03	-8.4484E-16	175.04	22.088	52.422	-3.2252E-11
4.0600	9.6862E-04	-6.6010E-16	166.84	35.486	39.752	-2.7091E-11
4.3500	6.3096E-04	-4.9811E-16	155.22	45.301	27.702	-2.1869E-11
4.6400	3.5552E-04	-3.5889E-16	141.19	51.762	16.627	-1.6785E-11
4.9300	1.3666E-04	-2.4176E-16	125.70	55.189	6.7832	-1.2000E-11
5.2200	-3.1826E-05	-1.4544E-16	109.58	55.960	-1.6708	-7.6358E-12
5.5100	-1.5642E-04	-6.8246E-17	93.519	54.489	-8.6600	-3.7784E-12
5.8000	-2.4355E-04	-8.2186E-18	78.151	51.201	-14.182	-4.7857E-13

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6.0900	-2.9937E-04	-2.1660E-16	63.944	47.161	-13.806	-9.9891E-12
6.3800	-3.2957E-04	-4.0481E-16	50.871	42.875	-15.847	-1.9465E-11
6.6700	-3.3940E-04	-5.2872E-16	39.110	38.125	-16.987	-2.6463E-11
6.9600	-3.3356E-04	-5.9982E-16	28.761	33.149	-17.350	-3.1200E-11
7.2500	-3.1620E-04	-6.2872E-16	19.859	28.159	-17.069	-3.3939E-11
7.5400	-2.9088E-04	-6.2500E-16	12.384	23.324	-16.274	-3.4967E-11
7.8300	-2.6060E-04	-5.9712E-16	6.2733	18.776	-15.092	-3.4581E-11
8.1200	-2.2781E-04	-5.5236E-16	1.4290	14.609	-13.641	-3.3075E-11
8.4100	-1.9445E-04	-4.9684E-16	2.2287	10.888	-12.026	-3.0727E-11
8.7000	-1.6204E-04	-4.3559E-16	4.9201	7.6450	-10.340	-2.7795E-11
8.9900	-1.3160E-04	-3.7259E-16	6.7400	4.8918	-8.6560	-2.4507E-11
9.2800	-1.0386E-04	-3.1087E-16	7.8291	2.6181	-7.0355	-2.1059E-11
9.5700	-7.9254E-05	-2.5268E-16	8.3233	0.7988	-5.5246	-1.7614E-11
9.8600	-5.7985E-05	-1.9951E-16	8.3494	0.5877	-4.1560	-1.4300E-11
10.150	-4.0060E-05	-1.5228E-16	8.0227	1.6180	-2.9500	-1.1214E-11
10.440	-2.5350E-05	-1.1143E-16	7.4445	2.3237	-1.9166	-8.4248E-12
10.730	-1.3621E-05	-7.7001E-17	6.7020	2.7548	-1.0566	-5.9730E-12
11.020	-4.5780E-06	-4.8759E-17	5.8680	2.9608	-0.3641	-3.8781E-12
11.310	2.1148E-06	-2.6265E-17	5.0008	2.9886	0.1724	-2.1406E-12
11.600	6.8043E-06	-8.9456E-18	4.1450	2.8813	0.5679	-7.4667E-13
11.890	9.8327E-06	-6.4988E-19	3.3356	2.6771	0.8401	-5.5522E-14
12.180	1.1524E-05	-2.1677E-18	2.5958	2.4093	1.0072	-1.8946E-13
12.470	1.2175E-05	-3.1441E-18	1.9399	2.1055	1.0880	-2.8097E-13
12.760	1.2047E-05	-3.6855E-18	1.3749	1.7881	1.1003	-3.3660E-13
13.050	1.1367E-05	-3.8894E-18	0.9020	1.4743	1.0605	-3.6287E-13
13.340	1.0325E-05	-3.8420E-18	0.5180	1.1776	0.9836	-3.6600E-13
13.630	9.0743E-06	-3.6173E-18	0.2166	0.9069	0.8823	-3.5171E-13
13.920	7.7359E-06	-3.2772E-18	8.6389E-03	0.6676	0.7674	-3.2508E-13
14.210	6.4003E-06	-2.8716E-18	0.1717	0.4624	0.6475	-2.9049E-13
14.500	5.1326E-06	-2.4397E-18	0.2802	0.2918	0.5293	-2.5159E-13
14.790	3.9776E-06	-2.0106E-18	0.3440	0.1544	0.4180	-2.1130E-13



15.080	2.9610E-06	-1.6053E-18	0.3725	4.7827E-02	0.3170	-1.7186E-13
15.370	2.0939E-06	-1.2375E-18	0.3742	3.0459E-02	0.2283	-1.3492E-13
15.660	1.3770E-06	-9.1497E-19	0.3565	8.5846E-02	0.1528	-1.0155E-13
15.950	8.0305E-07	-6.4111E-19	0.3257	0.1213	9.0708E-02	-7.2417E-14
16.240	3.5972E-07	-4.1579E-19	0.2872	0.1405	4.1339E-02	-4.7783E-14
16.530	3.1498E-08	-2.3643E-19	0.2450	0.1472	3.6816E-03	-2.7636E-14
16.820	-1.9855E-07	-9.8834E-20	0.2024	0.1444	-2.3598E-02	-1.1747E-14
17.110	-3.4753E-07	-1.3594E-20	0.1616	0.1349	-4.1988E-02	-1.6424E-15
17.400	-4.3178E-07	-4.2543E-19	0.1243	0.1212	-5.3016E-02	-5.2236E-14
17.690	-4.6625E-07	-6.8722E-19	9.1349E-02	0.1052	-5.8164E-02	-8.5730E-14
17.980	-4.6412E-07	-8.3006E-19	6.3287E-02	8.8228E-02	-5.8811E-02	-1.0518E-13
18.270	-4.3664E-07	-8.8222E-19	4.0144E-02	7.1556E-02	-5.6188E-02	-1.1353E-13
18.560	-3.9308E-07	-8.6845E-19	2.1711E-02	5.5963E-02	-5.1355E-02	-1.1346E-13
18.850	-3.4082E-07	-8.0971E-19	7.5866E-03	4.1962E-02	-4.5198E-02	-1.0738E-13
19.140	-2.8553E-07	-7.2316E-19	2.6468E-03	2.9837E-02	-3.8426E-02	-9.7322E-14
19.430	-2.3137E-07	-6.2235E-19	9.7552E-03	1.9685E-02	-3.1592E-02	-8.4979E-14
19.720	-1.8116E-07	-5.1755E-19	1.4203E-02	1.1469E-02	-2.5093E-02	-7.1686E-14
20.010	-1.3665E-07	-4.1618E-19	1.6534E-02	5.0513E-03	-1.9196E-02	-5.8463E-14
20.300	-9.8762E-08	-3.2324E-19	1.7244E-02	2.3369E-04	-1.4068E-02	-4.6043E-14
20.590	-6.7780E-08	-2.4175E-19	1.6764E-02	3.1842E-03	-9.7880E-03	-3.4910E-14
20.880	-4.3515E-08	-1.7318E-19	1.5454E-02	5.5270E-03	-6.3694E-03	-2.5349E-14
21.170	-2.5440E-08	-1.1782E-19	1.3602E-02	6.9977E-03	-3.7738E-03	-1.7478E-14
21.460	-1.2815E-08	-7.5108E-20	1.1427E-02	7.8242E-03	-1.9261E-03	-1.1289E-14
21.750	-4.7663E-09	-4.3865E-20	9.0831E-03	8.2087E-03	-7.2577E-04	-6.6793E-15
22.040	-3.5762E-10	-2.2545E-20	6.6724E-03	8.3220E-03	-5.5157E-05	-3.4773E-15
22.330	1.3757E-09	-9.3690E-21	4.2549E-03	8.2988E-03	2.1489E-04	-1.4635E-15
22.620	1.4006E-09	-2.4364E-21	1.8540E-03	8.2355E-03	2.2153E-04	-3.8536E-16
22.910	6.7754E-10	-3.4488E-23	5.1267E-04	4.6805E-03	2.4241E-02	-1.2339E-15
23.200	1.5964E-10	-8.8654E-23	8.5352E-04	1.7870E-04	9.3125E-03	-5.1715E-15
23.490	-1.6508E-11	-4.0088E-23	4.0973E-04	1.3447E-03	-1.3353E-03	-3.2426E-15
23.780	-2.7756E-11	-6.9907E-24	7.3445E-05	7.4586E-04	-2.8712E-03	-7.2315E-16

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24.070	-9.5831E-12	-9.9489E-24	2.2876E-05	1.5849E-04	-1.2075E-03	-1.2536E-15
24.360	-7.6066E-13	-8.0337E-24	1.8371E-05	3.1948E-05	-1.1300E-04	-1.1935E-15
24.650	6.6811E-13	-1.8584E-24	4.3562E-06	3.1757E-05	1.1432E-04	-3.1800E-16
24.940	3.5182E-13	-2.1729E-26	4.6493E-08	8.5146E-06	4.5971E-05	-2.8392E-18
25.230	5.4036E-14	-3.3185E-26	5.8295E-07	1.9706E-07	1.1240E-05	-6.9025E-18
25.520	-1.0135E-14	-7.0433E-27	1.7183E-07	1.0049E-06	-2.8918E-06	-2.0097E-18
25.810	-5.3106E-15	-2.1597E-27	5.1221E-11	3.1398E-07	-1.9260E-06	-7.8325E-19
26.100	-5.0961E-16	-2.4677E-27	1.0283E-08	3.1704E-09	-2.2423E-07	-1.0858E-18
26.390	1.4571E-16	-3.2169E-28	1.8945E-09	1.7997E-08	7.5382E-08	-1.6642E-19
26.680	4.2119E-17	-8.1995E-30	1.5506E-10	3.4352E-09	2.5047E-08	-4.8760E-21
26.970	6.0037E-19	-3.3720E-30	9.8073E-11	2.5243E-10	3.6022E-10	-2.0232E-21
27.260	-1.5608E-18	-1.8676E-31	8.6465E-12	1.7345E-10	-9.3647E-10	-1.1206E-22
27.550	-2.5818E-19	-6.1072E-31	2.5247E-12	1.6149E-11	-1.5491E-10	-3.6643E-22
27.840	2.1721E-20	-1.3459E-31	7.1922E-13	4.3369E-12	1.3033E-11	-8.0755E-23
28.130	1.3348E-20	-6.0844E-34	8.8160E-15	1.2859E-12	8.0089E-12	-3.6507E-25
28.420	1.1535E-21	-9.8783E-34	2.6635E-14	2.2533E-14	6.9208E-13	-5.9270E-25
28.710	-3.6266E-22	-1.2733E-34	4.2646E-15	4.5925E-14	-2.1760E-13	-7.6400E-26
29.000	-1.6915E-22	-3.8896E-34	0.0000	0.0000	-1.0149E-13	-2.3338E-25

* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD



2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1026.1 185.96 -1.0663E-10 -8.9377E-11 -1.1739E-09 171.69

STR, KN/ M**2

1.1769E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

2.9714E-03 0.011642 -3.5079E-15 -6.1614E-15 -2.2431E-17 -2.9595E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1026.1 185.96 -1.0663E-10 -8.9377E-11 -1.1739E-09 171.69

STR, KN/ M**2

1.1769E+04

* EFFECTS FOR Laterally Loaded Pile *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT
y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR
M M M KN- M KN KN/ M KN/ M

0.0000 1.1642E-02 -3.5079E-15 171.69 186.09 0.0000 0.0000

0.2900 1.0753E-02 -3.4691E-15 116.83 183.58 16.428 -5.2996E-12



0.5800	9.8170E-03	-3.3628E-15	63.311	176.21	34.417	-1.1790E-11
0.8700	8.8549E-03	-3.2013E-15	12.656	163.88	50.598	-1.8293E-11
1.1600	7.8872E-03	-2.9965E-15	32.784	147.29	63.788	-2.4234E-11
1.4500	6.9327E-03	-2.7596E-15	73.890	127.49	72.743	-2.8956E-11
1.7400	6.0077E-03	-2.5012E-15	108.85	105.78	76.951	-3.2037E-11
2.0300	5.1258E-03	-2.2308E-15	137.29	83.429	77.211	-3.3601E-11
2.3200	4.2986E-03	-1.9567E-15	159.18	62.534	66.886	-3.0441E-11
2.6100	3.5355E-03	-1.6863E-15	175.38	43.195	66.490	-3.1706E-11
2.9000	2.8428E-03	-1.4258E-15	185.92	24.293	63.864	-3.2022E-11
3.1900	2.2247E-03	-1.1806E-15	191.00	5.8266	63.493	-3.3677E-11
3.4800	1.6833E-03	-9.5462E-16	190.66	12.047	61.782	-3.5011E-11
3.7700	1.2185E-03	-7.5092E-16	185.05	29.370	57.505	-3.5440E-11
4.0600	8.2779E-04	-5.7127E-16	174.51	43.835	42.000	-2.8985E-11
4.3500	5.0709E-04	-4.1627E-16	160.35	53.953	27.524	-2.2595E-11
4.6400	2.5067E-04	-2.8551E-16	143.81	60.082	14.494	-1.6508E-11
4.9300	5.1872E-05	-1.7781E-16	125.97	62.679	3.1830	-1.0911E-11
5.2200	-9.6456E-05	-9.1446E-17	107.79	62.264	-6.2604	-5.9353E-12
5.5100	-2.0160E-04	-2.4293E-17	90.080	59.383	-13.799	-1.6628E-12
5.8000	-2.7066E-04	-1.5326E-16	73.493	54.582	-19.485	-1.1033E-11
6.0900	-3.1028E-04	-3.6378E-16	58.514	49.209	-17.691	-2.0741E-11
6.3800	-3.2646E-04	-5.0259E-16	44.999	43.843	-19.407	-2.9877E-11
6.6700	-3.2461E-04	-5.8273E-16	33.097	38.123	-20.086	-3.6058E-11
6.9600	-3.0951E-04	-6.1628E-16	22.870	32.324	-19.904	-3.9631E-11
7.2500	-2.8524E-04	-6.1409E-16	14.308	26.678	-19.036	-4.0983E-11
7.5400	-2.5524E-04	-5.8571E-16	7.3404	21.358	-17.655	-4.0512E-11
7.8300	-2.2230E-04	-5.3933E-16	1.8548	16.490	-15.916	-3.8615E-11
8.1200	-1.8862E-04	-4.8176E-16	2.2530	12.157	-13.963	-3.5663E-11
8.4100	-1.5590E-04	-4.1852E-16	5.2318	8.4048	-11.920	-3.1999E-11
8.7000	-1.2527E-04	-3.5394E-16	7.2060	5.2447	-9.8827	-2.7922E-11
8.9900	-9.7535E-05	-2.9127E-16	8.3461	2.6634	-7.9314	-2.3686E-11
9.2800	-7.3139E-05	-2.3281E-16	8.8157	0.6274	-6.1253	-1.9498E-11

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9.5700	-5.2274E-05	-1.8007E-16	8.7666	0.8964	-4.5049	-1.5519E-11
9.8600	-3.4921E-05	-1.3390E-16	8.3350	1.9983	-3.0944	-1.1865E-11
10.150	-2.0907E-05	-9.4613E-17	7.6398	2.7230	-1.9034	-8.6136E-12
10.440	-9.9541E-06	-6.2133E-17	6.7813	3.1339	-0.9304	-5.8076E-12
10.730	-1.7173E-06	-3.6085E-17	5.8418	3.2927	-0.1647	-3.4605E-12
11.020	4.1793E-06	-1.5895E-17	4.8853	3.2570	0.4109	-1.5629E-12
11.310	8.1185E-06	-8.7166E-19	3.9611	3.0788	0.8180	-8.7829E-14
11.600	1.0470E-05	-1.6497E-18	3.1044	2.8035	1.0804	-1.7023E-13
11.890	1.1578E-05	-2.8274E-18	2.3375	2.4695	1.2228	-2.9864E-13
12.180	1.1747E-05	-3.5042E-18	1.6728	2.1082	1.2693	-3.7863E-13
12.470	1.1246E-05	-3.7922E-18	1.1144	1.7435	1.2424	-4.1897E-13
12.760	1.0296E-05	-3.7912E-18	0.6601	1.3944	1.1626	-4.2807E-13
13.050	9.0818E-06	-3.5867E-18	0.3033	1.0737	1.0475	-4.1369E-13
13.340	7.7446E-06	-3.2499E-18	3.4643E-02	0.7895	0.9121	-3.8275E-13
13.630	6.3923E-06	-2.8384E-18	0.1556	0.5458	0.7684	-3.4119E-13
13.920	5.1012E-06	-2.3966E-18	0.2832	0.3436	0.6256	-2.9391E-13
14.210	3.9241E-06	-1.9577E-18	0.3581	0.1818	0.4908	-2.4483E-13
14.500	2.8909E-06	-1.5447E-18	0.3915	5.7173E-02	0.3686	-1.9694E-13
14.790	2.0150E-06	-1.1725E-18	0.3937	3.3427E-02	0.2618	-1.5234E-13
15.080	1.2969E-06	-8.4944E-19	0.3737	9.6414E-02	0.1717	-1.1243E-13
15.370	7.2883E-07	-5.7855E-19	0.3391	0.1357	9.8235E-02	-7.7980E-14
15.660	2.9668E-07	-3.5914E-19	0.2961	0.1560	4.0709E-02	-4.9279E-14
15.950	-1.6815E-08	-1.8781E-19	0.2494	0.1616	-2.3481E-03	-2.6227E-14
16.240	-2.3037E-07	-5.9543E-20	0.2028	0.1566	-3.2729E-02	-8.4596E-15
16.530	-3.6266E-07	-1.8706E-19	0.1589	0.1444	-5.2406E-02	-2.7031E-14
16.820	-4.3131E-07	-5.4217E-19	0.1192	0.1276	-6.3375E-02	-7.9665E-14
17.110	-4.5219E-07	-7.5156E-19	8.4898E-02	0.1087	-6.7541E-02	-1.1226E-13
17.400	-4.3905E-07	-8.4856E-19	5.6195E-02	8.9265E-02	-6.6647E-02	-1.2881E-13
17.690	-4.0341E-07	-8.6281E-19	3.3073E-02	7.0580E-02	-6.2217E-02	-1.3307E-13
17.980	-3.5452E-07	-8.1962E-19	1.5171E-02	5.3505E-02	-5.5538E-02	-1.2840E-13
18.270	-2.9955E-07	-7.3984E-19	1.9324E-03	3.8542E-02	-4.7655E-02	-1.1770E-13

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18.560	-2.4382E-07	-6.4002E-19	7.2171E-03	2.5922E-02	-3.9381E-02	-1.0338E-13
18.850	-1.9107E-07	-5.3276E-19	1.3149E-02	1.5672E-02	-3.1325E-02	-8.7344E-14
19.140	-1.4358E-07	-4.2715E-19	1.6442E-02	7.6707E-03	-2.3889E-02	-7.1068E-14
19.430	-1.0268E-07	-3.2936E-19	1.7718E-02	1.6995E-03	-1.7334E-02	-5.5600E-14
19.720	-6.8884E-08	-2.4317E-19	1.7529E-02	2.4803E-03	-1.1796E-02	-4.1641E-14
20.010	-4.2106E-08	-1.7047E-19	1.6342E-02	5.2510E-03	-7.3125E-03	-2.9605E-14
20.300	-2.1874E-08	-1.1172E-19	1.4532E-02	6.8698E-03	-3.8520E-03	-1.9675E-14
20.590	-7.4638E-09	-6.6426E-20	1.2393E-02	7.6216E-03	-1.3325E-03	-1.1859E-14
20.880	1.9819E-09	-3.3381E-20	1.0136E-02	7.7628E-03	3.5865E-04	-6.0406E-15
21.170	7.3672E-09	-1.0996E-20	7.9024E-03	7.5149E-03	1.3511E-03	-2.0165E-15
21.460	9.5855E-09	-4.2552E-22	5.7802E-03	7.0607E-03	1.7812E-03	-7.9070E-17
21.750	9.4862E-09	-1.5381E-21	3.8063E-03	6.5435E-03	1.7858E-03	-2.8955E-16
22.040	7.8596E-09	-1.7810E-21	1.9814E-03	6.0672E-03	1.4987E-03	-3.3960E-16
22.330	5.4366E-09	-1.4607E-21	2.8222E-04	5.6977E-03	1.0499E-03	-2.8208E-16
22.620	2.8975E-09	-8.7252E-22	1.3214E-03	5.4632E-03	5.6659E-04	-1.7061E-16
22.910	8.8790E-10	-3.0235E-22	2.8840E-03	7.6826E-04	3.1767E-02	-1.0817E-14
23.200	3.3371E-11	-3.0342E-23	1.7738E-03	4.1153E-03	1.9466E-03	-1.7700E-15
23.490	-1.1045E-10	-1.6457E-22	4.9813E-04	3.1071E-03	-8.9346E-03	-1.3312E-14
23.780	-5.4475E-11	-9.7512E-23	2.8254E-05	9.9936E-04	-5.6352E-03	-1.0087E-14
24.070	-9.9020E-12	-2.1507E-23	8.1599E-05	2.7706E-06	-1.2476E-03	-2.7099E-15
24.360	1.9010E-12	-3.3588E-25	3.0088E-05	1.3672E-04	2.8241E-04	-4.9896E-17
24.650	1.6407E-12	-4.7646E-25	2.3142E-06	5.5058E-05	2.8075E-04	-8.1527E-17
24.940	4.5270E-13	-1.5505E-25	1.8468E-06	5.7725E-06	5.9153E-05	-2.0260E-17
25.230	4.3924E-15	-8.6723E-27	1.0339E-06	2.9399E-06	9.1361E-07	-1.8038E-18
25.520	-2.9647E-14	-4.8925E-26	1.4211E-07	1.8512E-06	-8.4592E-06	-1.3960E-17
25.810	-6.7256E-15	-1.3609E-26	3.9834E-08	2.7411E-07	-2.4391E-06	-4.9356E-18
26.100	1.9129E-16	-1.5941E-28	1.6906E-08	6.6882E-08	8.4168E-08	-7.0141E-20
26.390	3.2678E-16	-9.6677E-29	1.0486E-09	3.0165E-08	1.6905E-07	-5.0014E-20
26.680	4.1965E-17	-1.5712E-29	5.9011E-10	2.0326E-09	2.4955E-08	-9.3433E-21
26.970	-6.4759E-18	-8.3413E-30	1.3047E-10	1.0234E-09	-3.8855E-09	-5.0048E-21
27.260	-2.6150E-18	-4.8712E-30	3.4341E-12	2.3462E-10	-1.5690E-09	-2.9227E-21

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27.550 -1.4034E-19 -4.0667E-31 5.6139E-12 4.7013E-12 -8.4202E-11 -2.4400E-22
 27.840 8.0886E-20 -2.1909E-32 7.1009E-13 9.8735E-12 4.8532E-11 -1.3145E-23
 28.130 1.7647E-20 -5.9926E-33 1.1254E-13 1.3011E-12 1.0588E-11 -3.5956E-24
 28.420 -5.1336E-22 -4.4563E-35 4.4629E-14 1.8988E-13 -3.0802E-13 -2.6738E-26
 28.710 -7.8996E-22 -1.3808E-33 2.4228E-15 7.6947E-14 -4.7397E-13 -8.2850E-25
 29.000 -9.6048E-23 -2.7206E-34 0.0000 0.0000 -5.7629E-14 -1.6323E-25

LOAD CASE ENV : 2

CASE NAME : MAXIMUM ENVELOPE

* TABLE L * COMPUTATION ON PILE CAP

* EQUIVALENT CONCENTRATED LOAD AT ORIGIN *

VERT. LOAD, KN	HOR. LOAD Y, KN	HOR. LOAD Z, KN
4165.78	1736.15	0.00000

MOMENT X , KN- M	MOMENT Y, KN- M	MOMENT Z, KN- M
0.00000	0.00000	-3918.93

* DISPLACEMENT OF GROUPED PILE FOUNDATION AT ORIGIN *

VERTICAL , M	HORIZONTAL Y, M	HORIZONTAL Z, M
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1.08957E-03 0.0116578 4.96970E-16

ANGLE ROT. X,RAD ANGLE ROT. Y,RAD ANGLE ROT. Z,RAD

3.63155E-14 3.69255E-18 -2.94632E-03

* TABLE M * COMPUTATION ON INDIVIDUAL PILE

* PILE GROUP * 1

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-344.15 141.22 1.1031E-10 5.2679E-10 1.2991E-09 115.74

STR, KN/ M**2

6710.2

THE PILE COORDINATE SYSTEM (LOCAL AXES)





DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -344.15 141.22 1.1031E-10 5.2679E-10 1.2991E-09 115.74

STR, KN/ M**2

6710.2

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.1658E-02	4.5019E-15	115.74	141.19	0.0000	0.0000
0.2900	1.0777E-02	4.4567E-15	75.101	139.61	11.041	4.5695E-12
0.5800	9.8659E-03	4.3361E-15	35.398	134.65	23.198	1.0202E-11
0.8700	8.9413E-03	4.1527E-15	3.3730	126.32	34.267	1.5922E-11
1.1600	8.0182E-03	3.9188E-15	38.160	115.05	43.489	2.1262E-11
1.4500	7.1103E-03	3.6461E-15	69.295	101.49	50.027	2.5659E-11
1.7400	6.2301E-03	3.3457E-15	96.232	86.478	53.501	2.8733E-11
2.0300	5.3893E-03	3.0278E-15	118.68	70.831	54.413	3.0570E-11
2.3200	4.5962E-03	2.7014E-15	136.58	55.993	47.920	2.8165E-11
2.6100	3.8575E-03	2.3749E-15	150.46	42.000	48.582	2.9910E-11
2.9000	3.1789E-03	2.0553E-15	160.27	28.026	47.790	3.0898E-11
3.1900	2.5643E-03	1.7490E-15	166.10	14.004	48.915	3.3362E-11



3.4800	2.0161E-03	1.4609E-15	167.83	0.5172	49.369	3.5774E-11
3.7700	1.5350E-03	1.1953E-15	165.44	14.705	48.625	3.7863E-11
4.0600	1.1201E-03	9.5490E-16	159.00	27.257	38.144	3.2518E-11
4.3500	7.6883E-04	7.4129E-16	149.37	36.819	28.009	2.7006E-11
4.6400	4.7732E-04	5.5494E-16	137.42	43.536	18.524	2.1536E-11
4.9300	2.4083E-04	3.9543E-16	123.94	47.631	9.9188	1.6286E-11
5.2200	5.3982E-05	2.6160E-16	109.65	49.383	2.3516	1.1396E-11
5.5100	-8.8946E-05	1.5176E-16	95.203	49.106	-4.0862	6.9718E-12
5.8000	-1.9374E-04	6.3820E-17	81.119	47.133	-9.3608	3.0836E-12
6.0900	-2.6603E-04	2.7215E-17	67.834	44.281	-10.180	1.0415E-12
6.3800	-3.1115E-04	3.2890E-16	55.415	40.992	-12.415	1.3123E-11
6.6700	-3.3407E-04	5.4341E-16	44.047	37.168	-13.874	2.2568E-11
6.9600	-3.3935E-04	6.8449E-16	33.853	33.024	-14.647	2.9544E-11
7.2500	-3.3106E-04	7.6508E-16	24.895	28.749	-14.829	3.4270E-11
7.5400	-3.1281E-04	7.9714E-16	17.188	24.493	-14.522	3.7006E-11
7.8300	-2.8766E-04	7.9144E-16	10.705	20.383	-13.824	3.8033E-11
8.1200	-2.5823E-04	7.5753E-16	5.3856	16.518	-12.830	3.7639E-11
8.4100	-2.2664E-04	7.0366E-16	1.1461	12.971	-11.631	3.6110E-11
8.7000	-1.9459E-04	6.3680E-16	2.1535	9.7906	-10.303	3.3717E-11
8.9900	-1.6335E-04	5.6272E-16	4.5428	7.0036	-8.9154	3.0713E-11
9.2800	-1.3392E-04	4.8604E-16	6.1831	4.6184	-7.5278	2.7321E-11
9.5700	-1.0697E-04	4.1035E-16	7.1910	2.6282	-6.1875	2.3735E-11
9.8600	-8.2906E-05	3.3832E-16	7.6796	1.0144	-4.9306	2.0121E-11
10.150	-6.1915E-05	2.7182E-16	7.7546	0.2651	-3.7832	1.6609E-11
10.440	-4.4030E-05	2.1205E-16	7.5125	1.2141	-2.7622	1.3303E-11
10.730	-2.9154E-05	1.5963E-16	7.0391	1.8868	-1.8766	1.0275E-11
11.020	-1.7099E-05	1.1475E-16	6.4089	2.3225	-1.1285	7.5732E-12
11.310	-7.6107E-06	7.7260E-17	5.6847	2.5608	-0.5147	5.2250E-12
11.600	-3.9985E-07	4.6742E-17	4.9179	2.6394	-2.7694E-02	3.2373E-12
11.890	4.8409E-06	2.2610E-17	4.1504	2.5937	0.3432	1.6028E-12
12.180	8.4193E-06	4.1675E-18	3.4123	2.4554	0.6106	3.0223E-13

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12.470	1.0632E-05	1.5786E-18	2.7257	2.2525	0.7884	1.1706E-13
12.760	1.1753E-05	3.1589E-18	2.1056	2.0091	0.8907	2.3940E-13
13.050	1.2031E-05	4.1545E-18	1.5605	1.7449	0.9314	3.2162E-13
13.340	1.1686E-05	4.6817E-18	1.0937	1.4761	0.9237	3.7007E-13
13.630	1.0904E-05	4.8459E-18	0.7047	1.2150	0.8797	3.9095E-13
13.920	9.8403E-06	4.7400E-18	0.3897	0.9702	0.8099	3.9014E-13
14.210	8.6215E-06	4.4438E-18	0.1428	0.7479	0.7237	3.7301E-13
14.500	7.3464E-06	4.0238E-18	4.5095E-02	0.5519	0.6286	3.4432E-13
14.790	6.0905E-06	3.5339E-18	0.1780	0.3838	0.5311	3.0816E-13
15.080	4.9062E-06	3.0165E-18	0.2662	0.2436	0.4358	2.6796E-13
15.370	3.8280E-06	2.5035E-18	0.3179	0.1301	0.3463	2.2648E-13
15.660	2.8768E-06	2.0179E-18	0.3405	4.1518E-02	0.2649	1.8584E-13
15.950	2.0617E-06	1.5750E-18	0.3409	2.5612E-02	0.1932	1.4762E-13
16.240	1.3829E-06	1.1839E-18	0.3251	7.2643E-02	0.1319	1.1289E-13
16.530	8.3413E-07	8.4849E-19	0.2984	0.1034	8.0902E-02	8.2294E-14
16.820	4.0482E-07	5.6921E-19	0.2648	0.1208	3.9923E-02	5.6136E-14
17.110	8.1541E-08	3.4356E-19	0.2280	0.1277	8.1746E-03	3.4442E-14
17.400	-1.5041E-07	1.6716E-19	0.1906	0.1266	-1.5324E-02	1.7030E-14
17.690	-3.0601E-07	3.4501E-20	0.1545	0.1197	-3.1676E-02	3.5713E-15
17.980	-3.9969E-07	3.5782E-19	0.1212	0.1090	-4.2025E-02	3.7623E-14
18.270	-4.4483E-07	7.3237E-19	9.1358E-02	9.5929E-02	-4.7497E-02	7.8199E-14
18.560	-4.5337E-07	9.5659E-19	6.5546E-02	8.1882E-02	-4.9149E-02	1.0370E-13
18.850	-4.3566E-07	1.0631E-18	4.3877E-02	6.7792E-02	-4.7939E-02	1.1698E-13
19.140	-4.0037E-07	1.0810E-18	2.6246E-02	5.4358E-02	-4.4709E-02	1.2071E-13
19.430	-3.5456E-07	1.0354E-18	1.2378E-02	4.2050E-02	-4.0172E-02	1.1731E-13
19.720	-3.0380E-07	9.4748E-19	1.8912E-03	3.1162E-02	-3.4916E-02	1.0890E-13
20.010	-2.5228E-07	8.3427E-19	5.7396E-03	2.1835E-02	-2.9406E-02	9.7244E-14
20.300	-2.0297E-07	7.0922E-19	1.0804E-02	1.4092E-02	-2.3990E-02	8.3826E-14
20.590	-1.5798E-07	5.8252E-19	1.3853E-02	7.8665E-03	-1.8930E-02	6.9800E-14
20.880	-1.1853E-07	4.6149E-19	1.5311E-02	3.0307E-03	-1.4397E-02	5.6051E-14
21.170	-8.5224E-08	3.5114E-19	1.5561E-02	6.2009E-04	-1.0490E-02	4.3221E-14



21.460	-5.8148E-08	2.5456E-19	1.4931E-02	3.1927E-03	-7.2521E-03	3.1748E-14
21.750	-3.7053E-08	1.7341E-19	1.3693E-02	4.9231E-03	-4.6816E-03	2.1910E-14
22.040	-2.1443E-08	1.0826E-19	1.2063E-02	5.9999E-03	-2.7443E-03	1.3855E-14
22.330	-1.0666E-08	5.8966E-20	1.0210E-02	6.5982E-03	-1.3824E-03	7.6426E-15
22.620	-3.9760E-09	2.4906E-20	8.2436E-03	6.8744E-03	-5.2182E-04	3.2687E-15
22.910	-5.8282E-10	5.2071E-21	6.2341E-03	9.9768E-03	-2.0852E-02	1.8630E-13
23.200	3.2146E-10	1.8872E-22	2.4555E-03	1.0310E-02	1.8752E-02	1.1008E-14
23.490	2.4757E-10	2.2240E-22	2.5420E-04	4.6870E-03	2.0026E-02	1.7990E-14
23.780	7.1852E-11	7.7237E-23	2.6288E-04	7.0549E-04	7.4327E-03	7.9898E-15
24.070	1.4401E-12	6.5364E-24	1.5490E-04	3.9856E-04	1.8145E-04	8.2359E-16
24.360	-6.9021E-12	3.2712E-23	3.1689E-05	2.7584E-04	-1.0253E-03	4.8596E-15
24.650	-2.5707E-12	1.5318E-23	5.0975E-06	6.2762E-05	-4.3987E-04	2.6211E-15
24.940	-2.8125E-13	2.5944E-24	4.7107E-06	6.7082E-06	-3.6750E-05	3.3900E-16
25.230	1.2677E-13	7.9338E-26	1.2126E-06	8.2387E-06	2.6368E-05	1.6502E-17
25.520	5.1824E-14	5.0240E-26	6.8586E-08	2.2711E-06	1.4787E-05	1.4335E-17
25.810	4.0510E-15	6.4240E-27	1.0464E-07	8.7528E-08	1.4692E-06	2.3298E-18
26.100	-1.8005E-15	7.5071E-27	1.7911E-08	1.8404E-07	-7.9223E-07	3.3031E-18
26.390	-4.7965E-16	2.9273E-27	2.1045E-09	3.2859E-08	-2.4814E-07	1.5144E-18
26.680	-1.8097E-18	1.4802E-28	1.1464E-09	3.4736E-09	-1.0762E-09	8.8021E-20
26.970	1.8517E-17	1.5617E-29	9.0415E-11	2.0304E-09	1.1110E-08	9.3704E-21
27.260	2.8652E-18	3.3302E-30	3.1190E-11	1.7008E-10	1.7191E-09	1.9981E-21
27.550	-2.9252E-19	6.4508E-31	8.2234E-12	5.3743E-11	-1.7551E-10	3.8705E-22
27.840	-1.5536E-19	8.6412E-31	1.8279E-14	1.4728E-11	-9.3213E-11	5.1847E-22
28.130	-1.1914E-20	1.0476E-31	3.1850E-13	1.1541E-13	-7.1486E-12	6.2857E-23
28.420	4.2950E-21	3.0617E-33	4.8602E-14	5.5699E-13	2.5770E-12	1.8370E-24
28.710	1.1439E-21	1.1856E-33	4.5699E-15	8.3800E-14	6.8635E-13	7.1134E-25
29.000	-1.8070E-22	3.6698E-34	0.0000	0.0000	-1.0842E-13	2.2019E-25

* PILE GROUP * 2



* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
-8.3409E-04	0.011658	4.5019E-15	3.6315E-14	3.6925E-18	-2.9463E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
-344.15	111.85	9.3090E-11	5.2679E-10	1.1621E-09	80.074

STR, KN/ M**2

5028.2

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
-8.3409E-04	0.011658	4.5019E-15	3.6315E-14	3.6925E-18	-2.9463E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
-344.15	111.85	9.3090E-11	5.2679E-10	1.1621E-09	80.074

STR, KN/ M**2

5028.2



* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1658E-02	4.5019E-15	80.074	111.83	0.0000	0.0000
0.2900	1.0784E-02	4.4614E-15	47.945	110.68	8.1172	3.3608E-12
0.5800	9.8910E-03	4.3527E-15	16.505	107.02	17.087	7.5242E-12
0.8700	8.9920E-03	4.1866E-15	14.499	100.88	25.319	1.1794E-11
1.1600	8.0989E-03	3.9735E-15	42.298	92.525	32.273	1.5840E-11
1.4500	7.2227E-03	3.7234E-15	67.388	82.433	37.337	1.9252E-11
1.7400	6.3734E-03	3.4457E-15	89.347	71.188	40.213	2.1741E-11
2.0300	5.5610E-03	3.1494E-15	107.94	59.376	41.251	2.3362E-11
2.3200	4.7918E-03	2.8425E-15	123.07	48.072	36.705	2.1774E-11
2.6100	4.0716E-03	2.5323E-15	135.14	37.287	37.675	2.3432E-11
2.9000	3.4054E-03	2.2254E-15	144.06	26.370	37.613	2.4580E-11
3.1900	2.7967E-03	1.9276E-15	149.84	15.233	39.194	2.7015E-11
3.4800	2.2478E-03	1.6438E-15	152.34	3.6865	40.440	2.9574E-11
3.7700	1.7598E-03	1.3781E-15	151.47	8.3559	40.956	3.2072E-11
4.0600	1.3324E-03	1.1335E-15	147.18	19.103	33.337	2.8359E-11
4.3500	9.6390E-04	9.1195E-16	140.12	27.651	25.800	2.4409E-11
4.6400	6.5146E-04	7.1456E-16	130.91	34.059	18.575	2.0374E-11
4.9300	3.9141E-04	5.4150E-16	120.16	38.444	11.844	1.6385E-11
5.2200	1.7948E-04	3.9229E-16	108.45	40.969	5.7445	1.2556E-11
5.5100	1.0987E-05	2.6591E-16	96.273	41.832	0.3708	8.9751E-12
5.8000	-1.1894E-04	1.6090E-16	84.106	41.251	-4.2224	5.7119E-12
6.0900	-2.1518E-04	7.5527E-17	72.305	39.744	-6.0499	2.1235E-12
6.3800	-2.8245E-04	7.8477E-18	61.023	37.653	-8.2798	2.3005E-13
6.6700	-3.2528E-04	2.6084E-16	50.447	35.001	-9.9251	7.9588E-12

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6.9600	-3.4790E-04	4.8670E-16	40.712	31.952	-11.032	1.5434E-11
7.2500	-3.5420E-04	6.4344E-16	31.911	28.654	-11.657	2.1175E-11
7.5400	-3.4773E-04	7.4212E-16	24.094	25.241	-11.860	2.5312E-11
7.8300	-3.3160E-04	7.9306E-16	17.279	21.824	-11.708	2.8000E-11
8.1200	-3.0855E-04	8.0573E-16	11.450	18.493	-11.264	2.9413E-11
8.4100	-2.8092E-04	7.8864E-16	6.5706	15.324	-10.591	2.9734E-11
8.7000	-2.5065E-04	7.4932E-16	2.5827	12.374	-9.7507	2.9150E-11
8.9900	-2.1935E-04	6.9429E-16	0.6265	9.6852	-8.7958	2.7841E-11
9.2800	-1.8826E-04	6.2907E-16	3.0491	7.2824	-7.7750	2.5980E-11
9.5700	-1.5836E-04	5.5827E-16	4.8183	5.1787	-6.7298	2.3725E-11
9.8600	-1.3039E-04	4.8561E-16	6.0221	3.3759	-5.6973	2.1219E-11
10.150	-1.0483E-04	4.1400E-16	6.7476	1.8661	-4.7060	1.8586E-11
10.440	-8.1967E-05	3.4564E-16	7.0783	0.6344	-3.7780	1.5931E-11
10.730	-6.1945E-05	2.8212E-16	7.0922	0.3530	-2.9294	1.3342E-11
11.020	-4.4764E-05	2.2448E-16	6.8608	1.0925	-2.1705	1.0885E-11
11.310	-3.0331E-05	1.7331E-16	6.4477	1.6257	-1.5071	8.6111E-12
11.600	-1.8481E-05	1.2884E-16	5.9088	1.9806	-0.9404	6.5559E-12
11.890	-8.9980E-06	9.1005E-17	5.2916	2.1849	-0.4687	4.7399E-12
12.180	-1.6349E-06	5.9533E-17	4.6357	2.2655	-8.7110E-02	3.1720E-12
12.470	3.8712E-06	3.3978E-17	3.9736	2.2476	0.2109	1.8512E-12
12.760	7.7857E-06	1.3796E-17	3.3303	2.1541	0.4335	7.6816E-13
13.050	1.0367E-05	2.7033E-19	2.7236	2.0058	0.5896	1.5376E-14
13.340	1.1857E-05	2.1842E-18	2.1666	1.8204	0.6886	1.2685E-13
13.630	1.2481E-05	3.5041E-18	1.6676	1.6133	0.7398	2.0770E-13
13.920	1.2438E-05	4.3323E-18	1.2310	1.3970	0.7521	2.6199E-13
14.210	1.1902E-05	4.7641E-18	0.8576	1.1818	0.7340	2.9381E-13
14.500	1.1025E-05	4.8858E-18	0.5460	0.9752	0.6931	3.0717E-13
14.790	9.9293E-06	4.7736E-18	0.2927	0.7826	0.6361	3.0584E-13
15.080	8.7175E-06	4.4937E-18	9.2922E-02	0.6080	0.5690	2.9329E-13
15.370	7.4694E-06	4.1017E-18	6.0903E-02	0.4535	0.4965	2.7262E-13
15.660	6.2468E-06	3.6434E-18	0.1709	0.3203	0.4227	2.4653E-13

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15.950	5.0931E-06	3.1553E-18	0.2453	0.2081	0.3507	2.1728E-13
16.240	4.0371E-06	2.6658E-18	0.2903	0.1163	0.2828	1.8677E-13
16.530	3.0969E-06	2.1957E-18	0.3115	4.3252E-02	0.2207	1.5647E-13
16.820	2.2812E-06	1.7598E-18	0.3143	1.3396E-02	0.1653	1.2751E-13
17.110	1.5912E-06	1.3674E-18	0.3032	5.4261E-02	0.1172	1.0072E-13
17.400	1.0224E-06	1.0236E-18	0.2824	8.2256E-02	7.6530E-02	7.6624E-14
17.690	5.6663E-07	7.3022E-19	0.2552	9.9511E-02	4.3093E-02	5.5535E-14
17.980	2.1301E-07	4.8629E-19	0.2244	0.1081	1.6455E-02	3.7566E-14
18.270	-5.0758E-08	2.8913E-19	0.1923	0.1098	-3.9820E-03	2.2682E-14
18.560	-2.3750E-07	1.3476E-19	0.1606	0.1064	-1.8916E-02	1.0733E-14
18.850	-3.5990E-07	1.8438E-20	0.1305	9.9393E-02	-2.9097E-02	1.4907E-15
19.140	-4.3001E-07	3.8405E-19	0.1030	9.0012E-02	-3.5280E-02	3.1509E-14
19.430	-4.5886E-07	7.1151E-19	7.8351E-02	7.9320E-02	-3.8197E-02	5.9228E-14
19.720	-4.5634E-07	9.0414E-19	5.6966E-02	6.8165E-02	-3.8534E-02	7.6347E-14
20.010	-4.3099E-07	9.8916E-19	3.8830E-02	5.7217E-02	-3.6910E-02	8.4712E-14
20.300	-3.9008E-07	9.9122E-19	2.3804E-02	4.6954E-02	-3.3874E-02	8.6076E-14
20.590	-3.3965E-07	9.3209E-19	1.1629E-02	3.7706E-02	-2.9901E-02	8.2058E-14
20.880	-2.8455E-07	8.3065E-19	1.9715E-03	2.9689E-02	-2.5392E-02	7.4123E-14
21.170	-2.2866E-07	7.0298E-19	5.6333E-03	2.3009E-02	-2.0678E-02	6.3573E-14
21.460	-1.7500E-07	5.6269E-19	1.1402E-02	1.7685E-02	-1.6035E-02	5.1560E-14
21.750	-1.2587E-07	4.2123E-19	1.5824E-02	1.3666E-02	-1.1685E-02	3.9102E-14
22.040	-8.3051E-08	2.8831E-19	1.9265E-02	1.0839E-02	-7.8091E-03	2.7110E-14
22.330	-4.7945E-08	1.7234E-19	2.2052E-02	9.0441E-03	-4.5656E-03	1.6412E-14
22.620	-2.1673E-08	8.0814E-20	2.4459E-02	8.0786E-03	-2.0898E-03	7.7926E-15
22.910	-5.1985E-09	2.0661E-20	2.6701E-02	1.9246E-02	-0.1860	7.3920E-13
23.200	5.8271E-10	2.4310E-22	1.3296E-02	4.1296E-02	3.3992E-02	1.4181E-14
23.490	1.0411E-09	6.2532E-22	2.7473E-03	2.4163E-02	8.4214E-02	5.0582E-14
23.780	3.9980E-10	2.5363E-22	7.1898E-04	5.9557E-03	4.1358E-02	2.6236E-14
24.070	4.6398E-11	3.3441E-23	7.0659E-04	8.8972E-04	5.8462E-03	4.2136E-15
24.360	-2.3951E-11	8.0681E-23	2.0295E-04	1.2207E-03	-3.5581E-03	1.1986E-14
24.650	-1.2993E-11	4.7806E-23	1.4475E-06	3.8220E-04	-2.2233E-03	8.1802E-15

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24.940	-2.6146E-12	1.0432E-23	1.8717E-05	1.0065E-05	-3.4164E-04	1.3632E-15
25.230	2.6757E-13	1.2382E-25	7.2533E-06	3.1464E-05	5.5655E-05	2.5754E-17
25.520	2.4629E-13	1.5184E-25	4.6637E-07	1.3214E-05	7.0274E-05	4.3326E-17
25.810	3.8464E-14	2.6063E-26	4.1050E-07	1.0013E-06	1.3950E-05	9.4522E-18
26.100	-4.9125E-15	1.5234E-26	1.1426E-07	7.0803E-07	-2.1615E-06	6.7028E-18
26.390	-2.5141E-15	9.3112E-27	1.8500E-10	2.0592E-07	-1.3006E-06	4.8170E-18
26.680	-1.8742E-16	8.1097E-28	5.1672E-09	1.0373E-09	-1.1145E-07	4.8225E-19
26.970	7.0040E-17	4.0987E-29	7.7370E-10	9.0564E-09	4.2024E-08	2.4592E-20
27.260	1.7868E-17	1.1536E-29	8.5548E-11	1.4083E-09	1.0721E-08	6.9218E-21
27.550	-4.8899E-20	1.3380E-31	4.3088E-11	1.4208E-10	-2.9339E-11	8.0279E-23
27.840	-7.0516E-19	2.5400E-30	3.1398E-12	7.6377E-11	-4.2310E-10	1.5240E-21
28.130	-1.0408E-19	4.1283E-31	1.2110E-12	5.9391E-12	-6.2450E-11	2.4770E-22
28.420	1.1936E-20	6.3192E-33	3.0461E-13	2.0874E-12	7.1616E-12	3.7915E-24
28.710	6.0258E-21	3.7872E-33	2.7398E-16	5.2520E-13	3.6155E-12	2.2723E-24
29.000	1.0944E-23	1.1305E-34	0.0000	0.0000	6.5663E-15	6.7832E-26

* PILE GROUP * 3

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M



-344.15 110.31 9.2171E-11 5.2679E-10 1.1545E-09 78.152

STR, KN/ M**2

4937.5

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

-344.15 110.31 9.2171E-11 5.2679E-10 1.1545E-09 78.152

STR, KN/ M**2

4937.5

* EFFECTS FOR Laterally Loaded Pile *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT
y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR
M M M KN- M KN KN/ M KN/ M

0.0000 1.1658E-02 4.5019E-15 78.152 110.30 0.0000 0.0000
0.2900 1.0784E-02 4.4616E-15 46.468 109.16 7.9723 3.3008E-12
0.5800 9.8924E-03 4.3536E-15 15.462 105.57 16.784 7.3912E-12
0.8700 8.9948E-03 4.1885E-15 15.133 99.531 24.874 1.1588E-11
1.1600 8.1033E-03 3.9765E-15 42.561 91.327 31.713 1.5568E-11



1.4500	7.2288E-03	3.7277E-15	67.328	81.408	36.700	1.8929E-11
1.7400	6.3813E-03	3.4514E-15	89.018	70.353	39.542	2.1388E-11
2.0300	5.5705E-03	3.1563E-15	107.40	58.735	40.583	2.2995E-11
2.3200	4.8027E-03	2.8506E-15	122.37	47.611	36.131	2.1445E-11
2.6100	4.0836E-03	2.5414E-15	134.33	36.991	37.110	2.3095E-11
2.9000	3.4181E-03	2.2353E-15	143.19	26.234	37.078	2.4247E-11
3.1900	2.8098E-03	1.9380E-15	148.95	15.250	38.675	2.6675E-11
3.4800	2.2610E-03	1.6545E-15	151.48	3.8493	39.951	2.9234E-11
3.7700	1.7728E-03	1.3889E-15	150.68	8.0585	40.521	3.1745E-11
4.0600	1.3448E-03	1.1441E-15	146.49	18.700	33.045	2.8114E-11
4.3500	9.7544E-04	9.2226E-16	139.56	27.184	25.642	2.4244E-11
4.6400	6.6191E-04	7.2432E-16	130.49	33.563	18.535	2.0283E-11
4.9300	4.0061E-04	5.5056E-16	119.89	37.951	11.905	1.6362E-11
5.2200	1.8731E-04	4.0053E-16	108.32	40.506	5.8878	1.2590E-11
5.5100	1.7397E-05	2.7324E-16	96.268	41.420	0.5767	9.0575E-12
5.8000	-1.1395E-04	1.6727E-16	84.211	40.905	-3.9729	5.8318E-12
6.0900	-2.1157E-04	8.0921E-17	72.500	39.464	-5.8420	2.2345E-12
6.3800	-2.8014E-04	1.2277E-17	61.290	37.434	-8.0652	3.5346E-13
6.6700	-3.2416E-04	2.4020E-16	50.768	34.845	-9.7140	7.1982E-12
6.9600	-3.4784E-04	4.7122E-16	41.069	31.855	-10.833	1.4676E-11
7.2500	-3.5507E-04	6.3271E-16	32.288	28.612	-11.476	2.0450E-11
7.5400	-3.4937E-04	7.3564E-16	24.476	25.247	-11.703	2.4642E-11
7.8300	-3.3386E-04	7.9030E-16	17.652	21.872	-11.576	2.7403E-11
8.1200	-3.1128E-04	8.0613E-16	11.804	18.575	-11.160	2.8901E-11
8.4100	-2.8397E-04	7.9165E-16	6.8959	15.432	-10.515	2.9314E-11
8.7000	-2.5389E-04	7.5439E-16	2.8733	12.501	-9.7002	2.8822E-11
8.9900	-2.2267E-04	7.0092E-16	0.3753	9.8230	-8.7694	2.7604E-11
9.2800	-1.9157E-04	6.3679E-16	2.8390	7.4247	-7.7700	2.5828E-11
9.5700	-1.6156E-04	5.6666E-16	4.6496	5.3200	-6.7429	2.3651E-11
9.8600	-1.3341E-04	4.9430E-16	5.8938	3.5112	-5.7251	2.1212E-11
10.150	-1.0762E-04	4.2268E-16	6.6573	1.9918	-4.7451	1.8636E-11

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10.440	-8.4501E-05	3.5406E-16	7.0227	0.7477	-3.8252	1.6027E-11
10.730	-6.4194E-05	2.9008E-16	7.0673	0.2543	-2.9814	1.3472E-11
11.020	-4.6717E-05	2.3182E-16	6.8622	1.0092	-2.2247	1.1040E-11
11.310	-3.1990E-05	1.7994E-16	6.4709	1.5581	-1.5611	8.7808E-12
11.600	-1.9855E-05	1.3470E-16	5.9493	1.9283	-0.9923	6.7315E-12
11.890	-1.0103E-05	9.6069E-17	5.3450	2.1471	-0.5168	4.9142E-12
12.180	-2.4924E-06	6.3806E-17	4.6979	2.2410	-0.1304	3.3389E-12
12.470	3.2363E-06	3.7492E-17	4.0409	2.2348	0.1732	2.0060E-12
12.760	7.3463E-06	1.6598E-17	3.3996	2.1514	0.4017	9.0764E-13
13.050	1.0095E-05	5.3175E-19	2.7924	2.0114	0.5639	2.9704E-14
13.340	1.1726E-05	1.9172E-18	2.2327	1.8327	0.6688	1.0935E-13
13.630	1.2463E-05	3.3225E-18	1.7293	1.6305	0.7255	1.9342E-13
13.920	1.2509E-05	4.2232E-18	1.2871	1.4176	0.7429	2.5082E-13
14.210	1.2040E-05	4.7147E-18	0.9073	1.2044	0.7292	2.8556E-13
14.500	1.1209E-05	4.8842E-18	0.5890	0.9986	0.6921	3.0158E-13
14.790	1.0143E-05	4.8089E-18	0.3288	0.8059	0.6382	3.0259E-13
15.080	8.9459E-06	4.5560E-18	0.1224	0.6303	0.5734	2.9204E-13
15.370	7.7009E-06	4.1824E-18	3.7814E-02	0.4743	0.5027	2.7301E-13
15.660	6.4719E-06	3.7351E-18	0.1535	0.3391	0.4301	2.4821E-13
15.950	5.3053E-06	3.2520E-18	0.2331	0.2247	0.3588	2.1993E-13
16.240	4.2314E-06	2.7625E-18	0.2826	0.1305	0.2912	1.9008E-13
16.530	3.2704E-06	2.2888E-18	0.3076	5.5073E-02	0.2289	1.6018E-13
16.820	2.4321E-06	1.8465E-18	0.3134	3.9084E-03	0.1731	1.3140E-13
17.110	1.7192E-06	1.4460E-18	0.3048	4.6942E-02	0.1244	1.0460E-13
17.400	1.1281E-06	1.0929E-18	0.2858	7.6905E-02	8.2934E-02	8.0347E-14
17.690	6.5140E-07	7.8979E-19	0.2598	9.5894E-02	4.8655E-02	5.8991E-14
17.980	2.7867E-07	5.3620E-19	0.2298	0.1059	2.1143E-02	4.0681E-14
18.270	-2.0307E-09	3.2980E-19	0.1981	0.1089	-1.5646E-04	2.5410E-14
18.560	-2.0337E-07	1.6690E-19	0.1665	0.1065	-1.5908E-02	1.3056E-14
18.850	-3.3800E-07	4.2947E-20	0.1363	0.1002	-2.6837E-02	3.4100E-15
19.140	-4.1801E-07	2.7868E-19	0.1084	9.1422E-02	-3.3682E-02	2.2456E-14

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19.430	-4.5459E-07	6.3916E-19	8.3317E-02	8.1110E-02	-3.7165E-02	5.2254E-14
19.720	-4.5780E-07	8.5870E-19	6.1370E-02	7.0185E-02	-3.7966E-02	7.1213E-14
20.010	-4.3642E-07	9.6483E-19	4.2625E-02	5.9343E-02	-3.6707E-02	8.1150E-14
20.300	-3.9797E-07	9.8265E-19	2.6972E-02	4.9099E-02	-3.3941E-02	8.3805E-14
20.590	-3.4871E-07	9.3451E-19	1.4178E-02	3.9806E-02	-3.0150E-02	8.0800E-14
20.880	-2.9378E-07	8.3993E-19	3.9215E-03	3.1701E-02	-2.5746E-02	7.3611E-14
21.170	-2.3727E-07	7.1571E-19	4.2553E-03	2.4912E-02	-2.1073E-02	6.3566E-14
21.460	-1.8243E-07	5.7615E-19	1.0559E-02	1.9476E-02	-1.6417E-02	5.1850E-14
21.750	-1.3179E-07	4.3343E-19	1.5484E-02	1.5353E-02	-1.2016E-02	3.9516E-14
22.040	-8.7332E-08	2.9796E-19	1.9400E-02	1.2442E-02	-8.0649E-03	2.7516E-14
22.330	-5.0625E-08	1.7883E-19	2.2640E-02	1.0585E-02	-4.7347E-03	1.6724E-14
22.620	-2.2987E-08	8.4195E-20	2.5485E-02	9.5828E-03	-2.1769E-03	7.9733E-15
22.910	-5.5592E-09	2.1669E-20	2.8157E-02	1.9627E-02	-0.1989	7.7528E-13
23.200	5.9187E-10	2.3912E-22	1.4101E-02	4.3466E-02	3.4526E-02	1.3949E-14
23.490	1.0973E-09	6.4779E-22	2.9445E-03	2.5598E-02	8.8762E-02	5.2399E-14
23.780	4.2424E-10	2.6435E-22	7.4664E-04	6.3641E-03	4.3885E-02	2.7345E-14
24.070	5.0076E-11	3.5309E-23	7.4636E-04	9.1499E-04	6.3096E-03	4.4489E-15
24.360	-2.5096E-11	8.3080E-23	2.1594E-04	1.2884E-03	-3.7281E-03	1.2342E-14
24.650	-1.3759E-11	4.9733E-23	9.4515E-07	4.0628E-04	-2.3542E-03	8.5099E-15
24.940	-2.7975E-12	1.0946E-23	1.9696E-05	1.1717E-05	-3.6554E-04	1.4303E-15
25.230	2.7432E-13	1.2388E-25	7.7077E-06	3.3072E-05	5.7059E-05	2.5766E-17
25.520	2.6041E-13	1.5777E-25	5.1339E-07	1.4034E-05	7.4304E-05	4.5016E-17
25.810	4.1164E-14	2.7353E-26	4.3181E-07	1.0949E-06	1.4929E-05	9.9200E-18
26.100	-5.1003E-15	1.5521E-26	1.2157E-07	7.4436E-07	-2.2441E-06	6.8293E-18
26.390	-2.6643E-15	9.6935E-27	6.9145E-11	2.1901E-07	-1.3783E-06	5.0148E-18
26.680	-2.0277E-16	8.5756E-28	5.4564E-09	1.5466E-09	-1.2058E-07	5.0996E-19
26.970	7.3596E-17	4.2330E-29	8.2691E-10	9.5606E-09	4.4158E-08	2.5398E-20
27.260	1.9003E-17	1.2047E-29	8.8851E-11	1.5045E-09	1.1402E-08	7.2281E-21
27.550	-1.7235E-20	1.5811E-31	4.5662E-11	1.4733E-10	-1.0341E-11	9.4865E-23
27.840	-7.4477E-19	2.6362E-30	3.3983E-12	8.0922E-11	-4.4686E-10	1.5817E-21
28.130	-1.1128E-19	4.3289E-31	1.2727E-12	6.4183E-12	-6.6766E-11	2.5973E-22

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28.420 1.2404E-20 6.4450E-33 3.2397E-13 2.1928E-12 7.4423E-12 3.8670E-24
 28.710 6.3866E-21 3.9433E-33 8.5359E-16 5.5858E-13 3.8319E-12 2.3660E-24
 29.000 3.3922E-23 1.2984E-34 0.0000 0.0000 2.0353E-14 7.7904E-26

* PILE GROUP * 4

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-344.15 110.31 9.2171E-11 5.2679E-10 1.1545E-09 78.152

STR, KN/ M**2

4937.5

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

-8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03



AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -344.15 110.31 9.2171E-11 5.2679E-10 1.1545E-09 78.152

STR, KN/ M**2

4937.5

* EFFECTS FOR Laterally LOADED PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.1658E-02	4.5019E-15	78.152	110.30	0.0000	0.0000
0.2900	1.0784E-02	4.4616E-15	46.468	109.16	7.9723	3.3008E-12
0.5800	9.8924E-03	4.3536E-15	15.462	105.57	16.784	7.3912E-12
0.8700	8.9948E-03	4.1885E-15	15.133	99.531	24.874	1.1588E-11
1.1600	8.1033E-03	3.9765E-15	42.561	91.327	31.713	1.5568E-11
1.4500	7.2288E-03	3.7277E-15	67.328	81.408	36.700	1.8929E-11
1.7400	6.3813E-03	3.4514E-15	89.018	70.353	39.542	2.1388E-11
2.0300	5.5705E-03	3.1563E-15	107.40	58.735	40.583	2.2995E-11
2.3200	4.8027E-03	2.8506E-15	122.37	47.611	36.131	2.1445E-11
2.6100	4.0836E-03	2.5414E-15	134.33	36.991	37.110	2.3095E-11
2.9000	3.4181E-03	2.2353E-15	143.19	26.234	37.078	2.4247E-11
3.1900	2.8098E-03	1.9380E-15	148.95	15.250	38.675	2.6675E-11
3.4800	2.2610E-03	1.6545E-15	151.48	3.8493	39.951	2.9234E-11
3.7700	1.7728E-03	1.3889E-15	150.68	8.0585	40.521	3.1745E-11
4.0600	1.3448E-03	1.1441E-15	146.49	18.700	33.045	2.8114E-11
4.3500	9.7544E-04	9.2226E-16	139.56	27.184	25.642	2.4244E-11
4.6400	6.6191E-04	7.2432E-16	130.49	33.563	18.535	2.0283E-11

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4.9300	4.0061E-04	5.5056E-16	119.89	37.951	11.905	1.6362E-11
5.2200	1.8731E-04	4.0053E-16	108.32	40.506	5.8878	1.2590E-11
5.5100	1.7397E-05	2.7324E-16	96.268	41.420	0.5767	9.0575E-12
5.8000	-1.1395E-04	1.6727E-16	84.211	40.905	-3.9729	5.8318E-12
6.0900	-2.1157E-04	8.0921E-17	72.500	39.464	-5.8420	2.2345E-12
6.3800	-2.8014E-04	1.2277E-17	61.290	37.434	-8.0652	3.5346E-13
6.6700	-3.2416E-04	2.4020E-16	50.768	34.845	-9.7140	7.1982E-12
6.9600	-3.4784E-04	4.7122E-16	41.069	31.855	-10.833	1.4676E-11
7.2500	-3.5507E-04	6.3271E-16	32.288	28.612	-11.476	2.0450E-11
7.5400	-3.4937E-04	7.3564E-16	24.476	25.247	-11.703	2.4642E-11
7.8300	-3.3386E-04	7.9030E-16	17.652	21.872	-11.576	2.7403E-11
8.1200	-3.1128E-04	8.0613E-16	11.804	18.575	-11.160	2.8901E-11
8.4100	-2.8397E-04	7.9165E-16	6.8959	15.432	-10.515	2.9314E-11
8.7000	-2.5389E-04	7.5439E-16	2.8733	12.501	-9.7002	2.8822E-11
8.9900	-2.2267E-04	7.0092E-16	0.3753	9.8230	-8.7694	2.7604E-11
9.2800	-1.9157E-04	6.3679E-16	2.8390	7.4247	-7.7700	2.5828E-11
9.5700	-1.6156E-04	5.6666E-16	4.6496	5.3200	-6.7429	2.3651E-11
9.8600	-1.3341E-04	4.9430E-16	5.8938	3.5112	-5.7251	2.1212E-11
10.150	-1.0762E-04	4.2268E-16	6.6573	1.9918	-4.7451	1.8636E-11
10.440	-8.4501E-05	3.5406E-16	7.0227	0.7477	-3.8252	1.6027E-11
10.730	-6.4194E-05	2.9008E-16	7.0673	0.2543	-2.9814	1.3472E-11
11.020	-4.6717E-05	2.3182E-16	6.8622	1.0092	-2.2247	1.1040E-11
11.310	-3.1990E-05	1.7994E-16	6.4709	1.5581	-1.5611	8.7808E-12
11.600	-1.9855E-05	1.3470E-16	5.9493	1.9283	-0.9923	6.7315E-12
11.890	-1.0103E-05	9.6069E-17	5.3450	2.1471	-0.5168	4.9142E-12
12.180	-2.4924E-06	6.3806E-17	4.6979	2.2410	-0.1304	3.3389E-12
12.470	3.2363E-06	3.7492E-17	4.0409	2.2348	0.1732	2.0060E-12
12.760	7.3463E-06	1.6598E-17	3.3996	2.1514	0.4017	9.0764E-13
13.050	1.0095E-05	5.3175E-19	2.7924	2.0114	0.5639	2.9704E-14
13.340	1.1726E-05	1.9172E-18	2.2327	1.8327	0.6688	1.0935E-13
13.630	1.2463E-05	3.3225E-18	1.7293	1.6305	0.7255	1.9342E-13

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13.920	1.2509E-05	4.2232E-18	1.2871	1.4176	0.7429	2.5082E-13
14.210	1.2040E-05	4.7147E-18	0.9073	1.2044	0.7292	2.8556E-13
14.500	1.1209E-05	4.8842E-18	0.5890	0.9986	0.6921	3.0158E-13
14.790	1.0143E-05	4.8089E-18	0.3288	0.8059	0.6382	3.0259E-13
15.080	8.9459E-06	4.5560E-18	0.1224	0.6303	0.5734	2.9204E-13
15.370	7.7009E-06	4.1824E-18	3.7814E-02	0.4743	0.5027	2.7301E-13
15.660	6.4719E-06	3.7351E-18	0.1535	0.3391	0.4301	2.4821E-13
15.950	5.3053E-06	3.2520E-18	0.2331	0.2247	0.3588	2.1993E-13
16.240	4.2314E-06	2.7625E-18	0.2826	0.1305	0.2912	1.9008E-13
16.530	3.2704E-06	2.2888E-18	0.3076	5.5073E-02	0.2289	1.6018E-13
16.820	2.4321E-06	1.8465E-18	0.3134	3.9084E-03	0.1731	1.3140E-13
17.110	1.7192E-06	1.4460E-18	0.3048	4.6942E-02	0.1244	1.0460E-13
17.400	1.1281E-06	1.0929E-18	0.2858	7.6905E-02	8.2934E-02	8.0347E-14
17.690	6.5140E-07	7.8979E-19	0.2598	9.5894E-02	4.8655E-02	5.8991E-14
17.980	2.7867E-07	5.3620E-19	0.2298	0.1059	2.1143E-02	4.0681E-14
18.270	-2.0307E-09	3.2980E-19	0.1981	0.1089	-1.5646E-04	2.5410E-14
18.560	-2.0337E-07	1.6690E-19	0.1665	0.1065	-1.5908E-02	1.3056E-14
18.850	-3.3800E-07	4.2947E-20	0.1363	0.1002	-2.6837E-02	3.4100E-15
19.140	-4.1801E-07	2.7868E-19	0.1084	9.1422E-02	-3.3682E-02	2.2456E-14
19.430	-4.5459E-07	6.3916E-19	8.3317E-02	8.1110E-02	-3.7165E-02	5.2254E-14
19.720	-4.5780E-07	8.5870E-19	6.1370E-02	7.0185E-02	-3.7966E-02	7.1213E-14
20.010	-4.3642E-07	9.6483E-19	4.2625E-02	5.9343E-02	-3.6707E-02	8.1150E-14
20.300	-3.9797E-07	9.8265E-19	2.6972E-02	4.9099E-02	-3.3941E-02	8.3805E-14
20.590	-3.4871E-07	9.3451E-19	1.4178E-02	3.9806E-02	-3.0150E-02	8.0800E-14
20.880	-2.9378E-07	8.3993E-19	3.9215E-03	3.1701E-02	-2.5746E-02	7.3611E-14
21.170	-2.3727E-07	7.1571E-19	4.2553E-03	2.4912E-02	-2.1073E-02	6.3566E-14
21.460	-1.8243E-07	5.7615E-19	1.0559E-02	1.9476E-02	-1.6417E-02	5.1850E-14
21.750	-1.3179E-07	4.3343E-19	1.5484E-02	1.5353E-02	-1.2016E-02	3.9516E-14
22.040	-8.7332E-08	2.9796E-19	1.9400E-02	1.2442E-02	-8.0649E-03	2.7516E-14
22.330	-5.0625E-08	1.7883E-19	2.2640E-02	1.0585E-02	-4.7347E-03	1.6724E-14
22.620	-2.2987E-08	8.4195E-20	2.5485E-02	9.5828E-03	-2.1769E-03	7.9733E-15



22.910	-5.5592E-09	2.1669E-20	2.8157E-02	1.9627E-02	-0.1989	7.7528E-13
23.200	5.9187E-10	2.3912E-22	1.4101E-02	4.3466E-02	3.4526E-02	1.3949E-14
23.490	1.0973E-09	6.4779E-22	2.9445E-03	2.5598E-02	8.8762E-02	5.2399E-14
23.780	4.2424E-10	2.6435E-22	7.4664E-04	6.3641E-03	4.3885E-02	2.7345E-14
24.070	5.0076E-11	3.5309E-23	7.4636E-04	9.1499E-04	6.3096E-03	4.4489E-15
24.360	-2.5096E-11	8.3080E-23	2.1594E-04	1.2884E-03	-3.7281E-03	1.2342E-14
24.650	-1.3759E-11	4.9733E-23	9.4515E-07	4.0628E-04	-2.3542E-03	8.5099E-15
24.940	-2.7975E-12	1.0946E-23	1.9696E-05	1.1717E-05	-3.6554E-04	1.4303E-15
25.230	2.7432E-13	1.2388E-25	7.7077E-06	3.3072E-05	5.7059E-05	2.5766E-17
25.520	2.6041E-13	1.5777E-25	5.1339E-07	1.4034E-05	7.4304E-05	4.5016E-17
25.810	4.1164E-14	2.7353E-26	4.3181E-07	1.0949E-06	1.4929E-05	9.9200E-18
26.100	-5.1003E-15	1.5521E-26	1.2157E-07	7.4436E-07	-2.2441E-06	6.8293E-18
26.390	-2.6643E-15	9.6935E-27	6.9145E-11	2.1901E-07	-1.3783E-06	5.0148E-18
26.680	-2.0277E-16	8.5756E-28	5.4564E-09	1.5466E-09	-1.2058E-07	5.0996E-19
26.970	7.3596E-17	4.2330E-29	8.2691E-10	9.5606E-09	4.4158E-08	2.5398E-20
27.260	1.9003E-17	1.2047E-29	8.8851E-11	1.5045E-09	1.1402E-08	7.2281E-21
27.550	-1.7235E-20	1.5811E-31	4.5662E-11	1.4733E-10	-1.0341E-11	9.4865E-23
27.840	-7.4477E-19	2.6362E-30	3.3983E-12	8.0922E-11	-4.4686E-10	1.5817E-21
28.130	-1.1128E-19	4.3289E-31	1.2727E-12	6.4183E-12	-6.6766E-11	2.5973E-22
28.420	1.2404E-20	6.4450E-33	3.2397E-13	2.1928E-12	7.4423E-12	3.8670E-24
28.710	6.3866E-21	3.9433E-33	8.5359E-16	5.5858E-13	3.8319E-12	2.3660E-24
29.000	3.3922E-23	1.2984E-34	0.0000	0.0000	2.0353E-14	7.7904E-26

* PILE GROUP * 5

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM



DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 -8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 -344.15 111.85 9.3090E-11 5.2679E-10 1.1621E-09 80.074

STR, KN/ M**2
 5028.2

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -344.15 111.85 9.3090E-11 5.2679E-10 1.1621E-09 80.074

STR, KN/ M**2
 5028.2

* EFFECTS FOR LATERALLY LOADED PILE *

x DISPL. DISPL. MOMENT SHEAR SOIL REACT SOIL REACT
 y-DIR z-DIR y-z-DIR y-z-DIR y-DIR z-DIR



M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1658E-02	4.5019E-15	80.074	111.83	0.0000	0.0000
0.2900	1.0784E-02	4.4614E-15	47.945	110.68	8.1172	3.3608E-12
0.5800	9.8910E-03	4.3527E-15	16.505	107.02	17.087	7.5242E-12
0.8700	8.9920E-03	4.1866E-15	14.499	100.88	25.319	1.1794E-11
1.1600	8.0989E-03	3.9735E-15	42.298	92.525	32.273	1.5840E-11
1.4500	7.2227E-03	3.7234E-15	67.388	82.433	37.337	1.9252E-11
1.7400	6.3734E-03	3.4457E-15	89.347	71.188	40.213	2.1741E-11
2.0300	5.5610E-03	3.1494E-15	107.94	59.376	41.251	2.3362E-11
2.3200	4.7918E-03	2.8425E-15	123.07	48.072	36.705	2.1774E-11
2.6100	4.0716E-03	2.5323E-15	135.14	37.287	37.675	2.3432E-11
2.9000	3.4054E-03	2.2254E-15	144.06	26.370	37.613	2.4580E-11
3.1900	2.7967E-03	1.9276E-15	149.84	15.233	39.194	2.7015E-11
3.4800	2.2478E-03	1.6438E-15	152.34	3.6865	40.440	2.9574E-11
3.7700	1.7598E-03	1.3781E-15	151.47	8.3559	40.956	3.2072E-11
4.0600	1.3324E-03	1.1335E-15	147.18	19.103	33.337	2.8359E-11
4.3500	9.6390E-04	9.1195E-16	140.12	27.651	25.800	2.4409E-11
4.6400	6.5146E-04	7.1456E-16	130.91	34.059	18.575	2.0374E-11
4.9300	3.9141E-04	5.4150E-16	120.16	38.444	11.844	1.6385E-11
5.2200	1.7948E-04	3.9229E-16	108.45	40.969	5.7445	1.2556E-11
5.5100	1.0987E-05	2.6591E-16	96.273	41.832	0.3708	8.9751E-12
5.8000	-1.1894E-04	1.6090E-16	84.106	41.251	-4.2224	5.7119E-12
6.0900	-2.1518E-04	7.5527E-17	72.305	39.744	-6.0499	2.1235E-12
6.3800	-2.8245E-04	7.8477E-18	61.023	37.653	-8.2798	2.3005E-13
6.6700	-3.2528E-04	2.6084E-16	50.447	35.001	-9.9251	7.9588E-12
6.9600	-3.4790E-04	4.8670E-16	40.712	31.952	-11.032	1.5434E-11
7.2500	-3.5420E-04	6.4344E-16	31.911	28.654	-11.657	2.1175E-11
7.5400	-3.4773E-04	7.4212E-16	24.094	25.241	-11.860	2.5312E-11
7.8300	-3.3160E-04	7.9306E-16	17.279	21.824	-11.708	2.8000E-11
8.1200	-3.0855E-04	8.0573E-16	11.450	18.493	-11.264	2.9413E-11

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8.4100	-2.8092E-04	7.8864E-16	6.5706	15.324	-10.591	2.9734E-11
8.7000	-2.5065E-04	7.4932E-16	2.5827	12.374	-9.7507	2.9150E-11
8.9900	-2.1935E-04	6.9429E-16	0.6265	9.6852	-8.7958	2.7841E-11
9.2800	-1.8826E-04	6.2907E-16	3.0491	7.2824	-7.7750	2.5980E-11
9.5700	-1.5836E-04	5.5827E-16	4.8183	5.1787	-6.7298	2.3725E-11
9.8600	-1.3039E-04	4.8561E-16	6.0221	3.3759	-5.6973	2.1219E-11
10.150	-1.0483E-04	4.1400E-16	6.7476	1.8661	-4.7060	1.8586E-11
10.440	-8.1967E-05	3.4564E-16	7.0783	0.6344	-3.7780	1.5931E-11
10.730	-6.1945E-05	2.8212E-16	7.0922	0.3530	-2.9294	1.3342E-11
11.020	-4.4764E-05	2.2448E-16	6.8608	1.0925	-2.1705	1.0885E-11
11.310	-3.0331E-05	1.7331E-16	6.4477	1.6257	-1.5071	8.6111E-12
11.600	-1.8481E-05	1.2884E-16	5.9088	1.9806	-0.9404	6.5559E-12
11.890	-8.9980E-06	9.1005E-17	5.2916	2.1849	-0.4687	4.7399E-12
12.180	-1.6349E-06	5.9533E-17	4.6357	2.2655	-8.7110E-02	3.1720E-12
12.470	3.8712E-06	3.3978E-17	3.9736	2.2476	0.2109	1.8512E-12
12.760	7.7857E-06	1.3796E-17	3.3303	2.1541	0.4335	7.6816E-13
13.050	1.0367E-05	2.7033E-19	2.7236	2.0058	0.5896	1.5376E-14
13.340	1.1857E-05	2.1842E-18	2.1666	1.8204	0.6886	1.2685E-13
13.630	1.2481E-05	3.5041E-18	1.6676	1.6133	0.7398	2.0770E-13
13.920	1.2438E-05	4.3323E-18	1.2310	1.3970	0.7521	2.6199E-13
14.210	1.1902E-05	4.7641E-18	0.8576	1.1818	0.7340	2.9381E-13
14.500	1.1025E-05	4.8858E-18	0.5460	0.9752	0.6931	3.0717E-13
14.790	9.9293E-06	4.7736E-18	0.2927	0.7826	0.6361	3.0584E-13
15.080	8.7175E-06	4.4937E-18	9.2922E-02	0.6080	0.5690	2.9329E-13
15.370	7.4694E-06	4.1017E-18	6.0903E-02	0.4535	0.4965	2.7262E-13
15.660	6.2468E-06	3.6434E-18	0.1709	0.3203	0.4227	2.4653E-13
15.950	5.0931E-06	3.1553E-18	0.2453	0.2081	0.3507	2.1728E-13
16.240	4.0371E-06	2.6658E-18	0.2903	0.1163	0.2828	1.8677E-13
16.530	3.0969E-06	2.1957E-18	0.3115	4.3252E-02	0.2207	1.5647E-13
16.820	2.2812E-06	1.7598E-18	0.3143	1.3396E-02	0.1653	1.2751E-13
17.110	1.5912E-06	1.3674E-18	0.3032	5.4261E-02	0.1172	1.0072E-13

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17.400	1.0224E-06	1.0236E-18	0.2824	8.2256E-02	7.6530E-02	7.6624E-14
17.690	5.6663E-07	7.3022E-19	0.2552	9.9511E-02	4.3093E-02	5.5535E-14
17.980	2.1301E-07	4.8629E-19	0.2244	0.1081	1.6455E-02	3.7566E-14
18.270	-5.0758E-08	2.8913E-19	0.1923	0.1098	-3.9820E-03	2.2682E-14
18.560	-2.3750E-07	1.3476E-19	0.1606	0.1064	-1.8916E-02	1.0733E-14
18.850	-3.5990E-07	1.8438E-20	0.1305	9.9393E-02	-2.9097E-02	1.4907E-15
19.140	-4.3001E-07	3.8405E-19	0.1030	9.0012E-02	-3.5280E-02	3.1509E-14
19.430	-4.5886E-07	7.1151E-19	7.8351E-02	7.9320E-02	-3.8197E-02	5.9228E-14
19.720	-4.5634E-07	9.0414E-19	5.6966E-02	6.8165E-02	-3.8534E-02	7.6347E-14
20.010	-4.3099E-07	9.8916E-19	3.8830E-02	5.7217E-02	-3.6910E-02	8.4712E-14
20.300	-3.9008E-07	9.9122E-19	2.3804E-02	4.6954E-02	-3.3874E-02	8.6076E-14
20.590	-3.3965E-07	9.3209E-19	1.1629E-02	3.7706E-02	-2.9901E-02	8.2058E-14
20.880	-2.8455E-07	8.3065E-19	1.9715E-03	2.9689E-02	-2.5392E-02	7.4123E-14
21.170	-2.2866E-07	7.0298E-19	5.6333E-03	2.3009E-02	-2.0678E-02	6.3573E-14
21.460	-1.7500E-07	5.6269E-19	1.1402E-02	1.7685E-02	-1.6035E-02	5.1560E-14
21.750	-1.2587E-07	4.2123E-19	1.5824E-02	1.3666E-02	-1.1685E-02	3.9102E-14
22.040	-8.3051E-08	2.8831E-19	1.9265E-02	1.0839E-02	-7.8091E-03	2.7110E-14
22.330	-4.7945E-08	1.7234E-19	2.2052E-02	9.0441E-03	-4.5656E-03	1.6412E-14
22.620	-2.1673E-08	8.0814E-20	2.4459E-02	8.0786E-03	-2.0898E-03	7.7926E-15
22.910	-5.1985E-09	2.0661E-20	2.6701E-02	1.9246E-02	-0.1860	7.3920E-13
23.200	5.8271E-10	2.4310E-22	1.3296E-02	4.1296E-02	3.3992E-02	1.4181E-14
23.490	1.0411E-09	6.2532E-22	2.7473E-03	2.4163E-02	8.4214E-02	5.0582E-14
23.780	3.9980E-10	2.5363E-22	7.1898E-04	5.9557E-03	4.1358E-02	2.6236E-14
24.070	4.6398E-11	3.3441E-23	7.0659E-04	8.8972E-04	5.8462E-03	4.2136E-15
24.360	-2.3951E-11	8.0681E-23	2.0295E-04	1.2207E-03	-3.5581E-03	1.1986E-14
24.650	-1.2993E-11	4.7806E-23	1.4475E-06	3.8220E-04	-2.2233E-03	8.1802E-15
24.940	-2.6146E-12	1.0432E-23	1.8717E-05	1.0065E-05	-3.4164E-04	1.3632E-15
25.230	2.6757E-13	1.2382E-25	7.2533E-06	3.1464E-05	5.5655E-05	2.5754E-17
25.520	2.4629E-13	1.5184E-25	4.6637E-07	1.3214E-05	7.0274E-05	4.3326E-17
25.810	3.8464E-14	2.6063E-26	4.1050E-07	1.0013E-06	1.3950E-05	9.4522E-18
26.100	-4.9125E-15	1.5234E-26	1.1426E-07	7.0803E-07	-2.1615E-06	6.7028E-18

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26.390	-2.5141E-15	9.3112E-27	1.8500E-10	2.0592E-07	-1.3006E-06	4.8170E-18
26.680	-1.8742E-16	8.1097E-28	5.1672E-09	1.0373E-09	-1.1145E-07	4.8225E-19
26.970	7.0040E-17	4.0987E-29	7.7370E-10	9.0564E-09	4.2024E-08	2.4592E-20
27.260	1.7868E-17	1.1536E-29	8.5548E-11	1.4083E-09	1.0721E-08	6.9218E-21
27.550	-4.8899E-20	1.3380E-31	4.3088E-11	1.4208E-10	-2.9339E-11	8.0279E-23
27.840	-7.0516E-19	2.5400E-30	3.1398E-12	7.6377E-11	-4.2310E-10	1.5240E-21
28.130	-1.0408E-19	4.1283E-31	1.2110E-12	5.9391E-12	-6.2450E-11	2.4770E-22
28.420	1.1936E-20	6.3192E-33	3.0461E-13	2.0874E-12	7.1616E-12	3.7915E-24
28.710	6.0258E-21	3.7872E-33	2.7398E-16	5.2520E-13	3.6155E-12	2.2723E-24
29.000	1.0944E-23	1.1305E-34	0.0000	0.0000	6.5663E-15	6.7832E-26

* PILE GROUP * 6

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

-8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

-344.15 141.22 1.1031E-10 5.2679E-10 1.2991E-09 115.74

STR, KN/ M**2

6710.2



THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 -8.3409E-04 0.011658 4.5019E-15 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 -344.15 141.22 1.1031E-10 5.2679E-10 1.2991E-09 115.74

STR, KN/ M**2

6710.2

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1658E-02	4.5019E-15	115.74	141.19	0.0000	0.0000
0.2900	1.0777E-02	4.4567E-15	75.101	139.61	11.041	4.5695E-12
0.5800	9.8659E-03	4.3361E-15	35.398	134.65	23.198	1.0202E-11
0.8700	8.9413E-03	4.1527E-15	3.3730	126.32	34.267	1.5922E-11
1.1600	8.0182E-03	3.9188E-15	38.160	115.05	43.489	2.1262E-11
1.4500	7.1103E-03	3.6461E-15	69.295	101.49	50.027	2.5659E-11
1.7400	6.2301E-03	3.3457E-15	96.232	86.478	53.501	2.8733E-11
2.0300	5.3893E-03	3.0278E-15	118.68	70.831	54.413	3.0570E-11
2.3200	4.5962E-03	2.7014E-15	136.58	55.993	47.920	2.8165E-11
2.6100	3.8575E-03	2.3749E-15	150.46	42.000	48.582	2.9910E-11

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2.9000	3.1789E-03	2.0553E-15	160.27	28.026	47.790	3.0898E-11
3.1900	2.5643E-03	1.7490E-15	166.10	14.004	48.915	3.3362E-11
3.4800	2.0161E-03	1.4609E-15	167.83	0.5172	49.369	3.5774E-11
3.7700	1.5350E-03	1.1953E-15	165.44	14.705	48.625	3.7863E-11
4.0600	1.1201E-03	9.5490E-16	159.00	27.257	38.144	3.2518E-11
4.3500	7.6883E-04	7.4129E-16	149.37	36.819	28.009	2.7006E-11
4.6400	4.7732E-04	5.5494E-16	137.42	43.536	18.524	2.1536E-11
4.9300	2.4083E-04	3.9543E-16	123.94	47.631	9.9188	1.6286E-11
5.2200	5.3982E-05	2.6160E-16	109.65	49.383	2.3516	1.1396E-11
5.5100	-8.8946E-05	1.5176E-16	95.203	49.106	-4.0862	6.9718E-12
5.8000	-1.9374E-04	6.3820E-17	81.119	47.133	-9.3608	3.0836E-12
6.0900	-2.6603E-04	2.7215E-17	67.834	44.281	-10.180	1.0415E-12
6.3800	-3.1115E-04	3.2890E-16	55.415	40.992	-12.415	1.3123E-11
6.6700	-3.3407E-04	5.4341E-16	44.047	37.168	-13.874	2.2568E-11
6.9600	-3.3935E-04	6.8449E-16	33.853	33.024	-14.647	2.9544E-11
7.2500	-3.3106E-04	7.6508E-16	24.895	28.749	-14.829	3.4270E-11
7.5400	-3.1281E-04	7.9714E-16	17.188	24.493	-14.522	3.7006E-11
7.8300	-2.8766E-04	7.9144E-16	10.705	20.383	-13.824	3.8033E-11
8.1200	-2.5823E-04	7.5753E-16	5.3856	16.518	-12.830	3.7639E-11
8.4100	-2.2664E-04	7.0366E-16	1.1461	12.971	-11.631	3.6110E-11
8.7000	-1.9459E-04	6.3680E-16	2.1535	9.7906	-10.303	3.3717E-11
8.9900	-1.6335E-04	5.6272E-16	4.5428	7.0036	-8.9154	3.0713E-11
9.2800	-1.3392E-04	4.8604E-16	6.1831	4.6184	-7.5278	2.7321E-11
9.5700	-1.0697E-04	4.1035E-16	7.1910	2.6282	-6.1875	2.3735E-11
9.8600	-8.2906E-05	3.3832E-16	7.6796	1.0144	-4.9306	2.0121E-11
10.150	-6.1915E-05	2.7182E-16	7.7546	0.2651	-3.7832	1.6609E-11
10.440	-4.4030E-05	2.1205E-16	7.5125	1.2141	-2.7622	1.3303E-11
10.730	-2.9154E-05	1.5963E-16	7.0391	1.8868	-1.8766	1.0275E-11
11.020	-1.7099E-05	1.1475E-16	6.4089	2.3225	-1.1285	7.5732E-12
11.310	-7.6107E-06	7.7260E-17	5.6847	2.5608	-0.5147	5.2250E-12
11.600	-3.9985E-07	4.6742E-17	4.9179	2.6394	-2.7694E-02	3.2373E-12



11.890	4.8409E-06	2.2610E-17	4.1504	2.5937	0.3432	1.6028E-12
12.180	8.4193E-06	4.1675E-18	3.4123	2.4554	0.6106	3.0223E-13
12.470	1.0632E-05	1.5786E-18	2.7257	2.2525	0.7884	1.1706E-13
12.760	1.1753E-05	3.1589E-18	2.1056	2.0091	0.8907	2.3940E-13
13.050	1.2031E-05	4.1545E-18	1.5605	1.7449	0.9314	3.2162E-13
13.340	1.1686E-05	4.6817E-18	1.0937	1.4761	0.9237	3.7007E-13
13.630	1.0904E-05	4.8459E-18	0.7047	1.2150	0.8797	3.9095E-13
13.920	9.8403E-06	4.7400E-18	0.3897	0.9702	0.8099	3.9014E-13
14.210	8.6215E-06	4.4438E-18	0.1428	0.7479	0.7237	3.7301E-13
14.500	7.3464E-06	4.0238E-18	4.5095E-02	0.5519	0.6286	3.4432E-13
14.790	6.0905E-06	3.5339E-18	0.1780	0.3838	0.5311	3.0816E-13
15.080	4.9062E-06	3.0165E-18	0.2662	0.2436	0.4358	2.6796E-13
15.370	3.8280E-06	2.5035E-18	0.3179	0.1301	0.3463	2.2648E-13
15.660	2.8768E-06	2.0179E-18	0.3405	4.1518E-02	0.2649	1.8584E-13
15.950	2.0617E-06	1.5750E-18	0.3409	2.5612E-02	0.1932	1.4762E-13
16.240	1.3829E-06	1.1839E-18	0.3251	7.2643E-02	0.1319	1.1289E-13
16.530	8.3413E-07	8.4849E-19	0.2984	0.1034	8.0902E-02	8.2294E-14
16.820	4.0482E-07	5.6921E-19	0.2648	0.1208	3.9923E-02	5.6136E-14
17.110	8.1541E-08	3.4356E-19	0.2280	0.1277	8.1746E-03	3.4442E-14
17.400	-1.5041E-07	1.6716E-19	0.1906	0.1266	-1.5324E-02	1.7030E-14
17.690	-3.0601E-07	3.4501E-20	0.1545	0.1197	-3.1676E-02	3.5713E-15
17.980	-3.9969E-07	3.5782E-19	0.1212	0.1090	-4.2025E-02	3.7623E-14
18.270	-4.4483E-07	7.3237E-19	9.1358E-02	9.5929E-02	-4.7497E-02	7.8199E-14
18.560	-4.5337E-07	9.5659E-19	6.5546E-02	8.1882E-02	-4.9149E-02	1.0370E-13
18.850	-4.3566E-07	1.0631E-18	4.3877E-02	6.7792E-02	-4.7939E-02	1.1698E-13
19.140	-4.0037E-07	1.0810E-18	2.6246E-02	5.4358E-02	-4.4709E-02	1.2071E-13
19.430	-3.5456E-07	1.0354E-18	1.2378E-02	4.2050E-02	-4.0172E-02	1.1731E-13
19.720	-3.0380E-07	9.4748E-19	1.8912E-03	3.1162E-02	-3.4916E-02	1.0890E-13
20.010	-2.5228E-07	8.3427E-19	5.7396E-03	2.1835E-02	-2.9406E-02	9.7244E-14
20.300	-2.0297E-07	7.0922E-19	1.0804E-02	1.4092E-02	-2.3990E-02	8.3826E-14
20.590	-1.5798E-07	5.8252E-19	1.3853E-02	7.8665E-03	-1.8930E-02	6.9800E-14

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20.880	-1.1853E-07	4.6149E-19	1.5311E-02	3.0307E-03	-1.4397E-02	5.6051E-14
21.170	-8.5224E-08	3.5114E-19	1.5561E-02	6.2009E-04	-1.0490E-02	4.3221E-14
21.460	-5.8148E-08	2.5456E-19	1.4931E-02	3.1927E-03	-7.2521E-03	3.1748E-14
21.750	-3.7053E-08	1.7341E-19	1.3693E-02	4.9231E-03	-4.6816E-03	2.1910E-14
22.040	-2.1443E-08	1.0826E-19	1.2063E-02	5.9999E-03	-2.7443E-03	1.3855E-14
22.330	-1.0666E-08	5.8966E-20	1.0210E-02	6.5982E-03	-1.3824E-03	7.6426E-15
22.620	-3.9760E-09	2.4906E-20	8.2436E-03	6.8744E-03	-5.2182E-04	3.2687E-15
22.910	-5.8282E-10	5.2071E-21	6.2341E-03	9.9768E-03	-2.0852E-02	1.8630E-13
23.200	3.2146E-10	1.8872E-22	2.4555E-03	1.0310E-02	1.8752E-02	1.1008E-14
23.490	2.4757E-10	2.2240E-22	2.5420E-04	4.6870E-03	2.0026E-02	1.7990E-14
23.780	7.1852E-11	7.7237E-23	2.6288E-04	7.0549E-04	7.4327E-03	7.9898E-15
24.070	1.4401E-12	6.5364E-24	1.5490E-04	3.9856E-04	1.8145E-04	8.2359E-16
24.360	-6.9021E-12	3.2712E-23	3.1689E-05	2.7584E-04	-1.0253E-03	4.8596E-15
24.650	-2.5707E-12	1.5318E-23	5.0975E-06	6.2762E-05	-4.3987E-04	2.6211E-15
24.940	-2.8125E-13	2.5944E-24	4.7107E-06	6.7082E-06	-3.6750E-05	3.3900E-16
25.230	1.2677E-13	7.9338E-26	1.2126E-06	8.2387E-06	2.6368E-05	1.6502E-17
25.520	5.1824E-14	5.0240E-26	6.8586E-08	2.2711E-06	1.4787E-05	1.4335E-17
25.810	4.0510E-15	6.4240E-27	1.0464E-07	8.7528E-08	1.4692E-06	2.3298E-18
26.100	-1.8005E-15	7.5071E-27	1.7911E-08	1.8404E-07	-7.9223E-07	3.3031E-18
26.390	-4.7965E-16	2.9273E-27	2.1045E-09	3.2859E-08	-2.4814E-07	1.5144E-18
26.680	-1.8097E-18	1.4802E-28	1.1464E-09	3.4736E-09	-1.0762E-09	8.8021E-20
26.970	1.8517E-17	1.5617E-29	9.0415E-11	2.0304E-09	1.1110E-08	9.3704E-21
27.260	2.8652E-18	3.3302E-30	3.1190E-11	1.7008E-10	1.7191E-09	1.9981E-21
27.550	-2.9252E-19	6.4508E-31	8.2234E-12	5.3743E-11	-1.7551E-10	3.8705E-22
27.840	-1.5536E-19	8.6412E-31	1.8279E-14	1.4728E-11	-9.3213E-11	5.1847E-22
28.130	-1.1914E-20	1.0476E-31	3.1850E-13	1.1541E-13	-7.1486E-12	6.2857E-23
28.420	4.2950E-21	3.0617E-33	4.8602E-14	5.5699E-13	2.5770E-12	1.8370E-24
28.710	1.1439E-21	1.1856E-33	4.5699E-15	8.3800E-14	6.8635E-13	7.1134E-25
29.000	-1.8070E-22	3.6698E-34	0.0000	0.0000	-1.0842E-13	2.2019E-25

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* PILE GROUP * 7

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1038.4 186.29 6.2788E-10 5.2679E-10 1.9933E-10 172.97

STR, KN/ M**2

1.1786E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD

3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M

1038.4 186.29 6.2788E-10 5.2679E-10 1.9933E-10 172.97

STR, KN/ M**2



1.1786E+04

* EFFECTS FOR Laterally Loaded PILE *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.1658E-02	2.0658E-14	172.97	186.41	0.0000	0.0000
0.2900	1.0765E-02	2.0429E-14	118.04	183.90	16.433	3.1185E-11
0.5800	9.8258E-03	1.9803E-14	64.435	176.53	34.426	6.9384E-11
0.8700	8.8610E-03	1.8852E-14	13.701	164.20	50.608	1.0767E-10
1.1600	7.8911E-03	1.7646E-14	33.747	147.62	63.797	1.4266E-10
1.4500	6.9347E-03	1.6251E-14	74.771	127.82	72.749	1.7048E-10
1.7400	6.0083E-03	1.4729E-14	109.65	106.12	76.952	1.8865E-10
2.0300	5.1264E-03	1.3137E-14	138.00	83.761	77.216	1.9788E-10
2.3200	4.3001E-03	1.1523E-14	159.81	62.865	66.899	1.7929E-10
2.6100	3.5375E-03	9.9301E-15	175.92	43.520	66.513	1.8675E-10
2.9000	2.8452E-03	8.3964E-15	186.37	24.610	63.897	1.8863E-10
3.1900	2.2274E-03	6.9520E-15	191.38	6.1323	63.537	1.9841E-10
3.4800	1.6861E-03	5.6212E-15	190.96	12.338	61.837	2.0631E-10
3.7700	1.2211E-03	4.4216E-15	185.26	29.635	57.632	2.0868E-10
4.0600	8.3033E-04	3.3637E-15	174.66	44.063	42.129	1.7067E-10
4.3500	5.0943E-04	2.4509E-15	160.45	54.144	27.651	1.3303E-10
4.6400	2.5276E-04	1.6809E-15	143.85	60.237	14.615	9.7190E-11
4.9300	5.3710E-05	1.0467E-15	125.98	62.800	3.2958	6.4228E-11
5.2200	-9.4880E-05	5.3811E-16	107.81	62.354	-6.1582	3.4926E-11
5.5100	-2.0028E-04	1.4269E-16	90.119	59.445	-13.709	9.7667E-12
5.8000	-2.6958E-04	2.5969E-17	73.546	54.619	-19.407	1.8695E-12
6.0900	-3.0942E-04	6.1724E-17	58.574	49.228	-17.642	3.5193E-12

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6.3800	-3.2580E-04	8.5303E-17	45.062	43.849	-19.367	5.0709E-12
6.6700	-3.2412E-04	9.8919E-17	33.160	38.127	-20.055	6.1208E-12
6.9600	-3.0916E-04	1.0462E-16	22.931	32.336	-19.881	6.7279E-12
7.2500	-2.8501E-04	1.0426E-16	14.365	26.695	-19.021	6.9577E-12
7.5400	-2.5511E-04	9.9442E-17	7.3926	21.379	-17.645	6.8782E-12
7.8300	-2.2225E-04	9.1570E-17	1.9011	16.513	-15.912	6.5562E-12
8.1200	-1.8862E-04	8.1798E-17	2.2930	12.181	-13.963	6.0553E-12
8.4100	-1.5586E-04	7.1063E-17	5.2655	8.4276	-11.917	5.4333E-12
8.7000	-1.2520E-04	6.0099E-17	7.2336	5.2662	-9.8772	4.7412E-12
8.9900	-9.7448E-05	4.9459E-17	8.3681	2.6832	-7.9243	4.0220E-12
9.2800	-7.3043E-05	3.9534E-17	8.8326	0.6450	-6.1173	3.3110E-12
9.5700	-5.2177E-05	3.0580E-17	8.7790	0.9116	-4.4966	2.6354E-12
9.8600	-3.4828E-05	2.2740E-17	8.3435	2.0111	-3.0861	2.0150E-12
10.150	-2.0821E-05	1.6069E-17	7.6451	2.7334	-1.8956	1.4630E-12
10.440	-9.8770E-06	1.0554E-17	6.7841	3.1422	-0.9232	9.8651E-13
10.730	-1.6504E-06	6.1309E-18	5.8426	3.2990	-0.1583	5.8796E-13
11.020	4.2356E-06	2.7023E-18	4.8860	3.2615	0.4165	2.6572E-13
11.310	8.1646E-06	1.5104E-19	3.9628	3.0818	0.8227	1.5219E-14
11.600	1.0507E-05	9.7309E-18	3.1068	2.8053	1.0842	1.0041E-12
11.890	1.1605E-05	1.6664E-17	2.3403	2.4704	1.2258	1.7601E-12
12.180	1.1768E-05	2.0648E-17	1.6757	2.1083	1.2715	2.2310E-12
12.470	1.1260E-05	2.2342E-17	1.1172	1.7440	1.2440	2.4684E-12
12.760	1.0305E-05	2.2334E-17	0.6627	1.3953	1.1636	2.5218E-12
13.050	9.0867E-06	2.1127E-17	0.3058	1.0748	1.0481	2.4369E-12
13.340	7.7465E-06	1.9143E-17	3.6756E-02	0.7906	0.9123	2.2545E-12
13.630	6.3928E-06	1.6718E-17	0.1573	0.5470	0.7684	2.0096E-12
13.920	5.1032E-06	1.4116E-17	0.2847	0.3448	0.6258	1.7310E-12
14.210	3.9271E-06	1.1530E-17	0.3592	0.1828	0.4911	1.4419E-12
14.500	2.8944E-06	9.0967E-18	0.3924	5.8110E-02	0.3690	1.1598E-12
14.790	2.0186E-06	6.9046E-18	0.3944	3.4231E-02	0.2623	8.9707E-13
15.080	1.3005E-06	5.0017E-18	0.3742	9.7081E-02	0.1721	6.6200E-13



15.370	7.3212E-07	3.4063E-18	0.3394	0.1362	9.8679E-02	4.5912E-13
15.660	2.9960E-07	2.1141E-18	0.2962	0.1564	4.1110E-02	2.9008E-13
15.950	-1.4313E-08	1.1051E-18	0.2495	0.1619	-1.9988E-03	1.5433E-13
16.240	-2.2830E-07	3.4977E-19	0.2029	0.1568	-3.2436E-02	4.9694E-14
16.530	-3.6101E-07	3.1627E-20	0.1590	0.1445	-5.2168E-02	4.5703E-15
16.820	-4.3004E-07	9.1945E-20	0.1194	0.1277	-6.3188E-02	1.3510E-14
17.110	-4.5126E-07	1.2752E-19	8.5026E-02	0.1087	-6.7402E-02	1.9047E-14
17.400	-4.3841E-07	1.4401E-19	5.6325E-02	8.9275E-02	-6.6549E-02	2.1860E-14
17.690	-4.0300E-07	1.4645E-19	3.3197E-02	7.0613E-02	-6.2154E-02	2.2586E-14
17.980	-3.5429E-07	1.3913E-19	1.5283E-02	5.3553E-02	-5.5503E-02	2.1795E-14
18.270	-2.9946E-07	1.2559E-19	2.0299E-03	3.8597E-02	-4.7641E-02	1.9980E-14
18.560	-2.4381E-07	1.0866E-19	7.2989E-03	2.5979E-02	-3.9379E-02	1.7550E-14
18.850	-1.9099E-07	9.0451E-20	1.3215E-02	1.5727E-02	-3.1312E-02	1.4829E-14
19.140	-1.4346E-07	7.2525E-20	1.6493E-02	7.7208E-03	-2.3869E-02	1.2067E-14
19.430	-1.0255E-07	5.5927E-20	1.7756E-02	1.7435E-03	-1.7311E-02	9.4409E-15
19.720	-6.8742E-08	4.1295E-20	1.7556E-02	2.5173E-03	-1.1771E-02	7.0713E-15
20.010	-4.1970E-08	2.8951E-20	1.6359E-02	5.2811E-03	-7.2889E-03	5.0279E-15
20.300	-2.1751E-08	1.8978E-20	1.4542E-02	6.8934E-03	-3.8304E-03	3.3419E-15
20.590	-7.3581E-09	1.1286E-20	1.2397E-02	7.6392E-03	-1.3136E-03	2.0149E-15
20.880	2.0690E-09	5.6745E-21	1.0136E-02	7.7754E-03	3.7440E-04	1.0269E-15
21.170	7.4356E-09	1.8727E-21	7.9055E-03	7.5234E-03	1.3636E-03	3.4343E-16
21.460	9.6365E-09	2.5331E-21	5.7853E-03	7.0661E-03	1.7907E-03	4.7071E-16
21.750	9.5219E-09	9.0790E-21	3.8125E-03	6.5465E-03	1.7925E-03	1.7091E-15
22.040	7.8825E-09	1.0503E-20	1.9883E-03	6.0686E-03	1.5030E-03	2.0027E-15
22.330	5.4493E-09	8.6111E-21	2.8937E-04	5.6981E-03	1.0523E-03	1.6629E-15
22.620	2.9031E-09	5.1426E-21	1.3286E-03	5.4633E-03	5.6768E-04	1.0056E-15
22.910	8.8914E-10	1.7817E-21	2.8912E-03	7.7490E-04	3.1811E-02	6.3744E-14
23.200	3.3577E-11	1.7863E-22	1.7772E-03	4.1266E-03	1.9586E-03	1.0420E-14
23.490	-1.1017E-10	2.7912E-23	4.9877E-04	3.1134E-03	-8.9118E-03	2.2578E-15
23.780	-5.4373E-11	1.6545E-23	2.8473E-05	1.0008E-03	-5.6246E-03	1.7115E-15
24.070	-9.8920E-12	3.6502E-24	8.1787E-05	3.0624E-06	-1.2464E-03	4.5992E-16

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24.360	1.9078E-12	1.9821E-24	3.0139E-05	1.3704E-04	2.8342E-04	2.9446E-16
24.650	1.6441E-12	2.8084E-24	2.3159E-06	5.5154E-05	2.8133E-04	4.8055E-16
24.940	4.5332E-13	9.1367E-25	1.8519E-06	5.7727E-06	5.9234E-05	1.1939E-16
25.230	4.4824E-15	5.1037E-26	1.0357E-06	2.9487E-06	9.3234E-07	1.0616E-17
25.520	-2.9582E-14	8.2997E-27	1.4219E-07	1.8545E-06	-8.4406E-06	2.3682E-18
25.810	-6.7165E-15	2.3095E-27	3.9947E-08	2.7429E-07	-2.4359E-06	8.3758E-19
26.100	1.9280E-16	2.7199E-29	1.6934E-08	6.7079E-08	8.4834E-08	1.1968E-20
26.390	3.2743E-16	5.6983E-28	1.0492E-09	3.0216E-08	1.6939E-07	2.9479E-19
26.680	4.2004E-17	9.2573E-29	5.9149E-10	2.0333E-09	2.4978E-08	5.5050E-20
26.970	-6.4563E-18	1.4143E-30	1.3066E-10	1.0259E-09	-3.8738E-09	8.4856E-22
27.260	-2.6105E-18	8.2654E-31	3.4604E-12	2.3496E-10	-1.5663E-09	4.9593E-22
27.550	-1.4024E-19	6.9046E-32	5.6251E-12	4.7456E-12	-8.4146E-11	4.1428E-23
27.840	8.1075E-20	1.2916E-31	7.1074E-13	9.8933E-12	4.8645E-11	7.7495E-23
28.130	1.7672E-20	3.5313E-32	1.1287E-13	1.3023E-12	1.0603E-11	2.1188E-23
28.420	-5.0969E-22	2.6053E-34	4.4706E-14	1.9047E-13	-3.0582E-13	1.5632E-25
28.710	-7.8840E-22	2.3427E-34	2.4240E-15	7.7078E-14	-4.7304E-13	1.4056E-25
29.000	-9.5999E-23	4.6189E-35	0.0000	0.0000	-5.7599E-14	2.7714E-26

* PILE GROUP * 8

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.0132E-03	0.011658	2.0658E-14	3.6315E-14	3.6925E-18	-2.9463E-03



FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2

1.0346E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2

1.0346E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1658E-02	2.0658E-14	142.43	159.30	0.0000	0.0000
0.2900	1.0771E-02	2.0446E-14	95.356	157.27	13.300	2.5246E-11
0.5800	9.8471E-03	1.9864E-14	49.360	151.30	27.907	5.6296E-11



0.8700	8.9035E-03	1.8976E-14	5.6906	141.29	41.132	8.7665E-11
1.1600	7.9580E-03	1.7844E-14	35.476	127.78	52.041	1.1669E-10
1.4500	7.0268E-03	1.6527E-14	71.219	111.59	59.626	1.4024E-10
1.7400	6.1241E-03	1.5081E-14	101.92	93.750	63.444	1.5624E-10
2.0300	5.2629E-03	1.3558E-14	127.24	75.253	64.122	1.6519E-10
2.3200	4.4529E-03	1.2003E-14	147.12	57.830	56.036	1.5107E-10
2.6100	3.7016E-03	1.0456E-14	162.22	41.542	56.296	1.5906E-10
2.9000	3.0150E-03	8.9528E-15	172.52	25.437	54.770	1.6269E-10
3.1900	2.3974E-03	7.5230E-15	178.15	9.4749	55.316	1.7367E-10
3.4800	1.8510E-03	6.1908E-15	179.05	6.7917	54.911	1.8379E-10
3.7700	1.3762E-03	4.9747E-15	175.27	22.348	52.535	1.8991E-10
4.0600	9.7147E-04	3.8868E-15	167.01	35.713	39.869	1.5952E-10
4.3500	6.3361E-04	2.9328E-15	155.33	45.494	27.819	1.2877E-10
4.6400	3.5793E-04	2.1130E-15	141.26	51.921	16.740	9.8826E-11
4.9300	1.3881E-04	1.4233E-15	125.73	55.316	6.8899	7.0644E-11
5.2200	-2.9951E-05	8.5607E-16	109.58	56.057	-1.5724	4.4944E-11
5.5100	-1.5482E-04	4.0149E-16	93.548	54.559	-8.5714	2.2228E-11
5.8000	-2.4221E-04	4.8031E-17	78.197	51.247	-14.104	2.7968E-12
6.0900	-2.9827E-04	3.6724E-17	63.999	47.189	-13.756	1.6937E-12
6.3800	-3.2870E-04	6.8691E-17	50.932	42.889	-15.805	3.3030E-12
6.6700	-3.3872E-04	8.9739E-17	39.173	38.128	-16.953	4.4915E-12
6.9600	-3.3305E-04	1.0182E-16	28.824	33.155	-17.324	5.2962E-12
7.2500	-3.1584E-04	1.0673E-16	19.920	28.171	-17.049	5.7616E-12
7.5400	-2.9064E-04	1.0611E-16	12.441	23.341	-16.261	5.9364E-12
7.8300	-2.6046E-04	1.0138E-16	6.3251	18.796	-15.084	5.8711E-12
8.1200	-2.2775E-04	9.3781E-17	1.4750	14.631	-13.638	5.6155E-12
8.4100	-1.9445E-04	8.4358E-17	2.2687	10.910	-12.026	5.2171E-12
8.7000	-1.6199E-04	7.3961E-17	4.9542	7.6669	-10.337	4.7195E-12
8.9900	-1.3152E-04	6.3264E-17	6.7682	4.9125	-8.6511	4.1613E-12
9.2800	-1.0376E-04	5.2788E-17	7.8519	2.6373	-7.0292	3.5759E-12
9.5700	-7.9151E-05	4.2907E-17	8.3411	0.8160	-5.5175	2.9910E-12

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9.8600	-5.7879E-05	3.3880E-17	8.3628	0.6027	-4.1484	2.4283E-12
10.150	-3.9957E-05	2.5862E-17	8.0322	1.6309	-2.9424	1.9044E-12
10.440	-2.5253E-05	1.8925E-17	7.4508	2.3344	-1.9092	1.4308E-12
10.730	-1.3533E-05	1.3079E-17	6.7057	2.7634	-1.0498	1.0145E-12
11.020	-4.5002E-06	8.2832E-18	5.8695	2.9676	-0.3579	6.5882E-13
11.310	2.1817E-06	4.4635E-18	5.0009	2.9937	0.1778	3.6378E-13
11.600	6.8602E-06	1.5224E-18	4.1463	2.8849	0.5726	1.2707E-13
11.890	9.8783E-06	3.8452E-18	3.3377	2.6795	0.8439	3.2851E-13
12.180	1.1560E-05	1.2782E-17	2.5984	2.4106	1.0104	1.1171E-12
12.470	1.2202E-05	1.8529E-17	1.9427	2.1060	1.0904	1.6559E-12
12.760	1.2067E-05	2.1716E-17	1.3778	1.7882	1.1021	1.9833E-12
13.050	1.1381E-05	2.2914E-17	0.9048	1.4748	1.0618	2.1379E-12
13.340	1.0334E-05	2.2633E-17	0.5206	1.1784	0.9844	2.1561E-12
13.630	9.0790E-06	2.1308E-17	0.2189	0.9079	0.8827	2.0718E-12
13.920	7.7375E-06	1.9304E-17	1.0702E-02	0.6687	0.7675	1.9148E-12
14.210	6.4010E-06	1.6914E-17	0.1734	0.4635	0.6475	1.7110E-12
14.500	5.1348E-06	1.4369E-17	0.2816	0.2929	0.5295	1.4818E-12
14.790	3.9809E-06	1.1842E-17	0.3452	0.1554	0.4184	1.2445E-12
15.080	2.9648E-06	9.4542E-18	0.3734	4.8729E-02	0.3174	1.0121E-12
15.370	2.0979E-06	7.2874E-18	0.3748	3.1238E-02	0.2287	7.9450E-13
15.660	1.3809E-06	5.3878E-18	0.3569	8.6499E-02	0.1533	5.9798E-13
15.950	8.0670E-07	3.7747E-18	0.3260	0.1218	9.1120E-02	4.2638E-13
16.240	3.6299E-07	2.4477E-18	0.2873	0.1410	4.1716E-02	2.8129E-13
16.530	3.4340E-08	1.3914E-18	0.2451	0.1475	4.0139E-03	1.6264E-13
16.820	-1.9616E-07	5.8109E-19	0.2024	0.1446	-2.3315E-02	6.9064E-14
17.110	-3.4559E-07	2.1568E-21	0.1617	0.1351	-4.1754E-02	2.6059E-16
17.400	-4.3025E-07	7.2104E-20	0.1244	0.1213	-5.2828E-02	8.8532E-15
17.690	-4.6509E-07	1.1658E-19	9.1475E-02	0.1052	-5.8020E-02	1.4543E-14
17.980	-4.6329E-07	1.4085E-19	6.3418E-02	8.8231E-02	-5.8706E-02	1.7848E-14
18.270	-4.3608E-07	1.4972E-19	4.0273E-02	7.1579E-02	-5.6115E-02	1.9267E-14
18.560	-3.9273E-07	1.4740E-19	2.1830E-02	5.6002E-02	-5.1310E-02	1.9258E-14



18.850	-3.4065E-07	1.3745E-19	7.6937E-03	4.2012E-02	-4.5174E-02	1.8227E-14
19.140	-2.8548E-07	1.2276E-19	2.7394E-03	2.9891E-02	-3.8419E-02	1.6521E-14
19.430	-2.3133E-07	1.0566E-19	9.8326E-03	1.9739E-02	-3.1586E-02	1.4427E-14
19.720	-1.8107E-07	8.7869E-20	1.4265E-02	1.1520E-02	-2.5080E-02	1.2171E-14
20.010	-1.3652E-07	7.0662E-20	1.6583E-02	5.0982E-03	-1.9178E-02	9.9264E-15
20.300	-9.8618E-08	5.4885E-20	1.7281E-02	2.7494E-04	-1.4047E-02	7.8180E-15
20.590	-6.7637E-08	4.1051E-20	1.6790E-02	3.2194E-03	-9.7673E-03	5.9281E-15
20.880	-4.3383E-08	2.9410E-20	1.5471E-02	5.5564E-03	-6.3501E-03	4.3049E-15
21.170	-2.5326E-08	2.0012E-20	1.3611E-02	7.0219E-03	-3.7568E-03	2.9685E-15
21.460	-1.2721E-08	1.2758E-20	1.1430E-02	7.8439E-03	-1.9121E-03	1.9176E-15
21.750	-4.6959E-09	7.4525E-21	9.0851E-03	8.2249E-03	-7.1505E-04	1.1348E-15
22.040	-3.0906E-10	3.8314E-21	6.6786E-03	8.3355E-03	-4.7668E-05	5.9094E-16
22.330	1.4049E-09	1.5930E-21	4.2647E-03	8.3106E-03	2.1945E-04	2.4883E-16
22.620	1.4144E-09	4.1480E-22	1.8671E-03	8.2463E-03	2.2371E-04	6.5608E-17
22.910	6.8109E-10	2.0499E-22	5.2874E-04	4.6885E-03	2.4368E-02	7.3341E-15
23.200	1.5987E-10	5.2213E-22	8.6196E-04	2.0315E-04	9.3258E-03	3.0457E-14
23.490	-1.5883E-11	2.3583E-22	4.1164E-04	1.3598E-03	-1.2848E-03	1.9076E-14
23.780	-2.7501E-11	4.1050E-23	7.3816E-05	7.4990E-04	-2.8448E-03	4.2464E-15
24.070	-9.5490E-12	1.6859E-24	2.3308E-05	1.5890E-04	-1.2032E-03	2.1242E-16
24.360	-7.4709E-13	1.3649E-24	1.8504E-05	3.2691E-05	-1.1098E-04	2.0277E-16
24.650	6.7625E-13	3.1619E-25	4.3584E-06	3.2005E-05	1.1571E-04	5.4103E-17
24.940	3.5361E-13	1.2893E-25	5.7557E-08	8.5266E-06	4.6205E-05	1.6847E-17
25.230	5.4155E-14	1.9543E-25	5.8764E-07	2.1546E-07	1.1264E-05	4.0649E-17
25.520	-9.9824E-15	4.1412E-26	1.7223E-07	1.0134E-06	-2.8483E-06	1.1816E-17
25.810	-5.2842E-15	3.6429E-28	1.9074E-10	3.1479E-07	-1.9164E-06	1.3212E-19
26.100	-5.0707E-16	4.1913E-28	1.0357E-08	3.5856E-09	-2.2311E-07	1.8442E-19
26.390	1.4730E-16	5.4747E-29	1.8957E-09	1.8132E-08	7.6203E-08	2.8322E-20
26.680	4.2260E-17	4.8375E-29	1.5821E-10	3.4382E-09	2.5130E-08	2.8767E-20
26.970	6.4126E-19	1.9843E-29	9.8598E-11	2.5795E-10	3.8475E-10	1.1906E-20
27.260	-1.5491E-18	1.0941E-30	8.6909E-12	1.7440E-10	-9.2949E-10	6.5648E-22
27.550	-2.5802E-19	1.0366E-31	2.5519E-12	1.6221E-11	-1.5481E-10	6.2195E-23

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27.840	2.2153E-20	2.2885E-32	7.2158E-13	4.3851E-12	1.3292E-11	1.3731E-23
28.130	1.3419E-20	3.6211E-33	9.5244E-15	1.2903E-12	8.0514E-12	2.1727E-24
28.420	1.1597E-21	5.8160E-33	2.6833E-14	2.3750E-14	6.9582E-13	3.4896E-24
28.710	-3.5885E-22	7.4813E-34	4.2677E-15	4.6267E-14	-2.1531E-13	4.4888E-25
29.000	-1.6902E-22	6.6016E-35	0.0000	0.0000	-1.0141E-13	3.9610E-26

* PILE GROUP * 9

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD

3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M

1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2

1.0346E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)



DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2

1.0346E+04

* EFFECTS FOR LATERALLY LOADED PILE *

x	DISPL. y-DIR	DISPL. z-DIR	MOMENT y-z-DIR	SHEAR y-z-DIR	SOIL REACT y-DIR	SOIL REACT z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
0.0000	1.1658E-02	2.0658E-14	142.43	159.30	0.0000	0.0000
0.2900	1.0771E-02	2.0446E-14	95.356	157.27	13.300	2.5246E-11
0.5800	9.8471E-03	1.9864E-14	49.360	151.30	27.907	5.6296E-11
0.8700	8.9035E-03	1.8976E-14	5.6906	141.29	41.132	8.7665E-11
1.1600	7.9580E-03	1.7844E-14	35.476	127.78	52.041	1.1669E-10
1.4500	7.0268E-03	1.6527E-14	71.219	111.59	59.626	1.4024E-10
1.7400	6.1241E-03	1.5081E-14	101.92	93.750	63.444	1.5624E-10
2.0300	5.2629E-03	1.3558E-14	127.24	75.253	64.122	1.6519E-10
2.3200	4.4529E-03	1.2003E-14	147.12	57.830	56.036	1.5107E-10
2.6100	3.7016E-03	1.0456E-14	162.22	41.542	56.296	1.5906E-10
2.9000	3.0150E-03	8.9528E-15	172.52	25.437	54.770	1.6269E-10
3.1900	2.3974E-03	7.5230E-15	178.15	9.4749	55.316	1.7367E-10
3.4800	1.8510E-03	6.1908E-15	179.05	6.7917	54.911	1.8379E-10
3.7700	1.3762E-03	4.9747E-15	175.27	22.348	52.535	1.8991E-10
4.0600	9.7147E-04	3.8868E-15	167.01	35.713	39.869	1.5952E-10

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4.3500	6.3361E-04	2.9328E-15	155.33	45.494	27.819	1.2877E-10
4.6400	3.5793E-04	2.1130E-15	141.26	51.921	16.740	9.8826E-11
4.9300	1.3881E-04	1.4233E-15	125.73	55.316	6.8899	7.0644E-11
5.2200	-2.9951E-05	8.5607E-16	109.58	56.057	-1.5724	4.4944E-11
5.5100	-1.5482E-04	4.0149E-16	93.548	54.559	-8.5714	2.2228E-11
5.8000	-2.4221E-04	4.8031E-17	78.197	51.247	-14.104	2.7968E-12
6.0900	-2.9827E-04	3.6724E-17	63.999	47.189	-13.756	1.6937E-12
6.3800	-3.2870E-04	6.8691E-17	50.932	42.889	-15.805	3.3030E-12
6.6700	-3.3872E-04	8.9739E-17	39.173	38.128	-16.953	4.4915E-12
6.9600	-3.3305E-04	1.0182E-16	28.824	33.155	-17.324	5.2962E-12
7.2500	-3.1584E-04	1.0673E-16	19.920	28.171	-17.049	5.7616E-12
7.5400	-2.9064E-04	1.0611E-16	12.441	23.341	-16.261	5.9364E-12
7.8300	-2.6046E-04	1.0138E-16	6.3251	18.796	-15.084	5.8711E-12
8.1200	-2.2775E-04	9.3781E-17	1.4750	14.631	-13.638	5.6155E-12
8.4100	-1.9445E-04	8.4358E-17	2.2687	10.910	-12.026	5.2171E-12
8.7000	-1.6199E-04	7.3961E-17	4.9542	7.6669	-10.337	4.7195E-12
8.9900	-1.3152E-04	6.3264E-17	6.7682	4.9125	-8.6511	4.1613E-12
9.2800	-1.0376E-04	5.2788E-17	7.8519	2.6373	-7.0292	3.5759E-12
9.5700	-7.9151E-05	4.2907E-17	8.3411	0.8160	-5.5175	2.9910E-12
9.8600	-5.7879E-05	3.3880E-17	8.3628	0.6027	-4.1484	2.4283E-12
10.150	-3.9957E-05	2.5862E-17	8.0322	1.6309	-2.9424	1.9044E-12
10.440	-2.5253E-05	1.8925E-17	7.4508	2.3344	-1.9092	1.4308E-12
10.730	-1.3533E-05	1.3079E-17	6.7057	2.7634	-1.0498	1.0145E-12
11.020	-4.5002E-06	8.2832E-18	5.8695	2.9676	-0.3579	6.5882E-13
11.310	2.1817E-06	4.4635E-18	5.0009	2.9937	0.1778	3.6378E-13
11.600	6.8602E-06	1.5224E-18	4.1463	2.8849	0.5726	1.2707E-13
11.890	9.8783E-06	3.8452E-18	3.3377	2.6795	0.8439	3.2851E-13
12.180	1.1560E-05	1.2782E-17	2.5984	2.4106	1.0104	1.1171E-12
12.470	1.2202E-05	1.8529E-17	1.9427	2.1060	1.0904	1.6559E-12
12.760	1.2067E-05	2.1716E-17	1.3778	1.7882	1.1021	1.9833E-12
13.050	1.1381E-05	2.2914E-17	0.9048	1.4748	1.0618	2.1379E-12



13.340	1.0334E-05	2.2633E-17	0.5206	1.1784	0.9844	2.1561E-12
13.630	9.0790E-06	2.1308E-17	0.2189	0.9079	0.8827	2.0718E-12
13.920	7.7375E-06	1.9304E-17	1.0702E-02	0.6687	0.7675	1.9148E-12
14.210	6.4010E-06	1.6914E-17	0.1734	0.4635	0.6475	1.7110E-12
14.500	5.1348E-06	1.4369E-17	0.2816	0.2929	0.5295	1.4818E-12
14.790	3.9809E-06	1.1842E-17	0.3452	0.1554	0.4184	1.2445E-12
15.080	2.9648E-06	9.4542E-18	0.3734	4.8729E-02	0.3174	1.0121E-12
15.370	2.0979E-06	7.2874E-18	0.3748	3.1238E-02	0.2287	7.9450E-13
15.660	1.3809E-06	5.3878E-18	0.3569	8.6499E-02	0.1533	5.9798E-13
15.950	8.0670E-07	3.7747E-18	0.3260	0.1218	9.1120E-02	4.2638E-13
16.240	3.6299E-07	2.4477E-18	0.2873	0.1410	4.1716E-02	2.8129E-13
16.530	3.4340E-08	1.3914E-18	0.2451	0.1475	4.0139E-03	1.6264E-13
16.820	-1.9616E-07	5.8109E-19	0.2024	0.1446	-2.3315E-02	6.9064E-14
17.110	-3.4559E-07	2.1568E-21	0.1617	0.1351	-4.1754E-02	2.6059E-16
17.400	-4.3025E-07	7.2104E-20	0.1244	0.1213	-5.2828E-02	8.8532E-15
17.690	-4.6509E-07	1.1658E-19	9.1475E-02	0.1052	-5.8020E-02	1.4543E-14
17.980	-4.6329E-07	1.4085E-19	6.3418E-02	8.8231E-02	-5.8706E-02	1.7848E-14
18.270	-4.3608E-07	1.4972E-19	4.0273E-02	7.1579E-02	-5.6115E-02	1.9267E-14
18.560	-3.9273E-07	1.4740E-19	2.1830E-02	5.6002E-02	-5.1310E-02	1.9258E-14
18.850	-3.4065E-07	1.3745E-19	7.6937E-03	4.2012E-02	-4.5174E-02	1.8227E-14
19.140	-2.8548E-07	1.2276E-19	2.7394E-03	2.9891E-02	-3.8419E-02	1.6521E-14
19.430	-2.3133E-07	1.0566E-19	9.8326E-03	1.9739E-02	-3.1586E-02	1.4427E-14
19.720	-1.8107E-07	8.7869E-20	1.4265E-02	1.1520E-02	-2.5080E-02	1.2171E-14
20.010	-1.3652E-07	7.0662E-20	1.6583E-02	5.0982E-03	-1.9178E-02	9.9264E-15
20.300	-9.8618E-08	5.4885E-20	1.7281E-02	2.7494E-04	-1.4047E-02	7.8180E-15
20.590	-6.7637E-08	4.1051E-20	1.6790E-02	3.2194E-03	-9.7673E-03	5.9281E-15
20.880	-4.3383E-08	2.9410E-20	1.5471E-02	5.5564E-03	-6.3501E-03	4.3049E-15
21.170	-2.5326E-08	2.0012E-20	1.3611E-02	7.0219E-03	-3.7568E-03	2.9685E-15
21.460	-1.2721E-08	1.2758E-20	1.1430E-02	7.8439E-03	-1.9121E-03	1.9176E-15
21.750	-4.6959E-09	7.4525E-21	9.0851E-03	8.2249E-03	-7.1505E-04	1.1348E-15
22.040	-3.0906E-10	3.8314E-21	6.6786E-03	8.3355E-03	-4.7668E-05	5.9094E-16

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22.330	1.4049E-09	1.5930E-21	4.2647E-03	8.3106E-03	2.1945E-04	2.4883E-16
22.620	1.4144E-09	4.1480E-22	1.8671E-03	8.2463E-03	2.2371E-04	6.5608E-17
22.910	6.8109E-10	2.0499E-22	5.2874E-04	4.6885E-03	2.4368E-02	7.3341E-15
23.200	1.5987E-10	5.2213E-22	8.6196E-04	2.0315E-04	9.3258E-03	3.0457E-14
23.490	-1.5883E-11	2.3583E-22	4.1164E-04	1.3598E-03	-1.2848E-03	1.9076E-14
23.780	-2.7501E-11	4.1050E-23	7.3816E-05	7.4990E-04	-2.8448E-03	4.2464E-15
24.070	-9.5490E-12	1.6859E-24	2.3308E-05	1.5890E-04	-1.2032E-03	2.1242E-16
24.360	-7.4709E-13	1.3649E-24	1.8504E-05	3.2691E-05	-1.1098E-04	2.0277E-16
24.650	6.7625E-13	3.1619E-25	4.3584E-06	3.2005E-05	1.1571E-04	5.4103E-17
24.940	3.5361E-13	1.2893E-25	5.7557E-08	8.5266E-06	4.6205E-05	1.6847E-17
25.230	5.4155E-14	1.9543E-25	5.8764E-07	2.1546E-07	1.1264E-05	4.0649E-17
25.520	-9.9824E-15	4.1412E-26	1.7223E-07	1.0134E-06	-2.8483E-06	1.1816E-17
25.810	-5.2842E-15	3.6429E-28	1.9074E-10	3.1479E-07	-1.9164E-06	1.3212E-19
26.100	-5.0707E-16	4.1913E-28	1.0357E-08	3.5856E-09	-2.2311E-07	1.8442E-19
26.390	1.4730E-16	5.4747E-29	1.8957E-09	1.8132E-08	7.6203E-08	2.8322E-20
26.680	4.2260E-17	4.8375E-29	1.5821E-10	3.4382E-09	2.5130E-08	2.8767E-20
26.970	6.4126E-19	1.9843E-29	9.8598E-11	2.5795E-10	3.8475E-10	1.1906E-20
27.260	-1.5491E-18	1.0941E-30	8.6909E-12	1.7440E-10	-9.2949E-10	6.5648E-22
27.550	-2.5802E-19	1.0366E-31	2.5519E-12	1.6221E-11	-1.5481E-10	6.2195E-23
27.840	2.2153E-20	2.2885E-32	7.2158E-13	4.3851E-12	1.3292E-11	1.3731E-23
28.130	1.3419E-20	3.6211E-33	9.5244E-15	1.2903E-12	8.0514E-12	2.1727E-24
28.420	1.1597E-21	5.8160E-33	2.6833E-14	2.3750E-14	6.9582E-13	3.4896E-24
28.710	-3.5885E-22	7.4813E-34	4.2677E-15	4.6267E-14	-2.1531E-13	4.4888E-25
29.000	-1.6902E-22	6.6016E-35	0.0000	0.0000	-1.0141E-13	3.9610E-26

* PILE GROUP * 10

* PILE TOP DISPLACEMENTS AND REACTIONS *



THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2

1.0346E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
 3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
 1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2

1.0346E+04

* EFFECTS FOR LATERALLY LOADED PILE *



x	DISPL.	DISPL.	MOMENT	SHEAR	SOIL REACT	SOIL REACT
	y-DIR	z-DIR	y-z-DIR	y-z-DIR	y-DIR	z-DIR
M	M	M	KN- M	KN	KN/ M	KN/ M
*****	*****	*****	*****	*****	*****	*****
0.0000	1.1658E-02	2.0658E-14	142.43	159.30	0.0000	0.0000
0.2900	1.0771E-02	2.0446E-14	95.356	157.27	13.300	2.5246E-11
0.5800	9.8471E-03	1.9864E-14	49.360	151.30	27.907	5.6296E-11
0.8700	8.9035E-03	1.8976E-14	5.6906	141.29	41.132	8.7665E-11
1.1600	7.9580E-03	1.7844E-14	35.476	127.78	52.041	1.1669E-10
1.4500	7.0268E-03	1.6527E-14	71.219	111.59	59.626	1.4024E-10
1.7400	6.1241E-03	1.5081E-14	101.92	93.750	63.444	1.5624E-10
2.0300	5.2629E-03	1.3558E-14	127.24	75.253	64.122	1.6519E-10
2.3200	4.4529E-03	1.2003E-14	147.12	57.830	56.036	1.5107E-10
2.6100	3.7016E-03	1.0456E-14	162.22	41.542	56.296	1.5906E-10
2.9000	3.0150E-03	8.9528E-15	172.52	25.437	54.770	1.6269E-10
3.1900	2.3974E-03	7.5230E-15	178.15	9.4749	55.316	1.7367E-10
3.4800	1.8510E-03	6.1908E-15	179.05	6.7917	54.911	1.8379E-10
3.7700	1.3762E-03	4.9747E-15	175.27	22.348	52.535	1.8991E-10
4.0600	9.7147E-04	3.8868E-15	167.01	35.713	39.869	1.5952E-10
4.3500	6.3361E-04	2.9328E-15	155.33	45.494	27.819	1.2877E-10
4.6400	3.5793E-04	2.1130E-15	141.26	51.921	16.740	9.8826E-11
4.9300	1.3881E-04	1.4233E-15	125.73	55.316	6.8899	7.0644E-11
5.2200	-2.9951E-05	8.5607E-16	109.58	56.057	-1.5724	4.4944E-11
5.5100	-1.5482E-04	4.0149E-16	93.548	54.559	-8.5714	2.2228E-11
5.8000	-2.4221E-04	4.8031E-17	78.197	51.247	-14.104	2.7968E-12
6.0900	-2.9827E-04	3.6724E-17	63.999	47.189	-13.756	1.6937E-12
6.3800	-3.2870E-04	6.8691E-17	50.932	42.889	-15.805	3.3030E-12
6.6700	-3.3872E-04	8.9739E-17	39.173	38.128	-16.953	4.4915E-12
6.9600	-3.3305E-04	1.0182E-16	28.824	33.155	-17.324	5.2962E-12
7.2500	-3.1584E-04	1.0673E-16	19.920	28.171	-17.049	5.7616E-12
7.5400	-2.9064E-04	1.0611E-16	12.441	23.341	-16.261	5.9364E-12

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7.8300	-2.6046E-04	1.0138E-16	6.3251	18.796	-15.084	5.8711E-12
8.1200	-2.2775E-04	9.3781E-17	1.4750	14.631	-13.638	5.6155E-12
8.4100	-1.9445E-04	8.4358E-17	2.2687	10.910	-12.026	5.2171E-12
8.7000	-1.6199E-04	7.3961E-17	4.9542	7.6669	-10.337	4.7195E-12
8.9900	-1.3152E-04	6.3264E-17	6.7682	4.9125	-8.6511	4.1613E-12
9.2800	-1.0376E-04	5.2788E-17	7.8519	2.6373	-7.0292	3.5759E-12
9.5700	-7.9151E-05	4.2907E-17	8.3411	0.8160	-5.5175	2.9910E-12
9.8600	-5.7879E-05	3.3880E-17	8.3628	0.6027	-4.1484	2.4283E-12
10.150	-3.9957E-05	2.5862E-17	8.0322	1.6309	-2.9424	1.9044E-12
10.440	-2.5253E-05	1.8925E-17	7.4508	2.3344	-1.9092	1.4308E-12
10.730	-1.3533E-05	1.3079E-17	6.7057	2.7634	-1.0498	1.0145E-12
11.020	-4.5002E-06	8.2832E-18	5.8695	2.9676	-0.3579	6.5882E-13
11.310	2.1817E-06	4.4635E-18	5.0009	2.9937	0.1778	3.6378E-13
11.600	6.8602E-06	1.5224E-18	4.1463	2.8849	0.5726	1.2707E-13
11.890	9.8783E-06	3.8452E-18	3.3377	2.6795	0.8439	3.2851E-13
12.180	1.1560E-05	1.2782E-17	2.5984	2.4106	1.0104	1.1171E-12
12.470	1.2202E-05	1.8529E-17	1.9427	2.1060	1.0904	1.6559E-12
12.760	1.2067E-05	2.1716E-17	1.3778	1.7882	1.1021	1.9833E-12
13.050	1.1381E-05	2.2914E-17	0.9048	1.4748	1.0618	2.1379E-12
13.340	1.0334E-05	2.2633E-17	0.5206	1.1784	0.9844	2.1561E-12
13.630	9.0790E-06	2.1308E-17	0.2189	0.9079	0.8827	2.0718E-12
13.920	7.7375E-06	1.9304E-17	1.0702E-02	0.6687	0.7675	1.9148E-12
14.210	6.4010E-06	1.6914E-17	0.1734	0.4635	0.6475	1.7110E-12
14.500	5.1348E-06	1.4369E-17	0.2816	0.2929	0.5295	1.4818E-12
14.790	3.9809E-06	1.1842E-17	0.3452	0.1554	0.4184	1.2445E-12
15.080	2.9648E-06	9.4542E-18	0.3734	4.8729E-02	0.3174	1.0121E-12
15.370	2.0979E-06	7.2874E-18	0.3748	3.1238E-02	0.2287	7.9450E-13
15.660	1.3809E-06	5.3878E-18	0.3569	8.6499E-02	0.1533	5.9798E-13
15.950	8.0670E-07	3.7747E-18	0.3260	0.1218	9.1120E-02	4.2638E-13
16.240	3.6299E-07	2.4477E-18	0.2873	0.1410	4.1716E-02	2.8129E-13
16.530	3.4340E-08	1.3914E-18	0.2451	0.1475	4.0139E-03	1.6264E-13



16.820	-1.9616E-07	5.8109E-19	0.2024	0.1446	-2.3315E-02	6.9064E-14
17.110	-3.4559E-07	2.1568E-21	0.1617	0.1351	-4.1754E-02	2.6059E-16
17.400	-4.3025E-07	7.2104E-20	0.1244	0.1213	-5.2828E-02	8.8532E-15
17.690	-4.6509E-07	1.1658E-19	9.1475E-02	0.1052	-5.8020E-02	1.4543E-14
17.980	-4.6329E-07	1.4085E-19	6.3418E-02	8.8231E-02	-5.8706E-02	1.7848E-14
18.270	-4.3608E-07	1.4972E-19	4.0273E-02	7.1579E-02	-5.6115E-02	1.9267E-14
18.560	-3.9273E-07	1.4740E-19	2.1830E-02	5.6002E-02	-5.1310E-02	1.9258E-14
18.850	-3.4065E-07	1.3745E-19	7.6937E-03	4.2012E-02	-4.5174E-02	1.8227E-14
19.140	-2.8548E-07	1.2276E-19	2.7394E-03	2.9891E-02	-3.8419E-02	1.6521E-14
19.430	-2.3133E-07	1.0566E-19	9.8326E-03	1.9739E-02	-3.1586E-02	1.4427E-14
19.720	-1.8107E-07	8.7869E-20	1.4265E-02	1.1520E-02	-2.5080E-02	1.2171E-14
20.010	-1.3652E-07	7.0662E-20	1.6583E-02	5.0982E-03	-1.9178E-02	9.9264E-15
20.300	-9.8618E-08	5.4885E-20	1.7281E-02	2.7494E-04	-1.4047E-02	7.8180E-15
20.590	-6.7637E-08	4.1051E-20	1.6790E-02	3.2194E-03	-9.7673E-03	5.9281E-15
20.880	-4.3383E-08	2.9410E-20	1.5471E-02	5.5564E-03	-6.3501E-03	4.3049E-15
21.170	-2.5326E-08	2.0012E-20	1.3611E-02	7.0219E-03	-3.7568E-03	2.9685E-15
21.460	-1.2721E-08	1.2758E-20	1.1430E-02	7.8439E-03	-1.9121E-03	1.9176E-15
21.750	-4.6959E-09	7.4525E-21	9.0851E-03	8.2249E-03	-7.1505E-04	1.1348E-15
22.040	-3.0906E-10	3.8314E-21	6.6786E-03	8.3355E-03	-4.7668E-05	5.9094E-16
22.330	1.4049E-09	1.5930E-21	4.2647E-03	8.3106E-03	2.1945E-04	2.4883E-16
22.620	1.4144E-09	4.1480E-22	1.8671E-03	8.2463E-03	2.2371E-04	6.5608E-17
22.910	6.8109E-10	2.0499E-22	5.2874E-04	4.6885E-03	2.4368E-02	7.3341E-15
23.200	1.5987E-10	5.2213E-22	8.6196E-04	2.0315E-04	9.3258E-03	3.0457E-14
23.490	-1.5883E-11	2.3583E-22	4.1164E-04	1.3598E-03	-1.2848E-03	1.9076E-14
23.780	-2.7501E-11	4.1050E-23	7.3816E-05	7.4990E-04	-2.8448E-03	4.2464E-15
24.070	-9.5490E-12	1.6859E-24	2.3308E-05	1.5890E-04	-1.2032E-03	2.1242E-16
24.360	-7.4709E-13	1.3649E-24	1.8504E-05	3.2691E-05	-1.1098E-04	2.0277E-16
24.650	6.7625E-13	3.1619E-25	4.3584E-06	3.2005E-05	1.1571E-04	5.4103E-17
24.940	3.5361E-13	1.2893E-25	5.7557E-08	8.5266E-06	4.6205E-05	1.6847E-17
25.230	5.4155E-14	1.9543E-25	5.8764E-07	2.1546E-07	1.1264E-05	4.0649E-17
25.520	-9.9824E-15	4.1412E-26	1.7223E-07	1.0134E-06	-2.8483E-06	1.1816E-17

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25.810	-5.2842E-15	3.6429E-28	1.9074E-10	3.1479E-07	-1.9164E-06	1.3212E-19
26.100	-5.0707E-16	4.1913E-28	1.0357E-08	3.5856E-09	-2.2311E-07	1.8442E-19
26.390	1.4730E-16	5.4747E-29	1.8957E-09	1.8132E-08	7.6203E-08	2.8322E-20
26.680	4.2260E-17	4.8375E-29	1.5821E-10	3.4382E-09	2.5130E-08	2.8767E-20
26.970	6.4126E-19	1.9843E-29	9.8598E-11	2.5795E-10	3.8475E-10	1.1906E-20
27.260	-1.5491E-18	1.0941E-30	8.6909E-12	1.7440E-10	-9.2949E-10	6.5648E-22
27.550	-2.5802E-19	1.0366E-31	2.5519E-12	1.6221E-11	-1.5481E-10	6.2195E-23
27.840	2.2153E-20	2.2885E-32	7.2158E-13	4.3851E-12	1.3292E-11	1.3731E-23
28.130	1.3419E-20	3.6211E-33	9.5244E-15	1.2903E-12	8.0514E-12	2.1727E-24
28.420	1.1597E-21	5.8160E-33	2.6833E-14	2.3750E-14	6.9582E-13	3.4896E-24
28.710	-3.5885E-22	7.4813E-34	4.2677E-15	4.6267E-14	-2.1531E-13	4.4888E-25
29.000	-1.6902E-22	6.6016E-35	0.0000	0.0000	-1.0141E-13	3.9610E-26

* PILE GROUP * 11

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M DISP. Y, M DISP. Z, M ROT. X,RAD ROT. Y,RAD ROT. Z,RAD
 3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

FOR. X, KN FOR. Y, KN FOR. Z, KN MOM X, KN- M MOM Y, KN- M MOM Z, KN- M
 1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2



1.0346E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M DISP. y, M DISP. z, M ROT. x,RAD ROT. y,RAD ROT. z,RAD
3.0132E-03 0.011658 2.0658E-14 3.6315E-14 3.6925E-18 -2.9463E-03

AXIAL, KN LAT. y, KN LAT. z, KN MOM x, KN- M MOM y, KN- M MOM z, KN- M
1038.4 159.20 5.5783E-10 5.2679E-10 1.8461E-10 142.43

STR, KN/ M**2

1.0346E+04

* EFFECTS FOR Laterally LOADED PILE *

Table with 8 columns: x, DISPL., DISPL., MOMENT, SHEAR, SOIL REACT, SOIL REACT. Rows show data for x values from 0.0000 to 2.0300.



2.3200	4.4529E-03	1.2003E-14	147.12	57.830	56.036	1.5107E-10
2.6100	3.7016E-03	1.0456E-14	162.22	41.542	56.296	1.5906E-10
2.9000	3.0150E-03	8.9528E-15	172.52	25.437	54.770	1.6269E-10
3.1900	2.3974E-03	7.5230E-15	178.15	9.4749	55.316	1.7367E-10
3.4800	1.8510E-03	6.1908E-15	179.05	6.7917	54.911	1.8379E-10
3.7700	1.3762E-03	4.9747E-15	175.27	22.348	52.535	1.8991E-10
4.0600	9.7147E-04	3.8868E-15	167.01	35.713	39.869	1.5952E-10
4.3500	6.3361E-04	2.9328E-15	155.33	45.494	27.819	1.2877E-10
4.6400	3.5793E-04	2.1130E-15	141.26	51.921	16.740	9.8826E-11
4.9300	1.3881E-04	1.4233E-15	125.73	55.316	6.8899	7.0644E-11
5.2200	-2.9951E-05	8.5607E-16	109.58	56.057	-1.5724	4.4944E-11
5.5100	-1.5482E-04	4.0149E-16	93.548	54.559	-8.5714	2.2228E-11
5.8000	-2.4221E-04	4.8031E-17	78.197	51.247	-14.104	2.7968E-12
6.0900	-2.9827E-04	3.6724E-17	63.999	47.189	-13.756	1.6937E-12
6.3800	-3.2870E-04	6.8691E-17	50.932	42.889	-15.805	3.3030E-12
6.6700	-3.3872E-04	8.9739E-17	39.173	38.128	-16.953	4.4915E-12
6.9600	-3.3305E-04	1.0182E-16	28.824	33.155	-17.324	5.2962E-12
7.2500	-3.1584E-04	1.0673E-16	19.920	28.171	-17.049	5.7616E-12
7.5400	-2.9064E-04	1.0611E-16	12.441	23.341	-16.261	5.9364E-12
7.8300	-2.6046E-04	1.0138E-16	6.3251	18.796	-15.084	5.8711E-12
8.1200	-2.2775E-04	9.3781E-17	1.4750	14.631	-13.638	5.6155E-12
8.4100	-1.9445E-04	8.4358E-17	2.2687	10.910	-12.026	5.2171E-12
8.7000	-1.6199E-04	7.3961E-17	4.9542	7.6669	-10.337	4.7195E-12
8.9900	-1.3152E-04	6.3264E-17	6.7682	4.9125	-8.6511	4.1613E-12
9.2800	-1.0376E-04	5.2788E-17	7.8519	2.6373	-7.0292	3.5759E-12
9.5700	-7.9151E-05	4.2907E-17	8.3411	0.8160	-5.5175	2.9910E-12
9.8600	-5.7879E-05	3.3880E-17	8.3628	0.6027	-4.1484	2.4283E-12
10.150	-3.9957E-05	2.5862E-17	8.0322	1.6309	-2.9424	1.9044E-12
10.440	-2.5253E-05	1.8925E-17	7.4508	2.3344	-1.9092	1.4308E-12
10.730	-1.3533E-05	1.3079E-17	6.7057	2.7634	-1.0498	1.0145E-12
11.020	-4.5002E-06	8.2832E-18	5.8695	2.9676	-0.3579	6.5882E-13

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11.310	2.1817E-06	4.4635E-18	5.0009	2.9937	0.1778	3.6378E-13
11.600	6.8602E-06	1.5224E-18	4.1463	2.8849	0.5726	1.2707E-13
11.890	9.8783E-06	3.8452E-18	3.3377	2.6795	0.8439	3.2851E-13
12.180	1.1560E-05	1.2782E-17	2.5984	2.4106	1.0104	1.1171E-12
12.470	1.2202E-05	1.8529E-17	1.9427	2.1060	1.0904	1.6559E-12
12.760	1.2067E-05	2.1716E-17	1.3778	1.7882	1.1021	1.9833E-12
13.050	1.1381E-05	2.2914E-17	0.9048	1.4748	1.0618	2.1379E-12
13.340	1.0334E-05	2.2633E-17	0.5206	1.1784	0.9844	2.1561E-12
13.630	9.0790E-06	2.1308E-17	0.2189	0.9079	0.8827	2.0718E-12
13.920	7.7375E-06	1.9304E-17	1.0702E-02	0.6687	0.7675	1.9148E-12
14.210	6.4010E-06	1.6914E-17	0.1734	0.4635	0.6475	1.7110E-12
14.500	5.1348E-06	1.4369E-17	0.2816	0.2929	0.5295	1.4818E-12
14.790	3.9809E-06	1.1842E-17	0.3452	0.1554	0.4184	1.2445E-12
15.080	2.9648E-06	9.4542E-18	0.3734	4.8729E-02	0.3174	1.0121E-12
15.370	2.0979E-06	7.2874E-18	0.3748	3.1238E-02	0.2287	7.9450E-13
15.660	1.3809E-06	5.3878E-18	0.3569	8.6499E-02	0.1533	5.9798E-13
15.950	8.0670E-07	3.7747E-18	0.3260	0.1218	9.1120E-02	4.2638E-13
16.240	3.6299E-07	2.4477E-18	0.2873	0.1410	4.1716E-02	2.8129E-13
16.530	3.4340E-08	1.3914E-18	0.2451	0.1475	4.0139E-03	1.6264E-13
16.820	-1.9616E-07	5.8109E-19	0.2024	0.1446	-2.3315E-02	6.9064E-14
17.110	-3.4559E-07	2.1568E-21	0.1617	0.1351	-4.1754E-02	2.6059E-16
17.400	-4.3025E-07	7.2104E-20	0.1244	0.1213	-5.2828E-02	8.8532E-15
17.690	-4.6509E-07	1.1658E-19	9.1475E-02	0.1052	-5.8020E-02	1.4543E-14
17.980	-4.6329E-07	1.4085E-19	6.3418E-02	8.8231E-02	-5.8706E-02	1.7848E-14
18.270	-4.3608E-07	1.4972E-19	4.0273E-02	7.1579E-02	-5.6115E-02	1.9267E-14
18.560	-3.9273E-07	1.4740E-19	2.1830E-02	5.6002E-02	-5.1310E-02	1.9258E-14
18.850	-3.4065E-07	1.3745E-19	7.6937E-03	4.2012E-02	-4.5174E-02	1.8227E-14
19.140	-2.8548E-07	1.2276E-19	2.7394E-03	2.9891E-02	-3.8419E-02	1.6521E-14
19.430	-2.3133E-07	1.0566E-19	9.8326E-03	1.9739E-02	-3.1586E-02	1.4427E-14
19.720	-1.8107E-07	8.7869E-20	1.4265E-02	1.1520E-02	-2.5080E-02	1.2171E-14
20.010	-1.3652E-07	7.0662E-20	1.6583E-02	5.0982E-03	-1.9178E-02	9.9264E-15

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20.300	-9.8618E-08	5.4885E-20	1.7281E-02	2.7494E-04	-1.4047E-02	7.8180E-15
20.590	-6.7637E-08	4.1051E-20	1.6790E-02	3.2194E-03	-9.7673E-03	5.9281E-15
20.880	-4.3383E-08	2.9410E-20	1.5471E-02	5.5564E-03	-6.3501E-03	4.3049E-15
21.170	-2.5326E-08	2.0012E-20	1.3611E-02	7.0219E-03	-3.7568E-03	2.9685E-15
21.460	-1.2721E-08	1.2758E-20	1.1430E-02	7.8439E-03	-1.9121E-03	1.9176E-15
21.750	-4.6959E-09	7.4525E-21	9.0851E-03	8.2249E-03	-7.1505E-04	1.1348E-15
22.040	-3.0906E-10	3.8314E-21	6.6786E-03	8.3355E-03	-4.7668E-05	5.9094E-16
22.330	1.4049E-09	1.5930E-21	4.2647E-03	8.3106E-03	2.1945E-04	2.4883E-16
22.620	1.4144E-09	4.1480E-22	1.8671E-03	8.2463E-03	2.2371E-04	6.5608E-17
22.910	6.8109E-10	2.0499E-22	5.2874E-04	4.6885E-03	2.4368E-02	7.3341E-15
23.200	1.5987E-10	5.2213E-22	8.6196E-04	2.0315E-04	9.3258E-03	3.0457E-14
23.490	-1.5883E-11	2.3583E-22	4.1164E-04	1.3598E-03	-1.2848E-03	1.9076E-14
23.780	-2.7501E-11	4.1050E-23	7.3816E-05	7.4990E-04	-2.8448E-03	4.2464E-15
24.070	-9.5490E-12	1.6859E-24	2.3308E-05	1.5890E-04	-1.2032E-03	2.1242E-16
24.360	-7.4709E-13	1.3649E-24	1.8504E-05	3.2691E-05	-1.1098E-04	2.0277E-16
24.650	6.7625E-13	3.1619E-25	4.3584E-06	3.2005E-05	1.1571E-04	5.4103E-17
24.940	3.5361E-13	1.2893E-25	5.7557E-08	8.5266E-06	4.6205E-05	1.6847E-17
25.230	5.4155E-14	1.9543E-25	5.8764E-07	2.1546E-07	1.1264E-05	4.0649E-17
25.520	-9.9824E-15	4.1412E-26	1.7223E-07	1.0134E-06	-2.8483E-06	1.1816E-17
25.810	-5.2842E-15	3.6429E-28	1.9074E-10	3.1479E-07	-1.9164E-06	1.3212E-19
26.100	-5.0707E-16	4.1913E-28	1.0357E-08	3.5856E-09	-2.2311E-07	1.8442E-19
26.390	1.4730E-16	5.4747E-29	1.8957E-09	1.8132E-08	7.6203E-08	2.8322E-20
26.680	4.2260E-17	4.8375E-29	1.5821E-10	3.4382E-09	2.5130E-08	2.8767E-20
26.970	6.4126E-19	1.9843E-29	9.8598E-11	2.5795E-10	3.8475E-10	1.1906E-20
27.260	-1.5491E-18	1.0941E-30	8.6909E-12	1.7440E-10	-9.2949E-10	6.5648E-22
27.550	-2.5802E-19	1.0366E-31	2.5519E-12	1.6221E-11	-1.5481E-10	6.2195E-23
27.840	2.2153E-20	2.2885E-32	7.2158E-13	4.3851E-12	1.3292E-11	1.3731E-23
28.130	1.3419E-20	3.6211E-33	9.5244E-15	1.2903E-12	8.0514E-12	2.1727E-24
28.420	1.1597E-21	5.8160E-33	2.6833E-14	2.3750E-14	6.9582E-13	3.4896E-24
28.710	-3.5885E-22	7.4813E-34	4.2677E-15	4.6267E-14	-2.1531E-13	4.4888E-25
29.000	-1.6902E-22	6.6016E-35	0.0000	0.0000	-1.0141E-13	3.9610E-26

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* PILE GROUP * 12

* PILE TOP DISPLACEMENTS AND REACTIONS *

THE GLOBAL STRUCTURAL COORDINATE SYSTEM

DISP. X, M	DISP. Y, M	DISP. Z, M	ROT. X,RAD	ROT. Y,RAD	ROT. Z,RAD
3.0132E-03	0.011658	2.0658E-14	3.6315E-14	3.6925E-18	-2.9463E-03

FOR. X, KN	FOR. Y, KN	FOR. Z, KN	MOM X, KN- M	MOM Y, KN- M	MOM Z, KN- M
1038.4	186.29	6.2788E-10	5.2679E-10	1.9933E-10	172.97

STR, KN/ M**2

1.1786E+04

THE PILE COORDINATE SYSTEM (LOCAL AXES)

DISP. x, M	DISP. y, M	DISP. z, M	ROT. x,RAD	ROT. y,RAD	ROT. z,RAD
3.0132E-03	0.011658	2.0658E-14	3.6315E-14	3.6925E-18	-2.9463E-03

AXIAL, KN	LAT. y, KN	LAT. z, KN	MOM x, KN- M	MOM y, KN- M	MOM z, KN- M
1038.4	186.29	6.2788E-10	5.2679E-10	1.9933E-10	172.97

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STR, KN/ M**2

1.1786E+04

* EFFECTS FOR Laterally Loaded Pile *

x	DISPL. y-DIR M	DISPL. z-DIR M	MOMENT y-z-DIR KN- M	SHEAR y-z-DIR KN	SOIL REACT y-DIR KN/ M	SOIL REACT z-DIR KN/ M
0.0000	1.1658E-02	2.0658E-14	172.97	186.41	0.0000	0.0000
0.2900	1.0765E-02	2.0429E-14	118.04	183.90	16.433	3.1185E-11
0.5800	9.8258E-03	1.9803E-14	64.435	176.53	34.426	6.9384E-11
0.8700	8.8610E-03	1.8852E-14	13.701	164.20	50.608	1.0767E-10
1.1600	7.8911E-03	1.7646E-14	33.747	147.62	63.797	1.4266E-10
1.4500	6.9347E-03	1.6251E-14	74.771	127.82	72.749	1.7048E-10
1.7400	6.0083E-03	1.4729E-14	109.65	106.12	76.952	1.8865E-10
2.0300	5.1264E-03	1.3137E-14	138.00	83.761	77.216	1.9788E-10
2.3200	4.3001E-03	1.1523E-14	159.81	62.865	66.899	1.7929E-10
2.6100	3.5375E-03	9.9301E-15	175.92	43.520	66.513	1.8675E-10
2.9000	2.8452E-03	8.3964E-15	186.37	24.610	63.897	1.8863E-10
3.1900	2.2274E-03	6.9520E-15	191.38	6.1323	63.537	1.9841E-10
3.4800	1.6861E-03	5.6212E-15	190.96	12.338	61.837	2.0631E-10
3.7700	1.2211E-03	4.4216E-15	185.26	29.635	57.632	2.0868E-10
4.0600	8.3033E-04	3.3637E-15	174.66	44.063	42.129	1.7067E-10
4.3500	5.0943E-04	2.4509E-15	160.45	54.144	27.651	1.3303E-10
4.6400	2.5276E-04	1.6809E-15	143.85	60.237	14.615	9.7190E-11
4.9300	5.3710E-05	1.0467E-15	125.98	62.800	3.2958	6.4228E-11
5.2200	-9.4880E-05	5.3811E-16	107.81	62.354	-6.1582	3.4926E-11
5.5100	-2.0028E-04	1.4269E-16	90.119	59.445	-13.709	9.7667E-12

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5.8000	-2.6958E-04	2.5969E-17	73.546	54.619	-19.407	1.8695E-12
6.0900	-3.0942E-04	6.1724E-17	58.574	49.228	-17.642	3.5193E-12
6.3800	-3.2580E-04	8.5303E-17	45.062	43.849	-19.367	5.0709E-12
6.6700	-3.2412E-04	9.8919E-17	33.160	38.127	-20.055	6.1208E-12
6.9600	-3.0916E-04	1.0462E-16	22.931	32.336	-19.881	6.7279E-12
7.2500	-2.8501E-04	1.0426E-16	14.365	26.695	-19.021	6.9577E-12
7.5400	-2.5511E-04	9.9442E-17	7.3926	21.379	-17.645	6.8782E-12
7.8300	-2.2225E-04	9.1570E-17	1.9011	16.513	-15.912	6.5562E-12
8.1200	-1.8862E-04	8.1798E-17	2.2930	12.181	-13.963	6.0553E-12
8.4100	-1.5586E-04	7.1063E-17	5.2655	8.4276	-11.917	5.4333E-12
8.7000	-1.2520E-04	6.0099E-17	7.2336	5.2662	-9.8772	4.7412E-12
8.9900	-9.7448E-05	4.9459E-17	8.3681	2.6832	-7.9243	4.0220E-12
9.2800	-7.3043E-05	3.9534E-17	8.8326	0.6450	-6.1173	3.3110E-12
9.5700	-5.2177E-05	3.0580E-17	8.7790	0.9116	-4.4966	2.6354E-12
9.8600	-3.4828E-05	2.2740E-17	8.3435	2.0111	-3.0861	2.0150E-12
10.150	-2.0821E-05	1.6069E-17	7.6451	2.7334	-1.8956	1.4630E-12
10.440	-9.8770E-06	1.0554E-17	6.7841	3.1422	-0.9232	9.8651E-13
10.730	-1.6504E-06	6.1309E-18	5.8426	3.2990	-0.1583	5.8796E-13
11.020	4.2356E-06	2.7023E-18	4.8860	3.2615	0.4165	2.6572E-13
11.310	8.1646E-06	1.5104E-19	3.9628	3.0818	0.8227	1.5219E-14
11.600	1.0507E-05	9.7309E-18	3.1068	2.8053	1.0842	1.0041E-12
11.890	1.1605E-05	1.6664E-17	2.3403	2.4704	1.2258	1.7601E-12
12.180	1.1768E-05	2.0648E-17	1.6757	2.1083	1.2715	2.2310E-12
12.470	1.1260E-05	2.2342E-17	1.1172	1.7440	1.2440	2.4684E-12
12.760	1.0305E-05	2.2334E-17	0.6627	1.3953	1.1636	2.5218E-12
13.050	9.0867E-06	2.1127E-17	0.3058	1.0748	1.0481	2.4369E-12
13.340	7.7465E-06	1.9143E-17	3.6756E-02	0.7906	0.9123	2.2545E-12
13.630	6.3928E-06	1.6718E-17	0.1573	0.5470	0.7684	2.0096E-12
13.920	5.1032E-06	1.4116E-17	0.2847	0.3448	0.6258	1.7310E-12
14.210	3.9271E-06	1.1530E-17	0.3592	0.1828	0.4911	1.4419E-12
14.500	2.8944E-06	9.0967E-18	0.3924	5.8110E-02	0.3690	1.1598E-12

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14.790	2.0186E-06	6.9046E-18	0.3944	3.4231E-02	0.2623	8.9707E-13
15.080	1.3005E-06	5.0017E-18	0.3742	9.7081E-02	0.1721	6.6200E-13
15.370	7.3212E-07	3.4063E-18	0.3394	0.1362	9.8679E-02	4.5912E-13
15.660	2.9960E-07	2.1141E-18	0.2962	0.1564	4.1110E-02	2.9008E-13
15.950	-1.4313E-08	1.1051E-18	0.2495	0.1619	-1.9988E-03	1.5433E-13
16.240	-2.2830E-07	3.4977E-19	0.2029	0.1568	-3.2436E-02	4.9694E-14
16.530	-3.6101E-07	3.1627E-20	0.1590	0.1445	-5.2168E-02	4.5703E-15
16.820	-4.3004E-07	9.1945E-20	0.1194	0.1277	-6.3188E-02	1.3510E-14
17.110	-4.5126E-07	1.2752E-19	8.5026E-02	0.1087	-6.7402E-02	1.9047E-14
17.400	-4.3841E-07	1.4401E-19	5.6325E-02	8.9275E-02	-6.6549E-02	2.1860E-14
17.690	-4.0300E-07	1.4645E-19	3.3197E-02	7.0613E-02	-6.2154E-02	2.2586E-14
17.980	-3.5429E-07	1.3913E-19	1.5283E-02	5.3553E-02	-5.5503E-02	2.1795E-14
18.270	-2.9946E-07	1.2559E-19	2.0299E-03	3.8597E-02	-4.7641E-02	1.9980E-14
18.560	-2.4381E-07	1.0866E-19	7.2989E-03	2.5979E-02	-3.9379E-02	1.7550E-14
18.850	-1.9099E-07	9.0451E-20	1.3215E-02	1.5727E-02	-3.1312E-02	1.4829E-14
19.140	-1.4346E-07	7.2525E-20	1.6493E-02	7.7208E-03	-2.3869E-02	1.2067E-14
19.430	-1.0255E-07	5.5927E-20	1.7756E-02	1.7435E-03	-1.7311E-02	9.4409E-15
19.720	-6.8742E-08	4.1295E-20	1.7556E-02	2.5173E-03	-1.1771E-02	7.0713E-15
20.010	-4.1970E-08	2.8951E-20	1.6359E-02	5.2811E-03	-7.2889E-03	5.0279E-15
20.300	-2.1751E-08	1.8978E-20	1.4542E-02	6.8934E-03	-3.8304E-03	3.3419E-15
20.590	-7.3581E-09	1.1286E-20	1.2397E-02	7.6392E-03	-1.3136E-03	2.0149E-15
20.880	2.0690E-09	5.6745E-21	1.0136E-02	7.7754E-03	3.7440E-04	1.0269E-15
21.170	7.4356E-09	1.8727E-21	7.9055E-03	7.5234E-03	1.3636E-03	3.4343E-16
21.460	9.6365E-09	2.5331E-21	5.7853E-03	7.0661E-03	1.7907E-03	4.7071E-16
21.750	9.5219E-09	9.0790E-21	3.8125E-03	6.5465E-03	1.7925E-03	1.7091E-15
22.040	7.8825E-09	1.0503E-20	1.9883E-03	6.0686E-03	1.5030E-03	2.0027E-15
22.330	5.4493E-09	8.6111E-21	2.8937E-04	5.6981E-03	1.0523E-03	1.6629E-15
22.620	2.9031E-09	5.1426E-21	1.3286E-03	5.4633E-03	5.6768E-04	1.0056E-15
22.910	8.8914E-10	1.7817E-21	2.8912E-03	7.7490E-04	3.1811E-02	6.3744E-14
23.200	3.3577E-11	1.7863E-22	1.7772E-03	4.1266E-03	1.9586E-03	1.0420E-14
23.490	-1.1017E-10	2.7912E-23	4.9877E-04	3.1134E-03	-8.9118E-03	2.2578E-15

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23.780	-5.4373E-11	1.6545E-23	2.8473E-05	1.0008E-03	-5.6246E-03	1.7115E-15
24.070	-9.8920E-12	3.6502E-24	8.1787E-05	3.0624E-06	-1.2464E-03	4.5992E-16
24.360	1.9078E-12	1.9821E-24	3.0139E-05	1.3704E-04	2.8342E-04	2.9446E-16
24.650	1.6441E-12	2.8084E-24	2.3159E-06	5.5154E-05	2.8133E-04	4.8055E-16
24.940	4.5332E-13	9.1367E-25	1.8519E-06	5.7727E-06	5.9234E-05	1.1939E-16
25.230	4.4824E-15	5.1037E-26	1.0357E-06	2.9487E-06	9.3234E-07	1.0616E-17
25.520	-2.9582E-14	8.2997E-27	1.4219E-07	1.8545E-06	-8.4406E-06	2.3682E-18
25.810	-6.7165E-15	2.3095E-27	3.9947E-08	2.7429E-07	-2.4359E-06	8.3758E-19
26.100	1.9280E-16	2.7199E-29	1.6934E-08	6.7079E-08	8.4834E-08	1.1968E-20
26.390	3.2743E-16	5.6983E-28	1.0492E-09	3.0216E-08	1.6939E-07	2.9479E-19
26.680	4.2004E-17	9.2573E-29	5.9149E-10	2.0333E-09	2.4978E-08	5.5050E-20
26.970	-6.4563E-18	1.4143E-30	1.3066E-10	1.0259E-09	-3.8738E-09	8.4856E-22
27.260	-2.6105E-18	8.2654E-31	3.4604E-12	2.3496E-10	-1.5663E-09	4.9593E-22
27.550	-1.4024E-19	6.9046E-32	5.6251E-12	4.7456E-12	-8.4146E-11	4.1428E-23
27.840	8.1075E-20	1.2916E-31	7.1074E-13	9.8933E-12	4.8645E-11	7.7495E-23
28.130	1.7672E-20	3.5313E-32	1.1287E-13	1.3023E-12	1.0603E-11	2.1188E-23
28.420	-5.0969E-22	2.6053E-34	4.4706E-14	1.9047E-13	-3.0582E-13	1.5632E-25
28.710	-7.8840E-22	2.3427E-34	2.4240E-15	7.7078E-14	-4.7304E-13	1.4056E-25
29.000	-9.5999E-23	4.6189E-35	0.0000	0.0000	-5.7599E-14	2.7714E-26

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