



Concessionaria per la progettazione, realizzazione e gestione del collegamento stabile tra la Sicilia e il Continente Organismo di Diritto Pubblico
(Legge n° 1158 del 17 dicembre 1971, modificata dal D.Lgs. n°114 del 24 aprile 2003)



PONTE SULLO STRETTO DI MESSINA



PROGETTO DEFINITIVO

EUROLINK S.C.p.A.

IMPREGILO S.p.A. (MANDATARIA)

SOCIETÀ ITALIANA PER CONDOTTE D'ACQUA S.p.A. (MANDANTE)

COOPERATIVA MURATORI E CEMENTISTI - C.M.C. DI RAVENNA SOC. COOP. A.R.L. (MANDANTE)

SACYR S.A.U. (MANDANTE)

ISHIKAWAJIMA - HARIMA HEAVY INDUSTRIES CO. LTD (MANDANTE)

A.C.I. S.C.P.A. - CONSORZIO STABILE (MANDANTE)

IL PROGETTISTA



Dott. Ing. F. Colla
Ordine Ingegneri
Milano
n° 20355

Dott. Ing. E. Pagani
Ordine Ingegneri Milano
n° 15408



IL CONTRAENTE GENERALE

Project Manager
(Ing. P.P. Marcheselli)

STRETTO DI MESSINA

Direttore Generale e
RUP Validazione
(Ing. G. Fiammenghi)

STRETTO DI MESSINA

Amministratore Delegato
(Dott. P. Ciucci)

Unità Funzionale

COLLEGAMENTI SICILIA

SS0780_F0

Tipo di sistema

INFRASTRUTTURE STRADALI - OPERE CIVILI

Raggruppamento di opere/attività

SVINCOLO ANNUNZIATA

Opera - tratto d'opera - parte d'opera

VIADOTTO DIREZIONE REGGIO CALABRIA

Titolo del documento

RELAZIONE DI CALCOLO OPERE PROVVISORIALI

CODICE

C G 0 7 0 0 P C L D S S C A 4 V I V 3 0 0 0 0 0 2 F0

REV	DATA	DESCRIZIONE	REDATTO	VERIFICATO	APPROVATO
F0	20/06/2011	EMISSIONE FINALE	R. CAFFARENA	G. SCIUTO	F. COLLA

INDICE

INDICE	3
1 INTRODUZIONE	4
1.1 DESCRIZIONE DEL CODICE DI CALCOLO PLAXIS	4
1.1.1 Modellazione del comportamento del terreno	4
1.1.2 Modello elastico lineare ed elastoplastico lineare	5
1.1.3 Modello incrudente isotropo.....	5
1.1.4 Modello viscoplastico.....	5
2 NORMATIVE DI RIFERIMENTO E MATERIALI.....	6
2.1 NORMATIVA ADOTTATA.....	6
2.2 MATERIALI	8
2.2.1 Calcestruzzi (Secondo UNI 11104 - 2004).....	8
2.2.2 Acciaio per armature (Secondo NTC 2008 – D.M. 14/01/2008)	9
2.2.3 Acciaio per micropali.....	9
3 OPERE PROVVISORIALI.....	11
3.1 Generalità	11
3.1.1 Caratterizzazione geotecnica.....	11
3.1.2 Caratterizzazione micropali.....	12
3.2 Descrizione delle fasi di scavo	13
3.3 Risultati	13
3.3.1 Verifica degli spostamenti SLE	13
3.3.2 Verifica di stabilità SLU-GEO	14
3.3.3 Verifica strutturale SLU-STR.....	15
3.3.4 Verifica strutturale SLU-V (Sisma)	17
4 ALLEGATI: Tabulati di calcolo	19

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0

1 INTRODUZIONE

Si realizzano opere provvisoriali con micropali affiancati a costituire una berlinese a protezione degli scavi. L'analisi delle sollecitazioni e la verifica dei tubi di armatura è svolta con il codice di calcolo non lineare Plaxis.

1.1 DESCRIZIONE DEL CODICE DI CALCOLO PLAXIS

Lo sviluppo del codice di calcolo PLAXIS è iniziato nel 1987 presso il Politecnico di Delft, su iniziativa del Dutch Department of Public Works and Water Management.

Originariamente concepito come un codice di calcolo agli elementi finiti per l'analisi dei corpi arginali e dei terreni molli dei polders olandesi, è stato successivamente ampliato per coprire la maggior parte delle problematiche di ingegneria geotecnica.

Nel 1993 è stata formata una società, denominata PLAXIS BV, per lo sviluppo continuo del codice di calcolo.

La ricerca e lo sviluppo sono finanziati grazie agli introiti da nuove licenze, ma soprattutto grazie al CUR (Center for Civil Engineering Research and Codes), un consorzio di più di 30 società europee interessate allo strumento di calcolo che forniscono, oltre al supporto economico, anche il necessario collegamento con la realtà applicativa e la validazione sul campo.

Il codice di calcolo è supportato da un valido background scientifico ed il suo standard tecnico è mantenuto costantemente elevato grazie al contributo delle numerose strutture di ricerca che collaborano direttamente allo sviluppo. Tra queste si ricorda la Delft University of Technology (Olanda), l'Institut für Geotechnik di Stoccarda (Germania), l'Università di Oxford (Gran Bretagna), il Massachusetts Institute of Technology (USA), l'Università di Grenoble (Francia), ecc.

1.1.1 *Modellazione del comportamento del terreno*

PLAXIS è un codice di calcolo non lineare agli elementi finiti espressamente concepito per i problemi di ingegneria geotecnica (problem deformativi e filtrazione/consolidazione nei terreni e nelle rocce).

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

Il comportamento meccanico dei terreni può essere descritto attraverso diversi modelli che forniscono approcci più o meno accurati.

1.1.2 **Modello elastico lineare ed elastoplastico lineare**

L'approccio più semplice è quello elastico lineare isotropo, che si basa su due soli parametri, il modulo di Young E e il rapporto di Poisson; il modello elastico lineare, tuttavia, non è sempre valido per trattare i problemi deformativi dei terreni, in particolare quando le deformazioni sono significative.

Un approccio più affine al comportamento reale dei terreni è quello descritto dal modello di Mohr-Coulomb; si tratta di un modello elastoplastico lineare (elastico – perfettamente plastico) che si basa su cinque parametri, di cui due descriventi il comportamento elastico (E , ν) analogamente al modello lineare, due il comportamento plastico (ϕ e c , rispettivamente angolo di attrito interno e coesione) ed uno (ψ) la dilatazione del materiale. Tale modello è stato utilizzato nella presente analisi.

1.1.3 **Modello incrudente isotropo**

Per descrivere il comportamento dei terreni coesivi, fortemente dipendente dalla storia tensionale, nel codice PLAXIS è disponibile un modello incrudente, in grado di rappresentare l'incrudimento isotropo del materiale mediante l'espansione della superficie di snervamento descritta alla Mohr-Coulomb. Oltre ai parametri impiegati nel modello Mohr-Coulomb, il modello incrudente necessita di ulteriori parametri descriventi il comportamento elastico (il modulo E è infatti dipendente dallo stato tensionale), cioè $E_{50,\text{ref}}$, modulo di deformazione ricavato da compressione in cella triassiale al 50 % della rottura per una tensione di contenimento di 100 kPa, E_{ur} , modulo di deformazione ricavato da prove di estensione per scarico in cella triassiale, e $E_{oed,\text{ref}}$, modulo di deformazione in cella edometrica ricavato sulla curva di compressione vergine.

1.1.4 **Modello viscoplastico**

Per lo studio dei terreni coesivi e, in particolare, dei problemi di deformazione viscosa e di consolidazione si fa riferimento al modello SSC (Soft Soil Creep), la cui principale peculiarità consiste nel tener conto di:

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO	
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0	<i>Data</i> 20/06/2011

- rigidezza variabile in funzione del livello di sollecitazione (curva di compressione logaritmica);
- distinzione tra curva di carico e di scarico;
- compressione secondaria viscosa;
- memoria della tensione di preconsolidazione;
- rottura secondo il criterio di Mohr-Coulomb.

Il modello necessita di ulteriori parametri per descrivere il comportamento deformativo dei terreni.

2 NORMATIVE DI RIFERIMENTO E MATERIALI

2.1 NORMATIVA ADOTTATA

I calcoli delle strutture sono stati eseguiti in base alle seguenti disposizioni:

- Legge 5/11/1971 n° 1086: "Norme per le discipline delle opere di conglomerato cementizio armato normale e precompresso ed a struttura metallica".
- D.M. 04/05/1990: "Aggiornamento delle norme tecniche per la progettazione, la esecuzione e il collaudo dei ponti stradali".
- Ministero LL.PP. 25/02/1991: "Istruzioni relative alla normativa tecnica dei ponti stradali".
- D.M. 9/01/1996: "Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle opere in cemento armato normale e precompresso e per le strutture metalliche".
- D.M. 16/01/1996: Norme tecniche per le costruzioni in zone sismiche.
- C.N.R. - U.N.I. 10011 - 97: "Costruzioni in acciaio. Istruzioni per il calcolo, l'esecuzione, il collaudo e la manutenzione".
- C.N.R. - U.N.I. 10016 - 00: "Travi composte di acciaio e calcestruzzo. Istruzioni per l'impiego nelle costruzioni".
- C.N.R. - U.N.I. 10030 - 87: "Costruzioni in acciaio. Anime irrigidite di travi a parete piena".
- Circ. Min. LL.PP. n° 31104 del 16 marzo 1989 "Istruzioni in merito alle norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni prefabbricate"
- Circ. Min. LL.PP. n° 65 del 10 aprile 1997 "Istruzioni per l'applicazione delle Norme Tecniche per le costruzioni in zone sismiche"
- C.N.R. 10018/99 – "Apparecchi d'appoggio per le costruzioni. Istruzioni per l'impiego"
- Ordinanza del Presidente del Consiglio dei Ministri N° 3274 del 20 marzo 2003. Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO	
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0	<i>Data</i> 20/06/2011

normative tecniche per le costruzioni in zona sismica;

- Ordinanza del Presidente del Consiglio dei Ministri del 02/10/2003 N. 3316 – “Modifiche ed integrazioni all’ordinanza del presidente del Consiglio dei Ministri n. 3274 del 20 marzo 2003”
- Ordinanza del Presidente del Consiglio dei Ministri del 02/10/2005 N. 3431 - Ulteriori modifiche e integrazioni alla precedente Ordinanza 3274 del 20 marzo 2003;
- O.P.C.M. n. 3519 28 aprile 2006 - Criteri generali per l’individuazione delle zone sismiche e per la formazione e l’aggiornamento degli elenchi delle medesime zone. (GU n. 108 del 11-5-2006)
- Norma UNI EN 206-1 : 2006 “Calcestruzzo. Parte 1 : specificazione, prestazione, produzione e conformità”
- Norma UNI EN 10025 – 2005 – “Prodotti laminati a caldo di acciai per impieghi strutturali.
- D.M. del 14/01/2008 - “Norme Tecniche per le Costruzioni 2008”

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

2.2 MATERIALI

2.2.1 Calcestruzzi (Secondo UNI 11104 - 2004)

Per sottofondazioni

classe di resistenza

C12/15

classe di esposizione

XC0

Cordoli testa opere provvisionali

classe di resistenza

C32/40

modulo elastico

$$E_c = 36.050 \text{ N/mm}^2$$

resistenza caratteristica a compressione cilindrica

$$f_{ck} = 33,20 \text{ N/mm}^2$$

resistenza media a compressione cilindrica

$$f_{cm} = 39,84 \text{ N/mm}^2$$

resistenza di calcolo a compressione

$$f_{cd} = 18,81 \text{ N/mm}^2$$

resistenza a trazione (valore medio)

$$f_{ctm} = 3,16 \text{ N/mm}^2$$

resistenza caratteristica a trazione

$$f_{ctk} = 2,21 \text{ N/mm}^2$$

resistenza caratteristica a trazione per flessione

$$f_{cfk} = 2,65 \text{ N/mm}^2$$

tensione a SLE – combinazione rara

$$\sigma_c = 19,92 \text{ N/mm}^2$$

tensione a SLE – combinazione quasi permanente

$$\sigma_c = 14,94 \text{ N/mm}^2$$

copriferro

$$C = 40 \text{ mm}$$

classe di esposizione

XC2

classe di consistenza slump

S4

max dimensione aggregati

$$D_{max} = 32 \text{ mm}$$

rapporto A/C massimo

$$0,50$$

Per il calcestruzzo ordinario armato si assume il seguente peso per unità di volume:

$$\rho'_{cls} = 25 \text{ kN/m}^3$$

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

*Codice documento
SS0780_F0.doc*

*Rev
F0* *Data
20/06/2011*

2.2.2 Acciaio per armature (Secondo NTC 2008 – D.M. 14/01/2008)

B450C

tensione caratteristica di snervamento	f_{yk} =	450	N/mm ²
tensione caratteristica di rottura	f_{tk} =	540	N/mm ²
resistenza di calcolo a trazione	f_{yd} =	391,30	N/mm ²
modulo elastico	E_s =	206.000	N/mm ²
deformazione caratteristica al carico massimo	ϵ_{uk}	7,50	%
deformazione di progetto	ϵ_{ud}	6,75	%
coeff. resistenza a instabilità delle membrature	γ_m =	1,10	

2.2.3 Acciaio per micropali

Elementi non saldati: acciaio S235 JO (ex 360 C) (UNI EN 10025)

L'acciaio deve essere conforme alle prescrizioni del D.M. 14.01.2008, dovendo presentare le seguenti caratteristiche (Tabella 11.3.IX, D.M. 14.01.2008):

Spessore nominale dell'elemento			
$t \leq 40$		$40 \text{ mm} < t \leq 80 \text{ mm}$	
f_{vk} [MPa]	f_{tk} [MPa]	f_{vk} [MPa]	f_{tk} [MPa]
235	360	215	360

Per la verifica in campo elastico, la resistenza di calcolo dell'acciaio si è assunta pari a :

$$f_{yd} = \frac{f_{yk}}{\gamma_M}$$

essendo

γ_M = coefficiente parziale di sicurezza per la resistenza delle membrature e la stabilità

Per il materiale	Elemento o tipo di verifica	γ_M
	Sezioni di classe 1-2-3-4	$\gamma_{M0} = 1.05$
	Fenomeni di instabilità	$\gamma_{M1} = 1.1$

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

	Resistenza delle sezioni tese (indebolite dai fori)	$\gamma_{M2} = 1.25$
--	---	----------------------

Si sono utilizzati i seguenti valori nominali delle proprietà del materiale:

- modulo di elasticità $E = 210000 \text{ N/mm}^2$
- modulo di elasticità tangenziale $G = E / (2 \times (1 + \nu)) = 80769 \text{ N/mm}^2$
- coefficiente di Poisson $\nu = 0.3$
- coefficiente di espansione termica $\alpha = 12 \times 10^{-6} \text{ per } ^\circ\text{C}$
- densità $\rho = 7850 \text{ kg/m}^3$

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

3 OPERE PROVVISORIALI

3.1 Generalità

La paratia provvisoriale di sostegno dello scavo necessario alla realizzazione delle pile del viadotto svincolo Annunziata, direzione Reggio Calabria, è stata verificata in accordo alla NTC 2008 ed in particolare:

- Stato Limite d'Esercizio SLE per la verifica degli spostamenti;
- Stato Limite Ultimo SLU-GEO per la verifica di stabilità della paratia;
- Stato Limite Ultimo SLU-STR per la verifica strutturale della paratia;
- Stato Limite Ultimo SLU-V (Sisma) per la verifica di stabilità e strutturale della paratia.

E' stato ipotizzato un carico accidentale pari a 10 kPa dovuto alla eventuale presenza di mezzi d'opera a monte della paratia, tale valore è stato incrementato con coefficienti parziali in accordo alle NTC2008 (1.5 per il caso SLU-STR e 1.3 per il caso SLU-GEO).

La paratia è caratterizzata da un'altezza di scavo di 4 m.

3.1.1 Caratterizzazione geotecnica

Dall'esame del profilo geotecnico le fondazioni dell'opera in esame appaiono intercettare le formazioni di seguito riportate. Si riporta una stratigrafia media, ricostruita in base al profilo stratigrafico longitudinale (elaborato grafico CG0800PFZDSSBC8G000000008B). Si sono riportati i parametri geotecnici di maggiore interesse per i calcoli e le verifiche successivamente eseguite.

Litologia	Da (m da p.c.)	A (m da p.c.)	γ (kN/m ³)	ϕ' (°)	C_u (kPa)	c' (kPa)	E^{**} [MPa]
Depositi alluvionali	0.0	12.0	18	38*	-	-	$E = (10 \div 25) \cdot (z)^{0.65}$
San Pier Niceto argilloso	12.0	40.0	20	25	350	20	70-120
San Pier Niceto Conglomeratico	40.0	-	21	38	-	-	$E = (20 \div 30) \cdot (z)^{0.7}$

Tab. 3.1.1 – Parametri geotecnici utilizzati

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

*valore cautelativo

** modulo di Young "operativo" – si considerano valori nel range per fronti di scavo sostenuti, opere di sostegno tirantate o puntonate; valori al minimo del range per fondazioni dirette, fondazioni su pali e rilevati.

La falda risulta presente nei depositi alluvionali a quota assoluta 150 m s.l.m..

Il valore della componente orizzontale dell'accelerazione equivalente per la verifica SLU-V (sisma) risulta pari a:

$$a_h = \alpha \cdot \beta \cdot a_{max} = 1 \cdot 0.6 \cdot 0.458 \cdot g = 0.2748 \cdot g$$

con

α = coefficiente di deformabilità del terreno

β = coefficiente funzione della capacità dell'opera di subire spostamenti

a_{max} = accelerazione di picco

I valori della tabella 3.1.1 sono stati ridotti con i coefficienti parziali per i parametri geotecnici secondo la NTC2008 nella verifica SLU-GEO.

3.1.2 Caratterizzazione micropali

- Diametro esterno tubolari: 193.7 mm
- Spessore: 14.2 mm
- Acciaio Fe360 (S235)
- Interasse micropali: 0.30 m
- Lunghezza micropali: 10 m

Nel codice di calcolo si è fatto riferimento ad una struttura a "diaframma", di caratteristiche geometriche e rigidezza riassunte nella successiva tabella.

D_{ext}	193.7	mm
Spessore	14.2	mm
$E_s A_s$	5.761E+06	kN/m
$E_s J_s$	2.334E+04	kNm ² /m

Tab. 3.1.2 – Caratteristiche paratia

3.2 Descrizione delle fasi di scavo

La sequenza costruttiva, schematizzata nel modello, può essere così descritta:

1. Presenza di un sovraccarico accidentale (dovuto ai mezzi d'opera)
2. Realizzazione palificata (schematizzata come un diaframma di spessore e rigidezza equivalenti a quelle dei micropali)
3. Completamento scavo

3.3 Risultati

3.3.1 Verifica degli spostamenti SLE

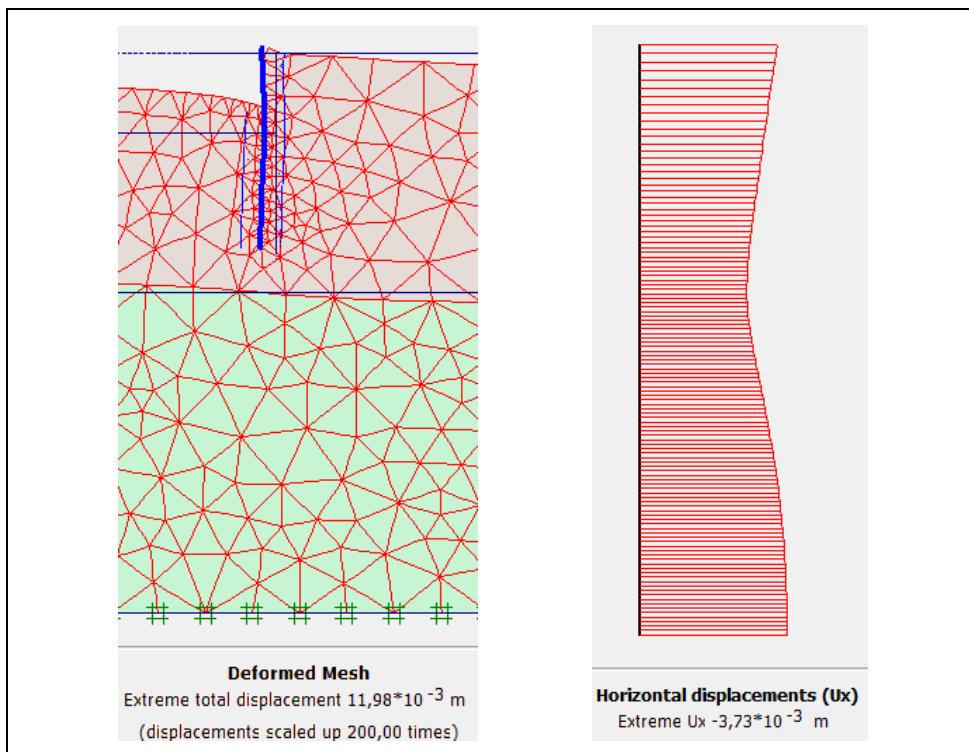


Figura 3.3.1 – Spostamenti totali SLE

Il valore di spostamento massimo orizzontale della paratia risulta pari a circa 0,4 cm, pertanto compatibile con l'opera provvisoriale in progetto.

3.3.2 Verifica di stabilità SLU-GEO

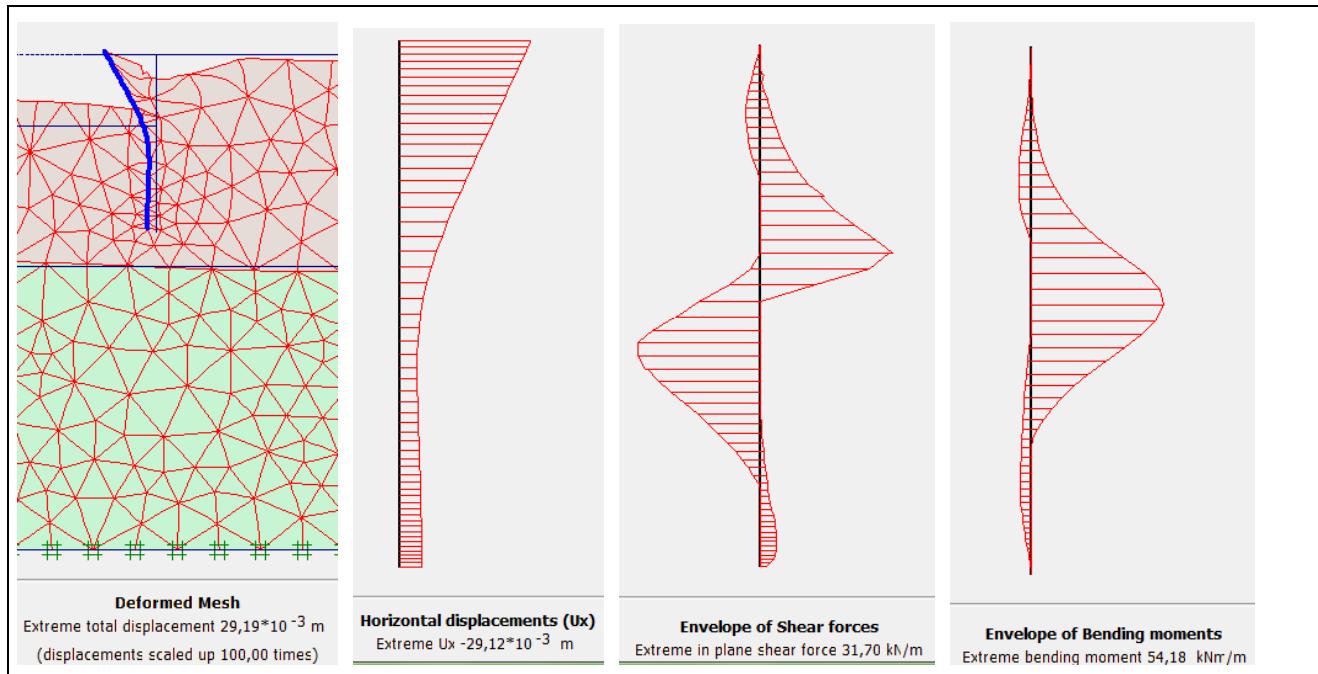


Figura 3.3.2 – Spostamenti, taglio e momento flettente SLU-GEO

Il valore di spostamento massimo orizzontale della paratia risulta pari a circa 3 cm, pertanto compatibile con l'opera provvisoriale in progetto.

3.3.3 Verifica strutturale SLU-STR

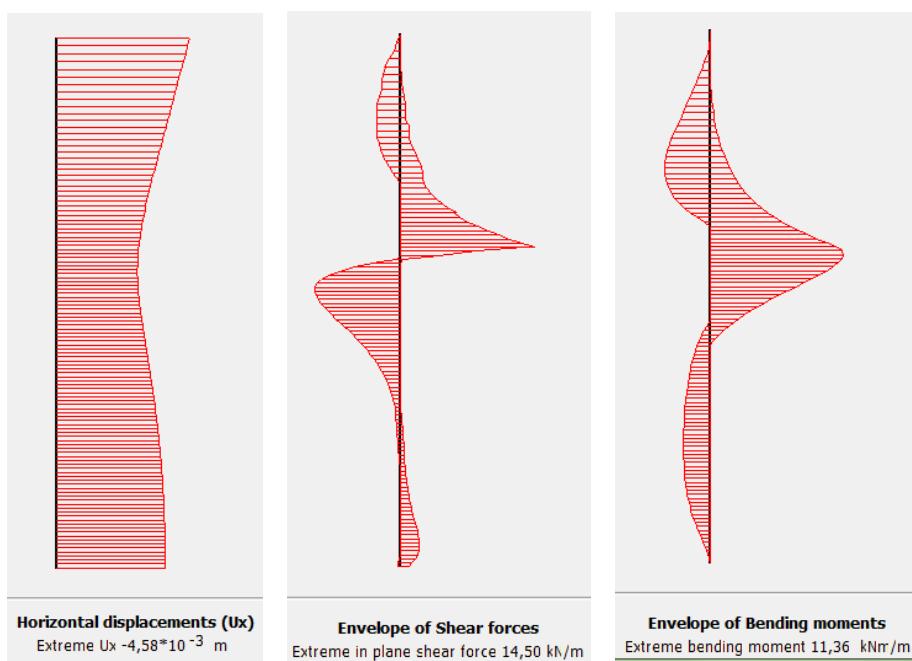


Figura 3.3.3 – Spostamenti, taglio e momento flettente SLU-STR

Verifiche di resistenza dei micropali

La verifica a flessione e taglio è stata eseguita secondo quanto indicato nel capitolo 4 delle NTC 2008.

La sezione tubolare utilizzata rientra in classe 1, essendo $d/t = 13.64 < 50$ $\varepsilon^2=50$, essendo

d: diametro esterno tubolare (193.7 mm)

t: spessore tubolare (14.2 mm)

$$\varepsilon^2: \frac{235}{f_{yk}} .$$

Per le sezioni di classe 1 la verifica a flessione può essere condotta nella forma:

$$E_d = \frac{M_{ed}}{W_{pl}} \leq \frac{f_{yk}}{\gamma_{M0}} = R_d$$

dove:

M_{ed} : momento di calcolo agente

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

- A: area della sezione (80.1 cm^2)
 W_{pl} : modulo resistente plastico della sezione (335 cm^3)
 f_{yk} : tensione di snervamento (235 N/mm^2)
 γ_{Mo} : coefficiente pari a 1.05.

I micropali hanno interasse pari a 30 cm di conseguenza le sollecitazioni vengono ripartite su 3.33 micropali a metro di paratia.

Il modulo di resistenza della paratia è pari a: $W_{pl} = 3,33 \times 335 = 1115.55 \text{ cm}^3/\text{m}$

L'area della sezione resistente della paratia è pari a: $A = 3,33 \times 80.1 = 266.73 \text{ cm}^2/\text{m}$

$$R_d = \frac{235}{1.05} = 223.80 \text{ N/mm}^2$$

$$M_{ed} = 11.36 \text{ kNm/m}$$

$$E_d = \frac{11360000}{1155550} = 9.83 \text{ N/mm}^2$$

Da cui si verifica: $E_d = 9.83 < R_d = 223.8 \text{ N/mm}^2$

La verifica a taglio impone che:

$$V_{ED} \leq V_{C,RD} = \frac{A_V \cdot f_{yk}}{\sqrt{3} \cdot \gamma_{Mo}}$$

dove:

V_{ED} : taglio di calcolo agente

$$A_V: \text{area pari a } \frac{2A}{\pi} = 169.89 \text{ cm}^2$$

$$V_{C,RD} = \frac{16989 \cdot 235}{\sqrt{3} \cdot 1.05} = 2195260 \text{ N} = 2195.26 \text{ kN}$$

$$V_{ED} = 12.64 \text{ kN/m}$$

RELAZIONE DI CALCOLO OPERE PROVVISORIALI

Codice documento
SS0780_F0.doc

Rev
F0 Data
20/06/2011

Da cui si verifica: $V_{ED} = 14.50 < V_{C,RD} = 2195 \text{ kN}$

3.3.4 Verifica strutturale SLU-V (Sisma)

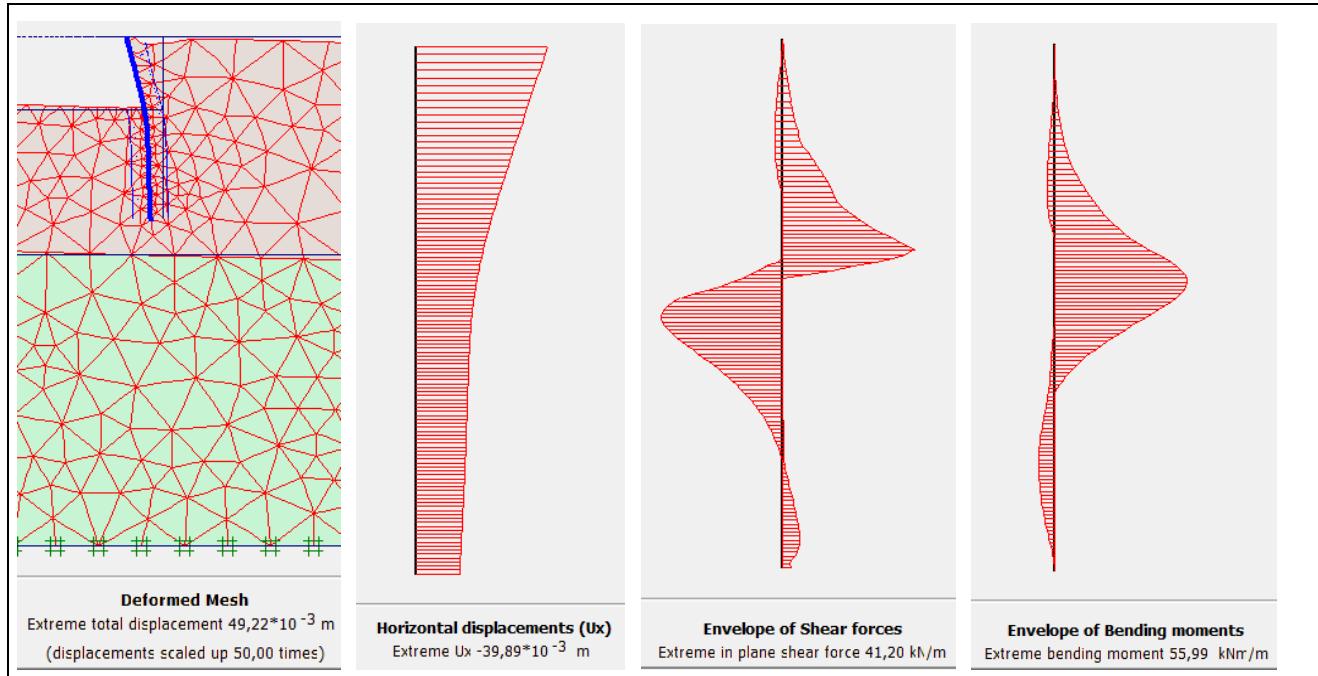


Figura 3.3.4 – Spostamenti, taglio e momento flettente SLU-V (Sisma)

Il valore di spostamento massimo orizzontale della paratia risulta pari a circa 4 cm, pertanto compatibile con l'opera provvisoria in progetto in presenza di sisma.

Analogamente alle verifiche flessione e taglio del paragrafo 3.3.3 si ottiene:

$$M_{ed} = 55.99 \text{ kNm/m}$$

$$E_d = \frac{55990000}{1155550} = 48.45 \text{ N/mm}^2$$

Da cui si verifica: $E_d = 48.45 < R_d = 223.8 \text{ N/mm}^2$

$$V_{ED} = 41.20 \text{ kN/m}$$

Da cui si verifica: $V_{ED} = 41.20 < V_{C,RD} = 2195 \text{ kN}$



Ponte sullo Stretto di Messina
PROGETTO DEFINITIVO

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

4 ALLEGATI: Tabulati di calcolo

SLU GEO

1. General Information

Table [1] Units

Type	Unit
Length	m
Force	kN
Time	day

Table [2] Model dimensions

	min.	max.
X	-20,000	20,000
Y	-20,000	8,000

Table [3] Model

Model	Plane strain
Element	15-Noded

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

2. Structures

Table [4] Beams

Plate no.	Data set	Length [m]	Nodes
1	MICROPALI 193S	10,000	2727, 3669, 3808.

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

3. Material data

Table [5] Soil data sets parameters

<i>Mohr-Coulomb</i>		1	2
		GHIAIE	Argilla
Type		Drained	Undrained
γ_{unsat}	[kN/m ³]	18,00	20,00
γ_{sat}	[kN/m ³]	18,00	20,00
k_x	[m/day]	1,000	0,000
k_y	[m/day]	1,000	0,000
e_{init}	[\cdot]	1,000	0,500
c_k	[\cdot]	1E15	1E15
E_{ref}	[kN/m ²]	40000,000	75000,000
ν	[\cdot]	0,300	0,300
G_{ref}	[kN/m ²]	15384,615	28846,154
E_{oed}	[kN/m ²]	53846,154	100961,538
c_{ref}	[kN/m ²]	0,00	16,00
ϕ	[$^{\circ}$]	27,50	20,50
ψ	[$^{\circ}$]	0,00	0,00
E_{inc}	[kN/m ² /m]	0,00	0,00
y_{ref}	[m]	0,000	0,000
$c_{\text{increment}}$	[kN/m ² /m]	0,00	0,00
$T_{\text{str.}}$	[kN/m ²]	0,00	0,00
$R_{\text{inter.}}$	[\cdot]	1,00	1,00
Interface permeability		Neutral	Neutral

Table [6] Beam data sets parameters

No.	Identification	EA [kN/m]	EI [kNm ² /m]	w [kN/m/m]	v [\cdot]	Mp [kNm/m]	Np [kN/m]
-----	----------------	--------------	-----------------------------	---------------	------------------	---------------	--------------

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI***Codice documento
SS0780_F0.doc**Rev
F0* *Data
20/06/2011*

No.	Identification	EA [kN/m]	EI [kNm ² /m]	w [kN/m/m]	v [-]	Mp [kNm/m]	Np [kN/m]
1	MICROPALI 193	5,121E6	21100,00	1,86	0,20	1E15	1E15
2	MICROPALI 219	5,78E6	3,126E8	2,12	0,20	1E15	1E15
3	MICROPALI 193S	5,7614E6	23341,00	2,10	0,20	1E15	1E15

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

4. Calculation phases

Table [7] List of phases

Phase	Ph-No.	Start phase	Calculation type	Load input	First step	Last step
Initial phase	0	0		-	0	0
CARICO	1	0	Plastic	Staged construction	1	2
MICROPALI	2	1	Plastic	Staged construction	3	4
SCAVO	3	2	Plastic	Staged construction	5	41

Table [8] Staged construction info

Ph-No.	Active clusters	Inactive clusters	Active beams	Active geotextiles	Active anchors
0	1, 2, 3.				
1	1, 2, 3.				
2	1, 2, 3.		1.		
3	1, 2.	3.	1.		

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

5. Results for phase

Table [9] Table of deformations phase no: 0

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1	-20,000	-20,000	0,000	0,000	0,000	0,000
2	-19,412	-20,000	0,000	0,000	0,000	0,000
3	-18,824	-20,000	0,000	0,000	0,000	0,000
4	-18,235	-20,000	0,000	0,000	0,000	0,000
5	-20,000	-18,286	0,000	0,000	0,000	0,000
6	-20,000	-18,857	0,000	0,000	0,000	0,000
7	-20,000	-19,429	0,000	0,000	0,000	0,000
23	-17,059	-20,000	0,000	0,000	0,000	0,000
24	-16,471	-20,000	0,000	0,000	0,000	0,000
25	-15,882	-20,000	0,000	0,000	0,000	0,000
32	-17,647	-20,000	0,000	0,000	0,000	0,000
33	-15,294	-20,000	0,000	0,000	0,000	0,000
37	-14,706	-20,000	0,000	0,000	0,000	0,000
38	-14,118	-20,000	0,000	0,000	0,000	0,000
39	-13,529	-20,000	0,000	0,000	0,000	0,000
65	-20,000	-16,000	0,000	0,000	0,000	0,000
66	-20,000	-16,571	0,000	0,000	0,000	0,000
67	-20,000	-17,143	0,000	0,000	0,000	0,000
74	-20,000	-17,714	0,000	0,000	0,000	0,000
75	-20,000	-15,429	0,000	0,000	0,000	0,000
79	-20,000	-13,714	0,000	0,000	0,000	0,000
80	-20,000	-14,286	0,000	0,000	0,000	0,000
81	-20,000	-14,857	0,000	0,000	0,000	0,000
145	-12,941	-20,000	0,000	0,000	0,000	0,000
146	-12,353	-20,000	0,000	0,000	0,000	0,000
147	-11,765	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
148	-11,176	-20,000	0,000	0,000	0,000	0,000
167	-20,000	-11,429	0,000	0,000	0,000	0,000
168	-20,000	-12,000	0,000	0,000	0,000	0,000
169	-20,000	-12,571	0,000	0,000	0,000	0,000
173	-20,000	-13,143	0,000	0,000	0,000	0,000
177	-20,000	-10,857	0,000	0,000	0,000	0,000
181	-20,000	-9,143	0,000	0,000	0,000	0,000
182	-20,000	-9,714	0,000	0,000	0,000	0,000
183	-20,000	-10,286	0,000	0,000	0,000	0,000
231	-10,588	-20,000	0,000	0,000	0,000	0,000
235	-10,000	-20,000	0,000	0,000	0,000	0,000
236	-9,412	-20,000	0,000	0,000	0,000	0,000
237	-8,824	-20,000	0,000	0,000	0,000	0,000
347	-20,000	-8,571	0,000	0,000	0,000	0,000
348	-20,000	-6,857	0,000	0,000	0,000	0,000
349	-20,000	-7,429	0,000	0,000	0,000	0,000
350	-20,000	-8,000	0,000	0,000	0,000	0,000
465	-20,000	-6,286	0,000	0,000	0,000	0,000
469	-20,000	-4,571	0,000	0,000	0,000	0,000
470	-20,000	-5,143	0,000	0,000	0,000	0,000
471	-20,000	-5,714	0,000	0,000	0,000	0,000
523	-8,235	-20,000	0,000	0,000	0,000	0,000
527	-7,647	-20,000	0,000	0,000	0,000	0,000
528	-7,059	-20,000	0,000	0,000	0,000	0,000
529	-6,471	-20,000	0,000	0,000	0,000	0,000
567	-20,000	-4,000	0,000	0,000	0,000	0,000
568	-18,235	-4,000	0,000	0,000	0,000	0,000
569	-18,824	-4,000	0,000	0,000	0,000	0,000
570	-19,412	-4,000	0,000	0,000	0,000	0,000
571	-20,000	-2,000	0,000	0,000	0,000	0,000
572	-20,000	-2,667	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
573	-20,000	-3,333	0,000	0,000	0,000	0,000
621	-20,000	-1,333	0,000	0,000	0,000	0,000
622	-20,000	0,667	0,000	0,000	0,000	0,000
623	-20,000	0,000	0,000	0,000	0,000	0,000
624	-20,000	-0,667	0,000	0,000	0,000	0,000
643	-20,000	3,333	0,000	0,000	0,000	0,000
644	-20,000	2,667	0,000	0,000	0,000	0,000
645	-20,000	2,000	0,000	0,000	0,000	0,000
649	-20,000	1,333	0,000	0,000	0,000	0,000
653	-18,273	4,000	0,000	0,000	0,000	0,000
654	-18,849	4,000	0,000	0,000	0,000	0,000
655	-19,424	4,000	0,000	0,000	0,000	0,000
656	-20,000	4,000	0,000	0,000	0,000	0,000
657	-20,000	5,500	0,000	0,000	0,000	0,000
658	-20,000	5,000	0,000	0,000	0,000	0,000
659	-20,000	4,500	0,000	0,000	0,000	0,000
669	-20,000	6,000	0,000	0,000	0,000	0,000
673	-20,000	8,000	0,000	0,000	0,000	0,000
674	-20,000	7,500	0,000	0,000	0,000	0,000
675	-20,000	7,000	0,000	0,000	0,000	0,000
676	-20,000	6,500	0,000	0,000	0,000	0,000
677	-18,285	8,000	0,000	0,000	0,000	0,000
678	-18,857	8,000	0,000	0,000	0,000	0,000
679	-19,428	8,000	0,000	0,000	0,000	0,000
689	-16,077	4,000	0,000	0,000	0,000	0,000
690	-16,617	4,000	0,000	0,000	0,000	0,000
691	-17,157	4,000	0,000	0,000	0,000	0,000
695	-17,698	4,000	0,000	0,000	0,000	0,000
708	-17,713	8,000	0,000	0,000	0,000	0,000
709	-16,150	8,000	0,000	0,000	0,000	0,000
710	-16,671	8,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
711	-17,192	8,000	0,000	0,000	0,000	0,000
718	-15,628	8,000	0,000	0,000	0,000	0,000
719	-14,203	8,000	0,000	0,000	0,000	0,000
720	-14,678	8,000	0,000	0,000	0,000	0,000
721	-15,153	8,000	0,000	0,000	0,000	0,000
731	-13,727	8,000	0,000	0,000	0,000	0,000
735	-12,428	8,000	0,000	0,000	0,000	0,000
736	-12,861	8,000	0,000	0,000	0,000	0,000
737	-13,294	8,000	0,000	0,000	0,000	0,000
741	-5,882	-20,000	0,000	0,000	0,000	0,000
745	-5,294	-20,000	0,000	0,000	0,000	0,000
746	-4,706	-20,000	0,000	0,000	0,000	0,000
747	-4,118	-20,000	0,000	0,000	0,000	0,000
819	-15,882	-4,000	0,000	0,000	0,000	0,000
820	-16,471	-4,000	0,000	0,000	0,000	0,000
821	-17,059	-4,000	0,000	0,000	0,000	0,000
825	-17,647	-4,000	0,000	0,000	0,000	0,000
841	-15,294	-4,000	0,000	0,000	0,000	0,000
845	-13,529	-4,000	0,000	0,000	0,000	0,000
846	-14,118	-4,000	0,000	0,000	0,000	0,000
847	-14,706	-4,000	0,000	0,000	0,000	0,000
1001	-15,536	4,000	0,000	0,000	0,000	0,000
1002	-14,014	4,000	0,000	0,000	0,000	0,000
1003	-14,521	4,000	0,000	0,000	0,000	0,000
1004	-15,029	4,000	0,000	0,000	0,000	0,000
1033	-11,994	8,000	0,000	0,000	0,000	0,000
1037	-10,809	8,000	0,000	0,000	0,000	0,000
1038	-11,204	8,000	0,000	0,000	0,000	0,000
1039	-11,599	8,000	0,000	0,000	0,000	0,000
1195	-11,176	-4,000	0,000	0,000	0,000	0,000
1196	-11,765	-4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1197	-12,353	-4,000	0,000	0,000	0,000	0,000
1201	-12,941	-4,000	0,000	0,000	0,000	0,000
1217	-13,507	4,000	0,000	0,000	0,000	0,000
1221	-12,077	4,000	0,000	0,000	0,000	0,000
1222	-12,554	4,000	0,000	0,000	0,000	0,000
1223	-13,030	4,000	0,000	0,000	0,000	0,000
1233	-10,414	8,000	0,000	0,000	0,000	0,000
1237	-9,334	8,000	0,000	0,000	0,000	0,000
1238	-9,694	8,000	0,000	0,000	0,000	0,000
1239	-10,054	8,000	0,000	0,000	0,000	0,000
1275	-2,941	-20,000	0,000	0,000	0,000	0,000
1276	-2,353	-20,000	0,000	0,000	0,000	0,000
1277	-1,765	-20,000	0,000	0,000	0,000	0,000
1281	-3,529	-20,000	0,000	0,000	0,000	0,000
1285	-1,176	-20,000	0,000	0,000	0,000	0,000
1289	-0,588	-20,000	0,000	0,000	0,000	0,000
1290	0,000	-20,000	0,000	0,000	0,000	0,000
1291	0,588	-20,000	0,000	0,000	0,000	0,000
1329	-10,588	-4,000	0,000	0,000	0,000	0,000
1333	-8,824	-4,000	0,000	0,000	0,000	0,000
1334	-9,412	-4,000	0,000	0,000	0,000	0,000
1335	-10,000	-4,000	0,000	0,000	0,000	0,000
1367	-8,974	8,000	0,000	0,000	0,000	0,000
1371	-7,989	8,000	0,000	0,000	0,000	0,000
1372	-8,317	8,000	0,000	0,000	0,000	0,000
1373	-8,645	8,000	0,000	0,000	0,000	0,000
1399	1,176	-20,000	0,000	0,000	0,000	0,000
1403	1,765	-20,000	0,000	0,000	0,000	0,000
1404	2,353	-20,000	0,000	0,000	0,000	0,000
1405	2,941	-20,000	0,000	0,000	0,000	0,000
1409	3,529	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1413	4,118	-20,000	0,000	0,000	0,000	0,000
1414	4,706	-20,000	0,000	0,000	0,000	0,000
1415	5,294	-20,000	0,000	0,000	0,000	0,000
1563	-11,601	4,000	0,000	0,000	0,000	0,000
1564	-11,154	4,000	0,000	0,000	0,000	0,000
1565	-10,706	4,000	0,000	0,000	0,000	0,000
1566	-10,259	4,000	0,000	0,000	0,000	0,000
1615	-6,471	-4,000	0,000	0,000	0,000	0,000
1616	-7,059	-4,000	0,000	0,000	0,000	0,000
1617	-7,647	-4,000	0,000	0,000	0,000	0,000
1627	-8,235	-4,000	0,000	0,000	0,000	0,000
1643	-9,812	4,000	0,000	0,000	0,000	0,000
1647	-8,552	4,000	0,000	0,000	0,000	0,000
1648	-8,972	4,000	0,000	0,000	0,000	0,000
1649	-9,392	4,000	0,000	0,000	0,000	0,000
1669	-7,660	8,000	0,000	0,000	0,000	0,000
1673	-6,762	8,000	0,000	0,000	0,000	0,000
1674	-7,062	8,000	0,000	0,000	0,000	0,000
1675	-7,361	8,000	0,000	0,000	0,000	0,000
1733	-6,463	8,000	0,000	0,000	0,000	0,000
1737	-5,644	8,000	0,000	0,000	0,000	0,000
1738	-5,917	8,000	0,000	0,000	0,000	0,000
1739	-6,190	8,000	0,000	0,000	0,000	0,000
1781	5,882	-20,000	0,000	0,000	0,000	0,000
1782	6,471	-20,000	0,000	0,000	0,000	0,000
1783	7,059	-20,000	0,000	0,000	0,000	0,000
1784	7,647	-20,000	0,000	0,000	0,000	0,000
1791	8,235	-20,000	0,000	0,000	0,000	0,000
1795	8,824	-20,000	0,000	0,000	0,000	0,000
1796	9,412	-20,000	0,000	0,000	0,000	0,000
1797	10,000	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1935	-8,132	4,000	0,000	0,000	0,000	0,000
1936	-7,737	4,000	0,000	0,000	0,000	0,000
1937	-7,343	4,000	0,000	0,000	0,000	0,000
1938	-6,949	4,000	0,000	0,000	0,000	0,000
1961	-5,882	-4,000	0,000	0,000	0,000	0,000
1962	-4,118	-4,000	0,000	0,000	0,000	0,000
1963	-4,706	-4,000	0,000	0,000	0,000	0,000
1964	-5,294	-4,000	0,000	0,000	0,000	0,000
2099	-6,554	4,000	0,000	0,000	0,000	0,000
2103	-5,444	4,000	0,000	0,000	0,000	0,000
2104	-5,814	4,000	0,000	0,000	0,000	0,000
2105	-6,184	4,000	0,000	0,000	0,000	0,000
2125	-5,371	8,000	0,000	0,000	0,000	0,000
2129	-4,625	8,000	0,000	0,000	0,000	0,000
2130	-4,873	8,000	0,000	0,000	0,000	0,000
2131	-5,122	8,000	0,000	0,000	0,000	0,000
2157	-4,376	8,000	0,000	0,000	0,000	0,000
2161	-3,695	8,000	0,000	0,000	0,000	0,000
2162	-3,922	8,000	0,000	0,000	0,000	0,000
2163	-4,149	8,000	0,000	0,000	0,000	0,000
2221	10,588	-20,000	0,000	0,000	0,000	0,000
2225	11,176	-20,000	0,000	0,000	0,000	0,000
2226	11,765	-20,000	0,000	0,000	0,000	0,000
2227	12,353	-20,000	0,000	0,000	0,000	0,000
2231	12,941	-20,000	0,000	0,000	0,000	0,000
2235	13,529	-20,000	0,000	0,000	0,000	0,000
2236	14,118	-20,000	0,000	0,000	0,000	0,000
2237	14,706	-20,000	0,000	0,000	0,000	0,000
2325	-3,529	-4,000	0,000	0,000	0,000	0,000
2329	-1,765	-4,000	0,000	0,000	0,000	0,000
2330	-2,353	-4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
2331	-2,941	-4,000	0,000	0,000	0,000	0,000
2403	-5,073	4,000	0,000	0,000	0,000	0,000
2407	-4,726	4,000	0,000	0,000	0,000	0,000
2408	-4,378	4,000	0,000	0,000	0,000	0,000
2409	-4,030	4,000	0,000	0,000	0,000	0,000
2579	-3,683	4,000	0,000	0,000	0,000	0,000
2583	-2,703	4,000	0,000	0,000	0,000	0,000
2584	-3,030	4,000	0,000	0,000	0,000	0,000
2585	-3,356	4,000	0,000	0,000	0,000	0,000
2621	-3,468	8,000	0,000	0,000	0,000	0,000
2625	-2,848	8,000	0,000	0,000	0,000	0,000
2626	-3,055	8,000	0,000	0,000	0,000	0,000
2627	-3,261	8,000	0,000	0,000	0,000	0,000
2637	-2,641	8,000	0,000	0,000	0,000	0,000
2641	-2,075	8,000	0,000	0,000	0,000	0,000
2642	-2,264	8,000	0,000	0,000	0,000	0,000
2643	-2,452	8,000	0,000	0,000	0,000	0,000
2669	15,294	-20,000	0,000	0,000	0,000	0,000
2673	15,882	-20,000	0,000	0,000	0,000	0,000
2674	16,471	-20,000	0,000	0,000	0,000	0,000
2675	17,059	-20,000	0,000	0,000	0,000	0,000
2685	17,647	-20,000	0,000	0,000	0,000	0,000
2689	20,000	-20,000	0,000	0,000	0,000	0,000
2690	20,000	-19,429	0,000	0,000	0,000	0,000
2691	20,000	-18,857	0,000	0,000	0,000	0,000
2692	20,000	-18,286	0,000	0,000	0,000	0,000
2693	18,235	-20,000	0,000	0,000	0,000	0,000
2694	18,824	-20,000	0,000	0,000	0,000	0,000
2695	19,412	-20,000	0,000	0,000	0,000	0,000
2715	0,000	-0,784	0,000	0,000	0,000	0,000
2716	0,000	-0,657	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
2717	0,000	-0,530	0,000	0,000	0,000	0,000
2721	0,000	-1,924	0,000	0,000	0,000	0,000
2722	0,000	-1,849	0,000	0,000	0,000	0,000
2723	0,000	-1,773	0,000	0,000	0,000	0,000
2727	0,000	-2,000	0,000	0,000	0,000	0,000
2737	0,000	-1,608	0,000	0,000	0,000	0,000
2738	0,000	-1,518	0,000	0,000	0,000	0,000
2739	0,000	-1,428	0,000	0,000	0,000	0,000
2743	0,000	-1,698	0,000	0,000	0,000	0,000
2753	0,000	-1,338	0,000	0,000	0,000	0,000
2754	0,000	-1,232	0,000	0,000	0,000	0,000
2755	0,000	-1,125	0,000	0,000	0,000	0,000
2756	0,000	-1,018	0,000	0,000	0,000	0,000
2763	0,000	-0,911	0,000	0,000	0,000	0,000
2911	-2,377	4,000	0,000	0,000	0,000	0,000
2915	-2,071	4,000	0,000	0,000	0,000	0,000
2916	-1,764	4,000	0,000	0,000	0,000	0,000
2917	-1,458	4,000	0,000	0,000	0,000	0,000
2943	0,000	-0,252	0,000	0,000	0,000	0,000
2944	0,000	-0,101	0,000	0,000	0,000	0,000
2945	0,000	0,050	0,000	0,000	0,000	0,000
2949	0,000	-0,403	0,000	0,000	0,000	0,000
2965	0,000	0,201	0,000	0,000	0,000	0,000
2966	0,000	0,381	0,000	0,000	0,000	0,000
2967	0,000	0,561	0,000	0,000	0,000	0,000
2968	0,000	0,740	0,000	0,000	0,000	0,000
3013	-1,176	-4,000	0,000	0,000	0,000	0,000
3014	0,588	-4,000	0,000	0,000	0,000	0,000
3015	0,000	-4,000	0,000	0,000	0,000	0,000
3016	-0,588	-4,000	0,000	0,000	0,000	0,000
3065	-1,887	8,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
3069	-1,371	8,000	0,000	0,000	0,000	0,000
3070	-1,543	8,000	0,000	0,000	0,000	0,000
3071	-1,715	8,000	0,000	0,000	0,000	0,000
3141	-1,199	8,000	0,000	0,000	0,000	0,000
3145	-0,728	8,000	0,000	0,000	0,000	0,000
3146	-0,885	8,000	0,000	0,000	0,000	0,000
3147	-1,042	8,000	0,000	0,000	0,000	0,000
3189	20,000	-17,714	0,000	0,000	0,000	0,000
3193	20,000	-17,143	0,000	0,000	0,000	0,000
3194	20,000	-16,571	0,000	0,000	0,000	0,000
3195	20,000	-16,000	0,000	0,000	0,000	0,000
3211	1,176	-4,000	0,000	0,000	0,000	0,000
3215	2,941	-4,000	0,000	0,000	0,000	0,000
3216	2,353	-4,000	0,000	0,000	0,000	0,000
3217	1,765	-4,000	0,000	0,000	0,000	0,000
3299	0,000	1,134	0,000	0,000	0,000	0,000
3300	0,000	1,348	0,000	0,000	0,000	0,000
3301	0,000	1,561	0,000	0,000	0,000	0,000
3305	0,000	0,920	0,000	0,000	0,000	0,000
3363	-1,151	4,000	0,000	0,000	0,000	0,000
3367	-0,288	4,000	0,000	0,000	0,000	0,000
3368	-0,576	4,000	0,000	0,000	0,000	0,000
3369	-0,863	4,000	0,000	0,000	0,000	0,000
3399	20,000	-15,429	0,000	0,000	0,000	0,000
3403	20,000	-14,857	0,000	0,000	0,000	0,000
3404	20,000	-14,286	0,000	0,000	0,000	0,000
3405	20,000	-13,714	0,000	0,000	0,000	0,000
3521	0,000	2,029	0,000	0,000	0,000	0,000
3522	0,000	2,283	0,000	0,000	0,000	0,000
3523	0,000	2,537	0,000	0,000	0,000	0,000
3527	0,000	1,775	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
3537	0,000	2,791	0,000	0,000	0,000	0,000
3538	0,000	3,093	0,000	0,000	0,000	0,000
3539	0,000	3,396	0,000	0,000	0,000	0,000
3540	0,000	3,698	0,000	0,000	0,000	0,000
3595	-0,572	8,000	0,000	0,000	0,000	0,000
3599	-0,143	8,000	0,000	0,000	0,000	0,000
3600	-0,286	8,000	0,000	0,000	0,000	0,000
3601	-0,429	8,000	0,000	0,000	0,000	0,000
3627	0,000	6,216	0,000	0,000	0,000	0,000
3628	0,000	6,410	0,000	0,000	0,000	0,000
3629	0,000	6,604	0,000	0,000	0,000	0,000
3633	0,000	6,798	0,000	0,000	0,000	0,000
3634	0,000	6,961	0,000	0,000	0,000	0,000
3635	0,000	7,124	0,000	0,000	0,000	0,000
3636	0,000	7,288	0,000	0,000	0,000	0,000
3643	0,000	5,329	0,000	0,000	0,000	0,000
3644	0,000	5,560	0,000	0,000	0,000	0,000
3645	0,000	5,791	0,000	0,000	0,000	0,000
3649	0,000	6,022	0,000	0,000	0,000	0,000
3659	0,000	5,098	0,000	0,000	0,000	0,000
3660	0,000	4,275	0,000	0,000	0,000	0,000
3661	0,000	4,549	0,000	0,000	0,000	0,000
3662	0,000	4,824	0,000	0,000	0,000	0,000
3669	0,000	4,000	0,000	0,000	0,000	0,000
3743	3,529	-4,000	0,000	0,000	0,000	0,000
3747	5,294	-4,000	0,000	0,000	0,000	0,000
3748	4,706	-4,000	0,000	0,000	0,000	0,000
3749	4,118	-4,000	0,000	0,000	0,000	0,000
3805	0,000	7,588	0,000	0,000	0,000	0,000
3806	0,000	7,725	0,000	0,000	0,000	0,000
3807	0,000	7,863	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
3808	0,000	8,000	0,000	0,000	0,000	0,000
3809	0,750	8,000	0,000	0,000	0,000	0,000
3810	0,500	8,000	0,000	0,000	0,000	0,000
3811	0,250	8,000	0,000	0,000	0,000	0,000
3815	0,000	7,451	0,000	0,000	0,000	0,000
3832	20,000	-13,143	0,000	0,000	0,000	0,000
3836	20,000	-12,571	0,000	0,000	0,000	0,000
3837	20,000	-12,000	0,000	0,000	0,000	0,000
3838	20,000	-11,429	0,000	0,000	0,000	0,000
4019	1,000	8,000	0,000	0,000	0,000	0,000
4023	2,500	8,000	0,000	0,000	0,000	0,000
4024	2,000	8,000	0,000	0,000	0,000	0,000
4025	1,500	8,000	0,000	0,000	0,000	0,000
4039	7,647	-4,000	0,000	0,000	0,000	0,000
4040	7,059	-4,000	0,000	0,000	0,000	0,000
4041	6,471	-4,000	0,000	0,000	0,000	0,000
4077	20,000	-10,857	0,000	0,000	0,000	0,000
4078	20,000	-10,286	0,000	0,000	0,000	0,000
4079	20,000	-9,714	0,000	0,000	0,000	0,000
4080	20,000	-9,143	0,000	0,000	0,000	0,000
4103	5,882	-4,000	0,000	0,000	0,000	0,000
4151	8,235	-4,000	0,000	0,000	0,000	0,000
4152	10,000	-4,000	0,000	0,000	0,000	0,000
4153	9,412	-4,000	0,000	0,000	0,000	0,000
4154	8,824	-4,000	0,000	0,000	0,000	0,000
4193	3,000	8,000	0,000	0,000	0,000	0,000
4197	4,500	8,000	0,000	0,000	0,000	0,000
4198	4,000	8,000	0,000	0,000	0,000	0,000
4199	3,500	8,000	0,000	0,000	0,000	0,000
4209	20,000	-8,571	0,000	0,000	0,000	0,000
4213	20,000	-8,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
4214	20,000	-7,429	0,000	0,000	0,000	0,000
4215	20,000	-6,857	0,000	0,000	0,000	0,000
4357	10,588	-4,000	0,000	0,000	0,000	0,000
4358	12,353	-4,000	0,000	0,000	0,000	0,000
4359	11,765	-4,000	0,000	0,000	0,000	0,000
4360	11,176	-4,000	0,000	0,000	0,000	0,000
4389	5,000	8,000	0,000	0,000	0,000	0,000
4393	6,875	8,000	0,000	0,000	0,000	0,000
4394	6,250	8,000	0,000	0,000	0,000	0,000
4395	5,625	8,000	0,000	0,000	0,000	0,000
4461	20,000	-6,286	0,000	0,000	0,000	0,000
4462	20,000	-5,714	0,000	0,000	0,000	0,000
4463	20,000	-5,143	0,000	0,000	0,000	0,000
4464	20,000	-4,571	0,000	0,000	0,000	0,000
4477	12,941	-4,000	0,000	0,000	0,000	0,000
4478	14,706	-4,000	0,000	0,000	0,000	0,000
4479	14,118	-4,000	0,000	0,000	0,000	0,000
4480	13,529	-4,000	0,000	0,000	0,000	0,000
4487	15,294	-4,000	0,000	0,000	0,000	0,000
4491	17,059	-4,000	0,000	0,000	0,000	0,000
4492	16,471	-4,000	0,000	0,000	0,000	0,000
4493	15,882	-4,000	0,000	0,000	0,000	0,000
4555	7,500	8,000	0,000	0,000	0,000	0,000
4559	9,375	8,000	0,000	0,000	0,000	0,000
4560	8,750	8,000	0,000	0,000	0,000	0,000
4561	8,125	8,000	0,000	0,000	0,000	0,000
4565	20,000	-4,000	0,000	0,000	0,000	0,000
4566	19,412	-4,000	0,000	0,000	0,000	0,000
4567	18,824	-4,000	0,000	0,000	0,000	0,000
4568	18,235	-4,000	0,000	0,000	0,000	0,000
4569	20,000	-3,400	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
4570	20,000	-2,800	0,000	0,000	0,000	0,000
4571	20,000	-2,200	0,000	0,000	0,000	0,000
4587	17,647	-4,000	0,000	0,000	0,000	0,000
4649	10,000	8,000	0,000	0,000	0,000	0,000
4653	11,875	8,000	0,000	0,000	0,000	0,000
4654	11,250	8,000	0,000	0,000	0,000	0,000
4655	10,625	8,000	0,000	0,000	0,000	0,000
4701	20,000	-1,600	0,000	0,000	0,000	0,000
4702	20,000	-1,000	0,000	0,000	0,000	0,000
4703	20,000	-0,400	0,000	0,000	0,000	0,000
4704	20,000	0,200	0,000	0,000	0,000	0,000
4737	20,000	0,800	0,000	0,000	0,000	0,000
4741	20,000	1,400	0,000	0,000	0,000	0,000
4742	20,000	2,000	0,000	0,000	0,000	0,000
4743	20,000	2,600	0,000	0,000	0,000	0,000
4773	12,500	8,000	0,000	0,000	0,000	0,000
4774	14,375	8,000	0,000	0,000	0,000	0,000
4775	13,750	8,000	0,000	0,000	0,000	0,000
4776	13,125	8,000	0,000	0,000	0,000	0,000
4799	15,000	8,000	0,000	0,000	0,000	0,000
4807	20,000	3,200	0,000	0,000	0,000	0,000
4812	17,500	8,000	0,000	0,000	0,000	0,000
4813	16,875	8,000	0,000	0,000	0,000	0,000
4814	16,250	8,000	0,000	0,000	0,000	0,000
4815	15,625	8,000	0,000	0,000	0,000	0,000
4828	20,000	3,800	0,000	0,000	0,000	0,000
4832	20,000	4,400	0,000	0,000	0,000	0,000
4833	20,000	5,000	0,000	0,000	0,000	0,000
4837	20,000	5,600	0,000	0,000	0,000	0,000
4845	20,000	6,800	0,000	0,000	0,000	0,000
4846	20,000	7,400	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI***Codice documento*
SS0780_F0.doc*Rev*
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
4847	19,375	8,000	0,000	0,000	0,000	0,000
4848	18,125	8,000	0,000	0,000	0,000	0,000
4849	20,000	6,200	0,000	0,000	0,000	0,000
4850	20,000	8,000	0,000	0,000	0,000	0,000

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

6. Results for phase 1

Table [10] Table of deformations phase no: 1

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1	-20,000	-20,000	0,000	0,000	0,000	0,000
2	-19,412	-20,000	0,000	0,000	0,000	0,000
3	-18,824	-20,000	0,000	0,000	0,000	0,000
4	-18,235	-20,000	0,000	0,000	0,000	0,000
5	-20,000	-18,286	0,000	0,000	1,134	2,270
6	-20,000	-18,857	0,000	0,000	481,478	963,809
7	-20,000	-19,429	0,000	0,000	95,448	191,148
23	-17,059	-20,000	0,000	0,000	0,000	0,000
24	-16,471	-20,000	0,000	0,000	0,000	0,000
25	-15,882	-20,000	0,000	0,000	0,000	0,000
32	-17,647	-20,000	0,000	0,000	0,000	0,000
33	-15,294	-20,000	0,000	0,000	0,000	0,000
37	-14,706	-20,000	0,000	0,000	0,000	0,000
38	-14,118	-20,000	0,000	0,000	0,000	0,000
39	-13,529	-20,000	0,000	0,000	0,000	0,000
65	-20,000	-16,000	0,000	0,000	5,995	11,997
66	-20,000	-16,571	0,000	0,000	4,479	8,965
67	-20,000	-17,143	0,000	0,000	3,153	6,310
74	-20,000	-17,714	0,000	0,000	2,031	4,065
75	-20,000	-15,429	0,000	0,000	7,683	15,377
79	-20,000	-13,714	0,000	0,000	13,657	27,331
80	-20,000	-14,286	0,000	0,000	11,527	23,068
81	-20,000	-14,857	0,000	0,000	9,532	19,076
145	-12,941	-20,000	0,000	0,000	0,000	0,000
146	-12,353	-20,000	0,000	0,000	0,000	0,000
147	-11,765	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
148	-11,176 -20,000	0,000	0,000	0,000	0,000
167	-20,000 -11,429	0,000	0,000	23,316	46,659
168	-20,000 -12,000	0,000	0,000	20,750	41,525
169	-20,000 -12,571	0,000	0,000	18,279	36,580
173	-20,000 -13,143	0,000	0,000	15,911	31,842
177	-20,000 -10,857	0,000	0,000	25,967	51,964
181	-20,000 -9,143	0,000	0,000	34,345	68,729
182	-20,000 -9,714	0,000	0,000	31,490	63,017
183	-20,000 -10,286	0,000	0,000	28,695	57,423
231	-10,588 -20,000	0,000	0,000	0,000	0,000
235	-10,000 -20,000	0,000	0,000	0,000	0,000
236	-9,412 -20,000	0,000	0,000	0,000	0,000
237	-8,824 -20,000	0,000	0,000	0,000	0,000
347	-20,000 -8,571	0,000	0,000	37,249	74,541
348	-20,000 -6,857	0,000	0,000	46,169	92,388
349	-20,000 -7,429	0,000	0,000	43,171	86,390
350	-20,000 -8,000	0,000	0,000	40,195	80,435
465	-20,000 -6,286	0,000	0,000	49,177	98,408
469	-20,000 -4,571	0,000	0,000	58,160	116,380
470	-20,000 -5,143	0,000	0,000	55,184	110,426
471	-20,000 -5,714	0,000	0,000	52,187	104,429
523	-8,235 -20,000	0,000	0,000	0,000	0,000
527	-7,647 -20,000	0,000	0,000	0,000	0,000
528	-7,059 -20,000	0,000	0,000	0,000	0,000
529	-6,471 -20,000	0,000	0,000	0,000	0,000
567	-20,000 -4,000	0,000	0,000	61,102	122,265
568	-18,235 -4,000	-9,192	-18,387	60,201	120,461
569	-18,824 -4,000	-6,136	-12,275	60,699	121,459
570	-19,412 -4,000	-3,071	-6,144	61,001	122,062
571	-20,000 -2,000	0,000	0,000	65,231	130,545
572	-20,000 -2,667	0,000	0,000	63,757	127,591

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
573	-20,000 -3,333	0,000	0,000	62,368	124,804
621	-20,000 -1,333	0,000	0,000	66,723	133,534
622	-20,000 0,667	0,000	0,000	71,198	142,497
623	-20,000 0,000	0,000	0,000	69,661	139,421
624	-20,000 -0,667	0,000	0,000	68,180	136,454
643	-20,000 3,333	0,000	0,000	76,210	152,522
644	-20,000 2,667	0,000	0,000	75,185	150,474
645	-20,000 2,000	0,000	0,000	73,994	148,093
649	-20,000 1,333	0,000	0,000	72,663	145,429
653	-18,273 4,000	-3,588	-7,139	75,977	152,055
654	-18,849 4,000	-2,386	-4,746	76,576	153,251
655	-19,424 4,000	-1,191	-2,369	76,931	153,962
656	-20,000 4,000	0,000	0,000	77,049	154,197
657	-20,000 5,500	0,000	0,000	78,178	156,442
658	-20,000 5,000	0,000	0,000	77,922	155,936
659	-20,000 4,500	0,000	0,000	77,546	155,187
669	-20,000 6,000	0,000	0,000	78,312	156,705
673	-20,000 8,000	0,000	0,000	77,725	155,507
674	-20,000 7,500	0,000	0,000	78,024	156,111
675	-20,000 7,000	0,000	0,000	78,228	156,526
676	-20,000 6,500	0,000	0,000	78,327	156,730
677	-18,285 8,000	2,791	5,632	76,609	153,277
678	-18,857 8,000	1,840	3,712	77,231	154,521
679	-19,428 8,000	913,667	1,844	77,602	155,261
689	-16,077 4,000	-8,332	-16,577	71,282	142,674
690	-16,617 4,000	-7,133	-14,192	72,816	145,738
691	-17,157 4,000	-5,958	-11,854	74,093	148,290
695	-17,698 4,000	-4,803	-9,555	75,128	150,358
708	-17,713 8,000	3,780	7,627	75,728	151,517
709	-16,150 8,000	6,781	13,677	71,908	143,881
710	-16,671 8,000	5,723	11,544	73,422	146,907

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
711	-17,192	8,000	4,726	9,534	74,691	149,445
718	-15,628	8,000	7,909	15,952	70,134	140,336
719	-14,203	8,000	11,435	23,058	63,819	127,713
720	-14,678	8,000	10,181	20,530	66,178	132,429
721	-15,153	8,000	9,008	18,166	68,278	136,625
731	-13,727	8,000	12,778	25,765	61,182	122,442
735	-12,428	8,000	16,968	34,208	52,377	104,840
736	-12,861	8,000	15,482	31,212	55,590	111,263
737	-13,294	8,000	14,087	28,402	58,519	117,118
741	-5,882	-20,000	0,000	0,000	0,000	0,000
745	-5,294	-20,000	0,000	0,000	0,000	0,000
746	-4,706	-20,000	0,000	0,000	0,000	0,000
747	-4,118	-20,000	0,000	0,000	0,000	0,000
819	-15,882	-4,000	-21,266	-42,543	56,148	112,351
820	-16,471	-4,000	-18,279	-36,566	57,482	115,020
821	-17,059	-4,000	-15,267	-30,541	58,595	117,249
825	-17,647	-4,000	-12,238	-24,481	59,497	119,053
841	-15,294	-4,000	-24,223	-48,459	54,590	109,232
845	-13,529	-4,000	-32,867	-65,752	48,479	97,000
846	-14,118	-4,000	-30,032	-60,079	50,766	101,578
847	-14,706	-4,000	-27,145	-54,303	52,799	105,649
1001	-15,536	4,000	-9,560	-19,021	69,475	139,063
1002	-14,014	4,000	-13,227	-26,323	62,735	125,593
1003	-14,521	4,000	-11,965	-23,808	65,273	130,665
1004	-15,029	4,000	-10,744	-21,378	67,512	135,141
1033	-11,994	8,000	18,552	37,400	48,859	97,806
1037	-10,809	8,000	23,426	47,225	37,478	75,053
1038	-11,204	8,000	21,709	43,763	41,578	83,251
1039	-11,599	8,000	20,086	40,490	45,365	90,821
1195	-11,176	-4,000	-43,469	-86,965	36,580	73,182
1196	-11,765	-4,000	-40,938	-81,901	39,993	80,014

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1197	-12,353	-4,000	-38,311	-76,645	43,110	86,255
1201	-12,941	-4,000	-35,623	-71,267	45,931	91,900
1217	-13,507	4,000	-14,539	-28,935	59,875	119,877
1221	-12,077	4,000	-18,560	-36,950	49,844	99,825
1222	-12,554	4,000	-17,159	-34,157	53,538	107,211
1223	-13,030	4,000	-15,821	-31,489	56,873	113,876
1233	-10,414	8,000	25,240	50,885	33,041	66,181
1237	-9,334	8,000	30,731	61,969	18,970	38,046
1238	-9,694	8,000	28,812	58,094	23,997	48,099
1239	-10,054	8,000	26,983	54,401	28,680	57,462
1275	-2,941	-20,000	0,000	0,000	0,000	0,000
1276	-2,353	-20,000	0,000	0,000	0,000	0,000
1277	-1,765	-20,000	0,000	0,000	0,000	0,000
1281	-3,529	-20,000	0,000	0,000	0,000	0,000
1285	-1,176	-20,000	0,000	0,000	0,000	0,000
1289	-0,588	-20,000	0,000	0,000	0,000	0,000
1290	0,000	-20,000	0,000	0,000	0,000	0,000
1291	0,588	-20,000	0,000	0,000	0,000	0,000
1329	-10,588	-4,000	-45,887	-91,803	32,859	65,733
1333	-8,824	-4,000	-52,255	-104,542	19,789	39,571
1334	-9,412	-4,000	-50,301	-100,634	24,463	48,927
1335	-10,000	-4,000	-48,171	-96,371	28,820	57,648
1367	-8,974	8,000	32,741	66,031	13,573	27,255
1371	-7,989	8,000	38,715	78,127	-3,298	-6,481
1372	-8,317	8,000	36,645	73,932	2,693	5,498
1373	-8,645	8,000	34,654	69,901	8,308	16,728
1399	1,176	-20,000	0,000	0,000	0,000	0,000
1403	1,765	-20,000	0,000	0,000	0,000	0,000
1404	2,353	-20,000	0,000	0,000	0,000	0,000
1405	2,941	-20,000	0,000	0,000	0,000	0,000
1409	3,529	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1413	4,118	-20,000	0,000	0,000	0,000	0,000
1414	4,706	-20,000	0,000	0,000	0,000	0,000
1415	5,294	-20,000	0,000	0,000	0,000	0,000
1563	-11,601	4,000	-20,031	-39,886	45,759	91,656
1564	-11,154	4,000	-21,484	-42,786	41,535	83,211
1565	-10,706	4,000	-23,015	-45,843	36,904	73,949
1566	-10,259	4,000	-24,631	-49,072	31,830	63,799
1615	-6,471	-4,000	-57,786	-115,603	-1,887	-3,817
1616	-7,059	-4,000	-56,805	-113,642	3,955	7,877
1617	-7,647	-4,000	-55,534	-111,100	9,526	19,027
1627	-8,235	-4,000	-54,007	-108,047	14,807	29,598
1643	-9,812	4,000	-26,341	-52,492	26,273	52,682
1647	-8,552	4,000	-31,756	-63,335	7,634	15,375
1648	-8,972	4,000	-29,843	-59,502	14,379	28,879
1649	-9,392	4,000	-28,042	-55,895	20,578	41,285
1669	-7,660	8,000	40,862	82,487	-9,688	-19,262
1673	-6,762	8,000	47,119	95,251	-29,443	-58,775
1674	-7,062	8,000	44,974	90,862	-22,463	-44,813
1675	-7,361	8,000	42,887	86,606	-15,886	-31,658
1733	-6,463	8,000	49,318	99,772	-36,857	-73,604
1737	-5,644	8,000	55,220	112,413	-59,486	-118,964
1738	-5,917	8,000	53,351	108,233	-51,590	-103,065
1739	-6,190	8,000	51,354	103,990	-44,034	-87,942
1781	5,882	-20,000	0,000	0,000	0,000	0,000
1782	6,471	-20,000	0,000	0,000	0,000	0,000
1783	7,059	-20,000	0,000	0,000	0,000	0,000
1784	7,647	-20,000	0,000	0,000	0,000	0,000
1791	8,235	-20,000	0,000	0,000	0,000	0,000
1795	8,824	-20,000	0,000	0,000	0,000	0,000
1796	9,412	-20,000	0,000	0,000	0,000	0,000
1797	10,000	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1935	-8,132 4,000	-33,790	-67,413	295,561	678,257
1936	-7,737 4,000	-35,820	-71,485	-7,181	-14,299
1937	-7,343 4,000	-37,977	-75,813	-15,273	-30,514
1938	-6,949 4,000	-40,272	-80,418	-24,032	-48,067
1961	-5,882 -4,000	-58,442	-116,912	-7,972	-15,995
1962	-4,118 -4,000	-58,092	-116,202	-27,241	-54,553
1963	-4,706 -4,000	-58,630	-117,282	-20,704	-41,472
1964	-5,294 -4,000	-58,735	-117,495	-14,261	-28,580
2099	-6,554 4,000	-42,713	-85,317	-33,512	-67,072
2103	-5,444 4,000	-50,449	-100,826	-64,650	-129,498
2104	-5,814 4,000	-47,723	-95,364	-53,484	-107,114
2105	-6,184 4,000	-45,146	-90,197	-43,125	-86,345
2125	-5,371 8,000	56,830	116,398	-67,739	-135,683
2129	-4,625 8,000	65,304	131,697	-92,888	-186,618
2130	-4,873 8,000	62,474	126,539	-83,800	-168,478
2131	-5,122 8,000	59,525	121,315	-75,345	-151,437
2157	-4,376 8,000	67,665	136,440	-102,495	-205,775
2161	-3,695 8,000	75,596	151,149	-131,311	-263,549
2162	-3,922 8,000	72,691	145,942	-121,089	-243,181
2163	-4,149 8,000	69,912	140,903	-111,541	-223,990
2221	10,588 -20,000	0,000	0,000	0,000	0,000
2225	11,176 -20,000	0,000	0,000	0,000	0,000
2226	11,765 -20,000	0,000	0,000	0,000	0,000
2227	12,353 -20,000	0,000	0,000	0,000	0,000
2231	12,941 -20,000	0,000	0,000	0,000	0,000
2235	13,529 -20,000	0,000	0,000	0,000	0,000
2236	14,118 -20,000	0,000	0,000	0,000	0,000
2237	14,706 -20,000	0,000	0,000	0,000	0,000
2325	-3,529 -4,000	-57,090	-114,193	-33,802	-67,679
2329	-1,765 -4,000	-51,075	-102,148	-52,746	-105,571
2330	-2,353 -4,000	-53,596	-107,196	-46,651	-93,381

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2331	-2,941	-4,000	-55,598	-111,204	-40,302	-80,683
2403	-5,073	4,000	-53,323	-106,583	-76,686	-153,623
2407	-4,726	4,000	-56,154	-112,249	-88,842	-177,980
2408	-4,378	4,000	-59,108	-118,158	-101,885	-204,109
2409	-4,030	4,000	-62,169	-124,281	-115,875	-232,125
2579	-3,683	4,000	-65,315	-130,573	-130,870	-262,145
2583	-2,703	4,000	-74,315	-148,571	-178,993	-358,431
2584	-3,030	4,000	-71,335	-142,613	-161,946	-324,331
2585	-3,356	4,000	-68,319	-136,580	-145,917	-292,259
2621	-3,468	8,000	78,093	155,990	-142,529	-285,454
2625	-2,848	8,000	84,677	169,190	-174,481	-349,728
2626	-3,055	8,000	81,790	164,065	-163,062	-326,994
2627	-3,261	8,000	79,170	159,239	-152,464	-305,634
2637	-2,641	8,000	86,560	173,341	-186,567	-373,724
2641	-2,075	8,000	93,617	186,697	-222,384	-445,540
2642	-2,264	8,000	91,092	182,066	-209,668	-420,229
2643	-2,452	8,000	88,333	177,204	-197,812	-396,387
2669	15,294	-20,000	0,000	0,000	0,000	0,000
2673	15,882	-20,000	0,000	0,000	0,000	0,000
2674	16,471	-20,000	0,000	0,000	0,000	0,000
2675	17,059	-20,000	0,000	0,000	0,000	0,000
2685	17,647	-20,000	0,000	0,000	0,000	0,000
2689	20,000	-20,000	0,000	0,000	0,000	0,000
2690	20,000	-19,429	0,000	0,000	-20,290	-40,387
2691	20,000	-18,857	0,000	0,000	141,164	282,991
2692	20,000	-18,286	0,000	0,000	461,515	924,406
2693	18,235	-20,000	0,000	0,000	0,000	0,000
2694	18,824	-20,000	0,000	0,000	0,000	0,000
2695	19,412	-20,000	0,000	0,000	0,000	0,000
2715	0,000	-0,784	-63,937	-127,827	-171,332	-342,803
2716	0,000	-0,657	-64,704	-129,361	-175,827	-351,795

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2717	0,000 -0,530	-65,468	-130,887	-180,354	-360,852
2721	0,000 -1,924	-56,706	-113,378	-132,390	-264,892
2722	0,000 -1,849	-57,209	-114,382	-134,888	-269,890
2723	0,000 -1,773	-57,707	-115,378	-137,397	-274,910
2727	0,000 -2,000	-56,200	-112,365	-129,903	-259,918
2737	0,000 -1,608	-58,785	-117,532	-142,930	-285,979
2738	0,000 -1,518	-59,364	-118,689	-145,959	-292,039
2739	0,000 -1,428	-59,938	-119,835	-149,003	-298,131
2743	0,000 -1,698	-58,202	-116,366	-139,918	-279,953
2753	0,000 -1,338	-60,507	-120,972	-152,064	-304,254
2754	0,000 -1,232	-61,178	-122,313	-155,723	-311,575
2755	0,000 -1,125	-61,845	-123,648	-159,405	-318,941
2756	0,000 -1,018	-62,511	-124,977	-163,119	-326,371
2763	0,000 -0,911	-63,167	-126,289	-166,874	-333,882
2911	-2,377 4,000	-77,193	-154,326	-197,082	-394,609
2915	-2,071 4,000	-79,730	-159,401	-215,022	-430,483
2916	-1,764 4,000	-82,025	-163,991	-233,875	-468,177
2917	-1,458 4,000	-83,975	-167,890	-253,601	-507,613
2943	0,000 -0,252	-67,121	-134,191	-190,373	-380,896
2944	0,000 -0,101	-68,009	-135,965	-195,878	-391,909
2945	0,000 0,050	-68,890	-137,726	-201,426	-403,010
2949	0,000 -0,403	-66,226	-132,402	-184,912	-369,971
2965	0,000 0,201	-69,765	-139,475	-207,017	-414,195
2966	0,000 0,381	-70,797	-141,537	-213,719	-427,605
2967	0,000 0,561	-71,819	-143,578	-220,480	-441,130
2968	0,000 0,740	-72,829	-145,598	-227,297	-454,768
3013	-1,176 -4,000	-48,033	-96,060	-58,478	-117,033
3014	0,588 -4,000	-36,021	-72,024	-72,367	-144,802
3015	0,000 -4,000	-40,468	-80,922	-68,397	-136,866
3016	-0,588 -4,000	-44,488	-88,965	-63,732	-127,539
3065	-1,887 8,000	94,627	189,801	-235,972	-472,392

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3069	-1,371	8,000	101,849	203,433	-275,632	-552,202
3070	-1,543	8,000	99,446	198,825	-261,518	-523,943
3071	-1,715	8,000	96,967	194,158	-248,186	-497,249
3141	-1,199	8,000	104,161	207,789	-290,534	-582,050
3145	-0,728	8,000	110,784	220,333	-336,197	-673,173
3146	-0,885	8,000	108,549	216,078	-320,079	-641,021
3147	-1,042	8,000	106,275	211,764	-304,894	-610,720
3189	20,000	-17,714	0,000	0,000	922,267	1,847
3193	20,000	-17,143	0,000	0,000	1,508	3,019
3194	20,000	-16,571	0,000	0,000	2,204	4,413
3195	20,000	-16,000	0,000	0,000	3,003	6,013
3211	1,176	-4,000	-31,206	-62,393	-75,546	-151,153
3215	2,941	-4,000	-15,368	-30,713	-79,609	-159,263
3216	2,353	-4,000	-20,789	-41,555	-79,218	-158,486
3217	1,765	-4,000	-26,100	-52,178	-77,850	-155,756
3299	0,000	1,134	-74,997	-149,929	-242,401	-484,987
3300	0,000	1,348	-76,143	-152,219	-250,705	-501,600
3301	0,000	1,561	-77,261	-154,454	-259,072	-518,339
3305	0,000	0,920	-73,828	-147,593	-234,166	-468,511
3363	-1,151	4,000	-85,461	-170,863	-274,122	-548,631
3367	-0,288	4,000	-85,984	-171,913	-335,004	-670,303
3368	-0,576	4,000	-86,535	-173,012	-314,370	-629,071
3369	-0,863	4,000	-86,320	-172,581	-294,015	-588,391
3399	20,000	-15,429	0,000	0,000	3,898	7,804
3403	20,000	-14,857	0,000	0,000	4,883	9,775
3404	20,000	-14,286	0,000	0,000	5,953	11,918
3405	20,000	-13,714	0,000	0,000	7,108	14,230
3521	0,000	2,029	-79,581	-159,092	-277,570	-555,348
3522	0,000	2,283	-80,745	-161,418	-287,702	-575,617
3523	0,000	2,537	-81,815	-163,559	-297,868	-595,956
3527	0,000	1,775	-78,345	-156,621	-267,493	-535,188

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3537	0,000 2,791	-82,769	-165,467	-308,047	-616,320
3538	0,000 3,093	-83,710	-167,351	-320,131	-640,497
3539	0,000 3,396	-84,379	-168,693	-332,145	-664,533
3540	0,000 3,698	-84,695	-169,330	-344,022	-688,294
3595	-0,572 8,000	112,579	223,915	-353,497	-707,509
3599	-0,143 8,000	118,273	235,515	-405,929	-812,477
3600	-0,286 8,000	116,187	231,403	-387,254	-775,075
3601	-0,429 8,000	114,225	227,436	-369,761	-740,114
3627	0,000 6,216	-49,347	-98,903	-422,304	-844,922
3628	0,000 6,410	-40,394	-81,053	-425,100	-850,519
3629	0,000 6,604	-29,688	-59,708	-427,130	-854,583
3633	0,000 6,798	-16,934	-34,280	-428,343	-857,012
3634	0,000 6,961	-4,374	-9,240	-428,716	-857,759
3635	0,000 7,124	10,083	19,579	-428,559	-857,448
3636	0,000 7,288	26,539	52,382	-427,999	-856,332
3643	0,000 5,329	-74,202	-148,448	-401,574	-803,440
3644	0,000 5,560	-69,736	-139,548	-408,035	-816,367
3645	0,000 5,791	-64,031	-128,175	-413,814	-827,931
3649	0,000 6,022	-56,805	-113,770	-418,798	-837,904
3659	0,000 5,098	-77,643	-155,304	-394,538	-789,361
3660	0,000 4,275	-83,912	-167,784	-366,011	-732,286
3661	0,000 4,549	-82,659	-165,292	-375,999	-752,270
3662	0,000 4,824	-80,635	-161,263	-385,547	-771,374
3669	0,000 4,000	-84,551	-169,051	-355,682	-711,623
3743	3,529 -4,000	-9,941	-19,858	-79,008	-158,054
3747	5,294 -4,000	5,381	10,782	-71,511	-143,045
3748	4,706 -4,000	527,754	1,077	-74,908	-149,843
3749	4,118 -4,000	-4,609	-9,195	-77,427	-154,887
3805	0,000 7,588	62,110	123,322	-426,412	-853,123
3806	0,000 7,725	80,727	160,452	-425,936	-852,190
3807	0,000 7,863	100,301	199,493	-426,016	-852,312

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3808	0,000 8,000	120,430	239,581	-426,126	-852,871
3809	0,750 8,000	132,957	263,631	-568,617	-1,138
3810	0,500 8,000	127,392	253,251	-510,719	-1,022
3811	0,250 8,000	123,222	245,203	-465,329	-931,151
3815	0,000 7,451	44,910	89,008	-427,210	-854,764
3832	20,000 -13,143	0,000	0,000	8,347	16,709
3836	20,000 -12,571	0,000	0,000	9,670	19,357
3837	20,000 -12,000	0,000	0,000	11,077	22,174
3838	20,000 -11,429	0,000	0,000	12,571	25,164
4019	1,000 8,000	129,431	257,157	-660,166	-1,320
4023	2,500 8,000	26,130	51,625	-901,875	-1,804
4024	2,000 8,000	63,274	125,752	-866,270	-1,732
4025	1,500 8,000	98,469	195,845	-797,280	-1,594
4039	7,647 -4,000	20,654	41,326	-51,029	-102,067
4040	7,059 -4,000	17,568	35,155	-56,968	-113,947
4041	6,471 -4,000	13,970	27,958	-62,442	-124,900
4077	20,000 -10,857	0,000	0,000	14,153	28,330
4078	20,000 -10,286	0,000	0,000	15,824	31,675
4079	20,000 -9,714	0,000	0,000	17,586	35,202
4080	20,000 -9,143	0,000	0,000	19,440	38,912
4103	5,882 -4,000	9,884	19,787	-67,321	-134,661
4151	8,235 -4,000	23,221	46,460	-44,747	-89,500
4152	10,000 -4,000	27,819	55,655	-24,941	-49,878
4153	9,412 -4,000	26,791	53,600	-31,599	-63,198
4154	8,824 -4,000	25,265	50,548	-38,235	-76,472
4193	3,000 8,000	-7,975	-16,458	-912,738	-1,825
4197	4,500 8,000	-115,098	-230,412	-793,623	-1,587
4198	4,000 8,000	-83,008	-166,319	-865,981	-1,732
4199	3,500 8,000	-45,739	-91,877	-902,877	-1,806
4209	20,000 -8,571	0,000	0,000	21,386	42,807
4213	20,000 -8,000	0,000	0,000	23,424	46,884

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4214	20,000	-7,429	0,000	0,000	25,550	51,140
4215	20,000	-6,857	0,000	0,000	27,762	55,566
4357	10,588	-4,000	28,374	56,765	-18,349	-36,690
4358	12,353	-4,000	27,520	55,059	285,512	590,840
4359	11,765	-4,000	28,189	56,395	-5,670	-11,324
4360	11,176	-4,000	28,485	56,989	-11,901	-23,790
4389	5,000	8,000	-143,770	-287,668	-656,389	-1,313
4393	6,875	8,000	-125,733	-251,160	-320,768	-641,428
4394	6,250	8,000	-136,316	-272,524	-390,737	-781,349
4395	5,625	8,000	-143,793	-287,603	-487,352	-974,576
4461	20,000	-6,286	0,000	0,000	30,055	60,154
4462	20,000	-5,714	0,000	0,000	32,418	64,884
4463	20,000	-5,143	0,000	0,000	34,843	69,736
4464	20,000	-4,571	0,000	0,000	37,316	74,683
4477	12,941	-4,000	26,518	53,054	5,915	11,855
4478	14,706	-4,000	21,872	43,760	20,496	41,027
4479	14,118	-4,000	23,658	47,333	16,048	32,128
4480	13,529	-4,000	25,219	50,454	11,180	22,388
4487	15,294	-4,000	19,890	39,794	24,510	49,058
4491	17,059	-4,000	13,039	26,088	33,809	67,667
4492	16,471	-4,000	15,446	30,904	31,175	62,395
4493	15,882	-4,000	17,738	35,489	28,073	56,189
4555	7,500	8,000	-118,113	-235,536	-265,068	-530,011
4559	9,375	8,000	-93,473	-188,028	-145,335	-291,137
4560	8,750	8,000	-101,988	-204,005	-178,291	-357,360
4561	8,125	8,000	-110,866	-220,597	-217,605	-435,690
4565	20,000	-4,000	0,000	0,000	39,819	79,692
4566	19,412	-4,000	2,680	5,362	39,576	79,206
4567	18,824	-4,000	5,340	10,684	38,851	77,754
4568	18,235	-4,000	7,964	15,933	37,648	75,348
4569	20,000	-3,400	0,000	0,000	38,811	77,683

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4570	20,000 -2,800	0,000	0,000	38,238	76,545
4571	20,000 -2,200	0,000	0,000	38,089	76,254
4587	17,647 -4,000	10,536	21,080	35,966	71,982
4649	10,000 8,000	-86,777	-174,123	-117,096	-234,206
4653	11,875 8,000	-66,153	-133,262	-51,724	-103,530
4654	11,250 8,000	-72,851	-146,454	-70,332	-140,969
4655	10,625 8,000	-80,130	-160,480	-92,007	-184,254
4701	20,000 -1,600	0,000	0,000	38,362	76,807
4702	20,000 -1,000	0,000	0,000	38,509	77,109
4703	20,000 -0,400	0,000	0,000	39,197	78,492
4704	20,000 0,200	0,000	0,000	40,198	80,500
4737	20,000 0,800	0,000	0,000	41,304	82,719
4741	20,000 1,400	0,000	0,000	42,449	85,015
4742	20,000 2,000	0,000	0,000	43,615	87,351
4743	20,000 2,600	0,000	0,000	44,722	89,568
4773	12,500 8,000	-60,203	-121,061	-35,471	-70,854
4774	14,375 8,000	-43,188	-86,691	2,000	4,087
4775	13,750 8,000	-48,687	-97,756	-8,748	-17,407
4776	13,125 8,000	-54,369	-109,220	-21,170	-42,253
4799	15,000 8,000	-37,875	-76,012	11,236	22,558
4807	20,000 3,200	0,000	0,000	45,704	91,535
4812	17,500 8,000	-18,184	-36,481	35,491	71,064
4813	16,875 8,000	-22,910	-45,964	31,140	62,363
4814	16,250 8,000	-27,754	-55,686	25,702	51,487
4815	15,625 8,000	-32,736	-65,689	19,098	38,282
4828	20,000 3,800	0,000	0,000	46,506	93,140
4832	20,000 4,400	0,000	0,000	47,065	94,255
4833	20,000 5,000	0,000	0,000	47,325	94,773
4837	20,000 5,600	0,000	0,000	47,245	94,606
4845	20,000 6,800	0,000	0,000	45,929	91,959
4846	20,000 7,400	0,000	0,000	44,667	89,424

RELAZIONE DI CALCOLO OPERE
PROVVISORIALI

Codice documento
SS0780_F0.doc

Rev
F0 Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4847	19,375	8,000	-4,485	-8,998	42,549	85,178
4848	18,125	8,000	-13,554	-27,190	38,814	77,709
4849	20,000	6,200	0,000	0,000	46,787	93,683
4850	20,000	8,000	0,000	0,000	43,011	86,101

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

7. Results for phase 2

Table [11] Table of deformations phase no: 2

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1	-20,000	-20,000	0,000	0,000	0,000	0,000
2	-19,412	-20,000	0,000	0,000	0,000	0,000
3	-18,824	-20,000	0,000	0,000	0,000	0,000
4	-18,235	-20,000	0,000	0,000	0,000	0,000
5	-20,000	-18,286	0,000	0,000	549,881	3,370
6	-20,000	-18,857	0,000	0,000	236,253	1,436
7	-20,000	-19,429	0,000	0,000	48,256	287,691
23	-17,059	-20,000	0,000	0,000	0,000	0,000
24	-16,471	-20,000	0,000	0,000	0,000	0,000
25	-15,882	-20,000	0,000	0,000	0,000	0,000
32	-17,647	-20,000	0,000	0,000	0,000	0,000
33	-15,294	-20,000	0,000	0,000	0,000	0,000
37	-14,706	-20,000	0,000	0,000	0,000	0,000
38	-14,118	-20,000	0,000	0,000	0,000	0,000
39	-13,529	-20,000	0,000	0,000	0,000	0,000
65	-20,000	-16,000	0,000	0,000	2,824	17,645
66	-20,000	-16,571	0,000	0,000	2,123	13,212
67	-20,000	-17,143	0,000	0,000	1,504	9,319
74	-20,000	-17,714	0,000	0,000	976,379	6,018
75	-20,000	-15,429	0,000	0,000	3,597	22,572
79	-20,000	-13,714	0,000	0,000	6,282	39,897
80	-20,000	-14,286	0,000	0,000	5,333	33,736
81	-20,000	-14,857	0,000	0,000	4,436	27,949
145	-12,941	-20,000	0,000	0,000	0,000	0,000
146	-12,353	-20,000	0,000	0,000	0,000	0,000
147	-11,765	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
148	-11,176 -20,000	0,000	0,000	0,000	0,000
167	-20,000 -11,429	0,000	0,000	10,480	67,620
168	-20,000 -12,000	0,000	0,000	9,381	60,289
169	-20,000 -12,571	0,000	0,000	8,312	53,205
173	-20,000 -13,143	0,000	0,000	7,277	46,397
177	-20,000 -10,857	0,000	0,000	11,603	75,171
181	-20,000 -9,143	0,000	0,000	15,064	98,859
182	-20,000 -9,714	0,000	0,000	13,900	90,819
183	-20,000 -10,286	0,000	0,000	12,744	82,913
231	-10,588 -20,000	0,000	0,000	0,000	0,000
235	-10,000 -20,000	0,000	0,000	0,000	0,000
236	-9,412 -20,000	0,000	0,000	0,000	0,000
237	-8,824 -20,000	0,000	0,000	0,000	0,000
347	-20,000 -8,571	0,000	0,000	16,232	107,007
348	-20,000 -6,857	0,000	0,000	19,700	131,790
349	-20,000 -7,429	0,000	0,000	18,555	123,504
350	-20,000 -8,000	0,000	0,000	17,397	115,232
465	-20,000 -6,286	0,000	0,000	20,825	140,060
469	-20,000 -4,571	0,000	0,000	24,025	164,432
470	-20,000 -5,143	0,000	0,000	22,993	156,416
471	-20,000 -5,714	0,000	0,000	21,925	148,281
523	-8,235 -20,000	0,000	0,000	0,000	0,000
527	-7,647 -20,000	0,000	0,000	0,000	0,000
528	-7,059 -20,000	0,000	0,000	0,000	0,000
529	-6,471 -20,000	0,000	0,000	0,000	0,000
567	-20,000 -4,000	0,000	0,000	25,013	172,294
568	-18,235 -4,000	-3,038	-24,463	24,511	169,487
569	-18,824 -4,000	-2,029	-16,334	24,790	171,043
570	-19,412 -4,000	-1,016	-8,176	24,957	171,980
571	-20,000 -2,000	0,000	0,000	26,080	182,716
572	-20,000 -2,667	0,000	0,000	25,704	179,007

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
573	-20,000	-3,333	0,000	0,000	25,345	175,499
621	-20,000	-1,333	0,000	0,000	26,460	186,467
622	-20,000	0,667	0,000	0,000	27,493	197,502
623	-20,000	0,000	0,000	0,000	27,180	193,798
624	-20,000	-0,667	0,000	0,000	26,831	190,131
643	-20,000	3,333	0,000	0,000	28,125	208,800
644	-20,000	2,667	0,000	0,000	28,084	206,668
645	-20,000	2,000	0,000	0,000	27,958	204,032
649	-20,000	1,333	0,000	0,000	27,756	200,964
653	-18,273	4,000	883,893	-5,360	27,349	206,780
654	-18,849	4,000	591,646	-3,556	27,751	208,781
655	-19,424	4,000	296,526	-1,773	27,991	209,971
656	-20,000	4,000	0,000	0,000	28,071	210,365
657	-20,000	5,500	0,000	0,000	27,557	211,580
658	-20,000	5,000	0,000	0,000	27,791	211,544
659	-20,000	4,500	0,000	0,000	27,961	211,137
669	-20,000	6,000	0,000	0,000	27,258	211,244
673	-20,000	8,000	0,000	0,000	25,430	206,378
674	-20,000	7,500	0,000	0,000	25,978	208,081
675	-20,000	7,000	0,000	0,000	26,467	209,478
676	-20,000	6,500	0,000	0,000	26,895	210,539
677	-18,285	8,000	4,625	14,909	24,691	202,671
678	-18,857	8,000	3,076	9,882	25,103	204,738
679	-19,428	8,000	1,536	4,923	25,349	205,969
689	-16,077	4,000	1,946	-12,664	24,232	191,160
690	-16,617	4,000	1,695	-10,782	25,244	196,250
691	-17,157	4,000	1,437	-8,963	26,091	200,498
695	-17,698	4,000	1,172	-7,197	26,781	203,946
708	-17,713	8,000	6,188	20,040	24,109	199,747
709	-16,150	8,000	10,565	34,874	21,601	187,094
710	-16,671	8,000	9,086	29,773	22,592	192,103

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
711	-17,192	8,000	7,628	24,837	23,426	196,308
718	-15,628	8,000	12,065	40,163	20,444	181,237
719	-14,203	8,000	16,291	55,772	16,368	160,461
720	-14,678	8,000	14,862	50,367	17,884	168,209
721	-15,153	8,000	13,453	45,168	19,240	175,118
731	-13,727	8,000	17,736	61,398	14,685	151,822
735	-12,428	8,000	21,806	78,059	9,178	123,156
736	-12,861	8,000	20,376	72,232	11,180	133,597
737	-13,294	8,000	19,040	66,702	12,993	143,114
741	-5,882	-20,000	0,000	0,000	0,000	0,000
745	-5,294	-20,000	0,000	0,000	0,000	0,000
746	-4,706	-20,000	0,000	0,000	0,000	0,000
747	-4,118	-20,000	0,000	0,000	0,000	0,000
819	-15,882	-4,000	-6,973	-56,489	22,233	156,818
820	-16,471	-4,000	-6,009	-48,585	22,982	160,985
821	-17,059	-4,000	-5,030	-40,602	23,609	164,469
825	-17,647	-4,000	-4,039	-32,560	24,118	167,292
841	-15,294	-4,000	-7,918	-64,295	21,359	151,949
845	-13,529	-4,000	-10,613	-86,976	17,940	132,878
846	-14,118	-4,000	-9,742	-79,562	19,217	140,010
847	-14,706	-4,000	-8,842	-71,987	20,355	146,357
1001	-15,536	4,000	2,188	-14,623	23,047	185,176
1002	-14,014	4,000	2,807	-20,688	18,687	162,968
1003	-14,521	4,000	2,612	-18,562	20,318	171,310
1004	-15,029	4,000	2,406	-16,545	21,768	178,692
1033	-11,994	8,000	23,094	83,956	6,975	111,727
1037	-10,809	8,000	27,766	102,386	210,925	75,231
1038	-11,204	8,000	25,962	95,803	2,787	88,500
1039	-11,599	8,000	24,265	89,522	4,978	100,585
1195	-11,176	-4,000	-13,736	-114,433	11,336	95,851
1196	-11,765	-4,000	-13,018	-107,933	13,223	106,457

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1197	-12,353	-4,000	-12,255	-101,153	14,949	116,150
1201	-12,941	-4,000	-11,452	-94,169	16,519	124,937
1217	-13,507	4,000	2,987	-22,939	16,861	153,592
1221	-12,077	4,000	3,408	-30,111	10,550	120,890
1222	-12,554	4,000	3,283	-27,568	12,859	132,904
1223	-13,030	4,000	3,143	-25,183	14,958	143,776
1233	-10,414	8,000	28,963	108,561	-2,724	60,748
1237	-9,334	8,000	32,205	126,452	-11,037	15,981
1238	-9,694	8,000	31,102	120,297	-8,098	31,916
1239	-10,054	8,000	30,003	114,315	-5,320	46,827
1275	-2,941	-20,000	0,000	0,000	0,000	0,000
1276	-2,353	-20,000	0,000	0,000	0,000	0,000
1277	-1,765	-20,000	0,000	0,000	0,000	0,000
1281	-3,529	-20,000	0,000	0,000	0,000	0,000
1285	-1,176	-20,000	0,000	0,000	0,000	0,000
1289	-0,588	-20,000	0,000	0,000	0,000	0,000
1290	0,000	-20,000	0,000	0,000	0,000	0,000
1291	0,588	-20,000	0,000	0,000	0,000	0,000
1329	-10,588	-4,000	-14,403	-120,604	9,282	84,294
1333	-8,824	-4,000	-16,049	-136,632	2,054	43,678
1334	-9,412	-4,000	-15,566	-131,759	4,647	58,219
1335	-10,000	-4,000	-15,016	-126,396	7,054	71,754
1367	-8,974	8,000	33,270	132,735	-14,142	-1,038
1371	-7,989	8,000	36,512	151,076	-23,555	-53,713
1372	-8,317	8,000	35,355	144,756	-20,198	-35,036
1373	-8,645	8,000	34,218	138,584	-17,083	-17,519
1399	1,176	-20,000	0,000	0,000	0,000	0,000
1403	1,765	-20,000	0,000	0,000	0,000	0,000
1404	2,353	-20,000	0,000	0,000	0,000	0,000
1405	2,941	-20,000	0,000	0,000	0,000	0,000
1409	3,529	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1413	4,118	-20,000	0,000	0,000	0,000	0,000
1414	4,706	-20,000	0,000	0,000	0,000	0,000
1415	5,294	-20,000	0,000	0,000	0,000	0,000
1563	-11,601	4,000	3,515	-32,828	8,014	107,644
1564	-11,154	4,000	3,601	-35,554	5,413	93,993
1565	-10,706	4,000	3,673	-38,465	2,585	79,074
1566	-10,259	4,000	3,730	-41,577	-484,097	62,786
1615	-6,471	-4,000	-17,156	-149,903	-10,311	-24,435
1616	-7,059	-4,000	-17,021	-147,672	-6,906	-5,933
1617	-7,647	-4,000	-16,785	-144,659	-3,715	11,597
1627	-8,235	-4,000	-16,458	-140,953	-730,989	28,135
1643	-9,812	4,000	3,774	-44,910	-3,809	45,020
1647	-8,552	4,000	3,821	-55,658	-14,689	-14,042
1648	-8,972	4,000	3,817	-51,833	-10,800	7,239
1649	-9,392	4,000	3,802	-48,256	-7,178	26,887
1669	-7,660	8,000	37,306	157,154	-27,177	-73,629
1673	-6,762	8,000	39,888	174,732	-37,586	-134,084
1674	-7,062	8,000	38,945	168,712	-33,860	-112,731
1675	-7,361	8,000	37,969	162,734	-30,400	-92,607
1733	-6,463	8,000	40,436	180,419	-41,503	-156,652
1737	-5,644	8,000	41,614	195,482	-52,819	-224,603
1738	-5,917	8,000	41,328	190,688	-48,900	-200,897
1739	-6,190	8,000	40,865	185,563	-45,132	-178,246
1781	5,882	-20,000	0,000	0,000	0,000	0,000
1782	6,471	-20,000	0,000	0,000	0,000	0,000
1783	7,059	-20,000	0,000	0,000	0,000	0,000
1784	7,647	-20,000	0,000	0,000	0,000	0,000
1791	8,235	-20,000	0,000	0,000	0,000	0,000
1795	8,824	-20,000	0,000	0,000	0,000	0,000
1796	9,412	-20,000	0,000	0,000	0,000	0,000
1797	10,000	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1935	-8,132 4,000	3,812	-59,752	-18,860	-37,079
1936	-7,737 4,000	3,794	-63,858	-23,049	-60,430
1937	-7,343 4,000	3,768	-68,238	-27,513	-85,569
1938	-6,949 4,000	3,734	-72,908	-32,265	-112,623
1961	-5,882 -4,000	-17,179	-151,257	-13,940	-43,869
1962	-4,118 -4,000	-16,389	-148,967	-26,246	-107,034
1963	-4,706 -4,000	-16,819	-150,908	-21,897	-85,257
1964	-5,294 -4,000	-17,072	-151,626	-17,794	-64,161
2099	-6,554 4,000	3,694	-77,884	-37,318	-141,728
2103	-5,444 4,000	3,558	-93,661	-53,259	-236,014
2104	-5,814 4,000	3,607	-88,103	-47,658	-202,434
2105	-6,184 4,000	3,652	-82,846	-42,346	-171,050
2125	-5,371 8,000	41,752	199,828	-56,835	-249,354
2129	-4,625 8,000	42,016	215,662	-68,607	-323,809
2130	-4,873 8,000	42,096	210,636	-64,565	-297,587
2131	-5,122 8,000	42,043	205,273	-60,620	-272,673
2157	-4,376 8,000	41,808	220,003	-72,746	-351,243
2161	-3,695 8,000	40,706	232,541	-84,580	-432,683
2162	-3,922 8,000	41,169	228,252	-80,543	-404,241
2163	-4,149 8,000	41,523	223,909	-76,600	-377,166
2221	10,588 -20,000	0,000	0,000	0,000	0,000
2225	11,176 -20,000	0,000	0,000	0,000	0,000
2226	11,765 -20,000	0,000	0,000	0,000	0,000
2227	12,353 -20,000	0,000	0,000	0,000	0,000
2231	12,941 -20,000	0,000	0,000	0,000	0,000
2235	13,529 -20,000	0,000	0,000	0,000	0,000
2236	14,118 -20,000	0,000	0,000	0,000	0,000
2237	14,706 -20,000	0,000	0,000	0,000	0,000
2325	-3,529 -4,000	-15,732	-145,644	-30,843	-129,353
2329	-1,765 -4,000	-11,453	-125,043	-45,782	-197,116
2330	-2,353 -4,000	-13,418	-134,020	-40,713	-174,791

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2331	-2,941	-4,000	-14,782	-140,755	-35,684	-152,035
2403	-5,073	4,000	3,505	-99,523	-59,155	-271,923
2407	-4,726	4,000	3,452	-105,294	-64,962	-307,888
2408	-4,378	4,000	3,395	-111,317	-71,031	-346,148
2409	-4,030	4,000	3,331	-117,567	-77,358	-386,813
2579	-3,683	4,000	3,258	-124,004	-83,937	-429,985
2583	-2,703	4,000	2,967	-142,580	-103,689	-565,766
2584	-3,030	4,000	3,083	-136,392	-96,922	-518,135
2585	-3,356	4,000	3,178	-130,170	-90,332	-472,886
2621	-3,468	8,000	40,095	236,170	-88,707	-462,842
2625	-2,848	8,000	37,750	244,701	-100,388	-550,476
2626	-3,055	8,000	38,641	241,352	-96,420	-519,806
2627	-3,261	8,000	39,416	238,070	-92,530	-490,666
2637	-2,641	8,000	36,631	246,620	-104,415	-582,525
2641	-2,075	8,000	32,932	252,596	-115,615	-676,742
2642	-2,264	8,000	34,288	250,671	-111,830	-643,860
2643	-2,452	8,000	35,485	248,198	-108,100	-612,559
2669	15,294	-20,000	0,000	0,000	0,000	0,000
2673	15,882	-20,000	0,000	0,000	0,000	0,000
2674	16,471	-20,000	0,000	0,000	0,000	0,000
2675	17,059	-20,000	0,000	0,000	0,000	0,000
2685	17,647	-20,000	0,000	0,000	0,000	0,000
2689	20,000	-20,000	0,000	0,000	0,000	0,000
2690	20,000	-19,429	0,000	0,000	48,438	56,393
2691	20,000	-18,857	0,000	0,000	236,759	756,214
2692	20,000	-18,286	0,000	0,000	550,846	2,026
2693	18,235	-20,000	0,000	0,000	0,000	0,000
2694	18,824	-20,000	0,000	0,000	0,000	0,000
2695	19,412	-20,000	0,000	0,000	0,000	0,000
2715	0,000	-0,784	-64,096	-127,921	-159,976	-662,707
2716	0,000	-0,657	-64,968	-129,456	-160,032	-671,810

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2717	0,000 -0,530	-66,144	-130,983	-160,088	-680,980
2721	0,000 -1,924	-74,509	-113,503	-159,578	-584,001
2722	0,000 -1,849	-72,739	-114,503	-159,594	-589,031
2723	0,000 -1,773	-71,048	-115,495	-159,613	-594,088
2727	0,000 -2,000	-76,368	-112,495	-159,565	-578,999
2737	0,000 -1,608	-67,859	-117,642	-159,660	-605,252
2738	0,000 -1,518	-66,511	-118,795	-159,689	-611,369
2739	0,000 -1,428	-65,420	-119,938	-159,720	-617,523
2743	0,000 -1,698	-69,471	-116,480	-159,633	-599,172
2753	0,000 -1,338	-64,574	-121,073	-159,753	-623,711
2754	0,000 -1,232	-63,868	-122,412	-159,793	-631,112
2755	0,000 -1,125	-63,475	-123,744	-159,835	-638,562
2756	0,000 -1,018	-63,377	-125,072	-159,878	-646,078
2763	0,000 -0,911	-63,557	-126,384	-159,922	-653,679
2911	-2,377 4,000	2,824	-148,619	-110,607	-615,777
2915	-2,071 4,000	2,658	-154,025	-117,212	-664,859
2916	-1,764 4,000	2,451	-159,026	-123,892	-715,912
2917	-1,458 4,000	2,194	-163,438	-130,613	-768,788
2943	0,000 -0,252	-69,629	-134,291	-160,214	-701,276
2944	0,000 -0,101	-71,964	-136,069	-160,284	-712,429
2945	0,000 0,050	-74,556	-137,834	-160,354	-723,671
2949	0,000 -0,403	-67,593	-132,500	-160,145	-690,214
2965	0,000 0,201	-77,370	-139,587	-160,425	-734,997
2966	0,000 0,381	-80,955	-141,654	-160,509	-748,575
2967	0,000 0,561	-84,766	-143,701	-160,594	-762,270
2968	0,000 0,740	-88,767	-145,727	-160,678	-776,076
3013	-1,176 -4,000	-8,645	-113,340	-50,492	-217,998
3014	0,588 -4,000	4,715	-62,589	-54,107	-252,994
3015	0,000 -4,000	13,504	-80,888	-55,467	-247,778
3016	-0,588 -4,000	-4,742	-98,440	-54,104	-235,726
3065	-1,887 8,000	31,396	252,633	-119,442	-711,245

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3069	-1,371	8,000	26,344	256,174	-130,071	-812,313
3070	-1,543	8,000	28,195	255,264	-126,499	-776,910
3071	-1,715	8,000	29,875	253,951	-122,952	-743,123
3141	-1,199	8,000	24,316	256,479	-133,669	-849,356
3145	-0,728	8,000	17,656	255,713	-143,693	-960,525
3146	-0,885	8,000	20,086	256,314	-140,313	-921,614
3147	-1,042	8,000	22,294	256,413	-136,975	-884,637
3189	20,000	-17,714	0,000	0,000	977,924	3,802
3193	20,000	-17,143	0,000	0,000	1,507	6,030
3194	20,000	-16,571	0,000	0,000	2,126	8,664
3195	20,000	-16,000	0,000	0,000	2,828	11,665
3211	1,176	-4,000	8,630	-45,128	-50,491	-252,114
3215	2,941	-4,000	14,765	-1,183	-35,672	-230,590
3216	2,353	-4,000	13,410	-14,733	-40,714	-239,896
3217	1,765	-4,000	11,445	-29,286	-45,770	-247,277
3299	0,000	1,134	-98,034	-150,073	-160,861	-806,661
3300	0,000	1,348	-103,283	-152,372	-160,959	-823,471
3301	0,000	1,561	-108,642	-154,615	-161,056	-840,403
3305	0,000	0,920	-92,925	-147,729	-160,762	-789,987
3363	-1,151	4,000	1,873	-167,049	-137,339	-823,258
3367	-0,288	4,000	493,498	-170,851	-155,989	-982,232
3368	-0,576	4,000	1,046	-170,848	-149,851	-928,722
3369	-0,863	4,000	1,501	-169,509	-143,625	-875,589
3399	20,000	-15,429	0,000	0,000	3,602	15,004
3403	20,000	-14,857	0,000	0,000	4,442	18,655
3404	20,000	-14,286	0,000	0,000	5,340	22,593
3405	20,000	-13,714	0,000	0,000	6,290	26,804
3521	0,000	2,029	-120,632	-159,273	-161,263	-877,826
3522	0,000	2,283	-127,232	-161,609	-161,372	-898,312
3523	0,000	2,537	-133,853	-163,761	-161,477	-918,863
3527	0,000	1,775	-114,085	-156,791	-161,152	-857,443

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3537	0,000 2,791	-140,461	-165,681	-161,580	-939,432
3538	0,000 3,093	-148,259	-167,577	-161,697	-963,843
3539	0,000 3,396	-155,936	-168,932	-161,810	-988,103
3540	0,000 3,698	-163,429	-169,581	-161,916	-1,012
3595	-0,572 8,000	14,942	253,872	-147,115	-1,002
3599	-0,143 8,000	5,179	245,955	-157,505	-1,127
3600	-0,286 8,000	9,228	249,938	-153,749	-1,083
3601	-0,429 8,000	12,301	252,113	-150,346	-1,041
3627	0,000 6,216	-211,886	-99,238	-162,546	-1,170
3628	0,000 6,410	-214,645	-81,394	-162,573	-1,176
3629	0,000 6,604	-217,431	-60,055	-162,597	-1,180
3633	0,000 6,798	-220,322	-34,632	-162,617	-1,182
3634	0,000 6,961	-222,927	-9,597	-162,631	-1,183
3635	0,000 7,124	-225,749	19,216	-162,643	-1,183
3636	0,000 7,288	-228,863	52,013	-162,652	-1,182
3643	0,000 5,329	-198,132	-148,759	-162,382	-1,128
3644	0,000 5,560	-202,017	-139,865	-162,431	-1,141
3645	0,000 5,791	-205,655	-128,499	-162,476	-1,153
3649	0,000 6,022	-209,096	-114,101	-162,516	-1,163
3659	0,000 5,098	-193,975	-155,608	-162,328	-1,114
3660	0,000 4,275	-176,987	-168,058	-162,103	-1,056
3661	0,000 4,549	-183,001	-165,577	-162,184	-1,077
3662	0,000 4,824	-188,675	-161,557	-162,259	-1,096
3669	0,000 4,000	-170,674	-169,315	-162,017	-1,036
3743	3,529 -4,000	15,721	11,582	-30,834	-219,709
3747	5,294 -4,000	17,063	44,905	-17,774	-178,587
3748	4,706 -4,000	16,809	34,693	-21,877	-193,587
3749	4,118 -4,000	16,377	23,556	-26,228	-207,331
3805	0,000 7,588	-235,653	122,940	-162,662	-1,178
3806	0,000 7,725	-239,483	160,062	-162,665	-1,177
3807	0,000 7,863	-243,810	199,094	-162,665	-1,178

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3808	0,000 8,000	-248,647	239,172	-162,664	-1,178
3809	0,750 8,000	-18,431	226,878	-143,221	-1,424
3810	0,500 8,000	-14,243	224,867	-148,751	-1,319
3811	0,250 8,000	-8,559	228,181	-154,728	-1,241
3815	0,000 7,451	-232,342	88,632	-162,659	-1,180
3832	20,000 -13,143	0,000	0,000	7,285	31,274
3836	20,000 -12,571	0,000	0,000	8,321	35,993
3837	20,000 -12,000	0,000	0,000	9,391	40,949
3838	20,000 -11,429	0,000	0,000	10,490	46,136
4019	1,000 8,000	-22,159	212,954	-137,938	-1,596
4023	2,500 8,000	-36,294	-20,803	-107,187	-2,018
4024	2,000 8,000	-32,817	60,261	-117,167	-1,967
4025	1,500 8,000	-28,209	139,555	-127,415	-1,849
4039	7,647 -4,000	16,774	74,869	-3,679	-109,430
4040	7,059 -4,000	17,011	69,171	-6,873	-127,695
4041	6,471 -4,000	17,146	62,245	-10,282	-145,462
4077	20,000 -10,857	0,000	0,000	11,613	51,548
4078	20,000 -10,286	0,000	0,000	12,755	57,177
4079	20,000 -9,714	0,000	0,000	13,911	63,015
4080	20,000 -9,143	0,000	0,000	15,075	69,053
4103	5,882 -4,000	17,169	54,120	-13,912	-162,480
4151	8,235 -4,000	16,446	79,348	-691,978	-90,892
4152	10,000 -4,000	14,999	85,651	7,098	-35,697
4153	9,412 -4,000	15,552	84,700	4,690	-53,831
4154	8,824 -4,000	16,037	82,617	2,096	-72,292
4193	3,000 8,000	-38,879	-94,039	-97,510	-2,020
4197	4,500 8,000	-42,442	-315,048	-70,725	-1,729
4198	4,000 8,000	-41,831	-249,761	-79,240	-1,890
4199	3,500 8,000	-40,677	-173,034	-88,179	-1,982
4209	20,000 -8,571	0,000	0,000	16,243	75,282
4213	20,000 -8,000	0,000	0,000	17,407	81,689

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4214	20,000	-7,429	0,000	0,000	18,564	88,258
4215	20,000	-6,857	0,000	0,000	19,707	94,971
4357	10,588	-4,000	14,385	85,534	9,326	-18,056
4358	12,353	-4,000	12,232	79,525	14,988	30,547
4359	11,765	-4,000	12,996	82,388	13,265	15,186
4360	11,176	-4,000	13,716	84,420	11,380	-1,050
4389	5,000	8,000	-42,601	-372,590	-62,651	-1,438
4393	6,875	8,000	-40,510	-331,655	-36,413	-714,200
4394	6,250	8,000	-41,514	-355,165	-44,472	-870,224
4395	5,625	8,000	-42,277	-371,834	-53,201	-1,081
4461	20,000	-6,286	0,000	0,000	20,830	101,804
4462	20,000	-5,714	0,000	0,000	21,928	108,730
4463	20,000	-5,143	0,000	0,000	22,994	115,715
4464	20,000	-4,571	0,000	0,000	24,022	122,720
4477	12,941	-4,000	11,427	75,912	16,556	44,945
4478	14,706	-4,000	8,816	61,399	20,378	81,766
4479	14,118	-4,000	9,716	66,770	19,245	70,599
4480	13,529	-4,000	10,587	71,633	17,973	58,313
4487	15,294	-4,000	7,893	55,587	21,377	91,796
4491	17,059	-4,000	5,011	36,117	23,614	114,883
4492	16,471	-4,000	5,988	42,886	22,991	108,365
4493	15,882	-4,000	6,949	49,395	22,247	100,667
4555	7,500	8,000	-39,515	-313,754	-28,969	-587,996
4559	9,375	8,000	-32,275	-252,117	-10,067	-311,460
4560	8,750	8,000	-35,085	-273,741	-15,424	-388,343
4561	8,125	8,000	-37,830	-295,745	-21,744	-479,340
4565	20,000	-4,000	0,000	0,000	25,006	129,699
4566	19,412	-4,000	1,012	7,386	24,951	129,102
4567	18,824	-4,000	2,021	14,729	24,786	127,318
4568	18,235	-4,000	3,025	21,988	24,509	124,357
4569	20,000	-3,400	0,000	0,000	25,301	128,280

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4570	20,000 -2,800	0,000	0,000	25,618	127,777
4571	20,000 -2,200	0,000	0,000	25,948	128,149
4587	17,647 -4,000	4,023	29,131	24,119	120,210
4649	10,000 8,000	-30,540	-234,888	-5,370	-245,226
4653	11,875 8,000	-22,965	-178,992	6,829	-90,007
4654	11,250 8,000	-25,802	-197,892	3,504	-134,076
4655	10,625 8,000	-28,671	-217,732	-632,864	-185,716
4701	20,000 -1,600	0,000	0,000	26,282	129,375
4702	20,000 -1,000	0,000	0,000	26,612	130,341
4703	20,000 -0,400	0,000	0,000	26,927	132,362
4704	20,000 0,200	0,000	0,000	27,218	134,959
4737	20,000 0,800	0,000	0,000	27,475	137,700
4741	20,000 1,400	0,000	0,000	27,687	140,432
4742	20,000 2,000	0,000	0,000	27,846	143,100
4743	20,000 2,600	0,000	0,000	27,944	145,526
4773	12,500 8,000	-21,377	-163,539	9,400	-52,043
4774	14,375 8,000	-14,714	-116,957	17,290	38,266
4775	13,750 8,000	-17,470	-132,642	15,392	12,741
4776	13,125 8,000	-20,208	-148,808	12,716	-17,235
4799	15,000 8,000	-13,209	-102,984	18,788	60,110
4807	20,000 3,200	0,000	0,000	27,971	147,564
4812	17,500 8,000	-6,374	-49,580	23,693	118,539
4813	16,875 8,000	-7,853	-62,264	22,880	108,116
4814	16,250 8,000	-9,682	-75,560	21,907	95,136
4815	15,625 8,000	-11,763	-89,415	20,529	79,188
4828	20,000 3,800	0,000	0,000	27,922	149,089
4832	20,000 4,400	0,000	0,000	27,792	149,960
4833	20,000 5,000	0,000	0,000	27,578	150,064
4837	20,000 5,600	0,000	0,000	27,278	149,308
4845	20,000 6,800	0,000	0,000	26,426	144,956
4846	20,000 7,400	0,000	0,000	25,882	141,315

RELAZIONE DI CALCOLO OPERE
PROVVISORIALI

Codice documento
SS0780_F0.doc

Rev
F0 Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4847	19,375	8,000	-1,603	-12,268	25,164	135,608
4848	18,125	8,000	-4,801	-37,016	24,382	126,572
4849	20,000	6,200	0,000	0,000	26,892	147,618
4850	20,000	8,000	0,000	0,000	25,262	136,727

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

8. Results for phase 3

Table [12] Table of deformations phase no: 3

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
1	-20,000	-20,000	0,000	0,000	0,000	0,000
2	-19,412	-20,000	0,000	0,000	0,000	0,000
3	-18,824	-20,000	0,000	0,000	0,000	0,000
4	-18,235	-20,000	0,000	0,000	0,000	0,000
5	-20,000	-18,286	0,000	0,000	926,950	102,199
6	-20,000	-18,857	0,000	0,000	497,525	54,394
7	-20,000	-19,429	0,000	0,000	186,419	20,047
23	-17,059	-20,000	0,000	0,000	0,000	0,000
24	-16,471	-20,000	0,000	0,000	0,000	0,000
25	-15,882	-20,000	0,000	0,000	0,000	0,000
32	-17,647	-20,000	0,000	0,000	0,000	0,000
33	-15,294	-20,000	0,000	0,000	0,000	0,000
37	-14,706	-20,000	0,000	0,000	0,000	0,000
38	-14,118	-20,000	0,000	0,000	0,000	0,000
39	-13,529	-20,000	0,000	0,000	0,000	0,000
65	-20,000	-16,000	0,000	0,000	3,697	411,680
66	-20,000	-16,571	0,000	0,000	2,860	318,159
67	-20,000	-17,143	0,000	0,000	2,115	234,885
74	-20,000	-17,714	0,000	0,000	1,468	162,635
75	-20,000	-15,429	0,000	0,000	4,620	514,690
79	-20,000	-13,714	0,000	0,000	7,839	873,391
80	-20,000	-14,286	0,000	0,000	6,697	746,254
81	-20,000	-14,857	0,000	0,000	5,622	626,454
145	-12,941	-20,000	0,000	0,000	0,000	0,000
146	-12,353	-20,000	0,000	0,000	0,000	0,000
147	-11,765	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
148	-11,176	-20,000	0,000	0,000	0,000	0,000
167	-20,000	-11,429	0,000	0,000	12,962	1,442
168	-20,000	-12,000	0,000	0,000	11,609	1,292
169	-20,000	-12,571	0,000	0,000	10,301	1,147
173	-20,000	-13,143	0,000	0,000	9,043	1,007
177	-20,000	-10,857	0,000	0,000	14,354	1,596
181	-20,000	-9,143	0,000	0,000	18,721	2,077
182	-20,000	-9,714	0,000	0,000	17,238	1,914
183	-20,000	-10,286	0,000	0,000	15,781	1,753
231	-10,588	-20,000	0,000	0,000	0,000	0,000
235	-10,000	-20,000	0,000	0,000	0,000	0,000
236	-9,412	-20,000	0,000	0,000	0,000	0,000
237	-8,824	-20,000	0,000	0,000	0,000	0,000
347	-20,000	-8,571	0,000	0,000	20,227	2,241
348	-20,000	-6,857	0,000	0,000	24,845	2,741
349	-20,000	-7,429	0,000	0,000	23,292	2,574
350	-20,000	-8,000	0,000	0,000	21,751	2,407
465	-20,000	-6,286	0,000	0,000	26,410	2,908
469	-20,000	-4,571	0,000	0,000	31,151	3,404
470	-20,000	-5,143	0,000	0,000	29,564	3,240
471	-20,000	-5,714	0,000	0,000	27,983	3,074
523	-8,235	-20,000	0,000	0,000	0,000	0,000
527	-7,647	-20,000	0,000	0,000	0,000	0,000
528	-7,059	-20,000	0,000	0,000	0,000	0,000
529	-6,471	-20,000	0,000	0,000	0,000	0,000
567	-20,000	-4,000	0,000	0,000	32,743	3,567
568	-18,235	-4,000	-4,588	-464,814	32,709	3,562
569	-18,824	-4,000	-3,060	-309,875	32,728	3,564
570	-19,412	-4,000	-1,531	-154,938	32,739	3,566
571	-20,000	-2,000	0,000	0,000	60,949	6,484
572	-20,000	-2,667	0,000	0,000	51,532	5,514

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
573	-20,000 -3,333	0,000	0,000	42,130	4,542
621	-20,000 -1,333	0,000	0,000	70,377	7,451
622	-20,000 0,667	0,000	0,000	98,705	10,332
623	-20,000 0,000	0,000	0,000	89,258	9,375
624	-20,000 -0,667	0,000	0,000	79,814	8,415
643	-20,000 3,333	0,000	0,000	136,475	14,130
644	-20,000 2,667	0,000	0,000	127,041	13,184
645	-20,000 2,000	0,000	0,000	117,600	12,237
649	-20,000 1,333	0,000	0,000	108,154	11,286
653	-18,273 4,000	-4,370	-313,932	145,813	15,066
654	-18,849 4,000	-2,913	-209,851	145,862	15,070
655	-19,424 4,000	-1,457	-105,094	145,890	15,073
656	-20,000 4,000	0,000	0,000	145,899	15,074
689	-16,077 4,000	-9,931	-698,880	145,423	15,032
690	-16,617 4,000	-8,562	-606,600	145,553	15,044
691	-17,157 4,000	-7,194	-512,541	145,659	15,053
695	-17,698 4,000	-5,826	-416,998	145,745	15,060
741	-5,882 -20,000	0,000	0,000	0,000	0,000
745	-5,294 -20,000	0,000	0,000	0,000	0,000
746	-4,706 -20,000	0,000	0,000	0,000	0,000
747	-4,118 -20,000	0,000	0,000	0,000	0,000
819	-15,882 -4,000	-10,646	-1,085	32,533	3,535
820	-16,471 -4,000	-9,142	-929,641	32,594	3,545
821	-17,059 -4,000	-7,629	-774,700	32,643	3,552
825	-17,647 -4,000	-6,111	-619,757	32,681	3,558
841	-15,294 -4,000	-12,140	-1,240	32,457	3,523
845	-13,529 -4,000	-16,549	-1,704	32,125	3,468
846	-14,118 -4,000	-15,094	-1,549	32,256	3,490
847	-14,706 -4,000	-13,624	-1,394	32,366	3,508
1001	-15,536 4,000	-11,303	-789,085	145,267	15,018
1002	-14,014 4,000	-15,198	-1,029	144,665	14,962

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
1003	-14,521 4,000	-13,893	-951,791	144,895	14,984
1004	-15,029 4,000	-12,595	-871,616	145,095	15,002
1195	-11,176 -4,000	-22,174	-2,321	31,345	3,325
1196	-11,765 -4,000	-20,802	-2,167	31,584	3,370
1197	-12,353 -4,000	-19,405	-2,013	31,792	3,409
1201	-12,941 -4,000	-17,987	-1,859	31,971	3,441
1217	-13,507 4,000	-16,514	-1,104	144,403	14,937
1221	-12,077 4,000	-20,312	-1,296	143,463	14,840
1222	-12,554 4,000	-19,027	-1,235	143,812	14,877
1223	-13,030 4,000	-17,762	-1,171	144,124	14,909
1275	-2,941 -20,000	0,000	0,000	0,000	0,000
1276	-2,353 -20,000	0,000	0,000	0,000	0,000
1277	-1,765 -20,000	0,000	0,000	0,000	0,000
1281	-3,529 -20,000	0,000	0,000	0,000	0,000
1285	-1,176 -20,000	0,000	0,000	0,000	0,000
1289	-0,588 -20,000	0,000	0,000	0,000	0,000
1290	0,000 -20,000	0,000	0,000	0,000	0,000
1291	0,588 -20,000	0,000	0,000	0,000	0,000
1329	-10,588 -4,000	-23,522	-2,474	31,071	3,272
1333	-8,824 -4,000	-27,395	-2,928	30,004	3,057
1334	-9,412 -4,000	-26,133	-2,778	30,405	3,139
1335	-10,000 -4,000	-24,841	-2,627	30,759	3,210
1399	1,176 -20,000	0,000	0,000	0,000	0,000
1403	1,765 -20,000	0,000	0,000	0,000	0,000
1404	2,353 -20,000	0,000	0,000	0,000	0,000
1405	2,941 -20,000	0,000	0,000	0,000	0,000
1409	3,529 -20,000	0,000	0,000	0,000	0,000
1413	4,118 -20,000	0,000	0,000	0,000	0,000
1414	4,706 -20,000	0,000	0,000	0,000	0,000
1415	5,294 -20,000	0,000	0,000	0,000	0,000
1563	-11,601 4,000	-21,624	-1,354	143,076	14,798

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
1564	-11,154 4,000	-22,887	-1,404	142,675	14,753
1565	-10,706 4,000	-24,186	-1,451	142,238	14,701
1566	-10,259 4,000	-25,529	-1,494	141,763	14,643
1615	-6,471 -4,000	-32,196	-3,503	27,761	2,600
1616	-7,059 -4,000	-31,026	-3,364	28,441	2,735
1617	-7,647 -4,000	-29,839	-3,222	29,032	2,856
1627	-8,235 -4,000	-28,630	-3,076	29,549	2,963
1643	-9,812 4,000	-26,927	-1,534	141,250	14,577
1647	-8,552 4,000	-31,271	-1,623	139,615	14,342
1648	-8,972 4,000	-29,743	-1,597	140,189	14,429
1649	-9,392 4,000	-28,300	-1,567	140,735	14,508
1781	5,882 -20,000	0,000	0,000	0,000	0,000
1782	6,471 -20,000	0,000	0,000	0,000	0,000
1783	7,059 -20,000	0,000	0,000	0,000	0,000
1784	7,647 -20,000	0,000	0,000	0,000	0,000
1791	8,235 -20,000	0,000	0,000	0,000	0,000
1795	8,824 -20,000	0,000	0,000	0,000	0,000
1796	9,412 -20,000	0,000	0,000	0,000	0,000
1797	10,000 -20,000	0,000	0,000	0,000	0,000
1935	-8,132 4,000	-32,899	-1,645	139,021	14,243
1936	-7,737 4,000	-34,536	-1,662	138,449	14,140
1937	-7,343 4,000	-36,299	-1,676	137,875	14,025
1938	-6,949 4,000	-38,210	-1,687	137,314	13,896
1961	-5,882 -4,000	-33,357	-3,636	26,968	2,449
1962	-4,118 -4,000	-36,881	-3,992	23,574	1,901
1963	-4,706 -4,000	-35,691	-3,882	24,921	2,100
1964	-5,294 -4,000	-34,519	-3,763	26,036	2,283
2099	-6,554 4,000	-40,295	-1,694	136,785	13,754
2103	-5,444 4,000	-47,376	-1,704	135,745	13,260
2104	-5,814 4,000	-44,785	-1,702	135,980	13,441
2105	-6,184 4,000	-42,435	-1,699	136,341	13,605

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
2221	10,588	-20,000	0,000	0,000	0,000	0,000
2225	11,176	-20,000	0,000	0,000	0,000	0,000
2226	11,765	-20,000	0,000	0,000	0,000	0,000
2227	12,353	-20,000	0,000	0,000	0,000	0,000
2231	12,941	-20,000	0,000	0,000	0,000	0,000
2235	13,529	-20,000	0,000	0,000	0,000	0,000
2236	14,118	-20,000	0,000	0,000	0,000	0,000
2237	14,706	-20,000	0,000	0,000	0,000	0,000
2325	-3,529	-4,000	-38,086	-4,091	21,932	1,687
2329	-1,765	-4,000	-41,535	-4,304	14,533	971,670
2330	-2,353	-4,000	-40,469	-4,248	17,470	1,220
2331	-2,941	-4,000	-39,295	-4,176	19,920	1,459
2403	-5,073	4,000	-50,238	-1,705	135,694	13,060
2407	-4,726	4,000	-53,205	-1,706	135,863	12,854
2408	-4,378	4,000	-56,460	-1,708	136,364	12,627
2409	-4,030	4,000	-60,012	-1,713	137,269	12,379
2579	-3,683	4,000	-63,849	-1,723	138,700	12,108
2583	-2,703	4,000	-75,047	-1,789	148,195	11,209
2584	-3,030	4,000	-71,778	-1,759	143,914	11,532
2585	-3,356	4,000	-67,798	-1,737	140,773	11,831
2669	15,294	-20,000	0,000	0,000	0,000	0,000
2673	15,882	-20,000	0,000	0,000	0,000	0,000
2674	16,471	-20,000	0,000	0,000	0,000	0,000
2675	17,059	-20,000	0,000	0,000	0,000	0,000
2685	17,647	-20,000	0,000	0,000	0,000	0,000
2689	20,000	-20,000	0,000	0,000	0,000	0,000
2690	20,000	-19,429	0,000	0,000	-58,395	-5,700
2691	20,000	-18,857	0,000	0,000	-254,683	-25,380
2692	20,000	-18,286	0,000	0,000	-580,988	-58,232
2693	18,235	-20,000	0,000	0,000	0,000	0,000
2694	18,824	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
2695	19,412	-20,000	0,000	0,000	0,000	0,000
2715	0,000	-0,784	-32,363	-4,639	15,844	2,072
2716	0,000	-0,657	-30,489	-4,607	15,837	2,073
2717	0,000	-0,530	-28,567	-4,571	15,827	2,074
2721	0,000	-1,924	-46,742	-4,843	15,859	2,066
2722	0,000	-1,849	-45,869	-4,832	15,860	2,066
2723	0,000	-1,773	-44,994	-4,821	15,860	2,066
2727	0,000	-2,000	-47,617	-4,853	15,859	2,066
2737	0,000	-1,608	-43,063	-4,796	15,860	2,067
2738	0,000	-1,518	-41,997	-4,782	15,860	2,068
2739	0,000	-1,428	-40,914	-4,768	15,860	2,068
2743	0,000	-1,698	-44,116	-4,810	15,860	2,067
2753	0,000	-1,338	-39,811	-4,753	15,859	2,069
2754	0,000	-1,232	-38,465	-4,734	15,858	2,069
2755	0,000	-1,125	-37,080	-4,714	15,856	2,070
2756	0,000	-1,018	-35,651	-4,692	15,853	2,071
2763	0,000	-0,911	-34,176	-4,669	15,850	2,071
2911	-2,377	4,000	-76,471	-1,828	153,267	10,861
2915	-2,071	4,000	-77,211	-1,876	159,938	10,511
2916	-1,764	4,000	-91,854	-1,965	179,036	10,170
2917	-1,458	4,000	-133,366	-2,157	224,145	9,898
2943	0,000	-0,252	-24,308	-4,483	15,790	2,075
2944	0,000	-0,101	-22,080	-4,430	15,763	2,076
2945	0,000	0,050	-20,005	-4,372	15,733	2,077
2949	0,000	-0,403	-26,614	-4,533	15,814	2,075
2965	0,000	0,201	-18,180	-4,311	15,701	2,078
2966	0,000	0,381	-16,493	-4,236	15,666	2,079
2967	0,000	0,561	-15,536	-4,159	15,636	2,079
2968	0,000	0,740	-15,579	-4,082	15,607	2,080
3013	-1,176	-4,000	-42,394	-4,345	11,128	715,904
3014	0,588	-4,000	-42,814	-4,381	-473,676	-117,041

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
3015	0,000 -4,000	-43,064	-4,388	3,419	174,083
3016	-0,588 -4,000	-42,927	-4,374	7,357	451,852
3189	20,000 -17,714	0,000	0,000	-1,029	-103,457
3193	20,000 -17,143	0,000	0,000	-1,592	-160,267
3194	20,000 -16,571	0,000	0,000	-2,261	-227,894
3195	20,000 -16,000	0,000	0,000	-3,029	-305,586
3211	1,176 -4,000	-42,242	-4,347	-4,132	-412,155
3215	2,941 -4,000	-39,496	-4,117	-13,092	-1,203
3216	2,353 -4,000	-40,518	-4,210	-10,441	-960,676
3217	1,765 -4,000	-41,451	-4,288	-7,462	-696,253
3299	0,000 1,134	-20,669	-3,928	15,549	2,081
3300	0,000 1,348	-27,380	-3,864	15,520	2,082
3301	0,000 1,561	-37,800	-3,824	15,492	2,082
3305	0,000 0,920	-16,921	-4,008	15,580	2,081
3363	-1,151 4,000	-195,588	-2,520	289,911	9,758
3367	-0,288 4,000	-362,907	-3,905	398,475	8,518
3368	-0,576 4,000	-289,648	-3,147	396,460	9,438
3369	-0,863 4,000	-252,176	-2,985	339,233	9,567
3399	20,000 -15,429	0,000	0,000	-3,887	-392,609
3403	20,000 -14,857	0,000	0,000	-4,829	-488,247
3404	20,000 -14,286	0,000	0,000	-5,848	-591,803
3405	20,000 -13,714	0,000	0,000	-6,935	-702,601
3521	0,000 2,029	-77,510	-3,864	15,433	2,082
3522	0,000 2,283	-111,252	-3,992	15,396	2,082
3523	0,000 2,537	-155,093	-4,221	15,359	2,082
3527	0,000 1,775	-52,729	-3,816	15,465	2,082
3537	0,000 2,791	-209,645	-4,570	15,318	2,081
3538	0,000 3,093	-288,193	-5,161	15,254	2,080
3539	0,000 3,396	-379,933	-5,957	15,189	2,079
3540	0,000 3,698	-482,234	-6,951	15,143	2,077
3627	0,000 6,216	-1,543	-19,306	15,152	2,065

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
3628	0,000	6,410	-1,633	-20,369	15,156	2,065
3629	0,000	6,604	-1,723	-21,434	15,160	2,064
3633	0,000	6,798	-1,813	-22,502	15,164	2,064
3634	0,000	6,961	-1,889	-23,400	15,167	2,064
3635	0,000	7,124	-1,966	-24,298	15,170	2,064
3636	0,000	7,288	-2,043	-25,197	15,172	2,064
3643	0,000	5,329	-1,142	-14,529	15,136	2,068
3644	0,000	5,560	-1,244	-15,754	15,140	2,067
3645	0,000	5,791	-1,348	-16,995	15,143	2,066
3649	0,000	6,022	-1,454	-18,247	15,147	2,066
3659	0,000	5,098	-1,041	-13,324	15,131	2,069
3660	0,000	4,275	-698,595	-9,306	15,109	2,073
3661	0,000	4,549	-809,085	-10,581	15,116	2,072
3662	0,000	4,824	-923,355	-11,927	15,124	2,070
3669	0,000	4,000	-592,645	-8,120	15,116	2,075
3743	3,529	-4,000	-38,410	-4,014	-15,443	-1,422
3747	5,294	-4,000	-34,853	-3,667	-20,984	-1,960
3748	4,706	-4,000	-36,082	-3,788	-19,367	-1,800
3749	4,118	-4,000	-37,270	-3,904	-17,527	-1,621
3805	0,000	7,588	-2,184	-26,851	15,176	2,063
3806	0,000	7,725	-2,248	-27,607	15,176	2,063
3807	0,000	7,863	-2,313	-28,362	15,177	2,063
3808	0,000	8,000	-2,377	-29,117	15,177	2,063
3809	0,750	8,000	-1,192	-13,030	-1,079	-9,574
3810	0,500	8,000	-1,128	-12,400	-1,112	-10,631
3811	0,250	8,000	-998,565	-11,091	-661,255	-5,885
3815	0,000	7,451	-2,119	-26,096	15,174	2,064
3832	20,000	-13,143	0,000	0,000	-8,084	-819,979
3836	20,000	-12,571	0,000	0,000	-9,289	-943,299
3837	20,000	-12,000	0,000	0,000	-10,542	-1,072
3838	20,000	-11,429	0,000	0,000	-11,838	-1,205

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
4019	1,000	8,000	-1,158	-12,737	-1,274	-12,911
4023	2,500	8,000	-1,169	-12,645	-1,119	-11,769
4024	2,000	8,000	-1,205	-13,224	-1,262	-13,328
4025	1,500	8,000	-1,190	-13,122	-1,344	-13,986
4039	7,647	-4,000	-29,653	-3,146	-25,598	-2,452
4040	7,059	-4,000	-30,984	-3,280	-24,687	-2,349
4041	6,471	-4,000	-32,298	-3,412	-23,626	-2,234
4077	20,000	-10,857	0,000	0,000	-13,170	-1,343
4078	20,000	-10,286	0,000	0,000	-14,532	-1,484
4079	20,000	-9,714	0,000	0,000	-15,919	-1,628
4080	20,000	-9,143	0,000	0,000	-17,324	-1,774
4103	5,882	-4,000	-33,590	-3,541	-22,398	-2,104
4151	8,235	-4,000	-28,309	-3,008	-26,376	-2,544
4152	10,000	-4,000	-24,219	-2,585	-28,066	-2,761
4153	9,412	-4,000	-25,590	-2,728	-27,596	-2,697
4154	8,824	-4,000	-26,954	-2,869	-27,037	-2,625
4193	3,000	8,000	-957,013	-11,014	-1,028	-11,170
4197	4,500	8,000	-482,029	-4,371	-532,611	-4,763
4198	4,000	8,000	-695,466	-6,346	-712,911	-6,495
4199	3,500	8,000	-857,922	-8,725	-913,591	-8,440
4209	20,000	-8,571	0,000	0,000	-18,744	-1,923
4213	20,000	-8,000	0,000	0,000	-20,173	-2,073
4214	20,000	-7,429	0,000	0,000	-21,607	-2,224
4215	20,000	-6,857	0,000	0,000	-23,042	-2,376
4357	10,588	-4,000	-22,842	-2,440	-28,460	-2,817
4358	12,353	-4,000	-18,669	-1,998	-29,284	-2,947
4359	11,765	-4,000	-20,066	-2,147	-29,060	-2,910
4360	11,176	-4,000	-21,457	-2,294	-28,788	-2,866
4389	5,000	8,000	-423,904	-3,616	-165,633	-2,555
4393	6,875	8,000	-22,329	-1,242	-34,733	-2,634
4394	6,250	8,000	-35,313	-1,322	-24,710	-2,371

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
4395	5,625 8,000	-109,877	-1,728	-22,676	-2,083
4461	20,000 -6,286	0,000	0,000	-24,474	-2,528
4462	20,000 -5,714	0,000	0,000	-25,900	-2,679
4463	20,000 -5,143	0,000	0,000	-27,318	-2,830
4464	20,000 -4,571	0,000	0,000	-28,725	-2,981
4477	12,941 -4,000	-17,265	-1,849	-29,467	-2,980
4478	14,706 -4,000	-13,014	-1,394	-29,833	-3,054
4479	14,118 -4,000	-14,437	-1,546	-29,736	-3,033
4480	13,529 -4,000	-15,854	-1,698	-29,616	-3,009
4487	15,294 -4,000	-11,585	-1,241	-29,909	-3,072
4491	17,059 -4,000	-7,266	-777,858	-30,051	-3,109
4492	16,471 -4,000	-8,710	-932,607	-30,016	-3,099
4493	15,882 -4,000	-10,150	-1,087	-29,969	-3,086
4555	7,500 8,000	-19,642	-1,140	-34,733	-2,806
4559	9,375 8,000	-15,307	-1,001	-34,985	-3,304
4560	8,750 8,000	-17,304	-1,037	-34,300	-3,158
4561	8,125 8,000	-19,011	-1,069	-34,080	-2,992
4565	20,000 -4,000	0,000	0,000	-30,119	-3,130
4566	19,412 -4,000	-1,456	-155,868	-30,117	-3,129
4567	18,824 -4,000	-2,912	-311,661	-30,110	-3,127
4568	18,235 -4,000	-4,366	-467,307	-30,097	-3,123
4569	20,000 -3,400	0,000	0,000	-30,814	-3,205
4570	20,000 -2,800	0,000	0,000	-31,493	-3,279
4571	20,000 -2,200	0,000	0,000	-32,154	-3,351
4587	17,647 -4,000	-5,817	-622,732	-30,078	-3,117
4649	10,000 8,000	-14,535	-955,563	-35,732	-3,433
4653	11,875 8,000	-11,573	-838,821	-37,216	-3,744
4654	11,250 8,000	-12,335	-874,419	-36,603	-3,656
4655	10,625 8,000	-13,748	-911,142	-36,152	-3,552
4701	20,000 -1,600	0,000	0,000	-32,797	-3,423
4702	20,000 -1,000	0,000	0,000	-33,422	-3,493

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
4703	20,000	-0,400	0,000	0,000	-34,028	-3,561
4704	20,000	0,200	0,000	0,000	-34,616	-3,627
4737	20,000	0,800	0,000	0,000	-35,186	-3,691
4741	20,000	1,400	0,000	0,000	-35,739	-3,753
4742	20,000	2,000	0,000	0,000	-36,274	-3,811
4743	20,000	2,600	0,000	0,000	-36,794	-3,867
4773	12,500	8,000	-10,863	-771,481	-37,597	-3,819
4774	14,375	8,000	-7,584	-605,297	-38,876	-4,016
4775	13,750	8,000	-8,572	-660,421	-38,414	-3,960
4776	13,125	8,000	-9,345	-707,012	-38,021	-3,896
4799	15,000	8,000	-6,875	-549,104	-39,311	-4,063
4807	20,000	3,200	0,000	0,000	-37,297	-3,920
4812	17,500	8,000	-3,943	-302,086	-39,920	-4,170
4813	16,875	8,000	-3,898	-366,465	-39,918	-4,160
4814	16,250	8,000	-4,771	-417,305	-39,502	-4,133
4815	15,625	8,000	-6,426	-488,669	-39,337	-4,099
4828	20,000	3,800	0,000	0,000	-37,786	-3,970
4832	20,000	4,400	0,000	0,000	-38,261	-4,017
4833	20,000	5,000	0,000	0,000	-38,728	-4,060
4837	20,000	5,600	0,000	0,000	-39,197	-4,102
4845	20,000	6,800	0,000	0,000	-39,974	-4,173
4846	20,000	7,400	0,000	0,000	-40,351	-4,206
4847	19,375	8,000	-841,256	-75,226	-40,488	-4,220
4848	18,125	8,000	-1,900	-188,792	-40,116	-4,192
4849	20,000	6,200	0,000	0,000	-39,575	-4,139
4850	20,000	8,000	0,000	0,000	-40,456	-4,218

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

SLE, SLU-STR, SLU-V (Sisma)

1. General Information

Table [1] Units

Type	Unit
Length	m
Force	kN
Time	day

Table [2] Model dimensions

	min.	max.
X	-20,000	20,000
Y	-20,000	8,000

Table [3] Model

Model	Plane strain
Element	15-Noded

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

2. Structures

Table [4] Beams

Plate no.	Data set	Length [m]	Nodes
1	MICROPALI 193S	10,000	3675, 409, 146.

Table [5] Interfaces

Interface no.	Data set	Nodes
1	GHIAIE GHIAIE	146, 409, 3675, 409, 409, 3675. 409, 146.

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

3. Material data

Table [6] Soil data sets parameters

<i>Mohr-Coulomb</i>		1	2
		GHIAIE	ARGILLA
Type		Drained	Undrained
γ_{unsat}	[kN/m ³]	18,00	20,00
γ_{sat}	[kN/m ³]	18,00	20,00
k_x	[m/day]	1,000	0,000
k_y	[m/day]	1,000	0,000
e_{init}	[\cdot]	1,000	0,500
c_k	[\cdot]	1E15	1E15
E_{ref}	[kN/m ²]	50000,000	95000,000
ν	[\cdot]	0,300	0,300
G_{ref}	[kN/m ²]	19230,769	36538,462
E_{oed}	[kN/m ²]	67307,692	127884,615
c_{ref}	[kN/m ²]	0,00	20,00
ϕ	[$^{\circ}$]	38,00	25,00
ψ	[$^{\circ}$]	0,00	0,00
E_{inc}	[kN/m ² /m]	0,00	0,00
y_{ref}	[m]	0,000	0,000
$c_{\text{increment}}$	[kN/m ² /m]	0,00	0,00
$T_{\text{str.}}$	[kN/m ²]	0,00	0,00
$R_{\text{inter.}}$	[\cdot]	0,70	1,00
Interface permeability		Neutral	Neutral

Table [7] Beam data sets parameters

No.	Identification	EA [kN/m]	EI [kNm ² /m]	w [kN/m/m]	v [\cdot]	Mp [kNm/m]	Np [kN/m]
-----	----------------	--------------	-----------------------------	---------------	------------------	---------------	--------------

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI***Codice documento
SS0780_F0.doc**Rev
F0* *Data
20/06/2011*

No.	Identification	EA [kN/m]	EI [kNm ² /m]	w [kN/m/m]	v [-]	Mp [kNm/m]	Np [kN/m]
1	MICROPALI 193	5,1215E6	21103,00	1,85	0,20	1E15	1E15
2	MICROPALI 219	5,78E6	31923,00	2,12	0,20	1E15	1E15
3	MICROPALI 193S	5,7614E6	23341,00	2,10	0,20	1E15	1E15
4	MICROPALI 193SS	6,4232E6	25560,00	2,10	0,20	1E15	1E15

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

4. Calculation phases

Table [8] List of phases

Phase	Ph-No.	Start phase	Calculation type	Load input	First step	Last step
Initial phase	0	-1		-	0	0
SOVRACCARI CO SLE	1	0	Plastic	Staged construction	70	71
MICROPALI SLE	2	1	Plastic	Staged construction	72	73
SCAVO SLE	3	2	Plastic	Staged construction	74	95
SOVRACCARI CO STR	4	0	Plastic	Staged construction	96	97
MICROPALI STR	5	4	Plastic	Staged construction	98	99
SCAVO STR	6	5	Plastic	Staged construction	100	120
SCAVO SISMA	7	0	Plastic	Staged construction	1	23
SISMA	8	7	Plastic	Total multipliers	24	69

Table [9] Staged construction info

Ph-No.	Active clusters	Inactive clusters	Active beams	Active geotextiles	Active anchors
0	1, 2, 3.				
1	1, 2, 3.				
2	1, 2, 3.		1.		
3	1, 2.	3.	1.		
4	1, 2, 3.				
5	1, 2, 3.		1.		
6	1, 2.	3.	1.		
7	1, 2.	3.	1.		



Ponte sullo Stretto di Messina
PROGETTO DEFINITIVO

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

5. Results for phase

Table [10] Table of deformations phase no: 0

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1	-1,371	8,000	0,000	0,000	0,000	0,000
2	-1,543	8,000	0,000	0,000	0,000	0,000
3	-1,715	8,000	0,000	0,000	0,000	0,000
7	-2,075	8,000	0,000	0,000	0,000	0,000
8	-2,264	8,000	0,000	0,000	0,000	0,000
9	-2,452	8,000	0,000	0,000	0,000	0,000
13	-1,887	8,000	0,000	0,000	0,000	0,000
23	-2,641	8,000	0,000	0,000	0,000	0,000
27	-2,848	8,000	0,000	0,000	0,000	0,000
28	-3,055	8,000	0,000	0,000	0,000	0,000
29	-3,261	8,000	0,000	0,000	0,000	0,000
33	-3,468	8,000	0,000	0,000	0,000	0,000
37	-3,695	8,000	0,000	0,000	0,000	0,000
38	-3,922	8,000	0,000	0,000	0,000	0,000
39	-4,149	8,000	0,000	0,000	0,000	0,000
49	-0,728	8,000	0,000	0,000	0,000	0,000
50	-0,885	8,000	0,000	0,000	0,000	0,000
51	-1,042	8,000	0,000	0,000	0,000	0,000
58	-1,199	8,000	0,000	0,000	0,000	0,000
103	-4,376	8,000	0,000	0,000	0,000	0,000
107	-4,625	8,000	0,000	0,000	0,000	0,000
108	-4,873	8,000	0,000	0,000	0,000	0,000
109	-5,122	8,000	0,000	0,000	0,000	0,000
113	-5,371	8,000	0,000	0,000	0,000	0,000
117	-5,644	8,000	0,000	0,000	0,000	0,000
118	-5,917	8,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
119	-6,190	8,000	0,000	0,000	0,000	0,000
129	-0,572	8,000	0,000	0,000	0,000	0,000
133	-0,143	8,000	0,000	0,000	0,000	0,000
134	-0,286	8,000	0,000	0,000	0,000	0,000
135	-0,429	8,000	0,000	0,000	0,000	0,000
139	0,000	8,000	0,000	0,000	0,000	0,000
143	0,000	7,540	0,000	0,000	0,000	0,000
144	0,000	7,693	0,000	0,000	0,000	0,000
145	0,000	7,847	0,000	0,000	0,000	0,000
146	0,000	8,000	0,000	0,000	0,000	0,000
169	0,000	6,965	0,000	0,000	0,000	0,000
170	0,000	7,106	0,000	0,000	0,000	0,000
171	0,000	7,246	0,000	0,000	0,000	0,000
172	0,000	7,387	0,000	0,000	0,000	0,000
183	0,000	6,825	0,000	0,000	0,000	0,000
184	0,000	6,438	0,000	0,000	0,000	0,000
185	0,000	6,567	0,000	0,000	0,000	0,000
186	0,000	6,696	0,000	0,000	0,000	0,000
207	0,000	6,309	0,000	0,000	0,000	0,000
208	0,000	5,955	0,000	0,000	0,000	0,000
209	0,000	6,073	0,000	0,000	0,000	0,000
210	0,000	6,191	0,000	0,000	0,000	0,000
265	0,000	5,836	0,000	0,000	0,000	0,000
266	0,000	5,511	0,000	0,000	0,000	0,000
267	0,000	5,620	0,000	0,000	0,000	0,000
268	0,000	5,728	0,000	0,000	0,000	0,000
289	0,000	5,403	0,000	0,000	0,000	0,000
290	0,000	5,105	0,000	0,000	0,000	0,000
291	0,000	5,204	0,000	0,000	0,000	0,000
292	0,000	5,304	0,000	0,000	0,000	0,000
315	-6,463	8,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
319	-6,762	8,000	0,000	0,000	0,000	0,000
320	-7,062	8,000	0,000	0,000	0,000	0,000
321	-7,361	8,000	0,000	0,000	0,000	0,000
331	-7,660	8,000	0,000	0,000	0,000	0,000
335	-7,989	8,000	0,000	0,000	0,000	0,000
336	-8,317	8,000	0,000	0,000	0,000	0,000
337	-8,645	8,000	0,000	0,000	0,000	0,000
361	0,000	4,732	0,000	0,000	0,000	0,000
362	0,000	4,823	0,000	0,000	0,000	0,000
363	0,000	4,914	0,000	0,000	0,000	0,000
364	0,000	5,005	0,000	0,000	0,000	0,000
375	0,000	4,641	0,000	0,000	0,000	0,000
376	0,000	4,390	0,000	0,000	0,000	0,000
377	0,000	4,474	0,000	0,000	0,000	0,000
378	0,000	4,557	0,000	0,000	0,000	0,000
395	0,000	4,307	0,000	0,000	0,000	0,000
396	0,000	4,077	0,000	0,000	0,000	0,000
397	0,000	4,153	0,000	0,000	0,000	0,000
398	0,000	4,230	0,000	0,000	0,000	0,000
399	-0,219	4,000	0,000	0,000	0,000	0,000
400	-0,146	4,000	0,000	0,000	0,000	0,000
401	-0,073	4,000	0,000	0,000	0,000	0,000
405	0,000	4,000	0,000	0,000	0,000	0,000
409	0,000	4,000	0,000	0,000	0,000	0,000
410	0,000	3,775	0,000	0,000	0,000	0,000
411	0,000	3,850	0,000	0,000	0,000	0,000
412	0,000	3,925	0,000	0,000	0,000	0,000
571	-0,536	4,000	0,000	0,000	0,000	0,000
572	-0,455	4,000	0,000	0,000	0,000	0,000
573	-0,373	4,000	0,000	0,000	0,000	0,000
577	-0,292	4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
593	-9,334	8,000	0,000	0,000	0,000	0,000
594	-9,694	8,000	0,000	0,000	0,000	0,000
595	-10,054	8,000	0,000	0,000	0,000	0,000
599	-8,974	8,000	0,000	0,000	0,000	0,000
603	-10,414	8,000	0,000	0,000	0,000	0,000
607	-10,809	8,000	0,000	0,000	0,000	0,000
608	-11,204	8,000	0,000	0,000	0,000	0,000
609	-11,599	8,000	0,000	0,000	0,000	0,000
625	-11,994	8,000	0,000	0,000	0,000	0,000
626	-12,428	8,000	0,000	0,000	0,000	0,000
627	-12,861	8,000	0,000	0,000	0,000	0,000
628	-13,294	8,000	0,000	0,000	0,000	0,000
635	-13,727	8,000	0,000	0,000	0,000	0,000
639	-14,203	8,000	0,000	0,000	0,000	0,000
640	-14,678	8,000	0,000	0,000	0,000	0,000
641	-15,153	8,000	0,000	0,000	0,000	0,000
651	-16,150	8,000	0,000	0,000	0,000	0,000
652	-16,671	8,000	0,000	0,000	0,000	0,000
653	-17,192	8,000	0,000	0,000	0,000	0,000
657	-15,628	8,000	0,000	0,000	0,000	0,000
667	-17,713	8,000	0,000	0,000	0,000	0,000
671	-20,000	8,000	0,000	0,000	0,000	0,000
672	-20,000	7,500	0,000	0,000	0,000	0,000
673	-20,000	7,000	0,000	0,000	0,000	0,000
674	-20,000	6,500	0,000	0,000	0,000	0,000
675	-18,285	8,000	0,000	0,000	0,000	0,000
676	-18,857	8,000	0,000	0,000	0,000	0,000
677	-19,428	8,000	0,000	0,000	0,000	0,000
703	-20,000	6,000	0,000	0,000	0,000	0,000
707	-20,000	5,500	0,000	0,000	0,000	0,000
708	-20,000	5,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
709	-20,000	4,500	0,000	0,000	0,000	0,000
713	-20,000	4,000	0,000	0,000	0,000	0,000
714	-19,416	4,000	0,000	0,000	0,000	0,000
715	-18,833	4,000	0,000	0,000	0,000	0,000
716	-18,249	4,000	0,000	0,000	0,000	0,000
717	-20,000	3,333	0,000	0,000	0,000	0,000
718	-20,000	2,667	0,000	0,000	0,000	0,000
719	-20,000	2,000	0,000	0,000	0,000	0,000
755	0,000	3,700	0,000	0,000	0,000	0,000
756	0,000	3,475	0,000	0,000	0,000	0,000
757	0,000	3,550	0,000	0,000	0,000	0,000
758	0,000	3,625	0,000	0,000	0,000	0,000
769	0,000	3,400	0,000	0,000	0,000	0,000
770	0,000	3,175	0,000	0,000	0,000	0,000
771	0,000	3,250	0,000	0,000	0,000	0,000
772	0,000	3,325	0,000	0,000	0,000	0,000
821	-17,665	4,000	0,000	0,000	0,000	0,000
822	-17,142	4,000	0,000	0,000	0,000	0,000
823	-16,619	4,000	0,000	0,000	0,000	0,000
824	-16,095	4,000	0,000	0,000	0,000	0,000
853	-20,000	1,333	0,000	0,000	0,000	0,000
857	-20,000	0,667	0,000	0,000	0,000	0,000
858	-20,000	0,000	0,000	0,000	0,000	0,000
859	-20,000	-0,667	0,000	0,000	0,000	0,000
869	-20,000	-1,333	0,000	0,000	0,000	0,000
873	-20,000	-2,000	0,000	0,000	0,000	0,000
874	-20,000	-2,667	0,000	0,000	0,000	0,000
875	-20,000	-3,333	0,000	0,000	0,000	0,000
879	-20,000	-4,000	0,000	0,000	0,000	0,000
880	-19,412	-4,000	0,000	0,000	0,000	0,000
881	-18,824	-4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
882	-18,235	-4,000	0,000	0,000	0,000	0,000
883	-20,000	-4,571	0,000	0,000	0,000	0,000
884	-20,000	-5,143	0,000	0,000	0,000	0,000
885	-20,000	-5,714	0,000	0,000	0,000	0,000
895	-20,000	-6,286	0,000	0,000	0,000	0,000
899	-20,000	-6,857	0,000	0,000	0,000	0,000
900	-20,000	-7,429	0,000	0,000	0,000	0,000
901	-20,000	-8,000	0,000	0,000	0,000	0,000
905	-2,217	4,000	0,000	0,000	0,000	0,000
906	-2,091	4,000	0,000	0,000	0,000	0,000
907	-1,964	4,000	0,000	0,000	0,000	0,000
911	-1,838	4,000	0,000	0,000	0,000	0,000
912	-1,725	4,000	0,000	0,000	0,000	0,000
913	-1,612	4,000	0,000	0,000	0,000	0,000
914	-1,499	4,000	0,000	0,000	0,000	0,000
921	-2,765	4,000	0,000	0,000	0,000	0,000
922	-2,624	4,000	0,000	0,000	0,000	0,000
923	-2,483	4,000	0,000	0,000	0,000	0,000
927	-2,343	4,000	0,000	0,000	0,000	0,000
937	-2,906	4,000	0,000	0,000	0,000	0,000
938	-3,377	4,000	0,000	0,000	0,000	0,000
939	-3,220	4,000	0,000	0,000	0,000	0,000
940	-3,063	4,000	0,000	0,000	0,000	0,000
947	-4,820	4,000	0,000	0,000	0,000	0,000
948	-4,625	4,000	0,000	0,000	0,000	0,000
949	-4,429	4,000	0,000	0,000	0,000	0,000
953	-4,234	4,000	0,000	0,000	0,000	0,000
954	-4,059	4,000	0,000	0,000	0,000	0,000
955	-3,884	4,000	0,000	0,000	0,000	0,000
956	-3,709	4,000	0,000	0,000	0,000	0,000
963	-3,534	4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
973	-5,670	4,000	0,000	0,000	0,000	0,000
974	-5,452	4,000	0,000	0,000	0,000	0,000
975	-5,234	4,000	0,000	0,000	0,000	0,000
979	-5,016	4,000	0,000	0,000	0,000	0,000
989	-5,888	4,000	0,000	0,000	0,000	0,000
990	-6,617	4,000	0,000	0,000	0,000	0,000
991	-6,374	4,000	0,000	0,000	0,000	0,000
992	-6,131	4,000	0,000	0,000	0,000	0,000
999	-1,285	4,000	0,000	0,000	0,000	0,000
1000	-1,183	4,000	0,000	0,000	0,000	0,000
1001	-1,082	4,000	0,000	0,000	0,000	0,000
1005	-1,386	4,000	0,000	0,000	0,000	0,000
1015	-0,981	4,000	0,000	0,000	0,000	0,000
1016	-0,890	4,000	0,000	0,000	0,000	0,000
1017	-0,799	4,000	0,000	0,000	0,000	0,000
1018	-0,708	4,000	0,000	0,000	0,000	0,000
1025	-0,618	4,000	0,000	0,000	0,000	0,000
1077	-7,674	4,000	0,000	0,000	0,000	0,000
1078	-7,403	4,000	0,000	0,000	0,000	0,000
1079	-7,132	4,000	0,000	0,000	0,000	0,000
1083	-6,860	4,000	0,000	0,000	0,000	0,000
1099	-7,946	4,000	0,000	0,000	0,000	0,000
1100	-8,854	4,000	0,000	0,000	0,000	0,000
1101	-8,551	4,000	0,000	0,000	0,000	0,000
1102	-8,248	4,000	0,000	0,000	0,000	0,000
1209	0,000	3,100	0,000	0,000	0,000	0,000
1210	0,000	2,875	0,000	0,000	0,000	0,000
1211	0,000	2,950	0,000	0,000	0,000	0,000
1212	0,000	3,025	0,000	0,000	0,000	0,000
1239	-15,103	4,000	0,000	0,000	0,000	0,000
1240	-14,634	4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1241	-14,165	4,000	0,000	0,000	0,000	0,000
1245	-13,696	4,000	0,000	0,000	0,000	0,000
1246	-13,276	4,000	0,000	0,000	0,000	0,000
1247	-12,855	4,000	0,000	0,000	0,000	0,000
1248	-12,435	4,000	0,000	0,000	0,000	0,000
1255	-15,572	4,000	0,000	0,000	0,000	0,000
1291	0,000	2,800	0,000	0,000	0,000	0,000
1292	0,000	2,575	0,000	0,000	0,000	0,000
1293	0,000	2,650	0,000	0,000	0,000	0,000
1294	0,000	2,725	0,000	0,000	0,000	0,000
1339	-17,647	-4,000	0,000	0,000	0,000	0,000
1340	-15,882	-4,000	0,000	0,000	0,000	0,000
1341	-16,471	-4,000	0,000	0,000	0,000	0,000
1342	-17,059	-4,000	0,000	0,000	0,000	0,000
1383	-20,000	-8,571	0,000	0,000	0,000	0,000
1384	-20,000	-9,143	0,000	0,000	0,000	0,000
1385	-20,000	-9,714	0,000	0,000	0,000	0,000
1386	-20,000	-10,286	0,000	0,000	0,000	0,000
1393	-20,000	-10,857	0,000	0,000	0,000	0,000
1397	-20,000	-11,429	0,000	0,000	0,000	0,000
1398	-20,000	-12,000	0,000	0,000	0,000	0,000
1399	-20,000	-12,571	0,000	0,000	0,000	0,000
1419	0,000	2,500	0,000	0,000	0,000	0,000
1420	0,000	2,275	0,000	0,000	0,000	0,000
1421	0,000	2,350	0,000	0,000	0,000	0,000
1422	0,000	2,425	0,000	0,000	0,000	0,000
1433	0,000	8,000	0,000	0,000	0,000	0,000
1437	0,750	8,000	0,000	0,000	0,000	0,000
1438	0,500	8,000	0,000	0,000	0,000	0,000
1439	0,250	8,000	0,000	0,000	0,000	0,000
1547	-10,170	4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1548	-9,832	4,000	0,000	0,000	0,000	0,000
1549	-9,494	4,000	0,000	0,000	0,000	0,000
1553	-9,157	4,000	0,000	0,000	0,000	0,000
1563	-10,508	4,000	0,000	0,000	0,000	0,000
1564	-11,638	4,000	0,000	0,000	0,000	0,000
1565	-11,261	4,000	0,000	0,000	0,000	0,000
1566	-10,884	4,000	0,000	0,000	0,000	0,000
1573	-12,015	4,000	0,000	0,000	0,000	0,000
1709	-15,294	-4,000	0,000	0,000	0,000	0,000
1710	-14,706	-4,000	0,000	0,000	0,000	0,000
1711	-14,118	-4,000	0,000	0,000	0,000	0,000
1712	-13,529	-4,000	0,000	0,000	0,000	0,000
1847	0,000	2,200	0,000	0,000	0,000	0,000
1848	0,000	1,975	0,000	0,000	0,000	0,000
1849	0,000	2,050	0,000	0,000	0,000	0,000
1850	0,000	2,125	0,000	0,000	0,000	0,000
1921	-20,000	-13,714	0,000	0,000	0,000	0,000
1922	-20,000	-14,286	0,000	0,000	0,000	0,000
1923	-20,000	-14,857	0,000	0,000	0,000	0,000
1927	-20,000	-13,143	0,000	0,000	0,000	0,000
1931	-20,000	-15,429	0,000	0,000	0,000	0,000
1935	-20,000	-16,000	0,000	0,000	0,000	0,000
1936	-20,000	-16,571	0,000	0,000	0,000	0,000
1937	-20,000	-17,143	0,000	0,000	0,000	0,000
1957	0,000	1,900	0,000	0,000	0,000	0,000
1958	0,000	1,825	0,000	0,000	0,000	0,000
1959	0,000	1,750	0,000	0,000	0,000	0,000
1960	0,000	1,675	0,000	0,000	0,000	0,000
1993	0,000	1,600	0,000	0,000	0,000	0,000
1994	0,000	1,375	0,000	0,000	0,000	0,000
1995	0,000	1,450	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
1996	0,000	1,525	0,000	0,000	0,000	0,000
2035	-20,000	-17,714	0,000	0,000	0,000	0,000
2036	-20,000	-20,000	0,000	0,000	0,000	0,000
2037	-19,412	-20,000	0,000	0,000	0,000	0,000
2038	-18,824	-20,000	0,000	0,000	0,000	0,000
2039	-18,235	-20,000	0,000	0,000	0,000	0,000
2043	-20,000	-18,286	0,000	0,000	0,000	0,000
2044	-20,000	-18,857	0,000	0,000	0,000	0,000
2045	-20,000	-19,429	0,000	0,000	0,000	0,000
2059	0,000	1,300	0,000	0,000	0,000	0,000
2060	0,000	1,075	0,000	0,000	0,000	0,000
2061	0,000	1,150	0,000	0,000	0,000	0,000
2062	0,000	1,225	0,000	0,000	0,000	0,000
2079	0,000	1,000	0,000	0,000	0,000	0,000
2080	0,000	0,775	0,000	0,000	0,000	0,000
2081	0,000	0,850	0,000	0,000	0,000	0,000
2082	0,000	0,925	0,000	0,000	0,000	0,000
2083	1,000	8,000	0,000	0,000	0,000	0,000
2087	2,500	8,000	0,000	0,000	0,000	0,000
2088	2,000	8,000	0,000	0,000	0,000	0,000
2089	1,500	8,000	0,000	0,000	0,000	0,000
2293	-12,941	-4,000	0,000	0,000	0,000	0,000
2297	-11,176	-4,000	0,000	0,000	0,000	0,000
2298	-11,765	-4,000	0,000	0,000	0,000	0,000
2299	-12,353	-4,000	0,000	0,000	0,000	0,000
2525	-17,647	-20,000	0,000	0,000	0,000	0,000
2529	-17,059	-20,000	0,000	0,000	0,000	0,000
2530	-16,471	-20,000	0,000	0,000	0,000	0,000
2531	-15,882	-20,000	0,000	0,000	0,000	0,000
2567	0,000	0,700	0,000	0,000	0,000	0,000
2568	0,000	0,475	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
2569	0,000	0,550	0,000	0,000	0,000	0,000
2570	0,000	0,625	0,000	0,000	0,000	0,000
2591	0,000	0,400	0,000	0,000	0,000	0,000
2592	0,000	0,325	0,000	0,000	0,000	0,000
2593	0,000	0,250	0,000	0,000	0,000	0,000
2594	0,000	0,175	0,000	0,000	0,000	0,000
2621	0,000	0,100	0,000	0,000	0,000	0,000
2622	0,000	0,025	0,000	0,000	0,000	0,000
2623	0,000	-0,050	0,000	0,000	0,000	0,000
2624	0,000	-0,125	0,000	0,000	0,000	0,000
2689	0,000	-0,200	0,000	0,000	0,000	0,000
2690	0,000	-0,275	0,000	0,000	0,000	0,000
2691	0,000	-0,350	0,000	0,000	0,000	0,000
2692	0,000	-0,425	0,000	0,000	0,000	0,000
2713	0,000	-0,500	0,000	0,000	0,000	0,000
2714	0,000	-0,725	0,000	0,000	0,000	0,000
2715	0,000	-0,650	0,000	0,000	0,000	0,000
2716	0,000	-0,575	0,000	0,000	0,000	0,000
2749	0,000	-0,800	0,000	0,000	0,000	0,000
2750	0,000	-0,875	0,000	0,000	0,000	0,000
2751	0,000	-0,950	0,000	0,000	0,000	0,000
2752	0,000	-1,025	0,000	0,000	0,000	0,000
2773	0,000	-1,100	0,000	0,000	0,000	0,000
2774	0,000	-1,175	0,000	0,000	0,000	0,000
2775	0,000	-1,250	0,000	0,000	0,000	0,000
2776	0,000	-1,325	0,000	0,000	0,000	0,000
2793	3,000	8,000	0,000	0,000	0,000	0,000
2794	4,500	8,000	0,000	0,000	0,000	0,000
2795	4,000	8,000	0,000	0,000	0,000	0,000
2796	3,500	8,000	0,000	0,000	0,000	0,000
2971	-10,588	-4,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
2972	-10,000	-4,000	0,000	0,000	0,000	0,000
2973	-9,412	-4,000	0,000	0,000	0,000	0,000
2974	-8,824	-4,000	0,000	0,000	0,000	0,000
3065	-15,294	-20,000	0,000	0,000	0,000	0,000
3069	-14,706	-20,000	0,000	0,000	0,000	0,000
3070	-14,118	-20,000	0,000	0,000	0,000	0,000
3071	-13,529	-20,000	0,000	0,000	0,000	0,000
3251	0,000	-1,400	0,000	0,000	0,000	0,000
3252	0,000	-1,475	0,000	0,000	0,000	0,000
3253	0,000	-1,550	0,000	0,000	0,000	0,000
3254	0,000	-1,625	0,000	0,000	0,000	0,000
3275	0,000	-1,700	0,000	0,000	0,000	0,000
3276	0,000	-1,775	0,000	0,000	0,000	0,000
3277	0,000	-1,850	0,000	0,000	0,000	0,000
3278	0,000	-1,925	0,000	0,000	0,000	0,000
3279	5,000	8,000	0,000	0,000	0,000	0,000
3283	6,875	8,000	0,000	0,000	0,000	0,000
3284	6,250	8,000	0,000	0,000	0,000	0,000
3285	5,625	8,000	0,000	0,000	0,000	0,000
3385	-8,235	-4,000	0,000	0,000	0,000	0,000
3389	-6,471	-4,000	0,000	0,000	0,000	0,000
3390	-7,059	-4,000	0,000	0,000	0,000	0,000
3391	-7,647	-4,000	0,000	0,000	0,000	0,000
3521	-12,941	-20,000	0,000	0,000	0,000	0,000
3525	-12,353	-20,000	0,000	0,000	0,000	0,000
3526	-11,765	-20,000	0,000	0,000	0,000	0,000
3527	-11,176	-20,000	0,000	0,000	0,000	0,000
3675	0,000	-2,000	0,000	0,000	0,000	0,000
3697	7,500	8,000	0,000	0,000	0,000	0,000
3698	9,375	8,000	0,000	0,000	0,000	0,000
3699	8,750	8,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
3700	8,125	8,000	0,000	0,000	0,000	0,000
3739	-5,294	-4,000	0,000	0,000	0,000	0,000
3740	-4,706	-4,000	0,000	0,000	0,000	0,000
3741	-4,118	-4,000	0,000	0,000	0,000	0,000
3745	-5,882	-4,000	0,000	0,000	0,000	0,000
3755	-3,529	-4,000	0,000	0,000	0,000	0,000
3756	-2,941	-4,000	0,000	0,000	0,000	0,000
3757	-2,353	-4,000	0,000	0,000	0,000	0,000
3758	-1,765	-4,000	0,000	0,000	0,000	0,000
3791	-10,588	-20,000	0,000	0,000	0,000	0,000
3795	-10,000	-20,000	0,000	0,000	0,000	0,000
3796	-9,412	-20,000	0,000	0,000	0,000	0,000
3797	-8,824	-20,000	0,000	0,000	0,000	0,000
3959	10,000	8,000	0,000	0,000	0,000	0,000
3963	11,875	8,000	0,000	0,000	0,000	0,000
3964	11,250	8,000	0,000	0,000	0,000	0,000
3965	10,625	8,000	0,000	0,000	0,000	0,000
4213	-8,235	-20,000	0,000	0,000	0,000	0,000
4217	-7,647	-20,000	0,000	0,000	0,000	0,000
4218	-7,059	-20,000	0,000	0,000	0,000	0,000
4219	-6,471	-20,000	0,000	0,000	0,000	0,000
4281	-0,588	-4,000	0,000	0,000	0,000	0,000
4282	0,000	-4,000	0,000	0,000	0,000	0,000
4283	0,588	-4,000	0,000	0,000	0,000	0,000
4287	-1,176	-4,000	0,000	0,000	0,000	0,000
4297	1,176	-4,000	0,000	0,000	0,000	0,000
4301	1,765	-4,000	0,000	0,000	0,000	0,000
4302	2,353	-4,000	0,000	0,000	0,000	0,000
4303	2,941	-4,000	0,000	0,000	0,000	0,000
4329	12,500	8,000	0,000	0,000	0,000	0,000
4330	14,375	8,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
4331	13,750	8,000	0,000	0,000	0,000	0,000
4332	13,125	8,000	0,000	0,000	0,000	0,000
4361	15,000	8,000	0,000	0,000	0,000	0,000
4365	16,875	8,000	0,000	0,000	0,000	0,000
4366	16,250	8,000	0,000	0,000	0,000	0,000
4367	15,625	8,000	0,000	0,000	0,000	0,000
4403	-5,882	-20,000	0,000	0,000	0,000	0,000
4407	-5,294	-20,000	0,000	0,000	0,000	0,000
4408	-4,706	-20,000	0,000	0,000	0,000	0,000
4409	-4,118	-20,000	0,000	0,000	0,000	0,000
4577	5,294	-4,000	0,000	0,000	0,000	0,000
4578	4,706	-4,000	0,000	0,000	0,000	0,000
4579	4,118	-4,000	0,000	0,000	0,000	0,000
4589	3,529	-4,000	0,000	0,000	0,000	0,000
4643	20,000	6,200	0,000	0,000	0,000	0,000
4644	20,000	6,800	0,000	0,000	0,000	0,000
4645	20,000	7,400	0,000	0,000	0,000	0,000
4646	20,000	8,000	0,000	0,000	0,000	0,000
4647	19,375	8,000	0,000	0,000	0,000	0,000
4648	18,750	8,000	0,000	0,000	0,000	0,000
4649	18,125	8,000	0,000	0,000	0,000	0,000
4653	17,500	8,000	0,000	0,000	0,000	0,000
4657	20,000	5,600	0,000	0,000	0,000	0,000
4661	20,000	3,800	0,000	0,000	0,000	0,000
4662	20,000	4,400	0,000	0,000	0,000	0,000
4663	20,000	5,000	0,000	0,000	0,000	0,000
4711	5,882	-4,000	0,000	0,000	0,000	0,000
4715	6,471	-4,000	0,000	0,000	0,000	0,000
4716	7,059	-4,000	0,000	0,000	0,000	0,000
4717	7,647	-4,000	0,000	0,000	0,000	0,000
4779	-3,529	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
4780	-2,941	-20,000	0,000	0,000	0,000	0,000
4781	-2,353	-20,000	0,000	0,000	0,000	0,000
4782	-1,765	-20,000	0,000	0,000	0,000	0,000
4939	20,000	3,200	0,000	0,000	0,000	0,000
4943	20,000	1,400	0,000	0,000	0,000	0,000
4944	20,000	2,000	0,000	0,000	0,000	0,000
4945	20,000	2,600	0,000	0,000	0,000	0,000
4949	8,824	-4,000	0,000	0,000	0,000	0,000
4950	9,412	-4,000	0,000	0,000	0,000	0,000
4951	10,000	-4,000	0,000	0,000	0,000	0,000
4955	8,235	-4,000	0,000	0,000	0,000	0,000
4965	-1,176	-20,000	0,000	0,000	0,000	0,000
4969	-0,588	-20,000	0,000	0,000	0,000	0,000
4970	0,000	-20,000	0,000	0,000	0,000	0,000
4971	0,588	-20,000	0,000	0,000	0,000	0,000
5039	10,588	-4,000	0,000	0,000	0,000	0,000
5043	12,353	-4,000	0,000	0,000	0,000	0,000
5044	11,765	-4,000	0,000	0,000	0,000	0,000
5045	11,176	-4,000	0,000	0,000	0,000	0,000
5134	20,000	0,800	0,000	0,000	0,000	0,000
5141	20,000	-1,000	0,000	0,000	0,000	0,000
5142	20,000	-0,400	0,000	0,000	0,000	0,000
5143	20,000	0,200	0,000	0,000	0,000	0,000
5245	1,176	-20,000	0,000	0,000	0,000	0,000
5249	1,765	-20,000	0,000	0,000	0,000	0,000
5250	2,353	-20,000	0,000	0,000	0,000	0,000
5251	2,941	-20,000	0,000	0,000	0,000	0,000
5287	20,000	-1,600	0,000	0,000	0,000	0,000
5291	20,000	-3,400	0,000	0,000	0,000	0,000
5292	20,000	-2,800	0,000	0,000	0,000	0,000
5293	20,000	-2,200	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
5297	13,529	-4,000	0,000	0,000	0,000	0,000
5298	14,118	-4,000	0,000	0,000	0,000	0,000
5299	14,706	-4,000	0,000	0,000	0,000	0,000
5303	12,941	-4,000	0,000	0,000	0,000	0,000
5313	15,294	-4,000	0,000	0,000	0,000	0,000
5314	15,882	-4,000	0,000	0,000	0,000	0,000
5315	16,471	-4,000	0,000	0,000	0,000	0,000
5316	17,059	-4,000	0,000	0,000	0,000	0,000
5439	3,529	-20,000	0,000	0,000	0,000	0,000
5443	4,118	-20,000	0,000	0,000	0,000	0,000
5444	4,706	-20,000	0,000	0,000	0,000	0,000
5445	5,294	-20,000	0,000	0,000	0,000	0,000
5501	18,235	-4,000	0,000	0,000	0,000	0,000
5502	18,824	-4,000	0,000	0,000	0,000	0,000
5503	19,412	-4,000	0,000	0,000	0,000	0,000
5504	20,000	-4,000	0,000	0,000	0,000	0,000
5505	20,000	-5,714	0,000	0,000	0,000	0,000
5506	20,000	-5,143	0,000	0,000	0,000	0,000
5507	20,000	-4,571	0,000	0,000	0,000	0,000
5517	17,647	-4,000	0,000	0,000	0,000	0,000
5667	5,882	-20,000	0,000	0,000	0,000	0,000
5668	6,471	-20,000	0,000	0,000	0,000	0,000
5669	7,059	-20,000	0,000	0,000	0,000	0,000
5670	7,647	-20,000	0,000	0,000	0,000	0,000
5693	20,000	-6,286	0,000	0,000	0,000	0,000
5694	20,000	-8,000	0,000	0,000	0,000	0,000
5695	20,000	-7,429	0,000	0,000	0,000	0,000
5696	20,000	-6,857	0,000	0,000	0,000	0,000
5813	8,235	-20,000	0,000	0,000	0,000	0,000
5817	8,824	-20,000	0,000	0,000	0,000	0,000
5818	9,412	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	0,000	0,000
5843	20,000	-10,286	0,000	0,000	0,000	0,000
5844	20,000	-9,714	0,000	0,000	0,000	0,000
5845	20,000	-9,143	0,000	0,000	0,000	0,000
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	0,000	0,000
6054	20,000	-12,571	0,000	0,000	0,000	0,000
6055	20,000	-12,000	0,000	0,000	0,000	0,000
6056	20,000	-11,429	0,000	0,000	0,000	0,000
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	0,000	0,000
6093	20,000	-14,857	0,000	0,000	0,000	0,000
6094	20,000	-14,286	0,000	0,000	0,000	0,000
6095	20,000	-13,714	0,000	0,000	0,000	0,000
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	0,000	0,000
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	0,000	0,000
6175	20,000	-16,571	0,000	0,000	0,000	0,000
6176	20,000	-16,000	0,000	0,000	0,000	0,000
6180	20,000	-17,714	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-15 m]	Ux [10^-15 m]	dUy [10^-15 m]	Uy [10^-15 m]
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	0,000	0,000
6201	20,000	-18,286	0,000	0,000	0,000	0,000
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	0,000	0,000

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

6. Results for phase 1

Table [11] Table of deformations phase no: 1

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1	-1,371	8,000	62,513	124,574	-168,544	-337,719
2	-1,543	8,000	60,997	121,702	-159,853	-320,347
3	-1,715	8,000	59,497	118,863	-151,652	-303,949
7	-2,075	8,000	56,703	113,560	-135,704	-272,054
8	-2,264	8,000	55,131	110,603	-127,996	-256,610
9	-2,452	8,000	53,621	107,748	-120,730	-242,014
13	-1,887	8,000	58,147	116,300	-143,855	-288,366
23	-2,641	8,000	52,403	105,338	-113,938	-228,249
27	-2,848	8,000	51,174	102,688	-106,533	-213,487
28	-3,055	8,000	49,737	99,778	-99,625	-199,639
29	-3,261	8,000	48,304	96,901	-93,023	-186,469
33	-3,468	8,000	46,878	94,147	-86,737	-173,941
37	-3,695	8,000	45,342	91,190	-80,232	-160,882
38	-3,922	8,000	43,835	88,194	-74,055	-148,491
39	-4,149	8,000	42,282	85,178	-68,178	-136,745
49	-0,728	8,000	67,673	134,503	-205,877	-412,236
50	-0,885	8,000	66,239	131,895	-195,921	-392,428
51	-1,042	8,000	64,786	129,270	-186,621	-373,816
58	-1,199	8,000	63,811	127,138	-177,927	-356,306
103	-4,376	8,000	40,762	82,311	-62,829	-125,843
107	-4,625	8,000	39,835	79,986	-56,866	-114,051
108	-4,873	8,000	38,228	76,987	-51,286	-102,941
109	-5,122	8,000	36,550	73,935	-46,115	-92,522
113	-5,371	8,000	35,370	71,407	-41,262	-82,686
117	-5,644	8,000	34,123	68,718	-36,023	-72,273
118	-5,917	8,000	32,478	65,668	-31,100	-62,460

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
119	-6,190 8,000	30,958	62,781	-26,571	-53,307
129	-0,572 8,000	68,515	136,509	-216,423	-433,233
133	-0,143 8,000	72,911	144,901	-249,003	-498,468
134	-0,286 8,000	71,382	142,009	-237,282	-475,039
135	-0,429 8,000	69,897	139,162	-226,416	-453,326
139	0,000 8,000	74,376	147,602	-261,851	-524,057
143	0,000 7,540	33,895	67,198	-262,167	-524,521
144	0,000 7,693	46,527	92,367	-261,782	-523,765
145	0,000 7,847	60,114	119,378	-261,776	-523,717
146	0,000 8,000	74,378	147,642	-261,846	-524,070
169	0,000 6,965	-3,092	-6,502	-263,483	-527,174
170	0,000 7,106	4,501	8,629	-263,403	-527,016
171	0,000 7,246	13,031	25,625	-263,129	-526,473
172	0,000 7,387	22,525	44,538	-262,742	-525,707
183	0,000 6,825	-9,806	-19,883	-263,312	-526,831
184	0,000 6,438	-24,483	-49,134	-261,467	-523,135
185	0,000 6,567	-20,149	-40,496	-262,302	-524,807
186	0,000 6,696	-15,274	-30,780	-262,918	-526,041
207	0,000 6,309	-28,333	-56,807	-260,421	-521,040
208	0,000 5,955	-36,778	-73,638	-256,546	-513,285
209	0,000 6,073	-34,276	-68,652	-257,991	-516,177
210	0,000 6,191	-31,471	-63,062	-259,286	-518,769
265	0,000 5,836	-39,003	-78,073	-254,960	-510,111
266	0,000 5,511	-43,900	-87,832	-249,951	-500,085
267	0,000 5,620	-42,450	-84,942	-251,719	-503,624
268	0,000 5,728	-40,823	-81,700	-253,391	-506,971
289	0,000 5,403	-45,189	-90,401	-248,093	-496,369
290	0,000 5,105	-48,011	-96,023	-242,576	-485,328
291	0,000 5,204	-47,179	-94,365	-244,477	-489,131
292	0,000 5,304	-46,242	-92,497	-246,317	-492,815
315	-6,463 8,000	30,042	60,538	-22,339	-44,700

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
319	-6,762	8,000	28,684	57,767	-17,628	-35,460
320	-7,062	8,000	27,048	54,765	-13,327	-26,894
321	-7,361	8,000	25,489	51,886	-9,408	-18,958
331	-7,660	8,000	24,416	49,537	-5,766	-11,531
335	-7,989	8,000	23,232	47,006	-1,810	-3,674
336	-8,317	8,000	21,796	44,276	1,876	3,667
337	-8,645	8,000	20,462	41,699	5,234	10,449
361	0,000	4,732	-50,328	-100,636	-234,981	-470,131
362	0,000	4,823	-49,867	-99,719	-236,899	-473,969
363	0,000	4,914	-49,342	-98,673	-238,779	-477,731
364	0,000	5,005	-48,747	-97,488	-240,619	-481,412
375	0,000	4,641	-50,728	-101,433	-233,029	-466,224
376	0,000	4,390	-51,554	-103,075	-227,498	-455,158
377	0,000	4,474	-51,320	-102,611	-229,366	-458,895
378	0,000	4,557	-51,046	-102,065	-231,210	-462,585
395	0,000	4,307	-51,749	-103,463	-225,609	-451,378
396	0,000	4,077	-52,110	-104,180	-220,314	-440,783
397	0,000	4,153	-52,017	-103,994	-222,094	-444,344
398	0,000	4,230	-51,897	-103,757	-223,859	-447,877
399	-0,219	4,000	-52,845	-105,647	-207,897	-415,969
400	-0,146	4,000	-52,645	-105,248	-211,106	-422,382
401	-0,073	4,000	-52,409	-104,775	-214,312	-428,787
405	0,000	4,000	-52,135	-104,227	-217,512	-435,181
409	0,000	4,000	-52,179	-104,316	-218,520	-437,195
410	0,000	3,775	-52,253	-104,460	-213,189	-426,527
411	0,000	3,850	-52,248	-104,452	-214,976	-430,104
412	0,000	3,925	-52,224	-104,404	-216,754	-433,660
571	-0,536	4,000	-53,315	-106,587	-193,971	-388,142
572	-0,455	4,000	-53,254	-106,464	-197,535	-395,264
573	-0,373	4,000	-53,152	-106,261	-201,108	-402,404
577	-0,292	4,000	-53,010	-105,976	-204,687	-409,555

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
593	-9,334 8,000	18,260	37,056	11,635	23,349
594	-9,694 8,000	17,137	34,741	14,696	29,472
595	-10,054 8,000	16,049	32,518	17,549	35,176
599	-8,974 8,000	19,396	39,441	8,347	16,772
603	-10,414 8,000	15,007	30,396	20,203	40,483
607	-10,809 8,000	13,920	28,185	22,902	45,879
608	-11,204 8,000	12,888	26,091	25,394	50,862
609	-11,599 8,000	11,912	24,111	27,693	55,458
625	-11,994 8,000	10,989	22,240	29,812	59,695
626	-12,428 8,000	10,035	20,310	31,944	63,956
627	-12,861 8,000	9,141	18,499	33,888	67,842
628	-13,294 8,000	8,302	16,803	35,657	71,378
635	-13,727 8,000	7,516	15,213	37,264	74,589
639	-14,203 8,000	6,711	13,585	38,852	77,763
640	-14,678 8,000	5,962	12,069	40,270	80,597
641	-15,153 8,000	5,263	10,656	41,529	83,114
651	-16,150 8,000	3,944	7,988	43,701	87,455
652	-16,671 8,000	3,322	6,728	44,605	89,261
653	-17,192 8,000	2,738	5,546	45,362	90,774
657	-15,628 8,000	4,611	9,337	42,641	85,336
667	-17,713 8,000	2,187	4,430	45,979	92,007
671	-20,000 8,000	0,000	0,000	47,166	94,378
672	-20,000 7,500	0,000	0,000	47,337	94,726
673	-20,000 7,000	0,000	0,000	47,452	94,961
674	-20,000 6,500	0,000	0,000	47,504	95,069
675	-18,285 8,000	1,612	3,266	46,503	93,053
676	-18,857 8,000	1,062	2,151	46,873	93,792
677	-19,428 8,000	526,854	1,067	47,093	94,232
703	-20,000 6,000	0,000	0,000	47,486	95,038
707	-20,000 5,500	0,000	0,000	47,396	94,864
708	-20,000 5,000	0,000	0,000	47,234	94,543

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
709	-20,000	4,500	0,000	0,000	46,999	94,075
713	-20,000	4,000	0,000	0,000	46,692	93,464
714	-19,416	4,000	-744,123	-1,478	46,619	93,318
715	-18,833	4,000	-1,492	-2,963	46,400	92,881
716	-18,249	4,000	-2,246	-4,461	46,033	92,147
717	-20,000	3,333	0,000	0,000	46,177	92,437
718	-20,000	2,667	0,000	0,000	45,555	91,195
719	-20,000	2,000	0,000	0,000	44,844	89,772
755	0,000	3,700	-52,240	-104,432	-211,392	-422,933
756	0,000	3,475	-52,101	-104,152	-205,957	-412,059
757	0,000	3,550	-52,162	-104,276	-207,776	-415,698
758	0,000	3,625	-52,209	-104,370	-209,588	-419,323
769	0,000	3,400	-52,025	-103,999	-204,133	-408,409
770	0,000	3,175	-51,722	-103,391	-198,631	-397,402
771	0,000	3,250	-51,834	-103,617	-200,469	-401,079
772	0,000	3,325	-51,936	-103,821	-202,303	-404,749
821	-17,665	4,000	-3,010	-5,978	45,513	91,109
822	-17,142	4,000	-3,704	-7,358	44,911	89,907
823	-16,619	4,000	-4,410	-8,761	44,176	88,438
824	-16,095	4,000	-5,130	-10,192	43,297	86,683
853	-20,000	1,333	0,000	0,000	44,067	88,217
857	-20,000	0,667	0,000	0,000	43,177	86,433
858	-20,000	0,000	0,000	0,000	42,252	84,581
859	-20,000	-0,667	0,000	0,000	41,453	82,980
869	-20,000	-1,333	0,000	0,000	40,556	81,181
873	-20,000	-2,000	0,000	0,000	39,463	78,990
874	-20,000	-2,667	0,000	0,000	38,614	77,285
875	-20,000	-3,333	0,000	0,000	37,848	75,748
879	-20,000	-4,000	0,000	0,000	37,111	74,267
880	-19,412	-4,000	-1,853	-3,706	37,052	74,149
881	-18,824	-4,000	-3,705	-7,412	36,878	73,802

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
882	-18,235 -4,000	-5,557	-11,117	36,586	73,215
883	-20,000 -4,571	0,000	0,000	35,335	70,714
884	-20,000 -5,143	0,000	0,000	33,537	67,116
885	-20,000 -5,714	0,000	0,000	31,722	63,486
895	-20,000 -6,286	0,000	0,000	29,898	59,835
899	-20,000 -6,857	0,000	0,000	28,073	56,183
900	-20,000 -7,429	0,000	0,000	26,254	52,542
901	-20,000 -8,000	0,000	0,000	24,446	48,925
905	-2,217 4,000	-48,419	-96,801	-126,144	-252,558
906	-2,091 4,000	-49,049	-98,061	-130,717	-261,702
907	-1,964 4,000	-49,655	-99,271	-135,384	-271,036
911	-1,838 4,000	-50,232	-100,424	-140,145	-280,556
912	-1,725 4,000	-50,721	-101,402	-144,491	-289,244
913	-1,612 4,000	-51,180	-102,320	-148,909	-298,077
914	-1,499 4,000	-51,606	-103,171	-153,396	-307,048
921	-2,765 4,000	-45,479	-90,920	-107,383	-215,031
922	-2,624 4,000	-46,257	-92,476	-112,025	-224,317
923	-2,483 4,000	-47,021	-94,005	-116,786	-233,842
927	-2,343 4,000	-47,768	-95,498	-121,667	-243,604
937	-2,906 4,000	-44,691	-89,345	-102,859	-205,981
938	-3,377 4,000	-42,024	-84,006	-88,562	-177,375
939	-3,220 4,000	-42,915	-85,790	-93,186	-186,626
940	-3,063 4,000	-43,805	-87,572	-97,950	-196,160
947	-4,820 4,000	-34,191	-68,320	-52,145	-104,473
948	-4,625 4,000	-35,190	-70,322	-56,479	-113,150
949	-4,429 4,000	-36,212	-72,369	-60,987	-122,177
953	-4,234 4,000	-37,255	-74,458	-65,676	-131,565
954	-4,059 4,000	-38,207	-76,364	-70,039	-140,299
955	-3,884 4,000	-39,172	-78,296	-74,557	-149,343
956	-3,709 4,000	-40,149	-80,252	-79,235	-158,707
963	-3,534 4,000	-41,135	-82,226	-84,078	-168,400

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
973	-5,670 4,000	-30,130	-60,182	-35,183	-70,500
974	-5,452 4,000	-31,127	-62,182	-39,261	-78,669
975	-5,234 4,000	-32,156	-64,243	-43,524	-87,208
979	-5,016 4,000	-33,216	-66,366	-47,980	-96,132
989	-5,888 4,000	-29,163	-58,245	-31,281	-62,685
990	-6,617 4,000	-26,148	-52,203	-19,411	-38,903
991	-6,374 4,000	-27,116	-54,143	-23,174	-46,443
992	-6,131 4,000	-28,121	-56,157	-27,127	-54,363
999	-1,285 4,000	-52,308	-104,575	-162,090	-324,426
1000	-1,183 4,000	-52,586	-105,131	-166,277	-332,796
1001	-1,082 4,000	-52,825	-105,609	-170,511	-341,258
1005	-1,386 4,000	-51,994	-103,948	-157,952	-316,154
1015	-0,981 4,000	-53,023	-106,003	-174,788	-349,807
1016	-0,890 4,000	-53,162	-106,281	-178,655	-357,536
1017	-0,799 4,000	-53,262	-106,481	-182,552	-365,323
1018	-0,708 4,000	-53,322	-106,601	-186,474	-373,162
1025	-0,618 4,000	-53,339	-106,634	-190,419	-381,045
1077	-7,674 4,000	-22,338	-44,569	-5,049	-10,120
1078	-7,403 4,000	-23,257	-46,411	-8,447	-16,930
1079	-7,132 4,000	-24,216	-48,332	-12,037	-24,125
1083	-6,860 4,000	-25,215	-50,335	-15,830	-31,726
1099	-7,946 4,000	-21,456	-42,804	-1,832	-3,673
1100	-8,854 4,000	-18,757	-37,395	7,734	15,503
1101	-8,551 4,000	-19,616	-39,117	4,739	9,498
1102	-8,248 4,000	-20,515	-40,918	1,554	3,114
1209	0,000 3,100	-51,598	-103,143	-196,790	-393,718
1210	0,000 2,875	-51,168	-102,283	-191,251	-382,637
1211	0,000 2,950	-51,320	-102,587	-193,099	-386,335
1212	0,000 3,025	-51,464	-102,875	-194,946	-390,029
1239	-15,103 4,000	-6,543	-13,001	41,202	82,495
1240	-14,634 4,000	-7,237	-14,382	39,995	80,085

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1241	-14,165 4,000	-7,952	-15,806	38,636	77,368
1245	-13,696 4,000	-8,691	-17,277	37,112	74,322
1246	-13,276 4,000	-9,377	-18,643	35,596	71,290
1247	-12,855 4,000	-10,088	-20,059	33,926	67,952
1248	-12,435 4,000	-10,826	-21,531	32,093	64,284
1255	-15,572 4,000	-5,867	-11,656	42,266	84,621
1291	0,000 2,800	-51,007	-101,961	-189,402	-378,938
1292	0,000 2,575	-50,481	-100,909	-183,852	-367,833
1293	0,000 2,650	-50,664	-101,273	-185,702	-371,534
1294	0,000 2,725	-50,839	-101,624	-187,552	-375,236
1339	-17,647 -4,000	-7,407	-14,819	36,148	72,340
1340	-15,882 -4,000	-12,851	-25,710	34,115	68,269
1341	-16,471 -4,000	-11,037	-22,080	34,926	69,894
1342	-17,059 -4,000	-9,220	-18,447	35,612	71,266
1383	-20,000 -8,571	0,000	0,000	22,656	45,342
1384	-20,000 -9,143	0,000	0,000	20,890	41,809
1385	-20,000 -9,714	0,000	0,000	19,155	38,336
1386	-20,000 -10,286	0,000	0,000	17,455	34,934
1393	-20,000 -10,857	0,000	0,000	15,796	31,614
1397	-20,000 -11,429	0,000	0,000	14,184	28,388
1398	-20,000 -12,000	0,000	0,000	12,624	25,265
1399	-20,000 -12,571	0,000	0,000	11,120	22,257
1419	0,000 2,500	-50,293	-100,531	-182,002	-364,132
1420	0,000 2,275	-49,693	-99,333	-176,460	-353,044
1421	0,000 2,350	-49,898	-99,743	-178,306	-356,737
1422	0,000 2,425	-50,098	-100,143	-180,153	-360,434
1433	0,000 8,000	74,380	147,682	-261,841	-524,084
1437	0,750 8,000	81,264	161,074	-350,203	-700,693
1438	0,500 8,000	77,927	154,882	-314,722	-629,739
1439	0,250 8,000	75,700	150,500	-286,613	-573,485
1547	-10,170 4,000	-15,423	-30,718	18,817	37,710

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1548	-9,832	4,000	-16,222	-32,318	16,249	32,566
1549	-9,494	4,000	-17,058	-33,993	13,498	27,054
1553	-9,157	4,000	-17,935	-35,748	10,552	21,150
1563	-10,508	4,000	-14,658	-29,187	21,214	42,511
1564	-11,638	4,000	-12,313	-24,499	28,121	56,339
1565	-11,261	4,000	-13,061	-25,993	25,997	52,087
1566	-10,884	4,000	-13,841	-27,554	23,698	47,486
1573	-12,015	4,000	-11,595	-23,065	30,083	60,264
1709	-15,294	-4,000	-14,654	-29,317	33,169	66,375
1710	-14,706	-4,000	-16,431	-32,874	32,071	64,176
1711	-14,118	-4,000	-18,178	-36,368	30,820	61,672
1712	-13,529	-4,000	-19,889	-39,791	29,421	58,871
1847	0,000	2,200	-49,483	-98,913	-174,616	-349,355
1848	0,000	1,975	-48,828	-97,604	-169,098	-338,316
1849	0,000	2,050	-49,051	-98,049	-170,935	-341,990
1850	0,000	2,125	-49,269	-98,485	-172,774	-345,670
1921	-20,000	-13,714	0,000	0,000	8,309	16,630
1922	-20,000	-14,286	0,000	0,000	7,013	14,037
1923	-20,000	-14,857	0,000	0,000	5,800	11,608
1927	-20,000	-13,143	0,000	0,000	9,680	19,374
1931	-20,000	-15,429	0,000	0,000	4,675	9,358
1935	-20,000	-16,000	0,000	0,000	3,648	7,301
1936	-20,000	-16,571	0,000	0,000	2,726	5,456
1937	-20,000	-17,143	0,000	0,000	1,919	3,841
1957	0,000	1,900	-48,603	-97,153	-167,265	-334,648
1958	0,000	1,825	-48,374	-96,695	-165,435	-330,987
1959	0,000	1,750	-48,141	-96,231	-163,608	-327,332
1960	0,000	1,675	-47,906	-95,761	-161,785	-323,685
1993	0,000	1,600	-47,668	-95,286	-159,966	-320,046
1994	0,000	1,375	-46,940	-93,831	-154,534	-309,180
1995	0,000	1,450	-47,185	-94,321	-156,340	-312,793

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1996	0,000 1,525	-47,428	-94,805	-158,151	-316,415
2035	-20,000 -17,714	0,000	0,000	1,236	2,475
2036	-20,000 -20,000	0,000	0,000	0,000	0,000
2037	-19,412 -20,000	0,000	0,000	0,000	0,000
2038	-18,824 -20,000	0,000	0,000	0,000	0,000
2039	-18,235 -20,000	0,000	0,000	0,000	0,000
2043	-20,000 -18,286	0,000	0,000	690,278	1,382
2044	-20,000 -18,857	0,000	0,000	293,202	587,018
2045	-20,000 -19,429	0,000	0,000	58,239	116,661
2059	0,000 1,300	-46,694	-93,338	-152,733	-305,576
2060	0,000 1,075	-45,942	-91,836	-147,358	-294,824
2061	0,000 1,150	-46,194	-92,340	-149,145	-298,398
2062	0,000 1,225	-46,445	-92,841	-150,937	-301,982
2079	0,000 1,000	-45,688	-91,329	-145,577	-291,260
2080	0,000 0,775	-44,918	-89,790	-140,266	-280,635
2081	0,000 0,850	-45,176	-90,305	-142,031	-284,166
2082	0,000 0,925	-45,433	-90,818	-143,802	-287,708
2083	1,000 8,000	79,319	157,524	-406,828	-813,574
2087	2,500 8,000	15,269	30,143	-555,078	-1,110
2088	2,000 8,000	38,167	75,823	-533,539	-1,067
2089	1,500 8,000	59,898	119,087	-491,124	-982,135
2293	-12,941 -4,000	-21,567	-43,149	27,874	55,773
2297	-11,176 -4,000	-26,343	-52,705	22,208	44,428
2298	-11,765 -4,000	-24,806	-49,630	24,273	48,564
2299	-12,353 -4,000	-23,211	-46,439	26,160	52,342
2525	-17,647 -20,000	0,000	0,000	0,000	0,000
2529	-17,059 -20,000	0,000	0,000	0,000	0,000
2530	-16,471 -20,000	0,000	0,000	0,000	0,000
2531	-15,882 -20,000	0,000	0,000	0,000	0,000
2567	0,000 0,700	-44,658	-89,271	-138,507	-277,116
2568	0,000 0,475	-43,873	-87,702	-133,265	-266,628

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2569	0,000 0,550	-44,136	-88,227	-135,006	-270,112
2570	0,000 0,625	-44,398	-88,750	-136,754	-273,608
2591	0,000 0,400	-43,609	-87,174	-131,529	-263,156
2592	0,000 0,325	-43,343	-86,644	-129,800	-259,696
2593	0,000 0,250	-43,077	-86,112	-128,076	-256,248
2594	0,000 0,175	-42,810	-85,577	-126,359	-252,813
2621	0,000 0,100	-42,541	-85,041	-124,649	-249,391
2622	0,000 0,025	-42,271	-84,502	-122,945	-245,981
2623	0,000 -0,050	-42,000	-83,961	-121,247	-242,585
2624	0,000 -0,125	-41,728	-83,417	-119,555	-239,201
2689	0,000 -0,200	-41,455	-82,871	-117,870	-235,830
2690	0,000 -0,275	-41,181	-82,323	-116,192	-232,473
2691	0,000 -0,350	-40,905	-81,773	-114,521	-229,129
2692	0,000 -0,425	-40,629	-81,220	-112,856	-225,798
2713	0,000 -0,500	-40,350	-80,664	-111,198	-222,481
2714	0,000 -0,725	-39,507	-78,978	-106,263	-212,608
2715	0,000 -0,650	-39,790	-79,544	-107,902	-215,887
2716	0,000 -0,575	-40,071	-80,105	-109,547	-219,178
2749	0,000 -0,800	-39,223	-78,411	-104,630	-209,342
2750	0,000 -0,875	-38,941	-77,847	-103,006	-206,092
2751	0,000 -0,950	-38,659	-77,284	-101,387	-202,853
2752	0,000 -1,025	-38,365	-76,697	-99,777	-199,633
2773	0,000 -1,100	-38,078	-76,123	-98,171	-196,420
2774	0,000 -1,175	-37,783	-75,535	-96,573	-193,223
2775	0,000 -1,250	-37,488	-74,946	-94,983	-190,043
2776	0,000 -1,325	-37,192	-74,353	-93,401	-186,877
2793	3,000 8,000	-5,705	-11,714	-562,127	-1,124
2794	4,500 8,000	-72,165	-144,415	-488,972	-977,836
2795	4,000 8,000	-51,420	-102,992	-532,777	-1,065
2796	3,500 8,000	-28,249	-56,722	-555,286	-1,110
2971	-10,588 -4,000	-27,812	-55,644	19,958	39,924

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2972	-10,000 -4,000	-29,202	-58,426	17,522	35,046
2973	-9,412 -4,000	-30,502	-61,026	14,894	29,785
2974	-8,824 -4,000	-31,697	-63,415	12,073	24,138
3065	-15,294 -20,000	0,000	0,000	0,000	0,000
3069	-14,706 -20,000	0,000	0,000	0,000	0,000
3070	-14,118 -20,000	0,000	0,000	0,000	0,000
3071	-13,529 -20,000	0,000	0,000	0,000	0,000
3251	0,000 -1,400	-36,894	-73,758	-91,826	-183,726
3252	0,000 -1,475	-36,594	-73,158	-90,257	-180,587
3253	0,000 -1,550	-36,291	-72,553	-88,694	-177,460
3254	0,000 -1,625	-35,986	-71,943	-87,137	-174,346
3275	0,000 -1,700	-35,681	-71,334	-85,588	-171,246
3276	0,000 -1,775	-35,353	-70,679	-84,052	-168,174
3277	0,000 -1,850	-35,023	-70,019	-82,527	-165,123
3278	0,000 -1,925	-34,706	-69,386	-81,002	-162,072
3279	5,000 8,000	-89,013	-178,042	-402,634	-805,165
3283	6,875 8,000	-78,139	-155,932	-196,874	-393,661
3284	6,250 8,000	-84,680	-169,181	-240,038	-479,974
3285	5,625 8,000	-88,345	-176,617	-300,305	-600,507
3385	-8,235 -4,000	-32,770	-65,562	9,062	18,108
3389	-6,471 -4,000	-35,089	-70,197	-1,062	-2,154
3390	-7,059 -4,000	-34,486	-68,992	2,485	4,944
3391	-7,647 -4,000	-33,707	-67,434	5,863	11,706
3521	-12,941 -20,000	0,000	0,000	0,000	0,000
3525	-12,353 -20,000	0,000	0,000	0,000	0,000
3526	-11,765 -20,000	0,000	0,000	0,000	0,000
3527	-11,176 -20,000	0,000	0,000	0,000	0,000
3675	0,000 -2,000	-34,419	-68,812	-79,462	-158,990
3697	7,500 8,000	-72,902	-145,136	-162,995	-325,893
3698	9,375 8,000	-57,443	-115,705	-89,049	-178,520
3699	8,750 8,000	-62,999	-125,898	-109,258	-219,199

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3700	8,125 8,000	-68,737	-136,396	-133,540	-267,486
3739	-5,294 -4,000	-35,678	-71,370	-8,580	-17,200
3740	-4,706 -4,000	-35,620	-71,252	-12,497	-25,039
3741	-4,118 -4,000	-35,299	-70,607	-16,475	-32,998
3745	-5,882 -4,000	-35,494	-71,004	-4,758	-9,552
3755	-3,529 -4,000	-34,695	-69,396	-20,469	-40,986
3756	-2,941 -4,000	-33,793	-67,588	-24,424	-48,899
3757	-2,353 -4,000	-32,582	-65,164	-28,288	-56,626
3758	-1,765 -4,000	-31,058	-62,112	-32,001	-64,053
3791	-10,588 -20,000	0,000	0,000	0,000	0,000
3795	-10,000 -20,000	0,000	0,000	0,000	0,000
3796	-9,412 -20,000	0,000	0,000	0,000	0,000
3797	-8,824 -20,000	0,000	0,000	0,000	0,000
3959	10,000 8,000	-53,460	-107,247	-71,808	-143,639
3963	11,875 8,000	-40,265	-81,513	-31,543	-63,274
3964	11,250 8,000	-44,696	-89,963	-42,882	-86,168
3965	10,625 8,000	-49,474	-98,922	-56,275	-112,830
4213	-8,235 -20,000	0,000	0,000	0,000	0,000
4217	-7,647 -20,000	0,000	0,000	0,000	0,000
4218	-7,059 -20,000	0,000	0,000	0,000	0,000
4219	-6,471 -20,000	0,000	0,000	0,000	0,000
4281	-0,588 -4,000	-27,074	-54,139	-38,725	-77,497
4282	0,000 -4,000	-24,631	-49,252	-41,598	-83,240
4283	0,588 -4,000	-21,919	-43,826	-44,049	-88,139
4287	-1,176 -4,000	-29,220	-58,434	-35,502	-71,054
4297	1,176 -4,000	-18,977	-37,940	-46,008	-92,054
4301	1,765 -4,000	-15,855	-31,695	-47,424	-94,883
4302	2,353 -4,000	-12,609	-25,204	-48,261	-96,552
4303	2,941 -4,000	-9,299	-18,584	-48,496	-97,019
4329	12,500 8,000	-36,692	-74,073	-21,742	-43,406
4330	14,375 8,000	-26,381	-53,060	1,210	2,497

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4331	13,750 8,000	-29,741	-59,849	-5,369	-10,659
4332	13,125 8,000	-33,193	-66,866	-12,972	-25,870
4361	15,000 8,000	-23,131	-46,508	6,862	13,797
4365	16,875 8,000	-13,982	-28,096	19,022	38,117
4366	16,250 8,000	-16,942	-34,049	15,701	31,476
4367	15,625 8,000	-19,988	-40,178	11,667	23,409
4403	-5,882 -20,000	0,000	0,000	0,000	0,000
4407	-5,294 -20,000	0,000	0,000	0,000	0,000
4408	-4,706 -20,000	0,000	0,000	0,000	0,000
4409	-4,118 -20,000	0,000	0,000	0,000	0,000
4577	5,294 -4,000	3,347	6,705	-43,540	-87,097
4578	4,706 -4,000	392,854	798,161	-45,613	-91,244
4579	4,118 -4,000	-2,737	-5,461	-47,154	-94,329
4589	3,529 -4,000	-5,987	-11,961	-48,125	-96,273
4643	20,000 6,200	0,000	0,000	28,567	57,232
4644	20,000 6,800	0,000	0,000	28,045	56,181
4645	20,000 7,400	0,000	0,000	27,276	54,632
4646	20,000 8,000	0,000	0,000	26,266	52,603
4647	19,375 8,000	-2,736	-5,496	25,984	52,040
4648	18,750 8,000	-5,487	-11,024	25,135	50,342
4649	18,125 8,000	-8,269	-16,613	23,706	47,484
4653	17,500 8,000	-11,096	-22,294	21,679	43,430
4657	20,000 5,600	0,000	0,000	28,843	57,790
4661	20,000 3,800	0,000	0,000	28,374	56,860
4662	20,000 4,400	0,000	0,000	28,722	57,555
4663	20,000 5,000	0,000	0,000	28,887	57,883
4711	5,882 -4,000	6,076	12,163	-40,991	-81,997
4715	6,471 -4,000	8,543	17,097	-38,030	-76,073
4716	7,059 -4,000	10,723	21,456	-34,719	-69,450
4717	7,647 -4,000	12,599	25,208	-31,133	-62,276
4779	-3,529 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4780	-2,941 -20,000	0,000	0,000	0,000	0,000
4781	-2,353 -20,000	0,000	0,000	0,000	0,000
4782	-1,765 -20,000	0,000	0,000	0,000	0,000
4939	20,000 3,200	0,000	0,000	27,875	55,861
4943	20,000 1,400	0,000	0,000	25,824	51,747
4944	20,000 2,000	0,000	0,000	26,575	53,253
4945	20,000 2,600	0,000	0,000	27,265	54,638
4949	8,824 -4,000	15,417	30,845	-23,360	-46,727
4950	9,412 -4,000	16,348	32,707	-19,296	-38,597
4951	10,000 -4,000	16,963	33,938	-15,206	-30,414
4955	8,235 -4,000	14,166	28,343	-27,329	-54,665
4965	-1,176 -20,000	0,000	0,000	0,000	0,000
4969	-0,588 -20,000	0,000	0,000	0,000	0,000
4970	0,000 -20,000	0,000	0,000	0,000	0,000
4971	0,588 -20,000	0,000	0,000	0,000	0,000
5039	10,588 -4,000	17,282	34,577	-11,163	-22,325
5043	12,353 -4,000	16,718	33,451	213,172	435,852
5044	11,765 -4,000	17,135	34,285	-3,416	-6,827
5045	11,176 -4,000	17,331	34,676	-7,219	-14,435
5134	20,000 0,800	0,000	0,000	25,094	50,280
5141	20,000 -1,000	0,000	0,000	23,445	46,963
5142	20,000 -0,400	0,000	0,000	23,803	47,686
5143	20,000 0,200	0,000	0,000	24,403	48,892
5245	1,176 -20,000	0,000	0,000	0,000	0,000
5249	1,765 -20,000	0,000	0,000	0,000	0,000
5250	2,353 -20,000	0,000	0,000	0,000	0,000
5251	2,941 -20,000	0,000	0,000	0,000	0,000
5287	20,000 -1,600	0,000	0,000	23,529	47,123
5291	20,000 -3,400	0,000	0,000	23,711	47,467
5292	20,000 -2,800	0,000	0,000	23,381	46,814
5293	20,000 -2,200	0,000	0,000	23,320	46,699

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
5297	13,529	-4,000	15,307	30,628	6,847	13,710
5298	14,118	-4,000	14,356	28,727	9,812	19,643
5299	14,706	-4,000	13,269	26,552	12,523	25,070
5303	12,941	-4,000	16,101	32,217	3,642	7,296
5313	15,294	-4,000	12,062	24,137	14,969	29,965
5314	15,882	-4,000	10,755	21,521	17,140	34,311
5315	16,471	-4,000	9,363	18,736	19,030	38,093
5316	17,059	-4,000	7,902	15,813	20,634	41,302
5439	3,529	-20,000	0,000	0,000	0,000	0,000
5443	4,118	-20,000	0,000	0,000	0,000	0,000
5444	4,706	-20,000	0,000	0,000	0,000	0,000
5445	5,294	-20,000	0,000	0,000	0,000	0,000
5501	18,235	-4,000	4,827	9,660	22,977	45,992
5502	18,824	-4,000	3,240	6,484	23,713	47,466
5503	19,412	-4,000	1,628	3,257	24,163	48,365
5504	20,000	-4,000	0,000	0,000	24,315	48,669
5505	20,000	-5,714	0,000	0,000	19,811	39,657
5506	20,000	-5,143	0,000	0,000	21,288	42,612
5507	20,000	-4,571	0,000	0,000	22,792	45,623
5517	17,647	-4,000	6,386	12,779	21,949	43,935
5667	5,882	-20,000	0,000	0,000	0,000	0,000
5668	6,471	-20,000	0,000	0,000	0,000	0,000
5669	7,059	-20,000	0,000	0,000	0,000	0,000
5670	7,647	-20,000	0,000	0,000	0,000	0,000
5693	20,000	-6,286	0,000	0,000	18,371	36,775
5694	20,000	-8,000	0,000	0,000	14,326	28,678
5695	20,000	-7,429	0,000	0,000	15,624	31,276
5696	20,000	-6,857	0,000	0,000	16,973	33,977
5813	8,235	-20,000	0,000	0,000	0,000	0,000
5817	8,824	-20,000	0,000	0,000	0,000	0,000
5818	9,412	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	13,082	26,188
5843	20,000	-10,286	0,000	0,000	9,683	19,385
5844	20,000	-9,714	0,000	0,000	10,760	21,541
5845	20,000	-9,143	0,000	0,000	11,893	23,808
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	8,661	17,339
6054	20,000	-12,571	0,000	0,000	5,919	11,851
6055	20,000	-12,000	0,000	0,000	6,780	13,574
6056	20,000	-11,429	0,000	0,000	7,694	15,402
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	5,110	10,231
6093	20,000	-14,857	0,000	0,000	2,990	5,987
6094	20,000	-14,286	0,000	0,000	3,646	7,299
6095	20,000	-13,714	0,000	0,000	4,352	8,713
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	2,388	4,781
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	924,781	1,852
6175	20,000	-16,571	0,000	0,000	1,351	2,706
6176	20,000	-16,000	0,000	0,000	1,840	3,685
6180	20,000	-17,714	0,000	0,000	566,188	1,134

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	-11,836	-23,540
6201	20,000	-18,286	0,000	0,000	283,763	568,468
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	87,385	175,223

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

7. Results for phase 2

Table [12] Table of deformations phase no: 2

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1	-1,371	8,000	23,535	47,049	-106,301	-212,578
2	-1,543	8,000	24,937	49,851	-103,279	-206,534
3	-1,715	8,000	26,212	52,396	-100,290	-200,556
7	-2,075	8,000	28,519	57,003	-94,126	-188,227
8	-2,264	8,000	29,539	59,038	-90,959	-181,892
9	-2,452	8,000	30,444	60,844	-87,836	-175,645
13	-1,887	8,000	27,371	54,712	-97,334	-194,643
23	-2,641	8,000	31,257	62,467	-84,759	-169,491
27	-2,848	8,000	32,045	64,038	-81,429	-162,832
28	-3,055	8,000	32,715	65,373	-78,154	-156,280
29	-3,261	8,000	33,284	66,506	-74,936	-149,844
33	-3,468	8,000	33,752	67,436	-71,778	-143,528
37	-3,695	8,000	34,166	68,258	-68,390	-136,751
38	-3,922	8,000	34,495	68,908	-65,075	-130,122
39	-4,149	8,000	34,725	69,361	-61,837	-123,645
49	-0,728	8,000	16,873	33,737	-117,868	-235,711
50	-0,885	8,000	18,719	37,426	-114,985	-229,946
51	-1,042	8,000	20,388	40,761	-112,154	-224,283
58	-1,199	8,000	21,983	43,948	-109,357	-218,689
103	-4,376	8,000	34,855	69,614	-58,694	-117,359
107	-4,625	8,000	35,049	69,990	-55,305	-110,584
108	-4,873	8,000	35,048	69,989	-51,989	-103,950
109	-5,122	8,000	34,906	69,702	-48,805	-97,567
113	-5,371	8,000	34,874	69,545	-45,725	-91,399
117	-5,644	8,000	34,695	69,132	-42,351	-84,693
118	-5,917	8,000	34,168	68,133	-39,128	-78,276

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
119	-6,190	8,000	33,639	67,096	-36,095	-72,217
129	-0,572	8,000	14,729	29,451	-120,789	-241,553
133	-0,143	8,000	7,599	15,200	-129,357	-258,687
134	-0,286	8,000	10,403	20,804	-126,308	-252,590
135	-0,429	8,000	12,697	25,391	-123,464	-246,902
139	0,000	8,000	3,912	7,828	-132,736	-265,444
143	0,000	7,540	-45,839	-84,915	-141,454	-282,874
144	0,000	7,693	-45,410	-83,985	-141,458	-282,883
145	0,000	7,847	-44,918	-82,932	-141,460	-282,888
146	0,000	8,000	-44,394	-81,816	-141,461	-282,889
169	0,000	6,965	-47,290	-88,108	-141,421	-282,810
170	0,000	7,106	-46,983	-87,419	-141,432	-282,830
171	0,000	7,246	-46,634	-86,647	-141,440	-282,848
172	0,000	7,387	-46,254	-85,818	-141,448	-282,862
183	0,000	6,825	-47,548	-88,707	-141,409	-282,786
184	0,000	6,438	-48,007	-89,874	-141,368	-282,703
185	0,000	6,567	-47,896	-89,565	-141,383	-282,733
186	0,000	6,696	-47,742	-89,175	-141,397	-282,761
207	0,000	6,309	-48,074	-90,101	-141,351	-282,670
208	0,000	5,955	-48,018	-90,266	-141,299	-282,566
209	0,000	6,073	-48,077	-90,289	-141,318	-282,603
210	0,000	6,191	-48,095	-90,233	-141,335	-282,638
265	0,000	5,836	-47,916	-90,161	-141,280	-282,527
266	0,000	5,511	-47,398	-89,413	-141,221	-282,409
267	0,000	5,620	-47,611	-89,741	-141,241	-282,450
268	0,000	5,728	-47,783	-89,989	-141,261	-282,489
289	0,000	5,403	-47,142	-89,004	-141,199	-282,366
290	0,000	5,105	-46,210	-87,426	-141,136	-282,239
291	0,000	5,204	-46,560	-88,028	-141,158	-282,282
292	0,000	5,304	-46,870	-88,553	-141,179	-282,325
315	-6,463	8,000	33,408	66,673	-33,223	-66,465

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
319	-6,762 8,000	32,759	65,368	-30,024	-60,057
320	-7,062 8,000	32,079	63,968	-27,056	-54,108
321	-7,361 8,000	31,387	62,523	-24,208	-48,426
331	-7,660 8,000	30,645	61,049	-21,476	-42,995
335	-7,989 8,000	29,771	59,320	-18,661	-37,338
336	-8,317 8,000	28,891	57,455	-15,984	-31,974
337	-8,645 8,000	27,958	55,473	-13,428	-26,922
361	0,000 4,732	-44,526	-84,430	-141,047	-282,062
362	0,000 4,823	-44,995	-85,275	-141,070	-282,107
363	0,000 4,914	-45,426	-86,045	-141,092	-282,151
364	0,000 5,005	-45,820	-86,744	-141,113	-282,193
375	0,000 4,641	-44,019	-83,507	-141,024	-282,016
376	0,000 4,390	-42,409	-80,543	-140,958	-281,883
377	0,000 4,474	-42,981	-81,603	-140,981	-281,928
378	0,000 4,557	-43,518	-82,590	-141,003	-281,973
395	0,000 4,307	-41,798	-79,407	-140,935	-281,837
396	0,000 4,077	-39,912	-75,868	-140,869	-281,706
397	0,000 4,153	-40,576	-77,118	-140,892	-281,750
398	0,000 4,230	-41,204	-78,297	-140,913	-281,794
399	-0,219 4,000	605,753	1,213	-128,508	-256,979
400	-0,146 4,000	501,192	1,004	-129,814	-259,591
401	-0,073 4,000	391,237	784,923	-131,115	-262,194
405	0,000 4,000	275,657	554,216	-132,411	-264,786
409	0,000 4,000	-39,211	-74,545	-140,847	-281,661
410	0,000 3,775	-36,927	-70,203	-140,778	-281,524
411	0,000 3,850	-37,728	-71,729	-140,801	-281,570
412	0,000 3,925	-38,488	-73,175	-140,824	-281,616
571	-0,536 4,000	1,003	2,005	-122,784	-245,530
572	-0,455 4,000	909,316	1,819	-124,260	-248,482
573	-0,373 4,000	810,170	1,621	-125,731	-251,425
577	-0,292 4,000	705,139	1,411	-127,198	-254,359

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
593	-9,334 8,000	26,375	52,328	-8,466	-17,161
594	-9,694 8,000	25,123	49,958	-6,031	-12,348
595	-10,054 8,000	23,793	47,520	-3,873	-8,042
599	-8,974 8,000	27,118	53,753	-11,134	-22,393
603	-10,414 8,000	22,890	45,750	-1,912	-4,080
607	-10,809 8,000	21,892	43,763	314,919	304,120
608	-11,204 8,000	20,471	41,223	2,349	4,331
609	-11,599 8,000	19,026	38,709	4,083	7,884
625	-11,994 8,000	17,986	36,666	5,539	11,040
626	-12,428 8,000	17,132	34,696	7,232	14,476
627	-12,861 8,000	16,147	32,599	8,813	17,658
628	-13,294 8,000	15,108	30,458	10,285	20,600
635	-13,727 8,000	14,058	28,320	11,633	23,291
639	-14,203 8,000	12,916	26,004	12,967	25,962
640	-14,678 8,000	11,787	23,718	14,168	28,366
641	-15,153 8,000	10,672	21,466	15,243	30,516
651	-16,150 8,000	8,382	16,850	17,113	34,257
652	-16,671 8,000	7,209	14,490	17,898	35,827
653	-17,192 8,000	6,053	12,164	18,558	37,147
657	-15,628 8,000	9,572	19,247	16,197	32,426
667	-17,713 8,000	4,910	9,866	19,099	38,229
671	-20,000 8,000	0,000	0,000	20,144	40,319
672	-20,000 7,500	0,000	0,000	20,578	41,192
673	-20,000 7,000	0,000	0,000	20,967	41,973
674	-20,000 6,500	0,000	0,000	21,306	42,655
675	-18,285 8,000	3,670	7,373	19,559	39,150
676	-18,857 8,000	2,440	4,903	19,885	39,801
677	-19,428 8,000	1,218	2,448	20,079	40,190
703	-20,000 6,000	0,000	0,000	21,595	43,235
707	-20,000 5,500	0,000	0,000	21,833	43,712
708	-20,000 5,000	0,000	0,000	22,019	44,085

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
709	-20,000	4,500	0,000	0,000	22,154	44,357
713	-20,000	4,000	0,000	0,000	22,241	44,530
714	-19,416	4,000	240,348	483,930	22,177	44,401
715	-18,833	4,000	479,636	965,594	21,982	44,012
716	-18,249	4,000	716,771	1,443	21,656	43,359
717	-20,000	3,333	0,000	0,000	22,285	44,615
718	-20,000	2,667	0,000	0,000	22,252	44,547
719	-20,000	2,000	0,000	0,000	22,150	44,339
755	0,000	3,700	-36,086	-68,595	-140,755	-281,477
756	0,000	3,475	-33,299	-63,240	-140,682	-281,332
757	0,000	3,550	-34,273	-65,117	-140,707	-281,381
758	0,000	3,625	-35,202	-66,901	-140,731	-281,429
769	0,000	3,400	-32,276	-61,267	-140,657	-281,282
770	0,000	3,175	-28,899	-54,726	-140,581	-281,130
771	0,000	3,250	-30,078	-57,013	-140,607	-281,181
772	0,000	3,325	-31,203	-59,192	-140,632	-281,232
821	-17,665	4,000	950,636	1,913	21,195	42,435
822	-17,142	4,000	1,157	2,326	20,663	41,370
823	-16,619	4,000	1,358	2,730	20,015	40,071
824	-16,095	4,000	1,555	3,124	19,245	38,529
853	-20,000	1,333	0,000	0,000	21,988	44,012
857	-20,000	0,667	0,000	0,000	21,776	43,585
858	-20,000	0,000	0,000	0,000	21,525	43,078
859	-20,000	-0,667	0,000	0,000	21,245	42,513
869	-20,000	-1,333	0,000	0,000	20,946	41,913
873	-20,000	-2,000	0,000	0,000	20,641	41,298
874	-20,000	-2,667	0,000	0,000	20,339	40,691
875	-20,000	-3,333	0,000	0,000	20,050	40,111
879	-20,000	-4,000	0,000	0,000	19,784	39,576
880	-19,412	-4,000	-803,264	-1,607	19,740	39,488
881	-18,824	-4,000	-1,605	-3,211	19,608	39,224

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
882	-18,235	-4,000	-2,402	-4,807	19,388	38,783
883	-20,000	-4,571	0,000	0,000	19,002	38,012
884	-20,000	-5,143	0,000	0,000	18,187	36,380
885	-20,000	-5,714	0,000	0,000	17,342	34,689
895	-20,000	-6,286	0,000	0,000	16,472	32,948
899	-20,000	-6,857	0,000	0,000	15,582	31,168
900	-20,000	-7,429	0,000	0,000	14,677	29,357
901	-20,000	-8,000	0,000	0,000	13,761	27,526
905	-2,217	4,000	2,102	4,194	-92,219	-184,396
906	-2,091	4,000	2,055	4,101	-94,468	-188,894
907	-1,964	4,000	2,004	4,000	-96,731	-193,421
911	-1,838	4,000	1,949	3,891	-99,007	-197,972
912	-1,725	4,000	1,896	3,786	-101,056	-202,071
913	-1,612	4,000	1,840	3,673	-103,112	-206,184
914	-1,499	4,000	1,778	3,551	-105,175	-210,308
921	-2,765	4,000	2,273	4,536	-82,644	-165,247
922	-2,624	4,000	2,234	4,457	-85,066	-170,092
923	-2,483	4,000	2,191	4,372	-87,514	-174,988
927	-2,343	4,000	2,145	4,281	-89,985	-179,930
937	-2,906	4,000	2,311	4,610	-80,248	-160,456
938	-3,377	4,000	2,422	4,831	-72,441	-144,844
939	-3,220	4,000	2,387	4,762	-75,005	-149,972
940	-3,063	4,000	2,350	4,688	-77,608	-155,177
947	-4,820	4,000	2,686	5,361	-50,831	-101,636
948	-4,625	4,000	2,655	5,297	-53,539	-107,049
949	-4,429	4,000	2,622	5,232	-56,316	-112,601
953	-4,234	4,000	2,588	5,164	-59,161	-118,290
954	-4,059	4,000	2,557	5,101	-61,769	-123,505
955	-3,884	4,000	2,524	5,036	-64,432	-128,829
956	-3,709	4,000	2,491	4,969	-67,148	-134,260
963	-3,534	4,000	2,455	4,898	-69,916	-139,795

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
973	-5,670 4,000	2,814	5,620	-39,859	-79,704
974	-5,452 4,000	2,783	5,556	-42,552	-85,087
975	-5,234 4,000	2,750	5,491	-45,330	-90,638
979	-5,016 4,000	2,717	5,423	-48,192	-96,361
989	-5,888 4,000	2,844	5,682	-37,249	-74,489
990	-6,617 4,000	2,936	5,871	-29,107	-58,220
991	-6,374 4,000	2,907	5,811	-31,721	-63,443
992	-6,131 4,000	2,876	5,748	-34,435	-68,865
999	-1,285 4,000	1,649	3,292	-109,097	-218,154
1000	-1,183 4,000	1,580	3,156	-110,954	-221,868
1001	-1,082 4,000	1,506	3,009	-112,811	-225,583
1005	-1,386 4,000	1,712	3,420	-107,242	-214,443
1015	-0,981 4,000	1,427	2,852	-114,668	-229,297
1016	-0,890 4,000	1,351	2,700	-116,331	-232,623
1017	-0,799 4,000	1,270	2,539	-117,992	-235,945
1018	-0,708 4,000	1,184	2,366	-119,650	-239,261
1025	-0,618 4,000	1,091	2,181	-121,305	-242,571
1077	-7,674 4,000	3,037	6,080	-18,836	-37,711
1078	-7,403 4,000	3,015	6,035	-21,308	-42,645
1079	-7,132 4,000	2,991	5,984	-23,891	-47,803
1083	-6,860 4,000	2,963	5,927	-26,589	-53,191
1099	-7,946 4,000	3,054	6,118	-16,473	-32,992
1100	-8,854 4,000	3,086	6,184	-9,303	-18,685
1101	-8,551 4,000	3,081	6,172	-11,571	-23,209
1102	-8,248 4,000	3,070	6,150	-13,959	-27,975
1209	0,000 3,100	-27,664	-52,325	-140,555	-281,078
1210	0,000 2,875	-23,604	-44,407	-140,475	-280,918
1211	0,000 2,950	-25,019	-47,170	-140,502	-280,972
1212	0,000 3,025	-26,371	-49,808	-140,529	-281,025
1239	-15,103 4,000	1,911	3,833	17,430	34,888
1240	-14,634 4,000	2,071	4,148	16,399	32,818

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1241	-14,165 4,000	2,223	4,448	15,249	30,506
1245	-13,696 4,000	2,367	4,731	13,971	27,938
1246	-13,276 4,000	2,488	4,969	12,712	25,405
1247	-12,855 4,000	2,600	5,190	11,338	22,641
1248	-12,435 4,000	2,702	5,392	9,841	19,630
1255	-15,572 4,000	1,746	3,504	18,348	36,730
1291	0,000 2,800	-22,125	-41,516	-140,448	-280,864
1292	0,000 2,575	-17,290	-32,038	-140,365	-280,698
1293	0,000 2,650	-18,970	-35,334	-140,393	-280,754
1294	0,000 2,725	-20,581	-38,493	-140,421	-280,809
1339	-17,647 -4,000	-3,194	-6,392	19,078	38,162
1340	-15,882 -4,000	-5,516	-11,036	17,589	35,180
1341	-16,471 -4,000	-4,753	-9,511	18,181	36,365
1342	-17,059 -4,000	-3,978	-7,961	18,676	37,357
1383	-20,000 -8,571	0,000	0,000	12,839	25,681
1384	-20,000 -9,143	0,000	0,000	11,916	23,834
1385	-20,000 -9,714	0,000	0,000	10,995	21,992
1386	-20,000 -10,286	0,000	0,000	10,081	20,164
1393	-20,000 -10,857	0,000	0,000	9,178	18,357
1397	-20,000 -11,429	0,000	0,000	8,290	16,581
1398	-20,000 -12,000	0,000	0,000	7,421	14,843
1399	-20,000 -12,571	0,000	0,000	6,575	13,151
1419	0,000 2,500	-15,540	-28,600	-140,337	-280,642
1420	0,000 2,275	-9,864	-17,430	-140,251	-280,470
1421	0,000 2,350	-11,827	-21,297	-140,280	-280,528
1422	0,000 2,425	-13,719	-25,020	-140,309	-280,585
1433	0,000 8,000	-3,995	-7,980	-132,655	-265,281
1437	0,750 8,000	-17,174	-34,325	-117,435	-234,844
1438	0,500 8,000	-13,930	-27,840	-122,113	-244,200
1439	0,250 8,000	-9,816	-19,618	-127,102	-254,177
1547	-10,170 4,000	3,045	6,094	-745,707	-1,597

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1548	-9,832	4,000	3,066	6,139	-2,752	-5,606
1549	-9,494	4,000	3,080	6,169	-4,886	-9,867
1553	-9,157	4,000	3,086	6,183	-7,153	-14,393
1563	-10,508	4,000	3,017	6,033	1,139	2,171
1564	-11,638	4,000	2,864	5,716	6,633	13,183
1565	-11,261	4,000	2,925	5,841	4,933	9,772
1566	-10,884	4,000	2,976	5,947	3,104	6,106
1573	-12,015	4,000	2,793	5,573	8,212	16,356
1709	-15,294	-4,000	-6,264	-12,533	16,898	33,796
1710	-14,706	-4,000	-6,996	-13,997	16,104	32,208
1711	-14,118	-4,000	-7,708	-15,421	15,205	30,407
1712	-13,529	-4,000	-8,398	-16,801	14,195	28,385
1847	0,000	2,200	-7,830	-13,421	-140,222	-280,412
1848	0,000	1,975	-1,316	-563,169	-140,133	-280,234
1849	0,000	2,050	-3,554	-4,983	-140,163	-280,294
1850	0,000	2,125	-5,726	-9,271	-140,193	-280,353
1921	-20,000	-13,714	0,000	0,000	4,970	9,940
1922	-20,000	-14,286	0,000	0,000	4,219	8,439
1923	-20,000	-14,857	0,000	0,000	3,509	7,019
1927	-20,000	-13,143	0,000	0,000	5,757	11,514
1931	-20,000	-15,429	0,000	0,000	2,846	5,692
1935	-20,000	-16,000	0,000	0,000	2,234	4,468
1936	-20,000	-16,571	0,000	0,000	1,680	3,360
1937	-20,000	-17,143	0,000	0,000	1,190	2,381
1957	0,000	1,900	983,804	3,982	-140,103	-280,174
1958	0,000	1,825	3,341	8,643	-140,073	-280,114
1959	0,000	1,750	5,751	13,410	-140,043	-280,053
1960	0,000	1,675	8,205	18,266	-140,012	-279,992
1993	0,000	1,600	10,696	23,197	-139,982	-279,931
1994	0,000	1,375	18,272	38,202	-139,889	-279,745
1995	0,000	1,450	15,742	33,191	-139,920	-279,807

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1996	0,000 1,525	13,212	28,180	-139,951	-279,869
2035	-20,000 -17,714	0,000	0,000	772,595	1,545
2036	-20,000 -20,000	0,000	0,000	0,000	0,000
2037	-19,412 -20,000	0,000	0,000	0,000	0,000
2038	-18,824 -20,000	0,000	0,000	0,000	0,000
2039	-18,235 -20,000	0,000	0,000	0,000	0,000
2043	-20,000 -18,286	0,000	0,000	435,182	870,420
2044	-20,000 -18,857	0,000	0,000	187,039	374,105
2045	-20,000 -19,429	0,000	0,000	38,259	76,526
2059	0,000 1,300	20,783	43,179	-139,857	-279,682
2060	0,000 1,075	28,007	57,490	-139,763	-279,493
2061	0,000 1,150	25,675	52,870	-139,794	-279,556
2062	0,000 1,225	23,259	48,083	-139,826	-279,619
2079	0,000 1,000	30,226	61,885	-139,731	-279,429
2080	0,000 0,775	35,860	73,029	-139,635	-279,238
2081	0,000 0,850	34,191	69,732	-139,667	-279,302
2082	0,000 0,925	32,300	65,990	-139,699	-279,366
2083	1,000 8,000	-20,053	-40,078	-112,937	-225,848
2087	2,500 8,000	-30,763	-61,466	-87,064	-174,101
2088	2,000 8,000	-28,173	-56,298	-95,405	-190,785
2089	1,500 8,000	-24,686	-49,334	-104,034	-208,042
2293	-12,941 -4,000	-9,063	-18,131	13,070	26,135
2297	-11,176 -4,000	-10,873	-21,747	8,965	17,921
2298	-11,765 -4,000	-10,304	-20,611	10,460	20,912
2299	-12,353 -4,000	-9,700	-19,403	11,827	23,647
2525	-17,647 -20,000	0,000	0,000	0,000	0,000
2529	-17,059 -20,000	0,000	0,000	0,000	0,000
2530	-16,471 -20,000	0,000	0,000	0,000	0,000
2531	-15,882 -20,000	0,000	0,000	0,000	0,000
2567	0,000 0,700	37,260	75,789	-139,603	-279,173
2568	0,000 0,475	39,311	79,778	-139,506	-278,980

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
2569	0,000 0,550	39,044	79,282	-139,538	-279,045
2570	0,000 0,625	38,340	77,911	-139,571	-279,109
2591	0,000 0,400	39,070	79,261	-139,474	-278,916
2592	0,000 0,325	38,248	77,581	-139,442	-278,851
2593	0,000 0,250	36,761	74,573	-139,409	-278,786
2594	0,000 0,175	34,520	70,059	-139,377	-278,722
2621	0,000 0,100	31,428	63,842	-139,345	-278,658
2622	0,000 0,025	27,379	55,713	-139,313	-278,593
2623	0,000 -0,050	22,259	45,442	-139,281	-278,529
2624	0,000 -0,125	15,945	32,785	-139,248	-278,465
2689	0,000 -0,200	8,306	17,477	-139,216	-278,401
2690	0,000 -0,275	-799,727	-761,488	-139,185	-278,337
2691	0,000 -0,350	-11,521	-22,230	-139,153	-278,274
2692	0,000 -0,425	-24,016	-47,247	-139,121	-278,210
2713	0,000 -0,500	-38,454	-76,147	-139,090	-278,147
2714	0,000 -0,725	-95,216	-189,740	-138,996	-277,961
2715	0,000 -0,650	-73,866	-147,018	-139,027	-278,022
2716	0,000 -0,575	-55,009	-109,281	-139,058	-278,085
2749	0,000 -0,800	-119,256	-237,841	-138,966	-277,899
2750	0,000 -0,875	-146,189	-291,727	-138,935	-277,838
2751	0,000 -0,950	-176,221	-351,810	-138,905	-277,778
2752	0,000 -1,025	-209,560	-418,506	-138,875	-277,718
2773	0,000 -1,100	-246,412	-492,226	-138,845	-277,659
2774	0,000 -1,175	-286,979	-573,376	-138,816	-277,600
2775	0,000 -1,250	-331,450	-662,332	-138,787	-277,542
2776	0,000 -1,325	-380,008	-759,463	-138,759	-277,485
2793	3,000 8,000	-32,636	-65,201	-79,015	-158,003
2794	4,500 8,000	-35,005	-69,886	-56,997	-113,967
2795	4,000 8,000	-34,664	-69,225	-63,967	-127,906
2796	3,500 8,000	-33,903	-67,719	-71,314	-142,600
2971	-10,588 -4,000	-11,401	-22,803	7,337	14,665

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
2972	-10,000 -4,000	-11,885	-23,769	5,571	11,133
2973	-9,412 -4,000	-12,319	-24,636	3,663	7,317
2974	-8,824 -4,000	-12,698	-25,394	1,608	3,207
3065	-15,294 -20,000	0,000	0,000	0,000	0,000
3069	-14,706 -20,000	0,000	0,000	0,000	0,000
3070	-14,118 -20,000	0,000	0,000	0,000	0,000
3071	-13,529 -20,000	0,000	0,000	0,000	0,000
3251	0,000 -1,400	-432,820	-865,098	-138,730	-277,429
3252	0,000 -1,475	-490,024	-979,519	-138,703	-277,373
3253	0,000 -1,550	-551,737	-1,103	-138,675	-277,318
3254	0,000 -1,625	-618,084	-1,236	-138,648	-277,264
3275	0,000 -1,700	-689,132	-1,378	-138,622	-277,211
3276	0,000 -1,775	-764,798	-1,529	-138,595	-277,159
3277	0,000 -1,850	-845,723	-1,691	-138,570	-277,107
3278	0,000 -1,925	-931,652	-1,863	-138,544	-277,055
3279	5,000 8,000	-34,997	-69,849	-50,411	-100,800
3283	6,875 8,000	-33,030	-65,674	-29,155	-58,303
3284	6,250 8,000	-33,869	-67,505	-35,685	-71,330
3285	5,625 8,000	-34,588	-69,001	-42,743	-85,456
3385	-8,235 -4,000	-13,017	-26,031	-599,475	-1,206
3389	-6,471 -4,000	-13,543	-27,081	-8,182	-16,367
3390	-7,059 -4,000	-13,447	-26,890	-5,489	-10,983
3391	-7,647 -4,000	-13,269	-26,534	-2,963	-5,933
3521	-12,941 -20,000	0,000	0,000	0,000	0,000
3525	-12,353 -20,000	0,000	0,000	0,000	0,000
3526	-11,765 -20,000	0,000	0,000	0,000	0,000
3527	-11,176 -20,000	0,000	0,000	0,000	0,000
3675	0,000 -2,000	-1,022	-2,043	-138,518	-277,003
3697	7,500 8,000	-32,322	-63,914	-23,047	-46,259
3698	9,375 8,000	-26,224	-52,184	-7,944	-16,026
3699	8,750 8,000	-28,205	-56,353	-12,340	-24,755

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
3700	8,125	8,000	-30,325	-60,636	-17,262	-34,745
3739	-5,294	-4,000	-13,447	-26,889	-14,090	-28,179
3740	-4,706	-4,000	-13,230	-26,455	-17,321	-34,640
3741	-4,118	-4,000	-12,873	-25,740	-20,741	-41,478
3745	-5,882	-4,000	-13,547	-27,089	-11,049	-22,099
3755	-3,529	-4,000	-12,340	-24,676	-24,351	-48,698
3756	-2,941	-4,000	-11,583	-23,163	-28,152	-56,297
3757	-2,353	-4,000	-10,516	-21,028	-32,106	-64,204
3758	-1,765	-4,000	-8,994	-17,984	-36,113	-72,218
3791	-10,588	-20,000	0,000	0,000	0,000	0,000
3795	-10,000	-20,000	0,000	0,000	0,000	0,000
3796	-9,412	-20,000	0,000	0,000	0,000	0,000
3797	-8,824	-20,000	0,000	0,000	0,000	0,000
3959	10,000	8,000	-24,387	-48,749	-3,970	-8,230
3963	11,875	8,000	-18,252	-36,485	5,603	10,964
3964	11,250	8,000	-20,441	-40,892	2,763	5,451
3965	10,625	8,000	-22,427	-45,086	-415,051	-975,109
4213	-8,235	-20,000	0,000	0,000	0,000	0,000
4217	-7,647	-20,000	0,000	0,000	0,000	0,000
4218	-7,059	-20,000	0,000	0,000	0,000	0,000
4219	-6,471	-20,000	0,000	0,000	0,000	0,000
4281	-0,588	-4,000	-3,753	-7,505	-42,812	-85,613
4282	0,000	-4,000	25,154	50,294	-43,929	-87,848
4283	0,588	-4,000	3,755	7,510	-42,812	-85,614
4287	-1,176	-4,000	-6,817	-13,632	-39,883	-79,757
4297	1,176	-4,000	6,825	13,647	-39,866	-79,722
4301	1,765	-4,000	9,000	17,996	-36,093	-72,177
4302	2,353	-4,000	10,517	21,031	-32,093	-64,180
4303	2,941	-4,000	11,573	23,141	-28,130	-56,255
4329	12,500	8,000	-15,923	-32,599	7,720	15,252
4330	14,375	8,000	-12,282	-24,741	13,370	26,773

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
4331	13,750 8,000	-13,686	-27,619	11,639	23,319
4332	13,125 8,000	-14,953	-30,318	9,732	19,464
4361	15,000 8,000	-10,846	-21,838	14,871	29,771
4365	16,875 8,000	-6,665	-13,404	18,122	36,276
4366	16,250 8,000	-8,040	-16,174	17,226	34,485
4367	15,625 8,000	-9,434	-18,985	16,146	32,324
4403	-5,882 -20,000	0,000	0,000	0,000	0,000
4407	-5,294 -20,000	0,000	0,000	0,000	0,000
4408	-4,706 -20,000	0,000	0,000	0,000	0,000
4409	-4,118 -20,000	0,000	0,000	0,000	0,000
4577	5,294 -4,000	13,440	26,874	-14,076	-28,154
4578	4,706 -4,000	13,221	26,438	-17,305	-34,609
4579	4,118 -4,000	12,862	25,719	-20,723	-41,443
4589	3,529 -4,000	12,331	24,658	-24,337	-48,670
4643	20,000 6,200	0,000	0,000	21,418	42,884
4644	20,000 6,800	0,000	0,000	21,045	42,134
4645	20,000 7,400	0,000	0,000	20,602	41,242
4646	20,000 8,000	0,000	0,000	20,092	40,217
4647	19,375 8,000	-1,316	-2,646	20,015	40,063
4648	18,750 8,000	-2,637	-5,301	19,783	39,599
4649	18,125 8,000	-3,967	-7,974	19,393	38,819
4653	17,500 8,000	-5,308	-10,673	18,841	37,715
4657	20,000 5,600	0,000	0,000	21,719	43,488
4661	20,000 3,800	0,000	0,000	22,196	44,443
4662	20,000 4,400	0,000	0,000	22,106	44,264
4663	20,000 5,000	0,000	0,000	21,948	43,947
4711	5,882 -4,000	13,539	27,074	-11,033	-22,068
4715	6,471 -4,000	13,536	27,066	-8,167	-16,339
4716	7,059 -4,000	13,440	26,876	-5,474	-10,954
4717	7,647 -4,000	13,263	26,522	-2,948	-5,902
4779	-3,529 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
4780	-2,941 -20,000	0,000	0,000	0,000	0,000
4781	-2,353 -20,000	0,000	0,000	0,000	0,000
4782	-1,765 -20,000	0,000	0,000	0,000	0,000
4939	20,000 3,200	0,000	0,000	22,222	44,491
4943	20,000 1,400	0,000	0,000	21,961	43,959
4944	20,000 2,000	0,000	0,000	22,098	44,238
4945	20,000 2,600	0,000	0,000	22,187	44,419
4949	8,824 -4,000	12,692	25,381	1,625	3,241
4950	9,412 -4,000	12,312	24,623	3,680	7,351
4951	10,000 -4,000	11,877	23,754	5,588	11,167
4955	8,235 -4,000	13,011	26,018	-582,829	-1,174
4965	-1,176 -20,000	0,000	0,000	0,000	0,000
4969	-0,588 -20,000	0,000	0,000	0,000	0,000
4970	0,000 -20,000	0,000	0,000	0,000	0,000
4971	0,588 -20,000	0,000	0,000	0,000	0,000
5039	10,588 -4,000	11,392	22,786	7,354	14,698
5043	12,353 -4,000	9,689	19,382	11,840	23,673
5044	11,765 -4,000	10,294	20,591	10,475	20,941
5045	11,176 -4,000	10,863	21,729	8,981	17,953
5134	20,000 0,800	0,000	0,000	21,782	43,598
5141	20,000 -1,000	0,000	0,000	21,072	42,167
5142	20,000 -0,400	0,000	0,000	21,330	42,686
5143	20,000 0,200	0,000	0,000	21,569	43,168
5245	1,176 -20,000	0,000	0,000	0,000	0,000
5249	1,765 -20,000	0,000	0,000	0,000	0,000
5250	2,353 -20,000	0,000	0,000	0,000	0,000
5251	2,941 -20,000	0,000	0,000	0,000	0,000
5287	20,000 -1,600	0,000	0,000	20,804	41,627
5291	20,000 -3,400	0,000	0,000	20,011	40,033
5292	20,000 -2,800	0,000	0,000	20,266	40,545
5293	20,000 -2,200	0,000	0,000	20,533	41,081

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
5297	13,529	-4,000	8,387	16,778	14,204	28,404
5298	14,118	-4,000	7,696	15,398	15,212	30,421
5299	14,706	-4,000	6,984	13,974	16,109	32,217
5303	12,941	-4,000	9,052	18,109	13,082	26,157
5313	15,294	-4,000	6,253	12,511	16,900	33,801
5314	15,882	-4,000	5,505	11,016	17,589	35,180
5315	16,471	-4,000	4,744	9,492	18,178	36,360
5316	17,059	-4,000	3,970	7,945	18,672	37,348
5439	3,529	-20,000	0,000	0,000	0,000	0,000
5443	4,118	-20,000	0,000	0,000	0,000	0,000
5444	4,706	-20,000	0,000	0,000	0,000	0,000
5445	5,294	-20,000	0,000	0,000	0,000	0,000
5501	18,235	-4,000	2,397	4,797	19,381	38,768
5502	18,824	-4,000	1,601	3,204	19,600	39,208
5503	19,412	-4,000	801,474	1,604	19,731	39,470
5504	20,000	-4,000	0,000	0,000	19,775	39,558
5505	20,000	-5,714	0,000	0,000	17,337	34,679
5506	20,000	-5,143	0,000	0,000	18,181	36,368
5507	20,000	-4,571	0,000	0,000	18,995	37,997
5517	17,647	-4,000	3,187	6,379	19,072	38,150
5667	5,882	-20,000	0,000	0,000	0,000	0,000
5668	6,471	-20,000	0,000	0,000	0,000	0,000
5669	7,059	-20,000	0,000	0,000	0,000	0,000
5670	7,647	-20,000	0,000	0,000	0,000	0,000
5693	20,000	-6,286	0,000	0,000	16,468	32,941
5694	20,000	-8,000	0,000	0,000	13,760	27,523
5695	20,000	-7,429	0,000	0,000	14,675	29,354
5696	20,000	-6,857	0,000	0,000	15,579	31,163
5813	8,235	-20,000	0,000	0,000	0,000	0,000
5817	8,824	-20,000	0,000	0,000	0,000	0,000
5818	9,412	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	12,839	25,681
5843	20,000	-10,286	0,000	0,000	10,082	20,165
5844	20,000	-9,714	0,000	0,000	10,995	21,993
5845	20,000	-9,143	0,000	0,000	11,916	23,834
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	9,179	18,359
6054	20,000	-12,571	0,000	0,000	6,576	13,153
6055	20,000	-12,000	0,000	0,000	7,422	14,845
6056	20,000	-11,429	0,000	0,000	8,291	16,583
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	5,758	11,516
6093	20,000	-14,857	0,000	0,000	3,510	7,021
6094	20,000	-14,286	0,000	0,000	4,220	8,441
6095	20,000	-13,714	0,000	0,000	4,971	9,942
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	2,847	5,694
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	1,191	2,381
6175	20,000	-16,571	0,000	0,000	1,680	3,361
6176	20,000	-16,000	0,000	0,000	2,235	4,469
6180	20,000	-17,714	0,000	0,000	772,882	1,546

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	38,300	76,605
6201	20,000	-18,286	0,000	0,000	435,366	870,777
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	187,141	374,301

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO	
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	Rev F0	Data 20/06/2011

8. Results for phase 3

Table [13] Table of deformations phase no: 3

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
143	0,000	7,540	-253,716	-3,369	6,188	1,494
144	0,000	7,693	-264,188	-3,400	6,187	1,494
145	0,000	7,847	-274,662	-3,431	6,187	1,494
146	0,000	8,000	-285,136	-3,462	6,187	1,494
169	0,000	6,965	-214,552	-3,252	6,191	1,494
170	0,000	7,106	-224,096	-3,280	6,190	1,494
171	0,000	7,246	-233,665	-3,309	6,189	1,494
172	0,000	7,387	-243,251	-3,338	6,188	1,494
183	0,000	6,825	-205,041	-3,223	6,192	1,494
184	0,000	6,438	-179,148	-3,143	6,195	1,494
185	0,000	6,567	-187,725	-3,169	6,194	1,494
186	0,000	6,696	-196,359	-3,196	6,193	1,494
207	0,000	6,309	-170,640	-3,116	6,196	1,495
208	0,000	5,955	-147,692	-3,041	6,200	1,495
209	0,000	6,073	-155,254	-3,066	6,198	1,495
210	0,000	6,191	-162,907	-3,091	6,197	1,495
265	0,000	5,836	-140,234	-3,017	6,201	1,495
266	0,000	5,511	-120,368	-2,949	6,206	1,496
267	0,000	5,620	-126,868	-2,972	6,204	1,496
268	0,000	5,728	-133,496	-2,994	6,202	1,495
289	0,000	5,403	-114,014	-2,927	6,209	1,496
290	0,000	5,105	-97,478	-2,868	6,213	1,497
291	0,000	5,204	-102,817	-2,887	6,212	1,497
292	0,000	5,304	-108,333	-2,907	6,211	1,496
361	0,000	4,732	-79,153	-2,798	6,211	1,498
362	0,000	4,823	-83,379	-2,814	6,211	1,498

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
363	0,000 4,914	-87,770	-2,831	6,212	1,497
364	0,000 5,005	-92,326	-2,848	6,212	1,497
375	0,000 4,641	-75,099	-2,782	6,210	1,498
376	0,000 4,390	-64,895	-2,743	6,204	1,499
377	0,000 4,474	-68,137	-2,756	6,207	1,499
378	0,000 4,557	-71,540	-2,768	6,208	1,499
395	0,000 4,307	-61,814	-2,732	6,202	1,499
396	0,000 4,077	-54,181	-2,709	6,195	1,500
397	0,000 4,153	-56,589	-2,716	6,198	1,500
398	0,000 4,230	-59,133	-2,723	6,200	1,500
399	-0,219 4,000	-39,781	-2,009	131,948	6,508
400	-0,146 4,000	-47,310	-2,123	138,296	6,342
401	-0,073 4,000	-57,390	-2,351	130,287	6,129
405	0,000 4,000	-66,730	-2,604	101,592	5,705
409	0,000 4,000	-51,908	-2,704	6,193	1,501
410	0,000 3,775	-45,942	-2,701	6,195	1,501
411	0,000 3,850	-47,806	-2,700	6,194	1,501
412	0,000 3,925	-49,800	-2,701	6,192	1,501
571	-0,536 4,000	-23,101	-1,777	107,167	6,941
572	-0,455 4,000	-22,396	-1,817	110,642	6,827
573	-0,373 4,000	-22,868	-1,868	113,412	6,715
577	-0,292 4,000	-24,073	-1,947	113,002	6,614
713	-20,000 4,000	0,000	0,000	116,054	11,976
714	-19,416 4,000	-904,597	-81,983	116,045	11,975
715	-18,833 4,000	-1,826	-163,714	116,030	11,974
716	-18,249 4,000	-2,792	-244,950	116,028	11,971
717	-20,000 3,333	0,000	0,000	108,655	11,223
718	-20,000 2,667	0,000	0,000	101,260	10,468
719	-20,000 2,000	0,000	0,000	93,875	9,712
755	0,000 3,700	-44,222	-2,704	6,196	1,502
756	0,000 3,475	-39,896	-2,725	6,194	1,502

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
757	0,000	3,550	-41,202	-2,716	6,195	1,502
758	0,000	3,625	-42,643	-2,709	6,195	1,502
769	0,000	3,400	-38,720	-2,736	6,192	1,503
770	0,000	3,175	-35,906	-2,778	6,188	1,503
771	0,000	3,250	-36,732	-2,762	6,189	1,503
772	0,000	3,325	-37,667	-2,748	6,191	1,503
821	-17,665	4,000	-3,844	-325,462	116,057	11,967
822	-17,142	4,000	-4,602	-396,535	116,433	11,962
823	-16,619	4,000	-5,061	-466,231	116,575	11,956
824	-16,095	4,000	-5,539	-534,693	116,472	11,948
853	-20,000	1,333	0,000	0,000	86,493	8,953
857	-20,000	0,667	0,000	0,000	79,089	8,192
858	-20,000	0,000	0,000	0,000	71,667	7,428
859	-20,000	-0,667	0,000	0,000	64,223	6,662
869	-20,000	-1,333	0,000	0,000	56,755	5,893
873	-20,000	-2,000	0,000	0,000	49,263	5,121
874	-20,000	-2,667	0,000	0,000	41,746	4,347
875	-20,000	-3,333	0,000	0,000	34,206	3,570
879	-20,000	-4,000	0,000	0,000	26,643	2,792
880	-19,412	-4,000	-1,130	-120,012	26,644	2,791
881	-18,824	-4,000	-2,259	-240,015	26,646	2,790
882	-18,235	-4,000	-3,388	-360,005	26,649	2,789
883	-20,000	-4,571	0,000	0,000	25,452	2,665
884	-20,000	-5,143	0,000	0,000	24,251	2,538
885	-20,000	-5,714	0,000	0,000	23,040	2,409
895	-20,000	-6,286	0,000	0,000	21,821	2,280
899	-20,000	-6,857	0,000	0,000	20,597	2,150
900	-20,000	-7,429	0,000	0,000	19,369	2,020
901	-20,000	-8,000	0,000	0,000	18,140	1,890
905	-2,217	4,000	-20,869	-1,352	101,893	8,804
906	-2,091	4,000	-21,192	-1,365	101,730	8,693

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
907	-1,964 4,000	-21,487	-1,381	101,587	8,579
911	-1,838 4,000	-21,759	-1,399	101,388	8,460
912	-1,725 4,000	-22,131	-1,417	101,273	8,350
913	-1,612 4,000	-22,446	-1,438	101,240	8,237
914	-1,499 4,000	-22,721	-1,460	101,252	8,120
921	-2,765 4,000	-19,480	-1,310	102,860	9,246
922	-2,624 4,000	-19,829	-1,318	102,575	9,139
923	-2,483 4,000	-20,192	-1,328	102,297	9,027
927	-2,343 4,000	-20,566	-1,340	102,121	8,912
937	-2,906 4,000	-19,161	-1,303	103,147	9,349
938	-3,377 4,000	-17,970	-1,288	104,160	9,669
939	-3,220 4,000	-18,392	-1,292	103,796	9,567
940	-3,063 4,000	-18,793	-1,297	103,468	9,460
947	-4,820 4,000	-16,129	-1,288	107,649	10,436
948	-4,625 4,000	-16,442	-1,286	107,246	10,349
949	-4,429 4,000	-16,699	-1,285	106,823	10,257
953	-4,234 4,000	-16,780	-1,283	106,341	10,160
954	-4,059 4,000	-17,051	-1,281	105,945	10,068
955	-3,884 4,000	-17,059	-1,281	105,542	9,973
956	-3,709 4,000	-17,128	-1,282	105,038	9,872
963	-3,534 4,000	-17,702	-1,285	104,564	9,767
973	-5,670 4,000	-15,928	-1,297	109,485	10,765
974	-5,452 4,000	-16,225	-1,297	108,980	10,688
975	-5,234 4,000	-16,502	-1,295	108,487	10,606
979	-5,016 4,000	-16,234	-1,292	108,264	10,519
989	-5,888 4,000	-15,973	-1,299	109,854	10,838
990	-6,617 4,000	-15,788	-1,297	110,942	11,053
991	-6,374 4,000	-15,796	-1,298	110,686	10,986
992	-6,131 4,000	-15,832	-1,299	110,312	10,915
999	-1,285 4,000	-23,146	-1,509	101,368	7,888
1000	-1,183 4,000	-23,312	-1,536	101,486	7,773

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1001	-1,082 4,000	-23,455	-1,565	101,669	7,655
1005	-1,386 4,000	-22,960	-1,485	101,300	8,000
1015	-0,981 4,000	-23,570	-1,597	101,947	7,532
1016	-0,890 4,000	-23,674	-1,628	102,325	7,418
1017	-0,799 4,000	-23,755	-1,662	102,967	7,301
1018	-0,708 4,000	-23,745	-1,698	103,909	7,180
1025	-0,618 4,000	-23,564	-1,737	104,945	7,054
1077	-7,674 4,000	-15,207	-1,275	112,259	11,298
1078	-7,403 4,000	-15,309	-1,282	111,976	11,241
1079	-7,132 4,000	-15,290	-1,288	111,547	11,180
1083	-6,860 4,000	-15,771	-1,294	111,252	11,115
1099	-7,946 4,000	-14,800	-1,266	112,461	11,350
1100	-8,854 4,000	-13,761	-1,228	113,287	11,501
1101	-8,551 4,000	-14,115	-1,242	113,087	11,455
1102	-8,248 4,000	-14,437	-1,255	112,807	11,405
1209	0,000 3,100	-35,181	-2,794	6,186	1,503
1210	0,000 2,875	-33,545	-2,850	6,182	1,504
1211	0,000 2,950	-34,008	-2,831	6,183	1,503
1212	0,000 3,025	-34,551	-2,812	6,184	1,503
1239	-15,103 4,000	-6,953	-660,786	116,243	11,929
1240	-14,634 4,000	-7,524	-717,674	116,120	11,918
1241	-14,165 4,000	-8,120	-772,934	116,024	11,904
1245	-13,696 4,000	-8,664	-826,382	115,981	11,888
1246	-13,276 4,000	-9,120	-872,529	115,787	11,872
1247	-12,855 4,000	-9,662	-916,933	115,617	11,854
1248	-12,435 4,000	-10,210	-959,449	115,536	11,833
1255	-15,572 4,000	-6,282	-602,105	116,023	11,939
1291	0,000 2,800	-33,154	-2,871	6,181	1,504
1292	0,000 2,575	-32,351	-2,935	6,179	1,504
1293	0,000 2,650	-32,563	-2,913	6,179	1,504
1294	0,000 2,725	-32,829	-2,892	6,180	1,504

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1339	-17,647	-4,000	-4,516	-479,978	26,651	2,786
1340	-15,882	-4,000	-7,891	-839,699	26,640	2,773
1341	-16,471	-4,000	-6,768	-719,833	26,649	2,779
1342	-17,059	-4,000	-5,643	-599,924	26,652	2,783
1383	-20,000	-8,571	0,000	0,000	16,915	1,761
1384	-20,000	-9,143	0,000	0,000	15,695	1,632
1385	-20,000	-9,714	0,000	0,000	14,485	1,505
1386	-20,000	-10,286	0,000	0,000	13,289	1,379
1393	-20,000	-10,857	0,000	0,000	12,112	1,256
1397	-20,000	-11,429	0,000	0,000	10,957	1,135
1398	-20,000	-12,000	0,000	0,000	9,830	1,018
1399	-20,000	-12,571	0,000	0,000	8,736	903,579
1419	0,000	2,500	-32,187	-2,958	6,178	1,504
1420	0,000	2,275	-31,930	-3,026	6,179	1,504
1421	0,000	2,350	-31,981	-3,003	6,178	1,504
1422	0,000	2,425	-32,065	-2,980	6,178	1,504
1433	0,000	8,000	-120,037	-1,737	9,306	1,529
1437	0,750	8,000	-90,773	-1,255	-111,383	-121,288
1438	0,500	8,000	-87,534	-1,217	-110,405	33,583
1439	0,250	8,000	-78,822	-1,131	-86,498	415,720
1547	-10,170	4,000	-12,466	-1,151	114,474	11,663
1548	-9,832	4,000	-12,834	-1,174	114,213	11,627
1549	-9,494	4,000	-13,168	-1,194	113,998	11,588
1553	-9,157	4,000	-13,377	-1,213	113,761	11,543
1563	-10,508	4,000	-12,166	-1,127	114,760	11,696
1564	-11,638	4,000	-11,092	-1,035	115,367	11,785
1565	-11,261	4,000	-11,449	-1,068	115,149	11,758
1566	-10,884	4,000	-11,837	-1,098	114,934	11,729
1573	-12,015	4,000	-10,779	-1,000	115,216	11,808
1709	-15,294	-4,000	-9,012	-959,510	26,622	2,766
1710	-14,706	-4,000	-10,130	-1,079	26,594	2,756

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1711	-14,118	-4,000	-11,244	-1,199	26,551	2,745
1712	-13,529	-4,000	-12,354	-1,318	26,491	2,730
1847	0,000	2,200	-31,908	-3,049	6,179	1,504
1848	0,000	1,975	-31,978	-3,117	6,182	1,505
1849	0,000	2,050	-31,935	-3,095	6,181	1,505
1850	0,000	2,125	-31,911	-3,072	6,180	1,505
1921	-20,000	-13,714	0,000	0,000	6,665	688,489
1922	-20,000	-14,286	0,000	0,000	5,700	588,436
1923	-20,000	-14,857	0,000	0,000	4,789	494,103
1927	-20,000	-13,143	0,000	0,000	7,679	793,715
1931	-20,000	-15,429	0,000	0,000	3,937	406,055
1935	-20,000	-16,000	0,000	0,000	3,152	324,869
1936	-20,000	-16,571	0,000	0,000	2,438	251,134
1937	-20,000	-17,143	0,000	0,000	1,801	185,458
1957	0,000	1,900	-32,036	-3,140	6,184	1,505
1958	0,000	1,825	-32,108	-3,162	6,185	1,505
1959	0,000	1,750	-32,189	-3,184	6,187	1,505
1960	0,000	1,675	-32,280	-3,206	6,189	1,505
1993	0,000	1,600	-32,376	-3,227	6,192	1,505
1994	0,000	1,375	-32,690	-3,289	6,200	1,505
1995	0,000	1,450	-32,583	-3,269	6,197	1,505
1996	0,000	1,525	-32,478	-3,248	6,194	1,505
2035	-20,000	-17,714	0,000	0,000	1,249	128,460
2036	-20,000	-20,000	0,000	0,000	0,000	0,000
2037	-19,412	-20,000	0,000	0,000	0,000	0,000
2038	-18,824	-20,000	0,000	0,000	0,000	0,000
2039	-18,235	-20,000	0,000	0,000	0,000	0,000
2043	-20,000	-18,286	0,000	0,000	785,907	80,767
2044	-20,000	-18,857	0,000	0,000	419,500	43,024
2045	-20,000	-19,429	0,000	0,000	155,494	15,883
2059	0,000	1,300	-32,799	-3,309	6,203	1,505

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
2060	0,000 1,075	-33,123	-3,366	6,213	1,505
2061	0,000 1,150	-33,016	-3,347	6,209	1,505
2062	0,000 1,225	-32,908	-3,328	6,206	1,505
2079	0,000 1,000	-33,228	-3,384	6,217	1,505
2080	0,000 0,775	-33,531	-3,435	6,229	1,505
2081	0,000 0,850	-33,433	-3,419	6,225	1,505
2082	0,000 0,925	-33,332	-3,401	6,221	1,505
2083	1,000 8,000	-91,514	-1,262	-112,156	-267,610
2087	2,500 8,000	-72,855	-1,104	-49,849	-675,518
2088	2,000 8,000	-85,602	-1,194	-69,145	-535,286
2089	1,500 8,000	-92,600	-1,257	-95,724	-427,572
2293	-12,941 -4,000	-13,459	-1,438	26,408	2,712
2297	-11,176 -4,000	-16,745	-1,795	25,982	2,633
2298	-11,765 -4,000	-15,655	-1,676	26,159	2,665
2299	-12,353 -4,000	-14,560	-1,557	26,299	2,691
2525	-17,647 -20,000	0,000	0,000	0,000	0,000
2529	-17,059 -20,000	0,000	0,000	0,000	0,000
2530	-16,471 -20,000	0,000	0,000	0,000	0,000
2531	-15,882 -20,000	0,000	0,000	0,000	0,000
2567	0,000 0,700	-33,627	-3,451	6,234	1,505
2568	0,000 0,475	-33,900	-3,497	6,249	1,505
2569	0,000 0,550	-33,812	-3,482	6,244	1,505
2570	0,000 0,625	-33,721	-3,467	6,239	1,505
2591	0,000 0,400	-33,987	-3,511	6,254	1,504
2592	0,000 0,325	-34,071	-3,525	6,259	1,504
2593	0,000 0,250	-34,154	-3,538	6,265	1,504
2594	0,000 0,175	-34,236	-3,551	6,271	1,504
2621	0,000 0,100	-34,316	-3,563	6,277	1,504
2622	0,000 0,025	-34,396	-3,575	6,283	1,504
2623	0,000 -0,050	-34,476	-3,586	6,289	1,504
2624	0,000 -0,125	-34,556	-3,597	6,295	1,504

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
2689	0,000 -0,200	-34,637	-3,607	6,302	1,503
2690	0,000 -0,275	-34,719	-3,617	6,308	1,503
2691	0,000 -0,350	-34,802	-3,626	6,315	1,503
2692	0,000 -0,425	-34,887	-3,635	6,322	1,503
2713	0,000 -0,500	-34,974	-3,643	6,329	1,503
2714	0,000 -0,725	-35,245	-3,665	6,347	1,502
2715	0,000 -0,650	-35,153	-3,659	6,341	1,502
2716	0,000 -0,575	-35,062	-3,651	6,335	1,502
2749	0,000 -0,800	-35,338	-3,672	6,352	1,502
2750	0,000 -0,875	-35,432	-3,678	6,357	1,501
2751	0,000 -0,950	-35,526	-3,683	6,361	1,501
2752	0,000 -1,025	-35,621	-3,688	6,364	1,501
2773	0,000 -1,100	-35,715	-3,693	6,368	1,501
2774	0,000 -1,175	-35,810	-3,697	6,371	1,500
2775	0,000 -1,250	-35,905	-3,701	6,374	1,500
2776	0,000 -1,325	-36,000	-3,705	6,376	1,500
2793	3,000 8,000	-62,492	-1,026	-39,078	-839,921
2794	4,500 8,000	-43,754	-873,025	-27,214	-1,374
2795	4,000 8,000	-48,277	-910,797	-29,324	-1,198
2796	3,500 8,000	-54,432	-961,322	-32,959	-1,018
2971	-10,588 -4,000	-17,828	-1,913	25,762	2,596
2972	-10,000 -4,000	-18,906	-2,030	25,493	2,553
2973	-9,412 -4,000	-19,977	-2,147	25,167	2,502
2974	-8,824 -4,000	-21,041	-2,263	24,775	2,443
3065	-15,294 -20,000	0,000	0,000	0,000	0,000
3069	-14,706 -20,000	0,000	0,000	0,000	0,000
3070	-14,118 -20,000	0,000	0,000	0,000	0,000
3071	-13,529 -20,000	0,000	0,000	0,000	0,000
3251	0,000 -1,400	-36,095	-3,708	6,379	1,500
3252	0,000 -1,475	-36,190	-3,711	6,381	1,499
3253	0,000 -1,550	-36,285	-3,714	6,383	1,499

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
3254	0,000 -1,625	-36,381	-3,717	6,385	1,499
3275	0,000 -1,700	-36,478	-3,719	6,386	1,499
3276	0,000 -1,775	-36,575	-3,722	6,388	1,498
3277	0,000 -1,850	-36,674	-3,724	6,389	1,498
3278	0,000 -1,925	-36,774	-3,727	6,391	1,498
3279	5,000 8,000	-40,777	-847,199	-25,764	-1,543
3283	6,875 8,000	-28,220	-749,711	-23,400	-2,088
3284	6,250 8,000	-32,179	-781,545	-23,211	-1,917
3285	5,625 8,000	-37,463	-820,924	-23,693	-1,734
3385	-8,235 -4,000	-22,099	-2,378	24,309	2,375
3389	-6,471 -4,000	-25,233	-2,709	22,351	2,109
3390	-7,059 -4,000	-24,194	-2,601	23,110	2,209
3391	-7,647 -4,000	-23,150	-2,490	23,758	2,298
3521	-12,941 -20,000	0,000	0,000	0,000	0,000
3525	-12,353 -20,000	0,000	0,000	0,000	0,000
3526	-11,765 -20,000	0,000	0,000	0,000	0,000
3527	-11,176 -20,000	0,000	0,000	0,000	0,000
3675	0,000 -2,000	-36,874	-3,729	6,392	1,498
3697	7,500 8,000	-23,048	-725,003	-23,484	-2,245
3698	9,375 8,000	-18,719	-682,365	-26,579	-2,627
3699	8,750 8,000	-19,773	-694,467	-26,000	-2,515
3700	8,125 8,000	-20,167	-705,744	-25,065	-2,387
3739	-5,294 -4,000	-27,293	-2,915	20,435	1,872
3740	-4,706 -4,000	-28,314	-3,010	19,236	1,733
3741	-4,118 -4,000	-29,330	-3,100	17,843	1,580
3745	-5,882 -4,000	-26,265	-2,814	21,465	1,997
3755	-3,529 -4,000	-30,336	-3,182	16,221	1,413
3756	-2,941 -4,000	-31,322	-3,256	14,330	1,231
3757	-2,353 -4,000	-32,267	-3,321	12,126	1,036
3758	-1,765 -4,000	-33,131	-3,375	9,563	826,428
3791	-10,588 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
3795	-10,000	-20,000	0,000	0,000	0,000	0,000
3796	-9,412	-20,000	0,000	0,000	0,000	0,000
3797	-8,824	-20,000	0,000	0,000	0,000	0,000
3959	10,000	8,000	-17,662	-662,781	-27,096	-2,726
3963	11,875	8,000	-13,526	-602,927	-28,354	-2,959
3964	11,250	8,000	-14,329	-622,458	-27,673	-2,893
3965	10,625	8,000	-16,442	-641,626	-27,291	-2,815
4213	-8,235	-20,000	0,000	0,000	0,000	0,000
4217	-7,647	-20,000	0,000	0,000	0,000	0,000
4218	-7,059	-20,000	0,000	0,000	0,000	0,000
4219	-6,471	-20,000	0,000	0,000	0,000	0,000
4281	-0,588	-4,000	-34,292	-3,445	3,355	365,220
4282	0,000	-4,000	-34,358	-3,456	-66,745	113,206
4283	0,588	-4,000	-34,034	-3,442	-3,385	-144,845
4287	-1,176	-4,000	-33,843	-3,417	6,627	603,274
4297	1,176	-4,000	-33,408	-3,405	-6,356	-394,802
4301	1,765	-4,000	-32,620	-3,349	-8,921	-625,492
4302	2,353	-4,000	-31,743	-3,281	-11,114	-833,910
4303	2,941	-4,000	-30,820	-3,204	-12,987	-1,021
4329	12,500	8,000	-13,108	-564,414	-28,443	-3,015
4330	14,375	8,000	-9,041	-452,062	-30,108	-3,159
4331	13,750	8,000	-9,184	-481,076	-29,682	-3,120
4332	13,125	8,000	-9,870	-512,291	-28,947	-3,070
4361	15,000	8,000	-8,116	-406,695	-30,296	-3,191
4365	16,875	8,000	-6,556	-292,887	-30,347	-3,255
4366	16,250	8,000	-7,314	-333,532	-30,552	-3,243
4367	15,625	8,000	-7,464	-363,802	-30,554	-3,221
4403	-5,882	-20,000	0,000	0,000	0,000	0,000
4407	-5,294	-20,000	0,000	0,000	0,000	0,000
4408	-4,706	-20,000	0,000	0,000	0,000	0,000
4409	-4,118	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
4577	5,294 -4,000	-26,890	-2,851	-18,082	-1,594
4578	4,706 -4,000	-27,895	-2,945	-17,104	-1,473
4579	4,118 -4,000	-28,888	-3,035	-15,948	-1,339
4589	3,529 -4,000	-29,865	-3,122	-14,585	-1,188
4643	20,000 6,200	0,000	0,000	-29,900	-3,246
4644	20,000 6,800	0,000	0,000	-30,488	-3,273
4645	20,000 7,400	0,000	0,000	-30,786	-3,296
4646	20,000 8,000	0,000	0,000	-30,842	-3,304
4647	19,375 8,000	-563,042	-50,592	-30,577	-3,301
4648	18,750 8,000	-2,573	-102,554	-30,438	-3,295
4649	18,125 8,000	-3,554	-142,425	-30,607	-3,284
4653	17,500 8,000	-3,430	-210,049	-30,353	-3,265
4657	20,000 5,600	0,000	0,000	-29,466	-3,218
4661	20,000 3,800	0,000	0,000	-28,142	-3,118
4662	20,000 4,400	0,000	0,000	-28,563	-3,154
4663	20,000 5,000	0,000	0,000	-28,999	-3,187
4711	5,882 -4,000	-25,879	-2,754	-18,904	-1,701
4715	6,471 -4,000	-24,863	-2,654	-19,591	-1,798
4716	7,059 -4,000	-23,844	-2,553	-20,163	-1,884
4717	7,647 -4,000	-22,822	-2,449	-20,635	-1,961
4779	-3,529 -20,000	0,000	0,000	0,000	0,000
4780	-2,941 -20,000	0,000	0,000	0,000	0,000
4781	-2,353 -20,000	0,000	0,000	0,000	0,000
4782	-1,765 -20,000	0,000	0,000	0,000	0,000
4939	20,000 3,200	0,000	0,000	-27,724	-3,080
4943	20,000 1,400	0,000	0,000	-26,456	-2,951
4944	20,000 2,000	0,000	0,000	-26,881	-2,997
4945	20,000 2,600	0,000	0,000	-27,303	-3,040
4949	8,824 -4,000	-20,771	-2,235	-21,343	-2,090
4950	9,412 -4,000	-19,740	-2,125	-21,602	-2,143
4951	10,000 -4,000	-18,704	-2,014	-21,811	-2,191

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
No.						
4955	8,235	-4,000	-21,798	-2,343	-21,024	-2,029
4965	-1,176	-20,000	0,000	0,000	0,000	0,000
4969	-0,588	-20,000	0,000	0,000	0,000	0,000
4970	0,000	-20,000	0,000	0,000	0,000	0,000
4971	0,588	-20,000	0,000	0,000	0,000	0,000
5039	10,588	-4,000	-17,661	-1,902	-21,980	-2,232
5043	12,353	-4,000	-14,488	-1,558	-22,304	-2,328
5044	11,765	-4,000	-15,554	-1,674	-22,221	-2,300
5045	11,176	-4,000	-16,612	-1,788	-22,115	-2,269
5134	20,000	0,800	0,000	0,000	-26,030	-2,904
5141	20,000	-1,000	0,000	0,000	-24,737	-2,748
5142	20,000	-0,400	0,000	0,000	-25,171	-2,802
5143	20,000	0,200	0,000	0,000	-25,602	-2,854
5245	1,176	-20,000	0,000	0,000	0,000	0,000
5249	1,765	-20,000	0,000	0,000	0,000	0,000
5250	2,353	-20,000	0,000	0,000	0,000	0,000
5251	2,941	-20,000	0,000	0,000	0,000	0,000
5287	20,000	-1,600	0,000	0,000	-24,301	-2,692
5291	20,000	-3,400	0,000	0,000	-22,969	-2,518
5292	20,000	-2,800	0,000	0,000	-23,416	-2,577
5293	20,000	-2,200	0,000	0,000	-23,860	-2,635
5297	13,529	-4,000	-12,331	-1,324	-22,416	-2,372
5298	14,118	-4,000	-11,240	-1,206	-22,452	-2,390
5299	14,706	-4,000	-10,140	-1,087	-22,478	-2,405
5303	12,941	-4,000	-13,414	-1,441	-22,368	-2,352
5313	15,294	-4,000	-9,033	-967,421	-22,495	-2,417
5314	15,882	-4,000	-7,919	-847,511	-22,507	-2,428
5315	16,471	-4,000	-6,800	-727,183	-22,514	-2,436
5316	17,059	-4,000	-5,674	-606,505	-22,517	-2,443
5439	3,529	-20,000	0,000	0,000	0,000	0,000
5443	4,118	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
5444	4,706	-20,000	0,000	0,000	0,000	0,000
5445	5,294	-20,000	0,000	0,000	0,000	0,000
5501	18,235	-4,000	-3,412	-364,349	-22,519	-2,453
5502	18,824	-4,000	-2,276	-242,991	-22,518	-2,455
5503	19,412	-4,000	-1,138	-121,523	-22,518	-2,457
5504	20,000	-4,000	0,000	0,000	-22,518	-2,458
5505	20,000	-5,714	0,000	0,000	-19,259	-2,106
5506	20,000	-5,143	0,000	0,000	-20,347	-2,224
5507	20,000	-4,571	0,000	0,000	-21,433	-2,341
5517	17,647	-4,000	-4,545	-485,540	-22,519	-2,449
5667	5,882	-20,000	0,000	0,000	0,000	0,000
5668	6,471	-20,000	0,000	0,000	0,000	0,000
5669	7,059	-20,000	0,000	0,000	0,000	0,000
5670	7,647	-20,000	0,000	0,000	0,000	0,000
5693	20,000	-6,286	0,000	0,000	-18,171	-1,987
5694	20,000	-8,000	0,000	0,000	-14,920	-1,632
5695	20,000	-7,429	0,000	0,000	-16,000	-1,750
5696	20,000	-6,857	0,000	0,000	-17,084	-1,869
5813	8,235	-20,000	0,000	0,000	0,000	0,000
5817	8,824	-20,000	0,000	0,000	0,000	0,000
5818	9,412	-20,000	0,000	0,000	0,000	0,000
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	-13,847	-1,514
5843	20,000	-10,286	0,000	0,000	-10,702	-1,169
5844	20,000	-9,714	0,000	0,000	-11,735	-1,283
5845	20,000	-9,143	0,000	0,000	-12,784	-1,398
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	-9,689	-1,059

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
6054	20,000	-12,571	0,000	0,000	-6,812	-744,297
6055	20,000	-12,000	0,000	0,000	-7,740	-845,568
6056	20,000	-11,429	0,000	0,000	-8,700	-950,492
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	-5,922	-647,162
6093	20,000	-14,857	0,000	0,000	-3,523	-385,626
6094	20,000	-14,286	0,000	0,000	-4,273	-467,305
6095	20,000	-13,714	0,000	0,000	-5,074	-554,660
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	-2,832	-310,166
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	-1,152	-126,737
6175	20,000	-16,571	0,000	0,000	-1,641	-180,143
6176	20,000	-16,000	0,000	0,000	-2,202	-241,481
6180	20,000	-17,714	0,000	0,000	-742,630	-81,862
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	-40,619	-4,564
6201	20,000	-18,286	0,000	0,000	-417,215	-46,125
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	-181,430	-20,150

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO	
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	Rev F0	Data 20/06/2011

9. Results for phase 4

Table [14] Table of deformations phase no: 4

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1	-1,371	8,000	93,404	186,644	-252,833	-506,381
2	-1,543	8,000	91,427	182,602	-239,851	-480,377
3	-1,715	8,000	89,418	178,559	-227,491	-455,705
7	-2,075	8,000	84,983	170,181	-203,542	-407,834
8	-2,264	8,000	82,903	165,989	-191,991	-384,694
9	-2,452	8,000	80,829	161,863	-180,975	-362,692
13	-1,887	8,000	87,308	174,547	-215,707	-432,224
23	-2,641	8,000	78,566	157,736	-170,624	-341,926
27	-2,848	8,000	76,282	153,374	-159,749	-320,016
28	-3,055	8,000	74,362	149,254	-149,490	-299,366
29	-3,261	8,000	72,561	145,289	-139,614	-279,627
33	-3,468	8,000	70,483	141,169	-130,145	-260,778
37	-3,695	8,000	68,165	136,649	-120,434	-241,261
38	-3,922	8,000	66,204	132,449	-111,196	-222,725
39	-4,149	8,000	64,256	128,273	-102,282	-205,007
49	-0,728	8,000	101,899	202,427	-308,532	-617,920
50	-0,885	8,000	99,456	198,139	-293,589	-588,162
51	-1,042	8,000	97,042	193,881	-279,665	-560,271
58	-1,199	8,000	95,110	190,327	-266,758	-534,165
103	-4,376	8,000	62,360	124,213	-94,000	-188,472
107	-4,625	8,000	60,276	120,212	-84,910	-170,642
108	-4,873	8,000	57,761	115,596	-76,539	-153,984
109	-5,122	8,000	55,267	111,010	-68,698	-138,293
113	-5,371	8,000	53,145	106,917	-61,304	-123,453
117	-5,644	8,000	50,889	102,545	-53,548	-107,940
118	-5,917	8,000	48,433	98,000	-46,257	-93,316

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
119	-6,190 8,000	46,128	93,673	-39,447	-79,575
129	-0,572 8,000	103,804	205,927	-324,533	-649,628
133	-0,143 8,000	109,454	217,771	-373,626	-747,660
134	-0,286 8,000	107,385	213,563	-356,101	-712,552
135	-0,429 8,000	105,505	209,548	-339,743	-679,929
139	0,000 8,000	111,720	221,892	-392,851	-786,035
143	0,000 7,540	50,905	101,063	-393,406	-786,856
144	0,000 7,693	69,899	138,893	-392,821	-785,713
145	0,000 7,847	90,294	179,470	-392,788	-785,635
146	0,000 8,000	111,718	221,936	-392,843	-786,049
169	0,000 6,965	-4,713	-9,713	-395,357	-790,806
170	0,000 7,106	6,700	13,025	-395,243	-790,574
171	0,000 7,246	19,525	38,570	-394,838	-789,763
172	0,000 7,387	33,805	67,003	-394,261	-788,617
183	0,000 6,825	-14,802	-29,819	-395,097	-790,289
184	0,000 6,438	-36,853	-73,765	-392,328	-784,744
185	0,000 6,567	-30,341	-60,787	-393,580	-787,252
186	0,000 6,696	-23,017	-46,190	-394,505	-789,103
207	0,000 6,309	-42,636	-85,291	-390,759	-781,604
208	0,000 5,955	-55,321	-110,577	-384,950	-769,974
209	0,000 6,073	-51,563	-103,085	-387,116	-774,311
210	0,000 6,191	-47,350	-94,689	-389,058	-778,198
265	0,000 5,836	-58,664	-117,239	-382,572	-765,215
266	0,000 5,511	-66,019	-131,900	-375,060	-750,180
267	0,000 5,620	-63,841	-127,558	-377,711	-755,487
268	0,000 5,728	-61,397	-122,687	-380,219	-760,506
289	0,000 5,403	-67,956	-135,759	-372,274	-744,606
290	0,000 5,105	-72,194	-144,206	-363,999	-728,047
291	0,000 5,204	-70,944	-141,714	-366,850	-733,752
292	0,000 5,304	-69,536	-138,908	-369,611	-739,276
315	-6,463 8,000	44,603	90,189	-33,190	-66,757

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
319	-6,762 8,000	42,587	86,071	-26,150	-52,905
320	-7,062 8,000	40,294	81,699	-19,743	-40,102
321	-7,361 8,000	38,056	77,483	-13,781	-28,127
331	-7,660 8,000	36,180	73,718	-8,219	-16,893
335	-7,989 8,000	34,191	69,722	-2,373	-5,198
336	-8,317 8,000	32,034	65,635	3,088	5,746
337	-8,645 8,000	29,930	61,675	8,101	15,896
361	0,000 4,732	-75,672	-151,135	-352,607	-705,255
362	0,000 4,823	-74,980	-149,758	-355,484	-711,010
363	0,000 4,914	-74,192	-148,186	-358,304	-716,653
364	0,000 5,005	-73,298	-146,405	-361,064	-722,175
375	0,000 4,641	-76,273	-152,332	-349,677	-699,394
376	0,000 4,390	-77,511	-154,799	-341,380	-682,795
377	0,000 4,474	-77,161	-154,102	-344,182	-688,401
378	0,000 4,557	-76,750	-153,283	-346,949	-693,935
395	0,000 4,307	-77,804	-155,383	-338,546	-677,126
396	0,000 4,077	-78,345	-156,459	-330,601	-661,233
397	0,000 4,153	-78,205	-156,180	-333,271	-666,575
398	0,000 4,230	-78,026	-155,823	-335,920	-671,874
399	-0,219 4,000	-79,445	-158,659	-311,965	-623,996
400	-0,146 4,000	-79,146	-158,060	-316,782	-633,620
401	-0,073 4,000	-78,792	-157,351	-321,594	-643,233
405	0,000 4,000	-78,381	-156,530	-326,397	-652,828
409	0,000 4,000	-78,448	-156,663	-327,910	-655,851
410	0,000 3,775	-78,557	-156,879	-319,910	-639,849
411	0,000 3,850	-78,550	-156,867	-322,592	-645,213
412	0,000 3,925	-78,514	-156,796	-325,259	-650,548
571	-0,536 4,000	-80,147	-160,066	-291,062	-582,236
572	-0,455 4,000	-80,055	-159,882	-296,412	-592,924
573	-0,373 4,000	-79,904	-159,578	-301,775	-603,638
577	-0,292 4,000	-79,691	-159,151	-307,147	-614,370

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
593	-9,334 8,000	26,968	55,067	17,634	35,176
594	-9,694 8,000	25,021	51,340	22,283	44,418
595	-10,054 8,000	23,104	47,728	26,450	52,862
599	-8,974 8,000	28,252	58,218	12,588	25,197
603	-10,414 8,000	21,745	44,755	30,272	60,663
607	-10,809 8,000	20,282	41,612	34,350	68,789
608	-11,204 8,000	18,688	38,432	38,080	76,255
609	-11,599 8,000	17,298	35,542	41,474	83,096
625	-11,994 8,000	16,024	32,853	44,651	89,450
626	-12,428 8,000	14,654	30,024	47,848	95,844
627	-12,861 8,000	13,361	27,362	50,767	101,679
628	-13,294 8,000	12,144	24,864	53,425	106,991
635	-13,727 8,000	11,001	22,520	55,840	111,816
639	-14,203 8,000	9,827	20,117	58,227	116,586
640	-14,678 8,000	8,733	17,878	60,360	120,847
641	-15,153 8,000	7,712	15,789	62,255	124,634
651	-16,150 8,000	5,783	11,842	65,527	131,169
652	-16,671 8,000	4,871	9,977	66,889	133,891
653	-17,192 8,000	4,016	8,226	68,030	136,170
657	-15,628 8,000	6,759	13,839	63,929	127,978
667	-17,713 8,000	3,208	6,572	68,961	138,029
671	-20,000 8,000	0,000	0,000	70,752	141,606
672	-20,000 7,500	0,000	0,000	71,003	142,121
673	-20,000 7,000	0,000	0,000	71,168	142,467
674	-20,000 6,500	0,000	0,000	71,239	142,622
675	-18,285 8,000	2,365	4,847	69,752	139,608
676	-18,857 8,000	1,558	3,192	70,310	140,722
677	-19,428 8,000	773,042	1,584	70,642	141,386
703	-20,000 6,000	0,000	0,000	71,207	142,570
707	-20,000 5,500	0,000	0,000	71,068	142,303
708	-20,000 5,000	0,000	0,000	70,820	141,816

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
709	-20,000 4,500	0,000	0,000	70,463	141,111
713	-20,000 4,000	0,000	0,000	70,000	140,191
714	-19,416 4,000	-1,132	-2,237	69,890	139,972
715	-18,833 4,000	-2,268	-4,483	69,560	139,312
716	-18,249 4,000	-3,413	-6,748	69,005	138,205
717	-20,000 3,333	0,000	0,000	69,226	138,648
718	-20,000 2,667	0,000	0,000	68,290	136,778
719	-20,000 2,000	0,000	0,000	67,218	134,632
755	0,000 3,700	-78,536	-156,837	-317,214	-634,457
756	0,000 3,475	-78,324	-156,415	-309,059	-618,145
757	0,000 3,550	-78,418	-156,602	-311,787	-623,603
758	0,000 3,625	-78,489	-156,743	-314,506	-629,041
769	0,000 3,400	-78,209	-156,186	-306,321	-612,670
770	0,000 3,175	-77,751	-155,270	-298,065	-596,157
771	0,000 3,250	-77,921	-155,611	-300,823	-601,673
772	0,000 3,325	-78,075	-155,917	-303,575	-607,178
821	-17,665 4,000	-4,572	-9,039	68,220	136,637
822	-17,142 4,000	-5,626	-11,123	67,312	134,824
823	-16,619 4,000	-6,696	-13,241	66,201	132,605
824	-16,095 4,000	-7,787	-15,401	64,875	129,957
853	-20,000 1,333	0,000	0,000	66,041	132,274
857	-20,000 0,667	0,000	0,000	64,719	129,624
858	-20,000 0,000	0,000	0,000	63,344	126,864
859	-20,000 -0,667	0,000	0,000	62,084	124,333
869	-20,000 -1,333	0,000	0,000	60,725	121,604
873	-20,000 -2,000	0,000	0,000	59,181	118,501
874	-20,000 -2,667	0,000	0,000	57,899	115,923
875	-20,000 -3,333	0,000	0,000	56,729	113,567
879	-20,000 -4,000	0,000	0,000	55,623	111,340
880	-19,412 -4,000	-2,781	-5,565	55,534	111,162
881	-18,824 -4,000	-5,561	-11,127	55,272	110,637

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
882	-18,235 -4,000	-8,339	-16,684	54,831	109,753
883	-20,000 -4,571	0,000	0,000	52,958	106,007
884	-20,000 -5,143	0,000	0,000	50,259	100,606
885	-20,000 -5,714	0,000	0,000	47,537	95,160
895	-20,000 -6,286	0,000	0,000	44,802	89,685
899	-20,000 -6,857	0,000	0,000	42,066	84,209
900	-20,000 -7,429	0,000	0,000	39,338	78,750
901	-20,000 -8,000	0,000	0,000	36,629	73,327
905	-2,217 4,000	-72,791	-145,371	-189,254	-378,779
906	-2,091 4,000	-73,737	-147,262	-196,118	-392,500
907	-1,964 4,000	-74,645	-149,079	-203,125	-406,505
911	-1,838 4,000	-75,511	-150,809	-210,272	-420,790
912	-1,725 4,000	-76,245	-152,276	-216,795	-433,828
913	-1,612 4,000	-76,934	-153,654	-223,426	-447,081
914	-1,499 4,000	-77,574	-154,932	-230,162	-460,543
921	-2,765 4,000	-68,382	-136,550	-161,087	-322,471
922	-2,624 4,000	-69,548	-138,883	-168,057	-336,405
923	-2,483 4,000	-70,694	-141,176	-175,206	-350,696
927	-2,343 4,000	-71,814	-143,417	-182,534	-365,345
937	-2,906 4,000	-67,201	-134,187	-154,295	-308,891
938	-3,377 4,000	-63,202	-126,180	-132,825	-265,966
939	-3,220 4,000	-64,538	-128,855	-139,769	-279,849
940	-3,063 4,000	-65,873	-131,527	-146,924	-294,155
947	-4,820 4,000	-51,455	-102,660	-78,112	-156,565
948	-4,625 4,000	-52,954	-105,662	-84,623	-169,587
949	-4,429 4,000	-54,488	-108,731	-91,397	-183,133
953	-4,234 4,000	-56,052	-111,864	-98,443	-197,222
954	-4,059 4,000	-57,479	-114,721	-104,998	-210,329
955	-3,884 4,000	-58,927	-117,619	-111,786	-223,901
956	-3,709 4,000	-60,391	-120,552	-118,814	-237,953
963	-3,534 4,000	-61,869	-123,512	-126,089	-252,499

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
973	-5,670 4,000	-45,354	-90,453	-52,630	-105,588
974	-5,452 4,000	-46,853	-93,452	-58,755	-117,845
975	-5,234 4,000	-48,399	-96,544	-65,159	-130,656
979	-5,016 4,000	-49,990	-99,728	-71,854	-144,048
989	-5,888 4,000	-43,902	-87,547	-46,771	-93,864
990	-6,617 4,000	-39,371	-78,483	-28,957	-58,196
991	-6,374 4,000	-40,825	-81,393	-34,602	-69,502
992	-6,131 4,000	-42,335	-84,414	-40,535	-81,382
999	-1,285 4,000	-78,629	-157,040	-243,210	-486,620
1000	-1,183 4,000	-79,047	-157,874	-249,495	-499,180
1001	-1,082 4,000	-79,407	-158,593	-255,850	-511,879
1005	-1,386 4,000	-78,158	-156,098	-236,999	-474,208
1015	-0,981 4,000	-79,704	-159,185	-262,270	-524,707
1016	-0,890 4,000	-79,913	-159,603	-268,075	-536,306
1017	-0,799 4,000	-80,065	-159,905	-273,923	-547,992
1018	-0,708 4,000	-80,155	-160,084	-279,811	-559,755
1025	-0,618 4,000	-80,181	-160,135	-285,731	-571,585
1077	-7,674 4,000	-33,647	-67,034	-7,431	-15,054
1078	-7,403 4,000	-35,028	-69,796	-12,520	-25,259
1079	-7,132 4,000	-36,468	-72,676	-17,900	-36,042
1083	-6,860 4,000	-37,970	-75,681	-23,586	-47,436
1099	-7,946 4,000	-32,324	-64,386	-2,615	-5,396
1100	-8,854 4,000	-28,271	-56,275	11,692	23,316
1101	-8,551 4,000	-29,561	-58,857	7,214	14,328
1102	-8,248 4,000	-30,911	-61,558	2,451	4,769
1209	0,000 3,100	-77,563	-154,897	-295,301	-590,630
1210	0,000 2,875	-76,915	-153,603	-286,990	-574,007
1211	0,000 2,950	-77,145	-154,062	-289,763	-579,554
1212	0,000 3,025	-77,361	-154,494	-292,534	-585,096
1239	-15,103 4,000	-9,925	-19,639	61,717	123,645
1240	-14,634 4,000	-10,974	-21,722	59,902	120,017

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1241	-14,165 4,000	-12,054	-23,867	57,860	115,932
1245	-13,696 4,000	-13,169	-26,083	55,573	111,357
1246	-13,276 4,000	-14,202	-28,139	53,300	106,808
1247	-12,855 4,000	-15,270	-30,268	50,801	101,802
1248	-12,435 4,000	-16,379	-32,480	48,059	96,308
1255	-15,572 4,000	-8,902	-17,610	63,320	126,848
1291	0,000 2,800	-76,672	-153,120	-284,215	-568,457
1292	0,000 2,575	-75,878	-151,536	-275,885	-551,798
1293	0,000 2,650	-76,153	-152,085	-278,661	-557,351
1294	0,000 2,725	-76,418	-152,613	-281,438	-562,905
1339	-17,647 -4,000	-11,112	-22,233	54,184	108,458
1340	-15,882 -4,000	-19,292	-38,600	51,143	102,365
1341	-16,471 -4,000	-16,572	-33,158	52,356	104,795
1342	-17,059 -4,000	-13,843	-27,698	53,377	106,840
1383	-20,000 -8,571	0,000	0,000	33,946	67,957
1384	-20,000 -9,143	0,000	0,000	31,300	62,661
1385	-20,000 -9,714	0,000	0,000	28,700	57,455
1386	-20,000 -10,286	0,000	0,000	26,153	52,356
1393	-20,000 -10,857	0,000	0,000	23,667	47,381
1397	-20,000 -11,429	0,000	0,000	21,251	42,544
1398	-20,000 -12,000	0,000	0,000	18,913	37,864
1399	-20,000 -12,571	0,000	0,000	16,661	33,356
1419	0,000 2,500	-75,593	-150,969	-273,109	-546,246
1420	0,000 2,275	-74,689	-149,166	-264,791	-529,612
1421	0,000 2,350	-74,998	-149,782	-267,562	-535,152
1422	0,000 2,425	-75,300	-150,384	-270,334	-540,698
1433	0,000 8,000	111,717	221,980	-392,835	-786,063
1437	0,750 8,000	122,042	242,248	-525,376	-1,051
1438	0,500 8,000	117,044	232,835	-472,173	-944,586
1439	0,250 8,000	113,651	226,158	-430,019	-860,212
1547	-10,170 4,000	-23,271	-46,263	28,241	56,544

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1548	-9,832	4,000	-24,469	-48,662	24,409	48,849
1549	-9,494	4,000	-25,723	-51,173	20,302	40,602
1553	-9,157	4,000	-27,038	-53,805	15,902	31,768
1563	-10,508	4,000	-22,124	-43,967	31,818	63,725
1564	-11,638	4,000	-18,610	-36,936	42,126	84,413
1565	-11,261	4,000	-19,731	-39,177	38,955	78,051
1566	-10,884	4,000	-20,901	-41,518	35,525	71,168
1573	-12,015	4,000	-17,533	-34,784	45,055	90,288
1709	-15,294	-4,000	-21,992	-44,002	49,728	99,530
1710	-14,706	-4,000	-24,656	-49,334	48,089	96,246
1711	-14,118	-4,000	-27,277	-54,577	46,224	92,509
1712	-13,529	-4,000	-29,847	-59,720	44,133	88,321
1847	0,000	2,200	-74,372	-148,535	-262,024	-524,077
1848	0,000	1,975	-73,384	-146,565	-253,743	-507,517
1849	0,000	2,050	-73,719	-147,233	-256,499	-513,029
1850	0,000	2,125	-74,049	-147,890	-259,260	-518,549
1921	-20,000	-13,714	0,000	0,000	12,448	24,922
1922	-20,000	-14,286	0,000	0,000	10,507	21,036
1923	-20,000	-14,857	0,000	0,000	8,689	17,396
1927	-20,000	-13,143	0,000	0,000	14,503	29,035
1931	-20,000	-15,429	0,000	0,000	7,004	14,023
1935	-20,000	-16,000	0,000	0,000	5,465	10,941
1936	-20,000	-16,571	0,000	0,000	4,083	8,176
1937	-20,000	-17,143	0,000	0,000	2,874	5,755
1957	0,000	1,900	-73,043	-145,886	-250,991	-502,014
1958	0,000	1,825	-72,697	-145,196	-248,244	-496,521
1959	0,000	1,750	-72,347	-144,498	-245,503	-491,038
1960	0,000	1,675	-71,992	-143,791	-242,767	-485,566
1993	0,000	1,600	-71,633	-143,075	-240,037	-480,107
1994	0,000	1,375	-70,535	-140,886	-231,885	-463,805
1995	0,000	1,450	-70,904	-141,622	-234,596	-469,226

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
1996	0,000	1,525	-71,270	-142,352	-237,313	-474,660
2035	-20,000	-17,714	0,000	0,000	1,852	3,708
2036	-20,000	-20,000	0,000	0,000	0,000	0,000
2037	-19,412	-20,000	0,000	0,000	0,000	0,000
2038	-18,824	-20,000	0,000	0,000	0,000	0,000
2039	-18,235	-20,000	0,000	0,000	0,000	0,000
2043	-20,000	-18,286	0,000	0,000	1,034	2,071
2044	-20,000	-18,857	0,000	0,000	439,063	879,473
2045	-20,000	-19,429	0,000	0,000	87,089	174,590
2059	0,000	1,300	-70,162	-140,143	-229,182	-458,399
2060	0,000	1,075	-69,027	-137,882	-221,116	-442,268
2061	0,000	1,150	-69,408	-138,641	-223,797	-447,630
2062	0,000	1,225	-69,786	-139,395	-226,486	-453,007
2079	0,000	1,000	-68,644	-137,118	-218,442	-436,922
2080	0,000	0,775	-67,482	-134,801	-210,471	-420,981
2081	0,000	0,850	-67,871	-135,577	-213,120	-426,278
2082	0,000	0,925	-68,259	-136,350	-215,777	-431,592
2083	1,000	8,000	118,971	236,662	-610,395	-1,221
2087	2,500	8,000	22,619	45,104	-832,783	-1,665
2088	2,000	8,000	57,041	113,730	-800,470	-1,601
2089	1,500	8,000	89,726	178,770	-736,843	-1,473
2293	-12,941	-4,000	-32,367	-64,761	41,814	83,675
2297	-11,176	-4,000	-39,529	-79,087	33,319	66,659
2298	-11,765	-4,000	-37,224	-74,477	36,417	72,863
2299	-12,353	-4,000	-34,833	-69,693	39,246	78,530
2525	-17,647	-20,000	0,000	0,000	0,000	0,000
2529	-17,059	-20,000	0,000	0,000	0,000	0,000
2530	-16,471	-20,000	0,000	0,000	0,000	0,000
2531	-15,882	-20,000	0,000	0,000	0,000	0,000
2567	0,000	0,700	-67,090	-134,020	-207,831	-415,702
2568	0,000	0,475	-65,905	-131,657	-199,964	-399,968

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2569	0,000 0,550	-66,302	-132,448	-202,577	-405,195
2570	0,000 0,625	-66,697	-133,236	-205,200	-410,440
2591	0,000 0,400	-65,506	-130,862	-197,359	-394,759
2592	0,000 0,325	-65,106	-130,064	-194,764	-389,569
2593	0,000 0,250	-64,704	-129,263	-192,177	-384,397
2594	0,000 0,175	-64,300	-128,458	-189,600	-379,243
2621	0,000 0,100	-63,895	-127,650	-187,033	-374,109
2622	0,000 0,025	-63,488	-126,839	-184,476	-368,994
2623	0,000 -0,050	-63,080	-126,025	-181,927	-363,898
2624	0,000 -0,125	-62,670	-125,207	-179,389	-358,822
2689	0,000 -0,200	-62,258	-124,386	-176,860	-353,765
2690	0,000 -0,275	-61,844	-123,561	-174,342	-348,729
2691	0,000 -0,350	-61,429	-122,733	-171,833	-343,712
2692	0,000 -0,425	-61,012	-121,901	-169,334	-338,715
2713	0,000 -0,500	-60,593	-121,065	-166,846	-333,738
2714	0,000 -0,725	-59,322	-118,532	-159,440	-318,926
2715	0,000 -0,650	-59,748	-119,381	-161,899	-323,845
2716	0,000 -0,575	-60,171	-120,225	-164,368	-328,782
2749	0,000 -0,800	-58,894	-117,678	-156,990	-314,028
2750	0,000 -0,875	-58,468	-116,828	-154,552	-309,152
2751	0,000 -0,950	-58,041	-115,977	-152,123	-304,294
2752	0,000 -1,025	-57,602	-115,100	-149,707	-299,462
2773	0,000 -1,100	-57,168	-114,234	-147,297	-294,643
2774	0,000 -1,175	-56,726	-113,353	-144,900	-289,848
2775	0,000 -1,250	-56,282	-112,468	-142,514	-285,077
2776	0,000 -1,325	-55,837	-111,579	-140,139	-280,326
2793	3,000 8,000	-8,921	-17,781	-843,361	-1,686
2794	4,500 8,000	-108,887	-217,148	-733,635	-1,467
2795	4,000 8,000	-77,666	-154,899	-799,343	-1,598
2796	3,500 8,000	-42,819	-85,391	-833,104	-1,666
2971	-10,588 -4,000	-41,733	-83,495	29,946	59,902

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
2972	-10,000	-4,000	-43,819	-87,666	26,291	52,583
2973	-9,412	-4,000	-45,769	-91,565	22,349	44,689
2974	-8,824	-4,000	-47,562	-95,148	18,118	36,217
3065	-15,294	-20,000	0,000	0,000	0,000	0,000
3069	-14,706	-20,000	0,000	0,000	0,000	0,000
3070	-14,118	-20,000	0,000	0,000	0,000	0,000
3071	-13,529	-20,000	0,000	0,000	0,000	0,000
3251	0,000	-1,400	-55,388	-110,684	-137,774	-275,597
3252	0,000	-1,475	-54,936	-109,782	-135,419	-270,888
3253	0,000	-1,550	-54,480	-108,872	-133,073	-266,196
3254	0,000	-1,625	-54,021	-107,956	-130,737	-261,524
3275	0,000	-1,700	-53,562	-107,040	-128,412	-256,873
3276	0,000	-1,775	-53,069	-106,056	-126,108	-252,265
3277	0,000	-1,850	-52,571	-105,064	-123,819	-247,687
3278	0,000	-1,925	-52,095	-104,113	-121,531	-243,112
3279	5,000	8,000	-134,278	-267,716	-604,120	-1,208
3283	6,875	8,000	-119,005	-235,617	-295,438	-590,666
3284	6,250	8,000	-128,214	-254,878	-360,285	-720,233
3285	5,625	8,000	-133,438	-265,750	-450,647	-900,989
3385	-8,235	-4,000	-49,173	-98,369	13,599	27,171
3389	-6,471	-4,000	-52,653	-105,318	-1,586	-3,222
3390	-7,059	-4,000	-51,748	-103,512	3,733	7,422
3391	-7,647	-4,000	-50,578	-101,175	8,801	17,566
3521	-12,941	-20,000	0,000	0,000	0,000	0,000
3525	-12,353	-20,000	0,000	0,000	0,000	0,000
3526	-11,765	-20,000	0,000	0,000	0,000	0,000
3527	-11,176	-20,000	0,000	0,000	0,000	0,000
3675	0,000	-2,000	-51,663	-103,251	-119,219	-238,489
3697	7,500	8,000	-112,451	-220,735	-244,184	-488,583
3698	9,375	8,000	-86,988	-174,339	-132,503	-266,762
3699	8,750	8,000	-95,451	-189,750	-162,961	-327,925

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
3700	8,125 8,000	-104,757	-206,187	-199,301	-400,272
3739	-5,294 -4,000	-53,538	-107,078	-12,862	-25,782
3740	-4,706 -4,000	-53,452	-106,902	-18,737	-37,536
3741	-4,118 -4,000	-52,971	-105,936	-24,703	-49,468
3745	-5,882 -4,000	-53,261	-106,529	-7,130	-14,314
3755	-3,529 -4,000	-52,066	-104,122	-30,693	-61,448
3756	-2,941 -4,000	-50,714	-101,413	-36,628	-73,318
3757	-2,353 -4,000	-48,898	-97,779	-42,428	-84,916
3758	-1,765 -4,000	-46,611	-93,201	-48,003	-96,062
3791	-10,588 -20,000	0,000	0,000	0,000	0,000
3795	-10,000 -20,000	0,000	0,000	0,000	0,000
3796	-9,412 -20,000	0,000	0,000	0,000	0,000
3797	-8,824 -20,000	0,000	0,000	0,000	0,000
3959	10,000 8,000	-80,111	-160,760	-106,385	-214,181
3963	11,875 8,000	-58,696	-120,557	-46,381	-94,010
3964	11,250 8,000	-66,049	-133,934	-63,416	-128,383
3965	10,625 8,000	-73,389	-147,537	-83,357	-168,235
4213	-8,235 -20,000	0,000	0,000	0,000	0,000
4217	-7,647 -20,000	0,000	0,000	0,000	0,000
4218	-7,059 -20,000	0,000	0,000	0,000	0,000
4219	-6,471 -20,000	0,000	0,000	0,000	0,000
4281	-0,588 -4,000	-40,629	-81,236	-58,096	-116,240
4282	0,000 -4,000	-36,963	-73,904	-62,407	-124,859
4283	0,588 -4,000	-32,893	-65,765	-66,084	-132,209
4287	-1,176 -4,000	-43,852	-87,681	-53,258	-106,570
4297	1,176 -4,000	-28,477	-56,935	-69,023	-138,085
4301	1,765 -4,000	-23,793	-47,568	-71,147	-142,331
4302	2,353 -4,000	-18,923	-37,831	-72,401	-144,837
4303	2,941 -4,000	-13,957	-27,902	-72,753	-145,542
4329	12,500 8,000	-52,220	-108,286	-32,363	-64,883
4330	14,375 8,000	-38,726	-78,748	1,630	3,559

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4331	13,750 8,000	-43,493	-88,656	-8,263	-16,207
4332	13,125 8,000	-48,101	-98,609	-19,570	-38,935
4361	15,000 8,000	-34,007	-69,078	10,129	20,539
4365	16,875 8,000	-20,625	-41,802	28,372	57,040
4366	16,250 8,000	-24,971	-50,637	23,387	47,070
4367	15,625 8,000	-29,428	-59,720	17,334	34,960
4403	-5,882 -20,000	0,000	0,000	0,000	0,000
4407	-5,294 -20,000	0,000	0,000	0,000	0,000
4408	-4,706 -20,000	0,000	0,000	0,000	0,000
4409	-4,118 -20,000	0,000	0,000	0,000	0,000
4577	5,294 -4,000	5,019	10,040	-65,305	-130,658
4578	4,706 -4,000	585,530	1,175	-68,419	-136,882
4579	4,118 -4,000	-4,111	-8,217	-70,736	-141,511
4589	3,529 -4,000	-8,988	-17,968	-72,193	-144,425
4643	20,000 6,200	0,000	0,000	42,634	85,671
4644	20,000 6,800	0,000	0,000	41,871	84,114
4645	20,000 7,400	0,000	0,000	40,739	81,815
4646	20,000 8,000	0,000	0,000	39,250	78,795
4647	19,375 8,000	-4,042	-8,184	38,827	77,949
4648	18,750 8,000	-8,105	-16,412	37,551	75,398
4649	18,125 8,000	-12,210	-24,730	35,405	71,107
4653	17,500 8,000	-16,378	-33,181	32,360	65,018
4657	20,000 5,600	0,000	0,000	43,034	86,495
4661	20,000 3,800	0,000	0,000	42,330	85,099
4662	20,000 4,400	0,000	0,000	42,846	86,136
4663	20,000 5,000	0,000	0,000	43,095	86,629
4711	5,882 -4,000	9,116	18,235	-61,471	-122,995
4715	6,471 -4,000	12,822	25,648	-57,014	-114,086
4716	7,059 -4,000	16,094	32,195	-52,030	-104,122
4717	7,647 -4,000	18,908	37,825	-46,629	-93,324
4779	-3,529 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
4780	-2,941	-20,000	0,000	0,000	0,000	0,000
4781	-2,353	-20,000	0,000	0,000	0,000	0,000
4782	-1,765	-20,000	0,000	0,000	0,000	0,000
4939	20,000	3,200	0,000	0,000	41,593	83,612
4943	20,000	1,400	0,000	0,000	38,591	77,536
4944	20,000	2,000	0,000	0,000	39,679	79,740
4945	20,000	2,600	0,000	0,000	40,693	81,792
4949	8,824	-4,000	23,119	46,258	-34,947	-69,962
4950	9,412	-4,000	24,508	49,042	-28,857	-57,780
4951	10,000	-4,000	25,429	50,890	-22,736	-45,535
4955	8,235	-4,000	21,252	42,519	-40,905	-81,877
4965	-1,176	-20,000	0,000	0,000	0,000	0,000
4969	-0,588	-20,000	0,000	0,000	0,000	0,000
4970	0,000	-20,000	0,000	0,000	0,000	0,000
4971	0,588	-20,000	0,000	0,000	0,000	0,000
5039	10,588	-4,000	25,909	51,856	-16,685	-33,426
5043	12,353	-4,000	25,067	50,188	350,677	675,403
5044	11,765	-4,000	25,692	51,435	-5,086	-10,209
5045	11,176	-4,000	25,985	52,014	-10,781	-21,609
5134	20,000	0,800	0,000	0,000	37,527	75,379
5141	20,000	-1,000	0,000	0,000	35,098	70,431
5142	20,000	-0,400	0,000	0,000	35,662	71,589
5143	20,000	0,200	0,000	0,000	36,527	73,350
5245	1,176	-20,000	0,000	0,000	0,000	0,000
5249	1,765	-20,000	0,000	0,000	0,000	0,000
5250	2,353	-20,000	0,000	0,000	0,000	0,000
5251	2,941	-20,000	0,000	0,000	0,000	0,000
5287	20,000	-1,600	0,000	0,000	35,053	70,313
5291	20,000	-3,400	0,000	0,000	35,463	71,058
5292	20,000	-2,800	0,000	0,000	34,941	70,037
5293	20,000	-2,200	0,000	0,000	34,809	69,798

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
5297	13,529 -4,000	22,949	45,958	10,285	20,573
5298	14,118 -4,000	21,523	43,106	14,723	29,464
5299	14,706 -4,000	19,892	39,842	18,780	37,592
5303	12,941 -4,000	24,141	48,340	5,485	10,958
5313	15,294 -4,000	18,082	36,221	22,438	44,922
5314	15,882 -4,000	16,122	32,297	25,684	51,428
5315	16,471 -4,000	14,036	28,119	28,508	57,089
5316	17,059 -4,000	11,846	23,733	30,904	61,893
5439	3,529 -20,000	0,000	0,000	0,000	0,000
5443	4,118 -20,000	0,000	0,000	0,000	0,000
5444	4,706 -20,000	0,000	0,000	0,000	0,000
5445	5,294 -20,000	0,000	0,000	0,000	0,000
5501	18,235 -4,000	7,236	14,499	34,403	68,907
5502	18,824 -4,000	4,855	9,727	35,501	71,108
5503	19,412 -4,000	2,437	4,884	36,167	72,444
5504	20,000 -4,000	0,000	0,000	36,391	72,894
5505	20,000 -5,714	0,000	0,000	29,651	59,389
5506	20,000 -5,143	0,000	0,000	31,861	63,816
5507	20,000 -4,571	0,000	0,000	34,113	68,328
5517	17,647 -4,000	9,573	19,180	32,869	65,833
5667	5,882 -20,000	0,000	0,000	0,000	0,000
5668	6,471 -20,000	0,000	0,000	0,000	0,000
5669	7,059 -20,000	0,000	0,000	0,000	0,000
5670	7,647 -20,000	0,000	0,000	0,000	0,000
5693	20,000 -6,286	0,000	0,000	27,496	55,071
5694	20,000 -8,000	0,000	0,000	21,443	42,945
5695	20,000 -7,429	0,000	0,000	23,385	46,835
5696	20,000 -6,857	0,000	0,000	25,404	50,881
5813	8,235 -20,000	0,000	0,000	0,000	0,000
5817	8,824 -20,000	0,000	0,000	0,000	0,000
5818	9,412 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	19,581	39,215
5843	20,000	-10,286	0,000	0,000	14,495	29,028
5844	20,000	-9,714	0,000	0,000	16,106	32,256
5845	20,000	-9,143	0,000	0,000	17,802	35,652
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	12,965	25,965
6054	20,000	-12,571	0,000	0,000	8,861	17,746
6055	20,000	-12,000	0,000	0,000	10,150	20,327
6056	20,000	-11,429	0,000	0,000	11,517	23,065
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	7,650	15,320
6093	20,000	-14,857	0,000	0,000	4,477	8,965
6094	20,000	-14,286	0,000	0,000	5,457	10,929
6095	20,000	-13,714	0,000	0,000	6,515	13,048
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	3,574	7,159
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	1,384	2,772
6175	20,000	-16,571	0,000	0,000	2,023	4,051
6176	20,000	-16,000	0,000	0,000	2,755	5,517
6180	20,000	-17,714	0,000	0,000	847,213	1,697

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-3 m]
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	-17,913	-35,626
6201	20,000	-18,286	0,000	0,000	424,633	850,879
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	130,614	261,981

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	<i>Rev</i> F0 <i>Data</i> 20/06/2011

10. Results for phase 5

Table [15] Table of deformations phase no: 5

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1	-1,371	8,000	23,430	46,929	-106,321	-212,621
2	-1,543	8,000	24,858	49,781	-103,301	-206,581
3	-1,715	8,000	26,148	52,359	-100,306	-200,593
7	-2,075	8,000	28,438	56,931	-94,142	-188,265
8	-2,264	8,000	29,481	59,015	-90,977	-181,936
9	-2,452	8,000	30,409	60,867	-87,846	-175,673
13	-1,887	8,000	27,303	54,665	-97,344	-194,669
23	-2,641	8,000	31,196	62,439	-84,758	-169,497
27	-2,848	8,000	31,964	63,971	-81,436	-162,853
28	-3,055	8,000	32,647	65,334	-78,167	-156,316
29	-3,261	8,000	33,232	66,499	-74,949	-149,879
33	-3,468	8,000	33,699	67,429	-71,786	-143,555
37	-3,695	8,000	34,105	68,236	-68,400	-136,783
38	-3,922	8,000	34,436	68,895	-65,092	-130,167
39	-4,149	8,000	34,685	69,388	-61,858	-123,698
49	-0,728	8,000	16,784	33,648	-117,864	-235,705
50	-0,885	8,000	18,629	37,335	-114,987	-229,952
51	-1,042	8,000	20,303	40,679	-112,155	-224,288
58	-1,199	8,000	21,845	43,762	-109,359	-218,698
103	-4,376	8,000	34,879	69,771	-58,699	-117,382
107	-4,625	8,000	34,990	69,997	-55,312	-110,605
108	-4,873	8,000	35,021	70,049	-52,016	-104,004
109	-5,122	8,000	34,977	69,918	-48,801	-97,576
113	-5,371	8,000	34,839	69,611	-45,669	-91,326
117	-5,644	8,000	34,548	69,038	-42,345	-84,697
118	-5,917	8,000	34,123	68,216	-39,155	-78,323

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
119	-6,190 8,000	33,644	67,285	-36,098	-72,204
129	-0,572 8,000	14,715	29,513	-120,793	-241,562
133	-0,143 8,000	7,493	15,077	-129,376	-258,726
134	-0,286 8,000	10,315	20,718	-126,332	-252,639
135	-0,429 8,000	12,641	25,367	-123,487	-246,949
139	0,000 8,000	3,819	7,732	-132,751	-265,474
143	0,000 7,540	-139,938	-183,064	-141,478	-282,919
144	0,000 7,693	-139,895	-182,496	-141,482	-282,928
145	0,000 7,847	-139,780	-181,802	-141,485	-282,932
146	0,000 8,000	-139,633	-181,045	-141,485	-282,934
169	0,000 6,965	-139,520	-184,369	-141,446	-282,854
170	0,000 7,106	-139,770	-184,278	-141,456	-282,875
171	0,000 7,246	-139,903	-184,001	-141,465	-282,893
172	0,000 7,387	-139,943	-183,582	-141,472	-282,907
183	0,000 6,825	-139,137	-184,248	-141,434	-282,830
184	0,000 6,438	-137,362	-182,783	-141,392	-282,748
185	0,000 6,567	-138,073	-183,457	-141,407	-282,778
186	0,000 6,696	-138,664	-183,945	-141,421	-282,806
207	0,000 6,309	-136,532	-181,924	-141,376	-282,715
208	0,000 5,955	-133,650	-178,631	-141,324	-282,611
209	0,000 6,073	-134,707	-179,877	-141,342	-282,648
210	0,000 6,191	-135,668	-180,976	-141,360	-282,682
265	0,000 5,836	-132,500	-177,239	-141,304	-282,572
266	0,000 5,511	-128,874	-172,679	-141,245	-282,454
267	0,000 5,620	-130,156	-174,316	-141,266	-282,495
268	0,000 5,728	-131,366	-175,837	-141,286	-282,534
289	0,000 5,403	-127,520	-170,928	-141,224	-282,411
290	0,000 5,105	-123,442	-165,530	-141,160	-282,283
291	0,000 5,204	-124,858	-167,423	-141,182	-282,327
292	0,000 5,304	-126,217	-169,222	-141,203	-282,370
315	-6,463 8,000	33,277	66,510	-33,214	-66,422

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
319	-6,762 8,000	32,693	65,351	-30,053	-60,110
320	-7,062 8,000	32,077	64,097	-27,086	-54,174
321	-7,361 8,000	31,428	62,761	-24,213	-48,446
331	-7,660 8,000	30,603	61,175	-21,458	-42,964
335	-7,989 8,000	29,701	59,410	-18,670	-37,366
336	-8,317 8,000	28,866	57,708	-16,016	-32,039
337	-8,645 8,000	28,003	55,954	-13,465	-26,929
361	0,000 4,732	-117,649	-157,601	-141,072	-282,107
362	0,000 4,823	-119,135	-159,661	-141,094	-282,152
363	0,000 4,914	-120,576	-161,641	-141,116	-282,196
364	0,000 5,005	-121,972	-163,544	-141,138	-282,238
375	0,000 4,641	-116,119	-155,462	-141,049	-282,061
376	0,000 4,390	-111,679	-149,159	-140,982	-281,928
377	0,000 4,474	-113,196	-151,330	-141,005	-281,973
378	0,000 4,557	-114,676	-153,430	-141,027	-282,017
395	0,000 4,307	-110,123	-146,916	-140,959	-281,882
396	0,000 4,077	-105,641	-140,361	-140,894	-281,751
397	0,000 4,153	-107,169	-142,611	-140,916	-281,795
398	0,000 4,230	-108,662	-144,795	-140,938	-281,839
399	-0,219 4,000	542,681	1,153	-128,530	-257,024
400	-0,146 4,000	437,764	943,498	-129,835	-259,635
401	-0,073 4,000	327,453	723,399	-131,136	-262,237
405	0,000 4,000	211,518	492,049	-132,432	-264,829
409	0,000 4,000	-104,079	-138,044	-140,871	-281,705
410	0,000 3,775	-99,284	-130,828	-140,803	-281,568
411	0,000 3,850	-100,918	-133,304	-140,826	-281,615
412	0,000 3,925	-102,516	-135,708	-140,849	-281,660
571	-0,536 4,000	941,354	1,948	-122,807	-245,577
572	-0,455 4,000	847,402	1,761	-124,282	-248,528
573	-0,373 4,000	747,855	1,562	-125,753	-251,471
577	-0,292 4,000	642,423	1,352	-127,220	-254,404

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
593	-9,334 8,000	26,306	52,480	-8,477	-16,986
594	-9,694 8,000	25,196	50,229	-6,098	-12,235
595	-10,054 8,000	24,078	47,905	-3,857	-7,828
599	-8,974 8,000	27,264	54,397	-11,115	-22,233
603	-10,414 8,000	22,977	45,893	-1,772	-3,752
607	-10,809 8,000	21,823	43,765	367,081	614,940
608	-11,204 8,000	20,547	41,078	2,375	4,660
609	-11,599 8,000	19,101	38,216	4,211	8,215
625	-11,994 8,000	17,655	35,883	5,641	11,138
626	-12,428 8,000	16,966	34,238	7,246	14,478
627	-12,861 8,000	16,054	32,292	8,806	17,630
628	-13,294 8,000	15,040	30,219	10,284	20,578
635	-13,727 8,000	13,999	28,117	11,637	23,277
639	-14,203 8,000	12,866	25,834	12,969	25,944
640	-14,678 8,000	11,745	23,576	14,169	28,346
641	-15,153 8,000	10,637	21,346	15,244	30,496
651	-16,150 8,000	8,357	16,765	17,115	34,236
652	-16,671 8,000	7,188	14,419	17,900	35,806
653	-17,192 8,000	6,035	12,106	18,560	37,127
657	-15,628 8,000	9,541	19,144	16,199	32,405
667	-17,713 8,000	4,896	9,820	19,101	38,208
671	-20,000 8,000	0,000	0,000	20,146	40,299
672	-20,000 7,500	0,000	0,000	20,580	41,168
673	-20,000 7,000	0,000	0,000	20,967	41,945
674	-20,000 6,500	0,000	0,000	21,305	42,624
675	-18,285 8,000	3,660	7,340	19,561	39,129
676	-18,857 8,000	2,434	4,881	19,887	39,781
677	-19,428 8,000	1,215	2,437	20,082	40,170
703	-20,000 6,000	0,000	0,000	21,593	43,201
707	-20,000 5,500	0,000	0,000	21,830	43,676
708	-20,000 5,000	0,000	0,000	22,015	44,048

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
709	-20,000 4,500	0,000	0,000	22,151	44,319
713	-20,000 4,000	0,000	0,000	22,237	44,492
714	-19,416 4,000	238,686	480,114	22,173	44,363
715	-18,833 4,000	476,345	958,100	21,978	43,974
716	-18,249 4,000	711,922	1,432	21,652	43,322
717	-20,000 3,333	0,000	0,000	22,281	44,579
718	-20,000 2,667	0,000	0,000	22,248	44,512
719	-20,000 2,000	0,000	0,000	22,146	44,308
755	0,000 3,700	-97,613	-128,278	-140,779	-281,521
756	0,000 3,475	-92,363	-120,149	-140,707	-281,376
757	0,000 3,550	-94,154	-122,941	-140,731	-281,425
758	0,000 3,625	-95,903	-125,650	-140,755	-281,474
769	0,000 3,400	-90,530	-117,270	-140,682	-281,327
770	0,000 3,175	-84,755	-108,071	-140,606	-281,174
771	0,000 3,250	-86,727	-111,234	-140,631	-281,226
772	0,000 3,325	-88,651	-114,299	-140,657	-281,277
821	-17,665 4,000	944,344	1,899	21,191	42,400
822	-17,142 4,000	1,149	2,310	20,660	41,336
823	-16,619 4,000	1,350	2,713	20,012	40,039
824	-16,095 4,000	1,546	3,106	19,243	38,500
853	-20,000 1,333	0,000	0,000	21,985	43,984
857	-20,000 0,667	0,000	0,000	21,774	43,559
858	-20,000 0,000	0,000	0,000	21,523	43,056
859	-20,000 -0,667	0,000	0,000	21,243	42,495
869	-20,000 -1,333	0,000	0,000	20,945	41,898
873	-20,000 -2,000	0,000	0,000	20,640	41,286
874	-20,000 -2,667	0,000	0,000	20,339	40,682
875	-20,000 -3,333	0,000	0,000	20,051	40,104
879	-20,000 -4,000	0,000	0,000	19,785	39,572
880	-19,412 -4,000	-803,518	-1,607	19,742	39,484
881	-18,824 -4,000	-1,605	-3,210	19,610	39,220

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
882	-18,235	-4,000	-2,403	-4,806	19,390	38,780
883	-20,000	-4,571	0,000	0,000	19,004	38,008
884	-20,000	-5,143	0,000	0,000	18,188	36,376
885	-20,000	-5,714	0,000	0,000	17,342	34,686
895	-20,000	-6,286	0,000	0,000	16,472	32,946
899	-20,000	-6,857	0,000	0,000	15,582	31,166
900	-20,000	-7,429	0,000	0,000	14,677	29,355
901	-20,000	-8,000	0,000	0,000	13,761	27,524
905	-2,217	4,000	2,049	4,151	-92,241	-184,446
906	-2,091	4,000	2,001	4,056	-94,490	-188,945
907	-1,964	4,000	1,950	3,955	-96,754	-193,471
911	-1,838	4,000	1,894	3,845	-99,030	-198,023
912	-1,725	4,000	1,841	3,739	-101,079	-202,121
913	-1,612	4,000	1,784	3,625	-103,135	-206,234
914	-1,499	4,000	1,722	3,502	-105,198	-210,358
921	-2,765	4,000	2,223	4,496	-82,665	-165,297
922	-2,624	4,000	2,183	4,416	-85,088	-170,142
923	-2,483	4,000	2,139	4,331	-87,536	-175,038
927	-2,343	4,000	2,093	4,239	-90,008	-179,980
937	-2,906	4,000	2,261	4,572	-80,269	-160,505
938	-3,377	4,000	2,375	4,796	-72,462	-144,891
939	-3,220	4,000	2,339	4,725	-75,026	-150,020
940	-3,063	4,000	2,301	4,651	-77,629	-155,225
947	-4,820	4,000	2,646	5,332	-50,849	-101,674
948	-4,625	4,000	2,613	5,268	-53,557	-107,089
949	-4,429	4,000	2,580	5,201	-56,334	-112,642
953	-4,234	4,000	2,545	5,133	-59,180	-118,332
954	-4,059	4,000	2,513	5,069	-61,789	-123,549
955	-3,884	4,000	2,480	5,003	-64,452	-128,874
956	-3,709	4,000	2,445	4,935	-67,168	-134,305
963	-3,534	4,000	2,409	4,863	-69,937	-139,842

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
973	-5,670 4,000	2,777	5,592	-39,875	-79,733
974	-5,452 4,000	2,745	5,529	-42,568	-85,118
975	-5,234 4,000	2,712	5,463	-45,346	-90,672
979	-5,016 4,000	2,678	5,395	-48,210	-96,397
989	-5,888 4,000	2,808	5,654	-37,265	-74,515
990	-6,617 4,000	2,903	5,841	-29,121	-58,234
991	-6,374 4,000	2,873	5,783	-31,736	-63,462
992	-6,131 4,000	2,842	5,720	-34,450	-68,887
999	-1,285 4,000	1,591	3,242	-109,120	-218,203
1000	-1,183 4,000	1,522	3,104	-110,977	-221,917
1001	-1,082 4,000	1,448	2,957	-112,834	-225,632
1005	-1,386 4,000	1,655	3,369	-107,265	-214,492
1015	-0,981 4,000	1,368	2,798	-114,691	-229,345
1016	-0,890 4,000	1,292	2,646	-116,354	-232,671
1017	-0,799 4,000	1,210	2,483	-118,015	-235,993
1018	-0,708 4,000	1,123	2,310	-119,673	-239,309
1025	-0,618 4,000	1,030	2,125	-121,327	-242,618
1077	-7,674 4,000	3,006	6,046	-18,847	-37,699
1078	-7,403 4,000	2,984	6,002	-21,320	-42,641
1079	-7,132 4,000	2,959	5,952	-23,904	-47,806
1083	-6,860 4,000	2,931	5,896	-26,602	-53,200
1099	-7,946 4,000	3,024	6,082	-16,482	-32,973
1100	-8,854 4,000	3,056	6,146	-9,306	-18,634
1101	-8,551 4,000	3,050	6,135	-11,575	-23,169
1102	-8,248 4,000	3,039	6,113	-13,966	-27,946
1209	0,000 3,100	-82,732	-104,805	-140,580	-281,122
1210	0,000 2,875	-76,348	-94,354	-140,500	-280,963
1211	0,000 2,950	-78,531	-97,950	-140,527	-281,017
1212	0,000 3,025	-80,658	-101,433	-140,553	-281,070
1239	-15,103 4,000	1,901	3,817	17,431	34,870
1240	-14,634 4,000	2,060	4,134	16,402	32,807

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1241	-14,165 4,000	2,212	4,437	15,254	30,506
1245	-13,696 4,000	2,355	4,723	13,979	27,950
1246	-13,276 4,000	2,476	4,964	12,723	25,430
1247	-12,855 4,000	2,587	5,186	11,351	22,680
1248	-12,435 4,000	2,687	5,388	9,857	19,684
1255	-15,572 4,000	1,736	3,487	18,348	36,706
1291	0,000 2,800	-74,107	-90,639	-140,473	-280,909
1292	0,000 2,575	-67,027	-78,755	-140,390	-280,743
1293	0,000 2,650	-69,448	-82,843	-140,418	-280,799
1294	0,000 2,725	-71,808	-86,804	-140,445	-280,854
1339	-17,647 -4,000	-3,195	-6,390	19,079	38,159
1340	-15,882 -4,000	-5,518	-11,034	17,590	35,180
1341	-16,471 -4,000	-4,755	-9,509	18,182	36,364
1342	-17,059 -4,000	-3,980	-7,959	18,678	37,355
1383	-20,000 -8,571	0,000	0,000	12,839	25,680
1384	-20,000 -9,143	0,000	0,000	11,916	23,832
1385	-20,000 -9,714	0,000	0,000	10,995	21,991
1386	-20,000 -10,286	0,000	0,000	10,081	20,162
1393	-20,000 -10,857	0,000	0,000	9,178	18,356
1397	-20,000 -11,429	0,000	0,000	8,290	16,580
1398	-20,000 -12,000	0,000	0,000	7,421	14,842
1399	-20,000 -12,571	0,000	0,000	6,575	13,150
1419	0,000 2,500	-64,542	-74,537	-140,362	-280,686
1420	0,000 2,275	-56,704	-61,089	-140,276	-280,514
1421	0,000 2,350	-59,381	-65,705	-140,304	-280,572
1422	0,000 2,425	-61,994	-70,187	-140,333	-280,630
1433	0,000 8,000	-4,091	-8,082	-132,679	-265,323
1437	0,750 8,000	-17,286	-34,456	-117,461	-234,890
1438	0,500 8,000	-14,031	-27,951	-122,137	-244,240
1439	0,250 8,000	-9,917	-19,728	-127,124	-254,216
1547	-10,170 4,000	3,018	6,065	-735,098	-1,511

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1548	-9,832	4,000	3,038	6,107	-2,744	-5,526
1549	-9,494	4,000	3,050	6,133	-4,882	-9,796
1553	-9,157	4,000	3,056	6,146	-7,152	-14,332
1563	-10,508	4,000	2,991	6,009	1,152	2,261
1564	-11,638	4,000	2,845	5,708	6,651	13,262
1565	-11,261	4,000	2,904	5,828	4,950	9,858
1566	-10,884	4,000	2,952	5,929	3,120	6,196
1573	-12,015	4,000	2,776	5,567	8,230	16,424
1709	-15,294	-4,000	-6,266	-12,532	16,899	33,797
1710	-14,706	-4,000	-6,998	-13,995	16,106	32,210
1711	-14,118	-4,000	-7,711	-15,420	15,206	30,410
1712	-13,529	-4,000	-8,402	-16,801	14,196	28,389
1847	0,000	2,200	-53,962	-56,340	-140,246	-280,456
1848	0,000	1,975	-45,367	-41,326	-140,158	-280,279
1849	0,000	2,050	-48,292	-46,454	-140,188	-280,338
1850	0,000	2,125	-51,158	-51,461	-140,217	-280,397
1921	-20,000	-13,714	0,000	0,000	4,970	9,940
1922	-20,000	-14,286	0,000	0,000	4,219	8,438
1923	-20,000	-14,857	0,000	0,000	3,509	7,019
1927	-20,000	-13,143	0,000	0,000	5,756	11,513
1931	-20,000	-15,429	0,000	0,000	2,846	5,692
1935	-20,000	-16,000	0,000	0,000	2,234	4,468
1936	-20,000	-16,571	0,000	0,000	1,680	3,360
1937	-20,000	-17,143	0,000	0,000	1,190	2,380
1957	0,000	1,900	-42,387	-36,081	-140,128	-280,219
1958	0,000	1,825	-39,355	-30,730	-140,098	-280,159
1959	0,000	1,750	-36,279	-25,284	-140,067	-280,098
1960	0,000	1,675	-33,164	-19,756	-140,037	-280,037
1993	0,000	1,600	-30,019	-14,165	-140,006	-279,975
1994	0,000	1,375	-20,518	2,772	-139,913	-279,789
1995	0,000	1,450	-23,683	-2,874	-139,944	-279,852

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
1996	0,000	1,525	-26,854	-8,529	-139,975	-279,914
2035	-20,000	-17,714	0,000	0,000	772,520	1,545
2036	-20,000	-20,000	0,000	0,000	0,000	0,000
2037	-19,412	-20,000	0,000	0,000	0,000	0,000
2038	-18,824	-20,000	0,000	0,000	0,000	0,000
2039	-18,235	-20,000	0,000	0,000	0,000	0,000
2043	-20,000	-18,286	0,000	0,000	435,128	870,331
2044	-20,000	-18,857	0,000	0,000	187,004	374,054
2045	-20,000	-19,429	0,000	0,000	38,242	76,505
2059	0,000	1,300	-17,376	8,376	-139,882	-279,727
2060	0,000	1,075	-8,299	24,520	-139,787	-279,537
2061	0,000	1,150	-11,243	19,297	-139,819	-279,601
2062	0,000	1,225	-14,277	13,899	-139,850	-279,664
2079	0,000	1,000	-5,474	29,510	-139,755	-279,474
2080	0,000	0,775	1,946	42,393	-139,659	-279,282
2081	0,000	0,850	-312,298	38,524	-139,691	-279,346
2082	0,000	0,925	-2,799	34,202	-139,723	-279,410
2083	1,000	8,000	-20,169	-40,217	-112,961	-225,888
2087	2,500	8,000	-30,912	-61,661	-87,092	-174,145
2088	2,000	8,000	-28,308	-56,469	-95,432	-190,827
2089	1,500	8,000	-24,810	-49,487	-104,059	-208,083
2293	-12,941	-4,000	-9,067	-18,131	13,071	26,140
2297	-11,176	-4,000	-10,878	-21,751	8,965	17,927
2298	-11,765	-4,000	-10,309	-20,614	10,460	20,918
2299	-12,353	-4,000	-9,704	-19,405	11,827	23,652
2525	-17,647	-20,000	0,000	0,000	0,000	0,000
2529	-17,059	-20,000	0,000	0,000	0,000	0,000
2530	-16,471	-20,000	0,000	0,000	0,000	0,000
2531	-15,882	-20,000	0,000	0,000	0,000	0,000
2567	0,000	0,700	3,931	45,719	-139,627	-279,218
2568	0,000	0,475	7,706	51,365	-139,530	-279,024

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
2569	0,000 0,550	6,870	50,324	-139,563	-279,089
2570	0,000 0,625	5,591	48,400	-139,595	-279,153
2591	0,000 0,400	8,030	51,388	-139,498	-278,960
2592	0,000 0,325	7,768	50,241	-139,466	-278,895
2593	0,000 0,250	6,837	47,761	-139,434	-278,831
2594	0,000 0,175	5,147	43,768	-139,401	-278,766
2621	0,000 0,100	2,602	38,067	-139,369	-278,702
2622	0,000 0,025	-904,551	30,448	-139,337	-278,637
2623	0,000 -0,050	-5,486	20,682	-139,305	-278,573
2624	0,000 -0,125	-11,266	8,525	-139,273	-278,509
2689	0,000 -0,200	-18,375	-6,288	-139,241	-278,445
2690	0,000 -0,275	-26,954	-24,037	-139,209	-278,381
2691	0,000 -0,350	-37,152	-45,021	-139,177	-278,318
2692	0,000 -0,425	-49,128	-69,557	-139,145	-278,254
2713	0,000 -0,500	-63,049	-97,981	-139,114	-278,191
2714	0,000 -0,725	-118,283	-210,172	-139,021	-278,005
2715	0,000 -0,650	-97,440	-167,913	-139,051	-278,066
2716	0,000 -0,575	-79,092	-130,644	-139,083	-278,129
2749	0,000 -0,800	-141,820	-257,813	-138,990	-277,943
2750	0,000 -0,875	-168,253	-311,244	-138,959	-277,882
2751	0,000 -0,950	-197,787	-370,874	-138,929	-277,822
2752	0,000 -1,025	-230,631	-437,121	-138,899	-277,762
2773	0,000 -1,100	-266,990	-510,397	-138,870	-277,703
2774	0,000 -1,175	-307,067	-591,104	-138,840	-277,644
2775	0,000 -1,250	-351,050	-679,621	-138,811	-277,586
2776	0,000 -1,325	-399,122	-776,316	-138,783	-277,529
2793	3,000 8,000	-32,802	-65,423	-79,044	-158,048
2794	4,500 8,000	-35,254	-70,242	-57,020	-114,003
2795	4,000 8,000	-34,878	-69,525	-63,994	-127,949
2796	3,500 8,000	-34,090	-67,975	-71,343	-142,646
2971	-10,588 -4,000	-11,407	-22,808	7,336	14,670

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
2972	-10,000 -4,000	-11,891	-23,775	5,570	11,138
2973	-9,412 -4,000	-12,325	-24,643	3,661	7,322
2974	-8,824 -4,000	-12,705	-25,402	1,605	3,210
3065	-15,294 -20,000	0,000	0,000	0,000	0,000
3069	-14,706 -20,000	0,000	0,000	0,000	0,000
3070	-14,118 -20,000	0,000	0,000	0,000	0,000
3071	-13,529 -20,000	0,000	0,000	0,000	0,000
3251	0,000 -1,400	-451,450	-881,518	-138,755	-277,473
3252	0,000 -1,475	-508,172	-995,508	-138,727	-277,417
3253	0,000 -1,550	-569,404	-1,119	-138,699	-277,362
3254	0,000 -1,625	-635,272	-1,251	-138,672	-277,308
3275	0,000 -1,700	-705,842	-1,392	-138,646	-277,255
3276	0,000 -1,775	-781,032	-1,543	-138,620	-277,203
3277	0,000 -1,850	-861,482	-1,705	-138,594	-277,151
3278	0,000 -1,925	-946,937	-1,876	-138,568	-277,099
3279	5,000 8,000	-35,287	-70,267	-50,448	-100,850
3283	6,875 8,000	-32,811	-65,563	-28,826	-57,858
3284	6,250 8,000	-34,452	-68,350	-35,427	-71,004
3285	5,625 8,000	-35,184	-69,833	-42,705	-85,412
3385	-8,235 -4,000	-13,024	-26,040	-602,838	-1,205
3389	-6,471 -4,000	-13,550	-27,091	-8,188	-16,371
3390	-7,059 -4,000	-13,454	-26,900	-5,494	-10,985
3391	-7,647 -4,000	-13,276	-26,544	-2,967	-5,933
3521	-12,941 -20,000	0,000	0,000	0,000	0,000
3525	-12,353 -20,000	0,000	0,000	0,000	0,000
3526	-11,765 -20,000	0,000	0,000	0,000	0,000
3527	-11,176 -20,000	0,000	0,000	0,000	0,000
3675	0,000 -2,000	-1,036	-2,056	-138,542	-277,047
3697	7,500 8,000	-32,057	-63,969	-23,069	-46,135
3698	9,375 8,000	-26,432	-52,641	-8,040	-16,088
3699	8,750 8,000	-28,169	-56,246	-12,472	-24,946

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
3700	8,125	8,000	-30,077	-60,082	-17,309	-34,681
3739	-5,294	-4,000	-13,454	-26,899	-14,097	-28,186
3740	-4,706	-4,000	-13,237	-26,465	-17,329	-34,649
3741	-4,118	-4,000	-12,880	-25,750	-20,749	-41,488
3745	-5,882	-4,000	-13,555	-27,100	-11,055	-22,104
3755	-3,529	-4,000	-12,347	-24,685	-24,360	-48,710
3756	-2,941	-4,000	-11,590	-23,171	-28,161	-56,310
3757	-2,353	-4,000	-10,522	-21,036	-32,116	-64,218
3758	-1,765	-4,000	-9,000	-17,991	-36,124	-72,234
3791	-10,588	-20,000	0,000	0,000	0,000	0,000
3795	-10,000	-20,000	0,000	0,000	0,000	0,000
3796	-9,412	-20,000	0,000	0,000	0,000	0,000
3797	-8,824	-20,000	0,000	0,000	0,000	0,000
3959	10,000	8,000	-24,510	-48,826	-3,993	-8,050
3963	11,875	8,000	-18,766	-37,177	5,551	11,025
3964	11,250	8,000	-20,782	-41,248	2,651	5,294
3965	10,625	8,000	-22,556	-44,940	-509,834	-1,031
4213	-8,235	-20,000	0,000	0,000	0,000	0,000
4217	-7,647	-20,000	0,000	0,000	0,000	0,000
4218	-7,059	-20,000	0,000	0,000	0,000	0,000
4219	-6,471	-20,000	0,000	0,000	0,000	0,000
4281	-0,588	-4,000	-3,758	-7,510	-42,823	-85,631
4282	0,000	-4,000	20,380	46,265	-43,941	-87,866
4283	0,588	-4,000	3,751	7,507	-42,824	-85,632
4287	-1,176	-4,000	-6,823	-13,639	-39,895	-79,774
4297	1,176	-4,000	6,821	13,646	-39,877	-79,738
4301	1,765	-4,000	8,996	17,996	-36,104	-72,192
4302	2,353	-4,000	10,515	21,031	-32,104	-64,193
4303	2,941	-4,000	11,570	23,142	-28,140	-56,267
4329	12,500	8,000	-16,556	-32,787	7,695	15,372
4330	14,375	8,000	-11,820	-24,183	13,678	27,063

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
4331	13,750	8,000	-13,925	-27,721	12,085	23,740
4332	13,125	8,000	-15,783	-30,910	10,013	19,749
4361	15,000	8,000	-10,495	-21,407	14,909	29,794
4365	16,875	8,000	-6,754	-13,452	18,080	36,217
4366	16,250	8,000	-7,994	-16,076	17,201	34,442
4367	15,625	8,000	-9,303	-18,790	16,134	32,295
4403	-5,882	-20,000	0,000	0,000	0,000	0,000
4407	-5,294	-20,000	0,000	0,000	0,000	0,000
4408	-4,706	-20,000	0,000	0,000	0,000	0,000
4409	-4,118	-20,000	0,000	0,000	0,000	0,000
4577	5,294	-4,000	13,439	26,876	-14,083	-28,158
4578	4,706	-4,000	13,220	26,439	-17,312	-34,615
4579	4,118	-4,000	12,861	25,721	-20,731	-41,452
4589	3,529	-4,000	12,329	24,659	-24,346	-48,680
4643	20,000	6,200	0,000	0,000	21,457	42,897
4644	20,000	6,800	0,000	0,000	21,070	42,135
4645	20,000	7,400	0,000	0,000	20,578	41,198
4646	20,000	8,000	0,000	0,000	20,103	40,211
4647	19,375	8,000	-1,092	-2,414	20,147	40,177
4648	18,750	8,000	-2,687	-5,336	20,019	39,817
4649	18,125	8,000	-4,399	-8,384	19,564	38,972
4653	17,500	8,000	-5,601	-10,935	18,792	37,648
4657	20,000	5,600	0,000	0,000	21,790	43,531
4661	20,000	3,800	0,000	0,000	22,245	44,464
4662	20,000	4,400	0,000	0,000	22,159	44,288
4663	20,000	5,000	0,000	0,000	22,007	43,978
4711	5,882	-4,000	13,539	27,076	-11,038	-22,071
4715	6,471	-4,000	13,535	27,068	-8,171	-16,339
4716	7,059	-4,000	13,440	26,878	-5,477	-10,953
4717	7,647	-4,000	13,263	26,523	-2,950	-5,900
4779	-3,529	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
4780	-2,941 -20,000	0,000	0,000	0,000	0,000
4781	-2,353 -20,000	0,000	0,000	0,000	0,000
4782	-1,765 -20,000	0,000	0,000	0,000	0,000
4939	20,000 3,200	0,000	0,000	22,268	44,511
4943	20,000 1,400	0,000	0,000	22,002	43,978
4944	20,000 2,000	0,000	0,000	22,141	44,257
4945	20,000 2,600	0,000	0,000	22,232	44,438
4949	8,824 -4,000	12,692	25,383	1,625	3,246
4950	9,412 -4,000	12,313	24,624	3,681	7,357
4951	10,000 -4,000	11,879	23,755	5,591	11,175
4955	8,235 -4,000	13,011	26,020	-584,180	-1,170
4965	-1,176 -20,000	0,000	0,000	0,000	0,000
4969	-0,588 -20,000	0,000	0,000	0,000	0,000
4970	0,000 -20,000	0,000	0,000	0,000	0,000
4971	0,588 -20,000	0,000	0,000	0,000	0,000
5039	10,588 -4,000	11,394	22,787	7,357	14,706
5043	12,353 -4,000	9,692	19,382	11,848	23,684
5044	11,765 -4,000	10,296	20,592	10,481	20,951
5045	11,176 -4,000	10,866	21,729	8,986	17,962
5134	20,000 0,800	0,000	0,000	21,821	43,617
5141	20,000 -1,000	0,000	0,000	21,105	42,186
5142	20,000 -0,400	0,000	0,000	21,365	42,705
5143	20,000 0,200	0,000	0,000	21,606	43,188
5245	1,176 -20,000	0,000	0,000	0,000	0,000
5249	1,765 -20,000	0,000	0,000	0,000	0,000
5250	2,353 -20,000	0,000	0,000	0,000	0,000
5251	2,941 -20,000	0,000	0,000	0,000	0,000
5287	20,000 -1,600	0,000	0,000	20,834	41,645
5291	20,000 -3,400	0,000	0,000	20,033	40,047
5292	20,000 -2,800	0,000	0,000	20,290	40,561
5293	20,000 -2,200	0,000	0,000	20,560	41,098

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
5297	13,529 -4,000	8,389	16,778	14,215	28,415
5298	14,118 -4,000	7,699	15,398	15,224	30,433
5299	14,706 -4,000	6,987	13,973	16,122	32,229
5303	12,941 -4,000	9,055	18,108	13,091	26,169
5313	15,294 -4,000	6,255	12,511	16,914	33,813
5314	15,882 -4,000	5,507	11,015	17,604	35,192
5315	16,471 -4,000	4,745	9,491	18,194	36,373
5316	17,059 -4,000	3,972	7,944	18,688	37,361
5439	3,529 -20,000	0,000	0,000	0,000	0,000
5443	4,118 -20,000	0,000	0,000	0,000	0,000
5444	4,706 -20,000	0,000	0,000	0,000	0,000
5445	5,294 -20,000	0,000	0,000	0,000	0,000
5501	18,235 -4,000	2,398	4,796	19,398	38,781
5502	18,824 -4,000	1,602	3,204	19,618	39,220
5503	19,412 -4,000	801,777	1,604	19,749	39,483
5504	20,000 -4,000	0,000	0,000	19,793	39,570
5505	20,000 -5,714	0,000	0,000	17,354	34,692
5506	20,000 -5,143	0,000	0,000	18,198	36,380
5507	20,000 -4,571	0,000	0,000	19,013	38,010
5517	17,647 -4,000	3,189	6,378	19,089	38,162
5667	5,882 -20,000	0,000	0,000	0,000	0,000
5668	6,471 -20,000	0,000	0,000	0,000	0,000
5669	7,059 -20,000	0,000	0,000	0,000	0,000
5670	7,647 -20,000	0,000	0,000	0,000	0,000
5693	20,000 -6,286	0,000	0,000	16,484	32,953
5694	20,000 -8,000	0,000	0,000	13,774	27,535
5695	20,000 -7,429	0,000	0,000	14,690	29,365
5696	20,000 -6,857	0,000	0,000	15,595	31,175
5813	8,235 -20,000	0,000	0,000	0,000	0,000
5817	8,824 -20,000	0,000	0,000	0,000	0,000
5818	9,412 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	12,852	25,691
5843	20,000	-10,286	0,000	0,000	10,092	20,174
5844	20,000	-9,714	0,000	0,000	11,007	22,002
5845	20,000	-9,143	0,000	0,000	11,928	23,844
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	9,188	18,367
6054	20,000	-12,571	0,000	0,000	6,583	13,159
6055	20,000	-12,000	0,000	0,000	7,430	14,852
6056	20,000	-11,429	0,000	0,000	8,300	16,590
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	5,764	11,522
6093	20,000	-14,857	0,000	0,000	3,514	7,025
6094	20,000	-14,286	0,000	0,000	4,225	8,445
6095	20,000	-13,714	0,000	0,000	4,976	9,947
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	2,850	5,696
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	1,192	2,383
6175	20,000	-16,571	0,000	0,000	1,682	3,363
6176	20,000	-16,000	0,000	0,000	2,237	4,472
6180	20,000	-17,714	0,000	0,000	773,859	1,547

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-6 m]	dUy [10^-6 m]	Uy [10^-6 m]
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	38,393	76,688
6201	20,000	-18,286	0,000	0,000	435,959	871,301
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	187,435	374,563

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	Codice documento SS0780_F0.doc	Rev F0 Data 20/06/2011

11. Results for phase 6

Table [16] Table of deformations phase no: 6

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
143	0,000	7,540	-251,623	-4,349	3,554	1,441
144	0,000	7,693	-262,351	-4,425	3,554	1,441
145	0,000	7,847	-273,078	-4,500	3,554	1,441
146	0,000	8,000	-283,806	-4,576	3,554	1,441
169	0,000	6,965	-211,414	-4,066	3,556	1,441
170	0,000	7,106	-221,233	-4,136	3,555	1,441
171	0,000	7,246	-231,062	-4,205	3,554	1,441
172	0,000	7,387	-240,896	-4,274	3,554	1,441
183	0,000	6,825	-201,610	-3,997	3,557	1,441
184	0,000	6,438	-174,797	-3,807	3,560	1,442
185	0,000	6,567	-183,700	-3,870	3,559	1,442
186	0,000	6,696	-192,640	-3,934	3,558	1,441
207	0,000	6,309	-165,940	-3,744	3,561	1,442
208	0,000	5,955	-141,934	-3,572	3,567	1,442
209	0,000	6,073	-149,861	-3,629	3,566	1,442
210	0,000	6,191	-157,867	-3,686	3,564	1,442
265	0,000	5,836	-134,098	-3,515	3,569	1,443
266	0,000	5,511	-113,118	-3,362	3,579	1,443
267	0,000	5,620	-120,000	-3,413	3,575	1,443
268	0,000	5,728	-127,000	-3,464	3,572	1,443
289	0,000	5,403	-106,375	-3,313	3,583	1,444
290	0,000	5,105	-88,763	-3,180	3,592	1,444
291	0,000	5,204	-94,461	-3,223	3,590	1,444
292	0,000	5,304	-100,336	-3,268	3,587	1,444
361	0,000	4,732	-69,102	-3,027	3,597	1,445
362	0,000	4,823	-73,650	-3,063	3,595	1,445

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
363	0,000	4,914	-78,368	-3,100	3,594	1,445
364	0,000	5,005	-83,252	-3,138	3,593	1,445
375	0,000	4,641	-64,727	-2,993	3,598	1,446
376	0,000	4,390	-53,659	-2,907	3,599	1,447
377	0,000	4,474	-57,186	-2,934	3,599	1,446
378	0,000	4,557	-60,877	-2,963	3,598	1,446
395	0,000	4,307	-50,295	-2,881	3,599	1,447
396	0,000	4,077	-41,911	-2,822	3,598	1,448
397	0,000	4,153	-44,562	-2,840	3,599	1,448
398	0,000	4,230	-47,358	-2,860	3,599	1,447
399	-0,219	4,000	-32,004	-2,052	83,449	6,652
400	-0,146	4,000	-36,181	-2,181	84,604	6,485
401	-0,073	4,000	-41,157	-2,434	76,018	6,271
405	0,000	4,000	-45,256	-2,714	61,483	5,821
409	0,000	4,000	-39,404	-2,806	3,598	1,448
410	0,000	3,775	-32,854	-2,774	3,601	1,449
411	0,000	3,850	-34,900	-2,782	3,599	1,449
412	0,000	3,925	-37,086	-2,793	3,598	1,449
571	-0,536	4,000	-14,529	-1,793	65,162	7,064
572	-0,455	4,000	-15,008	-1,837	68,371	6,958
573	-0,373	4,000	-17,595	-1,894	71,559	6,854
577	-0,292	4,000	-22,270	-1,981	73,418	6,756
713	-20,000	4,000	0,000	0,000	64,465	11,973
714	-19,416	4,000	-504,544	-81,682	64,460	11,972
715	-18,833	4,000	-1,021	-163,102	64,452	11,971
716	-18,249	4,000	-1,567	-244,011	64,455	11,968
717	-20,000	3,333	0,000	0,000	60,350	11,220
718	-20,000	2,667	0,000	0,000	56,239	10,466
719	-20,000	2,000	0,000	0,000	52,136	9,710
755	0,000	3,700	-30,955	-2,770	3,601	1,449
756	0,000	3,475	-26,134	-2,770	3,601	1,450

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
757	0,000	3,550	-27,598	-2,768	3,602	1,450
758	0,000	3,625	-29,203	-2,767	3,602	1,450
769	0,000	3,400	-24,809	-2,775	3,601	1,450
770	0,000	3,175	-21,593	-2,803	3,597	1,451
771	0,000	3,250	-22,545	-2,792	3,599	1,450
772	0,000	3,325	-23,614	-2,783	3,600	1,450
821	-17,665	4,000	-2,171	-324,168	64,487	11,964
822	-17,142	4,000	-2,558	-394,947	64,724	11,960
823	-16,619	4,000	-2,803	-464,307	64,792	11,954
824	-16,095	4,000	-3,079	-532,401	64,768	11,947
853	-20,000	1,333	0,000	0,000	48,036	8,951
857	-20,000	0,667	0,000	0,000	43,923	8,191
858	-20,000	0,000	0,000	0,000	39,799	7,427
859	-20,000	-0,667	0,000	0,000	35,664	6,661
869	-20,000	-1,333	0,000	0,000	31,514	5,893
873	-20,000	-2,000	0,000	0,000	27,351	5,121
874	-20,000	-2,667	0,000	0,000	23,173	4,347
875	-20,000	-3,333	0,000	0,000	18,982	3,570
879	-20,000	-4,000	0,000	0,000	14,777	2,792
880	-19,412	-4,000	-623,902	-119,729	14,778	2,791
881	-18,824	-4,000	-1,248	-239,450	14,780	2,791
882	-18,235	-4,000	-1,871	-359,160	14,783	2,789
883	-20,000	-4,571	0,000	0,000	14,119	2,666
884	-20,000	-5,143	0,000	0,000	13,455	2,538
885	-20,000	-5,714	0,000	0,000	12,785	2,410
895	-20,000	-6,286	0,000	0,000	12,111	2,281
899	-20,000	-6,857	0,000	0,000	11,434	2,151
900	-20,000	-7,429	0,000	0,000	10,754	2,021
901	-20,000	-8,000	0,000	0,000	10,074	1,891
905	-2,217	4,000	-12,018	-1,336	57,650	8,875
906	-2,091	4,000	-12,223	-1,351	57,611	8,767

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
907	-1,964 4,000	-12,415	-1,368	57,566	8,655
911	-1,838 4,000	-12,670	-1,387	57,509	8,539
912	-1,725 4,000	-12,902	-1,407	57,543	8,432
913	-1,612 4,000	-13,117	-1,429	57,603	8,321
914	-1,499 4,000	-13,319	-1,453	57,692	8,208
921	-2,765 4,000	-11,132	-1,291	57,990	9,306
922	-2,624 4,000	-11,349	-1,300	57,875	9,201
923	-2,483 4,000	-11,580	-1,310	57,769	9,093
927	-2,343 4,000	-11,818	-1,323	57,723	8,980
937	-2,906 4,000	-10,934	-1,283	58,105	9,407
938	-3,377 4,000	-10,267	-1,267	58,528	9,720
939	-3,220 4,000	-10,486	-1,271	58,384	9,620
940	-3,063 4,000	-10,705	-1,276	58,244	9,516
947	-4,820 4,000	-9,112	-1,265	60,237	10,471
948	-4,625 4,000	-9,180	-1,263	60,073	10,385
949	-4,429 4,000	-9,201	-1,261	59,810	10,295
953	-4,234 4,000	-9,643	-1,259	59,564	10,200
954	-4,059 4,000	-9,492	-1,258	59,453	10,110
955	-3,884 4,000	-9,434	-1,259	59,200	10,016
956	-3,709 4,000	-9,650	-1,261	58,883	9,918
963	-3,534 4,000	-10,017	-1,264	58,693	9,816
973	-5,670 4,000	-8,804	-1,275	61,178	10,793
974	-5,452 4,000	-8,993	-1,274	60,914	10,717
975	-5,234 4,000	-9,122	-1,272	60,659	10,637
979	-5,016 4,000	-8,896	-1,269	60,512	10,552
989	-5,888 4,000	-8,812	-1,277	61,386	10,865
990	-6,617 4,000	-8,737	-1,277	61,882	11,075
991	-6,374 4,000	-8,781	-1,278	61,771	11,009
992	-6,131 4,000	-8,810	-1,278	61,608	10,939
999	-1,285 4,000	-13,670	-1,506	57,957	7,981
1000	-1,183 4,000	-13,833	-1,534	58,148	7,869

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1001	-1,082	4,000	-13,988	-1,566	58,412	7,753
1005	-1,386	4,000	-13,509	-1,479	57,818	8,090
1015	-0,981	4,000	-14,116	-1,600	58,765	7,634
1016	-0,890	4,000	-14,247	-1,634	59,193	7,523
1017	-0,799	4,000	-14,434	-1,670	59,841	7,409
1018	-0,708	4,000	-14,683	-1,709	60,880	7,293
1025	-0,618	4,000	-14,973	-1,751	62,533	7,171
1077	-7,674	4,000	-8,430	-1,258	62,562	11,314
1078	-7,403	4,000	-8,537	-1,265	62,441	11,259
1079	-7,132	4,000	-8,451	-1,270	62,246	11,200
1083	-6,860	4,000	-8,613	-1,275	62,055	11,136
1099	-7,946	4,000	-8,175	-1,250	62,677	11,366
1100	-8,854	4,000	-7,623	-1,215	63,092	11,513
1101	-8,551	4,000	-7,808	-1,228	63,000	11,468
1102	-8,248	4,000	-7,982	-1,240	62,861	11,419
1209	0,000	3,100	-20,751	-2,816	3,596	1,451
1210	0,000	2,875	-18,810	-2,863	3,592	1,451
1211	0,000	2,950	-19,367	-2,846	3,593	1,451
1212	0,000	3,025	-20,012	-2,831	3,595	1,451
1239	-15,103	4,000	-3,812	-657,692	64,599	11,929
1240	-14,634	4,000	-4,144	-714,146	64,528	11,917
1241	-14,165	4,000	-4,480	-768,933	64,481	11,904
1245	-13,696	4,000	-4,782	-821,867	64,464	11,889
1246	-13,276	4,000	-5,037	-867,515	64,360	11,873
1247	-12,855	4,000	-5,342	-911,375	64,272	11,856
1248	-12,435	4,000	-5,649	-953,302	64,236	11,835
1255	-15,572	4,000	-3,411	-599,417	64,504	11,937
1291	0,000	2,800	-18,333	-2,881	3,591	1,451
1292	0,000	2,575	-17,312	-2,941	3,588	1,452
1293	0,000	2,650	-17,590	-2,920	3,589	1,452
1294	0,000	2,725	-17,928	-2,900	3,590	1,452

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1339	-17,647 -4,000	-2,494	-478,855	14,787	2,787
1340	-15,882 -4,000	-4,358	-837,766	14,791	2,774
1341	-16,471 -4,000	-3,738	-718,165	14,792	2,780
1342	-17,059 -4,000	-3,116	-598,526	14,790	2,784
1383	-20,000 -8,571	0,000	0,000	9,395	1,762
1384	-20,000 -9,143	0,000	0,000	8,719	1,633
1385	-20,000 -9,714	0,000	0,000	8,049	1,506
1386	-20,000 -10,286	0,000	0,000	7,386	1,381
1393	-20,000 -10,857	0,000	0,000	6,732	1,257
1397	-20,000 -11,429	0,000	0,000	6,091	1,136
1398	-20,000 -12,000	0,000	0,000	5,466	1,019
1399	-20,000 -12,571	0,000	0,000	4,858	904,736
1419	0,000 2,500	-17,088	-2,962	3,587	1,452
1420	0,000 2,275	-16,684	-3,027	3,586	1,452
1421	0,000 2,350	-16,779	-3,005	3,586	1,452
1422	0,000 2,425	-16,912	-2,983	3,587	1,452
1433	0,000 8,000	-120,684	-2,347	6,390	1,495
1437	0,750 8,000	-104,625	-1,808	-123,858	-797,195
1438	0,500 8,000	-103,585	-1,766	-120,146	-625,911
1439	0,250 8,000	-96,060	-1,641	-97,060	-141,626
1547	-10,170 4,000	-6,891	-1,141	63,693	11,671
1548	-9,832 4,000	-7,098	-1,163	63,558	11,636
1549	-9,494 4,000	-7,287	-1,182	63,452	11,597
1553	-9,157 4,000	-7,405	-1,200	63,339	11,554
1563	-10,508 4,000	-6,724	-1,118	63,843	11,703
1564	-11,638 4,000	-6,122	-1,028	64,159	11,789
1565	-11,261 4,000	-6,321	-1,060	64,042	11,764
1566	-10,884 4,000	-6,539	-1,090	63,931	11,735
1573	-12,015 4,000	-5,955	-993,458	64,092	11,811
1709	-15,294 -4,000	-4,976	-957,319	14,787	2,767
1710	-14,706 -4,000	-5,593	-1,077	14,777	2,758

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1711	-14,118	-4,000	-6,208	-1,196	14,759	2,747
1712	-13,529	-4,000	-6,820	-1,316	14,733	2,733
1847	0,000	2,200	-16,623	-3,049	3,585	1,452
1848	0,000	1,975	-16,601	-3,116	3,585	1,453
1849	0,000	2,050	-16,585	-3,094	3,585	1,453
1850	0,000	2,125	-16,591	-3,071	3,585	1,452
1921	-20,000	-13,714	0,000	0,000	3,707	689,437
1922	-20,000	-14,286	0,000	0,000	3,171	589,268
1923	-20,000	-14,857	0,000	0,000	2,664	494,818
1927	-20,000	-13,143	0,000	0,000	4,271	794,772
1931	-20,000	-15,429	0,000	0,000	2,191	406,653
1935	-20,000	-16,000	0,000	0,000	1,754	325,353
1936	-20,000	-16,571	0,000	0,000	1,356	251,511
1937	-20,000	-17,143	0,000	0,000	1,002	185,736
1957	0,000	1,900	-16,635	-3,138	3,586	1,453
1958	0,000	1,825	-16,686	-3,160	3,586	1,453
1959	0,000	1,750	-16,750	-3,182	3,587	1,453
1960	0,000	1,675	-16,825	-3,204	3,587	1,453
1993	0,000	1,600	-16,909	-3,225	3,588	1,453
1994	0,000	1,375	-17,198	-3,287	3,591	1,453
1995	0,000	1,450	-17,097	-3,266	3,590	1,453
1996	0,000	1,525	-17,001	-3,246	3,589	1,453
2035	-20,000	-17,714	0,000	0,000	694,870	128,651
2036	-20,000	-20,000	0,000	0,000	0,000	0,000
2037	-19,412	-20,000	0,000	0,000	0,000	0,000
2038	-18,824	-20,000	0,000	0,000	0,000	0,000
2039	-18,235	-20,000	0,000	0,000	0,000	0,000
2043	-20,000	-18,286	0,000	0,000	437,456	80,884
2044	-20,000	-18,857	0,000	0,000	233,562	43,085
2045	-20,000	-19,429	0,000	0,000	86,616	15,904
2059	0,000	1,300	-17,301	-3,307	3,592	1,453

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
2060	0,000	1,075	-17,615	-3,364	3,597	1,453
2061	0,000	1,150	-17,510	-3,345	3,595	1,453
2062	0,000	1,225	-17,405	-3,326	3,593	1,453
2079	0,000	1,000	-17,719	-3,382	3,598	1,453
2080	0,000	0,775	-18,020	-3,434	3,604	1,453
2081	0,000	0,850	-17,922	-3,417	3,602	1,453
2082	0,000	0,925	-17,821	-3,400	3,600	1,453
2083	1,000	8,000	-104,088	-1,818	-128,791	-956,542
2087	2,500	8,000	-67,621	-1,526	-45,487	-924,087
2088	2,000	8,000	-102,298	-1,743	-85,203	-962,998
2089	1,500	8,000	-110,149	-1,840	-121,501	-1,045
2293	-12,941	-4,000	-7,430	-1,435	14,695	2,716
2297	-11,176	-4,000	-9,242	-1,791	14,487	2,638
2298	-11,765	-4,000	-8,641	-1,673	14,575	2,669
2299	-12,353	-4,000	-8,037	-1,554	14,643	2,694
2525	-17,647	-20,000	0,000	0,000	0,000	0,000
2529	-17,059	-20,000	0,000	0,000	0,000	0,000
2530	-16,471	-20,000	0,000	0,000	0,000	0,000
2531	-15,882	-20,000	0,000	0,000	0,000	0,000
2567	0,000	0,700	-18,115	-3,450	3,606	1,453
2568	0,000	0,475	-18,384	-3,496	3,613	1,453
2569	0,000	0,550	-18,298	-3,481	3,610	1,453
2570	0,000	0,625	-18,208	-3,466	3,608	1,453
2591	0,000	0,400	-18,468	-3,510	3,615	1,453
2592	0,000	0,325	-18,549	-3,524	3,618	1,453
2593	0,000	0,250	-18,627	-3,537	3,621	1,453
2594	0,000	0,175	-18,703	-3,550	3,623	1,453
2621	0,000	0,100	-18,776	-3,562	3,626	1,453
2622	0,000	0,025	-18,847	-3,574	3,629	1,452
2623	0,000	-0,050	-18,916	-3,586	3,632	1,452
2624	0,000	-0,125	-18,983	-3,596	3,635	1,452

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
2689	0,000	-0,200	-19,049	-3,607	3,639	1,452
2690	0,000	-0,275	-19,114	-3,617	3,642	1,452
2691	0,000	-0,350	-19,178	-3,626	3,645	1,452
2692	0,000	-0,425	-19,241	-3,635	3,649	1,452
2713	0,000	-0,500	-19,304	-3,643	3,652	1,451
2714	0,000	-0,725	-19,493	-3,665	3,663	1,451
2715	0,000	-0,650	-19,430	-3,659	3,659	1,451
2716	0,000	-0,575	-19,367	-3,651	3,656	1,451
2749	0,000	-0,800	-19,556	-3,672	3,666	1,451
2750	0,000	-0,875	-19,619	-3,678	3,668	1,450
2751	0,000	-0,950	-19,682	-3,684	3,671	1,450
2752	0,000	-1,025	-19,745	-3,689	3,673	1,450
2773	0,000	-1,100	-19,808	-3,694	3,675	1,450
2774	0,000	-1,175	-19,871	-3,698	3,677	1,449
2775	0,000	-1,250	-19,933	-3,702	3,679	1,449
2776	0,000	-1,325	-19,995	-3,706	3,680	1,449
2793	3,000	8,000	-46,183	-1,362	-34,355	-1,016
2794	4,500	8,000	-33,737	-1,104	-19,566	-1,445
2795	4,000	8,000	-37,306	-1,168	-22,370	-1,291
2796	3,500	8,000	-41,731	-1,254	-26,663	-1,143
2971	-10,588	-4,000	-9,839	-1,909	14,376	2,602
2972	-10,000	-4,000	-10,433	-2,027	14,239	2,559
2973	-9,412	-4,000	-11,024	-2,143	14,071	2,509
2974	-8,824	-4,000	-11,611	-2,259	13,867	2,450
3065	-15,294	-20,000	0,000	0,000	0,000	0,000
3069	-14,706	-20,000	0,000	0,000	0,000	0,000
3070	-14,118	-20,000	0,000	0,000	0,000	0,000
3071	-13,529	-20,000	0,000	0,000	0,000	0,000
3251	0,000	-1,400	-20,057	-3,710	3,681	1,449
3252	0,000	-1,475	-20,119	-3,713	3,683	1,449
3253	0,000	-1,550	-20,181	-3,716	3,684	1,448

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
3254	0,000 -1,625	-20,243	-3,719	3,685	1,448
3275	0,000 -1,700	-20,305	-3,722	3,686	1,448
3276	0,000 -1,775	-20,368	-3,724	3,687	1,448
3277	0,000 -1,850	-20,432	-3,727	3,688	1,447
3278	0,000 -1,925	-20,496	-3,729	3,688	1,447
3279	5,000 8,000	-31,534	-1,062	-17,382	-1,596
3283	6,875 8,000	-20,484	-889,384	-13,867	-2,095
3284	6,250 8,000	-23,840	-949,585	-14,146	-1,933
3285	5,625 8,000	-27,830	-1,018	-14,636	-1,762
3385	-8,235 -4,000	-12,194	-2,374	13,623	2,383
3389	-6,471 -4,000	-13,929	-2,706	12,584	2,117
3390	-7,059 -4,000	-13,353	-2,598	12,989	2,217
3391	-7,647 -4,000	-12,775	-2,487	13,333	2,305
3521	-12,941 -20,000	0,000	0,000	0,000	0,000
3525	-12,353 -20,000	0,000	0,000	0,000	0,000
3526	-11,765 -20,000	0,000	0,000	0,000	0,000
3527	-11,176 -20,000	0,000	0,000	0,000	0,000
3675	0,000 -2,000	-20,561	-3,732	3,689	1,447
3697	7,500 8,000	-16,073	-822,412	-13,672	-2,246
3698	9,375 8,000	-13,697	-758,775	-14,495	-2,623
3699	8,750 8,000	-14,622	-786,903	-14,513	-2,514
3700	8,125 8,000	-15,243	-803,623	-14,349	-2,391
3739	-5,294 -4,000	-15,076	-2,913	11,553	1,880
3740	-4,706 -4,000	-15,649	-3,009	10,902	1,740
3741	-4,118 -4,000	-16,223	-3,099	10,140	1,586
3745	-5,882 -4,000	-14,502	-2,811	12,109	2,005
3755	-3,529 -4,000	-16,795	-3,183	9,246	1,418
3756	-2,941 -4,000	-17,362	-3,258	8,196	1,235
3757	-2,353 -4,000	-17,912	-3,323	6,962	1,037
3758	-1,765 -4,000	-18,422	-3,378	5,514	824,746
3791	-10,588 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
3795	-10,000	-20,000	0,000	0,000	0,000	0,000
3796	-9,412	-20,000	0,000	0,000	0,000	0,000
3797	-8,824	-20,000	0,000	0,000	0,000	0,000
3959	10,000	8,000	-11,959	-733,465	-14,458	-2,723
3963	11,875	8,000	-9,002	-654,114	-15,653	-2,952
3964	11,250	8,000	-9,534	-677,728	-15,515	-2,886
3965	10,625	8,000	-9,629	-704,690	-14,945	-2,809
4213	-8,235	-20,000	0,000	0,000	0,000	0,000
4217	-7,647	-20,000	0,000	0,000	0,000	0,000
4218	-7,059	-20,000	0,000	0,000	0,000	0,000
4219	-6,471	-20,000	0,000	0,000	0,000	0,000
4281	-0,588	-4,000	-19,131	-3,450	1,957	355,502
4282	0,000	-4,000	-19,190	-3,459	-26,567	99,603
4283	0,588	-4,000	-19,018	-3,444	-1,960	-161,382
4287	-1,176	-4,000	-18,851	-3,421	3,839	597,775
4297	1,176	-4,000	-18,665	-3,406	-3,697	-413,086
4301	1,765	-4,000	-18,213	-3,348	-5,197	-644,623
4302	2,353	-4,000	-17,704	-3,279	-6,478	-853,226
4303	2,941	-4,000	-17,166	-3,201	-7,568	-1,040
4329	12,500	8,000	-8,433	-615,086	-15,759	-3,005
4330	14,375	8,000	-5,907	-484,410	-16,122	-3,151
4331	13,750	8,000	-7,378	-513,821	-15,990	-3,112
4332	13,125	8,000	-7,463	-545,821	-16,069	-3,060
4361	15,000	8,000	-5,419	-435,359	-16,449	-3,182
4365	16,875	8,000	-2,851	-311,029	-16,837	-3,246
4366	16,250	8,000	-3,063	-351,388	-16,384	-3,233
4367	15,625	8,000	-4,799	-389,692	-16,306	-3,211
4403	-5,882	-20,000	0,000	0,000	0,000	0,000
4407	-5,294	-20,000	0,000	0,000	0,000	0,000
4408	-4,706	-20,000	0,000	0,000	0,000	0,000
4409	-4,118	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
4577	5,294 -4,000	-14,867	-2,845	-10,456	-1,608
4578	4,706 -4,000	-15,453	-2,940	-9,918	-1,489
4579	4,118 -4,000	-16,034	-3,031	-9,268	-1,356
4589	3,529 -4,000	-16,607	-3,118	-8,490	-1,207
4643	20,000 6,200	0,000	0,000	-16,077	-3,234
4644	20,000 6,800	0,000	0,000	-16,309	-3,263
4645	20,000 7,400	0,000	0,000	-16,325	-3,286
4646	20,000 8,000	0,000	0,000	-16,289	-3,293
4647	19,375 8,000	-1,951	-56,024	-16,570	-3,290
4648	18,750 8,000	-2,129	-112,821	-16,886	-3,284
4649	18,125 8,000	-2,259	-153,049	-16,955	-3,274
4653	17,500 8,000	-2,409	-220,390	-16,858	-3,255
4657	20,000 5,600	0,000	0,000	-15,960	-3,206
4661	20,000 3,800	0,000	0,000	-15,273	-3,103
4662	20,000 4,400	0,000	0,000	-15,511	-3,139
4663	20,000 5,000	0,000	0,000	-15,743	-3,173
4711	5,882 -4,000	-14,281	-2,748	-10,896	-1,714
4715	6,471 -4,000	-13,695	-2,648	-11,253	-1,809
4716	7,059 -4,000	-13,111	-2,546	-11,538	-1,893
4717	7,647 -4,000	-12,531	-2,442	-11,762	-1,968
4779	-3,529 -20,000	0,000	0,000	0,000	0,000
4780	-2,941 -20,000	0,000	0,000	0,000	0,000
4781	-2,353 -20,000	0,000	0,000	0,000	0,000
4782	-1,765 -20,000	0,000	0,000	0,000	0,000
4939	20,000 3,200	0,000	0,000	-15,032	-3,065
4943	20,000 1,400	0,000	0,000	-14,313	-2,936
4944	20,000 2,000	0,000	0,000	-14,550	-2,981
4945	20,000 2,600	0,000	0,000	-14,790	-3,024
4949	8,824 -4,000	-11,379	-2,229	-12,069	-2,094
4950	9,412 -4,000	-10,805	-2,120	-12,169	-2,146
4951	10,000 -4,000	-10,232	-2,009	-12,241	-2,191

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
4955	8,235	-4,000	-11,954	-2,336	-11,936	-2,035
4965	-1,176	-20,000	0,000	0,000	0,000	0,000
4969	-0,588	-20,000	0,000	0,000	0,000	0,000
4970	0,000	-20,000	0,000	0,000	0,000	0,000
4971	0,588	-20,000	0,000	0,000	0,000	0,000
5039	10,588	-4,000	-9,658	-1,897	-12,292	-2,232
5043	12,353	-4,000	-7,921	-1,554	-12,358	-2,324
5044	11,765	-4,000	-8,503	-1,669	-12,347	-2,297
5045	11,176	-4,000	-9,082	-1,784	-12,326	-2,267
5134	20,000	0,800	0,000	0,000	-14,080	-2,888
5141	20,000	-1,000	0,000	0,000	-13,400	-2,734
5142	20,000	-0,400	0,000	0,000	-13,624	-2,787
5143	20,000	0,200	0,000	0,000	-13,851	-2,839
5245	1,176	-20,000	0,000	0,000	0,000	0,000
5249	1,765	-20,000	0,000	0,000	0,000	0,000
5250	2,353	-20,000	0,000	0,000	0,000	0,000
5251	2,941	-20,000	0,000	0,000	0,000	0,000
5287	20,000	-1,600	0,000	0,000	-13,176	-2,679
5291	20,000	-3,400	0,000	0,000	-12,507	-2,507
5292	20,000	-2,800	0,000	0,000	-12,731	-2,565
5293	20,000	-2,200	0,000	0,000	-12,954	-2,623
5297	13,529	-4,000	-6,744	-1,321	-12,360	-2,366
5298	14,118	-4,000	-6,149	-1,203	-12,354	-2,383
5299	14,706	-4,000	-5,550	-1,084	-12,346	-2,397
5303	12,941	-4,000	-7,335	-1,438	-12,362	-2,347
5313	15,294	-4,000	-4,945	-965,285	-12,336	-2,409
5314	15,882	-4,000	-4,337	-845,689	-12,326	-2,419
5315	16,471	-4,000	-3,725	-725,657	-12,316	-2,427
5316	17,059	-4,000	-3,110	-605,260	-12,307	-2,434
5439	3,529	-20,000	0,000	0,000	0,000	0,000
5443	4,118	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
5444	4,706	-20,000	0,000	0,000	0,000	0,000
5445	5,294	-20,000	0,000	0,000	0,000	0,000
5501	18,235	-4,000	-1,871	-363,625	-12,292	-2,443
5502	18,824	-4,000	-1,248	-242,514	-12,286	-2,446
5503	19,412	-4,000	-624,320	-121,286	-12,283	-2,447
5504	20,000	-4,000	0,000	0,000	-12,282	-2,448
5505	20,000	-5,714	0,000	0,000	-10,502	-2,097
5506	20,000	-5,143	0,000	0,000	-11,095	-2,215
5507	20,000	-4,571	0,000	0,000	-11,689	-2,332
5517	17,647	-4,000	-2,491	-484,561	-12,298	-2,439
5667	5,882	-20,000	0,000	0,000	0,000	0,000
5668	6,471	-20,000	0,000	0,000	0,000	0,000
5669	7,059	-20,000	0,000	0,000	0,000	0,000
5670	7,647	-20,000	0,000	0,000	0,000	0,000
5693	20,000	-6,286	0,000	0,000	-9,909	-1,979
5694	20,000	-8,000	0,000	0,000	-8,139	-1,624
5695	20,000	-7,429	0,000	0,000	-8,727	-1,742
5696	20,000	-6,857	0,000	0,000	-9,317	-1,860
5813	8,235	-20,000	0,000	0,000	0,000	0,000
5817	8,824	-20,000	0,000	0,000	0,000	0,000
5818	9,412	-20,000	0,000	0,000	0,000	0,000
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	-7,555	-1,507
5843	20,000	-10,286	0,000	0,000	-5,841	-1,164
5844	20,000	-9,714	0,000	0,000	-6,404	-1,277
5845	20,000	-9,143	0,000	0,000	-6,976	-1,391
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	-5,289	-1,054

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [m]	y-coord. [m]	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
6054	20,000	-12,571	0,000	0,000	-3,720	-740,805
6055	20,000	-12,000	0,000	0,000	-4,226	-841,630
6056	20,000	-11,429	0,000	0,000	-4,750	-946,093
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	-3,234	-644,099
6093	20,000	-14,857	0,000	0,000	-1,923	-383,734
6094	20,000	-14,286	0,000	0,000	-2,333	-465,044
6095	20,000	-13,714	0,000	0,000	-2,770	-552,008
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	-1,545	-308,619
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	-628,026	-126,060
6175	20,000	-16,571	0,000	0,000	-894,648	-179,206
6176	20,000	-16,000	0,000	0,000	-1,201	-240,253
6180	20,000	-17,714	0,000	0,000	-404,501	-81,409
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	-21,974	-4,529
6201	20,000	-18,286	0,000	0,000	-227,033	-45,858
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	-98,571	-20,024

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	Rev F0

12. Results for phase 7

Table [17] Table of deformations phase no: 7

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
143	0,000	7,540	-236,187	-2,521	3,573	1,334
144	0,000	7,693	-244,489	-2,517	3,573	1,334
145	0,000	7,847	-252,787	-2,513	3,573	1,334
146	0,000	8,000	-261,085	-2,509	3,573	1,334
169	0,000	6,965	-204,985	-2,535	3,585	1,335
170	0,000	7,106	-212,621	-2,532	3,581	1,334
171	0,000	7,246	-220,254	-2,528	3,577	1,334
172	0,000	7,387	-227,879	-2,525	3,575	1,334
183	0,000	6,825	-197,347	-2,538	3,589	1,335
184	0,000	6,438	-176,382	-2,546	3,602	1,335
185	0,000	6,567	-183,356	-2,543	3,598	1,335
186	0,000	6,696	-190,346	-2,541	3,594	1,335
207	0,000	6,309	-169,434	-2,548	3,607	1,335
208	0,000	5,955	-150,548	-2,553	3,619	1,336
209	0,000	6,073	-156,796	-2,551	3,615	1,336
210	0,000	6,191	-163,095	-2,550	3,611	1,335
265	0,000	5,836	-144,364	-2,554	3,623	1,336
266	0,000	5,511	-127,793	-2,557	3,636	1,337
267	0,000	5,620	-133,231	-2,557	3,632	1,337
268	0,000	5,728	-138,760	-2,556	3,627	1,336
289	0,000	5,403	-122,462	-2,558	3,640	1,337
290	0,000	5,105	-108,520	-2,560	3,654	1,338
291	0,000	5,204	-113,035	-2,560	3,649	1,338
292	0,000	5,304	-117,685	-2,559	3,644	1,337
361	0,000	4,732	-92,940	-2,563	3,667	1,339
362	0,000	4,823	-96,533	-2,562	3,665	1,339

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
363	0,000 4,914	-100,272	-2,561	3,662	1,338
364	0,000 5,005	-104,148	-2,561	3,658	1,338
375	0,000 4,641	-89,502	-2,563	3,670	1,339
376	0,000 4,390	-80,886	-2,568	3,675	1,340
377	0,000 4,474	-83,618	-2,566	3,673	1,340
378	0,000 4,557	-86,491	-2,565	3,672	1,340
395	0,000 4,307	-78,294	-2,570	3,676	1,341
396	0,000 4,077	-71,865	-2,581	3,679	1,341
397	0,000 4,153	-73,898	-2,576	3,678	1,341
398	0,000 4,230	-76,039	-2,573	3,677	1,341
399	-0,219 4,000	-57,112	-1,969	195,899	6,002
400	-0,146 4,000	-66,051	-2,059	199,470	5,827
401	-0,073 4,000	-81,532	-2,253	189,294	5,624
405	0,000 4,000	-93,463	-2,478	159,516	5,244
409	0,000 4,000	-69,936	-2,586	3,680	1,342
410	0,000 3,775	-64,766	-2,610	3,696	1,343
411	0,000 3,850	-66,399	-2,600	3,689	1,342
412	0,000 3,925	-68,130	-2,592	3,683	1,342
571	-0,536 4,000	-34,749	-1,775	160,087	6,485
572	-0,455 4,000	-33,899	-1,813	164,760	6,361
573	-0,373 4,000	-37,232	-1,859	171,649	6,239
577	-0,292 4,000	-46,911	-1,928	180,293	6,128
713	-20,000 4,000	0,000	0,000	186,708	12,026
714	-19,416 4,000	-1,413	-82,152	186,693	12,025
715	-18,833 4,000	-2,845	-164,072	186,658	12,023
716	-18,249 4,000	-4,330	-245,538	186,629	12,019
717	-20,000 3,333	0,000	0,000	174,869	11,272
718	-20,000 2,667	0,000	0,000	163,029	10,517
719	-20,000 2,000	0,000	0,000	151,192	9,759
755	0,000 3,700	-63,251	-2,620	3,702	1,343
756	0,000 3,475	-59,415	-2,662	3,715	1,343

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
757	0,000 3,550	-60,577	-2,647	3,711	1,343
758	0,000 3,625	-61,855	-2,633	3,707	1,343
769	0,000 3,400	-58,365	-2,679	3,718	1,344
770	0,000 3,175	-55,842	-2,736	3,728	1,344
771	0,000 3,250	-56,585	-2,716	3,725	1,344
772	0,000 3,325	-57,424	-2,697	3,722	1,344
821	-17,665 4,000	-5,913	-326,340	186,636	12,014
822	-17,142 4,000	-7,102	-397,670	186,994	12,008
823	-16,619 4,000	-8,001	-467,701	187,094	12,000
824	-16,095 4,000	-8,922	-536,576	186,921	11,990
853	-20,000 1,333	0,000	0,000	139,352	9,000
857	-20,000 0,667	0,000	0,000	127,475	8,238
858	-20,000 0,000	0,000	0,000	115,569	7,473
859	-20,000 -0,667	0,000	0,000	103,633	6,705
869	-20,000 -1,333	0,000	0,000	91,657	5,935
873	-20,000 -2,000	0,000	0,000	79,637	5,162
874	-20,000 -2,667	0,000	0,000	67,586	4,387
875	-20,000 -3,333	0,000	0,000	55,501	3,610
879	-20,000 -4,000	0,000	0,000	43,381	2,830
880	-19,412 -4,000	-1,844	-122,163	43,379	2,830
881	-18,824 -4,000	-3,687	-244,315	43,375	2,829
882	-18,235 -4,000	-5,529	-366,451	43,366	2,826
883	-20,000 -4,571	0,000	0,000	41,440	2,702
884	-20,000 -5,143	0,000	0,000	39,481	2,573
885	-20,000 -5,714	0,000	0,000	37,507	2,442
895	-20,000 -6,286	0,000	0,000	35,519	2,310
899	-20,000 -6,857	0,000	0,000	33,522	2,179
900	-20,000 -7,429	0,000	0,000	31,520	2,046
901	-20,000 -8,000	0,000	0,000	29,517	1,915
905	-2,217 4,000	-33,721	-1,391	157,165	8,488
906	-2,091 4,000	-34,294	-1,403	156,783	8,368

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
907	-1,964 4,000	-34,836	-1,417	156,501	8,244
911	-1,838 4,000	-35,262	-1,433	156,279	8,116
912	-1,725 4,000	-35,577	-1,449	155,964	7,997
913	-1,612 4,000	-35,986	-1,467	155,667	7,875
914	-1,499 4,000	-36,423	-1,487	155,486	7,749
921	-2,765 4,000	-31,349	-1,354	159,301	8,967
922	-2,624 4,000	-31,954	-1,362	158,707	8,851
923	-2,483 4,000	-32,548	-1,370	158,105	8,730
927	-2,343 4,000	-33,204	-1,381	157,674	8,604
937	-2,906 4,000	-30,688	-1,348	159,893	9,080
938	-3,377 4,000	-29,299	-1,334	162,144	9,429
939	-3,220 4,000	-29,765	-1,338	161,494	9,317
940	-3,063 4,000	-30,012	-1,342	160,733	9,201
947	-4,820 4,000	-26,366	-1,335	168,857	10,269
948	-4,625 4,000	-26,831	-1,335	168,164	10,173
949	-4,429 4,000	-27,093	-1,335	167,365	10,072
953	-4,234 4,000	-27,115	-1,331	166,383	9,966
954	-4,059 4,000	-27,469	-1,330	165,509	9,866
955	-3,884 4,000	-27,895	-1,330	164,655	9,761
956	-3,709 4,000	-28,308	-1,330	163,773	9,651
963	-3,534 4,000	-28,254	-1,331	163,006	9,536
973	-5,670 4,000	-25,498	-1,341	172,537	10,632
974	-5,452 4,000	-25,953	-1,342	171,558	10,546
975	-5,234 4,000	-26,352	-1,342	170,564	10,456
979	-5,016 4,000	-26,069	-1,339	169,891	10,361
989	-5,888 4,000	-25,487	-1,341	173,339	10,713
990	-6,617 4,000	-25,181	-1,334	175,468	10,952
991	-6,374 4,000	-25,361	-1,337	174,899	10,877
992	-6,131 4,000	-25,502	-1,340	174,202	10,798
999	-1,285 4,000	-36,996	-1,531	155,427	7,500
1000	-1,183 4,000	-37,133	-1,555	155,472	7,376

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1001	-1,082 4,000	-37,181	-1,582	155,571	7,249
1005	-1,386 4,000	-36,779	-1,509	155,436	7,619
1015	-0,981 4,000	-37,126	-1,611	155,745	7,118
1016	-0,890 4,000	-36,994	-1,639	156,002	6,997
1017	-0,799 4,000	-36,763	-1,669	156,448	6,872
1018	-0,708 4,000	-36,365	-1,702	157,141	6,742
1025	-0,618 4,000	-35,709	-1,738	158,048	6,608
1077	-7,674 4,000	-24,345	-1,305	178,181	11,228
1078	-7,403 4,000	-24,569	-1,314	177,647	11,164
1079	-7,132 4,000	-24,424	-1,322	176,858	11,095
1083	-6,860 4,000	-25,116	-1,330	176,152	11,022
1099	-7,946 4,000	-23,588	-1,294	178,623	11,287
1100	-8,854 4,000	-21,849	-1,251	180,468	11,459
1101	-8,551 4,000	-22,434	-1,267	179,997	11,406
1102	-8,248 4,000	-22,945	-1,281	179,367	11,349
1209	0,000 3,100	-55,189	-2,756	3,732	1,344
1210	0,000 2,875	-53,703	-2,823	3,743	1,345
1211	0,000 2,950	-54,126	-2,800	3,739	1,345
1212	0,000 3,025	-54,619	-2,778	3,735	1,344
1239	-15,103 4,000	-11,163	-663,724	186,750	11,966
1240	-14,634 4,000	-12,008	-721,244	186,507	11,951
1241	-14,165 4,000	-12,927	-777,237	186,287	11,934
1245	-13,696 4,000	-13,772	-831,524	186,150	11,915
1246	-13,276 4,000	-14,480	-878,527	185,763	11,895
1247	-12,855 4,000	-15,331	-923,898	185,410	11,872
1248	-12,435 4,000	-16,194	-967,494	185,189	11,847
1255	-15,572 4,000	-10,218	-604,492	186,376	11,977
1291	0,000 2,800	-53,345	-2,846	3,747	1,345
1292	0,000 2,575	-52,599	-2,918	3,762	1,345
1293	0,000 2,650	-52,798	-2,893	3,757	1,345
1294	0,000 2,725	-53,045	-2,870	3,752	1,345

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1339	-17,647	-4,000	-7,370	-488,562	43,351	2,823
1340	-15,882	-4,000	-12,874	-854,438	43,246	2,805
1341	-16,471	-4,000	-11,042	-732,529	43,295	2,813
1342	-17,059	-4,000	-9,207	-610,564	43,329	2,819
1383	-20,000	-8,571	0,000	0,000	27,518	1,783
1384	-20,000	-9,143	0,000	0,000	25,530	1,653
1385	-20,000	-9,714	0,000	0,000	23,559	1,524
1386	-20,000	-10,286	0,000	0,000	21,611	1,396
1393	-20,000	-10,857	0,000	0,000	19,693	1,271
1397	-20,000	-11,429	0,000	0,000	17,813	1,149
1398	-20,000	-12,000	0,000	0,000	15,979	1,030
1399	-20,000	-12,571	0,000	0,000	14,198	914,230
1419	0,000	2,500	-52,442	-2,942	3,767	1,345
1420	0,000	2,275	-52,185	-3,015	3,785	1,346
1421	0,000	2,350	-52,239	-2,990	3,779	1,346
1422	0,000	2,425	-52,324	-2,966	3,773	1,345
1433	0,000	8,000	-108,222	-1,136	6,960	1,366
1437	0,750	8,000	-70,041	-688,222	-63,466	307,676
1438	0,500	8,000	-66,857	-666,678	-64,976	462,093
1439	0,250	8,000	-60,684	-617,945	-50,638	717,374
1547	-10,170	4,000	-19,798	-1,167	182,894	11,646
1548	-9,832	4,000	-20,384	-1,191	182,358	11,604
1549	-9,494	4,000	-20,915	-1,213	181,888	11,559
1553	-9,157	4,000	-21,245	-1,234	181,368	11,508
1563	-10,508	4,000	-19,323	-1,142	183,461	11,684
1564	-11,638	4,000	-17,624	-1,045	184,739	11,790
1565	-11,261	4,000	-18,188	-1,079	184,299	11,758
1566	-10,884	4,000	-18,801	-1,111	183,850	11,723
1573	-12,015	4,000	-17,123	-1,009	184,543	11,817
1709	-15,294	-4,000	-14,701	-976,258	43,179	2,796
1710	-14,706	-4,000	-16,523	-1,098	43,088	2,784

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
1711	-14,118	-4,000	-18,338	-1,219	42,968	2,770
1712	-13,529	-4,000	-20,145	-1,341	42,814	2,753
1847	0,000	2,200	-52,156	-3,039	3,791	1,346
1848	0,000	1,975	-52,194	-3,110	3,813	1,346
1849	0,000	2,050	-52,164	-3,087	3,805	1,346
1850	0,000	2,125	-52,150	-3,063	3,798	1,346
1921	-20,000	-13,714	0,000	0,000	10,829	696,395
1922	-20,000	-14,286	0,000	0,000	9,260	595,091
1923	-20,000	-14,857	0,000	0,000	7,778	499,594
1927	-20,000	-13,143	0,000	0,000	12,479	802,954
1931	-20,000	-15,429	0,000	0,000	6,393	410,471
1935	-20,000	-16,000	0,000	0,000	5,116	328,305
1936	-20,000	-16,571	0,000	0,000	3,955	253,693
1937	-20,000	-17,143	0,000	0,000	2,921	187,249
1957	0,000	1,900	-52,239	-3,133	3,820	1,346
1958	0,000	1,825	-52,296	-3,156	3,828	1,346
1959	0,000	1,750	-52,362	-3,179	3,837	1,346
1960	0,000	1,675	-52,437	-3,201	3,845	1,346
1993	0,000	1,600	-52,518	-3,223	3,854	1,346
1994	0,000	1,375	-52,788	-3,287	3,882	1,346
1995	0,000	1,450	-52,695	-3,266	3,873	1,346
1996	0,000	1,525	-52,605	-3,245	3,863	1,346
2035	-20,000	-17,714	0,000	0,000	2,023	129,600
2036	-20,000	-20,000	0,000	0,000	0,000	0,000
2037	-19,412	-20,000	0,000	0,000	0,000	0,000
2038	-18,824	-20,000	0,000	0,000	0,000	0,000
2039	-18,235	-20,000	0,000	0,000	0,000	0,000
2043	-20,000	-18,286	0,000	0,000	1,271	81,388
2044	-20,000	-18,857	0,000	0,000	677,017	43,272
2045	-20,000	-19,429	0,000	0,000	249,823	15,918
2059	0,000	1,300	-52,883	-3,307	3,892	1,346

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
2060	0,000 1,075	-53,174	-3,365	3,924	1,346
2061	0,000 1,150	-53,077	-3,346	3,913	1,346
2062	0,000 1,225	-52,980	-3,327	3,902	1,346
2079	0,000 1,000	-53,272	-3,383	3,935	1,346
2080	0,000 0,775	-53,564	-3,436	3,969	1,346
2081	0,000 0,850	-53,467	-3,419	3,957	1,346
2082	0,000 0,925	-53,369	-3,401	3,946	1,346
2083	1,000 8,000	-71,116	-692,208	-62,611	146,484
2087	2,500 8,000	-59,181	-674,193	-36,331	-577,032
2088	2,000 8,000	-69,938	-697,719	-43,606	-353,218
2089	1,500 8,000	-72,753	-702,645	-53,947	-117,553
2293	-12,941 -4,000	-21,945	-1,462	42,619	2,732
2297	-11,176 -4,000	-27,285	-1,823	41,711	2,642
2298	-11,765 -4,000	-25,516	-1,703	42,076	2,677
2299	-12,353 -4,000	-23,735	-1,583	42,376	2,707
2525	-17,647 -20,000	0,000	0,000	0,000	0,000
2529	-17,059 -20,000	0,000	0,000	0,000	0,000
2530	-16,471 -20,000	0,000	0,000	0,000	0,000
2531	-15,882 -20,000	0,000	0,000	0,000	0,000
2567	0,000 0,700	-53,661	-3,452	3,981	1,346
2568	0,000 0,475	-53,954	-3,498	4,019	1,346
2569	0,000 0,550	-53,856	-3,484	4,006	1,346
2570	0,000 0,625	-53,758	-3,468	3,993	1,346
2591	0,000 0,400	-54,054	-3,513	4,032	1,346
2592	0,000 0,325	-54,156	-3,527	4,045	1,345
2593	0,000 0,250	-54,259	-3,540	4,058	1,345
2594	0,000 0,175	-54,366	-3,553	4,072	1,345
2621	0,000 0,100	-54,475	-3,565	4,086	1,345
2622	0,000 0,025	-54,589	-3,577	4,100	1,345
2623	0,000 -0,050	-54,706	-3,588	4,115	1,345
2624	0,000 -0,125	-54,828	-3,599	4,129	1,345

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
2689	0,000 -0,200	-54,955	-3,610	4,144	1,344
2690	0,000 -0,275	-55,088	-3,619	4,159	1,344
2691	0,000 -0,350	-55,225	-3,629	4,173	1,344
2692	0,000 -0,425	-55,367	-3,637	4,186	1,344
2713	0,000 -0,500	-55,513	-3,645	4,199	1,344
2714	0,000 -0,725	-55,968	-3,667	4,231	1,343
2715	0,000 -0,650	-55,814	-3,660	4,221	1,343
2716	0,000 -0,575	-55,663	-3,653	4,210	1,343
2749	0,000 -0,800	-56,123	-3,673	4,240	1,343
2750	0,000 -0,875	-56,278	-3,679	4,249	1,342
2751	0,000 -0,950	-56,433	-3,684	4,257	1,342
2752	0,000 -1,025	-56,588	-3,689	4,264	1,342
2773	0,000 -1,100	-56,743	-3,694	4,271	1,342
2774	0,000 -1,175	-56,897	-3,698	4,277	1,341
2775	0,000 -1,250	-57,050	-3,702	4,283	1,341
2776	0,000 -1,325	-57,203	-3,705	4,289	1,341
2793	3,000 8,000	-45,553	-641,417	-34,355	-798,661
2794	4,500 8,000	-37,406	-623,123	-35,843	-1,399
2795	4,000 8,000	-39,285	-627,315	-35,158	-1,212
2796	3,500 8,000	-42,443	-634,023	-34,576	-1,012
2971	-10,588 -4,000	-29,043	-1,943	41,271	2,601
2972	-10,000 -4,000	-30,789	-2,061	40,746	2,553
2973	-9,412 -4,000	-32,521	-2,179	40,123	2,497
2974	-8,824 -4,000	-34,240	-2,295	39,390	2,434
3065	-15,294 -20,000	0,000	0,000	0,000	0,000
3069	-14,706 -20,000	0,000	0,000	0,000	0,000
3070	-14,118 -20,000	0,000	0,000	0,000	0,000
3071	-13,529 -20,000	0,000	0,000	0,000	0,000
3251	0,000 -1,400	-57,356	-3,708	4,294	1,341
3252	0,000 -1,475	-57,508	-3,711	4,299	1,340
3253	0,000 -1,550	-57,660	-3,714	4,303	1,340

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
3254	0,000 -1,625	-57,812	-3,717	4,307	1,340
3275	0,000 -1,700	-57,965	-3,719	4,311	1,340
3276	0,000 -1,775	-58,119	-3,721	4,315	1,340
3277	0,000 -1,850	-58,275	-3,724	4,318	1,339
3278	0,000 -1,925	-58,433	-3,726	4,322	1,339
3279	5,000 8,000	-35,897	-620,743	-36,460	-1,574
3283	6,875 8,000	-29,994	-617,685	-39,585	-2,128
3284	6,250 8,000	-31,772	-618,409	-38,456	-1,961
3285	5,625 8,000	-33,738	-619,129	-37,382	-1,777
3385	-8,235 -4,000	-35,944	-2,410	38,531	2,361
3389	-6,471 -4,000	-40,970	-2,741	35,028	2,078
3390	-7,059 -4,000	-39,310	-2,634	36,371	2,184
3391	-7,647 -4,000	-37,634	-2,523	37,531	2,278
3521	-12,941 -20,000	0,000	0,000	0,000	0,000
3525	-12,353 -20,000	0,000	0,000	0,000	0,000
3526	-11,765 -20,000	0,000	0,000	0,000	0,000
3527	-11,176 -20,000	0,000	0,000	0,000	0,000
3675	0,000 -2,000	-58,592	-3,728	4,325	1,339
3697	7,500 8,000	-28,397	-616,197	-40,709	-2,278
3698	9,375 8,000	-24,325	-601,910	-43,319	-2,642
3699	8,750 8,000	-26,015	-609,165	-42,636	-2,535
3700	8,125 8,000	-27,134	-613,514	-41,842	-2,414
3739	-5,294 -4,000	-44,247	-2,945	31,693	1,830
3740	-4,706 -4,000	-45,861	-3,039	29,635	1,686
3741	-4,118 -4,000	-47,455	-3,126	27,264	1,528
3745	-5,882 -4,000	-42,616	-2,845	33,478	1,961
3755	-3,529 -4,000	-49,020	-3,205	24,529	1,356
3756	-2,941 -4,000	-50,534	-3,276	21,369	1,171
3757	-2,353 -4,000	-51,959	-3,336	17,724	972,489
3758	-1,765 -4,000	-53,220	-3,385	13,538	761,640
3791	-10,588 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. [10^-6 m]	y-coord. [10^-6 m]	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
3795	-10,000	-20,000	0,000	0,000	0,000	0,000
3796	-9,412	-20,000	0,000	0,000	0,000	0,000
3797	-8,824	-20,000	0,000	0,000	0,000	0,000
3959	10,000	8,000	-22,169	-591,393	-44,216	-2,737
3963	11,875	8,000	-18,614	-538,413	-46,764	-2,962
3964	11,250	8,000	-19,624	-558,521	-46,082	-2,896
3965	10,625	8,000	-20,833	-576,740	-45,225	-2,822
4213	-8,235	-20,000	0,000	0,000	0,000	0,000
4217	-7,647	-20,000	0,000	0,000	0,000	0,000
4218	-7,059	-20,000	0,000	0,000	0,000	0,000
4219	-6,471	-20,000	0,000	0,000	0,000	0,000
4281	-0,588	-4,000	-54,724	-3,445	3,656	302,628
4282	0,000	-4,000	-54,633	-3,450	-1,602	55,261
4283	0,588	-4,000	-53,965	-3,432	-6,565	-196,010
4287	-1,176	-4,000	-54,201	-3,422	8,815	538,514
4297	1,176	-4,000	-52,892	-3,392	-10,905	-438,113
4301	1,765	-4,000	-51,637	-3,334	-14,601	-661,063
4302	2,353	-4,000	-50,291	-3,265	-17,744	-862,431
4303	2,941	-4,000	-48,904	-3,188	-20,434	-1,043
4329	12,500	8,000	-18,145	-521,025	-47,175	-3,019
4330	14,375	8,000	-13,675	-423,922	-48,518	-3,144
4331	13,750	8,000	-14,610	-457,250	-48,176	-3,108
4332	13,125	8,000	-15,793	-489,206	-47,561	-3,066
4361	15,000	8,000	-12,018	-382,798	-48,743	-3,173
4365	16,875	8,000	-9,780	-263,714	-48,953	-3,236
4366	16,250	8,000	-10,568	-304,308	-49,247	-3,222
4367	15,625	8,000	-10,856	-340,229	-49,154	-3,201
4403	-5,882	-20,000	0,000	0,000	0,000	0,000
4407	-5,294	-20,000	0,000	0,000	0,000	0,000
4408	-4,706	-20,000	0,000	0,000	0,000	0,000
4409	-4,118	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
4577	5,294 -4,000	-43,065	-2,834	-27,976	-1,599
4578	4,706 -4,000	-44,564	-2,928	-26,479	-1,481
4579	4,118 -4,000	-46,038	-3,019	-24,748	-1,351
4589	3,529 -4,000	-47,485	-3,105	-22,748	-1,205
4643	20,000 6,200	0,000	0,000	-48,255	-3,222
4644	20,000 6,800	0,000	0,000	-49,123	-3,246
4645	20,000 7,400	0,000	0,000	-49,679	-3,269
4646	20,000 8,000	0,000	0,000	-49,862	-3,279
4647	19,375 8,000	-963,042	-51,337	-49,338	-3,279
4648	18,750 8,000	-3,666	-91,936	-49,118	-3,274
4649	18,125 8,000	-3,778	-133,614	-49,283	-3,261
4653	17,500 8,000	-6,381	-204,592	-48,478	-3,247
4657	20,000 5,600	0,000	0,000	-47,650	-3,195
4661	20,000 3,800	0,000	0,000	-45,621	-3,099
4662	20,000 4,400	0,000	0,000	-46,273	-3,133
4663	20,000 5,000	0,000	0,000	-46,943	-3,165
4711	5,882 -4,000	-41,542	-2,737	-29,271	-1,704
4715	6,471 -4,000	-39,995	-2,638	-30,389	-1,798
4716	7,059 -4,000	-38,426	-2,536	-31,351	-1,882
4717	7,647 -4,000	-36,836	-2,432	-32,177	-1,957
4779	-3,529 -20,000	0,000	0,000	0,000	0,000
4780	-2,941 -20,000	0,000	0,000	0,000	0,000
4781	-2,353 -20,000	0,000	0,000	0,000	0,000
4782	-1,765 -20,000	0,000	0,000	0,000	0,000
4939	20,000 3,200	0,000	0,000	-44,970	-3,061
4943	20,000 1,400	0,000	0,000	-42,947	-2,934
4944	20,000 2,000	0,000	0,000	-43,634	-2,979
4945	20,000 2,600	0,000	0,000	-44,308	-3,022
4949	8,824 -4,000	-33,592	-2,219	-33,484	-2,082
4950	9,412 -4,000	-31,941	-2,109	-33,993	-2,134
4951	10,000 -4,000	-30,272	-1,999	-34,421	-2,180

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
4955	8,235 -4,000	-35,224	-2,326	-32,884	-2,023
4965	-1,176 -20,000	0,000	0,000	0,000	0,000
4969	-0,588 -20,000	0,000	0,000	0,000	0,000
4970	0,000 -20,000	0,000	0,000	0,000	0,000
4971	0,588 -20,000	0,000	0,000	0,000	0,000
5039	10,588 -4,000	-28,586	-1,887	-34,779	-2,220
5043	12,353 -4,000	-23,428	-1,544	-35,524	-2,313
5044	11,765 -4,000	-25,163	-1,660	-35,323	-2,286
5045	11,176 -4,000	-26,882	-1,774	-35,078	-2,256
5134	20,000 0,800	0,000	0,000	-42,247	-2,887
5141	20,000 -1,000	0,000	0,000	-40,062	-2,730
5142	20,000 -0,400	0,000	0,000	-40,806	-2,785
5143	20,000 0,200	0,000	0,000	-41,533	-2,837
5245	1,176 -20,000	0,000	0,000	0,000	0,000
5249	1,765 -20,000	0,000	0,000	0,000	0,000
5250	2,353 -20,000	0,000	0,000	0,000	0,000
5251	2,941 -20,000	0,000	0,000	0,000	0,000
5287	20,000 -1,600	0,000	0,000	-39,297	-2,673
5291	20,000 -3,400	0,000	0,000	-36,977	-2,497
5292	20,000 -2,800	0,000	0,000	-37,761	-2,557
5293	20,000 -2,200	0,000	0,000	-38,535	-2,616
5297	13,529 -4,000	-19,917	-1,312	-35,816	-2,355
5298	14,118 -4,000	-18,143	-1,194	-35,917	-2,372
5299	14,706 -4,000	-16,358	-1,076	-35,995	-2,386
5303	12,941 -4,000	-21,679	-1,428	-35,686	-2,336
5313	15,294 -4,000	-14,564	-958,016	-36,054	-2,398
5314	15,882 -4,000	-12,761	-839,149	-36,098	-2,408
5315	16,471 -4,000	-10,951	-719,918	-36,130	-2,416
5316	17,059 -4,000	-9,135	-600,382	-36,152	-2,422
5439	3,529 -20,000	0,000	0,000	0,000	0,000
5443	4,118 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
5444	4,706	-20,000	0,000	0,000	0,000	0,000
5445	5,294	-20,000	0,000	0,000	0,000	0,000
5501	18,235	-4,000	-5,489	-360,611	-36,176	-2,431
5502	18,824	-4,000	-3,661	-240,478	-36,181	-2,433
5503	19,412	-4,000	-1,831	-120,258	-36,184	-2,435
5504	20,000	-4,000	0,000	0,000	-36,185	-2,435
5505	20,000	-5,714	0,000	0,000	-30,933	-2,087
5506	20,000	-5,143	0,000	0,000	-32,688	-2,204
5507	20,000	-4,571	0,000	0,000	-34,439	-2,320
5517	17,647	-4,000	-7,314	-480,595	-36,166	-2,427
5667	5,882	-20,000	0,000	0,000	0,000	0,000
5668	6,471	-20,000	0,000	0,000	0,000	0,000
5669	7,059	-20,000	0,000	0,000	0,000	0,000
5670	7,647	-20,000	0,000	0,000	0,000	0,000
5693	20,000	-6,286	0,000	0,000	-29,178	-1,970
5694	20,000	-8,000	0,000	0,000	-23,932	-1,617
5695	20,000	-7,429	0,000	0,000	-25,674	-1,734
5696	20,000	-6,857	0,000	0,000	-27,423	-1,852
5813	8,235	-20,000	0,000	0,000	0,000	0,000
5817	8,824	-20,000	0,000	0,000	0,000	0,000
5818	9,412	-20,000	0,000	0,000	0,000	0,000
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	-22,203	-1,500
5843	20,000	-10,286	0,000	0,000	-17,142	-1,159
5844	20,000	-9,714	0,000	0,000	-18,803	-1,271
5845	20,000	-9,143	0,000	0,000	-20,492	-1,385
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	-15,514	-1,049

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-6 m]	Ux [10^-3 m]	dUy [10^-6 m]	Uy [10^-3 m]
6054	20,000	-12,571	0,000	0,000	-10,899	-737,434
6055	20,000	-12,000	0,000	0,000	-12,386	-837,800
6056	20,000	-11,429	0,000	0,000	-13,927	-941,793
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	-9,473	-641,175
6093	20,000	-14,857	0,000	0,000	-5,634	-382,037
6094	20,000	-14,286	0,000	0,000	-6,832	-462,960
6095	20,000	-13,714	0,000	0,000	-8,115	-549,514
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	-4,527	-307,282
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	-1,843	-125,589
6175	20,000	-16,571	0,000	0,000	-2,624	-178,486
6176	20,000	-16,000	0,000	0,000	-3,521	-239,243
6180	20,000	-17,714	0,000	0,000	-1,188	-81,141
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	-65,465	-4,551
6201	20,000	-18,286	0,000	0,000	-668,171	-45,744
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	-290,995	-20,007

		Ponte sullo Stretto di Messina PROGETTO DEFINITIVO	
RELAZIONE DI CALCOLO OPERE PROVVISORIALI	<i>Codice documento</i> SS0780_F0.doc	Rev F0	Data 20/06/2011

13. Results for phase 8

Table [18] Table of deformations phase no: 8

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
143	0,000	7,540	-2,628	-37,436	-14,219	-1,189
144	0,000	7,693	-2,695	-38,253	-14,217	-1,189
145	0,000	7,847	-2,763	-39,071	-14,216	-1,189
146	0,000	8,000	-2,830	-39,889	-14,216	-1,189
169	0,000	6,965	-2,377	-34,371	-14,223	-1,189
170	0,000	7,106	-2,438	-35,120	-14,222	-1,189
171	0,000	7,246	-2,500	-35,869	-14,221	-1,189
172	0,000	7,387	-2,561	-36,618	-14,219	-1,189
183	0,000	6,825	-2,316	-33,623	-14,224	-1,189
184	0,000	6,438	-2,148	-31,574	-14,227	-1,188
185	0,000	6,567	-2,204	-32,256	-14,226	-1,188
186	0,000	6,696	-2,260	-32,939	-14,226	-1,189
207	0,000	6,309	-2,093	-30,894	-14,226	-1,188
208	0,000	5,955	-1,941	-29,036	-14,224	-1,188
209	0,000	6,073	-1,991	-29,653	-14,224	-1,188
210	0,000	6,191	-2,042	-30,272	-14,225	-1,188
265	0,000	5,836	-1,891	-28,422	-14,223	-1,188
266	0,000	5,511	-1,755	-26,752	-14,215	-1,188
267	0,000	5,620	-1,800	-27,305	-14,219	-1,188
268	0,000	5,728	-1,846	-27,862	-14,222	-1,188
289	0,000	5,403	-1,711	-26,204	-14,210	-1,188
290	0,000	5,105	-1,591	-24,723	-14,193	-1,187
291	0,000	5,204	-1,631	-25,212	-14,199	-1,188
292	0,000	5,304	-1,671	-25,705	-14,205	-1,188
361	0,000	4,732	-1,449	-22,950	-14,174	-1,187
362	0,000	4,823	-1,483	-23,374	-14,178	-1,187

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
363	0,000 4,914	-1,517	-23,804	-14,182	-1,187
364	0,000 5,005	-1,552	-24,241	-14,187	-1,187
375	0,000 4,641	-1,415	-22,533	-14,171	-1,187
376	0,000 4,390	-1,327	-21,426	-14,166	-1,186
377	0,000 4,474	-1,356	-21,788	-14,167	-1,186
378	0,000 4,557	-1,385	-22,157	-14,168	-1,187
395	0,000 4,307	-1,299	-21,072	-14,165	-1,186
396	0,000 4,077	-1,224	-20,145	-14,160	-1,185
397	0,000 4,153	-1,248	-20,446	-14,163	-1,186
398	0,000 4,230	-1,273	-20,756	-14,165	-1,186
399	-0,219 4,000	-1,054	-17,991	206,651	2,027
400	-0,146 4,000	-1,106	-18,531	166,395	1,553
401	-0,073 4,000	-1,166	-19,273	122,954	920,335
405	0,000 4,000	-1,203	-19,855	79,709	99,141
409	0,000 4,000	-1,200	-19,852	-14,156	-1,185
410	0,000 3,775	-1,134	-19,049	-14,132	-1,184
411	0,000 3,850	-1,155	-19,307	-14,141	-1,185
412	0,000 3,925	-1,177	-19,575	-14,149	-1,185
571	-0,536 4,000	-965,573	-16,756	267,707	2,287
572	-0,455 4,000	-971,111	-17,010	256,287	2,286
573	-0,373 4,000	-987,730	-17,321	238,757	2,235
577	-0,292 4,000	-1,023	-17,682	225,712	2,117
713	-20,000 4,000	0,000	0,000	537,558	11,088
714	-19,416 4,000	-36,588	-715,006	531,559	11,011
715	-18,833 4,000	-67,202	-1,357	525,513	10,914
716	-18,249 4,000	-94,177	-1,953	523,194	10,810
717	-20,000 3,333	0,000	0,000	502,857	10,559
718	-20,000 2,667	0,000	0,000	487,540	10,242
719	-20,000 2,000	0,000	0,000	471,650	9,917
755	0,000 3,700	-1,113	-18,802	-14,121	-1,184
756	0,000 3,475	-1,055	-18,127	-14,085	-1,184

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
757	0,000	3,550	-1,073	-18,340	-14,096	-1,184
758	0,000	3,625	-1,093	-18,565	-14,109	-1,184
769	0,000	3,400	-1,037	-17,926	-14,077	-1,184
770	0,000	3,175	-989,051	-17,394	-14,076	-1,184
771	0,000	3,250	-1,004	-17,560	-14,073	-1,184
772	0,000	3,325	-1,020	-17,737	-14,073	-1,184
821	-17,665	4,000	-124,307	-2,545	520,414	10,653
822	-17,142	4,000	-152,551	-3,059	508,830	10,455
823	-16,619	4,000	-175,198	-3,533	501,768	10,279
824	-16,095	4,000	-201,431	-4,001	493,329	10,097
853	-20,000	1,333	0,000	0,000	456,778	9,601
857	-20,000	0,667	0,000	0,000	441,422	9,290
858	-20,000	0,000	0,000	0,000	427,143	8,997
859	-20,000	-0,667	0,000	0,000	413,955	8,724
869	-20,000	-1,333	0,000	0,000	401,933	8,475
873	-20,000	-2,000	0,000	0,000	391,211	8,252
874	-20,000	-2,667	0,000	0,000	381,975	8,061
875	-20,000	-3,333	0,000	0,000	374,588	7,911
879	-20,000	-4,000	0,000	0,000	369,655	7,815
880	-19,412	-4,000	-24,810	-519,793	368,802	7,794
881	-18,824	-4,000	-49,241	-1,031	366,722	7,746
882	-18,235	-4,000	-73,269	-1,532	363,575	7,672
883	-20,000	-4,571	0,000	0,000	346,444	7,328
884	-20,000	-5,143	0,000	0,000	324,026	6,859
885	-20,000	-5,714	0,000	0,000	302,300	6,405
895	-20,000	-6,286	0,000	0,000	281,215	5,964
899	-20,000	-6,857	0,000	0,000	260,763	5,536
900	-20,000	-7,429	0,000	0,000	240,943	5,120
901	-20,000	-8,000	0,000	0,000	221,763	4,718
905	-2,217	4,000	-718,927	-13,920	143,244	1,951
906	-2,091	4,000	-727,384	-14,016	143,267	1,875

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
907	-1,964 4,000	-739,305	-14,123	146,996	1,808
911	-1,838 4,000	-754,484	-14,241	153,785	1,753
912	-1,725 4,000	-770,137	-14,361	162,450	1,714
913	-1,612 4,000	-787,663	-14,493	172,639	1,686
914	-1,499 4,000	-805,688	-14,638	182,354	1,670
921	-2,765 4,000	-695,369	-13,541	159,269	2,321
922	-2,624 4,000	-700,916	-13,637	154,051	2,226
923	-2,483 4,000	-705,596	-13,734	150,370	2,129
927	-2,343 4,000	-712,477	-13,830	146,318	2,035
937	-2,906 4,000	-690,440	-13,446	163,888	2,416
938	-3,377 4,000	-673,392	-13,126	175,704	2,731
939	-3,220 4,000	-679,771	-13,234	172,404	2,626
940	-3,063 4,000	-685,766	-13,340	168,862	2,521
947	-4,820 4,000	-626,723	-12,142	220,545	3,699
948	-4,625 4,000	-633,019	-12,271	213,991	3,570
949	-4,429 4,000	-639,339	-12,404	208,347	3,440
953	-4,234 4,000	-646,162	-12,540	203,097	3,310
954	-4,059 4,000	-652,286	-12,662	197,326	3,191
955	-3,884 4,000	-657,782	-12,782	192,142	3,074
956	-3,709 4,000	-663,016	-12,901	187,553	2,958
963	-3,534 4,000	-668,628	-13,019	182,685	2,839
973	-5,670 4,000	-596,898	-11,587	243,836	4,263
974	-5,452 4,000	-604,010	-11,731	238,027	4,120
975	-5,234 4,000	-611,145	-11,873	233,127	3,976
979	-5,016 4,000	-619,695	-12,018	227,630	3,823
989	-5,888 4,000	-588,881	-11,440	250,942	4,408
990	-6,617 4,000	-564,975	-10,960	271,060	4,885
991	-6,374 4,000	-572,708	-11,118	263,636	4,726
992	-6,131 4,000	-580,384	-11,278	257,266	4,567
999	-1,285 4,000	-827,949	-14,962	199,323	1,694
1000	-1,183 4,000	-841,820	-15,155	202,635	1,746

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
1001	-1,082 4,000	-861,697	-15,374	207,084	1,821
1005	-1,386 4,000	-820,663	-14,796	190,523	1,667
1015	-0,981 4,000	-886,518	-15,617	216,362	1,914
1016	-0,890 4,000	-911,894	-15,860	229,611	2,012
1017	-0,799 4,000	-937,847	-16,115	244,788	2,110
1018	-0,708 4,000	-959,196	-16,361	258,655	2,193
1025	-0,618 4,000	-969,437	-16,570	266,595	2,239
1077	-7,674 4,000	-528,786	-10,278	299,109	5,564
1078	-7,403 4,000	-537,189	-10,455	291,822	5,392
1079	-7,132 4,000	-545,774	-10,630	285,663	5,219
1083	-6,860 4,000	-556,086	-10,807	279,501	5,037
1099	-7,946 4,000	-519,427	-10,098	307,408	5,737
1100	-8,854 4,000	-492,301	-9,497	330,228	6,304
1101	-8,551 4,000	-499,945	-9,696	322,438	6,115
1102	-8,248 4,000	-509,017	-9,897	314,699	5,926
1209	0,000 3,100	-974,923	-17,240	-14,082	-1,183
1210	0,000 2,875	-937,845	-16,838	-14,106	-1,183
1211	0,000 2,950	-949,345	-16,962	-14,098	-1,183
1212	0,000 3,025	-961,695	-17,096	-14,090	-1,183
1239	-15,103 4,000	-246,775	-4,862	472,375	9,680
1240	-14,634 4,000	-277,052	-5,254	468,459	9,467
1241	-14,165 4,000	-298,018	-5,632	458,678	9,243
1245	-13,696 4,000	-312,271	-6,011	444,791	9,022
1246	-13,276 4,000	-324,785	-6,343	433,699	8,803
1247	-12,855 4,000	-335,392	-6,660	424,367	8,587
1248	-12,435 4,000	-348,321	-6,973	417,651	8,373
1255	-15,572 4,000	-232,275	-4,469	499,135	9,886
1291	0,000 2,800	-927,163	-16,723	-14,114	-1,183
1292	0,000 2,575	-899,657	-16,426	-14,139	-1,183
1293	0,000 2,650	-908,108	-16,517	-14,130	-1,183
1294	0,000 2,725	-917,264	-16,616	-14,122	-1,183

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
1339	-17,647 -4,000	-96,881	-2,022	359,467	7,576
1340	-15,882 -4,000	-165,049	-3,430	342,219	7,172
1341	-16,471 -4,000	-142,785	-2,972	348,728	7,324
1342	-17,059 -4,000	-120,058	-2,503	354,498	7,459
1383	-20,000 -8,571	0,000	0,000	203,230	4,329
1384	-20,000 -9,143	0,000	0,000	185,353	3,953
1385	-20,000 -9,714	0,000	0,000	168,146	3,591
1386	-20,000 -10,286	0,000	0,000	151,623	3,242
1393	-20,000 -10,857	0,000	0,000	135,801	2,908
1397	-20,000 -11,429	0,000	0,000	120,696	2,588
1398	-20,000 -12,000	0,000	0,000	106,328	2,283
1399	-20,000 -12,571	0,000	0,000	92,718	1,994
1419	0,000 2,500	-891,867	-16,341	-14,147	-1,183
1420	0,000 2,275	-872,049	-16,123	-14,172	-1,183
1421	0,000 2,350	-878,106	-16,190	-14,164	-1,183
1422	0,000 2,425	-884,698	-16,263	-14,155	-1,183
1433	0,000 8,000	-2,254	-30,848	17,307	-1,041
1437	0,750 8,000	-2,214	-30,749	-667,986	-8,556
1438	0,500 8,000	-2,204	-30,652	-665,898	-8,607
1439	0,250 8,000	-2,159	-30,150	-533,940	-7,203
1547	-10,170 4,000	-445,282	-8,622	365,859	7,100
1548	-9,832 4,000	-459,154	-8,855	357,889	6,899
1549	-9,494 4,000	-472,703	-9,081	349,207	6,692
1553	-9,157 4,000	-486,385	-9,296	335,317	6,476
1563	-10,508 4,000	-430,937	-8,381	374,327	7,299
1564	-11,638 4,000	-386,544	-7,560	403,156	7,943
1565	-11,261 4,000	-401,451	-7,833	390,925	7,731
1566	-10,884 4,000	-415,525	-8,108	381,662	7,516
1573	-12,015 4,000	-367,645	-7,289	416,774	8,142
1709	-15,294 -4,000	-186,842	-3,876	335,020	7,004
1710	-14,706 -4,000	-208,154	-4,310	327,175	6,821

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
1711	-14,118	-4,000	-228,981	-4,732	318,724	6,624
1712	-13,529	-4,000	-249,315	-5,140	309,700	6,415
1847	0,000	2,200	-866,487	-16,060	-14,180	-1,183
1848	0,000	1,975	-852,367	-15,893	-14,204	-1,183
1849	0,000	2,050	-856,684	-15,945	-14,197	-1,183
1850	0,000	2,125	-861,378	-16,001	-14,188	-1,183
1921	-20,000	-13,714	0,000	0,000	67,870	1,463
1922	-20,000	-14,286	0,000	0,000	56,685	1,224
1923	-20,000	-14,857	0,000	0,000	46,369	1,003
1927	-20,000	-13,143	0,000	0,000	79,890	1,720
1931	-20,000	-15,429	0,000	0,000	36,955	800,199
1935	-20,000	-16,000	0,000	0,000	28,483	617,648
1936	-20,000	-16,571	0,000	0,000	20,997	456,002
1937	-20,000	-17,143	0,000	0,000	14,546	316,413
1957	0,000	1,900	-848,391	-15,844	-14,212	-1,183
1958	0,000	1,825	-844,722	-15,797	-14,220	-1,183
1959	0,000	1,750	-841,327	-15,752	-14,227	-1,183
1960	0,000	1,675	-838,176	-15,709	-14,234	-1,183
1993	0,000	1,600	-835,240	-15,668	-14,241	-1,183
1994	0,000	1,375	-827,457	-15,549	-14,260	-1,182
1995	0,000	1,450	-829,904	-15,588	-14,254	-1,182
1996	0,000	1,525	-832,491	-15,627	-14,248	-1,182
2035	-20,000	-17,714	0,000	0,000	9,184	200,156
2036	-20,000	-20,000	0,000	0,000	0,000	0,000
2037	-19,412	-20,000	0,000	0,000	0,000	0,000
2038	-18,824	-20,000	0,000	0,000	0,000	0,000
2039	-18,235	-20,000	0,000	0,000	0,000	0,000
2043	-20,000	-18,286	0,000	0,000	4,975	108,702
2044	-20,000	-18,857	0,000	0,000	1,984	43,525
2045	-20,000	-19,429	0,000	0,000	291,276	6,514
2059	0,000	1,300	-825,126	-15,510	-14,267	-1,182

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
2060	0,000 1,075	-818,645	-15,396	-14,283	-1,182
2061	0,000 1,150	-820,738	-15,434	-14,278	-1,182
2062	0,000 1,225	-822,893	-15,472	-14,272	-1,182
2079	0,000 1,000	-816,598	-15,357	-14,289	-1,182
2080	0,000 0,775	-810,601	-15,239	-14,304	-1,181
2081	0,000 0,850	-812,588	-15,279	-14,299	-1,181
2082	0,000 0,925	-814,584	-15,318	-14,294	-1,181
2083	1,000 8,000	-2,222	-30,803	-655,071	-8,406
2087	2,500 8,000	-2,202	-29,870	-296,309	-4,761
2088	2,000 8,000	-2,231	-30,803	-462,760	-6,308
2089	1,500 8,000	-2,229	-30,934	-582,979	-7,587
2293	-12,941 -4,000	-269,152	-5,536	300,135	6,193
2297	-11,176 -4,000	-325,653	-6,645	268,474	5,465
2298	-11,765 -4,000	-307,323	-6,289	279,496	5,717
2299	-12,353 -4,000	-288,489	-5,919	290,058	5,961
2525	-17,647 -20,000	0,000	0,000	0,000	0,000
2529	-17,059 -20,000	0,000	0,000	0,000	0,000
2530	-16,471 -20,000	0,000	0,000	0,000	0,000
2531	-15,882 -20,000	0,000	0,000	0,000	0,000
2567	0,000 0,700	-808,611	-15,198	-14,308	-1,181
2568	0,000 0,475	-802,539	-15,071	-14,321	-1,180
2569	0,000 0,550	-804,587	-15,114	-14,317	-1,181
2570	0,000 0,625	-806,609	-15,156	-14,313	-1,181
2591	0,000 0,400	-800,456	-15,026	-14,325	-1,180
2592	0,000 0,325	-798,335	-14,981	-14,329	-1,180
2593	0,000 0,250	-796,170	-14,935	-14,333	-1,180
2594	0,000 0,175	-793,957	-14,888	-14,337	-1,179
2621	0,000 0,100	-791,693	-14,839	-14,340	-1,179
2622	0,000 0,025	-789,376	-14,790	-14,343	-1,179
2623	0,000 -0,050	-787,003	-14,740	-14,347	-1,179
2624	0,000 -0,125	-784,574	-14,688	-14,350	-1,179

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
2689	0,000 -0,200	-782,086	-14,636	-14,353	-1,178
2690	0,000 -0,275	-779,540	-14,582	-14,355	-1,178
2691	0,000 -0,350	-776,935	-14,528	-14,358	-1,178
2692	0,000 -0,425	-774,273	-14,472	-14,360	-1,178
2713	0,000 -0,500	-771,553	-14,416	-14,363	-1,177
2714	0,000 -0,725	-763,068	-14,241	-14,368	-1,176
2715	0,000 -0,650	-765,949	-14,300	-14,366	-1,177
2716	0,000 -0,575	-768,778	-14,359	-14,365	-1,177
2749	0,000 -0,800	-760,137	-14,181	-14,370	-1,176
2750	0,000 -0,875	-757,159	-14,121	-14,371	-1,176
2751	0,000 -0,950	-754,137	-14,060	-14,372	-1,176
2752	0,000 -1,025	-751,074	-13,998	-14,373	-1,175
2773	0,000 -1,100	-747,973	-13,935	-14,374	-1,175
2774	0,000 -1,175	-744,838	-13,872	-14,375	-1,175
2775	0,000 -1,250	-741,673	-13,808	-14,375	-1,175
2776	0,000 -1,325	-738,482	-13,744	-14,376	-1,174
2793	3,000 8,000	-2,055	-28,103	-207,305	-3,248
2794	4,500 8,000	-1,331	-20,435	-71,904	-2,703
2795	4,000 8,000	-1,528	-21,754	-106,050	-2,621
2796	3,500 8,000	-1,770	-24,336	-150,785	-2,663
2971	-10,588 -4,000	-343,478	-6,988	257,015	5,203
2972	-10,000 -4,000	-360,799	-7,317	245,141	4,933
2973	-9,412 -4,000	-377,617	-7,632	232,873	4,655
2974	-8,824 -4,000	-393,933	-7,934	220,229	4,370
3065	-15,294 -20,000	0,000	0,000	0,000	0,000
3069	-14,706 -20,000	0,000	0,000	0,000	0,000
3070	-14,118 -20,000	0,000	0,000	0,000	0,000
3071	-13,529 -20,000	0,000	0,000	0,000	0,000
3251	0,000 -1,400	-735,268	-13,680	-14,376	-1,174
3252	0,000 -1,475	-732,036	-13,615	-14,376	-1,174
3253	0,000 -1,550	-728,790	-13,550	-14,376	-1,174

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
3254	0,000 -1,625	-725,533	-13,485	-14,377	-1,173
3275	0,000 -1,700	-722,268	-13,420	-14,378	-1,173
3276	0,000 -1,775	-719,000	-13,354	-14,380	-1,173
3277	0,000 -1,850	-715,728	-13,289	-14,382	-1,173
3278	0,000 -1,925	-712,454	-13,223	-14,385	-1,173
3279	5,000 8,000	-1,178	-19,845	-70,708	-2,857
3283	6,875 8,000	-1,031	-19,086	-128,003	-3,897
3284	6,250 8,000	-1,055	-19,230	-102,319	-3,507
3285	5,625 8,000	-1,093	-19,425	-85,172	-3,164
3385	-8,235 -4,000	-409,747	-8,222	207,229	4,078
3389	-6,471 -4,000	-454,158	-9,002	166,324	3,166
3390	-7,059 -4,000	-439,861	-8,756	180,251	3,476
3391	-7,647 -4,000	-425,057	-8,496	193,896	3,779
3521	-12,941 -20,000	0,000	0,000	0,000	0,000
3525	-12,353 -20,000	0,000	0,000	0,000	0,000
3526	-11,765 -20,000	0,000	0,000	0,000	0,000
3527	-11,176 -20,000	0,000	0,000	0,000	0,000
3675	0,000 -2,000	-709,176	-13,158	-14,388	-1,173
3697	7,500 8,000	-1,019	-18,994	-156,820	-4,313
3698	9,375 8,000	-1,004	-18,788	-250,111	-5,660
3699	8,750 8,000	-1,009	-18,864	-216,508	-5,188
3700	8,125 8,000	-1,015	-18,937	-184,863	-4,738
3739	-5,294 -4,000	-481,221	-9,451	137,755	2,535
3740	-4,706 -4,000	-493,985	-9,656	123,200	2,214
3741	-4,118 -4,000	-506,248	-9,846	108,524	1,889
3745	-5,882 -4,000	-467,944	-9,233	152,147	2,853
3755	-3,529 -4,000	-518,030	-10,024	93,777	1,561
3756	-2,941 -4,000	-529,360	-10,190	79,004	1,229
3757	-2,353 -4,000	-540,293	-10,344	64,221	893,317
3758	-1,765 -4,000	-550,901	-10,486	49,391	550,755
3791	-10,588 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
3795	-10,000	-20,000	0,000	0,000	0,000	0,000
3796	-9,412	-20,000	0,000	0,000	0,000	0,000
3797	-8,824	-20,000	0,000	0,000	0,000	0,000
3959	10,000	8,000	-1,003	-18,717	-284,807	-6,151
3963	11,875	8,000	-1,002	-18,444	-396,393	-7,757
3964	11,250	8,000	-1,002	-18,549	-358,002	-7,190
3965	10,625	8,000	-1,002	-18,653	-320,614	-6,654
4213	-8,235	-20,000	0,000	0,000	0,000	0,000
4217	-7,647	-20,000	0,000	0,000	0,000	0,000
4218	-7,059	-20,000	0,000	0,000	0,000	0,000
4219	-6,471	-20,000	0,000	0,000	0,000	0,000
4281	-0,588	-4,000	-571,446	-10,731	18,861	-161,596
4282	0,000	-4,000	-581,003	-10,822	2,594	-525,116
4283	0,588	-4,000	-589,412	-10,889	-13,726	-876,441
4287	-1,176	-4,000	-561,261	-10,617	34,376	199,435
4297	1,176	-4,000	-596,974	-10,941	-28,678	-1,200
4301	1,765	-4,000	-604,383	-10,986	-42,125	-1,499
4302	2,353	-4,000	-611,761	-11,028	-54,622	-1,780
4303	2,941	-4,000	-619,056	-11,066	-66,643	-2,052
4329	12,500	8,000	-1,003	-18,390	-432,965	-8,326
4330	14,375	8,000	-245,043	-14,654	-923,402	-12,321
4331	13,750	8,000	-719,100	-16,612	-408,857	-9,908
4332	13,125	8,000	-979,809	-17,949	-382,501	-8,849
4361	15,000	8,000	-156,200	-13,861	-1,543	-14,928
4365	16,875	8,000	-265,067	-1,115	-2,034	-28,583
4366	16,250	8,000	-258,925	-3,891	-1,927	-21,776
4367	15,625	8,000	-224,913	-10,988	-1,794	-17,040
4403	-5,882	-20,000	0,000	0,000	0,000	0,000
4407	-5,294	-20,000	0,000	0,000	0,000	0,000
4408	-4,706	-20,000	0,000	0,000	0,000	0,000
4409	-4,118	-20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
4577	5,294 -4,000	-644,253	-11,138	-116,965	-3,102
4578	4,706 -4,000	-638,740	-11,135	-103,372	-2,840
4579	4,118 -4,000	-632,672	-11,121	-90,684	-2,579
4589	3,529 -4,000	-626,074	-11,097	-78,563	-2,317
4643	20,000 6,200	0,000	0,000	-2,819	-48,373
4644	20,000 6,800	0,000	0,000	-2,798	-49,218
4645	20,000 7,400	0,000	0,000	-2,795	-49,185
4646	20,000 8,000	0,000	0,000	-2,815	-49,183
4647	19,375 8,000	-21,079	35,396	-2,645	-48,414
4648	18,750 8,000	-80,547	449,321	-2,457	-46,585
4649	18,125 8,000	-139,188	1,256	-2,310	-42,561
4653	17,500 8,000	-150,976	819,007	-2,156	-32,891
4657	20,000 5,600	0,000	0,000	-2,621	-44,012
4661	20,000 3,800	0,000	0,000	-1,640	-39,744
4662	20,000 4,400	0,000	0,000	-1,699	-40,762
4663	20,000 5,000	0,000	0,000	-1,985	-41,970
4711	5,882 -4,000	-649,404	-11,128	-131,689	-3,366
4715	6,471 -4,000	-654,153	-11,105	-148,162	-3,637
4716	7,059 -4,000	-659,960	-11,068	-165,155	-3,913
4717	7,647 -4,000	-667,398	-11,018	-180,522	-4,197
4779	-3,529 -20,000	0,000	0,000	0,000	0,000
4780	-2,941 -20,000	0,000	0,000	0,000	0,000
4781	-2,353 -20,000	0,000	0,000	0,000	0,000
4782	-1,765 -20,000	0,000	0,000	0,000	0,000
4939	20,000 3,200	0,000	0,000	-1,660	-38,882
4943	20,000 1,400	0,000	0,000	-1,330	-32,542
4944	20,000 2,000	0,000	0,000	-1,464	-35,859
4945	20,000 2,600	0,000	0,000	-1,606	-37,760
4949	8,824 -4,000	-646,782	-10,837	-206,541	-4,783
4950	9,412 -4,000	-609,462	-10,681	-221,630	-5,082
4951	10,000 -4,000	-582,955	-10,523	-228,899	-5,396

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011

Node No.	x-coord. y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
4955	8,235 -4,000	-674,510	-10,951	-190,254	-4,482
4965	-1,176 -20,000	0,000	0,000	0,000	0,000
4969	-0,588 -20,000	0,000	0,000	0,000	0,000
4970	0,000 -20,000	0,000	0,000	0,000	0,000
4971	0,588 -20,000	0,000	0,000	0,000	0,000
5039	10,588 -4,000	-575,603	-10,391	-247,210	-5,734
5043	12,353 -4,000	-537,286	-9,864	-286,853	-6,926
5044	11,765 -4,000	-573,487	-10,153	-291,896	-6,592
5045	11,176 -4,000	-581,822	-10,296	-274,787	-6,152
5134	20,000 0,800	0,000	0,000	-1,242	-28,394
5141	20,000 -1,000	0,000	0,000	-981,634	-15,106
5142	20,000 -0,400	0,000	0,000	-1,051	-20,013
5143	20,000 0,200	0,000	0,000	-1,137	-24,252
5245	1,176 -20,000	0,000	0,000	0,000	0,000
5249	1,765 -20,000	0,000	0,000	0,000	0,000
5250	2,353 -20,000	0,000	0,000	0,000	0,000
5251	2,941 -20,000	0,000	0,000	0,000	0,000
5287	20,000 -1,600	0,000	0,000	-916,156	-4,595
5291	20,000 -3,400	0,000	0,000	-803,350	-4,268
5292	20,000 -2,800	0,000	0,000	-818,507	-3,945
5293	20,000 -2,200	0,000	0,000	-838,337	-3,753
5297	13,529 -4,000	-445,243	-8,656	-277,958	-7,100
5298	14,118 -4,000	-426,214	-7,868	-290,487	-7,055
5299	14,706 -4,000	-420,516	-7,185	-304,915	-6,962
5303	12,941 -4,000	-481,844	-9,358	-272,176	-7,066
5313	15,294 -4,000	-418,291	-6,641	-318,560	-6,956
5314	15,882 -4,000	-407,798	-6,145	-328,184	-6,986
5315	16,471 -4,000	-382,670	-5,530	-318,014	-6,851
5316	17,059 -4,000	-349,065	-4,471	-289,792	-6,226
5439	3,529 -20,000	0,000	0,000	0,000	0,000
5443	4,118 -20,000	0,000	0,000	0,000	0,000

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
5444	4,706	-20,000	0,000	0,000	0,000	0,000
5445	5,294	-20,000	0,000	0,000	0,000	0,000
5501	18,235	-4,000	-294,443	-1,690	-335,544	-4,075
5502	18,824	-4,000	-202,659	-1,005	-521,432	-4,154
5503	19,412	-4,000	-98,100	-435,673	-675,460	-4,419
5504	20,000	-4,000	0,000	0,000	-728,376	-4,536
5505	20,000	-5,714	0,000	0,000	-218,092	-2,944
5506	20,000	-5,143	0,000	0,000	-399,523	-3,486
5507	20,000	-4,571	0,000	0,000	-593,443	-4,082
5517	17,647	-4,000	-328,517	-2,482	-276,380	-4,703
5667	5,882	-20,000	0,000	0,000	0,000	0,000
5668	6,471	-20,000	0,000	0,000	0,000	0,000
5669	7,059	-20,000	0,000	0,000	0,000	0,000
5670	7,647	-20,000	0,000	0,000	0,000	0,000
5693	20,000	-6,286	0,000	0,000	-165,000	-2,724
5694	20,000	-8,000	0,000	0,000	-133,731	-2,123
5695	20,000	-7,429	0,000	0,000	-143,975	-2,324
5696	20,000	-6,857	0,000	0,000	-153,294	-2,524
5813	8,235	-20,000	0,000	0,000	0,000	0,000
5817	8,824	-20,000	0,000	0,000	0,000	0,000
5818	9,412	-20,000	0,000	0,000	0,000	0,000
5819	10,000	-20,000	0,000	0,000	0,000	0,000
5839	20,000	-8,571	0,000	0,000	-121,639	-1,922
5843	20,000	-10,286	0,000	0,000	-85,284	-1,345
5844	20,000	-9,714	0,000	0,000	-96,747	-1,530
5845	20,000	-9,143	0,000	0,000	-108,954	-1,723
5991	10,588	-20,000	0,000	0,000	0,000	0,000
5995	11,176	-20,000	0,000	0,000	0,000	0,000
5996	11,765	-20,000	0,000	0,000	0,000	0,000
5997	12,353	-20,000	0,000	0,000	0,000	0,000
6053	20,000	-10,857	0,000	0,000	-74,347	-1,170

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0 *Data*
20/06/2011

Node No.	x-coord.	y-coord.	dUx [10^-3 m]	Ux [10^-3 m]	dUy [10^-3 m]	Uy [10^-3 m]
6054	20,000	-12,571	0,000	0,000	-47,033	-711,526
6055	20,000	-12,000	0,000	0,000	-55,357	-852,215
6056	20,000	-11,429	0,000	0,000	-64,443	-1,005
6079	12,941	-20,000	0,000	0,000	0,000	0,000
6083	13,529	-20,000	0,000	0,000	0,000	0,000
6084	14,118	-20,000	0,000	0,000	0,000	0,000
6085	14,706	-20,000	0,000	0,000	0,000	0,000
6089	20,000	-13,143	0,000	0,000	-39,430	-583,492
6093	20,000	-14,857	0,000	0,000	-20,711	-276,731
6094	20,000	-14,286	0,000	0,000	-26,287	-366,106
6095	20,000	-13,714	0,000	0,000	-32,522	-468,337
6151	15,294	-20,000	0,000	0,000	0,000	0,000
6155	15,882	-20,000	0,000	0,000	0,000	0,000
6156	16,471	-20,000	0,000	0,000	0,000	0,000
6157	17,059	-20,000	0,000	0,000	0,000	0,000
6158	20,000	-15,429	0,000	0,000	-15,787	-200,039
6167	17,647	-20,000	0,000	0,000	0,000	0,000
6174	20,000	-17,143	0,000	0,000	-4,923	-43,067
6175	20,000	-16,571	0,000	0,000	-7,892	-83,571
6176	20,000	-16,000	0,000	0,000	-11,514	-135,764
6180	20,000	-17,714	0,000	0,000	-2,609	-13,811
6197	18,824	-20,000	0,000	0,000	0,000	0,000
6198	19,412	-20,000	0,000	0,000	0,000	0,000
6199	20,000	-19,429	0,000	0,000	365,100	11,280
6201	20,000	-18,286	0,000	0,000	-954,380	4,631
6203	18,235	-20,000	0,000	0,000	0,000	0,000
6204	20,000	-18,857	0,000	0,000	40,379	12,869



Ponte sullo Stretto di Messina
PROGETTO DEFINITIVO

**RELAZIONE DI CALCOLO OPERE
PROVVISORIALI**

Codice documento
SS0780_F0.doc

Rev
F0

Data
20/06/2011