

COMMITTENTE:



PROGETTAZIONE:



U.O. OPERE CIVILI

PROGETTO DEFINITIVO

RADDOPPIO DELLA LINEA GENOVA – VENTIMIGLIA  
 TRATTA FINALE LIGURE - ANDORA

OPERE PRINCIPALI - PONTI e CAVALCAFERROVIA

Ponte stradale su Torrente Giustenice  
 Relazione di calcolo spalle

SCALA:

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COMMESSA	LOTTO	FASE	ENTE	TIPO DOC.	OPERA/DISCIPLINA	PROGR.	REV.
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Rev.	Descrizione	Redatto	Data	Verificato	Data	Approvato	Data	Autorizzato Data
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 U.O. Opere Chivi e Gestione delle Infrastrutture  
 Dott. Ing. Angelo Vittozzi  
 Ordine degli Ingegneri della Provincia di Genova  
 N° 420783

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Ponte stradale su Torrente Giustenice

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## 1 PREMESSA

La presente relazione ha per oggetto la descrizione dei calcoli eseguiti per il dimensionamento delle spalle del cavalcavia IV01, ponte stradale su Torrente Giustenice, nell'ambito del raddoppio della linea Genova-Ventimiglia, tratta Finale Ligure-Andora.

## 2 DESCRIZIONE GENERALE

Le spalle in oggetto sono costituite da paratie di pali di diametro 1200 mm ad interasse di 1.30 m e di lunghezza pari a 22 m. In direzione ortogonale alle paratie sono presenti 4 speroni (2 di estremità e 2 centrali), posti ad interasse di circa 6 m, aventi sporgenza verso monte di circa 3m e spessore di 1.50 m per gli speroni centrali e 1.80 m per gli speroni di estremità. I cordoli seguono l'andamento delle spalle per una lunghezza complessiva di 18.70 m ed hanno dimensioni della sezione trasversale pari a 1.5 m di larghezza e 1.5 m di altezza. Il muro paraghiaia, invece, è alto circa 1.40 m, ha uno spessore di 0.50 m e lunghezza pari a quella dei cordoli. Sulle spalle poggia un impalcato in acciaio a via inferiore, per ulteriori dettagli si rimanda alla relazione di calcolo dell'impalcato (documenti IV0I00D09CLIV0109001 e IV0I00D09CLIV010A001).

### 3 NORMATIVE DI RIFERIMENTO

#### 3.1 Normativa e istruzioni

La progettazione è conforme alle normative vigenti:

- DM 17 gennaio 2018: *Aggiornamento delle "Norme Tecniche per le Costruzioni"*(nel seguito **NTC18**);
- Circolare 21 gennaio 2019, n.7 C.S.LL.PP: *istruzioni per l'applicazione delle NTC 2018 (nel seguito circ. NTC18)*;
- RFICTCSIMAIIFS001\_E: *Manuale di progettazione delle opere civili, 31/12/2020*;
- *Regolamento (UE) N. 1299/2014 della Commissione del 18 novembre 2014 relativo alle specifiche tecniche di interoperabilità per il sottosistema "infrastruttura" del sistema ferroviario dell'Unione europea, modificato dal Regolamento di esecuzione (UE) N° 2019/776 della Commissione del 16 maggio 2019*;
- *Regolamento (UE) 2016/919 della Commissione del 27 maggio 2016 relativo alla specifica tecnica di interoperabilità per i sottosistemi "controllo-comando e segnalamento" del sistema ferroviario nell'Unione europea*;
- UNI EN 1991-2 (nel seguito EN91);
- UNI EN 1992-1-1:2015 (nel seguito EN92);
- UNI EN 1997-1: *Progettazione Geotecnica – Parte 1: Regole generali*;
- UNI EN 1998-5: *Progettazione delle strutture per la resistenza sismica – Parte 5: Fondazione, strutture di contenimento ed aspetti geotecnici*;
- *Linee Guida per la progettazione di ponti e viadotti stradali a travata, Settembre 2012 (nel seguito LG ANAS)*.

## 4 CARATTERISTICHE DEI MATERIALI IMPIEGATI

### 4.1 Calcestruzzo

#### 4.1.1 Pali di fondazione

Classe di resistenza C25/30

Classe d'esposizione: XC2

Copriferro netto minimo:  $c = 60\text{mm}$

$$R_{ck} = 30 \text{ N/mm}^2$$

$$f_{ck} = 0,83 \cdot R_{ck} = 24.9 \text{ N/mm}^2$$

$$\text{Resistenza di calcolo a compressione: } f_{cd} = f_{ck} \cdot \alpha_{cc} / \gamma_c = 24.9 \cdot 0,85 / 1,5 = 14.11 \text{ N/mm}^2$$

$$\text{Resistenza di calcolo a trazione: } f_{ctm} = 0,30 \cdot f_{ck}^{(2/3)} = 2.56 \text{ N/mm}^2$$

$$\text{Modulo elastico: } E = 22000 [f_{cm}/10]^{0.3} = 31447,16 \text{ MPa}$$

#### 4.1.2 Cordoli

Classe di resistenza C32/40

Classe d'esposizione: XC2

Copriferro netto minimo:  $c = 40\text{mm}$

$$R_{ck} = 40 \text{ N/mm}^2$$

$$f_{ck} = 0,83 \cdot R_{ck} = 33.20 \text{ N/mm}^2$$

$$\text{Resistenza di calcolo a compressione: } f_{cd} = f_{ck} \cdot \alpha_{cc} / \gamma_c = 33.20 \cdot 0,85 / 1,5 = 18.81 \text{ N/mm}^2$$

$$\text{Resistenza di calcolo a trazione: } f_{ctm} = 0,30 \cdot f_{ck}^{(2/3)} = 3.10 \text{ N/mm}^2$$

$$\text{Modulo elastico: } E = 22000 [f_{cm}/10]^{0.3} = 33642.78 \text{ MPa}$$

### 4.2 Acciaio

#### 4.2.1 Acciaio per cemento armato

Si utilizzano barre ad aderenza migliorata in acciaio con le seguenti caratteristiche meccaniche:

#### Acciaio B450C

tensione caratteristica di snervamento

$$f_{yk} = 450 \text{ N/mm}^2;$$

tensione caratteristica di rottura

$$f_{tk} = 540 \text{ N/mm}^2;$$

resistenza di calcolo a trazione

$$f_{yd} = 391.30 \text{ N/mm}^2;$$

modulo elastico

$$E_s = 206000 \text{ N/mm}^2.$$

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## 5 STRATIGRAFIA E PARAMETRI GEOTECNICI

Il terreno, per le profondità d'interesse, è caratterizzato da tre unità per cui si adottano i seguenti parametri:

Unità	Descrizione	Prof top m slm	$\gamma$ kN/mc	$\phi$ °	$c'$ kPa	$c_u$ kPa	E MPa
-	-	-	-	-	-	-	-
1	Terreno di riporto costituito da ghiaia in matrice sabbio-limosa, con clasti da eterometrici a spigolosi	+12.0	19	31	0	-	10
2	Sabbia con ghiaia debolmente limosa o ghiaia con sabbia limosa, con clasti prevalentemente angolari,	+9.5	20	33 per z>4m slm 35 per z<4m slm	0	-	30-60**
3	Limo sabbioso ghiaioso	-22.0	21	27	20	80-100	15-20

\*\* 30 fino a 4m slm, poi crescente con la profondità

Per i dettagli si rimanda alla relazione geotecnica generale.

Per il rilevato a monte sono stati assunti i seguenti parametri:

–  $\gamma = 19 \text{ kN/m}^3$

–  $\phi = 35^\circ$

La falda è posta a +6.5 m slm.

## 6 MODELLO DI CALCOLO

L'analisi della paratia è stata svolta con il programma di calcolo PARATIE PLUS della CeAS S.r.l. I files di input e output dei modelli utilizzati sono riportati in allegato.

Il modello si riferisce ad una porzione di paratia di larghezza unitaria (1m).

Per considerare la presenza del vincolo offerto dal cordolo collegato ai pali posti in direzione perpendicolare, nel modello è stata inserita una molla in testa alla paratia.

Per determinare la rigidezza di tale molla, è stata prima valutata la rigidezza dei pali posti ortogonalmente all'asse della paratia, successivamente è stato considerato uno schema statico di trave appoggiata in corrispondenza degli speroni modellati come molle di rigidezza pari a quella precedentemente calcolata.



Applicando a tale schema di calcolo un valore della forza unitario si è valutato lo spostamento corrispondente e, tenendo conto della relazione  $F=k*u$  ove "k" è la rigidezza e "u" lo spostamento ottenuto, si è ottenuto il valore della rigidezza.

F	1	KN
u	0.00001711	m
k	58445	KN/m

La rigidezza ottenuta è pari a circa 58445 kN/m. Questo è il valore inserito nel modello di Paratie.

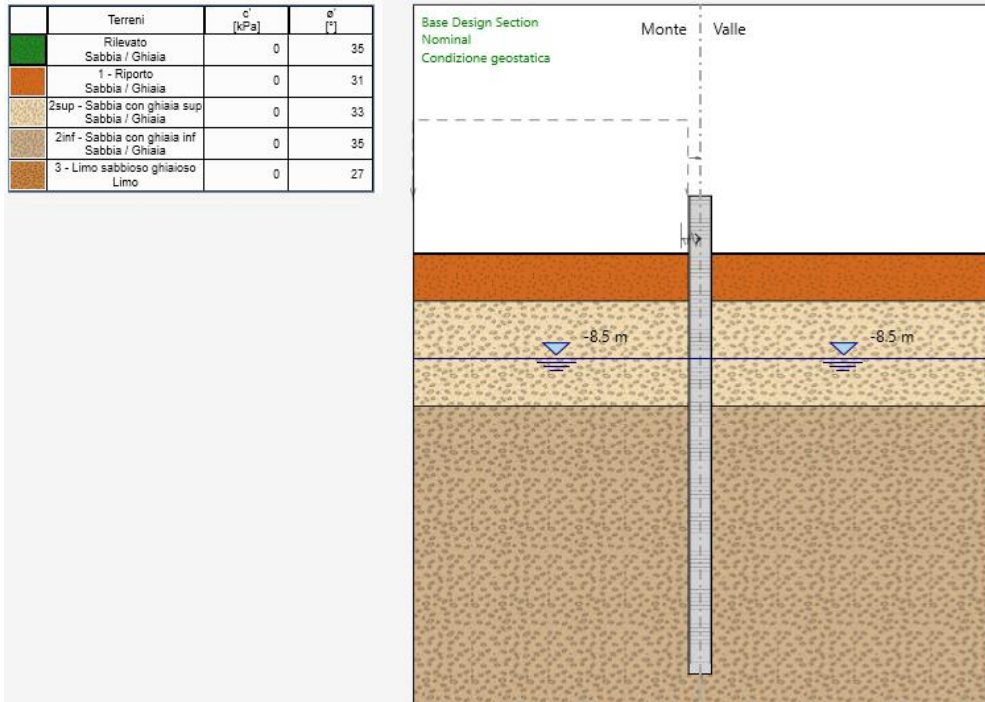


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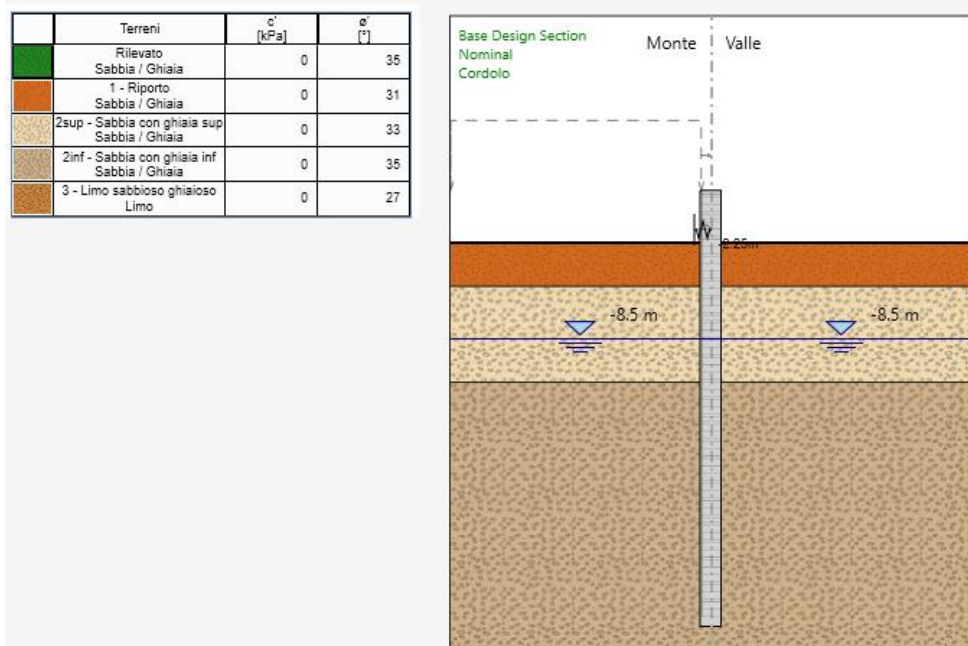
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Di seguito si riportano le fasi considerate nel calcolo:

- Fase 1: Condizioni geostatiche



- Fase 2: Realizzazione cordolo (inserimento molla)

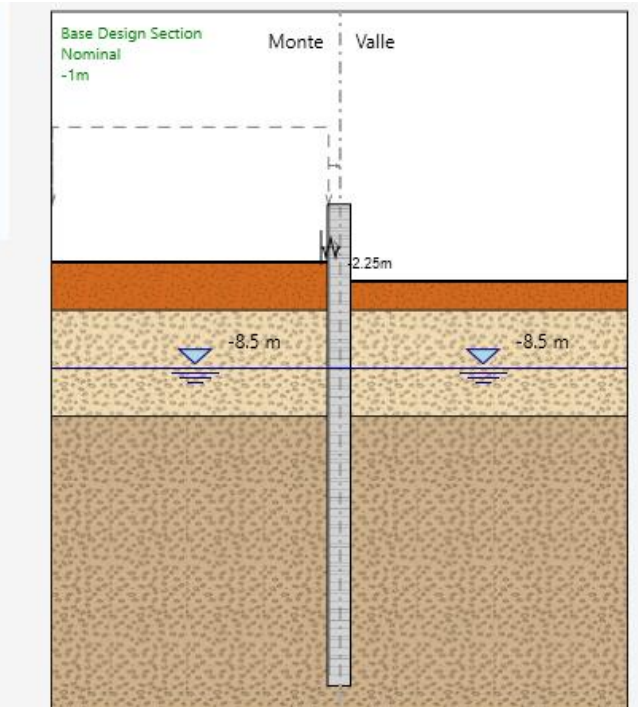


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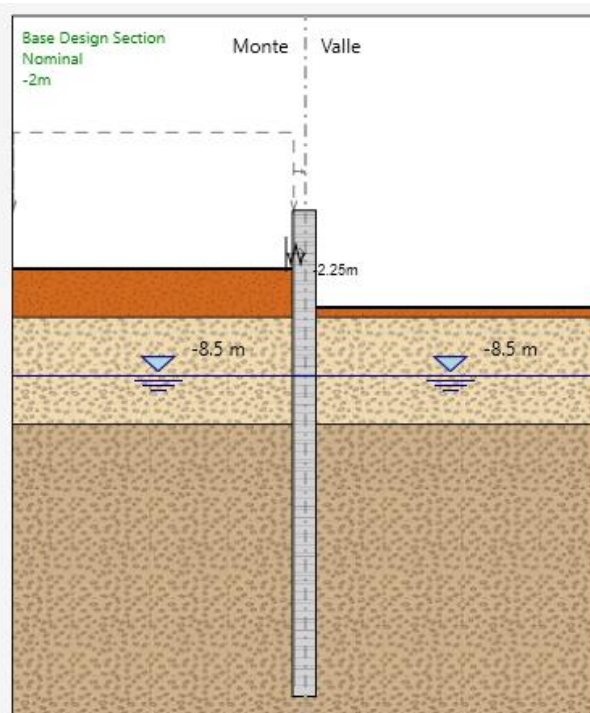
- Fase 3: Scavo fino a -1m

Terreni	$c'$ [kPa]	$\phi'$ [°]
Rilevato Sabbia / Ghiaia	0	35
1 - Riporto Sabbia / Ghiaia	0	31
2sup - Sabbia con ghiaia sup Sabbia / Ghiaia	0	33
2inf - Sabbia con ghiaia inf Sabbia / Ghiaia	0	35
3 - Limo sabbioso ghiaioso Limo	0	27



- Fase 4: Scavo fino a quota - 2 m

Terreni	$c'$ [kPa]	$\phi'$ [°]
Rilevato Sabbia / Ghiaia	0	35
1 - Riporto Sabbia / Ghiaia	0	31
2sup - Sabbia con ghiaia sup Sabbia / Ghiaia	0	33
2inf - Sabbia con ghiaia inf Sabbia / Ghiaia	0	35
3 - Limo sabbioso ghiaioso Limo	0	27

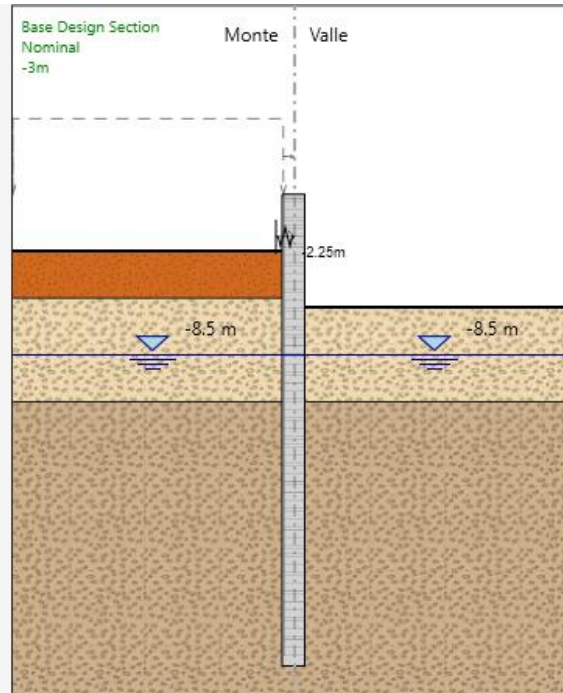


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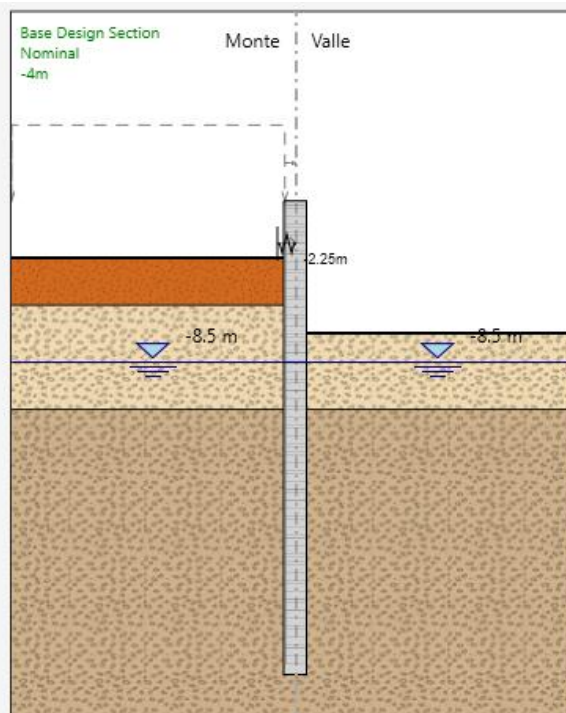
- Fase 5: Scavo fino a quota -3.0m

Terreni	$c'$ [kPa]	$\phi'$ [°]
Rilevato Sabbia / Ghiaia	0	35
1 - Riporto Sabbia / Ghiaia	0	31
2sup - Sabbia con ghiaia sup Sabbia / Ghiaia	0	33
2inf - Sabbia con ghiaia inf Sabbia / Ghiaia	0	35
3 - Limo sabbioso ghiaioso Limo	0	27



- Fase 6: Scavo fino a quota -4.0m

Terreni	$c'$ [kPa]	$\phi'$ [°]
Rilevato Sabbia / Ghiaia	0	35
1 - Riporto Sabbia / Ghiaia	0	31
2sup - Sabbia con ghiaia sup Sabbia / Ghiaia	0	33
2inf - Sabbia con ghiaia inf Sabbia / Ghiaia	0	35
3 - Limo sabbioso ghiaioso Limo	0	27

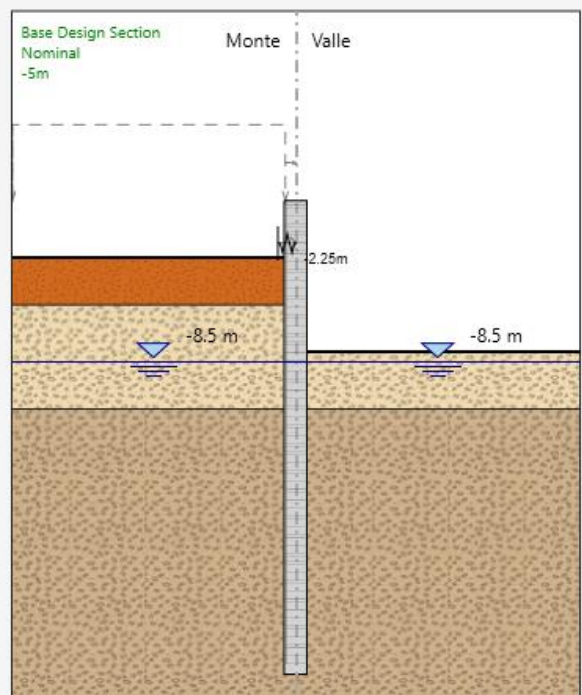


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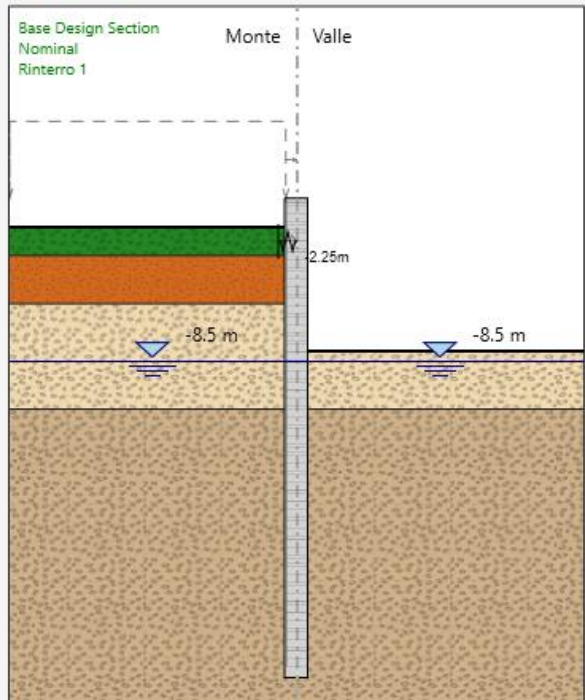
- Fase 7: Scavo fino a -5m

Terreni	$c'$ [kPa]	$\phi'$ [°]
Rilevato Sabbia / Ghiaia	0	35
1 - Riporto Sabbia / Ghiaia	0	31
2sup - Sabbia con ghiaia sup Sabbia / Ghiaia	0	33
2inf - Sabbia con ghiaia inf Sabbia / Ghiaia	0	35
3 - Limo sabbioso ghiaioso Limo	0	27



- Fase 8: Rinterro parziale

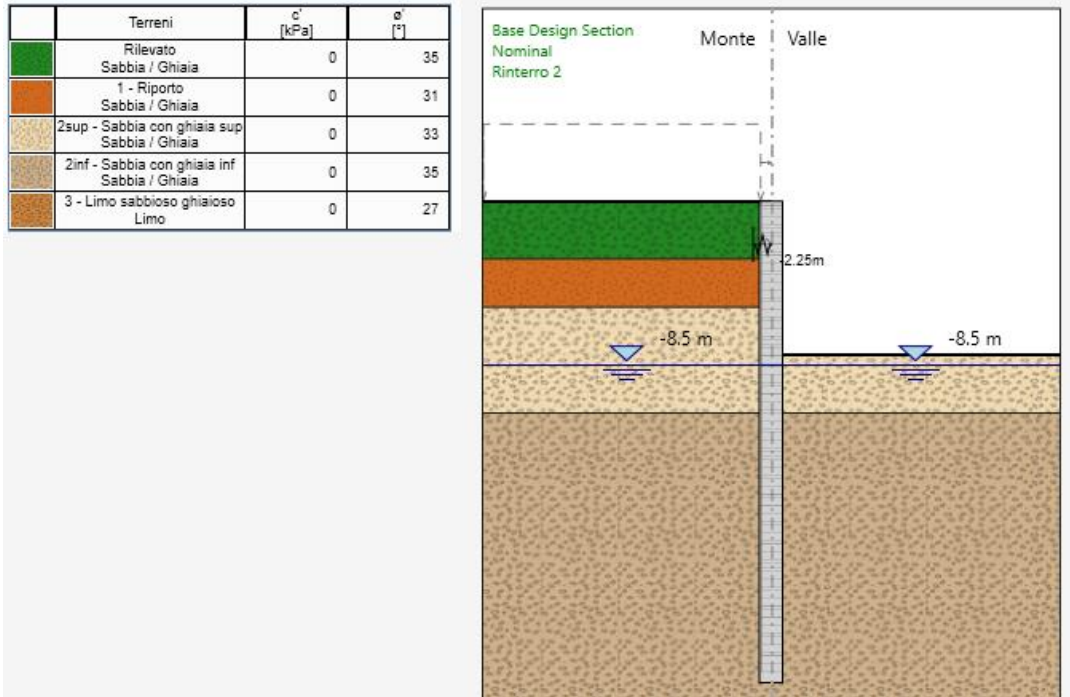
Terreni	$c'$ [kPa]	$\phi'$ [°]
Rilevato Sabbia / Ghiaia	0	35
1 - Riporto Sabbia / Ghiaia	0	31
2sup - Sabbia con ghiaia sup Sabbia / Ghiaia	0	33
2inf - Sabbia con ghiaia inf Sabbia / Ghiaia	0	35
3 - Limo sabbioso ghiaioso Limo	0	27



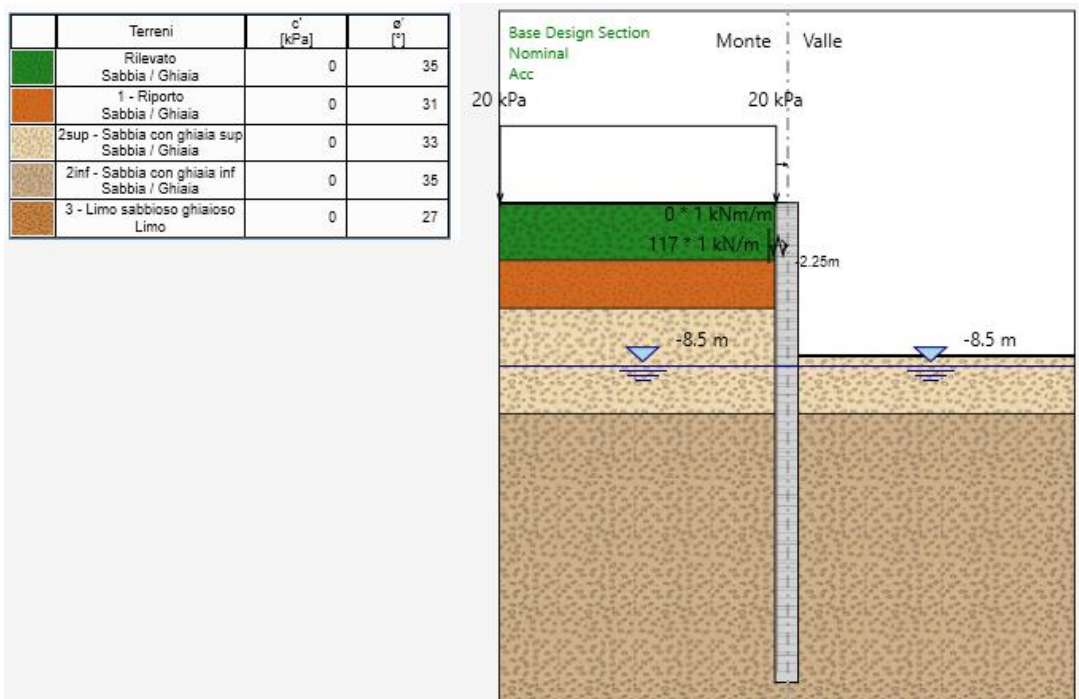
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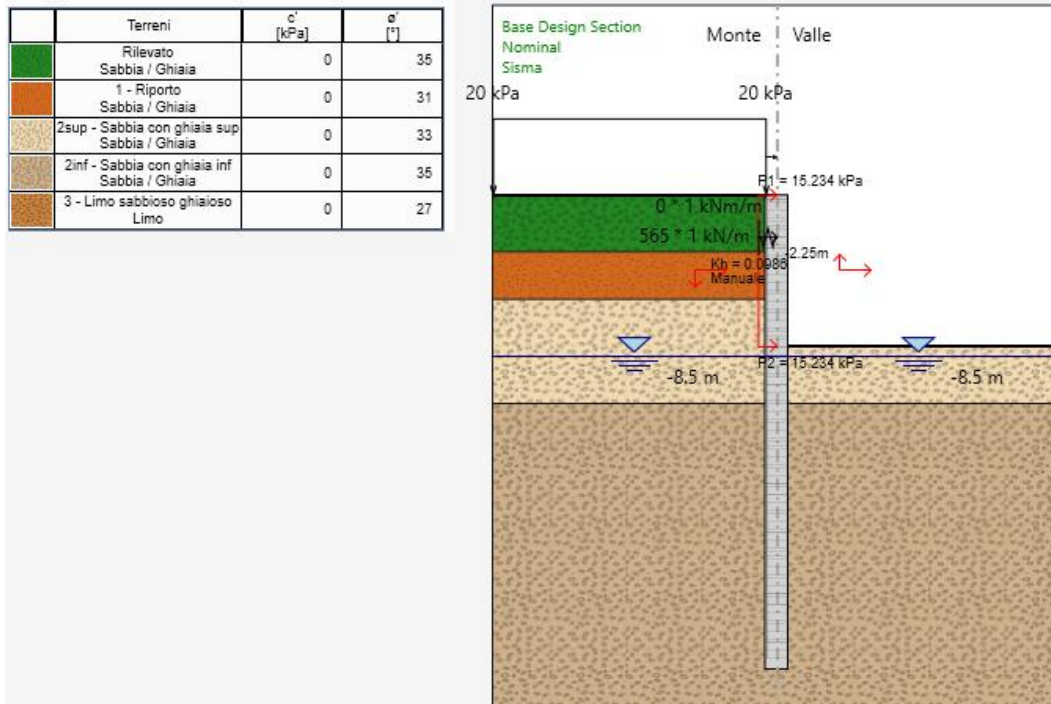
- Fase 9: Completamento rinterro (rilevato)



- Fase 10: Transito accidentali (a monte e sull'impalcato)



- Fase 11: Sisma



A monte della paratia è stato applicato il carico accidentale dovuto al traffico.

Sul cordolo in testa alla paratia sono stati considerati anche gli scarichi dell'impalcato, in particolare è stata applicata una forza orizzontale pari a 117 kN/m distribuiti lungo il cordolo.

Per i dettagli si rimanda alla relazione dell'impalcato (IV0I00D09CLIV010A001). Le azioni sono state diffuse fino alla quota dei pali considerando una diffusione a 45°.

Il sisma è stato modellato considerando il comportamento della paratia flessibile calcolando la spinta secondo la teoria di Mononobe-Okabe. L'azione proveniente dall'impalcato è stata assunta pari a quella agente in corrispondenza del plateau dello spettro considerando un fattore di comportamento  $q$  pari a  $1.5/1.1=1.36$ .

Nel calcolo è stato considerato:

- categoria di sottosuolo
- categoria topografica T1
- vita nominale 75 anni
- Classe d'uso III ( $C_U = 1.5$ ).

Nella schermata seguente si riporta il dettaglio utilizzato nel modello di calcolo:

Opzioni Sisma (attive solo nell'ultima fase)

**Opzioni**

Includi Azione Sismica

**1. Definizione accelerazione**

Coefficiente accel. base  $a_g / g$

Fattore importanza I

Coefficiente  $S_s$

Coefficiente  $S_T$

$a_{max} / g =$

**2. Accelerazione di calcolo**

Eurocodice

Calcolo coefficiente di risposta R

Input diretto

Da formule

$U_s$   m  $T_c$   m/s

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

R=   $>$

NTC

$U_{s=}$   m

$\beta=$    $>$

$\alpha=$    $>$

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

**3. Definizione calcolo**

Modalità spinta  Paratia fuori terra  
 Paratia intera

Comportamento idraulico  Terreno pervio  
 Terreno impervio

$k_{vu}$  (%  $k_h$ )

$k_{vd}$  (%  $k_h$ )

$R_u$

Includi inerzia paratia

**4. Metodo di calcolo**

Procedura Automatica (Paratie)

Pressione di Wood [0-1]

Valore Applicato

Manuale (Carichi Esterni)

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

Metodo  Wood  
 Mononobe-Okabe  
 Semirigido

B=

$\alpha_1=$

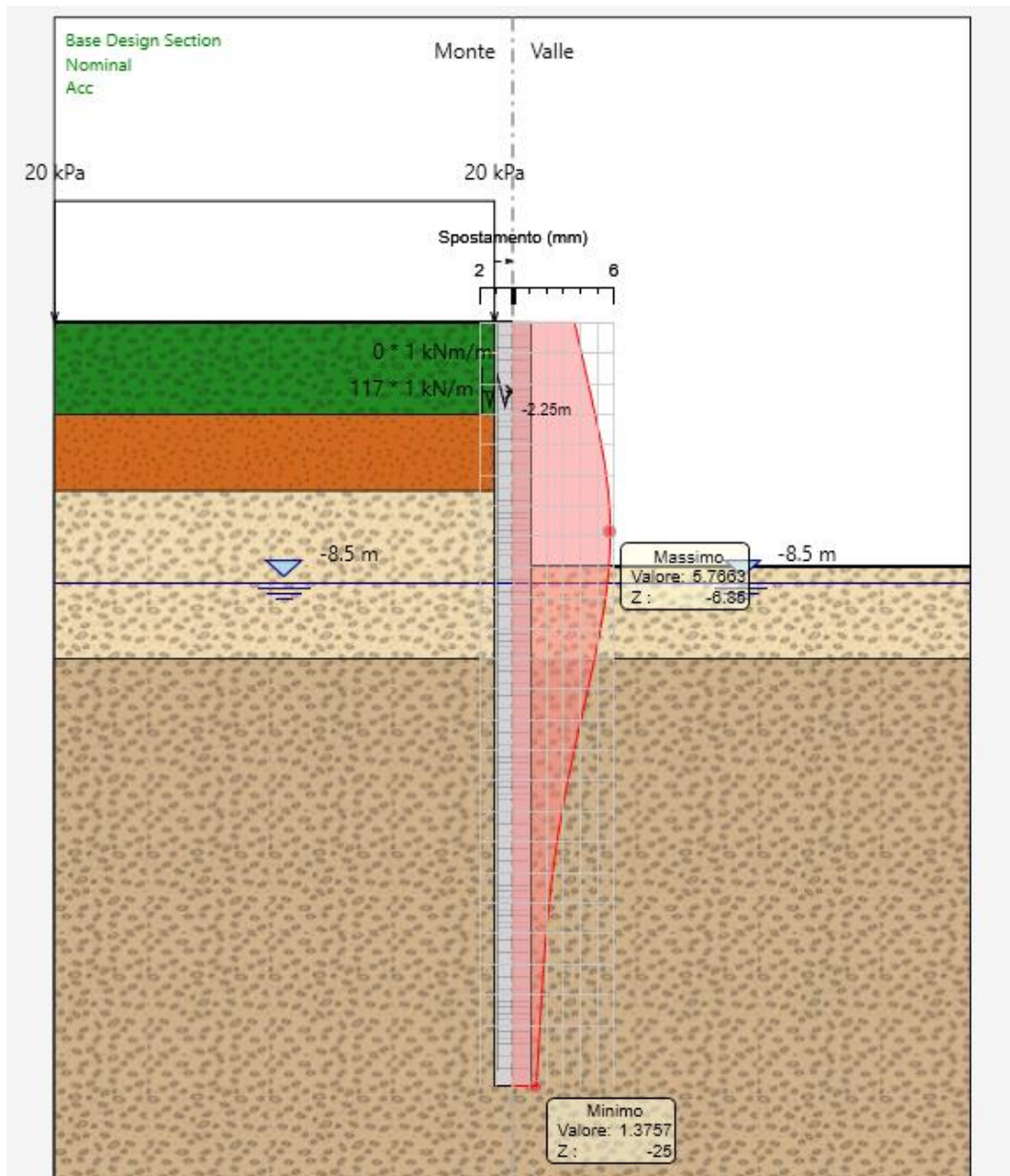
$\alpha_2=$

Correlazione  $\alpha_1 - \alpha_2$

## 7 VERIFICHE DI DEFORMABILITA'

Nel seguito si riportano i massimi spostamenti attesi per la paratia in oggetto.

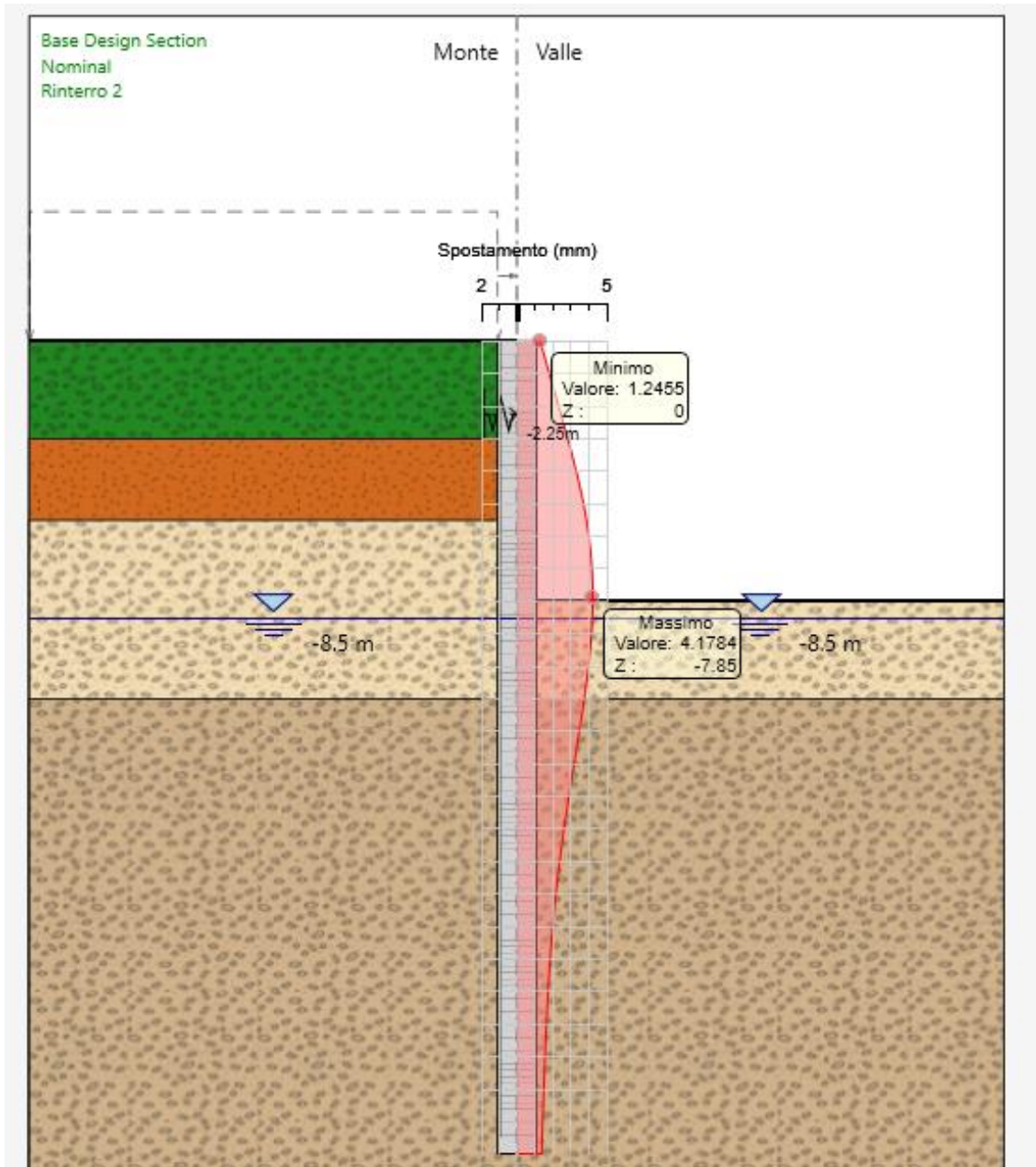
In condizione statica (fase 10, con transito degli accidentali)



Il valore massimo dello spostamento è pari a circa 5.77mm, valore che si ritiene accettabile.



In condizione statica (fase 9, senza transito degli accidentali)



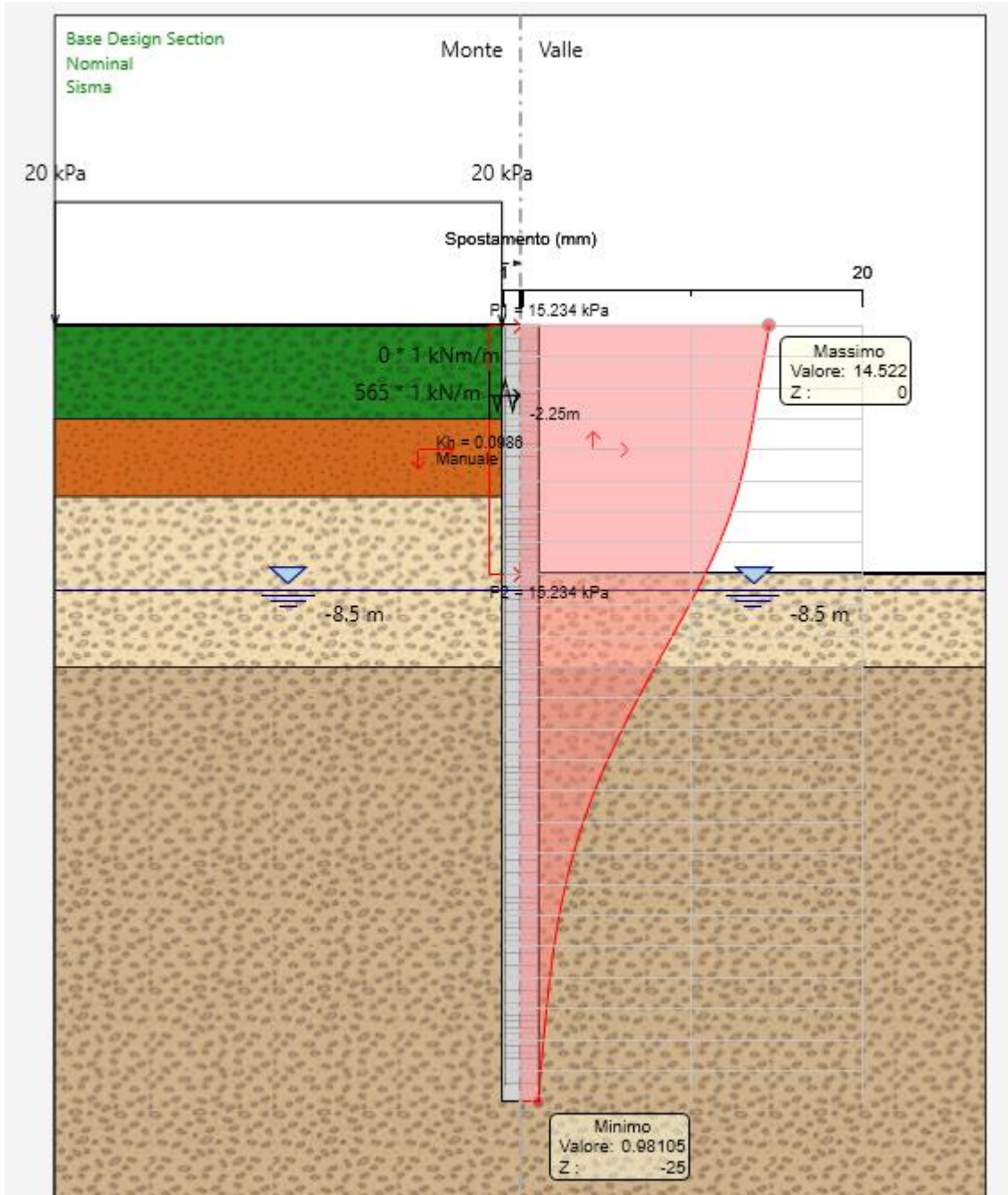
Il massimo spostamento è pari a 4.18 mm.

Pertanto, per effetto del transito degli accidentali si hanno  $5.77 - 4.18 = 1.59$  mm di spostamento, valore che si ritiene del tutto accettabile.

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In condizione sismica



Il valore massimo dello spostamento è pari a circa 14.5mm, valore che si ritiene accettabile.

## 8 VERIFICHE STRUTTURALI

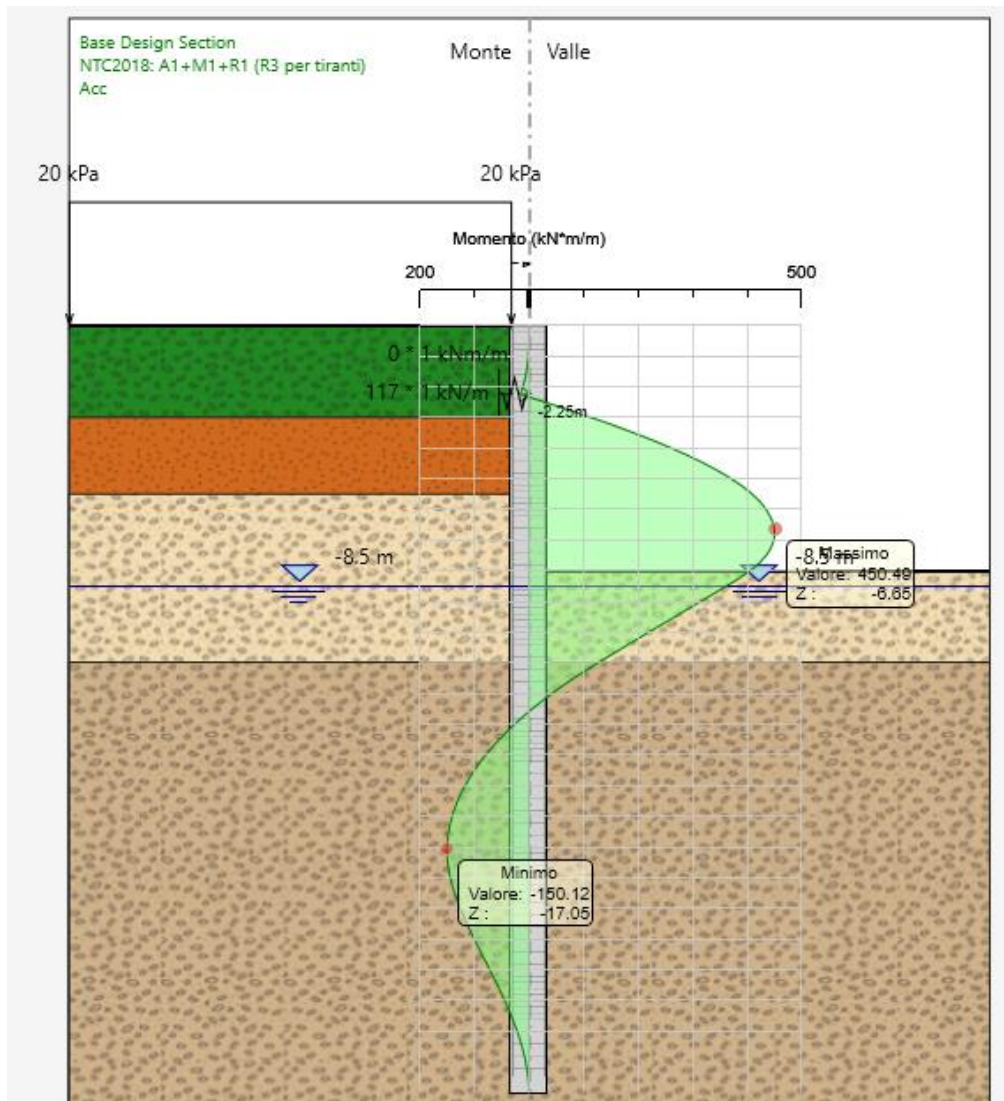
Nel seguito si riportano le verifiche strutturali della paratia effettuate in condizioni A1+M1 e in condizioni sismiche.

Le armature dei pali delle paratie sono state dimensionate in riferimento al palo più sollecitato.

### 8.1 Pali

#### 8.1.1 Sollecitazioni sui pali

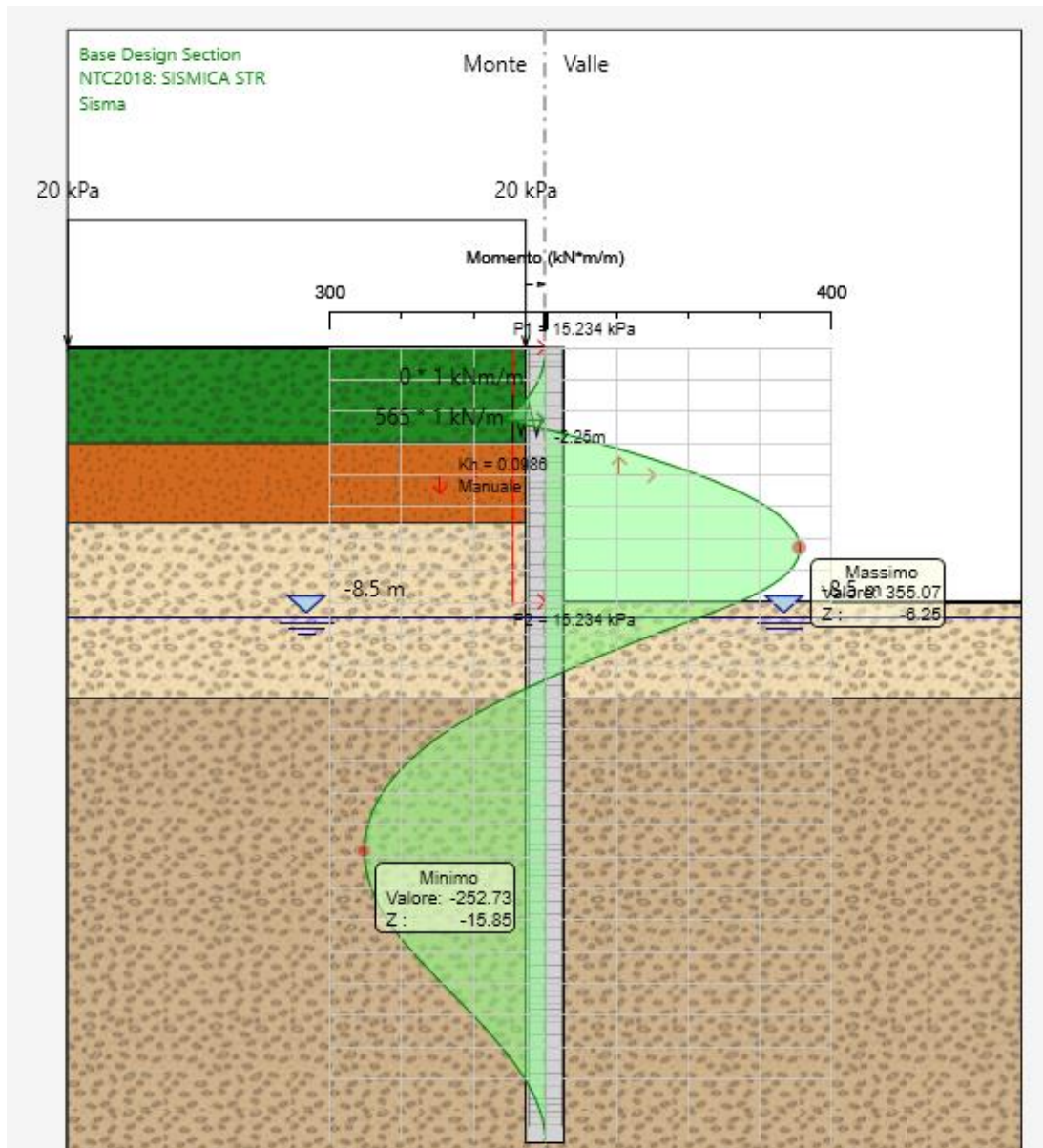
Il massimo momento nella combinazione A1+M1+R1 vale  $M_{A1+M1+R1} = 450.5 \text{ kNm/m}$ , come riportato nella seguente figura:



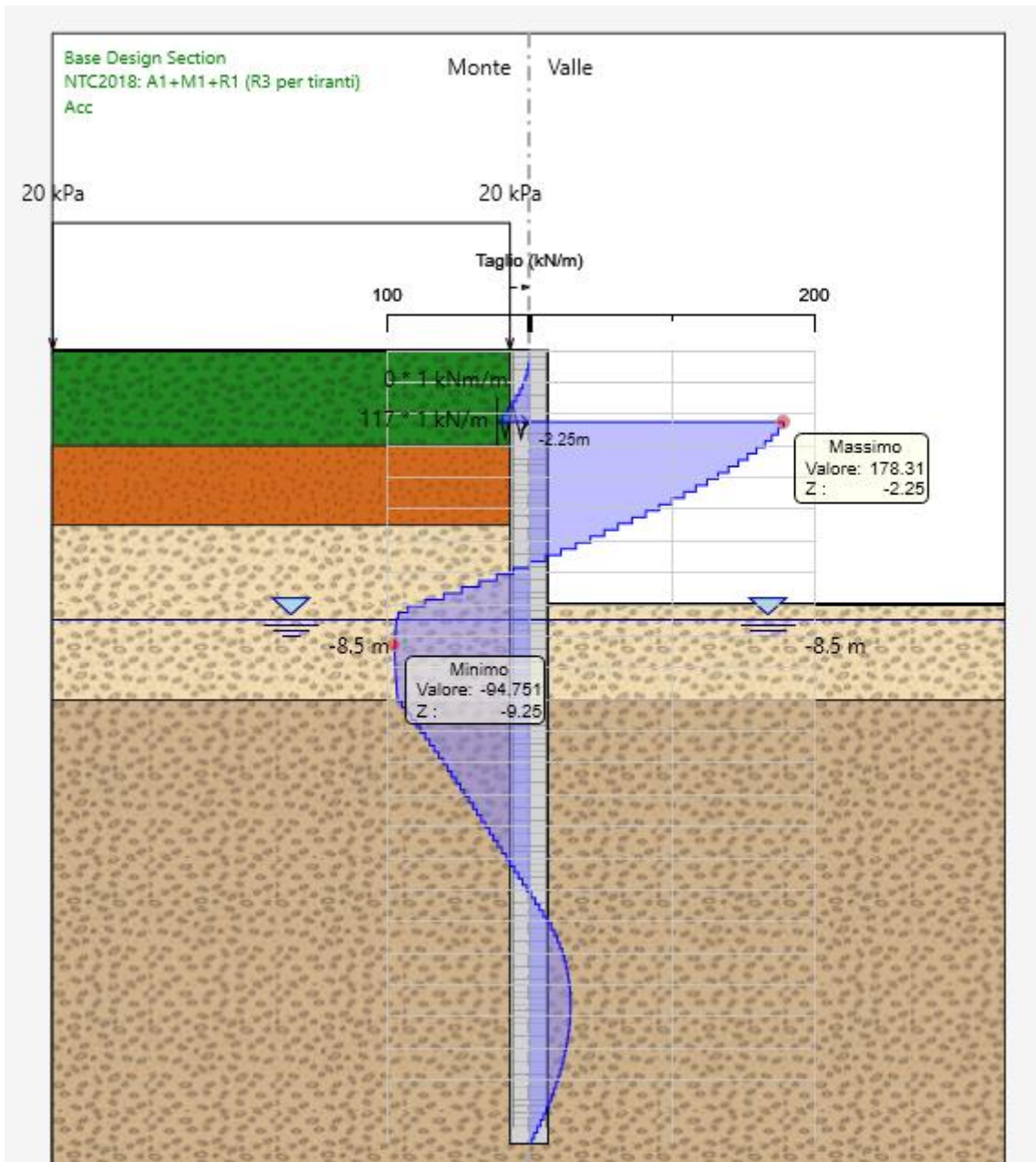
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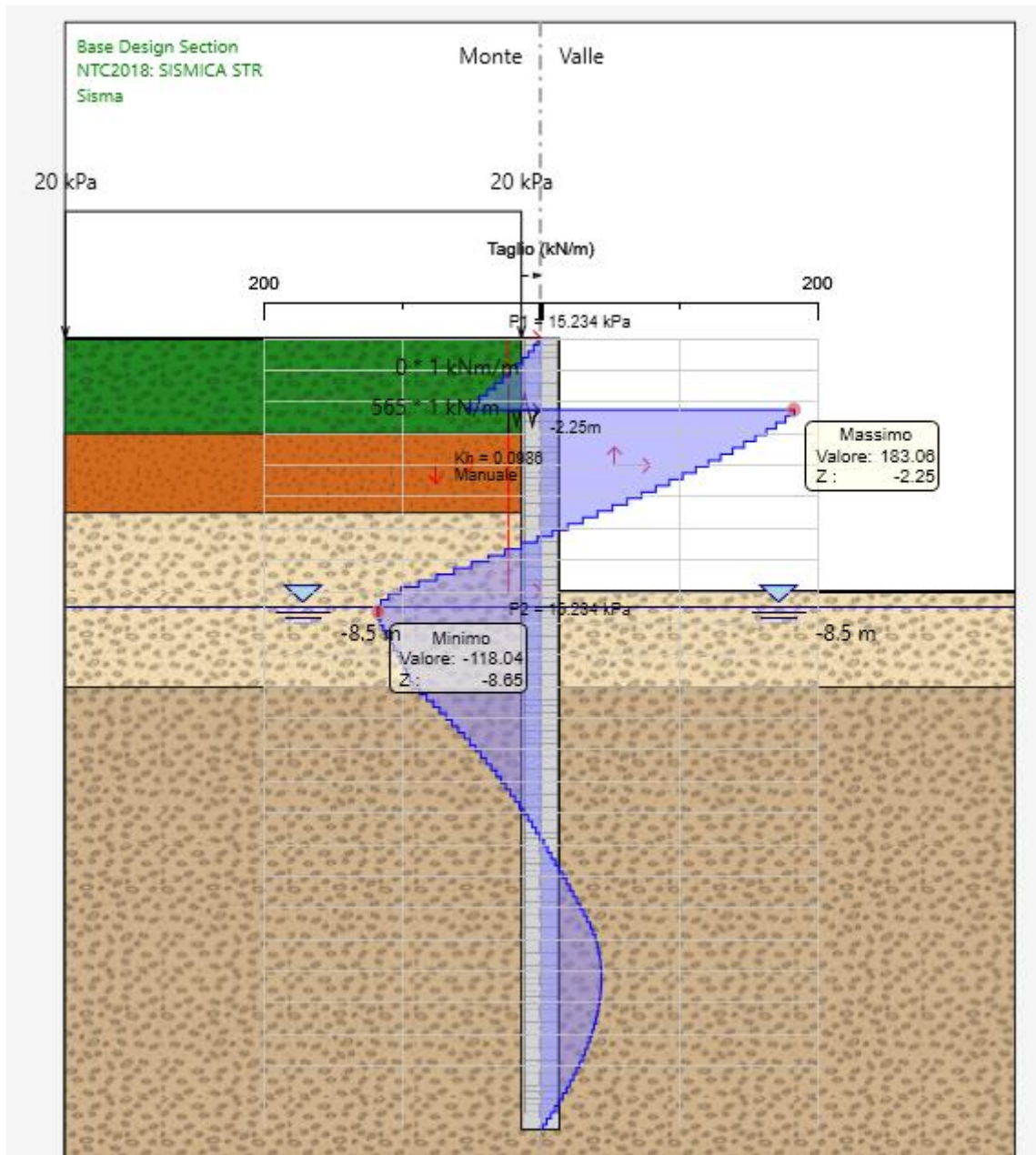
Il massimo momento nella combinazione SISMICA STR vale  $M_{\text{SISMICA STR}} = 355.07 \text{ kNm/m}$ , come riportato nella seguente figura:



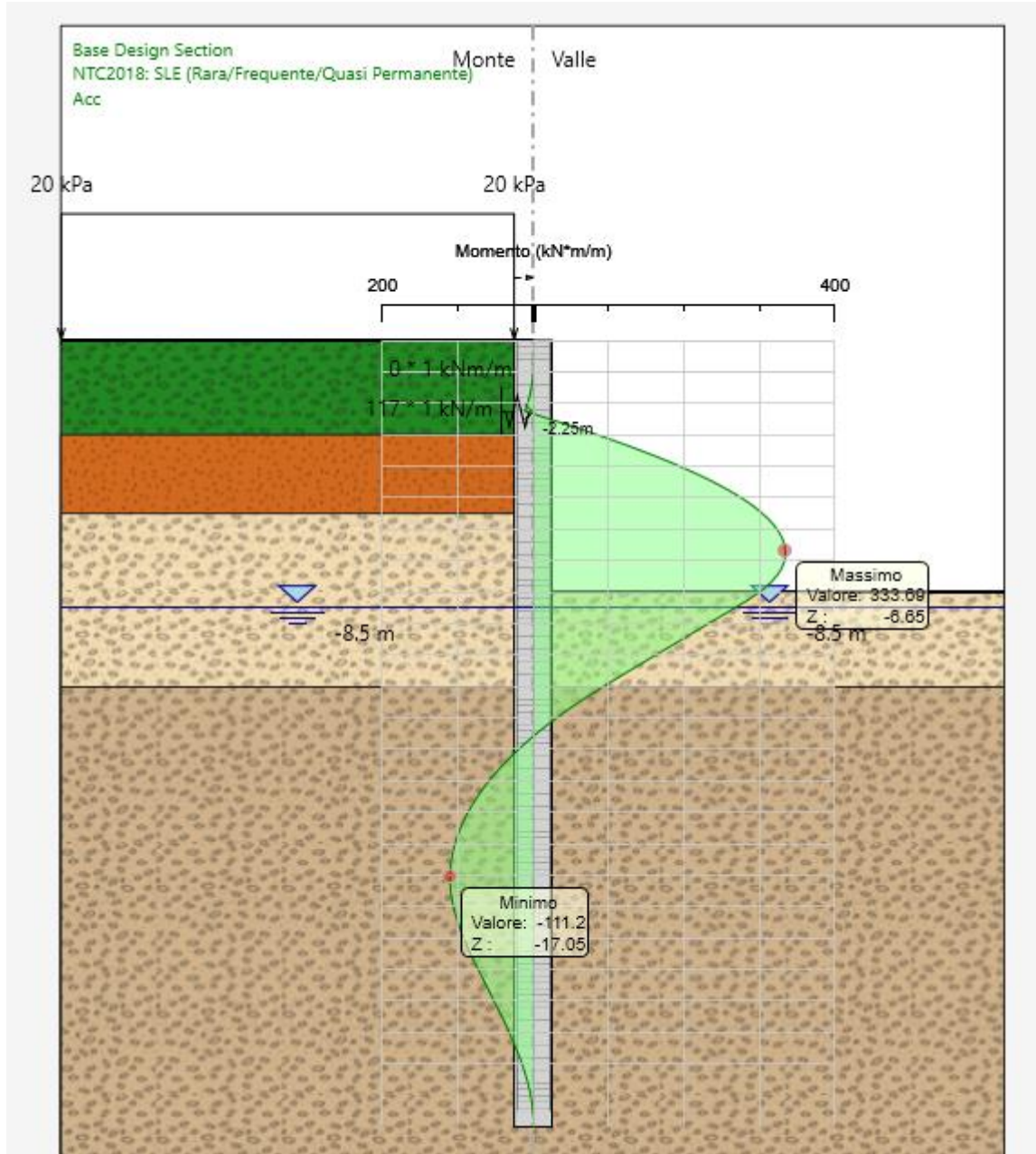
Il massimo taglio nella combinazione A1+M1+R1 vale  $T_{A1+M1+R1} = 178.31$  kN/m, come riportato nella seguente figura:



Il massimo taglio nella combinazione SISMICA STR vale  $T_{SISMICA\ STR} = 183.06\text{ kN/m}$ , come riportato nella seguente figura:



Il massimo momento nella combinazione SLE vale  $M = 333.09 \text{ kNm/m}$ , come riportato nella seguente figura:



Tali valori sono a metro lineare, pertanto vanno moltiplicati per l'interasse dei pali (pari a 1.3 m) per ottenere i valori delle sollecitazioni da utilizzare nelle verifiche sul singolo palo.

Di seguito si riporta una sintesi delle sollecitazioni utilizzate per le verifiche:

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	$N_{\text{pali}}$ [KN]	$M_{\text{max}}$ [KNm]	$T_{\text{max}}$ [KN]
SLU	103.2	585.65	231.8
SLV	91.9	461.59	238.0
RARA	103.2	433.09	-

Dimensionamento delle armature longitudinali dei pali

Caratteristiche del palo		
Diametro	1.2	m <sup>2</sup>
Area	1.13	m
Perimetro	3.77	m

$\emptyset$ palo	1200	mm
Area palo	1130973	mm <sup>2</sup>
As, min	11310	mm <sup>2</sup>
As, max	45239	mm <sup>2</sup>

$\emptyset$	22	mm
n	30	
strati	1	
As	11398.2	mm <sup>2</sup>
	1.01%	<b>ok</b>

Si dispongono staffe  $\phi$  12/20 a due bracci



### 8.1.2 Verifiche SLU

#### 8.1.2.1 Verifica a pressoflessione

Si riportano di seguito i diagrammi dei momenti agenti sovrapposti a quelli resistenti e il tasso di sfruttamento dei pali allo SLU:

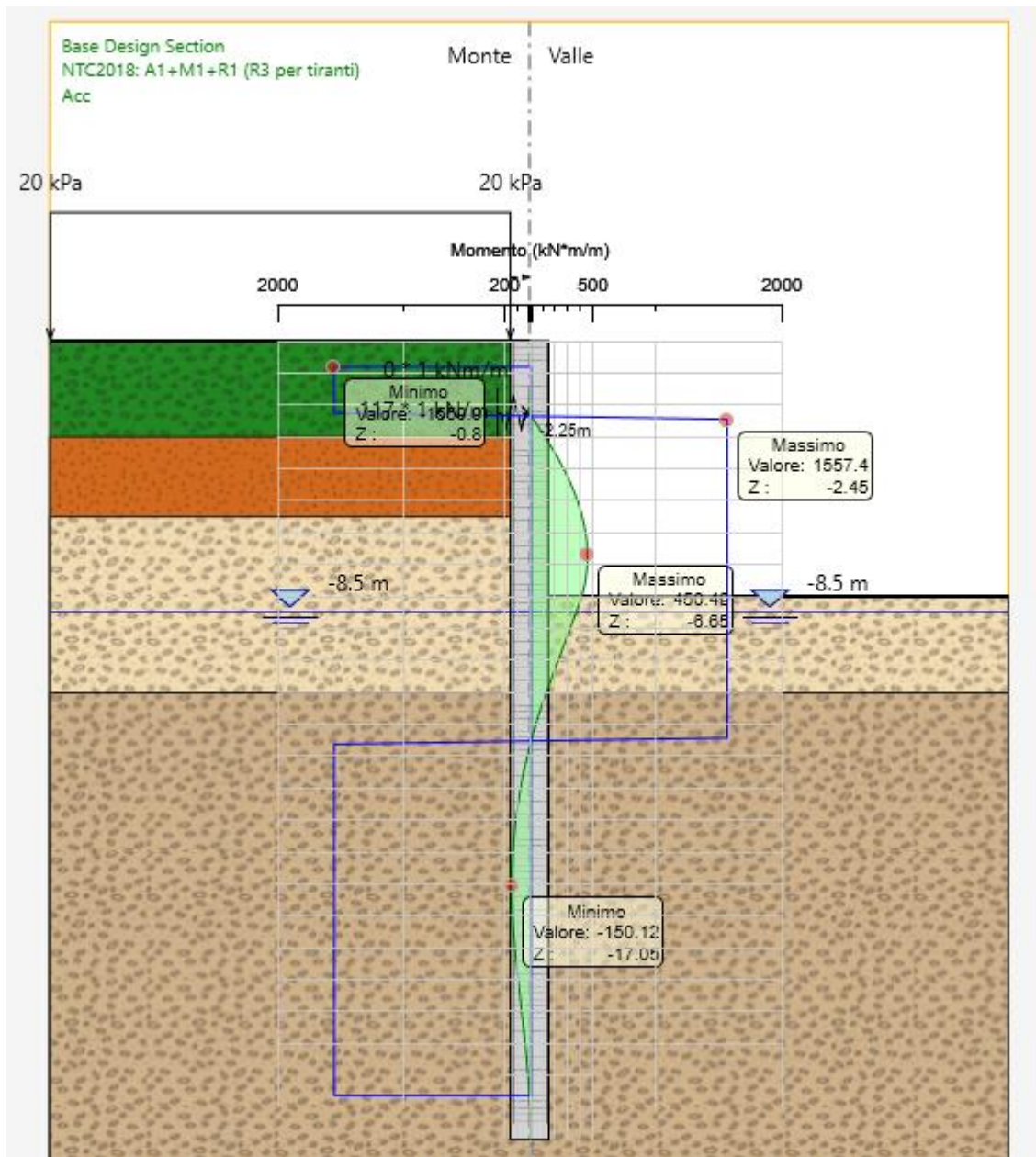


Figura 8-1 Resistenza a pressoflessione della sezione SLU

Ponte stradale su Torrente Giustenice  
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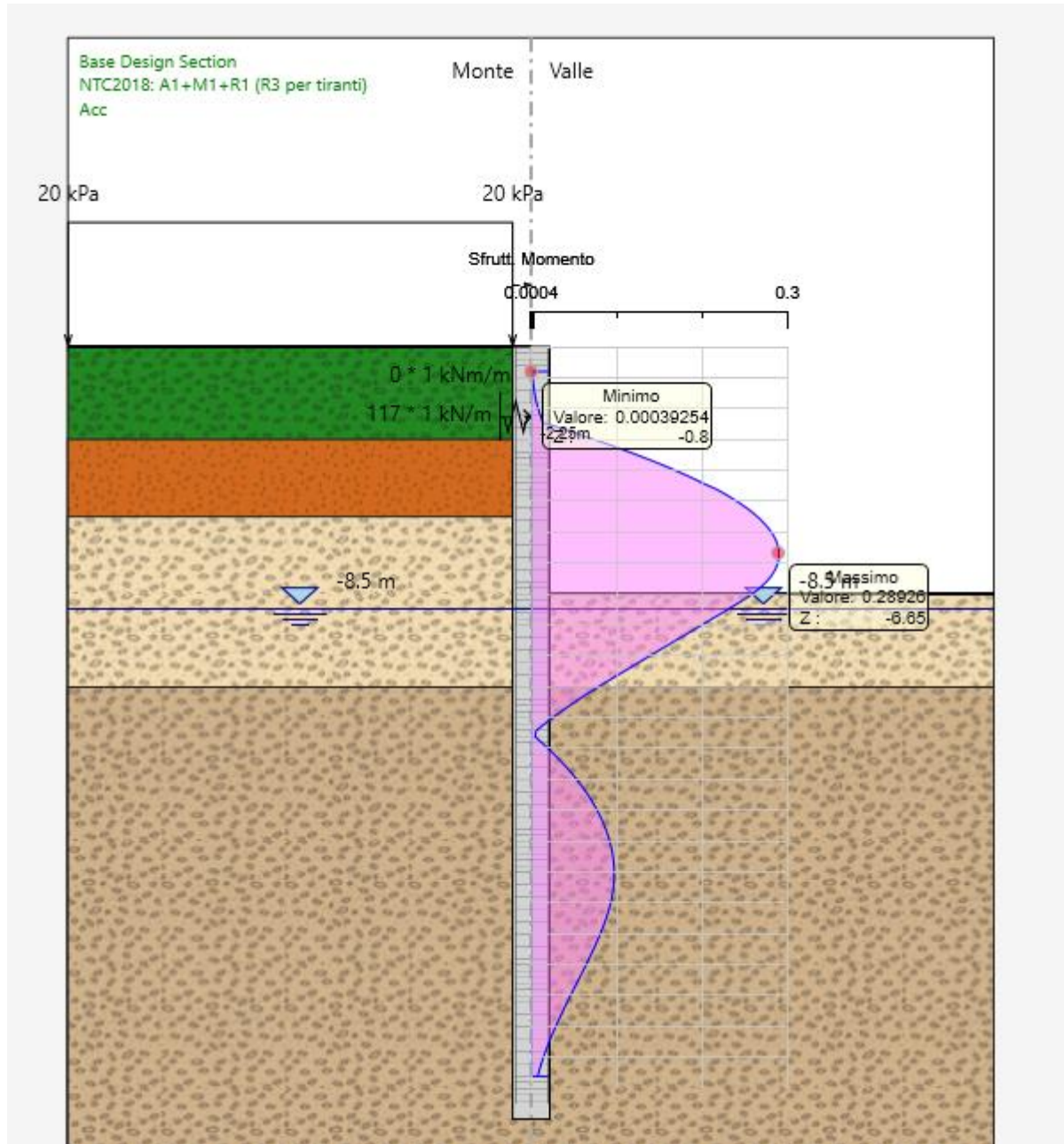


Figura 8-2 Tasso di sfruttamento a pressoflessione SLU

Il massimo tasso di sfruttamento è pari a 0.29, la verifica risulta essere soddisfatta.

### 8.1.2.2 Verifica a taglio SLU

Si riportano di seguito i diagrammi dei tagli agenti sovrapposti a quelli resistenti e il tasso di sfruttamento dei pali allo SLU:

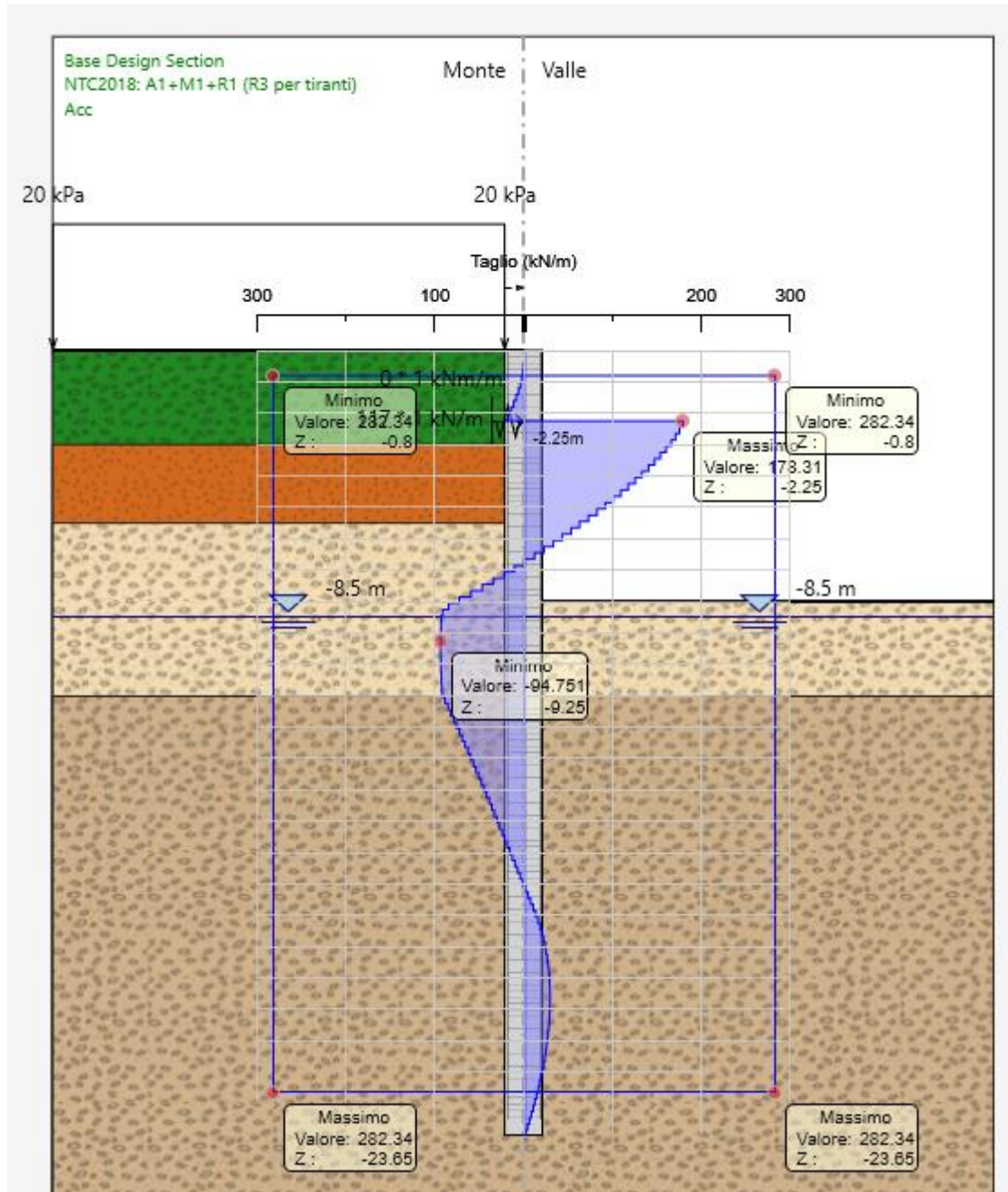


Figura 8-3 Resistenza a taglio della sezione SLU

Ponte stradale su Torrente Giustenice  
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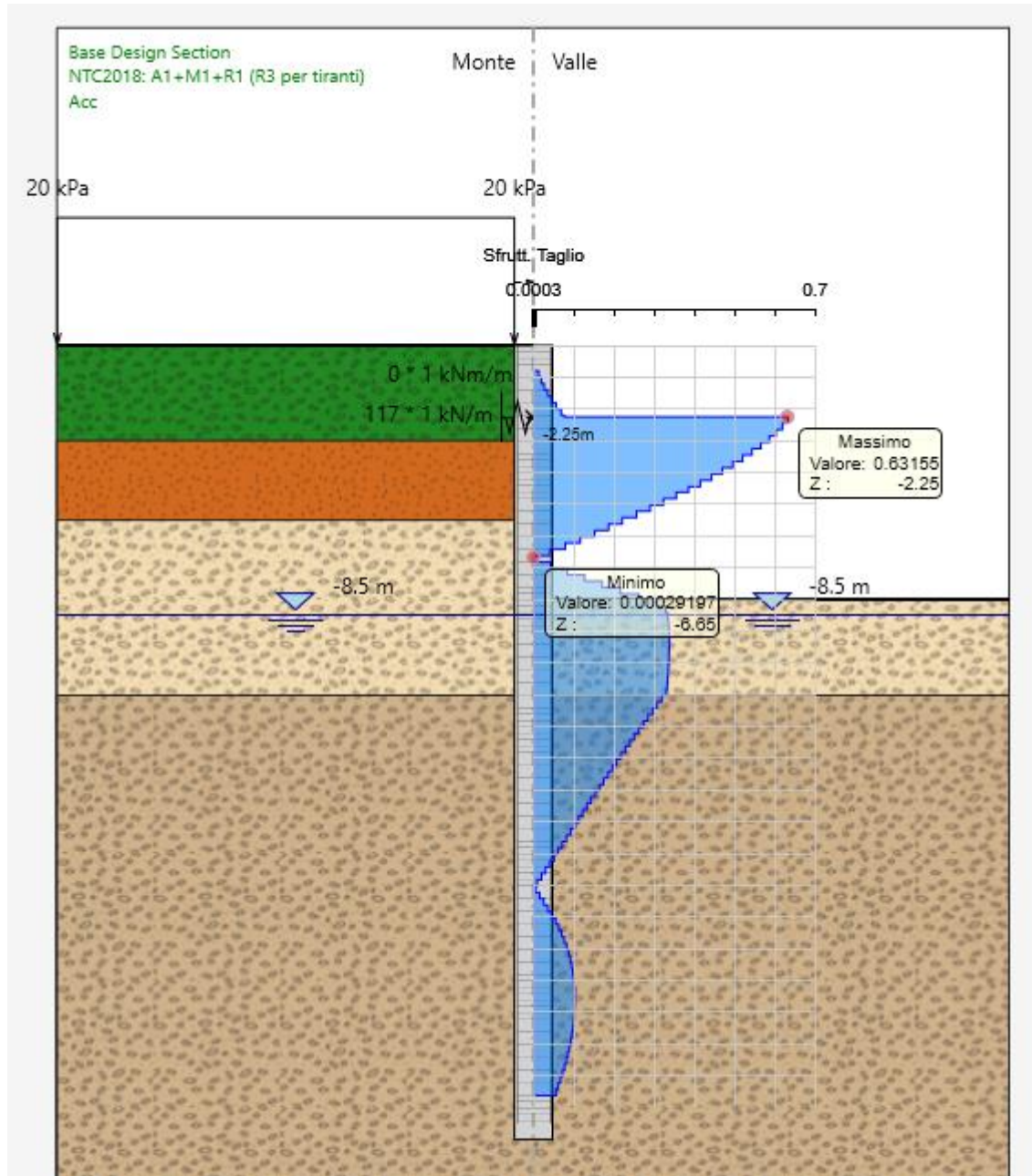


Figura 8-4 Tasso di sfruttamento a taglio SLV

Il massimo tasso di sfruttamento è pari a 0.63, la verifica risulta essere soddisfatta.

### 8.1.3 Verifiche SLV

#### 8.1.3.1 Verifica a pressoflessione

Si riportano di seguito i diagrammi dei momenti agenti sovrapposti a quelli resistenti e il tasso di sfruttamento dei pali allo SLV:

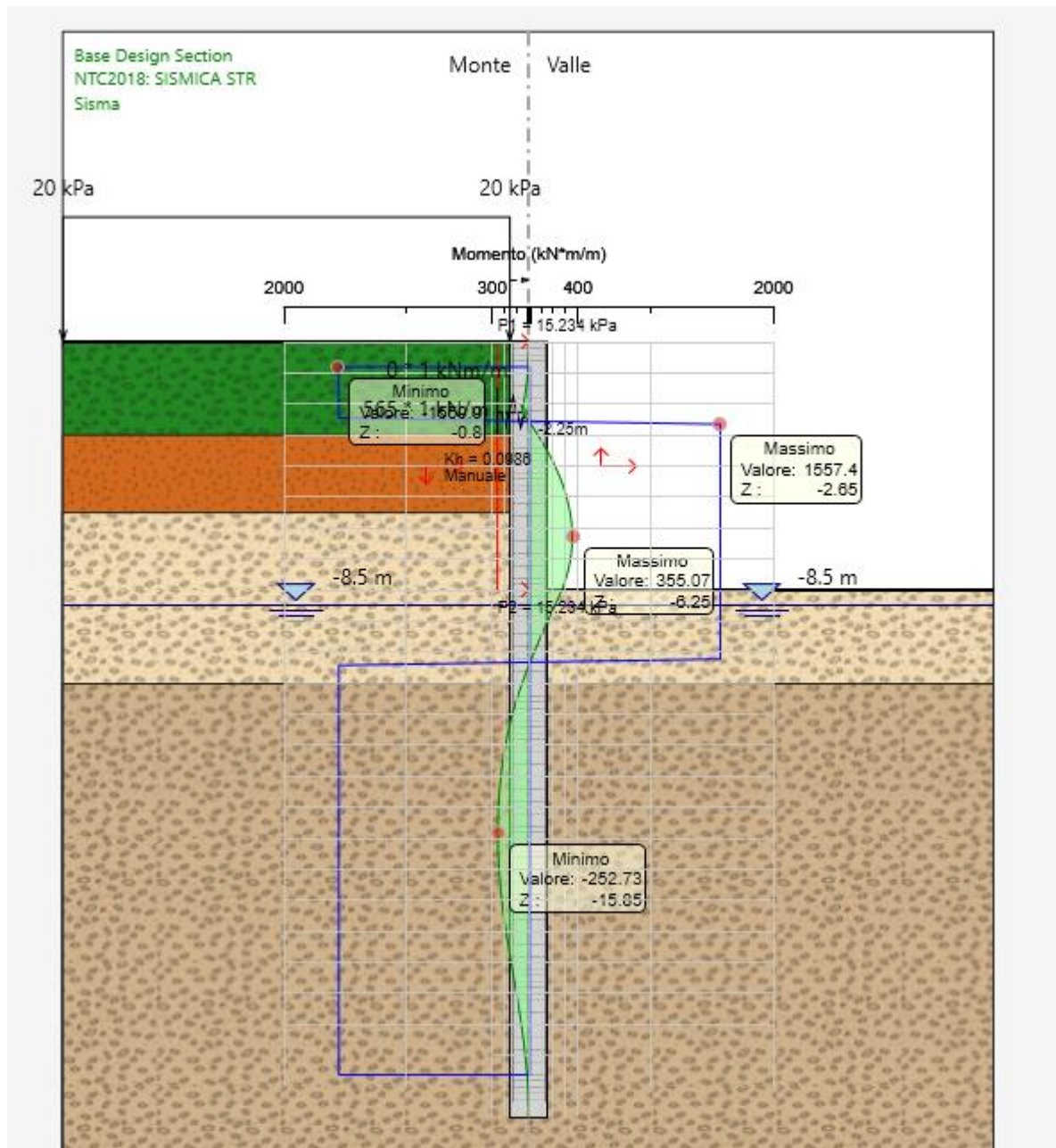


Figura 8-5 Resistenza a pressoflessione della sezione

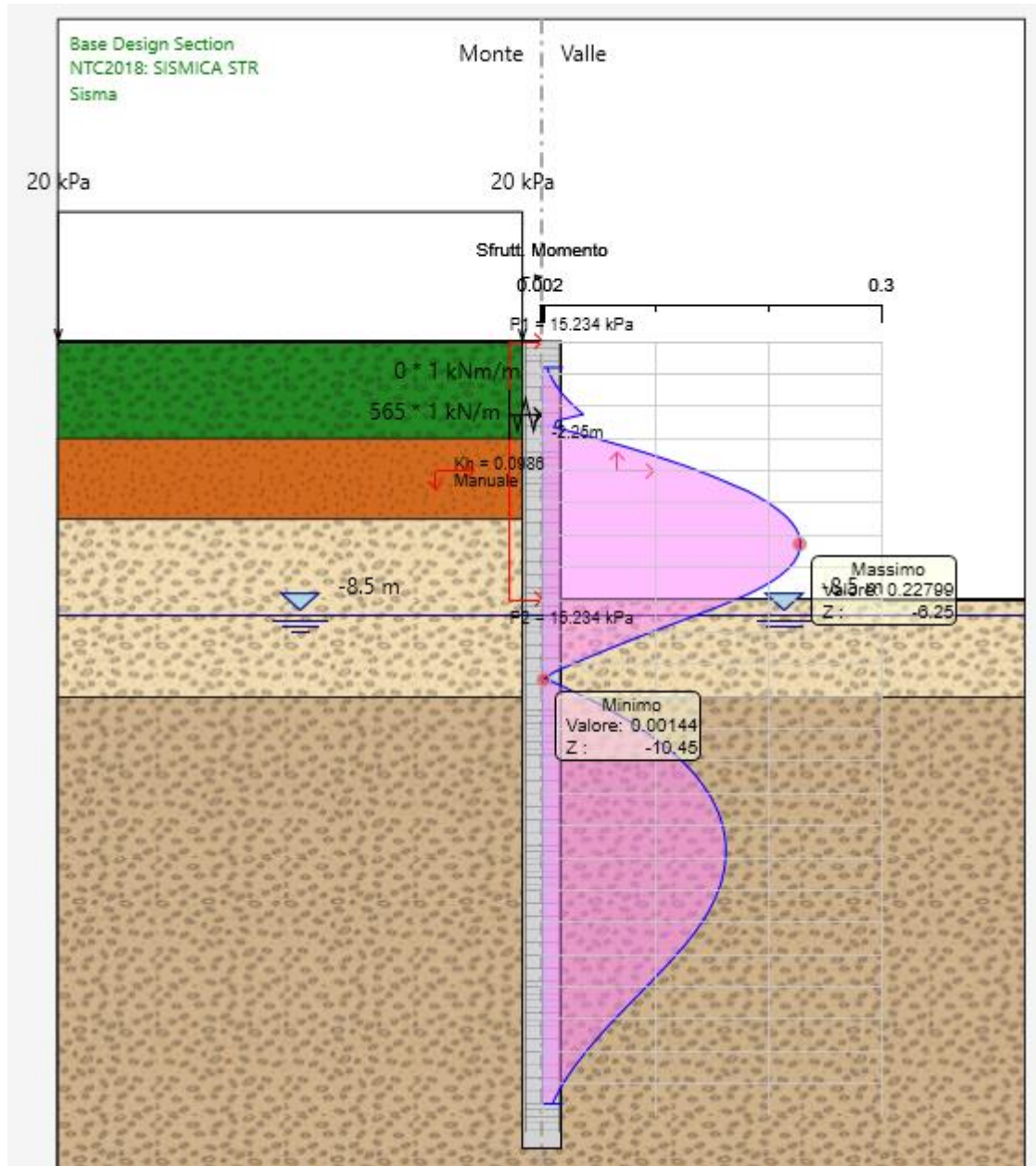


Figura 8-6 Tasso di sfruttamento a pressoflessione SLV

Il massimo tasso di sfruttamento è pari a 0.23, la verifica risulta essere soddisfatta.

### 8.1.3.1 Verifica a taglio SLV

Si riportano di seguito i diagrammi dei tagli agenti sovrapposti a quelli resistenti e il tasso di sfruttamento dei pali allo SLV:

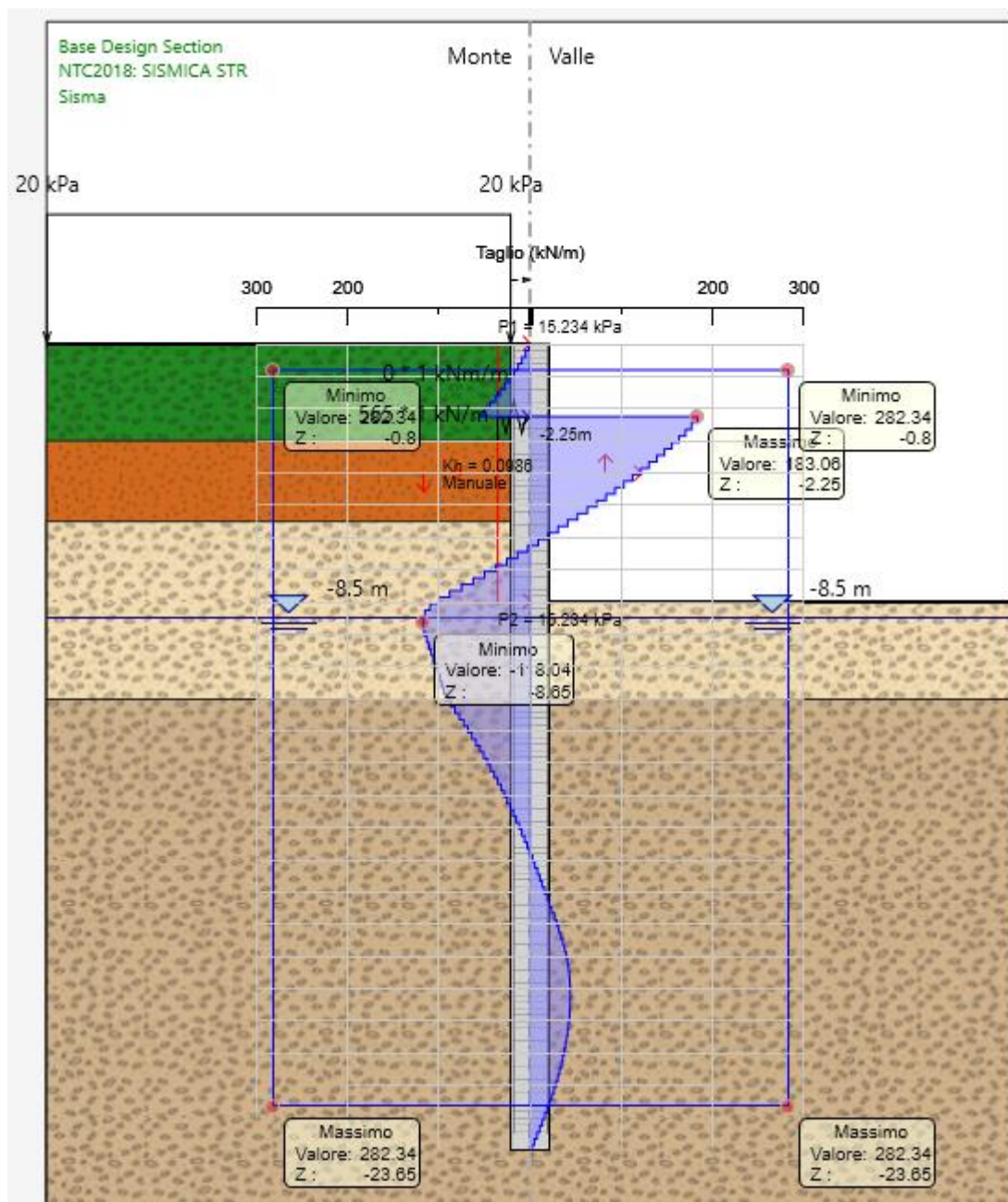


Figura 8-7 Resistenza a taglio della sezione

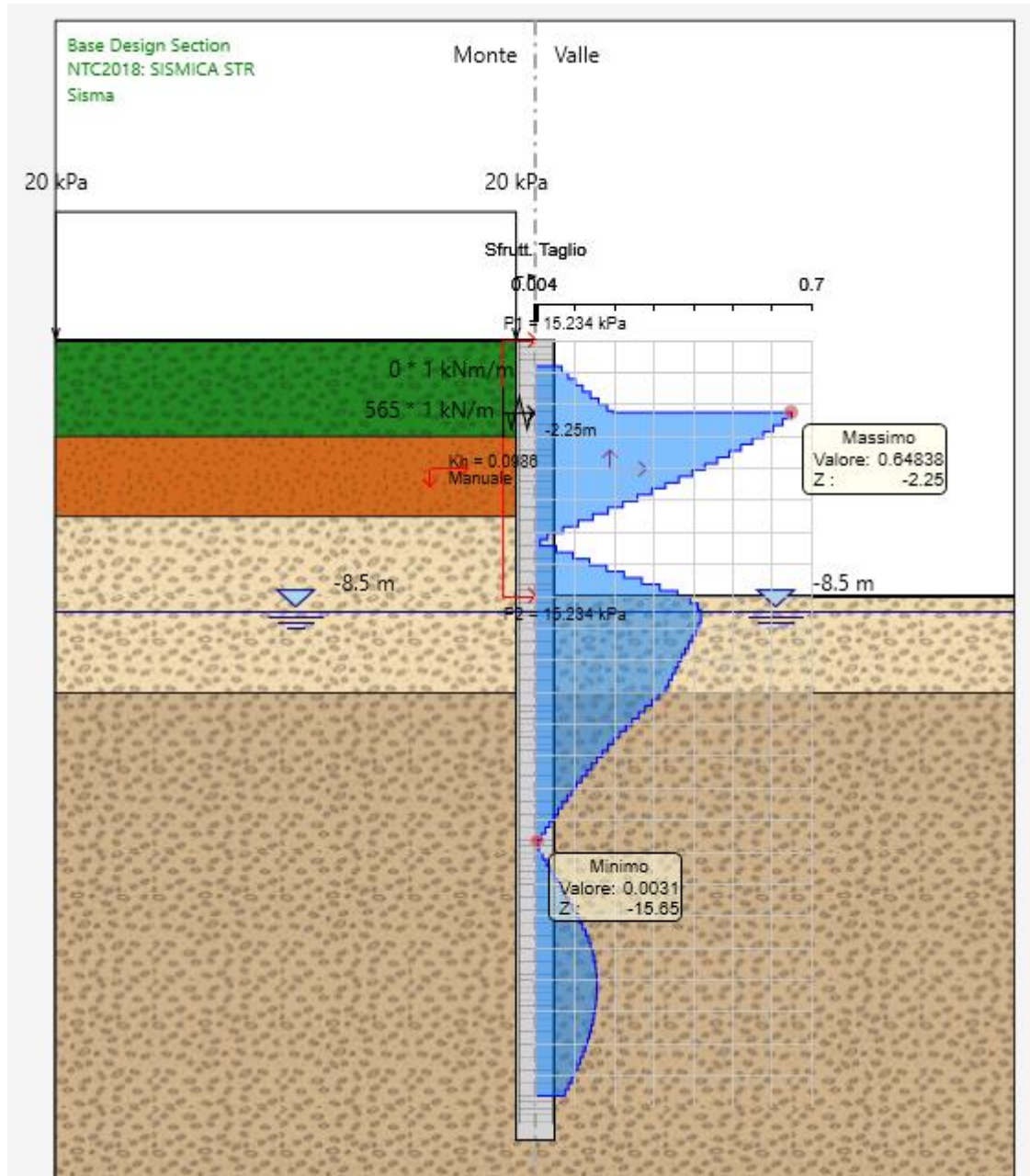


Figura 8-8 Tasso di sfruttamento a taglio SLV

Il massimo tasso di sfruttamento è pari a 0.65, la verifica risulta essere soddisfatta.



#### 8.1.4 Verifiche SLE

##### 8.1.4.1 Sollecitazioni per le verifiche

	N	M <sub>x</sub>
	KN	KN m
RARA	103.20	434
Q.PERM	103.20	434

A favore di sicurezza, le verifiche agli stati limite di esercizio sono state eseguite con le sollecitazioni della combinazione rara.

##### 8.1.4.2 Verifica tensioni di esercizio

La massima tensione di compressione del cls deve rispettare le seguenti limitazioni (vedi §4.1.2.2.5 delle NTC18):

- $\sigma_{c,max} < 0.60 f_{ck}$  per combinazione caratteristica (rara) = 14.94 MPa;
- $\sigma_{c,max} < 0.45 f_{ck}$  per combinazione quasi permanente = 11.21 MPa;

La massima tensione di trazione dell'acciaio deve rispettare la limitazione:

- $\sigma_s < 0.80 f_{yk}$  per combinazione caratteristica (rara) = 360 MPa.

La massima tensione di compressione nel cls vale:

- $\sigma_{c,max} = 3.74$  MPa per la combinazione caratteristica (rara);

Siccome il valore della tensione di compressione nel cls è inferiore anche al limite per la combinazione quasi permanente, per quest'ultima si omettono le verifiche.

La massima tensione di trazione dell'acciaio vale:

- $\sigma_s = 108.6$  MPa per la combinazione caratteristica (rara).

Le verifiche risultano tutte soddisfatte.

### 8.1.4.3 Verifica a fessurazione

#### Stato limite di formazione delle fessure

Si verifica nel seguito lo stato limite di formazione delle fessure, a favore di sicurezza condotto con la combinazione rara:

<b>fck</b>	24.9	N/mm <sup>2</sup>
<b>fctm</b>	2.56	N/mm <sup>2</sup>
<b>fyk</b>	450.00	N/mm <sup>2</sup>

	<b>σt max</b>	<b>σcls-</b>	<b>U.d.m.</b>	<b>Verifica</b>
<b>Comb rara</b>	<b>-2.13</b>	<b>-2.02</b>	N/mm <sup>2</sup>	<b>Verifica soddisfatta</b>

Il valore limite di tensione di trazione nel calcestruzzo per lo stato limite di formazione delle fessure vale  $f_{ctm}/1.2 = -2.13$  MPa.

Considerando la sezione interamente reagente, per la combinazione rara si ottiene un valore massimo della tensione di trazione nel calcestruzzo pari a -2.02 MPa, inferiore al limite di tensione di trazione nel calcestruzzo.

Pertanto, la verifica risulta soddisfatta e non occorre verificare lo stato limite di apertura delle fessure.

## 8.2 Cordolo

Nel seguito si riportano le verifiche strutturali del cordolo.

### 8.2.1 Sollecitazioni sul cordolo

Dall'analisi della paratia effettuata con il software di calcolo PARATIE PLUS della CeAS S.r.l si ottiene il carico linearmente distribuito sul cordolo pari a circa 360 kN/m nella combinazione SLU A1+M1+R1.

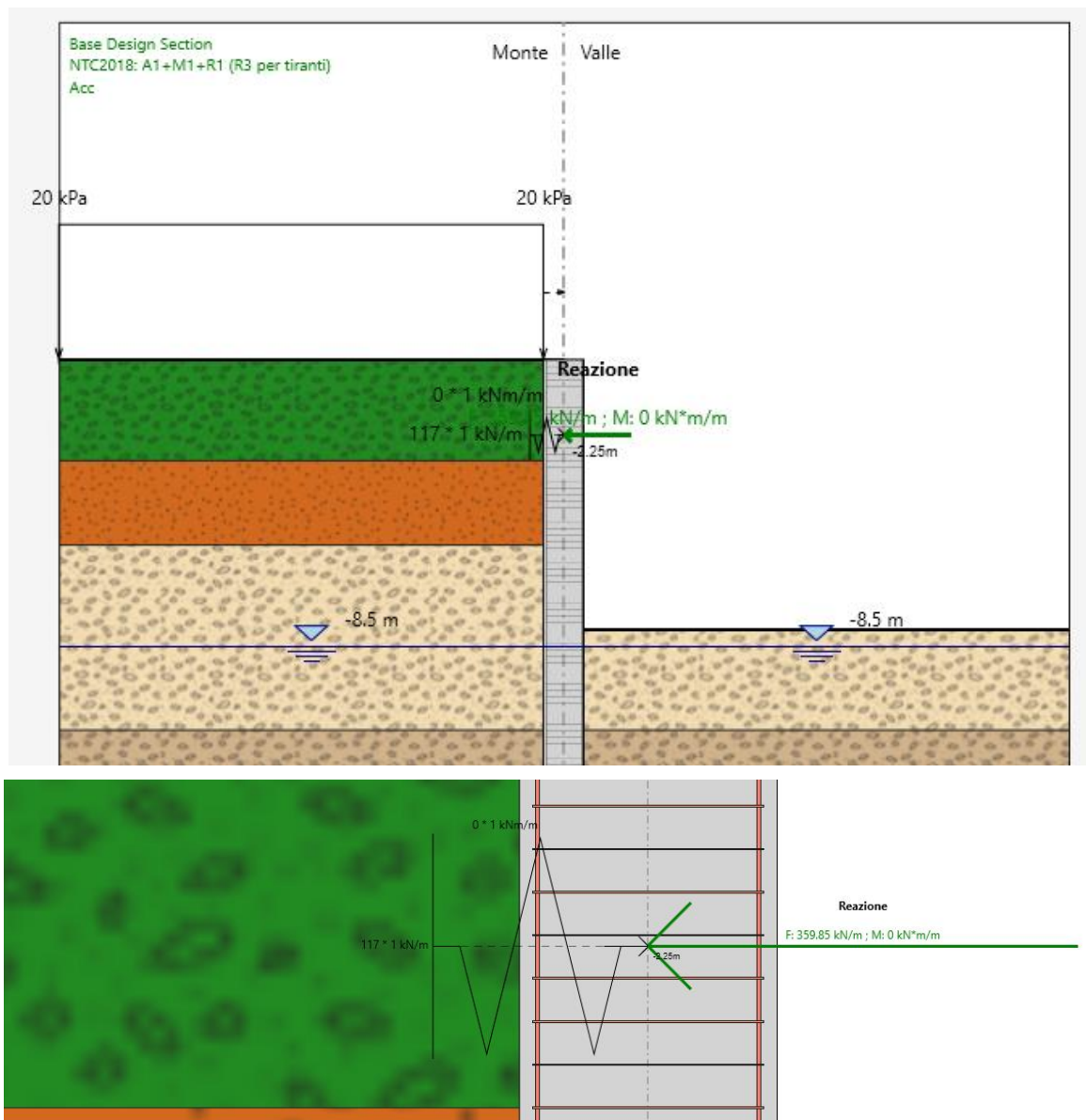


Figura 8-9: Sollecitazione sul cordolo A1+M1+R1

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Dall'analisi della paratia effettuata con il software di calcolo PARATIE PLUS della CeAS S.r.l si ottiene il carico linearmente distribuito sul cordolo pari a circa 810 kN/m nella combinazione SISMICA STR.

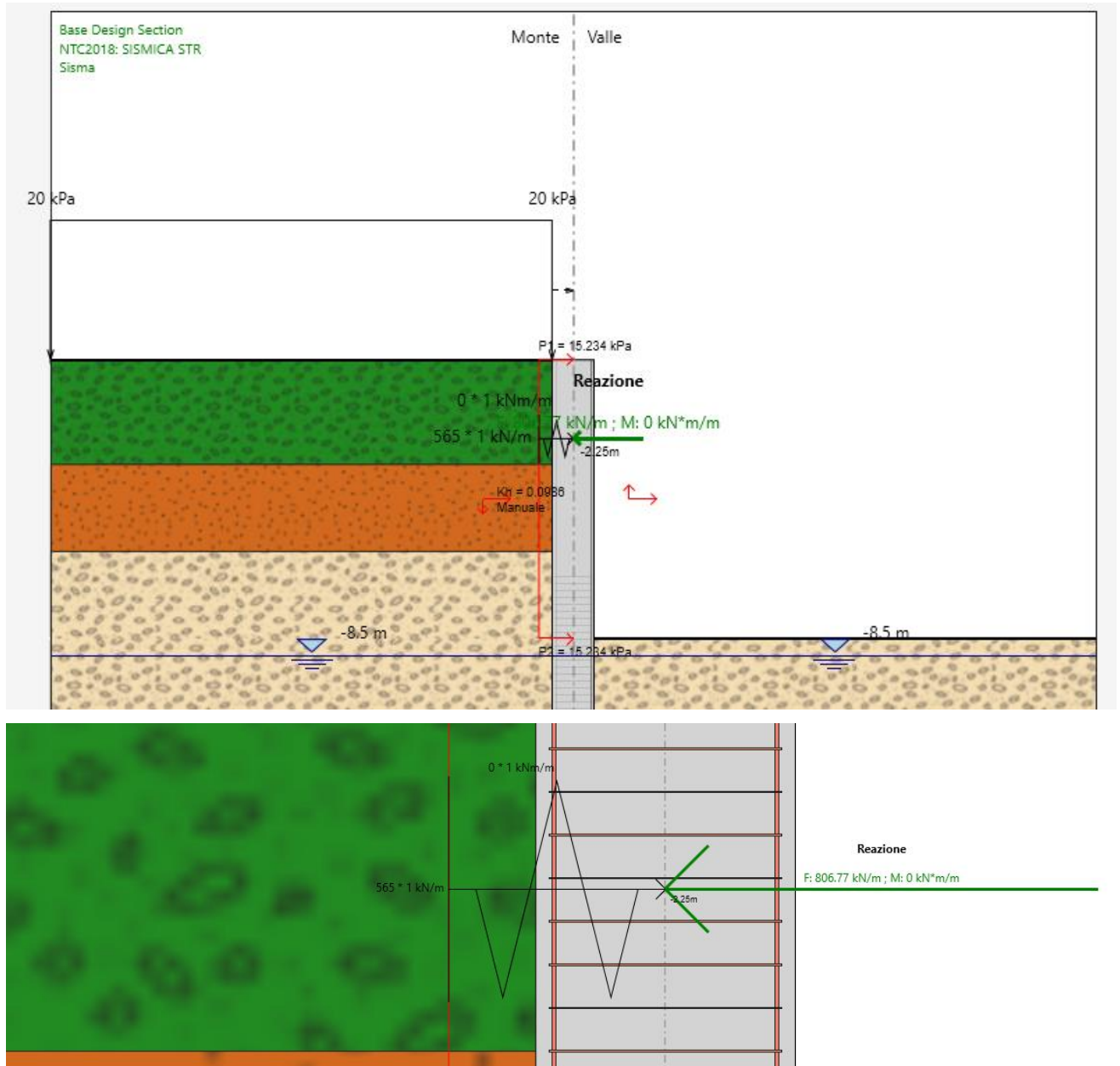


Figura 8-10 Sollecitazioni sul cordolo SISMICA STR

Considerando uno schema di trave continua su 4 appoggi si ottengono le seguenti sollecitazioni:

SLE Combinazione Rara			SLU			SLV		
F	268	kN/m	F	360	kN/m	F	810	kN/m
V <sub>Ed</sub>	884	kN/m	V <sub>Ed</sub>	1193	kN/m	V <sub>Ed</sub>	2673	kN/m
M <sub>Ed</sub>	1636	kNm/m	M <sub>Ed</sub>	2209	kNm/m	M <sub>Ed</sub>	4949	kNm/m

### 8.2.2 Dimensionamento delle armature

Per il dimensionamento delle armature si considera la sezione trasversale del cordolo di dimensioni pari a 1,5 m x 1.5 m.

Si dispone la seguente armatura, nel rispetto di quanto prescritto nelle **NTC18** §7.4.6.2.1.

	Φ	passo	As	As,tot	As,min	Verifica As,min
	mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	
Tesa	22	100	5701.99	11403.98	7000.00	Verificato
	22	100	5701.99			
Compressa	22	100	0.00	0.00	-	
	-	-	-		-	

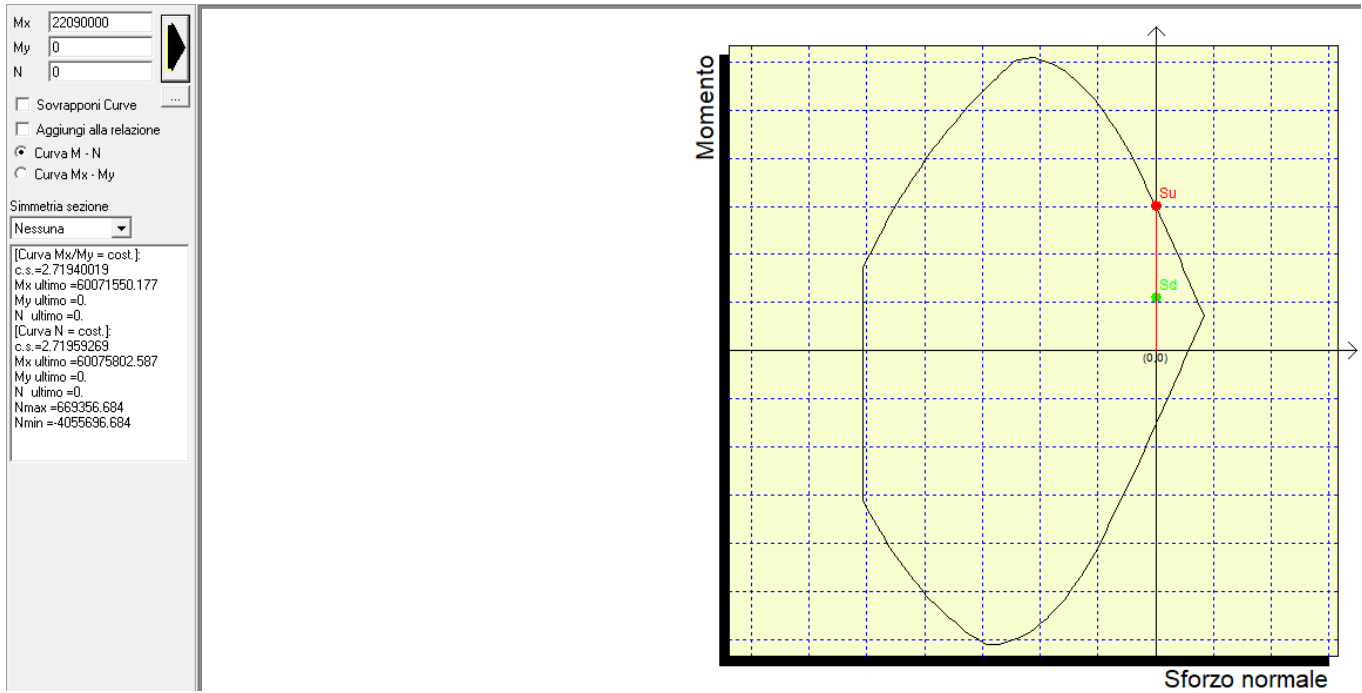
Si dispongono staffe φ 12/10 a 6 bracci.

### 8.2.3 Verifiche SLU

#### 8.2.3.1 Verifica a pressoflessione SLU

Si riportano di seguito le verifiche a pressoflessione per la combinazione SLU:

	N (kN)	M (kNm)	cs	
SLU	0	2209	2.72	Verificato



Il coefficiente di sicurezza è pari a 2.72, la verifica risulta soddisfatta.

### 8.2.3.1 Verifica a taglio SLU

#### VERIFICA A TAGLIO SECONDO NTC2018 SENZA ARMATURE A TAGLIO

$V_{Ed} = T_{SLU}$	1193	kN
$V_{Ed} = T_{SLU}$	1193000	N
$R_{ck}$	40	MPa
$f_{ck}$	33.2	MPa
<b>c netto</b>	40	mm
<b>Ø staffa</b>	12	mm
<b>Ø arm tesa</b>	22	mm
<b>Hsezione</b>	1500	mm
<b>d</b>	1437	mm
<b>k</b>	1.373	-
<b>b<sub>w</sub></b>	1500	mm
<b>Ø</b>	22	mm
<b>n</b>	14	-
<b>strati</b>	2	-
<b>A<sub>sl</sub></b>	5322	mm <sup>2</sup>
<b>ρ<sub>l</sub></b>	0.0025	-
<b>N<sub>Ed</sub></b>	0	kN
<b>N<sub>Ed</sub></b>	0	N
<b>Ac</b>	2250000.0	mm <sup>2</sup>
<b>σ<sub>cp</sub></b>	0	MPa
<b>f<sub>cd</sub></b>	21.053	MPa
<b>γ<sub>c</sub></b>	1.5	-
<b>C<sub>Rd,c</sub></b>	0.12	-
<b>v<sub>min</sub></b>	0.3245	-
<b>V<sub>Rd,c</sub></b>	716097.3	N
<b>V<sub>Rd,c min</sub></b>	699395.2	N
<b>V<sub>Rd,c effettivo</sub></b>	<b>716097.3</b>	<b>N</b>
<b>Verifica</b>	<b>NO</b>	
<b>T.S.</b>	1.666	
<b>C.S.</b>	0.600	

E' necessario disporre specifica armatura a taglio.

**VERIFICA A TAGLIO**  
**SECONDO NTC2018**  
**CON ARMATURE A TAGLIO**

$V_{Ed} = T_{SLU}$	1193	kN
$V_{Ed} = T_{SLU}$	1193000	N
$\phi$	12	mm
$A_{\phi}$	113.1	mm <sup>2</sup>
<b>bracci</b>	6	-
$A_{sw}$	678.6	mm <sup>2</sup>
<b>s</b>	100	mm
$f_{ywd}$	391.3	MPa
<b>cot <math>\theta</math></b>	1	-
$\alpha_c$	1	-
<b>z = 0.9d</b>	1293.3	mm
<b>v</b>	0.52032	-
$V_{Rd,s}$	3434137	N
$V_{Rd,s \max}$	10625208	N
$V_{Rd,c \text{ effettivo}}$	<b>3434137</b>	<b>N</b>
<b>Verifica</b>	<b>OK</b>	
<b>T.S.</b>	0.347	
<b>C.S.</b>	2.879	

Disponendo delle staffe  $\phi 12/10$  a 6 bracci la verifica risulta soddisfatta.



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## 8.2.4 Verifiche SLV

### 8.2.4.1 Verifica a pressoflessione SLV

Si riportano di seguito le verifiche a pressoflessione per la combinazione SLU:

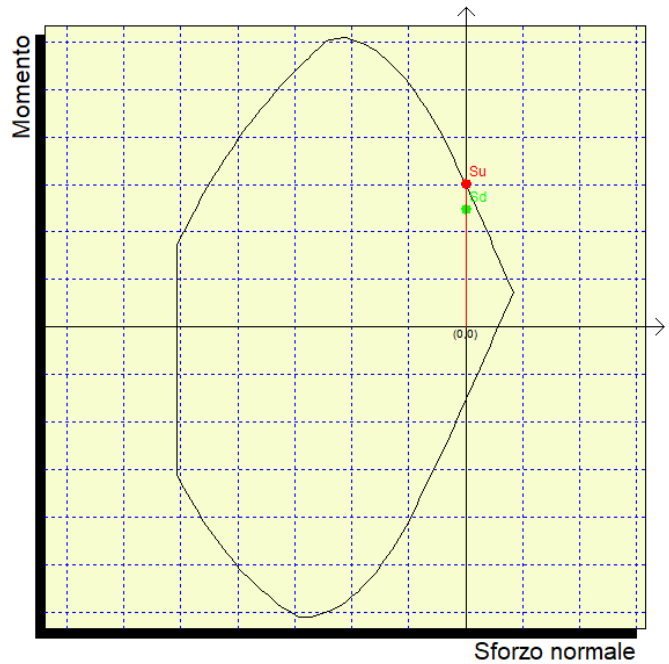
	N (kN)	M (kNm)	cs	
SLU	0	2673	1.21	Verificato

Mx 49490000  
My 0  
N 0

Sovrapponi Curve  
 Aggiungli alla relazione  
 Curva M - N  
 Curva Mx - My

Simmetria sezione  
Nessuna

[Curva Mx/My = cost.]:  
c.s.=1,21381188  
Mx ultimo =60071550.177  
My ultimo =0  
N ultimo =0  
[Curva N = cost.]:  
c.s.=1,21389781  
Mx ultimo =60075802.587  
My ultimo =0  
N ultimo =0  
Nmax =669356.684  
Nmin =-4055696.684



Il coefficiente di sicurezza è pari a 1.21, la verifica risulta soddisfatta.

### 8.2.4.2 Verifica a taglio SLV

#### VERIFICA A TAGLIO SECONDO NTC2018 SENZA ARMATURE A TAGLIO

$V_{Ed} = T_{SLU}$	2673	kN
$V_{Ed} = T_{SLU}$	2673000	N
$R_{ck}$	40	MPa
$f_{ck}$	33.2	MPa
<b>c netto</b>	40	mm
<b>Ø staffa</b>	12	mm
<b>Ø arm tesa</b>	22	mm
<b>Hsezione</b>	1500	mm
<b>d</b>	1437	mm
<b>k</b>	1.373	-
<b>b<sub>w</sub></b>	1500	mm
<b>Ø</b>	22	mm
<b>n</b>	14	-
<b>strati</b>	2	-
<b>A<sub>sl</sub></b>	5322	mm <sup>2</sup>
<b>ρ<sub>l</sub></b>	0.0025	-
<b>N<sub>Ed</sub></b>	0	kN
<b>N<sub>Ed</sub></b>	0	N
<b>Ac</b>	2250000.0	mm <sup>2</sup>
<b>σ<sub>cp</sub></b>	0	MPa
<b>f<sub>cd</sub></b>	21.053	MPa
<b>γ<sub>c</sub></b>	1.5	-
<b>C<sub>Rd,c</sub></b>	0.12	-
<b>v<sub>min</sub></b>	0.3245	-
<b>V<sub>Rd,c</sub></b>	716097.3	N
<b>V<sub>Rd,c min</sub></b>	699395.2	N
<b>V<sub>Rd,c effettivo</sub></b>	<b>716097.3</b>	<b>N</b>
<b>Verifica</b>	<b>NO</b>	
<b>T.S.</b>	3.733	
<b>C.S.</b>	0.268	

E' necessario disporre specifica armatura a taglio.

**VERIFICA A TAGLIO  
SECONDO NTC2018  
CON ARMATURE A TAGLIO**

$V_{Ed} = T_{SLU}$	2673	kN
$V_{Ed} = T_{SLU}$	2673000	N
$\phi$	12	mm
$A_{\phi}$	113.1	mm <sup>2</sup>
<b>bracci</b>	6	-
$A_{sw}$	678.6	mm <sup>2</sup>
<b>s</b>	100	mm
$f_{ywd}$	391.3	MPa
<b>cot <math>\theta</math></b>	1	-
$\alpha_c$	1	-
<b>z = 0.9d</b>	1293.3	mm
<b>v</b>	0.5203	-
$V_{Rd,s}$	3434137	N
$V_{Rd,s \max}$	10625208	N
$V_{Rd,c \text{ effettivo}}$	<b>3434137</b>	<b>N</b>
<b>Verifica</b>	<b>OK</b>	
<b>T.S.</b>	0.778	
<b>C.S.</b>	1.285	

Disponendo delle staffe  $\phi 12/10$  a 6 bracci la verifica risulta soddisfatta.

## 8.2.5 Verifiche SLE

### 8.2.5.1 Sollecitazioni per le verifiche

Di seguito si riportano le sollecitazioni per la combinazione rara:

	N (kN)	M (kNm)
<b>Comb SLE</b>		1636

A favore di sicurezza, le verifiche agli stati limite di esercizio sono state eseguite con le sollecitazioni della combinazione rara.

### 8.2.5.2 Verifica tensioni di esercizio

La massima tensione di compressione del cls deve rispettare le seguenti limitazioni (vedi §4.1.2.2.5 delle NTC18):

- $\sigma_{c,max} < 0.60 f_{ck}$  per combinazione caratteristica (rara) = 19.92 MPa;
- $\sigma_{c,max} < 0.45 f_{ck}$  per combinazione quasi permanente = 14.94 MPa;

La massima tensione di trazione dell'acciaio deve rispettare la limitazione:

- $\sigma_s < 0.80 f_{yk}$  per combinazione caratteristica (rara) = 360 MPa.

La massima tensione di compressione nel cls vale:

- $\sigma_{c,max} = 4.51$  MPa per la combinazione caratteristica (rara);

Siccome il valore della tensione di compressione nel cls è inferiore anche al limite per la combinazione quasi permanente, per quest'ultima si omettono le verifiche.

La massima tensione di trazione dell'acciaio vale:

- $\sigma_s = 317.47$  MPa per la combinazione caratteristica (rara).

Le verifiche risultano tutte soddisfatte.

### 8.2.5.3 Verifica a fessurazione

#### Stato limite di formazione delle fessure

Si verifica nel seguito lo stato limite di formazione delle fessure, a favore di sicurezza condotto con la combinazione rara:

fck	33.2	N/mm <sup>2</sup>
fctm	3.10	N/mm <sup>2</sup>
fyk	450.00	N/mm <sup>2</sup>

	$\sigma_t$ max	$\sigma_{cls}$	U.d.m.	Verifica
Comb rara	-2.58	-2.51	N/mm <sup>2</sup>	<b>Verifica soddisfatta</b>

Il valore limite di tensione di trazione nel calcestruzzo per lo stato limite di formazione delle fessure vale  $f_{ctm}/1.2 = -2.58$  MPa.

Considerando la sezione interamente reagente, per la combinazione rara si ottiene un valore massimo della tensione di trazione nel calcestruzzo pari a -2.51 MPa, inferiore al limite di tensione di trazione nel calcestruzzo.

Pertanto, la verifica risulta soddisfatta e non occorre verificare lo stato limite di apertura delle fessure.

## 9 ALLEGATO

**PARATIE** plus™

### ***Report di Calcolo***

Nome Progetto: New Project

Autore: Ingegnere

Design Section: Base Design Section

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## Sommario

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## ***Descrizione del Software***

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





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## **Descrizione Pareti**

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Muro di sinistra

Armatura Lunghezza segmenti : 1 m

Rinforzo longitudinale 1

Lunghezza : 24.5 m

Materiale : B450C

Quota iniziale : 0 m

Barre 1

Numero di barre : 30

Diametro : 0.022 m

Distanza dal bordo : 0.083 m

Staffe 1

Numero di staffe : 2

Copertura : 0.06 m

Diametro : 0.012 m

Lunghezza : 24.5 m

Quota iniziale : 0 m

Passo : 0.2 m

Sezione : Pali1200\_1300

Area equivalente : 0.86997950407102 m

Inerzia equivalente : 0.0783 m<sup>4</sup>/m

Materiale calcestruzzo : C25/30

Tipo sezione : Tangent

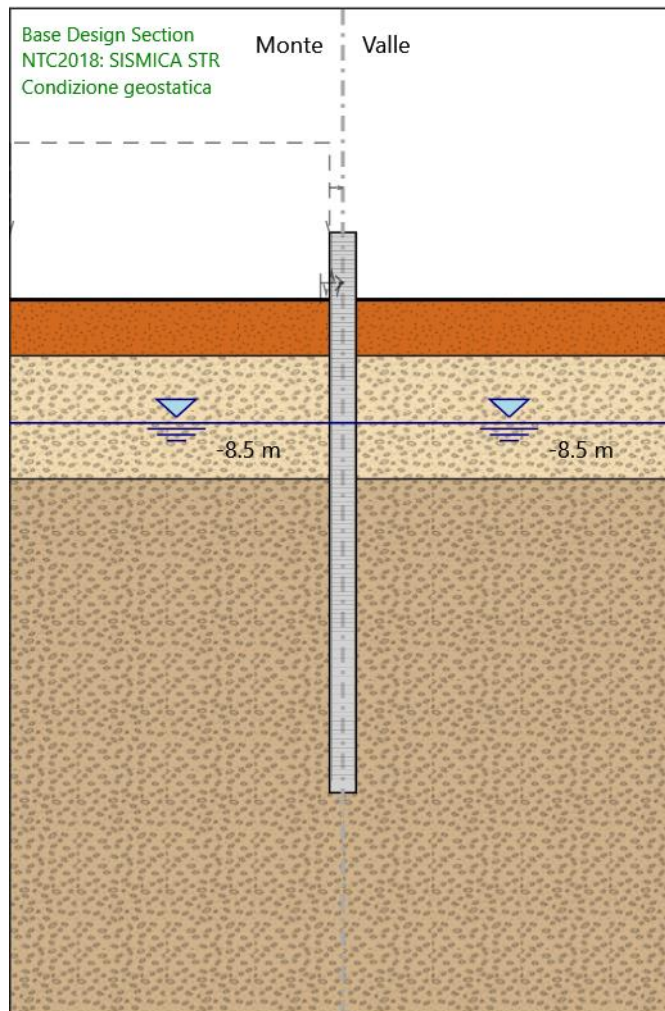
Spaziatura : 1.3 m

Diametro : 1.2 m

Efficacia : 1

## Fasi di Calcolo

### Condizione geostatica



Condizione geostatica

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#### Scavo

##### Muro di sinistra

Lato monte : -3 m

Lato valle : -3 m

Linea di scavo di sinistra (Orizzontale)

-3 m

Linea di scavo di destra (Orizzontale)

-3 m

#### Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

#### Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

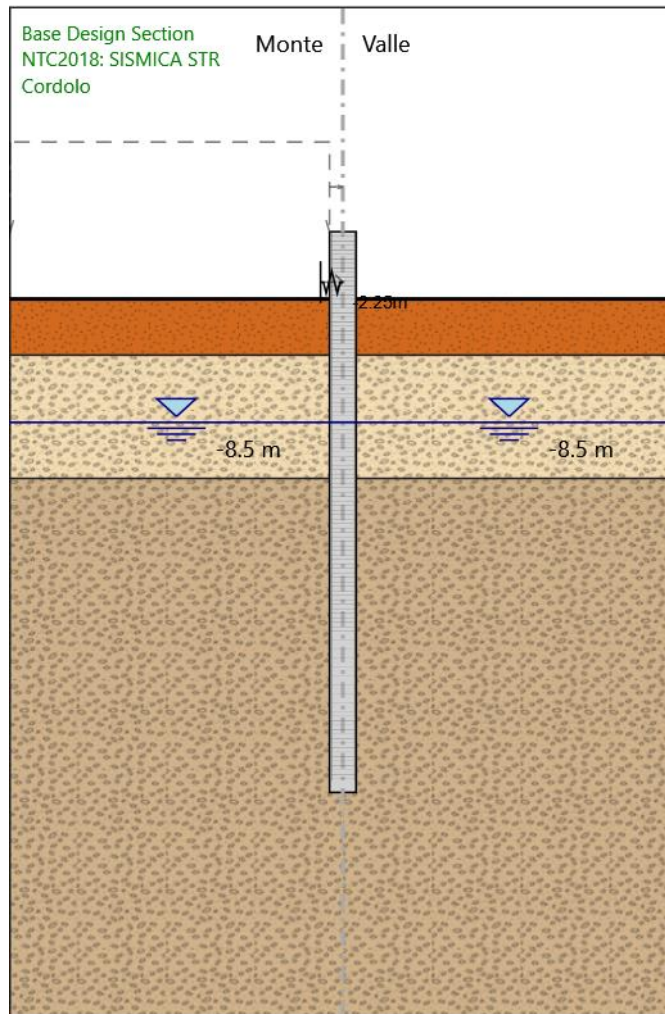
Quota di fondo : -25 m

Sezione : Pali1200\_1300

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## Cordolo



Cordolo

Scavo

Muro di sinistra

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Lato monte : -3 m

Lato valle : -3 m

Linea di scavo di sinistra (Orizzontale)

-3 m

Linea di scavo di destra (Orizzontale)

-3 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

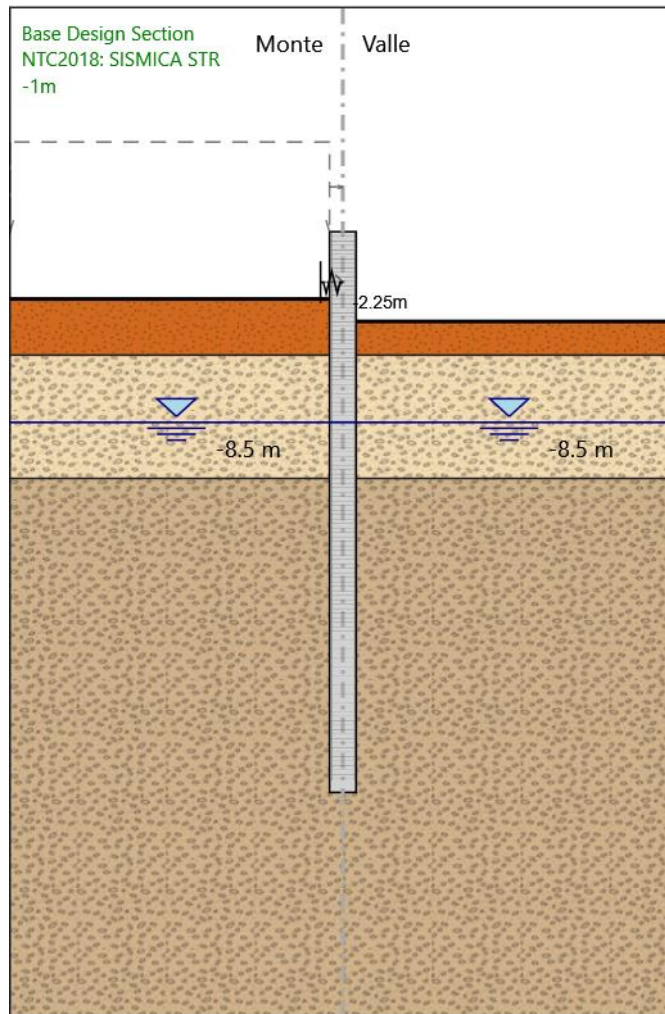
Z : -2.25 m

Angolo : 0 °

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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**-1m**



-1m

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Lato monte : -3 m

Lato valle : -4 m

Linea di scavo di sinistra (Orizzontale)

-3 m

Linea di scavo di destra (Orizzontale)

-4 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

Z : -2.25 m

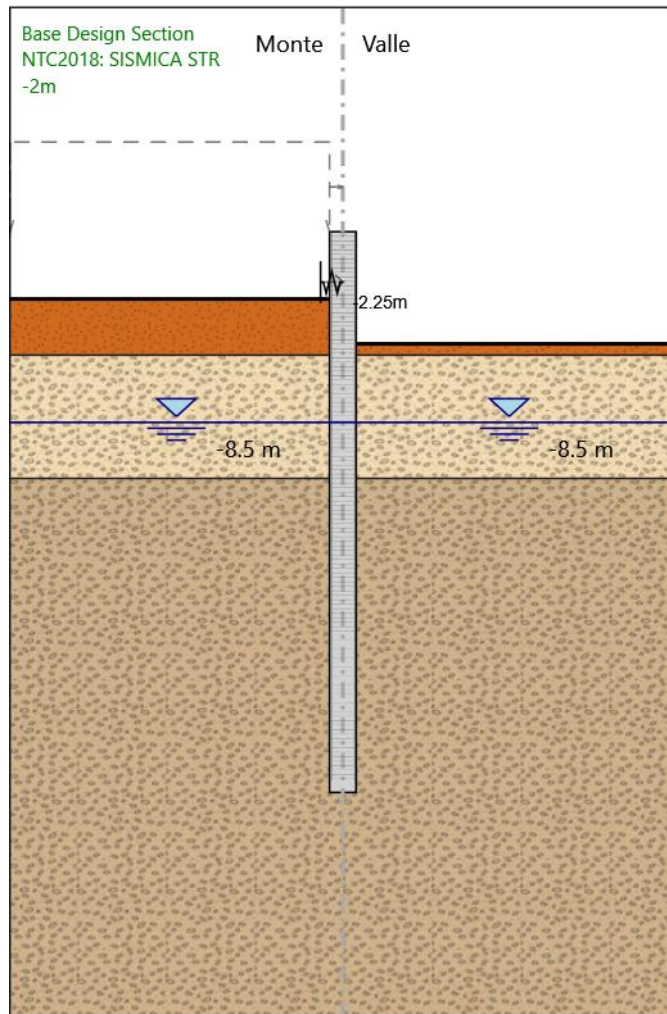
Angolo : 0 °



Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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**-2m**



-2m

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Lato monte : -3 m

Lato valle : -5 m

Linea di scavo di sinistra (Orizzontale)

-3 m

Linea di scavo di destra (Orizzontale)

-5 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

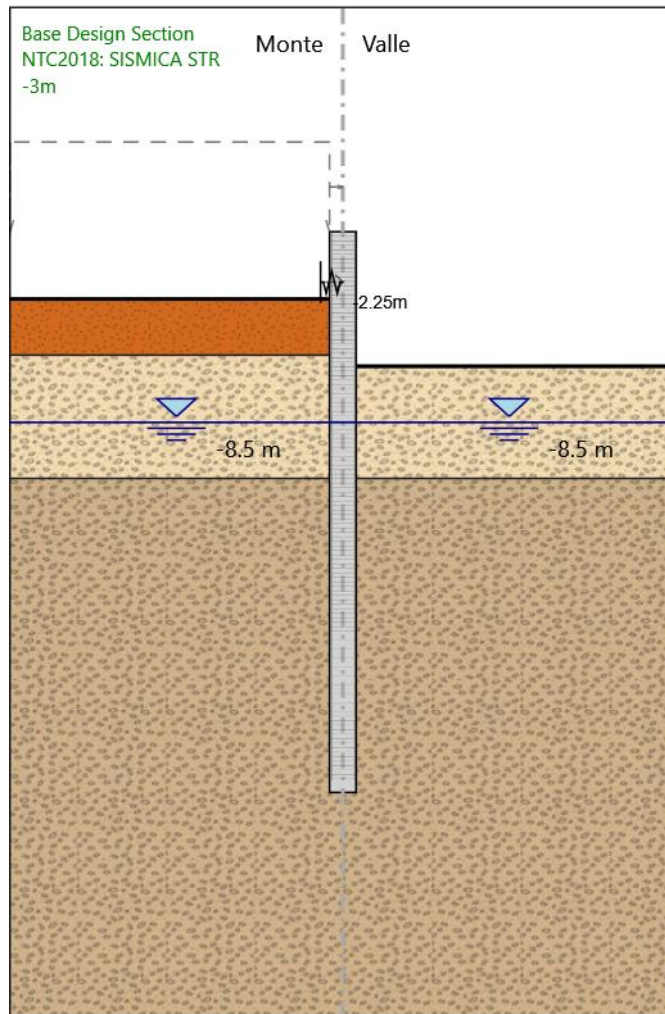
Z : -2.25 m

Angolo : 0 °

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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**-3m**



-3m

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Lato monte : -3 m

Lato valle : -6 m

Linea di scavo di sinistra (Orizzontale)

-3 m

Linea di scavo di destra (Orizzontale)

-6 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

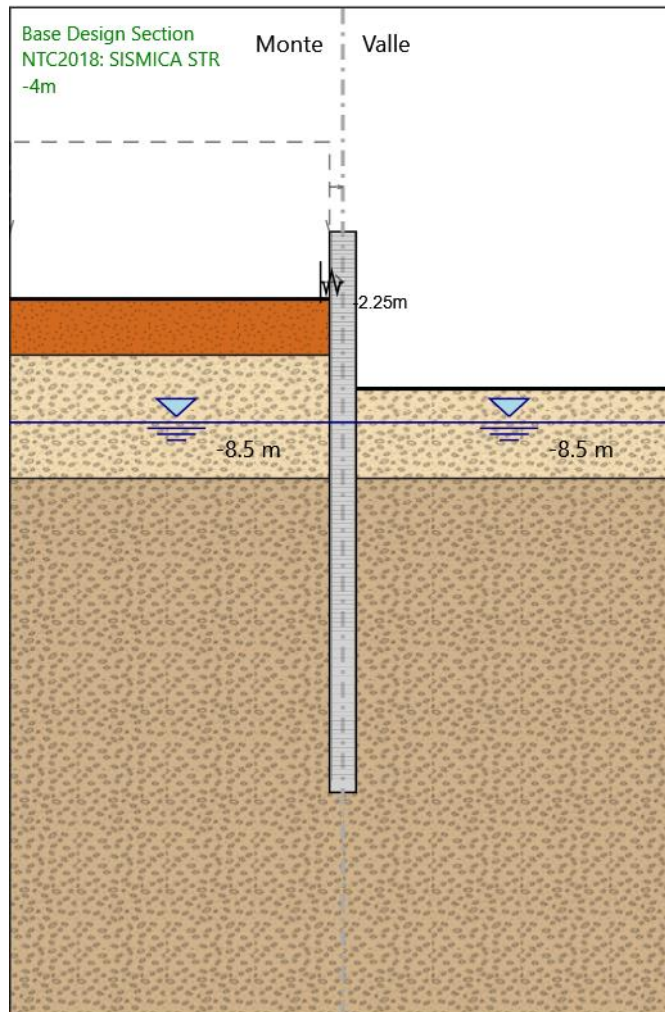
Z : -2.25 m

Angolo : 0 °

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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**-4m**



-4m

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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IV01	00	D 09	CLIV0104001	A	60 di 232

Lato monte : -3 m

Lato valle : -7 m

Linea di scavo di sinistra (Orizzontale)

-3 m

Linea di scavo di destra (Orizzontale)

-7 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

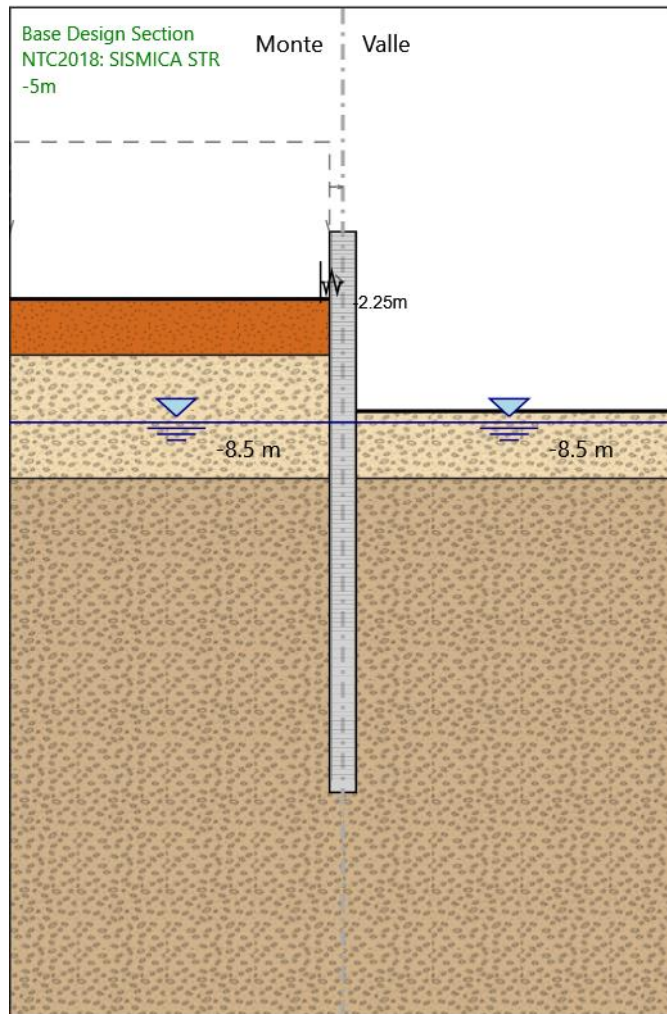
Z : -2.25 m

Angolo : 0 °

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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**-5m**



-5m

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Lato monte : -3 m

Lato valle : -8 m

Linea di scavo di sinistra (Orizzontale)

-3 m

Linea di scavo di destra (Orizzontale)

-8 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

Z : -2.25 m

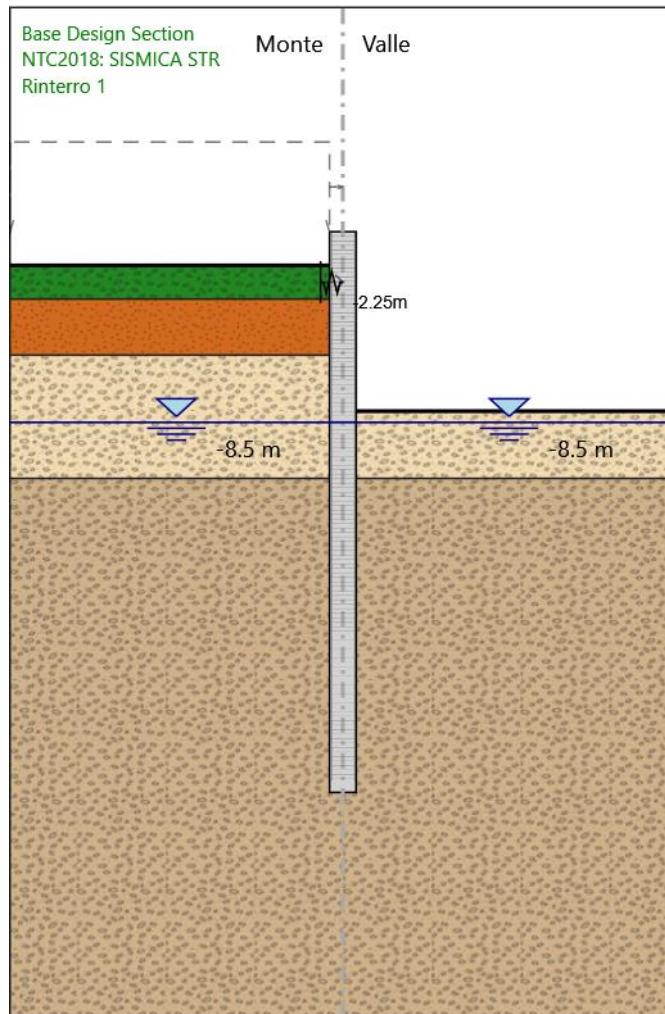
Angolo : 0 °



Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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## Rinterro 1



Rinterro 1

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Lato monte : -1.5 m

Lato valle : -8 m

Linea di scavo di sinistra (Orizzontale)

-1.5 m

Linea di scavo di destra (Orizzontale)

-8 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

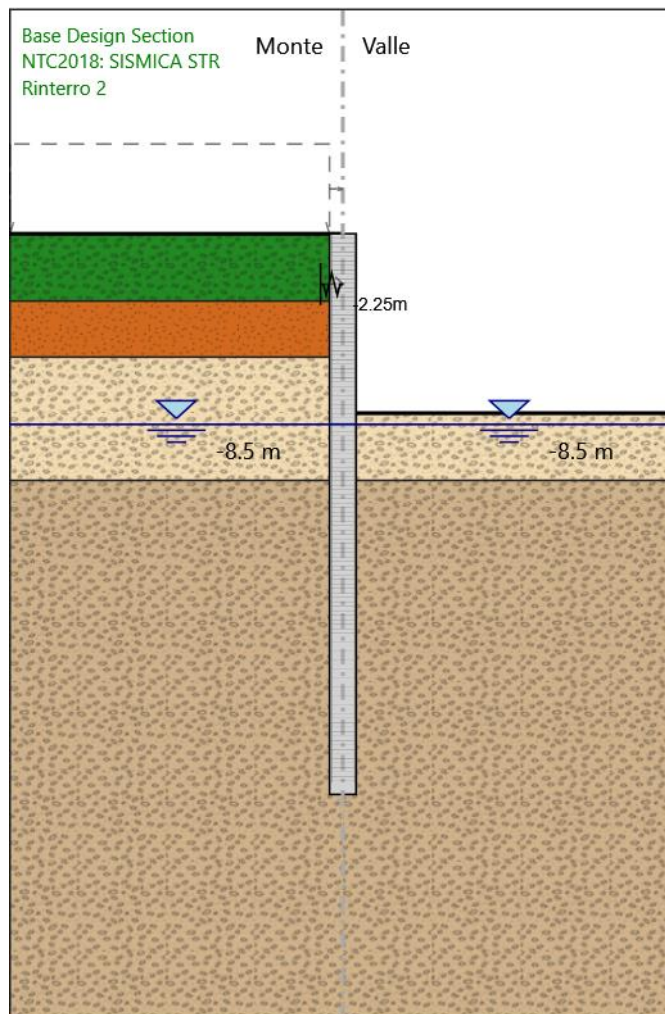
Z : -2.25 m

Angolo : 0 °

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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## Rinterro 2



Rinterro 2

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	66 di 232

Lato monte : 0 m

Lato valle : -8 m

Linea di scavo di sinistra (Orizzontale)

0 m

Linea di scavo di destra (Orizzontale)

-8 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

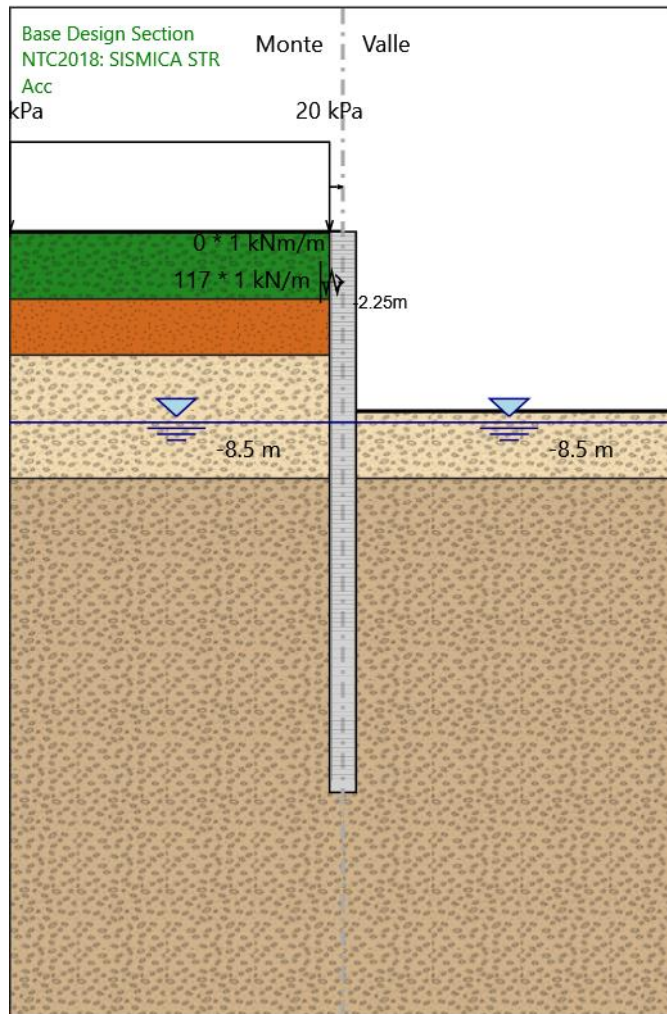
Z : -2.25 m

Angolo : 0 °

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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**Acc**



Acc

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	68 di 232

Lato monte : 0 m

Lato valle : -8 m

Linea di scavo di sinistra (Orizzontale)

0 m

Linea di scavo di destra (Orizzontale)

-8 m

Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

Carichi

Carico puntuale alla paratia : Accidentale

Quota : -2.25 m

Px : 117 kN/m

Pz : 1 kN/m

: 0 kNm/m

X : 0 m

Carico lineare in superficie : SurfaceSurcharge

X iniziale : -15 m

X finale : -0.6 m

Pressione iniziale : 20 kPa

Pressione finale : 20 kPa

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

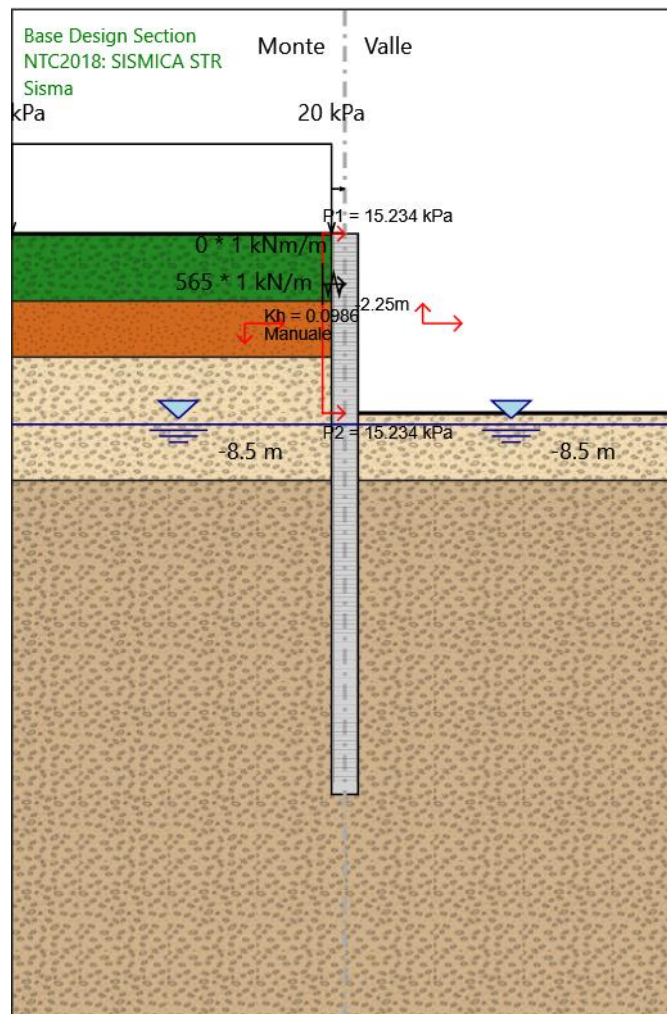
Z : -2.25 m

Angolo : 0 °

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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## Sisma



Sisma

Scavo

Muro di sinistra

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Lato monte : 0 m

Lato valle : -8 m

Linea di scavo di sinistra (Orizzontale)

0 m

Linea di scavo di destra (Orizzontale)

-8 m

#### Falda acquifera

Falda di sinistra : -8.5 m

Falda di destra : -8.5 m

#### Carichi

Carico puntuale alla paratia : Sisma

Quota : -2.25 m

Px : 565 kN/m

Pz : 1 kN/m

: 0 kNm/m

X : 0 m

Carico lineare in superficie : SurfaceSurcharge

X iniziale : -15 m

X finale : -0.6 m

Pressione iniziale : 20 kPa

Pressione finale : 20 kPa

#### Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -25 m

Sezione : Pali1200\_1300

Vincolo elastico : Spring

X : 0 m

Z : -2.25 m

Angolo : 0 °



Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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## Grafici dei Risultati

### Design Assumption : Nominal

#### Tabella Spostamento Nominal - LEFT Stage: Condizione geostatica

Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
Condizione geostatica	0	0
Condizione geostatica	-0.2	0
Condizione geostatica	-0.4	0
Condizione geostatica	-0.6	0
Condizione geostatica	-0.8	0
Condizione geostatica	-1	0
Condizione geostatica	-1.2	0
Condizione geostatica	-1.4	0
Condizione geostatica	-1.6	0
Condizione geostatica	-1.8	0
Condizione geostatica	-2	0
Condizione geostatica	-2.2	0
Condizione geostatica	-2.25	0
Condizione geostatica	-2.45	0
Condizione geostatica	-2.65	0
Condizione geostatica	-2.85	0
Condizione geostatica	-3.05	0
Condizione geostatica	-3.25	0
Condizione geostatica	-3.45	0
Condizione geostatica	-3.65	0
Condizione geostatica	-3.85	0
Condizione geostatica	-4.05	0
Condizione geostatica	-4.25	0
Condizione geostatica	-4.45	0
Condizione geostatica	-4.65	0
Condizione geostatica	-4.85	0
Condizione geostatica	-5.05	0
Condizione geostatica	-5.25	0
Condizione geostatica	-5.45	0
Condizione geostatica	-5.65	0
Condizione geostatica	-5.85	0
Condizione geostatica	-6.05	0
Condizione geostatica	-6.25	0
Condizione geostatica	-6.45	0
Condizione geostatica	-6.65	0
Condizione geostatica	-6.85	0
Condizione geostatica	-7.05	0
Condizione geostatica	-7.25	0
Condizione geostatica	-7.45	0
Condizione geostatica	-7.65	0
Condizione geostatica	-7.85	0
Condizione geostatica	-8.05	0
Condizione geostatica	-8.25	0
Condizione geostatica	-8.45	0
Condizione geostatica	-8.65	0
Condizione geostatica	-8.85	0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
Condizione geostatica	-9.05	0
Condizione geostatica	-9.25	0
Condizione geostatica	-9.45	0
Condizione geostatica	-9.65	0
Condizione geostatica	-9.85	0
Condizione geostatica	-10.05	0
Condizione geostatica	-10.25	0
Condizione geostatica	-10.45	0
Condizione geostatica	-10.65	0
Condizione geostatica	-10.85	0
Condizione geostatica	-11.05	0
Condizione geostatica	-11.25	0
Condizione geostatica	-11.45	0
Condizione geostatica	-11.65	0
Condizione geostatica	-11.85	0
Condizione geostatica	-12.05	0
Condizione geostatica	-12.25	0
Condizione geostatica	-12.45	0
Condizione geostatica	-12.65	0
Condizione geostatica	-12.85	0
Condizione geostatica	-13.05	0
Condizione geostatica	-13.25	0
Condizione geostatica	-13.45	0
Condizione geostatica	-13.65	0
Condizione geostatica	-13.85	0
Condizione geostatica	-14.05	0
Condizione geostatica	-14.25	0
Condizione geostatica	-14.45	0
Condizione geostatica	-14.65	0
Condizione geostatica	-14.85	0
Condizione geostatica	-15.05	0
Condizione geostatica	-15.25	0
Condizione geostatica	-15.45	0
Condizione geostatica	-15.65	0
Condizione geostatica	-15.85	0
Condizione geostatica	-16.05	0
Condizione geostatica	-16.25	0
Condizione geostatica	-16.45	0
Condizione geostatica	-16.65	0
Condizione geostatica	-16.85	0
Condizione geostatica	-17.05	0
Condizione geostatica	-17.25	0
Condizione geostatica	-17.45	0
Condizione geostatica	-17.65	0
Condizione geostatica	-17.85	0
Condizione geostatica	-18.05	0
Condizione geostatica	-18.25	0
Condizione geostatica	-18.45	0
Condizione geostatica	-18.65	0
Condizione geostatica	-18.85	0
Condizione geostatica	-19.05	0
Condizione geostatica	-19.25	0
Condizione geostatica	-19.45	0
Condizione geostatica	-19.65	0
Condizione geostatica	-19.85	0
Condizione geostatica	-20.05	0
Condizione geostatica	-20.25	0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
Condizione geostatica	-20.45	0
Condizione geostatica	-20.65	0
Condizione geostatica	-20.85	0
Condizione geostatica	-21.05	0
Condizione geostatica	-21.25	0
Condizione geostatica	-21.45	0
Condizione geostatica	-21.65	0
Condizione geostatica	-21.85	0
Condizione geostatica	-22.05	0
Condizione geostatica	-22.25	0
Condizione geostatica	-22.45	0
Condizione geostatica	-22.65	0
Condizione geostatica	-22.85	0
Condizione geostatica	-23.05	0
Condizione geostatica	-23.25	0
Condizione geostatica	-23.45	0
Condizione geostatica	-23.65	0
Condizione geostatica	-23.85	0
Condizione geostatica	-24.05	0
Condizione geostatica	-24.25	0
Condizione geostatica	-24.45	0
Condizione geostatica	-24.65	0
Condizione geostatica	-24.85	0
Condizione geostatica	-25	0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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### Tabella Spostamento Nominal - LEFT Stage: Cordolo

Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal Stage	Spostamento Z (m)	Spostamento (mm)
Cordolo	0	0
Cordolo	-0.2	0
Cordolo	-0.4	0
Cordolo	-0.6	0
Cordolo	-0.8	0
Cordolo	-1	0
Cordolo	-1.2	0
Cordolo	-1.4	0
Cordolo	-1.6	0
Cordolo	-1.8	0
Cordolo	-2	0
Cordolo	-2.2	0
Cordolo	-2.25	0
Cordolo	-2.45	0
Cordolo	-2.65	0
Cordolo	-2.85	0
Cordolo	-3.05	0
Cordolo	-3.25	0
Cordolo	-3.45	0
Cordolo	-3.65	0
Cordolo	-3.85	0
Cordolo	-4.05	0
Cordolo	-4.25	0
Cordolo	-4.45	0
Cordolo	-4.65	0
Cordolo	-4.85	0
Cordolo	-5.05	0
Cordolo	-5.25	0
Cordolo	-5.45	0
Cordolo	-5.65	0
Cordolo	-5.85	0
Cordolo	-6.05	0
Cordolo	-6.25	0
Cordolo	-6.45	0
Cordolo	-6.65	0
Cordolo	-6.85	0
Cordolo	-7.05	0
Cordolo	-7.25	0
Cordolo	-7.45	0
Cordolo	-7.65	0
Cordolo	-7.85	0
Cordolo	-8.05	0
Cordolo	-8.25	0
Cordolo	-8.45	0
Cordolo	-8.65	0
Cordolo	-8.85	0
Cordolo	-9.05	0
Cordolo	-9.25	0
Cordolo	-9.45	0
Cordolo	-9.65	0
Cordolo	-9.85	0
Cordolo	-10.05	0
Cordolo	-10.25	0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal Stage	Spostamento Z (m)	Spostamento (mm)
Cordolo	-10.45	0
Cordolo	-10.65	0
Cordolo	-10.85	0
Cordolo	-11.05	0
Cordolo	-11.25	0
Cordolo	-11.45	0
Cordolo	-11.65	0
Cordolo	-11.85	0
Cordolo	-12.05	0
Cordolo	-12.25	0
Cordolo	-12.45	0
Cordolo	-12.65	0
Cordolo	-12.85	0
Cordolo	-13.05	0
Cordolo	-13.25	0
Cordolo	-13.45	0
Cordolo	-13.65	0
Cordolo	-13.85	0
Cordolo	-14.05	0
Cordolo	-14.25	0
Cordolo	-14.45	0
Cordolo	-14.65	0
Cordolo	-14.85	0
Cordolo	-15.05	0
Cordolo	-15.25	0
Cordolo	-15.45	0
Cordolo	-15.65	0
Cordolo	-15.85	0
Cordolo	-16.05	0
Cordolo	-16.25	0
Cordolo	-16.45	0
Cordolo	-16.65	0
Cordolo	-16.85	0
Cordolo	-17.05	0
Cordolo	-17.25	0
Cordolo	-17.45	0
Cordolo	-17.65	0
Cordolo	-17.85	0
Cordolo	-18.05	0
Cordolo	-18.25	0
Cordolo	-18.45	0
Cordolo	-18.65	0
Cordolo	-18.85	0
Cordolo	-19.05	0
Cordolo	-19.25	0
Cordolo	-19.45	0
Cordolo	-19.65	0
Cordolo	-19.85	0
Cordolo	-20.05	0
Cordolo	-20.25	0
Cordolo	-20.45	0
Cordolo	-20.65	0
Cordolo	-20.85	0
Cordolo	-21.05	0
Cordolo	-21.25	0
Cordolo	-21.45	0
Cordolo	-21.65	0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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**Design Assumption:**

**Nominal  
Stage**

**Tipo Risultato:**

**Spostamento  
Z (m)**

**Muro: LEFT**

**Spostamento  
(mm)**

Cordolo	-21.85	0
Cordolo	-22.05	0
Cordolo	-22.25	0
Cordolo	-22.45	0
Cordolo	-22.65	0
Cordolo	-22.85	0
Cordolo	-23.05	0
Cordolo	-23.25	0
Cordolo	-23.45	0
Cordolo	-23.65	0
Cordolo	-23.85	0
Cordolo	-24.05	0
Cordolo	-24.25	0
Cordolo	-24.45	0
Cordolo	-24.65	0
Cordolo	-24.85	0
Cordolo	-25	0

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### Tabella Spostamento Nominal - LEFT Stage: -1m

Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-1m	0	0.09
-1m	-0.2	0.09
-1m	-0.4	0.1
-1m	-0.6	0.1
-1m	-0.8	0.1
-1m	-1	0.1
-1m	-1.2	0.1
-1m	-1.4	0.1
-1m	-1.6	0.11
-1m	-1.8	0.11
-1m	-2	0.11
-1m	-2.2	0.11
-1m	-2.25	0.11
-1m	-2.45	0.11
-1m	-2.65	0.12
-1m	-2.85	0.12
-1m	-3.05	0.12
-1m	-3.25	0.12
-1m	-3.45	0.12
-1m	-3.65	0.12
-1m	-3.85	0.13
-1m	-4.05	0.13
-1m	-4.25	0.13
-1m	-4.45	0.13
-1m	-4.65	0.13
-1m	-4.85	0.13
-1m	-5.05	0.13
-1m	-5.25	0.13
-1m	-5.45	0.13
-1m	-5.65	0.13
-1m	-5.85	0.13
-1m	-6.05	0.13
-1m	-6.25	0.13
-1m	-6.45	0.13
-1m	-6.65	0.13
-1m	-6.85	0.12
-1m	-7.05	0.12
-1m	-7.25	0.12
-1m	-7.45	0.12
-1m	-7.65	0.12
-1m	-7.85	0.12
-1m	-8.05	0.12
-1m	-8.25	0.11
-1m	-8.45	0.11
-1m	-8.65	0.11
-1m	-8.85	0.11
-1m	-9.05	0.11
-1m	-9.25	0.11
-1m	-9.45	0.1
-1m	-9.65	0.1
-1m	-9.85	0.1
-1m	-10.05	0.1
-1m	-10.25	0.1

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-1m	-10.45	0.1
-1m	-10.65	0.09
-1m	-10.85	0.09
-1m	-11.05	0.09
-1m	-11.25	0.09
-1m	-11.45	0.09
-1m	-11.65	0.08
-1m	-11.85	0.08
-1m	-12.05	0.08
-1m	-12.25	0.08
-1m	-12.45	0.08
-1m	-12.65	0.08
-1m	-12.85	0.08
-1m	-13.05	0.08
-1m	-13.25	0.07
-1m	-13.45	0.07
-1m	-13.65	0.07
-1m	-13.85	0.07
-1m	-14.05	0.07
-1m	-14.25	0.07
-1m	-14.45	0.07
-1m	-14.65	0.07
-1m	-14.85	0.07
-1m	-15.05	0.07
-1m	-15.25	0.07
-1m	-15.45	0.07
-1m	-15.65	0.07
-1m	-15.85	0.06
-1m	-16.05	0.06
-1m	-16.25	0.06
-1m	-16.45	0.06
-1m	-16.65	0.06
-1m	-16.85	0.06
-1m	-17.05	0.06
-1m	-17.25	0.06
-1m	-17.45	0.06
-1m	-17.65	0.06
-1m	-17.85	0.06
-1m	-18.05	0.06
-1m	-18.25	0.06
-1m	-18.45	0.06
-1m	-18.65	0.06
-1m	-18.85	0.06
-1m	-19.05	0.06
-1m	-19.25	0.06
-1m	-19.45	0.06
-1m	-19.65	0.06
-1m	-19.85	0.06
-1m	-20.05	0.06
-1m	-20.25	0.06
-1m	-20.45	0.06
-1m	-20.65	0.06
-1m	-20.85	0.06
-1m	-21.05	0.06
-1m	-21.25	0.06
-1m	-21.45	0.06
-1m	-21.65	0.06



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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-1m	-21.85	0.06
-1m	-22.05	0.06
-1m	-22.25	0.06
-1m	-22.45	0.06
-1m	-22.65	0.06
-1m	-22.85	0.06
-1m	-23.05	0.06
-1m	-23.25	0.06
-1m	-23.45	0.06
-1m	-23.65	0.06
-1m	-23.85	0.06
-1m	-24.05	0.06
-1m	-24.25	0.06
-1m	-24.45	0.06
-1m	-24.65	0.06
-1m	-24.85	0.06
-1m	-25	0.06

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### Tabella Spostamento Nominal - LEFT Stage: -2m

Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-2m	0	0.17
-2m	-0.2	0.18
-2m	-0.4	0.18
-2m	-0.6	0.19
-2m	-0.8	0.19
-2m	-1	0.19
-2m	-1.2	0.2
-2m	-1.4	0.2
-2m	-1.6	0.21
-2m	-1.8	0.21
-2m	-2	0.22
-2m	-2.2	0.22
-2m	-2.25	0.22
-2m	-2.45	0.23
-2m	-2.65	0.23
-2m	-2.85	0.24
-2m	-3.05	0.24
-2m	-3.25	0.25
-2m	-3.45	0.25
-2m	-3.65	0.26
-2m	-3.85	0.26
-2m	-4.05	0.26
-2m	-4.25	0.27
-2m	-4.45	0.27
-2m	-4.65	0.27
-2m	-4.85	0.27
-2m	-5.05	0.27
-2m	-5.25	0.27
-2m	-5.45	0.27
-2m	-5.65	0.27
-2m	-5.85	0.27
-2m	-6.05	0.27
-2m	-6.25	0.27
-2m	-6.45	0.27
-2m	-6.65	0.27
-2m	-6.85	0.27
-2m	-7.05	0.26
-2m	-7.25	0.26
-2m	-7.45	0.26
-2m	-7.65	0.26
-2m	-7.85	0.25
-2m	-8.05	0.25
-2m	-8.25	0.25
-2m	-8.45	0.24
-2m	-8.65	0.24
-2m	-8.85	0.24
-2m	-9.05	0.23
-2m	-9.25	0.23
-2m	-9.45	0.22
-2m	-9.65	0.22
-2m	-9.85	0.22
-2m	-10.05	0.21
-2m	-10.25	0.21

Ponte stradale su Torrente Giustenice  
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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-2m	-10.45	0.2
-2m	-10.65	0.2
-2m	-10.85	0.2
-2m	-11.05	0.19
-2m	-11.25	0.19
-2m	-11.45	0.18
-2m	-11.65	0.18
-2m	-11.85	0.18
-2m	-12.05	0.17
-2m	-12.25	0.17
-2m	-12.45	0.17
-2m	-12.65	0.16
-2m	-12.85	0.16
-2m	-13.05	0.16
-2m	-13.25	0.16
-2m	-13.45	0.15
-2m	-13.65	0.15
-2m	-13.85	0.15
-2m	-14.05	0.15
-2m	-14.25	0.14
-2m	-14.45	0.14
-2m	-14.65	0.14
-2m	-14.85	0.14
-2m	-15.05	0.14
-2m	-15.25	0.14
-2m	-15.45	0.14
-2m	-15.65	0.13
-2m	-15.85	0.13
-2m	-16.05	0.13
-2m	-16.25	0.13
-2m	-16.45	0.13
-2m	-16.65	0.13
-2m	-16.85	0.13
-2m	-17.05	0.13
-2m	-17.25	0.13
-2m	-17.45	0.13
-2m	-17.65	0.13
-2m	-17.85	0.13
-2m	-18.05	0.13
-2m	-18.25	0.13
-2m	-18.45	0.13
-2m	-18.65	0.13
-2m	-18.85	0.13
-2m	-19.05	0.13
-2m	-19.25	0.13
-2m	-19.45	0.13
-2m	-19.65	0.13
-2m	-19.85	0.13
-2m	-20.05	0.13
-2m	-20.25	0.13
-2m	-20.45	0.13
-2m	-20.65	0.13
-2m	-20.85	0.13
-2m	-21.05	0.13
-2m	-21.25	0.13
-2m	-21.45	0.13
-2m	-21.65	0.13



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### Tabella Spostamento Nominal - LEFT Stage: -3m

Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-3m	0	0.23
-3m	-0.2	0.24
-3m	-0.4	0.25
-3m	-0.6	0.26
-3m	-0.8	0.27
-3m	-1	0.28
-3m	-1.2	0.29
-3m	-1.4	0.3
-3m	-1.6	0.31
-3m	-1.8	0.33
-3m	-2	0.34
-3m	-2.2	0.35
-3m	-2.25	0.35
-3m	-2.45	0.36
-3m	-2.65	0.37
-3m	-2.85	0.38
-3m	-3.05	0.39
-3m	-3.25	0.4
-3m	-3.45	0.41
-3m	-3.65	0.42
-3m	-3.85	0.42
-3m	-4.05	0.43
-3m	-4.25	0.44
-3m	-4.45	0.45
-3m	-4.65	0.45
-3m	-4.85	0.46
-3m	-5.05	0.46
-3m	-5.25	0.47
-3m	-5.45	0.47
-3m	-5.65	0.47
-3m	-5.85	0.47
-3m	-6.05	0.47
-3m	-6.25	0.47
-3m	-6.45	0.47
-3m	-6.65	0.47
-3m	-6.85	0.47
-3m	-7.05	0.46
-3m	-7.25	0.46
-3m	-7.45	0.46
-3m	-7.65	0.45
-3m	-7.85	0.45
-3m	-8.05	0.44
-3m	-8.25	0.44
-3m	-8.45	0.43
-3m	-8.65	0.43
-3m	-8.85	0.42
-3m	-9.05	0.41
-3m	-9.25	0.41
-3m	-9.45	0.4
-3m	-9.65	0.39
-3m	-9.85	0.38
-3m	-10.05	0.38
-3m	-10.25	0.37

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-3m	-10.45	0.36
-3m	-10.65	0.35
-3m	-10.85	0.35
-3m	-11.05	0.34
-3m	-11.25	0.33
-3m	-11.45	0.33
-3m	-11.65	0.32
-3m	-11.85	0.31
-3m	-12.05	0.31
-3m	-12.25	0.3
-3m	-12.45	0.29
-3m	-12.65	0.29
-3m	-12.85	0.28
-3m	-13.05	0.28
-3m	-13.25	0.27
-3m	-13.45	0.27
-3m	-13.65	0.26
-3m	-13.85	0.26
-3m	-14.05	0.25
-3m	-14.25	0.25
-3m	-14.45	0.25
-3m	-14.65	0.24
-3m	-14.85	0.24
-3m	-15.05	0.24
-3m	-15.25	0.23
-3m	-15.45	0.23
-3m	-15.65	0.23
-3m	-15.85	0.23
-3m	-16.05	0.23
-3m	-16.25	0.22
-3m	-16.45	0.22
-3m	-16.65	0.22
-3m	-16.85	0.22
-3m	-17.05	0.22
-3m	-17.25	0.22
-3m	-17.45	0.22
-3m	-17.65	0.22
-3m	-17.85	0.21
-3m	-18.05	0.21
-3m	-18.25	0.21
-3m	-18.45	0.21
-3m	-18.65	0.21
-3m	-18.85	0.21
-3m	-19.05	0.21
-3m	-19.25	0.21
-3m	-19.45	0.21
-3m	-19.65	0.21
-3m	-19.85	0.21
-3m	-20.05	0.21
-3m	-20.25	0.21
-3m	-20.45	0.21
-3m	-20.65	0.21
-3m	-20.85	0.21
-3m	-21.05	0.21
-3m	-21.25	0.21
-3m	-21.45	0.21
-3m	-21.65	0.21

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Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal Stage	Spostamento Z (m)	Spostamento (mm)
-3m	-21.85	0.21
-3m	-22.05	0.21
-3m	-22.25	0.21
-3m	-22.45	0.21
-3m	-22.65	0.21
-3m	-22.85	0.21
-3m	-23.05	0.21
-3m	-23.25	0.21
-3m	-23.45	0.22
-3m	-23.65	0.22
-3m	-23.85	0.22
-3m	-24.05	0.22
-3m	-24.25	0.22
-3m	-24.45	0.22
-3m	-24.65	0.22
-3m	-24.85	0.22
-3m	-25	0.22

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### Tabella Spostamento Nominal - LEFT Stage: -4m

Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-4m	0	0.29
-4m	-0.2	0.31
-4m	-0.4	0.33
-4m	-0.6	0.35
-4m	-0.8	0.37
-4m	-1	0.39
-4m	-1.2	0.41
-4m	-1.4	0.43
-4m	-1.6	0.45
-4m	-1.8	0.47
-4m	-2	0.49
-4m	-2.2	0.51
-4m	-2.25	0.51
-4m	-2.45	0.53
-4m	-2.65	0.55
-4m	-2.85	0.57
-4m	-3.05	0.59
-4m	-3.25	0.61
-4m	-3.45	0.63
-4m	-3.65	0.65
-4m	-3.85	0.67
-4m	-4.05	0.68
-4m	-4.25	0.7
-4m	-4.45	0.71
-4m	-4.65	0.73
-4m	-4.85	0.74
-4m	-5.05	0.75
-4m	-5.25	0.76
-4m	-5.45	0.77
-4m	-5.65	0.78
-4m	-5.85	0.79
-4m	-6.05	0.79
-4m	-6.25	0.79
-4m	-6.45	0.8
-4m	-6.65	0.8
-4m	-6.85	0.8
-4m	-7.05	0.8
-4m	-7.25	0.79
-4m	-7.45	0.79
-4m	-7.65	0.78
-4m	-7.85	0.78
-4m	-8.05	0.77
-4m	-8.25	0.76
-4m	-8.45	0.75
-4m	-8.65	0.75
-4m	-8.85	0.73
-4m	-9.05	0.72
-4m	-9.25	0.71
-4m	-9.45	0.7
-4m	-9.65	0.69
-4m	-9.85	0.68
-4m	-10.05	0.66
-4m	-10.25	0.65



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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-4m	-10.45	0.64
-4m	-10.65	0.62
-4m	-10.85	0.61
-4m	-11.05	0.6
-4m	-11.25	0.58
-4m	-11.45	0.57
-4m	-11.65	0.56
-4m	-11.85	0.55
-4m	-12.05	0.53
-4m	-12.25	0.52
-4m	-12.45	0.51
-4m	-12.65	0.5
-4m	-12.85	0.49
-4m	-13.05	0.48
-4m	-13.25	0.47
-4m	-13.45	0.46
-4m	-13.65	0.45
-4m	-13.85	0.44
-4m	-14.05	0.43
-4m	-14.25	0.42
-4m	-14.45	0.42
-4m	-14.65	0.41
-4m	-14.85	0.4
-4m	-15.05	0.4
-4m	-15.25	0.39
-4m	-15.45	0.39
-4m	-15.65	0.38
-4m	-15.85	0.38
-4m	-16.05	0.37
-4m	-16.25	0.37
-4m	-16.45	0.36
-4m	-16.65	0.36
-4m	-16.85	0.36
-4m	-17.05	0.35
-4m	-17.25	0.35
-4m	-17.45	0.35
-4m	-17.65	0.35
-4m	-17.85	0.34
-4m	-18.05	0.34
-4m	-18.25	0.34
-4m	-18.45	0.34
-4m	-18.65	0.34
-4m	-18.85	0.34
-4m	-19.05	0.34
-4m	-19.25	0.34
-4m	-19.45	0.33
-4m	-19.65	0.33
-4m	-19.85	0.33
-4m	-20.05	0.33
-4m	-20.25	0.33
-4m	-20.45	0.33
-4m	-20.65	0.33
-4m	-20.85	0.33
-4m	-21.05	0.33
-4m	-21.25	0.33
-4m	-21.45	0.33
-4m	-21.65	0.33



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### Tabella Spostamento Nominal - LEFT Stage: -5m

Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-5m	0	0.3
-5m	-0.2	0.34
-5m	-0.4	0.37
-5m	-0.6	0.41
-5m	-0.8	0.45
-5m	-1	0.49
-5m	-1.2	0.53
-5m	-1.4	0.56
-5m	-1.6	0.6
-5m	-1.8	0.64
-5m	-2	0.68
-5m	-2.2	0.72
-5m	-2.25	0.73
-5m	-2.45	0.76
-5m	-2.65	0.8
-5m	-2.85	0.84
-5m	-3.05	0.88
-5m	-3.25	0.91
-5m	-3.45	0.95
-5m	-3.65	0.99
-5m	-3.85	1.02
-5m	-4.05	1.05
-5m	-4.25	1.08
-5m	-4.45	1.11
-5m	-4.65	1.14
-5m	-4.85	1.17
-5m	-5.05	1.2
-5m	-5.25	1.22
-5m	-5.45	1.24
-5m	-5.65	1.26
-5m	-5.85	1.28
-5m	-6.05	1.3
-5m	-6.25	1.31
-5m	-6.45	1.32
-5m	-6.65	1.33
-5m	-6.85	1.34
-5m	-7.05	1.34
-5m	-7.25	1.35
-5m	-7.45	1.35
-5m	-7.65	1.35
-5m	-7.85	1.34
-5m	-8.05	1.34
-5m	-8.25	1.33
-5m	-8.45	1.32
-5m	-8.65	1.31
-5m	-8.85	1.3
-5m	-9.05	1.28
-5m	-9.25	1.27
-5m	-9.45	1.25
-5m	-9.65	1.23
-5m	-9.85	1.21
-5m	-10.05	1.19
-5m	-10.25	1.17

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-5m	-10.45	1.15
-5m	-10.65	1.13
-5m	-10.85	1.1
-5m	-11.05	1.08
-5m	-11.25	1.06
-5m	-11.45	1.03
-5m	-11.65	1.01
-5m	-11.85	0.99
-5m	-12.05	0.97
-5m	-12.25	0.94
-5m	-12.45	0.92
-5m	-12.65	0.9
-5m	-12.85	0.88
-5m	-13.05	0.86
-5m	-13.25	0.83
-5m	-13.45	0.81
-5m	-13.65	0.8
-5m	-13.85	0.78
-5m	-14.05	0.76
-5m	-14.25	0.74
-5m	-14.45	0.72
-5m	-14.65	0.71
-5m	-14.85	0.69
-5m	-15.05	0.68
-5m	-15.25	0.66
-5m	-15.45	0.65
-5m	-15.65	0.64
-5m	-15.85	0.63
-5m	-16.05	0.61
-5m	-16.25	0.6
-5m	-16.45	0.59
-5m	-16.65	0.58
-5m	-16.85	0.58
-5m	-17.05	0.57
-5m	-17.25	0.56
-5m	-17.45	0.55
-5m	-17.65	0.55
-5m	-17.85	0.54
-5m	-18.05	0.53
-5m	-18.25	0.53
-5m	-18.45	0.52
-5m	-18.65	0.52
-5m	-18.85	0.51
-5m	-19.05	0.51
-5m	-19.25	0.51
-5m	-19.45	0.5
-5m	-19.65	0.5
-5m	-19.85	0.5
-5m	-20.05	0.5
-5m	-20.25	0.49
-5m	-20.45	0.49
-5m	-20.65	0.49
-5m	-20.85	0.49
-5m	-21.05	0.49
-5m	-21.25	0.48
-5m	-21.45	0.48
-5m	-21.65	0.48

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
-5m	-21.85	0.48
-5m	-22.05	0.48
-5m	-22.25	0.48
-5m	-22.45	0.48
-5m	-22.65	0.48
-5m	-22.85	0.48
-5m	-23.05	0.48
-5m	-23.25	0.48
-5m	-23.45	0.47
-5m	-23.65	0.47
-5m	-23.85	0.47
-5m	-24.05	0.47
-5m	-24.25	0.47
-5m	-24.45	0.47
-5m	-24.65	0.47
-5m	-24.85	0.47
-5m	-25	0.47

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### Tabella Spostamento Nominal - LEFT Stage: Rinterro 1

Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal	Spostamento	Spostamento
Stage	Z (m)	(mm)
Rinterro 1	0	0.67
Rinterro 1	-0.2	0.74
Rinterro 1	-0.4	0.81
Rinterro 1	-0.6	0.88
Rinterro 1	-0.8	0.94
Rinterro 1	-1	1.01
Rinterro 1	-1.2	1.08
Rinterro 1	-1.4	1.15
Rinterro 1	-1.6	1.22
Rinterro 1	-1.8	1.29
Rinterro 1	-2	1.36
Rinterro 1	-2.2	1.42
Rinterro 1	-2.25	1.44
Rinterro 1	-2.45	1.51
Rinterro 1	-2.65	1.58
Rinterro 1	-2.85	1.65
Rinterro 1	-3.05	1.71
Rinterro 1	-3.25	1.78
Rinterro 1	-3.45	1.84
Rinterro 1	-3.65	1.91
Rinterro 1	-3.85	1.97
Rinterro 1	-4.05	2.03
Rinterro 1	-4.25	2.08
Rinterro 1	-4.45	2.14
Rinterro 1	-4.65	2.19
Rinterro 1	-4.85	2.24
Rinterro 1	-5.05	2.29
Rinterro 1	-5.25	2.33
Rinterro 1	-5.45	2.37
Rinterro 1	-5.65	2.41
Rinterro 1	-5.85	2.44
Rinterro 1	-6.05	2.47
Rinterro 1	-6.25	2.5
Rinterro 1	-6.45	2.52
Rinterro 1	-6.65	2.54
Rinterro 1	-6.85	2.55
Rinterro 1	-7.05	2.56
Rinterro 1	-7.25	2.57
Rinterro 1	-7.45	2.58
Rinterro 1	-7.65	2.58
Rinterro 1	-7.85	2.57
Rinterro 1	-8.05	2.57
Rinterro 1	-8.25	2.56
Rinterro 1	-8.45	2.55
Rinterro 1	-8.65	2.53
Rinterro 1	-8.85	2.51
Rinterro 1	-9.05	2.49
Rinterro 1	-9.25	2.47
Rinterro 1	-9.45	2.44
Rinterro 1	-9.65	2.42
Rinterro 1	-9.85	2.39
Rinterro 1	-10.05	2.35
Rinterro 1	-10.25	2.32

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Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal Stage	Spostamento Z (m)	Spostamento (mm)
Rinterro 1	-10.45	2.29
Rinterro 1	-10.65	2.25
Rinterro 1	-10.85	2.21
Rinterro 1	-11.05	2.18
Rinterro 1	-11.25	2.14
Rinterro 1	-11.45	2.1
Rinterro 1	-11.65	2.06
Rinterro 1	-11.85	2.02
Rinterro 1	-12.05	1.98
Rinterro 1	-12.25	1.94
Rinterro 1	-12.45	1.9
Rinterro 1	-12.65	1.86
Rinterro 1	-12.85	1.82
Rinterro 1	-13.05	1.78
Rinterro 1	-13.25	1.74
Rinterro 1	-13.45	1.71
Rinterro 1	-13.65	1.67
Rinterro 1	-13.85	1.63
Rinterro 1	-14.05	1.6
Rinterro 1	-14.25	1.56
Rinterro 1	-14.45	1.53
Rinterro 1	-14.65	1.49
Rinterro 1	-14.85	1.46
Rinterro 1	-15.05	1.43
Rinterro 1	-15.25	1.4
Rinterro 1	-15.45	1.37
Rinterro 1	-15.65	1.35
Rinterro 1	-15.85	1.32
Rinterro 1	-16.05	1.29
Rinterro 1	-16.25	1.27
Rinterro 1	-16.45	1.25
Rinterro 1	-16.65	1.23
Rinterro 1	-16.85	1.2
Rinterro 1	-17.05	1.19
Rinterro 1	-17.25	1.17
Rinterro 1	-17.45	1.15
Rinterro 1	-17.65	1.13
Rinterro 1	-17.85	1.12
Rinterro 1	-18.05	1.1
Rinterro 1	-18.25	1.09
Rinterro 1	-18.45	1.07
Rinterro 1	-18.65	1.06
Rinterro 1	-18.85	1.05
Rinterro 1	-19.05	1.04
Rinterro 1	-19.25	1.03
Rinterro 1	-19.45	1.02
Rinterro 1	-19.65	1.01
Rinterro 1	-19.85	1
Rinterro 1	-20.05	0.99
Rinterro 1	-20.25	0.98
Rinterro 1	-20.45	0.98
Rinterro 1	-20.65	0.97
Rinterro 1	-20.85	0.96
Rinterro 1	-21.05	0.96
Rinterro 1	-21.25	0.95
Rinterro 1	-21.45	0.95
Rinterro 1	-21.65	0.94

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Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal Stage	Spostamento Z (m)	Spostamento (mm)
Rinterro 1	-21.85	0.94
Rinterro 1	-22.05	0.93
Rinterro 1	-22.25	0.93
Rinterro 1	-22.45	0.93
Rinterro 1	-22.65	0.92
Rinterro 1	-22.85	0.92
Rinterro 1	-23.05	0.91
Rinterro 1	-23.25	0.91
Rinterro 1	-23.45	0.91
Rinterro 1	-23.65	0.9
Rinterro 1	-23.85	0.9
Rinterro 1	-24.05	0.9
Rinterro 1	-24.25	0.89
Rinterro 1	-24.45	0.89
Rinterro 1	-24.65	0.89
Rinterro 1	-24.85	0.88
Rinterro 1	-25	0.88



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### Tabella Spostamento Nominal - LEFT Stage: Rinterro 2

Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal	Spostamento	Spostamento
Stage	Z (m)	(mm)
Rinterro 2	0	1.25
Rinterro 2	-0.2	1.35
Rinterro 2	-0.4	1.45
Rinterro 2	-0.6	1.55
Rinterro 2	-0.8	1.65
Rinterro 2	-1	1.76
Rinterro 2	-1.2	1.86
Rinterro 2	-1.4	1.96
Rinterro 2	-1.6	2.06
Rinterro 2	-1.8	2.17
Rinterro 2	-2	2.27
Rinterro 2	-2.2	2.37
Rinterro 2	-2.25	2.4
Rinterro 2	-2.45	2.5
Rinterro 2	-2.65	2.6
Rinterro 2	-2.85	2.7
Rinterro 2	-3.05	2.81
Rinterro 2	-3.25	2.9
Rinterro 2	-3.45	3
Rinterro 2	-3.65	3.1
Rinterro 2	-3.85	3.19
Rinterro 2	-4.05	3.28
Rinterro 2	-4.25	3.37
Rinterro 2	-4.45	3.45
Rinterro 2	-4.65	3.53
Rinterro 2	-4.85	3.61
Rinterro 2	-5.05	3.68
Rinterro 2	-5.25	3.75
Rinterro 2	-5.45	3.81
Rinterro 2	-5.65	3.87
Rinterro 2	-5.85	3.92
Rinterro 2	-6.05	3.97
Rinterro 2	-6.25	4.01
Rinterro 2	-6.45	4.05
Rinterro 2	-6.65	4.09
Rinterro 2	-6.85	4.11
Rinterro 2	-7.05	4.14
Rinterro 2	-7.25	4.16
Rinterro 2	-7.45	4.17
Rinterro 2	-7.65	4.18
Rinterro 2	-7.85	4.18
Rinterro 2	-8.05	4.18
Rinterro 2	-8.25	4.17
Rinterro 2	-8.45	4.16
Rinterro 2	-8.65	4.14
Rinterro 2	-8.85	4.12
Rinterro 2	-9.05	4.1
Rinterro 2	-9.25	4.07
Rinterro 2	-9.45	4.04
Rinterro 2	-9.65	4.01
Rinterro 2	-9.85	3.97
Rinterro 2	-10.05	3.93
Rinterro 2	-10.25	3.89

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Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal Stage	Spostamento Z (m)	Spostamento (mm)
Rinterro 2	-10.45	3.84
Rinterro 2	-10.65	3.79
Rinterro 2	-10.85	3.74
Rinterro 2	-11.05	3.69
Rinterro 2	-11.25	3.64
Rinterro 2	-11.45	3.59
Rinterro 2	-11.65	3.53
Rinterro 2	-11.85	3.47
Rinterro 2	-12.05	3.42
Rinterro 2	-12.25	3.36
Rinterro 2	-12.45	3.3
Rinterro 2	-12.65	3.24
Rinterro 2	-12.85	3.18
Rinterro 2	-13.05	3.12
Rinterro 2	-13.25	3.06
Rinterro 2	-13.45	3.01
Rinterro 2	-13.65	2.95
Rinterro 2	-13.85	2.89
Rinterro 2	-14.05	2.83
Rinterro 2	-14.25	2.78
Rinterro 2	-14.45	2.72
Rinterro 2	-14.65	2.67
Rinterro 2	-14.85	2.61
Rinterro 2	-15.05	2.56
Rinterro 2	-15.25	2.51
Rinterro 2	-15.45	2.46
Rinterro 2	-15.65	2.41
Rinterro 2	-15.85	2.36
Rinterro 2	-16.05	2.32
Rinterro 2	-16.25	2.27
Rinterro 2	-16.45	2.23
Rinterro 2	-16.65	2.19
Rinterro 2	-16.85	2.15
Rinterro 2	-17.05	2.11
Rinterro 2	-17.25	2.07
Rinterro 2	-17.45	2.03
Rinterro 2	-17.65	2
Rinterro 2	-17.85	1.96
Rinterro 2	-18.05	1.93
Rinterro 2	-18.25	1.9
Rinterro 2	-18.45	1.87
Rinterro 2	-18.65	1.84
Rinterro 2	-18.85	1.82
Rinterro 2	-19.05	1.79
Rinterro 2	-19.25	1.77
Rinterro 2	-19.45	1.74
Rinterro 2	-19.65	1.72
Rinterro 2	-19.85	1.7
Rinterro 2	-20.05	1.68
Rinterro 2	-20.25	1.66
Rinterro 2	-20.45	1.64
Rinterro 2	-20.65	1.62
Rinterro 2	-20.85	1.6
Rinterro 2	-21.05	1.58
Rinterro 2	-21.25	1.57
Rinterro 2	-21.45	1.55
Rinterro 2	-21.65	1.54

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
Rinterro 2	-21.85	1.52
Rinterro 2	-22.05	1.51
Rinterro 2	-22.25	1.49
Rinterro 2	-22.45	1.48
Rinterro 2	-22.65	1.47
Rinterro 2	-22.85	1.45
Rinterro 2	-23.05	1.44
Rinterro 2	-23.25	1.43
Rinterro 2	-23.45	1.42
Rinterro 2	-23.65	1.4
Rinterro 2	-23.85	1.39
Rinterro 2	-24.05	1.38
Rinterro 2	-24.25	1.37
Rinterro 2	-24.45	1.35
Rinterro 2	-24.65	1.34
Rinterro 2	-24.85	1.33
Rinterro 2	-25	1.32

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**Tabella Spostamento Nominal - LEFT Stage: Acc**

Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal	Spostamento	Spostamento
Stage	Z (m)	(mm)
Acc	0	3.65
Acc	-0.2	3.73
Acc	-0.4	3.81
Acc	-0.6	3.89
Acc	-0.8	3.97
Acc	-1	4.05
Acc	-1.2	4.13
Acc	-1.4	4.22
Acc	-1.6	4.3
Acc	-1.8	4.38
Acc	-2	4.46
Acc	-2.2	4.54
Acc	-2.25	4.56
Acc	-2.45	4.64
Acc	-2.65	4.72
Acc	-2.85	4.8
Acc	-3.05	4.88
Acc	-3.25	4.96
Acc	-3.45	5.04
Acc	-3.65	5.11
Acc	-3.85	5.18
Acc	-4.05	5.25
Acc	-4.25	5.32
Acc	-4.45	5.38
Acc	-4.65	5.44
Acc	-4.85	5.49
Acc	-5.05	5.54
Acc	-5.25	5.59
Acc	-5.45	5.63
Acc	-5.65	5.66
Acc	-5.85	5.69
Acc	-6.05	5.72
Acc	-6.25	5.74
Acc	-6.45	5.75
Acc	-6.65	5.76
Acc	-6.85	5.77
Acc	-7.05	5.76
Acc	-7.25	5.76
Acc	-7.45	5.75
Acc	-7.65	5.73
Acc	-7.85	5.71
Acc	-8.05	5.68
Acc	-8.25	5.65
Acc	-8.45	5.61
Acc	-8.65	5.57
Acc	-8.85	5.52
Acc	-9.05	5.47
Acc	-9.25	5.42
Acc	-9.45	5.36
Acc	-9.65	5.3
Acc	-9.85	5.24
Acc	-10.05	5.18
Acc	-10.25	5.11

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
Acc	-10.45	5.04
Acc	-10.65	4.97
Acc	-10.85	4.89
Acc	-11.05	4.81
Acc	-11.25	4.74
Acc	-11.45	4.66
Acc	-11.65	4.58
Acc	-11.85	4.5
Acc	-12.05	4.42
Acc	-12.25	4.34
Acc	-12.45	4.25
Acc	-12.65	4.17
Acc	-12.85	4.09
Acc	-13.05	4.01
Acc	-13.25	3.93
Acc	-13.45	3.85
Acc	-13.65	3.76
Acc	-13.85	3.69
Acc	-14.05	3.61
Acc	-14.25	3.53
Acc	-14.45	3.45
Acc	-14.65	3.38
Acc	-14.85	3.3
Acc	-15.05	3.23
Acc	-15.25	3.16
Acc	-15.45	3.09
Acc	-15.65	3.02
Acc	-15.85	2.96
Acc	-16.05	2.89
Acc	-16.25	2.83
Acc	-16.45	2.77
Acc	-16.65	2.71
Acc	-16.85	2.65
Acc	-17.05	2.59
Acc	-17.25	2.54
Acc	-17.45	2.49
Acc	-17.65	2.43
Acc	-17.85	2.39
Acc	-18.05	2.34
Acc	-18.25	2.29
Acc	-18.45	2.25
Acc	-18.65	2.21
Acc	-18.85	2.17
Acc	-19.05	2.13
Acc	-19.25	2.09
Acc	-19.45	2.05
Acc	-19.65	2.02
Acc	-19.85	1.99
Acc	-20.05	1.95
Acc	-20.25	1.92
Acc	-20.45	1.89
Acc	-20.65	1.86
Acc	-20.85	1.84
Acc	-21.05	1.81
Acc	-21.25	1.78
Acc	-21.45	1.76
Acc	-21.65	1.73

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
Acc	-21.85	1.71
Acc	-22.05	1.69
Acc	-22.25	1.66
Acc	-22.45	1.64
Acc	-22.65	1.62
Acc	-22.85	1.6
Acc	-23.05	1.58
Acc	-23.25	1.56
Acc	-23.45	1.53
Acc	-23.65	1.51
Acc	-23.85	1.49
Acc	-24.05	1.47
Acc	-24.25	1.45
Acc	-24.45	1.43
Acc	-24.65	1.41
Acc	-24.85	1.39
Acc	-25	1.38

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### Tabella Spostamento Nominal - LEFT Stage: Sisma

Design Assumption:	Tipo Risultato:	Muro: LEFT
Nominal	Spostamento	Spostamento
Stage	Z (m)	(mm)
Sisma	0	14.52
Sisma	-0.2	14.46
Sisma	-0.4	14.39
Sisma	-0.6	14.33
Sisma	-0.8	14.26
Sisma	-1	14.2
Sisma	-1.2	14.13
Sisma	-1.4	14.07
Sisma	-1.6	14.01
Sisma	-1.8	13.94
Sisma	-2	13.88
Sisma	-2.2	13.82
Sisma	-2.25	13.8
Sisma	-2.45	13.74
Sisma	-2.65	13.68
Sisma	-2.85	13.62
Sisma	-3.05	13.56
Sisma	-3.25	13.5
Sisma	-3.45	13.43
Sisma	-3.65	13.36
Sisma	-3.85	13.29
Sisma	-4.05	13.22
Sisma	-4.25	13.14
Sisma	-4.45	13.06
Sisma	-4.65	12.98
Sisma	-4.85	12.89
Sisma	-5.05	12.8
Sisma	-5.25	12.7
Sisma	-5.45	12.59
Sisma	-5.65	12.48
Sisma	-5.85	12.37
Sisma	-6.05	12.24
Sisma	-6.25	12.12
Sisma	-6.45	11.98
Sisma	-6.65	11.85
Sisma	-6.85	11.7
Sisma	-7.05	11.55
Sisma	-7.25	11.4
Sisma	-7.45	11.24
Sisma	-7.65	11.07
Sisma	-7.85	10.9
Sisma	-8.05	10.72
Sisma	-8.25	10.54
Sisma	-8.45	10.36
Sisma	-8.65	10.17
Sisma	-8.85	9.98
Sisma	-9.05	9.79
Sisma	-9.25	9.6
Sisma	-9.45	9.4
Sisma	-9.65	9.2
Sisma	-9.85	9
Sisma	-10.05	8.8
Sisma	-10.25	8.6

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Design Assumption: Nominal Stage	Tipo Risultato: Spostamento Z (m)	Muro: LEFT Spostamento (mm)
Sisma	-10.45	8.39
Sisma	-10.65	8.19
Sisma	-10.85	7.99
Sisma	-11.05	7.79
Sisma	-11.25	7.59
Sisma	-11.45	7.39
Sisma	-11.65	7.19
Sisma	-11.85	7
Sisma	-12.05	6.8
Sisma	-12.25	6.61
Sisma	-12.45	6.42
Sisma	-12.65	6.24
Sisma	-12.85	6.05
Sisma	-13.05	5.87
Sisma	-13.25	5.7
Sisma	-13.45	5.52
Sisma	-13.65	5.35
Sisma	-13.85	5.18
Sisma	-14.05	5.02
Sisma	-14.25	4.86
Sisma	-14.45	4.71
Sisma	-14.65	4.55
Sisma	-14.85	4.41
Sisma	-15.05	4.26
Sisma	-15.25	4.12
Sisma	-15.45	3.98
Sisma	-15.65	3.85
Sisma	-15.85	3.72
Sisma	-16.05	3.6
Sisma	-16.25	3.48
Sisma	-16.45	3.37
Sisma	-16.65	3.25
Sisma	-16.85	3.15
Sisma	-17.05	3.04
Sisma	-17.25	2.94
Sisma	-17.45	2.85
Sisma	-17.65	2.76
Sisma	-17.85	2.67
Sisma	-18.05	2.58
Sisma	-18.25	2.5
Sisma	-18.45	2.42
Sisma	-18.65	2.35
Sisma	-18.85	2.28
Sisma	-19.05	2.21
Sisma	-19.25	2.15
Sisma	-19.45	2.08
Sisma	-19.65	2.02
Sisma	-19.85	1.97
Sisma	-20.05	1.91
Sisma	-20.25	1.86
Sisma	-20.45	1.81
Sisma	-20.65	1.76
Sisma	-20.85	1.72
Sisma	-21.05	1.67
Sisma	-21.25	1.63
Sisma	-21.45	1.59
Sisma	-21.65	1.55



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**Design Assumption:**

**Nominal  
Stage**

Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma  
Sisma

**Tipo Risultato:**

**Spostamento  
Z (m)**

-21.85  
-22.05  
-22.25  
-22.45  
-22.65  
-22.85  
-23.05  
-23.25  
-23.45  
-23.65  
-23.85  
-24.05  
-24.25  
-24.45  
-24.65  
-24.85  
-25

**Muro: LEFT**

**Spostamento  
(mm)**

1.51  
1.47  
1.44  
1.4  
1.37  
1.33  
1.3  
1.26  
1.23  
1.2  
1.17  
1.13  
1.1  
1.07  
1.04  
1.01  
0.98

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## Risultati Paratia

**Tabella Risultati Paratia Nominal - Stage: Condizione geostatica**

Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
Condizione geostatica	0	0	0
Condizione geostatica	-0.2	0	0
Condizione geostatica	-0.4	0	0
Condizione geostatica	-0.6	0	0
Condizione geostatica	-0.8	0	0
Condizione geostatica	-1	0	0
Condizione geostatica	-1.2	0	0
Condizione geostatica	-1.4	0	0
Condizione geostatica	-1.6	0	0
Condizione geostatica	-1.8	0	0
Condizione geostatica	-2	0	0
Condizione geostatica	-2.2	0	0
Condizione geostatica	-2.25	0	0
Condizione geostatica	-2.45	0	0
Condizione geostatica	-2.65	0	0
Condizione geostatica	-2.85	0	0
Condizione geostatica	-3.05	0	0
Condizione geostatica	-3.25	0	0
Condizione geostatica	-3.45	0	0
Condizione geostatica	-3.65	0	0
Condizione geostatica	-3.85	0	0
Condizione geostatica	-4.05	0	0
Condizione geostatica	-4.25	0	0
Condizione geostatica	-4.45	0	0
Condizione geostatica	-4.65	0	0
Condizione geostatica	-4.85	0	0
Condizione geostatica	-5.05	0	0
Condizione geostatica	-5.25	0	0
Condizione geostatica	-5.45	0	0
Condizione geostatica	-5.65	0	0
Condizione geostatica	-5.85	0	0
Condizione geostatica	-6.05	0	0
Condizione geostatica	-6.25	0	0
Condizione geostatica	-6.45	0	0
Condizione geostatica	-6.65	0	0
Condizione geostatica	-6.85	0	0
Condizione geostatica	-7.05	0	0
Condizione geostatica	-7.25	0	0
Condizione geostatica	-7.45	0	0
Condizione geostatica	-7.65	0	0
Condizione geostatica	-7.85	0	0
Condizione geostatica	-8.05	0	0
Condizione geostatica	-8.25	0	0
Condizione geostatica	-8.45	0	0
Condizione geostatica	-8.65	0	0
Condizione geostatica	-8.85	0	0
Condizione geostatica	-9.05	0	0
Condizione geostatica	-9.25	0	0
Condizione geostatica	-9.45	0	0
Condizione geostatica	-9.65	0	0

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
Condizione geostatica	-9.85	0	0
Condizione geostatica	-10.05	0	0
Condizione geostatica	-10.25	0	0
Condizione geostatica	-10.45	0	0
Condizione geostatica	-10.65	0	0
Condizione geostatica	-10.85	0	0
Condizione geostatica	-11.05	0	0
Condizione geostatica	-11.25	0	0
Condizione geostatica	-11.45	0	0
Condizione geostatica	-11.65	0	0
Condizione geostatica	-11.85	0	0
Condizione geostatica	-12.05	0	0
Condizione geostatica	-12.25	0	0
Condizione geostatica	-12.45	0	0
Condizione geostatica	-12.65	0	0
Condizione geostatica	-12.85	0	0
Condizione geostatica	-13.05	0	0
Condizione geostatica	-13.25	0	0
Condizione geostatica	-13.45	0	0
Condizione geostatica	-13.65	0	0
Condizione geostatica	-13.85	0	0
Condizione geostatica	-14.05	0	0
Condizione geostatica	-14.25	0	0
Condizione geostatica	-14.45	0	0
Condizione geostatica	-14.65	0	0
Condizione geostatica	-14.85	0	0
Condizione geostatica	-15.05	0	0
Condizione geostatica	-15.25	0	0
Condizione geostatica	-15.45	0	0
Condizione geostatica	-15.65	0	0
Condizione geostatica	-15.85	0	0
Condizione geostatica	-16.05	0	0
Condizione geostatica	-16.25	0	0
Condizione geostatica	-16.45	0	0
Condizione geostatica	-16.65	0	0
Condizione geostatica	-16.85	0	0
Condizione geostatica	-17.05	0	0
Condizione geostatica	-17.25	0	0
Condizione geostatica	-17.45	0	0
Condizione geostatica	-17.65	0	0
Condizione geostatica	-17.85	0	0
Condizione geostatica	-18.05	0	0
Condizione geostatica	-18.25	0	0
Condizione geostatica	-18.45	0	0
Condizione geostatica	-18.65	0	0
Condizione geostatica	-18.85	0	0
Condizione geostatica	-19.05	0	0
Condizione geostatica	-19.25	0	0
Condizione geostatica	-19.45	0	0
Condizione geostatica	-19.65	0	0
Condizione geostatica	-19.85	0	0
Condizione geostatica	-20.05	0	0
Condizione geostatica	-20.25	0	0
Condizione geostatica	-20.45	0	0
Condizione geostatica	-20.65	0	0
Condizione geostatica	-20.85	0	0
Condizione geostatica	-21.05	0	0

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
Condizione geostatica	-21.25	0	0
Condizione geostatica	-21.45	0	0
Condizione geostatica	-21.65	0	0
Condizione geostatica	-21.85	0	0
Condizione geostatica	-22.05	0	0
Condizione geostatica	-22.25	0	0
Condizione geostatica	-22.45	0	0
Condizione geostatica	-22.65	0	0
Condizione geostatica	-22.85	0	0
Condizione geostatica	-23.05	0	0
Condizione geostatica	-23.25	0	0
Condizione geostatica	-23.45	0	0
Condizione geostatica	-23.65	0	0
Condizione geostatica	-23.85	0	0
Condizione geostatica	-24.05	0	0
Condizione geostatica	-24.25	0	0
Condizione geostatica	-24.45	0	0
Condizione geostatica	-24.65	0	0
Condizione geostatica	-24.85	0	0
Condizione geostatica	-25	0	0

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### Tabella Risultati Paratia Nominal - Stage: Cordolo

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
Cordolo	0	0	0
Cordolo	-0.2	0	0
Cordolo	-0.4	0	0
Cordolo	-0.6	0	0
Cordolo	-0.8	0	0
Cordolo	-1	0	0
Cordolo	-1.2	0	0
Cordolo	-1.4	0	0
Cordolo	-1.6	0	0
Cordolo	-1.8	0	0
Cordolo	-2	0	0
Cordolo	-2.2	0	0
Cordolo	-2.25	0	0
Cordolo	-2.45	0	0
Cordolo	-2.65	0	0
Cordolo	-2.85	0	0
Cordolo	-3.05	0	0
Cordolo	-3.25	0	0
Cordolo	-3.45	0	0
Cordolo	-3.65	0	0
Cordolo	-3.85	0	0
Cordolo	-4.05	0	0
Cordolo	-4.25	0	0
Cordolo	-4.45	0	0
Cordolo	-4.65	0	0
Cordolo	-4.85	0	0
Cordolo	-5.05	0	0
Cordolo	-5.25	0	0
Cordolo	-5.45	0	0
Cordolo	-5.65	0	0
Cordolo	-5.85	0	0
Cordolo	-6.05	0	0
Cordolo	-6.25	0	0
Cordolo	-6.45	0	0
Cordolo	-6.65	0	0
Cordolo	-6.85	0	0
Cordolo	-7.05	0	0
Cordolo	-7.25	0	0
Cordolo	-7.45	0	0
Cordolo	-7.65	0	0
Cordolo	-7.85	0	0
Cordolo	-8.05	0	0
Cordolo	-8.25	0	0
Cordolo	-8.45	0	0
Cordolo	-8.65	0	0
Cordolo	-8.85	0	0
Cordolo	-9.05	0	0
Cordolo	-9.25	0	0
Cordolo	-9.45	0	0
Cordolo	-9.65	0	0
Cordolo	-9.85	0	0
Cordolo	-10.05	0	0
Cordolo	-10.25	0	0

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
Cordolo	-10.45	0	0
Cordolo	-10.65	0	0
Cordolo	-10.85	0	0
Cordolo	-11.05	0	0
Cordolo	-11.25	0	0
Cordolo	-11.45	0	0
Cordolo	-11.65	0	0
Cordolo	-11.85	0	0
Cordolo	-12.05	0	0
Cordolo	-12.25	0	0
Cordolo	-12.45	0	0
Cordolo	-12.65	0	0
Cordolo	-12.85	0	0
Cordolo	-13.05	0	0
Cordolo	-13.25	0	0
Cordolo	-13.45	0	0
Cordolo	-13.65	0	0
Cordolo	-13.85	0	0
Cordolo	-14.05	0	0
Cordolo	-14.25	0	0
Cordolo	-14.45	0	0
Cordolo	-14.65	0	0
Cordolo	-14.85	0	0
Cordolo	-15.05	0	0
Cordolo	-15.25	0	0
Cordolo	-15.45	0	0
Cordolo	-15.65	0	0
Cordolo	-15.85	0	0
Cordolo	-16.05	0	0
Cordolo	-16.25	0	0
Cordolo	-16.45	0	0
Cordolo	-16.65	0	0
Cordolo	-16.85	0	0
Cordolo	-17.05	0	0
Cordolo	-17.25	0	0
Cordolo	-17.45	0	0
Cordolo	-17.65	0	0
Cordolo	-17.85	0	0
Cordolo	-18.05	0	0
Cordolo	-18.25	0	0
Cordolo	-18.45	0	0
Cordolo	-18.65	0	0
Cordolo	-18.85	0	0
Cordolo	-19.05	0	0
Cordolo	-19.25	0	0
Cordolo	-19.45	0	0
Cordolo	-19.65	0	0
Cordolo	-19.85	0	0
Cordolo	-20.05	0	0
Cordolo	-20.25	0	0
Cordolo	-20.45	0	0
Cordolo	-20.65	0	0
Cordolo	-20.85	0	0
Cordolo	-21.05	0	0
Cordolo	-21.25	0	0
Cordolo	-21.45	0	0
Cordolo	-21.65	0	0

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
Cordolo	-21.85	0	0
Cordolo	-22.05	0	0
Cordolo	-22.25	0	0
Cordolo	-22.45	0	0
Cordolo	-22.65	0	0
Cordolo	-22.85	0	0
Cordolo	-23.05	0	0
Cordolo	-23.25	0	0
Cordolo	-23.45	0	0
Cordolo	-23.65	0	0
Cordolo	-23.85	0	0
Cordolo	-24.05	0	0
Cordolo	-24.25	0	0
Cordolo	-24.45	0	0
Cordolo	-24.65	0	0
Cordolo	-24.85	0	0
Cordolo	-25	0	0

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### Tabella Risultati Paratia Nominal - Stage: -1m

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
-1m	0	0	0
-1m	-0.2	0	0
-1m	-0.2	0	0
-1m	-0.4	0	0
-1m	-0.4	0	0
-1m	-0.6	0	0
-1m	-0.6	0	0
-1m	-0.8	0	0
-1m	-0.8	0	0
-1m	-1	0	0
-1m	-1	0	0
-1m	-1.2	0	0
-1m	-1.2	0	0
-1m	-1.4	0	0
-1m	-1.4	0	0
-1m	-1.6	0	0
-1m	-1.6	0	0
-1m	-1.8	0	0
-1m	-1.8	0	0
-1m	-2	0	0
-1m	-2	0	0
-1m	-2.2	0	0
-1m	-2.2	0	0
-1m	-2.25	0	0
-1m	-2.25	0	0
-1m	-2.45	1.31	6.57
-1m	-2.65	2.63	6.57
-1m	-2.85	3.94	6.57
-1m	-3.05	5.25	6.57
-1m	-3.25	6.55	6.51
-1m	-3.45	7.79	6.2
-1m	-3.65	8.91	5.58
-1m	-3.85	9.83	4.59
-1m	-4.05	10.48	3.24
-1m	-4.25	10.89	2.08
-1m	-4.45	11.12	1.16
-1m	-4.65	11.19	0.33
-1m	-4.85	11.1	-0.44
-1m	-5.05	10.87	-1.18
-1m	-5.25	10.49	-1.9
-1m	-5.45	9.97	-2.59
-1m	-5.65	9.31	-3.27
-1m	-5.85	8.68	-3.15
-1m	-6.05	8.08	-3.03
-1m	-6.25	7.5	-2.9
-1m	-6.45	6.94	-2.77
-1m	-6.65	6.42	-2.64
-1m	-6.85	5.91	-2.52
-1m	-7.05	5.43	-2.4
-1m	-7.25	4.98	-2.28
-1m	-7.45	4.54	-2.18
-1m	-7.65	4.13	-2.08
-1m	-7.85	3.73	-1.99



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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-1m	-8.05	3.35	-1.91
-1m	-8.25	2.98	-1.84
-1m	-8.45	2.62	-1.78
-1m	-8.65	2.28	-1.74
-1m	-8.85	1.94	-1.7
-1m	-9.05	1.6	-1.68
-1m	-9.25	1.26	-1.68
-1m	-9.45	0.92	-1.69
-1m	-9.65	0.58	-1.71
-1m	-9.85	0.23	-1.75
-1m	-10.05	-0.13	-1.8
-1m	-10.25	-0.5	-1.87
-1m	-10.45	-0.89	-1.95
-1m	-10.65	-1.3	-2.05
-1m	-10.85	-1.73	-2.16
-1m	-11.05	-2.19	-2.28
-1m	-11.25	-2.58	-1.97
-1m	-11.45	-2.92	-1.68
-1m	-11.65	-3.2	-1.41
-1m	-11.85	-3.44	-1.17
-1m	-12.05	-3.62	-0.94
-1m	-12.25	-3.77	-0.73
-1m	-12.45	-3.88	-0.53
-1m	-12.65	-3.95	-0.36
-1m	-12.85	-3.99	-0.2
-1m	-13.05	-4	-0.06
-1m	-13.25	-3.99	0.07
-1m	-13.45	-3.95	0.18
-1m	-13.65	-3.89	0.28
-1m	-13.85	-3.82	0.37
-1m	-14.05	-3.73	0.44
-1m	-14.25	-3.63	0.51
-1m	-14.45	-3.52	0.56
-1m	-14.65	-3.39	0.61
-1m	-14.85	-3.27	0.65
-1m	-15.05	-3.13	0.68
-1m	-15.25	-2.99	0.7
-1m	-15.45	-2.85	0.71
-1m	-15.65	-2.7	0.72
-1m	-15.85	-2.56	0.72
-1m	-16.05	-2.41	0.72
-1m	-16.25	-2.27	0.72
-1m	-16.45	-2.13	0.71
-1m	-16.65	-1.99	0.69
-1m	-16.85	-1.86	0.68
-1m	-17.05	-1.72	0.66
-1m	-17.25	-1.6	0.64
-1m	-17.45	-1.47	0.62
-1m	-17.65	-1.35	0.59
-1m	-17.85	-1.24	0.57
-1m	-18.05	-1.13	0.54
-1m	-18.25	-1.03	0.51
-1m	-18.45	-0.93	0.49
-1m	-18.65	-0.84	0.46
-1m	-18.85	-0.76	0.43
-1m	-19.05	-0.67	0.4
-1m	-19.25	-0.6	0.38

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-1m	-19.45	-0.53	0.35
-1m	-19.65	-0.47	0.32
-1m	-19.85	-0.41	0.3
-1m	-20.05	-0.35	0.27
-1m	-20.25	-0.3	0.25
-1m	-20.45	-0.26	0.22
-1m	-20.65	-0.22	0.2
-1m	-20.85	-0.18	0.18
-1m	-21.05	-0.15	0.16
-1m	-21.25	-0.12	0.14
-1m	-21.45	-0.09	0.12
-1m	-21.65	-0.07	0.11
-1m	-21.85	-0.06	0.09
-1m	-22.05	-0.04	0.08
-1m	-22.25	-0.03	0.06
-1m	-22.45	-0.02	0.05
-1m	-22.65	-0.01	0.04
-1m	-22.85	0	0.03
-1m	-23.05	0	0.02
-1m	-23.25	0	0.01
-1m	-23.45	0.01	0.01
-1m	-23.65	0.01	0
-1m	-23.85	0.01	0
-1m	-24.05	0	0
-1m	-24.25	0	-0.01
-1m	-24.45	0	-0.01
-1m	-24.65	0	-0.01
-1m	-24.85	0	0
-1m	-24.85	0	0
-1m	-25	0	0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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### Tabella Risultati Paratia Nominal - Stage: -2m

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
-2m	0	0	0
-2m	-0.2	0	0
-2m	-0.2	0	0
-2m	-0.4	0	0
-2m	-0.4	0	0
-2m	-0.6	0	0
-2m	-0.6	0	0
-2m	-0.8	0	0
-2m	-0.8	0	0
-2m	-1	0	0
-2m	-1	0	0
-2m	-1.2	0	0
-2m	-1.2	0	0
-2m	-1.4	0	0
-2m	-1.4	0	0
-2m	-1.6	0	0
-2m	-1.6	0	0
-2m	-1.8	0	0
-2m	-1.8	0	0
-2m	-2	0	0
-2m	-2	0	0
-2m	-2.2	0	0
-2m	-2.2	0	0
-2m	-2.25	0	0
-2m	-2.25	0	0
-2m	-2.45	2.63	13.14
-2m	-2.65	5.26	13.14
-2m	-2.85	7.88	13.14
-2m	-3.05	10.51	13.14
-2m	-3.25	13.13	13.08
-2m	-3.45	15.68	12.78
-2m	-3.65	18.13	12.23
-2m	-3.85	20.42	11.44
-2m	-4.05	22.48	10.31
-2m	-4.25	24.24	8.82
-2m	-4.45	25.64	6.97
-2m	-4.65	26.59	4.75
-2m	-4.85	27.02	2.17
-2m	-5.05	26.87	-0.78
-2m	-5.25	26.22	-3.23
-2m	-5.45	25.18	-5.23
-2m	-5.65	23.77	-7.04
-2m	-5.85	22.36	-7.04
-2m	-6.05	20.97	-6.96
-2m	-6.25	19.6	-6.83
-2m	-6.45	18.27	-6.66
-2m	-6.65	16.98	-6.47
-2m	-6.85	15.73	-6.26
-2m	-7.05	14.52	-6.04
-2m	-7.25	13.35	-5.82
-2m	-7.45	12.23	-5.61
-2m	-7.65	11.15	-5.4
-2m	-7.85	10.11	-5.2

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-2m	-8.05	9.11	-5.01
-2m	-8.25	8.14	-4.84
-2m	-8.45	7.21	-4.69
-2m	-8.65	6.3	-4.55
-2m	-8.85	5.41	-4.45
-2m	-9.05	4.53	-4.37
-2m	-9.25	3.67	-4.32
-2m	-9.45	2.81	-4.3
-2m	-9.65	1.95	-4.31
-2m	-9.85	1.08	-4.35
-2m	-10.05	0.19	-4.42
-2m	-10.25	-0.71	-4.52
-2m	-10.45	-1.64	-4.65
-2m	-10.65	-2.6	-4.82
-2m	-10.85	-3.61	-5.01
-2m	-11.05	-4.65	-5.24
-2m	-11.25	-5.56	-4.54
-2m	-11.45	-6.34	-3.89
-2m	-11.65	-7	-3.28
-2m	-11.85	-7.54	-2.72
-2m	-12.05	-7.98	-2.21
-2m	-12.25	-8.33	-1.73
-2m	-12.45	-8.59	-1.3
-2m	-12.65	-8.77	-0.9
-2m	-12.85	-8.88	-0.54
-2m	-13.05	-8.92	-0.22
-2m	-13.25	-8.91	0.08
-2m	-13.45	-8.84	0.33
-2m	-13.65	-8.73	0.56
-2m	-13.85	-8.57	0.77
-2m	-14.05	-8.38	0.94
-2m	-14.25	-8.17	1.09
-2m	-14.45	-7.92	1.22
-2m	-14.65	-7.66	1.33
-2m	-14.85	-7.37	1.41
-2m	-15.05	-7.08	1.48
-2m	-15.25	-6.77	1.53
-2m	-15.45	-6.46	1.57
-2m	-15.65	-6.14	1.59
-2m	-15.85	-5.82	1.61
-2m	-16.05	-5.5	1.61
-2m	-16.25	-5.18	1.6
-2m	-16.45	-4.86	1.58
-2m	-16.65	-4.55	1.55
-2m	-16.85	-4.25	1.52
-2m	-17.05	-3.95	1.48
-2m	-17.25	-3.67	1.43
-2m	-17.45	-3.39	1.38
-2m	-17.65	-3.12	1.33
-2m	-17.85	-2.87	1.28
-2m	-18.05	-2.62	1.22
-2m	-18.25	-2.39	1.16
-2m	-18.45	-2.17	1.1
-2m	-18.65	-1.96	1.04
-2m	-18.85	-1.77	0.98
-2m	-19.05	-1.59	0.92
-2m	-19.25	-1.41	0.86

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-2m	-19.45	-1.25	0.8
-2m	-19.65	-1.11	0.74
-2m	-19.85	-0.97	0.68
-2m	-20.05	-0.85	0.63
-2m	-20.25	-0.73	0.57
-2m	-20.45	-0.63	0.52
-2m	-20.65	-0.53	0.47
-2m	-20.85	-0.45	0.42
-2m	-21.05	-0.37	0.38
-2m	-21.25	-0.31	0.33
-2m	-21.45	-0.25	0.29
-2m	-21.65	-0.2	0.26
-2m	-21.85	-0.15	0.22
-2m	-22.05	-0.12	0.19
-2m	-22.25	-0.08	0.16
-2m	-22.45	-0.06	0.13
-2m	-22.65	-0.04	0.1
-2m	-22.85	-0.02	0.08
-2m	-23.05	-0.01	0.06
-2m	-23.25	0	0.04
-2m	-23.25	0	0.04
-2m	-23.45	0	0.03
-2m	-23.65	0.01	0.01
-2m	-23.85	0.01	0
-2m	-24.05	0.01	0
-2m	-24.25	0.01	-0.01
-2m	-24.45	0	-0.01
-2m	-24.65	0	-0.01
-2m	-24.85	0	-0.01
-2m	-24.85	0	-0.01
-2m	-25	0	0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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### Tabella Risultati Paratia Nominal - Stage: -3m

Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
-3m	0	0	0
-3m	-0.2	0	0
-3m	-0.2	0	0
-3m	-0.4	0	0
-3m	-0.4	0	0
-3m	-0.6	0	0
-3m	-0.6	0	0
-3m	-0.8	0	0
-3m	-0.8	0	0
-3m	-1	0	0
-3m	-1	0	0
-3m	-1.2	0	0
-3m	-1.2	0	0
-3m	-1.4	0	0
-3m	-1.4	0	0
-3m	-1.6	0	0
-3m	-1.6	0	0
-3m	-1.8	0	0
-3m	-1.8	0	0
-3m	-2	0	0
-3m	-2	0	0
-3m	-2.2	0	0
-3m	-2.2	0	0
-3m	-2.25	0	0
-3m	-2.25	0	0
-3m	-2.45	4.07	20.34
-3m	-2.65	8.14	20.34
-3m	-2.85	12.21	20.34
-3m	-3.05	16.28	20.34
-3m	-3.25	20.33	20.28
-3m	-3.45	24.33	19.98
-3m	-3.65	28.21	19.43
-3m	-3.85	31.94	18.64
-3m	-4.05	35.47	17.61
-3m	-4.25	38.73	16.33
-3m	-4.45	41.68	14.72
-3m	-4.65	44.23	12.76
-3m	-4.85	46.31	10.43
-3m	-5.05	47.86	7.75
-3m	-5.25	48.8	4.7
-3m	-5.45	49.06	1.29
-3m	-5.65	48.56	-2.49
-3m	-5.85	47.47	-5.47
-3m	-6.05	45.73	-8.69
-3m	-6.25	43.51	-11.1
-3m	-6.45	41.15	-11.81
-3m	-6.65	38.72	-12.14
-3m	-6.85	36.28	-12.18
-3m	-7.05	33.87	-12.06
-3m	-7.25	31.49	-11.88
-3m	-7.45	29.17	-11.64
-3m	-7.65	26.89	-11.38
-3m	-7.85	24.67	-11.1

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
-3m	-8.05	22.51	-10.81
-3m	-8.25	20.4	-10.53
-3m	-8.45	18.35	-10.25
-3m	-8.65	16.36	-9.99
-3m	-8.85	14.4	-9.76
-3m	-9.05	12.49	-9.58
-3m	-9.25	10.6	-9.43
-3m	-9.45	8.74	-9.32
-3m	-9.65	6.89	-9.26
-3m	-9.85	5.04	-9.24
-3m	-10.05	3.18	-9.27
-3m	-10.25	1.32	-9.35
-3m	-10.45	-0.58	-9.47
-3m	-10.65	-2.51	-9.65
-3m	-10.85	-4.48	-9.87
-3m	-11.05	-6.51	-10.15
-3m	-11.25	-8.29	-8.91
-3m	-11.45	-9.84	-7.74
-3m	-11.65	-11.17	-6.65
-3m	-11.85	-12.3	-5.64
-3m	-12.05	-13.24	-4.7
-3m	-12.25	-14.01	-3.83
-3m	-12.45	-14.61	-3.03
-3m	-12.65	-15.07	-2.3
-3m	-12.85	-15.4	-1.63
-3m	-13.05	-15.6	-1.02
-3m	-13.25	-15.69	-0.46
-3m	-13.45	-15.69	0.03
-3m	-13.65	-15.59	0.48
-3m	-13.85	-15.42	0.87
-3m	-14.05	-15.17	1.22
-3m	-14.25	-14.87	1.52
-3m	-14.45	-14.51	1.79
-3m	-14.65	-14.11	2.01
-3m	-14.85	-13.67	2.2
-3m	-15.05	-13.2	2.36
-3m	-15.25	-12.7	2.49
-3m	-15.45	-12.18	2.59
-3m	-15.65	-11.65	2.66
-3m	-15.85	-11.11	2.71
-3m	-16.05	-10.56	2.74
-3m	-16.25	-10.01	2.75
-3m	-16.45	-9.46	2.74
-3m	-16.65	-8.92	2.72
-3m	-16.85	-8.38	2.68
-3m	-17.05	-7.86	2.63
-3m	-17.25	-7.34	2.57
-3m	-17.45	-6.84	2.5
-3m	-17.65	-6.36	2.43
-3m	-17.85	-5.89	2.34
-3m	-18.05	-5.44	2.25
-3m	-18.25	-5	2.16
-3m	-18.45	-4.59	2.07
-3m	-18.65	-4.2	1.97
-3m	-18.85	-3.82	1.87
-3m	-19.05	-3.47	1.76
-3m	-19.25	-3.14	1.66

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-3m	-19.45	-2.83	1.56
-3m	-19.65	-2.53	1.46
-3m	-19.85	-2.26	1.36
-3m	-20.05	-2.01	1.27
-3m	-20.25	-1.77	1.17
-3m	-20.45	-1.56	1.08
-3m	-20.65	-1.36	0.99
-3m	-20.85	-1.18	0.9
-3m	-21.05	-1.01	0.82
-3m	-21.25	-0.87	0.74
-3m	-21.45	-0.73	0.67
-3m	-21.65	-0.61	0.59
-3m	-21.85	-0.51	0.53
-3m	-22.05	-0.42	0.46
-3m	-22.25	-0.34	0.4
-3m	-22.45	-0.27	0.35
-3m	-22.65	-0.21	0.3
-3m	-22.85	-0.16	0.25
-3m	-23.05	-0.12	0.2
-3m	-23.25	-0.08	0.17
-3m	-23.45	-0.06	0.13
-3m	-23.65	-0.04	0.1
-3m	-23.85	-0.02	0.07
-3m	-24.05	-0.01	0.05
-3m	-24.25	-0.01	0.03
-3m	-24.45	0	0.02
-3m	-24.65	0	0.01
-3m	-24.85	0	0
-3m	-24.85	0	0
-3m	-25	0	0



Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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### Tabella Risultati Paratia Nominal - Stage: -4m

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
-4m	0	0	0
-4m	-0.2	0	0
-4m	-0.2	0	0
-4m	-0.4	0	0
-4m	-0.4	0	0
-4m	-0.6	0	0
-4m	-0.6	0	0
-4m	-0.8	0	0
-4m	-0.8	0	0
-4m	-1	0	0
-4m	-1	0	0
-4m	-1.2	0	0
-4m	-1.2	0	0
-4m	-1.4	0	0
-4m	-1.4	0	0
-4m	-1.6	0	0
-4m	-1.6	0	0
-4m	-1.8	0	0
-4m	-1.8	0	0
-4m	-2	0	0
-4m	-2	0	0
-4m	-2.2	0	0
-4m	-2.2	0	0
-4m	-2.25	0	0
-4m	-2.25	0	0
-4m	-2.45	6	29.98
-4m	-2.65	11.99	29.98
-4m	-2.85	17.99	29.98
-4m	-3.05	23.99	29.98
-4m	-3.25	29.97	29.92
-4m	-3.45	35.9	29.62
-4m	-3.65	41.71	29.07
-4m	-3.85	47.37	28.28
-4m	-4.05	52.82	27.25
-4m	-4.25	58.01	25.97
-4m	-4.45	62.9	24.45
-4m	-4.65	67.44	22.69
-4m	-4.85	71.57	20.66
-4m	-5.05	75.22	18.27
-4m	-5.25	78.33	15.53
-4m	-5.45	80.82	12.43
-4m	-5.65	82.61	8.98
-4m	-5.85	83.81	6
-4m	-6.05	84.37	2.78
-4m	-6.25	84.23	-0.67
-4m	-6.45	83.36	-4.36
-4m	-6.65	81.71	-8.28
-4m	-6.85	79.22	-12.44
-4m	-7.05	75.85	-16.83
-4m	-7.25	71.77	-20.43
-4m	-7.45	67.47	-21.47
-4m	-7.65	63.06	-22.05
-4m	-7.85	58.6	-22.31

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-4m	-8.05	54.14	-22.29
-4m	-8.25	49.73	-22.04
-4m	-8.45	45.41	-21.62
-4m	-8.65	41.17	-21.18
-4m	-8.85	37.02	-20.76
-4m	-9.05	32.95	-20.37
-4m	-9.25	28.94	-20.02
-4m	-9.45	25	-19.72
-4m	-9.65	21.11	-19.47
-4m	-9.85	17.25	-19.27
-4m	-10.05	13.42	-19.14
-4m	-10.25	9.61	-19.07
-4m	-10.45	5.8	-19.06
-4m	-10.65	1.97	-19.12
-4m	-10.85	-1.87	-19.24
-4m	-11.05	-5.76	-19.44
-4m	-11.25	-9.23	-17.35
-4m	-11.45	-12.31	-15.38
-4m	-11.65	-15.02	-13.53
-4m	-11.85	-17.37	-11.79
-4m	-12.05	-19.4	-10.16
-4m	-12.25	-21.13	-8.64
-4m	-12.45	-22.58	-7.22
-4m	-12.65	-23.76	-5.91
-4m	-12.85	-24.7	-4.7
-4m	-13.05	-25.42	-3.59
-4m	-13.25	-25.93	-2.57
-4m	-13.45	-26.26	-1.64
-4m	-13.65	-26.42	-0.79
-4m	-13.85	-26.42	-0.03
-4m	-14.05	-26.29	0.66
-4m	-14.25	-26.04	1.28
-4m	-14.45	-25.67	1.82
-4m	-14.65	-25.21	2.31
-4m	-14.85	-24.66	2.73
-4m	-15.05	-24.05	3.09
-4m	-15.25	-23.36	3.4
-4m	-15.45	-22.63	3.67
-4m	-15.65	-21.85	3.88
-4m	-15.85	-21.04	4.06
-4m	-16.05	-20.21	4.19
-4m	-16.25	-19.35	4.29
-4m	-16.45	-18.48	4.35
-4m	-16.65	-17.6	4.39
-4m	-16.85	-16.72	4.4
-4m	-17.05	-15.84	4.38
-4m	-17.25	-14.97	4.35
-4m	-17.45	-14.12	4.29
-4m	-17.65	-13.27	4.21
-4m	-17.85	-12.45	4.12
-4m	-18.05	-11.64	4.02
-4m	-18.25	-10.86	3.91
-4m	-18.45	-10.11	3.78
-4m	-18.65	-9.37	3.65
-4m	-18.85	-8.67	3.52
-4m	-19.05	-8	3.37
-4m	-19.25	-7.35	3.22

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-4m	-19.45	-6.74	3.07
-4m	-19.65	-6.15	2.92
-4m	-19.85	-5.6	2.77
-4m	-20.05	-5.08	2.62
-4m	-20.25	-4.58	2.46
-4m	-20.45	-4.12	2.31
-4m	-20.65	-3.69	2.17
-4m	-20.85	-3.28	2.02
-4m	-21.05	-2.91	1.88
-4m	-21.25	-2.56	1.74
-4m	-21.45	-2.24	1.6
-4m	-21.65	-1.95	1.47
-4m	-21.85	-1.68	1.34
-4m	-22.05	-1.43	1.22
-4m	-22.25	-1.21	1.1
-4m	-22.45	-1.01	0.99
-4m	-22.65	-0.84	0.89
-4m	-22.85	-0.68	0.78
-4m	-23.05	-0.54	0.69
-4m	-23.25	-0.42	0.6
-4m	-23.45	-0.32	0.51
-4m	-23.65	-0.24	0.43
-4m	-23.85	-0.17	0.35
-4m	-24.05	-0.11	0.28
-4m	-24.25	-0.07	0.22
-4m	-24.45	-0.03	0.16
-4m	-24.65	-0.01	0.1
-4m	-24.85	0	0.05
-4m	-25	0	0.02

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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### Tabella Risultati Paratia Nominal - Stage: -5m

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
-5m	0	0	0
-5m	-0.2	0	0
-5m	-0.2	0	0
-5m	-0.4	0	0
-5m	-0.4	0	0
-5m	-0.6	0	0
-5m	-0.6	0	0
-5m	-0.8	0	0
-5m	-0.8	0	0
-5m	-1	0	0
-5m	-1	0	0
-5m	-1.2	0	0
-5m	-1.2	0	0
-5m	-1.4	0	0
-5m	-1.4	0	0
-5m	-1.6	0	0
-5m	-1.6	0	0
-5m	-1.8	0	0
-5m	-1.8	0	0
-5m	-2	0	0
-5m	-2	0	0
-5m	-2.2	0	0
-5m	-2.2	0	0
-5m	-2.25	0	0
-5m	-2.25	0	0
-5m	-2.45	8.49	42.46
-5m	-2.65	16.98	42.46
-5m	-2.85	25.48	42.46
-5m	-3.05	33.97	42.46
-5m	-3.25	42.45	42.4
-5m	-3.45	50.87	42.1
-5m	-3.65	59.18	41.55
-5m	-3.85	67.33	40.76
-5m	-4.05	75.28	39.73
-5m	-4.25	82.97	38.45
-5m	-4.45	90.35	36.93
-5m	-4.65	97.38	35.17
-5m	-4.85	104.02	33.16
-5m	-5.05	110.2	30.91
-5m	-5.25	115.88	28.42
-5m	-5.45	121.02	25.68
-5m	-5.65	125.54	22.63
-5m	-5.85	129.47	19.65
-5m	-6.05	132.76	16.43
-5m	-6.25	135.36	12.98
-5m	-6.45	137.21	9.29
-5m	-6.65	138.29	5.37
-5m	-6.85	138.53	1.21
-5m	-7.05	137.89	-3.19
-5m	-7.25	136.33	-7.82
-5m	-7.45	133.79	-12.68
-5m	-7.65	130.24	-17.79
-5m	-7.85	125.61	-23.13

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-5m	-8.05	119.87	-28.7
-5m	-8.25	113.17	-33.48
-5m	-8.45	106.24	-34.68
-5m	-8.65	99.16	-35.38
-5m	-8.85	91.99	-35.85
-5m	-9.05	84.76	-36.16
-5m	-9.25	77.49	-36.35
-5m	-9.45	70.21	-36.41
-5m	-9.65	62.94	-36.36
-5m	-9.85	55.69	-36.22
-5m	-10.05	48.5	-35.98
-5m	-10.25	41.36	-35.67
-5m	-10.45	34.31	-35.27
-5m	-10.65	27.34	-34.82
-5m	-10.85	20.45	-34.45
-5m	-11.05	13.62	-34.16
-5m	-11.25	7.17	-32.28
-5m	-11.45	1.09	-30.38
-5m	-11.65	-4.6	-28.44
-5m	-11.85	-9.89	-26.48
-5m	-12.05	-14.79	-24.49
-5m	-12.25	-19.29	-22.48
-5m	-12.45	-23.38	-20.45
-5m	-12.65	-27.06	-18.39
-5m	-12.85	-30.32	-16.31
-5m	-13.05	-33.16	-14.21
-5m	-13.25	-35.58	-12.08
-5m	-13.45	-37.6	-10.1
-5m	-13.65	-39.25	-8.26
-5m	-13.85	-40.56	-6.55
-5m	-14.05	-41.55	-4.97
-5m	-14.25	-42.26	-3.53
-5m	-14.45	-42.7	-2.2
-5m	-14.65	-42.9	-0.99
-5m	-14.85	-42.87	0.12
-5m	-15.05	-42.65	1.11
-5m	-15.25	-42.25	2.01
-5m	-15.45	-41.68	2.81
-5m	-15.65	-40.98	3.53
-5m	-15.85	-40.15	4.16
-5m	-16.05	-39.21	4.71
-5m	-16.25	-38.17	5.19
-5m	-16.45	-37.05	5.6
-5m	-16.65	-35.86	5.94
-5m	-16.85	-34.61	6.23
-5m	-17.05	-33.32	6.46
-5m	-17.25	-32	6.64
-5m	-17.45	-30.64	6.77
-5m	-17.65	-29.27	6.86
-5m	-17.85	-27.89	6.9
-5m	-18.05	-26.51	6.92
-5m	-18.25	-25.13	6.9
-5m	-18.45	-23.76	6.85
-5m	-18.65	-22.41	6.77
-5m	-18.85	-21.07	6.67
-5m	-19.05	-19.76	6.54
-5m	-19.25	-18.48	6.4

Ponte stradale su Torrente Giustenice  
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COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
-5m	-19.45	-17.23	6.25
-5m	-19.65	-16.02	6.07
-5m	-19.85	-14.84	5.89
-5m	-20.05	-13.7	5.69
-5m	-20.25	-12.61	5.48
-5m	-20.45	-11.55	5.27
-5m	-20.65	-10.54	5.05
-5m	-20.85	-9.58	4.83
-5m	-21.05	-8.66	4.6
-5m	-21.25	-7.78	4.36
-5m	-21.45	-6.96	4.13
-5m	-21.65	-6.18	3.89
-5m	-21.85	-5.45	3.66
-5m	-22.05	-4.76	3.42
-5m	-22.25	-4.13	3.18
-5m	-22.45	-3.54	2.95
-5m	-22.65	-3	2.71
-5m	-22.85	-2.5	2.48
-5m	-23.05	-2.05	2.25
-5m	-23.25	-1.64	2.02
-5m	-23.45	-1.29	1.79
-5m	-23.65	-0.97	1.57
-5m	-23.85	-0.7	1.35
-5m	-24.05	-0.48	1.12
-5m	-24.25	-0.3	0.91
-5m	-24.45	-0.16	0.69
-5m	-24.65	-0.06	0.48
-5m	-24.85	-0.01	0.26
-5m	-25	0	0.08

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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### Tabella Risultati Paratia Nominal - Stage: Rinterro 1

Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
Rinterro 1	0	0	0
Rinterro 1	-0.2	0	0
Rinterro 1	-0.2	0	0
Rinterro 1	-0.4	0	0
Rinterro 1	-0.4	0	0
Rinterro 1	-0.6	0	0
Rinterro 1	-0.6	0	0
Rinterro 1	-0.8	0	0
Rinterro 1	-0.8	0	0
Rinterro 1	-1	0	0
Rinterro 1	-1	0	0
Rinterro 1	-1.2	0	0
Rinterro 1	-1.2	0	0
Rinterro 1	-1.4	0	0
Rinterro 1	-1.4	0	0
Rinterro 1	-1.6	0	0
Rinterro 1	-1.6	0	0
Rinterro 1	-1.8	-0.02	-0.1
Rinterro 1	-2	-0.1	-0.41
Rinterro 1	-2.2	-0.29	-0.93
Rinterro 1	-2.25	-0.36	-1.38
Rinterro 1	-2.45	16.11	82.36
Rinterro 1	-2.65	32.39	81.38
Rinterro 1	-2.85	48.43	80.19
Rinterro 1	-3.05	64.19	78.8
Rinterro 1	-3.25	79.49	76.52
Rinterro 1	-3.45	94.3	74.02
Rinterro 1	-3.65	108.56	71.29
Rinterro 1	-3.85	122.22	68.34
Rinterro 1	-4.05	135.26	65.16
Rinterro 1	-4.25	147.6	61.75
Rinterro 1	-4.45	159.23	58.12
Rinterro 1	-4.65	170.08	54.26
Rinterro 1	-4.85	180.11	50.17
Rinterro 1	-5.05	189.28	45.85
Rinterro 1	-5.25	197.54	41.3
Rinterro 1	-5.45	204.85	36.53
Rinterro 1	-5.65	211.14	31.44
Rinterro 1	-5.85	216.49	26.78
Rinterro 1	-6.05	220.87	21.88
Rinterro 1	-6.25	224.22	16.75
Rinterro 1	-6.45	226.5	11.38
Rinterro 1	-6.65	227.65	5.78
Rinterro 1	-6.85	227.64	-0.06
Rinterro 1	-7.05	226.41	-6.14
Rinterro 1	-7.25	223.92	-12.45
Rinterro 1	-7.45	220.12	-19
Rinterro 1	-7.65	214.96	-25.79
Rinterro 1	-7.85	208.4	-32.81
Rinterro 1	-8.05	200.39	-40.07
Rinterro 1	-8.25	191.08	-46.53
Rinterro 1	-8.45	181.26	-49.1
Rinterro 1	-8.65	171.26	-50

Ponte stradale su Torrente Giustenice  
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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT	
		Momento (kN*m/m)	Taglio (kN/m)
Rinterro 1	-8.85	161.13	-50.68
Rinterro 1	-9.05	150.88	-51.22
Rinterro 1	-9.25	140.56	-51.63
Rinterro 1	-9.45	130.17	-51.92
Rinterro 1	-9.65	119.75	-52.12
Rinterro 1	-9.85	109.3	-52.23
Rinterro 1	-10.05	98.85	-52.27
Rinterro 1	-10.25	88.4	-52.23
Rinterro 1	-10.45	77.98	-52.13
Rinterro 1	-10.65	67.58	-51.98
Rinterro 1	-10.85	57.22	-51.78
Rinterro 1	-11.05	46.92	-51.53
Rinterro 1	-11.25	37.06	-49.31
Rinterro 1	-11.45	27.64	-47.08
Rinterro 1	-11.65	18.67	-44.85
Rinterro 1	-11.85	10.15	-42.62
Rinterro 1	-12.05	2.07	-40.39
Rinterro 1	-12.25	-5.57	-38.17
Rinterro 1	-12.45	-12.76	-35.96
Rinterro 1	-12.65	-19.51	-33.75
Rinterro 1	-12.85	-25.82	-31.55
Rinterro 1	-13.05	-31.69	-29.36
Rinterro 1	-13.25	-37.13	-27.17
Rinterro 1	-13.45	-42.12	-24.99
Rinterro 1	-13.65	-46.69	-22.82
Rinterro 1	-13.85	-50.82	-20.64
Rinterro 1	-14.05	-54.51	-18.47
Rinterro 1	-14.25	-57.77	-16.31
Rinterro 1	-14.45	-60.6	-14.13
Rinterro 1	-14.65	-62.99	-11.96
Rinterro 1	-14.85	-64.95	-9.78
Rinterro 1	-15.05	-66.47	-7.6
Rinterro 1	-15.25	-67.55	-5.42
Rinterro 1	-15.45	-68.23	-3.41
Rinterro 1	-15.65	-68.54	-1.56
Rinterro 1	-15.85	-68.52	0.13
Rinterro 1	-16.05	-68.19	1.66
Rinterro 1	-16.25	-67.57	3.06
Rinterro 1	-16.45	-66.71	4.32
Rinterro 1	-16.65	-65.62	5.46
Rinterro 1	-16.85	-64.32	6.47
Rinterro 1	-17.05	-62.85	7.37
Rinterro 1	-17.25	-61.22	8.16
Rinterro 1	-17.45	-59.45	8.84
Rinterro 1	-17.65	-57.56	9.44
Rinterro 1	-17.85	-55.58	9.94
Rinterro 1	-18.05	-53.5	10.36
Rinterro 1	-18.25	-51.36	10.7
Rinterro 1	-18.45	-49.17	10.97
Rinterro 1	-18.65	-46.93	11.17
Rinterro 1	-18.85	-44.67	11.31
Rinterro 1	-19.05	-42.39	11.39
Rinterro 1	-19.25	-40.11	11.41
Rinterro 1	-19.45	-37.83	11.39
Rinterro 1	-19.65	-35.57	11.32
Rinterro 1	-19.85	-33.33	11.2
Rinterro 1	-20.05	-31.12	11.05



Ponte stradale su Torrente Giustenice  
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Design Assumption:	Risultati	Muro: LEFT	
Nominal Stage	Paratia Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Rinterro 1	-20.25	-28.95	10.86
Rinterro 1	-20.45	-26.82	10.64
Rinterro 1	-20.65	-24.74	10.39
Rinterro 1	-20.85	-22.72	10.1
Rinterro 1	-21.05	-20.76	9.8
Rinterro 1	-21.25	-18.87	9.46
Rinterro 1	-21.45	-17.05	9.11
Rinterro 1	-21.65	-15.3	8.74
Rinterro 1	-21.85	-13.63	8.34
Rinterro 1	-22.05	-12.04	7.93
Rinterro 1	-22.25	-10.54	7.51
Rinterro 1	-22.45	-9.13	7.06
Rinterro 1	-22.65	-7.81	6.61
Rinterro 1	-22.85	-6.58	6.14
Rinterro 1	-23.05	-5.45	5.65
Rinterro 1	-23.25	-4.42	5.15
Rinterro 1	-23.45	-3.49	4.65
Rinterro 1	-23.65	-2.67	4.12
Rinterro 1	-23.85	-1.95	3.59
Rinterro 1	-24.05	-1.34	3.05
Rinterro 1	-24.25	-0.84	2.49
Rinterro 1	-24.45	-0.45	1.92
Rinterro 1	-24.65	-0.19	1.35
Rinterro 1	-24.85	-0.03	0.76
Rinterro 1	-25	0	0.23

Ponte stradale su Torrente Giustenice  
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### Tabella Risultati Paratia Nominal - Stage: Rinterro 2

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
Rinterro 2	0	0	0
Rinterro 2	-0.2	0	0
Rinterro 2	-0.2	0	0
Rinterro 2	-0.4	-0.04	-0.21
Rinterro 2	-0.6	-0.16	-0.62
Rinterro 2	-0.8	-0.41	-1.24
Rinterro 2	-1	-0.82	-2.06
Rinterro 2	-1.2	-1.44	-3.09
Rinterro 2	-1.4	-2.31	-4.33
Rinterro 2	-1.6	-3.46	-5.77
Rinterro 2	-1.8	-4.94	-7.41
Rinterro 2	-2	-6.8	-9.27
Rinterro 2	-2.2	-9.06	-11.33
Rinterro 2	-2.25	-9.7	-12.74
Rinterro 2	-2.45	15.48	125.92
Rinterro 2	-2.65	40.16	123.39
Rinterro 2	-2.85	64.3	120.66
Rinterro 2	-3.05	87.84	117.73
Rinterro 2	-3.25	110.49	113.26
Rinterro 2	-3.45	132.21	108.59
Rinterro 2	-3.65	152.95	103.71
Rinterro 2	-3.85	172.68	98.63
Rinterro 2	-4.05	191.35	93.33
Rinterro 2	-4.25	208.91	87.83
Rinterro 2	-4.45	225.33	82.11
Rinterro 2	-4.65	240.57	76.18
Rinterro 2	-4.85	254.58	70.04
Rinterro 2	-5.05	267.31	63.68
Rinterro 2	-5.25	278.74	57.11
Rinterro 2	-5.45	288.8	50.32
Rinterro 2	-5.65	297.45	43.24
Rinterro 2	-5.85	304.83	36.9
Rinterro 2	-6.05	310.89	30.32
Rinterro 2	-6.25	315.59	23.5
Rinterro 2	-6.45	318.88	16.45
Rinterro 2	-6.65	320.72	9.17
Rinterro 2	-6.85	321.04	1.64
Rinterro 2	-7.05	319.82	-6.12
Rinterro 2	-7.25	317	-14.11
Rinterro 2	-7.45	312.53	-22.34
Rinterro 2	-7.65	306.37	-30.81
Rinterro 2	-7.85	298.47	-39.51
Rinterro 2	-8.05	288.78	-48.45
Rinterro 2	-8.25	277.46	-56.59
Rinterro 2	-8.45	265.29	-60.84
Rinterro 2	-8.65	252.92	-61.85
Rinterro 2	-8.85	240.39	-62.64
Rinterro 2	-9.05	227.74	-63.28
Rinterro 2	-9.25	214.98	-63.8
Rinterro 2	-9.45	202.13	-64.21
Rinterro 2	-9.65	189.23	-64.53
Rinterro 2	-9.85	176.27	-64.77
Rinterro 2	-10.05	163.28	-64.94

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Design Assumption:	Risultati	Muro: LEFT	
Nominal Stage	Paratia Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Rinterro 2	-10.25	150.28	-65.05
Rinterro 2	-10.45	137.25	-65.1
Rinterro 2	-10.65	124.23	-65.11
Rinterro 2	-10.85	111.21	-65.09
Rinterro 2	-11.05	98.21	-65.03
Rinterro 2	-11.25	85.63	-62.88
Rinterro 2	-11.45	73.49	-60.72
Rinterro 2	-11.65	61.78	-58.55
Rinterro 2	-11.85	50.5	-56.38
Rinterro 2	-12.05	39.66	-54.19
Rinterro 2	-12.25	29.26	-52.01
Rinterro 2	-12.45	19.3	-49.82
Rinterro 2	-12.65	9.77	-47.62
Rinterro 2	-12.85	0.69	-45.43
Rinterro 2	-13.05	-7.96	-43.23
Rinterro 2	-13.25	-16.16	-41.03
Rinterro 2	-13.45	-23.93	-38.83
Rinterro 2	-13.65	-31.25	-36.62
Rinterro 2	-13.85	-38.13	-34.42
Rinterro 2	-14.05	-44.58	-32.21
Rinterro 2	-14.25	-50.57	-29.99
Rinterro 2	-14.45	-56.13	-27.77
Rinterro 2	-14.65	-61.24	-25.55
Rinterro 2	-14.85	-65.9	-23.32
Rinterro 2	-15.05	-70.12	-21.08
Rinterro 2	-15.25	-73.88	-18.84
Rinterro 2	-15.45	-77.21	-16.62
Rinterro 2	-15.65	-80.09	-14.42
Rinterro 2	-15.85	-82.54	-12.24
Rinterro 2	-16.05	-84.55	-10.06
Rinterro 2	-16.25	-86.13	-7.9
Rinterro 2	-16.45	-87.28	-5.74
Rinterro 2	-16.65	-88	-3.58
Rinterro 2	-16.85	-88.28	-1.43
Rinterro 2	-17.05	-88.14	0.72
Rinterro 2	-17.25	-87.58	2.77
Rinterro 2	-17.45	-86.66	4.64
Rinterro 2	-17.65	-85.39	6.34
Rinterro 2	-17.85	-83.81	7.88
Rinterro 2	-18.05	-81.96	9.27
Rinterro 2	-18.25	-79.86	10.5
Rinterro 2	-18.45	-77.54	11.6
Rinterro 2	-18.65	-75.02	12.57
Rinterro 2	-18.85	-72.34	13.41
Rinterro 2	-19.05	-69.52	14.13
Rinterro 2	-19.25	-66.57	14.74
Rinterro 2	-19.45	-63.52	15.23
Rinterro 2	-19.65	-60.4	15.63
Rinterro 2	-19.85	-57.21	15.93
Rinterro 2	-20.05	-53.98	16.14
Rinterro 2	-20.25	-50.73	16.26
Rinterro 2	-20.45	-47.47	16.29
Rinterro 2	-20.65	-44.22	16.25
Rinterro 2	-20.85	-41	16.13
Rinterro 2	-21.05	-37.81	15.94
Rinterro 2	-21.25	-34.67	15.68
Rinterro 2	-21.45	-31.6	15.36

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Design Assumption:	Risultati	Muro: LEFT	
Nominal Stage	Paratia Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Rinterro 2	-21.65	-28.61	14.97
Rinterro 2	-21.85	-25.7	14.53
Rinterro 2	-22.05	-22.9	14.02
Rinterro 2	-22.25	-20.2	13.46
Rinterro 2	-22.45	-17.63	12.85
Rinterro 2	-22.65	-15.2	12.18
Rinterro 2	-22.85	-12.91	11.46
Rinterro 2	-23.05	-10.77	10.69
Rinterro 2	-23.25	-8.8	9.87
Rinterro 2	-23.45	-7	9
Rinterro 2	-23.65	-5.38	8.08
Rinterro 2	-23.85	-3.96	7.11
Rinterro 2	-24.05	-2.74	6.1
Rinterro 2	-24.25	-1.73	5.04
Rinterro 2	-24.45	-0.94	3.93
Rinterro 2	-24.65	-0.39	2.78
Rinterro 2	-24.85	-0.07	1.58
Rinterro 2	-25	0	0.48

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### Tabella Risultati Paratia Nominal - Stage: Acc

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
Acc	0	0	0
Acc	-0.2	0	0
Acc	-0.2	0	0
Acc	-0.4	-0.04	-0.21
Acc	-0.6	-0.18	-0.67
Acc	-0.8	-0.45	-1.39
Acc	-1	-0.93	-2.4
Acc	-1.2	-1.67	-3.68
Acc	-1.4	-2.72	-5.27
Acc	-1.6	-4.14	-7.09
Acc	-1.8	-5.97	-9.13
Acc	-2	-8.26	-11.45
Acc	-2.2	-11.05	-13.97
Acc	-2.25	-11.84	-15.71
Acc	-2.45	14.58	132.08
Acc	-2.65	40.39	129.05
Acc	-2.85	65.55	125.78
Acc	-3.05	90.01	122.3
Acc	-3.25	113.59	117.91
Acc	-3.45	136.24	113.28
Acc	-3.65	157.93	108.41
Acc	-3.85	178.58	103.27
Acc	-4.05	198.15	97.88
Acc	-4.25	216.61	92.25
Acc	-4.45	233.88	86.36
Acc	-4.65	249.92	80.23
Acc	-4.85	264.69	73.83
Acc	-5.05	278.13	67.19
Acc	-5.25	290.19	60.32
Acc	-5.45	300.83	53.18
Acc	-5.65	309.99	45.8
Acc	-5.85	317.74	38.75
Acc	-6.05	324.03	31.47
Acc	-6.25	328.82	23.95
Acc	-6.45	332.06	16.18
Acc	-6.65	333.69	8.18
Acc	-6.85	333.68	-0.06
Acc	-7.05	331.97	-8.54
Acc	-7.25	328.52	-17.25
Acc	-7.45	323.28	-26.21
Acc	-7.65	316.2	-35.41
Acc	-7.85	307.23	-44.83
Acc	-8.05	296.33	-54.51
Acc	-8.25	283.65	-63.38
Acc	-8.45	269.98	-68.37
Acc	-8.65	256.09	-69.47
Acc	-8.85	242.13	-69.77
Acc	-9.05	228.13	-69.99
Acc	-9.25	214.11	-70.12
Acc	-9.45	200.07	-70.19
Acc	-9.65	186.04	-70.18
Acc	-9.85	172.01	-70.11
Acc	-10.05	158.01	-70

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
Acc	-10.25	144.05	-69.84
Acc	-10.45	130.12	-69.64
Acc	-10.65	116.24	-69.41
Acc	-10.85	102.41	-69.14
Acc	-11.05	88.64	-68.85
Acc	-11.25	75.36	-66.41
Acc	-11.45	62.56	-63.98
Acc	-11.65	50.25	-61.57
Acc	-11.85	38.41	-59.17
Acc	-12.05	27.06	-56.78
Acc	-12.25	16.17	-54.42
Acc	-12.45	5.76	-52.06
Acc	-12.65	-4.19	-49.73
Acc	-12.85	-13.67	-47.42
Acc	-13.05	-22.7	-45.13
Acc	-13.25	-31.27	-42.86
Acc	-13.45	-39.39	-40.6
Acc	-13.65	-47.06	-38.37
Acc	-13.85	-54.29	-36.15
Acc	-14.05	-61.08	-33.95
Acc	-14.25	-67.43	-31.76
Acc	-14.45	-73.35	-29.59
Acc	-14.65	-78.84	-27.43
Acc	-14.85	-83.89	-25.28
Acc	-15.05	-88.52	-23.14
Acc	-15.25	-92.72	-21.01
Acc	-15.45	-96.49	-18.87
Acc	-15.65	-99.84	-16.74
Acc	-15.85	-102.76	-14.6
Acc	-16.05	-105.25	-12.45
Acc	-16.25	-107.31	-10.3
Acc	-16.45	-108.94	-8.14
Acc	-16.65	-110.13	-5.97
Acc	-16.85	-110.89	-3.78
Acc	-17.05	-111.2	-1.57
Acc	-17.25	-111.08	0.62
Acc	-17.45	-110.52	2.81
Acc	-17.65	-109.52	4.98
Acc	-17.85	-108.09	7.15
Acc	-18.05	-106.24	9.24
Acc	-18.25	-104.02	11.13
Acc	-18.45	-101.45	12.84
Acc	-18.65	-98.58	14.36
Acc	-18.85	-95.44	15.7
Acc	-19.05	-92.06	16.88
Acc	-19.25	-88.48	17.9
Acc	-19.45	-84.72	18.78
Acc	-19.65	-80.82	19.5
Acc	-19.85	-76.81	20.09
Acc	-20.05	-72.7	20.55
Acc	-20.25	-68.52	20.88
Acc	-20.45	-64.3	21.09
Acc	-20.65	-60.07	21.18
Acc	-20.85	-55.83	21.17
Acc	-21.05	-51.62	21.05
Acc	-21.25	-47.46	20.82
Acc	-21.45	-43.36	20.5

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Design Assumption: Nominal Stage	Risultati Paratia Z (m)	Muro: LEFT Momento (kN*m/m)	Taglio (kN/m)
Acc	-21.65	-39.34	20.09
Acc	-21.85	-35.43	19.58
Acc	-22.05	-31.63	18.98
Acc	-22.25	-27.97	18.3
Acc	-22.45	-24.47	17.53
Acc	-22.65	-21.13	16.68
Acc	-22.85	-17.98	15.75
Acc	-23.05	-15.03	14.74
Acc	-23.25	-12.3	13.66
Acc	-23.45	-9.8	12.49
Acc	-23.65	-7.55	11.25
Acc	-23.85	-5.56	9.93
Acc	-24.05	-3.85	8.54
Acc	-24.25	-2.44	7.08
Acc	-24.45	-1.33	5.54
Acc	-24.65	-0.55	3.92
Acc	-24.85	-0.1	2.23
Acc	-25	0	0.68

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### Tabella Risultati Paratia Nominal - Stage: Sisma

Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
Sisma	0	0	-1.75
Sisma	-0.2	-0.35	-1.75
Sisma	-0.4	-1.45	-5.47
Sisma	-0.6	-3.33	-9.44
Sisma	-0.8	-6.07	-13.66
Sisma	-1	-9.7	-18.19
Sisma	-1.2	-14.3	-22.97
Sisma	-1.4	-19.91	-28.07
Sisma	-1.6	-26.59	-33.4
Sisma	-1.8	-34.38	-38.95
Sisma	-2	-43.33	-44.77
Sisma	-2.2	-53.49	-50.8
Sisma	-2.25	-56.23	-54.74
Sisma	-2.45	-19.62	183.06
Sisma	-2.65	15.69	176.52
Sisma	-2.85	49.64	169.75
Sisma	-3.05	82.19	162.76
Sisma	-3.25	113.16	154.86
Sisma	-3.45	142.5	146.73
Sisma	-3.65	170.17	138.35
Sisma	-3.85	196.11	129.7
Sisma	-4.05	220.27	120.8
Sisma	-4.25	242.61	111.67
Sisma	-4.45	263.06	102.27
Sisma	-4.65	281.59	92.63
Sisma	-4.85	298.13	82.72
Sisma	-5.05	312.65	72.58
Sisma	-5.25	325.09	62.19
Sisma	-5.45	335.4	51.55
Sisma	-5.65	343.53	40.66
Sisma	-5.85	349.55	30.1
Sisma	-6.05	353.41	19.31
Sisma	-6.25	355.07	8.29
Sisma	-6.45	354.47	-2.98
Sisma	-6.65	351.57	-14.49
Sisma	-6.85	346.32	-26.24
Sisma	-7.05	338.68	-38.23
Sisma	-7.25	328.59	-50.45
Sisma	-7.45	316	-62.92
Sisma	-7.65	300.88	-75.62
Sisma	-7.85	283.17	-88.55
Sisma	-8.05	262.91	-101.28
Sisma	-8.25	240.86	-110.27
Sisma	-8.45	217.69	-115.83
Sisma	-8.65	194.1	-117.95
Sisma	-8.85	170.49	-118.04
Sisma	-9.05	147.18	-116.58
Sisma	-9.25	124.36	-114.07
Sisma	-9.45	102.05	-111.58
Sisma	-9.65	80.23	-109.11
Sisma	-9.85	58.89	-106.66
Sisma	-10.05	38.04	-104.26
Sisma	-10.25	17.67	-101.88



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Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
Sisma	-10.45	-2.25	-99.56
Sisma	-10.65	-21.7	-97.27
Sisma	-10.85	-40.71	-95.03
Sisma	-11.05	-59.28	-92.85
Sisma	-11.25	-76.84	-87.8
Sisma	-11.45	-93.41	-82.86
Sisma	-11.65	-109.02	-78.05
Sisma	-11.85	-123.69	-73.35
Sisma	-12.05	-137.44	-68.77
Sisma	-12.25	-150.3	-64.3
Sisma	-12.45	-162.29	-59.95
Sisma	-12.65	-173.43	-55.71
Sisma	-12.85	-183.75	-51.59
Sisma	-13.05	-193.26	-47.57
Sisma	-13.25	-202	-43.66
Sisma	-13.45	-209.96	-39.84
Sisma	-13.65	-217.19	-36.14
Sisma	-13.85	-223.7	-32.52
Sisma	-14.05	-229.5	-29
Sisma	-14.25	-234.61	-25.58
Sisma	-14.45	-239.06	-22.23
Sisma	-14.65	-242.85	-18.97
Sisma	-14.85	-246.01	-15.79
Sisma	-15.05	-248.55	-12.68
Sisma	-15.25	-250.48	-9.65
Sisma	-15.45	-251.81	-6.67
Sisma	-15.65	-252.56	-3.74
Sisma	-15.85	-252.73	-0.88
Sisma	-16.05	-252.35	1.95
Sisma	-16.25	-251.4	4.72
Sisma	-16.45	-249.91	7.46
Sisma	-16.65	-247.88	10.16
Sisma	-16.85	-245.31	12.82
Sisma	-17.05	-242.22	15.46
Sisma	-17.25	-238.61	18.07
Sisma	-17.45	-234.48	20.66
Sisma	-17.65	-229.83	23.23
Sisma	-17.85	-224.67	25.79
Sisma	-18.05	-219	28.34
Sisma	-18.25	-212.83	30.85
Sisma	-18.45	-206.17	33.31
Sisma	-18.65	-199.07	35.53
Sisma	-18.85	-191.58	37.45
Sisma	-19.05	-183.76	39.08
Sisma	-19.25	-175.67	40.43
Sisma	-19.45	-167.37	41.53
Sisma	-19.65	-158.89	42.37
Sisma	-19.85	-150.3	42.98
Sisma	-20.05	-141.62	43.36
Sisma	-20.25	-132.92	43.53
Sisma	-20.45	-124.22	43.5
Sisma	-20.65	-115.57	43.26
Sisma	-20.85	-107	42.84
Sisma	-21.05	-98.55	42.25
Sisma	-21.25	-90.25	41.48
Sisma	-21.45	-82.14	40.54
Sisma	-21.65	-74.26	39.45

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Design Assumption:	Risultati	Muro: LEFT	
Nominal	Paratia	Momento	Taglio
Stage	Z (m)	(kN*m/m)	(kN/m)
Sisma	-21.85	-66.61	38.2
Sisma	-22.05	-59.25	36.81
Sisma	-22.25	-52.2	35.27
Sisma	-22.45	-45.48	33.6
Sisma	-22.65	-39.12	31.79
Sisma	-22.85	-33.15	29.84
Sisma	-23.05	-27.6	27.77
Sisma	-23.25	-22.48	25.57
Sisma	-23.45	-17.83	23.24
Sisma	-23.65	-13.68	20.79
Sisma	-23.85	-10.03	18.22
Sisma	-24.05	-6.92	15.56
Sisma	-24.25	-4.36	12.8
Sisma	-24.45	-2.37	9.95
Sisma	-24.65	-0.97	7
Sisma	-24.85	-0.18	3.95
Sisma	-25	0	1.2

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## Risultati Elementi strutturali

Design Assumption:	Sollecitazione
Nominal	Spring
Stage	Forza (kN/m)
Cordolo	0
-1m	6.566371
-2m	13.14065
-3m	20.34465
-4m	29.98445
-5m	42.46181
Rinterro 1	84.21751
Rinterro 2	140.1081
Acc	266.5545
Sisma	806.7731

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## Risultati Terreno

**Tabella Risultati Terreno Left Wall - Nominal - Condizione geostatica**

Design Assumption: Nominal		Risultati Terreno	Muro: LEFT	Lato LEFT							
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Condizione geostatica	0	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-3.05	0.95	0.461	V-C	0.32	4.555	0	0	0	0	0.461
Condizione geostatica	-3.25	4.75	2.304	V-C	0.32	4.555	0	0	0	0	2.304
Condizione geostatica	-3.45	8.55	4.147	V-C	0.32	4.555	0	0	0	0	4.147
Condizione geostatica	-3.65	12.35	5.99	V-C	0.32	4.555	0	0	0	0	5.99
Condizione geostatica	-3.85	16.15	7.833	V-C	0.32	4.555	0	0	0	0	7.833
Condizione geostatica	-4.05	19.95	9.676	V-C	0.32	4.555	0	0	0	0	9.676
Condizione geostatica	-4.25	23.75	11.519	V-C	0.32	4.555	0	0	0	0	11.519
Condizione geostatica	-4.45	27.55	13.362	V-C	0.32	4.555	0	0	0	0	13.362
Condizione geostatica	-4.65	31.35	15.205	V-C	0.32	4.555	0	0	0	0	15.205

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Design Assumption: Nominal		Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Condizione geostatica	-4.85	35.15	17.048	V-C	0.32	4.555	0	0	0	0	17.048
Condizione geostatica	-5.05	38.95	18.891	V-C	0.32	4.555	0	0	0	0	18.891
Condizione geostatica	-5.25	42.75	20.734	V-C	0.32	4.555	0	0	0	0	20.734
Condizione geostatica	-5.45	46.55	22.577	V-C	0.32	4.555	0	0	0	0	22.577
Condizione geostatica	-5.65	50.5	22.977	V-C	0.295	5.16	0	0	0	0	22.977
Condizione geostatica	-5.85	54.5	24.797	V-C	0.295	5.16	0	0	0	0	24.797
Condizione geostatica	-6.05	58.5	26.617	V-C	0.295	5.16	0	0	0	0	26.617
Condizione geostatica	-6.25	62.5	28.437	V-C	0.295	5.16	0	0	0	0	28.437
Condizione geostatica	-6.45	66.5	30.257	V-C	0.295	5.16	0	0	0	0	30.257
Condizione geostatica	-6.65	70.5	32.077	V-C	0.295	5.16	0	0	0	0	32.077
Condizione geostatica	-6.85	74.5	33.897	V-C	0.295	5.16	0	0	0	0	33.897
Condizione geostatica	-7.05	78.5	35.717	V-C	0.295	5.16	0	0	0	0	35.717
Condizione geostatica	-7.25	82.5	37.537	V-C	0.295	5.16	0	0	0	0	37.537
Condizione geostatica	-7.45	86.5	39.357	V-C	0.295	5.16	0	0	0	0	39.357
Condizione geostatica	-7.65	90.5	41.177	V-C	0.295	5.16	0	0	0	0	41.177
Condizione geostatica	-7.85	94.5	42.997	V-C	0.295	5.16	0	0	0	0	42.997
Condizione geostatica	-8.05	98.5	44.817	V-C	0.295	5.16	0	0	0	0	44.817
Condizione geostatica	-8.25	102.5	46.637	V-C	0.295	5.16	0	0	0	0	46.637
Condizione geostatica	-8.45	106.5	48.457	V-C	0.295	5.16	0	0	0	0	48.457
Condizione geostatica	-8.65	109	49.595	V-C	0.295	5.16	0	1.5	0	0	51.095
Condizione geostatica	-8.85	111	50.505	V-C	0.295	5.16	0	3.5	0	0	54.005
Condizione geostatica	-9.05	113	51.415	V-C	0.295	5.16	0	5.5	0	0	56.915
Condizione geostatica	-9.25	115	52.325	V-C	0.295	5.16	0	7.5	0	0	59.825
Condizione geostatica	-9.45	117	53.235	V-C	0.295	5.16	0	9.5	0	0	62.735
Condizione geostatica	-9.65	119	54.145	V-C	0.295	5.16	0	11.5	0	0	65.645
Condizione geostatica	-9.85	121	55.055	V-C	0.295	5.16	0	13.5	0	0	68.555
Condizione geostatica	-10.05	123	55.965	V-C	0.295	5.16	0	15.5	0	0	71.465
Condizione geostatica	-10.25	125	56.875	V-C	0.295	5.16	0	17.5	0	0	74.375
Condizione geostatica	-10.45	127	57.785	V-C	0.295	5.16	0	19.5	0	0	77.285



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Design Assumption: Nominal		Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Condizione geostatica	-16.25	185	78.81	V-C	0.2715.879	0	77.5	0	0	0	156.31
Condizione geostatica	-16.45	187	79.662	V-C	0.2715.879	0	79.5	0	0	0	159.162
Condizione geostatica	-16.65	189	80.514	V-C	0.2715.879	0	81.5	0	0	0	162.014
Condizione geostatica	-16.85	191	81.366	V-C	0.2715.879	0	83.5	0	0	0	164.866
Condizione geostatica	-17.05	193	82.218	V-C	0.2715.879	0	85.5	0	0	0	167.718
Condizione geostatica	-17.25	195	83.07	V-C	0.2715.879	0	87.5	0	0	0	170.57
Condizione geostatica	-17.45	197	83.922	V-C	0.2715.879	0	89.5	0	0	0	173.422
Condizione geostatica	-17.65	199	84.774	V-C	0.2715.879	0	91.5	0	0	0	176.274
Condizione geostatica	-17.85	201	85.626	V-C	0.2715.879	0	93.5	0	0	0	179.126
Condizione geostatica	-18.05	203	86.478	V-C	0.2715.879	0	95.5	0	0	0	181.978
Condizione geostatica	-18.25	205	87.33	V-C	0.2715.879	0	97.5	0	0	0	184.83
Condizione geostatica	-18.45	207	88.182	V-C	0.2715.879	0	99.5	0	0	0	187.682
Condizione geostatica	-18.65	209	89.034	V-C	0.2715.879	0	101.5	0	0	0	190.534
Condizione geostatica	-18.85	211	89.886	V-C	0.2715.879	0	103.5	0	0	0	193.386
Condizione geostatica	-19.05	213	90.738	V-C	0.2715.879	0	105.5	0	0	0	196.238
Condizione geostatica	-19.25	215	91.59	V-C	0.2715.879	0	107.5	0	0	0	199.09
Condizione geostatica	-19.45	217	92.442	V-C	0.2715.879	0	109.5	0	0	0	201.942
Condizione geostatica	-19.65	219	93.294	V-C	0.2715.879	0	111.5	0	0	0	204.794
Condizione geostatica	-19.85	221	94.146	V-C	0.2715.879	0	113.5	0	0	0	207.646
Condizione geostatica	-20.05	223	94.998	V-C	0.2715.879	0	115.5	0	0	0	210.498
Condizione geostatica	-20.25	225	95.85	V-C	0.2715.879	0	117.5	0	0	0	213.35
Condizione geostatica	-20.45	227	96.702	V-C	0.2715.879	0	119.5	0	0	0	216.202
Condizione geostatica	-20.65	229	97.554	V-C	0.2715.879	0	121.5	0	0	0	219.054
Condizione geostatica	-20.85	231	98.406	V-C	0.2715.879	0	123.5	0	0	0	221.906
Condizione geostatica	-21.05	233	99.258	V-C	0.2715.879	0	125.5	0	0	0	224.758
Condizione geostatica	-21.25	235	100.11	V-C	0.2715.879	0	127.5	0	0	0	227.61
Condizione geostatica	-21.45	237	100.962	V-C	0.2715.879	0	129.5	0	0	0	230.462
Condizione geostatica	-21.65	239	101.814	V-C	0.2715.879	0	131.5	0	0	0	233.314
Condizione geostatica	-21.85	241	102.666	V-C	0.2715.879	0	133.5	0	0	0	236.166





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Design Assumption: Nominal		Risultati Terreno		Muro:	LEFT	Lato	RIGHT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Condizione geostatica	0	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
Condizione geostatica	-3.05	0.95	0.461	V-C	0.32	4.555	0	0	0	0	0.461
Condizione geostatica	-3.25	4.75	2.304	V-C	0.32	4.555	0	0	0	0	2.304
Condizione geostatica	-3.45	8.55	4.147	V-C	0.32	4.555	0	0	0	0	4.147
Condizione geostatica	-3.65	12.35	5.99	V-C	0.32	4.555	0	0	0	0	5.99
Condizione geostatica	-3.85	16.15	7.833	V-C	0.32	4.555	0	0	0	0	7.833
Condizione geostatica	-4.05	19.95	9.676	V-C	0.32	4.555	0	0	0	0	9.676
Condizione geostatica	-4.25	23.75	11.519	V-C	0.32	4.555	0	0	0	0	11.519
Condizione geostatica	-4.45	27.55	13.362	V-C	0.32	4.555	0	0	0	0	13.362
Condizione geostatica	-4.65	31.35	15.205	V-C	0.32	4.555	0	0	0	0	15.205
Condizione geostatica	-4.85	35.15	17.048	V-C	0.32	4.555	0	0	0	0	17.048
Condizione geostatica	-5.05	38.95	18.891	V-C	0.32	4.555	0	0	0	0	18.891
Condizione geostatica	-5.25	42.75	20.734	V-C	0.32	4.555	0	0	0	0	20.734

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Design Assumption: Nominal		Risultati Terreno	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Condizione geostatica	-5.45	46.55	22.577	V-C	0.32	4.555	0	0	0	0	22.577
Condizione geostatica	-5.65	50.5	22.977	V-C	0.295	5.16	0	0	0	0	22.977
Condizione geostatica	-5.85	54.5	24.797	V-C	0.295	5.16	0	0	0	0	24.797
Condizione geostatica	-6.05	58.5	26.617	V-C	0.295	5.16	0	0	0	0	26.617
Condizione geostatica	-6.25	62.5	28.437	V-C	0.295	5.16	0	0	0	0	28.437
Condizione geostatica	-6.45	66.5	30.257	V-C	0.295	5.16	0	0	0	0	30.257
Condizione geostatica	-6.65	70.5	32.077	V-C	0.295	5.16	0	0	0	0	32.077
Condizione geostatica	-6.85	74.5	33.897	V-C	0.295	5.16	0	0	0	0	33.897
Condizione geostatica	-7.05	78.5	35.717	V-C	0.295	5.16	0	0	0	0	35.717
Condizione geostatica	-7.25	82.5	37.537	V-C	0.295	5.16	0	0	0	0	37.537
Condizione geostatica	-7.45	86.5	39.357	V-C	0.295	5.16	0	0	0	0	39.357
Condizione geostatica	-7.65	90.5	41.177	V-C	0.295	5.16	0	0	0	0	41.177
Condizione geostatica	-7.85	94.5	42.997	V-C	0.295	5.16	0	0	0	0	42.997
Condizione geostatica	-8.05	98.5	44.817	V-C	0.295	5.16	0	0	0	0	44.817
Condizione geostatica	-8.25	102.5	46.637	V-C	0.295	5.16	0	0	0	0	46.637
Condizione geostatica	-8.45	106.5	48.457	V-C	0.295	5.16	0	0	0	0	48.457
Condizione geostatica	-8.65	109	49.595	V-C	0.295	5.16	0	1.5	0	0	51.095
Condizione geostatica	-8.85	111	50.505	V-C	0.295	5.16	0	3.5	0	0	54.005
Condizione geostatica	-9.05	113	51.415	V-C	0.295	5.16	0	5.5	0	0	56.915
Condizione geostatica	-9.25	115	52.325	V-C	0.295	5.16	0	7.5	0	0	59.825
Condizione geostatica	-9.45	117	53.235	V-C	0.295	5.16	0	9.5	0	0	62.735
Condizione geostatica	-9.65	119	54.145	V-C	0.295	5.16	0	11.5	0	0	65.645
Condizione geostatica	-9.85	121	55.055	V-C	0.295	5.16	0	13.5	0	0	68.555
Condizione geostatica	-10.05	123	55.965	V-C	0.295	5.16	0	15.5	0	0	71.465
Condizione geostatica	-10.25	125	56.875	V-C	0.295	5.16	0	17.5	0	0	74.375
Condizione geostatica	-10.45	127	57.785	V-C	0.295	5.16	0	19.5	0	0	77.285
Condizione geostatica	-10.65	129	58.695	V-C	0.295	5.16	0	21.5	0	0	80.195
Condizione geostatica	-10.85	131	59.605	V-C	0.295	5.16	0	23.5	0	0	83.105
Condizione geostatica	-11.05	133	56.658	V-C	0.2715	5.879	0	25.5	0	0	82.158



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Design Assumption: Nominal		Risultati Terreno	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Condizione geostatica	-16.85	191	81.366	V-C	0.2715.879		0	83.5	0	0	164.866
Condizione geostatica	-17.05	193	82.218	V-C	0.2715.879		0	85.5	0	0	167.718
Condizione geostatica	-17.25	195	83.07	V-C	0.2715.879		0	87.5	0	0	170.57
Condizione geostatica	-17.45	197	83.922	V-C	0.2715.879		0	89.5	0	0	173.422
Condizione geostatica	-17.65	199	84.774	V-C	0.2715.879		0	91.5	0	0	176.274
Condizione geostatica	-17.85	201	85.626	V-C	0.2715.879		0	93.5	0	0	179.126
Condizione geostatica	-18.05	203	86.478	V-C	0.2715.879		0	95.5	0	0	181.978
Condizione geostatica	-18.25	205	87.33	V-C	0.2715.879		0	97.5	0	0	184.83
Condizione geostatica	-18.45	207	88.182	V-C	0.2715.879		0	99.5	0	0	187.682
Condizione geostatica	-18.65	209	89.034	V-C	0.2715.879		0	101.5	0	0	190.534
Condizione geostatica	-18.85	211	89.886	V-C	0.2715.879		0	103.5	0	0	193.386
Condizione geostatica	-19.05	213	90.738	V-C	0.2715.879		0	105.5	0	0	196.238
Condizione geostatica	-19.25	215	91.59	V-C	0.2715.879		0	107.5	0	0	199.09
Condizione geostatica	-19.45	217	92.442	V-C	0.2715.879		0	109.5	0	0	201.942
Condizione geostatica	-19.65	219	93.294	V-C	0.2715.879		0	111.5	0	0	204.794
Condizione geostatica	-19.85	221	94.146	V-C	0.2715.879		0	113.5	0	0	207.646
Condizione geostatica	-20.05	223	94.998	V-C	0.2715.879		0	115.5	0	0	210.498
Condizione geostatica	-20.25	225	95.85	V-C	0.2715.879		0	117.5	0	0	213.35
Condizione geostatica	-20.45	227	96.702	V-C	0.2715.879		0	119.5	0	0	216.202
Condizione geostatica	-20.65	229	97.554	V-C	0.2715.879		0	121.5	0	0	219.054
Condizione geostatica	-20.85	231	98.406	V-C	0.2715.879		0	123.5	0	0	221.906
Condizione geostatica	-21.05	233	99.258	V-C	0.2715.879		0	125.5	0	0	224.758
Condizione geostatica	-21.25	235	100.11	V-C	0.2715.879		0	127.5	0	0	227.61
Condizione geostatica	-21.45	237	100.962	V-C	0.2715.879		0	129.5	0	0	230.462
Condizione geostatica	-21.65	239	101.814	V-C	0.2715.879		0	131.5	0	0	233.314
Condizione geostatica	-21.85	241	102.666	V-C	0.2715.879		0	133.5	0	0	236.166
Condizione geostatica	-22.05	243	103.518	V-C	0.2715.879		0	135.5	0	0	239.018
Condizione geostatica	-22.25	245	104.37	V-C	0.2715.879		0	137.5	0	0	241.87
Condizione geostatica	-22.45	247	105.222	V-C	0.2715.879		0	139.5	0	0	244.722

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Design Assumption: Nominal		Risultati	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
geostatica											
Condizione geostatica	-22.65	249	106.074	V-C	0.2715.879		0	141.5	0	0	247.574
Condizione geostatica	-22.85	251	106.926	V-C	0.2715.879		0	143.5	0	0	250.426
Condizione geostatica	-23.05	253	107.778	V-C	0.2715.879		0	145.5	0	0	253.278
Condizione geostatica	-23.25	255	108.63	V-C	0.2715.879		0	147.5	0	0	256.13
Condizione geostatica	-23.45	257	109.482	V-C	0.2715.879		0	149.5	0	0	258.982
Condizione geostatica	-23.65	259	110.334	V-C	0.2715.879		0	151.5	0	0	261.834
Condizione geostatica	-23.85	261	111.186	V-C	0.2715.879		0	153.5	0	0	264.686
Condizione geostatica	-24.05	263	112.038	V-C	0.2715.879		0	155.5	0	0	267.538
Condizione geostatica	-24.25	265	112.89	V-C	0.2715.879		0	157.5	0	0	270.39
Condizione geostatica	-24.45	267	113.742	V-C	0.2715.879		0	159.5	0	0	273.242
Condizione geostatica	-24.65	269	114.594	V-C	0.2715.879		0	161.5	0	0	276.094
Condizione geostatica	-24.85	271	115.446	V-C	0.2715.879		0	163.5	0	0	278.946
Condizione geostatica	-25	272.5	116.085	V-C	0.2715.879		0	165	0	0	281.085

Ponte stradale su Torrente Giustenice  
 Relazione di calcolo spalle

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**Tabella Risultati Terreno Left Wall - Nominal - Cordolo**

Design	Nominal	Risultati	Muro:	LEFT	Lato	LEFT					
Assumption:		Terreno									
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Cordolo	0	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-1	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-2	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
Cordolo	-3.05	0.95	0.461	UL-RL	0.32	4.555	0	0	0	0	0.461
Cordolo	-3.25	4.75	2.304	UL-RL	0.32	4.555	0	0	0	0	2.304
Cordolo	-3.45	8.55	4.147	UL-RL	0.32	4.555	0	0	0	0	4.147
Cordolo	-3.65	12.35	5.99	UL-RL	0.32	4.555	0	0	0	0	5.99
Cordolo	-3.85	16.15	7.833	UL-RL	0.32	4.555	0	0	0	0	7.833
Cordolo	-4.05	19.95	9.676	UL-RL	0.32	4.555	0	0	0	0	9.676
Cordolo	-4.25	23.75	11.519	UL-RL	0.32	4.555	0	0	0	0	11.519
Cordolo	-4.45	27.55	13.362	UL-RL	0.32	4.555	0	0	0	0	13.362
Cordolo	-4.65	31.35	15.205	UL-RL	0.32	4.555	0	0	0	0	15.205
Cordolo	-4.85	35.15	17.048	UL-RL	0.32	4.555	0	0	0	0	17.048
Cordolo	-5.05	38.95	18.891	UL-RL	0.32	4.555	0	0	0	0	18.891
Cordolo	-5.25	42.75	20.734	UL-RL	0.32	4.555	0	0	0	0	20.734
Cordolo	-5.45	46.55	22.577	UL-RL	0.32	4.555	0	0	0	0	22.577
Cordolo	-5.65	50.5	22.977	UL-RL	0.295	5.16	0	0	0	0	22.977
Cordolo	-5.85	54.5	24.797	UL-RL	0.295	5.16	0	0	0	0	24.797
Cordolo	-6.05	58.5	26.617	UL-RL	0.295	5.16	0	0	0	0	26.617
Cordolo	-6.25	62.5	28.437	UL-RL	0.295	5.16	0	0	0	0	28.437
Cordolo	-6.45	66.5	30.257	UL-RL	0.295	5.16	0	0	0	0	30.257
Cordolo	-6.65	70.5	32.077	UL-RL	0.295	5.16	0	0	0	0	32.077
Cordolo	-6.85	74.5	33.897	UL-RL	0.295	5.16	0	0	0	0	33.897
Cordolo	-7.05	78.5	35.717	UL-RL	0.295	5.16	0	0	0	0	35.717
Cordolo	-7.25	82.5	37.537	UL-RL	0.295	5.16	0	0	0	0	37.537
Cordolo	-7.45	86.5	39.357	UL-RL	0.295	5.16	0	0	0	0	39.357
Cordolo	-7.65	90.5	41.177	UL-RL	0.295	5.16	0	0	0	0	41.177
Cordolo	-7.85	94.5	42.997	UL-RL	0.295	5.16	0	0	0	0	42.997
Cordolo	-8.05	98.5	44.817	UL-RL	0.295	5.16	0	0	0	0	44.817
Cordolo	-8.25	102.5	46.637	UL-RL	0.295	5.16	0	0	0	0	46.637
Cordolo	-8.45	106.5	48.457	UL-RL	0.295	5.16	0	0	0	0	48.457
Cordolo	-8.65	109	49.595	UL-RL	0.295	5.16	0	1.5	0	0	51.095
Cordolo	-8.85	111	50.505	UL-RL	0.295	5.16	0	3.5	0	0	54.005
Cordolo	-9.05	113	51.415	UL-RL	0.295	5.16	0	5.5	0	0	56.915
Cordolo	-9.25	115	52.325	UL-RL	0.295	5.16	0	7.5	0	0	59.825
Cordolo	-9.45	117	53.235	UL-RL	0.295	5.16	0	9.5	0	0	62.735
Cordolo	-9.65	119	54.145	UL-RL	0.295	5.16	0	11.5	0	0	65.645
Cordolo	-9.85	121	55.055	UL-RL	0.295	5.16	0	13.5	0	0	68.555
Cordolo	-10.05	123	55.965	UL-RL	0.295	5.16	0	15.5	0	0	71.465
Cordolo	-10.25	125	56.875	UL-RL	0.295	5.16	0	17.5	0	0	74.375

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		LEFT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente		
Cordolo	-10.45	127	57.785	UL-RL	0.295	5.16	0	19.5	0	0	77.285
Cordolo	-10.65	129	58.695	UL-RL	0.295	5.16	0	21.5	0	0	80.195
Cordolo	-10.85	131	59.605	UL-RL	0.295	5.16	0	23.5	0	0	83.105
Cordolo	-11.05	133	56.658	UL-RL	0.2715.879		0	25.5	0	0	82.158
Cordolo	-11.25	135	57.51	UL-RL	0.2715.879		0	27.5	0	0	85.01
Cordolo	-11.45	137	58.362	UL-RL	0.2715.879		0	29.5	0	0	87.862
Cordolo	-11.65	139	59.214	UL-RL	0.2715.879		0	31.5	0	0	90.714
Cordolo	-11.85	141	60.066	UL-RL	0.2715.879		0	33.5	0	0	93.566
Cordolo	-12.05	143	60.918	UL-RL	0.2715.879		0	35.5	0	0	96.418
Cordolo	-12.25	145	61.77	UL-RL	0.2715.879		0	37.5	0	0	99.27
Cordolo	-12.45	147	62.622	UL-RL	0.2715.879		0	39.5	0	0	102.122
Cordolo	-12.65	149	63.474	UL-RL	0.2715.879		0	41.5	0	0	104.974
Cordolo	-12.85	151	64.326	UL-RL	0.2715.879		0	43.5	0	0	107.826
Cordolo	-13.05	153	65.178	UL-RL	0.2715.879		0	45.5	0	0	110.678
Cordolo	-13.25	155	66.03	UL-RL	0.2715.879		0	47.5	0	0	113.53
Cordolo	-13.45	157	66.882	UL-RL	0.2715.879		0	49.5	0	0	116.382
Cordolo	-13.65	159	67.734	UL-RL	0.2715.879		0	51.5	0	0	119.234
Cordolo	-13.85	161	68.586	UL-RL	0.2715.879		0	53.5	0	0	122.086
Cordolo	-14.05	163	69.438	UL-RL	0.2715.879		0	55.5	0	0	124.938
Cordolo	-14.25	165	70.29	UL-RL	0.2715.879		0	57.5	0	0	127.79
Cordolo	-14.45	167	71.142	UL-RL	0.2715.879		0	59.5	0	0	130.642
Cordolo	-14.65	169	71.994	UL-RL	0.2715.879		0	61.5	0	0	133.494
Cordolo	-14.85	171	72.846	UL-RL	0.2715.879		0	63.5	0	0	136.346
Cordolo	-15.05	173	73.698	UL-RL	0.2715.879		0	65.5	0	0	139.198
Cordolo	-15.25	175	74.55	UL-RL	0.2715.879		0	67.5	0	0	142.05
Cordolo	-15.45	177	75.402	UL-RL	0.2715.879		0	69.5	0	0	144.902
Cordolo	-15.65	179	76.254	UL-RL	0.2715.879		0	71.5	0	0	147.754
Cordolo	-15.85	181	77.106	UL-RL	0.2715.879		0	73.5	0	0	150.606
Cordolo	-16.05	183	77.958	UL-RL	0.2715.879		0	75.5	0	0	153.458
Cordolo	-16.25	185	78.81	UL-RL	0.2715.879		0	77.5	0	0	156.31
Cordolo	-16.45	187	79.662	UL-RL	0.2715.879		0	79.5	0	0	159.162
Cordolo	-16.65	189	80.514	UL-RL	0.2715.879		0	81.5	0	0	162.014
Cordolo	-16.85	191	81.366	UL-RL	0.2715.879		0	83.5	0	0	164.866
Cordolo	-17.05	193	82.218	UL-RL	0.2715.879		0	85.5	0	0	167.718
Cordolo	-17.25	195	83.07	UL-RL	0.2715.879		0	87.5	0	0	170.57
Cordolo	-17.45	197	83.922	UL-RL	0.2715.879		0	89.5	0	0	173.422
Cordolo	-17.65	199	84.774	UL-RL	0.2715.879		0	91.5	0	0	176.274
Cordolo	-17.85	201	85.626	UL-RL	0.2715.879		0	93.5	0	0	179.126
Cordolo	-18.05	203	86.478	UL-RL	0.2715.879		0	95.5	0	0	181.978
Cordolo	-18.25	205	87.33	UL-RL	0.2715.879		0	97.5	0	0	184.83
Cordolo	-18.45	207	88.182	UL-RL	0.2715.879		0	99.5	0	0	187.682
Cordolo	-18.65	209	89.034	UL-RL	0.2715.879		0	101.5	0	0	190.534
Cordolo	-18.85	211	89.886	UL-RL	0.2715.879		0	103.5	0	0	193.386
Cordolo	-19.05	213	90.738	UL-RL	0.2715.879		0	105.5	0	0	196.238
Cordolo	-19.25	215	91.59	UL-RL	0.2715.879		0	107.5	0	0	199.09
Cordolo	-19.45	217	92.442	UL-RL	0.2715.879		0	109.5	0	0	201.942
Cordolo	-19.65	219	93.294	UL-RL	0.2715.879		0	111.5	0	0	204.794
Cordolo	-19.85	221	94.146	UL-RL	0.2715.879		0	113.5	0	0	207.646
Cordolo	-20.05	223	94.998	UL-RL	0.2715.879		0	115.5	0	0	210.498
Cordolo	-20.25	225	95.85	UL-RL	0.2715.879		0	117.5	0	0	213.35
Cordolo	-20.45	227	96.702	UL-RL	0.2715.879		0	119.5	0	0	216.202
Cordolo	-20.65	229	97.554	UL-RL	0.2715.879		0	121.5	0	0	219.054
Cordolo	-20.85	231	98.406	UL-RL	0.2715.879		0	123.5	0	0	221.906
Cordolo	-21.05	233	99.258	UL-RL	0.2715.879		0	125.5	0	0	224.758
Cordolo	-21.25	235	100.11	UL-RL	0.2715.879		0	127.5	0	0	227.61
Cordolo	-21.45	237	100.962	UL-RL	0.2715.879		0	129.5	0	0	230.462
Cordolo	-21.65	239	101.814	UL-RL	0.2715.879		0	131.5	0	0	233.314

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		LEFT	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)				
Cordolo	-21.85	241	102.666	UL-RL	0.2715.879		0	133.5	0	0	236.166
Cordolo	-22.05	243	103.518	UL-RL	0.2715.879		0	135.5	0	0	239.018
Cordolo	-22.25	245	104.37	UL-RL	0.2715.879		0	137.5	0	0	241.87
Cordolo	-22.45	247	105.222	UL-RL	0.2715.879		0	139.5	0	0	244.722
Cordolo	-22.65	249	106.074	UL-RL	0.2715.879		0	141.5	0	0	247.574
Cordolo	-22.85	251	106.926	UL-RL	0.2715.879		0	143.5	0	0	250.426
Cordolo	-23.05	253	107.778	UL-RL	0.2715.879		0	145.5	0	0	253.278
Cordolo	-23.25	255	108.63	UL-RL	0.2715.879		0	147.5	0	0	256.13
Cordolo	-23.45	257	109.482	UL-RL	0.2715.879		0	149.5	0	0	258.982
Cordolo	-23.65	259	110.334	UL-RL	0.2715.879		0	151.5	0	0	261.834
Cordolo	-23.85	261	111.186	UL-RL	0.2715.879		0	153.5	0	0	264.686
Cordolo	-24.05	263	112.038	UL-RL	0.2715.879		0	155.5	0	0	267.538
Cordolo	-24.25	265	112.89	UL-RL	0.2715.879		0	157.5	0	0	270.39
Cordolo	-24.45	267	113.742	UL-RL	0.2715.879		0	159.5	0	0	273.242
Cordolo	-24.65	269	114.594	UL-RL	0.2715.879		0	161.5	0	0	276.094
Cordolo	-24.85	271	115.446	UL-RL	0.2715.879		0	163.5	0	0	278.946
Cordolo	-25	272.5	116.085	UL-RL	0.2715.879		0	165	0	0	281.085



Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	Lato			Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
				LEFT Stato	Ka	RIGHT Kp				
Cordolo	0	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-0.2	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-0.4	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-0.6	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-0.8	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-1	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-1.2	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-1.4	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-1.6	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-1.8	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-2	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-2.2	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-2.25	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-2.45	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-2.65	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-2.85	0	0	REMOVED	0	0	0	0	0	0
Cordolo	-3.05	0.95	0.461	UL-RL	0.32	4.555	0	0	0	0.461
Cordolo	-3.25	4.75	2.304	UL-RL	0.32	4.555	0	0	0	2.304
Cordolo	-3.45	8.55	4.147	UL-RL	0.32	4.555	0	0	0	4.147
Cordolo	-3.65	12.35	5.99	UL-RL	0.32	4.555	0	0	0	5.99
Cordolo	-3.85	16.15	7.833	UL-RL	0.32	4.555	0	0	0	7.833
Cordolo	-4.05	19.95	9.676	UL-RL	0.32	4.555	0	0	0	9.676
Cordolo	-4.25	23.75	11.519	UL-RL	0.32	4.555	0	0	0	11.519
Cordolo	-4.45	27.55	13.362	UL-RL	0.32	4.555	0	0	0	13.362
Cordolo	-4.65	31.35	15.205	UL-RL	0.32	4.555	0	0	0	15.205
Cordolo	-4.85	35.15	17.048	UL-RL	0.32	4.555	0	0	0	17.048
Cordolo	-5.05	38.95	18.891	UL-RL	0.32	4.555	0	0	0	18.891
Cordolo	-5.25	42.75	20.734	UL-RL	0.32	4.555	0	0	0	20.734
Cordolo	-5.45	46.55	22.577	UL-RL	0.32	4.555	0	0	0	22.577
Cordolo	-5.65	50.5	22.977	UL-RL	0.295	5.16	0	0	0	22.977
Cordolo	-5.85	54.5	24.797	UL-RL	0.295	5.16	0	0	0	24.797
Cordolo	-6.05	58.5	26.617	UL-RL	0.295	5.16	0	0	0	26.617
Cordolo	-6.25	62.5	28.437	UL-RL	0.295	5.16	0	0	0	28.437
Cordolo	-6.45	66.5	30.257	UL-RL	0.295	5.16	0	0	0	30.257
Cordolo	-6.65	70.5	32.077	UL-RL	0.295	5.16	0	0	0	32.077
Cordolo	-6.85	74.5	33.897	UL-RL	0.295	5.16	0	0	0	33.897
Cordolo	-7.05	78.5	35.717	UL-RL	0.295	5.16	0	0	0	35.717
Cordolo	-7.25	82.5	37.537	UL-RL	0.295	5.16	0	0	0	37.537
Cordolo	-7.45	86.5	39.357	UL-RL	0.295	5.16	0	0	0	39.357
Cordolo	-7.65	90.5	41.177	UL-RL	0.295	5.16	0	0	0	41.177
Cordolo	-7.85	94.5	42.997	UL-RL	0.295	5.16	0	0	0	42.997
Cordolo	-8.05	98.5	44.817	UL-RL	0.295	5.16	0	0	0	44.817
Cordolo	-8.25	102.5	46.637	UL-RL	0.295	5.16	0	0	0	46.637
Cordolo	-8.45	106.5	48.457	UL-RL	0.295	5.16	0	0	0	48.457
Cordolo	-8.65	109	49.595	UL-RL	0.295	5.16	0	1.5	0	51.095
Cordolo	-8.85	111	50.505	UL-RL	0.295	5.16	0	3.5	0	54.005
Cordolo	-9.05	113	51.415	UL-RL	0.295	5.16	0	5.5	0	56.915
Cordolo	-9.25	115	52.325	UL-RL	0.295	5.16	0	7.5	0	59.825
Cordolo	-9.45	117	53.235	UL-RL	0.295	5.16	0	9.5	0	62.735
Cordolo	-9.65	119	54.145	UL-RL	0.295	5.16	0	11.5	0	65.645
Cordolo	-9.85	121	55.055	UL-RL	0.295	5.16	0	13.5	0	68.555
Cordolo	-10.05	123	55.965	UL-RL	0.295	5.16	0	15.5	0	71.465
Cordolo	-10.25	125	56.875	UL-RL	0.295	5.16	0	17.5	0	74.375
Cordolo	-10.45	127	57.785	UL-RL	0.295	5.16	0	19.5	0	77.285
Cordolo	-10.65	129	58.695	UL-RL	0.295	5.16	0	21.5	0	80.195
Cordolo	-10.85	131	59.605	UL-RL	0.295	5.16	0	23.5	0	83.105

Ponte stradale su Torrente Giustenice

Relazione di calcolo spalle

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Design Assumption: Stage	Nominal	Risultati Terreno	Muro:	LEFT	Lato		RIGHT		U* (kPa)	Peq (kPa)
	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
Cordolo	-11.05	133	56.658	UL-RL	0.2715.879	0	25.5	0	0	82.158
Cordolo	-11.25	135	57.51	UL-RL	0.2715.879	0	27.5	0	0	85.01
Cordolo	-11.45	137	58.362	UL-RL	0.2715.879	0	29.5	0	0	87.862
Cordolo	-11.65	139	59.214	UL-RL	0.2715.879	0	31.5	0	0	90.714
Cordolo	-11.85	141	60.066	UL-RL	0.2715.879	0	33.5	0	0	93.566
Cordolo	-12.05	143	60.918	UL-RL	0.2715.879	0	35.5	0	0	96.418
Cordolo	-12.25	145	61.77	UL-RL	0.2715.879	0	37.5	0	0	99.27
Cordolo	-12.45	147	62.622	UL-RL	0.2715.879	0	39.5	0	0	102.122
Cordolo	-12.65	149	63.474	UL-RL	0.2715.879	0	41.5	0	0	104.974
Cordolo	-12.85	151	64.326	UL-RL	0.2715.879	0	43.5	0	0	107.826
Cordolo	-13.05	153	65.178	UL-RL	0.2715.879	0	45.5	0	0	110.678
Cordolo	-13.25	155	66.03	UL-RL	0.2715.879	0	47.5	0	0	113.53
Cordolo	-13.45	157	66.882	UL-RL	0.2715.879	0	49.5	0	0	116.382
Cordolo	-13.65	159	67.734	UL-RL	0.2715.879	0	51.5	0	0	119.234
Cordolo	-13.85	161	68.586	UL-RL	0.2715.879	0	53.5	0	0	122.086
Cordolo	-14.05	163	69.438	UL-RL	0.2715.879	0	55.5	0	0	124.938
Cordolo	-14.25	165	70.29	UL-RL	0.2715.879	0	57.5	0	0	127.79
Cordolo	-14.45	167	71.142	UL-RL	0.2715.879	0	59.5	0	0	130.642
Cordolo	-14.65	169	71.994	UL-RL	0.2715.879	0	61.5	0	0	133.494
Cordolo	-14.85	171	72.846	UL-RL	0.2715.879	0	63.5	0	0	136.346
Cordolo	-15.05	173	73.698	UL-RL	0.2715.879	0	65.5	0	0	139.198
Cordolo	-15.25	175	74.55	UL-RL	0.2715.879	0	67.5	0	0	142.05
Cordolo	-15.45	177	75.402	UL-RL	0.2715.879	0	69.5	0	0	144.902
Cordolo	-15.65	179	76.254	UL-RL	0.2715.879	0	71.5	0	0	147.754
Cordolo	-15.85	181	77.106	UL-RL	0.2715.879	0	73.5	0	0	150.606
Cordolo	-16.05	183	77.958	UL-RL	0.2715.879	0	75.5	0	0	153.458
Cordolo	-16.25	185	78.81	UL-RL	0.2715.879	0	77.5	0	0	156.31
Cordolo	-16.45	187	79.662	UL-RL	0.2715.879	0	79.5	0	0	159.162
Cordolo	-16.65	189	80.514	UL-RL	0.2715.879	0	81.5	0	0	162.014
Cordolo	-16.85	191	81.366	UL-RL	0.2715.879	0	83.5	0	0	164.866
Cordolo	-17.05	193	82.218	UL-RL	0.2715.879	0	85.5	0	0	167.718
Cordolo	-17.25	195	83.07	UL-RL	0.2715.879	0	87.5	0	0	170.57
Cordolo	-17.45	197	83.922	UL-RL	0.2715.879	0	89.5	0	0	173.422
Cordolo	-17.65	199	84.774	UL-RL	0.2715.879	0	91.5	0	0	176.274
Cordolo	-17.85	201	85.626	UL-RL	0.2715.879	0	93.5	0	0	179.126
Cordolo	-18.05	203	86.478	UL-RL	0.2715.879	0	95.5	0	0	181.978
Cordolo	-18.25	205	87.33	UL-RL	0.2715.879	0	97.5	0	0	184.83
Cordolo	-18.45	207	88.182	UL-RL	0.2715.879	0	99.5	0	0	187.682
Cordolo	-18.65	209	89.034	UL-RL	0.2715.879	0	101.5	0	0	190.534
Cordolo	-18.85	211	89.886	UL-RL	0.2715.879	0	103.5	0	0	193.386
Cordolo	-19.05	213	90.738	UL-RL	0.2715.879	0	105.5	0	0	196.238
Cordolo	-19.25	215	91.59	UL-RL	0.2715.879	0	107.5	0	0	199.09
Cordolo	-19.45	217	92.442	UL-RL	0.2715.879	0	109.5	0	0	201.942
Cordolo	-19.65	219	93.294	UL-RL	0.2715.879	0	111.5	0	0	204.794
Cordolo	-19.85	221	94.146	UL-RL	0.2715.879	0	113.5	0	0	207.646
Cordolo	-20.05	223	94.998	UL-RL	0.2715.879	0	115.5	0	0	210.498
Cordolo	-20.25	225	95.85	UL-RL	0.2715.879	0	117.5	0	0	213.35
Cordolo	-20.45	227	96.702	UL-RL	0.2715.879	0	119.5	0	0	216.202
Cordolo	-20.65	229	97.554	UL-RL	0.2715.879	0	121.5	0	0	219.054
Cordolo	-20.85	231	98.406	UL-RL	0.2715.879	0	123.5	0	0	221.906
Cordolo	-21.05	233	99.258	UL-RL	0.2715.879	0	125.5	0	0	224.758
Cordolo	-21.25	235	100.11	UL-RL	0.2715.879	0	127.5	0	0	227.61
Cordolo	-21.45	237	100.962	UL-RL	0.2715.879	0	129.5	0	0	230.462
Cordolo	-21.65	239	101.814	UL-RL	0.2715.879	0	131.5	0	0	233.314
Cordolo	-21.85	241	102.666	UL-RL	0.2715.879	0	133.5	0	0	236.166
Cordolo	-22.05	243	103.518	UL-RL	0.2715.879	0	135.5	0	0	239.018
Cordolo	-22.25	245	104.37	UL-RL	0.2715.879	0	137.5	0	0	241.87

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
Cordolo	-22.45	247	105.222	UL-RL	0.2715.879	0	139.5	0	0	244.722
Cordolo	-22.65	249	106.074	UL-RL	0.2715.879	0	141.5	0	0	247.574
Cordolo	-22.85	251	106.926	UL-RL	0.2715.879	0	143.5	0	0	250.426
Cordolo	-23.05	253	107.778	UL-RL	0.2715.879	0	145.5	0	0	253.278
Cordolo	-23.25	255	108.63	UL-RL	0.2715.879	0	147.5	0	0	256.13
Cordolo	-23.45	257	109.482	UL-RL	0.2715.879	0	149.5	0	0	258.982
Cordolo	-23.65	259	110.334	UL-RL	0.2715.879	0	151.5	0	0	261.834
Cordolo	-23.85	261	111.186	UL-RL	0.2715.879	0	153.5	0	0	264.686
Cordolo	-24.05	263	112.038	UL-RL	0.2715.879	0	155.5	0	0	267.538
Cordolo	-24.25	265	112.89	UL-RL	0.2715.879	0	157.5	0	0	270.39
Cordolo	-24.45	267	113.742	UL-RL	0.2715.879	0	159.5	0	0	273.242
Cordolo	-24.65	269	114.594	UL-RL	0.2715.879	0	161.5	0	0	276.094
Cordolo	-24.85	271	115.446	UL-RL	0.2715.879	0	163.5	0	0	278.946
Cordolo	-25	272.5	116.085	UL-RL	0.2715.879	0	165	0	0	281.085

### Tabella Risultati Terreno Left Wall - Nominal - -1m

Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	LEFT Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-1m	0	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-1m	-3.05	0.95	0.304	ACTIVE	0.32	4.555	0	0	0	0	0.304
-1m	-3.25	4.75	1.52	ACTIVE	0.32	4.555	0	0	0	0	1.52
-1m	-3.45	8.55	3.106	UL-RL	0.32	4.555	0	0	0	0	3.106
-1m	-3.65	12.35	4.937	UL-RL	0.32	4.555	0	0	0	0	4.937
-1m	-3.85	16.15	6.769	UL-RL	0.32	4.555	0	0	0	0	6.769
-1m	-4.05	19.95	8.603	UL-RL	0.32	4.555	0	0	0	0	8.603
-1m	-4.25	23.75	10.438	UL-RL	0.32	4.555	0	0	0	0	10.438
-1m	-4.45	27.55	12.275	UL-RL	0.32	4.555	0	0	0	0	12.275
-1m	-4.65	31.35	14.113	UL-RL	0.32	4.555	0	0	0	0	14.113
-1m	-4.85	35.15	15.953	UL-RL	0.32	4.555	0	0	0	0	15.953
-1m	-5.05	38.95	17.794	UL-RL	0.32	4.555	0	0	0	0	17.794
-1m	-5.25	42.75	19.637	UL-RL	0.32	4.555	0	0	0	0	19.637
-1m	-5.45	46.55	21.481	UL-RL	0.32	4.555	0	0	0	0	21.481
-1m	-5.65	50.5	19.559	UL-RL	0.295	5.16	0	0	0	0	19.559
-1m	-5.85	54.5	21.391	UL-RL	0.295	5.16	0	0	0	0	21.391
-1m	-6.05	58.5	23.227	UL-RL	0.295	5.16	0	0	0	0	23.227
-1m	-6.25	62.5	25.066	UL-RL	0.295	5.16	0	0	0	0	25.066
-1m	-6.45	66.5	26.908	UL-RL	0.295	5.16	0	0	0	0	26.908
-1m	-6.65	70.5	28.753	UL-RL	0.295	5.16	0	0	0	0	28.753
-1m	-6.85	74.5	30.601	UL-RL	0.295	5.16	0	0	0	0	30.601
-1m	-7.05	78.5	32.452	UL-RL	0.295	5.16	0	0	0	0	32.452
-1m	-7.25	82.5	34.305	UL-RL	0.295	5.16	0	0	0	0	34.305
-1m	-7.45	86.5	36.16	UL-RL	0.295	5.16	0	0	0	0	36.16
-1m	-7.65	90.5	38.017	UL-RL	0.295	5.16	0	0	0	0	38.017
-1m	-7.85	94.5	39.876	UL-RL	0.295	5.16	0	0	0	0	39.876
-1m	-8.05	98.5	41.736	UL-RL	0.295	5.16	0	0	0	0	41.736
-1m	-8.25	102.5	43.598	UL-RL	0.295	5.16	0	0	0	0	43.598
-1m	-8.45	106.5	45.461	UL-RL	0.295	5.16	0	0	0	0	45.461
-1m	-8.65	109	46.643	UL-RL	0.295	5.16	0	1.5	0	0	48.143
-1m	-8.85	111	47.598	UL-RL	0.295	5.16	0	3.5	0	0	51.098
-1m	-9.05	113	48.555	UL-RL	0.295	5.16	0	5.5	0	0	54.054
-1m	-9.25	115	49.511	UL-RL	0.295	5.16	0	7.5	0	0	57.011
-1m	-9.45	117	50.469	UL-RL	0.295	5.16	0	9.5	0	0	59.969
-1m	-9.65	119	51.426	UL-RL	0.295	5.16	0	11.5	0	0	62.926
-1m	-9.85	121	52.384	UL-RL	0.295	5.16	0	13.5	0	0	65.884
-1m	-10.05	123	53.342	UL-RL	0.295	5.16	0	15.5	0	0	68.842
-1m	-10.25	125	54.301	UL-RL	0.295	5.16	0	17.5	0	0	71.8

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka Kp	LEFT Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-1m	-10.45	127	55.258	UL-RL	0.295 5.16	0	19.5	0	0	74.758
-1m	-10.65	129	56.216	UL-RL	0.295 5.16	0	21.5	0	0	77.716
-1m	-10.85	131	57.173	UL-RL	0.295 5.16	0	23.5	0	0	80.673
-1m	-11.05	133	52.925	UL-RL	0.2715.879	0	25.5	0	0	78.425
-1m	-11.25	135	53.847	UL-RL	0.2715.879	0	27.5	0	0	81.347
-1m	-11.45	137	54.768	UL-RL	0.2715.879	0	29.5	0	0	84.268
-1m	-11.65	139	55.687	UL-RL	0.2715.879	0	31.5	0	0	87.187
-1m	-11.85	141	56.604	UL-RL	0.2715.879	0	33.5	0	0	90.104
-1m	-12.05	143	57.519	UL-RL	0.2715.879	0	35.5	0	0	93.019
-1m	-12.25	145	58.431	UL-RL	0.2715.879	0	37.5	0	0	95.931
-1m	-12.45	147	59.34	UL-RL	0.2715.879	0	39.5	0	0	98.84
-1m	-12.65	149	60.247	UL-RL	0.2715.879	0	41.5	0	0	101.747
-1m	-12.85	151	61.152	UL-RL	0.2715.879	0	43.5	0	0	104.652
-1m	-13.05	153	62.053	UL-RL	0.2715.879	0	45.5	0	0	107.553
-1m	-13.25	155	62.952	UL-RL	0.2715.879	0	47.5	0	0	110.452
-1m	-13.45	157	63.848	UL-RL	0.2715.879	0	49.5	0	0	113.348
-1m	-13.65	159	64.742	UL-RL	0.2715.879	0	51.5	0	0	116.242
-1m	-13.85	161	65.633	UL-RL	0.2715.879	0	53.5	0	0	119.133
-1m	-14.05	163	66.521	UL-RL	0.2715.879	0	55.5	0	0	122.021
-1m	-14.25	165	67.407	UL-RL	0.2715.879	0	57.5	0	0	124.907
-1m	-14.45	167	68.291	UL-RL	0.2715.879	0	59.5	0	0	127.791
-1m	-14.65	169	69.172	UL-RL	0.2715.879	0	61.5	0	0	130.672
-1m	-14.85	171	70.051	UL-RL	0.2715.879	0	63.5	0	0	133.55
-1m	-15.05	173	70.927	UL-RL	0.2715.879	0	65.5	0	0	136.427
-1m	-15.25	175	71.802	UL-RL	0.2715.879	0	67.5	0	0	139.302
-1m	-15.45	177	72.674	UL-RL	0.2715.879	0	69.5	0	0	142.174
-1m	-15.65	179	73.545	UL-RL	0.2715.879	0	71.5	0	0	145.045
-1m	-15.85	181	74.413	UL-RL	0.2715.879	0	73.5	0	0	147.913
-1m	-16.05	183	75.28	UL-RL	0.2715.879	0	75.5	0	0	150.78
-1m	-16.25	185	76.146	UL-RL	0.2715.879	0	77.5	0	0	153.646
-1m	-16.45	187	77.01	UL-RL	0.2715.879	0	79.5	0	0	156.51
-1m	-16.65	189	77.872	UL-RL	0.2715.879	0	81.5	0	0	159.372
-1m	-16.85	191	78.733	UL-RL	0.2715.879	0	83.5	0	0	162.233
-1m	-17.05	193	79.593	UL-RL	0.2715.879	0	85.5	0	0	165.093
-1m	-17.25	195	80.452	UL-RL	0.2715.879	0	87.5	0	0	167.952
-1m	-17.45	197	81.309	UL-RL	0.2715.879	0	89.5	0	0	170.809
-1m	-17.65	199	82.166	UL-RL	0.2715.879	0	91.5	0	0	173.666
-1m	-17.85	201	83.022	UL-RL	0.2715.879	0	93.5	0	0	176.522
-1m	-18.05	203	83.876	UL-RL	0.2715.879	0	95.5	0	0	179.376
-1m	-18.25	205	84.731	UL-RL	0.2715.879	0	97.5	0	0	182.23
-1m	-18.45	207	85.584	UL-RL	0.2715.879	0	99.5	0	0	185.084
-1m	-18.65	209	86.437	UL-RL	0.2715.879	0	101.5	0	0	187.937
-1m	-18.85	211	87.289	UL-RL	0.2715.879	0	103.5	0	0	190.789
-1m	-19.05	213	88.141	UL-RL	0.2715.879	0	105.5	0	0	193.641
-1m	-19.25	215	88.992	UL-RL	0.2715.879	0	107.5	0	0	196.492
-1m	-19.45	217	89.843	UL-RL	0.2715.879	0	109.5	0	0	199.343
-1m	-19.65	219	90.693	UL-RL	0.2715.879	0	111.5	0	0	202.193
-1m	-19.85	221	91.543	UL-RL	0.2715.879	0	113.5	0	0	205.043
-1m	-20.05	223	92.393	UL-RL	0.2715.879	0	115.5	0	0	207.893
-1m	-20.25	225	93.243	UL-RL	0.2715.879	0	117.5	0	0	210.743
-1m	-20.45	227	94.092	UL-RL	0.2715.879	0	119.5	0	0	213.592
-1m	-20.65	229	94.942	UL-RL	0.2715.879	0	121.5	0	0	216.442
-1m	-20.85	231	95.791	UL-RL	0.2715.879	0	123.5	0	0	219.291
-1m	-21.05	233	96.64	UL-RL	0.2715.879	0	125.5	0	0	222.14
-1m	-21.25	235	97.489	UL-RL	0.2715.879	0	127.5	0	0	224.989
-1m	-21.45	237	98.337	UL-RL	0.2715.879	0	129.5	0	0	227.838
-1m	-21.65	239	99.186	UL-RL	0.2715.879	0	131.5	0	0	230.686

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		LEFT	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)				
-1m	-21.85	241	100.035	UL-RL	0.2715.879		0	133.5	0	0	233.535
-1m	-22.05	243	100.884	UL-RL	0.2715.879		0	135.5	0	0	236.384
-1m	-22.25	245	101.732	UL-RL	0.2715.879		0	137.5	0	0	239.232
-1m	-22.45	247	102.581	UL-RL	0.2715.879		0	139.5	0	0	242.081
-1m	-22.65	249	103.429	UL-RL	0.2715.879		0	141.5	0	0	244.93
-1m	-22.85	251	104.278	UL-RL	0.2715.879		0	143.5	0	0	247.778
-1m	-23.05	253	105.127	UL-RL	0.2715.879		0	145.5	0	0	250.627
-1m	-23.25	255	105.975	UL-RL	0.2715.879		0	147.5	0	0	253.476
-1m	-23.45	257	106.824	UL-RL	0.2715.879		0	149.5	0	0	256.324
-1m	-23.65	259	107.672	UL-RL	0.2715.879		0	151.5	0	0	259.173
-1m	-23.85	261	108.521	UL-RL	0.2715.879		0	153.5	0	0	262.021
-1m	-24.05	263	109.37	UL-RL	0.2715.879		0	155.5	0	0	264.87
-1m	-24.25	265	110.218	UL-RL	0.2715.879		0	157.5	0	0	267.718
-1m	-24.45	267	111.067	UL-RL	0.2715.879		0	159.5	0	0	270.567
-1m	-24.65	269	111.916	UL-RL	0.2715.879		0	161.5	0	0	273.416
-1m	-24.85	271	112.764	UL-RL	0.2715.879		0	163.5	0	0	276.264
-1m	-25	272.5	113.401	UL-RL	0.2715.879		0	165	0	0	278.401

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT Stato	Lato		RIGHT Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
		Sigma V (kPa)				Ka	Kp					
-1m	0	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-0.2	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-0.4	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-0.6	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-0.8	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-1	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-1.2	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-1.4	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-1.6	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-1.8	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-2	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-2.2	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-2.25	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-2.45	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-2.65	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-2.85	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-3.05	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-3.25	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-3.45	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-3.65	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-3.85	0		0	REMOVED	0	0	0	0	0	0	0
-1m	-4.05	0.95		2.798	UL-RL	0.32	4.555	0	0	0	0	2.798
-1m	-4.25	4.75		5.843	UL-RL	0.32	4.555	0	0	0	0	5.843
-1m	-4.45	8.55		8.139	UL-RL	0.32	4.555	0	0	0	0	8.139
-1m	-4.65	12.35		10.242	UL-RL	0.32	4.555	0	0	0	0	10.242
-1m	-4.85	16.15		12.257	UL-RL	0.32	4.555	0	0	0	0	12.257
-1m	-5.05	19.95		14.222	UL-RL	0.32	4.555	0	0	0	0	14.222
-1m	-5.25	23.75		16.156	UL-RL	0.32	4.555	0	0	0	0	16.156
-1m	-5.45	27.55		18.07	UL-RL	0.32	4.555	0	0	0	0	18.07
-1m	-5.65	31.5		20.163	UL-RL	0.295	5.16	0	0	0	0	20.163
-1m	-5.85	35.5		22.022	UL-RL	0.295	5.16	0	0	0	0	22.022
-1m	-6.05	39.5		23.871	UL-RL	0.295	5.16	0	0	0	0	23.871
-1m	-6.25	43.5		25.712	UL-RL	0.295	5.16	0	0	0	0	25.712
-1m	-6.45	47.5		27.547	UL-RL	0.295	5.16	0	0	0	0	27.547
-1m	-6.65	51.5		29.376	UL-RL	0.295	5.16	0	0	0	0	29.376
-1m	-6.85	55.5		31.201	UL-RL	0.295	5.16	0	0	0	0	31.201
-1m	-7.05	59.5		33.021	UL-RL	0.295	5.16	0	0	0	0	33.021
-1m	-7.25	63.5		34.838	UL-RL	0.295	5.16	0	0	0	0	34.838
-1m	-7.45	67.5		36.653	UL-RL	0.295	5.16	0	0	0	0	36.653
-1m	-7.65	71.5		38.464	UL-RL	0.295	5.16	0	0	0	0	38.464
-1m	-7.85	75.5		40.273	UL-RL	0.295	5.16	0	0	0	0	40.273
-1m	-8.05	79.5		42.08	UL-RL	0.295	5.16	0	0	0	0	42.08
-1m	-8.25	83.5		43.886	UL-RL	0.295	5.16	0	0	0	0	43.886
-1m	-8.45	87.5		45.689	UL-RL	0.295	5.16	0	0	0	0	45.689
-1m	-8.65	90		46.806	UL-RL	0.295	5.16	0	1.5	0	0	48.306
-1m	-8.85	92		47.693	UL-RL	0.295	5.16	0	3.5	0	0	51.193
-1m	-9.05	94		48.58	UL-RL	0.295	5.16	0	5.5	0	0	54.08
-1m	-9.25	96		49.466	UL-RL	0.295	5.16	0	7.5	0	0	56.966
-1m	-9.45	98		50.352	UL-RL	0.295	5.16	0	9.5	0	0	59.852
-1m	-9.65	100		51.237	UL-RL	0.295	5.16	0	11.5	0	0	62.737
-1m	-9.85	102		52.123	UL-RL	0.295	5.16	0	13.5	0	0	65.623
-1m	-10.05	104		53.007	UL-RL	0.295	5.16	0	15.5	0	0	68.507
-1m	-10.25	106		53.892	UL-RL	0.295	5.16	0	17.5	0	0	71.392
-1m	-10.45	108		54.777	UL-RL	0.295	5.16	0	19.5	0	0	74.277
-1m	-10.65	110		55.662	UL-RL	0.295	5.16	0	21.5	0	0	77.162
-1m	-10.85	112		56.547	UL-RL	0.295	5.16	0	23.5	0	0	80.047

Ponte stradale su Torrente Giustenice

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente		
-1m	-11.05	114	54.478	UL-RL	0.2715.879	0	25.5	0	0	79.978	
-1m	-11.25	116	55.295	UL-RL	0.2715.879	0	27.5	0	0	82.794	
-1m	-11.45	118	56.112	UL-RL	0.2715.879	0	29.5	0	0	85.612	
-1m	-11.65	120	56.93	UL-RL	0.2715.879	0	31.5	0	0	88.43	
-1m	-11.85	122	57.749	UL-RL	0.2715.879	0	33.5	0	0	91.249	
-1m	-12.05	124	58.569	UL-RL	0.2715.879	0	35.5	0	0	94.069	
-1m	-12.25	126	59.391	UL-RL	0.2715.879	0	37.5	0	0	96.891	
-1m	-12.45	128	60.214	UL-RL	0.2715.879	0	39.5	0	0	99.713	
-1m	-12.65	130	61.038	UL-RL	0.2715.879	0	41.5	0	0	102.538	
-1m	-12.85	132	61.863	UL-RL	0.2715.879	0	43.5	0	0	105.363	
-1m	-13.05	134	62.69	UL-RL	0.2715.879	0	45.5	0	0	108.19	
-1m	-13.25	136	63.519	UL-RL	0.2715.879	0	47.5	0	0	111.019	
-1m	-13.45	138	64.349	UL-RL	0.2715.879	0	49.5	0	0	113.848	
-1m	-13.65	140	65.18	UL-RL	0.2715.879	0	51.5	0	0	116.68	
-1m	-13.85	142	66.012	UL-RL	0.2715.879	0	53.5	0	0	119.512	
-1m	-14.05	144	66.846	UL-RL	0.2715.879	0	55.5	0	0	122.346	
-1m	-14.25	146	67.682	UL-RL	0.2715.879	0	57.5	0	0	125.182	
-1m	-14.45	148	68.518	UL-RL	0.2715.879	0	59.5	0	0	128.018	
-1m	-14.65	150	69.356	UL-RL	0.2715.879	0	61.5	0	0	130.856	
-1m	-14.85	152	70.195	UL-RL	0.2715.879	0	63.5	0	0	133.695	
-1m	-15.05	154	71.035	UL-RL	0.2715.879	0	65.5	0	0	136.535	
-1m	-15.25	156	71.876	UL-RL	0.2715.879	0	67.5	0	0	139.376	
-1m	-15.45	158	72.719	UL-RL	0.2715.879	0	69.5	0	0	142.218	
-1m	-15.65	160	73.562	UL-RL	0.2715.879	0	71.5	0	0	145.062	
-1m	-15.85	162	74.406	UL-RL	0.2715.879	0	73.5	0	0	147.906	
-1m	-16.05	164	75.251	UL-RL	0.2715.879	0	75.5	0	0	150.751	
-1m	-16.25	166	76.097	UL-RL	0.2715.879	0	77.5	0	0	153.597	
-1m	-16.45	168	76.944	UL-RL	0.2715.879	0	79.5	0	0	156.444	
-1m	-16.65	170	77.792	UL-RL	0.2715.879	0	81.5	0	0	159.292	
-1m	-16.85	172	78.64	UL-RL	0.2715.879	0	83.5	0	0	162.14	
-1m	-17.05	174	79.489	UL-RL	0.2715.879	0	85.5	0	0	164.989	
-1m	-17.25	176	80.338	UL-RL	0.2715.879	0	87.5	0	0	167.838	
-1m	-17.45	178	81.188	UL-RL	0.2715.879	0	89.5	0	0	170.688	
-1m	-17.65	180	82.039	UL-RL	0.2715.879	0	91.5	0	0	173.539	
-1m	-17.85	182	82.89	UL-RL	0.2715.879	0	93.5	0	0	176.39	
-1m	-18.05	184	83.742	UL-RL	0.2715.879	0	95.5	0	0	179.242	
-1m	-18.25	186	84.593	UL-RL	0.2715.879	0	97.5	0	0	182.094	
-1m	-18.45	188	85.446	UL-RL	0.2715.879	0	99.5	0	0	184.946	
-1m	-18.65	190	86.298	UL-RL	0.2715.879	0	101.5	0	0	187.798	
-1m	-18.85	192	87.151	UL-RL	0.2715.879	0	103.5	0	0	190.651	
-1m	-19.05	194	88.004	UL-RL	0.2715.879	0	105.5	0	0	193.504	
-1m	-19.25	196	88.858	UL-RL	0.2715.879	0	107.5	0	0	196.358	
-1m	-19.45	198	89.711	UL-RL	0.2715.879	0	109.5	0	0	199.211	
-1m	-19.65	200	90.565	UL-RL	0.2715.879	0	111.5	0	0	202.065	
-1m	-19.85	202	91.419	UL-RL	0.2715.879	0	113.5	0	0	204.919	
-1m	-20.05	204	92.273	UL-RL	0.2715.879	0	115.5	0	0	207.773	
-1m	-20.25	206	93.127	UL-RL	0.2715.879	0	117.5	0	0	210.627	
-1m	-20.45	208	93.981	UL-RL	0.2715.879	0	119.5	0	0	213.481	
-1m	-20.65	210	94.835	UL-RL	0.2715.879	0	121.5	0	0	216.335	
-1m	-20.85	212	95.69	UL-RL	0.2715.879	0	123.5	0	0	219.19	
-1m	-21.05	214	96.544	UL-RL	0.2715.879	0	125.5	0	0	222.044	
-1m	-21.25	216	97.399	UL-RL	0.2715.879	0	127.5	0	0	224.899	
-1m	-21.45	218	98.253	UL-RL	0.2715.879	0	129.5	0	0	227.753	
-1m	-21.65	220	99.108	UL-RL	0.2715.879	0	131.5	0	0	230.608	
-1m	-21.85	222	99.962	UL-RL	0.2715.879	0	133.5	0	0	233.462	
-1m	-22.05	224	100.816	UL-RL	0.2715.879	0	135.5	0	0	236.317	
-1m	-22.25	226	101.671	UL-RL	0.2715.879	0	137.5	0	0	239.171	



Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
-1m	-22.45	228	102.526	UL-RL	0.2715.879	0	139.5	0	0	242.026
-1m	-22.65	230	103.38	UL-RL	0.2715.879	0	141.5	0	0	244.88
-1m	-22.85	232	104.235	UL-RL	0.2715.879	0	143.5	0	0	247.735
-1m	-23.05	234	105.089	UL-RL	0.2715.879	0	145.5	0	0	250.589
-1m	-23.25	236	105.944	UL-RL	0.2715.879	0	147.5	0	0	253.444
-1m	-23.45	238	106.798	UL-RL	0.2715.879	0	149.5	0	0	256.298
-1m	-23.65	240	107.652	UL-RL	0.2715.879	0	151.5	0	0	259.153
-1m	-23.85	242	108.507	UL-RL	0.2715.879	0	153.5	0	0	262.007
-1m	-24.05	244	109.361	UL-RL	0.2715.879	0	155.5	0	0	264.862
-1m	-24.25	246	110.216	UL-RL	0.2715.879	0	157.5	0	0	267.716
-1m	-24.45	248	111.07	UL-RL	0.2715.879	0	159.5	0	0	270.57
-1m	-24.65	250	111.925	UL-RL	0.2715.879	0	161.5	0	0	273.425
-1m	-24.85	252	112.779	UL-RL	0.2715.879	0	163.5	0	0	276.279
-1m	-25	253.5	113.42	UL-RL	0.2715.879	0	165	0	0	278.42

Ponte stradale su Torrente Giustenice  
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**Tabella Risultati Terreno Left Wall - Nominal - -2m**

Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-2m	0	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-3.05	0.95	0.304	ACTIVE	0.32	4.555	0	0	0	0	0.304
-2m	-3.25	4.75	1.52	ACTIVE	0.32	4.555	0	0	0	0	1.52
-2m	-3.45	8.55	2.736	ACTIVE	0.32	4.555	0	0	0	0	2.736
-2m	-3.65	12.35	3.952	ACTIVE	0.32	4.555	0	0	0	0	3.952
-2m	-3.85	16.15	5.63	UL-RL	0.32	4.555	0	0	0	0	5.63
-2m	-4.05	19.95	7.446	UL-RL	0.32	4.555	0	0	0	0	7.446
-2m	-4.25	23.75	9.264	UL-RL	0.32	4.555	0	0	0	0	9.264
-2m	-4.45	27.55	11.086	UL-RL	0.32	4.555	0	0	0	0	11.086
-2m	-4.65	31.35	12.911	UL-RL	0.32	4.555	0	0	0	0	12.911
-2m	-4.85	35.15	14.74	UL-RL	0.32	4.555	0	0	0	0	14.74
-2m	-5.05	38.95	16.572	UL-RL	0.32	4.555	0	0	0	0	16.572
-2m	-5.25	42.75	18.408	UL-RL	0.32	4.555	0	0	0	0	18.408
-2m	-5.45	46.55	20.248	UL-RL	0.32	4.555	0	0	0	0	20.248
-2m	-5.65	50.5	15.699	UL-RL	0.295	5.16	0	0	0	0	15.699
-2m	-5.85	54.5	17.53	UL-RL	0.295	5.16	0	0	0	0	17.53
-2m	-6.05	58.5	19.371	UL-RL	0.295	5.16	0	0	0	0	19.371
-2m	-6.25	62.5	21.22	UL-RL	0.295	5.16	0	0	0	0	21.22
-2m	-6.45	66.5	23.078	UL-RL	0.295	5.16	0	0	0	0	23.078
-2m	-6.65	70.5	24.945	UL-RL	0.295	5.16	0	0	0	0	24.945
-2m	-6.85	74.5	26.818	UL-RL	0.295	5.16	0	0	0	0	26.818
-2m	-7.05	78.5	28.698	UL-RL	0.295	5.16	0	0	0	0	28.698
-2m	-7.25	82.5	30.584	UL-RL	0.295	5.16	0	0	0	0	30.584
-2m	-7.45	86.5	32.476	UL-RL	0.295	5.16	0	0	0	0	32.476
-2m	-7.65	90.5	34.374	UL-RL	0.295	5.16	0	0	0	0	34.374
-2m	-7.85	94.5	36.276	UL-RL	0.295	5.16	0	0	0	0	36.276
-2m	-8.05	98.5	38.183	UL-RL	0.295	5.16	0	0	0	0	38.183
-2m	-8.25	102.5	40.093	UL-RL	0.295	5.16	0	0	0	0	40.093
-2m	-8.45	106.5	42.007	UL-RL	0.295	5.16	0	0	0	0	42.007
-2m	-8.65	109	43.242	UL-RL	0.295	5.16	0	1.5	0	0	44.742
-2m	-8.85	111	44.251	UL-RL	0.295	5.16	0	3.5	0	0	47.751
-2m	-9.05	113	45.264	UL-RL	0.295	5.16	0	5.5	0	0	50.763
-2m	-9.25	115	46.278	UL-RL	0.295	5.16	0	7.5	0	0	53.778
-2m	-9.45	117	47.293	UL-RL	0.295	5.16	0	9.5	0	0	56.793
-2m	-9.65	119	48.31	UL-RL	0.295	5.16	0	11.5	0	0	59.81
-2m	-9.85	121	49.328	UL-RL	0.295	5.16	0	13.5	0	0	62.828
-2m	-10.05	123	50.346	UL-RL	0.295	5.16	0	15.5	0	0	65.846
-2m	-10.25	125	51.364	UL-RL	0.295	5.16	0	17.5	0	0	68.864

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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U*	Peq (kPa)
-2m	-10.45	127	52.382	UL-RL	0.295	5.16	0	19.5	0	0	71.882
-2m	-10.65	129	53.399	UL-RL	0.295	5.16	0	21.5	0	0	74.899
-2m	-10.85	131	54.415	UL-RL	0.295	5.16	0	23.5	0	0	77.915
-2m	-11.05	133	48.702	UL-RL	0.2715.879		0	25.5	0	0	74.202
-2m	-11.25	135	49.715	UL-RL	0.2715.879		0	27.5	0	0	77.215
-2m	-11.45	137	50.724	UL-RL	0.2715.879		0	29.5	0	0	80.224
-2m	-11.65	139	51.728	UL-RL	0.2715.879		0	31.5	0	0	83.228
-2m	-11.85	141	52.728	UL-RL	0.2715.879		0	33.5	0	0	86.228
-2m	-12.05	143	53.723	UL-RL	0.2715.879		0	35.5	0	0	89.222
-2m	-12.25	145	54.712	UL-RL	0.2715.879		0	37.5	0	0	92.212
-2m	-12.45	147	55.696	UL-RL	0.2715.879		0	39.5	0	0	95.195
-2m	-12.65	149	56.674	UL-RL	0.2715.879		0	41.5	0	0	98.173
-2m	-12.85	151	57.646	UL-RL	0.2715.879		0	43.5	0	0	101.146
-2m	-13.05	153	58.612	UL-RL	0.2715.879		0	45.5	0	0	104.112
-2m	-13.25	155	59.572	UL-RL	0.2715.879		0	47.5	0	0	107.072
-2m	-13.45	157	60.526	UL-RL	0.2715.879		0	49.5	0	0	110.026
-2m	-13.65	159	61.474	UL-RL	0.2715.879		0	51.5	0	0	112.974
-2m	-13.85	161	62.416	UL-RL	0.2715.879		0	53.5	0	0	115.916
-2m	-14.05	163	63.353	UL-RL	0.2715.879		0	55.5	0	0	118.853
-2m	-14.25	165	64.284	UL-RL	0.2715.879		0	57.5	0	0	121.784
-2m	-14.45	167	65.209	UL-RL	0.2715.879		0	59.5	0	0	124.709
-2m	-14.65	169	66.129	UL-RL	0.2715.879		0	61.5	0	0	127.629
-2m	-14.85	171	67.044	UL-RL	0.2715.879		0	63.5	0	0	130.544
-2m	-15.05	173	67.954	UL-RL	0.2715.879		0	65.5	0	0	133.454
-2m	-15.25	175	68.859	UL-RL	0.2715.879		0	67.5	0	0	136.359
-2m	-15.45	177	69.76	UL-RL	0.2715.879		0	69.5	0	0	139.26
-2m	-15.65	179	70.656	UL-RL	0.2715.879		0	71.5	0	0	142.156
-2m	-15.85	181	71.548	UL-RL	0.2715.879		0	73.5	0	0	145.048
-2m	-16.05	183	72.436	UL-RL	0.2715.879		0	75.5	0	0	147.936
-2m	-16.25	185	73.321	UL-RL	0.2715.879		0	77.5	0	0	150.821
-2m	-16.45	187	74.202	UL-RL	0.2715.879		0	79.5	0	0	153.702
-2m	-16.65	189	75.079	UL-RL	0.2715.879		0	81.5	0	0	156.579
-2m	-16.85	191	75.954	UL-RL	0.2715.879		0	83.5	0	0	159.454
-2m	-17.05	193	76.826	UL-RL	0.2715.879		0	85.5	0	0	162.326
-2m	-17.25	195	77.695	UL-RL	0.2715.879		0	87.5	0	0	165.195
-2m	-17.45	197	78.562	UL-RL	0.2715.879		0	89.5	0	0	168.062
-2m	-17.65	199	79.426	UL-RL	0.2715.879		0	91.5	0	0	170.926
-2m	-17.85	201	80.288	UL-RL	0.2715.879		0	93.5	0	0	173.788
-2m	-18.05	203	81.149	UL-RL	0.2715.879		0	95.5	0	0	176.649
-2m	-18.25	205	82.007	UL-RL	0.2715.879		0	97.5	0	0	179.507
-2m	-18.45	207	82.864	UL-RL	0.2715.879		0	99.5	0	0	182.364
-2m	-18.65	209	83.72	UL-RL	0.2715.879		0	101.5	0	0	185.22
-2m	-18.85	211	84.574	UL-RL	0.2715.879		0	103.5	0	0	188.074
-2m	-19.05	213	85.427	UL-RL	0.2715.879		0	105.5	0	0	190.927
-2m	-19.25	215	86.279	UL-RL	0.2715.879		0	107.5	0	0	193.779
-2m	-19.45	217	87.13	UL-RL	0.2715.879		0	109.5	0	0	196.63
-2m	-19.65	219	87.98	UL-RL	0.2715.879		0	111.5	0	0	199.48
-2m	-19.85	221	88.83	UL-RL	0.2715.879		0	113.5	0	0	202.33
-2m	-20.05	223	89.678	UL-RL	0.2715.879		0	115.5	0	0	205.178
-2m	-20.25	225	90.527	UL-RL	0.2715.879		0	117.5	0	0	208.027
-2m	-20.45	227	91.374	UL-RL	0.2715.879		0	119.5	0	0	210.874
-2m	-20.65	229	92.221	UL-RL	0.2715.879		0	121.5	0	0	213.722
-2m	-20.85	231	93.068	UL-RL	0.2715.879		0	123.5	0	0	216.568
-2m	-21.05	233	93.915	UL-RL	0.2715.879		0	125.5	0	0	219.415
-2m	-21.25	235	94.761	UL-RL	0.2715.879		0	127.5	0	0	222.261
-2m	-21.45	237	95.607	UL-RL	0.2715.879		0	129.5	0	0	225.108
-2m	-21.65	239	96.453	UL-RL	0.2715.879		0	131.5	0	0	227.953

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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-2m	-21.85	241	97.299	UL-RL	0.2715.879	0	0	133.5	0	0	230.799
-2m	-22.05	243	98.145	UL-RL	0.2715.879	0	0	135.5	0	0	233.645
-2m	-22.25	245	98.99	UL-RL	0.2715.879	0	0	137.5	0	0	236.491
-2m	-22.45	247	99.836	UL-RL	0.2715.879	0	0	139.5	0	0	239.336
-2m	-22.65	249	100.682	UL-RL	0.2715.879	0	0	141.5	0	0	242.182
-2m	-22.85	251	101.527	UL-RL	0.2715.879	0	0	143.5	0	0	245.027
-2m	-23.05	253	102.373	UL-RL	0.2715.879	0	0	145.5	0	0	247.873
-2m	-23.25	255	103.218	UL-RL	0.2715.879	0	0	147.5	0	0	250.718
-2m	-23.45	257	104.064	UL-RL	0.2715.879	0	0	149.5	0	0	253.564
-2m	-23.65	259	104.909	UL-RL	0.2715.879	0	0	151.5	0	0	256.409
-2m	-23.85	261	105.755	UL-RL	0.2715.879	0	0	153.5	0	0	259.255
-2m	-24.05	263	106.6	UL-RL	0.2715.879	0	0	155.5	0	0	262.1
-2m	-24.25	265	107.446	UL-RL	0.2715.879	0	0	157.5	0	0	264.946
-2m	-24.45	267	108.291	UL-RL	0.2715.879	0	0	159.5	0	0	267.791
-2m	-24.65	269	109.137	UL-RL	0.2715.879	0	0	161.5	0	0	270.637
-2m	-24.85	271	109.982	UL-RL	0.2715.879	0	0	163.5	0	0	273.482
-2m	-25	272.5	110.616	UL-RL	0.2715.879	0	0	165	0	0	275.616

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	RIGHT Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-2m	0	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-3.05	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-3.25	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-3.45	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-3.65	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-3.85	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-4.05	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-4.25	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-4.45	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-4.65	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-4.85	0	0	REMOVED	0	0	0	0	0	0	0
-2m	-5.05	0.95	4.327	PASSIVE	0.32	4.555	0	0	0	0	4.327
-2m	-5.25	4.75	8.4	UL-RL	0.32	4.555	0	0	0	0	8.4
-2m	-5.45	8.55	11.167	UL-RL	0.32	4.555	0	0	0	0	11.167
-2m	-5.65	12.5	15.723	UL-RL	0.295	5.16	0	0	0	0	15.723
-2m	-5.85	16.5	17.929	UL-RL	0.295	5.16	0	0	0	0	17.929
-2m	-6.05	20.5	20.03	UL-RL	0.295	5.16	0	0	0	0	20.03
-2m	-6.25	24.5	22.06	UL-RL	0.295	5.16	0	0	0	0	22.06
-2m	-6.45	28.5	24.041	UL-RL	0.295	5.16	0	0	0	0	24.041
-2m	-6.65	32.5	25.985	UL-RL	0.295	5.16	0	0	0	0	25.985
-2m	-6.85	36.5	27.901	UL-RL	0.295	5.16	0	0	0	0	27.901
-2m	-7.05	40.5	29.794	UL-RL	0.295	5.16	0	0	0	0	29.794
-2m	-7.25	44.5	31.668	UL-RL	0.295	5.16	0	0	0	0	31.668
-2m	-7.45	48.5	33.528	UL-RL	0.295	5.16	0	0	0	0	33.528
-2m	-7.65	52.5	35.374	UL-RL	0.295	5.16	0	0	0	0	35.374
-2m	-7.85	56.5	37.21	UL-RL	0.295	5.16	0	0	0	0	37.21
-2m	-8.05	60.5	39.036	UL-RL	0.295	5.16	0	0	0	0	39.036
-2m	-8.25	64.5	40.854	UL-RL	0.295	5.16	0	0	0	0	40.854
-2m	-8.45	68.5	42.666	UL-RL	0.295	5.16	0	0	0	0	42.666
-2m	-8.65	71	43.773	UL-RL	0.295	5.16	0	1.5	0	0	45.273
-2m	-8.85	73	44.645	UL-RL	0.295	5.16	0	3.5	0	0	48.145
-2m	-9.05	75	45.514	UL-RL	0.295	5.16	0	5.5	0	0	51.014
-2m	-9.25	77	46.381	UL-RL	0.295	5.16	0	7.5	0	0	53.881
-2m	-9.45	79	47.247	UL-RL	0.295	5.16	0	9.5	0	0	56.747
-2m	-9.65	81	48.111	UL-RL	0.295	5.16	0	11.5	0	0	59.611
-2m	-9.85	83	48.974	UL-RL	0.295	5.16	0	13.5	0	0	62.474
-2m	-10.05	85	49.837	UL-RL	0.295	5.16	0	15.5	0	0	65.336
-2m	-10.25	87	50.698	UL-RL	0.295	5.16	0	17.5	0	0	68.198
-2m	-10.45	89	51.559	UL-RL	0.295	5.16	0	19.5	0	0	71.059
-2m	-10.65	91	52.42	UL-RL	0.295	5.16	0	21.5	0	0	73.92
-2m	-10.85	93	53.281	UL-RL	0.295	5.16	0	23.5	0	0	76.781

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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U*	Peq (kPa)
-2m	-11.05	95	52.196	UL-RL	0.2715.879	0	25.5	0	0	0	77.696
-2m	-11.25	97	52.973	UL-RL	0.2715.879	0	27.5	0	0	0	80.473
-2m	-11.45	99	53.752	UL-RL	0.2715.879	0	29.5	0	0	0	83.252
-2m	-11.65	101	54.532	UL-RL	0.2715.879	0	31.5	0	0	0	86.032
-2m	-11.85	103	55.315	UL-RL	0.2715.879	0	33.5	0	0	0	88.815
-2m	-12.05	105	56.1	UL-RL	0.2715.879	0	35.5	0	0	0	91.6
-2m	-12.25	107	56.888	UL-RL	0.2715.879	0	37.5	0	0	0	94.387
-2m	-12.45	109	57.678	UL-RL	0.2715.879	0	39.5	0	0	0	97.178
-2m	-12.65	111	58.471	UL-RL	0.2715.879	0	41.5	0	0	0	99.971
-2m	-12.85	113	59.267	UL-RL	0.2715.879	0	43.5	0	0	0	102.767
-2m	-13.05	115	60.066	UL-RL	0.2715.879	0	45.5	0	0	0	105.566
-2m	-13.25	117	60.868	UL-RL	0.2715.879	0	47.5	0	0	0	108.368
-2m	-13.45	119	61.673	UL-RL	0.2715.879	0	49.5	0	0	0	111.173
-2m	-13.65	121	62.481	UL-RL	0.2715.879	0	51.5	0	0	0	113.981
-2m	-13.85	123	63.292	UL-RL	0.2715.879	0	53.5	0	0	0	116.792
-2m	-14.05	125	64.106	UL-RL	0.2715.879	0	55.5	0	0	0	119.606
-2m	-14.25	127	64.922	UL-RL	0.2715.879	0	57.5	0	0	0	122.422
-2m	-14.45	129	65.742	UL-RL	0.2715.879	0	59.5	0	0	0	125.242
-2m	-14.65	131	66.564	UL-RL	0.2715.879	0	61.5	0	0	0	128.064
-2m	-14.85	133	67.389	UL-RL	0.2715.879	0	63.5	0	0	0	130.889
-2m	-15.05	135	68.216	UL-RL	0.2715.879	0	65.5	0	0	0	133.716
-2m	-15.25	137	69.046	UL-RL	0.2715.879	0	67.5	0	0	0	136.546
-2m	-15.45	139	69.878	UL-RL	0.2715.879	0	69.5	0	0	0	139.378
-2m	-15.65	141	70.712	UL-RL	0.2715.879	0	71.5	0	0	0	142.212
-2m	-15.85	143	71.548	UL-RL	0.2715.879	0	73.5	0	0	0	145.048
-2m	-16.05	145	72.386	UL-RL	0.2715.879	0	75.5	0	0	0	147.886
-2m	-16.25	147	73.226	UL-RL	0.2715.879	0	77.5	0	0	0	150.726
-2m	-16.45	149	74.068	UL-RL	0.2715.879	0	79.5	0	0	0	153.568
-2m	-16.65	151	74.912	UL-RL	0.2715.879	0	81.5	0	0	0	156.412
-2m	-16.85	153	75.757	UL-RL	0.2715.879	0	83.5	0	0	0	159.256
-2m	-17.05	155	76.603	UL-RL	0.2715.879	0	85.5	0	0	0	162.103
-2m	-17.25	157	77.451	UL-RL	0.2715.879	0	87.5	0	0	0	164.951
-2m	-17.45	159	78.3	UL-RL	0.2715.879	0	89.5	0	0	0	167.8
-2m	-17.65	161	79.15	UL-RL	0.2715.879	0	91.5	0	0	0	170.65
-2m	-17.85	163	80.001	UL-RL	0.2715.879	0	93.5	0	0	0	173.501
-2m	-18.05	165	80.853	UL-RL	0.2715.879	0	95.5	0	0	0	176.353
-2m	-18.25	167	81.706	UL-RL	0.2715.879	0	97.5	0	0	0	179.206
-2m	-18.45	169	82.56	UL-RL	0.2715.879	0	99.5	0	0	0	182.06
-2m	-18.65	171	83.414	UL-RL	0.2715.879	0	101.5	0	0	0	184.914
-2m	-18.85	173	84.269	UL-RL	0.2715.879	0	103.5	0	0	0	187.77
-2m	-19.05	175	85.125	UL-RL	0.2715.879	0	105.5	0	0	0	190.625
-2m	-19.25	177	85.981	UL-RL	0.2715.879	0	107.5	0	0	0	193.481
-2m	-19.45	179	86.838	UL-RL	0.2715.879	0	109.5	0	0	0	196.338
-2m	-19.65	181	87.695	UL-RL	0.2715.879	0	111.5	0	0	0	199.195
-2m	-19.85	183	88.552	UL-RL	0.2715.879	0	113.5	0	0	0	202.052
-2m	-20.05	185	89.409	UL-RL	0.2715.879	0	115.5	0	0	0	204.909
-2m	-20.25	187	90.267	UL-RL	0.2715.879	0	117.5	0	0	0	207.767
-2m	-20.45	189	91.125	UL-RL	0.2715.879	0	119.5	0	0	0	210.625
-2m	-20.65	191	91.983	UL-RL	0.2715.879	0	121.5	0	0	0	213.483
-2m	-20.85	193	92.842	UL-RL	0.2715.879	0	123.5	0	0	0	216.342
-2m	-21.05	195	93.7	UL-RL	0.2715.879	0	125.5	0	0	0	219.2
-2m	-21.25	197	94.558	UL-RL	0.2715.879	0	127.5	0	0	0	222.058
-2m	-21.45	199	95.417	UL-RL	0.2715.879	0	129.5	0	0	0	224.917
-2m	-21.65	201	96.275	UL-RL	0.2715.879	0	131.5	0	0	0	227.775
-2m	-21.85	203	97.134	UL-RL	0.2715.879	0	133.5	0	0	0	230.634
-2m	-22.05	205	97.992	UL-RL	0.2715.879	0	135.5	0	0	0	233.492
-2m	-22.25	207	98.851	UL-RL	0.2715.879	0	137.5	0	0	0	236.351

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
-2m	-22.45	209	99.709	UL-RL	0.2715.879	0	139.5	0	0	239.209
-2m	-22.65	211	100.568	UL-RL	0.2715.879	0	141.5	0	0	242.068
-2m	-22.85	213	101.426	UL-RL	0.2715.879	0	143.5	0	0	244.926
-2m	-23.05	215	102.285	UL-RL	0.2715.879	0	145.5	0	0	247.785
-2m	-23.25	217	103.143	UL-RL	0.2715.879	0	147.5	0	0	250.643
-2m	-23.45	219	104.001	UL-RL	0.2715.879	0	149.5	0	0	253.501
-2m	-23.65	221	104.859	UL-RL	0.2715.879	0	151.5	0	0	256.36
-2m	-23.85	223	105.718	UL-RL	0.2715.879	0	153.5	0	0	259.218
-2m	-24.05	225	106.576	UL-RL	0.2715.879	0	155.5	0	0	262.076
-2m	-24.25	227	107.434	UL-RL	0.2715.879	0	157.5	0	0	264.934
-2m	-24.45	229	108.292	UL-RL	0.2715.879	0	159.5	0	0	267.792
-2m	-24.65	231	109.15	UL-RL	0.2715.879	0	161.5	0	0	270.65
-2m	-24.85	233	110.008	UL-RL	0.2715.879	0	163.5	0	0	273.508
-2m	-25	234.5	110.651	UL-RL	0.2715.879	0	165	0	0	275.651

**Tabella Risultati Terreno Left Wall - Nominal - -3m**

Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	LEFT Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-3m	0	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-3.05	0.95	0.304	ACTIVE	0.32	4.555	0	0	0	0	0.304
-3m	-3.25	4.75	1.52	ACTIVE	0.32	4.555	0	0	0	0	1.52
-3m	-3.45	8.55	2.736	ACTIVE	0.32	4.555	0	0	0	0	2.736
-3m	-3.65	12.35	3.952	ACTIVE	0.32	4.555	0	0	0	0	3.952
-3m	-3.85	16.15	5.168	ACTIVE	0.32	4.555	0	0	0	0	5.168
-3m	-4.05	19.95	6.384	ACTIVE	0.32	4.555	0	0	0	0	6.384
-3m	-4.25	23.75	8.038	UL-RL	0.32	4.555	0	0	0	0	8.038
-3m	-4.45	27.55	9.831	UL-RL	0.32	4.555	0	0	0	0	9.831
-3m	-4.65	31.35	11.629	UL-RL	0.32	4.555	0	0	0	0	11.629
-3m	-4.85	35.15	13.433	UL-RL	0.32	4.555	0	0	0	0	13.433
-3m	-5.05	38.95	15.242	UL-RL	0.32	4.555	0	0	0	0	15.242
-3m	-5.25	42.75	17.058	UL-RL	0.32	4.555	0	0	0	0	17.058
-3m	-5.45	46.55	18.88	UL-RL	0.32	4.555	0	0	0	0	18.88
-3m	-5.65	50.5	14.897	ACTIVE	0.295	5.16	0	0	0	0	14.897
-3m	-5.85	54.5	16.077	ACTIVE	0.295	5.16	0	0	0	0	16.077
-3m	-6.05	58.5	17.257	ACTIVE	0.295	5.16	0	0	0	0	17.257
-3m	-6.25	62.5	18.437	ACTIVE	0.295	5.16	0	0	0	0	18.437
-3m	-6.45	66.5	19.617	ACTIVE	0.295	5.16	0	0	0	0	19.617
-3m	-6.65	70.5	20.797	ACTIVE	0.295	5.16	0	0	0	0	20.797
-3m	-6.85	74.5	22.391	UL-RL	0.295	5.16	0	0	0	0	22.391
-3m	-7.05	78.5	24.282	UL-RL	0.295	5.16	0	0	0	0	24.282
-3m	-7.25	82.5	26.186	UL-RL	0.295	5.16	0	0	0	0	26.186
-3m	-7.45	86.5	28.103	UL-RL	0.295	5.16	0	0	0	0	28.103
-3m	-7.65	90.5	30.031	UL-RL	0.295	5.16	0	0	0	0	30.031
-3m	-7.85	94.5	31.969	UL-RL	0.295	5.16	0	0	0	0	31.969
-3m	-8.05	98.5	33.917	UL-RL	0.295	5.16	0	0	0	0	33.917
-3m	-8.25	102.5	35.874	UL-RL	0.295	5.16	0	0	0	0	35.874
-3m	-8.45	106.5	37.838	UL-RL	0.295	5.16	0	0	0	0	37.838
-3m	-8.65	109	39.127	UL-RL	0.295	5.16	0	1.5	0	0	40.627
-3m	-8.85	111	40.195	UL-RL	0.295	5.16	0	3.5	0	0	43.695
-3m	-9.05	113	41.269	UL-RL	0.295	5.16	0	5.5	0	0	46.769
-3m	-9.25	115	42.347	UL-RL	0.295	5.16	0	7.5	0	0	49.847
-3m	-9.45	117	43.43	UL-RL	0.295	5.16	0	9.5	0	0	52.93
-3m	-9.65	119	44.516	UL-RL	0.295	5.16	0	11.5	0	0	56.015
-3m	-9.85	121	45.604	UL-RL	0.295	5.16	0	13.5	0	0	59.104
-3m	-10.05	123	46.694	UL-RL	0.295	5.16	0	15.5	0	0	62.194
-3m	-10.25	125	47.786	UL-RL	0.295	5.16	0	17.5	0	0	65.285



Ponte stradale su Torrente Giustenice  
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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U*	Peq (kPa)
-3m	-10.45	127	48.877	UL-RL	0.295	5.16	0	19.5	0	0	68.377
-3m	-10.65	129	49.969	UL-RL	0.295	5.16	0	21.5	0	0	71.469
-3m	-10.85	131	51.059	UL-RL	0.295	5.16	0	23.5	0	0	74.559
-3m	-11.05	133	43.568	UL-RL	0.2715.879		0	25.5	0	0	69.068
-3m	-11.25	135	44.695	UL-RL	0.2715.879		0	27.5	0	0	72.195
-3m	-11.45	137	45.817	UL-RL	0.2715.879		0	29.5	0	0	75.317
-3m	-11.65	139	46.933	UL-RL	0.2715.879		0	31.5	0	0	78.432
-3m	-11.85	141	48.041	UL-RL	0.2715.879		0	33.5	0	0	81.541
-3m	-12.05	143	49.142	UL-RL	0.2715.879		0	35.5	0	0	84.642
-3m	-12.25	145	50.235	UL-RL	0.2715.879		0	37.5	0	0	87.735
-3m	-12.45	147	51.319	UL-RL	0.2715.879		0	39.5	0	0	90.819
-3m	-12.65	149	52.393	UL-RL	0.2715.879		0	41.5	0	0	93.893
-3m	-12.85	151	53.459	UL-RL	0.2715.879		0	43.5	0	0	96.959
-3m	-13.05	153	54.514	UL-RL	0.2715.879		0	45.5	0	0	100.014
-3m	-13.25	155	55.56	UL-RL	0.2715.879		0	47.5	0	0	103.06
-3m	-13.45	157	56.597	UL-RL	0.2715.879		0	49.5	0	0	106.096
-3m	-13.65	159	57.623	UL-RL	0.2715.879		0	51.5	0	0	109.123
-3m	-13.85	161	58.64	UL-RL	0.2715.879		0	53.5	0	0	112.14
-3m	-14.05	163	59.647	UL-RL	0.2715.879		0	55.5	0	0	115.146
-3m	-14.25	165	60.644	UL-RL	0.2715.879		0	57.5	0	0	118.144
-3m	-14.45	167	61.633	UL-RL	0.2715.879		0	59.5	0	0	121.132
-3m	-14.65	169	62.612	UL-RL	0.2715.879		0	61.5	0	0	124.112
-3m	-14.85	171	63.582	UL-RL	0.2715.879		0	63.5	0	0	127.082
-3m	-15.05	173	64.544	UL-RL	0.2715.879		0	65.5	0	0	130.044
-3m	-15.25	175	65.498	UL-RL	0.2715.879		0	67.5	0	0	132.998
-3m	-15.45	177	66.444	UL-RL	0.2715.879		0	69.5	0	0	135.944
-3m	-15.65	179	67.383	UL-RL	0.2715.879		0	71.5	0	0	138.882
-3m	-15.85	181	68.314	UL-RL	0.2715.879		0	73.5	0	0	141.814
-3m	-16.05	183	69.238	UL-RL	0.2715.879		0	75.5	0	0	144.738
-3m	-16.25	185	70.156	UL-RL	0.2715.879		0	77.5	0	0	147.656
-3m	-16.45	187	71.067	UL-RL	0.2715.879		0	79.5	0	0	150.567
-3m	-16.65	189	71.973	UL-RL	0.2715.879		0	81.5	0	0	153.473
-3m	-16.85	191	72.873	UL-RL	0.2715.879		0	83.5	0	0	156.373
-3m	-17.05	193	73.768	UL-RL	0.2715.879		0	85.5	0	0	159.268
-3m	-17.25	195	74.658	UL-RL	0.2715.879		0	87.5	0	0	162.158
-3m	-17.45	197	75.544	UL-RL	0.2715.879		0	89.5	0	0	165.044
-3m	-17.65	199	76.425	UL-RL	0.2715.879		0	91.5	0	0	167.925
-3m	-17.85	201	77.303	UL-RL	0.2715.879		0	93.5	0	0	170.803
-3m	-18.05	203	78.177	UL-RL	0.2715.879		0	95.5	0	0	173.677
-3m	-18.25	205	79.047	UL-RL	0.2715.879		0	97.5	0	0	176.547
-3m	-18.45	207	79.915	UL-RL	0.2715.879		0	99.5	0	0	179.415
-3m	-18.65	209	80.779	UL-RL	0.2715.879		0	101.5	0	0	182.279
-3m	-18.85	211	81.641	UL-RL	0.2715.879		0	103.5	0	0	185.141
-3m	-19.05	213	82.501	UL-RL	0.2715.879		0	105.5	0	0	188.001
-3m	-19.25	215	83.358	UL-RL	0.2715.879		0	107.5	0	0	190.858
-3m	-19.45	217	84.214	UL-RL	0.2715.879		0	109.5	0	0	193.714
-3m	-19.65	219	85.068	UL-RL	0.2715.879		0	111.5	0	0	196.568
-3m	-19.85	221	85.92	UL-RL	0.2715.879		0	113.5	0	0	199.42
-3m	-20.05	223	86.771	UL-RL	0.2715.879		0	115.5	0	0	202.271
-3m	-20.25	225	87.621	UL-RL	0.2715.879		0	117.5	0	0	205.121
-3m	-20.45	227	88.47	UL-RL	0.2715.879		0	119.5	0	0	207.97
-3m	-20.65	229	89.318	UL-RL	0.2715.879		0	121.5	0	0	210.818
-3m	-20.85	231	90.164	UL-RL	0.2715.879		0	123.5	0	0	213.664
-3m	-21.05	233	91.011	UL-RL	0.2715.879		0	125.5	0	0	216.511
-3m	-21.25	235	91.856	UL-RL	0.2715.879		0	127.5	0	0	219.356
-3m	-21.45	237	92.701	UL-RL	0.2715.879		0	129.5	0	0	222.201
-3m	-21.65	239	93.546	UL-RL	0.2715.879		0	131.5	0	0	225.046

Ponte stradale su Torrente Giustenice  
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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-3m	-21.85	241	94.39	UL-RL	0.2715.879	0	133.5	0	0	0	227.89
-3m	-22.05	243	95.234	UL-RL	0.2715.879	0	135.5	0	0	0	230.734
-3m	-22.25	245	96.078	UL-RL	0.2715.879	0	137.5	0	0	0	233.578
-3m	-22.45	247	96.921	UL-RL	0.2715.879	0	139.5	0	0	0	236.421
-3m	-22.65	249	97.765	UL-RL	0.2715.879	0	141.5	0	0	0	239.265
-3m	-22.85	251	98.608	UL-RL	0.2715.879	0	143.5	0	0	0	242.108
-3m	-23.05	253	99.451	UL-RL	0.2715.879	0	145.5	0	0	0	244.951
-3m	-23.25	255	100.294	UL-RL	0.2715.879	0	147.5	0	0	0	247.794
-3m	-23.45	257	101.137	UL-RL	0.2715.879	0	149.5	0	0	0	250.637
-3m	-23.65	259	101.98	UL-RL	0.2715.879	0	151.5	0	0	0	253.48
-3m	-23.85	261	102.823	UL-RL	0.2715.879	0	153.5	0	0	0	256.323
-3m	-24.05	263	103.666	UL-RL	0.2715.879	0	155.5	0	0	0	259.166
-3m	-24.25	265	104.509	UL-RL	0.2715.879	0	157.5	0	0	0	262.009
-3m	-24.45	267	105.352	UL-RL	0.2715.879	0	159.5	0	0	0	264.852
-3m	-24.65	269	106.195	UL-RL	0.2715.879	0	161.5	0	0	0	267.695
-3m	-24.85	271	107.038	UL-RL	0.2715.879	0	163.5	0	0	0	270.538
-3m	-25	272.5	107.67	UL-RL	0.2715.879	0	165	0	0	0	272.67

Ponte stradale su Torrente Giustenice  
 Relazione di calcolo spalle

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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-3m	0	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-3.05	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-3.25	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-3.45	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-3.65	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-3.85	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-4.05	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-4.25	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-4.45	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-4.65	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-4.85	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-5.05	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-5.25	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-5.45	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-5.65	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-5.85	0	0	REMOVED	0	0	0	0	0	0	0
-3m	-6.05	1	5.16	PASSIVE	0.295	5.16	0	0	0	0	5.16
-3m	-6.25	5	14.901	UL-RL	0.295	5.16	0	0	0	0	14.901
-3m	-6.45	9	17.974	UL-RL	0.295	5.16	0	0	0	0	17.974
-3m	-6.65	13	20.593	UL-RL	0.295	5.16	0	0	0	0	20.593
-3m	-6.85	17	22.977	UL-RL	0.295	5.16	0	0	0	0	22.977
-3m	-7.05	21	25.216	UL-RL	0.295	5.16	0	0	0	0	25.216
-3m	-7.25	25	27.357	UL-RL	0.295	5.16	0	0	0	0	27.357
-3m	-7.45	29	29.424	UL-RL	0.295	5.16	0	0	0	0	29.424
-3m	-7.65	33	31.437	UL-RL	0.295	5.16	0	0	0	0	31.437
-3m	-7.85	37	33.407	UL-RL	0.295	5.16	0	0	0	0	33.407
-3m	-8.05	41	35.342	UL-RL	0.295	5.16	0	0	0	0	35.342
-3m	-8.25	45	37.248	UL-RL	0.295	5.16	0	0	0	0	37.248
-3m	-8.45	49	39.13	UL-RL	0.295	5.16	0	0	0	0	39.13
-3m	-8.65	51.5	40.262	UL-RL	0.295	5.16	0	1.5	0	0	41.762
-3m	-8.85	53.5	41.142	UL-RL	0.295	5.16	0	3.5	0	0	44.642
-3m	-9.05	55.5	42.015	UL-RL	0.295	5.16	0	5.5	0	0	47.515
-3m	-9.25	57.5	42.882	UL-RL	0.295	5.16	0	7.5	0	0	50.382
-3m	-9.45	59.5	43.744	UL-RL	0.295	5.16	0	9.5	0	0	53.244
-3m	-9.65	61.5	44.602	UL-RL	0.295	5.16	0	11.5	0	0	56.102
-3m	-9.85	63.5	45.456	UL-RL	0.295	5.16	0	13.5	0	0	58.956
-3m	-10.05	65.5	46.306	UL-RL	0.295	5.16	0	15.5	0	0	61.806
-3m	-10.25	67.5	47.153	UL-RL	0.295	5.16	0	17.5	0	0	64.653
-3m	-10.45	69.5	47.999	UL-RL	0.295	5.16	0	19.5	0	0	67.499
-3m	-10.65	71.5	48.843	UL-RL	0.295	5.16	0	21.5	0	0	70.342
-3m	-10.85	73.5	49.685	UL-RL	0.295	5.16	0	23.5	0	0	73.185

Ponte stradale su Torrente Giustenice  
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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-3m	-11.05	75.5	49.783	UL-RL	0.2715.879	0	25.5	0	0	0	75.283
-3m	-11.25	77.5	50.519	UL-RL	0.2715.879	0	27.5	0	0	0	78.019
-3m	-11.45	79.5	51.258	UL-RL	0.2715.879	0	29.5	0	0	0	80.757
-3m	-11.65	81.5	51.998	UL-RL	0.2715.879	0	31.5	0	0	0	83.498
-3m	-11.85	83.5	52.741	UL-RL	0.2715.879	0	33.5	0	0	0	86.24
-3m	-12.05	85.5	53.486	UL-RL	0.2715.879	0	35.5	0	0	0	88.986
-3m	-12.25	87.5	54.236	UL-RL	0.2715.879	0	37.5	0	0	0	91.736
-3m	-12.45	89.5	54.989	UL-RL	0.2715.879	0	39.5	0	0	0	94.489
-3m	-12.65	91.5	55.746	UL-RL	0.2715.879	0	41.5	0	0	0	97.246
-3m	-12.85	93.5	56.508	UL-RL	0.2715.879	0	43.5	0	0	0	100.008
-3m	-13.05	95.5	57.273	UL-RL	0.2715.879	0	45.5	0	0	0	102.773
-3m	-13.25	97.5	58.044	UL-RL	0.2715.879	0	47.5	0	0	0	105.544
-3m	-13.45	99.5	58.818	UL-RL	0.2715.879	0	49.5	0	0	0	108.318
-3m	-13.65	101.5	59.598	UL-RL	0.2715.879	0	51.5	0	0	0	111.098
-3m	-13.85	103.5	60.382	UL-RL	0.2715.879	0	53.5	0	0	0	113.882
-3m	-14.05	105.5	61.17	UL-RL	0.2715.879	0	55.5	0	0	0	116.67
-3m	-14.25	107.5	61.963	UL-RL	0.2715.879	0	57.5	0	0	0	119.463
-3m	-14.45	109.5	62.761	UL-RL	0.2715.879	0	59.5	0	0	0	122.261
-3m	-14.65	111.5	63.563	UL-RL	0.2715.879	0	61.5	0	0	0	125.062
-3m	-14.85	113.5	64.369	UL-RL	0.2715.879	0	63.5	0	0	0	127.868
-3m	-15.05	115.5	65.179	UL-RL	0.2715.879	0	65.5	0	0	0	130.679
-3m	-15.25	117.5	65.993	UL-RL	0.2715.879	0	67.5	0	0	0	133.492
-3m	-15.45	119.5	66.81	UL-RL	0.2715.879	0	69.5	0	0	0	136.31
-3m	-15.65	121.5	67.632	UL-RL	0.2715.879	0	71.5	0	0	0	139.132
-3m	-15.85	123.5	68.457	UL-RL	0.2715.879	0	73.5	0	0	0	141.957
-3m	-16.05	125.5	69.285	UL-RL	0.2715.879	0	75.5	0	0	0	144.785
-3m	-16.25	127.5	70.116	UL-RL	0.2715.879	0	77.5	0	0	0	147.616
-3m	-16.45	129.5	70.951	UL-RL	0.2715.879	0	79.5	0	0	0	150.451
-3m	-16.65	131.5	71.788	UL-RL	0.2715.879	0	81.5	0	0	0	153.288
-3m	-16.85	133.5	72.628	UL-RL	0.2715.879	0	83.5	0	0	0	156.128
-3m	-17.05	135.5	73.47	UL-RL	0.2715.879	0	85.5	0	0	0	158.97
-3m	-17.25	137.5	74.314	UL-RL	0.2715.879	0	87.5	0	0	0	161.814
-3m	-17.45	139.5	75.161	UL-RL	0.2715.879	0	89.5	0	0	0	164.661
-3m	-17.65	141.5	76.01	UL-RL	0.2715.879	0	91.5	0	0	0	167.51
-3m	-17.85	143.5	76.86	UL-RL	0.2715.879	0	93.5	0	0	0	170.36
-3m	-18.05	145.5	77.712	UL-RL	0.2715.879	0	95.5	0	0	0	173.212
-3m	-18.25	147.5	78.566	UL-RL	0.2715.879	0	97.5	0	0	0	176.066
-3m	-18.45	149.5	79.421	UL-RL	0.2715.879	0	99.5	0	0	0	178.921
-3m	-18.65	151.5	80.277	UL-RL	0.2715.879	0	101.5	0	0	0	181.777
-3m	-18.85	153.5	81.135	UL-RL	0.2715.879	0	103.5	0	0	0	184.635
-3m	-19.05	155.5	81.993	UL-RL	0.2715.879	0	105.5	0	0	0	187.493
-3m	-19.25	157.5	82.853	UL-RL	0.2715.879	0	107.5	0	0	0	190.353
-3m	-19.45	159.5	83.713	UL-RL	0.2715.879	0	109.5	0	0	0	193.213
-3m	-19.65	161.5	84.574	UL-RL	0.2715.879	0	111.5	0	0	0	196.074
-3m	-19.85	163.5	85.436	UL-RL	0.2715.879	0	113.5	0	0	0	198.936
-3m	-20.05	165.5	86.298	UL-RL	0.2715.879	0	115.5	0	0	0	201.798
-3m	-20.25	167.5	87.16	UL-RL	0.2715.879	0	117.5	0	0	0	204.661
-3m	-20.45	169.5	88.023	UL-RL	0.2715.879	0	119.5	0	0	0	207.524
-3m	-20.65	171.5	88.887	UL-RL	0.2715.879	0	121.5	0	0	0	210.387
-3m	-20.85	173.5	89.75	UL-RL	0.2715.879	0	123.5	0	0	0	213.25
-3m	-21.05	175.5	90.614	UL-RL	0.2715.879	0	125.5	0	0	0	216.114
-3m	-21.25	177.5	91.478	UL-RL	0.2715.879	0	127.5	0	0	0	218.978
-3m	-21.45	179.5	92.342	UL-RL	0.2715.879	0	129.5	0	0	0	221.842
-3m	-21.65	181.5	93.206	UL-RL	0.2715.879	0	131.5	0	0	0	224.706
-3m	-21.85	183.5	94.071	UL-RL	0.2715.879	0	133.5	0	0	0	227.571
-3m	-22.05	185.5	94.935	UL-RL	0.2715.879	0	135.5	0	0	0	230.435
-3m	-22.25	187.5	95.799	UL-RL	0.2715.879	0	137.5	0	0	0	233.299

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
-3m	-22.45	189.5	96.663	UL-RL	0.2715.879	0	139.5	0	0	236.163
-3m	-22.65	191.5	97.527	UL-RL	0.2715.879	0	141.5	0	0	239.028
-3m	-22.85	193.5	98.391	UL-RL	0.2715.879	0	143.5	0	0	241.892
-3m	-23.05	195.5	99.255	UL-RL	0.2715.879	0	145.5	0	0	244.756
-3m	-23.25	197.5	100.119	UL-RL	0.2715.879	0	147.5	0	0	247.62
-3m	-23.45	199.5	100.983	UL-RL	0.2715.879	0	149.5	0	0	250.483
-3m	-23.65	201.5	101.847	UL-RL	0.2715.879	0	151.5	0	0	253.347
-3m	-23.85	203.5	102.71	UL-RL	0.2715.879	0	153.5	0	0	256.211
-3m	-24.05	205.5	103.574	UL-RL	0.2715.879	0	155.5	0	0	259.074
-3m	-24.25	207.5	104.437	UL-RL	0.2715.879	0	157.5	0	0	261.937
-3m	-24.45	209.5	105.3	UL-RL	0.2715.879	0	159.5	0	0	264.8
-3m	-24.65	211.5	106.164	UL-RL	0.2715.879	0	161.5	0	0	267.664
-3m	-24.85	213.5	107.026	UL-RL	0.2715.879	0	163.5	0	0	270.527
-3m	-25	215	107.674	UL-RL	0.2715.879	0	165	0	0	272.674

Ponte stradale su Torrente Giustenice  
 Relazione di calcolo spalle

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**Tabella Risultati Terreno Left Wall - Nominal - -4m**

Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-4m	0	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-4m	-3.05	0.95	0.304	ACTIVE	0.32	4.555	0	0	0	0	0.304
-4m	-3.25	4.75	1.52	ACTIVE	0.32	4.555	0	0	0	0	1.52
-4m	-3.45	8.55	2.736	ACTIVE	0.32	4.555	0	0	0	0	2.736
-4m	-3.65	12.35	3.952	ACTIVE	0.32	4.555	0	0	0	0	3.952
-4m	-3.85	16.15	5.168	ACTIVE	0.32	4.555	0	0	0	0	5.168
-4m	-4.05	19.95	6.384	ACTIVE	0.32	4.555	0	0	0	0	6.384
-4m	-4.25	23.75	7.6	ACTIVE	0.32	4.555	0	0	0	0	7.6
-4m	-4.45	27.55	8.816	ACTIVE	0.32	4.555	0	0	0	0	8.816
-4m	-4.65	31.35	10.167	UL-RL	0.32	4.555	0	0	0	0	10.167
-4m	-4.85	35.15	11.93	UL-RL	0.32	4.555	0	0	0	0	11.93
-4m	-5.05	38.95	13.702	UL-RL	0.32	4.555	0	0	0	0	13.702
-4m	-5.25	42.75	15.482	UL-RL	0.32	4.555	0	0	0	0	15.482
-4m	-5.45	46.55	17.271	UL-RL	0.32	4.555	0	0	0	0	17.271
-4m	-5.65	50.5	14.897	ACTIVE	0.295	5.16	0	0	0	0	14.897
-4m	-5.85	54.5	16.077	ACTIVE	0.295	5.16	0	0	0	0	16.077
-4m	-6.05	58.5	17.257	ACTIVE	0.295	5.16	0	0	0	0	17.257
-4m	-6.25	62.5	18.437	ACTIVE	0.295	5.16	0	0	0	0	18.437
-4m	-6.45	66.5	19.617	ACTIVE	0.295	5.16	0	0	0	0	19.617
-4m	-6.65	70.5	20.797	ACTIVE	0.295	5.16	0	0	0	0	20.797
-4m	-6.85	74.5	21.977	ACTIVE	0.295	5.16	0	0	0	0	21.977
-4m	-7.05	78.5	23.157	ACTIVE	0.295	5.16	0	0	0	0	23.157
-4m	-7.25	82.5	24.337	ACTIVE	0.295	5.16	0	0	0	0	24.337
-4m	-7.45	86.5	25.517	ACTIVE	0.295	5.16	0	0	0	0	25.517
-4m	-7.65	90.5	26.697	ACTIVE	0.295	5.16	0	0	0	0	26.697
-4m	-7.85	94.5	27.877	ACTIVE	0.295	5.16	0	0	0	0	27.877
-4m	-8.05	98.5	29.057	ACTIVE	0.295	5.16	0	0	0	0	29.057
-4m	-8.25	102.5	30.477	UL-RL	0.295	5.16	0	0	0	0	30.477
-4m	-8.45	106.5	32.49	UL-RL	0.295	5.16	0	0	0	0	32.49
-4m	-8.65	109	33.834	UL-RL	0.295	5.16	0	1.5	0	0	35.334
-4m	-8.85	111	34.964	UL-RL	0.295	5.16	0	3.5	0	0	38.464
-4m	-9.05	113	36.106	UL-RL	0.295	5.16	0	5.5	0	0	41.605
-4m	-9.25	115	37.257	UL-RL	0.295	5.16	0	7.5	0	0	44.757
-4m	-9.45	117	38.418	UL-RL	0.295	5.16	0	9.5	0	0	47.918
-4m	-9.65	119	39.587	UL-RL	0.295	5.16	0	11.5	0	0	51.087
-4m	-9.85	121	40.762	UL-RL	0.295	5.16	0	13.5	0	0	54.262
-4m	-10.05	123	41.942	UL-RL	0.295	5.16	0	15.5	0	0	57.442
-4m	-10.25	125	43.126	UL-RL	0.295	5.16	0	17.5	0	0	60.626

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U*	Peq (kPa)
-4m	-10.45	127	44.312	UL-RL	0.295	5.16	0	19.5	0	0	63.812
-4m	-10.65	129	45.5	UL-RL	0.295	5.16	0	21.5	0	0	67
-4m	-10.85	131	46.689	UL-RL	0.295	5.16	0	23.5	0	0	70.189
-4m	-11.05	133	36.884	UL-RL	0.2715.879		0	25.5	0	0	62.384
-4m	-11.25	135	38.165	UL-RL	0.2715.879		0	27.5	0	0	65.665
-4m	-11.45	137	39.441	UL-RL	0.2715.879		0	29.5	0	0	68.941
-4m	-11.65	139	40.71	UL-RL	0.2715.879		0	31.5	0	0	72.21
-4m	-11.85	141	41.97	UL-RL	0.2715.879		0	33.5	0	0	75.47
-4m	-12.05	143	43.22	UL-RL	0.2715.879		0	35.5	0	0	78.72
-4m	-12.25	145	44.46	UL-RL	0.2715.879		0	37.5	0	0	81.959
-4m	-12.45	147	45.687	UL-RL	0.2715.879		0	39.5	0	0	85.187
-4m	-12.65	149	46.902	UL-RL	0.2715.879		0	41.5	0	0	88.402
-4m	-12.85	151	48.104	UL-RL	0.2715.879		0	43.5	0	0	91.604
-4m	-13.05	153	49.293	UL-RL	0.2715.879		0	45.5	0	0	94.792
-4m	-13.25	155	50.467	UL-RL	0.2715.879		0	47.5	0	0	97.967
-4m	-13.45	157	51.628	UL-RL	0.2715.879		0	49.5	0	0	101.128
-4m	-13.65	159	52.774	UL-RL	0.2715.879		0	51.5	0	0	104.274
-4m	-13.85	161	53.906	UL-RL	0.2715.879		0	53.5	0	0	107.406
-4m	-14.05	163	55.024	UL-RL	0.2715.879		0	55.5	0	0	110.524
-4m	-14.25	165	56.127	UL-RL	0.2715.879		0	57.5	0	0	113.627
-4m	-14.45	167	57.217	UL-RL	0.2715.879		0	59.5	0	0	116.717
-4m	-14.65	169	58.293	UL-RL	0.2715.879		0	61.5	0	0	119.793
-4m	-14.85	171	59.355	UL-RL	0.2715.879		0	63.5	0	0	122.855
-4m	-15.05	173	60.405	UL-RL	0.2715.879		0	65.5	0	0	125.905
-4m	-15.25	175	61.441	UL-RL	0.2715.879		0	67.5	0	0	128.941
-4m	-15.45	177	62.466	UL-RL	0.2715.879		0	69.5	0	0	131.966
-4m	-15.65	179	63.478	UL-RL	0.2715.879		0	71.5	0	0	134.978
-4m	-15.85	181	64.479	UL-RL	0.2715.879		0	73.5	0	0	137.979
-4m	-16.05	183	65.468	UL-RL	0.2715.879		0	75.5	0	0	140.968
-4m	-16.25	185	66.448	UL-RL	0.2715.879		0	77.5	0	0	143.947
-4m	-16.45	187	67.417	UL-RL	0.2715.879		0	79.5	0	0	146.916
-4m	-16.65	189	68.376	UL-RL	0.2715.879		0	81.5	0	0	149.876
-4m	-16.85	191	69.326	UL-RL	0.2715.879		0	83.5	0	0	152.826
-4m	-17.05	193	70.268	UL-RL	0.2715.879		0	85.5	0	0	155.767
-4m	-17.25	195	71.201	UL-RL	0.2715.879		0	87.5	0	0	158.701
-4m	-17.45	197	72.126	UL-RL	0.2715.879		0	89.5	0	0	161.626
-4m	-17.65	199	73.045	UL-RL	0.2715.879		0	91.5	0	0	164.545
-4m	-17.85	201	73.956	UL-RL	0.2715.879		0	93.5	0	0	167.456
-4m	-18.05	203	74.861	UL-RL	0.2715.879		0	95.5	0	0	170.361
-4m	-18.25	205	75.76	UL-RL	0.2715.879		0	97.5	0	0	173.26
-4m	-18.45	207	76.654	UL-RL	0.2715.879		0	99.5	0	0	176.154
-4m	-18.65	209	77.542	UL-RL	0.2715.879		0	101.5	0	0	179.042
-4m	-18.85	211	78.426	UL-RL	0.2715.879		0	103.5	0	0	181.926
-4m	-19.05	213	79.305	UL-RL	0.2715.879		0	105.5	0	0	184.805
-4m	-19.25	215	80.18	UL-RL	0.2715.879		0	107.5	0	0	187.68
-4m	-19.45	217	81.052	UL-RL	0.2715.879		0	109.5	0	0	190.552
-4m	-19.65	219	81.92	UL-RL	0.2715.879		0	111.5	0	0	193.42
-4m	-19.85	221	82.785	UL-RL	0.2715.879		0	113.5	0	0	196.285
-4m	-20.05	223	83.647	UL-RL	0.2715.879		0	115.5	0	0	199.147
-4m	-20.25	225	84.507	UL-RL	0.2715.879		0	117.5	0	0	202.007
-4m	-20.45	227	85.364	UL-RL	0.2715.879		0	119.5	0	0	204.864
-4m	-20.65	229	86.22	UL-RL	0.2715.879		0	121.5	0	0	207.72
-4m	-20.85	231	87.074	UL-RL	0.2715.879		0	123.5	0	0	210.574
-4m	-21.05	233	87.926	UL-RL	0.2715.879		0	125.5	0	0	213.426
-4m	-21.25	235	88.776	UL-RL	0.2715.879		0	127.5	0	0	216.276
-4m	-21.45	237	89.626	UL-RL	0.2715.879		0	129.5	0	0	219.126
-4m	-21.65	239	90.474	UL-RL	0.2715.879		0	131.5	0	0	221.974

Ponte stradale su Torrente Giustenice  
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COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-4m	-21.85	241	91.321	UL-RL	0.2715.879	0	133.5	0	0	0	224.822
-4m	-22.05	243	92.168	UL-RL	0.2715.879	0	135.5	0	0	0	227.668
-4m	-22.25	245	93.014	UL-RL	0.2715.879	0	137.5	0	0	0	230.514
-4m	-22.45	247	93.859	UL-RL	0.2715.879	0	139.5	0	0	0	233.36
-4m	-22.65	249	94.704	UL-RL	0.2715.879	0	141.5	0	0	0	236.204
-4m	-22.85	251	95.549	UL-RL	0.2715.879	0	143.5	0	0	0	239.049
-4m	-23.05	253	96.393	UL-RL	0.2715.879	0	145.5	0	0	0	241.893
-4m	-23.25	255	97.237	UL-RL	0.2715.879	0	147.5	0	0	0	244.737
-4m	-23.45	257	98.081	UL-RL	0.2715.879	0	149.5	0	0	0	247.581
-4m	-23.65	259	98.924	UL-RL	0.2715.879	0	151.5	0	0	0	250.425
-4m	-23.85	261	99.768	UL-RL	0.2715.879	0	153.5	0	0	0	253.268
-4m	-24.05	263	100.611	UL-RL	0.2715.879	0	155.5	0	0	0	256.112
-4m	-24.25	265	101.455	UL-RL	0.2715.879	0	157.5	0	0	0	258.955
-4m	-24.45	267	102.298	UL-RL	0.2715.879	0	159.5	0	0	0	261.798
-4m	-24.65	269	103.142	UL-RL	0.2715.879	0	161.5	0	0	0	264.642
-4m	-24.85	271	103.985	UL-RL	0.2715.879	0	163.5	0	0	0	267.485
-4m	-25	272.5	104.617	UL-RL	0.2715.879	0	165	0	0	0	269.617



Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT Stato	Lato		RIGHT Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
		Sigma V (kPa)				Ka	Kp					
-4m	0	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-0.2	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-0.4	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-0.6	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-0.8	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-1	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-1.2	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-1.4	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-1.6	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-1.8	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-2	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-2.2	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-2.25	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-2.45	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-2.65	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-2.85	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-3.05	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-3.25	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-3.45	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-3.65	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-3.85	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-4.05	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-4.25	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-4.45	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-4.65	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-4.85	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-5.05	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-5.25	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-5.45	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-5.65	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-5.85	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-6.05	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-6.25	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-6.45	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-6.65	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-6.85	0		0	REMOVED	0	0	0	0	0	0	0
-4m	-7.05	1		5.16	PASSIVE	0.295	5.16	0	0	0	0	5.16
-4m	-7.25	5		19.18	UL-RL	0.295	5.16	0	0	0	0	19.18
-4m	-7.45	9		22.575	UL-RL	0.295	5.16	0	0	0	0	22.575
-4m	-7.65	13		25.416	UL-RL	0.295	5.16	0	0	0	0	25.416
-4m	-7.85	17		27.963	UL-RL	0.295	5.16	0	0	0	0	27.963
-4m	-8.05	21		30.326	UL-RL	0.295	5.16	0	0	0	0	30.326
-4m	-8.25	25		32.561	UL-RL	0.295	5.16	0	0	0	0	32.561
-4m	-8.45	29		34.701	UL-RL	0.295	5.16	0	0	0	0	34.701
-4m	-8.65	31.5		35.954	UL-RL	0.295	5.16	0	1.5	0	0	37.454
-4m	-8.85	33.5		36.909	UL-RL	0.295	5.16	0	3.5	0	0	40.409
-4m	-9.05	35.5		37.845	UL-RL	0.295	5.16	0	5.5	0	0	43.344
-4m	-9.25	37.5		38.764	UL-RL	0.295	5.16	0	7.5	0	0	46.264
-4m	-9.45	39.5		39.668	UL-RL	0.295	5.16	0	9.5	0	0	49.168
-4m	-9.65	41.5		40.558	UL-RL	0.295	5.16	0	11.5	0	0	52.058
-4m	-9.85	43.5		41.438	UL-RL	0.295	5.16	0	13.5	0	0	54.938
-4m	-10.05	45.5		42.307	UL-RL	0.295	5.16	0	15.5	0	0	57.806
-4m	-10.25	47.5		43.167	UL-RL	0.295	5.16	0	17.5	0	0	60.667
-4m	-10.45	49.5		44.019	UL-RL	0.295	5.16	0	19.5	0	0	63.519
-4m	-10.65	51.5		44.865	UL-RL	0.295	5.16	0	21.5	0	0	66.365
-4m	-10.85	53.5		45.707	UL-RL	0.295	5.16	0	23.5	0	0	69.206

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-4m	-11.05	55.5	47.317	UL-RL	0.2715.879	0	25.5	0	0	0	72.817
-4m	-11.25	57.5	48.017	UL-RL	0.2715.879	0	27.5	0	0	0	75.517
-4m	-11.45	59.5	48.716	UL-RL	0.2715.879	0	29.5	0	0	0	78.216
-4m	-11.65	61.5	49.416	UL-RL	0.2715.879	0	31.5	0	0	0	80.916
-4m	-11.85	63.5	50.117	UL-RL	0.2715.879	0	33.5	0	0	0	83.617
-4m	-12.05	65.5	50.82	UL-RL	0.2715.879	0	35.5	0	0	0	86.32
-4m	-12.25	67.5	51.527	UL-RL	0.2715.879	0	37.5	0	0	0	89.027
-4m	-12.45	69.5	52.237	UL-RL	0.2715.879	0	39.5	0	0	0	91.737
-4m	-12.65	71.5	52.952	UL-RL	0.2715.879	0	41.5	0	0	0	94.451
-4m	-12.85	73.5	53.671	UL-RL	0.2715.879	0	43.5	0	0	0	97.171
-4m	-13.05	75.5	54.395	UL-RL	0.2715.879	0	45.5	0	0	0	99.895
-4m	-13.25	77.5	55.125	UL-RL	0.2715.879	0	47.5	0	0	0	102.625
-4m	-13.45	79.5	55.861	UL-RL	0.2715.879	0	49.5	0	0	0	105.36
-4m	-13.65	81.5	56.602	UL-RL	0.2715.879	0	51.5	0	0	0	108.102
-4m	-13.85	83.5	57.349	UL-RL	0.2715.879	0	53.5	0	0	0	110.849
-4m	-14.05	85.5	58.103	UL-RL	0.2715.879	0	55.5	0	0	0	113.603
-4m	-14.25	87.5	58.862	UL-RL	0.2715.879	0	57.5	0	0	0	116.362
-4m	-14.45	89.5	59.628	UL-RL	0.2715.879	0	59.5	0	0	0	119.128
-4m	-14.65	91.5	60.4	UL-RL	0.2715.879	0	61.5	0	0	0	121.9
-4m	-14.85	93.5	61.177	UL-RL	0.2715.879	0	63.5	0	0	0	124.677
-4m	-15.05	95.5	61.961	UL-RL	0.2715.879	0	65.5	0	0	0	127.461
-4m	-15.25	97.5	62.75	UL-RL	0.2715.879	0	67.5	0	0	0	130.25
-4m	-15.45	99.5	63.545	UL-RL	0.2715.879	0	69.5	0	0	0	133.045
-4m	-15.65	101.5	64.345	UL-RL	0.2715.879	0	71.5	0	0	0	135.845
-4m	-15.85	103.5	65.15	UL-RL	0.2715.879	0	73.5	0	0	0	138.65
-4m	-16.05	105.5	65.961	UL-RL	0.2715.879	0	75.5	0	0	0	141.461
-4m	-16.25	107.5	66.776	UL-RL	0.2715.879	0	77.5	0	0	0	144.276
-4m	-16.45	109.5	67.596	UL-RL	0.2715.879	0	79.5	0	0	0	147.096
-4m	-16.65	111.5	68.42	UL-RL	0.2715.879	0	81.5	0	0	0	149.92
-4m	-16.85	113.5	69.248	UL-RL	0.2715.879	0	83.5	0	0	0	152.748
-4m	-17.05	115.5	70.08	UL-RL	0.2715.879	0	85.5	0	0	0	155.58
-4m	-17.25	117.5	70.916	UL-RL	0.2715.879	0	87.5	0	0	0	158.416
-4m	-17.45	119.5	71.755	UL-RL	0.2715.879	0	89.5	0	0	0	161.255
-4m	-17.65	121.5	72.598	UL-RL	0.2715.879	0	91.5	0	0	0	164.098
-4m	-17.85	123.5	73.443	UL-RL	0.2715.879	0	93.5	0	0	0	166.943
-4m	-18.05	125.5	74.292	UL-RL	0.2715.879	0	95.5	0	0	0	169.792
-4m	-18.25	127.5	75.142	UL-RL	0.2715.879	0	97.5	0	0	0	172.642
-4m	-18.45	129.5	75.996	UL-RL	0.2715.879	0	99.5	0	0	0	175.496
-4m	-18.65	131.5	76.851	UL-RL	0.2715.879	0	101.5	0	0	0	178.351
-4m	-18.85	133.5	77.709	UL-RL	0.2715.879	0	103.5	0	0	0	181.209
-4m	-19.05	135.5	78.568	UL-RL	0.2715.879	0	105.5	0	0	0	184.068
-4m	-19.25	137.5	79.429	UL-RL	0.2715.879	0	107.5	0	0	0	186.929
-4m	-19.45	139.5	80.292	UL-RL	0.2715.879	0	109.5	0	0	0	189.792
-4m	-19.65	141.5	81.156	UL-RL	0.2715.879	0	111.5	0	0	0	192.656
-4m	-19.85	143.5	82.021	UL-RL	0.2715.879	0	113.5	0	0	0	195.521
-4m	-20.05	145.5	82.887	UL-RL	0.2715.879	0	115.5	0	0	0	198.387
-4m	-20.25	147.5	83.754	UL-RL	0.2715.879	0	117.5	0	0	0	201.254
-4m	-20.45	149.5	84.622	UL-RL	0.2715.879	0	119.5	0	0	0	204.122
-4m	-20.65	151.5	85.49	UL-RL	0.2715.879	0	121.5	0	0	0	206.991
-4m	-20.85	153.5	86.36	UL-RL	0.2715.879	0	123.5	0	0	0	209.86
-4m	-21.05	155.5	87.229	UL-RL	0.2715.879	0	125.5	0	0	0	212.729
-4m	-21.25	157.5	88.099	UL-RL	0.2715.879	0	127.5	0	0	0	215.599
-4m	-21.45	159.5	88.97	UL-RL	0.2715.879	0	129.5	0	0	0	218.47
-4m	-21.65	161.5	89.84	UL-RL	0.2715.879	0	131.5	0	0	0	221.34
-4m	-21.85	163.5	90.711	UL-RL	0.2715.879	0	133.5	0	0	0	224.211
-4m	-22.05	165.5	91.582	UL-RL	0.2715.879	0	135.5	0	0	0	227.082
-4m	-22.25	167.5	92.453	UL-RL	0.2715.879	0	137.5	0	0	0	229.953

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente		
-4m	-22.45	169.5	93.324	UL-RL	0.2715.879	0	139.5	0	0	232.824	
-4m	-22.65	171.5	94.194	UL-RL	0.2715.879	0	141.5	0	0	235.694	
-4m	-22.85	173.5	95.065	UL-RL	0.2715.879	0	143.5	0	0	238.565	
-4m	-23.05	175.5	95.936	UL-RL	0.2715.879	0	145.5	0	0	241.436	
-4m	-23.25	177.5	96.806	UL-RL	0.2715.879	0	147.5	0	0	244.306	
-4m	-23.45	179.5	97.677	UL-RL	0.2715.879	0	149.5	0	0	247.177	
-4m	-23.65	181.5	98.547	UL-RL	0.2715.879	0	151.5	0	0	250.047	
-4m	-23.85	183.5	99.417	UL-RL	0.2715.879	0	153.5	0	0	252.917	
-4m	-24.05	185.5	100.287	UL-RL	0.2715.879	0	155.5	0	0	255.787	
-4m	-24.25	187.5	101.156	UL-RL	0.2715.879	0	157.5	0	0	258.656	
-4m	-24.45	189.5	102.026	UL-RL	0.2715.879	0	159.5	0	0	261.526	
-4m	-24.65	191.5	102.895	UL-RL	0.2715.879	0	161.5	0	0	264.395	
-4m	-24.85	193.5	103.764	UL-RL	0.2715.879	0	163.5	0	0	267.264	
-4m	-25	195	104.415	UL-RL	0.2715.879	0	165	0	0	269.415	

### Tabella Risultati Terreno Left Wall - Nominal - -5m

Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	LEFT Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-5m	0	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-3.05	0.95	0.304	ACTIVE	0.32	4.555	0	0	0	0	0.304
-5m	-3.25	4.75	1.52	ACTIVE	0.32	4.555	0	0	0	0	1.52
-5m	-3.45	8.55	2.736	ACTIVE	0.32	4.555	0	0	0	0	2.736
-5m	-3.65	12.35	3.952	ACTIVE	0.32	4.555	0	0	0	0	3.952
-5m	-3.85	16.15	5.168	ACTIVE	0.32	4.555	0	0	0	0	5.168
-5m	-4.05	19.95	6.384	ACTIVE	0.32	4.555	0	0	0	0	6.384
-5m	-4.25	23.75	7.6	ACTIVE	0.32	4.555	0	0	0	0	7.6
-5m	-4.45	27.55	8.816	ACTIVE	0.32	4.555	0	0	0	0	8.816
-5m	-4.65	31.35	10.032	ACTIVE	0.32	4.555	0	0	0	0	10.032
-5m	-4.85	35.15	11.248	ACTIVE	0.32	4.555	0	0	0	0	11.248
-5m	-5.05	38.95	12.464	ACTIVE	0.32	4.555	0	0	0	0	12.464
-5m	-5.25	42.75	13.68	ACTIVE	0.32	4.555	0	0	0	0	13.68
-5m	-5.45	46.55	15.269	UL-RL	0.32	4.555	0	0	0	0	15.269
-5m	-5.65	50.5	14.897	ACTIVE	0.295	5.16	0	0	0	0	14.897
-5m	-5.85	54.5	16.077	ACTIVE	0.295	5.16	0	0	0	0	16.077
-5m	-6.05	58.5	17.257	ACTIVE	0.295	5.16	0	0	0	0	17.257
-5m	-6.25	62.5	18.437	ACTIVE	0.295	5.16	0	0	0	0	18.437
-5m	-6.45	66.5	19.617	ACTIVE	0.295	5.16	0	0	0	0	19.617
-5m	-6.65	70.5	20.797	ACTIVE	0.295	5.16	0	0	0	0	20.797
-5m	-6.85	74.5	21.977	ACTIVE	0.295	5.16	0	0	0	0	21.977
-5m	-7.05	78.5	23.157	ACTIVE	0.295	5.16	0	0	0	0	23.157
-5m	-7.25	82.5	24.337	ACTIVE	0.295	5.16	0	0	0	0	24.337
-5m	-7.45	86.5	25.517	ACTIVE	0.295	5.16	0	0	0	0	25.517
-5m	-7.65	90.5	26.697	ACTIVE	0.295	5.16	0	0	0	0	26.697
-5m	-7.85	94.5	27.877	ACTIVE	0.295	5.16	0	0	0	0	27.877
-5m	-8.05	98.5	29.057	ACTIVE	0.295	5.16	0	0	0	0	29.057
-5m	-8.25	102.5	30.237	ACTIVE	0.295	5.16	0	0	0	0	30.237
-5m	-8.45	106.5	31.417	ACTIVE	0.295	5.16	0	0	0	0	31.417
-5m	-8.65	109	32.155	ACTIVE	0.295	5.16	0	1.5	0	0	33.655
-5m	-8.85	111	32.745	ACTIVE	0.295	5.16	0	3.5	0	0	36.245
-5m	-9.05	113	33.335	ACTIVE	0.295	5.16	0	5.5	0	0	38.835
-5m	-9.25	115	33.925	ACTIVE	0.295	5.16	0	7.5	0	0	41.425
-5m	-9.45	117	34.515	ACTIVE	0.295	5.16	0	9.5	0	0	44.015
-5m	-9.65	119	35.105	ACTIVE	0.295	5.16	0	11.5	0	0	46.605
-5m	-9.85	121	35.695	ACTIVE	0.295	5.16	0	13.5	0	0	49.195
-5m	-10.05	123	36.285	ACTIVE	0.295	5.16	0	15.5	0	0	51.785
-5m	-10.25	125	36.875	ACTIVE	0.295	5.16	0	17.5	0	0	54.375

Ponte stradale su Torrente Giustenice  
 Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka Kp	LEFT Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-5m	-10.45	127	37.537	UL-RL	0.295 5.16	0	19.5	0	0	57.037
-5m	-10.65	129	38.843	UL-RL	0.295 5.16	0	21.5	0	0	60.343
-5m	-10.85	131	40.154	UL-RL	0.295 5.16	0	23.5	0	0	63.654
-5m	-11.05	133	36.043	ACTIVE	0.2715.879	0	25.5	0	0	61.543
-5m	-11.25	135	36.585	ACTIVE	0.2715.879	0	27.5	0	0	64.085
-5m	-11.45	137	37.127	ACTIVE	0.2715.879	0	29.5	0	0	66.627
-5m	-11.65	139	37.669	ACTIVE	0.2715.879	0	31.5	0	0	69.169
-5m	-11.85	141	38.211	ACTIVE	0.2715.879	0	33.5	0	0	71.711
-5m	-12.05	143	38.753	ACTIVE	0.2715.879	0	35.5	0	0	74.253
-5m	-12.25	145	39.295	ACTIVE	0.2715.879	0	37.5	0	0	76.795
-5m	-12.45	147	39.837	ACTIVE	0.2715.879	0	39.5	0	0	79.337
-5m	-12.65	149	40.379	ACTIVE	0.2715.879	0	41.5	0	0	81.879
-5m	-12.85	151	40.921	ACTIVE	0.2715.879	0	43.5	0	0	84.421
-5m	-13.05	153	41.466	UL-RL	0.2715.879	0	45.5	0	0	86.966
-5m	-13.25	155	42.86	UL-RL	0.2715.879	0	47.5	0	0	90.359
-5m	-13.45	157	44.236	UL-RL	0.2715.879	0	49.5	0	0	93.736
-5m	-13.65	159	45.594	UL-RL	0.2715.879	0	51.5	0	0	97.094
-5m	-13.85	161	46.934	UL-RL	0.2715.879	0	53.5	0	0	100.434
-5m	-14.05	163	48.254	UL-RL	0.2715.879	0	55.5	0	0	103.754
-5m	-14.25	165	49.556	UL-RL	0.2715.879	0	57.5	0	0	107.056
-5m	-14.45	167	50.838	UL-RL	0.2715.879	0	59.5	0	0	110.338
-5m	-14.65	169	52.1	UL-RL	0.2715.879	0	61.5	0	0	113.6
-5m	-14.85	171	53.343	UL-RL	0.2715.879	0	63.5	0	0	116.843
-5m	-15.05	173	54.567	UL-RL	0.2715.879	0	65.5	0	0	120.067
-5m	-15.25	175	55.772	UL-RL	0.2715.879	0	67.5	0	0	123.272
-5m	-15.45	177	56.958	UL-RL	0.2715.879	0	69.5	0	0	126.458
-5m	-15.65	179	58.126	UL-RL	0.2715.879	0	71.5	0	0	129.626
-5m	-15.85	181	59.276	UL-RL	0.2715.879	0	73.5	0	0	132.776
-5m	-16.05	183	60.408	UL-RL	0.2715.879	0	75.5	0	0	135.908
-5m	-16.25	185	61.524	UL-RL	0.2715.879	0	77.5	0	0	139.024
-5m	-16.45	187	62.623	UL-RL	0.2715.879	0	79.5	0	0	142.122
-5m	-16.65	189	63.706	UL-RL	0.2715.879	0	81.5	0	0	145.205
-5m	-16.85	191	64.773	UL-RL	0.2715.879	0	83.5	0	0	148.273
-5m	-17.05	193	65.826	UL-RL	0.2715.879	0	85.5	0	0	151.326
-5m	-17.25	195	66.865	UL-RL	0.2715.879	0	87.5	0	0	154.365
-5m	-17.45	197	67.891	UL-RL	0.2715.879	0	89.5	0	0	157.391
-5m	-17.65	199	68.903	UL-RL	0.2715.879	0	91.5	0	0	160.403
-5m	-17.85	201	69.904	UL-RL	0.2715.879	0	93.5	0	0	163.404
-5m	-18.05	203	70.892	UL-RL	0.2715.879	0	95.5	0	0	166.392
-5m	-18.25	205	71.87	UL-RL	0.2715.879	0	97.5	0	0	169.37
-5m	-18.45	207	72.838	UL-RL	0.2715.879	0	99.5	0	0	172.338
-5m	-18.65	209	73.795	UL-RL	0.2715.879	0	101.5	0	0	175.295
-5m	-18.85	211	74.744	UL-RL	0.2715.879	0	103.5	0	0	178.244
-5m	-19.05	213	75.684	UL-RL	0.2715.879	0	105.5	0	0	181.184
-5m	-19.25	215	76.616	UL-RL	0.2715.879	0	107.5	0	0	184.116
-5m	-19.45	217	77.54	UL-RL	0.2715.879	0	109.5	0	0	187.04
-5m	-19.65	219	78.458	UL-RL	0.2715.879	0	111.5	0	0	189.958
-5m	-19.85	221	79.369	UL-RL	0.2715.879	0	113.5	0	0	192.869
-5m	-20.05	223	80.275	UL-RL	0.2715.879	0	115.5	0	0	195.775
-5m	-20.25	225	81.175	UL-RL	0.2715.879	0	117.5	0	0	198.675
-5m	-20.45	227	82.07	UL-RL	0.2715.879	0	119.5	0	0	201.57
-5m	-20.65	229	82.96	UL-RL	0.2715.879	0	121.5	0	0	204.46
-5m	-20.85	231	83.847	UL-RL	0.2715.879	0	123.5	0	0	207.347
-5m	-21.05	233	84.729	UL-RL	0.2715.879	0	125.5	0	0	210.229
-5m	-21.25	235	85.608	UL-RL	0.2715.879	0	127.5	0	0	213.109
-5m	-21.45	237	86.485	UL-RL	0.2715.879	0	129.5	0	0	215.985
-5m	-21.65	239	87.358	UL-RL	0.2715.879	0	131.5	0	0	218.858

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		LEFT	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)				
-5m	-21.85	241	88.23	UL-RL	0.2715.879		0	133.5	0	0	221.73
-5m	-22.05	243	89.099	UL-RL	0.2715.879		0	135.5	0	0	224.599
-5m	-22.25	245	89.966	UL-RL	0.2715.879		0	137.5	0	0	227.466
-5m	-22.45	247	90.832	UL-RL	0.2715.879		0	139.5	0	0	230.332
-5m	-22.65	249	91.697	UL-RL	0.2715.879		0	141.5	0	0	233.197
-5m	-22.85	251	92.56	UL-RL	0.2715.879		0	143.5	0	0	236.06
-5m	-23.05	253	93.423	UL-RL	0.2715.879		0	145.5	0	0	238.923
-5m	-23.25	255	94.284	UL-RL	0.2715.879		0	147.5	0	0	241.784
-5m	-23.45	257	95.145	UL-RL	0.2715.879		0	149.5	0	0	244.646
-5m	-23.65	259	96.006	UL-RL	0.2715.879		0	151.5	0	0	247.506
-5m	-23.85	261	96.866	UL-RL	0.2715.879		0	153.5	0	0	250.366
-5m	-24.05	263	97.726	UL-RL	0.2715.879		0	155.5	0	0	253.227
-5m	-24.25	265	98.586	UL-RL	0.2715.879		0	157.5	0	0	256.086
-5m	-24.45	267	99.446	UL-RL	0.2715.879		0	159.5	0	0	258.946
-5m	-24.65	269	100.306	UL-RL	0.2715.879		0	161.5	0	0	261.806
-5m	-24.85	271	101.165	UL-RL	0.2715.879		0	163.5	0	0	264.666
-5m	-25	272.5	101.81	UL-RL	0.2715.879		0	165	0	0	266.81

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro:	LEFT	Lato	RIGHT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
-5m	0	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-3.05	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-3.25	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-3.45	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-3.65	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-3.85	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-4.05	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-4.25	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-4.45	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-4.65	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-4.85	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-5.05	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-5.25	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-5.45	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-5.65	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-5.85	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-6.05	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-6.25	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-6.45	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-6.65	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-6.85	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-7.05	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-7.25	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-7.45	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-7.65	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-7.85	0	0	REMOVED	0	0	0	0	0	0	0
-5m	-8.05	1	5.16	PASSIVE	0.295	5.16	0	0	0	0	5.16
-5m	-8.25	5	24.255	UL-RL	0.295	5.16	0	0	0	0	24.255
-5m	-8.45	9	27.921	UL-RL	0.295	5.16	0	0	0	0	27.921
-5m	-8.65	11.5	29.807	UL-RL	0.295	5.16	0	1.5	0	0	31.307
-5m	-8.85	13.5	31.16	UL-RL	0.295	5.16	0	3.5	0	0	34.66
-5m	-9.05	15.5	32.424	UL-RL	0.295	5.16	0	5.5	0	0	37.924
-5m	-9.25	17.5	33.616	UL-RL	0.295	5.16	0	7.5	0	0	41.116
-5m	-9.45	19.5	34.748	UL-RL	0.295	5.16	0	9.5	0	0	44.248
-5m	-9.65	21.5	35.83	UL-RL	0.295	5.16	0	11.5	0	0	47.33
-5m	-9.85	23.5	36.869	UL-RL	0.295	5.16	0	13.5	0	0	50.369
-5m	-10.05	25.5	37.872	UL-RL	0.295	5.16	0	15.5	0	0	53.372
-5m	-10.25	27.5	38.844	UL-RL	0.295	5.16	0	17.5	0	0	56.344
-5m	-10.45	29.5	39.788	UL-RL	0.295	5.16	0	19.5	0	0	59.288
-5m	-10.65	31.5	40.709	UL-RL	0.295	5.16	0	21.5	0	0	62.209
-5m	-10.85	33.5	41.61	UL-RL	0.295	5.16	0	23.5	0	0	65.11

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato		RIGHT		U* (kPa)	Peq (kPa)
					Ka	Kp	Coesione (kPa)	Pore (kPa)		
-5m	-11.05	35.5	45.421	UL-RL	0.2715.879	0	25.5	0	0	70.921
-5m	-11.25	37.5	46.115	UL-RL	0.2715.879	0	27.5	0	0	73.615
-5m	-11.45	39.5	46.798	UL-RL	0.2715.879	0	29.5	0	0	76.298
-5m	-11.65	41.5	47.472	UL-RL	0.2715.879	0	31.5	0	0	78.972
-5m	-11.85	43.5	48.139	UL-RL	0.2715.879	0	33.5	0	0	81.639
-5m	-12.05	45.5	48.802	UL-RL	0.2715.879	0	35.5	0	0	84.302
-5m	-12.25	47.5	49.463	UL-RL	0.2715.879	0	37.5	0	0	86.963
-5m	-12.45	49.5	50.122	UL-RL	0.2715.879	0	39.5	0	0	89.622
-5m	-12.65	51.5	50.782	UL-RL	0.2715.879	0	41.5	0	0	92.281
-5m	-12.85	53.5	51.443	UL-RL	0.2715.879	0	43.5	0	0	94.943
-5m	-13.05	55.5	52.107	UL-RL	0.2715.879	0	45.5	0	0	97.607
-5m	-13.25	57.5	52.775	UL-RL	0.2715.879	0	47.5	0	0	100.275
-5m	-13.45	59.5	53.447	UL-RL	0.2715.879	0	49.5	0	0	102.947
-5m	-13.65	61.5	54.125	UL-RL	0.2715.879	0	51.5	0	0	105.625
-5m	-13.85	63.5	54.809	UL-RL	0.2715.879	0	53.5	0	0	108.308
-5m	-14.05	65.5	55.498	UL-RL	0.2715.879	0	55.5	0	0	110.998
-5m	-14.25	67.5	56.195	UL-RL	0.2715.879	0	57.5	0	0	113.695
-5m	-14.45	69.5	56.899	UL-RL	0.2715.879	0	59.5	0	0	116.399
-5m	-14.65	71.5	57.61	UL-RL	0.2715.879	0	61.5	0	0	119.11
-5m	-14.85	73.5	58.329	UL-RL	0.2715.879	0	63.5	0	0	121.828
-5m	-15.05	75.5	59.055	UL-RL	0.2715.879	0	65.5	0	0	124.555
-5m	-15.25	77.5	59.788	UL-RL	0.2715.879	0	67.5	0	0	127.288
-5m	-15.45	79.5	60.53	UL-RL	0.2715.879	0	69.5	0	0	130.03
-5m	-15.65	81.5	61.278	UL-RL	0.2715.879	0	71.5	0	0	132.778
-5m	-15.85	83.5	62.035	UL-RL	0.2715.879	0	73.5	0	0	135.534
-5m	-16.05	85.5	62.798	UL-RL	0.2715.879	0	75.5	0	0	138.298
-5m	-16.25	87.5	63.569	UL-RL	0.2715.879	0	77.5	0	0	141.069
-5m	-16.45	89.5	64.346	UL-RL	0.2715.879	0	79.5	0	0	143.846
-5m	-16.65	91.5	65.131	UL-RL	0.2715.879	0	81.5	0	0	146.631
-5m	-16.85	93.5	65.922	UL-RL	0.2715.879	0	83.5	0	0	149.422
-5m	-17.05	95.5	66.719	UL-RL	0.2715.879	0	85.5	0	0	152.219
-5m	-17.25	97.5	67.522	UL-RL	0.2715.879	0	87.5	0	0	155.022
-5m	-17.45	99.5	68.331	UL-RL	0.2715.879	0	89.5	0	0	157.831
-5m	-17.65	101.5	69.145	UL-RL	0.2715.879	0	91.5	0	0	160.645
-5m	-17.85	103.5	69.965	UL-RL	0.2715.879	0	93.5	0	0	163.465
-5m	-18.05	105.5	70.79	UL-RL	0.2715.879	0	95.5	0	0	166.29
-5m	-18.25	107.5	71.619	UL-RL	0.2715.879	0	97.5	0	0	169.119
-5m	-18.45	109.5	72.452	UL-RL	0.2715.879	0	99.5	0	0	171.952
-5m	-18.65	111.5	73.29	UL-RL	0.2715.879	0	101.5	0	0	174.79
-5m	-18.85	113.5	74.132	UL-RL	0.2715.879	0	103.5	0	0	177.632
-5m	-19.05	115.5	74.977	UL-RL	0.2715.879	0	105.5	0	0	180.477
-5m	-19.25	117.5	75.825	UL-RL	0.2715.879	0	107.5	0	0	183.325
-5m	-19.45	119.5	76.676	UL-RL	0.2715.879	0	109.5	0	0	186.176
-5m	-19.65	121.5	77.53	UL-RL	0.2715.879	0	111.5	0	0	189.03
-5m	-19.85	123.5	78.387	UL-RL	0.2715.879	0	113.5	0	0	191.887
-5m	-20.05	125.5	79.246	UL-RL	0.2715.879	0	115.5	0	0	194.746
-5m	-20.25	127.5	80.107	UL-RL	0.2715.879	0	117.5	0	0	197.607
-5m	-20.45	129.5	80.97	UL-RL	0.2715.879	0	119.5	0	0	200.47
-5m	-20.65	131.5	81.834	UL-RL	0.2715.879	0	121.5	0	0	203.334
-5m	-20.85	133.5	82.7	UL-RL	0.2715.879	0	123.5	0	0	206.2
-5m	-21.05	135.5	83.568	UL-RL	0.2715.879	0	125.5	0	0	209.068
-5m	-21.25	137.5	84.436	UL-RL	0.2715.879	0	127.5	0	0	211.936
-5m	-21.45	139.5	85.305	UL-RL	0.2715.879	0	129.5	0	0	214.805
-5m	-21.65	141.5	86.175	UL-RL	0.2715.879	0	131.5	0	0	217.675
-5m	-21.85	143.5	87.046	UL-RL	0.2715.879	0	133.5	0	0	220.546
-5m	-22.05	145.5	87.917	UL-RL	0.2715.879	0	135.5	0	0	223.417
-5m	-22.25	147.5	88.789	UL-RL	0.2715.879	0	137.5	0	0	226.289



Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
-5m	-22.45	149.5	89.66	UL-RL	0.2715.879	0	139.5	0	0	229.16
-5m	-22.65	151.5	90.532	UL-RL	0.2715.879	0	141.5	0	0	232.032
-5m	-22.85	153.5	91.404	UL-RL	0.2715.879	0	143.5	0	0	234.904
-5m	-23.05	155.5	92.276	UL-RL	0.2715.879	0	145.5	0	0	237.776
-5m	-23.25	157.5	93.148	UL-RL	0.2715.879	0	147.5	0	0	240.648
-5m	-23.45	159.5	94.02	UL-RL	0.2715.879	0	149.5	0	0	243.52
-5m	-23.65	161.5	94.891	UL-RL	0.2715.879	0	151.5	0	0	246.391
-5m	-23.85	163.5	95.762	UL-RL	0.2715.879	0	153.5	0	0	249.262
-5m	-24.05	165.5	96.633	UL-RL	0.2715.879	0	155.5	0	0	252.133
-5m	-24.25	167.5	97.504	UL-RL	0.2715.879	0	157.5	0	0	255.004
-5m	-24.45	169.5	98.374	UL-RL	0.2715.879	0	159.5	0	0	257.874
-5m	-24.65	171.5	99.243	UL-RL	0.2715.879	0	161.5	0	0	260.744
-5m	-24.85	173.5	100.113	UL-RL	0.2715.879	0	163.5	0	0	263.613
-5m	-25	175	100.764	UL-RL	0.2715.879	0	165	0	0	265.764

**Tabella Risultati Terreno Left Wall - Nominal - Rinterro 1**

Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	LEFT Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Rinterro 1	0	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1.6	1.9	0.52	UL-RL	0.2715.879	0	0	0	0	0	0.52
Rinterro 1	-1.8	5.7	1.548	UL-RL	0.2715.879	0	0	0	0	0	1.548
Rinterro 1	-2	9.5	2.575	UL-RL	0.2715.879	0	0	0	0	0	2.575
Rinterro 1	-2.2	13.3	3.604	ACTIVE	0.2715.879	0	0	0	0	0	3.604
Rinterro 1	-2.25	14.25	3.862	ACTIVE	0.2715.879	0	0	0	0	0	3.862
Rinterro 1	-2.45	18.05	4.892	ACTIVE	0.2715.879	0	0	0	0	0	4.892
Rinterro 1	-2.65	21.85	5.921	ACTIVE	0.2715.879	0	0	0	0	0	5.921
Rinterro 1	-2.85	25.65	6.951	ACTIVE	0.2715.879	0	0	0	0	0	6.951
Rinterro 1	-3.05	29.45	11.403	UL-RL	0.32 4.555	0	0	0	0	0	11.403
Rinterro 1	-3.25	33.25	12.524	UL-RL	0.32 4.555	0	0	0	0	0	12.524
Rinterro 1	-3.45	37.05	13.647	UL-RL	0.32 4.555	0	0	0	0	0	13.647
Rinterro 1	-3.65	40.85	14.772	UL-RL	0.32 4.555	0	0	0	0	0	14.772
Rinterro 1	-3.85	44.65	15.899	UL-RL	0.32 4.555	0	0	0	0	0	15.899
Rinterro 1	-4.05	48.45	17.03	UL-RL	0.32 4.555	0	0	0	0	0	17.03
Rinterro 1	-4.25	52.25	18.164	UL-RL	0.32 4.555	0	0	0	0	0	18.164
Rinterro 1	-4.45	56.05	19.301	UL-RL	0.32 4.555	0	0	0	0	0	19.301
Rinterro 1	-4.65	59.85	20.442	UL-RL	0.32 4.555	0	0	0	0	0	20.442
Rinterro 1	-4.85	63.65	21.587	UL-RL	0.32 4.555	0	0	0	0	0	21.587
Rinterro 1	-5.05	67.45	22.736	UL-RL	0.32 4.555	0	0	0	0	0	22.736
Rinterro 1	-5.25	71.25	23.889	UL-RL	0.32 4.555	0	0	0	0	0	23.889
Rinterro 1	-5.45	75.05	25.419	UL-RL	0.32 4.555	0	0	0	0	0	25.419
Rinterro 1	-5.65	79	23.305	ACTIVE	0.295 5.16	0	0	0	0	0	23.305
Rinterro 1	-5.85	83	24.485	ACTIVE	0.295 5.16	0	0	0	0	0	24.485
Rinterro 1	-6.05	87	25.665	ACTIVE	0.295 5.16	0	0	0	0	0	25.665
Rinterro 1	-6.25	91	26.845	ACTIVE	0.295 5.16	0	0	0	0	0	26.845
Rinterro 1	-6.45	95	28.025	ACTIVE	0.295 5.16	0	0	0	0	0	28.025
Rinterro 1	-6.65	99	29.205	ACTIVE	0.295 5.16	0	0	0	0	0	29.205
Rinterro 1	-6.85	103	30.385	ACTIVE	0.295 5.16	0	0	0	0	0	30.385
Rinterro 1	-7.05	107	31.565	ACTIVE	0.295 5.16	0	0	0	0	0	31.565
Rinterro 1	-7.25	111	32.745	ACTIVE	0.295 5.16	0	0	0	0	0	32.745
Rinterro 1	-7.45	115	33.925	ACTIVE	0.295 5.16	0	0	0	0	0	33.925
Rinterro 1	-7.65	119	35.105	ACTIVE	0.295 5.16	0	0	0	0	0	35.105
Rinterro 1	-7.85	123	36.285	ACTIVE	0.295 5.16	0	0	0	0	0	36.285
Rinterro 1	-8.05	127	37.465	ACTIVE	0.295 5.16	0	0	0	0	0	37.465
Rinterro 1	-8.25	131	38.645	ACTIVE	0.295 5.16	0	0	0	0	0	38.645
Rinterro 1	-8.45	135	39.825	ACTIVE	0.295 5.16	0	0	0	0	0	39.825
Rinterro 1	-8.65	137.5	40.562	ACTIVE	0.295 5.16	0	1.5	0	0	0	42.062
Rinterro 1	-8.85	139.5	41.152	ACTIVE	0.295 5.16	0	3.5	0	0	0	44.652
Rinterro 1	-9.05	141.5	41.742	ACTIVE	0.295 5.16	0	5.5	0	0	0	47.242
Rinterro 1	-9.25	143.5	42.332	ACTIVE	0.295 5.16	0	7.5	0	0	0	49.832
Rinterro 1	-9.45	145.5	42.922	ACTIVE	0.295 5.16	0	9.5	0	0	0	52.422
Rinterro 1	-9.65	147.5	43.512	ACTIVE	0.295 5.16	0	11.5	0	0	0	55.012
Rinterro 1	-9.85	149.5	44.102	ACTIVE	0.295 5.16	0	13.5	0	0	0	57.602
Rinterro 1	-10.05	151.5	44.692	ACTIVE	0.295 5.16	0	15.5	0	0	0	60.192
Rinterro 1	-10.25	153.5	45.282	ACTIVE	0.295 5.16	0	17.5	0	0	0	62.782

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		LEFT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente		
Rinterro 1	-10.45	155.5	45.872	ACTIVE	0.295	5.16	0	19.5	0	0	65.372
Rinterro 1	-10.65	157.5	46.462	ACTIVE	0.295	5.16	0	21.5	0	0	67.962
Rinterro 1	-10.85	159.5	47.052	ACTIVE	0.295	5.16	0	23.5	0	0	70.552
Rinterro 1	-11.05	161.5	43.766	ACTIVE	0.2715.879		0	25.5	0	0	69.266
Rinterro 1	-11.25	163.5	44.308	ACTIVE	0.2715.879		0	27.5	0	0	71.808
Rinterro 1	-11.45	165.5	44.85	ACTIVE	0.2715.879		0	29.5	0	0	74.35
Rinterro 1	-11.65	167.5	45.392	ACTIVE	0.2715.879		0	31.5	0	0	76.892
Rinterro 1	-11.85	169.5	45.934	ACTIVE	0.2715.879		0	33.5	0	0	79.434
Rinterro 1	-12.05	171.5	46.476	ACTIVE	0.2715.879		0	35.5	0	0	81.976
Rinterro 1	-12.25	173.5	47.018	ACTIVE	0.2715.879		0	37.5	0	0	84.518
Rinterro 1	-12.45	175.5	47.56	ACTIVE	0.2715.879		0	39.5	0	0	87.06
Rinterro 1	-12.65	177.5	48.102	ACTIVE	0.2715.879		0	41.5	0	0	89.602
Rinterro 1	-12.85	179.5	48.644	ACTIVE	0.2715.879		0	43.5	0	0	92.144
Rinterro 1	-13.05	181.5	49.186	ACTIVE	0.2715.879		0	45.5	0	0	94.686
Rinterro 1	-13.25	183.5	49.728	ACTIVE	0.2715.879		0	47.5	0	0	97.228
Rinterro 1	-13.45	185.5	50.27	ACTIVE	0.2715.879		0	49.5	0	0	99.77
Rinterro 1	-13.65	187.5	50.812	ACTIVE	0.2715.879		0	51.5	0	0	102.312
Rinterro 1	-13.85	189.5	51.354	ACTIVE	0.2715.879		0	53.5	0	0	104.854
Rinterro 1	-14.05	191.5	51.896	ACTIVE	0.2715.879		0	55.5	0	0	107.396
Rinterro 1	-14.25	193.5	52.438	ACTIVE	0.2715.879		0	57.5	0	0	109.938
Rinterro 1	-14.45	195.5	52.98	ACTIVE	0.2715.879		0	59.5	0	0	112.48
Rinterro 1	-14.65	197.5	53.522	ACTIVE	0.2715.879		0	61.5	0	0	115.022
Rinterro 1	-14.85	199.5	54.064	ACTIVE	0.2715.879		0	63.5	0	0	117.564
Rinterro 1	-15.05	201.5	54.673	UL-RL	0.2715.879		0	65.5	0	0	120.173
Rinterro 1	-15.25	203.5	56.128	UL-RL	0.2715.879		0	67.5	0	0	123.628
Rinterro 1	-15.45	205.5	57.558	UL-RL	0.2715.879		0	69.5	0	0	127.058
Rinterro 1	-15.65	207.5	58.963	UL-RL	0.2715.879		0	71.5	0	0	130.462
Rinterro 1	-15.85	209.5	60.342	UL-RL	0.2715.879		0	73.5	0	0	133.842
Rinterro 1	-16.05	211.5	61.697	UL-RL	0.2715.879		0	75.5	0	0	137.196
Rinterro 1	-16.25	213.5	63.027	UL-RL	0.2715.879		0	77.5	0	0	140.527
Rinterro 1	-16.45	215.5	64.333	UL-RL	0.2715.879		0	79.5	0	0	143.833
Rinterro 1	-16.65	217.5	65.615	UL-RL	0.2715.879		0	81.5	0	0	147.115
Rinterro 1	-16.85	219.5	66.875	UL-RL	0.2715.879		0	83.5	0	0	150.374
Rinterro 1	-17.05	221.5	68.112	UL-RL	0.2715.879		0	85.5	0	0	153.612
Rinterro 1	-17.25	223.5	69.327	UL-RL	0.2715.879		0	87.5	0	0	156.827
Rinterro 1	-17.45	225.5	70.521	UL-RL	0.2715.879		0	89.5	0	0	160.021
Rinterro 1	-17.65	227.5	71.695	UL-RL	0.2715.879		0	91.5	0	0	163.195
Rinterro 1	-17.85	229.5	72.85	UL-RL	0.2715.879		0	93.5	0	0	166.35
Rinterro 1	-18.05	231.5	73.985	UL-RL	0.2715.879		0	95.5	0	0	169.485
Rinterro 1	-18.25	233.5	75.103	UL-RL	0.2715.879		0	97.5	0	0	172.603
Rinterro 1	-18.45	235.5	76.204	UL-RL	0.2715.879		0	99.5	0	0	175.704
Rinterro 1	-18.65	237.5	77.288	UL-RL	0.2715.879		0	101.5	0	0	178.788
Rinterro 1	-18.85	239.5	78.357	UL-RL	0.2715.879		0	103.5	0	0	181.856
Rinterro 1	-19.05	241.5	79.411	UL-RL	0.2715.879		0	105.5	0	0	184.911
Rinterro 1	-19.25	243.5	80.451	UL-RL	0.2715.879		0	107.5	0	0	187.951
Rinterro 1	-19.45	245.5	81.478	UL-RL	0.2715.879		0	109.5	0	0	190.978
Rinterro 1	-19.65	247.5	82.493	UL-RL	0.2715.879		0	111.5	0	0	193.993
Rinterro 1	-19.85	249.5	83.496	UL-RL	0.2715.879		0	113.5	0	0	196.996
Rinterro 1	-20.05	251.5	84.489	UL-RL	0.2715.879		0	115.5	0	0	199.989
Rinterro 1	-20.25	253.5	85.472	UL-RL	0.2715.879		0	117.5	0	0	202.972
Rinterro 1	-20.45	255.5	86.446	UL-RL	0.2715.879		0	119.5	0	0	205.946
Rinterro 1	-20.65	257.5	87.411	UL-RL	0.2715.879		0	121.5	0	0	208.911
Rinterro 1	-20.85	259.5	88.368	UL-RL	0.2715.879		0	123.5	0	0	211.869
Rinterro 1	-21.05	261.5	89.319	UL-RL	0.2715.879		0	125.5	0	0	214.819
Rinterro 1	-21.25	263.5	90.263	UL-RL	0.2715.879		0	127.5	0	0	217.763
Rinterro 1	-21.45	265.5	91.2	UL-RL	0.2715.879		0	129.5	0	0	220.701
Rinterro 1	-21.65	267.5	92.133	UL-RL	0.2715.879		0	131.5	0	0	223.633

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		LEFT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
Rinterro 1	-21.85	269.5	93.061	UL-RL	0.2715.879	0	133.5	0	0	226.561
Rinterro 1	-22.05	271.5	93.985	UL-RL	0.2715.879	0	135.5	0	0	229.485
Rinterro 1	-22.25	273.5	94.905	UL-RL	0.2715.879	0	137.5	0	0	232.405
Rinterro 1	-22.45	275.5	95.822	UL-RL	0.2715.879	0	139.5	0	0	235.322
Rinterro 1	-22.65	277.5	96.736	UL-RL	0.2715.879	0	141.5	0	0	238.236
Rinterro 1	-22.85	279.5	97.647	UL-RL	0.2715.879	0	143.5	0	0	241.148
Rinterro 1	-23.05	281.5	98.557	UL-RL	0.2715.879	0	145.5	0	0	244.057
Rinterro 1	-23.25	283.5	99.465	UL-RL	0.2715.879	0	147.5	0	0	246.966
Rinterro 1	-23.45	285.5	100.372	UL-RL	0.2715.879	0	149.5	0	0	249.872
Rinterro 1	-23.65	287.5	101.278	UL-RL	0.2715.879	0	151.5	0	0	252.778
Rinterro 1	-23.85	289.5	102.183	UL-RL	0.2715.879	0	153.5	0	0	255.683
Rinterro 1	-24.05	291.5	103.087	UL-RL	0.2715.879	0	155.5	0	0	258.587
Rinterro 1	-24.25	293.5	103.991	UL-RL	0.2715.879	0	157.5	0	0	261.491
Rinterro 1	-24.45	295.5	104.895	UL-RL	0.2715.879	0	159.5	0	0	264.395
Rinterro 1	-24.65	297.5	105.798	UL-RL	0.2715.879	0	161.5	0	0	267.298
Rinterro 1	-24.85	299.5	106.702	UL-RL	0.2715.879	0	163.5	0	0	270.202
Rinterro 1	-25	301	107.379	UL-RL	0.2715.879	0	165	0	0	272.379

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro:	LEFT	Lato	RIGHT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Rinterro 1	0	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-2	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-2.2	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-2.25	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-2.45	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-2.65	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-2.85	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-3.05	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-3.25	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-3.45	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-3.65	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-3.85	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-4.05	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-4.25	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-4.45	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-4.65	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-4.85	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-5.05	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-5.25	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-5.45	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-5.65	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-5.85	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-6.05	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-6.25	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-6.45	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-6.65	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-6.85	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-7.05	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-7.25	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-7.45	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-7.65	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-7.85	0	0	REMOVED	0	0	0	0	0	0	0
Rinterro 1	-8.05	1	5.16	PASSIVE	0.295	5.16	0	0	0	0	5.16
Rinterro 1	-8.25	5	25.8	PASSIVE	0.295	5.16	0	0	0	0	25.8
Rinterro 1	-8.45	9	35.295	UL-RL	0.295	5.16	0	0	0	0	35.295
Rinterro 1	-8.65	11.5	37.157	UL-RL	0.295	5.16	0	1.5	0	0	38.657
Rinterro 1	-8.85	13.5	38.478	UL-RL	0.295	5.16	0	3.5	0	0	41.978
Rinterro 1	-9.05	15.5	39.703	UL-RL	0.295	5.16	0	5.5	0	0	45.203
Rinterro 1	-9.25	17.5	40.85	UL-RL	0.295	5.16	0	7.5	0	0	48.35
Rinterro 1	-9.45	19.5	41.931	UL-RL	0.295	5.16	0	9.5	0	0	51.431
Rinterro 1	-9.65	21.5	42.956	UL-RL	0.295	5.16	0	11.5	0	0	54.456
Rinterro 1	-9.85	23.5	43.932	UL-RL	0.295	5.16	0	13.5	0	0	57.432
Rinterro 1	-10.05	25.5	44.867	UL-RL	0.295	5.16	0	15.5	0	0	60.367
Rinterro 1	-10.25	27.5	45.766	UL-RL	0.295	5.16	0	17.5	0	0	63.266
Rinterro 1	-10.45	29.5	46.633	UL-RL	0.295	5.16	0	19.5	0	0	66.133
Rinterro 1	-10.65	31.5	47.472	UL-RL	0.295	5.16	0	21.5	0	0	68.972
Rinterro 1	-10.85	33.5	48.288	UL-RL	0.295	5.16	0	23.5	0	0	71.788

Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT Stato	Lato		RIGHT Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
		Sigma V (kPa)				Ka	Kp					
Rinterro 1	-11.05	35.5		54.897	UL-RL	0.2715.879	0	25.5	0	0	80.397	
Rinterro 1	-11.25	37.5		55.458	UL-RL	0.2715.879	0	27.5	0	0	82.957	
Rinterro 1	-11.45	39.5		56.003	UL-RL	0.2715.879	0	29.5	0	0	85.503	
Rinterro 1	-11.65	41.5		56.536	UL-RL	0.2715.879	0	31.5	0	0	88.036	
Rinterro 1	-11.85	43.5		57.06	UL-RL	0.2715.879	0	33.5	0	0	90.559	
Rinterro 1	-12.05	45.5		57.576	UL-RL	0.2715.879	0	35.5	0	0	93.076	
Rinterro 1	-12.25	47.5		58.087	UL-RL	0.2715.879	0	37.5	0	0	95.587	
Rinterro 1	-12.45	49.5		58.595	UL-RL	0.2715.879	0	39.5	0	0	98.095	
Rinterro 1	-12.65	51.5		59.102	UL-RL	0.2715.879	0	41.5	0	0	100.602	
Rinterro 1	-12.85	53.5		59.609	UL-RL	0.2715.879	0	43.5	0	0	103.109	
Rinterro 1	-13.05	55.5		60.119	UL-RL	0.2715.879	0	45.5	0	0	105.619	
Rinterro 1	-13.25	57.5		60.632	UL-RL	0.2715.879	0	47.5	0	0	108.132	
Rinterro 1	-13.45	59.5		61.15	UL-RL	0.2715.879	0	49.5	0	0	110.65	
Rinterro 1	-13.65	61.5		61.674	UL-RL	0.2715.879	0	51.5	0	0	113.174	
Rinterro 1	-13.85	63.5		62.205	UL-RL	0.2715.879	0	53.5	0	0	115.705	
Rinterro 1	-14.05	65.5		62.744	UL-RL	0.2715.879	0	55.5	0	0	118.243	
Rinterro 1	-14.25	67.5		63.291	UL-RL	0.2715.879	0	57.5	0	0	120.791	
Rinterro 1	-14.45	69.5		63.847	UL-RL	0.2715.879	0	59.5	0	0	123.347	
Rinterro 1	-14.65	71.5		64.414	UL-RL	0.2715.879	0	61.5	0	0	125.913	
Rinterro 1	-14.85	73.5		64.99	UL-RL	0.2715.879	0	63.5	0	0	128.49	
Rinterro 1	-15.05	75.5		65.577	UL-RL	0.2715.879	0	65.5	0	0	131.077	
Rinterro 1	-15.25	77.5		66.175	UL-RL	0.2715.879	0	67.5	0	0	133.675	
Rinterro 1	-15.45	79.5		66.785	UL-RL	0.2715.879	0	69.5	0	0	136.285	
Rinterro 1	-15.65	81.5		67.405	UL-RL	0.2715.879	0	71.5	0	0	138.905	
Rinterro 1	-15.85	83.5		68.037	UL-RL	0.2715.879	0	73.5	0	0	141.537	
Rinterro 1	-16.05	85.5		68.68	UL-RL	0.2715.879	0	75.5	0	0	144.18	
Rinterro 1	-16.25	87.5		69.334	UL-RL	0.2715.879	0	77.5	0	0	146.834	
Rinterro 1	-16.45	89.5		70	UL-RL	0.2715.879	0	79.5	0	0	149.5	
Rinterro 1	-16.65	91.5		70.676	UL-RL	0.2715.879	0	81.5	0	0	152.176	
Rinterro 1	-16.85	93.5		71.363	UL-RL	0.2715.879	0	83.5	0	0	154.863	
Rinterro 1	-17.05	95.5		72.06	UL-RL	0.2715.879	0	85.5	0	0	157.56	
Rinterro 1	-17.25	97.5		72.768	UL-RL	0.2715.879	0	87.5	0	0	160.268	
Rinterro 1	-17.45	99.5		73.485	UL-RL	0.2715.879	0	89.5	0	0	162.985	
Rinterro 1	-17.65	101.5		74.212	UL-RL	0.2715.879	0	91.5	0	0	165.712	
Rinterro 1	-17.85	103.5		74.949	UL-RL	0.2715.879	0	93.5	0	0	168.448	
Rinterro 1	-18.05	105.5		75.693	UL-RL	0.2715.879	0	95.5	0	0	171.194	
Rinterro 1	-18.25	107.5		76.447	UL-RL	0.2715.879	0	97.5	0	0	173.947	
Rinterro 1	-18.45	109.5		77.208	UL-RL	0.2715.879	0	99.5	0	0	176.708	
Rinterro 1	-18.65	111.5		77.977	UL-RL	0.2715.879	0	101.5	0	0	179.477	
Rinterro 1	-18.85	113.5		78.754	UL-RL	0.2715.879	0	103.5	0	0	182.254	
Rinterro 1	-19.05	115.5		79.537	UL-RL	0.2715.879	0	105.5	0	0	185.037	
Rinterro 1	-19.25	117.5		80.327	UL-RL	0.2715.879	0	107.5	0	0	187.827	
Rinterro 1	-19.45	119.5		81.122	UL-RL	0.2715.879	0	109.5	0	0	190.622	
Rinterro 1	-19.65	121.5		81.924	UL-RL	0.2715.879	0	111.5	0	0	193.424	
Rinterro 1	-19.85	123.5		82.73	UL-RL	0.2715.879	0	113.5	0	0	196.23	
Rinterro 1	-20.05	125.5		83.542	UL-RL	0.2715.879	0	115.5	0	0	199.042	
Rinterro 1	-20.25	127.5		84.358	UL-RL	0.2715.879	0	117.5	0	0	201.858	
Rinterro 1	-20.45	129.5		85.178	UL-RL	0.2715.879	0	119.5	0	0	204.678	
Rinterro 1	-20.65	131.5		86.002	UL-RL	0.2715.879	0	121.5	0	0	207.502	
Rinterro 1	-20.85	133.5		86.83	UL-RL	0.2715.879	0	123.5	0	0	210.33	
Rinterro 1	-21.05	135.5		87.66	UL-RL	0.2715.879	0	125.5	0	0	213.16	
Rinterro 1	-21.25	137.5		88.494	UL-RL	0.2715.879	0	127.5	0	0	215.994	
Rinterro 1	-21.45	139.5		89.33	UL-RL	0.2715.879	0	129.5	0	0	218.83	
Rinterro 1	-21.65	141.5		90.168	UL-RL	0.2715.879	0	131.5	0	0	221.668	
Rinterro 1	-21.85	143.5		91.008	UL-RL	0.2715.879	0	133.5	0	0	224.508	
Rinterro 1	-22.05	145.5		91.849	UL-RL	0.2715.879	0	135.5	0	0	227.349	
Rinterro 1	-22.25	147.5		92.692	UL-RL	0.2715.879	0	137.5	0	0	230.192	

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		RIGHT		Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)					
Rinterro 1	-22.45	149.5	93.536	UL-RL	0.2715.879		0	139.5	0	0	233.036	
Rinterro 1	-22.65	151.5	94.381	UL-RL	0.2715.879		0	141.5	0	0	235.882	
Rinterro 1	-22.85	153.5	95.227	UL-RL	0.2715.879		0	143.5	0	0	238.728	
Rinterro 1	-23.05	155.5	96.074	UL-RL	0.2715.879		0	145.5	0	0	241.574	
Rinterro 1	-23.25	157.5	96.92	UL-RL	0.2715.879		0	147.5	0	0	244.42	
Rinterro 1	-23.45	159.5	97.767	UL-RL	0.2715.879		0	149.5	0	0	247.267	
Rinterro 1	-23.65	161.5	98.614	UL-RL	0.2715.879		0	151.5	0	0	250.114	
Rinterro 1	-23.85	163.5	99.461	UL-RL	0.2715.879		0	153.5	0	0	252.961	
Rinterro 1	-24.05	165.5	100.308	UL-RL	0.2715.879		0	155.5	0	0	255.808	
Rinterro 1	-24.25	167.5	101.155	UL-RL	0.2715.879		0	157.5	0	0	258.655	
Rinterro 1	-24.45	169.5	102.001	UL-RL	0.2715.879		0	159.5	0	0	261.501	
Rinterro 1	-24.65	171.5	102.847	UL-RL	0.2715.879		0	161.5	0	0	264.347	
Rinterro 1	-24.85	173.5	103.692	UL-RL	0.2715.879		0	163.5	0	0	267.193	
Rinterro 1	-25	175	104.326	UL-RL	0.2715.879		0	165	0	0	269.326	

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**Tabella Risultati Terreno Left Wall - Nominal - Rinterro 2**

Design Assumption: Stage	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Rinterro 2	0	0	0	PASSIVE	0.2715	0.879	0	0	0	0	0
Rinterro 2	-0.2	3.8	1.108	UL-RL	0.2715	0.879	0	0	0	0	1.108
Rinterro 2	-0.4	7.6	2.129	UL-RL	0.2715	0.879	0	0	0	0	2.129
Rinterro 2	-0.6	11.4	3.15	UL-RL	0.2715	0.879	0	0	0	0	3.15
Rinterro 2	-0.8	15.2	4.171	UL-RL	0.2715	0.879	0	0	0	0	4.171
Rinterro 2	-1	19	5.193	UL-RL	0.2715	0.879	0	0	0	0	5.193
Rinterro 2	-1.2	22.8	6.214	UL-RL	0.2715	0.879	0	0	0	0	6.214
Rinterro 2	-1.4	26.6	7.235	UL-RL	0.2715	0.879	0	0	0	0	7.235
Rinterro 2	-1.6	30.4	8.256	UL-RL	0.2715	0.879	0	0	0	0	8.256
Rinterro 2	-1.8	34.2	9.278	UL-RL	0.2715	0.879	0	0	0	0	9.278
Rinterro 2	-2	38	10.299	UL-RL	0.2715	0.879	0	0	0	0	10.299
Rinterro 2	-2.2	41.8	11.328	ACTIVE	0.2715	0.879	0	0	0	0	11.328
Rinterro 2	-2.25	42.75	11.585	ACTIVE	0.2715	0.879	0	0	0	0	11.585
Rinterro 2	-2.45	46.55	12.615	ACTIVE	0.2715	0.879	0	0	0	0	12.615
Rinterro 2	-2.65	50.35	13.645	ACTIVE	0.2715	0.879	0	0	0	0	13.645
Rinterro 2	-2.85	54.15	14.675	ACTIVE	0.2715	0.879	0	0	0	0	14.675
Rinterro 2	-3.05	57.95	22.327	UL-RL	0.32	4.555	0	0	0	0	22.327
Rinterro 2	-3.25	61.75	23.359	UL-RL	0.32	4.555	0	0	0	0	23.359
Rinterro 2	-3.45	65.55	24.394	UL-RL	0.32	4.555	0	0	0	0	24.394
Rinterro 2	-3.65	69.35	25.433	UL-RL	0.32	4.555	0	0	0	0	25.433
Rinterro 2	-3.85	73.15	26.477	UL-RL	0.32	4.555	0	0	0	0	26.477
Rinterro 2	-4.05	76.95	27.526	UL-RL	0.32	4.555	0	0	0	0	27.526
Rinterro 2	-4.25	80.75	28.58	UL-RL	0.32	4.555	0	0	0	0	28.58
Rinterro 2	-4.45	84.55	29.64	UL-RL	0.32	4.555	0	0	0	0	29.64
Rinterro 2	-4.65	88.35	30.707	UL-RL	0.32	4.555	0	0	0	0	30.707
Rinterro 2	-4.85	92.15	31.781	UL-RL	0.32	4.555	0	0	0	0	31.781
Rinterro 2	-5.05	95.95	32.862	UL-RL	0.32	4.555	0	0	0	0	32.862
Rinterro 2	-5.25	99.75	33.95	UL-RL	0.32	4.555	0	0	0	0	33.95
Rinterro 2	-5.45	103.55	35.42	UL-RL	0.32	4.555	0	0	0	0	35.42
Rinterro 2	-5.65	107.5	31.712	ACTIVE	0.295	5.16	0	0	0	0	31.712
Rinterro 2	-5.85	111.5	32.892	ACTIVE	0.295	5.16	0	0	0	0	32.892
Rinterro 2	-6.05	115.5	34.072	ACTIVE	0.295	5.16	0	0	0	0	34.072
Rinterro 2	-6.25	119.5	35.252	ACTIVE	0.295	5.16	0	0	0	0	35.252
Rinterro 2	-6.45	123.5	36.432	ACTIVE	0.295	5.16	0	0	0	0	36.432
Rinterro 2	-6.65	127.5	37.612	ACTIVE	0.295	5.16	0	0	0	0	37.612
Rinterro 2	-6.85	131.5	38.792	ACTIVE	0.295	5.16	0	0	0	0	38.792
Rinterro 2	-7.05	135.5	39.972	ACTIVE	0.295	5.16	0	0	0	0	39.972
Rinterro 2	-7.25	139.5	41.152	ACTIVE	0.295	5.16	0	0	0	0	41.152
Rinterro 2	-7.45	143.5	42.332	ACTIVE	0.295	5.16	0	0	0	0	42.332
Rinterro 2	-7.65	147.5	43.512	ACTIVE	0.295	5.16	0	0	0	0	43.512
Rinterro 2	-7.85	151.5	44.692	ACTIVE	0.295	5.16	0	0	0	0	44.692
Rinterro 2	-8.05	155.5	45.872	ACTIVE	0.295	5.16	0	0	0	0	45.872
Rinterro 2	-8.25	159.5	47.052	ACTIVE	0.295	5.16	0	0	0	0	47.052
Rinterro 2	-8.45	163.5	48.232	ACTIVE	0.295	5.16	0	0	0	0	48.232
Rinterro 2	-8.65	166	48.97	ACTIVE	0.295	5.16	0	1.5	0	0	50.47
Rinterro 2	-8.85	168	49.56	ACTIVE	0.295	5.16	0	3.5	0	0	53.06
Rinterro 2	-9.05	170	50.15	ACTIVE	0.295	5.16	0	5.5	0	0	55.65
Rinterro 2	-9.25	172	50.74	ACTIVE	0.295	5.16	0	7.5	0	0	58.24
Rinterro 2	-9.45	174	51.33	ACTIVE	0.295	5.16	0	9.5	0	0	60.83
Rinterro 2	-9.65	176	51.92	ACTIVE	0.295	5.16	0	11.5	0	0	63.42
Rinterro 2	-9.85	178	52.51	ACTIVE	0.295	5.16	0	13.5	0	0	66.01
Rinterro 2	-10.05	180	53.1	ACTIVE	0.295	5.16	0	15.5	0	0	68.6
Rinterro 2	-10.25	182	53.69	ACTIVE	0.295	5.16	0	17.5	0	0	71.19



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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT			Pore (kPa)	Gradiente	U*	Peq (kPa)	
				Stato	Ka	Kp					
Rinterro 2	-10.45	184	54.28	ACTIVE	0.295	5.16	0	19.5	0	0	73.78
Rinterro 2	-10.65	186	54.87	ACTIVE	0.295	5.16	0	21.5	0	0	76.37
Rinterro 2	-10.85	188	55.46	ACTIVE	0.295	5.16	0	23.5	0	0	78.96
Rinterro 2	-11.05	190	51.49	ACTIVE	0.2715.879		0	25.5	0	0	76.99
Rinterro 2	-11.25	192	52.032	ACTIVE	0.2715.879		0	27.5	0	0	79.532
Rinterro 2	-11.45	194	52.574	ACTIVE	0.2715.879		0	29.5	0	0	82.074
Rinterro 2	-11.65	196	53.116	ACTIVE	0.2715.879		0	31.5	0	0	84.616
Rinterro 2	-11.85	198	53.658	ACTIVE	0.2715.879		0	33.5	0	0	87.158
Rinterro 2	-12.05	200	54.2	ACTIVE	0.2715.879		0	35.5	0	0	89.7
Rinterro 2	-12.25	202	54.742	ACTIVE	0.2715.879		0	37.5	0	0	92.242
Rinterro 2	-12.45	204	55.284	ACTIVE	0.2715.879		0	39.5	0	0	94.784
Rinterro 2	-12.65	206	55.826	ACTIVE	0.2715.879		0	41.5	0	0	97.326
Rinterro 2	-12.85	208	56.368	ACTIVE	0.2715.879		0	43.5	0	0	99.868
Rinterro 2	-13.05	210	56.91	ACTIVE	0.2715.879		0	45.5	0	0	102.41
Rinterro 2	-13.25	212	57.452	ACTIVE	0.2715.879		0	47.5	0	0	104.952
Rinterro 2	-13.45	214	57.994	ACTIVE	0.2715.879		0	49.5	0	0	107.494
Rinterro 2	-13.65	216	58.536	ACTIVE	0.2715.879		0	51.5	0	0	110.036
Rinterro 2	-13.85	218	59.078	ACTIVE	0.2715.879		0	53.5	0	0	112.578
Rinterro 2	-14.05	220	59.62	ACTIVE	0.2715.879		0	55.5	0	0	115.12
Rinterro 2	-14.25	222	60.162	ACTIVE	0.2715.879		0	57.5	0	0	117.662
Rinterro 2	-14.45	224	60.704	ACTIVE	0.2715.879		0	59.5	0	0	120.204
Rinterro 2	-14.65	226	61.246	ACTIVE	0.2715.879		0	61.5	0	0	122.746
Rinterro 2	-14.85	228	61.788	ACTIVE	0.2715.879		0	63.5	0	0	125.288
Rinterro 2	-15.05	230	62.33	ACTIVE	0.2715.879		0	65.5	0	0	127.83
Rinterro 2	-15.25	232	62.872	ACTIVE	0.2715.879		0	67.5	0	0	130.372
Rinterro 2	-15.45	234	63.414	ACTIVE	0.2715.879		0	69.5	0	0	132.914
Rinterro 2	-15.65	236	63.956	ACTIVE	0.2715.879		0	71.5	0	0	135.456
Rinterro 2	-15.85	238	64.498	ACTIVE	0.2715.879		0	73.5	0	0	137.998
Rinterro 2	-16.05	240	65.04	ACTIVE	0.2715.879		0	75.5	0	0	140.54
Rinterro 2	-16.25	242	65.582	ACTIVE	0.2715.879		0	77.5	0	0	143.082
Rinterro 2	-16.45	244	66.124	ACTIVE	0.2715.879		0	79.5	0	0	145.624
Rinterro 2	-16.65	246	66.666	ACTIVE	0.2715.879		0	81.5	0	0	148.166
Rinterro 2	-16.85	248	67.208	ACTIVE	0.2715.879		0	83.5	0	0	150.708
Rinterro 2	-17.05	250	68.3	UL-RL	0.2715.879		0	85.5	0	0	153.8
Rinterro 2	-17.25	252	69.761	UL-RL	0.2715.879		0	87.5	0	0	157.26
Rinterro 2	-17.45	254	71.195	UL-RL	0.2715.879		0	89.5	0	0	160.695
Rinterro 2	-17.65	256	72.603	UL-RL	0.2715.879		0	91.5	0	0	164.103
Rinterro 2	-17.85	258	73.986	UL-RL	0.2715.879		0	93.5	0	0	167.486
Rinterro 2	-18.05	260	75.345	UL-RL	0.2715.879		0	95.5	0	0	170.845
Rinterro 2	-18.25	262	76.679	UL-RL	0.2715.879		0	97.5	0	0	174.179
Rinterro 2	-18.45	264	77.99	UL-RL	0.2715.879		0	99.5	0	0	177.49
Rinterro 2	-18.65	266	79.279	UL-RL	0.2715.879		0	101.5	0	0	180.779
Rinterro 2	-18.85	268	80.547	UL-RL	0.2715.879		0	103.5	0	0	184.047
Rinterro 2	-19.05	270	81.794	UL-RL	0.2715.879		0	105.5	0	0	187.294
Rinterro 2	-19.25	272	83.021	UL-RL	0.2715.879		0	107.5	0	0	190.521
Rinterro 2	-19.45	274	84.23	UL-RL	0.2715.879		0	109.5	0	0	193.73
Rinterro 2	-19.65	276	85.421	UL-RL	0.2715.879		0	111.5	0	0	196.921
Rinterro 2	-19.85	278	86.596	UL-RL	0.2715.879		0	113.5	0	0	200.096
Rinterro 2	-20.05	280	87.755	UL-RL	0.2715.879		0	115.5	0	0	203.255
Rinterro 2	-20.25	282	88.899	UL-RL	0.2715.879		0	117.5	0	0	206.399
Rinterro 2	-20.45	284	90.029	UL-RL	0.2715.879		0	119.5	0	0	209.529
Rinterro 2	-20.65	286	91.147	UL-RL	0.2715.879		0	121.5	0	0	212.647
Rinterro 2	-20.85	288	92.252	UL-RL	0.2715.879		0	123.5	0	0	215.752
Rinterro 2	-21.05	290	93.347	UL-RL	0.2715.879		0	125.5	0	0	218.847
Rinterro 2	-21.25	292	94.431	UL-RL	0.2715.879		0	127.5	0	0	221.932
Rinterro 2	-21.45	294	95.507	UL-RL	0.2715.879		0	129.5	0	0	225.007
Rinterro 2	-21.65	296	96.574	UL-RL	0.2715.879		0	131.5	0	0	228.074

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT			Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
				Stato	Ka	Kp				
Rinterro 2	-21.85	298	97.633	UL-RL	0.2715.879	0	133.5	0	0	231.134
Rinterro 2	-22.05	300	98.686	UL-RL	0.2715.879	0	135.5	0	0	234.186
Rinterro 2	-22.25	302	99.733	UL-RL	0.2715.879	0	137.5	0	0	237.233
Rinterro 2	-22.45	304	100.774	UL-RL	0.2715.879	0	139.5	0	0	240.275
Rinterro 2	-22.65	306	101.812	UL-RL	0.2715.879	0	141.5	0	0	243.312
Rinterro 2	-22.85	308	102.845	UL-RL	0.2715.879	0	143.5	0	0	246.345
Rinterro 2	-23.05	310	103.874	UL-RL	0.2715.879	0	145.5	0	0	249.375
Rinterro 2	-23.25	312	104.901	UL-RL	0.2715.879	0	147.5	0	0	252.402
Rinterro 2	-23.45	314	105.926	UL-RL	0.2715.879	0	149.5	0	0	255.426
Rinterro 2	-23.65	316	106.949	UL-RL	0.2715.879	0	151.5	0	0	258.449
Rinterro 2	-23.85	318	107.971	UL-RL	0.2715.879	0	153.5	0	0	261.471
Rinterro 2	-24.05	320	108.991	UL-RL	0.2715.879	0	155.5	0	0	264.492
Rinterro 2	-24.25	322	110.011	UL-RL	0.2715.879	0	157.5	0	0	267.511
Rinterro 2	-24.45	324	111.031	UL-RL	0.2715.879	0	159.5	0	0	270.531
Rinterro 2	-24.65	326	112.05	UL-RL	0.2715.879	0	161.5	0	0	273.55
Rinterro 2	-24.85	328	113.069	UL-RL	0.2715.879	0	163.5	0	0	276.569
Rinterro 2	-25	329.5	113.833	UL-RL	0.2715.879	0	165	0	0	278.833

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT Stato	Lato		RIGHT Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
		Sigma V (kPa)				Ka	Kp					
Rinterro 2	0	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-0.2	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-0.4	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-0.6	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-0.8	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-1	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-1.2	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-1.4	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-1.6	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-1.8	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-2	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-2.2	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-2.25	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-2.45	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-2.65	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-2.85	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-3.05	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-3.25	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-3.45	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-3.65	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-3.85	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-4.05	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-4.25	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-4.45	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-4.65	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-4.85	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-5.05	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-5.25	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-5.45	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-5.65	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-5.85	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-6.05	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-6.25	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-6.45	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-6.65	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-6.85	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-7.05	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-7.25	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-7.45	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-7.65	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-7.85	0		0	REMOVED	0	0	0	0	0	0	0
Rinterro 2	-8.05	1		5.16	PASSIVE	0.295	5.16	0	0	0	0	5.16
Rinterro 2	-8.25	5		25.8	PASSIVE	0.295	5.16	0	0	0	0	25.8
Rinterro 2	-8.45	9		43.172	UL-RL	0.295	5.16	0	0	0	0	43.172
Rinterro 2	-8.65	11.5		45.032	UL-RL	0.295	5.16	0	1.5	0	0	46.532
Rinterro 2	-8.85	13.5		46.345	UL-RL	0.295	5.16	0	3.5	0	0	49.845
Rinterro 2	-9.05	15.5		47.556	UL-RL	0.295	5.16	0	5.5	0	0	53.056
Rinterro 2	-9.25	17.5		48.682	UL-RL	0.295	5.16	0	7.5	0	0	56.182
Rinterro 2	-9.45	19.5		49.737	UL-RL	0.295	5.16	0	9.5	0	0	59.237
Rinterro 2	-9.65	21.5		50.73	UL-RL	0.295	5.16	0	11.5	0	0	62.23
Rinterro 2	-9.85	23.5		51.669	UL-RL	0.295	5.16	0	13.5	0	0	65.169
Rinterro 2	-10.05	25.5		52.561	UL-RL	0.295	5.16	0	15.5	0	0	68.061
Rinterro 2	-10.25	27.5		53.412	UL-RL	0.295	5.16	0	17.5	0	0	70.912
Rinterro 2	-10.45	29.5		54.226	UL-RL	0.295	5.16	0	19.5	0	0	73.726
Rinterro 2	-10.65	31.5		55.008	UL-RL	0.295	5.16	0	21.5	0	0	76.508
Rinterro 2	-10.85	33.5		55.761	UL-RL	0.295	5.16	0	23.5	0	0	79.261

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT Stato	Lato		RIGHT Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
		Sigma V (kPa)				Ka	Kp					
Rinterro 2	-11.05	35.5		62.215	V-C	0.2715.879	0	25.5	0	0	87.715	
Rinterro 2	-11.25	37.5		62.822	V-C	0.2715.879	0	27.5	0	0	90.322	
Rinterro 2	-11.45	39.5		63.416	V-C	0.2715.879	0	29.5	0	0	92.916	
Rinterro 2	-11.65	41.5		63.998	V-C	0.2715.879	0	31.5	0	0	95.498	
Rinterro 2	-11.85	43.5		64.572	V-C	0.2715.879	0	33.5	0	0	98.072	
Rinterro 2	-12.05	45.5		65.138	V-C	0.2715.879	0	35.5	0	0	100.638	
Rinterro 2	-12.25	47.5		65.698	V-C	0.2715.879	0	37.5	0	0	103.198	
Rinterro 2	-12.45	49.5		66.254	V-C	0.2715.879	0	39.5	0	0	105.754	
Rinterro 2	-12.65	51.5		66.807	V-C	0.2715.879	0	41.5	0	0	108.307	
Rinterro 2	-12.85	53.5		67.359	V-C	0.2715.879	0	43.5	0	0	110.858	
Rinterro 2	-13.05	55.5		67.909	V-C	0.2715.879	0	45.5	0	0	113.409	
Rinterro 2	-13.25	57.5		68.461	V-C	0.2715.879	0	47.5	0	0	115.96	
Rinterro 2	-13.45	59.5		69.013	V-C	0.2715.879	0	49.5	0	0	118.513	
Rinterro 2	-13.65	61.5		69.568	V-C	0.2715.879	0	51.5	0	0	121.068	
Rinterro 2	-13.85	63.5		70.127	V-C	0.2715.879	0	53.5	0	0	123.627	
Rinterro 2	-14.05	65.5		70.689	V-C	0.2715.879	0	55.5	0	0	126.189	
Rinterro 2	-14.25	67.5		71.256	V-C	0.2715.879	0	57.5	0	0	128.756	
Rinterro 2	-14.45	69.5		71.828	V-C	0.2715.879	0	59.5	0	0	131.328	
Rinterro 2	-14.65	71.5		72.406	V-C	0.2715.879	0	61.5	0	0	133.906	
Rinterro 2	-14.85	73.5		72.991	V-C	0.2715.879	0	63.5	0	0	136.491	
Rinterro 2	-15.05	75.5		73.512	UL-RL	0.2715.879	0	65.5	0	0	139.012	
Rinterro 2	-15.25	77.5		73.958	UL-RL	0.2715.879	0	67.5	0	0	141.458	
Rinterro 2	-15.45	79.5		74.416	UL-RL	0.2715.879	0	69.5	0	0	143.916	
Rinterro 2	-15.65	81.5		74.886	UL-RL	0.2715.879	0	71.5	0	0	146.386	
Rinterro 2	-15.85	83.5		75.368	UL-RL	0.2715.879	0	73.5	0	0	148.868	
Rinterro 2	-16.05	85.5		75.864	UL-RL	0.2715.879	0	75.5	0	0	151.364	
Rinterro 2	-16.25	87.5		76.372	UL-RL	0.2715.879	0	77.5	0	0	153.872	
Rinterro 2	-16.45	89.5		76.894	UL-RL	0.2715.879	0	79.5	0	0	156.394	
Rinterro 2	-16.65	91.5		77.429	UL-RL	0.2715.879	0	81.5	0	0	158.929	
Rinterro 2	-16.85	93.5		77.977	UL-RL	0.2715.879	0	83.5	0	0	161.477	
Rinterro 2	-17.05	95.5		78.539	UL-RL	0.2715.879	0	85.5	0	0	164.038	
Rinterro 2	-17.25	97.5		79.113	UL-RL	0.2715.879	0	87.5	0	0	166.613	
Rinterro 2	-17.45	99.5		79.7	UL-RL	0.2715.879	0	89.5	0	0	169.2	
Rinterro 2	-17.65	101.5		80.3	UL-RL	0.2715.879	0	91.5	0	0	171.8	
Rinterro 2	-17.85	103.5		80.913	UL-RL	0.2715.879	0	93.5	0	0	174.413	
Rinterro 2	-18.05	105.5		81.537	UL-RL	0.2715.879	0	95.5	0	0	177.037	
Rinterro 2	-18.25	107.5		82.173	UL-RL	0.2715.879	0	97.5	0	0	179.673	
Rinterro 2	-18.45	109.5		82.82	UL-RL	0.2715.879	0	99.5	0	0	182.32	
Rinterro 2	-18.65	111.5		83.478	UL-RL	0.2715.879	0	101.5	0	0	184.978	
Rinterro 2	-18.85	113.5		84.147	UL-RL	0.2715.879	0	103.5	0	0	187.647	
Rinterro 2	-19.05	115.5		84.826	UL-RL	0.2715.879	0	105.5	0	0	190.326	
Rinterro 2	-19.25	117.5		85.514	UL-RL	0.2715.879	0	107.5	0	0	193.014	
Rinterro 2	-19.45	119.5		86.211	UL-RL	0.2715.879	0	109.5	0	0	195.711	
Rinterro 2	-19.65	121.5		86.917	UL-RL	0.2715.879	0	111.5	0	0	198.417	
Rinterro 2	-19.85	123.5		87.631	UL-RL	0.2715.879	0	113.5	0	0	201.131	
Rinterro 2	-20.05	125.5		88.352	UL-RL	0.2715.879	0	115.5	0	0	203.852	
Rinterro 2	-20.25	127.5		89.081	UL-RL	0.2715.879	0	117.5	0	0	206.581	
Rinterro 2	-20.45	129.5		89.816	UL-RL	0.2715.879	0	119.5	0	0	209.316	
Rinterro 2	-20.65	131.5		90.558	UL-RL	0.2715.879	0	121.5	0	0	212.058	
Rinterro 2	-20.85	133.5		91.305	UL-RL	0.2715.879	0	123.5	0	0	214.805	
Rinterro 2	-21.05	135.5		92.057	UL-RL	0.2715.879	0	125.5	0	0	217.558	
Rinterro 2	-21.25	137.5		92.814	UL-RL	0.2715.879	0	127.5	0	0	220.315	
Rinterro 2	-21.45	139.5		93.576	UL-RL	0.2715.879	0	129.5	0	0	223.076	
Rinterro 2	-21.65	141.5		94.341	UL-RL	0.2715.879	0	131.5	0	0	225.841	
Rinterro 2	-21.85	143.5		95.11	UL-RL	0.2715.879	0	133.5	0	0	228.61	
Rinterro 2	-22.05	145.5		95.881	UL-RL	0.2715.879	0	135.5	0	0	231.382	
Rinterro 2	-22.25	147.5		96.656	UL-RL	0.2715.879	0	137.5	0	0	234.156	

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente		
Rinterro 2	-22.45	149.5	97.432	UL-RL	0.2715.879	0	139.5	0	0	236.932	
Rinterro 2	-22.65	151.5	98.211	UL-RL	0.2715.879	0	141.5	0	0	239.711	
Rinterro 2	-22.85	153.5	98.991	UL-RL	0.2715.879	0	143.5	0	0	242.491	
Rinterro 2	-23.05	155.5	99.772	UL-RL	0.2715.879	0	145.5	0	0	245.272	
Rinterro 2	-23.25	157.5	100.554	UL-RL	0.2715.879	0	147.5	0	0	248.054	
Rinterro 2	-23.45	159.5	101.337	UL-RL	0.2715.879	0	149.5	0	0	250.837	
Rinterro 2	-23.65	161.5	102.121	UL-RL	0.2715.879	0	151.5	0	0	253.621	
Rinterro 2	-23.85	163.5	102.904	UL-RL	0.2715.879	0	153.5	0	0	256.405	
Rinterro 2	-24.05	165.5	103.688	UL-RL	0.2715.879	0	155.5	0	0	259.188	
Rinterro 2	-24.25	167.5	104.472	UL-RL	0.2715.879	0	157.5	0	0	261.972	
Rinterro 2	-24.45	169.5	105.256	UL-RL	0.2715.879	0	159.5	0	0	264.756	
Rinterro 2	-24.65	171.5	106.039	UL-RL	0.2715.879	0	161.5	0	0	267.539	
Rinterro 2	-24.85	173.5	106.822	UL-RL	0.2715.879	0	163.5	0	0	270.322	
Rinterro 2	-25	175	107.408	UL-RL	0.2715.879	0	165	0	0	272.408	

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**Tabella Risultati Terreno Left Wall - Nominal - Acc**

Design Assumption: Stage	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Acc	0	0	0	ACTIVE	0.2715	8.79	0	0	0	0	0
Acc	-0.2	3.938	1.067	ACTIVE	0.2715	8.79	0	0	0	0	1.067
Acc	-0.4	8.405	2.278	ACTIVE	0.2715	8.79	0	0	0	0	2.278
Acc	-0.6	13.217	3.582	ACTIVE	0.2715	8.79	0	0	0	0	3.582
Acc	-0.8	18.771	5.087	ACTIVE	0.2715	8.79	0	0	0	0	5.087
Acc	-1	23.594	6.394	ACTIVE	0.2715	8.79	0	0	0	0	6.394
Acc	-1.2	29.306	7.942	ACTIVE	0.2715	8.79	0	0	0	0	7.942
Acc	-1.4	33.569	9.097	ACTIVE	0.2715	8.79	0	0	0	0	9.097
Acc	-1.6	37.742	10.228	ACTIVE	0.2715	8.79	0	0	0	0	10.228
Acc	-1.8	42.629	11.552	ACTIVE	0.2715	8.79	0	0	0	0	11.552
Acc	-2	46.62	12.634	ACTIVE	0.2715	8.79	0	0	0	0	12.634
Acc	-2.2	51.22	13.881	ACTIVE	0.2715	8.79	0	0	0	0	13.881
Acc	-2.25	52.041	14.103	ACTIVE	0.2715	8.79	0	0	0	0	14.103
Acc	-2.45	55.944	15.161	ACTIVE	0.2715	8.79	0	0	0	0	15.161
Acc	-2.65	60.367	16.359	ACTIVE	0.2715	8.79	0	0	0	0	16.359
Acc	-2.85	64.215	17.402	ACTIVE	0.2715	8.79	0	0	0	0	17.402
Acc	-3.05	68.519	21.943	UL-RL	0.32	4.555	0	0	0	0	21.943
Acc	-3.25	72.334	23.147	ACTIVE	0.32	4.555	0	0	0	0	23.147
Acc	-3.45	76.146	24.367	ACTIVE	0.32	4.555	0	0	0	0	24.367
Acc	-3.65	80.346	25.711	ACTIVE	0.32	4.555	0	0	0	0	25.711
Acc	-3.85	84.14	26.925	ACTIVE	0.32	4.555	0	0	0	0	26.925
Acc	-4.05	87.934	28.139	ACTIVE	0.32	4.555	0	0	0	0	28.139
Acc	-4.25	92.063	29.46	ACTIVE	0.32	4.555	0	0	0	0	29.46
Acc	-4.45	95.845	30.671	ACTIVE	0.32	4.555	0	0	0	0	30.671
Acc	-4.65	99.934	31.979	ACTIVE	0.32	4.555	0	0	0	0	31.979
Acc	-4.85	103.708	33.187	ACTIVE	0.32	4.555	0	0	0	0	33.187
Acc	-5.05	107.484	34.395	ACTIVE	0.32	4.555	0	0	0	0	34.395
Acc	-5.25	111.532	35.69	ACTIVE	0.32	4.555	0	0	0	0	35.69
Acc	-5.45	115.302	36.897	ACTIVE	0.32	4.555	0	0	0	0	36.897
Acc	-5.65	119.476	35.246	ACTIVE	0.295	5.16	0	0	0	0	35.246
Acc	-5.85	123.443	36.416	ACTIVE	0.295	5.16	0	0	0	0	36.416
Acc	-6.05	127.411	37.586	ACTIVE	0.295	5.16	0	0	0	0	37.586
Acc	-6.25	131.609	38.825	ACTIVE	0.295	5.16	0	0	0	0	38.825
Acc	-6.45	135.575	39.995	ACTIVE	0.295	5.16	0	0	0	0	39.995
Acc	-6.65	139.757	41.228	ACTIVE	0.295	5.16	0	0	0	0	41.228
Acc	-6.85	143.72	42.398	ACTIVE	0.295	5.16	0	0	0	0	42.398
Acc	-7.05	147.686	43.567	ACTIVE	0.295	5.16	0	0	0	0	43.567
Acc	-7.25	151.85	44.796	ACTIVE	0.295	5.16	0	0	0	0	44.796
Acc	-7.45	155.814	45.965	ACTIVE	0.295	5.16	0	0	0	0	45.965
Acc	-7.65	159.78	47.135	ACTIVE	0.295	5.16	0	0	0	0	47.135
Acc	-7.85	163.93	48.359	ACTIVE	0.295	5.16	0	0	0	0	48.359
Acc	-8.05	167.895	49.529	ACTIVE	0.295	5.16	0	0	0	0	49.529
Acc	-8.25	172.035	50.75	ACTIVE	0.295	5.16	0	0	0	0	50.75
Acc	-8.45	176	51.92	ACTIVE	0.295	5.16	0	0	0	0	51.92
Acc	-8.65	178.466	52.647	ACTIVE	0.295	5.16	0	1.5	0	0	54.147
Acc	-8.85	180.595	53.275	ACTIVE	0.295	5.16	0	3.5	0	0	56.775
Acc	-9.05	182.56	53.855	ACTIVE	0.295	5.16	0	5.5	0	0	59.355
Acc	-9.25	184.682	54.481	ACTIVE	0.295	5.16	0	7.5	0	0	61.981
Acc	-9.45	186.647	55.061	ACTIVE	0.295	5.16	0	9.5	0	0	64.561
Acc	-9.65	188.614	55.641	ACTIVE	0.295	5.16	0	11.5	0	0	67.141
Acc	-9.85	190.727	56.264	ACTIVE	0.295	5.16	0	13.5	0	0	69.764
Acc	-10.05	192.693	56.844	ACTIVE	0.295	5.16	0	15.5	0	0	72.344
Acc	-10.25	194.8	57.466	ACTIVE	0.295	5.16	0	17.5	0	0	74.966

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	LEFT Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Acc	-10.45	196.767	58.046	ACTIVE	0.295	5.16	0	19.5	0	0	77.546
Acc	-10.65	198.734	58.627	ACTIVE	0.295	5.16	0	21.5	0	0	80.127
Acc	-10.85	200.835	59.246	ACTIVE	0.295	5.16	0	23.5	0	0	82.746
Acc	-11.05	202.803	54.96	ACTIVE	0.2715	5.879	0	25.5	0	0	80.46
Acc	-11.25	204.772	55.493	ACTIVE	0.2715	5.879	0	27.5	0	0	82.993
Acc	-11.45	206.867	56.061	ACTIVE	0.2715	5.879	0	29.5	0	0	85.561
Acc	-11.65	208.835	56.594	ACTIVE	0.2715	5.879	0	31.5	0	0	88.094
Acc	-11.85	210.926	57.161	ACTIVE	0.2715	5.879	0	33.5	0	0	90.661
Acc	-12.05	212.895	57.695	ACTIVE	0.2715	5.879	0	35.5	0	0	93.194
Acc	-12.25	214.865	58.228	ACTIVE	0.2715	5.879	0	37.5	0	0	95.728
Acc	-12.45	216.951	58.794	ACTIVE	0.2715	5.879	0	39.5	0	0	98.294
Acc	-12.65	218.921	59.328	ACTIVE	0.2715	5.879	0	41.5	0	0	100.827
Acc	-12.85	221.003	59.892	ACTIVE	0.2715	5.879	0	43.5	0	0	103.392
Acc	-13.05	222.973	60.426	ACTIVE	0.2715	5.879	0	45.5	0	0	105.926
Acc	-13.25	224.944	60.96	ACTIVE	0.2715	5.879	0	47.5	0	0	108.46
Acc	-13.45	227.023	61.523	ACTIVE	0.2715	5.879	0	49.5	0	0	111.023
Acc	-13.65	228.994	62.057	ACTIVE	0.2715	5.879	0	51.5	0	0	113.557
Acc	-13.85	231.069	62.62	ACTIVE	0.2715	5.879	0	53.5	0	0	116.12
Acc	-14.05	233.04	63.154	ACTIVE	0.2715	5.879	0	55.5	0	0	118.654
Acc	-14.25	235.013	63.688	ACTIVE	0.2715	5.879	0	57.5	0	0	121.188
Acc	-14.45	237.085	64.25	ACTIVE	0.2715	5.879	0	59.5	0	0	123.75
Acc	-14.65	239.057	64.784	ACTIVE	0.2715	5.879	0	61.5	0	0	126.284
Acc	-14.85	241.03	65.319	ACTIVE	0.2715	5.879	0	63.5	0	0	128.819
Acc	-15.05	243.004	65.854	ACTIVE	0.2715	5.879	0	65.5	0	0	131.354
Acc	-15.25	244.883	66.363	ACTIVE	0.2715	5.879	0	67.5	0	0	133.863
Acc	-15.45	246.765	66.873	ACTIVE	0.2715	5.879	0	69.5	0	0	136.373
Acc	-15.65	248.649	67.384	ACTIVE	0.2715	5.879	0	71.5	0	0	138.884
Acc	-15.85	250.535	67.895	ACTIVE	0.2715	5.879	0	73.5	0	0	141.395
Acc	-16.05	252.424	68.407	ACTIVE	0.2715	5.879	0	75.5	0	0	143.907
Acc	-16.25	254.314	68.919	ACTIVE	0.2715	5.879	0	77.5	0	0	146.419
Acc	-16.45	256.206	69.432	ACTIVE	0.2715	5.879	0	79.5	0	0	148.932
Acc	-16.65	258.1	69.945	ACTIVE	0.2715	5.879	0	81.5	0	0	151.445
Acc	-16.85	259.997	70.459	ACTIVE	0.2715	5.879	0	83.5	0	0	153.959
Acc	-17.05	261.895	70.973	ACTIVE	0.2715	5.879	0	85.5	0	0	156.473
Acc	-17.25	263.794	71.488	ACTIVE	0.2715	5.879	0	87.5	0	0	158.988
Acc	-17.45	265.696	72.004	ACTIVE	0.2715	5.879	0	89.5	0	0	161.504
Acc	-17.65	267.599	72.519	ACTIVE	0.2715	5.879	0	91.5	0	0	164.019
Acc	-17.85	269.504	73.422	UL-RL	0.2715	5.879	0	93.5	0	0	166.922
Acc	-18.05	271.41	74.934	UL-RL	0.2715	5.879	0	95.5	0	0	170.434
Acc	-18.25	273.318	76.418	UL-RL	0.2715	5.879	0	97.5	0	0	173.918
Acc	-18.45	275.227	77.875	UL-RL	0.2715	5.879	0	99.5	0	0	177.375
Acc	-18.65	277.138	79.304	UL-RL	0.2715	5.879	0	101.5	0	0	180.804
Acc	-18.85	279.05	80.708	UL-RL	0.2715	5.879	0	103.5	0	0	184.208
Acc	-19.05	280.964	82.088	UL-RL	0.2715	5.879	0	105.5	0	0	187.588
Acc	-19.25	282.879	83.443	UL-RL	0.2715	5.879	0	107.5	0	0	190.943
Acc	-19.45	284.796	84.776	UL-RL	0.2715	5.879	0	109.5	0	0	194.276
Acc	-19.65	286.713	86.087	UL-RL	0.2715	5.879	0	111.5	0	0	197.587
Acc	-19.85	288.632	87.378	UL-RL	0.2715	5.879	0	113.5	0	0	200.878
Acc	-20.05	290.553	88.65	UL-RL	0.2715	5.879	0	115.5	0	0	204.15
Acc	-20.25	292.474	89.903	UL-RL	0.2715	5.879	0	117.5	0	0	207.403
Acc	-20.45	294.397	91.139	UL-RL	0.2715	5.879	0	119.5	0	0	210.64
Acc	-20.65	296.321	92.36	UL-RL	0.2715	5.879	0	121.5	0	0	213.86
Acc	-20.85	298.246	93.566	UL-RL	0.2715	5.879	0	123.5	0	0	217.066
Acc	-21.05	300.172	94.758	UL-RL	0.2715	5.879	0	125.5	0	0	220.258
Acc	-21.25	302.099	95.937	UL-RL	0.2715	5.879	0	127.5	0	0	223.438
Acc	-21.45	304.027	97.106	UL-RL	0.2715	5.879	0	129.5	0	0	226.606
Acc	-21.65	305.956	98.263	UL-RL	0.2715	5.879	0	131.5	0	0	229.764

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		LEFT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente		
Acc	-21.85	307.886	99.412	UL-RL	0.2715.879	0	133.5	0	0	232.912	
Acc	-22.05	309.818	100.552	UL-RL	0.2715.879	0	135.5	0	0	236.052	
Acc	-22.25	311.75	101.685	UL-RL	0.2715.879	0	137.5	0	0	239.185	
Acc	-22.45	313.683	102.811	UL-RL	0.2715.879	0	139.5	0	0	242.311	
Acc	-22.65	315.617	103.932	UL-RL	0.2715.879	0	141.5	0	0	245.432	
Acc	-22.85	317.552	105.047	UL-RL	0.2715.879	0	143.5	0	0	248.548	
Acc	-23.05	319.488	106.159	UL-RL	0.2715.879	0	145.5	0	0	251.659	
Acc	-23.25	321.425	107.268	UL-RL	0.2715.879	0	147.5	0	0	254.768	
Acc	-23.45	323.362	108.374	UL-RL	0.2715.879	0	149.5	0	0	257.874	
Acc	-23.65	325.301	109.478	UL-RL	0.2715.879	0	151.5	0	0	260.978	
Acc	-23.85	327.24	110.58	UL-RL	0.2715.879	0	153.5	0	0	264.08	
Acc	-24.05	329.18	111.681	UL-RL	0.2715.879	0	155.5	0	0	267.182	
Acc	-24.25	331.121	112.782	UL-RL	0.2715.879	0	157.5	0	0	270.282	
Acc	-24.45	333.062	113.883	UL-RL	0.2715.879	0	159.5	0	0	273.383	
Acc	-24.65	335.005	114.983	UL-RL	0.2715.879	0	161.5	0	0	276.484	
Acc	-24.85	336.948	116.084	UL-RL	0.2715.879	0	163.5	0	0	279.584	
Acc	-25	338.406	116.91	UL-RL	0.2715.879	0	165	0	0	281.91	



Ponte stradale su Torrente Giustenice  
 Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro:	LEFT	Lato	RIGHT				U* (kPa)	Peq (kPa)
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente			
Acc	0	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-0.2	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-0.4	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-0.6	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-0.8	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-1	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-1.2	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-1.4	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-1.6	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-1.8	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-2	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-2.2	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-2.25	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-2.45	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-2.65	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-2.85	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-3.05	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-3.25	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-3.45	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-3.65	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-3.85	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-4.05	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-4.25	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-4.45	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-4.65	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-4.85	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-5.05	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-5.25	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-5.45	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-5.65	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-5.85	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-6.05	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-6.25	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-6.45	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-6.65	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-6.85	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-7.05	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-7.25	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-7.45	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-7.65	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-7.85	0	0	REMOVED	0	0	0	0	0	0	0	0
Acc	-8.05	1	5.16	PASSIVE	0.295	5.16	0	0	0	0	0	5.16
Acc	-8.25	5	25.8	PASSIVE	0.295	5.16	0	0	0	0	0	25.8
Acc	-8.45	9	46.44	PASSIVE	0.295	5.16	0	0	0	0	0	46.44
Acc	-8.65	11.5	51.1	V-C	0.295	5.16	0	1.5	0	0	0	52.6
Acc	-8.85	13.5	52.183	V-C	0.295	5.16	0	3.5	0	0	0	55.683
Acc	-9.05	15.5	53.203	V-C	0.295	5.16	0	5.5	0	0	0	58.703
Acc	-9.25	17.5	54.17	V-C	0.295	5.16	0	7.5	0	0	0	61.67
Acc	-9.45	19.5	55.093	V-C	0.295	5.16	0	9.5	0	0	0	64.593
Acc	-9.65	21.5	55.977	V-C	0.295	5.16	0	11.5	0	0	0	67.477
Acc	-9.85	23.5	56.827	V-C	0.295	5.16	0	13.5	0	0	0	70.327
Acc	-10.05	25.5	57.648	V-C	0.295	5.16	0	15.5	0	0	0	73.148
Acc	-10.25	27.5	58.444	V-C	0.295	5.16	0	17.5	0	0	0	75.944
Acc	-10.45	29.5	59.217	V-C	0.295	5.16	0	19.5	0	0	0	78.717
Acc	-10.65	31.5	59.97	V-C	0.295	5.16	0	21.5	0	0	0	81.47
Acc	-10.85	33.5	60.706	V-C	0.295	5.16	0	23.5	0	0	0	84.206

Ponte stradale su Torrente Giustenice

Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption:	Nominal	Risultati Terreno	Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Acc	-11.05	35.5	67.144	V-C	0.2715.879	0	0	25.5	0	0	92.644
Acc	-11.25	37.5	67.643	V-C	0.2715.879	0	0	27.5	0	0	95.143
Acc	-11.45	39.5	68.129	V-C	0.2715.879	0	0	29.5	0	0	97.629
Acc	-11.65	41.5	68.605	V-C	0.2715.879	0	0	31.5	0	0	100.105
Acc	-11.85	43.5	69.072	V-C	0.2715.879	0	0	33.5	0	0	102.572
Acc	-12.05	45.5	69.533	V-C	0.2715.879	0	0	35.5	0	0	105.033
Acc	-12.25	47.5	69.989	V-C	0.2715.879	0	0	37.5	0	0	107.489
Acc	-12.45	49.5	70.442	V-C	0.2715.879	0	0	39.5	0	0	109.942
Acc	-12.65	51.5	70.892	V-C	0.2715.879	0	0	41.5	0	0	112.392
Acc	-12.85	53.5	71.342	V-C	0.2715.879	0	0	43.5	0	0	114.842
Acc	-13.05	55.5	71.792	V-C	0.2715.879	0	0	45.5	0	0	117.292
Acc	-13.25	57.5	72.244	V-C	0.2715.879	0	0	47.5	0	0	119.744
Acc	-13.45	59.5	72.699	V-C	0.2715.879	0	0	49.5	0	0	122.199
Acc	-13.65	61.5	73.157	V-C	0.2715.879	0	0	51.5	0	0	124.656
Acc	-13.85	63.5	73.619	V-C	0.2715.879	0	0	53.5	0	0	127.119
Acc	-14.05	65.5	74.086	V-C	0.2715.879	0	0	55.5	0	0	129.586
Acc	-14.25	67.5	74.56	V-C	0.2715.879	0	0	57.5	0	0	132.06
Acc	-14.45	69.5	75.039	V-C	0.2715.879	0	0	59.5	0	0	134.539
Acc	-14.65	71.5	75.526	V-C	0.2715.879	0	0	61.5	0	0	137.026
Acc	-14.85	73.5	76.02	V-C	0.2715.879	0	0	63.5	0	0	139.52
Acc	-15.05	75.5	76.523	V-C	0.2715.879	0	0	65.5	0	0	142.023
Acc	-15.25	77.5	77.034	V-C	0.2715.879	0	0	67.5	0	0	144.533
Acc	-15.45	79.5	77.553	V-C	0.2715.879	0	0	69.5	0	0	147.053
Acc	-15.65	81.5	78.082	V-C	0.2715.879	0	0	71.5	0	0	149.582
Acc	-15.85	83.5	78.619	V-C	0.2715.879	0	0	73.5	0	0	152.119
Acc	-16.05	85.5	79.167	V-C	0.2715.879	0	0	75.5	0	0	154.667
Acc	-16.25	87.5	79.724	V-C	0.2715.879	0	0	77.5	0	0	157.224
Acc	-16.45	89.5	80.29	V-C	0.2715.879	0	0	79.5	0	0	159.79
Acc	-16.65	91.5	80.867	V-C	0.2715.879	0	0	81.5	0	0	162.367
Acc	-16.85	93.5	81.453	V-C	0.2715.879	0	0	83.5	0	0	164.953
Acc	-17.05	95.5	81.948	UL-RL	0.2715.879	0	0	85.5	0	0	167.448
Acc	-17.25	97.5	82.407	UL-RL	0.2715.879	0	0	87.5	0	0	169.907
Acc	-17.45	99.5	82.881	UL-RL	0.2715.879	0	0	89.5	0	0	172.381
Acc	-17.65	101.5	83.37	UL-RL	0.2715.879	0	0	91.5	0	0	174.87
Acc	-17.85	103.5	83.874	UL-RL	0.2715.879	0	0	93.5	0	0	177.374
Acc	-18.05	105.5	84.394	UL-RL	0.2715.879	0	0	95.5	0	0	179.894
Acc	-18.25	107.5	84.927	UL-RL	0.2715.879	0	0	97.5	0	0	182.427
Acc	-18.45	109.5	85.475	UL-RL	0.2715.879	0	0	99.5	0	0	184.975
Acc	-18.65	111.5	86.036	UL-RL	0.2715.879	0	0	101.5	0	0	187.536
Acc	-18.85	113.5	86.611	UL-RL	0.2715.879	0	0	103.5	0	0	190.111
Acc	-19.05	115.5	87.198	UL-RL	0.2715.879	0	0	105.5	0	0	192.698
Acc	-19.25	117.5	87.797	UL-RL	0.2715.879	0	0	107.5	0	0	195.297
Acc	-19.45	119.5	88.408	UL-RL	0.2715.879	0	0	109.5	0	0	197.908
Acc	-19.65	121.5	89.029	UL-RL	0.2715.879	0	0	111.5	0	0	200.53
Acc	-19.85	123.5	89.662	UL-RL	0.2715.879	0	0	113.5	0	0	203.162
Acc	-20.05	125.5	90.304	UL-RL	0.2715.879	0	0	115.5	0	0	205.804
Acc	-20.25	127.5	90.955	UL-RL	0.2715.879	0	0	117.5	0	0	208.455
Acc	-20.45	129.5	91.615	UL-RL	0.2715.879	0	0	119.5	0	0	211.115
Acc	-20.65	131.5	92.283	UL-RL	0.2715.879	0	0	121.5	0	0	213.783
Acc	-20.85	133.5	92.959	UL-RL	0.2715.879	0	0	123.5	0	0	216.459
Acc	-21.05	135.5	93.641	UL-RL	0.2715.879	0	0	125.5	0	0	219.141
Acc	-21.25	137.5	94.33	UL-RL	0.2715.879	0	0	127.5	0	0	221.83
Acc	-21.45	139.5	95.024	UL-RL	0.2715.879	0	0	129.5	0	0	224.524
Acc	-21.65	141.5	95.724	UL-RL	0.2715.879	0	0	131.5	0	0	227.224
Acc	-21.85	143.5	96.428	UL-RL	0.2715.879	0	0	133.5	0	0	229.928
Acc	-22.05	145.5	97.137	UL-RL	0.2715.879	0	0	135.5	0	0	232.637
Acc	-22.25	147.5	97.849	UL-RL	0.2715.879	0	0	137.5	0	0	235.349

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		RIGHT		U* (kPa)	Peq (kPa)
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente		
Acc	-22.45	149.5	98.564	UL-RL	0.2715.879	0	139.5	0	0	238.064	
Acc	-22.65	151.5	99.282	UL-RL	0.2715.879	0	141.5	0	0	240.782	
Acc	-22.85	153.5	100.002	UL-RL	0.2715.879	0	143.5	0	0	243.502	
Acc	-23.05	155.5	100.724	UL-RL	0.2715.879	0	145.5	0	0	246.224	
Acc	-23.25	157.5	101.448	UL-RL	0.2715.879	0	147.5	0	0	248.948	
Acc	-23.45	159.5	102.172	UL-RL	0.2715.879	0	149.5	0	0	251.672	
Acc	-23.65	161.5	102.898	UL-RL	0.2715.879	0	151.5	0	0	254.398	
Acc	-23.85	163.5	103.624	UL-RL	0.2715.879	0	153.5	0	0	257.124	
Acc	-24.05	165.5	104.35	UL-RL	0.2715.879	0	155.5	0	0	259.85	
Acc	-24.25	167.5	105.076	UL-RL	0.2715.879	0	157.5	0	0	262.576	
Acc	-24.45	169.5	105.802	UL-RL	0.2715.879	0	159.5	0	0	265.302	
Acc	-24.65	171.5	106.528	UL-RL	0.2715.879	0	161.5	0	0	268.028	
Acc	-24.85	173.5	107.253	UL-RL	0.2715.879	0	163.5	0	0	270.754	
Acc	-25	175	107.797	UL-RL	0.2715.879	0	165	0	0	272.797	

Ponte stradale su Torrente Giustenice  
 Relazione di calcolo spalle

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**Tabella Risultati Terreno Left Wall - Nominal - Sisma**

Design Assumption: Stage	Nominal	Risultati Terreno	Muro:	LEFT	Lato	LEFT					
	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Sisma	0	0	0	PASSIVE	0.2715.828	0	0	0	0	0	0
Sisma	-0.2	3.938	1.08	UL-RL	0.2715.828	0	0	0	0	0	1.08
Sisma	-0.4	8.405	2.289	UL-RL	0.2715.828	0	0	0	0	0	2.289
Sisma	-0.6	13.217	3.592	UL-RL	0.2715.828	0	0	0	0	0	3.592
Sisma	-0.8	18.771	5.096	UL-RL	0.2715.828	0	0	0	0	0	5.096
Sisma	-1	23.594	6.401	UL-RL	0.2715.828	0	0	0	0	0	6.401
Sisma	-1.2	29.306	7.948	UL-RL	0.2715.828	0	0	0	0	0	7.948
Sisma	-1.4	33.569	9.102	UL-RL	0.2715.828	0	0	0	0	0	9.102
Sisma	-1.6	37.742	10.231	UL-RL	0.2715.828	0	0	0	0	0	10.231
Sisma	-1.8	42.629	11.554	UL-RL	0.2715.828	0	0	0	0	0	11.554
Sisma	-2	46.62	12.635	UL-RL	0.2715.828	0	0	0	0	0	12.635
Sisma	-2.2	51.22	13.881	ACTIVE	0.2715.828	0	0	0	0	0	13.881
Sisma	-2.25	52.041	14.103	ACTIVE	0.2715.828	0	0	0	0	0	14.103
Sisma	-2.45	55.944	15.161	ACTIVE	0.2715.828	0	0	0	0	0	15.161
Sisma	-2.65	60.367	16.359	ACTIVE	0.2715.828	0	0	0	0	0	16.359
Sisma	-2.85	64.215	17.402	ACTIVE	0.2715.828	0	0	0	0	0	17.402
Sisma	-3.05	68.519	21.926	ACTIVE	0.32 4.492	0	0	0	0	0	21.926
Sisma	-3.25	72.334	23.147	ACTIVE	0.32 4.492	0	0	0	0	0	23.147
Sisma	-3.45	76.146	24.367	ACTIVE	0.32 4.492	0	0	0	0	0	24.367
Sisma	-3.65	80.346	25.711	ACTIVE	0.32 4.492	0	0	0	0	0	25.711
Sisma	-3.85	84.14	26.925	ACTIVE	0.32 4.492	0	0	0	0	0	26.925
Sisma	-4.05	87.934	28.139	ACTIVE	0.32 4.492	0	0	0	0	0	28.139
Sisma	-4.25	92.063	29.46	ACTIVE	0.32 4.492	0	0	0	0	0	29.46
Sisma	-4.45	95.845	30.671	ACTIVE	0.32 4.492	0	0	0	0	0	30.671
Sisma	-4.65	99.934	31.979	ACTIVE	0.32 4.492	0	0	0	0	0	31.979
Sisma	-4.85	103.708	33.187	ACTIVE	0.32 4.492	0	0	0	0	0	33.187
Sisma	-5.05	107.484	34.395	ACTIVE	0.32 4.492	0	0	0	0	0	34.395
Sisma	-5.25	111.532	35.69	ACTIVE	0.32 4.492	0	0	0	0	0	35.69
Sisma	-5.45	115.302	36.897	ACTIVE	0.32 4.492	0	0	0	0	0	36.897
Sisma	-5.65	119.476	35.246	ACTIVE	0.2955.103	0	0	0	0	0	35.246
Sisma	-5.85	123.443	36.416	ACTIVE	0.2955.103	0	0	0	0	0	36.416
Sisma	-6.05	127.411	37.586	ACTIVE	0.2955.103	0	0	0	0	0	37.586
Sisma	-6.25	131.609	38.825	ACTIVE	0.2955.103	0	0	0	0	0	38.825
Sisma	-6.45	135.575	39.995	ACTIVE	0.2955.103	0	0	0	0	0	39.995
Sisma	-6.65	139.757	41.228	ACTIVE	0.2955.103	0	0	0	0	0	41.228
Sisma	-6.85	143.72	42.398	ACTIVE	0.2955.103	0	0	0	0	0	42.398
Sisma	-7.05	147.686	43.567	ACTIVE	0.2955.103	0	0	0	0	0	43.567
Sisma	-7.25	151.85	44.796	ACTIVE	0.2955.103	0	0	0	0	0	44.796
Sisma	-7.45	155.814	45.965	ACTIVE	0.2955.103	0	0	0	0	0	45.965
Sisma	-7.65	159.78	47.135	ACTIVE	0.2955.103	0	0	0	0	0	47.135
Sisma	-7.85	163.93	48.359	ACTIVE	0.2955.103	0	0	0	0	0	48.359
Sisma	-8.05	167.895	49.529	ACTIVE	0.2955.103	0	0	0	0	0	49.529
Sisma	-8.25	172.035	50.75	ACTIVE	0.2955.103	0	0	0	0	0	50.75
Sisma	-8.45	176	51.92	ACTIVE	0.2955.103	0	0	0	0	0	51.92
Sisma	-8.65	178.466	52.647	ACTIVE	0.2955.099	0	1.5	0	0	0	54.147
Sisma	-8.85	180.595	53.275	ACTIVE	0.2955.095	0	3.5	0	0	0	56.775
Sisma	-9.05	182.56	53.855	ACTIVE	0.2955.091	0	5.5	0	0	0	59.355
Sisma	-9.25	184.682	54.481	ACTIVE	0.2955.087	0	7.5	0	0	0	61.981
Sisma	-9.45	186.647	55.061	ACTIVE	0.2955.083	0	9.5	0	0	0	64.561
Sisma	-9.65	188.614	55.641	ACTIVE	0.2955.079	0	11.5	0	0	0	67.141
Sisma	-9.85	190.727	56.264	ACTIVE	0.2955.075	0	13.5	0	0	0	69.764
Sisma	-10.05	192.693	56.844	ACTIVE	0.2955.072	0	15.5	0	0	0	72.344
Sisma	-10.25	194.8	57.466	ACTIVE	0.2955.068	0	17.5	0	0	0	74.966

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT			Lato			LEFT		
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U*	Peq (kPa)	
Sisma	-10.45	196.767	58.046	ACTIVE	0.295	5.065	0	19.5	0	0	77.546	
Sisma	-10.65	198.734	58.627	ACTIVE	0.295	5.061	0	21.5	0	0	80.127	
Sisma	-10.85	200.835	59.246	ACTIVE	0.295	5.058	0	23.5	0	0	82.746	
Sisma	-11.05	202.803	54.96	ACTIVE	0.271	5.775	0	25.5	0	0	80.46	
Sisma	-11.25	204.772	55.493	ACTIVE	0.271	5.772	0	27.5	0	0	82.993	
Sisma	-11.45	206.867	56.061	ACTIVE	0.271	5.768	0	29.5	0	0	85.561	
Sisma	-11.65	208.835	56.594	ACTIVE	0.271	5.765	0	31.5	0	0	88.094	
Sisma	-11.85	210.926	57.161	ACTIVE	0.271	5.761	0	33.5	0	0	90.661	
Sisma	-12.05	212.895	57.695	ACTIVE	0.271	5.758	0	35.5	0	0	93.194	
Sisma	-12.25	214.865	58.228	ACTIVE	0.271	5.755	0	37.5	0	0	95.728	
Sisma	-12.45	216.951	58.794	ACTIVE	0.271	5.752	0	39.5	0	0	98.294	
Sisma	-12.65	218.921	59.328	ACTIVE	0.271	5.749	0	41.5	0	0	100.827	
Sisma	-12.85	221.003	59.892	ACTIVE	0.271	5.745	0	43.5	0	0	103.392	
Sisma	-13.05	222.973	60.426	ACTIVE	0.271	5.742	0	45.5	0	0	105.926	
Sisma	-13.25	224.944	60.96	ACTIVE	0.271	5.74	0	47.5	0	0	108.46	
Sisma	-13.45	227.023	61.523	ACTIVE	0.271	5.737	0	49.5	0	0	111.023	
Sisma	-13.65	228.994	62.057	ACTIVE	0.271	5.734	0	51.5	0	0	113.557	
Sisma	-13.85	231.069	62.62	ACTIVE	0.271	5.731	0	53.5	0	0	116.12	
Sisma	-14.05	233.04	63.154	ACTIVE	0.271	5.728	0	55.5	0	0	118.654	
Sisma	-14.25	235.013	63.688	ACTIVE	0.271	5.726	0	57.5	0	0	121.188	
Sisma	-14.45	237.085	64.25	ACTIVE	0.271	5.723	0	59.5	0	0	123.75	
Sisma	-14.65	239.057	64.784	ACTIVE	0.271	5.72	0	61.5	0	0	126.284	
Sisma	-14.85	241.03	65.319	ACTIVE	0.271	5.718	0	63.5	0	0	128.819	
Sisma	-15.05	243.004	65.854	ACTIVE	0.271	5.715	0	65.5	0	0	131.354	
Sisma	-15.25	244.883	66.363	ACTIVE	0.271	5.713	0	67.5	0	0	133.863	
Sisma	-15.45	246.765	66.873	ACTIVE	0.271	5.711	0	69.5	0	0	136.373	
Sisma	-15.65	248.649	67.384	ACTIVE	0.271	5.709	0	71.5	0	0	138.884	
Sisma	-15.85	250.535	67.895	ACTIVE	0.271	5.706	0	73.5	0	0	141.395	
Sisma	-16.05	252.424	68.407	ACTIVE	0.271	5.704	0	75.5	0	0	143.907	
Sisma	-16.25	254.314	68.919	ACTIVE	0.271	5.702	0	77.5	0	0	146.419	
Sisma	-16.45	256.206	69.432	ACTIVE	0.271	5.7	0	79.5	0	0	148.932	
Sisma	-16.65	258.1	69.945	ACTIVE	0.271	5.698	0	81.5	0	0	151.445	
Sisma	-16.85	259.997	70.459	ACTIVE	0.271	5.696	0	83.5	0	0	153.959	
Sisma	-17.05	261.895	70.973	ACTIVE	0.271	5.694	0	85.5	0	0	156.473	
Sisma	-17.25	263.794	71.488	ACTIVE	0.271	5.692	0	87.5	0	0	158.988	
Sisma	-17.45	265.696	72.004	ACTIVE	0.271	5.69	0	89.5	0	0	161.504	
Sisma	-17.65	267.599	72.519	ACTIVE	0.271	5.688	0	91.5	0	0	164.019	
Sisma	-17.85	269.504	73.035	ACTIVE	0.271	5.686	0	93.5	0	0	166.536	
Sisma	-18.05	271.41	73.552	ACTIVE	0.271	5.684	0	95.5	0	0	169.052	
Sisma	-18.25	273.318	74.069	ACTIVE	0.271	5.682	0	97.5	0	0	171.569	
Sisma	-18.45	275.227	75.608	UL-RL	0.271	5.68	0	99.5	0	0	175.108	
Sisma	-18.65	277.138	77.454	UL-RL	0.271	5.678	0	101.5	0	0	178.954	
Sisma	-18.85	279.05	79.254	UL-RL	0.271	5.677	0	103.5	0	0	182.754	
Sisma	-19.05	280.964	81.008	UL-RL	0.271	5.675	0	105.5	0	0	186.508	
Sisma	-19.25	282.879	82.72	UL-RL	0.271	5.673	0	107.5	0	0	190.22	
Sisma	-19.45	284.796	84.39	UL-RL	0.271	5.671	0	109.5	0	0	193.89	
Sisma	-19.65	286.713	86.022	UL-RL	0.271	5.67	0	111.5	0	0	197.522	
Sisma	-19.85	288.632	87.617	UL-RL	0.271	5.668	0	113.5	0	0	201.117	
Sisma	-20.05	290.553	89.177	UL-RL	0.271	5.666	0	115.5	0	0	204.677	
Sisma	-20.25	292.474	90.704	UL-RL	0.271	5.665	0	117.5	0	0	208.204	
Sisma	-20.45	294.397	92.201	UL-RL	0.271	5.663	0	119.5	0	0	211.701	
Sisma	-20.65	296.321	93.669	UL-RL	0.271	5.661	0	121.5	0	0	215.17	
Sisma	-20.85	298.246	95.111	UL-RL	0.271	5.66	0	123.5	0	0	218.611	
Sisma	-21.05	300.172	96.529	UL-RL	0.271	5.658	0	125.5	0	0	222.029	
Sisma	-21.25	302.099	97.924	UL-RL	0.271	5.657	0	127.5	0	0	225.424	
Sisma	-21.45	304.027	99.299	UL-RL	0.271	5.655	0	129.5	0	0	228.799	
Sisma	-21.65	305.956	100.655	UL-RL	0.271	5.653	0	131.5	0	0	232.155	

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT			Lato			LEFT		
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U*	Peq (kPa)	
Sisma	-21.85	307.886	101.994	UL-RL	0.2715.652		0	133.5	0	0	235.494	
Sisma	-22.05	309.818	103.319	UL-RL	0.2715.651		0	135.5	0	0	238.819	
Sisma	-22.25	311.75	104.63	UL-RL	0.2715.649		0	137.5	0	0	242.13	
Sisma	-22.45	313.683	105.93	UL-RL	0.2715.648		0	139.5	0	0	245.43	
Sisma	-22.65	315.617	107.219	UL-RL	0.2715.646		0	141.5	0	0	248.72	
Sisma	-22.85	317.552	108.5	UL-RL	0.2715.645		0	143.5	0	0	252.001	
Sisma	-23.05	319.488	109.774	UL-RL	0.2715.643		0	145.5	0	0	255.275	
Sisma	-23.25	321.425	111.042	UL-RL	0.2715.642		0	147.5	0	0	258.543	
Sisma	-23.45	323.362	112.306	UL-RL	0.2715.641		0	149.5	0	0	261.806	
Sisma	-23.65	325.301	113.51	UL-RL	0.2715.639		0	151.5	0	0	265.01	
Sisma	-23.85	327.24	114.635	V-C	0.2715.638		0	153.5	0	0	268.135	
Sisma	-24.05	329.18	115.758	V-C	0.2715.637		0	155.5	0	0	271.258	
Sisma	-24.25	331.121	116.881	V-C	0.2715.635		0	157.5	0	0	274.381	
Sisma	-24.45	333.062	118.002	V-C	0.2715.634		0	159.5	0	0	277.503	
Sisma	-24.65	335.005	119.124	V-C	0.2715.633		0	161.5	0	0	280.624	
Sisma	-24.85	336.948	120.246	V-C	0.2715.631		0	163.5	0	0	283.746	
Sisma	-25	338.406	121.087	V-C	0.2715.631		0	165	0	0	286.087	

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	RIGHT Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
		Sigma V (kPa)										
Sisma	0	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-0.2	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-0.4	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-0.6	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-0.8	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-1	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-1.2	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-1.4	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-1.6	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-1.8	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-2	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-2.2	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-2.25	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-2.45	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-2.65	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-2.85	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-3.05	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-3.25	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-3.45	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-3.65	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-3.85	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-4.05	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-4.25	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-4.45	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-4.65	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-4.85	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-5.05	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-5.25	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-5.45	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-5.65	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-5.85	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-6.05	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-6.25	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-6.45	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-6.65	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-6.85	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-7.05	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-7.25	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-7.45	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-7.65	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-7.85	0		0	REMOVED	0	0	0	0	0	0	0
Sisma	-8.05	1		4.59	PASSIVE	0.295	4.59	0	0	0	0	4.59
Sisma	-8.25	5		22.95	PASSIVE	0.295	4.59	0	0	0	0	22.95
Sisma	-8.45	9		41.31	PASSIVE	0.295	4.59	0	0	0	0	41.31
Sisma	-8.65	11.5		52.201	PASSIVE	0.295	4.539	0	1.5	0	0	53.701
Sisma	-8.85	13.5		60.604	PASSIVE	0.295	4.489	0	3.5	0	0	64.104
Sisma	-9.05	15.5		66.39	V-C	0.295	4.452	0	5.5	0	0	71.89
Sisma	-9.25	17.5		66.922	V-C	0.295	4.423	0	7.5	0	0	74.422
Sisma	-9.45	19.5		67.415	V-C	0.295	4.401	0	9.5	0	0	76.915
Sisma	-9.65	21.5		67.873	V-C	0.295	4.382	0	11.5	0	0	79.373
Sisma	-9.85	23.5		68.304	V-C	0.295	4.367	0	13.5	0	0	81.804
Sisma	-10.05	25.5		68.711	V-C	0.295	4.354	0	15.5	0	0	84.211
Sisma	-10.25	27.5		69.098	V-C	0.295	4.343	0	17.5	0	0	86.598
Sisma	-10.45	29.5		69.469	V-C	0.295	4.333	0	19.5	0	0	88.969
Sisma	-10.65	31.5		69.827	V-C	0.295	4.325	0	21.5	0	0	91.327
Sisma	-10.85	33.5		70.174	V-C	0.295	4.317	0	23.5	0	0	93.674

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT	Lato		RIGHT	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
		Stato	Ka		Kp	Coesione (kPa)						
Sisma	-11.05	35.5	80.212	V-C	0.271	4.94	0	25.5	0	0	105.712	
Sisma	-11.25	37.5	80.172	V-C	0.2714.934	0	27.5	0	0	107.672		
Sisma	-11.45	39.5	80.131	V-C	0.2714.928	0	29.5	0	0	109.631		
Sisma	-11.65	41.5	80.09	V-C	0.2714.923	0	31.5	0	0	111.59		
Sisma	-11.85	43.5	80.053	V-C	0.2714.918	0	33.5	0	0	113.553		
Sisma	-12.05	45.5	80.02	V-C	0.2714.914	0	35.5	0	0	115.52		
Sisma	-12.25	47.5	79.994	V-C	0.271 4.91	0	37.5	0	0	117.494		
Sisma	-12.45	49.5	79.977	V-C	0.2714.906	0	39.5	0	0	119.477		
Sisma	-12.65	51.5	79.97	V-C	0.2714.903	0	41.5	0	0	121.47		
Sisma	-12.85	53.5	79.974	V-C	0.271 4.9	0	43.5	0	0	123.474		
Sisma	-13.05	55.5	79.99	V-C	0.2714.897	0	45.5	0	0	125.49		
Sisma	-13.25	57.5	80.021	V-C	0.2714.895	0	47.5	0	0	127.521		
Sisma	-13.45	59.5	80.066	V-C	0.2714.892	0	49.5	0	0	129.566		
Sisma	-13.65	61.5	80.127	V-C	0.271 4.89	0	51.5	0	0	131.626		
Sisma	-13.85	63.5	80.204	V-C	0.2714.888	0	53.5	0	0	133.704		
Sisma	-14.05	65.5	80.298	V-C	0.2714.886	0	55.5	0	0	135.798		
Sisma	-14.25	67.5	80.41	V-C	0.2714.884	0	57.5	0	0	137.91		
Sisma	-14.45	69.5	80.541	V-C	0.2714.882	0	59.5	0	0	140.041		
Sisma	-14.65	71.5	80.69	V-C	0.271 4.88	0	61.5	0	0	142.19		
Sisma	-14.85	73.5	80.859	V-C	0.2714.879	0	63.5	0	0	144.359		
Sisma	-15.05	75.5	81.047	V-C	0.2714.877	0	65.5	0	0	146.547		
Sisma	-15.25	77.5	81.256	V-C	0.2714.876	0	67.5	0	0	148.755		
Sisma	-15.45	79.5	81.484	V-C	0.2714.874	0	69.5	0	0	150.984		
Sisma	-15.65	81.5	81.732	V-C	0.2714.873	0	71.5	0	0	153.232		
Sisma	-15.85	83.5	82	V-C	0.2714.872	0	73.5	0	0	155.5		
Sisma	-16.05	85.5	82.289	V-C	0.271 4.87	0	75.5	0	0	157.788		
Sisma	-16.25	87.5	82.597	V-C	0.2714.869	0	77.5	0	0	160.097		
Sisma	-16.45	89.5	82.926	V-C	0.2714.868	0	79.5	0	0	162.426		
Sisma	-16.65	91.5	83.274	V-C	0.2714.867	0	81.5	0	0	164.774		
Sisma	-16.85	93.5	83.643	V-C	0.2714.866	0	83.5	0	0	167.143		
Sisma	-17.05	95.5	84.03	V-C	0.2714.865	0	85.5	0	0	169.53		
Sisma	-17.25	97.5	84.437	V-C	0.2714.864	0	87.5	0	0	171.937		
Sisma	-17.45	99.5	84.863	V-C	0.2714.864	0	89.5	0	0	174.363		
Sisma	-17.65	101.5	85.307	V-C	0.2714.863	0	91.5	0	0	176.807		
Sisma	-17.85	103.5	85.769	V-C	0.2714.862	0	93.5	0	0	179.269		
Sisma	-18.05	105.5	86.11	UL-RL	0.2714.861	0	95.5	0	0	181.61		
Sisma	-18.25	107.5	86.394	UL-RL	0.271 4.86	0	97.5	0	0	183.894		
Sisma	-18.45	109.5	86.704	UL-RL	0.271 4.86	0	99.5	0	0	186.204		
Sisma	-18.65	111.5	87.039	UL-RL	0.2714.859	0	101.5	0	0	188.539		
Sisma	-18.85	113.5	87.399	UL-RL	0.2714.858	0	103.5	0	0	190.899		
Sisma	-19.05	115.5	87.783	UL-RL	0.2714.858	0	105.5	0	0	193.283		
Sisma	-19.25	117.5	88.189	UL-RL	0.2714.857	0	107.5	0	0	195.689		
Sisma	-19.45	119.5	88.617	UL-RL	0.2714.856	0	109.5	0	0	198.117		
Sisma	-19.65	121.5	89.065	UL-RL	0.2714.856	0	111.5	0	0	200.565		
Sisma	-19.85	123.5	89.532	UL-RL	0.2714.855	0	113.5	0	0	203.032		
Sisma	-20.05	125.5	90.018	UL-RL	0.2714.855	0	115.5	0	0	205.518		
Sisma	-20.25	127.5	90.521	UL-RL	0.2714.854	0	117.5	0	0	208.021		
Sisma	-20.45	129.5	91.04	UL-RL	0.2714.854	0	119.5	0	0	210.54		
Sisma	-20.65	131.5	91.573	UL-RL	0.2714.853	0	121.5	0	0	213.074		
Sisma	-20.85	133.5	92.121	UL-RL	0.2714.853	0	123.5	0	0	215.621		
Sisma	-21.05	135.5	92.681	UL-RL	0.2714.852	0	125.5	0	0	218.181		
Sisma	-21.25	137.5	93.253	UL-RL	0.2714.852	0	127.5	0	0	220.753		
Sisma	-21.45	139.5	93.836	UL-RL	0.2714.851	0	129.5	0	0	223.336		
Sisma	-21.65	141.5	94.428	UL-RL	0.2714.851	0	131.5	0	0	225.928		
Sisma	-21.85	143.5	95.029	UL-RL	0.271 4.85	0	133.5	0	0	228.529		
Sisma	-22.05	145.5	95.637	UL-RL	0.271 4.85	0	135.5	0	0	231.137		
Sisma	-22.25	147.5	96.253	UL-RL	0.271 4.85	0	137.5	0	0	233.753		



Ponte stradale su Torrente Giustenice  
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Design Assumption: Stage	Nominal Z (m)	Risultati Terreno		Muro: Sigma H (kPa)	LEFT	Lato		RIGHT		U* (kPa)	Peq (kPa)
		Sigma V (kPa)	Sigma H (kPa)		Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)		
Sisma	-22.45	149.5	96.874	UL-RL	0.2714.849	0	139.5	0	0	236.374	
Sisma	-22.65	151.5	97.5	UL-RL	0.2714.849	0	141.5	0	0	239	
Sisma	-22.85	153.5	98.131	UL-RL	0.2714.849	0	143.5	0	0	241.631	
Sisma	-23.05	155.5	98.765	UL-RL	0.2714.848	0	145.5	0	0	244.265	
Sisma	-23.25	157.5	99.402	UL-RL	0.2714.848	0	147.5	0	0	246.902	
Sisma	-23.45	159.5	100.041	UL-RL	0.2714.848	0	149.5	0	0	249.541	
Sisma	-23.65	161.5	100.682	UL-RL	0.2714.847	0	151.5	0	0	252.182	
Sisma	-23.85	163.5	101.325	UL-RL	0.2714.847	0	153.5	0	0	254.825	
Sisma	-24.05	165.5	101.968	UL-RL	0.2714.847	0	155.5	0	0	257.468	
Sisma	-24.25	167.5	102.611	UL-RL	0.2714.846	0	157.5	0	0	260.111	
Sisma	-24.45	169.5	103.255	UL-RL	0.2714.846	0	159.5	0	0	262.755	
Sisma	-24.65	171.5	103.898	UL-RL	0.2714.846	0	161.5	0	0	265.398	
Sisma	-24.85	173.5	104.541	UL-RL	0.2714.845	0	163.5	0	0	268.042	
Sisma	-25	175	105.024	UL-RL	0.2714.845	0	165	0	0	270.024	

Ponte stradale su Torrente Giustenice  
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## Riepilogo spinte

Design	Tipo Risultato:	Muro:	LEFT	Lato	LEFT		
Assumption:	Riepilogo spinte						
Nominal							
Stage	Vera effettiva (kN/m)	Pressione neutra (kN/m)	Vera Totale (kN/m)	Min ammissibile (kN/m)	Max ammissibile (kN/m)	Percentuale di resistenza massima	Vera / Attiva
Condizione geostatica	1478.7	1361.3	2840	944.3	19688.7	7.51%	1.57
Cordolo	1478.7	1361.3	2840	944.3	19688.7	7.51%	1.57
-1m	1420.6	1361.3	2781.9	944.3	19688.7	7.22%	1.5
-2m	1357.8	1361.3	2719.1	944.3	19688.7	6.9%	1.44
-3m	1289	1361.3	2650.3	944.3	19688.7	6.55%	1.37
-4m	1215.3	1361.3	2576.6	944.3	19688.7	6.17%	1.29
-5m	1143.6	1361.3	2504.9	944.3	19688.7	5.81%	1.21
Rinterro 1	1282.4	1361.3	2643.7	1127.3	23291.8	5.51%	1.14
Rinterro 2	1440.6	1361.3	2801.9	1321.9	27145.6	5.31%	1.09
Acc	1499.5	1361.3	2860.8	1399.1	28668	5.23%	1.07
Sisma	1511.8	1361.3	2873	1399.1	27846.1	5.43%	1.08

Design	Tipo Risultato:	Muro:	LEFT	Lato	RIGHT		
Assumption:	Riepilogo spinte						
Nominal							
Stage	Vera effettiva (kN/m)	Pressione neutra (kN/m)	Vera Totale (kN/m)	Min ammissibile (kN/m)	Max ammissibile (kN/m)	Percentuale di resistenza massima	Vera / Attiva
Condizione geostatica	1478.7	1361.3	2840	944.3	19688.7	7.51%	1.57
Cordolo	1478.7	1361.3	2840	944.3	19688.7	7.51%	1.57
-1m	1414.1	1361.3	2775.3	829.2	17412.4	8.12%	1.71
-2m	1344.6	1361.3	2705.9	720.2	15222.8	8.83%	1.87
-3m	1268.7	1361.3	2630	614.6	13066	9.71%	2.06
-4m	1185.3	1361.3	2546.6	512.2	10954.8	10.82%	2.31
-5m	1101.1	1361.3	2462.4	415.7	8946.8	12.31%	2.65
Rinterro 1	1198.2	1361.3	2559.4	415.7	8946.8	13.39%	2.88
Rinterro 2	1300.4	1361.3	2661.7	415.7	8946.8	14.53%	3.13
Acc	1350	1361.3	2711.2	415.7	8946.8	15.09%	3.25
Sisma	1409	1361.3	2770.3	415.7	7404.9	19.03%	3.39

Ponte stradale su Torrente Giustenice  
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## Descrizione Coefficienti Design Assumption

Nome	Carichi Permanenti Sfavorevoli (F_dead_load_unfavour)	Carichi Permanenti Favorevoli (F_dead_load_favour)	Carichi Variabili Sfavorevoli (F_live_load_unfavour)	Carichi Variabili Favorevoli (F_live_load_favour)	Carico Sismico (F_seism_load)	Pressioni Acqua Lato Monte (F_WaterDR)	Pressioni Acqua Lato Valle (F_WaterRes)	Carichi Permanenti Destabilizzanti (F_UPL_C)
Simbolo	$\gamma_G$	$\gamma_G$	$\gamma_Q$	$\gamma_Q$	$\gamma_{QE}$	$\gamma_G$	$\gamma_G$	$\gamma_{Gd}$
Nominal	1	1	1	1	1	1	1	1
NTC2018: SLE (Rara/Frequente/Quasi Permanente)	1	1	1	1	0	1	1	1
NTC2018: A1+M1+R1 (R3 per tiranti)	1.35	1	1.35	1	0	1.3	1	1
NTC2018: A2+M2+R1	1	1	1.25	1	0	1	1	1
NTC2018: SISMICA STR	1	1	1	1	1	1	1	1
NTC2018: SISMICA GEO	1	1	1	1	1	1	1	1

Nome	Parziale su tan( $\phi'$ ) (F_Fr)	Parziale su c' (F_eff_cohes)	Parziale su Su (F_Su)	Parziale su qu (F_qu)	Parziale su peso specifico (F_gamma)
Simbolo	$\gamma_\phi$	$\gamma_c$	$\gamma_{cu}$	$\gamma_{qu}$	$\gamma_\gamma$
Nominal	1	1	1	1	1
NTC2018: SLE (Rara/Frequente/Quasi Permanente)	1	1	1	1	1
NTC2018: A1+M1+R1 (R3 per tiranti)	1	1	1	1	1
NTC2018: A2+M2+R1	1.25	1.25	1.4	1	1
NTC2018: SISMICA STR	1	1	1	1	1
NTC2018: SISMICA GEO	1	1	1	1	1

Nome	Parziale resistenza terreno (es. Kp) (F_Soil_Res_walls)	Parziale resistenza Tiranti permanenti (F_Anch_P)	Parziale resistenza Tiranti temporanei (F_Anch_T)	Parziale elementi strutturali (F_wall)
Simbolo	$\gamma_{Re}$	$\gamma_{ap}$	$\gamma_{at}$	
Nominal	1	1	1	1
NTC2018: SLE (Rara/Frequente/Quasi Permanente)	1	1	1	1
NTC2018: A1+M1+R1 (R3 per tiranti)	1	1.2	1.1	1
NTC2018: A2+M2+R1	1	1.2	1.1	1
NTC2018: SISMICA STR	1	1.2	1.1	1
NTC2018: SISMICA GEO	1	1.2	1.1	1

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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## Allegati

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

\* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: Nominal

\* Time:lunedì 31 gennaio 2022 12:18:56

\* 1: Defining general settings

UNIT m kN

TITLE New Project

DELTA 0.2

option param itemax 40

option control hinges 0 0.0001 0.001

\* 2: Defining wall(s)

WALL LeftWall\_32 0 -25 0 1

\* 3: Defining surfaces for wall(s)

SOIL 0\_L LeftWall\_32 -25 0 1 0

SOIL 0\_R LeftWall\_32 -25 0 2 180

\* 4: Defining soil layers

\*

\* Soil Profile (Rilevato\_17359\_8\_L\_0)

\*

LDATA Rilevato\_17359\_8\_L\_0 0 LeftWall\_32

ATREST 0.426 0.5 1

WEIGHT 19 9 10

PERMEABILITY 0.0001

RESISTANCE 0 35 0 0 0

KSCALE 0 0

YOUNG 40000 64000

ENDL

\*

\* Soil Profile (1-Riporto\_177\_107603\_L\_0)

\*

LDATA 1-Riporto\_177\_107603\_L\_0 -3 LeftWall\_32

ATREST 0.485 0.5 1

WEIGHT 19 9 10

PERMEABILITY 0.0001

RESISTANCE 0 31 0 0 0

KSCALE 0 0

YOUNG 10000 16000

ENDL

\*

\* Soil Profile (2sup-Sabbiaconghiaiasup\_2\_391\_L\_0)

\*

LDATA 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 -5.5 LeftWall\_32

ATREST 0.455 0.5 1

WEIGHT 20 10 10

PERMEABILITY 0.0001

RESISTANCE 0 33 0 0 0

KSCALE 0 0

YOUNG 30000 48000

ENDL

\*

\* Soil Profile (2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0)

\*

LDATA 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 -11 LeftWall\_32

ATREST 0.426 0.5 1

WEIGHT 20 10 10

PERMEABILITY 0.0001

RESISTANCE 0 35 0 0 0

KSCALE 0 0

YOUNG 45000 72000

ENDL

\* 5: Defining structural materials

\* Concrete material: 106 Name=C25/30 E=31475800 kPa

MATERIAL C2530\_106 3.1476E+07

\* 6: Defining structural elements

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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\* 6.1: Beams and combined Wall Elements  
BEAM WallElement\_33 LeftWall\_32 -25 0 C2530\_106 0.97944 00 00 0

\* 6.2: Supports

CELA Spring\_3320 LeftWall\_32 -2.25 58445 0 1 1

\* 6.3: Strips

STRIP LeftWall\_32 10 11 0.6 14.4 0 20 45

\* 7: Defining Steps

STEP Condizionegeostatica\_31  
CHANGE Rilevato\_17359\_8\_L\_0 U-FRICT=35 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-FRICT=35 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KA=0.271 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KP=5.879 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KA=0.271 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KP=5.879 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-FRICT=31 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-FRICT=31 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KA=0.32 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KP=4.555 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KA=0.32 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KP=4.555 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-FRICT=33 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-FRICT=33 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KA=0.295 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KP=5.16 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KA=0.295 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KP=5.16 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 U-FRICT=35 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 D-FRICT=35 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 U-KA=0.271 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 U-KP=5.879 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 D-KA=0.271 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 D-KP=5.879 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-COHE=0 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-ADHES=0 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-COHE=0 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-ADHES=0 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-COHE=0 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-ADHES=0 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-COHE=0 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-ADHES=0 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-COHE=0 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-ADHES=0 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-COHE=0 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-ADHES=0 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 U-COHE=0 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 U-ADHES=0 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 D-COHE=0 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 D-ADHES=0 LeftWall\_32  
SETWALL LeftWall\_32  
GEOM -3 -3  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ADD WallElement\_33  
ENDSTEP  
  
STEP Cordolo\_197430  
SETWALL LeftWall\_32  
GEOM -3 -3  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ADD Spring\_3320  
ENDSTEP  
  
STEP -1m\_198657  
SETWALL LeftWall\_32  
GEOM -3 -4  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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ENDSTEP

STEP -2m\_198911  
SETWALL LeftWall\_32  
GEOM -3 -5  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -3m\_199165  
SETWALL LeftWall\_32  
GEOM -3 -6  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -4m\_199419  
SETWALL LeftWall\_32  
GEOM -3 -7  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -5m\_199673  
SETWALL LeftWall\_32  
GEOM -3 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro1\_199927  
SETWALL LeftWall\_32  
GEOM -1.5 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro2\_200181  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Acc\_200689  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
LOAD step LeftWall\_32 -2.25 1 117  
ENDSTEP

STEP Sisma\_201425  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
CHANGE Rilevato\_17359\_8\_L\_0 U-KAED=0.33997 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KAEW=0.41342 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KPED=5.8278 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KPEW=5.3651 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KAED=0.31373 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KAEW=0.38979 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KPED=5.2441 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KPEW=4.7697 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KAED=0.39664 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KAEW=0.47743 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KPED=4.4921 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KPEW=4.0986 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KAED=0.36602 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KAEW=0.44968 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KPED=4.0395 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KPEW=3.6355 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KAED=0.36726 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KAEW=0.43651 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KPED=5.1027 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KPEW=4.7239 LeftWall\_32

Ponte stradale su Torrente Giustenice  
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CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KAED=0.33845 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KAEW=0.40975 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KPED=4.59 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KPEW=4.2011 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KAED=0.33997 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KAEW=0.40608 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KPED=5.8278 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KPEW=5.4144 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KAED=0.31373 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KAEW=0.38123 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KPED=5.2441 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KPEW=4.821 LeftWall_32
EQK USER 0.0986 0.0493 -0.0493 0 0.5 0 0.5 0 0
* Defining seismic surcharge pressures on wall LeftWall_32
*
*   min elevation = -8
*   max elevation = 0
*   average gamma = 19.3125
*   kh = 0.0986
*   deltaQ = 121.8696
DLOAD step LeftWall_32 -8 15.234 0 15.234
* Include pressure contribution from wall: LeftWall_32
* Include wall contribution
DLOAD step LeftWall_32 -8 2.1445 0 2.1445
LOAD constant LeftWall_32 -2.25 1 565
ENDSTEP

```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

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

```
* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: SLE (Rara/Frequente/Quasi Permanente)
* Time:lunedì 31 gennaio 2022 12:19:01
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_32 0 -25 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_32 -25 0 1 0
SOIL 0_R LeftWall_32 -25 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Rilevato_17359_8_L_0)
*
LDATA Rilevato_17359_8_L_0 0 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 40000 64000
ENDL
*
* Soil Profile (1-Riporto_177_107603_L_0)
*
LDATA 1-Riporto_177_107603_L_0 -3 LeftWall_32
ATREST 0.485 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 31 0 0 0
KSCALE 0 0
YOUNG 10000 16000
ENDL
*
* Soil Profile (2sup-Sabbiaconghiaiasup_2_391_L_0)
*
LDATA 2sup-Sabbiaconghiaiasup_2_391_L_0 -5.5 LeftWall_32
ATREST 0.455 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 33 0 0 0
KSCALE 0 0
YOUNG 30000 48000
ENDL
*
* Soil Profile (2inf-Sabbiaconghiaiainf_103518_195609_L_0)
*
LDATA 2inf-Sabbiaconghiaiainf_103518_195609_L_0 -11 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 45000 72000
ENDL

* 5: Defining structural materials
* Concrete material: 106 Name=C25/30 E=31475800 kPa
MATERIAL C2530_106 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
BEAM WallElement_33 LeftWall_32 -25 0 C2530_106 0.97944 00 00 0
```



Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IVOI	00	D 09	CLIV0104001	A	215 di 232

\* 6.2: Supports

CELA Spring\_3320 LeftWall\_32 -2.25 58445 0 1 1

\* 6.3: Strips

STRIP LeftWall\_32 10 11 0.6 14.4 0 20 45

\* 7: Defining Steps

```

STEP Condizionegeostatica_31
CHANGE Rilevato_17359_8_L_0 U-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KP=5.879 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KP=4.555 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KP=4.555 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KP=5.16 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KP=5.16 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KP=5.879 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-ADHES=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-ADHES=0 LeftWall_32
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD WallElement_33
ENDSTEP

STEP Cordolo_197430
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD Spring_3320
ENDSTEP

STEP -1m_198657
SETWALL LeftWall_32
GEOM -3 -4
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP

```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	216 di 232

```
STEP -2m_198911
SETWALL LeftWall_32
GEOM -3 -5
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP -3m_199165
SETWALL LeftWall_32
GEOM -3 -6
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP -4m_199419
SETWALL LeftWall_32
GEOM -3 -7
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP -5m_199673
SETWALL LeftWall_32
GEOM -3 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP Rinterro1_199927
SETWALL LeftWall_32
GEOM -1.5 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP Rinterro2_200181
SETWALL LeftWall_32
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP Acc_200689
SETWALL LeftWall_32
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
LOAD step LeftWall_32 -2.25 1 117
ENDSTEP
```

```
STEP Sisma_201425
SETWALL LeftWall_32
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
LOAD constant LeftWall_32 -2.25 1 565
ENDSTEP
```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	217 di 232

## Design Assumption : NTC2018: A1+M1+R1 (R3 per tiranti) - File di Paratie - File di input (.d)

```
* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: A1+M1+R1 (R3 per tiranti)
* Time:lunedì 31 gennaio 2022 12:19:06
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_32 0 -25 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_32 -25 0 1 0
SOIL 0_R LeftWall_32 -25 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Rilevato_17359_8_L_0)
*
LDATA Rilevato_17359_8_L_0 0 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 40000 64000
ENDL
*
* Soil Profile (1-Riporto_177_107603_L_0)
*
LDATA 1-Riporto_177_107603_L_0 -3 LeftWall_32
ATREST 0.485 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 31 0 0 0
KSCALE 0 0
YOUNG 10000 16000
ENDL
*
* Soil Profile (2sup-Sabbiaconghiaiasup_2_391_L_0)
*
LDATA 2sup-Sabbiaconghiaiasup_2_391_L_0 -5.5 LeftWall_32
ATREST 0.455 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 33 0 0 0
KSCALE 0 0
YOUNG 30000 48000
ENDL
*
* Soil Profile (2inf-Sabbiaconghiaiainf_103518_195609_L_0)
*
LDATA 2inf-Sabbiaconghiaiainf_103518_195609_L_0 -11 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 45000 72000
ENDL

* 5: Defining structural materials
* Concrete material: 106 Name=C25/30 E=31475800 kPa
MATERIAL C2530_106 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
BEAM WallElement_33 LeftWall_32 -25 0 C2530_106 0.97944 00 00 0
```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IVOI	00	D 09	CLIV0104001	A	218 di 232

\* 6.2: Supports

CELA Spring\_3320 LeftWall\_32 -2.25 58445 0 1 1

\* 6.3: Strips

STRIP LeftWall\_32 10 11 0.6 14.4 0 20 45

\* 7: Defining Steps

```

STEP Condizionegeostatica_31
CHANGE Rilevato_17359_8_L_0 U-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KP=5.879 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KP=4.555 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KP=4.555 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KP=5.16 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KP=5.16 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KP=5.879 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-ADHES=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-ADHES=0 LeftWall_32
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD WallElement_33
ENDSTEP

STEP Cordolo_197430
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD Spring_3320
ENDSTEP

STEP -1m_198657
SETWALL LeftWall_32
GEOM -3 -4
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP

```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	219 di 232

```
STEP -2m_198911
SETWALL LeftWall_32
GEOM -3 -5
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP -3m_199165
SETWALL LeftWall_32
GEOM -3 -6
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP -4m_199419
SETWALL LeftWall_32
GEOM -3 -7
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP -5m_199673
SETWALL LeftWall_32
GEOM -3 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP Rinterro1_199927
SETWALL LeftWall_32
GEOM -1.5 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP Rinterro2_200181
SETWALL LeftWall_32
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP
```

```
STEP Acc_200689
SETWALL LeftWall_32
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
LOAD step LeftWall_32 -2.25 1 117
ENDSTEP
```

```
STEP Sisma_201425
SETWALL LeftWall_32
GEOM 0 -8
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
LOAD constant LeftWall_32 -2.25 1 565
ENDSTEP
```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	220 di 232

## Design Assumption : NTC2018: A2+M2+R1 - File di Paratie - File di input (.d)

\* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: A2+M2+R1

\* Time:lunedì 31 gennaio 2022 12:19:11

\* 1: Defining general settings

UNIT m kN

TITLE New Project

DELTA 0.2

option param itemax 40

option control hinges 0 0.0001 0.001

\* 2: Defining wall(s)

WALL LeftWall\_32 0 -25 0 1

\* 3: Defining surfaces for wall(s)

SOIL 0\_L LeftWall\_32 -25 0 1 0

SOIL 0\_R LeftWall\_32 -25 0 2 180

\* 4: Defining soil layers

\*

\* Soil Profile (Rilevato\_17359\_8\_L\_0)

\*

LDATA Rilevato\_17359\_8\_L\_0 0 LeftWall\_32

ATREST 0.426 0.5 1

WEIGHT 19 9 10

PERMEABILITY 0.0001

RESISTANCE 0 35 0 0 0

KSCALE 0 0

YOUNG 40000 64000

ENDL

\*

\* Soil Profile (1-Riporto\_177\_107603\_L\_0)

\*

LDATA 1-Riporto\_177\_107603\_L\_0 -3 LeftWall\_32

ATREST 0.485 0.5 1

WEIGHT 19 9 10

PERMEABILITY 0.0001

RESISTANCE 0 31 0 0 0

KSCALE 0 0

YOUNG 10000 16000

ENDL

\*

\* Soil Profile (2sup-Sabbiaconghiaiasup\_2\_391\_L\_0)

\*

LDATA 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 -5.5 LeftWall\_32

ATREST 0.455 0.5 1

WEIGHT 20 10 10

PERMEABILITY 0.0001

RESISTANCE 0 33 0 0 0

KSCALE 0 0

YOUNG 30000 48000

ENDL

\*

\* Soil Profile (2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0)

\*

LDATA 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 -11 LeftWall\_32

ATREST 0.426 0.5 1

WEIGHT 20 10 10

PERMEABILITY 0.0001

RESISTANCE 0 35 0 0 0

KSCALE 0 0

YOUNG 45000 72000

ENDL

\* 5: Defining structural materials

\* Concrete material: 106 Name=C25/30 E=31475800 kPa

MATERIAL C2530\_106 3.1476E+07

\* 6: Defining structural elements

\* 6.1: Beams and combined Wall Elements

BEAM WallElement\_33 LeftWall\_32 -25 0 C2530\_106 0.97944 00 00 0

\* 6.2: Supports

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	221 di 232

CELA Spring\_3320 LeftWall\_32 -2.25 58445 0 1 1

\* 6.3: Strips

STRIP LeftWall\_32 10 11 0.6 14.4 0 25 45

\* 7: Defining Steps

```

STEP Condizionegeostatica_31
CHANGE Rilevato_17359_8_L_0 U-FRICT=29.256 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-FRICT=29.256 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KA=0.343 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KP=4.102 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KA=0.343 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KP=4.102 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-FRICT=25.673 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-FRICT=25.673 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KA=0.395 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KP=3.343 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KA=0.395 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KP=3.343 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-FRICT=27.453 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-FRICT=27.453 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KA=0.369 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KP=3.695 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KA=0.369 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KP=3.695 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-FRICT=29.256 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-FRICT=29.256 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KA=0.343 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KP=4.102 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KA=0.343 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KP=4.102 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-ADHES=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-ADHES=0 LeftWall_32
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD WallElement_33
ENDSTEP

STEP Cordolo_197430
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD Spring_3320
ENDSTEP

STEP -1m_198657
SETWALL LeftWall_32
GEOM -3 -4
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP

STEP -2m_198911
SETWALL LeftWall_32
GEOM -3 -5

```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	222 di 232

SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -3m\_199165  
SETWALL LeftWall\_32  
GEOM -3 -6  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -4m\_199419  
SETWALL LeftWall\_32  
GEOM -3 -7  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -5m\_199673  
SETWALL LeftWall\_32  
GEOM -3 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro1\_199927  
SETWALL LeftWall\_32  
GEOM -1.5 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro2\_200181  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Acc\_200689  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
LOAD step LeftWall\_32 -2.25 1 146.25  
ENDSTEP

STEP Sisma\_201425  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
LOAD constant LeftWall\_32 -2.25 1 565  
ENDSTEP



Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	223 di 232

## Design Assumption : NTC2018: SISMICA STR - File di Paratie - File di input (.d)

```
* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: SISMICA STR
* Time:lunedì 31 gennaio 2022 12:19:16
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_32 0 -25 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_32 -25 0 1 0
SOIL 0_R LeftWall_32 -25 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Rilevato_17359_8_L_0)
*
LDATA Rilevato_17359_8_L_0 0 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 40000 64000
ENDL
*
* Soil Profile (1-Riporto_177_107603_L_0)
*
LDATA 1-Riporto_177_107603_L_0 -3 LeftWall_32
ATREST 0.485 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 31 0 0 0
KSCALE 0 0
YOUNG 10000 16000
ENDL
*
* Soil Profile (2sup-Sabbiaconghiaiasup_2_391_L_0)
*
LDATA 2sup-Sabbiaconghiaiasup_2_391_L_0 -5.5 LeftWall_32
ATREST 0.455 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 33 0 0 0
KSCALE 0 0
YOUNG 30000 48000
ENDL
*
* Soil Profile (2inf-Sabbiaconghiaiainf_103518_195609_L_0)
*
LDATA 2inf-Sabbiaconghiaiainf_103518_195609_L_0 -11 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 45000 72000
ENDL

* 5: Defining structural materials
* Concrete material: 106 Name=C25/30 E=31475800 kPa
MATERIAL C2530_106 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
BEAM WallElement_33 LeftWall_32 -25 0 C2530_106 0.97944 00 00 0

* 6.2: Supports
```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	224 di 232

CELA Spring\_3320 LeftWall\_32 -2.25 58445 0 1 1

\* 6.3: Strips

STRIP LeftWall\_32 10 11 0.6 14.4 0 20 45

\* 7: Defining Steps

```

STEP Condizionegeostatica_31
CHANGE Rilevato_17359_8_L_0 U-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KP=5.879 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KP=4.555 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KP=4.555 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KP=5.16 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KP=5.16 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KP=5.879 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-ADHES=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-ADHES=0 LeftWall_32
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD WallElement_33
ENDSTEP

STEP Cordolo_197430
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD Spring_3320
ENDSTEP

STEP -1m_198657
SETWALL LeftWall_32
GEOM -3 -4
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP

STEP -2m_198911
SETWALL LeftWall_32
GEOM -3 -5

```

**Ponte stradale su Torrente Giustenice**  
**Relazione di calcolo spalle**

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	225 di 232

SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -3m\_199165  
SETWALL LeftWall\_32  
GEOM -3 -6  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -4m\_199419  
SETWALL LeftWall\_32  
GEOM -3 -7  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -5m\_199673  
SETWALL LeftWall\_32  
GEOM -3 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro1\_199927  
SETWALL LeftWall\_32  
GEOM -1.5 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro2\_200181  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Acc\_200689  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
LOAD step LeftWall\_32 -2.25 1 117  
ENDSTEP

STEP Sisma\_201425  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
CHANGE Rilevato\_17359\_8\_L\_0 U-KAED=0.33997 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KAEW=0.41342 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KPED=5.8278 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KPEW=5.3651 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KAED=0.31373 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KAEW=0.38979 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KPED=5.2441 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KPEW=4.7697 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KAED=0.39664 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KAEW=0.47743 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KPED=4.4921 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KPEW=4.0986 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KAED=0.36602 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KAEW=0.44968 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KPED=4.0395 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KPEW=3.6355 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KAED=0.36726 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KAEW=0.43651 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KPED=5.1027 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KPEW=4.7239 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KAED=0.33845 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KAEW=0.40975 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KPED=4.59 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KPEW=4.2011 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 U-KAED=0.33997 LeftWall\_32

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	226 di 232

```
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KAEW=0.40608 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KPED=5.8278 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KPEW=5.4144 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KAED=0.31373 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KAEW=0.38123 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KPED=5.2441 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KPEW=4.821 LeftWall_32
EQK USER 0.0986 0.0493 -0.0493 0 0.5 0 0.5 0 0
* Defining seismic surcharge pressures on wall LeftWall_32
*   min elevation = -8
*   max elevation = 0
*   average gamma = 19.3125
*   kh = 0.0986
*   deltaQ = 121.8696
DLOAD step LeftWall_32 -8 15.234 0 15.234
* Include pressure contribution from wall: LeftWall_32
* Include wall contribution
DLOAD step LeftWall_32 -8 2.1445 0 2.1445
LOAD constant LeftWall_32 -2.25 1 565
ENDSTEP
```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	227 di 232

## Design Assumption : NTC2018: SISMICA GEO - File di Paratie - File di input (.d)

```

* PARATIE ANALYSIS FOR DESIGN SECTION:Base Design Section USING ASSUMPTION: NTC2018: SISMICA GEO
* Time:lunedì 31 gennaio 2022 12:19:21
* 1: Defining general settings
UNIT m kN
TITLE New Project
DELTA 0.2
option param itemax 40
option control hinges 0 0.0001 0.001

* 2: Defining wall(s)
WALL LeftWall_32 0 -25 0 1

* 3: Defining surfaces for wall(s)
SOIL 0_L LeftWall_32 -25 0 1 0
SOIL 0_R LeftWall_32 -25 0 2 180

* 4: Defining soil layers
*
* Soil Profile (Rilevato_17359_8_L_0)
*
LDATA Rilevato_17359_8_L_0 0 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 40000 64000
ENDL
*
* Soil Profile (1-Riporto_177_107603_L_0)
*
LDATA 1-Riporto_177_107603_L_0 -3 LeftWall_32
ATREST 0.485 0.5 1
WEIGHT 19 9 10
PERMEABILITY 0.0001
RESISTANCE 0 31 0 0 0
KSCALE 0 0
YOUNG 10000 16000
ENDL
*
* Soil Profile (2sup-Sabbiaconghiaiasup_2_391_L_0)
*
LDATA 2sup-Sabbiaconghiaiasup_2_391_L_0 -5.5 LeftWall_32
ATREST 0.455 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 33 0 0 0
KSCALE 0 0
YOUNG 30000 48000
ENDL
*
* Soil Profile (2inf-Sabbiaconghiaiainf_103518_195609_L_0)
*
LDATA 2inf-Sabbiaconghiaiainf_103518_195609_L_0 -11 LeftWall_32
ATREST 0.426 0.5 1
WEIGHT 20 10 10
PERMEABILITY 0.0001
RESISTANCE 0 35 0 0 0
KSCALE 0 0
YOUNG 45000 72000
ENDL

* 5: Defining structural materials
* Concrete material: 106 Name=C25/30 E=31475800 kPa
MATERIAL C2530_106 3.1476E+07

* 6: Defining structural elements
* 6.1: Beams and combined Wall Elements
BEAM WallElement_33 LeftWall_32 -25 0 C2530_106 0.97944 00 00 0

* 6.2: Supports

```

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	228 di 232

CELA Spring\_3320 LeftWall\_32 -2.25 58445 0 1 1

\* 6.3: Strips

STRIP LeftWall\_32 10 11 0.6 14.4 0 20 45

\* 7: Defining Steps

```

STEP Condizionegeostatica_31
CHANGE Rilevato_17359_8_L_0 U-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-FRICT=35 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KA=0.271 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-KP=5.879 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-FRICT=31 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-KP=4.555 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KA=0.32 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-KP=4.555 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-FRICT=33 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-KP=5.16 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KA=0.295 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-KP=5.16 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-FRICT=35 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KP=5.879 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KA=0.271 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KP=5.879 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 U-ADHES=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-COHE=0 LeftWall_32
CHANGE Rilevato_17359_8_L_0 D-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 U-ADHES=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-COHE=0 LeftWall_32
CHANGE 1-Riporto_177_107603_L_0 D-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 U-ADHES=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-COHE=0 LeftWall_32
CHANGE 2sup-Sabbiaconghiaiasup_2_391_L_0 D-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-ADHES=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-COHE=0 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-ADHES=0 LeftWall_32
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD WallElement_33
ENDSTEP

STEP Cordolo_197430
SETWALL LeftWall_32
GEOM -3 -3
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ADD Spring_3320
ENDSTEP

STEP -1m_198657
SETWALL LeftWall_32
GEOM -3 -4
SURCHARGE 0 0 0 0
WATER -8.5 0 -25 0 0
ENDSTEP

STEP -2m_198911
SETWALL LeftWall_32
GEOM -3 -5

```

**Ponte stradale su Torrente Giustenice**  
**Relazione di calcolo spalle**

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	229 di 232

SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -3m\_199165  
SETWALL LeftWall\_32  
GEOM -3 -6  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -4m\_199419  
SETWALL LeftWall\_32  
GEOM -3 -7  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP -5m\_199673  
SETWALL LeftWall\_32  
GEOM -3 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro1\_199927  
SETWALL LeftWall\_32  
GEOM -1.5 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Rinterro2\_200181  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
ENDSTEP

STEP Acc\_200689  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
LOAD step LeftWall\_32 -2.25 1 117  
ENDSTEP

STEP Sisma\_201425  
SETWALL LeftWall\_32  
GEOM 0 -8  
SURCHARGE 0 0 0 0  
WATER -8.5 0 -25 0 0  
CHANGE Rilevato\_17359\_8\_L\_0 U-KAED=0.33997 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KAEW=0.41342 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KPED=5.8278 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 U-KPEW=5.3651 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KAED=0.31373 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KAEW=0.38979 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KPED=5.2441 LeftWall\_32  
CHANGE Rilevato\_17359\_8\_L\_0 D-KPEW=4.7697 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KAED=0.39664 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KAEW=0.47743 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KPED=4.4921 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 U-KPEW=4.0986 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KAED=0.36602 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KAEW=0.44968 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KPED=4.0395 LeftWall\_32  
CHANGE 1-Riporto\_177\_107603\_L\_0 D-KPEW=3.6355 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KAED=0.36726 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KAEW=0.43651 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KPED=5.1027 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 U-KPEW=4.7239 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KAED=0.33845 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KAEW=0.40975 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KPED=4.59 LeftWall\_32  
CHANGE 2sup-Sabbiaconghiaiasup\_2\_391\_L\_0 D-KPEW=4.2011 LeftWall\_32  
CHANGE 2inf-Sabbiaconghiaiainf\_103518\_195609\_L\_0 U-KAED=0.33997 LeftWall\_32

Ponte stradale su Torrente Giustenice  
Relazione di calcolo spalle

COMMESSA	LOTTO	FASE-ENTE	DOCUMENTO	REV.	FOGLIO
IV01	00	D 09	CLIV0104001	A	230 di 232

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CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KAEW=0.40608 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KPED=5.8278 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 U-KPEW=5.4144 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KAED=0.31373 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KAEW=0.38123 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KPED=5.2441 LeftWall_32
CHANGE 2inf-Sabbiaconghiaiainf_103518_195609_L_0 D-KPEW=4.821 LeftWall_32
EQK USER 0.0986 0.0493 -0.0493 0 0.5 0 0.5 0 0
* Defining seismic surcharge pressures on wall LeftWall_32
*   min elevation = -8
*   max elevation = 0
*   average gamma = 19.3125
*   kh = 0.0986
*   deltaQ = 121.8696
DLOAD step LeftWall_32 -8 15.234 0 15.234
* Include pressure contribution from wall: LeftWall_32
* Include wall contribution
DLOAD step LeftWall_32 -8 2.1445 0 2.1445
LOAD constant LeftWall_32 -2.25 1 565
ENDSTEP

```