
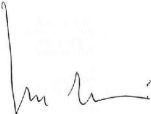




ASSE VIARIO MARCHE-UMBRIA E QUADRILATERO DI PENETRAZIONE INTERNA MAXI LOTTO 2

LAVORI DI COMPLETAMENTO DELLA DIRETTRICE PERUGIA ANCONA:
 SS. 318 DI "VALFABBRICA", TRATTO PIANELLO -VALFABBRICA
 SS. 76 "VAL D'ESINO", TRATTI FOSSATO VICO - CANCELLI E ALBACINA - SERRA SAN QUIRICO
 "PEDEMONTANA DELLE MARCHE", TRATTO FABRIANO-MUCCIA-SFERCIA.

PROGETTO ESECUTIVO DI DETTAGLIO

CONTRAENTE GENERALE: 	Il responsabile del Contraente Generale:  Ing. Federico Montanari	Il responsabile Integrazioni delle Prestazioni Specialistiche:  Ing. Salvatore Lieto
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PROGETTAZIONE: Associazione Temporanea di Imprese			
Mandataria: 	Mandanti:		
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2.1.1. - PEDEMONTANA DELLE MARCHE Lotto funzionale del Sub lotto 2.1 - Tratto Fabriano - Matelica Nord OPERE D'ARTE MINORI - OPERE IDAULICHE SU VIABILITA' INTERFERITA Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo	SCALA: DATA: <i>Settembre 2020</i>
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Codice Unico di Progetto (CUP) **F12C03000050021** (Assegnato CIPE 20-04-2015)

<i>Codice elaborato:</i>	Opera	Tratto	Settore	CEE	WBS	Id. doc.	N. prog.	Rev.
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A	Settembre 2020	RISCONTRO ISTRUTTORIE QMU-DL SETT.2020	TECNOSTRUTTURE	A. TOSIANI	S. LIETO	A. GRIMALDI

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1. INTRODUZIONE

La presente relazione riporta i calcoli, e le relative verifiche, del TOMBINO DN1500 - progr.6+716 in Sx su viabilità interferita, più precisamente i calcoli si riferiscono alle opere di imbocco e sbocco del tombino e al tombino DN1500, nell'ambito dei Lavori di completamento della direttrice Perugia - Ancona, Lotto della Pedemontana Marche: Tratto Fabriano - Muccia - Sfercia.

In accordo alle disposizioni dettate dalle "Norme tecniche per le costruzioni" (DM 14.09.2005), sono state effettuate le verifiche agli stati limite di esercizio (SLE) e agli stati limite ultimi (SLU). Secondo la normativa tecnica in vigore, ai fini della zonazione sismica del territorio italiano (O.P.C.M. 20.03.2003), l'area in oggetto ricade in zona sismica di categoria 2. Pertanto, per strutture di classe 2 (vita utile di 100 anni, sisma con periodo di ritorno di 1000 anni) l'accelerazione orizzontale utilizzata, come da relazione sismica è pari a si adotterà il valore $a_g = 0.275$ (relazione sismica L073211E04000000REL01D par. 5) con suolo è di categoria E. A tale accelerazione si è fatto riferimento nei calcoli di verifica riportati nel seguito.

Per la descrizione delle opere si faccia riferimento agli elaborati grafici di progetto da considerarsi parte integrante della presente.

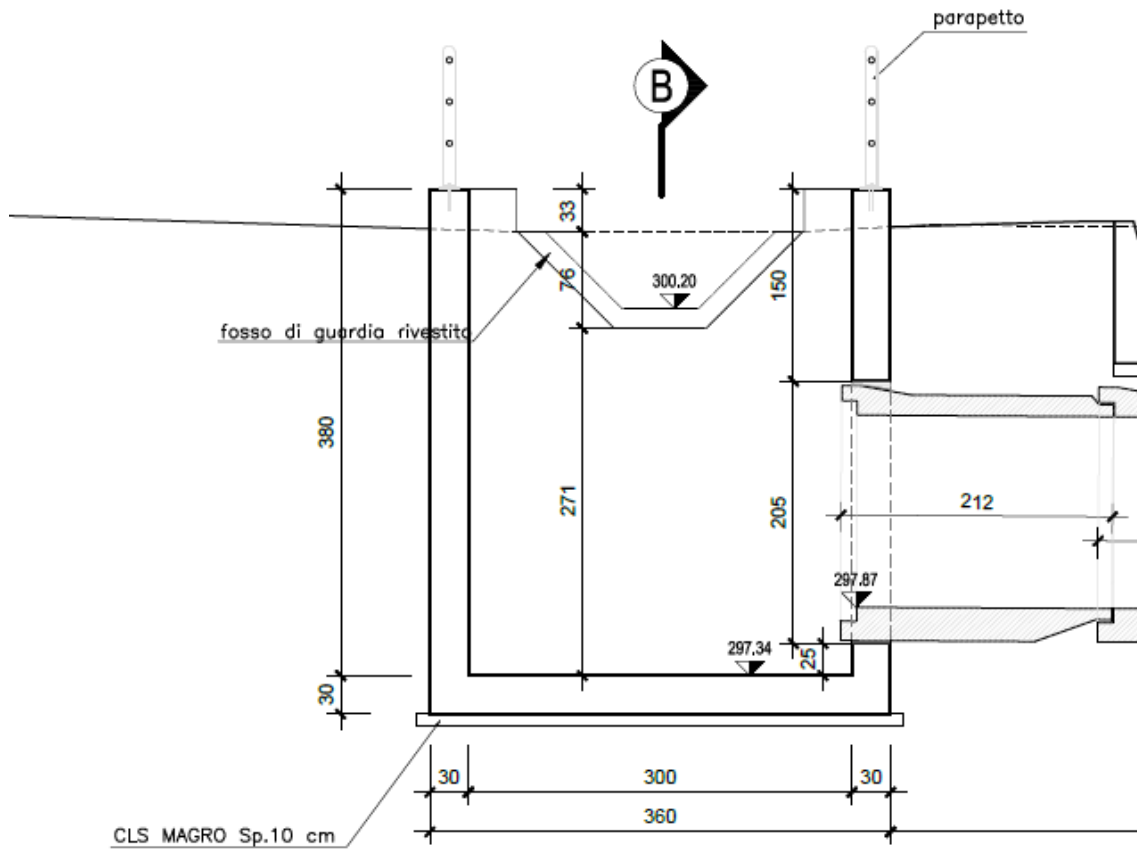
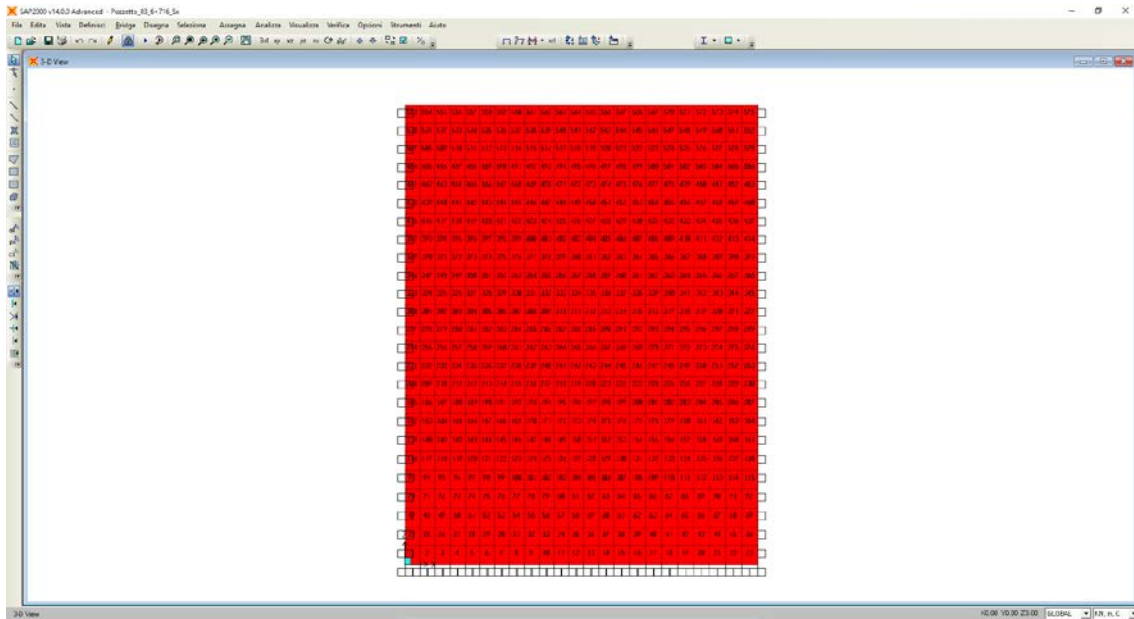
In coda alla relazione è riportato, nell' Allegato, il file di input e output delle analisi svolte.

1.1 IPOTESI DI CALCOLO

Per il calcolo delle strutture gettate in opera si è proceduto ad un'analisi con l'ausilio del programma di calcolo automatico agli elementi finiti SAP2000.

Considerata la geometria della struttura, per il calcolo delle sollecitazioni si è assunto uno schema di calcolo a piastra:

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Figura 1: Sezione vasca di imbocco

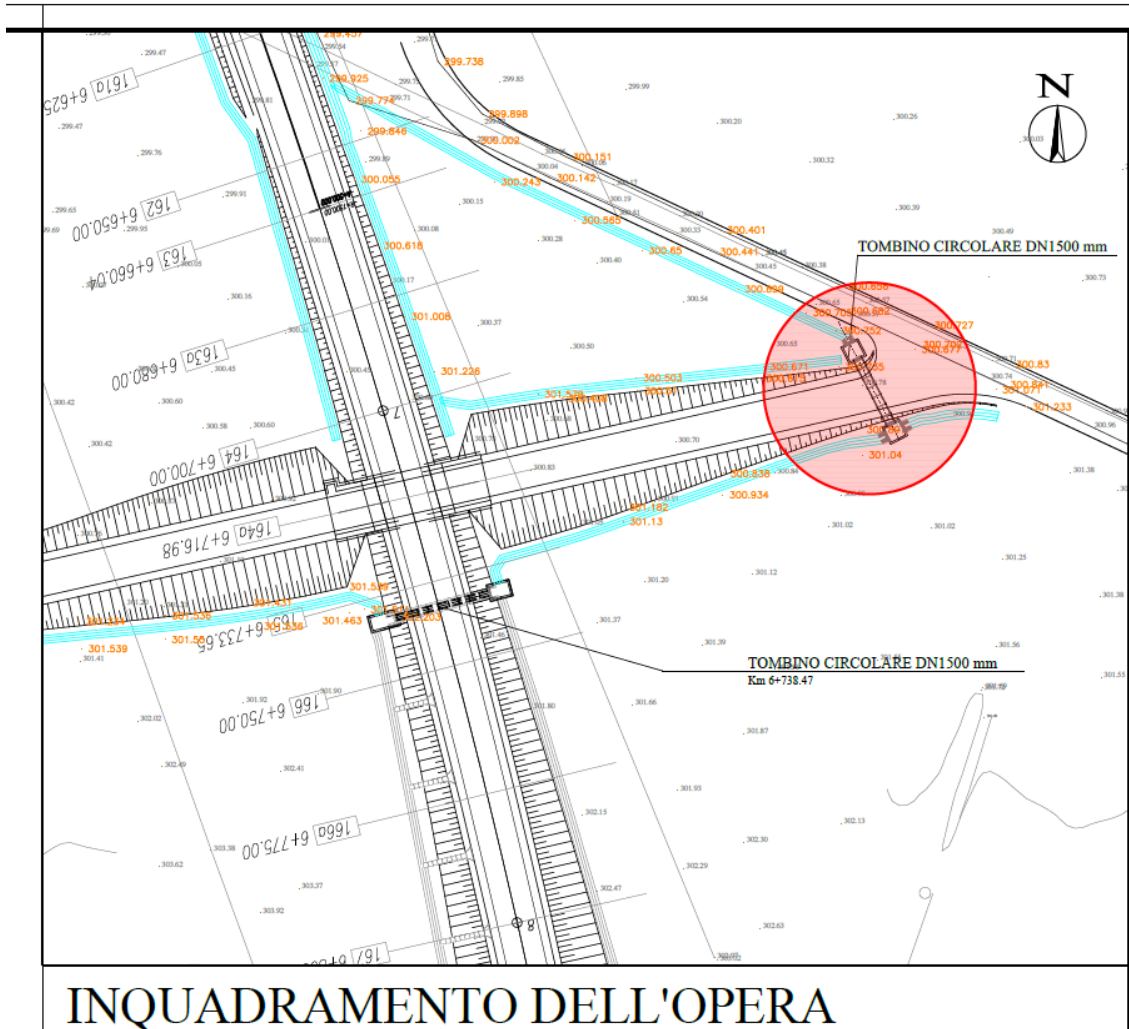


Figura 2: Stralcio planimetrico

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2. DOCUMENTI DI RIFERIMENTO

Nella esecuzione dei calcoli si è fatto riferimento ai seguenti documenti normativi.

2.1 NORMATIVE DI CARATTERE GENERALE

L. 05/11/1971 n. 1086: "Norme per la disciplina delle opere in conglomerato cementizio armato normale e precompresso ed a struttura metallica";

L. 02/02/1974 n. 64: "Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche";

2.2 NORMATIVE SPECIFICHE PER LE STRUTTURE

Decreto Ministeriale 14 settembre 2005 "Norme Tecniche per le Costruzioni".

OPCM 3274 d.d. 20/03/2003: "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica" e successive modifiche ed integrazioni

CNR-UNI 10011: "Costruzioni di acciaio "Istruzioni per il calcolo, l'esecuzione, il collaudo e la manutenzione".

CNR-UNI 10016:"Travi composte di acciaio e calcestruzzo - Istruzioni per l'impiego nelle costruzioni".

UNI EN 1992-2005:"Progettazione delle strutture di calcestruzzo".

UNI EN 1993-2005: "Progettazione delle strutture di acciaio".

UNI EN 1994-2005: "Progettazione delle strutture composte acciaio-calcestruzzo".

UNI EN 1997-2005: "Progettazione geotecnica".

UNI EN 1998-2005: "Progettazione delle strutture per la resistenza sismica".

UNI EN 206-1-2001: Calcestruzzo: "Specificazione, prestazione, produzione e conformità".

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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3. MATERIALI

Per la realizzazione delle sottostrutture sono stati previsti i seguenti materiali.

Calcestruzzi

I materiali da utilizzare avranno le seguenti caratteristiche:

Tab.1- FONDAZIONI ed ELEVAZIONI

		Classe di esposizione
		XA2
Classe di resistenza minima:	C_{min}	C32/40
Rapporto massimo acqua/cemento	a/max	0.5
Contenuto minimo di cemento (kg/m^3)	cem_{min}	360

Tab.2- CALCESTRUZZO PER MAGRONE

Classe di resistenza minima:	C_{min}	C12/15
------------------------------	-----------	--------

Acciaio per armature

Tab.3 - ACCIAIO ARMATURA ORDINARIA

Acciaio in barre ad aderenza migliorata tipo B450C

controllato in stabilimento:

Tensione caratteristica di snervamento:

$$f_{yk} = 450 \text{ MPa}$$

Per la realizzazione dei calcestruzzi, al fine di assicurare i requisiti di qualità e di durabilità, si è fatto riferimento alle specifiche riportate nella norma UNI EN 206-1. pertanto sulla base delle condizioni ambientali prevedibili per le opere in oggetto si riporta nella tabella seguente, in corrispondenza di ogni elemento strutturale, la classe di esposizione, la resistenza caratteristica R_{ck} , il rapporto a/c massimo, il quantitativo di cemento minimo, e l'eventuale percentuale di aria che deve essere inglobata nel calcestruzzo.

Sono previsti inoltre copriferri pari a:

40 mm per le fondazioni e superfici controterra in genere.

Le caratteristiche meccaniche del calcestruzzo in opera sono state valutate conformemente alle specifiche previste dal Decreto Ministeriale 14 settembre 2005, pertanto nella tabella seguente

vengono riportati i valori assunti per il modulo elastico e per le resistenze allo stato limite ultimo e di esercizio

CARATTERISTICHE MECCANICHE CALCESTRUZZI				
f_{ck}/R_{ck} (Mpa)	E_c (Mpa)	S.L.U		S.L.E
		$f_{cd}=R_{ck}/\gamma_{m,c}$ (Mpa)	$f_{ctd}=f_{ctk}/\gamma_{m,c}$ (Mpa)	$\sigma_c=R_{ck}/(\gamma_{m,c}\times\gamma_{E,c})$ (Mpa)
C32/40	33000	21.05	2.45	19.2 (rara) 14.8 (quasi permanente)

Le caratteristiche meccaniche adottate per l'acciaio sono:

CARATTERISTICHE MECCANICHE ACCIAIO PER C.A.					
TIPO	E_c (Mpa)	f_{tk} (Mpa)	f_{yk} (Mpa)	S.L.U	S.L.E
				$f_{yd} = f_{yk}/\gamma_{m,s}$ (Mpa)	$\sigma_{smax}=f_{yk}/1.25$ (Mpa)
B450C	210000	540	450	391	360

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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4. GEOTECNICA

4.1 CARATTERISTICHE GEOLOGICHE E IDROGEOLOGICHE

Nel calcolo dell'opera in oggetto, per quanto riguarda la determinazione della spinta delle terre, della capacità portante del terreno e delle caratteristiche di interazione terreno-struttura, si adottano, a favore di sicurezza, i seguenti parametri geotecnici ricavati dalla "Relazione geotecnica generale sulle opere all'aperto e gallerie artificiali (geotecnica-geomeccanica)" doc. L0703211E02GE0000REL02, da tale relazione si ha:

Per il terreno di fondazione si sono assunti i seguenti parametri geotecnici: "**Unità A: Alluvioni attuali e recenti con facies prevalentemente limoso-argillosa (unità Ala: Unità Geologica Are 2).**"

- peso di volume naturale $\gamma = 19\div 20 \text{ kN/m}^3$
- angolo di attrito $\phi' = (26+29)/2 \cong 27.5^\circ$
- coesione drenata $c' = (0\div 10)/2 \cong 5 \text{ kPa}$
- coesione non drenata $c_u = (80\div 100)/2 = 90 \text{ kPa}$

Per il terreno di rinfianco (terreno da rilevato stradale) si sono assunti i seguenti valori di resistenza:

- peso di volume naturale $\gamma = 20 \text{ kN/m}^3$
- angolo di attrito $\phi' = 35^\circ$
- coesione drenata $c' = 0.0 \text{ kPa}$
- coesione non drenata $c_u = 0.0 \text{ kPa}$

Per il calcolo della spinta sulla vasca si è considerato il coefficiente di spinta a riposo, k_0 .

La falda non interferisce con l'opera.

Inoltre, l'opera in oggetto viene realizzata all'interno del terreno in sito, pertanto per il calcolo delle spinte si assumono i parametri geotecnici del terreno in sito.

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo							
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5. VASCHE DI IMBOCCO E SBOCCO

5.1 ANALISI DEI CARICHI

5.1.1 Azione sismica

Le strutture, ai sensi della normativa di riferimento, sono assunte di Classe 2 (vita utile 100 anni).

Tutte le azioni sono calcolate considerando un periodo di ritorno per i fenomeni naturali pari a 1000 anni, pertanto nella valutazione della accelerazione orizzontale massima ag si è fatto riferimento alle mappe di pericolosità sismica dell'I.N.G.V. (Istituto Nazionale di Geofisica e Vulcanologia) andando a considerare il parametro ag/g riferito a una probabilità di superamento non maggiore del 5% in 50 anni, come previsto dal paragrafo 3.2.2.3 del D.M.14/09/05.

La tabella sottostante riporta i valori considerati per la zona in esame

Zona sismica	2
Categoria suolo di fondazione	E
Classe della struttura	2
Accelerazione orizzontale massima convenzionale per zona 1 e struttura di classe 2 (vedi par. 3.2.2.3)	0.275
Fattore S che tiene conto della categoria del suolo di fondazione = E	1.25

In definitiva l'accelerazione orizzontale massima convenzionale per zona 2, struttura di classe I e suolo di categoria E = 0.275 g x 1.25 = 0.344 g.

Incremento sismica sul terreno

Visto la tipologia d'opera per il coefficiente di spinta si può assumere una spinta a riposo con:

$$k_0 = 1 - \sin \phi = 0.538 \quad \text{con } \phi = 27.5^\circ - \text{Valore medio}$$

Mentre l'incremento di spinta sismica del terreno si calcola con l'espressione di Wood:

$$\Delta S = a_g/g * S * \gamma * H^2 = 0.275 * 1.25 * 19.50 * 4.20^2 = 118.24 \text{ kN} \quad - \text{ par } H = 3.20 \text{ m}$$

Da cui:

$$P_s = \Delta S / H = 118.24 / 3.90 = 30.31 \text{ kN/m}^2 \quad - \text{ applicata a } H/2$$

dove:

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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γ = peso di volume del terreno;

H = dislivello tra la quota del piano campagna e la quota di fondo scavo;

ΔS = incremento sismico del terreno

Forze di inerzia sismiche

Essendo:

$$a_g/g = 0.275$$

$$S = 1.25$$

i due coefficienti sismici orizzontale e verticale da applicare sulle masse strutturali sono pari a:

$$k_h = a_g/g * S/r = 0.344$$

$$k_v = \pm 0.5 * k_h = 0.172$$

5.2 CALCOLO DELLE SPINTE STATICHE

Spinta del terreno e dell'accidentale

Sulle piastre, in esercizio, viene presa in considerazione la spinta del terreno a riposo e di un accidentale pari a 10 kN/m² dovuto ad un eventuale mezzo meccanico.

In sismica, come detto in precedenza, viene considerata la forza d'inerzia orizzontale e l'incremento di spinta sismica del terreno mentre il carico accidentale viene assunto nullo.

Spinta del terreno sui piedritti

I parametri geotecnica del terreno sono:

$$\gamma = 19.50 \text{ kN/m}^3$$

$$\phi = 27.5^\circ$$

$$K_o = 0.538$$

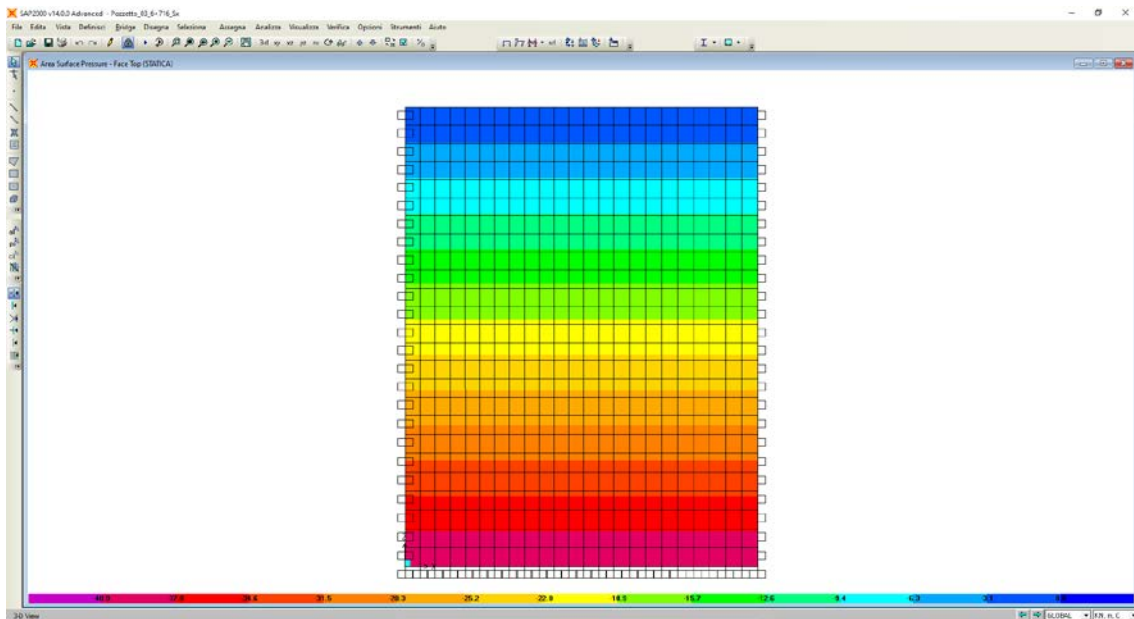
Pertanto la spinta del terreno sulle pareti è pari a:

Esercizio (solo terreno)

$$P_o = 0.538 * 20.00 * 0.00 = 0.00 \text{ kN/m}^2$$

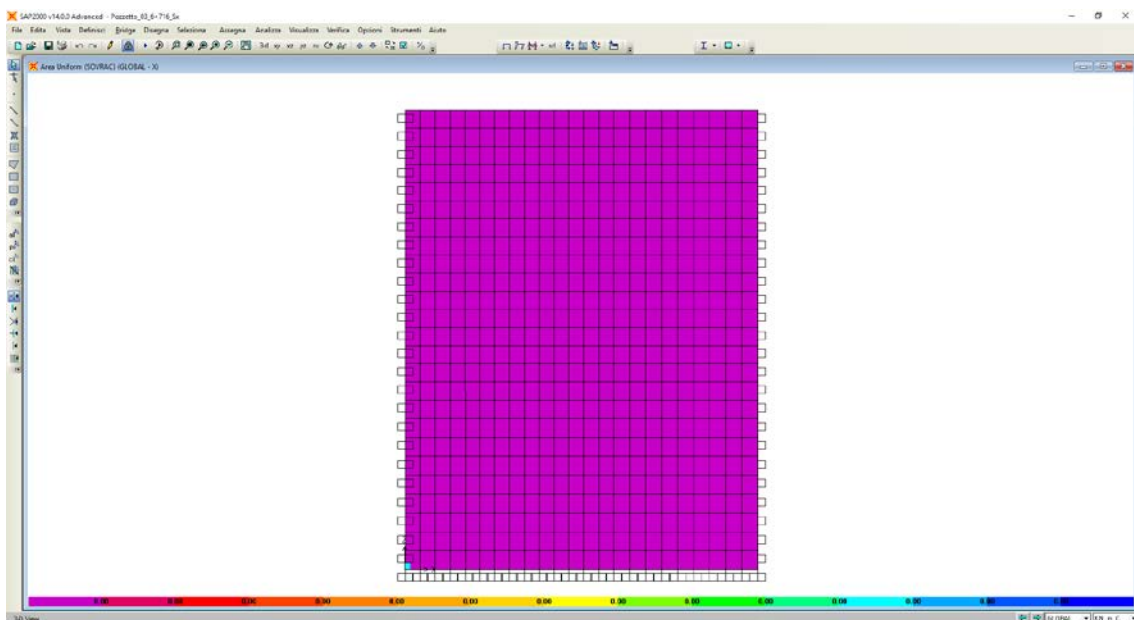
$$P_1 = 0.538 * 19.50 * 3.90 = 40.91 \text{ kN/m}^2$$

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Esercizio (solo accidentale)

Pripartito = $10 \cdot 0.538 = 5.38 \text{ kN/m}^2$



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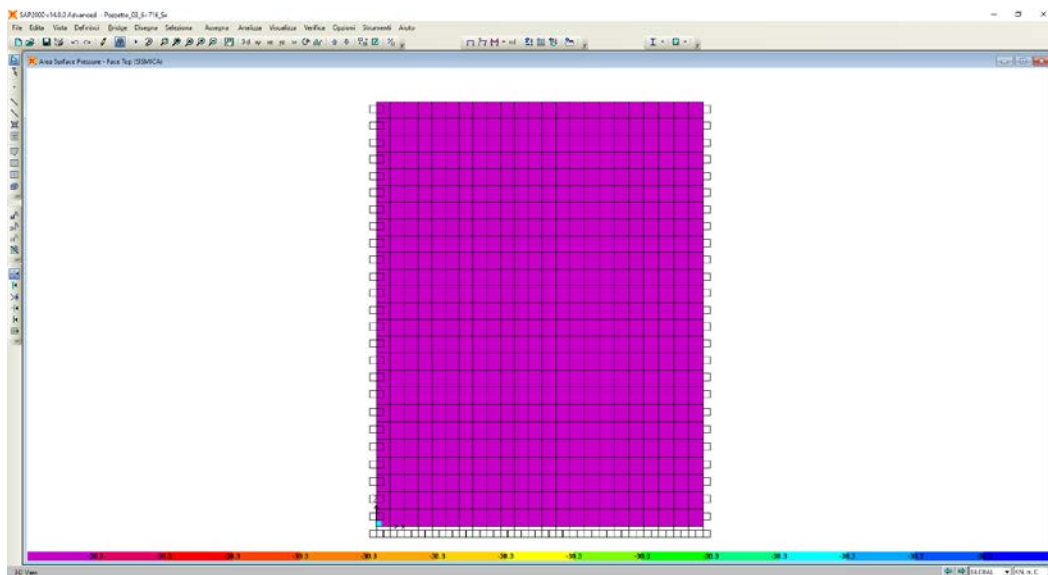
Sismica

- incremento di spinta sismica del terreno

$$\Delta S = a_g * S * \gamma * H^2 = 0.275 * 1.25 * 19.50 * 4.20^2 = 118.24 \text{ kN} \quad - \text{ par } H = 3.20 \text{ m}$$

Da cui:

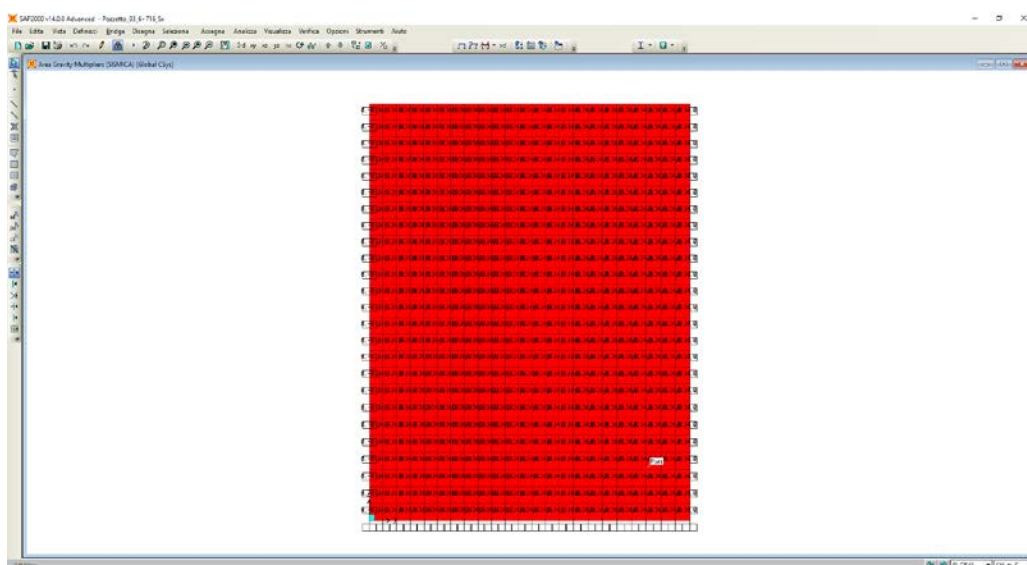
$$P_s = \Delta S / H = 118.24 / 3.90 = 30.31 \text{ kN/m}^2 \quad - \text{ applicata a } H/2$$



Incremento di spinta sismica

$$F_{h, \text{orizz}} = 0.344 * W$$

-Azione inerziale su W viene calcolato automaticamente dal programma



Moltiplicatori gravitazionali per le forze inerziali

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5.3 COMBINAZIONI DI CARICO

Le combinazioni di carico, considerate ai fini delle verifiche, sono stabilite in modo da garantire la sicurezza in conformità a quanto prescritto al cap. 2 delle NT.

5.3.1 Combinazioni per la verifica allo SLU e SLE

Gli stati limite ultimi delle opere interrato si riferiscono allo sviluppo di meccanismi di collasso, determinati dalla mobilitazione della resistenza del terreno, e al raggiungimento della resistenza degli elementi strutturali che compongono l'opera.

Le verifiche agli stati limite ultimi devono essere eseguiti in riferimento ai seguenti stati limite:

- SLU di tipo geotecnico (GEO) e di equilibrio di corpo rigido (EQU)
 - collasso per carico limite dell'insieme fondazione-terreno;
- SLU di tipo strutturale (STR)
 - raggiungimento della resistenza negli elementi strutturali.

Le verifiche saranno condotte utilizzando i coefficienti parziali riportati nelle Tabelle sottostanti (vedi DM 14/09/ 2005 NTC) per i parametri geotecnici e le azioni.

1. combinazione 1 → (A1+M1+R1) → STR
2. combinazione 2 → (A2+M2+R2) → GEO (carico limite)

Tabella 6.2.II - Coefficienti parziali per i parametri del terreno

PARAMETRO	GRANDEZZA ALLA QUALE APPLICARE IL COEFF. PARZIALE	COEFFICIENTE PARZIALE γ_M	M ₁	M ₂
Tangente dell'angolo di resistenza al taglio	$\tan \varphi'_k$	$\gamma_{\varphi'}$	1	1.25
Coesione efficace	c'_k	$\gamma_{c'}$	1	1.25
Resistenza non drenata	c'_{uk}	γ_{cu}	1	1.4
Peso dell'unità di volume	γ	γ_γ	1	1

Nella tabella 5.1.V è indicato un coefficiente maggiore di uno per gli effetti a sfavore di sicurezza e un coefficiente minore del precedente, per gli effetti a favore di sicurezza.

I coefficienti di amplificazione dei carichi γ e i coefficienti di combinazione Ψ sono riportati nelle tabelle 5.1.VI.

In particolare nel calcolo della struttura in oggetto si fa riferimento alla combinazione A1 STR.

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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Tabella 5.1.V – Coefficienti parziali di sicurezza per le combinazioni di carico agli SLU

		Coefficiente	EQU ⁽¹⁾	A1 STR	A2 GEO
Carichi permanenti	favorevoli	γ_{G1}	0,90	1,00	1,00
	sfavorevoli		1,10	1,35	1,00
Carichi permanenti non strutturali ⁽²⁾	favorevoli	γ_{G2}	0,00	0,00	0,00
	sfavorevoli		1,50	1,50	1,30
Carichi variabili da traffico	favorevoli	γ_Q	0,00	0,00	0,00
	sfavorevoli		1,35	1,35	1,15
Carichi variabili	favorevoli	γ_{Qi}	0,00	0,00	0,00
	sfavorevoli		1,50	1,50	1,30
Distorsioni e presollecitazioni di progetto	favorevoli	γ_{e1}	0,90	1,00	1,00
	sfavorevoli		1,00 ⁽³⁾	1,00 ⁽⁴⁾	1,00
Ritiro e viscosità, Variazioni termiche, Cedimenti vincolari	favorevoli	$\gamma_{e2}, \gamma_{e3}, \gamma_{e4}$	0,00	0,00	0,00
	sfavorevoli		1,20	1,20	1,00

⁽¹⁾ Equilibrio che non coinvolga i parametri di deformabilità e resistenza del terreno; altrimenti si applicano i valori di GEO.
⁽²⁾ Nel caso in cui i carichi permanenti non strutturali (ad es. carichi permanenti portati) siano compiutamente definiti si potranno adottare gli stessi coefficienti validi per le azioni permanenti.
⁽³⁾ 1,30 per instabilità in strutture con precompressione esterna
⁽⁴⁾ 1,20 per effetti locali

I valori del coefficiente ψ_{2i} sono quelli riportati nella tabella 5.1.VI della norma; la stessa propone nel caso di ponti, e più in generale per opere stradali, si assumere per i carichi dovuti al transito dei mezzi $\psi_{2i} = 0.0$.

Ai fini delle verifiche degli stati limite ultimi si riportano per comodità le combinazioni delle azioni riportate nella normativa sui ponti alla quale è possibile fare riferimento per la simbologia adottata:

$$\text{STR}) \Rightarrow \gamma_{G1} \cdot G_1 + \gamma_{G2} \cdot G_2 + \gamma_{Q1} \cdot Q_{k1} + \sum_i \psi_{0i} \cdot Q_{ki} \Rightarrow (\Phi_d' = \Phi_k')$$

Ai fini delle verifiche degli stati limite di esercizio (fessurazione) si definiscono le seguenti combinazioni:

$$\text{Rara}) \Rightarrow G_1 + G_2 + Q_{k1} + \sum_i \psi_{0i} \cdot Q_{ki}$$

$$\text{Frequente}) \Rightarrow G_1 + G_2 + \psi_{11} \cdot Q_{k1} + \sum_i \psi_{2i} \cdot Q_{ki}$$

$$\text{Quasi permanente}) \Rightarrow G_1 + G_2 + \psi_{21} \cdot Q_{k1} + \sum_i \psi_{2i} \cdot Q_{ki}$$

Per la condizione sismica, le combinazioni per gli stati limite ultimi da prendere in considerazione sono le seguenti:

$$\text{STR}) \Rightarrow E + G_1 + G_2 + \sum_i \psi_{2i} \cdot Q_{ki} \Rightarrow (\Phi_d' = \Phi_k')$$

Dove:

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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$$E = \pm 1.00 \times E_Y \pm 0.30 \times E_Z \quad \text{oppure} \quad E = \pm 0.30 \times E_Y \pm 1.00 \times E_Z$$

Avendo indicato con E_Y e E_Z rispettivamente le componenti orizzontale e verticale dell'azione sismica.

Gli effetti dell'azione sismica saranno valutati tenendo conto delle masse associate ai seguenti carichi gravitazionali:

$$G_1 + G_2 + \sum_i \psi_{2i} \cdot Q_{ki}$$

Le combinazioni di carico vengono ottenute combinando opportunamente i coefficienti innanzi detti.

5.3.2 Stato limite di apertura delle fessure

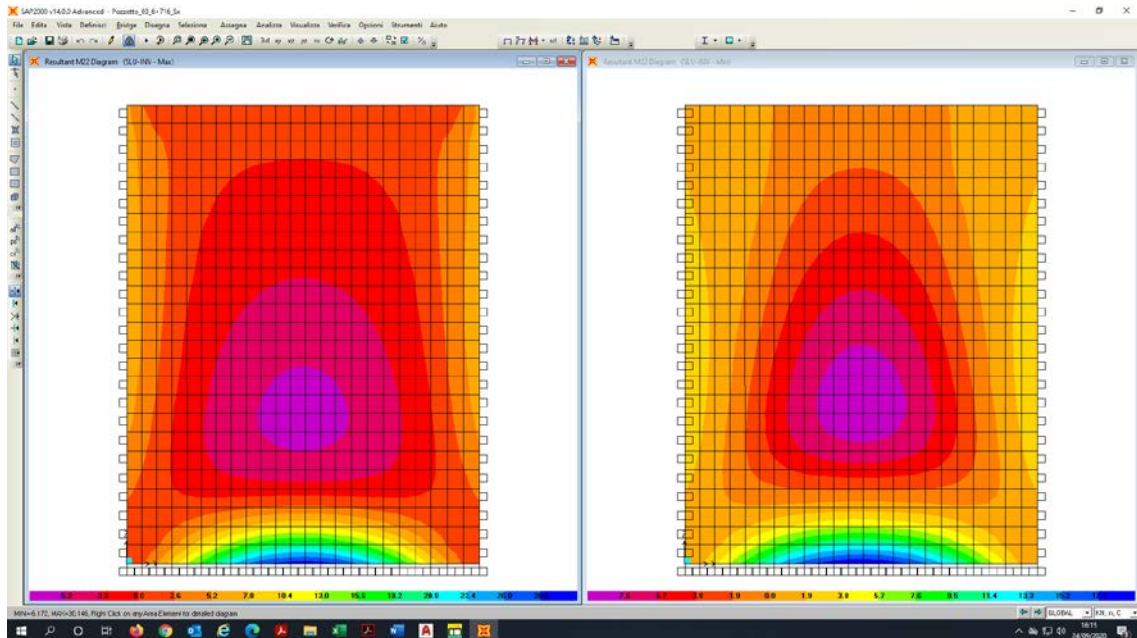
Per le verifiche a fessurazione si adotta la combinazione caratteristica FREQUENTE e QUASI PERMANENTE, così come richiesto del DM 2005 per gli SLE.

Pertanto l'apertura convenzionale delle fessure dovrà risultare:

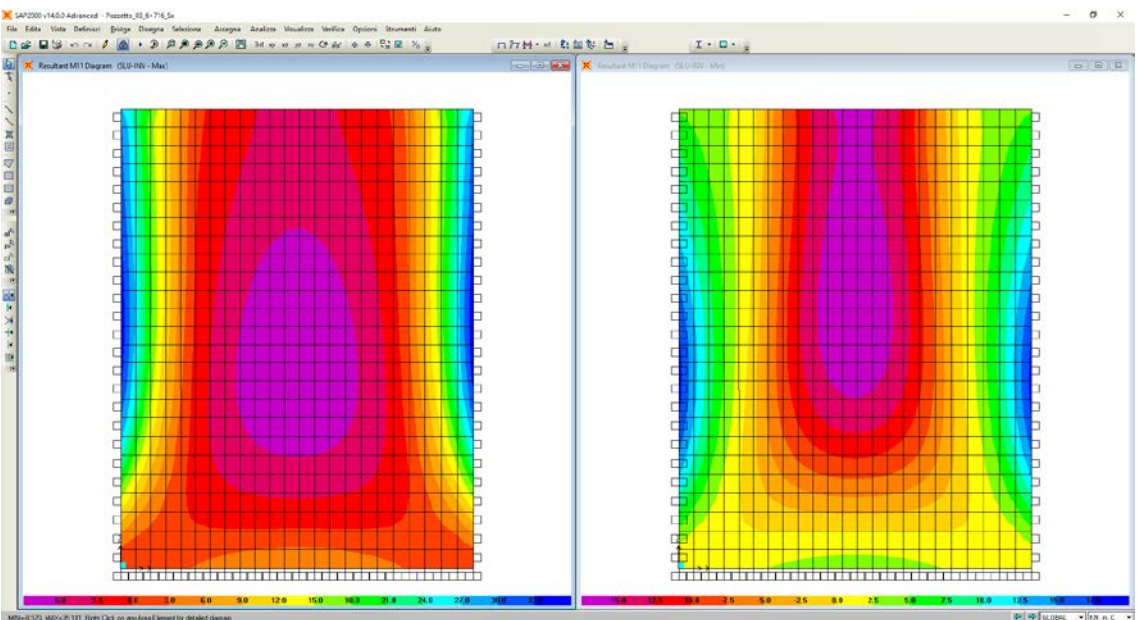
- a) $\delta_f \leq w_1 = 0.20 \text{ mm}$ per strutture in condizioni ambientali aggressive e molto aggressive, così come identificate nel DM 2005, per tutte le strutture a permanente contatto con il terreno e per le zone non ispezionabili di tutte le strutture;
- b) $\delta_f \leq w_2 = 0.30 \text{ mm}$ per strutture in condizioni ambientali ordinarie secondo il citato paragrafo del DM 2005.

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5.4 DIAGRAMMI DELLE SOLLECITAZIONI

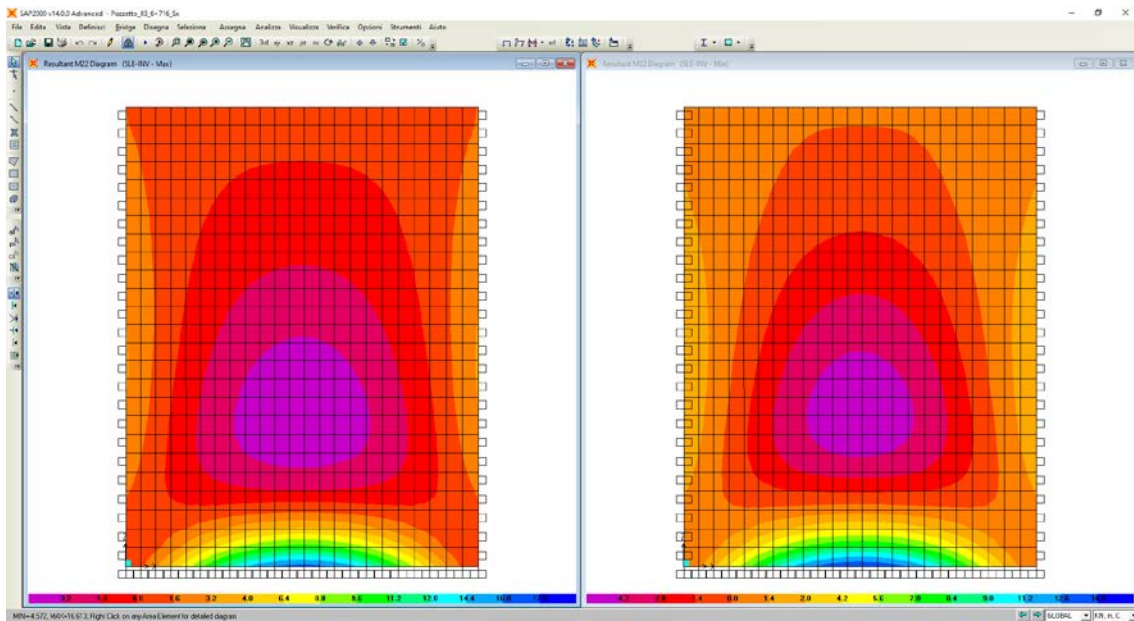


Involuppo Momenti Flettenti SLU: M22 (\pm)

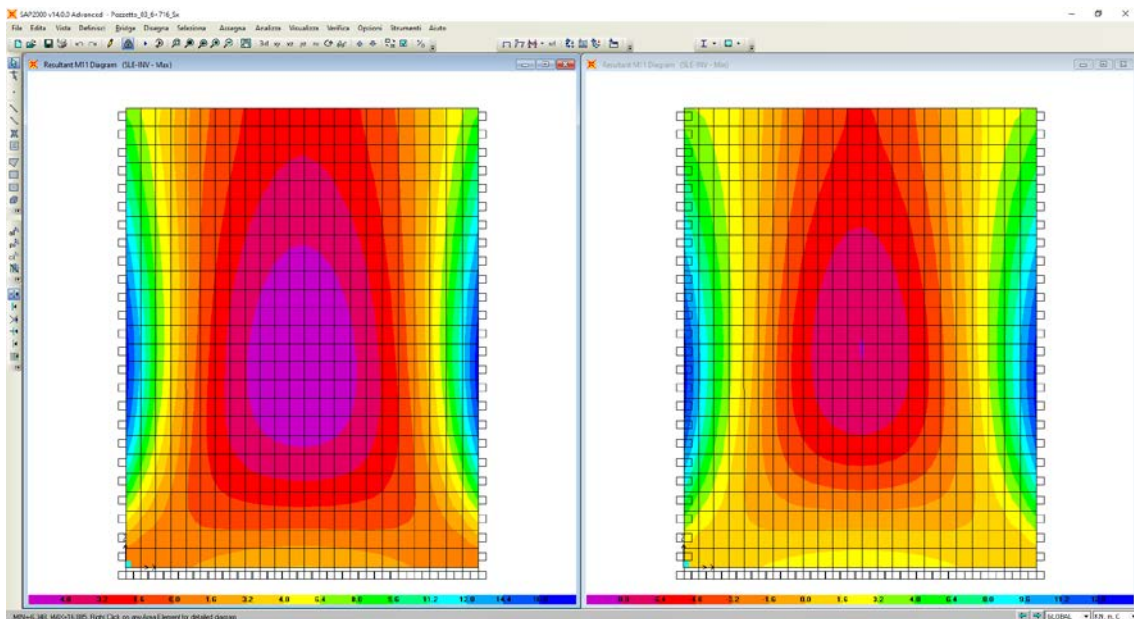


Involuppo Momenti Flettenti SLU: M11(\pm)

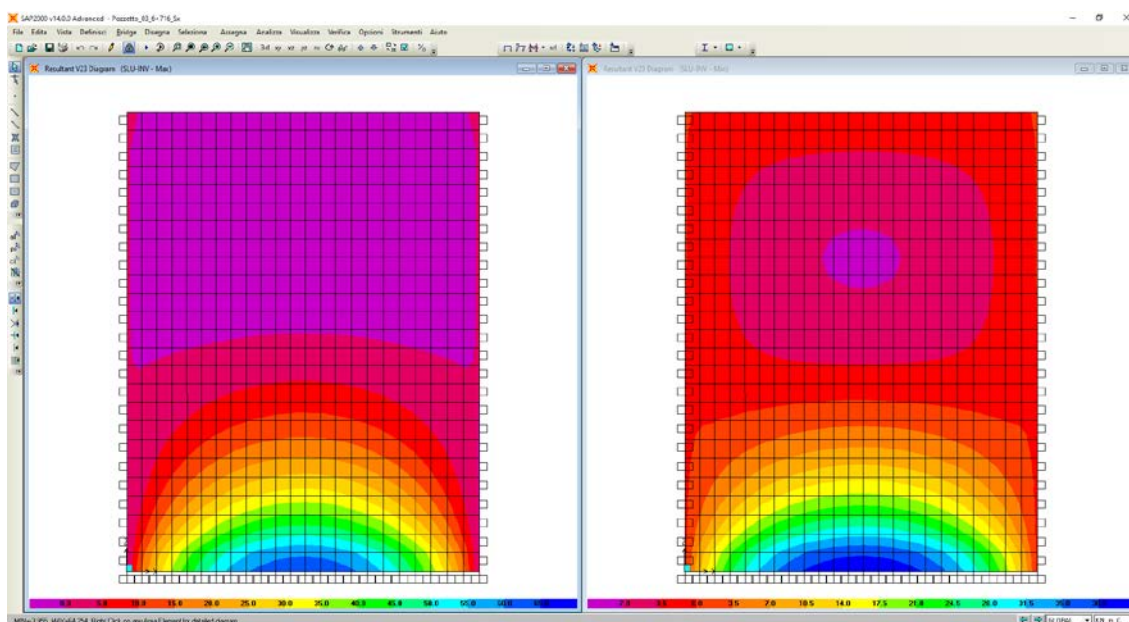
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Inviluppo Momenti Flettenti SLE: M22 (±)



Inviluppo Momenti Flettenti SLE: M11 (±)



Involuppo Sollecitazioni di Taglio SLU: V23 (±)

Involuppo Sollecitazioni di Taglio SLU: V13 (±)

Riassumendo si hanno le seguenti sollecitazioni massime:

	SLU	SLE
	kNm	
M22,max	30.15	16.61
M22,min	-9.48	-5.37
M11,max	35.18	16.89
M11,min	-17.30	-8.03

SLU (kN)	
V23,max	64.25
V23,min	-7.31
V13,max	67.22
V13,min	-66.81

5.5 VERIFICHE

Le verifiche degli elementi strutturali che compongono l' opera, sono state eseguite mediante il metodo degli Stati Limite.

Verifica materiali:

Stato Limite Ultimo

Coefficiente di sicurezza calcestruzzo γ_c	1.50
Fattore riduzione da resistenza cubica a cilindrica	0.83
Fattore di riduzione per carichi di lungo periodo	0.85

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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Coefficiente di sicurezza acciaio

1.15

Verifica Taglio - Metodo dell'inclinazione variabile del traliccio

$$V_{Rd} = [0.18 * k * (100.0 * \rho_l * f_{ck})^{1/3} / \gamma_c + 0.15 * \sigma_{cp}] * b_w * d > (v_{min} + 0.15 * \sigma_{cp}) * b_w * d$$

$$V_{Rsd} = 0.9 * d * A_{sw} / s * (ctg \alpha + ctg \theta) * \sin \alpha$$

$$V_{Rcd} = 0.9 * d * b_w * \alpha_c * f_{cd}' * (ctg(\theta) + ctg(\alpha)) / (1.0 + ctg \theta^{1/2})$$

con:

d altezza utile sezione [mm]

b_w larghezza minima sezione [mm]

σ_{cp} tensione media di compressione [N/mm²]

ρ_l rapporto geometrico di armatura

A_{sw} area armatura trasversale [mm²]

S interasse tra due armature trasversali consecutive [mm]

α_c coefficiente maggiorativo, funzione di f_{cd} e σ_{cp}

$$f_{cd}' = 0.5 * f_{cd}$$

$$k = 1 + (200/d)^{1/2}$$

$$v_{min} = 0.035 * k^{3/2} * f_{ck}^{1/2}$$

Stato Limite di Esercizio

Criteri di scelta per verifiche tensioni di esercizio:

Ambiente poco aggressivo

Limite tensioni di compressione nel calcestruzzo (comb. rare) 19.2 N/mm²

Limite tensioni di compressione nel calcestruzzo (comb. quasi perm.) 14.8 N/mm²

Limite tensioni di trazione nell'acciaio (comb. rare) 360 N/mm²

Criteri verifiche a fessurazione:

Armatura poco sensibile

Ambiente aggressivo

Apertura limite fessure espresse in [mm]

Apertura limite fessure w₁ = 0.20 w₂ = 0.30 w₃ = 0.40

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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Tutte le Verifiche secondo condotte con :

Norme Tecniche 2005 - Approccio 1

Copriferro sezioni 4.00 [cm]

Le verifiche in oggetto sono risultate tutte soddisfatte, come si vede da uno stralcio dei tabulati di calcolo di seguito riportate, mentre i tabulati completi sono riportati negli "Allegati di calcolo"

5.4.1 Verifiche delle armature

Di seguito si riportano le verifiche di resistenza delle sezioni più sollecitate.

Le sollecitazioni di verifica sono riportate nelle tabelle seguenti.

Sollecitazioni di verifica		
	Mmax (kNm)	Tmax (kN)
SLU : Armature Verticali	30.15	64.25
SLU : Armature Orizzontali	16.61	67.22
SLE -Rara: Armature Verticali	35.18	/
SLE-Rara: Armature Orizzontali	16.89	/

Nota: M positivo se tende le fibre inferiori (contro terra) e N positivo se di compressione.

VERIFICHE DELLE ARMATURE VERTICALI

Caratteristiche geometriche della sezione

Larghezza b	100 cm
Altezza h	30 cm
Armatura tesa 1° strato Aa	1Φ14/20 = 7.70 cm ²
Copriferro 1°strato c1	6.10 cm
Armatura tesa 2° strato Aa	
Copriferro 2°strato c2	
Armatura compressa 1° strato A'a	1Φ14/20 = 7.70 cm ²
Copriferro armatura compressa c'	23.9 cm

Le sollecitazioni per l'acciaio sono state ottenute trascurando, a favore di sicurezza, le azioni normali di compressione.

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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Verifiche allo stato limite ultimo per flessione

Sollecitazioni di verifica:

$$M = 30.15 \text{ kNm}$$

Sollecitazioni ultime:

$$M_u = 78.32 \text{ kNm}$$

Coeff. sicurezza = 2.60

Verifiche allo stato limite di esercizio (condizione rara)

Le verifiche da condurre in combinazione rara riguardano le tensioni di esercizio; nello specifico si verifica che le tensioni nei materiali si mantengano nei seguenti limiti:

$$\sigma_c \leq 19.20 \text{ N/mm}^2$$

$$\sigma_f \leq 360 \text{ N/mm}^2$$

Sollecitazioni di verifica:

$$M = 16.61 \text{ kNm}$$

pertanto:

$$\sigma_c = 2.38 \text{ N/mm}^2$$

$$\sigma_f = 99.27 \text{ N/mm}^2$$

Le verifiche sono rispettate.

Verifiche allo stato limite di esercizio (condizione frequente)

Le verifiche da condurre in combinazione frequente riguardano l'apertura delle fessure; nello specifico si verifica che l'ampiezza delle fessure si mantenga inferiore al valore limite:

$$w_k \leq w_2 = 0.300 \text{ mm.}$$

Sollecitazioni di verifica:

$$M = 16.61 \text{ kNm} < M_{f,cri} = 47.04 \text{ kNm}$$

$$w_k = 0.00 \text{ mm} \leq w_2$$

- Nel caso in esame la sezione non si fessura.

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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Verifiche allo stato limite di esercizio (condizione quasi permanente)

Le verifiche da condurre in combinazione quasi permanente riguardano sia la tensione di esercizio del calcestruzzo sia l'apertura delle fessure; nello specifico si verifica che la tensione nel calcestruzzo si mantenga nel seguente limite:

$$\sigma_c \leq 14.80 \text{ N/mm}^2$$

e che l'ampiezza delle fessure si mantenga inferiore al valore limite:

$$w_k \leq w_1 = 0.200 \text{ mm.}$$

Sollecitazioni di verifica:

$$M = 16.61 \text{ kNm} < M_{f,cri} = 47.04 \text{ kNm}$$

Nel caso in esame si ha:

$$\sigma_c = 2.47 \text{ N/mm}^2$$

$$w_k = 0.00 \text{ mm} < w_1$$

- Nel caso in esame la sezione non si fessura.

Verifiche allo stato limite ultimo per Taglio

Di seguito si riporta la verifica a taglio ultimo della sezione più sollecitata:

Verifica a taglio ultimo

Elementi senza armatura trasversale a taglio

- Verifica del conglomerato

$$VRd = [0,18 \cdot k \cdot (100 \cdot \rho_1 \cdot f_{ck})^{1/3} / \gamma_c + 0,15 \cdot \sigma_{cp}] \cdot b_w \cdot d = \quad \mathbf{121.00} \quad \text{kN}$$

$$VEd = \quad \mathbf{64.25} \quad \text{kN} \quad \boxed{\text{ok}}$$

con:

$$K = 1 + (200/d)^{1/2} = \quad 1.915 \quad \leq 2$$

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

$$v_{min} = 0,035 \cdot k^{3/2} \cdot f_{ck}^{1/2} = \quad 0.534 \quad \text{N/mm}^2$$

$$f_{ck} = 0,83 \cdot R_{ck} = \quad 33.2 \quad \text{N/mm}^2$$

$$f_{cd} = \alpha_{cc} \cdot f_{ck} / \gamma_c = \quad 18.81 \quad \text{N/mm}^2$$

$$\rho_1 = A_{sl}/(b_w \cdot d) = 0.00322 \leq 0,02$$

$$d = 239 \text{ mm}$$

$$H = 300 \text{ mm}$$

$$b_w = 1000 \text{ mm}$$

$$A_{sl} = 770 \text{ mm}^2 \quad (5\phi 14/ml)$$

$$N_{Ed} = 0.00 \text{ kN}$$

$$\sigma_{cp} = N_{Ed}/A_c = 0.000 \text{ N/mm}^2 \leq 0,2 \cdot f_{cd}$$

VERIFICHE DELLE ARMATURE ORIZZONTALI

Caratteristiche geometriche della sezione

Larghezza b	100 cm
Altezza h	30 cm
Armatura tesa 1° strato Aa	1Φ12/20 = 5.65 cm ²
Copriferro 1° strato c1	4.60 cm
Armatura tesa 2° strato Aa	
Copriferro 2° strato c2	
Armatura compressa 1° strato A'a	1Φ12/20 = 5.65 cm ²
Copriferro armatura compressa c'	25.4 cm

Le sollecitazioni per l'acciaio sono state ottenute trascurando, a favore di sicurezza, le azioni normali di compressione.

Verifiche allo stato limite ultimo per flessione

Sollecitazioni di verifica:

$$M = 35.18 \text{ kNm}$$

Sollecitazioni ultime:

$$M_u = 59.23 \text{ kNm}$$

$$\text{Coeff. sicurezza} = 1.68$$

Verifiche allo stato limite di esercizio (condizione rara)

Le verifiche da condurre in combinazione rara riguardano le tensioni di esercizio; nello specifico si verifica che le tensioni nei materiali si mantengano nei seguenti limiti:

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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$$\sigma_c \leq 19.20 \text{ N/mm}^2$$

$$\sigma_f \leq 360 \text{ N/mm}^2$$

Sollecitazioni di verifica:

$$M = 16.89 \text{ kNm}$$

pertanto:

$$\sigma_c = 2.47 \text{ N/mm}^2$$

$$\sigma_f = 127.76 \text{ N/mm}^2$$

Le verifiche sono rispettate.

Verifiche allo stato limite di esercizio (condizione frequente)

Le verifiche da condurre in combinazione frequente riguardano l'apertura delle fessure; nello specifico si verifica che l'ampiezza delle fessure si mantenga inferiore al valore limite:

$$w_k \leq w_2 = 0.300 \text{ mm.}$$

Sollecitazioni di verifica:

$$M = 16.89 \text{ kNm} < M_{f,cri} = 47.05 \text{ kNm}$$

$$w_k = 0.00 \text{ mm} \leq w_2 \quad - \text{ Nel caso in esame la sezione non si fessura.}$$

Verifiche allo stato limite di esercizio (condizione quasi permanente)

Le verifiche da condurre in combinazione quasi permanente riguardano sia la tensione di esercizio del calcestruzzo sia l'apertura delle fessure; nello specifico si verifica che la tensione nel calcestruzzo si mantenga nel seguente limite:

$$\sigma_c \leq 14.80 \text{ N/mm}^2$$

e che l'ampiezza delle fessure si mantenga inferiore al valore limite:

$$w_k \leq w_1 = 0.200 \text{ mm.}$$

Sollecitazioni di verifica:

$$M = 16.89 \text{ kNm} < M_{f,cri} = 47.05 \text{ kNm}$$

Nel caso in esame si ha:

$$\sigma_c = 2.47 \text{ N/mm}^2$$

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$$w_k = 0.00 \text{ mm} < w_1$$

- Nel caso in esame la sezione non si fessura.

Verifiche allo stato limite ultimo per Taglio

Di seguito si riporta la verifica a taglio ultimo della sezione più sollecitata:

Verifica a taglio ultimo

Elementi senza armatura trasversale a taglio

- Verifica del conglomerato

$$VRd = [0,18 \cdot k \cdot (100 \cdot \rho_1 \cdot f_{ck})^{1/3} / \gamma_c + 0,15 \cdot \sigma_{cp}] \cdot b_w \cdot d = \quad \mathbf{112.03} \quad \text{kN}$$

$$VEd = \quad \mathbf{67.22} \quad \text{kN} \quad \boxed{\text{ok}}$$

con:

$$K = 1 + (200/d)^{1/2} = \quad 1.887 \quad \leq 2$$

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

$$v_{\min} = 0,035 \cdot k^{3/2} \cdot f_{ck}^{1/2} = \quad 0.523 \quad \text{N/mm}^2$$

$$f_{ck} = 0,83 \cdot R_{ck} = \quad 33.2 \quad \text{N/mm}^2$$

$$f_{cd} = \alpha_{cc} \cdot f_{ck} / \gamma_c = \quad 18.81 \quad \text{N/mm}^2$$

$$\rho_1 = A_{sl} / (b_w \cdot d) = \quad 0.00222 \quad \leq 0,02$$

$$d = \quad \mathbf{254} \quad \text{mm}$$

$$H = \quad \mathbf{300} \quad \text{mm}$$

$$b_w = \quad \mathbf{1000} \quad \text{mm}$$

$$A_{sl} = \quad \mathbf{565} \quad \text{mm}^2 \quad (5\phi 14/ml)$$

$$N_{Ed} = \quad \mathbf{0.00} \quad \text{kN}$$

$$\sigma_{cp} = N_{Ed} / A_c = \quad 0.000 \quad \text{N/mm}^2 \quad \leq 0,2 \cdot f_{cd}$$

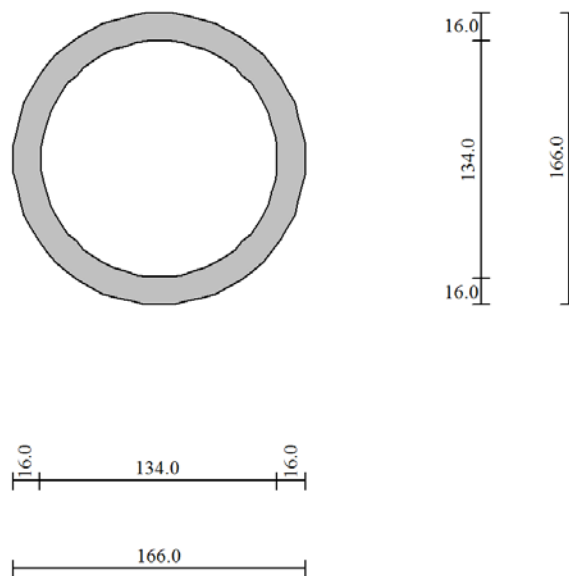
	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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6. TOMBINO CIRCOLARE DN1500

6.1 GEOMETRIA DELLA STRUTTURA

Sezione lungo l'asse stradale del **TOMBINO CIRCOLARE DN1500**

Diametro nominale 1,5m, spessore pareti 0,16m, ricoprimento medio circa 0.80m.



6.2 PARAMETRI GEOTECNICI DEL TERRENO

Nel calcolo dello scatolare, per quanto riguarda la determinazione della spinta delle terre, della capacità portante del terreno e delle caratteristiche di interazione terreno-struttura, si adottano, a favore di sicurezza, i seguenti parametri geotecnici:

Strato di ricoprimento

Descrizione	Terreno di ricoprimento	
Spessore dello strato	0.80	[m]
Peso di volume	20.0000	[kN/mc]
Peso di volume saturo	20.0000	[kN/mc]
Angolo di attrito	35.00	[°]
Coesione	0.000	[MPa]

Strato di rinfianco

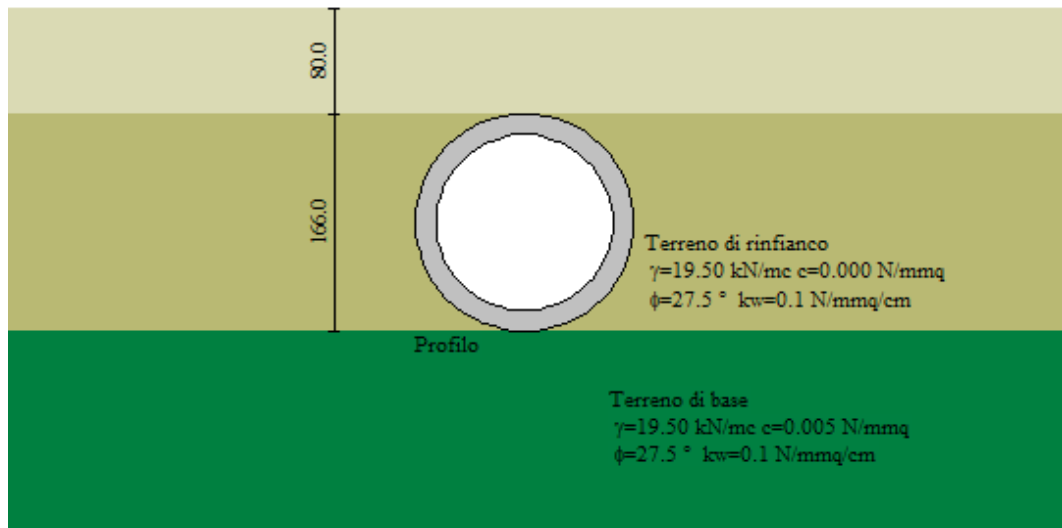
Descrizione	Terreno di rinfianco	
Peso di volume	19.5000	[kN/mc]
Peso di volume saturo	19.5000	[kN/mc]
Angolo di attrito	27.500	[°]
Angolo di attrito terreno struttura	0.00	[°]

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Coesione 0.000 [MPa]
 Costante di Winkler 0.050 [MPa/cm]

Strato di base

Descrizione	Terreno di base	
Peso di volume	19.5000	[kN/mc]
Peso di volume saturo	19.5000	[kN/mc]
Angolo di attrito	27.500	[°]
Angolo di attrito terreno struttura	0.00	[°]
Coesione	0.000	[MPa]
Costante di Winkler	0.05	[MPa/cm]
Tensione ammissibile	0.02	[MPa]



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6.3 CRITERI DI VERIFICA

Nella verifica si segue il metodo degli stati limite di cui al *Paragrafo 2.2. "Stati limite"*, così come stabilito al *Paragrafo 5.1. "Costruzioni di conglomerato cementizio" del D.M. 14 settembre 2005.*

I valori di calcolo delle azioni sulle strutture e le loro combinazioni fanno riferimento al *Paragrafo 6.2. "Opere stradali"* ed al *Paragrafo 3.2. "Azione sismica"*.

Per i materiali e i prodotti impiegati, nonché per i valori della resistenza di calcolo, si fa riferimento al *Capitolo 11. "Materiali e prodotti per uso strutturale"*.

Nel modello di calcolo i carichi accidentali sul rilevato, l'azione di frenamento ed il sisma vengono applicati sulla parte sinistra dello scatolare o in direzione da sinistra verso destra, onde massimizzare lo sbilanciamento delle forze per la verifica della struttura scatolare senza aumentare notevolmente il numero delle combinazioni di carico.

Le armature calcolate sul piedritto più sollecitato vengono poi "specchiate" anche sull'altro piedritto.

6.4 ANALISI DEI CARICHI

6.4.1 Peso proprio

Il peso proprio delle strutture è determinato automaticamente dal programma di calcolo.

6.4.2 Permanenti

Il peso dei carichi permanenti è determinato automaticamente dal programma di calcolo in base ai valori del peso specifico del terreno $\gamma_{ricoprimento} = 20 \text{ KN/m}^3$ ed all'altezza dello strato di terreno

6.4.2.1 Calcolo del carico sulla calotta - Metodo di Terzaghi

Nei riguardi della forma del diagramma di carico, cioè della modalità di applicazione delle spinte del terreno, il metodo di Terzaghi considera che il carico sul traverso si manifesti come semplice peso di una massa parabolica o ellittica di distacco.

Più in dettaglio Terzaghi fornisce due espressioni differenti della pressione a seconda della maggiore o minore altezza del ricoprimento H_0 . Le due espressioni sono: per $H_0 \leq 5 B_1$

$$P_V = \frac{\gamma \cdot B_1 - C}{k \cdot \text{tg}\phi} \cdot \left[1 - e^{-A} \right]$$

nella quale K è un coefficiente sperimentale, che, secondo misure eseguite dallo stesso Autore è circa uguale ad 1. Inoltre:

$$B_1 = \frac{b}{2} + h \cdot \text{tg} \left(45^\circ - \frac{\phi}{2} \right)$$

In questa espressione b ed h sono la larghezza e l'altezza dello scatolare e ϕ è l'angolo d'attrito del terreno di rinfiaccio mentre il termine A è espresso dalla relazione :

$$A = k \cdot \frac{H_0}{B_1} \cdot \text{tg}\phi$$

Per grandi profondità, cioè per $H_0 > 5B_1$:

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$$P_V = \frac{\gamma \cdot B_1 - C}{k \cdot \text{tg}\phi} \cdot \left[1 - e^{-D} \right] + \gamma \cdot H_2 \cdot e^{-D}$$

Dove :

$$D = k \cdot \frac{H_1}{B_1} \cdot \text{tg}\phi$$

essendo H_1 la distanza, misurata dal piano orizzontale sul quale agisce la pressione, alla quale si estende l'effetto volta e H_2 la residua distanza sino al piano campagna. La somma $H_1 + H_2$ è l'altezza del ricoprimento H_0 .

6.4.3 Spinta del terreno

6.4.3.1 Spinta attiva - Metodo di Coulomb

La teoria di Coulomb considera l'ipotesi di un cuneo di spinta a monte della parete che si muove rigidamente lungo una superficie di rottura rettilinea. Dall'equilibrio del cuneo si ricava la spinta che il terreno esercita sull'opera di sostegno. In particolare Coulomb ammette, al contrario della teoria di Rankine, l'esistenza di attrito fra il terreno e la parete, e quindi la retta di spinta risulta inclinata rispetto alla normale alla parete stesso di un angolo di attrito terra-parete.

L'espressione della spinta esercitata da un terrapieno, di peso di volume γ , su una parete di altezza H , risulta espressa secondo la teoria di Coulomb dalla seguente relazione (per terreno incoerente) :

$$S = \frac{1}{2} \cdot \gamma \cdot H^2 \cdot K_a$$

K_a rappresenta il coefficiente di spinta attiva di Coulomb nella versione riveduta da Muller-Breslau, espresso come :

$$K_a = \frac{\sin^2(\alpha + \phi)}{\sin^2 \alpha \cdot \sin(\alpha - \delta) \cdot \left[1 + \frac{\sqrt{\sin(\phi + \delta) \cdot \sin(\phi - \beta)}}{\sqrt{\sin(\alpha - \delta) \cdot \sin(\alpha + \beta)}} \right]^2}$$

dove ϕ è l'angolo d'attrito del terreno, α rappresenta l'angolo che la parete forma con l'orizzontale ($\alpha = 90^\circ$ per parete verticale), δ è l'angolo d'attrito terreno-parete, β è l'inclinazione del terrapieno rispetto all'orizzontale.

La spinta risulta inclinata dell'angolo d'attrito terreno-parete δ rispetto alla normale alla parete.

Il diagramma delle pressioni del terreno sulla parete risulta triangolare con il vertice in alto. Il punto di applicazione della spinta si trova in corrispondenza del baricentro del diagramma delle pressioni ($1/3 H$ rispetto alla base della parete). L'espressione di K_a perde di significato per $\beta > \phi$. Questo coincide con quanto si intuisce fisicamente: la pendenza del terreno a monte della parete non può superare l'angolo di natural declivio del terreno stesso.

Nel caso di terreno dotato di attrito e coesione c l'espressione della pressione del terreno ad una generica profondità z vale :

$$\sigma_a = \gamma \cdot z \cdot K_a - 2 \cdot c \cdot \sqrt{K_a}$$

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6.4.3.2 Spinta in presenza di falda

Nel caso in cui a monte della parete sia presente la falda il diagramma delle pressioni sulla parete risulta modificato a causa della sottospinta che l'acqua esercita sul terreno. Il peso di volume del terreno al di sopra della linea di falda non subisce variazioni. Viceversa al di sotto del livello di falda va considerato il peso di volume di galleggiamento :

$$\gamma_a = \gamma_{sat} - \gamma_w$$

dove γ_{sat} è il peso di volume saturo del terreno (dipendente dall'indice dei pori) e γ_w è il peso di volume dell'acqua. Quindi il diagramma delle pressioni al di sotto della linea di falda ha una pendenza minore. Al diagramma così ottenuto va sommato il diagramma triangolare legato alla pressione idrostatica esercitata dall'acqua.

6.4.3.3 Spinta a Riposo

Si assume che sui piedritti agisca la spinta calcolata in condizioni di riposo.

Il coefficiente di spinta a riposo è espresso dalla relazione :

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

dove ϕ rappresenta l'angolo d'attrito interno del terreno di rinfianco.

Quindi la pressione laterale, ad una generica profondità z e la spinta totale sulla parete di altezza H valgono :

$$\sigma = \gamma \cdot z \cdot K_0 + p_v \cdot K_0$$

$$S = \frac{1}{2} \cdot \gamma \cdot H^2 \cdot K_0 + p_v \cdot K_0 \cdot H$$

dove p_v è la pressione verticale agente in corrispondenza della calotta.

6.4.3.4 Spinta in presenza di sisma

Nell'analisi pseudo-statica, l'azione sismica è rappresentata da un insieme di forze statiche orizzontali e verticali date dal prodotto delle forze di gravità per un coefficiente sismico.

La componente verticale dell'azione sismica deve essere considerata agente verso l'alto o verso il basso, in modo da produrre gli effetti più sfavorevoli.

L'intensità delle forze sismiche equivalenti così introdotte dipende, per un'assegnata zona sismica, dall'entità dello spostamento permanente ammissibile ed allo stesso tempo effettivamente consentito dalla soluzione strutturale adottata.

In assenza di studi specifici, i coefficienti sismici orizzontale (k_h) e verticale (k_v) che interessano tutte le masse devono essere calcolati come:

$$k_h = S \frac{a_g}{r} \quad k_v = 0.5 k_h$$

Al fattore r è stato assegnato il valore unitario. Tali coefficienti sismici si possono assumere costanti lungo l'altezza del muro.

La spinta totale di progetto E_d (statica + dinamica) esercitata dal terrapieno ed agente sull'opera

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di sostegno a metà dell'altezza, è data da:

$$E_d = \frac{1}{2} \gamma^* (1 \pm k_v) K H^2 + E_{ws}$$

dove:

H è l'altezza del muro;

E_{ws} è la spinta idrostatica;

γ^* è il peso specifico del terreno

K è il coefficiente di spinta del terreno (statico + dinamico)

Il coefficiente di spinta del terreno può essere calcolato mediante la formula di Mononobe e Okabe.

Per stati di spinta attiva:

$$\beta \leq \phi - \theta \cdot K = \frac{\text{sen}^2(\psi + \phi - \theta)}{\cos\theta \text{sen}^2\psi \text{sen}(\psi - \theta - \delta) \left[1 + \sqrt{\frac{\text{sen}(\phi + \delta)\text{sen}(\phi - \beta - \theta)}{\text{sen}(\psi - \theta - \delta)\text{sen}(\psi + \beta)}} \right]^2}$$

$$\beta > \phi - \theta \cdot K = \frac{\text{sen}^2(\psi + \phi - \theta)}{\cos\theta \text{sen}^2\psi \text{sen}(\psi - \theta - \delta)}$$

Nelle precedenti equazioni vengono usate le seguenti notazioni:

ϕ è il valore di calcolo dell'angolo di resistenza a taglio del terreno in condizioni di sforzo efficace;

ψ, β è l'angolo di inclinazione rispetto all'orizzontale rispettivamente della parete del muro rivolta a monte e della superficie del terrapieno;

δ è il valore di calcolo dell'angolo di resistenza a taglio tra terreno e muro;

θ è l'angolo definito dalle espressioni da:

$$\tan\theta = \frac{k_h}{1 \pm k_v} \quad (\text{falda assente})$$

6.4.3.5 Strategia di soluzione

A partire dal tipo di terreno, dalla geometria e dai sovraccarichi agenti il programma è in grado di conoscere tutti i carichi agenti sulla struttura per ogni combinazione di carico.

La struttura scatolare viene schematizzata come un telaio piano e viene risolta mediante il metodo degli elementi finiti (FEM). Più dettagliatamente il telaio viene discretizzato in una serie di elementi connessi fra di loro nei nodi.

Il terreno di rinfianco e di fondazione viene invece schematizzato con una serie di elementi

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molle non reagenti a trazione (modello di Winkler). L'area della singola molla è direttamente proporzionale alla costante di Winkler del terreno e all'area di influenza della molla stessa.

A partire dalla matrice di rigidità del singolo elemento, K_e , si assembla la matrice di rigidità di tutta la struttura K . Tutti i carichi agenti sulla struttura vengono trasformati in carichi nodali (reazioni di incastro perfetto) ed inseriti nel vettore dei carichi nodali p . Indicando con u il vettore degli spostamenti nodali (incogniti), la relazione risolutiva può essere scritta nella forma:

$$K u = p$$

Da questa equazione matriciale si ricavano gli spostamenti incogniti u :

$$u = K^{-1} p$$

Noti gli spostamenti nodali è possibile risalire alle sollecitazioni nei vari elementi.

La soluzione del sistema viene fatta per ogni combinazione di carico agente sullo scatolare. Il successivo calcolo delle armature nei vari elementi viene condotto tenendo conto delle condizioni più gravose che si possono verificare nelle sezioni fra tutte le combinazioni di carico.

6.4.4 Variazioni termiche della struttura

- variazione termica variabile linearmente da + 2.5°C all'estradosso della soletta superiore, a - 2.5°C all'intradosso della soletta superiore;
- variazione termica variabile linearmente da - 2.5°C all'estradosso della soletta superiore, a + 2.5°C all'intradosso della soletta superiore;

6.4.5 Ritiro e viscosità

Gli effetti del ritiro del calcestruzzo e della viscosità sono assimilati ad una variazione termica uniforme della soletta superiore. La deformazione totale da ritiro si esprime come:

$$\varepsilon_s = \varepsilon_{ed} + \varepsilon_{ca} \text{ dove}$$

ε_{cs} è la differenza totale per ritiro

ε_{cd} è la differenza per ritiro da essiccamento

ε_{ca} è la differenza per ritiro autogeno

Il ritiro da essiccamento a tempo infino $\varepsilon_{cs} \infty$ è stato valutato in funzione della resistenza caratteristica a compressione, dell'umidità relativa e del parametro: ho utilizzando le tabelle del paragrafo 11.1.10.6 del D.M. 14/09/05. Lo sviluppo nel tempo della deformazione al tempo t è stata valutata con l'espressione

$$\varepsilon_{cd}(t) = \beta_{ds}(t - t_s) \cdot \varepsilon_{cd} \infty$$

dove la funzione di sviluppo temporale assume la forma

$$\beta_{ds}(t - t_s) = \left[\frac{(t - t_s)}{350 \cdot \left(\frac{h_0}{100}\right)^2 + (t - t_s)} \right]^{0.5}$$

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in cui

- t è l'età del calcestruzzo nel momento considerato (in giorni)
- t_s è l'età del calcestruzzo a partire dalla quale si considera l'effetto del ritiro da essiccamento (normalmente il termine del curing – in giorni)
- h_o dimensione fittizia (in mm) pari al rapporto 2 A_c/u essendo
- A_c l'area della sezione in conglomerato
- U il perimetro della sezione in conglomerato esposto all'aria

Il valore medio a tempo infinito della deformazione per ritiro autogeno $\varepsilon_{ca,\infty}$, può essere valutato mediante l'espressione:

$$\varepsilon_{ca,\infty} = 2.5 \cdot (f_{ck} - 10) \cdot 10^{-6} \text{ confck in MPa}$$

Gli effetti dei fenomeni viscosi sono stati valutati in funzione dell'umidità ambientale delle dimensioni dell'elemento soletta, del tipo di calcestruzzo utilizzato, dell'età dello stesso al momento della messa in carico e dalla durata e dal livello del carico applicato.

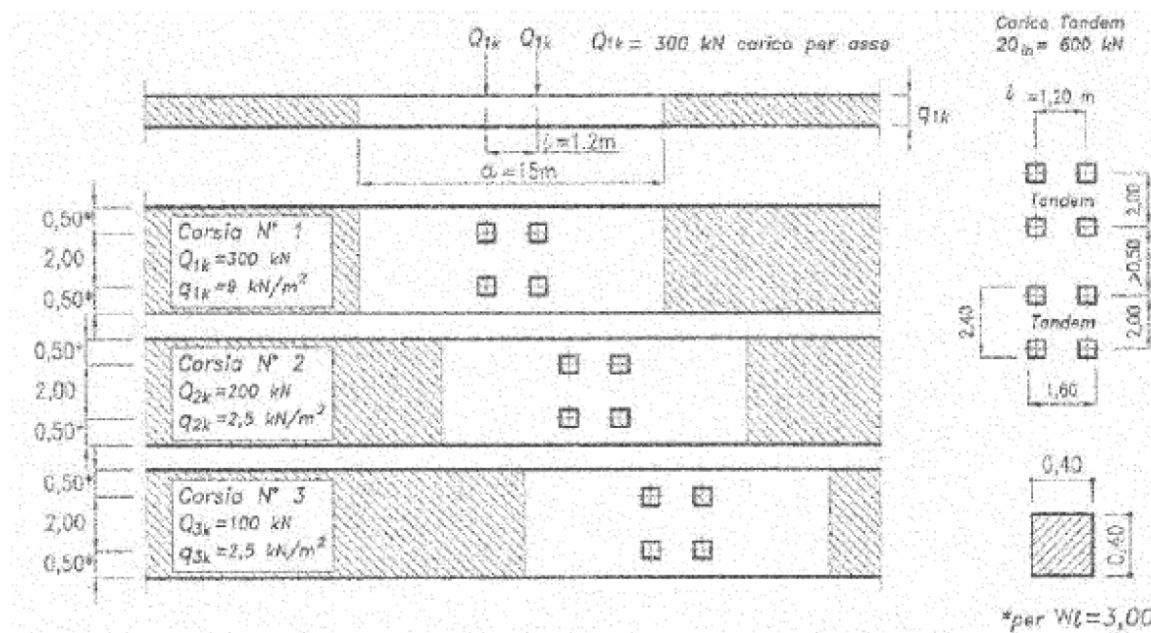
La deformazione viscosa al tempo infino t = ∞ è stata quindi riportata al tempo t di riferimento.

In definitiva la deformazione da ritiro totale, tenuto conto degli effetti da deformazione viscosa, è stata globalmente valutata corrispondente ad un carico termico uniforme nella soletta superiore di -10°C.

6.4.6 Azioni antropiche

6.4.6.1 Carichi stradali (q₁)

Le azioni variabili del traffico definite nello Schema di Carico 1 sono costituite da carichi concentrati e da carichi uniformemente distribuiti. Tale schema è da assumere a riferimento sia per le verifiche globali, sia per le verifiche locali.



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Il numero delle colonne di carichi mobili e la loro disposizione sono quelli massimi compatibili con la larghezza della carreggiata considerata, per i ponti di 1^a Categoria.

Posizione	Carico asse Q_{ik} [kN]	q_{ik} [kN/m ²]
Corsia Numero 1	300	9
Corsia Numero 2	200	2,5
Corsia Numero 3	100	2,5
Altre corsie	0,00	2,50

6.4.6.2 Incremento Dinamico dei Carichi Mobili dovuto ad Azioni Dinamiche (q_2)

L'entità dei carichi mobili deve essere maggiorata per tener conto degli effetti dinamici. In mancanza di analisi specifiche che prendano in conto le caratteristiche dinamiche della struttura, nonché la velocità di progetto della strada, le caratteristiche delle sospensioni dei carichi e la rugosità del manto stradale, l'incremento q_2 è fornito da :

$$q_2 = (\phi - 1) \cdot q_1$$

dove Φ , coefficiente dinamico, ha la seguente espressione:

- per luci $L \leq 10$ m $\Phi = 1,4$
- per luci $10 \leq L \leq 70$ m $\Phi = 1,4 - (L - 10) / 150$
- per luci $L \geq 70$ m $\Phi = 1,0$

Nel caso in oggetto essendo $L < 10$ m: $\phi = 1.4$

6.4.6.3 Diffusione dei carichi stradali q_1

Il carichi concentrati si assumono uniformemente distribuiti sulla superficie della rispettiva impronta. La diffusione attraverso la pavimentazione e lo spessore della soletta si considera avvenire secondo una diffusione a 45°, fino al piano medio della struttura della soletta sottostante.

I due assi da 300 kN vengono ripartiti e trasmessi sulla soletta considerando una diffusione attraverso la pavimentazione, il terreno e la soletta.

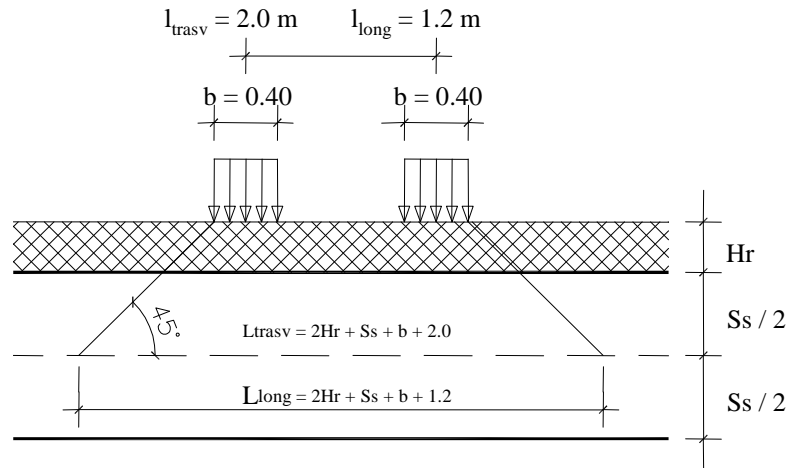
Larghezza di ripartizione in senso trasversale e longitudinale

$$L_{trasv} = 2 \times Hr + 2 \times (Ss / 2) + b + l_{trasv}$$

$$L_{long} = 2 \times Hr + 2 \times (Ss / 2) + b + l_{long}$$

TOMBINO	DN1500
	Tipo 1
Hr	3.00
Ss	0,16
b	0,4
Ltrasv	4.16
Llong	3.36

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$$q'_{1a} = 2 \times 300 \text{ KN} / (L_{\text{trasv}} \times L_{\text{long}})$$

$$q_{1a} = q'_{1a} \times \phi$$

TOMBINO	DN1500
	Tipo 1
ϕ	1,4
q'_{1a}	42.93
q_{1a}	60.10

Per quanto riguarda i tombini circolari DN1500, si evidenzia che la diffusione dei carichi accidentali è stata effettuata rispetto al piano orizzontale tangente superiormente la linea d'asse della sezione dell'opera.

6.4.6.4 Diffusione dei carichi stradali q_{1b}

Il carico distribuito q_{1b} da 9 kN/m^2 va applicato a partire da $15/2 \text{ m}$ dagli assi dei carichi concentrati Q_{1k} .

$$q'_{1b} = 9 \text{ kN/m}^2$$

$$q_{1b} = q'_{1b} \times \Phi = 12.6 \text{ kN/m}^2$$

6.4.6.5 Carichi sul rilevato

La spinta delle terre dovuta all'azione dei sovraccarichi accidentali posti sul rilevato a tergo dei piedritti dello scatolare viene valutata assunto una volta il carico q_{1b} associato al carico q_{1a} posto sul tombino, e una volta assunto il carico q'_{1a} ripartito solo in senso trasversale mentre in senso longitudinale viene ripartito automaticamente dal programma di calcolo assunto una diffusione pari a l'angolo di attrito del rilevato (vedi tabulati).

6.4.6.6 Frenatura (q_3)

Per quanto riguarda l'azione di frenatura, definita al paragrafo 6.2.3.5. del D.M.14/09/05, si considera la frenatura di una carreggiata

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Considero il carico totale che può interessare la struttura, tutte le corsie caricate dal solo carico Q_{1a} (600 kN):

$$Q_{frenatura} = 0.20 \times [(300 \times 2) \times 1.4]$$

e diffondo tale valore sulla superficie dello scatolare

$$q_{frenatura} \text{ (distribuita)} = 168 / (L_{trasv} \times L_{long})$$

TOMBINO	DN1500
	Tipo 1
Ltrasv	4.16
Llong	3.36
ϕ	1,4
Qfrenatura	168
q frenatura distr	12.02

6.4.6.7 Centrifuga (q_4)

Poiché la sezione dello scatolare considerata nel modello di calcolo è parallela all'asse stradale, l'azione centrifuga non presenta componente trasversale per lo scatolare.

6.4.7 Vento (q_5)

Poiché la sezione dello scatolare considerata nel modello di calcolo è parallela all'asse stradale, l'azione del vento non presenta componente trasversale per lo scatolare.

6.4.8 Sisma (q_6)

Le strutture, ai sensi della normativa vigente, sono assunte di Classe 2 (vita utile 100 anni).

Tutte le azioni sono calcolate considerando un periodo di ritorno per i fenomeni naturali pari a 1000 anni, pertanto nella valutazione della accelerazione orizzontale massima a_g si è fatto riferimento alle mappe di pericolosità sismica dell'I.N.G.V. (Istituto Nazionale di Geofisica e Vulcanologia) andando a considerare il parametro a_g/g riferito a una probabilità di superamento non maggiore del 5% in 50 anni, come previsto dal paragrafo 3.2.2.3 del *D.M. 14/09/05*.

La tabella sottostante riporta i valori considerati per la zona in esame

Zona sismica	2
Categoria suolo di fondazione	B/C
Classe della struttura	2
Accelerazione orizzontale massima	0.275
Fattore S che tiene conto della categoria del suolo di fondazione = B/C	1.25

In definitiva l'accelerazione orizzontale massima convenzionale per zona 1, struttura di classe 2 e suolo di categoria B/C = $0.275 \text{ g} \times 1.25 = 0.344 \text{ g}$.

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6.5 ANALISI STRUTTURALE

Il calcolo della struttura è eseguito con un programma di calcolo agli elementi finiti che schematizza la struttura come un telaio piano di larghezza unitaria composta dalla soletta superiore, dai 2 ritti e dalla soletta di base che costituisce la fondazione, la cui interazione con il terreno di base è simulata mediante una trave su suolo elastico alla Winkler.

Il programma di calcolo richiede come input la normativa di riferimento, le caratteristiche geometriche della struttura, le caratteristiche dei materiali, i parametri e la conformazione dei terreni, le condizioni di carico, le combinazioni di carico e fornisce sollecitazioni, deformazioni e tensioni e verifiche agli SLU e SLE richieste per le varie condizioni e combinazioni di carico.

Le azioni di carico sono state elencate precedentemente con riferimento al paragrafo 6.2 "Opere stradali: azioni sui ponti stradali" e le relative combinazioni di carico. I coefficienti moltiplicativi delle singole azioni per i diversi tipi di verifica sono riportati nella tabella seguente.

Tabella 6.2.IV – Combinazioni e coefficienti moltiplicativi delle singole azioni per i diversi tipi di verifiche

		g_1	g_2	g_3	ε_1	ε_2	ε_3	ε_4	q_1	q_2	q_3	q_4	q_5	q_6	q_7	q_8	q_9
Verifiche tensionali	T I	1	1	1	1	1	1	1	0	0	0	0	1	0	1	0	1
	T II	1	1	1	1	1	1	1	1	1	0	0	0,6	0	1	1	1
	T III	1	1	1	1	1	1	1	1	1	1	0	0,2	0	1	1	1
	T IV	1	1	1	1	1	1	1	1	1	0	1	0,2	0	1	1	1
	T V	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0
Stati limite di esercizio fessurazione	QP	1	1	1	1	1	1	1	0	0	0	0	0,4	0	0	0	0
	FR	1	1	1	1	1	1	1	ψ	y	0	0	0	0	0	0	0
Stati limite ultimi	U I	1,4	1,4	1,4	1,2 (0.85)	1,2 (0)	1,2 (0)	1,2(0)	0	0	0	0	1,5	1,5	1,5		
	U II	1,4	1,4	1,4	1,2 (0.85)	1,2 (0)	1,2 (0)	1,2(0)	1,5	1,5	0	0	0,9	1,5	1,5		
	U III	1,4	1,4	1,4	1,2 (0.85)	1,2 (0)	1,2 (0)	1,2(0)	1,5	1,5	1,5	0	0,3	1,5	1,5		
	U IV	1,4	1,4	1,4	1,2 (0.85)	1,2 (0)	1,2 (0)	1,2(0)	1,5	0,5	0	1,5	0,3	1,5	1,5		

Per la definizione delle combinazioni si è tenuto conto delle varie disposizioni dei carichi mobili al fine di realizzare le più gravose, delle distorsioni termiche di tipo triangolare tra esterno ed interno lungo lo spessore della soletta superiore (Positivo/Negativo e Negativo/Positivo).

Si è inoltre tenuto conto delle due combinazioni di carico (A1 + M1) e (A2+M2) previste per le

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verifiche agli stati limite ultimi delle opere che interagiscono con il terreno.

L'analisi della struttura scatolare è stata condotta il programma SCAT 9.1 (Aztech Informatica) nella forma originale commercializzata senza alcuna modifica apportata da parte dell'utente. Il software è dedicato all'analisi e al calcolo di strutture scatolari interrate.

La struttura viene schematizzata come un telaio piano e viene risolta mediante il metodo degli elementi finiti (FEM). Più dettagliatamente il telaio viene discretizzato in una serie di elementi connessi fra di loro nei nodi facendo riferimento ad una larghezza unitaria di struttura.

6.5.1 Verifiche di resistenza agli stati limite ultimi

Si è verificato che il valore di progetto degli effetti delle azioni, ovvero delle sollecitazioni flettenti M sia minore dei corrispondenti momenti resistenti (M_u) delle sezioni di progetto.

La verifica allo stato limite ultimo per taglio è stata condotta secondo l'Eurocodice 2 che definisce tre valori limite per il taglio V

V_{rd1} resistenza a taglio di una sezione in elementi strutturali privi di armatura a taglio

V_{rd2} massimo taglio che può essere sopportato senza rottura per schiacciamento dell'anima

V_{rd3} resistenza a taglio di una sezione in elementi strutturali con armatura a taglio.

Dall'esame di tali valori si sono predisposti adeguate armate al taglio composte da barre inclinate a 45° e da staffe per verificare che la resistenza dell'armatura al taglio sia massima della sollecitazione allo stato limite di calcolo.

La verifica di resistenza delle sezioni nei vari elementi strutturali, viene condotta tenendo conto delle condizioni più gravose che si individuano dall'involuppo delle sollecitazioni agenti nelle diverse combinazioni di carico.

Le verifiche si basano sul concetto dei coefficienti di sicurezza parziali e considerano due famiglie di combinazioni (indicate come A1-M1 e A2-M2) generate con le seguenti modalità:

- caso A1-M1: in questo tipo di combinazioni vengono incrementati le azioni permanenti e variabili con i coefficienti (γ_G, γ_Q) e vengono lasciate inalterate le caratteristiche di resistenza del terreno. Le combinazioni ottenute sono rilevanti per stabilire la capacità strutturale delle opere che interagiscono con il terreno.
- caso A2-M2: in questo tipo di combinazioni vengono incrementati i carichi variabili e vengono ridotte le caratteristiche di resistenza del terreno ($tg(\phi), c'$ o c_u) secondo i coefficienti parziali ($\gamma_{tan\phi}, \gamma_c', \gamma_{c_u}, \gamma_u$) definiti da normativa. Le combinazioni ottenute sono rilevanti per il dimensionamento geotecnico.

La soluzione si ottiene dalla combinazione dei casi A1-M1 e A2-M2.

Le combinazioni e i coefficienti moltiplicativi delle singole azioni vengono definiti in base a quanto indicato al paragrafo 6.2.3.12. del D.M. 14/09/05.

6.5.2 Verifiche agli stati limite di esercizio

6.5.2.1 Definizione degli stati limite di fessurazione

In ordine di severità crescente si distinguono i seguenti stati limite:

- a) stato limite di decompressione nel quale, per la combinazione di azioni prescelta, la tensione normale è ovunque di compressione ed al più uguale a 0 ;

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- b) stato limite di formazione delle fessure, nel quale, per la combinazione di azioni prescelta, la tensione normale di trazione nella fibra più sollecitata è:

$$\sigma_t \leq \frac{f_{ctk}}{\gamma_m}$$

- c) stato limite di apertura delle fessure nel quale, per la combinazione di azioni prescelta, il valore limite di apertura della fessura calcolato al livello considerato è pari ad uno dei seguenti valori nominali:

$$w_1 = 0,2 \text{ mm}$$

$$w_2 = 0,3 \text{ mm}$$

$$w_3 = 0,4 \text{ mm}$$

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

6.5.2.2 Condizioni ambientali

Le condizioni ambientali, ai fini della valutazione della durabilità delle strutture in calcestruzzo, possono essere suddivise in ordinarie, aggressive e molto aggressive in relazione a quanto indicato nella tabella seguente:

CONDIZIONI AMBIENTALI	DESCRIZIONE
Ordinarie	Tutte le sollecitazioni escluse le successive
Aggressive	Ambiente aggressivo per cause naturali, caratterizzato da elevata umidità, scarso o nullo soleggiamento.
Molto aggressive	Ambiente molto aggressivo per cause antropiche, caratterizzato da presenza di liquidi o di aeriformi particolarmente corrosivi, ambiente marino.

Nel caso in esame si considera l'opera sottoposta a condizioni ordinarie.

6.5.2.3 Sensibilità delle armature alla corrosione

Le armature si distinguono in due gruppi:

- armature sensibili;
- armature poco sensibili.

Appartengono al primo gruppo gli acciai ordinari e gli acciai da precompresso (con stato tensionale imposto). Appartengono al secondo gruppo gli acciai zincati ed inossidabili.

Le armature dello scatolare, oggetto della relazione, appartengono al gruppo delle armature sensibili.

6.5.2.4 Scelta degli stati limite di fessurazione

Nella tabella sottostante sono indicati i criteri di scelta dello stato limite di fessurazione con riferimento alle esigenze sopra riportate.

Gruppi di esigenze	Condizioni ambientali	Combinazione di azioni	Armatura			
			Sensibile		Poco sensibile	
			Stato limite	w_d	Stato limite	w_d
a	Ordinarie	frequente	ap. fessure	$\leq w_2$	ap. fessure	$\leq w_3$
		quasi permanente	ap. fessure	$\leq w_1$	ap. fessure	$\leq w_2$
b	Aggressive	frequente	ap. fessure	$\leq w_1$	ap. fessure	$\leq w_2$
		quasi permanente	decompressione	-	ap. fessure	$\leq w_1$
c	Molto aggressive	frequente	formaz. fessure	$\leq w_1$	ap. fessure	$\leq w_1$
		quasi permanente	decompressione	-	ap. fessure	$\leq w_1$

6.5.3 Verifiche allo stato limite di fessurazione per sollecitazioni che provocano tensioni normali

6.5.3.1 Stato limite di decompressione e di formazione delle fessure

Le tensioni sono calcolate in base alle caratteristiche geometriche e meccaniche della sezione omogeneizzata non fessurata.

6.5.3.2 Stato limite di apertura delle fessure

Il valore caratteristico di calcolo di apertura delle fessure (w_d) non deve superare i valori nominali w_1 , w_2 , w_3 secondo quanto riportato nella Tabella riportata in precedenza.

Il valore caratteristico di calcolo è dato da:

$$w_d = 1,7 \cdot w_m$$

dove w_m rappresenta l'ampiezza media delle fessure.

L'ampiezza media delle fessure (w_m) è calcolata come prodotto della deformazione media delle barre d'armatura ε_{sm} per la distanza media tra le fessure Δ_{sm} :

$$w_m = \varepsilon_{sm} \cdot \Delta_{sm}$$

Per il calcolo di ε_{sm} e Δ_{sm} vanno utilizzati criteri consolidati riportati nella letteratura tecnica. ε_{sm} può essere calcolato tenendo conto dell'effetto del "tension stiffening" nel rispetto della limitazione:

$$\varepsilon_{sm} \geq 0.6 \cdot \frac{\sigma_s}{E_s}$$

con σ_s tensione nell'acciaio dell'armatura tesa (per sezione fessurata) nelle condizioni di carico considerate ed E_s è il modulo elastico dell'acciaio.

6.5.4 Verifiche delle tensioni di esercizio

Valutate le azioni interne nelle varie parti della struttura, dovute alle combinazioni rare e quasi permanenti delle azioni, si calcolano le massime tensioni sia nel conglomerato cementizio sia nelle armature; si deve verificare che tali tensioni siano inferiori ai massimi valori consentiti di seguito riportati.

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6.5.4.1 Verifica della tensione massima di compressione del conglomerato cementizio nelle condizioni di esercizio

La massima tensione di compressione del conglomerato cementizio σ_c , deve rispettare la limitazione seguente:

$$\sigma_c \leq \frac{R_{ck}}{\gamma_{m,c} \cdot \gamma_{Ec}}$$

dove i coefficienti a denominatore vengono adottati in conformità con quanto mostrato nella seguente tabella.

$$R_{ck} = 300 \times 10^2 \text{ KN/mq}$$

Condizioni ambientali	Combinazioni di carico	$\gamma_{m,c}$	γ_{Ec}	σ_{max}
Ordinarie	Rara	1,5	1,4	142×10^2
	Quasi permanente	1,5	1,8	111×10^2
Aggressive	Rara	1,5	1,5	
	Quasi permanente	1,5	1,9	
Molto aggressive	Rara	1,5	1,6	
	Quasi permanente	1,5	2	

6.5.4.2 Verifica della tensione massima dell'acciaio in condizioni di esercizio

Per l'acciaio B450 C (parg. 11.2.2.1), la tensione massima, σ_s , per effetto delle azioni dovute alle combinazioni rare deve rispettare la limitazione seguente:

$$\sigma_s \leq \frac{f_{yk}}{1,25} = \frac{4500 \times 10^2}{1,25} \text{ KN/mq} = 3600 \times 10^2 \text{ KN/mq}$$

dove f_{yk} è la tensione caratteristica di snervamento dell'acciaio.

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6.6 CALCOLO DELLE SOLLECITAZIONI E VERIFICHE DI RESISTENZA DEL TOMBINI

6.6.1 TOMBINO DN1500

Calcolo del carico sulla calotta

Metodo di Terzaghi

Nei riguardi della forma del diagramma di carico, cioè della modalità di applicazione delle spinte del terreno, il metodo di Terzaghi considera che il carico sulla calotta si manifesti come semplice peso di una massa parabolica o ellittica di distacco.

Più in dettaglio Terzaghi fornisce due espressioni differenti della pressione a seconda della maggiore o minore altezza del ricoprimento H_0 . Le due espressioni sono: per $H_0 \leq 5 B_1$

$$P_v = \frac{\gamma B_1 - C}{K \operatorname{tg} \phi} [1 - e^{-A}]$$

nella quale K è un coefficiente sperimentale, che, secondo misure eseguite dallo stesso Autore è circa uguale ad 1. Inoltre:

$$B_1 = \frac{b}{2} + h \operatorname{tg} (45^\circ - \frac{\phi}{2})$$

In questa espressione b ed h sono la larghezza e l'altezza dello scatolare e ϕ è l'angolo d'attrito del terreno di rifianco mentre il termine A è espresso dalla relazione

$$A = K \frac{H_0}{B_1} \operatorname{tg} \phi$$

Per grandi profondità, cioè per $H_0 > 5B_1$:

$$P_v = \frac{\gamma B_1 - C}{K \operatorname{tg} \phi} [1 - e^{-D}] + \gamma H_2 e^{-D}$$

Dove

$$D = K \frac{H_1}{B_1} \operatorname{tg} \phi$$

essendo H_1 la distanza, misurata dal piano orizzontale sul quale agisce la pressione, alla quale si estende l'effetto volta e H_2 la residua distanza sino al piano campagna. La somma $H_1 + H_2$ è l'altezza del ricoprimento H_0 .

Spinta sui piedritti

Spinta attiva - Metodo di Coulomb

La teoria di Coulomb considera l'ipotesi di un cuneo di spinta a monte della parete che si muove rigidamente lungo una superficie di rottura rettilinea. Dall'equilibrio del cuneo si ricava la spinta che il terreno esercita sull'opera di sostegno. In particolare Coulomb ammette, al contrario della teoria di Rankine, l'esistenza di attrito fra il terreno e la parete, e quindi la retta di spinta risulta inclinata rispetto alla normale alla parete stesso di un angolo di attrito terra-parete.

L'espressione della spinta esercitata da un terrapieno, di peso di volume γ , su una parete di altezza H , risulta espressa secondo la teoria di Coulomb dalla seguente relazione (per terreno incoerente)

$$S = 1/2 \gamma H^2 K_a$$

K_a rappresenta il coefficiente di spinta attiva di Coulomb nella versione riveduta da Muller-Breslau, espresso come

$$K_a = \frac{\sin(\alpha + \phi)}{\sin^2 \alpha \sin(\alpha - \delta) \left[1 + \frac{\sqrt{[\sin(\phi + \delta) \sin(\phi - \beta)]}}{\sqrt{[\sin(\alpha - \delta) \sin(\alpha + \beta)]}} \right]^2}$$

dove ϕ è l'angolo d'attrito del terreno, α rappresenta l'angolo che la parete forma con l'orizzontale ($\alpha = 90^\circ$ per parete verticale), δ è l'angolo d'attrito terreno-parete, β è l'inclinazione del terrapieno rispetto all'orizzontale.

La spinta risulta inclinata dell'angolo d'attrito terreno-parete δ rispetto alla normale alla parete.

Il diagramma delle pressioni del terreno sulla parete risulta triangolare con il vertice in alto. Il punto di applicazione della spinta si trova in corrispondenza del baricentro del diagramma delle pressioni ($1/3 H$ rispetto alla base della parete). L'espressione di K_a perde di significato per $\beta > \phi$. Questo coincide con quanto si intuisce fisicamente: la pendenza del terreno a monte della parete non può superare l'angolo di natural declivio del terreno stesso.

Nel caso di terreno dotato di attrito e coesione c l'espressione della pressione del terreno ad una generica profondità z vale

$$\sigma_a = \gamma z K_a - 2c \sqrt{K_a}$$

Spinta in presenza di falda

Nel caso in cui a monte della parete sia presente la falda il diagramma delle pressioni sulla parete risulta modificato a causa della sottospinta che l'acqua esercita sul terreno. Il peso di volume del terreno al di sopra della linea di falda non subisce variazioni. Viceversa al di sotto del livello di falda va considerato il peso di volume di galleggiamento

$$\gamma_s = \gamma_{sat} - \gamma_w$$

dove γ_{sat} è il peso di volume saturo del terreno (dipendente dall'indice dei pori) e γ_w è il peso di volume dell'acqua. Quindi il diagramma delle pressioni al di sotto della linea di falda ha una pendenza minore. Al diagramma così ottenuto va sommato il diagramma triangolare legato alla pressione idrostatica esercitata dall'acqua.

Spinta a Riposo

Si assume che sui piedritti agisca la spinta calcolata in condizioni di riposo. Il coefficiente di spinta a riposo è espresso dalla relazione

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

dove ϕ rappresenta l'angolo d'attrito interno del terreno di rinfianco.

Quindi la pressione laterale, ad una generica profondità z e la spinta totale sulla parete di altezza H valgono

$$\sigma = \gamma z K_0 + p_v K_0$$

$$S = 1/2 \gamma H^2 K_0 + p_v K_0 H$$

dove p_v è la pressione verticale agente in corrispondenza della calotta.

Spinta in presenza di sisma - Formula di Wood

Spinta del terreno nel caso di strutture rigide.

Nel caso di strutture rigide completamente vincolate, in modo tale che non può svilupparsi nel terreno uno stato di spinta attiva, nonché nel caso di muri verticali con terrapieno a superficie orizzontale, l'incremento dinamico di spinta del terreno può essere calcolato come:

$$\Delta P_s = \alpha \gamma H^2$$

$$\alpha = a_w/g * S_w * \beta_w * S_s$$

H è l'altezza sulla quale agisce la spinta. Il punto di applicazione va preso a metà altezza.

Verifica al carico limite

Il rapporto fra il carico limite in fondazione e la componente normale della risultante dei carichi trasmessi dal muro sul terreno di fondazione deve essere superiore a η_s . Cioè, detto Q_n il carico limite ed R la risultante verticale dei carichi in fondazione, deve essere:

$$\frac{Q_n}{R} \geq \eta_s$$

Terzaghi ha proposto la seguente espressione per il calcolo della capacità portante di una fondazione superficiale.

$$q_u = c N_c s_c + q N_q + 0.5 B \gamma N_s s_s$$

La simbologia adottata è la seguente:

c	coesione del terreno in fondazione;
ϕ	angolo di attrito del terreno in fondazione;
γ	peso di volume del terreno in fondazione;
B	larghezza della fondazione;
D	profondità del piano di posa;
q	pressione geostatica alla quota del piano di posa.

I fattori di capacità portante sono espressi dalle seguenti relazioni:

$$N_q = \frac{e^{20.75s - 4.2s\phi}}{2 \cos^2(45 + \phi/2)}$$

$$N_c = (N_q - 1) \text{ctg}\phi$$

$$N_s = \frac{\text{tg}\phi}{2} \left(\frac{K_{pv}}{\cos^2\phi} - 1 \right)$$

I fattori di forma s_c e s_s che compaiono nella espressione di q_u dipendono dalla forma della fondazione. In particolare valgono 1 per fondazioni nastriformi o rettangolari allungate e valgono rispettivamente 1.3 e 0.8 per fondazioni quadrate.

termine K_{pv} che compare nell'espressione di N_s non ha un'espressione analitica. Pertanto si assume per N_s l'espressione proposta da Meyerhof

$$N_s = (N_q - 1) \text{tg}(1.4\phi)$$

Strategia di soluzione

A partire dal tipo di terreno, dalla geometria e dai sovraccarichi agenti il programma è in grado di conoscere tutti i carichi agenti sulla struttura per ogni combinazione di carico.

La struttura scatolare viene schematizzata come un telaio piano e viene risolta mediante il metodo degli elementi finiti (FEM). Più dettagliatamente il telaio viene discretizzato in una serie di elementi connessi fra di loro nei nodi.

Il terreno di rinfianco e di fondazione viene invece schematizzato con una serie di elementi molle non reagenti a trazione (modello di Winkler). L'area della singola molla è direttamente proporzionale alla costante di Winkler del terreno e all'area di influenza della molla stessa.

A partire dalla matrice di rigidità del singolo elemento, K_e si assembla la matrice di rigidità di tutta la struttura K . Tutti i carichi agenti sulla struttura vengono trasformati in carichi nodali (reazioni di incastro perfetto) ed inseriti nel vettore dei carichi nodali p .

Indicando con u il vettore degli spostamenti nodali (incogniti), la relazione risolutiva può essere scritta nella forma

$$K u = p$$

Da questa equazione matriciale si ricavano gli spostamenti incogniti u

$$u = K^{-1} p$$

Noti gli spostamenti nodali è possibile risalire alle sollecitazioni nei vari elementi.

La soluzione del sistema viene fatta per ogni combinazione di carico agente sullo scatolare. Il successivo calcolo delle armature nei vari elementi viene condotto tenendo conto delle condizioni più gravose che si possono verificare nelle sezioni fra tutte le combinazioni di carico.

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Geometria scatolare

Descrizione:	Scatolare circolare	
Diametro esterno verticale	1.66	[m]
Diametro esterno orizzontale	1.66	[m]
Spessore	0.16	[m]

Caratteristiche strati terreno

<u>Strato di ricoprimento</u>		
Descrizione	Terreno di ricoprimento	
Spessore dello strato	0.80	[m]
Peso di volume	20.0000	[kN/mc]
Peso di volume saturo	20.0000	[kN/mc]
Angolo di attrito	35.00	[°]
Coesione	0.000	[N/mm ²]

<u>Strato di rinfianco</u>		
Descrizione	Terreno di rinfianco	
Peso di volume	19.5000	[kN/mc]
Peso di volume saturo	19.5000	[kN/mc]
Angolo di attrito	27.50	[°]
Angolo di attrito terreno struttura	0.00	[°]
Coesione	0.000	[N/mm ²]
Costante di Winkler	0.050	[N/mm ² /cm]

<u>Strato di base</u>		
Descrizione	Terreno di base	
Peso di volume	19.5000	[kN/mc]
Peso di volume saturo	19.5000	[kN/mc]
Angolo di attrito	27.50	[°]
Angolo di attrito terreno struttura	13.75	[°]
Coesione	0.005	[N/mm ²]
Costante di Winkler	0.050	[N/mm ² /cm]
Tensione limite	0.200	[N/mm ²]

Caratteristiche materiali utilizzati

<u>Materiale calcestruzzo</u>		
R _s calcestruzzo	40.000	[N/mm ²]
Peso specifico calcestruzzo	24.5170	[kN/mc]
Modulo elastico E	33149.080	[N/mm ²]
Tensione di snervamento acciaio	450.000	[N/mm ²]
Coeff. omogeneizzazione cls tesoro/compresso (n)	0.50	
Coeff. omogeneizzazione acciaio/cls (n)	15.00	
Coefficiente dilatazione termica	0.0000120	

Condizioni di carico

Convenzioni adottate
 Origine in corrispondenza dello spigolo inferiore sinistro della struttura
 Carichi verticali positivi se diretti verso il basso
 Carichi orizzontali positivi se diretti verso destra
 Coppie concentrate positive se antiorarie
 Ascisse X (espresse in m) positive verso destra
 Ordinate Y (espresse in m) positive verso l'alto
 Carichi concentrati espressi in kN
 Coppie concentrate espressi in kNm
 Carichi distribuiti espressi in kN/m

Simbologia adottata e unità di misura

<u>Forze concentrate</u>	
X	ascissa del punto di applicazione dei carichi verticali concentrati
Y	ordinata del punto di applicazione dei carichi orizzontali concentrati
F _y	componente Y del carico concentrato
F _x	componente X del carico concentrato
M	momento
<u>Forze distribuite</u>	
X _i , X _f	ascisse del punto iniziale e finale per carichi distribuiti verticali
Y _i , Y _f	ordinate del punto iniziale e finale per carichi distribuiti orizzontali
V _{ni}	componente normale del carico distribuito nel punto iniziale
V _{nf}	componente normale del carico distribuito nel punto finale
V _{ti}	componente tangenziale del carico distribuito nel punto iniziale
V _{tf}	componente tangenziale del carico distribuito nel punto finale
D _{te}	variazione termica lembo esterno espressa in gradi centigradi
D _{ti}	variazione termica lembo interno espressa in gradi centigradi

Condizione di carico n°1 (Peso Proprio)
Condizione di carico n°2 (Spinta terreno sinistra)
Condizione di carico n°3 (Spinta terreno destra)
Condizione di carico n°4 (Sisma da sinistra)
Condizione di carico n°5 (Sisma da destra)
Condizione di carico n°7 (Ritiro)

Term	Traverso	D _{te} = -10.00	D _{ti} = -10.00
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Condizione di carico n°8 (Termica)

Term	Traverso	D _{te} = -2.50	D _{ti} = 2.50
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Condizione di carico n°9 (Q_Centrato)

Distr	Traverso	X _i = -10.00	X _f = 0.00	V _{ni} = 12.60	V _{nf} = 12.60	V _{ti} = 12.02	V _{tf} = 12.02
Distr	Traverso	X _i = 0.00	X _f = 1.66	V _{ni} = 60.10	V _{nf} = 60.10		

Condizione di carico n°10 (Q_laterale)

Distr	Traverso	X _i = -2.00	X _f = 0.00	V _{ni} = 144.23	V _{nf} = 144.23
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Distr Traverso $X_c=0.00$ $X_r=1.66$ $V_{a1}=12.60$ $V_{a2}=12.60$ $V_{a3}=12.02$ $V_{a4}=12.02$

Impostazioni di progetto

Verifica materiali:
Stato Limite Ultimo

Coefficiente di sicurezza calcestruzzo γ_c	1.50
Fattore riduzione da resistenza cubica a cilindrica	0.83
Fattore di riduzione per carichi di lungo periodo	0.85
Coefficiente di sicurezza acciaio	1.15
Coefficiente di sicurezza per la sezione	1.00

Verifica Taglio - Metodo dell'inclinazione variabile del traliccio

$$V_{R,d}=[0.18*k*(100.0*\rho)^{1/3}*f_{ck}]^{1/2}/\gamma_c+0.15*\sigma_{cp}*b_w*d>(v_{min}+0.15*\sigma_{cp})*b_w*d$$

$$V_{R,d}=0.9*d*A_w/s*f_{yd}*(ctg\alpha+ctg\theta)*\sin\alpha$$

$$V_{R,d}=0.9*d*b_w*\alpha*f_{cd}*(ctg(\theta)+ctg(\alpha))/(1.0+ctg\theta^2)$$

con:
d altezza utile sezione [mm]
 b_w larghezza minima sezione [mm]
 σ_{cp} tensione media di compressione [N/mm²]
 ρ rapporto geometrico di armatura
 A_w area armatura trasversale [mm²]
s interasse tra due armature trasversali consecutive [mm]
 α coefficiente maggiorativo, funzione di fcd e σ_{cp}

$$f_{cd}=0.5*f_{cd}$$

$$k=1+(200/d)^{1/2}$$

$$v_{min}=0.035*k^{3/2}*f_{ck}^{1/2}$$

Stato Limite di Esercizio

Criteri di scelta per verifiche tensioni di esercizio:

Ambiente moderatamente aggressivo	
Limite tensioni di compressione nel calcestruzzo (comb. rare)	0.60 f_{ck}
Limite tensioni di compressione nel calcestruzzo (comb. quasi perm.)	0.45 f_{ck}
Limite tensioni di trazione nell'acciaio (comb. rare)	0.80 f_{yk}

Criteri verifiche a fessurazione:

Armatura poco sensibile
Apertura limite fessure espresse in [mm]
Apertura limite fessure $w_1=0.20$ $w_2=0.30$ $w_3=0.40$

Verifiche secondo :

Copriferro sezioni 3.00 [cm]

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Descrizione combinazioni di carico

Simbologia adottata

γ	Coefficiente di partecipazione della condizione
Ψ	Coefficiente di combinazione della condizione
C	Coefficiente totale di partecipazione della condizione

Norme Tecniche 2008

Simbologia adottata

γ_{G1dav}	Coefficiente parziale sfavorevole sulle azioni permanenti
γ_{G1fav}	Coefficiente parziale favorevole sulle azioni permanenti
γ_{G2dav}	Coefficiente parziale sfavorevole sulle azioni permanenti non strutturali
γ_{G2fav}	Coefficiente parziale favorevole sulle azioni permanenti non strutturali
γ_Q	Coefficiente parziale sulle azioni variabili
γ_{unif}	Coefficiente parziale di riduzione dell'angolo di attrito drenato
γ_c	Coefficiente parziale di riduzione della coesione drenata
γ_{cu}	Coefficiente parziale di riduzione della coesione non drenata
γ_{qu}	Coefficiente parziale di riduzione del carico ultimo

Coefficienti di partecipazione combinazioni statiche

Coefficienti parziali per le azioni o per l'effetto delle azioni:

<i>Carichi</i>	<i>Effetto</i>		<i>A1</i>	<i>A2</i>
Permanenti	Favorevole	γ_{G1fav}	1.00	1.00
Permanenti	Sfavorevole	γ_{G1dav}	1.40	1.00
Permanenti non strutturali	Favorevole	γ_{G2fav}	0.00	0.00
Permanenti non strutturali	Sfavorevole	γ_{G2dav}	1.40	1.30
Variabili	Favorevole	γ_{Qfav}	0.00	0.00
Variabili	Sfavorevole	γ_{Qdav}	1.50	1.30
Variabili da traffico	Favorevole	γ_{Qfav}	0.00	0.00
Variabili da traffico	Sfavorevole	γ_{Qdav}	1.50	1.30
Termici	Favorevole	γ_{dfav}	0.00	0.00
Termici	Sfavorevole	γ_{dfav}	1.20	1.20

Coefficienti parziali per i parametri geotecnici del terreno:

<i>Parametri</i>			<i>M1</i>	<i>M2</i>
Tangente dell'angolo di attrito		γ_{unif}	1.00	1.25
Coesione efficace		γ_c	1.00	1.25
Resistenza non drenata		γ_{cu}	1.00	1.40
Resistenza a compressione uniassiale		γ_{qu}	1.00	1.60
Peso dell'unità di volume		γ_r	1.00	1.00

Coefficienti di partecipazione combinazioni sismiche

Coefficienti parziali per le azioni o per l'effetto delle azioni:

<i>Carichi</i>	<i>Effetto</i>		<i>A1</i>	<i>A2</i>
Permanenti	Favorevole	γ_{G1fav}	1.00	1.00
Permanenti	Sfavorevole	γ_{G1dav}	1.00	1.00
Permanenti	Favorevole	γ_{G2fav}	0.00	0.00
Permanenti	Sfavorevole	γ_{G2dav}	1.00	1.00
Variabili	Favorevole	γ_{Qfav}	0.00	0.00
Variabili	Sfavorevole	γ_{Qdav}	1.00	1.00
Variabili da traffico	Favorevole	γ_{Qfav}	0.00	0.00
Variabili da traffico	Sfavorevole	γ_{Qdav}	1.00	1.00
Termici	Favorevole	γ_{dfav}	0.00	0.00
Termici	Sfavorevole	γ_{dfav}	1.00	1.00

Coefficienti parziali per i parametri geotecnici del terreno:

<i>Parametri</i>			<i>M1</i>	<i>M2</i>
Tangente dell'angolo di attrito		γ_{unif}	1.00	1.25
Coesione efficace		γ_c	1.00	1.25
Resistenza non drenata		γ_{cu}	1.00	1.40
Resistenza a compressione uniassiale		γ_{qu}	1.00	1.60
Peso dell'unità di volume		γ_r	1.00	1.00

Combinazione n° 1 SLU (Caso A1-M1)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.40	1.00	1.40
Spinta terreno sinistra	Sfavorevole	1.40	1.00	1.40
Spinta terreno destra	Sfavorevole	1.40	1.00	1.40
Ritiro	Sfavorevole	1.20	1.00	1.20
Termica	Sfavorevole	1.20	0.60	0.72
Q_Centrato	Sfavorevole	1.50	0.75	1.12

Combinazione n° 2 SLU (Caso A2-M2)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.20	1.00	1.20
Termica	Sfavorevole	1.20	0.60	0.72
Q_Centrato	Sfavorevole	1.30	0.75	0.98

Combinazione n° 3 SLU (Caso A1-M1)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.40	1.00	1.40
Spinta terreno sinistra	Sfavorevole	1.40	1.00	1.40
Spinta terreno destra	Sfavorevole	1.40	1.00	1.40
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	1.00	1.20
Q_Centrato	Sfavorevole	1.50	0.75	1.12

Combinazione n° 4 SLU (Caso A2-M2)

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	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	1.00	1.20
Q_Centrato	Sfavorevole	1.30	0.75	0.98

Combinazione n° 5 SLU (Caso A1-M1)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.40	1.00	1.40
Spinta terreno sinistra	Sfavorevole	1.40	1.00	1.40
Spinta terreno destra	Sfavorevole	1.40	1.00	1.40
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	0.60	0.72
Q_Centrato	Sfavorevole	1.50	1.00	1.50

Combinazione n° 6 SLU (Caso A2-M2)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	0.60	0.72
Q_Centrato	Sfavorevole	1.30	1.00	1.30

Combinazione n° 7 SLU (Caso A1-M1)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.40	1.00	1.40
Spinta terreno sinistra	Sfavorevole	1.40	1.00	1.40
Spinta terreno destra	Sfavorevole	1.40	1.00	1.40
Ritiro	Sfavorevole	1.20	1.00	1.20
Termica	Sfavorevole	1.20	0.60	0.72
Q_laterale	Sfavorevole	1.50	0.75	1.12

Combinazione n° 8 SLU (Caso A2-M2)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.20	1.00	1.20
Termica	Sfavorevole	1.20	0.60	0.72
Q_laterale	Sfavorevole	1.30	0.75	0.98

Combinazione n° 9 SLU (Caso A1-M1)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.40	1.00	1.40
Spinta terreno sinistra	Sfavorevole	1.40	1.00	1.40
Spinta terreno destra	Sfavorevole	1.40	1.00	1.40
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	1.00	1.20
Q_laterale	Sfavorevole	1.50	0.75	1.12

Combinazione n° 10 SLU (Caso A2-M2)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	1.00	1.20
Q_laterale	Sfavorevole	1.30	0.75	0.98

Combinazione n° 11 SLU (Caso A1-M1)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.40	1.00	1.40
Spinta terreno sinistra	Sfavorevole	1.40	1.00	1.40
Spinta terreno destra	Sfavorevole	1.40	1.00	1.40
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	0.60	0.72
Q_laterale	Sfavorevole	1.50	1.00	1.50

Combinazione n° 12 SLU (Caso A2-M2)

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.20	0.60	0.72
Termica	Sfavorevole	1.20	0.60	0.72
Q_laterale	Sfavorevole	1.30	1.00	1.30

Combinazione n° 13 SLU (Caso A1-M1) - Sisma Vert. negativo

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

Combinazione n° 14 SLU (Caso A1-M1) - Sisma Vert. positivo

	Effetto	γ	ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

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Combinazione n° 15 SLU (Caso A2-M2) - Sisma Vert. positivo

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

Combinazione n° 16 SLU (Caso A2-M2) - Sisma Vert. negativo

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

Combinazione n° 17 SLU (Caso A1-M1) - Sisma Vert. negativo

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

Combinazione n° 18 SLU (Caso A1-M1) - Sisma Vert. positivo

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

Combinazione n° 19 SLU (Caso A2-M2) - Sisma Vert. positivo

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

Combinazione n° 20 SLU (Caso A2-M2) - Sisma Vert. negativo

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Sisma da sinistra	Sfavorevole	1.00	1.00	1.00

Combinazione n° 21 SLE (Quasi Permanente)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50

Combinazione n° 22 SLE (Frequente)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50

Combinazione n° 23 SLE (Frequente)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Termica	Sfavorevole	1.00	0.60	0.60
Ritiro	Sfavorevole	1.00	0.50	0.50

Combinazione n° 24 SLE (Frequente)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Q_Centrato	Sfavorevole	1.00	0.75	0.75
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50

Combinazione n° 25 SLE (Frequente)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Q_laterale	Sfavorevole	1.00	0.75	0.75
Ritiro	Sfavorevole	1.00	0.50	0.50
Termica	Sfavorevole	1.00	0.50	0.50

Combinazione n° 26 SLE (Rara)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	1.00	1.00
Termica	Sfavorevole	1.00	0.60	0.60
Q_Centrato	Sfavorevole	1.00	0.75	0.75

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Combinazione n° 27 SLE (Rara)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Termica	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.60	0.60
Q_laterale	Sfavorevole	1.00	0.75	0.75

Combinazione n° 28 SLE (Rara)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Q_Centrato	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.60	0.60
Termica	Sfavorevole	1.00	0.60	0.60

Combinazione n° 29 SLE (Rara)

	Effetto	γ	Ψ	C
Peso Proprio	Sfavorevole	1.00	1.00	1.00
Spinta terreno sinistra	Sfavorevole	1.00	1.00	1.00
Spinta terreno destra	Sfavorevole	1.00	1.00	1.00
Q_laterale	Sfavorevole	1.00	1.00	1.00
Ritiro	Sfavorevole	1.00	0.60	0.60
Termica	Sfavorevole	1.00	0.60	0.60



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
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Analisi della spinta e verifiche

Simbologia adottata ed unità di misura

Origine in corrispondenza dello spigolo inferiore sinistro della struttura
 Le forze orizzontali sono considerate positive se agenti verso destra
 Le forze verticali sono considerate positive se agenti verso il basso
 X ascisse (espresse in m) positive verso destra
 Y ordinate (espresse in m) positive verso l'alto
 M momento espresso in kNm
 V taglio espresso in kN
 SN sforzo normale espresso in kN
 ux spostamento direzione X espresso in cm
 uy spostamento direzione Y espresso in cm
 σ_t pressione sul terreno espressa in N/mmq

Tipo di analisi

Pressione in calotta
 I carichi applicati sul terreno sono stati diffusi secondo **valore 35.00**
 Metodo di calcolo della portanza

Spinta sui piedritti

Teoria di Terzaghi

Terzaghi

- a Riposo [combinazione 1]
- a Riposo [combinazione 2]
- a Riposo [combinazione 3]
- a Riposo [combinazione 4]
- a Riposo [combinazione 5]
- a Riposo [combinazione 6]
- a Riposo [combinazione 7]
- a Riposo [combinazione 8]
- a Riposo [combinazione 9]
- a Riposo [combinazione 10]
- a Riposo [combinazione 11]
- a Riposo [combinazione 12]
- a Riposo [combinazione 13]
- a Riposo [combinazione 14]
- a Riposo [combinazione 15]
- a Riposo [combinazione 16]
- a Riposo [combinazione 17]
- a Riposo [combinazione 18]
- a Riposo [combinazione 19]
- a Riposo [combinazione 20]
- a Riposo [combinazione 21]
- a Riposo [combinazione 22]
- a Riposo [combinazione 23]
- a Riposo [combinazione 24]
- a Riposo [combinazione 25]
- a Riposo [combinazione 26]
- a Riposo [combinazione 27]
- a Riposo [combinazione 28]
- a Riposo [combinazione 29]

Sisma

Identificazione del sito

Latitudine
 Longitudine
 Provincia
 Regione

42.820779
 12.917443
 Perugia
 Umbria

Punti di interpolazione del reticolo

24301 - 24300 - 24522 - 24523

Tipo di opera

Tipo di costruzione
 Vita nominale
 Classe d'uso
 Vita di riferimento

Opera ordinaria

50 anni
 III - Affollamenti significativi e industrie non pericolose
 75 anni

Combinazioni SLU

Accelerazione al suolo a_g =
 Coefficiente di amplificazione per tipo di sottosuolo (S)
 Coefficiente di amplificazione topografica (St)
 Coefficiente riduzione (β_m)
 Rapporto intensità sismica verticale/orizzontale
 Coefficiente di intensità sismica orizzontale (percento)
 Coefficiente di intensità sismica verticale (percento)

2.70 [m/s²]
 1.25
 1.00
 1.00
 0.50
 k_v=(a_g/g*β_m*St*Ss) = 34.40
 k_v=0.50 * k_v = 17.20

Combinazioni SLE

Accelerazione al suolo a_g =
 Coefficiente di amplificazione per tipo di sottosuolo (S)
 Coefficiente di amplificazione topografica (St)
 Coefficiente riduzione (β_m)
 Rapporto intensità sismica verticale/orizzontale
 Coefficiente di intensità sismica orizzontale (percento)
 Coefficiente di intensità sismica verticale (percento)
 Forma diagramma incremento sismico

0.92 [m/s²]
 1.20
 1.00
 0.20
 0.50
 k_v=(a_g/g*β_m*St*Ss) = 2.26
 k_v=0.50 * k_v = 1.13
 Rettangolare

Spinta sismica

Wood

Angolo diffusione sovraccarico

35.00 [°]

Coefficienti di spinta

N°combinazione	Statico	Sismico
1	0.538	0.000
2	0.616	0.000
3	0.538	0.000
4	0.616	0.000
5	0.538	0.000
6	0.616	0.000
7	0.538	0.000
8	0.616	0.000
9	0.538	0.000
10	0.616	0.000
11	0.538	0.000
12	0.616	0.000



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
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Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
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13	0.538	1.056
14	0.538	1.056
15	0.616	1.133
16	0.616	1.133
17	0.538	1.056
18	0.538	1.056
19	0.616	1.133
20	0.616	1.133
21	0.538	0.000
22	0.538	0.000
23	0.538	0.000
24	0.538	0.000
25	0.538	0.000
26	0.538	0.000
27	0.538	0.000
28	0.538	0.000
29	0.538	0.000

Discretizzazione strutturale

Numero elementi fondazione
Numero elementi traverso
Numero molle fondazione

64
64
65

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Analisi della combinazione n° 1

Pressione in calotta(solo peso terreno) 0.0190733 [N/mmq]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0190733
-10.56	0.56	0.0318202
0.56	12.57	0.0190733

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0171273 [N/mm²] Pressione inf. 0.0415197 [N/mm²]
 Piedritto destro Pressione sup. 0.0102662 [N/mm²] Pressione inf. 0.0346587 [N/mm²]

Analisi della combinazione n° 2

Pressione in calotta(solo peso terreno) 0.0141664 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0141664
-10.56	0.56	0.0252138
0.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0155204 [N/mm²] Pressione inf. 0.0354458 [N/mm²]
 Piedritto destro Pressione sup. 0.0087202 [N/mm²] Pressione inf. 0.0286456 [N/mm²]

Analisi della combinazione n° 3

Pressione in calotta(solo peso terreno) 0.0190733 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0190733
-10.56	0.56	0.0318202
0.56	12.57	0.0190733

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0171273 [N/mm²] Pressione inf. 0.0415197 [N/mm²]
 Piedritto destro Pressione sup. 0.0102662 [N/mm²] Pressione inf. 0.0346587 [N/mm²]

Analisi della combinazione n° 4

Pressione in calotta(solo peso terreno) 0.0141664 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0141664
-10.56	0.56	0.0252138
0.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0155204 [N/mm²] Pressione inf. 0.0354458 [N/mm²]
 Piedritto destro Pressione sup. 0.0087202 [N/mm²] Pressione inf. 0.0286456 [N/mm²]

Analisi della combinazione n° 5

Pressione in calotta(solo peso terreno) 0.0190733 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0190733
-10.56	0.56	0.0360692
0.56	12.57	0.0190733

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0194143 [N/mm²] Pressione inf. 0.0438068 [N/mm²]
 Piedritto destro Pressione sup. 0.0102662 [N/mm²] Pressione inf. 0.0346587 [N/mm²]

Analisi della combinazione n° 6

Pressione in calotta(solo peso terreno) 0.0141664 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0141664
-10.56	0.56	0.0288962
0.56	12.57	0.0141664

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Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0177871 [N/mmq] Pressione inf. 0.0377126 [N/mmq]
 Piedritto destro Pressione sup. 0.0087202 [N/mmq] Pressione inf. 0.0286456 [N/mmq]

Analisi della combinazione n° 7

Pressione in calotta(solo peso terreno) 0.0190733 [N/mmq]

Carichi verticali in calotta

Xi	Xj	Q[N/mmq]
-20.56	-2.56	0.0190733
-2.56	0.56	0.1230742
0.56	12.57	0.0190733

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0662449 [N/mmq] Pressione inf. 0.0906373 [N/mmq]
 Piedritto destro Pressione sup. 0.0102662 [N/mmq] Pressione inf. 0.0346587 [N/mmq]

Analisi della combinazione n° 8

Pressione in calotta(solo peso terreno) 0.0141664 [N/mmq]

Carichi verticali in calotta

Xi	Xj	Q[N/mmq]
-20.56	-2.56	0.0141664
-2.56	0.56	0.1043006
0.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0642025 [N/mmq] Pressione inf. 0.0841279 [N/mmq]
 Piedritto destro Pressione sup. 0.0087202 [N/mmq] Pressione inf. 0.0286456 [N/mmq]

Analisi della combinazione n° 9

Pressione in calotta(solo peso terreno) 0.0190733 [N/mmq]

Carichi verticali in calotta

Xi	Xj	Q[N/mmq]
-20.56	-2.56	0.0190733
-2.56	0.56	0.1230742
0.56	12.57	0.0190733

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0662449 [N/mmq] Pressione inf. 0.0906373 [N/mmq]
 Piedritto destro Pressione sup. 0.0102662 [N/mmq] Pressione inf. 0.0346587 [N/mmq]

Analisi della combinazione n° 10

Pressione in calotta(solo peso terreno) 0.0141664 [N/mmq]

Carichi verticali in calotta

Xi	Xj	Q[N/mmq]
-20.56	-2.56	0.0141664
-2.56	0.56	0.1043006
0.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0642025 [N/mmq] Pressione inf. 0.0841279 [N/mmq]
 Piedritto destro Pressione sup. 0.0087202 [N/mmq] Pressione inf. 0.0286456 [N/mmq]

Analisi della combinazione n° 11

Pressione in calotta(solo peso terreno) 0.0190733 [N/mmq]

Carichi verticali in calotta

Xi	Xj	Q[N/mmq]
-20.56	-2.56	0.0190733
-2.56	0.56	0.1577412
0.56	12.57	0.0190733

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0849044 [N/mmq] Pressione inf. 0.1092969 [N/mmq]
 Piedritto destro Pressione sup. 0.0102662 [N/mmq] Pressione inf. 0.0346587 [N/mmq]

Analisi della combinazione n° 12

Pressione in calotta(solo peso terreno) 0.0141664 [N/mmq]

Carichi verticali in calotta



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Xi	Xj	Q[N/mm ²]
-20.56	-2.56	0.0141664
-2.56	0.56	0.1343453
0.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro	Pressione sup. 0.0826966 [N/mm ²]	Pressione inf. 0.1026220 [N/mm ²]
Piedritto destro	Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]

Analisi della combinazione n° 13

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro	Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]
Piedritto destro	Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro	Pressione sup. 0.0205106 [N/mm ²]	Pressione inf. 0.0205106 [N/mm ²]
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Analisi della combinazione n° 14

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro	Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]
Piedritto destro	Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro	Pressione sup. 0.0205106 [N/mm ²]	Pressione inf. 0.0205106 [N/mm ²]
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Analisi della combinazione n° 15

Pressione in calotta(solo peso terreno) 0.0141664 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro	Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]
Piedritto destro	Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro	Pressione sup. 0.0208840 [N/mm ²]	Pressione inf. 0.0208840 [N/mm ²]
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Analisi della combinazione n° 16

Pressione in calotta(solo peso terreno) 0.0141664 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro	Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]
Piedritto destro	Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro	Pressione sup. 0.0208840 [N/mm ²]	Pressione inf. 0.0208840 [N/mm ²]
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Analisi della combinazione n° 17

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

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Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro Pressione sup. 0.0205106 [N/mm ²]	Pressione inf. 0.0205106 [N/mm ²]
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Analisi della combinazione n° 18

 Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro Pressione sup. 0.0205106 [N/mm ²]	Pressione inf. 0.0205106 [N/mm ²]
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Analisi della combinazione n° 19

 Pressione in calotta(solo peso terreno) 0.0141664 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]
Piedritto destro Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro Pressione sup. 0.0208840 [N/mm ²]	Pressione inf. 0.0208840 [N/mm ²]
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Analisi della combinazione n° 20

 Pressione in calotta(solo peso terreno) 0.0141664 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0141664

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]
Piedritto destro Pressione sup. 0.0087202 [N/mm ²]	Pressione inf. 0.0286456 [N/mm ²]

Spinte sismiche sui piedritti

Piedritto sinistro Pressione sup. 0.0208840 [N/mm ²]	Pressione inf. 0.0208840 [N/mm ²]
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Analisi della combinazione n° 21

 Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 22

 Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

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Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 23

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 24

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0136238
-10.56	0.56	0.0221217
0.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0119070 [N/mm ²]	Pressione inf. 0.0293302 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 25

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-2.56	0.0136238
-2.56	0.56	0.0829577
0.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0446521 [N/mm ²]	Pressione inf. 0.0620753 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 26

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0136238
-10.56	0.56	0.0221217
0.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0119070 [N/mm ²]	Pressione inf. 0.0293302 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 27

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-2.56	0.0136238
-2.56	0.56	0.0829577
0.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0446521 [N/mm ²]	Pressione inf. 0.0620753 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 28

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

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Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-10.56	0.0136238
-10.56	0.56	0.0249544
0.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0134317 [N/mm ²]	Pressione inf. 0.0308549 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

Analisi della combinazione n° 29

Pressione in calotta(solo peso terreno) 0.0136238 [N/mm²]

Carichi verticali in calotta

Xi	Xj	Q[N/mm ²]
-20.56	-2.56	0.0136238
-2.56	0.56	0.1060691
0.56	12.57	0.0136238

Spinte sui piedritti

Piedritto sinistro Pressione sup. 0.0570918 [N/mm ²]	Pressione inf. 0.0745150 [N/mm ²]
Piedritto destro Pressione sup. 0.0073330 [N/mm ²]	Pressione inf. 0.0247562 [N/mm ²]

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Spostamenti

Spostamenti fondazione (Combinazione n° 1)

X [m]	u _x [cm]	u _y [cm]
0.08	0.122	2.251
0.44	0.200	2.202
0.83	0.214	2.155
1.22	0.204	2.118
1.58	0.142	2.087

Spostamenti traverso (Combinazione n° 1)

X [m]	u _x [cm]	u _y [cm]
0.08	0.122	2.251
0.44	0.066	2.234
0.83	0.051	2.200
1.22	0.060	2.149
1.58	0.142	2.087

Spostamenti fondazione (Combinazione n° 2)

X [m]	u _x [cm]	u _y [cm]
0.08	0.126	1.850
0.44	0.192	1.809
0.83	0.203	1.768
1.22	0.194	1.736
1.58	0.140	1.708

Spostamenti traverso (Combinazione n° 2)

X [m]	u _x [cm]	u _y [cm]
0.08	0.126	1.850
0.44	0.077	1.836
0.83	0.063	1.807
1.22	0.069	1.763
1.58	0.140	1.708

Spostamenti fondazione (Combinazione n° 3)

X [m]	u _x [cm]	u _y [cm]
0.08	0.118	2.252
0.44	0.199	2.203
0.83	0.212	2.154
1.22	0.203	2.118
1.58	0.143	2.088

Spostamenti traverso (Combinazione n° 3)

X [m]	u _x [cm]	u _y [cm]
0.08	0.118	2.252
0.44	0.062	2.230
0.83	0.049	2.195
1.22	0.059	2.145
1.58	0.143	2.088

Spostamenti fondazione (Combinazione n° 4)

X [m]	u _x [cm]	u _y [cm]
0.08	0.122	1.851
0.44	0.190	1.809
0.83	0.202	1.768
1.22	0.193	1.736
1.58	0.141	1.709

Spostamenti traverso (Combinazione n° 4)

X [m]	u _x [cm]	u _y [cm]
0.08	0.122	1.851
0.44	0.072	1.833
0.83	0.061	1.802
1.22	0.069	1.759
1.58	0.141	1.709

Spostamenti fondazione (Combinazione n° 5)

X [m]	u _x [cm]	u _y [cm]
0.08	0.156	2.761
0.44	0.265	2.695
0.83	0.283	2.630
1.22	0.270	2.581
1.58	0.191	2.541

Spostamenti traverso (Combinazione n° 5)

X [m]	u _x [cm]	u _y [cm]
0.08	0.156	2.761
0.44	0.080	2.729
0.83	0.064	2.681
1.22	0.079	2.615
1.58	0.191	2.541

Spostamenti fondazione (Combinazione n° 6)

X [m]	u _x [cm]	u _y [cm]
0.08	0.160	2.292
0.44	0.253	2.236
0.83	0.269	2.180
1.22	0.257	2.137
1.58	0.188	2.101

Spostamenti traverso (Combinazione n° 6)

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X [m]	u _x [cm]	u _y [cm]
0.08	0.160	2.292
0.44	0.094	2.265
0.83	0.079	2.223
1.22	0.092	2.166
1.58	0.188	2.101

Spostamenti fondazione (Combinazione n° 7)

X [m]	u _x [cm]	u _y [cm]
0.08	1.133	2.353
0.44	1.706	2.027
0.83	1.802	1.678
1.22	1.704	1.326
1.58	1.117	0.994

Spostamenti traverso (Combinazione n° 7)

X [m]	u _x [cm]	u _y [cm]
0.08	1.133	2.353
0.44	0.554	2.036
0.83	0.451	1.686
1.22	0.542	1.333
1.58	1.117	0.994

Spostamenti fondazione (Combinazione n° 8)

X [m]	u _x [cm]	u _y [cm]
0.08	1.127	1.938
0.44	1.620	1.657
0.83	1.703	1.355
1.22	1.617	1.050
1.58	1.106	0.760

Spostamenti traverso (Combinazione n° 8)

X [m]	u _x [cm]	u _y [cm]
0.08	1.127	1.938
0.44	0.623	1.663
0.83	0.532	1.359
1.22	0.610	1.054
1.58	1.106	0.760

Spostamenti fondazione (Combinazione n° 9)

X [m]	u _x [cm]	u _y [cm]
0.08	1.130	2.355
0.44	1.704	2.027
0.83	1.801	1.677
1.22	1.703	1.326
1.58	1.118	0.994

Spostamenti traverso (Combinazione n° 9)

X [m]	u _x [cm]	u _y [cm]
0.08	1.130	2.355
0.44	0.550	2.033
0.83	0.449	1.681
1.22	0.542	1.329
1.58	1.118	0.994

Spostamenti fondazione (Combinazione n° 10)

X [m]	u _x [cm]	u _y [cm]
0.08	1.123	1.939
0.44	1.618	1.657
0.83	1.701	1.355
1.22	1.616	1.049
1.58	1.107	0.761

Spostamenti traverso (Combinazione n° 10)

X [m]	u _x [cm]	u _y [cm]
0.08	1.123	1.939
0.44	0.619	1.660
0.83	0.530	1.354
1.22	0.610	1.050
1.58	1.107	0.761

Spostamenti fondazione (Combinazione n° 11)

X [m]	u _x [cm]	u _y [cm]
0.08	1.505	2.898
0.44	2.272	2.460
0.83	2.401	1.994
1.22	2.270	1.525
1.58	1.490	1.083

Spostamenti traverso (Combinazione n° 11)

X [m]	u _x [cm]	u _y [cm]
0.08	1.505	2.898
0.44	0.731	2.466
0.83	0.597	1.996
1.22	0.722	1.527
1.58	1.490	1.083

Spostamenti fondazione (Combinazione n° 12)

X [m]	u _x [cm]	u _y [cm]
0.08	1.495	2.410
0.44	2.158	2.033
0.83	2.268	1.630

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1.22	2.155	1.222
1.58	1.476	0.837

Spostamenti trasverso (Combinazione n° 12)

X [m]	u _x [cm]	u _y [cm]
0.08	1.495	2.410
0.44	0.822	2.034
0.83	0.705	1.626
1.22	0.813	1.221
1.58	1.476	0.837

Spostamenti fondazione (Combinazione n° 13)

X [m]	u _x [cm]	u _y [cm]
0.08	0.507	0.473
0.44	0.500	0.476
0.83	0.499	0.479
1.22	0.498	0.477
1.58	0.493	0.474

Spostamenti trasverso (Combinazione n° 13)

X [m]	u _x [cm]	u _y [cm]
0.08	0.507	0.473
0.44	0.504	0.475
0.83	0.501	0.475
1.22	0.498	0.476
1.58	0.493	0.474

Spostamenti fondazione (Combinazione n° 14)

X [m]	u _x [cm]	u _y [cm]
0.08	0.506	0.558
0.44	0.500	0.561
0.83	0.499	0.563
1.22	0.498	0.562
1.58	0.493	0.559

Spostamenti trasverso (Combinazione n° 14)

X [m]	u _x [cm]	u _y [cm]
0.08	0.506	0.558
0.44	0.503	0.560
0.83	0.500	0.560
1.22	0.497	0.561
1.58	0.493	0.559

Spostamenti fondazione (Combinazione n° 15)

X [m]	u _x [cm]	u _y [cm]
0.08	0.515	0.568
0.44	0.508	0.572
0.83	0.507	0.574
1.22	0.506	0.573
1.58	0.500	0.570

Spostamenti trasverso (Combinazione n° 15)

X [m]	u _x [cm]	u _y [cm]
0.08	0.515	0.568
0.44	0.511	0.571
0.83	0.508	0.570
1.22	0.505	0.571
1.58	0.500	0.570

Spostamenti fondazione (Combinazione n° 16)

X [m]	u _x [cm]	u _y [cm]
0.08	0.516	0.483
0.44	0.508	0.487
0.83	0.507	0.490
1.22	0.506	0.488
1.58	0.500	0.485

Spostamenti trasverso (Combinazione n° 16)

X [m]	u _x [cm]	u _y [cm]
0.08	0.516	0.483
0.44	0.512	0.485
0.83	0.508	0.485
1.22	0.505	0.486
1.58	0.500	0.485

Spostamenti fondazione (Combinazione n° 17)

X [m]	u _x [cm]	u _y [cm]
0.08	0.503	0.474
0.44	0.499	0.477
0.83	0.498	0.478
1.22	0.497	0.477
1.58	0.493	0.474

Spostamenti trasverso (Combinazione n° 17)

X [m]	u _x [cm]	u _y [cm]
0.08	0.503	0.474
0.44	0.499	0.471
0.83	0.498	0.470
1.22	0.497	0.471
1.58	0.493	0.474

Spostamenti fondazione (Combinazione n° 18)

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X [m]	u _x [cm]	u _y [cm]
0.08	0.502	0.559
0.44	0.499	0.562
0.83	0.498	0.563
1.22	0.497	0.562
1.58	0.493	0.559

Spostamenti traverso (Combinazione n° 18)

X [m]	u _x [cm]	u _y [cm]
0.08	0.502	0.559
0.44	0.499	0.557
0.83	0.498	0.555
1.22	0.497	0.557
1.58	0.493	0.559

Spostamenti fondazione (Combinazione n° 19)

X [m]	u _x [cm]	u _y [cm]
0.08	0.511	0.570
0.44	0.507	0.572
0.83	0.506	0.574
1.22	0.505	0.572
1.58	0.501	0.570

Spostamenti traverso (Combinazione n° 19)

X [m]	u _x [cm]	u _y [cm]
0.08	0.511	0.570
0.44	0.506	0.567
0.83	0.506	0.565
1.22	0.505	0.567
1.58	0.501	0.570

Spostamenti fondazione (Combinazione n° 20)

X [m]	u _x [cm]	u _y [cm]
0.08	0.511	0.485
0.44	0.507	0.488
0.83	0.506	0.490
1.22	0.505	0.488
1.58	0.500	0.485

Spostamenti traverso (Combinazione n° 20)

X [m]	u _x [cm]	u _y [cm]
0.08	0.511	0.485
0.44	0.507	0.482
0.83	0.506	0.480
1.22	0.505	0.482
1.58	0.500	0.485

Spostamenti fondazione (Combinazione n° 21)

X [m]	u _x [cm]	u _y [cm]
0.08	0.002	0.519
0.44	0.000	0.519
0.83	0.000	0.519
1.22	0.000	0.519
1.58	-0.002	0.519

Spostamenti traverso (Combinazione n° 21)

X [m]	u _x [cm]	u _y [cm]
0.08	0.002	0.519
0.44	0.002	0.524
0.83	0.000	0.526
1.22	-0.002	0.524
1.58	-0.002	0.519

Spostamenti fondazione (Combinazione n° 22)

X [m]	u _x [cm]	u _y [cm]
0.08	0.002	0.519
0.44	0.000	0.519
0.83	0.000	0.519
1.22	0.000	0.519
1.58	-0.002	0.519

Spostamenti traverso (Combinazione n° 22)

X [m]	u _x [cm]	u _y [cm]
0.08	0.002	0.519
0.44	0.002	0.524
0.83	0.000	0.526
1.22	-0.002	0.524
1.58	-0.002	0.519

Spostamenti fondazione (Combinazione n° 23)

X [m]	u _x [cm]	u _y [cm]
0.08	0.002	0.519
0.44	0.000	0.519
0.83	0.000	0.519
1.22	0.000	0.519
1.58	-0.002	0.519

Spostamenti traverso (Combinazione n° 23)

X [m]	u _x [cm]	u _y [cm]
0.08	0.002	0.519
0.44	0.002	0.524
0.83	0.000	0.526



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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1.22	-0.002	0.524
1.58	-0.002	0.519

Spostamenti fondazione (Combinazione n° 24)

X [m]	u _x [cm]	u _y [cm]
0.08	0.079	1.536
0.44	0.133	1.503
0.83	0.142	1.471
1.22	0.135	1.446
1.58	0.095	1.426

Spostamenti traverso (Combinazione n° 24)

X [m]	u _x [cm]	u _y [cm]
0.08	0.079	1.536
0.44	0.041	1.522
0.83	0.033	1.498
1.22	0.040	1.465
1.58	0.095	1.426

Spostamenti fondazione (Combinazione n° 25)

X [m]	u _x [cm]	u _y [cm]
0.08	0.753	1.605
0.44	1.136	1.386
0.83	1.200	1.153
1.22	1.135	0.918
1.58	0.745	0.697

Spostamenti traverso (Combinazione n° 25)

X [m]	u _x [cm]	u _y [cm]
0.08	0.753	1.605
0.44	0.367	1.390
0.83	0.299	1.156
1.22	0.361	0.921
1.58	0.745	0.697

Spostamenti fondazione (Combinazione n° 26)

X [m]	u _x [cm]	u _y [cm]
0.08	0.083	1.534
0.44	0.134	1.503
0.83	0.143	1.471
1.22	0.136	1.447
1.58	0.095	1.426

Spostamenti traverso (Combinazione n° 26)

X [m]	u _x [cm]	u _y [cm]
0.08	0.083	1.534
0.44	0.046	1.525
0.83	0.035	1.503
1.22	0.040	1.469
1.58	0.095	1.426

Spostamenti fondazione (Combinazione n° 27)

X [m]	u _x [cm]	u _y [cm]
0.08	0.754	1.604
0.44	1.136	1.386
0.83	1.201	1.153
1.22	1.135	0.919
1.58	0.745	0.698

Spostamenti traverso (Combinazione n° 27)

X [m]	u _x [cm]	u _y [cm]
0.08	0.754	1.604
0.44	0.368	1.391
0.83	0.300	1.156
1.22	0.361	0.922
1.58	0.745	0.698

Spostamenti fondazione (Combinazione n° 28)

X [m]	u _x [cm]	u _y [cm]
0.08	0.105	1.875
0.44	0.177	1.831
0.83	0.189	1.788
1.22	0.180	1.756
1.58	0.127	1.728

Spostamenti traverso (Combinazione n° 28)

X [m]	u _x [cm]	u _y [cm]
0.08	0.105	1.875
0.44	0.055	1.855
0.83	0.043	1.823
1.22	0.053	1.779
1.58	0.127	1.728

Spostamenti fondazione (Combinazione n° 29)

X [m]	u _x [cm]	u _y [cm]
0.08	1.004	1.966
0.44	1.515	1.675
0.83	1.601	1.364
1.22	1.514	1.052
1.58	0.993	0.757

Spostamenti traverso (Combinazione n° 29)



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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X [m]	u _x [cm]	u _y [cm]
0.08	1.004	1.966
0.44	0.488	1.679
0.83	0.398	1.367
1.22	0.482	1.053
1.58	0.993	0.757

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Sollecitazioni

Sollecitazioni fondazione (Combinazione n° 1)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-11.4641	-2.2428	76.2487
0.44	3.4576	-22.6376	37.5774
0.83	8.6638	-1.1476	25.7957
1.22	3.6975	22.8739	39.4140
1.58	-11.1516	3.6227	72.7400

Sollecitazioni traverso (Combinazione n° 1)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-11.4641	1.5012	76.2669
0.44	3.0682	23.1690	31.7322
0.83	7.6694	-0.8757	18.2525
1.22	2.1591	-22.3520	33.8077
1.58	-11.1516	0.3113	72.8365

Sollecitazioni fondazione (Combinazione n° 2)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-9.6129	-2.0241	63.3206
0.44	2.6064	-18.4421	31.6070
0.83	6.8436	0.9062	22.0519
1.22	2.8172	18.5637	33.0439
1.58	-9.3435	3.2110	60.2803

Sollecitazioni traverso (Combinazione n° 2)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-9.6129	1.0853	63.3437
0.44	2.1453	18.8221	27.1845
0.83	5.8535	-0.7492	16.2249
1.22	1.3571	-18.1380	28.9117
1.58	-9.3435	0.5071	60.3716

Sollecitazioni fondazione (Combinazione n° 3)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-12.4815	-4.7059	76.1905
0.44	4.0222	-23.8397	35.4268
0.83	9.4865	1.2157	23.3329
1.22	4.2568	24.1858	37.3360
1.58	-12.1673	6.0729	72.6776

Sollecitazioni traverso (Combinazione n° 3)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-12.4815	-0.9617	76.3296
0.44	0.4568	21.9566	33.8770
0.83	4.8059	-0.8131	20.7154
1.22	-0.4403	-21.0298	35.8917
1.58	-12.1673	2.7626	72.8945

Sollecitazioni fondazione (Combinazione n° 4)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-10.6303	-4.4872	63.2624
0.44	3.1710	-19.6442	29.4564
0.83	7.6663	0.9742	19.5891
1.22	3.3765	19.8756	30.9659
1.58	-10.3591	5.6613	60.2179

Sollecitazioni traverso (Combinazione n° 4)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-10.6303	-1.3776	63.4064
0.44	-0.4561	17.6096	29.3293
0.83	2.9901	-0.6865	18.6878
1.22	-1.2423	-16.8157	30.9957
1.58	-10.3591	2.9583	60.4295

Sollecitazioni fondazione (Combinazione n° 5)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-14.5288	-3.1976	94.7393
0.44	5.3149	-29.9755	42.8497
0.83	12.2115	1.5051	27.0194
1.22	5.6233	30.3374	45.1125
1.58	-14.1091	5.0047	90.0493

Sollecitazioni traverso (Combinazione n° 5)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-14.5288	1.4549	94.7820
0.44	4.1744	29.8075	37.7593
0.83	10.0889	-1.2561	20.4785
1.22	2.9676	-28.9281	40.4789
1.58	-14.1091	0.9311	90.1950

Sollecitazioni fondazione (Combinazione n° 6)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-12.2289	-2.9504	79.3438
0.44	4.2606	-24.7589	36.2491
0.83	9.9516	1.2144	23.2271
1.22	4.5300	24.9882	38.0521
1.58	-11.8663	4.5000	75.2790

Sollecitazioni traverso (Combinazione n° 6)

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X [m]	M [kNm]	V [kN]	N [kN]
0.08	-12.2289	0.9464	79.3930
0.44	3.0218	24.4369	32.6535
0.83	7.8367	-1.0707	18.4663
1.22	1.9760	-23.6873	34.9294
1.58	-11.8663	1.1460	75.4176

Sollecitazioni fondazione (Combinazione n° 7)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.7896	3.1941	70.8572
0.44	-2.4874	-0.3512	67.3620
0.83	-2.3487	-1.7501	67.8784
1.22	-0.5516	-6.9346	59.8302
1.58	0.6746	7.7650	41.8131

Sollecitazioni traverso (Combinazione n° 7)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.7896	6.6671	70.6151
0.44	1.4671	-6.5880	45.0953
0.83	-3.9360	-9.3613	50.0055
1.22	-5.8010	2.7196	52.2001
1.58	0.6746	7.7598	42.1942

Sollecitazioni fondazione (Combinazione n° 8)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-0.3701	2.6895	58.6495
0.44	-2.9513	2.8042	60.8481
0.83	-3.5582	-1.7187	63.1089
1.22	-1.2695	-9.3367	54.0126
1.58	1.7636	6.6874	33.4784

Sollecitazioni traverso (Combinazione n° 8)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-0.3701	5.5640	58.4469
0.44	0.3525	-8.9037	42.1871
0.83	-5.0633	-7.9894	48.3263
1.22	-5.9456	5.6618	48.1196
1.58	1.7636	7.0728	33.8162

Sollecitazioni fondazione (Combinazione n° 9)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-2.8069	0.7311	70.7990
0.44	-1.9228	-1.5532	65.2114
0.83	-1.5259	-1.6820	65.4156
1.22	0.0077	-5.6227	57.7522
1.58	-0.3410	10.2153	41.7508

Sollecitazioni traverso (Combinazione n° 9)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-2.8069	4.2041	70.6778
0.44	-1.1344	-7.8004	47.2401
0.83	-6.7994	-9.2986	52.4684
1.22	-8.4003	4.0419	54.2840
1.58	-0.3410	10.2110	42.2522

Sollecitazioni fondazione (Combinazione n° 10)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.3875	0.2265	58.5913
0.44	-2.3867	1.6021	58.6975
0.83	-2.7355	-1.6506	60.6461
1.22	-0.7102	-8.0248	51.9345
1.58	0.7480	9.1376	33.4160

Sollecitazioni traverso (Combinazione n° 10)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.3875	3.1011	58.5096
0.44	-2.2490	-10.1161	44.3318
0.83	-7.9267	-7.9267	50.7892
1.22	-8.5450	6.9841	50.2035
1.58	0.7480	9.5240	33.8741

Sollecitazioni fondazione (Combinazione n° 11)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.6294	4.0516	87.5506
0.44	-2.6118	-0.2603	82.5625
0.83	-2.4718	-2.3584	83.1297
1.22	-0.0422	-9.4073	72.3340
1.58	1.6593	10.5278	48.8135

Sollecitazioni traverso (Combinazione n° 11)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.6294	8.3427	87.2463
0.44	2.0395	-9.8684	55.5767
0.83	-5.3849	-12.5702	62.8159
1.22	-7.6458	4.5007	65.0020
1.58	1.6593	10.8623	49.3386

Sollecitazioni fondazione (Combinazione n° 12)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	0.0948	3.3344	73.1157
0.44	-3.1497	3.5694	75.2372
0.83	-3.9174	-2.2854	77.9698

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1.22	-0.9190	-12.2123	66.0103
1.58	2.9431	9.1352	39.5431

Sollecitazioni trasverso (Combinazione n° 12)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	0.0948	6.9180	72.8640
0.44	0.6313	-12.5308	52.6569
0.83	-6.7191	-10.7243	61.2681
1.22	-7.7610	8.0459	60.5398
1.58	2.9431	9.9003	40.0104

Sollecitazioni fondazione (Combinazione n° 13)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	1.6994	-1.6990	13.8401
0.44	-1.6738	6.0952	25.7109
0.83	-3.1769	-0.1592	30.6083
1.22	-1.7384	-6.6571	26.2756
1.58	1.7705	1.2746	14.1830

Sollecitazioni trasverso (Combinazione n° 13)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	1.6994	-1.0179	13.9068
0.44	-3.0193	-6.1326	23.8142
0.83	-4.5441	0.5065	27.4051
1.22	-3.0944	7.2195	23.9885
1.58	1.7705	1.4837	14.2507

Sollecitazioni fondazione (Combinazione n° 14)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	1.4016	-1.5713	15.4329
0.44	-1.5329	5.2920	26.3577
0.83	-2.8420	-0.0850	30.7770
1.22	-1.5977	-5.7734	27.0345
1.58	1.4732	1.1469	15.7770

Sollecitazioni trasverso (Combinazione n° 14)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	1.4016	-0.8121	15.4914
0.44	-2.8794	-5.5755	23.9381
0.83	-4.2839	0.5018	27.2384
1.22	-2.9549	6.6688	24.1415
1.58	1.4732	1.2783	15.8365

Sollecitazioni fondazione (Combinazione n° 15)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	1.7481	-1.6877	15.8379
0.44	-1.6948	6.1705	28.3233
0.83	-3.2142	-0.1386	33.3533
1.22	-1.7593	-6.7310	28.9586
1.58	1.8192	1.2564	16.1807

Sollecitazioni trasverso (Combinazione n° 15)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	1.7481	-0.9085	15.9016
0.44	-3.0448	-6.2462	25.5481
0.83	-4.6048	0.5502	29.1785
1.22	-3.1199	7.4162	25.7114
1.58	1.8192	1.3812	16.2454

Sollecitazioni fondazione (Combinazione n° 16)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.0459	-1.8155	14.2451
0.44	-1.8357	6.9737	27.6766
0.83	-3.5491	-0.2128	33.1846
1.22	-1.8999	-7.6147	28.1998
1.58	2.1165	1.3841	14.5867

Sollecitazioni trasverso (Combinazione n° 16)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.0459	-1.1143	14.3170
0.44	-3.1848	-6.8034	25.4243
0.83	-4.8651	0.5549	29.3453
1.22	-3.2594	7.9669	25.5585
1.58	2.1165	1.5866	14.6596

Sollecitazioni fondazione (Combinazione n° 17)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.7607	-0.6780	13.8692
0.44	-1.2717	6.6091	26.5937
0.83	-2.8886	-0.1733	31.6297
1.22	-1.3437	-7.2046	27.1446
1.58	2.8339	0.2315	14.2046

Sollecitazioni trasverso (Combinazione n° 17)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.7607	0.0033	13.8857
0.44	-1.2995	-5.6257	22.9274
0.83	-2.7138	0.4854	26.3839
1.22	-1.3712	6.6792	23.1279
1.58	2.8339	0.4416	14.2212

Sollecitazioni fondazione (Combinazione n° 18)

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.4629	-0.5502	15.4619
0.44	-1.1307	5.8059	27.2405
0.83	-2.5537	-0.0991	31.7984
1.22	-1.2030	-6.3209	27.9035
1.58	2.5366	0.1038	15.7986

Sollecitazioni trasverso (Combinazione n° 18)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.4629	0.2091	15.4703
0.44	-1.1595	-5.0686	23.0513
0.83	-2.4535	0.4807	26.2171
1.22	-1.2316	6.1285	23.2809
1.58	2.5366	0.2363	15.8070

Sollecitazioni fondazione (Combinazione n° 19)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.8094	-0.6667	15.8669
0.44	-1.2926	6.6844	29.2062
0.83	-2.9259	-0.1527	34.3747
1.22	-1.3645	-7.2785	29.8276
1.58	2.8826	0.2133	16.2023

Sollecitazioni trasverso (Combinazione n° 19)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	2.8094	0.1127	15.8805
0.44	-1.3250	-5.7393	24.6614
0.83	-2.7745	0.5291	28.1573
1.22	-1.3966	6.8759	24.8509
1.58	2.8826	0.3392	16.2159

Sollecitazioni fondazione (Combinazione n° 20)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	3.1072	-0.7945	14.2741
0.44	-1.4336	7.4876	28.5594
0.83	-3.2608	-0.2269	34.2060
1.22	-1.5052	-8.1622	29.0688
1.58	3.1799	0.3410	14.6084

Sollecitazioni trasverso (Combinazione n° 20)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	3.1072	-0.0931	14.2959
0.44	-1.4650	-6.2965	24.5375
0.83	-3.0347	0.5338	28.3241
1.22	-1.5362	7.4266	24.6979
1.58	3.1799	0.5445	14.6301

Sollecitazioni fondazione (Combinazione n° 21)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.5891	-1.6512	14.8026
0.44	-0.1376	-1.4406	13.6986
0.83	0.1656	0.1412	13.7094
1.22	-0.1376	1.4591	14.1912
1.58	-1.5891	1.6512	14.8026

Sollecitazioni trasverso (Combinazione n° 21)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.5891	-0.9228	14.8658
0.44	-1.4896	1.3027	11.5805
0.83	-1.2357	0.2544	10.3620
1.22	-1.4896	-0.7329	11.6305
1.58	-1.5891	0.9228	14.8658

Sollecitazioni fondazione (Combinazione n° 22)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.5891	1.6512	14.8026
0.44	-0.1376	-1.4406	13.6986
0.83	0.1656	0.1412	13.7094
1.22	-0.1376	1.4591	14.1912
1.58	-1.5891	1.6512	14.8026

Sollecitazioni trasverso (Combinazione n° 22)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.5891	-0.9228	14.8658
0.44	-1.4896	1.3027	11.5805
0.83	-1.2357	0.2544	10.3620
1.22	-1.4896	-0.7329	11.6305
1.58	-1.5891	0.9228	14.8658

Sollecitazioni fondazione (Combinazione n° 23)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.8012	-2.0100	14.7938
0.44	-0.1189	-1.6172	13.3860
0.83	0.2225	0.1500	13.3506
1.22	-0.1189	1.6508	13.8877
1.58	-1.8012	2.0100	14.7938

Sollecitazioni trasverso (Combinazione n° 23)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.8012	-1.2817	14.8746
0.44	-1.9327	1.1257	11.8928
0.83	-1.7170	0.2632	10.7208

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1.22	-1.9327	-0.5408	11.9338
1.58	-1.8012	1.2817	14.8746

Sollecitazioni fondazione (Combinazione n° 24)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-7.7199	-2.0720	51.8097
0.44	2.6233	-15.4105	25.5546
0.83	6.1611	0.7916	17.6446
1.22	2.7793	15.5936	26.8306
1.58	-7.5103	2.9813	49.4671

Sollecitazioni traverso (Combinazione n° 24)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-7.7199	0.4727	51.8489
0.44	1.6754	15.3043	22.3339
0.83	4.7107	-0.5536	13.3257
1.22	1.0709	-14.6973	23.7098
1.58	-7.5103	0.7259	49.5582

Sollecitazioni fondazione (Combinazione n° 25)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.2702	1.5527	48.2153
0.44	-1.3401	-0.5529	45.4110
0.83	-1.1806	-1.1402	45.6998
1.22	-0.0534	-4.2787	40.4414
1.58	0.3738	5.7429	28.8493

Sollecitazioni traverso (Combinazione n° 25)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.2702	3.9166	48.0811
0.44	0.6080	-4.5336	31.2426
0.83	-3.0262	-6.2106	34.4944
1.22	-4.2358	2.0171	35.9714
1.58	0.3738	5.6915	29.1300

Sollecitazioni fondazione (Combinazione n° 26)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-7.9328	-1.6583	51.8165
0.44	2.1467	-15.2180	25.9209
0.83	5.6453	0.7717	18.0579
1.22	2.3094	15.3755	27.1751
1.58	-7.7252	2.5863	49.4801

Sollecitazioni traverso (Combinazione n° 26)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-7.9328	0.8862	51.8355
0.44	1.7274	15.5054	21.9723
0.83	4.8055	-0.5671	12.9122
1.22	1.1200	-14.9241	23.3579
1.58	-7.7252	0.3298	49.5517

Sollecitazioni fondazione (Combinazione n° 27)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-2.3308	-0.0862	48.1737
0.44	-1.3461	-1.3621	43.9852
0.83	-1.0108	-1.1034	44.0608
1.22	-0.0572	-3.4036	39.0541
1.58	-0.6874	7.3897	28.8103

Sollecitazioni traverso (Combinazione n° 27)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-2.3308	2.2777	48.1199
0.44	-1.5079	-5.3429	32.6683
0.83	-5.3175	-6.1719	36.1333
1.22	-6.3528	2.8922	37.3560
1.58	-0.6874	7.3381	29.1718

Sollecitazioni fondazione (Combinazione n° 28)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-9.9758	-2.4184	64.1410
0.44	3.4642	-20.1690	29.3272
0.83	8.1020	1.0146	18.7502
1.22	3.6715	20.4167	30.8703
1.58	-9.6964	3.6283	61.0162

Sollecitazioni traverso (Combinazione n° 28)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-9.9758	0.7318	64.1824
0.44	2.3857	19.8706	26.0981
0.83	6.3263	-0.8171	14.5198
1.22	1.5803	-19.2412	27.9101
1.58	-9.6964	0.8638	61.1265

Sollecitazioni fondazione (Combinazione n° 29)

X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.3762	2.4144	59.3486
0.44	-1.8203	-0.3588	55.8024
0.83	-1.6868	-1.5611	56.1571
1.22	-0.1055	-6.0798	49.0180
1.58	0.8159	7.3104	33.5257

Sollecitazioni traverso (Combinazione n° 29)



QUADRILATERO
Marche Umbria S.p.A.

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
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X [m]	M [kNm]	V [kN]	N [kN]
0.08	-1.3762	5.3236	59.1586
0.44	0.9624	-6.5801	37.9764
0.83	-3.9895	-8.3598	42.7447
1.22	-5.4953	3.0447	44.2588
1.58	0.8159	7.4846	33.8889

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Pressioni terreno

Pressioni sul terreno di fondazione (Combinazione n° 1)

X [m]	σ [N/mm ²]
0.08	0.113
0.44	0.110
0.83	0.108
1.22	0.106
1.58	0.104

Pressioni sul terreno di fondazione (Combinazione n° 2)

X [m]	σ [N/mm ²]
0.08	0.092
0.44	0.090
0.83	0.088
1.22	0.087
1.58	0.085

Pressioni sul terreno di fondazione (Combinazione n° 3)

X [m]	σ [N/mm ²]
0.08	0.113
0.44	0.110
0.83	0.108
1.22	0.106
1.58	0.104

Pressioni sul terreno di fondazione (Combinazione n° 4)

X [m]	σ [N/mm ²]
0.08	0.093
0.44	0.090
0.83	0.088
1.22	0.087
1.58	0.085

Pressioni sul terreno di fondazione (Combinazione n° 5)

X [m]	σ [N/mm ²]
0.08	0.138
0.44	0.135
0.83	0.132
1.22	0.129
1.58	0.127

Pressioni sul terreno di fondazione (Combinazione n° 6)

X [m]	σ [N/mm ²]
0.08	0.115
0.44	0.112
0.83	0.109
1.22	0.107
1.58	0.105

Pressioni sul terreno di fondazione (Combinazione n° 7)

X [m]	σ [N/mm ²]
0.08	0.118
0.44	0.101
0.83	0.084
1.22	0.066
1.58	0.050

Pressioni sul terreno di fondazione (Combinazione n° 8)

X [m]	σ [N/mm ²]
0.08	0.097
0.44	0.083
0.83	0.068
1.22	0.052
1.58	0.038

Pressioni sul terreno di fondazione (Combinazione n° 9)

X [m]	σ [N/mm ²]
0.08	0.118
0.44	0.101
0.83	0.084
1.22	0.066
1.58	0.050

Pressioni sul terreno di fondazione (Combinazione n° 10)

X [m]	σ [N/mm ²]
0.08	0.097
0.44	0.083
0.83	0.068
1.22	0.052
1.58	0.038

Pressioni sul terreno di fondazione (Combinazione n° 11)

X [m]	σ [N/mm ²]
0.08	0.145
0.44	0.123
0.83	0.100
1.22	0.076
1.58	0.054

Pressioni sul terreno di fondazione (Combinazione n° 12)

X [m]	σ [N/mm ²]
0.08	0.120
0.44	0.102
0.83	0.081
1.22	0.061
1.58	0.042

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Pressioni sul terreno di fondazione (Combinazione n° 13)

X [m]	σ [N/mm ²]
0.08	0.024
0.44	0.024
0.83	0.024
1.22	0.024
1.58	0.024

Pressioni sul terreno di fondazione (Combinazione n° 14)

X [m]	σ [N/mm ²]
0.08	0.028
0.44	0.028
0.83	0.028
1.22	0.028
1.58	0.028

Pressioni sul terreno di fondazione (Combinazione n° 15)

X [m]	σ [N/mm ²]
0.08	0.028
0.44	0.029
0.83	0.029
1.22	0.029
1.58	0.028

Pressioni sul terreno di fondazione (Combinazione n° 16)

X [m]	σ [N/mm ²]
0.08	0.024
0.44	0.024
0.83	0.024
1.22	0.024
1.58	0.024

Pressioni sul terreno di fondazione (Combinazione n° 17)

X [m]	σ [N/mm ²]
0.08	0.024
0.44	0.024
0.83	0.024
1.22	0.024
1.58	0.024

Pressioni sul terreno di fondazione (Combinazione n° 18)

X [m]	σ [N/mm ²]
0.08	0.028
0.44	0.028
0.83	0.028
1.22	0.028
1.58	0.028

Pressioni sul terreno di fondazione (Combinazione n° 19)

X [m]	σ [N/mm ²]
0.08	0.028
0.44	0.029
0.83	0.029
1.22	0.029
1.58	0.028

Pressioni sul terreno di fondazione (Combinazione n° 20)

X [m]	σ [N/mm ²]
0.08	0.024
0.44	0.024
0.83	0.024
1.22	0.024
1.58	0.024

Pressioni sul terreno di fondazione (Combinazione n° 21)

X [m]	σ [N/mm ²]
0.08	0.026
0.44	0.026
0.83	0.026
1.22	0.026
1.58	0.026

Pressioni sul terreno di fondazione (Combinazione n° 22)

X [m]	σ [N/mm ²]
0.08	0.026
0.44	0.026
0.83	0.026
1.22	0.026
1.58	0.026

Pressioni sul terreno di fondazione (Combinazione n° 23)

X [m]	σ [N/mm ²]
0.08	0.026
0.44	0.026
0.83	0.026
1.22	0.026
1.58	0.026

Pressioni sul terreno di fondazione (Combinazione n° 24)

X [m]	σ [N/mm ²]
0.08	0.077
0.44	0.075
0.83	0.074
1.22	0.072
1.58	0.071

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Pressioni sul terreno di fondazione (Combinazione n° 25)

X [m]	σ [N/mm ²]
0.08	0.080
0.44	0.069
0.83	0.058
1.22	0.046
1.58	0.035

Pressioni sul terreno di fondazione (Combinazione n° 26)

X [m]	σ [N/mm ²]
0.08	0.077
0.44	0.075
0.83	0.074
1.22	0.072
1.58	0.071

Pressioni sul terreno di fondazione (Combinazione n° 27)

X [m]	σ [N/mm ²]
0.08	0.080
0.44	0.069
0.83	0.058
1.22	0.046
1.58	0.035

Pressioni sul terreno di fondazione (Combinazione n° 28)

X [m]	σ [N/mm ²]
0.08	0.094
0.44	0.092
0.83	0.089
1.22	0.088
1.58	0.086

Pressioni sul terreno di fondazione (Combinazione n° 29)

X [m]	σ [N/mm ²]
0.08	0.098
0.44	0.084
0.83	0.068
1.22	0.053
1.58	0.038



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Verifiche combinazioni SLU

Simbologia adottata ed unità di misura

N^o	Indice sezione
X	Ascissa/Ordinata sezione, espresso in cm
M	Momento flettente, espresso in kNm
V	Taglio, espresso in kN
N	Sforzo normale, espresso in kN
N_u	Sforzo normale ultimo, espresso in kN
M_u	Momento ultimo, espresso in kNm
A_s	Area armatura inferiore, espresse in cm ²
A_s	Area armatura superiore, espresse in cm ²
CS	Coeff. di sicurezza sezione
V_{red}	Aliquota taglio assorbita dal calcestruzzo in elementi senza armature trasversali, espresa in kN
V_{red}	Aliquota taglio assorbita dal calcestruzzo in elementi con armature trasversali, espresa in kN
V_{red}	Aliquota taglio assorbita armature trasversali, espresa in kN
A_{sv}	Area armature trasversali nella sezione, espresa in cm ²

Verifica sezioni fondazione [Combinazione n° 1 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N_u	M_u	A_n	A_s	CS
1	0.08	11.46 (11.46)	76.25	223.12	33.55	3.93	3.93	2.93
2	0.44	-3.46 (-6.11)	37.58	197.19	-32.04	3.93	3.93	5.25
3	0.83	-8.66 (-8.66)	25.80	74.16	-24.91	3.93	3.93	2.87
4	1.22	-3.70 (-6.37)	39.41	198.68	-32.13	3.93	3.93	5.04
5	1.58	11.15 (11.46)	72.74	206.87	32.60	3.93	3.93	2.84

Verifiche taglio

N°	X	V	V_{red}	V_{red}	V_{red}	A_{sv}
1	0.08	-2.24	84.22	0.00	0.00	0.00
2	0.44	-22.64	79.87	0.00	0.00	0.00
3	0.83	1.15	78.08	0.00	0.00	0.00
4	1.22	22.87	79.41	0.00	0.00	0.00
5	1.58	3.62	83.80	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 1 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N_u	M_u	A_n	A_s	CS
1	0.08	-11.46 (-11.46)	76.27	223.20	-33.55	3.93	3.93	2.93
2	0.44	3.07 (5.78)	31.73	166.02	30.23	3.93	3.93	5.23
3	0.83	7.67 (7.67)	18.25	56.87	23.91	3.93	3.93	3.12
4	1.22	2.16 (4.77)	33.81	247.60	34.97	3.93	3.93	7.32
5	1.58	-11.15 (-11.19)	72.84	215.52	-33.11	3.93	3.93	2.96

Verifiche taglio

N°	X	V	V_{red}	V_{red}	V_{red}	A_{sv}
1	0.08	1.50	84.23	0.00	0.00	0.00
2	0.44	23.17	78.93	0.00	0.00	0.00
3	0.83	-0.88	77.15	0.00	0.00	0.00
4	1.22	-22.35	78.92	0.00	0.00	0.00
5	1.58	0.31	83.81	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 2 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N_u	M_u	A_n	A_s	CS
1	0.08	9.61 (9.61)	63.32	219.64	33.34	3.93	3.93	3.47
2	0.44	-2.61 (-4.76)	31.61	222.21	-33.49	3.93	3.93	7.03
3	0.83	-6.84 (-6.84)	22.05	81.66	-25.34	3.93	3.93	3.70
4	1.22	-2.82 (-4.99)	33.04	221.59	-33.46	3.93	3.93	6.71
5	1.58	9.34 (9.61)	60.28	203.07	32.38	3.93	3.93	3.37

Verifiche taglio

N°	X	V	V_{red}	V_{red}	V_{red}	A_{sv}
1	0.08	-2.02	82.65	0.00	0.00	0.00
2	0.44	-18.44	79.08	0.00	0.00	0.00
3	0.83	0.91	77.62	0.00	0.00	0.00
4	1.22	18.56	78.70	0.00	0.00	0.00
5	1.58	3.21	82.28	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 2 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N_u	M_u	A_n	A_s	CS
1	0.08	-9.61 (-9.61)	63.34	219.77	-33.35	3.93	3.93	3.47
2	0.44	2.15 (4.35)	27.18	202.16	32.33	3.93	3.93	7.44
3	0.83	5.85 (5.86)	16.22	67.99	24.55	3.93	3.93	4.19
4	1.22	1.36 (3.48)	28.91	330.51	39.77	3.93	3.93	11.43
5	1.58	-9.34 (-9.40)	60.37	210.80	-32.83	3.93	3.93	3.49

Verifiche taglio

N°	X	V	V_{red}	V_{red}	V_{red}	A_{sv}
1	0.08	1.09	82.65	0.00	0.00	0.00



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2	0.44	18.82	78.35	0.00	0.00	0.00
3	0.83	-0.75	76.90	0.00	0.00	0.00
4	1.22	-18.14	78.35	0.00	0.00	0.00
5	1.58	0.51	82.29	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 3 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	12.48 (12.48)	76.19	194.72	31.90	3.93	3.93	2.56
2	0.44	-4.02 (-6.81)	35.43	153.47	-29.51	3.93	3.93	4.33
3	0.83	-9.49 (-9.49)	23.33	59.12	-24.04	3.93	3.93	2.53
4	1.22	-4.26 (-7.09)	37.34	156.34	-29.67	3.93	3.93	4.19
5	1.58	12.17 (12.48)	72.68	181.17	31.11	3.93	3.93	2.49

Verifiche taglio

N°	X	V	V _{Res}	V _{Res}	V _{Res}	A _{sv}
1	0.08	-4.71	84.22	0.00	0.00	0.00
2	0.44	-23.84	79.61	0.00	0.00	0.00
3	0.83	1.22	77.78	0.00	0.00	0.00
4	1.22	24.19	79.15	0.00	0.00	0.00
5	1.58	6.07	83.79	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 3 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	-12.48 (-12.54)	76.33	193.95	-31.85	3.93	3.93	2.54
2	0.44	0.47 (3.04)	33.88	585.67	52.48	3.93	3.93	17.29
3	0.83	4.81 (4.81)	20.72	118.27	27.47	3.93	3.93	5.71
4	1.22	-0.44 (-2.90)	35.89	724.73	-58.57	3.93	3.93	20.19
5	1.58	-12.17 (-12.49)	72.89	181.79	-31.15	3.93	3.93	2.49

Verifiche taglio

N°	X	V	V _{Res}	V _{Res}	V _{Res}	A _{sv}
1	0.08	-0.96	84.23	0.00	0.00	0.00
2	0.44	21.96	79.19	0.00	0.00	0.00
3	0.83	-0.81	77.45	0.00	0.00	0.00
4	1.22	-21.03	79.18	0.00	0.00	0.00
5	1.58	2.76	83.82	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 4 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	10.63 (10.63)	63.26	187.26	31.47	3.93	3.93	2.96
2	0.44	-3.17 (-5.47)	29.46	161.39	-29.97	3.93	3.93	5.48
3	0.83	-7.67 (-7.67)	19.59	61.82	-24.19	3.93	3.93	3.16
4	1.22	-3.38 (-5.70)	30.97	163.36	-30.08	3.93	3.93	5.28
5	1.58	10.36 (10.63)	60.22	173.84	30.69	3.93	3.93	2.89

Verifiche taglio

N°	X	V	V _{Res}	V _{Res}	V _{Res}	A _{sv}
1	0.08	-4.49	82.64	0.00	0.00	0.00
2	0.44	-19.64	78.82	0.00	0.00	0.00
3	0.83	0.97	77.32	0.00	0.00	0.00
4	1.22	19.88	78.44	0.00	0.00	0.00
5	1.58	5.66	82.27	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 4 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	-10.63 (-10.70)	63.41	186.10	-31.40	3.93	3.93	2.94
2	0.44	-0.46 (-2.52)	29.33	638.85	-54.81	3.93	3.93	21.78
3	0.83	2.99 (3.00)	18.69	201.26	32.28	3.93	3.93	10.77
4	1.22	-1.24 (-3.21)	31.00	438.49	-45.41	3.93	3.93	14.15
5	1.58	-10.36 (-10.70)	60.43	173.11	-30.65	3.93	3.93	2.86

Verifiche taglio

N°	X	V	V _{Res}	V _{Res}	V _{Res}	A _{sv}
1	0.08	-1.38	82.66	0.00	0.00	0.00
2	0.44	17.61	78.61	0.00	0.00	0.00
3	0.83	-0.69	77.20	0.00	0.00	0.00
4	1.22	-16.82	78.61	0.00	0.00	0.00
5	1.58	2.96	82.30	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 5 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione



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N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	14.53 (14.53)	94.74	216.09	33.14	3.93	3.93	2.28
2	0.44	-5.31 (-8.82)	42.85	139.34	-28.69	3.93	3.93	3.25
3	0.83	-12.21 (-12.21)	27.02	52.31	-23.64	3.93	3.93	1.94
4	1.22	-5.62 (-9.17)	45.11	141.79	-28.83	3.93	3.93	3.14
5	1.58	14.11 (14.53)	90.05	199.39	32.17	3.93	3.93	2.21

Verifiche taglio

N°	X	V	V _{bat}	V _{bat}	V _{bat}	A _{av}
1	0.08	-3.20	86.48	0.00	0.00	0.00
2	0.44	-29.98	80.60	0.00	0.00	0.00
3	0.83	1.51	78.23	0.00	0.00	0.00
4	1.22	30.34	80.02	0.00	0.00	0.00
5	1.58	5.00	85.91	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 5 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	-14.53 (-14.53)	94.78	216.25	-33.15	3.93	3.93	2.28
2	0.44	4.17 (7.66)	37.76	142.20	28.85	3.93	3.93	3.77
3	0.83	10.09 (10.09)	20.48	47.38	23.36	3.93	3.93	2.31
4	1.22	2.97 (6.35)	40.48	208.29	32.69	3.93	3.93	5.15
5	1.58	-14.11 (-14.22)	90.20	206.81	-32.60	3.93	3.93	2.29

Verifiche taglio

N°	X	V	V _{bat}	V _{bat}	V _{bat}	A _{av}
1	0.08	1.45	86.48	0.00	0.00	0.00
2	0.44	29.81	79.71	0.00	0.00	0.00
3	0.83	-1.26	77.42	0.00	0.00	0.00
4	1.22	-28.93	79.69	0.00	0.00	0.00
5	1.58	0.93	85.92	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 6 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	12.23 (12.23)	79.34	214.36	33.04	3.93	3.93	2.70
2	0.44	-4.26 (-7.16)	36.25	147.77	-29.18	3.93	3.93	4.08
3	0.83	-9.95 (-9.95)	23.23	55.63	-23.83	3.93	3.93	2.39
4	1.22	-4.53 (-7.45)	38.05	149.45	-29.27	3.93	3.93	3.93
5	1.58	11.87 (12.23)	75.28	197.28	32.05	3.93	3.93	2.62

Verifiche taglio

N°	X	V	V _{bat}	V _{bat}	V _{bat}	A _{av}
1	0.08	-2.95	84.60	0.00	0.00	0.00
2	0.44	-24.76	79.72	0.00	0.00	0.00
3	0.83	1.21	77.76	0.00	0.00	0.00
4	1.22	24.99	79.24	0.00	0.00	0.00
5	1.58	4.50	84.11	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 6 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	-12.23 (-12.23)	79.39	214.57	-33.05	3.93	3.93	2.70
2	0.44	3.02 (5.88)	32.65	168.76	30.39	3.93	3.93	5.17
3	0.83	7.84 (7.84)	18.47	56.18	23.87	3.93	3.93	3.04
4	1.22	1.98 (4.75)	34.93	264.45	35.94	3.93	3.93	7.57
5	1.58	-11.87 (-12.00)	75.42	203.77	-32.42	3.93	3.93	2.70

Verifiche taglio

N°	X	V	V _{bat}	V _{bat}	V _{bat}	A _{av}
1	0.08	0.95	84.61	0.00	0.00	0.00
2	0.44	24.44	79.05	0.00	0.00	0.00
3	0.83	-1.07	77.17	0.00	0.00	0.00
4	1.22	-23.69	79.05	0.00	0.00	0.00
5	1.58	1.15	84.12	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 7 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	1.79 (2.16)	70.86	2028.59	61.93	3.93	3.93	28.63
2	0.44	2.49 (2.53)	67.36	1792.90	67.30	3.93	3.93	26.62
3	0.83	2.35 (2.55)	67.88	1790.19	67.34	3.93	3.93	26.37
4	1.22	0.55 (1.36)	59.83	2313.06	52.69	3.93	3.93	38.66
5	1.58	-0.67 (-1.58)	41.81	1782.10	-67.47	3.93	3.93	42.62

Verifiche taglio

N°	X	V	V _{bat}	V _{bat}	V _{bat}	A _{av}
1	0.08	3.19	83.57	0.00	0.00	0.00
2	0.44	-0.35	83.34	0.00	0.00	0.00
3	0.83	-1.75	83.21	0.00	0.00	0.00



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 77 di 180
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4	1.22	-6.93	82.30	0.00	0.00	0.00
5	1.58	7.77	80.03	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 7 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	-1.79 (-2.57)	70.62	1829.84	-66.59	3.93	3.93	25.91
2	0.44	1.47 (1.97)	45.10	1606.65	70.18	3.93	3.93	35.63
3	0.83	-3.94 (-5.03)	50.01	463.87	-46.67	3.93	3.93	9.28
4	1.22	-5.80 (-5.84)	52.20	379.91	-42.49	3.93	3.93	7.28
5	1.58	0.67 (1.58)	42.19	1793.95	67.28	3.93	3.93	42.52

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sv}
1	0.08	6.67	83.54	0.00	0.00	0.00
2	0.44	-6.59	80.38	0.00	0.00	0.00
3	0.83	-9.36	80.96	0.00	0.00	0.00
4	1.22	2.72	81.36	0.00	0.00	0.00
5	1.58	7.76	80.07	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 8 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	0.37 (0.68)	58.65	2589.01	30.23	3.93	3.93	44.14
2	0.44	2.95 (3.28)	60.85	1344.63	72.47	3.93	3.93	22.10
3	0.83	3.56 (3.61)	63.11	1273.74	72.85	3.93	3.93	20.18
4	1.22	1.27 (2.36)	54.01	1605.27	70.20	3.93	3.93	29.72
5	1.58	-1.76 (-2.51)	33.48	837.89	-62.71	3.93	3.93	25.03

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sv}
1	0.08	2.69	82.08	0.00	0.00	0.00
2	0.44	2.80	82.49	0.00	0.00	0.00
3	0.83	-1.72	82.63	0.00	0.00	0.00
4	1.22	-9.34	81.62	0.00	0.00	0.00
5	1.58	6.69	79.01	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 8 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	-0.37 (-1.02)	58.45	2518.26	-44.00	3.93	3.93	43.09
2	0.44	0.35 (1.39)	42.19	1940.60	64.13	3.93	3.93	46.00
3	0.83	-5.06 (-6.00)	48.33	311.64	-38.68	3.93	3.93	6.45
4	1.22	-5.95 (-6.28)	48.12	284.39	-37.10	3.93	3.93	5.91
5	1.58	1.76 (1.76)	33.82	1385.36	72.25	3.93	3.93	40.97

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sv}
1	0.08	5.56	82.05	0.00	0.00	0.00
2	0.44	-8.90	80.01	0.00	0.00	0.00
3	0.83	-7.99	80.77	0.00	0.00	0.00
4	1.22	5.66	80.88	0.00	0.00	0.00
5	1.58	7.07	79.05	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 9 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	2.81 (2.89)	70.80	1688.48	68.98	3.93	3.93	23.85
2	0.44	1.92 (2.10)	65.21	1968.24	63.52	3.93	3.93	30.18
3	0.83	1.53 (1.72)	65.42	2181.50	57.45	3.93	3.93	33.35
4	1.22	-0.01 (-0.67)	57.75	2590.59	-29.85	3.93	3.93	44.86
5	1.58	0.34 (1.54)	41.75	1817.26	66.86	3.93	3.93	43.53

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sv}
1	0.08	0.73	83.56	0.00	0.00	0.00
2	0.44	-1.55	83.09	0.00	0.00	0.00
3	0.83	-1.68	82.91	0.00	0.00	0.00
4	1.22	-5.62	82.04	0.00	0.00	0.00
5	1.58	10.22	80.02	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 9 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	-2.81 (-3.30)	70.68	1523.21	-71.09	3.93	3.93	21.55



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 78 di 180
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2	0.44	-1.13 (-2.05)	47.24	1617.03	-70.07	3.93	3.93	34.23
3	0.83	-6.80 (-7.89)	52.47	223.18	-33.55	3.93	3.93	4.25
4	1.22	-8.40 (-8.52)	54.28	208.26	-32.68	3.93	3.93	3.84
5	1.58	-0.34 (-1.54)	42.25	1831.19	-66.56	3.93	3.93	43.34

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	4.20	83.55	0.00	0.00	0.00
2	0.44	-7.80	80.64	0.00	0.00	0.00
3	0.83	-9.30	81.26	0.00	0.00	0.00
4	1.22	4.04	81.62	0.00	0.00	0.00
5	1.58	10.21	80.08	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 10 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	1.39 (1.41)	58.59	2261.19	54.57	3.93	3.93	38.59
2	0.44	2.39 (2.57)	58.70	1601.61	70.24	3.93	3.93	27.29
3	0.83	2.74 (2.79)	60.65	1538.88	70.92	3.93	3.93	25.37
4	1.22	0.71 (1.65)	51.93	1987.19	63.10	3.93	3.93	38.26
5	1.58	-0.75 (-1.82)	33.42	1333.76	-72.53	3.93	3.93	39.91

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	0.23	82.07	0.00	0.00	0.00
2	0.44	1.60	82.24	0.00	0.00	0.00
3	0.83	-1.65	82.33	0.00	0.00	0.00
4	1.22	-8.02	81.36	0.00	0.00	0.00
5	1.58	9.14	79.00	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 10 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	-1.39 (-1.75)	58.51	2049.82	-61.32	3.93	3.93	35.03
2	0.44	-2.25 (-3.43)	44.33	784.89	-60.77	3.93	3.93	17.70
3	0.83	-7.93 (-8.85)	50.79	177.13	-30.88	3.93	3.93	3.49
4	1.22	-8.55 (-9.03)	50.20	169.03	-30.41	3.93	3.93	3.37
5	1.58	0.75 (0.75)	33.87	2340.84	51.69	3.93	3.93	69.10

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	3.10	82.06	0.00	0.00	0.00
2	0.44	-10.12	80.27	0.00	0.00	0.00
3	0.83	-7.93	81.07	0.00	0.00	0.00
4	1.22	6.98	81.15	0.00	0.00	0.00
5	1.58	9.52	79.06	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 11 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	1.63 (2.10)	87.55	2265.22	54.42	3.93	3.93	25.87
2	0.44	2.61 (2.64)	82.56	1978.04	63.30	3.93	3.93	23.96
3	0.83	2.47 (2.70)	83.13	1960.99	63.68	3.93	3.93	23.59
4	1.22	0.04 (1.14)	72.33	2547.14	40.24	3.93	3.93	35.21
5	1.58	-1.66 (-2.89)	48.81	1217.38	-72.10	3.93	3.93	24.94

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	4.05	85.60	0.00	0.00	0.00
2	0.44	-0.26	85.24	0.00	0.00	0.00
3	0.83	-2.36	85.08	0.00	0.00	0.00
4	1.22	-9.41	83.88	0.00	0.00	0.00
5	1.58	10.53	80.88	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 11 - SLU (Caso A1-M1)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _a	M _a	A _n	A _a	CS
1	0.08	-1.63 (-2.61)	87.25	2051.61	-61.27	3.93	3.93	23.52
2	0.44	2.04 (2.86)	55.58	1400.71	72.17	3.93	3.93	25.20
3	0.83	-5.38 (-6.86)	62.82	397.24	-43.35	3.93	3.93	6.32
4	1.22	-7.65 (-7.76)	65.00	335.76	-40.08	3.93	3.93	5.17
5	1.58	1.66 (2.86)	49.34	1251.61	72.64	3.93	3.93	25.37

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	8.34	85.56	0.00	0.00	0.00
2	0.44	-9.87	81.64	0.00	0.00	0.00
3	0.83	-12.57	82.50	0.00	0.00	0.00
4	1.22	4.50	82.94	0.00	0.00	0.00
5	1.58	10.86	80.94	0.00	0.00	0.00

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Verifica sezioni fondazione [Combinazione n° 12 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	-0.09 (-0.48)	73.12	2642.15	-17.52	3.93	3.93	36.14
2	0.44	3.15 (3.57)	75.24	1503.86	71.30	3.93	3.93	19.99
3	0.83	3.92 (3.99)	77.97	1410.56	72.11	3.93	3.93	18.09
4	1.22	0.92 (2.35)	66.01	1855.88	66.01	3.93	3.93	28.11
5	1.58	-2.94 (-4.00)	39.54	459.96	-46.48	3.93	3.93	11.63

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sw}
1	0.08	3.33	83.84	0.00	0.00	0.00
2	0.44	3.57	84.28	0.00	0.00	0.00
3	0.83	-2.29	84.45	0.00	0.00	0.00
4	1.22	-12.21	83.14	0.00	0.00	0.00
5	1.58	9.14	79.75	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 12 - SLU (Caso A2-M2)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	0.09 (0.90)	72.86	2581.47	32.03	3.93	3.93	35.43
2	0.44	0.63 (2.10)	52.66	1719.33	68.48	3.93	3.93	32.65
3	0.83	-6.72 (-7.97)	61.27	285.59	-37.17	3.93	3.93	4.66
4	1.22	-7.76 (-8.28)	60.54	261.64	-35.78	3.93	3.93	4.32
5	1.58	2.94 (2.94)	40.01	866.99	63.78	3.93	3.93	21.67

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sw}
1	0.08	6.92	83.81	0.00	0.00	0.00
2	0.44	-12.53	81.27	0.00	0.00	0.00
3	0.83	-10.72	82.33	0.00	0.00	0.00
4	1.22	8.05	82.43	0.00	0.00	0.00
5	1.58	9.90	79.81	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 13 - SLU (Caso A1-M1) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	-1.70 (-1.82)	13.84	281.27	-36.92	3.93	3.93	20.32
2	0.44	1.67 (2.39)	25.71	547.08	50.79	3.93	3.93	21.28
3	0.83	3.18 (3.18)	30.61	436.58	45.31	3.93	3.93	14.26
4	1.22	1.74 (2.52)	26.28	512.35	49.08	3.93	3.93	19.50
5	1.58	-1.77 (-1.82)	14.18	294.00	-37.66	3.93	3.93	20.73

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sw}
1	0.08	-1.70	76.62	0.00	0.00	0.00
2	0.44	6.10	78.07	0.00	0.00	0.00
3	0.83	-0.16	78.66	0.00	0.00	0.00
4	1.22	-6.66	78.17	0.00	0.00	0.00
5	1.58	1.27	76.66	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 13 - SLU (Caso A1-M1) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	1.70 (1.77)	13.91	297.26	37.85	3.93	3.93	21.38
2	0.44	-3.02 (-3.74)	23.81	208.31	-32.69	3.93	3.93	8.75
3	0.83	-4.54 (-4.54)	27.41	191.12	-31.69	3.93	3.93	6.97
4	1.22	-3.09 (-3.94)	23.99	194.01	-31.86	3.93	3.93	8.09
5	1.58	1.77 (1.77)	14.25	311.04	38.64	3.93	3.93	21.83

Verifiche taglio

N°	X	V	V _{Rd}	V _{Rd}	V _{Rd}	A _{sw}
1	0.08	-1.02	76.63	0.00	0.00	0.00
2	0.44	-6.13	77.79	0.00	0.00	0.00
3	0.83	0.51	78.27	0.00	0.00	0.00
4	1.22	7.22	77.94	0.00	0.00	0.00
5	1.58	1.48	76.67	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 14 - SLU (Caso A1-M1) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _n	A _u	CS
1	0.08	-1.40 (-1.51)	15.43	488.70	-47.91	3.93	3.93	31.67
2	0.44	1.53 (2.15)	26.36	709.01	57.89	3.93	3.93	26.90
3	0.83	2.84 (2.84)	30.78	552.68	51.04	3.93	3.93	17.96



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 80 di 180
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4	1.22	1.60 (2.27)	27.03	666.03	56.00	3.93	3.93	24.64
5	1.58	-1.47 (-1.51)	15.78	511.36	-49.04	3.93	3.93	32.41

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	-1.57	76.81	0.00	0.00	0.00
2	0.44	5.29	78.17	0.00	0.00	0.00
3	0.83	-0.09	78.68	0.00	0.00	0.00
4	1.22	-5.77	78.25	0.00	0.00	0.00
5	1.58	1.15	76.85	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 14 - SLU (Caso A1-M1) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _n	CS
1	0.08	1.40 (1.47)	15.49	520.35	49.48	3.93	3.93	33.59
2	0.44	-2.88 (-3.53)	23.94	230.14	-33.95	3.93	3.93	9.61
3	0.83	-4.28 (-4.28)	27.24	207.56	-32.64	3.93	3.93	7.62
4	1.22	-2.95 (-3.74)	24.14	213.05	-32.96	3.93	3.93	8.82
5	1.58	1.47 (1.47)	15.84	545.02	50.70	3.93	3.93	34.42

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	-0.81	76.82	0.00	0.00	0.00
2	0.44	-5.58	77.81	0.00	0.00	0.00
3	0.83	0.50	78.25	0.00	0.00	0.00
4	1.22	6.67	77.96	0.00	0.00	0.00
5	1.58	1.28	76.86	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 15 - SLU (Caso A2-M2) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _n	CS
1	0.08	-1.75 (-1.86)	15.84	346.65	-40.71	3.93	3.93	21.89
2	0.44	1.69 (2.42)	28.32	646.13	55.13	3.93	3.93	22.81
3	0.83	3.21 (3.21)	33.35	506.12	48.77	3.93	3.93	15.17
4	1.22	1.76 (2.55)	28.96	607.75	53.45	3.93	3.93	20.99
5	1.58	-1.82 (-1.86)	16.18	361.79	-41.59	3.93	3.93	22.36

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	-1.69	76.86	0.00	0.00	0.00
2	0.44	6.17	78.40	0.00	0.00	0.00
3	0.83	-0.14	79.00	0.00	0.00	0.00
4	1.22	-6.73	78.49	0.00	0.00	0.00
5	1.58	1.26	76.90	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 15 - SLU (Caso A2-M2) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _n	CS
1	0.08	1.75 (1.82)	15.90	364.89	41.74	3.93	3.93	22.95
2	0.44	-3.04 (-3.78)	25.55	229.49	-33.92	3.93	3.93	8.98
3	0.83	-4.60 (-4.60)	29.18	206.43	-32.58	3.93	3.93	7.07
4	1.22	-3.12 (-3.99)	25.71	212.23	-32.91	3.93	3.93	8.25
5	1.58	1.82 (1.82)	16.25	379.09	42.45	3.93	3.93	23.34

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	-0.91	76.87	0.00	0.00	0.00
2	0.44	-6.25	78.00	0.00	0.00	0.00
3	0.83	0.55	78.49	0.00	0.00	0.00
4	1.22	7.42	78.16	0.00	0.00	0.00
5	1.58	1.38	76.91	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 16 - SLU (Caso A2-M2) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _n	CS
1	0.08	-2.05 (-2.16)	14.25	219.47	-33.33	3.93	3.93	15.41
2	0.44	1.84 (2.65)	27.68	512.29	49.08	3.93	3.93	18.51
3	0.83	3.55 (3.55)	33.18	412.45	44.11	3.93	3.93	12.43
4	1.22	1.90 (2.79)	28.20	479.39	47.44	3.93	3.93	17.00
5	1.58	-2.12 (-2.16)	14.59	228.11	-33.84	3.93	3.93	15.64

Verifiche taglio

N°	X	V	V _{tot}	V _{tot}	V _{tot}	A _{av}
1	0.08	-1.82	76.67	0.00	0.00	0.00
2	0.44	6.97	78.31	0.00	0.00	0.00
3	0.83	-0.21	78.97	0.00	0.00	0.00
4	1.22	-7.61	78.41	0.00	0.00	0.00
5	1.58	1.38	76.71	0.00	0.00	0.00

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Verifica sezioni traverso [Combinazione n° 16 - SLU (Caso A2-M2) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _u	A _v	CS
1	0.08	2.05 (2.12)	14.32	229.37	33.91	3.93	3.93	16.02
2	0.44	-3.18 (-3.98)	25.42	209.03	-32.73	3.93	3.93	8.22
3	0.83	-4.87 (-4.87)	29.35	191.17	-31.69	3.93	3.93	6.51
4	1.22	-3.26 (-4.19)	25.56	194.39	-31.88	3.93	3.93	7.61
5	1.58	2.12 (2.12)	14.66	238.54	34.44	3.93	3.93	16.27

Verifiche taglio

N°	X	V	V _{Rd}	V _{red}	V _{red}	A _{sw}
1	0.08	-1.11	76.68	0.00	0.00	0.00
2	0.44	-6.80	77.99	0.00	0.00	0.00
3	0.83	0.55	78.51	0.00	0.00	0.00
4	1.22	7.97	78.14	0.00	0.00	0.00
5	1.58	1.59	76.72	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 17 - SLU (Caso A1-M1) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _u	A _v	CS
1	0.08	-2.76 (-2.83)	13.87	140.82	-28.77	3.93	3.93	10.15
2	0.44	1.27 (2.04)	26.59	795.24	61.15	3.93	3.93	29.90
3	0.83	2.89 (2.89)	31.63	564.52	51.55	3.93	3.93	17.85
4	1.22	1.34 (2.19)	27.14	729.11	58.73	3.93	3.93	26.86
5	1.58	-2.83 (-2.83)	14.20	145.62	-29.05	3.93	3.93	10.25

Verifiche taglio

N°	X	V	V _{Rd}	V _{red}	V _{red}	A _{sw}
1	0.08	-0.68	76.62	0.00	0.00	0.00
2	0.44	6.61	78.18	0.00	0.00	0.00
3	0.83	-0.17	78.79	0.00	0.00	0.00
4	1.22	-7.20	78.28	0.00	0.00	0.00
5	1.58	0.23	76.66	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 17 - SLU (Caso A1-M1) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _u	A _v	CS
1	0.08	2.76 (2.76)	13.89	146.30	29.09	3.93	3.93	10.54
2	0.44	-1.30 (-1.96)	22.93	645.19	-55.09	3.93	3.93	28.14
3	0.83	-2.71 (-2.71)	26.38	444.26	-45.69	3.93	3.93	16.84
4	1.22	-1.37 (-2.15)	23.13	544.45	-50.67	3.93	3.93	23.54
5	1.58	2.83 (2.83)	14.22	145.86	29.07	3.93	3.93	10.26

Verifiche taglio

N°	X	V	V _{Rd}	V _{red}	V _{red}	A _{sw}
1	0.08	0.00	76.62	0.00	0.00	0.00
2	0.44	-5.63	77.69	0.00	0.00	0.00
3	0.83	0.49	78.15	0.00	0.00	0.00
4	1.22	6.68	77.84	0.00	0.00	0.00
5	1.58	0.44	76.66	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 18 - SLU (Caso A1-M1) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _u	A _v	CS
1	0.08	-2.46 (-2.53)	15.46	195.40	-31.94	3.93	3.93	12.64
2	0.44	1.13 (1.81)	27.24	1032.23	68.59	3.93	3.93	37.89
3	0.83	2.55 (2.55)	31.80	733.20	58.88	3.93	3.93	23.06
4	1.22	1.20 (1.94)	27.90	955.64	66.53	3.93	3.93	34.25
5	1.58	-2.54 (-2.54)	15.80	200.92	-32.26	3.93	3.93	12.72

Verifiche taglio

N°	X	V	V _{Rd}	V _{red}	V _{red}	A _{sw}
1	0.08	-0.55	76.82	0.00	0.00	0.00
2	0.44	5.81	78.27	0.00	0.00	0.00
3	0.83	-0.10	78.81	0.00	0.00	0.00
4	1.22	-6.32	78.36	0.00	0.00	0.00
5	1.58	0.10	76.86	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 18 - SLU (Caso A1-M1) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _u	M _u	A _u	A _v	CS
1	0.08	2.46 (2.49)	15.47	200.47	32.23	3.93	3.93	12.96
2	0.44	-1.16 (-1.75)	23.05	812.76	-61.79	3.93	3.93	35.26
3	0.83	-2.45 (-2.45)	26.22	538.31	-50.38	3.93	3.93	20.53
4	1.22	-1.23 (-1.95)	23.28	672.47	-56.29	3.93	3.93	28.89
5	1.58	2.54 (2.54)	15.81	201.09	32.27	3.93	3.93	12.72



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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Verifiche taglio

N°	X	V	V _{Rd}	V _{Ed}	V _{Rd}	A _{sv}
1	0.08	0.21	76.82	0.00	0.00	0.00
2	0.44	-5.07	77.71	0.00	0.00	0.00
3	0.83	0.48	78.13	0.00	0.00	0.00
4	1.22	6.13	77.85	0.00	0.00	0.00
5	1.58	0.24	76.86	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 19 - SLU (Caso A2-M2) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _s	CS
1	0.08	-2.81 (-2.88)	15.87	166.62	-30.27	3.93	3.93	10.50
2	0.44	1.29 (2.07)	29.21	924.89	65.70	3.93	3.93	31.67
3	0.83	2.93 (2.93)	34.37	649.37	55.27	3.93	3.93	18.89
4	1.22	1.36 (2.22)	29.83	850.03	63.15	3.93	3.93	28.50
5	1.58	-2.88 (-2.88)	16.20	171.84	-30.57	3.93	3.93	10.61

Verifiche taglio

N°	X	V	V _{Rd}	V _{Ed}	V _{Rd}	A _{sv}
1	0.08	-0.67	76.87	0.00	0.00	0.00
2	0.44	6.68	78.51	0.00	0.00	0.00
3	0.83	-0.15	79.12	0.00	0.00	0.00
4	1.22	-7.28	78.60	0.00	0.00	0.00
5	1.58	0.21	76.91	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 19 - SLU (Caso A2-M2) - Sisma Vert. positivo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _s	CS
1	0.08	2.81 (2.82)	15.88	172.09	30.59	3.93	3.93	10.84
2	0.44	-1.32 (-2.00)	24.66	722.19	-58.47	3.93	3.93	29.28
3	0.83	-2.77 (-2.77)	28.16	483.65	-47.66	3.93	3.93	17.18
4	1.22	-1.40 (-2.20)	24.85	599.26	-53.08	3.93	3.93	24.11
5	1.58	2.88 (2.88)	16.22	172.06	30.59	3.93	3.93	10.61

Verifiche taglio

N°	X	V	V _{Rd}	V _{Ed}	V _{Rd}	A _{sv}
1	0.08	0.11	76.87	0.00	0.00	0.00
2	0.44	-5.74	77.90	0.00	0.00	0.00
3	0.83	0.53	78.36	0.00	0.00	0.00
4	1.22	6.88	78.05	0.00	0.00	0.00
5	1.58	0.34	76.91	0.00	0.00	0.00

Verifica sezioni fondazione [Combinazione n° 20 - SLU (Caso A2-M2) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _s	CS
1	0.08	-3.11 (-3.18)	14.27	125.02	-27.86	3.93	3.93	8.76
2	0.44	1.43 (2.31)	28.56	723.82	58.54	3.93	3.93	25.34
3	0.83	3.26 (3.26)	34.21	517.70	49.35	3.93	3.93	15.13
4	1.22	1.51 (2.46)	29.07	657.11	55.61	3.93	3.93	22.61
5	1.58	-3.18 (-3.18)	14.61	129.01	-28.09	3.93	3.93	8.83

Verifiche taglio

N°	X	V	V _{Rd}	V _{Ed}	V _{Rd}	A _{sv}
1	0.08	-0.79	76.67	0.00	0.00	0.00
2	0.44	7.49	78.41	0.00	0.00	0.00
3	0.83	-0.23	79.10	0.00	0.00	0.00
4	1.22	-8.16	78.52	0.00	0.00	0.00
5	1.58	0.34	76.71	0.00	0.00	0.00

Verifica sezioni traverso [Combinazione n° 20 - SLU (Caso A2-M2) - Sisma Vert. negativo]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	N _s	M _s	A _n	A _s	CS
1	0.08	3.11 (3.12)	14.30	128.70	28.07	3.93	3.93	9.00
2	0.44	-1.46 (-2.20)	24.54	584.18	-52.42	3.93	3.93	23.81
3	0.83	-3.03 (-3.03)	28.32	411.06	-44.04	3.93	3.93	14.51
4	1.22	-1.54 (-2.41)	24.70	495.38	-48.24	3.93	3.93	20.06
5	1.58	3.18 (3.18)	14.63	129.31	28.11	3.93	3.93	8.84

Verifiche taglio

N°	X	V	V _{Rd}	V _{Ed}	V _{Rd}	A _{sv}
1	0.08	-0.09	76.67	0.00	0.00	0.00
2	0.44	-6.30	77.88	0.00	0.00	0.00
3	0.83	0.53	78.38	0.00	0.00	0.00
4	1.22	7.43	78.03	0.00	0.00	0.00
5	1.58	0.54	76.71	0.00	0.00	0.00

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Verifiche combinazioni SLE

Simbologia adottata ed unità di misura

N°	Indice sezione
X	Ascissa/Ordinata sezione, espresso in m
M	Momento flettente, espresso in kNm
V	Taglio, espresso in kN
N	Sforzo normale, espresso in kN
A_{si}	Area armatura inferiore, espressa in cm ²
A_{su}	Area armatura superiore, espressa in cm ²
σ_{si}	Tensione nell'armatura disposta in corrispondenza del lembo inferiore, espressa in N/mm ²
σ_{su}	Tensione nell'armatura disposta in corrispondenza del lembo superiore, espressa in N/mm ²
σ_c	Tensione nel calcestruzzo, espressa in N/mm ²
τ_c	Tensione tangenziale nel calcestruzzo, espressa in N/mm ²
A_{sv}	Area armature trasversali nella sezione, espressa in cm ²

Verifica sezioni fondazione [Combinazione n° 21 - SLE (Quasi Permanente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _{si}	A _{su}	σ _{si}	σ _{su}	σ _c
1	0.08	1.59	14.80	3.93	3.93	4.69	15.64	0.72
2	0.44	0.14	13.70	3.93	3.93	1.47	0.92	0.11
3	0.83	-0.17	13.71	3.93	3.93	0.86	1.53	0.12
4	1.22	0.14	14.19	3.93	3.93	1.52	0.96	0.11
5	1.58	1.59	14.80	3.93	3.93	4.69	15.64	0.72

Verifiche taglio

N°	X	V	τ _c	A _{sv}
1	0.08	-1.65	-0.015	0.00
2	0.44	-1.44	-0.013	0.00
3	0.83	0.14	0.001	0.00
4	1.22	1.46	0.013	0.00
5	1.58	1.65	0.015	0.00

Verifica sezioni traverso [Combinazione n° 21 - SLE (Quasi Permanente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _{si}	A _{su}	σ _{si}	σ _{su}	σ _c
1	0.08	-1.59	14.87	3.93	3.93	15.56	4.70	0.72
2	0.44	-1.49	11.58	3.93	3.93	17.29	3.98	0.69
3	0.83	-1.24	10.36	3.93	3.93	13.46	3.44	0.57
4	1.22	-1.49	11.63	3.93	3.93	17.24	3.99	0.69
5	1.58	-1.59	14.87	3.93	3.93	15.56	4.70	0.72

Verifiche taglio

N°	X	V	τ _c	A _{sv}
1	0.08	-0.92	-0.008	0.00
2	0.44	1.30	0.012	0.00
3	0.83	0.25	0.002	0.00
4	1.22	-0.73	-0.007	0.00
5	1.58	0.92	0.008	0.00

Verifica sezioni fondazione [Combinazione n° 22 - SLE (Frequente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _{si}	A _{su}	σ _{si}	σ _{su}	σ _c
1	0.08	1.59	14.80	3.93	3.93	4.69	15.64	0.72
2	0.44	0.14	13.70	3.93	3.93	1.47	0.92	0.11
3	0.83	-0.17	13.71	3.93	3.93	0.86	1.53	0.12
4	1.22	0.14	14.19	3.93	3.93	1.52	0.96	0.11
5	1.58	1.59	14.80	3.93	3.93	4.69	15.64	0.72

Verifiche taglio

N°	X	V	τ _c	A _{sv}
1	0.08	-1.65	-0.015	0.00
2	0.44	-1.44	-0.013	0.00
3	0.83	0.14	0.001	0.00
4	1.22	1.46	0.013	0.00
5	1.58	1.65	0.015	0.00

Verifica sezioni traverso [Combinazione n° 22 - SLE (Frequente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _{si}	A _{su}	σ _{si}	σ _{su}	σ _c
1	0.08	-1.59	14.87	3.93	3.93	15.56	4.70	0.72
2	0.44	-1.49	11.58	3.93	3.93	17.29	3.98	0.69
3	0.83	-1.24	10.36	3.93	3.93	13.46	3.44	0.57
4	1.22	-1.49	11.63	3.93	3.93	17.24	3.99	0.69
5	1.58	-1.59	14.87	3.93	3.93	15.56	4.70	0.72

Verifiche taglio

N°	X	V	τ _c	A _{sv}
1	0.08	-0.92	-0.008	0.00
2	0.44	1.30	0.012	0.00
3	0.83	0.25	0.002	0.00

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4	1.22	-0.73	-0.007	0.00
5	1.58	0.92	0.008	0.00

Verifica sezioni fondazione [Combinazione n° 23 - SLE (Frequente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	1.80	14.79	3.93	3.93	4.96	19.99	0.83
2	0.44	0.12	13.39	3.93	3.93	1.41	0.93	0.10
3	0.83	-0.22	13.35	3.93	3.93	0.72	1.62	0.13
4	1.22	0.12	13.89	3.93	3.93	1.45	0.97	0.11
5	1.58	1.80	14.79	3.93	3.93	4.96	19.99	0.83

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	-2.01	-0.018	0.00
2	0.44	-1.62	-0.015	0.00
3	0.83	0.15	0.001	0.00
4	1.22	1.65	0.015	0.00
5	1.58	2.01	0.018	0.00

Verifica sezioni traverso [Combinazione n° 23 - SLE (Frequente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	-1.80	14.87	3.93	3.93	19.89	4.98	0.83
2	0.44	-1.93	11.89	3.93	3.93	26.21	4.50	0.91
3	0.83	-1.72	10.72	3.93	3.93	23.10	4.03	0.81
4	1.22	-1.93	11.93	3.93	3.93	26.16	4.51	0.91
5	1.58	-1.80	14.87	3.93	3.93	19.89	4.98	0.83

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	-1.28	-0.012	0.00
2	0.44	1.13	0.010	0.00
3	0.83	0.26	0.002	0.00
4	1.22	-0.54	-0.005	0.00
5	1.58	1.28	0.012	0.00

Verifica sezioni fondazione [Combinazione n° 24 - SLE (Frequente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	7.72	51.81	3.93	3.93	18.92	99.45	3.63
2	0.44	-2.62	25.55	3.93	3.93	24.57	7.94	1.18
3	0.83	-6.16	17.64	3.93	3.93	109.28	9.39	3.00
4	1.22	-2.78	26.83	3.93	3.93	26.30	8.37	1.25
5	1.58	7.51	49.47	3.93	3.93	18.21	97.89	3.54

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	-2.07	-0.019	0.00
2	0.44	-15.41	-0.139	0.00
3	0.83	0.79	0.007	0.00
4	1.22	15.59	0.141	0.00
5	1.58	2.98	0.027	0.00

Verifica sezioni traverso [Combinazione n° 24 - SLE (Frequente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	-7.72	51.85	3.93	3.93	99.40	18.93	3.63
2	0.44	1.68	22.33	3.93	3.93	5.88	9.72	0.70
3	0.83	4.71	13.33	3.93	3.93	7.14	83.77	2.29
4	1.22	1.07	23.71	3.93	3.93	4.42	1.05	0.40
5	1.58	-7.51	49.56	3.93	3.93	97.78	18.23	3.54

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	0.47	0.004	0.00
2	0.44	15.30	0.139	0.00
3	0.83	-0.55	-0.005	0.00
4	1.22	-14.70	-0.133	0.00
5	1.58	0.73	0.007	0.00

Verifica sezioni fondazione [Combinazione n° 25 - SLE (Frequente)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	1.27	48.22	3.93	3.93	6.78	1.64	0.55



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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2	0.44	1.34	45.41	3.93	3.93	6.68	1.23	0.55
3	0.83	1.18	45.70	3.93	3.93	6.38	1.60	0.52
4	1.22	0.05	40.44	3.93	3.93	3.64	3.42	0.25
5	1.58	-0.37	28.85	3.93	3.93	1.76	3.28	0.25

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	1.55	0.014	0.00
2	0.44	-0.55	-0.005	0.00
3	0.83	-1.14	-0.010	0.00
4	1.22	-4.28	-0.039	0.00
5	1.58	5.74	0.052	0.00

Verifica sezioni trasverso [Combinazione n° 25 - SLE (Frequente)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _s	σ _b	σ _n	σ _c
1	0.08	-1.27	48.08	3.93	3.93	1.63	6.77	0.55
2	0.44	0.61	31.24	3.93	3.93	3.96	1.50	0.31
3	0.83	-3.03	34.49	3.93	3.93	23.06	9.91	1.32
4	1.22	-4.24	35.97	3.93	3.93	45.63	11.89	1.94
5	1.58	0.37	29.13	3.93	3.93	3.30	1.79	0.25

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	3.92	0.035	0.00
2	0.44	-4.53	-0.041	0.00
3	0.83	-6.21	-0.056	0.00
4	1.22	2.02	0.018	0.00
5	1.58	5.69	0.052	0.00

Verifica sezioni fondazione [Combinazione n° 26 - SLE (Rara)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _s	σ _b	σ _n	σ _c
1	0.08	7.93	51.82	3.93	3.93	19.14	103.92	3.74
2	0.44	-2.15	25.92	3.93	3.93	14.93	7.22	0.92
3	0.83	-5.65	18.06	3.93	3.93	97.68	9.11	2.74
4	1.22	-2.31	27.18	3.93	3.93	16.76	7.68	1.00
5	1.58	7.73	49.48	3.93	3.93	18.42	102.40	3.64

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	-1.66	-0.015	0.00
2	0.44	-15.22	-0.138	0.00
3	0.83	0.77	0.007	0.00
4	1.22	15.38	0.139	0.00
5	1.58	2.59	0.023	0.00

Verifica sezioni trasverso [Combinazione n° 26 - SLE (Rara)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _s	σ _b	σ _n	σ _c
1	0.08	-7.93	51.84	3.93	3.93	103.90	19.14	3.74
2	0.44	1.73	21.97	3.93	3.93	5.95	10.97	0.73
3	0.83	4.81	12.91	3.93	3.93	7.10	86.35	2.34
4	1.22	1.12	23.36	3.93	3.93	4.54	1.54	0.42
5	1.58	-7.73	49.55	3.93	3.93	102.31	18.44	3.64

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	0.89	0.008	0.00
2	0.44	15.51	0.140	0.00
3	0.83	-0.57	-0.005	0.00
4	1.22	-14.92	-0.135	0.00
5	1.58	0.33	0.003	0.00

Verifica sezioni fondazione [Combinazione n° 27 - SLE (Rara)]

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _s	σ _b	σ _n	σ _c
1	0.08	2.33	48.17	3.93	3.93	9.41	3.35	0.88
2	0.44	1.35	43.99	3.93	3.93	6.58	1.07	0.55
3	0.83	1.01	44.06	3.93	3.93	5.89	1.80	0.47
4	1.22	0.06	39.05	3.93	3.93	3.53	3.29	0.24
5	1.58	0.69	28.81	3.93	3.93	3.91	1.13	0.32

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	-0.09	-0.001	0.00
2	0.44	-1.36	-0.012	0.00
3	0.83	-1.10	-0.010	0.00
4	1.22	-3.40	-0.031	0.00
5	1.58	7.39	0.067	0.00

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Verifica sezioni traverso [Combinazione n° 27 - SLE (Rara)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	-2.33	48.12	3.93	3.93	3.37	9.41	0.88
2	0.44	-1.51	32.67	3.93	3.93	1.68	6.18	0.57
3	0.83	-5.32	36.13	3.93	3.93	67.96	13.13	2.50
4	1.22	-6.35	37.36	3.93	3.93	88.31	14.41	3.02
5	1.58	-0.69	29.17	3.93	3.93	1.16	3.94	0.32

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	2.28	0.021	0.00
2	0.44	-5.34	-0.048	0.00
3	0.83	-6.17	-0.056	0.00
4	1.22	2.89	0.026	0.00
5	1.58	7.34	0.066	0.00

Verifica sezioni fondazione [Combinazione n° 28 - SLE (Rara)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	9.98	64.14	3.93	3.93	23.84	131.93	4.71
2	0.44	-3.46	29.33	3.93	3.93	37.42	9.71	1.39
3	0.83	-8.10	18.75	3.93	3.93	149.52	11.15	3.96
4	1.22	-3.67	30.87	3.93	3.93	39.91	10.25	1.69
5	1.58	9.70	61.02	3.93	3.93	22.89	129.86	4.58

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	-2.42	-0.022	0.00
2	0.44	-20.17	-0.183	0.00
3	0.83	1.01	0.009	0.00
4	1.22	20.42	0.185	0.00
5	1.58	3.63	0.033	0.00

Verifica sezioni traverso [Combinazione n° 28 - SLE (Rara)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	-9.98	64.14	3.93	3.93	131.88	23.85	4.70
2	0.44	2.39	26.10	3.93	3.93	7.66	19.30	1.05
3	0.83	6.33	14.52	3.93	3.93	8.68	116.91	3.09
4	1.22	1.58	27.91	3.93	3.93	6.10	4.34	0.62
5	1.58	-9.70	61.13	3.93	3.93	129.72	22.91	4.58

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	0.73	0.007	0.00
2	0.44	19.87	0.180	0.00
3	0.83	-0.82	-0.007	0.00
4	1.22	-19.24	-0.174	0.00
5	1.58	0.86	0.008	0.00

Verifica sezioni fondazione [Combinazione n° 29 - SLE (Rara)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	1.38	59.35	3.93	3.93	7.97	2.40	0.64
2	0.44	1.82	55.80	3.93	3.93	8.60	1.03	0.72
3	0.83	1.69	56.16	3.93	3.93	8.33	1.45	0.69
4	1.22	0.11	49.02	3.93	3.93	4.49	4.07	0.31
5	1.58	-0.82	33.53	3.93	3.93	1.28	4.58	0.37

Verifiche taglio

N°	X	V	τ	A _{sw}
1	0.08	2.41	0.022	0.00
2	0.44	-0.36	-0.003	0.00
3	0.83	-1.56	-0.014	0.00
4	1.22	-6.08	-0.055	0.00
5	1.58	7.31	0.066	0.00

Verifica sezioni traverso [Combinazione n° 29 - SLE (Rara)]

 Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

Verifiche presso-flessione

N°	X	M	N	A _n	A _{te}	σ _n	σ _n	σ _c
1	0.08	-1.38	59.16	3.93	3.93	2.38	7.95	0.64
2	0.44	0.96	37.98	3.93	3.93	5.26	1.37	0.43
3	0.83	-3.99	42.74	3.93	3.93	33.21	12.68	1.76



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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4	1.22	-5.50	44.26	3.93	3.93	61.99	14.97	2.54
5	1.58	0.82	33.89	3.93	3.93	4.61	1.31	0.37

Verifiche taglio

N°	X	V	ε	A _{sw}
1	0.08	5.32	0.048	0.00
2	0.44	-6.58	-0.060	0.00
3	0.83	-8.36	-0.076	0.00
4	1.22	3.04	0.028	0.00
5	1.58	7.48	0.068	0.00

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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Verifiche fessurazione

Simbologia adottata ed unità di misura

N°	Indice sezione
X_i	Ascissa/Ordinata sezione, espresso in m
M_p	Momento, espresse in kNm
M_n	Momento, espresse in kNm
w_i	Apertura fessure, espresse in mm
w_{lim}	Apertura limite fessure, espresse in mm
s	Distanza media tra le fessure, espresse in mm
ϵ_{sm}	Deformazione nelle fessure, espresse in [%]

Verifica fessurazione fondazione [Combinazione n° 21 - SLE (Quasi Permanente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	1.59	0.00	0.20	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	0.14	0.00	0.20	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	-0.17	0.00	0.20	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	0.14	0.00	0.20	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	1.59	0.00	0.20	0.00	0.000000

Verifica fessurazione traverso [Combinazione n° 21 - SLE (Quasi Permanente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	-1.59	0.00	0.20	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	-1.49	0.00	0.20	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	-1.24	0.00	0.20	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	-1.49	0.00	0.20	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	-1.59	0.00	0.20	0.00	0.000000

Verifica fessurazione fondazione [Combinazione n° 22 - SLE (Frequente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	1.59	0.00	0.30	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	0.14	0.00	0.30	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	-0.17	0.00	0.30	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	0.14	0.00	0.30	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	1.59	0.00	0.30	0.00	0.000000

Verifica fessurazione traverso [Combinazione n° 22 - SLE (Frequente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	-1.59	0.00	0.30	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	-1.49	0.00	0.30	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	-1.24	0.00	0.30	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	-1.49	0.00	0.30	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	-1.59	0.00	0.30	0.00	0.000000

Verifica fessurazione fondazione [Combinazione n° 23 - SLE (Frequente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	1.80	0.00	0.30	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	0.12	0.00	0.30	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	-0.22	0.00	0.30	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	0.12	0.00	0.30	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	1.80	0.00	0.30	0.00	0.000000

Verifica fessurazione traverso [Combinazione n° 23 - SLE (Frequente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	-1.80	0.00	0.30	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	-1.93	0.00	0.30	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	-1.72	0.00	0.30	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	-1.93	0.00	0.30	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	-1.80	0.00	0.30	0.00	0.000000

Verifica fessurazione fondazione [Combinazione n° 24 - SLE (Frequente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	7.72	0.00	0.30	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	-2.62	0.00	0.30	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	-6.16	0.00	0.30	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	-2.78	0.00	0.30	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	7.51	0.00	0.30	0.00	0.000000

Verifica fessurazione traverso [Combinazione n° 24 - SLE (Frequente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	-7.72	0.00	0.30	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	1.68	0.00	0.30	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	4.71	0.00	0.30	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	1.07	0.00	0.30	0.00	0.000000
5	1.58	3.93	3.93	13.90	-13.90	-7.51	0.00	0.30	0.00	0.000000

Verifica fessurazione fondazione [Combinazione n° 25 - SLE (Frequente)]

N°	X	A_n	A_n	M_p	M_n	M	w	w_{lim}	S_m	ϵ_{sm}
1	0.08	3.93	3.93	13.90	-13.90	1.27	0.00	0.30	0.00	0.000000
2	0.44	3.93	3.93	13.90	-13.90	1.34	0.00	0.30	0.00	0.000000
3	0.83	3.93	3.93	13.90	-13.90	1.18	0.00	0.30	0.00	0.000000
4	1.22	3.93	3.93	13.90	-13.90	0.05	0.00	0.30	0.00	0.000000



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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5	1.58	3.93	3.93	13.90	-13.90	-0.37	0.00	0.30	0.00	0.00000
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Verifica fessurazione traverso [Combinazione n° 25 - SLE (Frequente)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	-1.27	0.00	0.30	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	0.61	0.00	0.30	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	-3.03	0.00	0.30	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	-4.24	0.00	0.30	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	0.37	0.00	0.30	0.00	0.00000

Verifica fessurazione fondazione [Combinazione n° 26 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	7.93	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	-2.15	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	-5.65	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	-2.31	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	7.73	0.00	100.00	0.00	0.00000

Verifica fessurazione traverso [Combinazione n° 26 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	-7.93	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	1.73	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	4.81	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	1.12	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	-7.73	0.00	100.00	0.00	0.00000

Verifica fessurazione fondazione [Combinazione n° 27 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	2.33	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	1.35	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	1.01	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	0.06	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	0.69	0.00	100.00	0.00	0.00000

Verifica fessurazione traverso [Combinazione n° 27 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	-2.33	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	-1.51	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	-5.32	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	-6.35	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	-0.69	0.00	100.00	0.00	0.00000

Verifica fessurazione fondazione [Combinazione n° 28 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	9.98	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	-3.46	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	-8.10	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	-3.67	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	9.70	0.00	100.00	0.00	0.00000

Verifica fessurazione traverso [Combinazione n° 28 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	-9.98	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	2.39	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	6.33	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	1.58	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	-9.70	0.00	100.00	0.00	0.00000

Verifica fessurazione fondazione [Combinazione n° 29 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	1.38	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	1.82	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	1.69	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	0.11	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	-0.82	0.00	100.00	0.00	0.00000

Verifica fessurazione traverso [Combinazione n° 29 - SLE (Rara)]

N°	X	A _N	A _n	Mp	Mn	M	w	W _{lim}	S _m	ε _m
1	0.08	3.93	3.93	13.90	-13.90	-1.38	0.00	100.00	0.00	0.00000
2	0.44	3.93	3.93	13.90	-13.90	0.96	0.00	100.00	0.00	0.00000
3	0.83	3.93	3.93	13.90	-13.90	-3.99	0.00	100.00	0.00	0.00000
4	1.22	3.93	3.93	13.90	-13.90	-5.50	0.00	100.00	0.00	0.00000
5	1.58	3.93	3.93	13.90	-13.90	0.82	0.00	100.00	0.00	0.00000

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Inviluppo spostamenti nodali

Inviluppo spostamenti fondazione

X [m]	$u_{x\min}$ [cm]	$u_{x\max}$ [cm]	$u_{y\min}$ [cm]	$u_{y\max}$ [cm]
0.08	0.0016	1.5047	0.4725	2.8981
0.44	0.0001	2.2724	0.4765	2.6948
0.83	0.0000	2.4006	0.4785	2.6305
1.22	-0.0001	2.2701	0.4768	2.5812
1.58	-0.0016	1.4902	0.4740	2.5407

Inviluppo spostamenti traverso

X [m]	$u_{x\min}$ [cm]	$u_{x\max}$ [cm]	$u_{y\min}$ [cm]	$u_{y\max}$ [cm]
0.08	0.0016	1.5047	0.4725	2.8981
0.44	0.0022	0.8222	0.4714	2.7291
0.83	0.0000	0.7053	0.4698	2.6811
1.22	-0.0022	0.8132	0.4713	2.6150
1.58	-0.0016	1.4902	0.4740	2.5407

Inviluppo sollecitazioni nodali

Inviluppo sollecitazioni fondazione

X [m]	M_{\min} [kNm]	M_{\max} [kNm]	V_{\min} [kN]	V_{\max} [kN]	N_{\min} [kN]	N_{\max} [kN]
0.08	-14.53	3.11	-4.71	4.05	13.84	94.74
0.44	-3.15	5.31	-29.98	7.49	13.39	82.56
0.83	-3.92	12.21	-2.36	1.51	13.35	83.13
1.22	-1.90	5.62	-12.21	30.34	13.89	72.33
1.58	-14.11	3.18	0.10	10.53	14.18	90.05

Inviluppo sollecitazioni traverso

X [m]	M_{\min} [kNm]	M_{\max} [kNm]	V_{\min} [kN]	V_{\max} [kN]	N_{\min} [kN]	N_{\max} [kN]
0.08	-14.53	3.11	-1.38	8.34	13.89	94.78
0.44	-3.18	4.17	-12.53	29.81	11.58	55.58
0.83	-7.93	10.09	-12.57	0.55	10.36	62.82
1.22	-8.55	2.97	-28.93	8.05	11.63	65.00
1.58	-14.11	3.18	0.24	10.86	14.22	90.20

Inviluppo pressioni terreno

Inviluppo pressioni sul terreno di fondazione

X [m]	σ_{\min} [N/mm ²]	σ_{\max} [N/mm ²]
0.08	0.024	0.145
0.44	0.024	0.135
0.83	0.024	0.132
1.22	0.024	0.129
1.58	0.024	0.127

Inviluppo verifiche stato limite ultimo (SLU)

Verifica sezioni fondazione (Inviluppo)

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

X	A_n	A_b	CS
0.08	3.93	3.93	2.28
0.44	3.93	3.93	3.25
0.83	3.93	3.93	1.94
1.22	3.93	3.93	3.14
1.58	3.93	3.93	2.21

X	V_{Rd}	V_{Rd}	V_{Rd}	A_{sw}
0.08	84.22	0.00	0.00	0.00
0.44	79.87	0.00	0.00	0.00
0.83	78.08	0.00	0.00	0.00
1.22	79.41	0.00	0.00	0.00
1.58	83.80	0.00	0.00	0.00

Verifica sezioni traverso (Inviluppo)

Base sezione B = 100 cm
 Altezza sezione H = 16.00 cm

X	A_n	A_b	CS
0.08	3.93	3.93	2.28
0.44	3.93	3.93	3.77
0.83	3.93	3.93	2.31
1.22	3.93	3.93	3.37
1.58	3.93	3.93	2.29

X	V_{Rd}	V_{Rd}	V_{Rd}	A_{sw}
0.08	84.23	0.00	0.00	0.00
0.44	78.93	0.00	0.00	0.00
0.83	77.15	0.00	0.00	0.00
1.22	78.92	0.00	0.00	0.00
1.58	83.81	0.00	0.00	0.00



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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Verifiche geotecniche

Simbologia adottata

IC Indice della combinazione
Nc, Nq, Ny Fattori di capacità portante
Nc, Nq, Ny Fattori di capacità portante corretti per effetto forma, inclinazione del carico, affondamento, etc.
qu Portanza ultima del terreno, espressa in [N/mmq]
Qv Portanza ultima del terreno, espressa in [kN]/m
Qv Carico verticale al piano di posa, espressa in [kN]/m
FS Fattore di sicurezza a carico limite

IC	Nc	Nq	Ny	N'c	N'q	N'y	qu	Qv	Qv	FS
1	30.39	16.82	12.59	30.39	16.82	12.59	1.122	1862.84	162.03	11.50
2	21.15	9.81	5.43	21.15	9.81	5.43	0.613	1017.96	132.93	7.66
3	30.39	16.82	12.59	30.39	16.82	12.59	1.122	1862.84	162.03	11.50
4	21.15	9.81	5.43	21.15	9.81	5.43	0.613	1017.96	132.93	7.66
5	30.39	16.82	12.59	30.39	16.82	12.59	1.118	1855.66	197.87	9.38
6	21.15	9.81	5.43	21.15	9.81	5.43	0.611	1013.43	164.00	6.18
7	30.39	16.82	12.59	30.39	16.82	12.59	0.673	1117.84	125.69	8.89
8	21.15	9.81	5.43	21.15	9.81	5.43	0.286	474.24	101.44	4.68
9	30.39	16.82	12.59	30.39	16.82	12.59	0.673	1117.84	125.69	8.89
10	21.15	9.81	5.43	21.15	9.81	5.43	0.286	474.24	101.44	4.68
11	30.39	16.82	12.59	30.39	16.82	12.59	0.613	1017.77	149.42	6.81
12	21.15	9.81	5.43	21.15	9.81	5.43	0.246	409.13	122.01	3.35
14	30.39	16.82	12.59	30.39	16.82	12.59	0.138	229.33	42.10	5.45
15	21.15	9.81	5.43	21.15	9.81	5.43	0.079	130.84	42.91	3.05
16	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	36.55	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	35.74	0.00
18	30.39	16.82	12.59	30.39	16.82	12.59	0.138	229.33	42.10	5.45
19	21.15	9.81	5.43	21.15	9.81	5.43	0.079	130.84	42.91	3.05



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

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Schema Strutturale

Area ed Inerzia elementi

Destinazione	Area [cmq]	Inerzia [cm^4]
Fondazione	1600.00	34133.33
Piedritto sinistro	3000.00	225000.00
Piedritto destro	3000.00	225000.00
Traverso	1600.00	34133.33

Simbologia adottata ed unità di misura

N	indice elemento
N _i	indice nodo iniziale elemento
N _f	indice nodo finale elemento
(X _i , Y _i)	coordinate nodo iniziale, espresse in cm
(X _f , Y _f)	coordinate nodo finale, espresse in cm
Dest	appartenenza elemento

N	N _i	N _f	X _i	Y _i	X _f	Y _f	Dest
1	1	4	8.00	83.00	8.09	79.32	PiedR
2	4	10	8.09	79.32	8.36	75.65	PiedR
3	10	16	8.36	75.65	8.81	72.00	PiedR
4	16	22	8.81	72.00	9.44	68.37	PiedR
5	22	28	9.44	68.37	10.25	64.78	PiedR
6	28	34	10.25	64.78	11.23	61.23	PiedR
7	34	40	11.23	61.23	12.38	57.73	PiedR
8	40	46	12.38	57.73	13.71	54.30	PiedR
9	46	52	13.71	54.30	15.20	50.93	PiedR
10	52	58	15.20	50.93	16.86	47.65	PiedR
11	58	64	16.86	47.65	18.67	44.44	PiedR
12	64	70	18.67	44.44	20.64	41.33	PiedR
13	70	76	20.64	41.33	22.76	38.32	PiedR
14	76	82	22.76	38.32	25.02	35.42	PiedR
15	82	88	25.02	35.42	27.43	32.63	PiedR
16	88	94	27.43	32.63	29.97	29.97	PiedR
17	94	100	29.97	29.97	32.63	27.43	PiedR
18	100	106	32.63	27.43	35.42	25.02	PiedR
19	106	112	35.42	25.02	38.32	22.76	PiedR
20	112	118	38.32	22.76	41.33	20.64	PiedR
21	118	124	41.33	20.64	44.44	18.67	PiedR
22	124	130	44.44	18.67	47.65	16.86	PiedR
23	130	136	47.65	16.86	50.93	15.20	PiedR
24	136	142	50.93	15.20	54.30	13.71	PiedR
25	142	148	54.30	13.71	57.73	12.38	PiedR
26	148	154	57.73	12.38	61.23	11.23	PiedR
27	154	160	61.23	11.23	64.78	10.25	PiedR
28	160	166	64.78	10.25	68.37	9.44	PiedR
29	166	172	68.37	9.44	72.00	8.81	PiedR
30	172	178	72.00	8.81	75.65	8.36	PiedR
31	178	184	75.65	8.36	79.32	8.09	PiedR
32	184	190	79.32	8.09	83.00	8.00	PiedR
33	190	196	83.00	8.00	86.68	8.09	PiedR
34	196	202	86.68	8.09	90.35	8.36	PiedR
35	202	208	90.35	8.36	94.00	8.81	PiedR
36	208	214	94.00	8.81	97.63	9.44	PiedR
37	214	220	97.63	9.44	101.22	10.25	PiedR
38	220	226	101.22	10.25	104.77	11.23	PiedR
39	226	232	104.77	11.23	108.27	12.38	PiedR
40	232	238	108.27	12.38	111.70	13.71	PiedR
41	238	244	111.70	13.71	115.07	15.20	PiedR
42	244	250	115.07	15.20	118.35	16.86	PiedR
43	250	256	118.35	16.86	121.56	18.67	PiedR
44	256	262	121.56	18.67	124.67	20.64	PiedR
45	262	268	124.67	20.64	127.68	22.76	PiedR
46	268	274	127.68	22.76	130.58	25.02	PiedR
47	274	280	130.58	25.02	133.37	27.43	PiedR
48	280	286	133.37	27.43	136.03	29.97	PiedR
49	286	292	136.03	29.97	138.57	32.63	PiedR
50	292	298	138.57	32.63	140.98	35.42	PiedR
51	298	304	140.98	35.42	143.24	38.32	PiedR
52	304	310	143.24	38.32	145.36	41.33	PiedR
53	310	316	145.36	41.33	147.33	44.44	PiedR
54	316	322	147.33	44.44	149.14	47.65	PiedR
55	322	328	149.14	47.65	150.80	50.93	PiedR
56	328	334	150.80	50.93	152.29	54.30	PiedR
57	334	340	152.29	54.30	153.62	57.73	PiedR
58	340	346	153.62	57.73	154.77	61.23	PiedR
59	346	352	154.77	61.23	155.75	64.78	PiedR
60	352	358	155.75	64.78	156.56	68.37	PiedR
61	358	364	156.56	68.37	157.19	72.00	PiedR
62	364	370	157.19	72.00	157.64	75.65	PiedR
63	370	376	157.64	75.65	157.91	79.32	PiedR
64	376	382	157.91	79.32	158.00	83.00	PiedR
65	1	7	8.00	83.00	8.09	86.68	Trav
66	7	13	8.09	86.68	8.36	90.35	Trav
67	13	19	8.36	90.35	8.81	94.00	Trav
68	19	25	8.81	94.00	9.44	97.63	Trav
69	25	31	9.44	97.63	10.25	101.22	Trav
70	31	37	10.25	101.22	11.23	104.77	Trav
71	37	43	11.23	104.77	12.38	108.27	Trav
72	43	49	12.38	108.27	13.71	111.70	Trav
73	49	55	13.71	111.70	15.20	115.07	Trav
74	55	61	15.20	115.07	16.86	118.35	Trav
75	61	67	16.86	118.35	18.67	121.56	Trav
76	67	73	18.67	121.56	20.64	124.67	Trav
77	73	79	20.64	124.67	22.76	127.68	Trav
78	79	85	22.76	127.68	25.02	130.58	Trav
79	85	91	25.02	130.58	27.43	133.37	Trav
80	91	97	27.43	133.37	29.97	136.03	Trav
81	97	103	29.97	136.03	32.63	138.57	Trav
82	103	109	32.63	138.57	35.42	140.98	Trav
83	109	115	35.42	140.98	38.32	143.24	Trav
84	115	121	38.32	143.24	41.33	145.36	Trav
85	121	127	41.33	145.36	44.44	147.33	Trav
86	127	133	44.44	147.33	47.65	149.14	Trav
87	133	139	47.65	149.14	50.93	150.80	Trav



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.progr. 01	REV. A	Pag.di Pag. 93 di 180
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88	139	145	50.93	150.80	54.30	152.29	Trav
89	145	151	54.30	152.29	57.73	153.62	Trav
90	151	157	57.73	153.62	61.23	154.77	Trav
91	157	163	61.23	154.77	64.78	155.75	Trav
92	163	169	64.78	155.75	68.37	156.56	Trav
93	169	175	68.37	156.56	72.00	157.19	Trav
94	175	181	72.00	157.19	75.65	157.64	Trav
95	181	187	75.65	157.64	79.32	157.91	Trav
96	187	193	79.32	157.91	83.00	158.00	Trav
97	193	199	83.00	158.00	86.68	157.91	Trav
98	199	205	86.68	157.91	90.35	157.64	Trav
99	205	211	90.35	157.64	94.00	157.19	Trav
100	211	217	94.00	157.19	97.63	156.56	Trav
101	217	223	97.63	156.56	101.22	155.75	Trav
102	223	229	101.22	155.75	104.77	154.77	Trav
103	229	235	104.77	154.77	108.27	153.62	Trav
104	235	241	108.27	153.62	111.70	152.29	Trav
105	241	247	111.70	152.29	115.07	150.80	Trav
106	247	253	115.07	150.80	118.35	149.14	Trav
107	253	259	118.35	149.14	121.56	147.33	Trav
108	259	265	121.56	147.33	124.67	145.36	Trav
109	265	271	124.67	145.36	127.68	143.24	Trav
110	271	277	127.68	143.24	130.58	140.98	Trav
111	277	283	130.58	140.98	133.37	138.57	Trav
112	283	289	133.37	138.57	136.03	136.03	Trav
113	289	295	136.03	136.03	138.57	133.37	Trav
114	295	301	138.57	133.37	140.98	130.58	Trav
115	301	307	140.98	130.58	143.24	127.68	Trav
116	307	313	143.24	127.68	145.36	124.67	Trav
117	313	319	145.36	124.67	147.33	121.56	Trav
118	319	325	147.33	121.56	149.14	118.35	Trav
119	325	331	149.14	118.35	150.80	115.07	Trav
120	331	337	150.80	115.07	152.29	111.70	Trav
121	337	343	152.29	111.70	153.62	108.27	Trav
122	343	349	153.62	108.27	154.77	104.77	Trav
123	349	355	154.77	104.77	155.75	101.22	Trav
124	355	361	155.75	101.22	156.56	97.63	Trav
125	361	367	156.56	97.63	157.19	94.00	Trav
126	367	373	157.19	94.00	157.64	90.35	Trav
127	373	379	157.64	90.35	157.91	86.68	Trav
128	379	382	157.91	86.68	158.00	83.00	Trav
129	1	2	8.00	83.00	-92.00	83.00	MollaPR
130	1	3	8.00	83.00	8.00	-17.00	MollaPR
131	4	5	8.09	79.32	-91.91	79.32	MollaPR
132	4	6	8.09	79.32	8.09	-20.68	MollaPR
133	7	8	8.09	86.68	-91.91	86.68	MollaPR
134	7	9	8.09	86.68	8.09	186.68	MollaPR
135	10	11	8.36	75.65	-91.64	75.65	MollaPR
136	10	12	8.36	75.65	8.36	-24.35	MollaPR
137	13	14	8.36	90.35	-91.64	90.35	MollaPR
138	13	15	8.36	90.35	8.36	190.35	MollaPR
139	16	17	8.81	72.00	-91.19	72.00	MollaPR
140	16	18	8.81	72.00	8.81	-28.00	MollaPR
141	19	20	8.81	94.00	-91.19	94.00	MollaPR
142	19	21	8.81	94.00	8.81	194.00	MollaPR
143	22	23	9.44	68.37	-90.56	68.37	MollaPR
144	22	24	9.44	68.37	9.44	-31.63	MollaPR
145	25	26	9.44	97.63	-90.56	97.63	MollaPR
146	25	27	9.44	97.63	9.44	197.63	MollaPR
147	28	29	10.25	64.78	-89.75	64.78	MollaPR
148	28	30	10.25	64.78	10.25	-35.22	MollaPR
149	31	32	10.25	101.22	-89.75	101.22	MollaPR
150	31	33	10.25	101.22	10.25	201.22	MollaPR
151	34	35	11.23	61.23	-88.77	61.23	MollaPR
152	34	36	11.23	61.23	11.23	-38.77	MollaPR
153	37	38	11.23	104.77	-88.77	104.77	MollaPR
154	37	39	11.23	104.77	11.23	204.77	MollaPR
155	40	41	12.38	57.73	-87.62	57.73	MollaPR
156	40	42	12.38	57.73	12.38	-42.27	MollaPR
157	43	44	12.38	108.27	-87.62	108.27	MollaPR
158	43	45	12.38	108.27	12.38	208.27	MollaPR
159	46	47	13.71	54.30	-86.29	54.30	MollaPR
160	46	48	13.71	54.30	13.71	-45.70	MollaPR
161	49	50	13.71	111.70	-86.29	111.70	MollaPR
162	49	51	13.71	111.70	13.71	211.70	MollaPR
163	52	53	15.20	50.93	-84.80	50.93	MollaPR
164	52	54	15.20	50.93	15.20	-49.07	MollaPR
165	55	56	15.20	115.07	-84.80	115.07	MollaPR
166	55	57	15.20	115.07	15.20	215.07	MollaPR
167	58	59	16.86	47.65	-83.14	47.65	MollaPR
168	58	60	16.86	47.65	16.86	-52.35	MollaPR
169	61	62	16.86	118.35	-83.14	118.35	MollaPR
170	61	63	16.86	118.35	16.86	218.35	MollaPR
171	64	65	18.67	44.44	-81.33	44.44	MollaPR
172	64	66	18.67	44.44	18.67	-55.56	MollaPR
173	67	68	18.67	121.56	-81.33	121.56	MollaPR
174	67	69	18.67	121.56	18.67	221.56	MollaPR
175	70	71	20.64	41.33	-79.36	41.33	MollaPR
176	70	72	20.64	41.33	20.64	-58.67	MollaPR
177	73	74	20.64	124.67	-79.36	124.67	MollaPR
178	73	75	20.64	124.67	20.64	224.67	MollaPR
179	76	77	22.76	38.32	-77.24	38.32	MollaPR
180	76	78	22.76	38.32	22.76	-61.68	MollaPR
181	79	80	22.76	127.68	-77.24	127.68	MollaPR
182	79	81	22.76	127.68	22.76	227.68	MollaPR
183	82	83	25.02	35.42	-74.98	35.42	MollaPR
184	82	84	25.02	35.42	25.02	-64.58	MollaPR
185	85	86	25.02	130.58	-74.98	130.58	MollaPR
186	85	87	25.02	130.58	25.02	230.58	MollaPR
187	88	89	27.43	32.63	-72.57	32.63	MollaPR
188	88	90	27.43	32.63	27.43	-67.37	MollaPR
189	91	92	27.43	133.37	-72.57	133.37	MollaPR
190	91	93	27.43	133.37	27.43	233.37	MollaPR
191	94	95	29.97	29.97	-70.03	29.97	MollaPR
192	94	96	29.97	29.97	29.97	-70.03	MollaPR
193	97	98	29.97	136.03	-70.03	136.03	MollaPR
194	97	99	29.97	136.03	29.97	236.03	MollaPR
195	100	101	32.63	27.43	-67.37	27.43	MollaPR
196	100	102	32.63	27.43	32.63	-72.57	MollaPR



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 94 di 180
197	103	104	32.63	138.57	-67.37	138.57	MollaPR	
198	103	105	32.63	138.57	32.63	238.57	MollaPR	
199	106	107	35.42	25.02	-64.58	25.02	MollaPR	
200	106	108	35.42	25.02	35.42	-74.98	MollaPR	
201	109	110	35.42	140.98	-64.58	140.98	MollaPR	
202	109	111	35.42	140.98	35.42	240.98	MollaPR	
203	112	113	38.32	22.76	-61.68	22.76	MollaPR	
204	112	114	38.32	22.76	38.32	-77.24	MollaPR	
205	115	116	38.32	143.24	-61.68	143.24	MollaPR	
206	115	117	38.32	143.24	38.32	243.24	MollaPR	
207	118	119	41.33	20.64	-58.67	20.64	MollaPR	
208	118	120	41.33	20.64	41.33	-79.36	MollaPR	
209	121	122	41.33	145.36	-58.67	145.36	MollaPR	
210	121	123	41.33	145.36	41.33	245.36	MollaPR	
211	124	125	44.44	18.67	-55.56	18.67	MollaPR	
212	124	126	44.44	18.67	44.44	-81.33	MollaPR	
213	127	128	44.44	147.33	-55.56	147.33	MollaPR	
214	127	129	44.44	147.33	44.44	247.33	MollaPR	
215	130	131	47.65	16.86	-52.35	16.86	MollaPR	
216	130	132	47.65	16.86	47.65	-83.14	MollaPR	
217	133	134	47.65	149.14	-52.35	149.14	MollaPR	
218	133	135	47.65	149.14	47.65	249.14	MollaPR	
219	136	137	50.93	15.20	-49.07	15.20	MollaPR	
220	136	138	50.93	15.20	50.93	-84.80	MollaPR	
221	139	140	50.93	150.80	-49.07	150.80	MollaPR	
222	139	141	50.93	150.80	50.93	250.80	MollaPR	
223	142	143	54.30	13.71	-45.70	13.71	MollaPR	
224	142	144	54.30	13.71	54.30	-86.29	MollaPR	
225	145	146	54.30	152.29	-45.70	152.29	MollaPR	
226	145	147	54.30	152.29	54.30	252.29	MollaPR	
227	148	149	57.73	12.38	-42.27	12.38	MollaPR	
228	148	150	57.73	12.38	57.73	-87.62	MollaPR	
229	151	152	57.73	153.62	-42.27	153.62	MollaPR	
230	151	153	57.73	153.62	57.73	253.62	MollaPR	
231	154	155	61.23	11.23	-38.77	11.23	MollaPR	
232	154	156	61.23	11.23	61.23	-88.77	MollaPR	
233	157	158	61.23	154.77	-38.77	154.77	MollaPR	
234	157	159	61.23	154.77	61.23	254.77	MollaPR	
235	160	161	64.78	10.25	-35.22	10.25	MollaPR	
236	160	162	64.78	10.25	64.78	-89.75	MollaPR	
237	163	164	64.78	155.75	-35.22	155.75	MollaPR	
238	163	165	64.78	155.75	64.78	255.75	MollaPR	
239	166	167	68.37	9.44	-31.63	9.44	MollaPR	
240	166	168	68.37	9.44	68.37	-90.56	MollaPR	
241	169	170	68.37	156.56	-31.63	156.56	MollaPR	
242	169	171	68.37	156.56	68.37	256.56	MollaPR	
243	172	173	72.00	8.81	-28.00	8.81	MollaPR	
244	172	174	72.00	8.81	72.00	-91.19	MollaPR	
245	175	176	72.00	157.19	-28.00	157.19	MollaPR	
246	175	177	72.00	157.19	72.00	257.19	MollaPR	
247	178	179	75.65	8.36	-24.35	8.36	MollaPR	
248	178	180	75.65	8.36	75.65	-91.64	MollaPR	
249	181	182	75.65	157.64	-24.35	157.64	MollaPR	
250	181	183	75.65	157.64	75.65	257.64	MollaPR	
251	184	185	79.32	8.09	-20.68	8.09	MollaPR	
252	184	186	79.32	8.09	79.32	-91.91	MollaPR	
253	187	188	79.32	157.91	-20.68	157.91	MollaPR	
254	187	189	79.32	157.91	79.32	257.91	MollaPR	
255	190	191	83.00	8.00	83.00	8.00	MollaPR	
256	190	192	83.00	8.00	83.00	-92.00	MollaPR	
257	193	194	83.00	158.00	83.00	158.00	MollaPR	
258	193	195	83.00	158.00	83.00	258.00	MollaPR	
259	196	197	86.68	8.09	86.68	8.09	MollaPR	
260	196	198	86.68	8.09	86.68	-91.91	MollaPR	
261	199	200	86.68	157.91	86.68	157.91	MollaPR	
262	199	201	86.68	157.91	86.68	257.91	MollaPR	
263	202	203	90.35	8.36	90.35	8.36	MollaPR	
264	202	204	90.35	8.36	90.35	-91.64	MollaPR	
265	205	206	90.35	157.64	90.35	157.64	MollaPR	
266	205	207	90.35	157.64	90.35	257.64	MollaPR	
267	208	209	94.00	8.81	94.00	8.81	MollaPR	
268	208	210	94.00	8.81	94.00	-91.19	MollaPR	
269	211	212	94.00	157.19	94.00	157.19	MollaPR	
270	211	213	94.00	157.19	94.00	257.19	MollaPR	
271	214	215	97.63	9.44	97.63	9.44	MollaPR	
272	214	216	97.63	9.44	97.63	-90.56	MollaPR	
273	217	218	97.63	156.56	97.63	156.56	MollaPR	
274	217	219	97.63	156.56	97.63	256.56	MollaPR	
275	220	221	101.22	10.25	101.22	10.25	MollaPR	
276	220	222	101.22	10.25	101.22	-89.75	MollaPR	
277	223	224	101.22	155.75	101.22	155.75	MollaPR	
278	223	225	101.22	155.75	101.22	255.75	MollaPR	
279	226	227	104.77	11.23	104.77	11.23	MollaPR	
280	226	228	104.77	11.23	104.77	-88.77	MollaPR	
281	229	230	104.77	154.77	104.77	154.77	MollaPR	
282	229	231	104.77	154.77	104.77	254.77	MollaPR	
283	232	233	108.27	12.38	108.27	12.38	MollaPR	
284	232	234	108.27	12.38	108.27	-87.62	MollaPR	
285	235	236	108.27	153.62	108.27	153.62	MollaPR	
286	235	237	108.27	153.62	108.27	253.62	MollaPR	
287	238	239	111.70	13.71	111.70	13.71	MollaPR	
288	238	240	111.70	13.71	111.70	-86.29	MollaPR	
289	241	242	111.70	152.29	111.70	152.29	MollaPR	
290	241	243	111.70	152.29	111.70	252.29	MollaPR	
291	244	245	115.07	15.20	115.07	15.20	MollaPR	
292	244	246	115.07	15.20	115.07	-84.80	MollaPR	
293	247	248	115.07	150.80	115.07	150.80	MollaPR	
294	247	249	115.07	150.80	115.07	250.80	MollaPR	
295	250	251	118.35	16.86	118.35	16.86	MollaPR	
296	250	252	118.35	16.86	118.35	-83.14	MollaPR	
297	253	254	118.35	149.14	118.35	149.14	MollaPR	
298	253	255	118.35	149.14	118.35	249.14	MollaPR	
299	256	257	121.56	18.67	121.56	18.67	MollaPR	
300	256	258	121.56	18.67	121.56	-81.33	MollaPR	
301	259	260	121.56	147.33	121.56	147.33	MollaPR	
302	259	261	121.56	147.33	121.56	247.33	MollaPR	
303	262	263	124.67	20.64	124.67	20.64	MollaPR	
304	262	264	124.67	20.64	124.67	-79.36	MollaPR	
305	265	266	124.67	145.36	124.67	145.36	MollaPR	

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di Pag.
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306	265	267	124.67	145.36	124.67	245.36	MollaPR
307	268	269	127.68	22.76	227.68	22.76	MollaPR
308	268	270	127.68	22.76	127.68	-77.24	MollaPR
309	271	272	127.68	143.24	227.68	143.24	MollaPR
310	271	273	127.68	143.24	127.68	243.24	MollaPR
311	274	275	130.58	25.02	230.58	25.02	MollaPR
312	274	276	130.58	25.02	130.58	-74.98	MollaPR
313	277	278	130.58	140.98	230.58	140.98	MollaPR
314	277	279	130.58	140.98	130.58	240.98	MollaPR
315	280	281	133.37	27.43	233.37	27.43	MollaPR
316	280	282	133.37	27.43	133.37	-72.57	MollaPR
317	283	284	133.37	138.57	233.37	138.57	MollaPR
318	283	285	133.37	138.57	133.37	238.57	MollaPR
319	286	287	136.03	29.97	236.03	29.97	MollaPR
320	286	288	136.03	29.97	136.03	-70.03	MollaPR
321	289	290	136.03	136.03	236.03	136.03	MollaPR
322	289	291	136.03	136.03	136.03	236.03	MollaPR
323	292	293	138.57	32.63	238.57	32.63	MollaPR
324	292	294	138.57	32.63	138.57	-67.37	MollaPR
325	295	296	138.57	133.37	238.57	133.37	MollaPR
326	295	297	138.57	133.37	138.57	233.37	MollaPR
327	298	299	140.98	35.42	240.98	35.42	MollaPR
328	298	300	140.98	35.42	140.98	-64.58	MollaPR
329	301	302	140.98	130.58	240.98	130.58	MollaPR
330	301	303	140.98	130.58	140.98	230.58	MollaPR
331	304	305	143.24	38.32	243.24	38.32	MollaPR
332	304	306	143.24	38.32	143.24	-61.68	MollaPR
333	307	308	143.24	127.68	243.24	127.68	MollaPR
334	307	309	143.24	127.68	143.24	227.68	MollaPR
335	310	311	145.36	41.33	245.36	41.33	MollaPR
336	310	312	145.36	41.33	145.36	-58.67	MollaPR
337	313	314	145.36	124.67	245.36	124.67	MollaPR
338	313	315	145.36	124.67	145.36	224.67	MollaPR
339	316	317	147.33	44.44	247.33	44.44	MollaPR
340	316	318	147.33	44.44	147.33	-55.56	MollaPR
341	319	320	147.33	121.56	247.33	121.56	MollaPR
342	319	321	147.33	121.56	147.33	221.56	MollaPR
343	322	323	149.14	47.65	249.14	47.65	MollaPR
344	322	324	149.14	47.65	149.14	-52.35	MollaPR
345	325	326	149.14	118.35	249.14	118.35	MollaPR
346	325	327	149.14	118.35	149.14	218.35	MollaPR
347	328	329	150.80	50.93	250.80	50.93	MollaPR
348	328	330	150.80	50.93	150.80	-49.07	MollaPR
349	331	332	150.80	115.07	250.80	115.07	MollaPR
350	331	333	150.80	115.07	150.80	215.07	MollaPR
351	334	335	152.29	54.30	252.29	54.30	MollaPR
352	334	336	152.29	54.30	152.29	-45.70	MollaPR
353	337	338	152.29	111.70	252.29	111.70	MollaPR
354	337	339	152.29	111.70	152.29	211.70	MollaPR
355	340	341	153.62	57.73	253.62	57.73	MollaPR
356	340	342	153.62	57.73	153.62	-42.27	MollaPR
357	343	344	153.62	108.27	253.62	108.27	MollaPR
358	343	345	153.62	108.27	153.62	208.27	MollaPR
359	346	347	154.77	61.23	254.77	61.23	MollaPR
360	346	348	154.77	61.23	154.77	-38.77	MollaPR
361	349	350	154.77	104.77	254.77	104.77	MollaPR
362	349	351	154.77	104.77	154.77	204.77	MollaPR
363	352	353	155.75	64.78	255.75	64.78	MollaPR
364	352	354	155.75	64.78	155.75	-35.22	MollaPR
365	355	356	155.75	101.22	255.75	101.22	MollaPR
366	355	357	155.75	101.22	155.75	201.22	MollaPR
367	358	359	156.56	68.37	256.56	68.37	MollaPR
368	358	360	156.56	68.37	156.56	-31.63	MollaPR
369	361	362	156.56	97.63	256.56	97.63	MollaPR
370	361	363	156.56	97.63	156.56	197.63	MollaPR
371	364	365	157.19	72.00	257.19	72.00	MollaPR
372	364	366	157.19	72.00	157.19	-28.00	MollaPR
373	367	368	157.19	94.00	257.19	94.00	MollaPR
374	367	369	157.19	94.00	157.19	194.00	MollaPR
375	370	371	157.64	75.65	257.64	75.65	MollaPR
376	370	372	157.64	75.65	157.64	-24.35	MollaPR
377	373	374	157.64	90.35	257.64	90.35	MollaPR
378	373	375	157.64	90.35	157.64	190.35	MollaPR
379	376	377	157.91	79.32	257.91	79.32	MollaPR
380	376	378	157.91	79.32	157.91	-20.68	MollaPR
381	379	380	157.91	86.68	257.91	86.68	MollaPR
382	379	381	157.91	86.68	157.91	186.68	MollaPR
383	382	383	158.00	83.00	258.00	83.00	MollaPR
384	382	384	158.00	83.00	158.00	-17.00	MollaPR

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo							
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7. ORIGINE E CARATTERISTICHE DEI CODICI DI CALCOLO

Nell'ambito del presente paragrafo si riporta una descrizione delle caratteristiche dei Software utilizzati per l'effettuazione delle Analisi e Verifiche strutturali e geotecniche esposte nel presente documento.

7.1 SOFTWARE PER ANALISI E VERIFICA DELLE VASCHE

Denominazione ed Estremi di Licenza del Software

Titolo	SAP2000
Versione	14
Produttore	CSI Italia Srl
Utente	TECNOSTRUTTURE S.R.L.
Licenza	4546

7.2 SOFTWARE PER ANALISI E VERIFICA TOMBINI

Denominazione ed Estremi di Licenza del Software

Titolo	SCAT - Analisi Strutture Scatolari
Versione	11.0
Produttore	Aztec Informatica srl, Casole Bruzio (CS)
Utente	TECNOSTRUTTURE S.R.L.
Licenza	U3163LJ

Tipo di analisi svolta

L'analisi strutturale e le verifiche sono condotte con l'ausilio di un codice di calcolo automatico. La verifica della sicurezza degli elementi strutturali è stata valutata con i metodi della scienza delle costruzioni.

La struttura viene discretizzata in elementi tipo trave. Per simulare il comportamento del terreno di fondazione e di rinfianco vengono inserite delle molle alla Winkler non reagenti a trazione

L'analisi che viene effettuata è un'analisi al passo per tener conto delle molle che devono essere eliminate (molle in trazione). L'analisi fornisce i risultati in termini di spostamenti. Dagli spostamenti si risale alle sollecitazioni nodali ed alle pressioni sul terreno.

Il calcolo degli scatolari viene eseguito secondo le seguenti fasi:

- Calcolo delle pressioni in calotta (per gli scatolari ricoperti da terreno);
- Calcolo della spinta del terreno;
- Calcolo delle sollecitazioni sugli elementi strutturali (fondazione, piedritti e traverso);
- Progetto delle armature e relative verifiche dei materiali.

L'analisi strutturale sotto le azioni sismiche è condotta con il metodo dell'analisi statica equivalente

La verifica delle sezioni degli elementi strutturali è eseguita con il metodo degli Stati Limite. Le combinazioni di carico adottate sono esaustive relativamente agli scenari di carico più gravosi cui l'opera sarà soggetta.

	2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1 Tratto Fabriano - Matelica Nord Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita Relazione di calcolo								
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7.3 AFFIDABILITÀ E CONTROLLO DEI RISULTATI

Affidabilità dei codici di calcolo

Un attento esame preliminare della documentazione a corredo dei software impiegati ha consentito di valutarne l'affidabilità. La documentazione fornita dal produttore dei software contiene un'esauriente descrizione delle basi teoriche, degli algoritmi impiegati e l'individuazione dei campi d'impiego. Le stesse società produttrici hanno verificato l'affidabilità e la robustezza dei codice di calcolo attraverso un numero significativo di casi prova in cui i risultati sono contenuti in apposita documentazione fornita a corredo dell'acquisto del prodotto, che per brevità espositiva si omette di allegare al presente documento.

Giudizio motivato di accettabilità dei risultati

I risultati delle elaborazioni esposte nel documento sono state inoltre sottoposte a controlli dal sottoscritto utente del software.

Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali, che per brevità espositiva si omette dall'allegare al presente documento.

Inoltre sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni.

In base a quanto sopra, Il Progettista dichiara pertanto che l'elaborazione è corretta ed idonea al caso specifico, validando conseguentemente i risultati dei calcoli esposti nella presente

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41	67	SLU-INV	Min	-1.66	-11.89	1.30	0.27	2.26	-5.08	-10.39	25.46
41	66	SLU-INV	Min	-1.89	-13.06	1.21	-0.36	3.18	-4.66	-10.39	28.32
41	42	SLU-INV	Min	-2.11	-13.10	1.27	0.89	7.51	-2.87	-4.90	28.32
42	44	SLE-INV	Max	-1.32	-7.77	1.52	1.31	4.60	-1.58	-2.89	19.30
42	68	SLE-INV	Max	-1.32	-7.77	1.47	0.44	1.28	-2.40	-6.01	19.30
42	67	SLE-INV	Max	-1.54	-8.87	1.39	-0.23	2.12	-2.29	-6.01	22.47
42	43	SLE-INV	Max	-1.54	-8.87	1.45	0.95	5.49	-1.48	-2.89	22.47
42	44	SLE-INV	Min	-1.32	-7.77	1.52	1.09	3.83	-1.89	-3.44	16.35
42	68	SLE-INV	Min	-1.32	-7.77	1.47	0.34	1.02	-2.87	-7.17	16.35
42	67	SLE-INV	Min	-1.54	-8.87	1.39	-0.25	1.71	-2.75	-7.17	19.01
42	43	SLE-INV	Min	-1.54	-8.87	1.45	0.45	4.57	-1.77	-3.44	19.01
42	44	SLU-INV	Max	-1.32	-7.77	2.05	2.43	8.52	-2.14	-3.90	34.39
42	68	SLU-INV	Max	-1.32	-7.77	1.98	0.95	2.58	-3.24	-8.12	34.39
42	67	SLU-INV	Max	-1.54	-8.87	1.88	-0.31	4.18	-3.10	-8.12	40.19
42	43	SLU-INV	Max	-1.54	-8.87	1.95	1.07	10.18	-1.99	-3.90	40.19
42	44	SLU-INV	Min	-1.78	-10.49	1.52	1.47	5.17	-3.43	-6.25	22.07
42	68	SLU-INV	Min	-1.78	-10.49	1.47	0.46	1.38	-5.28	-13.07	22.07
42	67	SLU-INV	Min	-2.07	-11.97	1.39	-0.34	2.31	-5.11	-13.07	25.66
42	43	SLU-INV	Min	-2.07	-11.97	1.45	0.60	6.17	-3.26	-6.25	25.66
43	45	SLE-INV	Max	-1.26	-6.44	1.65	1.26	3.39	-1.55	-3.73	15.62
43	69	SLE-INV	Max	-1.48	-6.49	1.64	0.77	0.60	-2.34	-7.61	15.62
43	68	SLE-INV	Max	-1.75	-7.86	1.57	-0.12	1.37	-2.39	-7.61	19.55
43	44	SLE-INV	Max	-1.53	-7.82	1.58	0.31	4.20	-1.60	-3.73	19.55
43	45	SLE-INV	Min	-1.26	-6.44	1.65	1.05	2.83	-1.83	-4.42	13.25
43	69	SLE-INV	Min	-1.48	-6.49	1.64	0.61	0.46	-2.78	-9.04	13.25
43	68	SLE-INV	Min	-1.75	-7.86	1.57	-0.13	1.10	-2.85	-9.04	16.55
43	44	SLE-INV	Min	-1.53	-7.82	1.58	0.25	3.50	-1.90	-4.42	16.55
43	45	SLU-INV	Max	-1.26	-6.44	2.23	2.33	6.27	-2.09	-5.04	27.74
43	69	SLU-INV	Max	-1.48	-6.49	2.21	1.55	1.28	-3.16	-10.28	27.74
43	68	SLU-INV	Max	-1.75	-7.86	2.12	-0.07	2.75	-3.22	-10.28	34.85
43	44	SLU-INV	Max	-1.53	-7.82	2.14	0.65	7.78	-2.16	-5.04	34.85
43	45	SLU-INV	Min	-1.70	-8.70	1.65	1.42	3.82	-3.29	-7.95	17.89
43	69	SLU-INV	Min	-1.99	-8.76	1.64	0.83	0.63	-5.07	-16.31	17.89
43	68	SLU-INV	Min	-2.36	-10.61	1.57	-0.18	1.48	-5.25	-16.31	22.35
43	44	SLU-INV	Min	-2.07	-10.55	1.58	0.33	4.72	-3.46	-7.95	22.35
44	46	SLE-INV	Max	-1.25	-4.75	1.73	1.30	2.29	-1.32	-4.88	11.10
44	70	SLE-INV	Max	-1.77	-4.85	1.76	1.35	0.14	-2.00	-9.68	11.10
44	69	SLE-INV	Max	-2.12	-6.62	1.75	0.19	0.74	-2.29	-9.68	15.93
44	45	SLE-INV	Max	-1.60	-6.51	1.71	0.12	2.91	-1.60	-4.88	15.93
44	46	SLE-INV	Min	-1.25	-4.75	1.73	1.09	1.92	-1.55	-5.75	9.43
44	70	SLE-INV	Min	-1.77	-4.85	1.76	1.11	0.09	-2.37	-11.43	9.43
44	69	SLE-INV	Min	-2.12	-6.62	1.75	0.13	0.58	-2.72	-11.43	13.51
44	45	SLE-INV	Min	-1.60	-6.51	1.71	0.08	2.43	-1.90	-5.75	13.51
44	46	SLE-INV	Max	-1.25	-4.75	2.33	2.38	4.22	-1.78	-6.59	19.65
44	70	SLU-INV	Max	-1.77	-4.85	2.38	2.58	0.38	-2.70	-13.07	19.65
44	69	SLU-INV	Max	-2.12	-6.62	2.36	0.50	1.54	-3.09	-13.07	28.32
44	45	SLU-INV	Max	-1.60	-6.51	2.31	0.29	5.39	-2.16	-6.59	28.32
44	46	SLU-INV	Min	-1.68	-6.41	1.73	1.47	2.59	-2.72	-10.20	12.73
44	70	SLU-INV	Min	-2.39	-6.55	1.76	1.50	0.12	-4.27	-20.40	12.73
44	69	SLU-INV	Min	-2.86	-8.93	1.75	0.18	0.78	-4.96	-20.40	18.24
44	45	SLU-INV	Min	-2.16	-8.79	1.71	0.11	3.28	-3.41	-10.20	18.24
45	47	SLE-INV	Max	-1.41	-2.50	2.04	1.52	1.36	-0.79	-6.60	5.59
45	71	SLE-INV	Max	-2.28	-2.67	2.26	2.27	-0.01	-1.32	-12.49	5.59
45	70	SLE-INV	Max	-2.75	-5.05	1.84	0.74	0.34	-1.93	-12.49	11.50
45	46	SLE-INV	Max	-1.89	-4.88	1.62	0.00	1.71	-1.40	-6.60	11.50
45	47	SLE-INV	Min	-1.41	-2.50	2.04	1.29	1.14	-0.92	-7.72	4.75
45	71	SLE-INV	Min	-2.28	-2.67	2.26	1.91	-0.02	-1.56	-14.67	4.75
45	70	SLE-INV	Min	-2.75	-5.05	1.84	0.61	0.26	-2.65	-11.34	9.76
45	46	SLE-INV	Min	-1.89	-4.88	1.62	-0.01	1.43	-1.64	-7.72	9.76
45	47	SLU-INV	Max	-1.41	-2.50	2.75	2.72	2.46	-1.07	-8.91	9.89
45	71	SLU-INV	Max	-2.28	-2.67	3.05	4.14	0.02	-1.79	-16.86	9.89
45	70	SLU-INV	Max	-2.75	-5.05	2.49	1.43	0.75	-2.60	-16.86	20.39
45	46	SLU-INV	Max	-1.89	-4.88	2.19	0.08	3.16	-1.88	-8.91	20.39
45	47	SLU-INV	Min	-1.90	-3.37	2.04	1.74	1.54	-1.56	-13.48	6.42
45	71	SLU-INV	Min	-3.07	-3.60	2.26	2.58	-0.03	-2.79	-25.82	6.42
45	70	SLU-INV	Min	-3.72	-6.82	1.84	0.82	0.35	-4.11	-25.82	13.17
45	46	SLU-INV	Min	-2.55	-6.59	1.62	-0.02	1.93	-2.89	-13.48	13.17
46	48	SLE-INV	Max	-2.40	-0.48	1.46	1.84	0.77	0.14	-9.77	-0.42
46	72	SLE-INV	Max	-2.93	-0.59	2.10	3.53	0.31	-0.12	-16.31	-0.42
46	71	SLE-INV	Max	-3.39	-2.89	3.32	1.43	0.20	-1.18	-16.31	6.06
46	47	SLE-INV	Max	-2.86	-2.78	2.69	-0.17	0.63	-0.94	-9.77	6.06
46	48	SLE-INV	Min	-2.40	-0.48	1.46	1.59	0.65	0.12	-11.34	-0.49
46	72	SLE-INV	Min	-2.93	-0.59	2.10	3.02	0.27	-0.15	-19.05	-0.49
46	71	SLE-INV	Min	-3.39	-2.89	3.32	1.23	0.16	-1.38	-19.05	5.14
46	47	SLE-INV	Min	-2.86	-2.78	2.69	-0.20	0.53	-1.10	-11.34	5.14
46	48	SLU-INV	Max	-2.40	-0.48	1.98	3.16	1.34	0.26	-13.19	-0.56
46	72	SLU-INV	Max	-2.93	-0.59	2.83	6.13	0.51	-0.16	-22.02	-0.56
46	71	SLU-INV	Max	-3.39	-2.89	4.48	2.49	0.39	-1.59	-22.02	10.77
46	47	SLU-INV	Max	-2.86	-2.78	3.63	-0.23	1.14	-1.27	-13.19	10.77
46	48	SLU-INV	Min	-3.23	-0.65	1.46	2.14	0.88	0.16	-19.37	-0.88
46	72	SLU-INV	Min	-3.95	-0.79	2.10	4.08	0.36	-0.28	-33.07	-0.88
46	71	SLU-INV	Min	-4.57	-3.90	3.32	1.66	0.22	-2.45	-33.07	6.95
46	47	SLU-INV	Min	-3.86	-3.76	2.69	-0.34	0.72	-1.91	-19.37	6.95
47	73	SLE-INV	Max	-3.08	-0.62	-2.69	6.24	0.88	0.03	24.30	-0.38
47	49	SLE-INV	Max	-2.96	-0.59	-2.10	3.99	1.17	-0.01	18.96	-0.38
47	50	SLE-INV	Max	-3.30	-2.28	-3.94	1.30	0.65	1.46	18.96	3.76
47	74	SLE-INV	Max	-3.41	-2.30	-4.53	3.45	0.41	1.52	24.30	3.76
47	73	SLE-INV	Min	-3.08	-0.62	-2.69	5.31	0.75	0.02	20.68	-0.46
47	49	SLE-INV	Min	-2.96	-0.59	-2.10	3.41	0.99	-0.02	16.24	-0.46
47	50	SLE-INV	Min	-3.30	-2.28	-3.94	1.11	0.54	1.24	16.24	3.13
47	74	SLE-INV	Min	-3.41	-2.30	-4.53	2.93	0.34	1.28	20.68	3.13
47	73	SLU-INV	Max	-3.08	-0.62	-2.69	11.03	1.52	0.09	42.81	-0.52
47	49	SLU-INV	Max	-2.96	-0.59	-2.10	6.94	2.07	-0.02	32.90	-0.52
47	50	SLU-INV	Max	-3.30	-2.28	-3.94	2.26	1.19	2.63	32.90	7.00
47	74	SLU-INV	Max	-3.41	-2.30	-4.53	6.11	0.76	2.47	42.81	7.00
47	73	SLU-INV	Min	-4.15	-0.83	-3.64	7.16	1.02	0.03	27.91	-0.85
47	49	SLU-INV	Min	-4.00	-0.80	-2.84	4.61	1.34	-0.06	21.92	-0.85
47	50	SLU-INV	Min	-4.46	-3.08	-5.32	1.50	0.73	1.67	21.92	4.22
47	74	SLU-INV	Min	-4.61	-3.11	-6.12	3.95	0.46	1.72	27.91	4.22
48	75	SLE-INV	Max	-2.86	-3.90	-2.64	1.82	0.05	2.46	19.94	7.53
48	74	SLE-INV	Max	-2.50	-2.12	-3.29	4.05	0.30	1.58	19.94	3.47
48	50	SLE-INV	Max	-2.26	-2.07	-2.90	2.87	1.19	1.40	14.82	3.47
48	51	SLE-INV	Max	-2.62	-3.86	-2.25	0.69	0.92	2.27	14.82	7.53
48	75	SLE-INV	Min	-2.86	-3.90	-2.64	1.51	0.01	2.06	16.90	6.28
48	74	SLE-INV	Min	-2.50	-2.12	-3.29	3.40	0.25	1.32	16.90	2.90
48	50	SLE-INV	Min	-2.26	-2.07	-2.90	2.41	0.99	1.18	12.62	2.90
48	51	SLE-INV	Min	-2.62	-3.86	-2.25	0.56	0.74	1.92	12.62	6.28
48	75	SLU-INV	Max	-2.86	-3.90	-2.64	3.41	0.23	4.53	35.51	13.91
48	74	SLU-INV	Max	-2.50	-2.12	-3.29	7.39	0.56	2.91	35.51	6.43
48	50	SLU-INV	Max	-2.26	-2.07	-2.90	5.18	2.23	2.48	26.66	6.43
48	51	SLU-INV	Max	-2.62	-3.86	-2.25	1.35	1.83	4.10	26.66	13.91



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 107 di 180			
62	88	SLU-INV	Max	-0.92	-9.89	1.13	-1.85	1.84	-2.15	-5.31	41.31
62	64	SLU-INV	Max	-1.10	-9.92	1.09	-0.30	8.27	-1.78	-3.53	41.31
62	65	SLU-INV	Min	-1.34	-12.68	0.93	0.32	4.18	-3.95	-5.88	23.60
62	89	SLU-INV	Min	-1.10	-12.63	0.96	-1.89	0.29	-4.63	-8.89	23.60
62	88	SLU-INV	Min	-1.25	-13.35	0.84	-2.87	0.53	-3.70	-8.89	25.12
62	64	SLU-INV	Min	-1.48	-13.40	0.80	-0.32	4.45	-3.02	-5.88	25.12
63	60	SLE-INV	Max	-1.00	-8.71	1.15	0.42	3.37	-2.06	-3.52	19.27
63	90	SLE-INV	Max	-0.90	-8.69	1.21	-0.72	0.16	-2.37	-5.27	19.27
63	89	SLE-INV	Max	-1.04	-9.40	1.09	-1.30	0.40	-2.03	-5.27	21.06
63	65	SLE-INV	Max	-1.15	-9.42	1.04	-0.30	3.64	-1.71	-3.52	21.06
63	66	SLE-INV	Min	-1.00	-8.71	1.15	0.32	2.70	-2.48	-4.23	16.08
63	90	SLE-INV	Min	-0.90	-8.69	1.21	-0.83	0.02	-2.88	-6.34	16.08
63	89	SLE-INV	Min	-1.04	-9.40	1.09	-1.52	0.21	-2.46	-6.34	17.56
63	65	SLE-INV	Min	-1.15	-9.42	1.04	-0.32	2.92	-2.07	-4.23	17.56
63	66	SLU-INV	Max	-1.00	-8.71	1.15	0.93	6.79	-2.78	-4.76	35.58
63	90	SLU-INV	Max	-0.90	-8.69	1.23	-0.98	0.84	-3.21	-7.11	35.58
63	89	SLU-INV	Max	-1.04	-9.40	1.47	-1.76	1.37	-2.74	-7.11	38.95
63	65	SLU-INV	Max	-1.15	-9.42	1.40	-0.40	7.35	-2.31	-4.76	38.95
63	66	SLU-INV	Min	-1.36	-11.76	1.15	0.44	3.65	-4.64	-7.86	21.71
63	90	SLU-INV	Min	-1.22	-11.74	1.21	-1.35	0.03	-5.44	-11.82	21.71
63	89	SLU-INV	Min	-1.41	-12.69	1.09	-2.66	0.29	-4.69	-11.82	23.71
63	65	SLU-INV	Min	-1.55	-12.72	1.04	-0.44	3.94	-3.89	-7.86	23.71
64	67	SLE-INV	Max	-1.04	-7.85	1.38	0.58	2.85	-2.29	-4.58	17.14
64	91	SLE-INV	Max	-1.03	-7.85	1.45	-0.40	-0.07	-2.63	-6.78	17.14
64	90	SLE-INV	Max	-1.21	-8.76	1.34	-1.15	0.16	-2.38	-6.78	19.40
64	66	SLE-INV	Max	-1.22	-8.76	1.26	-0.34	3.10	-2.05	-4.58	19.40
64	67	SLE-INV	Min	-1.04	-7.85	1.38	0.45	2.28	-2.75	-5.48	14.31
64	91	SLE-INV	Min	-1.03	-7.85	1.45	-0.43	-0.15	-3.17	-8.14	14.31
64	90	SLE-INV	Min	-1.21	-8.76	1.34	-1.33	0.03	-2.89	-8.14	16.19
64	66	SLE-INV	Min	-1.22	-8.76	1.26	-0.37	2.48	-2.47	-5.48	16.19
64	67	SLU-INV	Max	-1.04	-7.85	1.86	1.23	5.74	-3.09	-6.18	31.61
64	91	SLU-INV	Max	-1.03	-7.85	1.96	-0.54	0.36	-3.54	-9.16	31.61
64	90	SLU-INV	Max	-1.21	-8.76	1.81	-1.55	0.87	-3.22	-9.16	35.84
64	66	SLU-INV	Max	-1.22	-8.76	1.70	-0.46	6.29	-2.77	-6.18	35.84
64	67	SLU-INV	Min	-1.40	-10.60	1.38	0.61	3.08	-5.11	-10.10	19.32
64	91	SLU-INV	Min	-1.39	-10.60	1.45	-0.58	-0.20	-5.97	-15.08	19.32
64	90	SLU-INV	Min	-1.64	-11.82	1.34	-2.27	0.03	-5.47	-15.08	21.85
64	66	SLU-INV	Min	-1.65	-11.82	1.26	-0.51	3.35	-4.61	-10.10	21.85
64	68	SLE-INV	Max	-1.12	-6.78	1.60	0.83	2.32	-2.39	-5.84	14.54
65	92	SLE-INV	Max	-1.23	-6.80	1.72	0.16	-0.21	-2.72	-8.55	14.54
65	91	SLE-INV	Max	-1.45	-7.93	1.60	-0.88	-0.04	-2.68	-8.55	17.31
65	67	SLE-INV	Max	-1.34	-7.91	1.48	-0.33	2.52	-2.30	-5.84	17.31
65	68	SLE-INV	Min	-1.12	-6.78	1.60	0.67	1.86	-2.86	-6.97	12.15
65	92	SLE-INV	Min	-1.23	-6.80	1.72	0.09	-0.25	-3.27	-10.22	12.15
65	91	SLE-INV	Min	-1.45	-7.93	1.60	-1.00	-0.13	-3.17	-10.22	14.45
65	67	SLE-INV	Min	-1.34	-7.91	1.48	-0.35	2.01	-2.76	-6.97	14.45
65	68	SLU-INV	Max	-1.12	-6.78	2.16	1.70	4.68	-3.23	-7.89	26.78
65	92	SLU-INV	Max	-1.23	-6.80	2.32	0.53	-0.01	-3.62	-11.54	26.78
65	91	SLU-INV	Max	-1.45	-7.93	2.15	-1.18	0.42	-3.54	-11.54	31.94
65	67	SLU-INV	Max	-1.34	-7.91	1.99	-0.45	5.13	-2.77	-7.89	31.94
65	68	SLU-INV	Min	-1.51	-9.16	1.60	0.90	2.52	-5.27	-12.72	16.40
65	92	SLU-INV	Min	-1.66	-9.19	1.72	0.12	-0.34	-6.12	-18.79	16.40
65	91	SLU-INV	Min	-1.96	-10.71	1.60	-1.61	-0.18	-5.97	-18.79	19.51
65	67	SLU-INV	Min	-1.81	-10.68	1.48	-0.48	2.71	-5.11	-12.72	19.51
66	69	SLE-INV	Max	-1.27	-5.47	1.84	1.24	1.85	-2.31	-7.41	11.43
66	93	SLE-INV	Max	-1.51	-5.52	2.01	1.01	-0.24	-2.59	-10.66	11.43
66	92	SLE-INV	Max	-1.79	-6.92	1.87	-0.42	-0.16	-2.70	-10.66	14.75
66	68	SLE-INV	Max	-1.55	-6.87	1.70	-0.23	1.94	-2.41	-14.75	14.75
66	69	SLE-INV	Min	-1.27	-5.47	1.84	1.01	1.49	-2.75	-8.80	9.55
66	93	SLE-INV	Min	-1.51	-5.52	2.01	0.80	-0.25	-3.11	-12.70	9.55
66	92	SLE-INV	Min	-1.79	-6.92	1.87	-0.44	-0.22	-3.25	-12.70	12.32
66	68	SLE-INV	Min	-1.55	-6.87	1.70	-0.23	1.54	-2.89	-8.80	12.32
66	69	SLU-INV	Max	-1.27	-5.47	2.48	2.43	3.70	-3.11	-10.00	21.05
66	93	SLU-INV	Max	-1.51	-5.52	2.72	2.10	-0.16	-3.50	-14.40	21.05
66	92	SLU-INV	Max	-1.79	-6.92	2.53	-0.57	0.11	-3.64	-14.40	27.20
66	68	SLU-INV	Max	-1.55	-6.87	2.29	-0.22	3.96	-3.26	-10.00	27.20
66	69	SLU-INV	Min	-1.72	-7.39	1.84	1.36	2.01	-5.00	-15.90	12.90
66	93	SLU-INV	Min	-2.04	-7.45	2.01	1.08	-0.34	-5.78	-23.13	12.90
66	92	SLU-INV	Min	-2.42	-9.34	1.87	-0.60	-0.29	-6.09	-23.13	16.63
66	68	SLU-INV	Min	-2.10	-9.27	1.70	-0.31	2.08	-5.31	-15.90	16.63
67	70	SLE-INV	Max	-1.57	-3.89	2.12	1.88	1.46	-1.95	-9.44	7.81
67	94	SLE-INV	Max	-1.92	-3.96	2.40	2.24	-0.10	-2.18	-13.25	7.81
67	93	SLE-INV	Max	-2.26	-5.67	2.23	0.40	-0.15	-2.57	-13.25	11.69
67	69	SLE-INV	Max	-1.92	-5.60	1.95	0.06	1.41	-2.33	-9.44	11.69
67	70	SLE-INV	Min	-1.57	-3.89	2.12	1.56	1.19	-2.31	-11.15	6.52
67	94	SLE-INV	Min	-1.92	-3.96	2.40	1.84	-0.12	-2.62	-15.72	6.52
67	93	SLE-INV	Min	-2.26	-5.67	2.23	0.29	-0.19	-3.08	-15.72	9.76
67	69	SLE-INV	Min	-1.92	-5.60	1.95	0.01	1.12	-2.78	-11.15	9.76
67	70	SLU-INV	Max	-1.57	-3.89	2.86	3.54	2.86	-2.63	-12.74	14.39
67	94	SLU-INV	Max	-1.92	-3.96	3.24	4.27	-0.04	-2.95	-17.89	14.39
67	93	SLU-INV	Max	-2.26	-5.67	3.01	0.95	0.01	-3.47	-17.89	21.55
67	69	SLU-INV	Max	-1.92	-5.60	2.63	0.29	2.87	-3.15	-12.74	21.55
67	70	SLU-INV	Min	-2.12	-5.25	2.12	2.10	1.60	-4.16	-19.91	8.80
67	94	SLU-INV	Min	-2.59	-5.34	2.40	2.48	-0.16	-4.83	-28.33	8.80
67	93	SLU-INV	Min	-3.05	-7.65	2.23	0.39	-0.25	-5.73	-28.33	13.18
67	69	SLU-INV	Min	-2.59	-7.56	1.95	0.02	1.51	-5.06	-19.91	13.18
68	71	SLE-INV	Max	-2.18	-2.18	2.83	2.83	1.22	-1.25	-12.21	3.77
68	95	SLE-INV	Max	-2.43	-2.23	3.21	3.92	0.26	-1.40	-16.47	3.77
68	94	SLE-INV	Max	-2.81	-4.13	2.58	1.60	0.01	-2.14	-16.47	8.11
68	70	SLE-INV	Max	-2.56	-4.08	2.20	0.56	0.95	-1.99	-12.21	8.11
68	71	SLE-INV	Min	-2.18	-2.18	2.83	2.38	1.01	-1.48	-14.34	3.14
68	95	SLE-INV	Min	-2.43	-2.23	3.21	3.29	0.21	-1.68	-19.45	3.14
68	94	SLE-INV	Min	-2.81	-4.13	2.58	1.32	-0.02	-2.57	-19.45	6.77
68	70	SLE-INV	Min	-2.56	-4.08	2.20	0.44	0.77	-2.37	-14.34	6.77
68	71	SLU-INV	Max	-2.18	-2.18	3.82	5.13	2.29	-1.69	-16.48	6.98
68	95	SLU-INV	Max	-2.43	-2.23	4.33	7.18	0.49	-1.89	-22.23	6.98
68	94	SLU-INV	Max	-2.81	-4.13	3.48	3.03	0.19	-2.89	-22.23	14.98
68	70	SLU-INV	Max	-2.56	-4.08	2.97	1.12	1.91	-2.69	-16.48	14.98
68	71	SLU-INV	Min	-2.94	-2.94	2.83	3.22	1.37	-2.62	-25.26	4.25
68	95	SLU-INV	Min	-3.28	-3.01	3.21	4.44	0.28	-3.08	-34.67	4.25
68	94	SLU-INV	Min	-3.79	-5.58	2.58	1.78	-0.03	-4.73	-34.67	9.14
68	70	SLU-INV	Min	-3.45	-5.51	2.20	0.60	1.03	-4.27	-25.26	9.14
69	72	SLE-INV	Max	-2.93	-0.59	2.10	4.04	1.19	0.02	-16.01	-0.39
69	96	SLE-INV	Max	-3.04	-0.61	2.69	6.25	0.87	-0.03	-20.47	-0.39
69	95	SLE-INV	Max	-3.40	-2.42	4.48	3.29	0.38	-1.35	-20.47	4.08
69	71	SLE-INV	Max	-3.29	-2.40	3.89	1.18	0.64	-1.31	-16.01	4.08
69	72	SLE-INV	Min	-2.93	-0.59	2.10	3.46	1.01	0.02	-18.70	-0.47
69	96	SLE-INV	Min	-3.04	-0.61	2.69	5.31	0.75	-0.04	-24.06	-0.47
69	95	SLE-INV	Min	-3.40	-2.42	4.48	2.79	0.31	-1.61	-24.06	3.40
69	71	SLE-INV	Min	-3.29	-2.40	3.89	1.01	0.55	-1.85	-18.70	3.40
69	72	SLU-INV	Max	-2.93	-0.59	2.83	7.04	2.11	0.06	-21.61	-0.53

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS 016800	Id.doc. REL	N.progr. 01	REV. A	Pag.di Pag. 108 di 180
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69	96	SLU-INV	Max	-3.04	-0.61	3.63	11.06	1.51	-0.04	-27.63	-0.53
69	95	SLU-INV	Max	-3.40	-2.42	6.05	5.84	0.72	-1.82	-27.63	7.59
69	71	SLU-INV	Max	-3.29	-2.40	5.25	2.06	1.18	-1.77	-21.61	7.59
69	72	SLU-INV	Min	-3.95	-0.79	2.10	4.67	1.36	0.02	-32.46	-0.88
69	96	SLU-INV	Min	-4.11	-0.82	2.69	7.18	1.01	-0.09	-42.42	-0.88
69	95	SLU-INV	Min	-4.60	-3.27	4.48	3.77	0.42	-2.73	-42.42	4.59
69	71	SLU-INV	Min	-4.44	-3.24	3.89	1.36	0.72	-2.78	-32.46	4.59
70	97	SLE-INV	Max	-3.00	-0.60	-3.19	8.88	1.45	-0.01	27.87	-0.34
70	73	SLE-INV	Max	-3.08	-0.62	-2.69	6.59	1.65	0.03	24.12	-0.34
70	74	SLE-INV	Max	-3.36	-2.04	-4.96	3.36	0.92	1.52	24.12	2.56
70	98	SLE-INV	Max	-3.29	-2.03	-5.46	5.52	0.78	1.48	27.87	2.56
70	97	SLE-INV	Min	-3.00	-0.60	-3.19	7.50	1.23	-0.02	23.57	-0.41
70	73	SLE-INV	Min	-3.08	-0.62	-2.69	5.60	1.39	0.03	20.52	-0.41
70	74	SLE-INV	Min	-3.36	-2.04	-4.96	2.85	0.77	1.27	20.52	2.07
70	98	SLE-INV	Min	-3.29	-2.03	-5.46	4.66	0.65	1.22	23.57	2.07
70	97	SLU-INV	Max	-3.00	-0.60	-3.19	15.96	2.55	0.00	49.90	-0.46
70	73	SLU-INV	Max	-3.08	-0.62	-2.69	11.66	2.97	0.04	42.50	-0.46
70	74	SLU-INV	Max	-3.36	-2.04	-4.96	5.96	1.69	2.82	42.50	5.07
70	98	SLU-INV	Max	-3.29	-2.03	-5.46	9.95	1.43	2.78	49.90	5.07
70	97	SLU-INV	Min	-4.05	-0.81	-4.31	10.13	1.66	-0.02	31.82	-0.79
70	73	SLU-INV	Min	-4.15	-0.83	-3.64	7.56	1.88	0.04	27.70	-0.79
70	74	SLU-INV	Min	-4.54	-2.76	-6.70	3.85	1.04	1.71	27.70	2.80
70	98	SLU-INV	Min	-4.44	-2.74	-7.37	6.29	0.88	1.65	31.82	2.80
71	99	SLE-INV	Max	-2.79	-3.37	-3.30	3.03	0.06	2.41	23.50	5.31
71	98	SLE-INV	Max	-2.49	-1.87	-4.05	5.82	0.67	1.45	23.50	2.35
71	74	SLE-INV	Max	-2.45	-1.86	-3.72	4.45	1.30	1.54	19.76	2.35
71	75	SLE-INV	Max	-2.75	-3.37	-2.97	1.75	0.65	2.50	19.76	5.31
71	99	SLE-INV	Min	-2.79	-3.37	-3.30	2.51	0.02	1.99	19.80	4.33
71	98	SLE-INV	Min	-2.49	-1.87	-4.05	4.86	0.56	1.20	19.80	1.91
71	74	SLE-INV	Min	-2.45	-1.86	-3.72	3.73	1.07	1.29	16.74	1.91
71	75	SLE-INV	Min	-2.75	-3.37	-2.97	1.44	0.51	2.09	16.74	4.33
71	99	SLU-INV	Max	-2.79	-3.37	-3.30	5.68	0.24	4.56	42.44	10.36
71	98	SLU-INV	Max	-2.49	-1.87	-4.05	10.71	1.23	2.77	42.44	4.62
71	74	SLU-INV	Max	-2.45	-1.86	-3.72	8.12	2.48	2.82	35.18	4.62
71	75	SLU-INV	Max	-2.75	-3.37	-2.97	3.30	1.39	4.62	35.18	10.36
71	99	SLU-INV	Min	-3.76	-4.56	-4.46	3.40	0.03	2.68	26.73	5.84
71	98	SLU-INV	Min	-3.36	-2.52	-5.46	6.56	0.76	1.61	26.73	2.57
71	74	SLU-INV	Min	-3.30	-2.51	-5.02	5.03	1.45	1.75	22.60	2.57
71	75	SLU-INV	Min	-3.71	-4.54	-4.01	1.95	0.68	2.82	22.60	5.84
71	99	SLU-INV	Max	-2.30	-4.66	-2.89	1.14	0.50	2.98	19.70	7.97
72	100	SLE-INV	Max	-2.01	-3.22	-3.12	3.48	-0.02	2.42	19.70	5.10
72	95	SLE-INV	Max	-1.89	-3.20	-2.81	2.84	1.04	2.48	16.15	5.10
72	76	SLE-INV	Max	-2.18	-4.64	-2.58	0.55	0.50	3.04	16.15	7.97
72	100	SLE-INV	Min	-2.30	-4.66	-2.89	0.90	-0.54	2.45	16.53	6.51
72	99	SLE-INV	Min	-2.01	-3.22	-3.12	2.87	-0.04	1.99	16.53	4.16
72	75	SLE-INV	Min	-1.89	-3.20	-2.81	2.35	0.82	2.08	13.63	4.16
72	76	SLE-INV	Min	-2.18	-4.64	-2.58	0.41	0.34	2.53	13.63	6.51
72	100	SLU-INV	Max	-2.30	-4.66	-2.89	2.35	-0.68	5.66	35.88	15.43
72	99	SLU-INV	Max	-2.01	-3.22	-3.12	6.63	0.09	4.60	35.88	9.93
72	75	SLU-INV	Max	-1.89	-3.20	-2.81	5.38	2.15	4.58	29.06	9.93
72	76	SLU-INV	Max	-2.18	-4.64	-2.58	1.24	1.29	5.65	29.06	15.43
72	100	SLU-INV	Min	-3.10	-6.30	-3.91	1.22	-0.73	3.31	22.32	8.79
72	99	SLU-INV	Min	-2.71	-4.34	-4.21	3.87	-0.06	2.69	22.32	5.62
72	75	SLU-INV	Min	-2.56	-4.31	-3.79	3.17	1.11	2.80	18.40	5.62
72	76	SLU-INV	Min	-2.95	-6.27	-3.49	0.55	0.47	3.42	18.40	8.79
72	101	SLE-INV	Max	-1.85	-5.82	-2.37	-0.25	-0.91	3.23	16.40	10.37
73	100	SLE-INV	Max	-1.59	-4.52	-2.60	1.67	-0.54	2.99	16.40	7.77
73	76	SLE-INV	Max	-1.44	-4.49	-2.66	1.60	0.29	3.02	13.18	7.77
73	77	SLE-INV	Max	-1.70	-5.79	-2.13	-0.31	0.46	3.26	13.18	10.37
73	101	SLE-INV	Min	-1.85	-5.82	-2.37	-0.27	-0.99	2.66	13.71	8.49
73	100	SLE-INV	Min	-1.59	-4.52	-2.60	1.34	-0.59	2.47	13.71	6.35
73	76	SLE-INV	Min	-1.44	-4.49	-2.36	1.29	0.65	2.51	11.07	6.35
73	77	SLE-INV	Min	-1.70	-5.79	-2.13	-0.31	0.28	2.71	11.07	8.49
73	101	SLU-INV	Max	-1.85	-5.82	-2.37	-0.16	-1.23	6.18	30.11	20.01
73	100	SLU-INV	Max	-1.59	-4.52	-2.60	3.38	-0.73	5.70	30.11	15.03
73	76	SLU-INV	Max	-1.44	-4.49	-2.36	3.19	2.00	5.60	23.96	15.03
73	77	SLU-INV	Max	-1.70	-5.79	-2.13	-0.28	1.38	6.09	23.96	20.01
73	101	SLU-INV	Min	-2.50	-7.86	-3.20	-0.36	-1.41	3.59	18.51	11.46
73	100	SLU-INV	Min	-2.15	-6.11	-3.51	1.81	-0.82	3.33	18.51	8.58
73	76	SLU-INV	Min	-1.95	-6.06	-3.18	1.74	0.87	3.39	14.95	8.58
73	77	SLU-INV	Min	-2.30	-7.82	-2.88	-0.42	0.38	3.65	14.95	11.46
74	102	SLE-INV	Max	-1.48	-6.77	-1.99	-1.07	-1.20	3.24	13.60	12.38
74	101	SLE-INV	Max	-1.26	-5.70	-2.16	0.29	-0.93	3.25	13.60	10.20
74	77	SLE-INV	Max	-1.14	-5.68	-1.98	0.67	0.79	3.24	10.79	10.20
74	78	SLE-INV	Max	-1.35	-6.74	-1.81	-0.76	0.50	3.23	10.79	12.38
74	102	SLE-INV	Min	-1.48	-6.77	-1.99	-1.22	-1.31	2.66	11.34	10.14
74	101	SLE-INV	Min	-1.26	-5.70	-2.16	0.18	-1.02	2.67	11.34	8.35
74	77	SLE-INV	Min	-1.14	-5.68	-1.98	0.51	0.55	2.69	9.03	8.35
74	78	SLE-INV	Min	-1.35	-6.74	-1.81	-0.85	0.28	2.68	9.03	10.14
74	102	SLU-INV	Max	-1.48	-6.77	-1.99	-1.45	-1.62	6.22	25.17	23.83
74	101	SLU-INV	Max	-1.26	-5.70	-2.16	0.85	-1.25	6.21	25.17	19.66
74	77	SLU-INV	Max	-1.14	-5.68	-1.98	1.50	2.01	6.06	19.78	19.66
74	78	SLU-INV	Max	-1.35	-6.74	-1.81	-1.03	1.58	6.07	19.78	23.83
74	102	SLU-INV	Min	-1.99	-9.14	-2.69	-1.96	-1.89	3.59	15.31	13.69
74	101	SLU-INV	Min	-1.71	-7.70	-2.92	0.25	-1.48	3.61	15.31	11.28
74	77	SLU-INV	Min	-1.53	-7.67	-2.68	0.68	0.74	3.63	12.19	11.28
74	78	SLU-INV	Min	-1.82	-9.10	-2.45	-1.27	0.38	3.62	12.19	13.69
75	103	SLE-INV	Max	-1.18	-7.56	-1.67	-1.65	-1.40	3.07	11.21	14.11
75	102	SLE-INV	Max	-1.00	-6.67	-1.82	-0.63	-1.20	3.26	11.21	12.24
75	78	SLE-INV	Max	-0.93	-6.66	-1.68	0.03	0.78	3.22	8.80	12.24
75	79	SLE-INV	Max	-1.11	-7.55	-1.53	-1.07	0.58	3.03	8.80	14.11
75	103	SLE-INV	Min	-1.18	-7.56	-1.67	-1.92	-1.53	2.51	9.32	11.56
75	102	SLE-INV	Min	-1.00	-6.67	-1.82	-0.69	-1.32	2.67	9.32	10.03
75	78	SLE-INV	Min	-0.93	-6.66	-1.68	-0.02	0.52	2.66	7.34	10.03
75	79	SLE-INV	Min	-1.11	-7.55	-1.53	-1.22	0.33	2.50	7.34	11.56
75	103	SLU-INV	Max	-1.18	-7.56	-1.67	-2.23	-1.90	5.91	20.89	27.14
75	102	SLU-INV	Max	-1.00	-6.67	-1.82	-0.85	-1.62	6.25	20.89	23.55
75	78	SLU-INV	Max	-0.93	-6.66	-1.68	0.33	2.13	6.05	16.26	23.55
75	79	SLU-INV	Max	-1.11	-7.55	-1.53	-1.44	1.85	5.72	16.26	27.14
75	103	SLU-INV	Min	-1.60	-10.21	-2.25	-3.30	-2.20	3.39	12.59	15.61
75	102	SLU-INV	Min	-1.36	-9.01	-2.45	-1.00	-1.93	3.61	12.59	13.54
75	78	SLU-INV	Min	-1.25	-8.99	-2.27	-0.03	0.70	3.60	9.91	13.54
75	79	SLU-INV	Min	-1.49	-10.19	-2.07	-1.97	0.45	3.38	9.91	15.61
76	104	SLE-INV	Max	-0.95	-8.23	-1.37	-2.07	-1.54	2.74	9.08	15.59
76	103	SLE-INV	Max	-0.80	-7.49	-1.51	-1.23	-1.39	3.08	9.08	14.00
76	79	SLE-INV	Max	-0.78	-7.48	-1.41	-0.40	0.83	3.02	7.06	14.00
76	80	SLE-INV	Max	-0.93	-8.23	-1.27	-1.26	0.69	2.68	7.06	15.59
76	104	SLE-INV	Min	-0.95	-8.23	-1.37	-2.43	-1.68	2.24	7.53	12.78
76	103	SLE-INV	Min	-0.80	-7.49	-1.51	-1.42	-1.53	2.52	7.53	11.47
76	79	SLE-INV	Min	-0.78	-7.48	-1.41	-0.42	0.54	2.49	5.84	11.47
76	80	SLE-INV	Min	-0.93	-8.23	-1.27	-1.46	0.41	2.21	5.88	12.78

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N. progr. 01	REV. A	Pag.di Pag. 109 di 180
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76	104	SLU-INV	Max	-0.95	-8.23	-1.37	-2.79	-2.08	5.30	17.01	29.97
76	103	SLU-INV	Max	-0.80	-7.49	-1.51	-1.66	-1.88	5.93	17.01	26.90
76	79	SLU-INV	Max	-0.78	-7.48	-1.41	-0.54	2.33	5.70	13.13	26.90
76	80	SLU-INV	Max	-0.93	-8.23	-1.27	-1.71	2.16	5.08	13.13	29.97
76	104	SLU-INV	Min	-1.29	-11.11	-1.85	-4.30	-2.39	3.03	10.16	17.25
76	103	SLU-INV	Min	-1.08	-10.11	-2.04	-2.40	-2.22	3.41	10.16	15.49
76	79	SLU-INV	Min	-1.06	-10.10	-1.90	-0.57	0.73	3.37	7.93	15.49
76	80	SLU-INV	Min	-1.26	-11.11	-1.72	-2.46	0.55	2.98	7.93	17.25
77	105	SLE-INV	Max	-0.77	-8.76	-1.09	-2.34	-1.62	2.30	7.13	16.78
77	104	SLE-INV	Max	-0.65	-8.17	-1.22	-1.69	-1.53	2.75	7.13	15.50
77	80	SLE-INV	Max	-0.69	-8.18	-1.15	-0.68	0.91	2.67	5.51	15.50
77	81	SLE-INV	Max	-0.80	-8.77	-1.02	-1.36	0.83	2.22	5.51	16.78
77	105	SLE-INV	Min	-0.77	-8.76	-1.09	-2.77	-1.76	1.88	5.90	13.75
77	104	SLE-INV	Min	-0.65	-8.17	-1.22	-1.98	-1.67	2.25	5.90	12.70
77	80	SLE-INV	Min	-0.69	-8.18	-1.15	-0.77	0.58	2.20	4.57	12.70
77	81	SLE-INV	Min	-0.80	-8.77	-1.02	-1.59	0.50	1.83	4.57	13.75
77	105	SLU-INV	Max	-0.77	-8.76	-1.09	-3.15	-2.19	4.46	13.42	32.24
77	104	SLU-INV	Max	-0.65	-8.17	-1.22	-2.28	-2.06	5.30	13.42	29.77
77	80	SLU-INV	Max	-0.69	-8.18	-1.15	-0.92	2.57	5.08	10.31	29.77
77	81	SLU-INV	Max	-0.80	-8.77	-1.02	-1.84	2.49	4.23	10.31	32.24
77	105	SLU-INV	Min	-1.04	-11.82	-1.47	-4.99	-2.48	2.53	7.96	18.57
77	104	SLU-INV	Min	-0.88	-11.03	-1.65	-3.50	-2.39	3.04	7.96	17.15
77	80	SLU-INV	Min	-0.93	-11.04	-1.55	-1.21	0.79	2.98	6.17	17.15
77	81	SLU-INV	Min	-1.08	-11.83	-1.37	-2.73	0.68	2.47	6.17	18.57
78	106	SLE-INV	Max	-0.64	-9.16	-0.82	-2.50	-1.67	1.77	5.34	17.68
78	105	SLE-INV	Max	-0.55	-8.71	-0.95	-2.02	-1.61	2.30	5.34	16.71
78	81	SLE-INV	Max	-0.62	-8.73	-0.90	-0.89	1.00	2.23	4.11	16.71
78	82	SLE-INV	Max	-0.71	-9.17	-0.77	-1.40	0.95	1.70	4.11	17.68
78	106	SLE-INV	Min	-0.64	-9.16	-0.82	-2.98	-1.81	1.44	4.41	14.49
78	105	SLE-INV	Min	-0.55	-8.71	-0.95	-2.40	-1.75	1.88	4.41	13.70
78	81	SLE-INV	Min	-0.62	-8.73	-0.90	-1.03	0.64	1.83	3.40	13.70
78	82	SLE-INV	Min	-0.71	-9.17	-0.77	-1.64	0.60	1.39	3.40	14.49
78	106	SLU-INV	Max	-0.64	-9.16	-0.82	-3.38	-2.25	3.44	10.10	33.97
78	105	SLU-INV	Max	-0.55	-8.71	-0.95	-2.73	-2.17	4.45	10.10	32.09
78	81	SLU-INV	Max	-0.62	-8.73	-0.90	-1.21	2.81	4.25	7.72	32.09
78	82	SLU-INV	Max	-0.71	-9.17	-0.77	-1.89	2.78	3.24	7.72	33.97
78	106	SLU-INV	Min	-0.86	-12.36	-1.10	-5.43	-2.51	1.95	5.96	19.57
78	105	SLU-INV	Min	-0.74	-11.76	-1.28	-4.32	-2.47	2.54	5.96	18.49
78	81	SLU-INV	Min	-0.84	-11.78	-1.21	-1.72	0.87	2.47	4.60	18.49
78	82	SLU-INV	Min	-0.96	-12.38	-1.04	-2.86	0.80	1.88	4.60	19.57
79	107	SLE-INV	Max	-0.54	-9.43	-0.55	-2.59	-1.18	3.69	3.68	18.31
79	106	SLE-INV	Max	-0.48	-9.13	-0.68	-2.26	-1.65	1.76	3.68	17.63
79	82	SLE-INV	Max	-0.59	-9.15	-0.65	-1.05	1.08	1.70	2.82	17.63
79	83	SLE-INV	Max	-0.65	-9.45	-0.52	-1.40	1.06	1.12	2.82	18.31
79	107	SLE-INV	Min	-0.54	-9.43	-0.55	-3.10	-1.82	0.96	3.03	15.01
79	106	SLE-INV	Min	-0.48	-9.13	-0.68	-2.70	-1.79	1.44	3.03	14.45
79	82	SLE-INV	Min	-0.59	-9.15	-0.65	-1.22	0.70	1.40	2.33	14.45
79	83	SLE-INV	Min	-0.65	-9.45	-0.52	-1.64	0.67	0.92	2.33	15.01
79	107	SLU-INV	Max	-0.54	-9.43	-0.55	-3.49	-2.28	2.29	6.97	35.18
79	106	SLU-INV	Max	-0.48	-9.13	-0.68	-3.05	-2.23	3.42	6.97	33.87
79	82	SLU-INV	Max	-0.59	-9.15	-0.65	-1.42	3.02	3.26	5.31	33.87
79	83	SLU-INV	Max	-0.65	-9.45	-0.52	-1.89	3.02	2.14	5.31	35.18
79	107	SLU-INV	Min	-0.73	-12.73	-0.75	-5.69	-2.51	1.29	4.09	20.26
79	106	SLU-INV	Min	-0.65	-12.32	-0.92	-4.92	-2.50	1.94	4.09	19.51
79	82	SLU-INV	Min	-0.79	-12.35	-0.87	-2.10	0.94	1.89	3.15	19.51
79	83	SLU-INV	Min	-0.87	-12.76	-0.70	-2.89	0.91	1.24	3.15	20.26
80	108	SLE-INV	Max	-0.48	-9.58	-0.29	-2.61	-1.70	0.55	2.09	18.66
80	107	SLE-INV	Max	-0.44	-9.41	-0.42	-2.43	-1.68	1.17	2.09	18.77
80	83	SLE-INV	Max	-0.57	-9.44	-0.40	-1.17	1.14	1.13	1.60	18.27
80	84	SLE-INV	Max	-0.60	-9.61	-0.27	-1.37	1.13	0.51	1.60	18.66
80	108	SLE-INV	Min	-0.48	-9.58	-0.29	-3.13	-1.83	0.44	1.72	15.30
80	107	SLE-INV	Min	-0.44	-9.41	-0.42	-2.91	-1.81	0.95	1.72	14.98
80	83	SLE-INV	Min	-0.57	-9.44	-0.40	-1.37	0.74	0.93	1.32	14.98
80	84	SLE-INV	Min	-0.60	-9.61	-0.27	-1.61	0.73	0.42	1.32	15.30
80	108	SLU-INV	Max	-0.48	-9.58	-0.29	-3.53	-2.29	1.07	3.96	35.86
80	107	SLU-INV	Max	-0.44	-9.41	-0.42	-3.28	-2.27	2.26	3.96	35.11
80	83	SLU-INV	Max	-0.57	-9.44	-0.40	-1.58	3.17	2.17	3.01	35.11
80	84	SLU-INV	Max	-0.60	-9.61	-0.27	-1.85	3.18	0.98	3.01	35.86
80	108	SLU-INV	Min	-0.64	-12.94	-0.39	-5.78	-2.51	0.60	2.32	20.65
80	107	SLU-INV	Min	-0.60	-12.70	-0.56	-5.35	-2.50	1.29	2.32	20.22
80	83	SLU-INV	Min	-0.77	-12.74	-0.54	-2.39	1.00	1.25	1.78	20.22
80	84	SLU-INV	Min	-0.81	-12.97	-0.36	-2.84	0.99	0.57	1.78	20.65
81	109	SLE-INV	Max	-0.44	-9.62	-0.02	-2.59	-1.70	-0.08	0.54	18.75
81	108	SLE-INV	Max	-0.43	-9.57	-0.15	-2.54	-1.69	0.53	0.54	18.65
81	84	SLE-INV	Max	-0.57	-9.60	-0.15	-1.26	1.17	0.53	0.41	18.65
81	85	SLE-INV	Max	-0.58	-9.65	-0.02	-1.31	1.17	-0.09	0.41	18.75
81	109	SLE-INV	Min	-0.44	-9.62	-0.02	-3.10	-1.83	-0.10	0.45	15.37
81	108	SLE-INV	Min	-0.43	-9.57	-0.15	-3.04	-1.82	0.44	0.45	15.29
81	84	SLE-INV	Min	-0.57	-9.60	-0.15	-1.48	0.76	0.43	0.34	15.29
81	85	SLE-INV	Min	-0.58	-9.65	-0.02	-1.54	0.76	-0.11	0.34	15.37
81	109	SLU-INV	Max	-0.44	-9.62	-0.02	-3.49	-2.29	-0.11	1.03	36.03
81	108	SLU-INV	Max	-0.43	-9.57	-0.15	-3.43	-2.28	1.04	1.03	35.84
81	84	SLU-INV	Max	-0.57	-9.60	-0.15	-1.70	3.25	1.01	0.78	35.84
81	85	SLU-INV	Max	-0.58	-9.65	-0.02	-1.77	3.25	-0.12	0.78	36.03
81	109	SLU-INV	Min	-0.59	-12.98	-0.03	-5.74	-2.50	-0.19	0.60	20.75
81	108	SLU-INV	Min	-0.58	-12.93	-0.20	-5.62	-2.50	0.59	0.60	20.64
81	84	SLU-INV	Min	-0.77	-12.96	-0.20	-2.61	1.03	0.58	0.46	20.64
81	85	SLU-INV	Min	-0.78	-13.02	-0.03	-2.73	1.02	-0.22	0.46	20.75
82	110	SLE-INV	Max	-0.43	-9.53	0.24	-2.51	-1.69	-0.61	-0.81	18.57
82	109	SLE-INV	Max	-0.45	-9.62	0.11	-2.60	-1.70	-0.09	-0.81	18.75
82	85	SLE-INV	Max	-0.58	-9.65	0.10	-1.33	1.16	-0.08	-0.62	18.75
82	86	SLE-INV	Max	-0.57	-9.56	0.23	-1.23	1.16	-0.60	-0.62	18.57
82	110	SLE-INV	Min	-0.43	-9.53	0.24	-3.01	-1.82	-0.75	-0.99	15.22
82	109	SLE-INV	Min	-0.45	-9.62	0.11	-3.12	-1.83	-0.11	-0.99	15.37
82	85	SLE-INV	Min	-0.58	-9.65	0.10	-1.56	0.75	-0.09	-0.76	15.37
82	86	SLE-INV	Min	-0.57	-9.56	0.23	-1.45	0.76	-0.73	-0.76	15.22
82	110	SLE-INV	Max	-0.43	-9.53	0.32	-3.39	-2.28	-0.82	-1.10	35.68
82	109	SLU-INV	Max	-0.45	-9.62	0.15	-3.51	-2.29	-0.12	-1.10	36.04
82	85	SLU-INV	Max	-0.58	-9.65	0.14	-1.79	3.24	-0.11	-0.84	36.04
82	86	SLU-INV	Max	-0.57	-9.56	0.31	-1.67	3.24	-0.80	-0.84	35.68
82	110	SLU-INV	Min	-0.58	-12.87	0.24	-5.55	-2.50	-1.45	-1.89	20.55
82	109	SLU-INV	Min	-0.61	-12.99	0.11	-5.76	-2.50	-0.23	-1.89	20.75
82	85	SLU-INV	Min	-0.79	-13.02	0.10	-2.77	1.02	-0.18	-1.43	20.75
82	86	SLU-INV	Min	-0.77	-12.91	0.23	-2.55	1.02	-1.40	-1.43	20.55
83	111	SLE-INV	Max	-0.45	-9.33	0.50	-2.38	-1.67	-1.12	-1.12	18.12
83	110	SLE-INV	Max	-0.49	-9.55	0.37	-2.61	-1.70	-0.62	-2.10	18.59
83	86	SLE-INV	Max	-0.62	-9.57	0.35	-1.38	1.11	-0.59	-1.61	18.59
83	87	SLE-INV	Max	-0.57	-9.35	0.48	-1.14	1.12	-1.09	-1.61	18.12
83	111	SLE-INV	Min	-0.45	-9.33	0.50	-2.85	-1.81	-1.37	-2.54	14.85
83	110	SLE-INV	Min	-0.49	-9.55	0.37	-3.13	-1.83	-0.76	-2.44	15.24
83	86	SLE-INV	Min	-0.62	-9.57	0.35	-1.62	0.72	-0.71	-1.95	15.24



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N. progr.	REV.	Pag.di Pag.
L0703	211	E	16	O16800	REL	01	A	112 di 180

97	125	SLE-INV	Min	-1.20	-5.03	-2.60	0.25	-1.41	2.42	13.02	5.84
97	101	SLE-INV	Min	-1.12	-5.01	-2.39	0.43	-0.20	2.66	11.24	5.84
97	102	SLE-INV	Min	-1.32	-6.00	-2.17	-1.21	-0.72	2.68	11.24	7.22
97	126	SLU-INV	Max	-1.40	-6.02	-2.38	-1.70	-2.39	5.94	29.41	18.52
97	101	SLU-INV	Max	-1.20	-5.03	-2.60	1.06	-1.68	5.87	29.41	15.09
97	101	SLU-INV	Max	-1.12	-5.01	-2.39	1.45	0.48	6.18	24.97	15.09
97	102	SLU-INV	Max	-1.32	-6.00	-2.17	-1.45	-0.50	6.25	24.97	18.52
97	126	SLU-INV	Min	-1.89	-8.13	-3.21	-2.36	-3.17	3.29	17.58	9.74
97	125	SLU-INV	Min	-1.63	-6.79	-3.51	0.34	-2.23	3.26	17.58	7.88
97	101	SLU-INV	Min	-1.52	-6.77	-3.23	0.58	-0.27	3.59	15.18	7.88
97	102	SLU-INV	Min	-1.79	-8.10	-2.93	-1.88	-0.98	3.61	15.18	9.74
98	127	SLE-INV	Max	-1.10	-6.77	-1.97	-2.10	-2.20	2.87	13.06	10.46
98	126	SLE-INV	Max	-0.93	-5.92	-2.16	-0.86	-1.76	3.03	13.06	8.95
98	102	SLE-INV	Max	-0.85	-5.91	-2.00	-0.40	-0.44	3.24	11.11	8.95
98	103	SLE-INV	Max	-1.02	-6.76	-1.81	-1.65	-0.94	3.09	11.11	10.46
98	127	SLE-INV	Min	-1.10	-6.77	-1.97	-2.46	-2.49	2.32	10.80	8.34
98	126	SLE-INV	Min	-0.93	-5.92	-2.16	-0.96	-1.99	2.45	10.80	7.13
98	102	SLE-INV	Min	-0.85	-5.91	-2.00	-0.41	-0.52	2.66	9.24	7.13
98	103	SLE-INV	Min	-1.02	-6.76	-1.81	-1.91	-0.96	2.53	9.24	8.34
98	127	SLU-INV	Max	-1.10	-6.77	-1.97	-2.83	-2.97	5.68	24.60	21.28
98	126	SLU-INV	Max	-0.93	-5.92	-2.16	-1.16	-2.37	5.96	24.60	18.28
98	102	SLU-INV	Max	-0.85	-5.91	-2.00	-0.43	-0.02	6.22	20.72	18.28
98	103	SLU-INV	Max	-1.02	-6.76	-1.81	-2.23	-0.82	5.94	20.72	21.28
98	127	SLU-INV	Min	-1.48	-9.15	-2.66	-4.31	-3.98	3.14	14.58	11.26
98	126	SLU-INV	Min	-1.25	-8.00	-2.92	-1.48	-3.19	3.31	14.58	9.63
98	102	SLU-INV	Min	-1.15	-7.98	-2.70	-0.55	-0.70	3.59	12.47	9.63
98	103	SLU-INV	Min	-1.38	-9.13	-2.44	-3.21	-1.29	3.41	12.47	11.26
99	128	SLE-INV	Max	-0.84	-7.42	-1.61	-2.72	-2.55	2.58	10.64	11.67
99	127	SLE-INV	Max	-0.70	-6.69	-1.78	-1.70	-2.18	2.89	10.64	10.36
99	103	SLE-INV	Max	-0.64	-6.68	-1.65	-1.03	-0.71	3.07	8.99	10.36
99	104	SLE-INV	Max	-0.79	-7.41	-1.48	-2.06	-1.12	2.76	8.99	11.67
99	128	SLE-INV	Min	-0.84	-7.42	-1.61	-3.23	-2.89	2.09	8.78	9.32
99	127	SLE-INV	Min	-0.70	-6.69	-1.78	-1.99	-2.47	2.34	8.78	8.27
99	103	SLE-INV	Min	-0.64	-6.68	-1.65	-1.17	-0.78	2.51	7.45	8.27
99	104	SLE-INV	Min	-0.79	-7.41	-1.48	-2.41	-1.14	2.26	7.45	9.32
99	128	SLU-INV	Max	-0.84	-7.42	-1.61	-3.68	-3.44	5.12	20.15	23.69
99	127	SLU-INV	Max	-0.70	-6.69	-1.78	-2.30	-2.94	5.71	20.15	21.08
99	103	SLU-INV	Max	-0.64	-6.68	-1.65	-1.39	-0.39	5.91	16.85	21.08
99	104	SLU-INV	Max	-0.79	-7.41	-1.48	-2.78	-1.05	5.32	16.85	23.69
99	128	SLU-INV	Min	-1.14	-10.01	-2.17	-5.82	-4.63	2.82	11.85	12.57
99	127	SLU-INV	Min	-0.94	-9.04	-2.40	-3.47	-3.98	3.16	11.85	11.16
99	103	SLU-INV	Min	-0.87	-9.02	-2.22	-1.87	-1.05	3.39	10.05	11.16
99	104	SLU-INV	Min	-1.06	-10.00	-1.99	-4.20	-1.54	3.05	10.05	12.59
100	129	SLE-INV	Max	-0.63	-7.93	-1.26	-3.16	-2.82	2.18	8.40	12.66
100	128	SLE-INV	Max	-0.52	-7.35	-1.42	-2.36	-2.53	2.60	8.40	11.59
100	104	SLE-INV	Max	-0.49	-7.35	-1.33	-1.51	-0.93	2.74	7.05	11.59
100	105	SLE-INV	Max	-0.60	-7.93	-1.16	-2.33	-1.25	2.31	7.05	12.66
100	129	SLE-INV	Min	-0.63	-7.93	-1.26	-3.77	-3.19	1.76	6.92	10.12
100	128	SLE-INV	Min	-0.52	-7.35	-1.42	-2.80	-2.87	2.11	6.92	9.26
100	104	SLE-INV	Min	-0.49	-7.35	-1.33	-1.76	-0.98	2.24	5.83	9.26
100	105	SLE-INV	Min	-0.60	-7.93	-1.16	-2.74	-1.26	1.89	5.83	10.12
100	129	SLU-INV	Max	-0.63	-7.93	-1.26	-4.27	-3.80	4.32	15.97	25.64
100	128	SLU-INV	Max	-0.52	-7.35	-1.42	-3.19	-3.41	5.14	15.97	23.52
100	104	SLU-INV	Max	-0.49	-7.35	-1.33	-2.04	-0.68	5.29	13.29	23.52
100	105	SLU-INV	Max	-0.60	-7.93	-1.16	-3.14	-1.19	4.47	13.29	25.64
100	129	SLU-INV	Min	-0.86	-10.71	-1.70	-6.91	-5.12	2.37	9.34	13.66
100	128	SLU-INV	Min	-0.70	-9.93	-1.92	-5.05	-4.61	2.84	9.34	12.51
100	104	SLU-INV	Min	-0.66	-9.92	-1.79	-3.02	-1.81	3.02	7.87	12.51
100	105	SLU-INV	Min	-0.82	-10.70	-1.57	-4.87	-1.70	2.55	7.87	13.66
101	130	SLE-INV	Max	-0.47	-8.32	-0.94	-3.45	-3.01	1.68	6.32	13.42
101	129	SLE-INV	Max	-0.39	-7.88	-1.09	-2.85	-2.79	2.19	6.32	12.60
101	105	SLE-INV	Max	-0.38	-7.88	-1.02	-1.87	-1.09	2.29	5.28	12.60
101	106	SLE-INV	Max	-0.47	-8.32	-0.87	-2.49	-1.33	1.77	5.28	13.42
101	130	SLE-INV	Min	-0.47	-8.32	-0.94	-4.14	-3.41	1.35	5.20	10.74
101	129	SLE-INV	Min	-0.39	-7.88	-1.09	-3.41	-3.17	1.77	5.20	10.08
101	105	SLE-INV	Min	-0.38	-7.88	-1.02	-2.20	-1.13	1.87	4.36	10.08
101	106	SLE-INV	Min	-0.47	-8.32	-0.87	-2.95	-1.34	1.45	4.36	10.74
101	130	SLU-INV	Max	-0.47	-8.32	-0.94	-4.66	-4.06	3.34	12.06	27.14
101	129	SLU-INV	Max	-0.39	-7.88	-1.09	-3.85	-3.77	4.34	12.06	25.51
101	105	SLU-INV	Max	-0.38	-7.88	-1.02	-2.53	-0.89	4.44	9.99	25.51
101	106	SLU-INV	Max	-0.47	-8.32	-0.87	-3.36	-1.26	3.44	9.99	27.14
101	130	SLU-INV	Min	-0.64	-11.23	-1.27	-7.66	-5.47	1.83	7.01	14.49
101	129	SLU-INV	Min	-0.52	-10.64	-1.47	-6.26	-5.10	2.39	7.01	13.60
101	105	SLU-INV	Min	-0.52	-10.64	-1.38	-3.89	-1.53	2.52	5.99	13.60
101	106	SLU-INV	Min	-0.63	-11.23	-1.18	-5.29	-1.81	1.96	5.99	14.49
102	131	SLE-INV	Max	-0.36	-8.59	-0.63	-3.62	-3.14	1.12	4.36	13.95
102	130	SLE-INV	Max	-0.30	-8.28	-0.78	-3.21	-2.99	1.69	4.36	13.37
102	106	SLE-INV	Max	-0.31	-8.29	-0.73	-2.14	-1.21	1.62	3.63	13.37
102	107	SLE-INV	Max	-0.37	-8.59	-0.58	-2.56	-1.37	1.18	3.63	13.95
102	131	SLE-INV	Min	-0.36	-8.59	-0.63	-4.36	-3.56	0.90	3.58	11.16
102	130	SLE-INV	Min	-0.30	-8.28	-0.78	-3.86	-3.39	1.37	3.58	10.70
102	106	SLE-INV	Min	-0.31	-8.29	-0.73	-2.53	-1.24	1.43	2.99	10.70
102	107	SLE-INV	Min	-0.37	-8.59	-0.58	-3.05	-1.38	0.96	2.99	11.16
102	131	SLU-INV	Max	-0.36	-8.59	-0.63	-4.89	-4.23	2.23	8.34	28.19
102	130	SLU-INV	Max	-0.30	-8.28	-0.78	-4.33	-4.03	3.36	8.34	27.04
102	106	SLU-INV	Max	-0.31	-8.29	-0.73	-2.89	-1.03	3.42	6.89	27.04
102	107	SLU-INV	Max	-0.37	-8.59	-0.58	-3.46	-1.28	2.29	6.89	28.19
102	131	SLU-INV	Min	-0.48	-11.60	-0.85	-8.12	-5.71	1.21	4.83	15.07
102	130	SLU-INV	Min	-0.40	-11.18	-1.05	-7.16	-5.45	1.85	4.83	14.45
102	106	SLU-INV	Min	-0.42	-11.19	-0.99	-4.55	-1.68	1.94	4.04	14.45
102	107	SLU-INV	Min	-0.50	-11.60	-0.79	-5.52	-1.87	1.30	4.04	15.07
103	132	SLE-INV	Max	-0.28	-8.74	-0.33	-3.69	-3.21	0.51	2.48	14.25
103	131	SLE-INV	Max	-0.24	-8.57	-0.47	-3.46	-3.12	1.13	2.48	13.92
103	107	SLE-INV	Max	-0.27	-8.57	-0.45	-2.33	-1.29	1.17	2.06	13.92
103	108	SLE-INV	Max	-0.31	-8.75	-0.30	-2.58	-1.38	0.55	2.06	14.25
103	132	SLE-INV	Min	-0.28	-8.74	-0.33	-4.45	-3.63	0.41	2.03	11.41
103	131	SLE-INV	Min	-0.24	-8.57	-0.47	-4.17	-3.54	0.91	2.03	11.14
103	107	SLE-INV	Min	-0.27	-8.57	-0.45	-2.77	-1.32	0.95	1.70	11.14
103	108	SLE-INV	Min	-0.31	-8.75	-0.30	-3.07	-1.40	0.45	1.70	11.41
103	132	SLU-INV	Max	-0.28	-8.74	-0.33	-4.99	-4.33	1.02	4.75	28.79
103	131	SLU-INV	Max	-0.24	-8.57	-0.47	-4.67	-4.21	2.24	4.75	28.13
103	107	SLU-INV	Max	-0.27	-8.57	-0.45	-3.15	-1.13	2.27	3.92	28.13
103	108	SLU-INV	Max	-0.31	-8.75	-0.30	-3.48	-1.27	1.06	3.92	28.79
103	132	SLU-INV	Min	-0.37	-11.80	-0.44	-8.33	-5.83	0.56	2.75	15.40
103	131	SLU-INV	Min	-0.33	-11.56	-0.64	-7.78	-5.69	1.23	2.75	15.04
103	107	SLU-INV	Min	-0.37	-11.57	-0.60	-5.03	-1.78	1.28	2.29	15.04
103	108	SLU-INV	Min	-0.42	-11.81	-0.41	-5.58	-1.89	0.60	2.29	15.40
104	133	SLE-INV	Max	-0.24	-8.77	-0.03	-3.68	-3.22	-0.09	0.64	14.32
104	132	SLE-INV	Max	-0.23	-8.73	-0.17	-3.62	-3.20	0.53	0.64	14.24
104	108	SLE-INV	Max	-0.26	-8.74	-0.17	-2.47	-2.47	0.53	0.54	14.24
104											



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS OI6800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 113 di 180			
104	133	SLE-INV	Min	-0.24	-8.77	-0.03	-4.44	-3.65	-0.11	0.53	11.47
104	132	SLE-INV	Min	-0.23	-8.73	-0.17	-4.36	-3.63	0.43	0.53	11.40
104	108	SLE-INV	Min	-0.26	-8.74	-0.17	-2.94	-1.37	0.43	0.44	11.40
104	109	SLE-INV	Min	-0.27	-8.78	-0.02	-3.02	-1.39	-0.10	0.44	11.47
104	133	SLU-INV	Max	-0.24	-8.77	-0.03	-4.96	-4.35	-0.12	1.23	28.93
104	132	SLU-INV	Max	-0.23	-8.73	-0.17	-4.88	-4.32	1.04	1.23	28.76
104	108	SLU-INV	Max	-0.26	-8.74	-0.17	-3.33	-1.21	1.05	1.02	28.76
104	109	SLU-INV	Max	-0.27	-8.78	-0.02	-3.42	-1.24	-0.11	1.02	28.93
104	133	SLU-INV	Min	-0.32	-11.84	-0.04	-8.31	-5.86	-0.21	0.71	15.48
104	132	SLU-INV	Min	-0.31	-11.78	-0.23	-8.17	-5.82	0.57	0.71	15.39
104	108	SLU-INV	Min	-0.36	-11.79	-0.22	-5.35	-1.85	0.59	0.60	15.39
104	109	SLU-INV	Min	-0.37	-11.85	-0.03	-5.50	-1.87	-0.20	0.60	15.48
105	134	SLE-INV	Max	-0.23	-8.69	0.27	-3.58	-3.18	-0.59	-0.97	14.17
105	133	SLE-INV	Max	-0.25	-8.77	0.13	-3.69	-3.22	-0.08	-0.97	14.33
105	109	SLE-INV	Max	-0.28	-8.78	0.11	-2.55	-1.37	-0.09	-0.81	14.33
105	110	SLE-INV	Max	-0.26	-8.70	0.26	-2.43	-1.33	-0.61	-0.81	14.17
105	134	SLE-INV	Min	-0.23	-8.69	0.27	-4.31	-3.61	-0.73	-1.18	11.34
105	133	SLE-INV	Min	-0.25	-8.77	0.13	-4.45	-3.65	-0.10	-1.18	11.47
105	109	SLE-INV	Min	-0.28	-8.78	0.11	-3.04	-1.39	-0.11	-0.98	11.47
105	110	SLE-INV	Min	-0.26	-8.70	0.26	-2.90	-1.36	-0.75	-0.98	11.34
105	134	SLU-INV	Max	-0.23	-8.69	0.36	-4.83	-4.29	-0.80	-1.30	28.63
105	133	SLU-INV	Max	-0.25	-8.77	0.17	-4.98	-4.35	-0.10	-1.30	28.94
105	109	SLU-INV	Max	-0.28	-8.78	0.15	-3.44	-1.25	-0.13	-1.09	28.94
105	110	SLU-INV	Max	-0.26	-8.70	0.35	-3.29	-1.18	-0.82	-1.09	28.63
105	134	SLU-INV	Min	-0.31	-11.73	0.27	-8.08	-5.79	-1.44	-2.26	15.31
105	133	SLU-INV	Min	-0.33	-11.85	0.13	-8.34	-5.86	-0.20	-2.26	15.48
105	109	SLU-INV	Min	-0.38	-11.85	0.11	-5.53	-1.88	-0.21	-1.87	15.48
105	110	SLU-INV	Min	-0.36	-11.74	0.26	-5.27	-1.83	-1.46	-1.87	15.31
106	135	SLE-INV	Max	-0.26	-8.49	0.58	-3.39	-3.09	-1.07	-2.48	13.79
106	134	SLE-INV	Max	-0.30	-8.70	0.42	-3.68	-3.19	-0.58	-2.48	14.19
106	110	SLE-INV	Max	-0.33	-8.71	0.39	-2.57	-1.38	-0.62	-2.07	14.19
106	111	SLE-INV	Max	-0.28	-8.49	0.54	-2.28	-1.27	-1.11	-2.07	13.79
106	135	SLE-INV	Min	-0.26	-8.49	0.58	-4.08	-3.50	-1.32	-3.02	11.03
106	134	SLE-INV	Min	-0.30	-8.70	0.42	-4.43	-3.62	-0.71	-3.02	11.36
106	110	SLE-INV	Min	-0.33	-8.71	0.39	-3.06	-1.39	-0.76	-2.51	11.36
106	111	SLE-INV	Min	-0.28	-8.49	0.54	-2.71	-1.30	-1.37	-2.51	11.03
106	135	SLU-INV	Max	-0.26	-8.49	0.78	-4.58	-4.17	-1.44	-3.35	27.87
106	134	SLU-INV	Max	-0.30	-8.70	0.57	-4.97	-4.31	-0.78	-3.35	28.67
106	110	SLU-INV	Max	-0.33	-8.71	0.53	-3.48	-1.28	-0.84	-2.80	28.67
106	111	SLU-INV	Max	-0.28	-8.49	0.73	-3.08	-1.10	-1.50	-2.80	27.87
106	135	SLU-INV	Min	-0.35	-11.46	0.58	-7.61	-5.63	-2.62	-4.90	14.90
106	134	SLU-INV	Min	-0.40	-11.75	0.42	-8.28	-5.80	-1.43	-5.80	15.33
106	110	SLU-INV	Min	-0.44	-11.76	0.39	-5.57	-1.88	-1.47	-4.78	15.33
106	111	SLU-INV	Min	-0.38	-11.46	0.54	-4.90	-1.75	-2.66	-4.78	14.90
107	112	SLE-INV	Max	-0.33	-8.14	0.84	-2.04	-1.16	-1.62	-3.43	13.11
107	136	SLE-INV	Max	-0.32	-8.14	0.89	-3.08	-2.92	-1.54	-4.10	13.11
107	135	SLE-INV	Max	-0.40	-8.51	0.74	-3.59	-3.10	-1.05	-4.10	13.82
107	111	SLE-INV	Max	-0.41	-8.52	0.69	-2.56	-1.36	-1.13	-3.43	13.82
107	112	SLE-INV	Min	-0.33	-8.14	0.84	-2.41	-1.20	-1.98	-4.16	10.49
107	136	SLE-INV	Min	-0.32	-8.14	0.89	-3.69	-3.31	-1.91	-5.00	10.49
107	135	SLE-INV	Min	-0.40	-8.51	0.74	-4.31	-3.52	-1.31	-5.00	11.06
107	111	SLE-INV	Min	-0.41	-8.52	0.69	-3.04	-1.37	-1.38	-4.16	11.06
107	112	SLU-INV	Max	-0.33	-8.14	1.13	-2.75	-0.97	-2.18	-4.63	26.53
107	136	SLU-INV	Max	-0.32	-8.14	1.21	-4.15	-3.94	-2.08	-5.54	26.53
107	135	SLU-INV	Max	-0.40	-8.51	1.00	-4.84	-4.19	-1.42	-5.54	27.94
107	111	SLU-INV	Max	-0.41	-8.52	0.93	-3.45	-1.29	-1.52	-4.63	27.94
107	112	SLU-INV	Min	-0.45	-10.98	0.84	-4.30	-1.62	-3.85	-7.90	14.16
107	136	SLU-INV	Min	-0.43	-10.98	0.89	-6.83	-5.33	-3.70	-9.56	14.16
107	135	SLU-INV	Min	-0.54	-11.50	0.74	-8.02	-5.65	-2.60	-9.56	14.93
107	111	SLU-INV	Min	-0.55	-11.50	0.69	-5.49	-1.86	-2.68	-7.90	14.93
108	113	SLE-INV	Max	-0.42	-7.64	1.16	-1.71	-1.01	-2.06	-4.94	12.18
108	137	SLE-INV	Max	-0.44	-7.64	1.24	-2.63	-2.68	-1.94	-5.88	12.18
108	136	SLE-INV	Max	-0.54	-8.18	1.07	-3.36	-2.94	-1.52	-5.88	13.17
108	112	SLE-INV	Max	-0.53	-8.18	0.99	-2.45	-1.30	-1.63	-4.94	13.17
108	113	SLE-INV	Min	-0.42	-7.64	1.16	-2.00	-1.06	-2.52	-5.98	9.73
108	137	SLE-INV	Min	-0.44	-7.64	1.24	-3.14	-3.04	-2.40	-7.15	9.73
108	136	SLE-INV	Min	-0.54	-8.18	1.07	-4.03	-3.34	-1.89	-7.15	10.53
108	112	SLE-INV	Min	-0.53	-8.18	0.99	-2.90	-1.32	-2.00	-5.98	10.53
108	113	SLU-INV	Max	-0.42	-7.64	1.57	-2.30	-0.78	-2.78	-6.67	24.67
108	137	SLU-INV	Max	-0.44	-7.64	1.68	-3.55	-3.61	-2.63	-7.94	24.67
108	136	SLU-INV	Max	-0.54	-8.18	1.45	-4.54	-3.97	-2.06	-7.94	26.65
108	112	SLU-INV	Max	-0.53	-8.18	1.34	-3.31	-1.25	-2.21	-6.67	26.65
108	113	SLU-INV	Min	-0.57	-10.31	1.16	-3.49	-1.43	-4.88	-11.30	13.14
109	137	SLU-INV	Min	-0.59	-10.32	1.24	-5.72	-4.89	-4.76	-13.63	13.14
108	136	SLU-INV	Min	-0.73	-11.04	1.07	-7.42	-5.35	-3.76	-13.63	14.22
108	112	SLU-INV	Min	-0.71	-11.04	0.99	-5.18	-1.78	-3.87	-11.30	14.22
109	114	SLE-INV	Max	-0.56	-6.99	1.49	-1.25	-0.81	-2.40	-6.58	10.97
109	138	SLE-INV	Max	-0.60	-7.00	1.61	-2.01	-2.35	-2.25	-7.80	10.97
109	137	SLE-INV	Max	-0.74	-7.70	1.43	-2.99	-2.70	-1.92	-7.80	12.25
109	113	SLE-INV	Max	-0.70	-7.69	1.32	-2.24	-1.20	-2.08	-6.58	12.25
109	114	SLE-INV	Min	-0.56	-6.99	1.49	-1.44	-0.87	-2.94	-7.95	8.76
109	138	SLE-INV	Min	-0.60	-7.00	1.61	-2.37	-2.67	-2.78	-9.46	8.76
109	137	SLE-INV	Min	-0.74	-7.70	1.43	-3.56	-3.06	-2.38	-9.46	9.79
109	113	SLE-INV	Min	-0.70	-7.69	1.32	-2.63	-1.21	-2.54	-7.95	9.79
109	114	SLU-INV	Max	-0.56	-6.99	2.02	-1.69	-0.51	-3.24	-8.89	22.28
109	138	SLU-INV	Max	-0.60	-7.00	2.17	-2.72	-3.17	-3.04	-10.52	22.28
109	137	SLU-INV	Max	-0.74	-7.70	1.93	-4.03	-3.65	-2.60	-10.52	24.84
109	113	SLU-INV	Max	-0.70	-7.69	1.78	-3.02	-1.14	-2.80	-8.89	24.84
109	114	SLU-INV	Min	-0.75	-9.44	1.49	-2.40	-1.17	-5.67	-14.96	11.83
109	138	SLU-INV	Min	-0.81	-9.45	1.61	-4.22	-4.29	-5.49	-17.96	11.83
109	137	SLU-INV	Min	-1.00	-10.40	1.43	-6.47	-4.91	-4.73	-17.96	13.22
109	113	SLU-INV	Min	-0.94	-10.39	1.32	-4.63	-1.64	-4.90	-14.96	13.22
110	115	SLE-INV	Max	-0.75	-6.20	1.86	-0.63	-0.53	-2.62	-8.42	9.51
110	139	SLE-INV	Max	-0.82	-6.21	2.01	-1.18	-1.92	-2.43	-9.90	9.51
110	138	SLE-INV	Max	-1.00	-7.08	1.81	-2.42	-2.37	-2.23	-9.90	11.07
110	114	SLE-INV	Max	-0.93	-7.07	1.66	-1.88	-1.04	-2.42	-8.42	11.07
110	115	SLE-INV	Min	-0.75	-6.20	1.86	-0.68	-0.61	-3.20	-10.15	7.58
110	139	SLE-INV	Min	-0.82	-6.21	2.01	-1.35	-2.18	-3.00	-11.98	7.58
110	138	SLE-INV	Min	-1.00	-7.08	1.81	-2.86	-2.68	-2.76	-11.98	8.83
110	114	SLE-INV	Min	-0.93	-7.07	1.66	-2.19	-1.05	-2.96	-10.15	8.83
110	115	SLU-INV	Max	-0.75	-6.20	2.51	-0.85	-0.14	-3.54	-11.37	19.38
110	139	SLU-INV	Max	-0.82	-6.21	2.71	-1.59	-2.59	-3.28	-13.36	19.38
110	138	SLU-INV	Max	-1.00	-7.08	2.45	-3.27	-3.20	-3.01	-13.36	22.49
110	114	SLU-INV	Max	-0.93	-7.07	2.24	-2.54	-0.96	-3.27	-11.37	22.49
110	115	SLU-INV	Min	-1.02	-8.36	1.86	-0.95	-0.82	-6.15	-18.97	10.23
110	139	SLU-INV	Min	-1.11	-8.38	2.01	-2.23	-3.50	-5.91	-22.63	10.23
110	138	SLU-INV	Min	-1.34	-9.56	1.81	-5.08	-4.30	-5.46	-22.63	11.93
110	114	SLU-INV	Min	-1.25	-9.54	1.66	-3.76	-1.42	-5.70	-18.97	11.93
111	116	SLE-INV	Max	-1.02	-5.25	2.27	0.34	-0.18	-2.67	-10.52	7.80
111	140	SLE-INV	Max	-1.10	-5.77	2.47	0.01	-0.17	-2.45	-12.24	7.80
111	139	SLE-INV	Max	-1.31	-6.31	2.24	-1.61</				



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 114 di 180			
111	115	SLE-INV	Max	-1.23	-6.29	2.05	-1.34	-0.80	-2.64	-10.52	9.63
111	116	SLE-INV	Min	-1.02	-5.25	2.27	0.21	-0.28	-3.26	-12.63	6.20
111	140	SLE-INV	Min	-1.10	-5.27	2.47	-0.06	-1.58	-3.02	-14.78	6.20
111	139	SLE-INV	Min	-1.31	-6.31	2.24	-1.86	-2.19	-2.98	-14.78	7.67
111	115	SLE-INV	Min	-1.23	-6.29	2.05	-1.52	-0.83	-3.22	-12.63	7.67
111	116	SLU-INV	Max	-1.02	-5.25	3.07	0.97	0.36	-3.61	-14.20	15.99
111	140	SLU-INV	Max	-1.10	-5.27	3.33	0.36	-1.88	-3.30	-16.53	15.99
111	139	SLU-INV	Max	-1.31	-6.31	3.02	-2.17	-2.61	-3.26	-16.53	19.64
111	115	SLU-INV	Max	-1.23	-6.29	2.76	-1.81	-0.65	-3.57	-14.20	19.64
111	116	SLU-INV	Min	-1.38	-7.09	2.27	0.29	-0.38	-6.23	-23.45	8.37
111	140	SLU-INV	Min	-1.49	-7.11	2.47	-0.08	-2.51	-5.94	-27.74	8.37
111	139	SLU-INV	Min	-1.77	-8.52	2.24	-3.16	-3.49	-5.88	-27.74	10.35
111	115	SLU-INV	Min	-1.66	-8.49	2.05	-2.48	-1.11	-6.18	-23.45	10.35
112	117	SLE-INV	Max	-1.39	-4.17	2.77	1.70	0.27	-2.51	-12.96	5.89
112	141	SLE-INV	Max	-1.45	-4.19	3.01	1.80	-0.75	-2.26	-14.89	5.89
112	140	SLE-INV	Max	-1.69	-5.38	2.73	-0.47	-1.39	-2.43	-14.89	7.94
112	116	SLE-INV	Max	-1.63	-5.37	2.49	-0.54	-0.47	-2.69	-12.96	7.94
112	117	SLE-INV	Min	-1.39	-4.17	2.77	1.35	0.13	-3.05	-15.51	4.66
112	141	SLE-INV	Min	-1.45	-4.19	3.01	1.43	-0.84	-2.78	-17.92	4.66
112	140	SLE-INV	Min	-1.69	-5.38	2.73	-0.49	-1.56	-3.00	-17.92	6.31
112	116	SLE-INV	Min	-1.63	-5.37	2.49	-0.56	-0.52	-3.27	-15.51	6.31
112	117	SLU-INV	Max	-1.39	-4.17	3.74	3.48	1.02	-3.39	-17.49	12.17
112	141	SLU-INV	Max	-1.45	-4.19	4.06	3.70	-1.02	-3.05	-20.11	12.17
112	140	SLU-INV	Max	-1.69	-5.38	3.69	-0.57	-1.88	-3.28	-20.11	16.30
112	116	SLU-INV	Max	-1.63	-5.37	3.36	-0.68	-0.21	-3.63	-17.49	16.30
112	117	SLU-INV	Min	-1.87	-5.63	2.77	1.83	0.18	-5.82	-28.55	6.29
112	141	SLU-INV	Min	-1.96	-5.65	3.01	1.94	-1.29	-5.47	-33.41	6.29
112	140	SLU-INV	Min	-2.28	-7.27	2.73	-0.66	-2.46	-5.91	-33.41	8.52
112	116	SLU-INV	Min	-2.20	-7.25	2.49	-0.76	-0.70	-6.26	-28.55	8.52
113	118	SLE-INV	Max	-1.84	-3.00	3.34	3.52	0.82	-2.08	-15.83	3.83
113	142	SLE-INV	Max	-1.86	-3.00	3.62	4.15	0.02	-1.81	-17.91	3.83
113	141	SLE-INV	Max	-2.13	-4.32	3.34	1.38	-0.73	-2.25	-17.91	6.05
113	117	SLE-INV	Max	-2.11	-4.32	3.06	0.80	-0.03	-2.52	-15.83	6.05
113	118	SLE-INV	Min	-1.84	-3.00	3.34	2.89	0.62	-2.52	-18.87	3.01
113	142	SLE-INV	Min	-1.86	-3.00	3.62	3.40	-0.01	-2.24	-21.48	3.01
113	141	SLE-INV	Min	-2.13	-4.32	3.34	1.09	-0.80	-2.78	-21.48	4.78
113	117	SLE-INV	Min	-2.11	-4.32	3.06	0.61	-0.11	-3.06	-18.87	4.78
113	118	SLU-INV	Max	-1.84	-3.00	4.50	6.74	1.84	-2.81	-21.37	8.00
113	142	SLU-INV	Max	-1.86	-3.00	4.89	7.99	0.15	-2.45	-24.38	8.00
113	141	SLU-INV	Max	-2.13	-4.32	4.51	2.85	-0.98	-3.04	-24.38	12.51
113	117	SLU-INV	Max	-2.11	-4.32	4.13	1.77	0.40	-3.70	-21.37	12.51
113	118	SLU-INV	Min	-2.49	-4.04	3.34	3.90	0.84	-4.49	-34.44	4.06
113	142	SLU-INV	Min	-2.51	-4.05	3.62	4.59	-0.01	-4.41	-39.74	4.06
113	141	SLU-INV	Min	-2.87	-5.83	3.34	1.47	-1.19	-5.46	-39.74	6.45
113	117	SLU-INV	Min	-2.85	-5.83	3.06	0.82	-0.16	-5.84	-34.44	6.45
114	119	SLE-INV	Max	-2.38	-1.76	4.34	5.93	1.45	-1.29	-19.23	1.70
114	143	SLE-INV	Max	-2.32	-1.75	4.64	7.21	0.97	-1.07	-21.36	1.70
114	142	SLE-INV	Max	-2.60	-3.15	3.84	3.87	0.09	-1.84	-21.36	3.99
114	118	SLE-INV	Max	-2.66	-3.16	3.54	2.68	0.52	-2.06	-19.23	3.99
114	119	SLE-INV	Min	-2.38	-1.76	4.34	4.95	1.19	-1.56	-22.83	1.32
114	143	SLE-INV	Min	-2.32	-1.75	4.64	5.99	0.81	-1.32	-25.53	1.32
114	142	SLE-INV	Min	-2.60	-3.15	3.84	3.20	0.05	-2.26	-25.53	3.14
114	118	SLE-INV	Min	-2.66	-3.16	3.54	2.21	0.39	-2.50	-22.83	3.14
114	119	SLU-INV	Max	-2.38	-1.76	5.86	10.97	2.81	-1.74	-25.96	3.64
114	143	SLU-INV	Max	-2.32	-1.75	6.27	13.46	1.78	-1.44	-28.84	3.64
114	142	SLU-INV	Max	-2.60	-3.15	5.19	7.34	0.32	-2.48	-28.84	8.38
114	118	SLU-INV	Max	-2.66	-3.16	4.78	5.08	1.21	-2.78	-25.96	8.38
114	119	SLU-INV	Min	-3.22	-2.38	4.34	6.68	2.24	-2.60	-42.88	1.78
114	143	SLU-INV	Min	-3.14	-2.37	4.64	8.09	1.09	-2.62	-46.86	1.78
114	142	SLU-INV	Min	-3.51	-4.25	3.84	4.31	0.07	-4.43	-46.86	4.23
114	118	SLU-INV	Min	-3.59	-4.27	3.54	2.99	0.52	-4.76	-41.28	4.23
115	120	SLE-INV	Max	-2.97	-0.59	3.19	9.14	2.12	-0.06	-23.25	-0.29
115	144	SLE-INV	Max	-2.82	-0.56	3.63	11.21	1.95	0.04	-25.29	-0.29
115	143	SLE-INV	Max	-3.09	-1.91	6.23	7.21	1.10	-1.13	-25.29	1.87
115	119	SLE-INV	Max	-3.24	-1.94	5.79	5.28	1.19	-1.23	-23.25	1.87
115	120	SLE-INV	Min	-2.97	-0.59	3.19	7.71	1.77	-0.06	-27.50	-0.36
115	144	SLE-INV	Min	-2.82	-0.56	3.63	9.39	1.65	0.04	-30.13	-0.36
115	143	SLE-INV	Min	-3.09	-1.91	6.23	6.04	0.92	-1.39	-30.13	1.45
115	119	SLE-INV	Min	-3.24	-1.94	5.79	4.45	0.98	-1.49	-27.50	1.45
115	120	SLU-INV	Max	-2.97	-0.59	4.31	16.46	3.87	-0.07	-31.39	-0.39
115	144	SLU-INV	Max	-2.82	-0.56	4.90	20.46	3.51	0.06	-34.14	-0.39
115	143	SLU-INV	Max	-3.09	-1.91	8.41	13.21	2.04	-1.53	-34.14	4.04
115	119	SLU-INV	Max	-3.24	-1.94	7.81	9.53	2.21	-1.66	-31.39	4.04
115	120	SLU-INV	Min	-4.01	-0.80	3.19	10.41	2.39	-0.10	-49.25	-0.72
115	144	SLU-INV	Min	-3.80	-0.76	3.63	12.68	2.23	0.05	-54.86	-0.72
115	143	SLU-INV	Min	-4.17	-2.57	6.23	8.15	1.24	-2.71	-54.86	1.96
115	119	SLU-INV	Min	-4.37	-2.61	5.79	6.01	1.33	-2.86	-49.25	1.96
116	145	SLE-INV	Max	-2.65	-0.53	4.02	13.16	2.40	-0.05	32.06	-0.22
116	121	SLE-INV	Max	-2.84	-0.57	3.63	11.38	2.50	0.07	30.34	-0.22
116	122	SLE-INV	Max	-3.06	-1.68	-6.64	7.49	1.56	1.00	30.34	1.08
116	146	SLE-INV	Max	-2.87	-1.64	-7.03	9.13	1.53	1.08	32.06	1.08
116	145	SLE-INV	Min	-2.65	-0.53	4.02	10.96	2.02	-0.05	26.72	-0.28
116	121	SLE-INV	Min	-2.84	-0.57	3.63	9.53	2.08	0.06	25.48	-0.28
116	122	SLE-INV	Min	-3.06	-1.68	-6.64	6.28	1.30	0.97	25.48	0.77
116	146	SLE-INV	Min	-2.87	-1.64	-7.03	7.60	1.28	0.86	26.72	0.77
116	145	SLU-INV	Max	-2.65	-0.53	4.02	24.41	4.40	-0.06	59.36	-0.30
116	121	SLU-INV	Max	-2.84	-0.57	3.63	20.81	4.65	0.11	55.21	-0.30
116	122	SLU-INV	Max	-3.06	-1.68	-6.64	13.72	2.94	2.40	55.21	2.68
116	146	SLU-INV	Max	-2.87	-1.64	-7.03	16.98	2.86	2.21	59.36	2.68
116	145	SLU-INV	Min	-3.58	-0.72	-5.43	14.79	2.72	-0.07	36.08	-0.61
116	121	SLU-INV	Min	-3.84	-0.77	-4.90	12.87	2.81	0.08	34.40	-0.61
116	122	SLU-INV	Min	-4.14	-2.27	-8.96	8.47	1.75	1.31	34.40	1.03
116	146	SLU-INV	Min	-3.88	-2.21	-9.49	10.26	1.72	1.16	36.08	1.03
117	147	SLE-INV	Max	-2.46	-2.66	-4.46	5.44	0.45	1.81	27.85	2.42
117	146	SLE-INV	Max	-2.23	-1.51	-5.35	8.90	1.40	0.99	27.85	0.96
117	122	SLE-INV	Max	-2.35	-1.54	-5.09	7.67	1.69	1.29	26.00	0.96
117	123	SLE-INV	Max	-2.58	-2.68	-4.19	4.30	0.70	2.11	26.00	2.42
117	147	SLE-INV	Min	-2.46	-2.66	-4.46	4.48	0.35	1.44	23.15	1.78
117	146	SLE-INV	Min	-2.23	-1.51	-5.35	7.36	1.16	0.78	23.15	0.68
117	122	SLE-INV	Min	-2.35	-1.54	-5.09	6.37	1.38	1.05	21.77	0.68
117	123	SLE-INV	Min	-2.58	-2.68	-4.19	3.55	0.53	1.71	21.77	1.78
117	147	SLU-INV	Max	-2.46	-2.66	-4.46	10.35	0.95	3.71	51.90	5.72
117	146	SLU-INV	Max	-2.23	-1.51	-5.35	16.79	2.58	2.07	51.90	2.37
117	122	SLU-INV	Max	-2.35	-1.54	-5.09	14.31	3.30	2.53	47.67	2.37
117	123	SLU-INV	Max	-2.58	-2.68	-4.19	8.13	1.54	4.16	47.67	5.72
117	147	SLU-INV	Min	-3.32	-3.59	-6.03	6.04	0.48	1.94	31.25	2.40
117	146	SLU-INV	Min	-3.01	-2.04	-7.23	9.93	1.57	1.05	31.25	0.92
117	122	SLU-INV	Min	-3.18	-2.07	-6.86	8.59	1.86	1.42	29.38	0.92
117	123	SLU-INV	Min	-3.49	-3.62	-5.66	4.80	0.72	2.31	29.38	2.40
118	148	SLE-INV	Max	-2.05	-3.45	-4.00	2.48	-0.53	2.30	23.99	3.82
118	147	SLE-INV	Max	-1.83	-2.53	-4.27	5.50	0.37	1.76	23.99	2.31



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 115 di 180
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118	123	SLE-INV	Max	-1.88	-2.54	-4.00	4.77	0.88	2.15	22.11	2.31
118	124	SLE-INV	Max	-2.11	-3.66	-3.73	1.82	-0.11	2.69	22.11	3.82
118	148	SLE-INV	Min	-2.05	-3.65	-4.00	2.00	-0.58	1.88	19.88	2.85
118	147	SLE-INV	Min	-1.83	-2.53	-4.27	4.50	0.30	1.39	19.88	1.70
118	123	SLE-INV	Min	-1.88	-2.54	-4.00	3.91	0.67	1.75	18.45	1.70
118	124	SLE-INV	Min	-2.11	-3.66	-3.73	1.45	-0.18	2.18	18.45	2.85
118	148	SLU-INV	Max	-2.05	-3.65	-4.00	4.96	-0.72	4.71	44.99	8.78
118	147	SLU-INV	Max	-1.83	-2.53	-4.27	10.61	0.78	3.64	44.99	5.43
118	123	SLU-INV	Max	-1.88	-2.54	-4.00	9.15	1.97	4.22	40.84	5.43
118	124	SLU-INV	Max	-2.11	-3.66	-3.73	3.70	0.25	5.29	40.84	8.78
118	148	SLU-INV	Min	-2.77	-4.93	-5.40	2.70	-0.84	2.46	26.84	3.85
118	147	SLU-INV	Min	-2.47	-3.42	-5.77	6.08	0.40	1.88	26.84	2.29
118	123	SLU-INV	Min	-2.54	-3.43	-5.40	5.28	0.90	2.36	24.91	2.29
118	124	SLU-INV	Min	-2.84	-4.95	-5.03	1.96	-0.24	2.94	24.91	3.85
119	149	SLE-INV	Max	-1.66	-4.58	-3.32	0.19	-1.33	2.56	20.45	5.17
119	148	SLE-INV	Max	-1.45	-3.53	-3.63	2.74	-0.55	2.28	20.45	3.71
119	124	SLE-INV	Max	-1.45	-3.53	-3.39	2.45	0.11	2.70	18.64	3.71
119	125	SLE-INV	Max	-1.66	-4.58	-3.08	-0.06	-0.81	2.98	18.64	5.17
119	149	SLE-INV	Min	-1.66	-4.58	-3.32	0.09	-1.52	2.03	16.90	3.90
119	148	SLE-INV	Min	-1.45	-3.53	-3.63	2.20	-0.62	1.81	16.90	2.77
119	124	SLE-INV	Min	-1.45	-3.53	-3.39	1.96	-0.01	2.19	15.50	2.77
119	125	SLE-INV	Min	-1.66	-4.58	-3.08	-0.12	-0.82	2.41	15.50	3.90
119	149	SLU-INV	Max	-1.66	-4.58	-3.32	0.70	-1.80	5.24	38.59	11.67
119	148	SLU-INV	Max	-1.45	-3.53	-3.63	5.51	-0.75	4.69	38.59	8.51
119	124	SLU-INV	Max	-1.45	-3.53	-3.39	4.94	0.71	5.31	34.68	8.51
119	125	SLU-INV	Max	-1.66	-4.58	-3.08	0.27	-0.88	5.86	34.68	11.67
119	149	SLU-INV	Min	-2.25	-6.18	-4.49	0.12	-2.45	2.21	22.81	5.27
119	148	SLU-INV	Min	-1.96	-4.77	-4.90	2.96	-0.94	2.45	22.81	3.74
119	124	SLU-INV	Min	-1.96	-4.77	-4.58	2.65	-0.02	2.96	20.93	3.74
119	125	SLU-INV	Min	-2.24	-6.18	-4.16	-0.17	-1.10	3.26	20.93	5.27
120	150	SLE-INV	Max	-1.31	-5.37	-2.78	-1.31	-2.01	2.62	17.30	6.37
120	149	SLE-INV	Max	-1.13	-4.47	-3.04	0.55	-1.33	2.56	17.30	5.07
120	125	SLE-INV	Max	-1.09	-4.47	-2.83	0.63	-0.60	2.97	15.62	5.07
120	126	SLE-INV	Max	-1.27	-5.37	-2.57	-1.24	-1.32	3.02	15.62	6.37
120	150	SLE-INV	Min	-1.31	-5.37	-2.78	-1.51	-2.30	2.08	14.26	4.84
120	149	SLE-INV	Min	-1.13	-4.47	-3.04	0.38	-1.52	2.04	14.26	3.83
120	125	SLE-INV	Min	-1.09	-4.47	-2.83	0.44	-0.63	2.41	12.96	3.83
120	126	SLE-INV	Min	-1.27	-5.37	-2.57	-1.40	-1.39	2.45	12.96	4.84
120	150	SLU-INV	Max	-1.31	-5.37	-2.78	-1.77	-2.71	5.37	32.83	14.19
120	149	SLU-INV	Max	-1.13	-4.47	-3.04	1.39	-1.80	5.25	32.83	11.43
120	125	SLU-INV	Max	-1.09	-4.47	-2.83	1.57	-0.43	5.85	29.27	11.43
120	126	SLU-INV	Max	-1.27	-5.37	-2.57	-1.67	-1.77	5.96	29.27	14.19
120	150	SLU-INV	Min	-1.77	-7.26	-3.75	-2.51	-3.80	2.81	19.25	6.53
120	149	SLU-INV	Min	-1.53	-6.04	-4.10	0.51	-2.50	2.75	19.25	5.17
120	125	SLU-INV	Min	-1.47	-6.03	-3.82	0.60	-0.86	3.25	17.49	5.17
120	126	SLU-INV	Min	-1.72	-7.24	-3.47	-2.23	-1.89	3.31	17.49	6.53
121	151	SLE-INV	Max	-1.01	-6.07	-2.30	-2.39	-2.59	2.52	14.48	7.44
121	150	SLE-INV	Max	-0.85	-5.28	-2.53	-0.98	-1.99	2.63	14.48	6.28
121	126	SLE-INV	Max	-0.80	-5.27	-2.35	-0.67	-1.15	3.01	12.98	6.28
121	127	SLE-INV	Max	-0.95	-6.06	-2.13	-2.07	-1.75	2.89	12.98	7.44
121	151	SLE-INV	Min	-1.01	-6.07	-2.30	-2.82	-2.97	2.00	11.91	5.69
121	150	SLE-INV	Min	-0.85	-5.28	-2.53	-1.11	-2.29	2.09	11.91	4.78
121	126	SLE-INV	Min	-0.80	-5.27	-2.35	-0.72	-1.19	2.43	10.74	4.78
121	127	SLE-INV	Min	-0.95	-6.06	-2.13	-2.41	-1.88	2.34	10.74	5.69
121	151	SLU-INV	Max	-1.01	-6.07	-2.30	-3.22	-3.49	5.16	27.64	16.44
121	150	SLU-INV	Max	-0.85	-5.28	-2.53	-1.32	-2.69	5.39	27.64	13.99
121	126	SLU-INV	Max	-0.80	-5.27	-2.35	-0.90	-1.36	5.93	24.47	13.99
121	127	SLU-INV	Max	-0.95	-6.06	-2.13	-2.80	-2.66	5.71	24.47	16.44
121	151	SLU-INV	Min	-1.36	-8.20	-3.11	-5.04	-4.95	2.70	16.08	7.68
121	150	SLU-INV	Min	-1.15	-7.13	-3.42	-1.77	-3.81	2.83	16.08	6.45
121	126	SLU-INV	Min	-1.07	-7.12	-3.18	-0.98	-1.61	3.29	14.50	6.45
121	127	SLU-INV	Min	-1.29	-8.18	-2.87	-4.16	-2.55	3.16	14.50	7.68
122	152	SLE-INV	Max	-0.75	-6.68	-1.87	-3.21	-3.08	2.28	11.87	8.40
122	151	SLE-INV	Max	-0.62	-5.99	-2.07	-2.04	-2.56	2.54	11.87	7.37
122	127	SLE-INV	Max	-0.55	-5.98	-1.93	-1.52	-1.60	2.87	10.57	7.37
122	128	SLE-INV	Max	-0.69	-6.66	-1.73	-2.70	-2.11	2.61	10.57	8.40
122	152	SLE-INV	Min	-0.75	-6.68	-1.87	-3.83	-3.54	1.81	9.74	6.44
122	151	SLE-INV	Min	-0.62	-5.99	-2.07	-2.41	-2.95	2.02	9.74	5.63
122	127	SLE-INV	Min	-0.55	-5.98	-1.93	-1.76	-1.69	2.32	8.72	5.63
122	128	SLE-INV	Min	-0.69	-6.66	-1.73	-3.18	-2.28	2.11	8.72	6.44
122	152	SLU-INV	Max	-0.75	-6.68	-1.87	-4.33	-4.16	4.68	22.75	18.43
122	151	SLU-INV	Max	-0.62	-5.99	-2.07	-2.75	-3.46	5.20	22.75	16.27
122	127	SLU-INV	Max	-0.55	-5.98	-1.93	-2.06	-2.15	5.67	20.02	16.27
122	128	SLU-INV	Max	-0.69	-6.66	-1.73	-3.64	-2.85	5.15	20.02	18.43
122	152	SLU-INV	Min	-1.02	-9.01	-2.52	-7.02	-5.91	2.45	13.15	8.69
122	151	SLU-INV	Min	-0.83	-8.09	-2.80	-4.29	-4.94	2.73	13.15	7.60
122	127	SLU-INV	Min	-0.75	-8.07	-2.61	-2.97	-2.29	3.13	11.77	7.60
122	128	SLU-INV	Min	-0.93	-9.00	-2.33	-5.66	-3.15	2.85	11.77	8.69
123	153	SLE-INV	Max	-0.54	-7.16	-1.47	-3.80	-3.47	1.93	9.41	9.19
123	152	SLE-INV	Max	-0.43	-6.61	-1.66	-2.88	-3.05	2.31	9.41	8.34
123	128	SLE-INV	Max	-0.37	-6.60	-1.55	-2.20	-1.97	2.58	8.34	8.34
123	129	SLE-INV	Max	-0.48	-7.15	-1.36	-3.13	-2.39	2.20	8.34	9.19
123	153	SLE-INV	Min	-0.54	-7.16	-1.47	-4.57	-3.99	1.53	7.71	7.06
123	152	SLE-INV	Min	-0.43	-6.61	-1.66	-3.44	-3.51	1.84	7.71	6.39
123	128	SLE-INV	Min	-0.37	-6.60	-1.55	-2.59	-2.11	2.08	6.87	6.39
123	129	SLE-INV	Min	-0.48	-7.15	-1.36	-3.71	-2.59	1.78	6.87	7.06
123	153	SLU-INV	Max	-0.54	-7.16	-1.47	-5.13	-4.68	3.97	18.11	20.06
123	152	SLU-INV	Max	-0.43	-6.61	-1.66	-3.89	-4.12	4.72	18.11	18.28
123	128	SLU-INV	Max	-0.37	-6.60	-1.55	-2.97	-2.67	5.11	15.87	18.28
123	129	SLU-INV	Max	-0.48	-7.15	-1.36	-4.22	-3.23	4.35	15.87	20.06
123	153	SLU-INV	Min	-0.72	-9.67	-1.98	-8.50	-6.68	2.07	10.41	9.53
123	152	SLU-INV	Min	-0.57	-8.92	-2.24	-6.33	-5.89	2.48	10.41	8.63
123	128	SLU-INV	Min	-0.50	-8.91	-2.09	-4.58	-2.87	2.81	9.27	8.63
123	129	SLU-INV	Min	-0.65	-9.66	-1.83	-6.72	-3.62	2.40	9.27	9.53
124	154	SLE-INV	Max	-0.36	-7.54	-1.09	-4.21	-3.76	1.49	7.11	9.80
124	153	SLE-INV	Max	-0.28	-7.11	-1.27	-3.51	-3.44	1.96	7.11	9.14
124	129	SLE-INV	Max	-0.23	-7.10	-1.19	-2.71	-2.28	2.17	6.27	9.14
124	130	SLE-INV	Max	-0.31	-7.53	-1.01	-3.41	-2.59	1.70	6.27	9.80
124	154	SLE-INV	Min	-0.36	-7.54	-1.09	-5.08	-4.33	1.19	5.81	7.54
124	153	SLE-INV	Min	-0.28	-7.11	-1.27	-4.23	-3.97	1.56	5.81	7.02
124	129	SLE-INV	Min	-0.23	-7.10	-1.19	-3.22	-2.45	1.75	5.15	7.02
124	130	SLE-INV	Min	-0.31	-7.53	-1.01	-4.07	-2.82	1.38	5.15	7.54
124	154	SLU-INV	Max	-0.36	-7.54	-1.09	-5.68	-5.08	3.07	13.72	21.32
124	153	SLU-INV	Max	-0.28	-7.11	-1.27	-4.74	-4.64	4.01	13.72	19.94
124	129	SLU-INV	Max	-0.23	-7.10	-1.19	-3.66	-3.07	4.31	11.97	19.94
124	130	SLU-INV	Max	-0.31	-7.53	-1.01	-4.60	-3.50	3.37	11.97	21.32
124	154	SLU-INV	Min	-0.49	-10.17	-1.47	-9.53	-7.26	1.60	7.85	10.19
124	153	SLU-INV	Min	-0.38	-9.60	-1.71	-7.90	-6.66	2.11	7.85	9.48
124	129	SLU-INV	Min	-0.31	-9.59	-1.60	-5.82	-3.35	2.36	6.96	9.48
124	130	SLU-INV	Min	-0.43	-10.16	-1.36	-7.44	-3.96	1.86	6.96	10.19
125	155	SLE-INV	Max	-0.24	-7.80	-0.73	-4.46	-3.96	0.99	4.91	10.23

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS 016800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 116 di 180
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125	154	SLE-INV	Max	-0.18	-7.50	-0.90	-3.98	-3.74	1.53	4.91	9.76
125	130	SLE-INV	Max	-0.14	-7.49	-0.84	-3.08	-2.51	1.67	4.32	9.76
125	131	SLE-INV	Max	-0.20	-7.79	-0.67	-3.57	-2.73	1.14	4.32	10.23
125	155	SLE-INV	Min	-0.24	-7.80	-0.73	-5.40	-4.57	0.79	4.01	7.89
125	154	SLE-INV	Min	-0.18	-7.50	-0.90	-4.81	-4.31	1.21	4.01	7.52
125	130	SLE-INV	Min	-0.14	-7.49	-0.84	-3.68	-2.71	1.35	3.55	7.52
125	131	SLE-INV	Min	-0.20	-7.79	-0.67	-4.27	-2.97	0.92	3.55	7.89
125	155	SLU-INV	Max	-0.24	-7.80	-0.73	-6.02	-5.35	2.05	9.51	22.21
125	154	SLU-INV	Max	-0.18	-7.50	-0.90	-5.38	-5.05	3.12	9.51	21.24
125	130	SLU-INV	Max	-0.14	-7.49	-0.84	-4.16	-3.39	3.33	8.28	21.24
125	131	SLU-INV	Max	-0.20	-7.79	-0.67	-4.82	-3.68	2.25	8.28	22.21
125	155	SLU-INV	Min	-0.32	-10.52	-0.98	-10.20	-7.66	1.06	5.42	10.65
125	154	SLU-INV	Min	-0.24	-10.12	-1.21	-9.07	-7.24	1.64	5.42	10.15
125	130	SLU-INV	Min	-0.18	-10.11	-1.14	-6.75	-3.76	1.82	4.79	10.15
125	131	SLU-INV	Min	-0.26	-10.51	-0.91	-7.88	-4.18	1.24	4.79	10.65
126	156	SLE-INV	Max	-0.15	-7.94	-0.38	-4.58	-4.07	0.45	2.80	10.48
126	155	SLE-INV	Max	-0.12	-7.77	-0.55	-4.31	-3.95	1.02	2.80	10.21
126	131	SLE-INV	Max	-0.08	-7.76	-0.51	-3.35	-2.67	1.11	2.46	10.21
126	132	SLE-INV	Max	-0.12	-7.93	-0.35	-3.63	-2.80	0.53	2.46	10.48
126	156	SLE-INV	Min	-0.15	-7.94	-0.38	-5.55	-4.70	0.36	2.28	8.08
126	155	SLE-INV	Min	-0.12	-7.77	-0.55	-5.22	-4.55	0.82	2.28	7.87
126	131	SLE-INV	Min	-0.08	-7.76	-0.51	-4.02	-2.90	0.89	2.02	7.87
126	132	SLE-INV	Min	-0.12	-7.93	-0.35	-4.35	-3.04	0.43	2.02	8.08
126	156	SLU-INV	Max	-0.15	-7.94	-0.38	-6.18	-5.50	0.94	5.42	22.72
126	155	SLU-INV	Max	-0.12	-7.77	-0.55	-5.81	-5.33	2.09	5.42	22.16
126	131	SLU-INV	Max	-0.08	-7.76	-0.51	-4.53	-3.61	2.21	4.71	22.16
126	132	SLU-INV	Max	-0.12	-7.93	-0.35	-4.90	-3.78	1.06	4.71	22.72
126	156	SLU-INV	Min	-0.20	-10.72	-0.51	-10.53	-7.88	0.48	3.08	10.91
126	155	SLU-INV	Min	-0.16	-10.49	-0.74	-9.88	-7.64	1.10	3.08	10.62
126	131	SLU-INV	Min	-0.11	-10.48	-0.69	-7.42	-4.05	1.20	2.72	10.62
126	132	SLU-INV	Min	-0.16	-10.71	-0.47	-8.06	-4.29	0.58	2.72	10.91
127	157	SLE-INV	Max	-0.10	-7.97	-0.03	-4.58	-4.10	-0.09	0.73	10.54
127	156	SLE-INV	Max	-0.10	-7.93	-0.20	-4.51	-4.07	0.48	0.73	10.47
127	132	SLE-INV	Max	-0.07	-7.92	-0.19	-3.53	-2.77	0.50	0.64	10.47
127	133	SLE-INV	Max	-0.07	-7.97	-0.03	-3.60	-2.80	-0.07	0.64	10.54
127	157	SLE-INV	Min	-0.10	-7.97	-0.03	-5.55	-4.73	-0.11	0.59	8.13
127	156	SLE-INV	Min	-0.10	-7.93	-0.20	-5.47	-4.69	0.39	0.59	8.07
127	132	SLE-INV	Min	-0.07	-7.92	-0.19	-4.23	-3.01	0.40	0.52	8.07
127	133	SLE-INV	Min	-0.07	-7.97	-0.03	-4.32	-3.04	-0.09	0.52	8.33
127	157	SLU-INV	Max	-0.10	-7.97	-0.03	-6.18	-5.53	-0.12	1.41	22.84
127	156	SLU-INV	Max	-0.10	-7.93	-0.20	-6.08	-5.49	0.98	1.41	22.69
127	132	SLU-INV	Max	-0.07	-7.92	-0.19	-4.76	-3.74	1.01	1.22	22.69
127	133	SLU-INV	Max	-0.07	-7.97	-0.03	-4.86	-3.78	-0.09	1.22	22.84
127	157	SLU-INV	Min	-0.14	-10.76	-0.04	-10.55	-7.93	-0.21	0.80	10.97
127	156	SLU-INV	Min	-0.13	-10.70	-0.27	-10.38	-7.87	0.52	0.80	10.90
127	132	SLU-INV	Min	-0.09	-10.70	-0.26	-7.84	-4.22	0.55	0.71	10.90
127	133	SLU-INV	Min	-0.10	-10.75	-0.03	-8.01	-4.29	-0.18	0.71	10.97
128	158	SLE-INV	Max	-0.10	-7.89	0.31	-4.46	-4.04	-0.53	-1.09	10.41
128	157	SLE-INV	Max	-0.12	-7.97	0.15	-4.59	-4.10	-0.06	-1.09	10.54
128	133	SLE-INV	Max	-0.08	-7.97	0.13	-3.61	-2.81	-0.10	-0.96	10.54
128	134	SLE-INV	Max	-0.07	-7.88	0.30	-3.48	-2.74	-0.57	-0.96	10.41
128	158	SLE-INV	Min	-0.10	-7.89	0.31	-5.41	-4.66	-0.67	-1.33	8.03
128	157	SLE-INV	Min	-0.12	-7.97	0.15	-5.57	-4.73	-0.08	-1.33	8.13
128	133	SLE-INV	Min	-0.08	-7.97	0.13	-4.34	-3.05	-0.12	-1.17	8.13
128	134	SLE-INV	Min	-0.07	-7.88	0.30	-4.18	-2.98	-0.71	-1.17	8.03
128	158	SLU-INV	Max	-0.10	-7.89	0.42	-6.02	-5.45	-0.72	-1.47	22.58
128	157	SLU-INV	Max	-0.12	-7.97	0.20	-6.19	-5.54	-0.08	-1.47	22.95
128	133	SLU-INV	Max	-0.08	-7.97	0.18	-4.88	-3.79	-0.03	-1.29	22.85
128	134	SLU-INV	Max	-0.07	-7.88	0.40	-4.70	-3.71	-0.77	-1.29	22.58
128	158	SLU-INV	Min	-0.13	-10.65	0.31	-10.26	-7.82	-1.35	-2.59	10.84
128	157	SLU-INV	Min	-0.16	-10.76	0.15	-10.57	-7.93	-0.17	-2.59	10.98
128	133	SLU-INV	Min	-0.11	-10.76	0.13	-8.04	-4.30	-0.23	-2.25	10.98
128	134	SLU-INV	Min	-0.09	-10.64	0.30	-7.74	-4.18	-1.41	-2.25	10.84
129	159	SLE-INV	Max	-0.13	-7.69	0.66	-4.22	-3.89	-0.95	-2.79	10.10
129	158	SLE-INV	Max	-0.17	-7.90	0.49	-4.55	-4.05	-0.50	-2.79	10.42
129	134	SLE-INV	Max	-0.14	-7.90	0.45	-3.62	-2.78	-0.60	-2.46	10.42
129	135	SLE-INV	Max	-0.10	-7.69	0.63	-3.28	-2.62	-1.05	-2.46	10.10
129	159	SLE-INV	Min	-0.13	-7.69	0.66	-5.11	-4.49	-1.20	-3.41	7.78
129	158	SLE-INV	Min	-0.17	-7.90	0.49	-5.52	-4.67	-0.63	-3.41	8.04
129	134	SLE-INV	Min	-0.14	-7.90	0.45	-4.34	-3.02	-0.74	-3.00	8.04
129	135	SLE-INV	Min	-0.10	-7.69	0.63	-3.93	-2.84	-1.30	-3.00	7.78
129	159	SLU-INV	Max	-0.13	-7.69	0.90	-5.70	-5.25	-1.29	-3.76	21.93
129	158	SLU-INV	Max	-0.17	-7.90	0.66	-6.14	-5.46	-0.68	-3.76	22.62
129	134	SLU-INV	Max	-0.14	-7.90	0.61	-4.88	-3.75	-0.81	-3.32	22.62
129	135	SLU-INV	Max	-0.10	-7.69	0.84	-4.43	-3.54	-1.41	-3.32	21.93
129	159	SLU-INV	Min	-0.18	-10.39	0.66	-9.67	-7.53	-2.44	-6.62	10.51
129	158	SLU-INV	Min	-0.23	-10.67	0.49	-10.46	-7.83	-1.31	-6.62	10.86
129	134	SLU-INV	Min	-0.19	-10.66	0.45	-8.02	-4.26	-1.46	-5.76	10.86
129	135	SLU-INV	Min	-0.13	-10.38	0.63	-7.24	-3.96	-2.59	-5.76	10.51
130	136	SLE-INV	Max	-0.16	-7.35	0.97	-2.94	-2.42	-1.52	-4.07	9.55
130	160	SLE-INV	Max	-0.21	-7.36	1.04	-3.81	-3.63	-1.36	-4.60	9.55
130	159	SLE-INV	Max	-0.28	-7.72	0.86	-4.40	-3.91	-0.92	-4.60	10.13
130	135	SLE-INV	Max	-0.24	-7.72	0.79	-3.54	-2.69	-1.08	-4.07	10.13
130	136	SLE-INV	Min	-0.16	-7.35	0.97	-3.51	-2.61	-1.88	-4.96	7.35
130	160	SLE-INV	Min	-0.21	-7.36	1.04	-4.60	-4.19	-1.71	-5.63	7.35
130	159	SLE-INV	Min	-0.28	-7.72	0.86	-5.32	-4.50	-1.16	-5.63	7.80
130	135	SLE-INV	Min	-0.24	-7.72	0.79	-4.23	-2.93	-1.33	-4.96	7.80
130	136	SLU-INV	Max	-0.16	-7.35	1.31	-3.97	-3.27	-2.05	-5.49	20.80
130	160	SLU-INV	Max	-0.21	-7.36	1.40	-5.14	-4.90	-1.84	-6.21	20.80
130	159	SLU-INV	Max	-0.28	-7.72	1.16	-5.94	-5.28	-1.25	-6.21	22.00
130	135	SLU-INV	Max	-0.24	-7.72	1.07	-4.78	-3.64	-1.45	-5.49	22.00
130	136	SLU-INV	Min	-0.22	-9.92	0.97	-6.41	-3.60	-3.74	-9.49	9.93
130	160	SLU-INV	Min	-0.28	-9.93	1.04	-8.64	-7.03	-3.50	-10.90	9.93
130	159	SLU-INV	Min	-0.38	-10.43	0.86	-10.04	-7.55	-2.40	-10.90	10.54
130	135	SLU-INV	Min	-0.32	-10.42	0.79	-7.79	-4.13	-2.64	-9.49	10.54
131	137	SLE-INV	Max	-0.28	-6.87	1.35	-2.48	-2.14	-1.92	-5.83	8.80
131	161	SLE-INV	Max	-0.34	-6.88	1.44	-3.23	-3.27	-1.71	-6.57	8.80
131	160	SLE-INV	Max	-0.44	-7.40	1.25	-4.07	-3.66	-1.33	-6.57	9.60
131	136	SLE-INV	Max	-0.39	-7.39	1.15	-3.32	-2.52	-1.55	-5.83	9.60
131	137	SLE-INV	Min	-0.28	-6.87	1.35	-2.93	-2.29	-2.38	-7.09	6.76
131	161	SLE-INV	Min	-0.34	-6.88	1.44	-3.88	-3.77	-2.14	-8.03	6.76
131	160	SLE-INV	Min	-0.44	-7.40	1.25	-4.91	-4.21	-1.68	-8.03	7.39
131	136	SLE-INV	Min	-0.39	-7.39	1.15	-3.96	-2.74	-1.91	-7.09	7.39
131	137	SLU-INV	Max	-0.28	-6.87	1.82	-3.34	-2.88	-2.59	-7.87	19.24
131	161	SLU-INV	Max	-0.34	-6.88	1.95	-4.36	-4.41	-2.30	-8.87	19.24
131	160	SLU-INV	Max	-0.44	-7.40	1.88	-5.50	-4.94	-1.80	-8.87	20.91
131	136	SLU-INV	Max	-0.39	-7.39	1.55	-4.49	-3.41	-2.09	-7.87	20.91
131	137	SLU-INV	Min	-0.38	-9.28	1.35	-5.26	-3.12	-4.72	-13.53	9.12
131	161	SLU-INV	Min	-0.45	-9.29	1.44	-7.20	-6.32	-4.38	-15.49	9.12
131	160	SLU-INV	Min	-0.51	-9.99	1.25	-9.19	-7.05</			



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 117 di 180			
132	138	SLE-INV	Max	-0.45	-6.27	1.75	-1.84	-1.77	-2.23	-7.73	7.85
132	162	SLE-INV	Max	-0.51	-6.28	1.88	-2.44	-2.79	-1.95	-8.67	7.85
132	161	SLE-INV	Max	-0.65	-6.95	1.66	-3.56	-3.30	-1.68	-8.67	8.86
132	137	SLE-INV	Max	-0.59	-6.93	1.54	-2.96	-2.27	-1.95	-7.73	8.86
132	138	SLE-INV	Min	-0.45	-6.27	1.75	-2.15	-1.88	-2.76	-9.39	6.01
132	162	SLE-INV	Min	-0.51	-6.28	1.88	-2.90	-3.22	-2.46	-10.58	6.01
132	161	SLE-INV	Min	-0.65	-6.95	1.66	-4.26	-3.79	-2.11	-10.58	6.80
132	137	SLE-INV	Min	-0.59	-6.93	1.54	-3.51	-2.46	-2.41	-9.39	6.80
132	138	SLU-INV	Max	-0.45	-6.27	2.36	-2.48	-2.39	-3.01	-10.44	17.26
132	162	SLU-INV	Max	-0.51	-6.28	2.53	-3.29	-3.77	-2.64	-11.71	17.26
132	161	SLU-INV	Max	-0.65	-6.95	2.24	-4.80	-4.45	-2.26	-11.71	19.38
132	137	SLU-INV	Max	-0.59	-6.93	2.07	-3.99	-3.06	-2.63	-10.44	19.38
132	138	SLU-INV	Min	-0.61	-8.46	1.75	-3.72	-2.56	-5.45	-17.83	8.11
132	162	SLU-INV	Min	-0.69	-8.48	1.88	-5.26	-5.40	-5.02	-20.33	8.11
132	161	SLU-INV	Min	-0.87	-9.38	1.66	-7.88	-6.34	-4.34	-20.33	9.18
132	137	SLU-INV	Min	-0.79	-9.36	1.54	-6.30	-3.42	-4.77	-17.83	9.18
133	139	SLE-INV	Max	-0.69	-5.53	2.19	-0.99	-1.31	-2.41	-9.83	6.71
133	163	SLE-INV	Max	-0.75	-5.54	2.35	-1.38	-2.21	-2.08	-10.94	6.71
133	162	SLE-INV	Max	-0.91	-6.36	2.11	-2.80	-2.82	-1.93	-10.94	7.92
133	138	SLE-INV	Max	-0.85	-6.35	1.95	-2.40	-1.93	-2.25	-9.83	7.92
133	139	SLE-INV	Min	-0.69	-5.53	2.19	-1.11	-1.37	-2.98	-11.90	5.11
133	163	SLE-INV	Min	-0.75	-5.54	2.35	-1.60	-2.54	-2.62	-13.32	5.11
133	162	SLE-INV	Min	-0.91	-6.36	2.11	-3.33	-3.24	-2.43	-13.32	6.06
133	138	SLE-INV	Min	-0.85	-6.35	1.95	-2.82	-2.08	-2.78	-11.90	6.06
133	139	SLU-INV	Max	-0.69	-5.53	2.96	-1.33	-1.64	-3.25	-13.27	14.88
133	163	SLU-INV	Max	-0.75	-5.54	3.17	-1.87	-2.98	-2.81	-14.78	14.88
133	162	SLU-INV	Max	-0.91	-6.36	2.86	-3.78	-3.81	-2.60	-14.78	17.44
133	138	SLU-INV	Max	-0.85	-6.35	2.64	-3.24	-2.60	-3.04	-13.27	17.44
133	139	SLU-INV	Min	-0.93	-7.47	2.19	-1.71	-1.85	-5.88	-22.48	6.90
133	163	SLU-INV	Min	-1.01	-7.48	2.35	-2.73	-4.25	-5.36	-25.48	6.90
133	162	SLU-INV	Min	-1.23	-8.58	2.11	-6.03	-5.41	-4.98	-25.48	8.18
133	138	SLU-INV	Min	-1.15	-8.57	1.95	-4.94	-2.84	-5.50	-22.48	8.18
134	140	SLE-INV	Max	-0.99	-4.68	2.69	0.27	-0.75	-2.43	-12.17	5.41
134	164	SLE-INV	Max	-1.03	-4.69	2.88	0.08	-1.51	-2.07	-13.44	5.41
134	163	SLE-INV	Max	-1.22	-5.64	2.62	-1.75	-2.23	-2.07	-13.44	6.80
134	139	SLE-INV	Max	-1.18	-5.63	2.42	-1.59	-1.49	-2.43	-12.17	6.80
134	140	SLE-INV	Min	-0.99	-4.68	2.69	0.14	-0.77	-3.00	-14.69	4.10
134	164	SLE-INV	Min	-1.03	-4.69	2.88	0.00	-1.74	-2.60	-16.32	4.10
134	163	SLE-INV	Min	-1.22	-5.64	2.62	-2.04	-2.56	-2.60	-16.32	5.18
134	139	SLE-INV	Min	-1.18	-5.63	2.42	-1.83	-1.59	-3.03	-14.69	5.18
134	140	SLU-INV	Max	-0.99	-4.68	3.63	0.90	-0.66	-3.28	-16.42	12.15
134	164	SLU-INV	Max	-1.03	-4.69	3.89	0.52	-2.04	-2.79	-18.14	12.15
134	163	SLU-INV	Max	-1.22	-5.64	3.53	-2.36	-3.01	-2.79	-18.14	15.10
134	139	SLU-INV	Max	-1.18	-5.63	3.27	-2.15	-2.01	-3.28	-16.42	15.10
134	140	SLU-INV	Min	-1.33	-6.31	2.69	0.19	-1.04	-5.91	-27.57	5.53
134	164	SLU-INV	Min	-1.39	-6.33	2.88	0.00	-2.87	-5.33	-31.04	5.53
134	163	SLU-INV	Min	-1.65	-7.61	2.62	-3.52	-4.23	-5.33	-31.04	6.99
134	139	SLU-INV	Min	-1.59	-7.60	2.42	-3.05	-2.16	-5.91	-27.57	6.99
135	141	SLE-INV	Max	-1.36	-3.72	3.27	2.06	-0.03	-2.25	-14.81	4.00
135	165	SLE-INV	Max	-1.37	-3.72	3.50	2.26	-0.72	-1.87	-16.20	4.00
135	164	SLE-INV	Max	-1.59	-4.80	3.18	-0.31	-1.52	-2.06	-16.20	5.52
135	140	SLE-INV	Max	-1.57	-4.79	2.95	-0.46	-0.95	-2.44	-14.81	5.52
135	141	SLE-INV	Min	-1.36	-3.72	3.27	1.64	-0.14	-2.78	-17.82	2.99
135	165	SLE-INV	Min	-1.37	-3.72	3.50	1.80	-0.81	-2.36	-19.61	2.99
135	164	SLE-INV	Min	-1.59	-4.80	3.18	-0.32	-1.73	-2.59	-19.61	4.17
135	140	SLE-INV	Min	-1.57	-4.79	2.95	-0.47	-0.98	-3.01	-17.82	4.17
135	141	SLU-INV	Max	-1.36	-3.72	4.41	4.23	0.49	-3.04	-20.00	9.13
135	165	SLU-INV	Max	-1.37	-3.72	4.72	4.67	0.52	-2.97	-21.87	9.13
135	164	SLU-INV	Max	-1.59	-4.80	4.30	-0.24	-2.05	-2.78	-21.87	12.40
135	140	SLU-INV	Max	-1.57	-4.79	3.98	-0.49	-1.14	-3.29	-20.00	12.40
135	141	SLU-INV	Min	-1.83	-5.02	3.27	2.21	-0.18	-5.46	-33.23	4.04
135	165	SLU-INV	Min	-1.85	-5.02	3.50	2.43	-1.28	-4.84	-37.08	4.04
135	164	SLU-INV	Min	-2.14	-6.48	3.18	-0.44	-2.82	-5.31	-37.08	5.63
135	140	SLU-INV	Min	-2.12	-6.47	2.95	-0.63	-1.33	-5.93	-33.23	5.63
136	142	SLE-INV	Max	-1.80	-2.68	3.90	4.40	0.77	-1.83	-17.83	2.52
136	166	SLE-INV	Max	-1.76	-2.68	4.17	5.05	0.22	-1.47	-19.27	2.52
136	165	SLE-INV	Max	-1.99	-3.84	3.87	1.98	-0.69	-1.88	-19.27	4.11
136	141	SLE-INV	Max	-2.03	-3.85	3.60	1.39	-0.26	-2.24	-17.83	4.11
136	142	SLE-INV	Min	-1.80	-2.68	3.90	3.60	0.57	-2.25	-21.39	1.86
136	166	SLE-INV	Min	-1.76	-2.68	4.17	4.12	0.16	-1.85	-23.26	1.86
136	165	SLE-INV	Min	-1.99	-3.84	3.87	1.58	-0.77	-2.37	-23.26	3.08
136	141	SLE-INV	Min	-2.03	-3.85	3.60	1.09	-0.31	-2.77	-21.39	3.08
136	142	SLU-INV	Max	-1.80	-2.68	5.27	8.49	1.79	-2.47	-24.07	5.90
136	166	SLU-INV	Max	-1.76	-2.68	5.63	9.79	0.51	-1.98	-26.01	5.90
136	165	SLU-INV	Max	-1.99	-3.84	5.22	4.03	-0.94	-2.54	-26.01	9.41
136	141	SLU-INV	Max	-2.03	-3.85	4.86	2.91	0.00	-3.03	-24.07	9.41
136	142	SLU-INV	Min	-2.43	-3.62	3.90	4.86	0.77	-4.42	-39.57	2.51
136	166	SLU-INV	Min	-2.37	-3.61	4.17	5.57	0.22	-3.83	-43.69	2.51
136	165	SLU-INV	Min	-2.69	-5.19	3.87	2.13	-1.17	-4.86	-43.69	4.16
136	141	SLU-INV	Min	-2.74	-5.20	3.60	1.47	-0.42	-5.45	-39.57	4.16
137	143	SLE-INV	Max	-2.29	-1.60	4.98	7.43	1.64	-1.11	-21.29	1.06
137	167	SLE-INV	Max	-2.18	-1.58	5.25	8.61	1.31	-0.83	-22.69	1.06
137	166	SLE-INV	Max	-2.43	-2.81	4.39	4.97	0.30	-1.51	-22.69	2.65
137	142	SLE-INV	Max	-2.54	-2.83	4.12	3.89	0.57	-1.79	-21.29	2.65
137	143	SLE-INV	Min	-2.29	-1.60	4.98	6.17	1.33	-1.37	-25.45	0.76
137	167	SLE-INV	Min	-2.18	-1.58	5.25	7.11	1.09	-1.06	-27.32	0.76
137	166	SLE-INV	Min	-2.43	-2.81	4.39	4.08	0.23	-1.90	-27.32	1.95
137	142	SLE-INV	Min	-2.54	-2.83	4.12	3.20	0.42	-2.21	-25.45	1.95
137	143	SLU-INV	Max	-2.29	-1.60	6.73	13.91	3.21	-1.50	-28.75	2.60
137	167	SLU-INV	Max	-2.18	-1.58	7.09	16.27	2.43	-1.12	-30.64	2.60
137	166	SLU-INV	Max	-2.43	-2.81	5.93	9.49	0.69	-2.04	-30.64	6.21
137	142	SLU-INV	Max	-2.54	-2.83	5.57	7.38	1.33	-2.42	-28.75	6.21
137	143	SLU-INV	Min	-3.09	-2.16	4.98	8.32	1.80	-2.68	-46.70	1.02
137	167	SLU-INV	Min	-2.94	-2.13	5.25	9.60	1.48	-2.21	-50.95	1.02
137	166	SLU-INV	Min	-3.27	-3.79	4.39	5.51	0.31	-3.89	-50.95	2.63
137	142	SLU-INV	Min	-3.43	-3.82	4.12	4.32	0.57	-4.37	-46.70	2.63
138	144	SLE-INV	Max	-2.82	-0.56	3.63	11.38	2.51	-0.06	-25.25	-0.22
138	168	SLE-INV	Max	-2.63	-0.53	4.03	13.13	2.40	0.05	-26.51	-0.22
138	167	SLE-INV	Max	-2.86	-1.72	6.97	8.85	1.46	-0.92	-26.51	1.19
138	143	SLE-INV	Max	-3.06	-1.75	6.57	7.23	1.50	-1.03	-25.25	1.19
138	144	SLE-INV	Min	-2.82	-0.56	3.63	9.53	2.09	-0.07	-30.07	-0.29
138	168	SLE-INV	Min	-2.63	-0.53	4.03	10.93	2.01	0.05	-31.81	-0.29
138	167	SLE-INV	Min	-2.86	-1.72	6.97	7.36	1.22	-1.15	-31.81	0.85
138	143	SLE-INV	Min	-3.06	-1.75	6.57	6.05	1.24	-1.28	-30.07	0.85
138	144	SLU-INV	Max	-2.82	-0.56	4.90	20.82	4.66	-0.09	-34.08	-0.30
138	168	SLU-INV	Max	-2.63	-0.53	5.43	24.37	4.38	0.07	-35.78	-0.30
138	167	SLU-INV	Max	-2.86	-1.72	9.40	16.47	2.73	-1.24	-35.78	2.93
138	143	SLU-INV	Max	-3.06	-1.75	8.87	13.24	2.82	-1.39	-34.08	2.93
138	144	SLU-INV	Min	-3.80	-0.76	3.63	12.87	2.82	-0.12	-54.74	-0.62
138	168	SLU-INV	Min	-3.55	-0.71	4.03	14.76	2.71	0.47	-58.92	-0.62
138	167	SLU-INV	Min	-3.87	-2.32	6					



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.progr. 01	REV. A	Pag.di Pag. 118 di 180
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138	143	SLU-INV	Min	-4.13	-2.37	6.57	8.17	1.67	-2.55	-54.74	1.14
139	169	SLE-INV	Max	-2.44	-0.49	-4.38	14.66	2.76	-0.05	33.08	-0.16
139	145	SLE-INV	Max	-2.65	-0.53	-4.02	13.25	2.82	0.07	32.06	-0.16
139	146	SLE-INV	Max	-2.85	-1.53	-7.34	9.18	1.85	0.97	32.06	0.59
139	170	SLE-INV	Max	-2.64	-1.48	-7.70	10.47	1.85	0.84	33.08	0.59
139	169	SLE-INV	Min	-2.44	-0.49	-4.38	12.12	2.30	-0.06	27.35	-0.21
139	145	SLE-INV	Min	-2.65	-0.53	-4.02	11.03	2.33	0.06	26.72	-0.21
139	146	SLE-INV	Min	-2.85	-1.53	-7.34	7.64	1.52	0.76	26.72	0.34
139	170	SLE-INV	Min	-2.64	-1.48	-7.70	8.65	1.53	0.64	27.35	0.34
139	169	SLE-INV	Max	-2.44	-0.49	-4.38	27.67	5.13	-0.07	62.37	-0.21
139	145	SLU-INV	Max	-2.65	-0.53	-4.02	24.63	5.32	0.12	59.35	-0.21
139	146	SLU-INV	Max	-2.85	-1.53	-7.34	17.08	3.52	2.03	59.35	1.89
139	170	SLU-INV	Max	-2.64	-1.48	-7.70	19.79	3.48	1.83	62.37	1.89
139	169	SLU-INV	Min	-3.30	-0.66	-5.91	16.36	3.10	-0.08	36.92	-0.50
139	145	SLU-INV	Min	-3.58	-0.72	-5.43	14.88	3.15	0.08	36.08	-0.50
139	146	SLU-INV	Min	-3.84	-2.06	-9.92	10.31	2.05	1.02	36.08	0.46
139	170	SLU-INV	Min	-3.57	-2.00	-10.39	11.68	2.06	0.87	36.92	0.46
140	171	SLE-INV	Max	-2.27	-2.39	-4.97	6.43	0.70	1.42	29.00	1.44
140	170	SLE-INV	Max	-2.07	-1.37	-5.91	10.08	1.70	0.74	29.00	0.51
140	146	SLE-INV	Max	-2.21	-1.40	-5.67	9.03	1.88	1.06	27.82	0.51
140	147	SLE-INV	Max	-2.41	-2.42	-4.72	5.48	0.84	1.74	27.82	1.44
140	171	SLE-INV	Min	-2.27	-2.39	-4.97	5.27	0.56	1.09	23.92	0.91
140	170	SLE-INV	Min	-2.07	-1.37	-5.91	8.28	1.41	0.56	23.92	0.29
140	146	SLE-INV	Min	-2.21	-1.40	-5.67	7.46	1.52	0.84	23.92	0.29
140	147	SLE-INV	Min	-2.41	-2.42	-4.72	4.51	0.64	1.38	23.13	0.91
140	171	SLU-INV	Max	-2.27	-2.39	-4.97	12.39	1.42	3.10	54.99	4.13
140	170	SLU-INV	Max	-2.07	-1.37	-5.91	19.29	3.19	1.68	54.99	1.64
140	146	SLU-INV	Max	-2.21	-1.40	-5.67	17.09	3.71	2.18	51.84	1.64
140	147	SLU-INV	Max	-2.41	-2.42	-4.72	10.45	1.82	3.61	51.84	4.13
140	171	SLU-INV	Min	-3.07	-3.23	-6.70	7.11	0.76	1.47	32.29	1.23
140	170	SLU-INV	Min	-2.79	-1.85	-7.98	11.17	1.91	0.75	32.29	0.39
140	146	SLU-INV	Min	-2.98	-1.89	-7.65	10.07	2.06	1.14	31.22	0.39
140	147	SLU-INV	Min	-3.26	-3.27	-6.37	6.08	0.87	1.86	31.22	1.23
141	172	SLE-INV	Max	-1.90	-3.27	-4.49	3.13	-0.39	1.83	25.19	2.37
141	171	SLE-INV	Max	-1.70	-2.28	-4.77	6.34	0.62	1.36	25.19	1.36
141	147	SLE-INV	Max	-1.78	-2.29	-4.53	5.67	0.94	1.80	23.94	1.36
141	148	SLE-INV	Max	-1.98	-3.29	-4.24	2.52	-0.14	2.27	23.94	2.37
141	171	SLE-INV	Min	-1.90	-3.27	-4.49	2.51	-0.42	1.41	20.72	1.58
141	172	SLE-INV	Min	-1.70	-2.28	-4.77	5.16	0.50	1.04	20.72	0.86
141	147	SLE-INV	Min	-1.78	-2.29	-4.53	4.63	0.71	1.43	19.84	0.86
141	148	SLE-INV	Min	-1.98	-3.29	-4.24	2.02	-0.20	1.80	19.84	1.58
141	172	SLU-INV	Max	-1.90	-3.27	-4.49	6.25	-0.52	3.99	48.05	6.44
141	171	SLU-INV	Max	-1.70	-2.28	-4.77	12.37	1.23	3.01	48.05	3.90
141	147	SLU-INV	Max	-1.78	-2.29	-4.53	10.98	2.11	3.69	44.90	3.90
141	148	SLU-INV	Max	-1.98	-3.29	-4.24	5.07	0.20	4.67	44.90	6.44
141	172	SLU-INV	Min	-2.56	-4.42	-6.06	3.39	-0.58	1.90	27.98	2.13
141	171	SLU-INV	Min	-2.30	-3.07	-6.44	6.97	0.68	1.40	27.98	1.16
141	147	SLU-INV	Min	-2.40	-3.09	-6.11	6.24	0.95	1.92	26.78	1.16
141	148	SLU-INV	Min	-2.67	-4.44	-5.73	2.73	-0.28	2.43	26.78	2.13
142	173	SLE-INV	Max	-1.54	-4.10	-3.77	0.50	-1.27	2.07	21.65	3.31
142	172	SLE-INV	Max	-1.35	-3.17	-4.10	3.25	-0.41	1.81	21.65	2.29
142	148	SLE-INV	Max	-1.38	-3.17	-3.87	2.92	0.00	2.29	20.39	2.29
142	149	SLE-INV	Max	-1.57	-4.10	-3.54	0.22	-0.97	2.55	20.39	3.31
142	173	SLE-INV	Min	-1.54	-4.10	-3.77	0.34	-1.46	1.60	17.76	2.26
142	148	SLE-INV	Min	-1.35	-3.17	-4.10	2.60	-0.46	1.39	17.76	1.53
142	149	SLE-INV	Min	-1.38	-3.17	-3.87	2.34	-0.10	1.82	16.85	1.53
142	147	SLE-INV	Min	-1.57	-4.10	-3.54	0.11	-1.02	2.03	16.85	2.26
142	173	SLU-INV	Max	-1.54	-4.10	-3.77	1.30	-1.71	4.49	41.53	8.67
142	172	SLU-INV	Max	-1.35	-3.17	-4.10	6.56	-0.56	3.95	41.53	6.22
142	148	SLU-INV	Max	-1.38	-3.17	-3.87	5.92	0.55	4.70	38.48	6.22
142	149	SLU-INV	Max	-1.57	-4.10	-3.54	0.82	-1.25	5.24	38.48	8.67
142	173	SLU-INV	Min	-2.08	-5.53	-5.09	0.46	-2.40	2.16	23.98	3.06
142	172	SLU-INV	Min	-1.83	-4.27	-5.54	3.51	-0.69	1.87	23.98	2.06
142	148	SLU-INV	Min	-1.87	-4.28	-5.23	3.15	-0.14	2.46	22.75	2.06
142	149	SLU-INV	Min	-2.12	-5.54	-4.78	0.15	-1.38	2.74	22.75	3.06
143	174	SLE-INV	Max	-1.21	-4.82	-3.17	-1.28	-2.03	2.14	18.44	4.17
143	173	SLE-INV	Max	-1.05	-4.00	-3.46	0.75	-1.27	2.07	18.44	3.24
143	149	SLE-INV	Max	-1.04	-4.00	-3.26	0.74	-0.85	2.55	17.24	3.24
143	150	SLE-INV	Max	-1.20	-4.81	-2.97	-1.29	-1.62	2.63	17.24	4.17
143	174	SLE-INV	Min	-1.21	-4.82	-3.17	-1.48	-2.35	1.66	15.10	2.90
143	173	SLE-INV	Min	-1.05	-4.00	-3.46	0.55	-1.46	1.59	15.10	2.22
143	149	SLE-INV	Min	-1.04	-4.00	-3.26	0.52	-0.86	2.03	14.21	2.22
143	150	SLE-INV	Min	-1.20	-4.81	-2.97	-1.46	-1.76	2.09	14.21	2.90
143	174	SLU-INV	Max	-1.21	-4.82	-3.17	-1.73	-2.74	4.63	35.54	10.64
143	173	SLU-INV	Max	-1.05	-4.00	-3.46	1.80	-1.71	4.48	35.54	8.47
143	149	SLU-INV	Max	-1.04	-4.00	-3.26	1.82	-0.90	5.24	32.74	8.47
143	150	SLU-INV	Max	-1.20	-4.81	-2.97	-1.74	-2.19	5.38	32.74	10.64
143	174	SLU-INV	Min	-1.64	-6.50	-4.28	-2.49	-3.97	2.23	20.38	3.92
143	173	SLU-INV	Min	-1.42	-5.40	-4.67	0.74	-2.46	2.15	20.38	2.99
143	149	SLU-INV	Min	-1.40	-5.40	-4.40	0.71	-1.16	2.74	19.19	2.99
143	150	SLU-INV	Min	-1.62	-6.50	-4.01	-2.35	-2.47	2.82	19.19	3.92
144	175	SLE-INV	Max	-0.93	-5.45	-2.64	-2.55	-2.69	2.08	15.53	4.96
144	174	SLE-INV	Max	-0.78	-4.73	-2.90	-1.02	-2.01	2.16	15.53	4.11
144	150	SLE-INV	Max	-0.74	-4.72	-2.72	-0.83	-1.50	2.61	14.43	4.11
144	151	SLE-INV	Max	-0.89	-5.44	-2.46	-2.35	-2.18	2.54	14.43	4.96
144	175	SLE-INV	Min	-0.93	-5.45	-2.64	-3.03	-3.12	1.61	12.69	3.50
144	174	SLE-INV	Min	-0.78	-4.73	-2.90	-1.16	-2.33	1.67	12.69	2.86
144	150	SLE-INV	Min	-0.74	-4.72	-2.72	-0.91	-1.60	2.08	11.87	2.86
144	151	SLE-INV	Min	-0.89	-5.44	-2.46	-2.76	-2.40	2.02	11.87	3.50
144	175	SLU-INV	Max	-0.93	-5.45	-2.64	-3.44	-3.63	4.49	30.07	12.43
144	174	SLU-INV	Max	-0.78	-4.73	-2.90	-1.38	-2.71	4.65	30.07	10.48
144	150	SLU-INV	Max	-0.74	-4.72	-2.72	-1.12	-2.02	5.36	27.54	10.48
144	151	SLU-INV	Max	-0.89	-5.44	-2.46	-3.18	-2.95	5.20	27.54	12.43
144	175	SLU-INV	Min	-1.25	-7.36	-3.56	-5.51	-5.33	2.17	17.13	4.72
144	174	SLU-INV	Min	-1.06	-6.39	-3.91	-1.89	-3.99	2.25	17.13	3.86
144	150	SLU-INV	Min	-1.00	-6.38	-3.67	-1.33	-2.18	2.80	16.02	3.86
144	151	SLU-INV	Min	-1.20	-7.35	-3.33	-4.85	-3.52	2.73	16.02	4.72
145	176	SLE-INV	Max	-0.68	-6.01	-2.15	-3.53	-3.27	1.90	12.79	5.67
145	175	SLE-INV	Max	-0.55	-5.38	-2.38	-2.26	-2.66	2.11	12.79	4.90
145	151	SLE-INV	Max	-0.49	-5.37	-2.24	-1.89	-2.06	2.52	11.82	4.90
145	152	SLE-INV	Max	-0.62	-6.00	-2.00	-3.17	-2.67	2.31	11.82	5.67
145	176	SLE-INV	Min	-0.68	-6.01	-2.15	-4.25	-3.80	1.47	10.43	4.04
145	175	SLE-INV	Min	-0.55	-5.38	-2.38	-2.69	-3.10	1.63	10.43	3.46
145	151	SLE-INV	Min	-0.49	-5.37	-2.24	-2.21	-2.25	2.00	9.70	3.46
145	152	SLE-INV	Min	-0.62	-6.00	-2.00	-3.77	-2.95	1.84	9.70	4.04
145	176	SLU-INV	Max	-0.68	-6.01	-2.15	-4.77	-4.41	4.09	24.86	14.03
145	175	SLU-INV	Max	-0.55	-5.38	-2.38	-3.05	-3.60	4.53	24.86	12.29
145	151	SLU-INV	Max	-0.49	-5.37	-2.24	-2.56	-2.79	5.16	22.66	12.29
145	152	SLU-INV	Max	-0.62	-6.00	-2.00	-4.28	-3.60	4.72	22.66	14.03
145	176	SLU-INV	Min	-0.91	-8.11	-2.90	-7.93	-6.11	1.99	14.08	5.45
145	175	SLU-INV	Min	-0.74	-7.26	-3.21	-4.89	-5.33	2.20	14.08	

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	119 di 180			
145	151	SLU-INV	Min	-0.66	-7.24	-3.02	-3.84	-3.20	2.70	13.09	4.67
145	152	SLU-INV	Min	-0.83	-8.10	-2.70	-6.82	-4.42	2.48	13.09	5.45
146	177	SLE-INV	Max	-0.46	-6.47	-1.68	-4.26	-3.73	1.62	10.18	6.27
146	176	SLE-INV	Max	-0.36	-5.95	-1.90	-3.25	-3.24	1.93	10.18	5.63
146	152	SLU-INV	Max	-0.29	-5.93	-1.79	-2.74	-2.56	2.28	9.37	5.63
146	153	SLU-INV	Max	-0.39	-6.45	-1.57	-3.75	-3.05	1.96	9.37	6.27
146	177	SLE-INV	Min	-0.46	-6.47	-1.68	-5.16	-4.34	1.25	8.29	4.49
146	176	SLE-INV	Min	-0.36	-5.95	-1.90	-3.92	-3.77	1.50	8.29	4.01
146	152	SLE-INV	Min	-0.29	-5.93	-1.79	-3.26	-2.81	1.81	7.67	4.01
146	153	SLE-INV	Min	-0.39	-6.45	-1.57	-4.49	-3.39	1.56	7.67	4.49
146	177	SLU-INV	Max	-0.46	-6.47	-1.68	-5.75	-5.04	3.49	19.86	15.36
146	176	SLU-INV	Max	-0.36	-5.95	-1.90	-4.39	-4.37	4.14	19.86	13.91
146	152	SLU-INV	Max	-0.29	-5.93	-1.79	-3.70	-3.45	4.67	18.03	13.91
146	153	SLU-INV	Max	-0.39	-6.45	-1.57	-5.07	-4.12	4.02	18.03	15.36
146	177	SLU-INV	Min	-0.62	-8.73	-2.27	-9.76	-7.46	1.69	11.19	6.07
146	176	SLU-INV	Min	-0.48	-8.03	-2.57	-7.33	-6.49	2.02	11.19	5.41
146	152	SLU-INV	Min	-0.39	-8.01	-2.41	-5.89	-4.13	2.44	10.36	5.41
146	153	SLU-INV	Min	-0.53	-8.71	-2.12	-8.27	-5.13	2.11	10.36	6.07
147	178	SLE-INV	Max	-0.29	-6.82	-1.25	-4.77	-4.09	1.26	7.71	6.74
147	177	SLE-INV	Max	-0.21	-6.41	-1.46	-4.01	-3.70	1.65	7.71	6.24
147	153	SLE-INV	Max	-0.14	-6.40	-1.37	-3.39	-2.96	1.93	7.07	6.24
147	154	SLE-INV	Max	-0.22	-6.80	-1.16	-4.15	-3.34	1.53	7.07	6.74
147	178	SLE-INV	Min	-0.29	-6.82	-1.25	-5.80	-4.76	0.97	6.27	4.86
147	177	SLE-INV	Min	-0.21	-6.41	-1.46	-4.87	-4.31	1.29	6.27	4.47
147	153	SLE-INV	Min	-0.14	-6.40	-1.37	-4.06	-3.27	1.53	5.78	4.47
147	154	SLE-INV	Min	-0.22	-6.80	-1.16	-4.99	-3.72	1.22	5.78	4.86
147	178	SLE-INV	Max	-0.29	-6.82	-1.25	-6.45	-5.52	2.70	15.08	16.40
147	177	SLU-INV	Max	-0.21	-6.41	-1.46	-5.42	-5.00	3.54	15.08	15.26
147	153	SLU-INV	Max	-0.14	-6.40	-1.37	-4.57	-3.99	3.96	13.65	15.26
147	154	SLU-INV	Max	-0.22	-6.80	-1.16	-5.61	-4.51	3.12	13.65	16.40
147	178	SLU-INV	Min	-0.39	-9.20	-1.69	-11.07	-8.19	1.31	8.46	6.55
147	177	SLU-INV	Min	-0.28	-8.66	-1.97	-9.24	-7.43	1.74	8.46	6.03
147	153	SLU-INV	Min	-0.19	-8.64	-1.85	-7.48	-4.89	2.07	7.80	6.03
147	154	SLU-INV	Min	-0.29	-9.18	-1.57	-9.28	-5.66	1.64	7.80	6.55
148	179	SLE-INV	Max	-0.16	-7.06	-0.84	-5.10	-4.33	0.83	5.34	7.08
148	178	SLE-INV	Max	-0.10	-6.78	-1.03	-4.58	-4.06	1.29	5.34	6.72
148	154	SLE-INV	Max	-0.03	-6.76	-0.97	-3.87	-3.27	1.49	4.89	6.72
148	155	SLE-INV	Max	-0.09	-7.05	-0.77	-4.40	-3.54	1.03	4.89	7.08
148	179	SLE-INV	Min	-0.16	-7.06	-0.84	-6.22	-5.05	0.65	4.34	5.11
148	178	SLE-INV	Min	-0.10	-6.78	-1.03	-5.57	-4.73	1.01	4.34	4.84
148	154	SLE-INV	Min	-0.03	-6.76	-0.97	-4.65	-3.63	0.18	3.99	4.84
148	155	SLE-INV	Min	-0.09	-7.05	-0.77	-5.30	-3.94	0.82	3.99	5.11
148	179	SLU-INV	Max	-0.16	-7.06	-0.84	-6.89	-5.85	1.80	10.47	17.13
148	178	SLU-INV	Max	-0.10	-6.78	-1.03	-6.18	-5.48	2.76	10.47	16.33
148	154	SLU-INV	Max	-0.03	-6.76	-0.97	-5.22	-4.41	3.06	9.46	16.33
148	155	SLU-INV	Max	-0.09	-7.05	-0.77	-5.93	-4.78	2.10	9.46	17.13
148	179	SLU-INV	Min	-0.21	-9.53	-1.13	-11.93	-8.69	0.87	5.86	6.90
148	178	SLU-INV	Min	-0.14	-9.15	-1.40	-10.65	-8.16	1.36	5.86	6.53
148	154	SLU-INV	Min	-0.04	-9.13	-1.31	-8.67	-5.48	1.59	5.39	6.53
148	155	SLU-INV	Min	-0.12	-9.51	-1.04	-9.92	-6.02	1.11	5.39	6.90
149	180	SLE-INV	Max	-0.07	-7.20	-0.43	-5.26	-4.47	0.38	3.05	7.27
149	179	SLE-INV	Max	-0.04	-7.04	-0.63	-4.97	-4.32	0.88	3.05	7.06
149	155	SLE-INV	Max	0.03	-7.02	-0.59	-4.20	-3.49	0.99	2.78	7.06
149	156	SLE-INV	Max	0.00	-7.18	-0.40	-4.50	-3.64	0.49	2.78	7.27
149	180	SLE-INV	Min	-0.07	-7.20	-0.43	-6.43	-5.21	0.29	2.47	5.26
149	179	SLE-INV	Min	-0.04	-7.04	-0.63	-6.06	-5.03	0.68	2.47	5.10
149	155	SLE-INV	Min	0.03	-7.02	-0.59	-5.07	-3.88	0.78	2.27	5.10
149	156	SLE-INV	Min	0.00	-7.18	-0.40	-5.44	-4.56	0.39	2.27	5.26
149	180	SLU-INV	Max	-0.07	-7.20	-0.43	-7.11	-6.04	0.82	5.98	17.55
149	179	SLU-INV	Max	-0.04	-7.04	-0.63	-6.70	-5.83	1.87	5.98	17.09
149	155	SLU-INV	Max	0.04	-7.02	-0.59	-5.67	-4.71	2.04	5.39	17.09
149	156	SLU-INV	Max	0.00	-7.18	-0.40	-6.08	-4.92	0.99	5.39	17.55
149	180	SLU-INV	Min	-0.09	-9.72	-0.59	-12.37	-8.98	0.39	3.34	7.10
149	179	SLU-INV	Min	-0.05	-9.50	-0.85	-11.65	-8.67	0.92	3.34	6.89
149	155	SLU-INV	Min	0.03	-9.48	-0.80	-9.51	-5.90	1.06	3.07	6.89
149	156	SLU-INV	Min	0.00	-9.70	-0.54	-10.22	-6.21	0.53	3.07	7.10
150	181	SLE-INV	Max	-0.02	-7.23	-0.04	-5.28	-4.50	-0.08	0.79	7.32
150	180	SLE-INV	Max	-0.02	-7.19	-0.23	-5.20	-4.46	0.42	0.79	7.26
150	156	SLE-INV	Max	0.06	-7.17	-0.22	-4.41	-3.62	0.45	0.72	7.26
150	157	SLE-INV	Max	0.05	-7.21	-0.03	-4.49	-3.66	-0.06	0.72	7.32
150	181	SLE-INV	Min	-0.02	-7.23	-0.04	-6.45	-5.25	-0.10	0.64	5.30
150	180	SLE-INV	Min	-0.02	-7.19	-0.23	-6.35	-5.20	0.33	0.64	5.25
150	156	SLE-INV	Min	0.06	-7.17	-0.22	-5.33	-4.03	0.53	0.59	5.25
150	157	SLE-INV	Min	0.05	-7.21	-0.03	-5.43	-4.08	-0.07	0.59	5.30
150	181	SLU-INV	Max	-0.02	-7.23	-0.04	-7.12	-6.08	-0.11	3.55	17.65
150	180	SLU-INV	Max	-0.02	-7.19	-0.23	-7.02	-6.03	0.88	1.55	17.53
150	156	SLU-INV	Max	0.08	-7.17	-0.22	-5.96	-4.89	0.93	1.40	17.53
150	157	SLU-INV	Max	0.06	-7.21	-0.03	-6.06	-4.94	-0.07	1.40	17.65
150	181	SLU-INV	Min	-0.03	-9.76	-0.05	-12.42	-9.05	-0.20	0.87	7.15
150	180	SLU-INV	Min	-0.02	-9.70	-0.31	-12.23	-8.97	0.44	0.87	7.09
150	156	SLU-INV	Min	0.06	-9.68	-0.30	-10.03	-6.15	0.48	0.80	7.09
150	157	SLU-INV	Min	0.05	-9.74	-0.04	-10.22	-6.23	-0.16	0.80	7.15
151	182	SLE-INV	Max	-0.02	-7.15	0.36	-5.14	-4.43	-0.45	-1.18	7.22
151	181	SLE-INV	Max	-0.03	-7.23	0.17	-5.29	-4.51	-0.04	-1.18	7.32
151	157	SLE-INV	Max	0.04	-7.21	0.15	-4.50	-3.66	-0.09	-1.08	7.32
151	158	SLE-INV	Max	0.05	-7.13	0.34	-4.36	-3.59	-0.50	-1.08	7.22
151	182	SLE-INV	Min	-0.02	-7.15	0.36	-6.28	-5.16	-0.57	-1.45	5.22
151	181	SLE-INV	Min	-0.03	-7.23	0.17	-6.46	-5.25	-0.06	-1.45	5.30
151	157	SLE-INV	Min	0.04	-7.21	0.15	-5.44	-4.09	-0.11	-1.33	5.30
151	158	SLE-INV	Min	0.05	-7.13	0.34	-5.27	-4.00	-0.63	-1.33	5.22
151	182	SLU-INV	Max	-0.02	-7.15	0.48	-6.94	-5.98	-0.60	-1.59	17.43
151	181	SLU-INV	Max	-0.03	-7.23	0.23	-7.14	-6.08	-0.06	-1.59	17.66
151	157	SLU-INV	Max	0.05	-7.21	0.20	-6.08	-4.95	-0.12	-1.46	17.66
151	158	SLU-INV	Max	0.07	-7.13	0.46	-5.89	-4.84	-0.67	-1.46	17.43
151	182	SLU-INV	Min	-0.02	-9.65	0.36	-12.09	-8.90	-1.21	-2.86	7.05
151	181	SLU-INV	Min	-0.05	-9.76	0.17	-12.44	-9.05	-0.14	-2.86	7.15
151	157	SLU-INV	Min	0.04	-9.74	0.15	-10.24	-6.24	-0.22	-2.58	7.15
151	158	SLU-INV	Min	0.05	-9.63	0.34	-9.90	-6.09	-1.30	-2.58	7.05
152	183	SLE-INV	Max	-0.05	-6.96	0.76	-4.86	-4.25	-0.79	-3.02	6.98
152	182	SLE-INV	Max	-0.09	-7.16	0.56	-5.23	-4.44	-0.41	-3.02	7.23
152	158	SLE-INV	Max	-0.02	-7.15	0.52	-4.48	-3.62	-0.53	-2.77	7.23
152	159	SLE-INV	Max	0.02	-6.95	0.72	-4.11	-3.43	-0.92	-2.77	6.98
152	183	SLE-INV	Min	-0.05	-6.96	0.76	-5.93	-4.95	-1.02	-3.72	5.04
152	182	SLE-INV	Min	-0.09	-7.16	0.56	-6.38	-5.17	-0.53	-3.72	5.23
152	158	SLE-INV	Min	-0.02	-7.15	0.52	-5.41	-4.03	-0.67	-3.40	5.23
152	159	SLE-INV	Min	0.02	-6.95	0.72	-4.96	-3.81	-1.16	-3.40	5.04
152	183	SLU-INV	Max	-0.05	-6.96	1.03	-6.56	-5.73	-1.07	-4.07	16.90
152	182	SLU-INV	Max	-0.09	-7.16	0.76	-7.06	-5.99	-0.55	-4.07	17.46
152	158	SLU-INV	Max	-0.02	-7.15	0.70	-6.05	-4.88	-0.72	-3.74	17.46
152	159	SLU-INV	Max	0.02	-6.95	0.97	-5.95	-4.83	-1.24	-3.74	16.90
152	183	SLU-INV	Min	-0.07	-9.40	0.76	-11.38	-8.			

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.prog.	REV.	Pag.di	Pag.		
L0703	211	E	16	016800	REL	01	A	120 di	180		
152	182	SLU-INV	Min	-0.13	-9.67	0.56	-12.27	-8.91	-1.15	-7.30	7.06
152	158	SLU-INV	Min	-0.03	-9.65	0.52	-10.16	-6.16	-1.36	-6.59	7.06
152	159	SLU-INV	Min	0.02	-9.38	0.72	-9.28	-5.78	-2.39	-6.59	6.80
153	160	SLU-INV	Max	-0.06	-6.63	1.12	-3.69	-3.15	-1.33	-4.57	6.55
153	184	SLU-INV	Max	-0.13	-6.64	1.19	-4.37	-3.93	-1.13	-4.97	6.55
153	183	SLU-INV	Max	-0.20	-6.99	0.98	-5.02	-4.27	-0.76	-4.97	7.00
153	159	SLU-INV	Max	-0.13	-6.98	0.91	-4.34	-3.48	-0.96	-4.57	7.00
153	160	SLE-INV	Min	-0.06	-6.63	1.12	-4.43	-3.49	-1.67	-5.60	4.71
153	184	SLE-INV	Min	-0.13	-6.64	1.19	-5.31	-4.58	-1.45	-6.12	4.71
153	183	SLE-INV	Min	-0.20	-6.99	0.98	-6.11	-4.97	-0.98	-6.12	5.05
153	159	SLE-INV	Min	-0.13	-6.98	0.91	-5.23	-3.88	-1.20	-5.60	5.05
153	160	SLU-INV	Max	-0.06	-6.63	1.51	-4.98	-4.25	-1.79	-6.17	15.97
153	184	SLU-INV	Max	-0.13	-6.64	1.61	-5.90	-5.31	-1.52	-6.71	15.97
153	183	SLU-INV	Max	-0.20	-6.99	1.33	-6.78	-5.76	-1.02	-6.71	16.96
153	159	SLU-INV	Max	-0.13	-6.98	1.23	-5.86	-4.70	-1.29	-6.17	16.96
153	160	SLE-INV	Min	-0.08	-8.95	1.12	-8.23	-5.26	-3.44	-10.84	6.36
153	184	SLE-INV	Min	-0.18	-8.97	1.19	-10.14	-7.90	-3.10	-12.00	6.36
153	183	SLE-INV	Min	-0.28	-9.44	0.98	-11.71	-8.55	-2.11	-12.00	6.82
153	159	SLE-INV	Min	-0.18	-9.42	0.91	-9.77	-5.93	-2.45	-10.84	6.82
154	161	SLE-INV	Max	-0.20	-6.19	1.56	-3.10	-2.77	-1.67	-6.53	5.98
154	185	SLE-INV	Max	-0.27	-6.20	1.66	-3.68	-3.49	-1.40	-7.08	5.98
154	184	SLE-INV	Max	-0.36	-6.69	1.43	-4.60	-3.96	-1.09	-7.08	6.59
154	160	SLE-INV	Max	-0.29	-6.67	1.33	-4.02	-3.24	-1.37	-6.53	6.59
154	161	SLE-INV	Min	-0.20	-6.19	1.56	-3.70	-3.06	-2.11	-7.99	4.74
154	185	SLE-INV	Min	-0.27	-6.20	1.66	-4.45	-4.07	-1.80	-8.71	4.74
154	184	SLE-INV	Min	-0.36	-6.69	1.43	-5.59	-4.61	-1.41	-8.71	4.74
154	160	SLE-INV	Min	-0.29	-6.67	1.33	-4.83	-3.60	-1.72	-7.99	4.74
154	161	SLU-INV	Max	-0.20	-6.19	2.10	-4.18	-3.74	-2.26	-8.82	14.69
154	185	SLU-INV	Max	-0.27	-6.20	2.24	-4.96	-4.72	-1.89	-9.56	14.69
154	184	SLU-INV	Max	-0.36	-6.69	1.93	-6.21	-5.34	-1.47	-9.56	16.06
154	160	SLU-INV	Max	-0.29	-6.67	1.79	-5.43	-4.37	-1.84	-8.82	16.06
154	161	SLU-INV	Min	-0.26	-8.35	1.56	-6.76	-4.54	-4.33	-15.41	5.77
154	185	SLU-INV	Min	-0.36	-8.37	1.66	-8.39	-7.02	-3.86	-17.02	5.77
154	184	SLU-INV	Min	-0.49	-9.03	1.43	-10.62	-7.92	-3.04	-17.02	6.39
154	160	SLU-INV	Min	-0.40	-9.01	1.33	-8.95	-5.47	-3.51	-15.41	6.39
155	162	SLE-INV	Max	-0.38	-5.63	2.02	-2.30	-2.29	-1.93	-8.63	5.26
155	186	SLE-INV	Max	-0.45	-5.64	2.15	-2.73	-2.93	-1.59	-9.30	5.26
155	185	SLE-INV	Max	-0.57	-6.26	1.91	-3.96	-3.52	-1.37	-9.30	6.02
155	161	SLE-INV	Max	-0.51	-6.25	1.78	-3.52	-2.88	-1.71	-8.63	6.02
155	162	SLE-INV	Min	-0.38	-5.64	2.02	-2.71	-2.51	-2.42	-10.52	3.73
155	186	SLE-INV	Min	-0.45	-5.64	2.15	-3.28	-3.41	-2.04	-11.42	3.73
155	185	SLE-INV	Min	-0.57	-6.26	1.91	-4.78	-4.10	-1.76	-11.42	4.30
155	161	SLE-INV	Min	-0.51	-6.25	1.78	-4.20	-3.20	-2.14	-10.52	4.30
155	162	SLU-INV	Max	-0.38	-5.63	2.73	-3.10	-3.09	-2.60	-11.64	13.09
155	186	SLU-INV	Max	-0.45	-5.64	2.91	-3.69	-3.96	-2.14	-12.56	13.09
155	185	SLU-INV	Max	-0.57	-6.26	2.58	-5.34	-4.76	-1.84	-12.56	14.81
155	161	SLU-INV	Max	-0.51	-6.25	2.40	-4.75	-3.89	-2.30	-11.64	14.81
155	162	SLU-INV	Min	-0.52	-7.60	2.02	-4.80	-3.63	-4.98	-20.23	5.03
155	186	SLU-INV	Min	-0.61	-7.62	2.15	-6.06	-5.88	-4.39	-22.26	5.03
155	185	SLU-INV	Min	-0.77	-8.45	1.91	-8.98	-7.04	-3.80	-22.26	5.81
155	161	SLU-INV	Min	-0.69	-8.44	1.78	-7.67	-4.82	-4.38	-20.23	5.81
156	163	SLE-INV	Max	-0.63	-4.96	2.53	-1.23	-1.70	-2.06	-10.89	4.42
156	187	SLE-INV	Max	-0.68	-4.97	2.70	-1.49	-2.26	-1.67	-11.68	4.42
156	186	SLE-INV	Max	-0.83	-5.72	2.43	-3.04	-2.96	-1.56	-11.68	5.31
156	162	SLE-INV	Max	-0.78	-5.71	2.26	-2.77	-2.42	-1.95	-10.89	5.31
156	163	SLE-INV	Min	-0.63	-4.96	2.53	-1.40	-1.84	-2.60	-13.26	3.09
156	187	SLE-INV	Min	-0.68	-4.97	2.70	-1.75	-2.62	-2.16	-14.32	3.09
156	186	SLE-INV	Min	-0.83	-5.72	2.43	-3.44	-3.44	-2.02	-14.32	3.77
156	162	SLE-INV	Min	-0.78	-5.71	2.26	-3.27	-2.67	-2.45	-13.26	3.77
156	163	SLU-INV	Max	-0.63	-4.96	3.42	-1.67	-2.30	-2.78	-14.71	11.19
156	187	SLU-INV	Max	-0.68	-4.97	3.64	-2.02	-3.05	-2.25	-15.77	11.19
156	186	SLU-INV	Max	-0.83	-5.72	3.27	-4.10	-4.00	-2.10	-15.77	13.24
156	162	SLU-INV	Max	-0.78	-5.71	3.05	-3.74	-3.26	-2.64	-14.71	13.24
156	163	SLU-INV	Min	-0.85	-6.69	2.53	-2.27	-2.52	-5.32	-25.37	4.17
156	187	SLU-INV	Min	-0.92	-6.71	2.70	-3.04	-4.50	-4.64	-27.78	4.17
156	186	SLU-INV	Min	-1.12	-7.72	2.43	-6.70	-5.89	-4.35	-27.78	5.08
156	162	SLU-INV	Min	-1.05	-7.70	2.26	-5.85	-3.96	-5.02	-25.37	5.08
157	164	SLE-INV	Max	-0.93	-4.19	3.10	0.28	-1.02	-2.05	-13.38	3.48
157	188	SLE-INV	Max	-0.96	-4.19	3.29	0.21	-1.47	-1.63	-14.26	3.48
157	187	SLE-INV	Max	-1.13	-5.06	2.99	-1.78	-2.28	-1.65	-14.26	4.48
157	163	SLE-INV	Max	-1.11	-5.05	2.80	-1.72	-1.84	-2.08	-13.38	4.48
157	164	SLE-INV	Min	-0.93	-4.19	3.10	0.15	-1.05	-2.59	-16.25	2.39
157	188	SLE-INV	Min	-0.96	-4.19	3.29	0.11	-1.70	-2.11	-17.43	2.39
157	187	SLE-INV	Min	-1.13	-5.06	2.99	-2.09	-2.64	-2.14	-17.43	3.14
157	163	SLE-INV	Min	-1.11	-5.05	2.80	-1.99	-2.01	-2.62	-16.25	3.14
157	164	SLU-INV	Max	-0.93	-4.19	4.18	0.97	-1.22	-2.77	-18.07	9.04
157	188	SLU-INV	Max	-0.96	-4.19	4.44	0.77	-1.98	-2.19	-19.25	9.04
157	187	SLU-INV	Max	-1.13	-5.06	4.04	-2.41	-3.07	-2.23	-19.25	11.37
157	163	SLU-INV	Max	-1.11	-5.05	3.78	-2.33	-2.48	-2.81	-18.07	11.37
157	164	SLU-INV	Min	-1.26	-5.65	3.10	0.20	-1.43	-5.30	-30.92	3.23
157	188	SLU-INV	Min	-1.29	-5.66	3.29	0.14	-2.88	-4.56	-33.66	3.23
157	187	SLU-INV	Min	-1.53	-6.83	2.99	-3.68	-4.48	-4.61	-33.66	4.23
157	163	SLU-INV	Min	-1.49	-6.82	2.80	-3.38	-2.88	-5.36	-30.92	4.23
158	165	SLE-INV	Max	-1.29	-3.33	3.74	2.45	-0.17	-1.87	-16.14	2.49
158	189	SLE-INV	Max	-1.28	-3.33	3.96	2.70	-0.59	-1.44	-17.06	2.49
158	188	SLE-INV	Max	-1.47	-4.29	3.62	-0.07	-1.47	-1.62	-17.06	3.56
158	164	SLE-INV	Max	-1.49	-4.30	3.40	-0.27	-1.15	-2.06	-16.14	3.56
158	165	SLE-INV	Min	-1.29	-3.33	3.74	1.95	-0.25	-2.36	-19.55	1.67
158	189	SLE-INV	Min	-1.28	-3.33	3.96	2.15	-0.66	-1.87	-20.80	1.67
158	188	SLE-INV	Min	-1.47	-4.29	3.62	-0.12	-1.70	-2.10	-20.80	2.44
158	164	SLE-INV	Min	-1.49	-4.30	3.40	-0.30	-1.22	-2.59	-19.55	2.44
158	165	SLU-INV	Max	-1.29	-3.33	5.05	5.05	0.26	-2.53	-21.99	6.70
158	189	SLU-INV	Max	-1.28	-3.33	5.35	5.53	-0.79	-1.94	-23.03	6.70
158	188	SLU-INV	Max	-1.47	-4.29	4.88	0.22	-1.99	-2.19	-23.03	9.24
158	164	SLU-INV	Max	-1.49	-4.30	4.58	-0.11	-1.56	-2.78	-21.79	9.24
158	165	SLU-INV	Min	-1.75	-4.50	3.74	2.63	-0.34	-4.84	-36.96	2.25
158	189	SLU-INV	Min	-1.72	-4.50	3.96	2.90	-1.06	-4.09	-39.95	2.25
158	188	SLU-INV	Min	-1.99	-5.80	3.62	-0.17	-2.83	-4.56	-39.95	3.30
158	164	SLU-INV	Min	-2.01	-5.80	3.40	-0.41	-1.66	-5.31	-36.96	3.30
159	166	SLE-INV	Max	-1.71	-2.42	4.42	5.22	0.80	-1.50	-19.22	1.50
159	190	SLE-INV	Max	-1.63	-2.40	4.67	5.84	0.46	-1.10	-20.12	1.50
159	189	SLE-INV	Max	-1.84	-3.44	4.35	2.56	-0.57	-1.46	-20.12	2.57
159	165	SLE-INV	Max	-1.91	-3.46	4.11	2.01	-0.32	-1.86	-19.22	2.57
159	166	SLE-INV	Min	-1.71	-2.42	4.42	4.25	0.59	-1.88	-23.21	0.96
159	190	SLE-INV	Min	-1.63	-2.40	4.67	4.74	0.36	-1.44	-24.47	0.96
159	189	SLE-INV	Min	-1.84	-3.44	4.35	2.04	-0.63	-1.89	-24.47	1.72
159	165	SLE-INV	Min	-1.91	-3.46	4.11	1.59	-0.36	-2.34	-23.21	1.72
159	166	SLU-INV	Max	-1.71	-2.42	5.97	10.18	1.89	-2.02	-25.95	4.25
159	190	SLU-INV	Max	-1.63	-2.40	6.30	11.43	0.94	-1.48	-27.16	4.25
159	189	SLU-INV	Max								

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc	N. progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	121 di 180			
159	166	SLU-INV	Min	-2.30	-3.26	4.42	5.74	0.80	-3.87	-43.58	1.29
159	190	SLU-INV	Min	-2.21	-3.24	4.67	6.40	0.49	-3.18	-46.73	1.29
159	189	SLU-INV	Min	-2.49	-4.65	4.35	2.76	-0.95	-4.12	-46.73	2.32
159	165	SLU-INV	Min	-2.58	-4.67	4.11	2.15	-0.49	-4.82	-43.58	2.32
160	167	SLU-INV	Max	-2.15	-1.46	5.56	8.75	1.81	-0.89	-22.66	0.57
160	191	SLU-INV	Max	-2.02	-1.43	5.81	9.75	1.62	-0.60	-23.47	0.57
160	190	SLU-INV	Max	-2.24	-2.52	4.89	5.91	0.54	-1.15	-23.47	1.59
160	166	SLU-INV	Max	-2.37	-2.55	4.65	5.00	0.69	-1.45	-22.66	1.59
160	167	SLU-INV	Min	-2.15	-1.46	5.56	7.22	1.46	-1.13	-27.27	0.33
160	191	SLU-INV	Min	-2.02	-1.43	5.81	8.01	1.34	-0.79	-28.47	0.33
160	190	SLU-INV	Min	-2.24	-2.52	4.89	4.84	0.43	-1.49	-28.47	1.02
160	166	SLU-INV	Min	-2.37	-2.55	4.65	4.11	0.52	-1.83	-27.27	1.02
160	167	SLU-INV	Max	-2.15	-1.46	7.51	16.60	3.61	-1.21	-30.59	1.81
160	191	SLU-INV	Max	-2.02	-1.43	7.84	18.70	3.03	-0.80	-31.69	1.81
160	190	SLU-INV	Max	-2.24	-2.52	6.61	11.43	1.14	-1.55	-31.69	4.51
160	166	SLU-INV	Max	-2.37	-2.55	6.28	9.57	1.57	-1.95	-30.59	4.51
160	167	SLU-INV	Min	-2.91	-1.97	5.56	9.75	1.98	-2.32	-50.87	0.44
160	191	SLU-INV	Min	-2.73	-1.93	5.81	10.81	1.81	-1.79	-54.04	0.44
160	190	SLU-INV	Min	-3.02	-3.41	4.89	6.53	0.57	-3.26	-54.04	1.37
160	166	SLU-INV	Min	-3.20	-3.44	4.65	5.54	0.70	-3.79	-50.87	1.37
161	168	SLU-INV	Max	-2.63	-0.53	4.03	13.24	2.82	-0.07	-26.50	-0.16
161	192	SLU-INV	Max	-2.42	-0.48	4.38	14.63	2.75	0.06	-27.14	-0.16
161	191	SLU-INV	Max	-2.64	-1.55	7.63	10.17	1.77	-0.69	-27.14	0.66
161	167	SLU-INV	Max	-2.84	-1.59	7.27	8.89	1.77	-0.81	-26.50	0.66
161	168	SLU-INV	Min	-2.63	-0.53	4.03	11.01	2.33	-0.08	-31.79	-0.22
161	192	SLU-INV	Min	-2.42	-0.48	4.38	12.09	2.29	0.05	-32.83	-0.22
161	191	SLU-INV	Min	-2.64	-1.55	7.63	8.40	1.46	-0.89	-32.83	0.38
161	167	SLU-INV	Min	-2.84	-1.59	7.27	7.40	1.46	-1.03	-31.79	0.38
161	168	SLU-INV	Max	-2.63	-0.53	5.43	24.62	5.33	-0.09	-35.77	-0.22
161	192	SLU-INV	Max	-2.42	-0.48	5.91	27.62	5.12	0.08	-36.63	-0.22
161	191	SLU-INV	Max	-2.64	-1.55	10.30	19.24	3.35	-0.93	-36.63	2.08
161	167	SLU-INV	Max	-2.84	-1.59	9.82	16.54	3.38	-1.09	-35.77	2.08
161	168	SLU-INV	Min	-3.55	-0.71	4.03	14.86	3.15	-0.13	-58.87	-0.51
161	192	SLU-INV	Min	-3.27	-0.65	4.38	16.32	3.09	0.07	-61.93	-0.51
161	191	SLU-INV	Min	-3.56	-2.10	7.63	11.34	1.97	-1.95	-61.93	0.52
161	167	SLU-INV	Min	-3.83	-2.15	7.27	9.99	1.97	-2.16	-58.87	0.52
162	193	SLU-INV	Max	-2.24	-0.45	-4.70	15.75	3.03	-0.05	33.56	-0.10
162	169	SLU-INV	Max	-2.44	-0.49	-4.38	14.71	3.06	0.07	33.10	-0.10
162	170	SLU-INV	Max	-2.62	-1.38	-7.98	10.53	2.08	0.72	33.10	0.21
162	194	SLU-INV	Max	-2.42	-1.34	-8.30	11.48	2.10	0.60	33.56	0.21
162	193	SLU-INV	Min	-2.24	-0.45	-4.70	12.91	2.50	-0.05	27.50	-0.15
162	169	SLU-INV	Min	-2.44	-0.49	-4.38	12.15	2.51	0.06	27.37	-0.15
162	170	SLU-INV	Min	-2.62	-1.38	-7.98	8.70	1.70	0.54	27.37	0.01
162	194	SLU-INV	Min	-2.42	-1.34	-8.30	9.41	1.72	0.43	27.50	0.01
162	193	SLU-INV	Max	-2.24	-0.45	-4.70	30.26	5.74	-0.07	64.52	-0.14
162	169	SLU-INV	Max	-2.44	-0.49	-4.38	27.81	5.88	0.00	62.40	-0.14
162	170	SLU-INV	Max	-2.62	-1.38	-7.98	19.91	4.01	1.65	62.40	1.28
162	194	SLU-INV	Max	-2.42	-1.34	-8.30	22.07	4.01	1.45	64.52	1.28
162	193	SLU-INV	Min	-3.03	-0.61	-6.34	17.43	3.38	-0.08	37.13	-0.40
162	169	SLU-INV	Min	-3.30	-0.66	-5.91	16.40	3.39	0.08	36.95	-0.40
162	170	SLU-INV	Min	-3.54	-1.87	-10.77	11.75	2.29	0.73	36.95	0.01
162	194	SLU-INV	Min	-3.27	-1.81	-11.21	12.70	2.32	0.59	37.13	0.01
163	195	SLU-INV	Max	-2.09	-2.16	-5.42	7.23	0.93	1.03	29.63	0.66
163	194	SLU-INV	Max	-1.90	-1.24	-6.41	10.98	1.96	0.50	29.63	0.16
163	170	SLU-INV	Max	-2.05	-1.27	-6.19	10.16	2.04	0.82	29.00	0.16
163	171	SLU-INV	Max	-2.23	-2.19	-5.20	6.48	0.98	1.35	29.00	0.66
163	195	SLU-INV	Min	-2.09	-2.16	-5.42	5.88	0.75	0.75	24.23	0.23
163	194	SLU-INV	Min	-1.90	-1.24	-6.41	8.95	1.61	0.35	24.23	-0.52
163	170	SLU-INV	Min	-2.05	-1.27	-6.19	8.33	1.64	0.63	23.92	-0.02
163	171	SLU-INV	Min	-2.23	-2.19	-5.20	5.30	0.76	1.03	23.92	0.23
163	195	SLU-INV	Max	-2.09	-2.16	-5.42	14.13	1.87	2.48	57.25	2.87
163	194	SLU-INV	Max	-1.90	-1.24	-6.41	21.36	3.72	1.29	57.25	1.08
163	170	SLU-INV	Max	-2.05	-1.27	-6.19	19.50	4.09	1.80	54.98	1.08
163	171	SLU-INV	Max	-2.23	-2.19	-5.20	12.51	2.13	2.99	54.98	2.87
163	195	SLU-INV	Min	-2.82	-2.91	-7.31	7.94	1.01	1.01	32.71	0.31
163	194	SLU-INV	Min	-2.57	-1.67	-8.66	12.09	2.18	0.47	32.71	-0.02
163	170	SLU-INV	Min	-2.76	-1.71	-8.36	11.24	2.22	0.85	32.29	-0.02
163	171	SLU-INV	Min	-3.01	-2.95	-7.02	7.15	1.02	1.38	32.29	0.31
164	196	SLU-INV	Max	-1.74	-2.94	-4.94	3.69	-0.21	1.36	25.91	1.21
164	195	SLU-INV	Max	-1.57	-2.05	-5.23	7.02	0.85	0.97	25.91	0.61
164	171	SLU-INV	Max	-1.66	-2.07	-5.01	6.45	1.01	1.40	25.17	0.61
164	172	SLU-INV	Max	-1.84	-2.96	-4.71	3.17	-0.08	1.79	25.17	1.21
164	196	SLU-INV	Min	-1.74	-2.94	-4.94	2.96	-0.21	0.99	21.14	0.56
164	195	SLU-INV	Min	-1.57	-2.05	-5.23	5.68	0.69	0.69	21.14	0.20
164	171	SLU-INV	Min	-1.66	-2.07	-5.01	5.23	0.76	1.08	20.71	0.20
164	172	SLU-INV	Min	-1.84	-2.96	-4.71	2.54	-0.16	1.38	20.71	0.56
164	196	SLU-INV	Max	-1.74	-2.94	-4.94	7.42	-0.22	3.24	50.32	4.56
164	195	SLU-INV	Max	-1.57	-2.05	-5.23	13.88	1.68	2.39	50.32	2.68
164	171	SLU-INV	Max	-1.66	-2.07	-5.01	12.64	2.31	3.08	48.00	2.68
164	172	SLU-INV	Max	-1.84	-2.96	-4.71	6.37	0.32	3.93	48.00	4.56
164	196	SLU-INV	Min	-2.36	-3.97	-6.67	3.99	-0.29	1.34	28.54	0.75
164	195	SLU-INV	Min	-2.11	-2.77	-7.07	7.67	0.94	0.94	28.54	0.28
164	171	SLU-INV	Min	-2.24	-2.80	-6.76	7.06	1.03	1.45	27.95	0.28
164	172	SLU-INV	Min	-2.48	-4.00	-6.36	3.43	-0.21	1.86	27.95	0.75
165	197	SLU-INV	Max	-1.42	-3.68	-4.18	0.82	-1.12	1.56	22.41	1.80
165	196	SLU-INV	Max	-1.25	-2.85	-4.53	3.69	-0.23	1.33	22.41	1.16
165	172	SLU-INV	Max	-1.29	-2.85	-4.33	3.37	0.00	1.82	21.61	1.16
165	173	SLU-INV	Max	-1.46	-3.69	-3.98	0.54	-1.00	2.06	21.61	1.80
165	197	SLU-INV	Min	-1.42	-3.68	-4.18	0.60	-1.29	1.15	18.24	0.94
165	196	SLU-INV	Min	-1.25	-2.85	-4.53	2.94	-0.25	0.97	18.24	0.53
165	172	SLU-INV	Min	-1.29	-2.85	-4.33	2.69	-0.11	1.40	17.73	0.53
165	173	SLU-INV	Min	-1.46	-3.69	-3.98	0.37	-1.06	1.58	17.73	0.94
165	197	SLU-INV	Max	-1.42	-3.68	-4.18	1.93	-1.51	3.68	43.73	6.23
165	196	SLU-INV	Max	-1.25	-2.85	-4.53	7.52	-0.31	3.18	43.73	4.38
165	172	SLU-INV	Max	-1.29	-2.85	-4.33	6.88	0.55	3.98	41.45	4.38
165	173	SLU-INV	Max	-1.46	-3.69	-3.98	1.44	-1.35	4.47	41.45	6.23
165	197	SLU-INV	Min	-1.91	-4.97	-5.64	0.82	-2.16	1.55	24.62	1.27
165	196	SLU-INV	Min	-1.69	-3.84	-6.12	3.97	-0.34	1.30	24.62	0.72
165	172	SLU-INV	Min	-1.74	-3.85	-5.84	3.63	-0.15	1.89	23.94	0.72
165	173	SLU-INV	Min	-1.97	-4.99	-5.37	0.50	-1.44	2.14	23.94	1.27
166	198	SLU-INV	Max	-1.11	-4.33	-3.54	-1.19	-1.91	1.64	19.20	2.37
166	197	SLU-INV	Max	-0.97	-3.59	-3.85	0.97	-1.11	1.55	19.20	1.76
166	173	SLU-INV	Max	-0.97	-3.59	-3.66	0.89	-0.93	2.06	18.41	1.76
166	174	SLU-INV	Max	-1.12	-4.33	-3.35	-1.25	-1.73	2.15	18.41	2.37
166	198	SLU-INV	Min	-1.11	-4.33	-3.54	-1.38	-2.22	1.21	15.59	1.32
166	197	SLU-INV	Min	-0.97	-3.59	-3.85	0.72	-1.29	1.14	15.59	0.91
166	173	SLU-INV	Min	-0.97	-3.59	-3.66	0.64	-0.96	1.59	15.07	0.91
166	174	SLU-INV	Min	-1.12	-4.33	-3.35	-1.43	-1.90	1.66	15.07	1.32
166	198	SLU-INV	Max	-1.11	-4.33	-3.54	-1.60	-2.57	3.84	37.63	7.73
166	197	SLU-INV	Max	-0.97	-3.59	-3.85	2.25	-1.50	3.67	37.63	6.07
166	173	SLU-INV	Max	-0.97	-3.59	-3.66	2.15	-1.09</			



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.progr. 01	REV. A	Pag.di Pag. 122 di 180
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166	174	SLU-INV	Max	-1.12	-4.33	-3.35	-1.69	-2.34	4.64	35.48	7.73
166	198	SLU-INV	Min	-1.51	-5.84	-4.78	-2.35	-3.85	1.63	21.05	1.78
166	197	SLU-INV	Min	-1.31	-4.85	-5.20	0.97	-2.22	1.54	21.05	1.23
166	173	SLU-INV	Min	-1.31	-4.85	-4.95	0.87	-1.29	2.15	20.34	1.23
166	174	SLU-INV	Min	-1.51	-5.84	-4.53	-2.32	-2.77	2.24	20.34	1.78
167	199	SLE-INV	Max	-0.85	-4.91	-2.96	-2.60	-2.61	1.61	16.25	2.91
167	198	SLE-INV	Max	-0.72	-4.25	-3.25	-1.00	-1.89	1.65	16.25	2.33
167	174	SLE-INV	Max	-0.69	-4.24	-3.08	-0.91	-1.65	2.14	15.50	2.33
167	175	SLE-INV	Max	-0.82	-4.90	-2.80	-2.51	-2.37	2.10	15.50	2.91
167	199	SLE-INV	Min	-0.85	-4.91	-2.96	-3.12	-3.05	1.19	13.17	1.70
167	198	SLE-INV	Min	-0.72	-4.25	-3.25	-1.14	-2.21	1.22	13.17	1.30
167	174	SLE-INV	Min	-0.69	-4.24	-3.08	-1.01	-1.79	1.65	12.66	1.30
167	175	SLE-INV	Min	-0.82	-4.90	-2.80	-2.97	-2.64	1.63	12.66	1.70
167	199	SLE-INV	Max	-0.85	-4.91	-2.96	-3.51	-3.52	3.74	31.98	9.12
167	198	SLE-INV	Max	-0.72	-4.25	-3.25	-1.34	-2.55	3.85	31.98	7.60
167	174	SLE-INV	Max	-0.69	-4.24	-3.08	-1.24	-2.22	4.63	30.01	7.60
167	175	SLE-INV	Max	-0.82	-4.90	-2.80	-3.39	-3.20	4.52	30.01	9.12
167	199	SLE-INV	Min	-1.15	-6.62	-4.00	-5.80	-5.33	1.61	17.78	2.29
167	198	SLE-INV	Min	-0.97	-5.74	-4.38	-1.91	-3.86	1.64	17.78	1.75
167	174	SLE-INV	Min	-0.93	-5.73	-4.16	-1.53	-2.50	2.23	17.09	1.75
167	175	SLE-INV	Min	-1.10	-6.62	-3.78	-5.32	-4.02	2.20	17.09	2.29
168	200	SLE-INV	Max	-0.61	-5.42	-2.42	-3.72	-3.22	1.49	13.43	3.41
168	199	SLE-INV	Max	-0.49	-4.84	-2.68	-2.38	-2.58	1.63	13.43	2.87
168	175	SLE-INV	Max	-0.44	-4.83	-2.54	-2.15	-2.28	2.08	12.75	2.87
168	176	SLE-INV	Max	-0.56	-5.41	-2.28	-3.50	-2.92	1.93	12.75	3.41
168	200	SLE-INV	Min	-0.61	-5.42	-2.42	-4.52	-3.78	1.10	10.87	2.05
168	199	SLE-INV	Min	-0.49	-4.84	-2.68	-2.85	-3.03	1.21	10.87	1.67
168	175	SLE-INV	Min	-0.44	-4.83	-2.54	-2.54	-2.52	1.61	10.40	1.67
168	176	SLE-INV	Min	-0.56	-5.41	-2.28	-4.19	-3.28	1.50	10.40	2.05
168	200	SLU-INV	Max	-0.61	-5.42	-2.42	-5.03	-4.35	3.44	26.53	10.38
168	199	SLU-INV	Max	-0.49	-4.84	-2.68	-3.21	-3.48	3.78	26.53	9.00
168	175	SLU-INV	Max	-0.44	-4.83	-2.54	-2.90	-3.08	4.48	24.80	9.00
168	176	SLU-INV	Max	-0.56	-5.41	-2.28	-4.72	-3.95	4.14	24.80	10.38
168	200	SLU-INV	Min	-0.82	-7.31	-3.27	-8.59	-6.63	1.49	14.67	2.77
168	199	SLU-INV	Min	-0.67	-6.53	-3.62	-5.30	-5.33	1.64	14.67	2.26
168	175	SLU-INV	Min	-0.59	-6.51	-3.43	-4.51	-3.76	2.17	14.04	2.26
168	176	SLU-INV	Min	-0.75	-7.30	-3.07	-7.72	-5.09	2.02	14.04	2.77
169	201	SLE-INV	Max	-0.40	-5.84	-1.90	-4.57	-3.72	1.27	10.73	3.84
169	200	SLE-INV	Max	-0.31	-5.36	-2.15	-3.49	-3.19	1.52	10.73	3.38
169	176	SLE-INV	Max	-0.24	-5.34	-2.04	-3.14	-2.84	1.90	10.15	3.38
169	177	SLE-INV	Max	-0.33	-5.82	-1.79	-4.22	-3.37	1.65	10.15	3.84
169	201	SLE-INV	Min	-0.40	-5.84	-1.90	-5.58	-4.37	0.95	8.67	2.36
169	200	SLE-INV	Min	-0.31	-5.36	-2.15	-4.25	-3.75	1.13	8.67	2.03
169	176	SLE-INV	Min	-0.24	-5.34	-2.04	-3.77	-3.17	1.47	8.26	2.03
169	177	SLE-INV	Min	-0.33	-5.82	-1.79	-5.09	-3.80	1.28	8.26	2.36
169	201	SLU-INV	Max	-0.40	-5.84	-1.90	-6.17	-5.03	2.94	21.26	11.43
169	200	SLU-INV	Max	-0.31	-5.36	-2.15	-4.72	-4.31	3.49	21.26	10.28
169	176	SLU-INV	Max	-0.24	-5.34	-2.04	-4.25	-3.83	4.09	19.80	10.28
169	177	SLU-INV	Max	-0.33	-5.82	-1.79	-5.69	-4.55	3.54	19.80	11.43
169	201	SLU-INV	Min	-0.54	-7.88	-2.57	-10.73	-7.69	1.28	11.71	3.18
169	200	SLU-INV	Min	-0.42	-7.23	-2.90	-8.10	-6.61	1.53	11.71	2.74
169	176	SLU-INV	Min	-0.32	-7.21	-2.75	-6.94	-4.86	1.98	11.15	2.74
169	177	SLU-INV	Min	-0.45	-7.86	-2.41	-9.52	-5.96	1.73	11.15	3.18
170	202	SLE-INV	Max	-0.24	-6.16	-1.42	-5.17	-4.11	0.99	8.15	4.18
170	201	SLE-INV	Max	-0.16	-5.79	-1.65	-4.36	-3.69	1.31	8.15	3.82
170	177	SLE-INV	Max	-0.08	-5.77	-1.56	-3.91	-3.30	1.61	7.68	3.82
170	178	SLE-INV	Max	-0.15	-6.15	-1.33	-4.72	-3.71	1.30	7.68	4.18
170	202	SLE-INV	Min	-0.24	-6.16	-1.42	-6.23	-4.83	0.74	6.58	2.60
170	201	SLE-INV	Min	-0.16	-5.79	-1.65	-5.33	-4.34	0.98	6.58	2.34
170	177	SLE-INV	Min	-0.08	-5.77	-1.56	-4.72	-3.70	1.25	6.25	2.34
170	178	SLE-INV	Min	-0.15	-6.15	-1.33	-5.72	-4.19	1.01	6.25	2.60
170	202	SLU-INV	Max	-0.24	-6.16	-1.42	-6.98	-5.55	2.29	16.18	12.25
170	201	SLU-INV	Max	-0.16	-5.79	-1.65	-5.88	-4.99	3.00	16.18	11.35
170	177	SLU-INV	Max	-0.08	-5.77	-1.56	-5.28	-4.45	3.48	15.04	11.35
170	178	SLU-INV	Max	-0.15	-6.15	-1.33	-6.38	-5.02	2.77	15.04	12.25
170	202	SLU-INV	Min	-0.32	-8.32	-1.91	-12.28	-8.50	1.00	8.88	3.52
170	201	SLU-INV	Min	-0.22	-7.81	-2.23	-10.28	-7.66	1.32	8.88	3.16
170	177	SLU-INV	Min	-0.11	-7.79	-2.11	-8.85	-5.76	1.69	8.43	3.16
170	178	SLU-INV	Min	-0.21	-8.30	-1.79	-10.81	-6.62	1.36	8.43	3.52
171	203	SLE-INV	Max	-0.11	-6.39	-0.95	-5.56	-4.38	0.66	5.66	4.43
171	202	SLE-INV	Max	-0.05	-6.12	-1.17	-5.00	-4.09	1.03	5.66	4.16
171	178	SLE-INV	Max	0.03	-6.11	-1.11	-4.48	-3.66	1.25	5.32	4.16
171	179	SLE-INV	Max	-0.02	-6.37	-0.89	-5.04	-3.95	0.88	5.32	4.43
171	203	SLE-INV	Min	-0.11	-6.39	-0.95	-6.83	-5.15	0.49	4.56	2.78
171	202	SLE-INV	Min	-0.05	-6.12	-1.17	-6.13	-4.80	0.78	4.56	2.59
171	178	SLE-INV	Min	0.03	-6.11	-1.11	-5.43	-4.12	0.97	4.32	2.59
171	179	SLE-INV	Min	-0.02	-6.37	-0.89	-6.12	-4.46	0.68	4.32	2.78
171	203	SLU-INV	Max	-0.11	-6.39	-0.95	-7.51	-5.92	1.52	11.25	12.84
171	202	SLU-INV	Max	-0.05	-6.12	-1.17	-6.75	-5.52	2.36	11.25	12.20
171	178	SLU-INV	Max	0.04	-6.11	-1.11	-6.04	-4.94	2.04	10.44	12.20
171	179	SLU-INV	Max	-0.02	-6.37	-0.89	-6.81	-5.33	1.87	10.44	12.84
171	203	SLU-INV	Min	-0.14	-8.62	-1.28	-13.31	-9.07	0.66	6.16	3.76
171	202	SLU-INV	Min	-0.07	-8.27	-1.58	-11.93	-8.48	1.05	6.16	3.50
171	178	SLU-INV	Min	0.03	-8.25	-1.50	-10.28	-6.47	1.31	5.83	3.50
171	179	SLU-INV	Min	-0.03	-8.60	-1.20	-11.64	-7.07	0.92	5.83	3.76
172	204	SLE-INV	Max	-0.02	-6.52	-0.49	-5.76	-4.54	0.29	3.23	4.57
172	203	SLE-INV	Max	0.01	-6.37	-0.71	-5.44	-4.37	0.71	3.23	4.42
172	179	SLE-INV	Max	0.10	-6.35	-0.68	-4.87	-3.91	0.83	3.03	4.42
172	180	SLE-INV	Max	0.07	-6.50	-0.45	-5.20	-4.08	0.42	3.03	4.57
172	204	SLE-INV	Min	-0.02	-6.52	-0.49	-7.09	-5.33	0.22	2.60	2.89
172	203	SLE-INV	Min	0.01	-6.37	-0.71	-6.69	-5.13	0.53	2.60	2.78
172	179	SLE-INV	Min	0.10	-6.35	-0.68	-5.92	-4.41	0.64	2.46	2.78
172	180	SLE-INV	Min	0.07	-6.50	-0.45	-6.32	-4.61	0.33	2.46	2.89
172	204	SLU-INV	Max	-0.02	-6.52	-0.49	-7.78	-6.12	0.69	6.43	13.18
172	203	SLU-INV	Max	0.01	-6.37	-0.71	-7.35	-5.89	1.60	6.43	12.80
172	179	SLU-INV	Max	0.14	-6.35	-0.68	-6.58	-5.28	1.79	5.96	12.80
172	180	SLU-INV	Max	0.09	-6.50	-0.45	-7.02	-5.51	0.89	5.96	13.18
172	204	SLU-INV	Min	-0.03	-8.80	-0.66	-13.86	-9.40	0.29	3.51	3.90
172	203	SLU-INV	Min	0.01	-8.59	-0.96	-13.07	-9.05	0.72	3.51	3.75
172	179	SLU-INV	Min	0.10	-8.57	-0.91	-11.28	-6.97	0.87	3.32	3.75
172	180	SLU-INV	Min	0.07	-8.77	-0.61	-12.06	-7.32	0.44	3.32	3.90
173	205	SLE-INV	Max	0.03	-6.54	-0.04	-5.79	-4.57	-0.07	0.84	4.61
173	204	SLE-INV	Max	0.03	-6.51	-0.26	-5.71	-4.53	0.34	0.84	4.56
173	180	SLE-INV	Max	0.12	-6.49	-0.25	-5.12	-4.06	0.37	0.79	4.56
173	181	SLE-INV	Max	0.12	-6.53	-0.03	-5.20	-4.11	-0.04	0.79	4.61
173	205	SLE-INV	Min	0.03	-6.54	-0.04	-7.12	-5.37	-0.09	0.68	2.91
173	204	SLE-INV	Min	0.03	-6.51	-0.26	-7.02	-5.32	0.26	0.68	2.88
173	180	SLE-INV	Min	0.12	-6.49	-0.25	-6.22	-4.59	0.29	0.64	2.88
173	181	SLE-INV	Min	0.12	-6.53	-0.03	-6.33	-4.64	-0.06	0.64	2.91
173	205	SLU-INV	Max	0.04	-6.54	-0.04	-7.82	-6.17	-0.09	1.67	13.26
173	204	SLU-INV	Max	0.05	-6.51	-0.26	-7.70	-6.11			

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
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Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 123 di 180			
173	180	SLU-INV	Max	0.17	-6.49	-0.25	-6.91	-5.49	0.81	1.54	13.16
173	181	SLU-INV	Max	0.16	-6.53	-0.03	-7.02	-5.54	-0.05	1.54	13.26
173	205	SLU-INV	Min	0.03	-8.83	-0.06	-13.95	-9.48	-0.18	0.91	3.93
173	204	SLU-INV	Min	0.03	-8.78	-0.35	-13.74	-9.39	0.35	0.91	3.89
173	180	SLU-INV	Min	0.12	-8.76	-0.34	-11.89	-7.27	0.39	0.86	3.89
173	181	SLU-INV	Min	0.12	-8.81	-0.05	-12.09	-7.36	-0.13	0.86	3.93
174	206	SLE-INV	Max	0.03	-6.47	0.41	-5.64	-4.49	-0.35	-1.24	4.53
174	205	SLE-INV	Max	0.02	-6.55	0.19	-5.80	-4.57	-0.03	-1.24	4.61
174	181	SLE-INV	Max	0.11	-6.53	0.17	-5.21	-4.11	-0.08	-1.17	4.61
174	182	SLE-INV	Max	0.12	-6.45	0.39	-5.06	-4.03	-0.41	-1.17	4.53
174	206	SLE-INV	Min	0.03	-6.47	0.41	-6.94	-5.28	-0.46	-1.54	2.86
174	205	SLE-INV	Min	0.02	-6.55	0.19	-7.13	-5.37	-0.04	-1.54	2.91
174	181	SLE-INV	Min	0.11	-6.53	0.17	-6.34	-4.64	-0.10	-1.45	2.91
174	182	SLE-INV	Min	0.12	-6.45	0.39	-6.15	-4.54	-0.53	-1.45	2.86
174	206	SLU-INV	Max	0.04	-6.47	0.55	-7.62	-6.06	-0.47	-1.68	13.08
174	205	SLU-INV	Max	0.02	-6.55	0.26	-7.83	-6.17	-0.04	-1.68	13.26
174	181	SLU-INV	Max	0.14	-6.53	0.23	-7.04	-5.55	-0.11	-1.59	13.26
174	182	SLU-INV	Max	0.16	-6.45	0.53	-6.83	-5.44	-0.55	-1.59	13.08
174	206	SLU-INV	Min	0.03	-8.73	0.41	-13.58	-9.31	-1.04	-3.08	3.86
174	205	SLU-INV	Min	0.02	-8.84	0.19	-13.96	-9.48	-0.11	-3.08	3.93
174	181	SLU-INV	Min	0.11	-8.81	0.17	-12.12	-7.37	-0.21	-2.85	3.93
174	182	SLU-INV	Min	0.12	-8.71	0.39	-11.75	-7.20	-1.14	-2.85	3.86
175	207	SLE-INV	Max	-0.01	-6.30	0.87	-5.32	-4.29	-0.62	-3.18	4.35
175	206	SLE-INV	Max	-0.04	-6.49	0.64	-5.72	-4.50	-0.31	-3.18	4.54
175	182	SLE-INV	Max	0.04	-6.47	0.59	-5.16	-4.05	-0.45	-3.01	4.54
175	183	SLE-INV	Max	0.08	-6.28	0.82	-4.77	-3.84	-0.76	-3.01	4.35
175	207	SLE-INV	Min	-0.01	-6.30	0.87	-6.54	-5.04	-0.82	-3.94	2.73
175	206	SLE-INV	Min	-0.04	-6.49	0.64	-7.03	-5.29	-0.42	-3.94	2.86
175	182	SLE-INV	Min	0.04	-6.47	0.59	-6.27	-4.58	-0.57	-3.71	2.86
175	183	SLE-INV	Min	0.08	-6.28	0.82	-5.79	-4.33	-0.98	-3.71	2.73
175	207	SLU-INV	Max	-0.01	-6.30	1.17	-7.19	-5.79	-0.83	-4.29	12.66
175	206	SLU-INV	Max	-0.04	-6.49	0.86	-7.72	-6.07	-0.42	-4.29	13.11
175	182	SLU-INV	Max	0.06	-6.47	0.80	-6.97	-5.47	-0.61	-4.06	13.11
175	183	SLU-INV	Max	0.11	-6.28	1.11	-6.44	-5.18	-1.02	-4.06	12.66
175	207	SLU-INV	Min	-0.01	-8.50	0.87	-12.76	-8.90	-1.86	-7.86	3.69
175	206	SLU-INV	Min	-0.06	-8.75	0.64	-13.73	-9.32	-0.97	-7.86	3.87
175	182	SLU-INV	Min	0.04	-8.73	0.59	-11.96	-7.26	-1.22	-7.28	3.87
175	183	SLU-INV	Min	0.08	-8.48	0.82	-11.01	-6.83	-2.11	-7.28	3.69
176	184	SLE-INV	Max	0.00	-5.98	1.28	-4.27	-3.52	-1.09	-4.95	4.05
176	208	SLE-INV	Max	-0.09	-6.00	1.35	-4.77	-3.94	-0.87	-5.22	4.05
176	207	SLE-INV	Max	-0.15	-6.33	1.11	-5.46	-4.31	-0.58	-5.22	4.37
176	183	SLE-INV	Max	-0.07	-6.31	1.04	-4.96	-3.89	-0.80	-4.95	4.37
176	184	SLE-INV	Min	0.00	-5.98	1.28	-5.17	-3.96	-1.41	-6.10	2.51
176	208	SLE-INV	Min	-0.09	-6.00	1.35	-5.84	-4.64	-1.16	-6.48	2.51
176	207	SLE-INV	Min	-0.15	-6.33	1.11	-6.70	-5.06	-0.77	-6.48	2.74
176	183	SLE-INV	Min	-0.07	-6.31	1.04	-6.02	-4.39	-1.02	-6.10	2.74
176	184	SLU-INV	Max	0.00	-5.98	1.73	-5.76	-4.76	-1.47	-6.68	11.91
176	208	SLU-INV	Max	-0.09	-6.00	1.82	-6.43	-5.32	-1.17	-7.05	11.91
176	207	SLU-INV	Max	-0.15	-6.33	1.50	-7.37	-5.81	-0.78	-7.05	12.70
176	183	SLU-INV	Max	-0.07	-6.31	1.41	-6.70	-5.25	-1.08	-6.68	12.70
176	184	SLU-INV	Min	0.00	-8.08	1.28	-9.76	-6.20	-3.03	-11.96	3.38
176	208	SLU-INV	Min	-0.12	-8.10	1.35	-11.33	-8.18	-2.63	-12.89	3.38
176	207	SLU-INV	Min	-0.21	-8.54	1.11	-13.04	-8.91	-1.79	-12.89	3.70
176	183	SLU-INV	Min	-0.09	-8.52	1.04	-11.43	-6.95	-2.18	-11.96	3.70
177	185	SLE-INV	Max	-0.14	-5.57	1.78	-3.57	-3.09	-1.36	-7.05	3.63
177	209	SLE-INV	Max	-0.22	-5.59	1.88	-3.98	-3.47	-1.06	-7.42	3.63
177	208	SLE-INV	Max	-0.31	-6.04	1.62	-4.96	-3.97	-0.83	-7.42	4.07
177	184	SLE-INV	Max	-0.23	-6.03	1.52	-4.55	-4.03	-1.13	-7.05	4.07
177	185	SLE-INV	Min	-0.14	-5.57	1.78	-4.29	-3.46	-1.76	-8.67	2.21
177	209	SLE-INV	Min	-0.22	-5.59	1.88	-4.85	-4.08	-1.42	-9.19	2.21
177	208	SLE-INV	Min	-0.31	-6.04	1.62	-6.07	-4.66	-1.11	-9.19	2.52
177	184	SLE-INV	Min	-0.23	-6.03	1.52	-5.51	-4.05	-1.45	-8.67	2.52
177	185	SLU-INV	Max	-0.14	-5.57	2.40	-4.82	-4.17	-1.84	-9.52	10.89
177	209	SLU-INV	Max	-0.22	-5.59	2.53	-5.37	-4.68	-1.43	-10.02	10.89
177	208	SLU-INV	Max	-0.31	-6.04	2.19	-6.70	-5.36	-1.12	-10.02	11.98
177	184	SLU-INV	Max	-0.23	-6.03	2.05	-6.15	-4.85	-1.52	-9.52	11.98
177	185	SLU-INV	Min	-0.19	-7.53	1.78	-7.99	-5.35	-3.79	-16.96	2.98
177	209	SLU-INV	Min	-0.29	-7.55	1.88	-9.32	-7.19	-3.26	-18.25	2.98
177	208	SLU-INV	Min	-0.42	-8.16	1.62	-11.74	-8.20	-2.56	-18.25	3.40
177	184	SLU-INV	Min	-0.31	-8.14	1.52	-10.37	-6.39	-3.10	-16.96	3.40
178	186	SLE-INV	Max	-0.33	-5.06	2.30	-2.62	-2.54	-1.56	-9.27	3.12
178	210	SLE-INV	Max	-0.40	-5.08	2.43	-2.91	-2.87	-1.19	-9.72	3.12
178	209	SLE-INV	Max	-0.51	-5.65	2.16	-4.21	-3.50	-1.03	-9.72	3.66
178	185	SLE-INV	Max	-0.45	-5.64	2.03	-3.92	-3.17	-1.40	-9.27	3.66
178	186	SLE-INV	Min	-0.33	-5.06	2.30	-2.43	-2.82	-2.01	-11.38	1.85
178	210	SLE-INV	Min	-0.40	-5.08	2.43	-3.52	-3.37	-1.60	-12.02	1.85
178	209	SLE-INV	Min	-0.51	-5.65	2.16	-5.12	-4.10	-1.38	-12.02	2.23
178	185	SLE-INV	Min	-0.45	-5.64	2.03	-4.71	-3.57	-1.80	-11.38	2.23
178	186	SLU-INV	Max	-0.33	-5.06	3.11	-3.54	-3.43	-2.10	-12.52	9.63
178	210	SLU-INV	Max	-0.40	-5.08	3.28	-3.93	-3.87	-1.60	-13.12	9.63
178	209	SLU-INV	Max	-0.51	-5.65	2.91	-5.68	-4.72	-1.39	-13.12	10.99
178	185	SLU-INV	Max	-0.45	-5.64	2.74	-5.29	-4.28	-1.89	-12.52	10.99
178	186	SLU-INV	Min	-0.45	-6.84	2.30	-5.66	-4.26	-4.34	-22.19	2.49
178	210	SLU-INV	Min	-0.54	-6.85	2.43	-6.64	-5.93	-3.68	-23.79	2.49
178	209	SLU-INV	Min	-0.69	-7.63	2.16	-9.80	-7.21	-3.20	-23.79	3.01
178	185	SLU-INV	Min	-0.60	-7.61	2.03	-8.76	-5.58	-3.85	-22.19	3.01
179	187	SLE-INV	Max	-0.58	-4.46	2.87	-1.39	-1.88	-1.65	-11.65	2.54
179	211	SLE-INV	Max	-0.62	-4.46	3.03	-1.53	-2.15	-1.23	-12.15	2.54
179	210	SLE-INV	Max	-0.75	-5.15	2.73	-3.15	-2.90	-1.16	-12.15	3.16
179	186	SLE-INV	Max	-0.71	-5.14	2.57	-3.00	-2.63	-1.58	-11.65	3.16
179	187	SLE-INV	Min	-0.58	-4.46	2.87	-1.59	-2.06	-2.13	-14.28	1.44
179	211	SLE-INV	Min	-0.62	-4.46	3.03	-1.80	-2.52	-1.66	-15.00	1.44
179	210	SLE-INV	Min	-0.75	-5.15	2.73	-3.81	-3.39	-1.57	-15.00	1.87
179	186	SLE-INV	Min	-0.71	-5.14	2.57	-3.58	-2.94	-2.04	-14.28	1.87
179	187	SLU-INV	Max	-0.58	-4.46	3.87	-1.87	-2.54	-2.22	-15.73	8.15
179	211	SLU-INV	Max	-0.62	-4.46	4.09	-2.06	-2.90	-1.66	-16.41	8.15
179	210	SLU-INV	Max	-0.75	-5.15	3.68	-4.26	-3.91	-1.57	-16.41	9.75
179	186	SLU-INV	Max	-0.71	-5.14	3.47	-4.05	-3.55	-2.13	-15.73	9.75
179	187	SLU-INV	Min	-0.78	-6.02	2.87	-2.65	-2.96	-4.61	-27.70	1.95
179	211	SLU-INV	Min	-0.83	-6.03	3.03	-3.21	-4.42	-3.86	-29.59	1.95
179	210	SLU-INV	Min	-1.02	-6.95	2.73	-7.15	-5.94	-3.63	-29.59	2.52
179	186	SLU-INV	Min	-0.96	-6.94	2.57	-6.51	-4.53	-4.38	-27.70	2.52
180	188	SLE-INV	Max	-0.87	-3.76	3.49	0.36	-1.12	-1.62	-14.22	1.91
180	212	SLE-INV	Max	-0.88	-3.77	3.67	0.38	-1.32	-1.17	-14.75	1.91
180	211	SLE-INV	Max	-1.04	-4.55	3.35	-1.74	-2.17	-1.21	-14.75	2.58
180	187	SLE-INV	Max	-1.03	-4.55	3.17	-1.76	-1.97	-1.66	-14.22	2.58
180	188	SLU-INV	Min	-0.87	-3.76	3.49	0.21	-1.17	-2.10	-17.39	1.02
180	212	SLU-INV	Min	-0.88	-3.77	3.67	0.24	-1.54	-1.59	-18.18	1.02
180	211	SLU-INV	Min	-1.04	-4.55	3.35	-2.06	-2.53	-1.64	-18.18	1.47
180	187	SLU-INV	Min	-1.03	-4.55	3.17	-2.05	-2.17	-2.19	-17.39	1.47
180	188	SLU-INV	Max	-0.87	-3.76	4.71	1.14	-1.4			

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 124 di 180
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180	212	SLU-INV	Max	-0.88	-3.77	4.96	1.08	-1.78	-1.58	-19.91	6.50
180	211	SLU-INV	Max	-1.04	-4.55	4.52	-2.35	-2.93	-1.64	-19.91	8.29
180	187	SLU-INV	Max	-1.03	-4.55	4.27	-2.37	-2.66	-1.24	-19.20	8.29
180	188	SLU-INV	Min	-1.18	-5.08	3.49	0.28	-1.59	-4.54	-33.58	1.37
180	212	SLU-INV	Min	-1.19	-5.08	3.67	0.32	-2.67	-3.74	-35.69	1.37
180	211	SLU-INV	Min	-1.40	-6.14	3.35	-3.69	-4.40	-3.83	-35.69	1.98
180	187	SLU-INV	Min	-1.39	-6.14	3.17	-3.52	-3.25	-4.63	-33.58	1.98
181	189	SLE-INV	Max	-1.21	-3.00	4.18	2.84	-0.19	-1.45	-17.02	1.28
181	213	SLE-INV	Max	-1.18	-2.99	4.39	3.10	-0.41	-1.01	-17.54	1.28
181	212	SLE-INV	Max	-1.35	-3.86	4.02	0.20	-1.33	-1.17	-17.54	1.96
181	188	SLE-INV	Max	-1.38	-3.87	3.82	-0.03	-1.20	-1.62	-17.02	1.96
181	189	SLE-INV	Min	-1.21	-3.00	4.18	2.24	-0.27	-1.88	-20.76	0.60
181	213	SLE-INV	Min	-1.18	-2.99	4.39	2.46	-0.46	-1.38	-21.57	0.60
181	212	SLE-INV	Min	-1.35	-3.86	4.02	0.10	-1.54	-1.59	-21.57	1.04
181	188	SLE-INV	Min	-1.38	-3.87	3.82	-0.10	-1.29	-2.10	-20.76	1.04
181	189	SLE-INV	Max	-1.21	-3.00	5.65	5.87	-1.96	-22.98	4.74	4.74
181	213	SLU-INV	Max	-1.18	-2.99	5.92	6.38	-0.56	-1.36	-23.68	4.74
181	212	SLU-INV	Max	-1.35	-3.86	5.43	0.72	-1.79	-1.58	-23.68	6.67
181	188	SLU-INV	Max	-1.38	-3.87	5.15	0.36	-1.62	-2.18	-22.98	6.67
181	189	SLU-INV	Min	-1.64	-4.05	4.18	3.03	-0.37	-4.11	-39.88	0.82
181	213	SLU-INV	Min	-1.59	-4.04	4.39	3.32	-0.73	-3.31	-42.14	0.82
181	212	SLU-INV	Min	-1.83	-5.21	4.02	0.13	-2.62	-3.75	-42.14	1.41
181	188	SLU-INV	Min	-1.87	-5.22	3.82	-0.14	-1.76	-4.55	-39.88	1.41
182	190	SLE-INV	Max	-1.59	-2.18	4.90	5.95	0.87	-1.13	-20.10	0.69
182	214	SLE-INV	Max	-1.51	-2.17	5.12	6.48	0.69	-0.74	-20.55	0.69
182	213	SLE-INV	Max	-1.69	-3.10	4.80	3.07	-0.39	-1.03	-20.55	1.34
182	189	SLE-INV	Max	-1.78	-3.11	4.57	2.60	-0.28	-1.43	-20.10	1.34
182	190	SLE-INV	Min	-1.59	-2.18	4.90	4.82	0.63	-1.48	-24.44	0.25
182	214	SLE-INV	Min	-1.51	-2.17	5.12	5.23	0.56	-1.03	-25.20	0.25
182	213	SLE-INV	Min	-1.69	-3.10	4.80	2.45	-0.43	-1.41	-25.20	0.63
182	189	SLE-INV	Min	-1.78	-3.11	4.57	2.07	-0.33	-1.86	-24.44	0.63
182	190	SLU-INV	Max	-1.59	-2.18	6.61	11.72	2.05	-1.53	-27.13	2.94
182	214	SLU-INV	Max	-1.51	-2.17	6.92	12.86	1.37	-1.00	-27.74	2.94
182	213	SLU-INV	Max	-1.69	-3.10	6.48	6.25	-0.53	-1.39	-27.74	4.93
182	189	SLU-INV	Max	-1.78	-3.11	6.17	5.30	-0.03	-1.73	-27.13	4.93
182	190	SLU-INV	Min	-2.15	-2.95	4.90	6.51	0.86	-3.24	-46.67	0.33
182	214	SLU-INV	Min	-2.04	-2.92	5.12	7.07	0.75	-2.52	-49.00	0.33
182	213	SLU-INV	Min	-2.29	-4.18	4.80	3.31	-0.61	-3.35	-49.00	0.85
182	189	SLU-INV	Min	-2.40	-4.20	4.57	2.79	-0.45	-4.07	-46.67	0.85
183	191	SLE-INV	Max	-2.00	-1.32	6.09	6.09	1.97	-0.67	-23.46	0.19
183	215	SLE-INV	Max	-1.86	-1.29	6.31	10.84	1.87	-0.77	-23.80	0.19
183	214	SLE-INV	Max	-2.06	-2.27	5.35	6.68	0.77	-0.79	-23.80	0.74
183	190	SLE-INV	Max	-2.19	-2.30	5.13	5.96	0.82	-1.08	-23.46	0.74
183	191	SLE-INV	Min	-2.00	-1.32	6.09	8.06	1.58	-0.87	-28.46	-0.01
183	215	SLE-INV	Min	-1.86	-1.29	6.31	8.67	1.54	-0.54	-29.11	-0.01
183	214	SLE-INV	Min	-2.06	-2.27	5.35	5.43	0.61	-1.09	-29.11	0.28
183	190	SLE-INV	Min	-2.19	-2.30	5.13	4.87	0.62	-1.42	-28.46	0.28
183	191	SLU-INV	Max	-2.00	-1.32	8.22	18.93	3.97	-0.90	-31.68	1.19
183	215	SLU-INV	Max	-1.86	-1.29	8.51	20.72	3.55	-0.51	-32.12	1.19
183	214	SLU-INV	Max	-2.06	-2.27	7.22	13.09	1.57	-1.07	-32.12	3.15
183	190	SLU-INV	Max	-2.19	-2.30	6.92	11.53	1.85	-1.46	-31.68	3.15
183	191	SLU-INV	Min	-2.70	-1.78	6.09	10.88	2.13	-1.91	-54.01	-0.01
183	215	SLU-INV	Min	-2.51	-1.75	6.31	11.70	2.08	-1.38	-56.31	-0.01
183	214	SLU-INV	Min	-2.77	-3.07	5.35	7.33	0.83	-2.62	-56.31	0.37
183	190	SLU-INV	Min	-2.96	-3.11	5.13	6.57	0.84	-3.15	-54.01	0.37
184	192	SLU-INV	Max	-2.42	-0.48	4.38	14.69	3.06	-0.06	-27.15	-0.10
184	216	SLU-INV	Max	-2.22	-0.44	4.70	15.72	3.02	0.06	-27.99	-0.10
184	215	SLU-INV	Max	-2.42	-1.41	8.23	11.27	1.02	-2.47	-27.99	0.25
184	191	SLE-INV	Max	-2.62	-1.45	7.91	10.23	2.00	-0.58	-27.15	0.25
184	192	SLE-INV	Min	-2.42	-0.48	4.38	12.13	2.51	-0.07	-32.84	-0.15
184	216	SLE-INV	Min	-2.22	-0.44	4.70	12.89	2.50	0.05	-33.31	-0.15
184	215	SLE-INV	Min	-2.42	-1.41	8.23	9.15	1.66	-0.64	-33.31	0.02
184	191	SLE-INV	Min	-2.62	-1.45	7.91	8.45	1.63	-0.77	-32.84	0.02
184	192	SLU-INV	Max	-2.42	-0.48	5.91	27.78	5.88	-0.08	-36.65	-0.14
184	216	SLU-INV	Max	-2.22	-0.44	6.35	30.20	5.72	0.08	-36.85	-0.14
184	215	SLU-INV	Max	-2.42	-1.41	11.11	21.48	3.88	-0.63	-36.85	1.42
184	191	SLU-INV	Max	-2.62	-1.45	10.68	19.33	3.87	-0.78	-36.65	1.42
184	192	SLU-INV	Min	-3.27	-0.65	4.38	16.37	3.38	-0.12	-61.93	-0.41
184	216	SLU-INV	Min	-3.00	-0.60	4.70	17.40	3.37	0.07	-64.08	-0.41
184	215	SLU-INV	Min	-3.26	-1.90	8.23	12.35	2.24	-1.55	-64.08	0.03
184	191	SLU-INV	Min	-3.53	-1.95	7.91	11.40	2.20	-1.75	-61.93	0.03
185	217	SLE-INV	Max	-2.05	-0.41	-4.99	16.45	3.22	-0.05	33.60	-0.05
185	193	SLE-INV	Max	-2.24	-0.45	-4.70	15.76	3.22	0.06	33.59	-0.05
185	194	SLE-INV	Max	-2.40	-1.25	-8.56	11.54	2.25	0.49	33.59	-0.08
185	218	SLE-INV	Max	-2.22	-1.22	-8.85	12.86	2.28	0.38	33.60	-0.08
185	217	SLE-INV	Min	-2.05	-0.41	-4.99	13.37	2.64	-0.05	27.27	-0.09
185	193	SLE-INV	Min	-2.24	-0.45	-4.70	12.91	2.62	0.05	27.53	-0.09
185	194	SLE-INV	Min	-2.40	-1.25	-8.56	9.45	1.82	0.34	27.53	-0.26
185	218	SLE-INV	Min	-2.22	-1.22	-8.85	9.88	1.86	0.24	27.27	-0.26
185	217	SLU-INV	Max	-2.05	-0.41	-4.99	32.22	6.20	-0.06	65.97	-0.06
185	193	SLU-INV	Max	-2.24	-0.45	-4.70	30.33	6.31	0.11	64.57	-0.06
185	194	SLU-INV	Max	-2.40	-1.25	-8.56	22.19	4.42	1.27	64.57	0.80
185	218	SLU-INV	Max	-2.22	-1.22	-8.85	23.82	4.44	1.09	65.97	0.80
185	217	SLU-INV	Min	-2.77	-0.55	-6.73	18.05	3.56	-0.08	36.81	-0.30
185	193	SLU-INV	Min	-3.03	-0.61	-6.34	17.43	3.54	0.07	37.17	-0.30
185	194	SLU-INV	Min	-3.24	-1.69	-11.55	12.76	2.46	0.46	37.17	-0.35
185	218	SLU-INV	Min	-2.99	-1.64	-11.94	13.34	2.51	0.33	36.81	-0.35
186	219	SLE-INV	Max	-1.90	-1.95	-5.83	7.82	1.14	0.37	29.84	0.04
186	218	SLE-INV	Max	-1.74	-1.12	-6.87	11.62	2.15	0.29	29.84	-0.11
186	194	SLE-INV	Max	-1.88	-1.15	-6.67	11.01	2.16	0.58	29.84	-0.11
186	195	SLE-INV	Max	-2.05	-1.97	-5.63	7.27	1.12	0.96	29.84	0.04
186	219	SLE-INV	Min	-1.90	-1.95	-5.83	6.31	0.92	0.43	24.16	-0.32
186	218	SLE-INV	Min	-1.74	-1.12	-6.87	9.39	1.76	0.16	24.16	-0.26
186	194	SLE-INV	Min	-1.88	-1.15	-6.67	8.97	1.72	0.42	24.24	-0.26
186	195	SLE-INV	Min	-2.05	-1.97	-5.63	5.91	0.86	0.68	24.24	-0.32
186	219	SLU-INV	Max	-1.90	-1.95	-5.83	15.54	2.28	1.89	58.84	1.89
186	218	SLU-INV	Max	-1.74	-1.12	-6.87	23.00	4.15	0.94	58.84	0.64
186	194	SLU-INV	Max	-1.88	-1.15	-6.67	21.49	4.40	1.42	57.26	0.64
186	195	SLU-INV	Max	-2.05	-1.97	-5.63	14.24	2.43	2.37	57.26	1.89
186	219	SLU-INV	Min	-2.57	-2.63	-7.88	8.52	1.24	0.58	32.62	-0.43
186	218	SLU-INV	Min	-2.35	-1.51	-9.27	12.68	2.38	0.22	32.62	-0.35
186	194	SLU-INV	Min	-2.54	-1.55	-9.00	12.10	2.33	0.56	32.72	-0.35
186	195	SLU-INV	Min	-2.77	-2.67	-7.61	7.98	1.17	0.92	32.72	-0.43
187	221	SLE-INV	Max	-1.60	-2.66	-5.35	4.14	0.01	0.91	26.23	0.27
187	219	SLE-INV	Max	-1.44	-1.85	-5.65	7.54	1.07	0.61	26.23	0.02
187	195	SLE-INV	Max	-1.53	-1.87	-5.45	7.08	1.10	1.02	25.91	0.02
187	196	SLE-INV	Max	-1.69	-2.68	-5.15	3.72	0.02	1.32	25.91	0.02
187	221	SLE-INV	Min	-1.60	-2.66	-5.35	3.30	-0.03	0.59	21.20	-0.27
187	219	SLE-INV	Min	-1.44	-1.85	-5.65	6.05	0.87	0.38	21.20	-0.32
187	195	SLE-INV	Min	-1.53	-1.87	-5.45</					



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N. progr. 01	REV. A	Pag.di Pag. 125 di 180		
187	221	SLU-INV Max	-1.60	-2.66	-5.35	8.44	0.17	2.51	51.91	3.03
187	219	SLU-INV Max	-1.44	-1.85	-5.65	15.14	2.09	1.80	51.91	1.74
187	195	SLU-INV Max	-1.53	-1.87	-5.45	14.07	2.51	2.46	50.31	1.74
187	196	SLU-INV Max	-1.69	-2.68	-5.15	7.54	0.51	3.17	50.31	3.03
187	221	SLU-INV Min	-2.16	-3.59	-7.22	4.46	-0.04	0.80	28.62	-0.36
187	219	SLU-INV Min	-1.94	-2.50	-7.62	8.17	1.17	0.51	28.62	-0.43
187	195	SLU-INV Min	-2.07	-2.53	-7.36	7.71	1.11	0.99	28.54	-0.43
187	196	SLU-INV Min	-2.28	-3.61	-6.95	4.02	-0.11	1.29	28.54	-0.36
188	223	SLE-INV Max	-1.30	-3.32	-4.56	1.12	-0.92	1.07	22.79	0.57
188	221	SLE-INV Max	-1.15	-2.57	-4.93	4.06	-0.03	0.88	22.79	0.25
188	196	SLE-INV Max	-1.20	-2.58	-4.74	3.77	0.05	1.35	22.39	0.25
188	197	SLE-INV Max	-1.35	-3.33	-4.37	0.86	-0.96	1.54	22.39	0.57
188	223	SLE-INV Min	-1.30	-3.32	-4.56	0.84	-1.06	0.71	18.39	-0.14
188	221	SLE-INV Min	-1.15	-2.57	-4.93	3.22	-0.04	0.57	18.39	-0.27
188	196	SLE-INV Min	-1.20	-2.58	-4.74	2.99	-0.07	0.98	18.23	-0.27
188	197	SLE-INV Min	-1.35	-3.33	-4.37	0.62	-1.01	1.13	18.23	-0.14
188	223	SLU-INV Max	-1.30	-3.32	-4.56	2.52	-1.24	2.89	45.31	4.20
188	221	SLU-INV Max	-1.15	-2.57	-4.93	8.36	0.05	2.46	45.31	2.90
188	196	SLU-INV Max	-1.20	-2.58	-4.74	7.76	0.65	3.22	43.69	2.90
188	197	SLU-INV Max	-1.35	-3.33	-4.37	2.07	-1.27	3.65	43.69	4.20
188	223	SLU-INV Min	-1.75	-4.48	-6.16	1.14	-1.80	0.96	24.83	-0.19
188	221	SLU-INV Min	-1.55	-3.47	-6.66	4.35	-0.06	0.76	24.83	-0.37
188	196	SLU-INV Min	-1.61	-3.48	-6.40	4.03	-0.10	1.33	24.61	-0.37
188	197	SLU-INV Min	-1.82	-4.49	-5.90	0.84	-1.37	1.53	24.61	-0.19
189	225	SLE-INV Max	-1.02	-3.90	-3.89	-1.06	-1.70	1.15	19.63	0.90
189	223	SLE-INV Max	-0.89	-3.24	-4.22	1.19	-0.91	1.06	19.63	0.55
189	197	SLE-INV Max	-0.90	-3.24	-4.04	1.06	-0.92	1.55	19.18	0.55
189	198	SLE-INV Max	-1.03	-3.90	-3.71	-1.17	-1.72	1.64	19.18	0.90
189	225	SLE-INV Min	-1.02	-3.90	-3.89	-1.23	-2.01	0.78	15.80	0.03
189	223	SLE-INV Min	-0.89	-3.24	-4.22	0.89	-1.07	0.71	15.80	-0.14
189	197	SLE-INV Min	-0.90	-3.24	-4.04	0.78	-0.95	1.14	15.58	-0.14
189	198	SLE-INV Min	-1.03	-3.90	-3.71	-1.33	-1.90	1.21	15.58	0.03
189	225	SLU-INV Max	-1.02	-3.90	-3.89	-1.43	-2.30	3.03	39.23	5.35
189	223	SLU-INV Max	-0.89	-3.24	-4.22	2.69	-1.23	2.86	39.23	4.08
189	197	SLU-INV Max	-0.90	-3.24	-4.04	2.52	-1.09	3.67	37.59	4.08
189	198	SLU-INV Max	-1.03	-3.90	-3.71	-1.57	-2.32	3.84	37.59	5.35
189	225	SLU-INV Min	-1.38	-5.26	-5.25	-2.14	-3.55	1.05	21.33	0.04
189	223	SLU-INV Min	-1.20	-4.37	-5.69	1.21	-1.87	0.95	21.33	-0.19
189	197	SLU-INV Min	-1.21	-4.37	-5.45	1.05	-1.28	1.54	21.03	-0.19
189	198	SLU-INV Min	-1.39	-5.27	-5.02	-2.18	-2.82	1.64	21.03	0.04
190	226	SLE-INV Max	-0.78	-4.42	-3.27	-2.58	-2.40	1.15	16.40	1.23
190	225	SLE-INV Max	-0.66	-3.83	-3.57	-0.93	-1.68	1.15	16.68	0.88
190	198	SLE-INV Max	-0.63	-3.82	-3.42	-0.93	-1.66	1.63	16.23	0.88
190	199	SLE-INV Max	-0.75	-4.42	-3.12	-2.58	-2.38	1.63	16.23	1.23
190	226	SLE-INV Min	-0.78	-4.42	-3.27	-3.12	-2.84	0.79	13.40	0.22
190	225	SLE-INV Min	-0.66	-3.83	-3.57	-1.07	-1.99	0.78	13.40	0.03
190	198	SLE-INV Min	-0.63	-3.82	-3.42	-1.04	-1.82	1.20	13.15	0.03
190	199	SLE-INV Min	-0.75	-4.42	-3.12	-3.07	-2.68	1.21	13.15	0.22
190	226	SLU-INV Max	-0.78	-4.42	-3.27	-3.48	-3.24	3.00	33.44	6.40
190	225	SLU-INV Max	-0.66	-3.83	-3.57	-1.25	-2.27	3.04	33.44	5.24
190	198	SLU-INV Max	-0.63	-3.82	-3.42	-1.26	-2.25	3.82	31.94	5.24
190	199	SLU-INV Max	-0.75	-4.42	-3.12	-3.48	-3.22	3.77	31.94	6.40
190	226	SLU-INV Min	-1.05	-5.97	-4.42	-5.92	-5.08	1.06	18.09	0.30
190	225	SLU-INV Min	-0.89	-5.17	-4.82	-1.82	-3.57	1.06	18.09	0.03
190	198	SLU-INV Min	-0.85	-5.16	-4.61	-1.61	-2.62	1.63	17.76	0.03
190	199	SLU-INV Min	-1.01	-5.97	-4.21	-5.62	-4.17	1.63	17.76	0.30
191	227	SLE-INV Max	-0.55	-4.89	-2.68	-3.80	-3.02	1.07	13.83	1.55
191	226	SLE-INV Max	-0.44	-4.36	-2.97	-2.41	-2.37	1.17	13.83	1.21
191	199	SLE-INV Max	-0.40	-4.35	-2.83	-2.30	-2.32	1.61	13.41	1.21
191	200	SLE-INV Max	-0.50	-4.88	-2.55	-3.70	-2.97	1.51	13.41	1.55
191	227	SLE-INV Min	-0.55	-4.89	-2.68	-4.66	-3.58	0.74	11.10	0.41
191	226	SLE-INV Min	-0.44	-4.36	-2.97	-2.93	-2.82	0.80	11.10	0.21
191	199	SLE-INV Min	-0.40	-4.35	-2.83	-2.74	-2.59	1.19	10.85	0.21
191	200	SLE-INV Min	-0.50	-4.88	-2.55	-4.46	-3.36	1.13	10.85	0.41
191	227	SLU-INV Max	-0.55	-4.89	-2.68	-5.13	-4.08	2.77	27.80	7.34
191	226	SLU-INV Max	-0.44	-4.36	-2.97	-3.26	-3.21	3.03	27.80	6.31
191	199	SLU-INV Max	-0.40	-4.35	-2.83	-3.11	-3.14	3.74	26.49	6.31
191	200	SLU-INV Max	-0.50	-4.88	-2.55	-4.99	-4.01	3.48	26.49	7.34
191	227	SLU-INV Min	-0.74	-6.60	-3.62	-9.03	-6.42	1.00	14.99	0.56
191	226	SLU-INV Min	-0.60	-5.88	-4.00	-5.56	-5.08	1.08	14.99	0.29
191	199	SLU-INV Min	-0.54	-5.87	-3.83	-4.98	-3.97	1.61	14.65	0.29
191	200	SLU-INV Min	-0.68	-6.59	-3.44	-8.38	-5.35	1.52	14.65	0.56
191	228	SLE-INV Max	-0.36	-5.27	-2.12	-4.73	-3.53	0.93	11.08	1.82
192	207	SLE-INV Max	-0.27	-4.83	-2.39	-3.62	-2.99	1.10	11.08	1.53
192	200	SLE-INV Max	-0.20	-4.82	-2.28	-3.42	-2.91	1.48	10.71	1.53
192	201	SLE-INV Max	-0.29	-5.26	-2.01	-4.53	-3.45	1.31	10.71	1.82
192	228	SLE-INV Min	-0.36	-5.27	-2.12	-5.83	-4.19	0.64	8.88	0.59
192	227	SLE-INV Min	-0.27	-4.83	-2.39	-4.44	-3.55	0.76	8.88	0.41
192	200	SLE-INV Min	-0.20	-4.82	-2.28	-4.13	-3.28	1.10	8.65	0.41
192	201	SLE-INV Min	-0.29	-5.26	-2.01	-5.51	-3.92	0.98	8.65	0.59
192	228	SLU-INV Max	-0.36	-5.27	-2.12	-6.39	-4.77	2.38	22.33	8.15
192	227	SLU-INV Max	-0.27	-4.83	-2.39	-4.89	-4.04	2.82	22.33	7.26
192	200	SLU-INV Max	-0.20	-4.82	-2.28	-4.62	-3.93	3.43	21.22	7.26
192	201	SLU-INV Max	-0.29	-5.26	-2.01	-6.12	-4.66	3.00	21.22	8.15
192	228	SLU-INV Min	-0.48	-7.12	-2.86	-11.43	-7.53	0.87	11.99	0.79
192	227	SLU-INV Min	-0.36	-6.52	-3.23	-8.65	-6.41	1.03	11.99	0.55
192	200	SLU-INV Min	-0.27	-6.51	-3.08	-7.76	-5.16	1.49	11.68	0.55
192	201	SLU-INV Min	-0.39	-7.10	-2.71	-10.50	-6.31	1.32	11.68	0.79
193	229	SLE-INV Max	-0.20	-5.57	-1.58	-5.41	-3.93	0.72	8.43	2.05
193	228	SLE-INV Max	-0.13	-5.23	-1.84	-4.56	-3.50	0.96	8.43	1.81
193	201	SLE-INV Max	-0.05	-5.21	-1.75	-4.28	-3.40	1.27	8.13	1.81
193	202	SLE-INV Max	-0.11	-5.56	-1.49	-5.13	-3.83	1.03	8.13	2.05
193	229	SLE-INV Min	-0.20	-5.57	-1.58	-6.68	-4.66	0.50	6.75	0.73
193	228	SLE-INV Min	-0.13	-5.23	-1.84	-5.63	-4.16	0.67	6.75	0.58
193	201	SLE-INV Min	-0.05	-5.21	-1.75	-5.21	-3.85	0.95	6.56	0.58
193	202	SLE-INV Min	-0.11	-5.56	-1.49	-6.26	-4.35	0.77	6.56	0.73
193	229	SLE-INV Max	-0.20	-5.57	-1.58	-7.30	-5.31	1.86	17.03	8.79
193	228	SLU-INV Max	-0.13	-5.23	-1.84	-6.16	-4.73	2.44	17.03	8.08
193	201	SLU-INV Max	-0.05	-5.21	-1.75	-5.78	-4.59	2.94	16.14	8.08
193	202	SLU-INV Max	-0.11	-5.56	-1.49	-6.92	-5.16	2.35	16.14	8.79
193	229	SLU-INV Min	-0.26	-7.52	-2.13	-13.20	-8.39	0.68	9.11	0.99
193	228	SLU-INV Min	-0.17	-7.06	-2.48	-11.08	-7.51	0.91	9.11	0.78
193	201	SLU-INV Min	-0.06	-7.04	-2.37	-9.94	-6.15	1.28	8.86	0.78
193	202	SLU-INV Min	-0.15	-7.50	-2.02	-12.03	-7.05	1.05	8.86	0.99
194	230	SLE-INV Max	-0.07	-5.78	-1.06	-5.85	-4.21	0.88	5.86	2.22
194	229	SLE-INV Max	-0.02	-5.54	-1.31	-5.27	-3.91	0.77	5.86	2.04
194	203	SLE-INV Max	0.07	-5.52	-1.25	-4.93	-3.78	0.99	5.64	2.04
194	203	SLE-INV Min	0.02	-5.77	-1.00	-5.51	-4.08	0.70	5.64	2.22
194	230	SLE-INV Min	-0.07	-5.78	-1.06	-7.25	-4.99	0.33	4.69	0.84
194	229	SLE-INV Min	-0.02	-5.54	-1.11	-6.52	-4.64	0.54	4.69	0.73
194	202	SLE-INV Min	0.07	-5.52	-1.25	-6.02	-4.30	0.74	4.55	0.73

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1**Tratto Fabriano - Matelica Nord****Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita****Relazione di calcolo**

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	O16800	REL	01	A	126 di 180			
194	203	SLE-INV	Min	0.02	-5.77	-1.00	-6.74	-4.65	0.53	4.55	0.84
194	230	SLU-INV	Max	-0.07	-5.78	-1.06	-7.90	-5.68	1.24	11.86	9.24
194	229	SLU-INV	Max	-0.02	-5.54	-1.31	-7.11	-5.27	1.93	11.86	8.74
194	202	SLU-INV	Max	0.09	-5.52	-1.25	-6.65	-5.10	2.28	11.23	8.74
194	203	SLU-INV	Max	0.02	-5.77	-1.00	-7.44	-5.51	1.60	11.23	9.24
194	230	SLU-INV	Min	-0.10	-7.81	-1.43	-14.38	-9.00	0.45	6.33	1.14
194	229	SLU-INV	Min	-0.03	-7.48	-1.77	-12.91	-8.37	0.73	6.33	0.98
194	202	SLU-INV	Min	0.07	-7.45	-1.69	-11.59	-6.93	1.00	6.14	0.98
194	203	SLU-INV	Min	0.02	-7.78	-1.34	-13.04	-7.56	0.72	6.14	1.14
195	231	SLE-INV	Max	0.01	-5.90	-0.55	-6.09	-4.37	0.21	3.35	2.31
195	230	SLE-INV	Max	0.04	-5.76	-0.79	-5.75	-4.19	0.53	3.35	2.21
195	203	SLE-INV	Max	0.14	-5.74	-0.76	-5.37	-4.05	0.66	3.22	2.21
195	204	SLE-INV	Max	0.11	-5.88	-0.51	-5.71	-4.23	0.34	3.22	2.31
195	231	SLE-INV	Min	0.01	-5.90	-0.55	-7.55	-5.18	0.14	2.68	0.91
195	230	SLE-INV	Min	0.04	-5.76	-0.79	-7.13	-4.98	0.38	2.68	0.84
195	203	SLE-INV	Min	0.14	-5.74	-0.76	-6.58	-4.61	0.49	2.59	0.84
195	204	SLE-INV	Min	0.11	-5.88	-0.51	-6.99	-4.82	0.26	2.59	0.91
195	231	SLU-INV	Max	0.02	-5.90	-0.55	-8.22	-5.90	0.55	6.78	9.51
195	230	SLU-INV	Max	0.06	-5.76	-0.79	-7.77	-5.66	1.31	6.78	9.21
195	203	SLU-INV	Max	0.18	-5.74	-0.76	-7.25	-5.47	1.52	6.41	9.21
195	204	SLU-INV	Max	0.14	-5.88	-0.51	-7.71	-5.71	0.76	6.41	9.51
195	231	SLU-INV	Min	-0.01	-7.97	-0.74	-15.02	-9.34	0.20	3.62	1.22
195	230	SLU-INV	Min	0.04	-7.78	-1.07	-14.18	-8.98	0.51	3.62	1.13
195	203	SLU-INV	Min	0.14	-7.75	-1.03	-12.74	-7.48	0.66	3.50	1.13
195	204	SLU-INV	Min	0.11	-7.94	-0.69	-13.57	-7.85	0.35	3.50	1.22
196	232	SLE-INV	Max	0.06	-5.93	-0.05	-6.12	-4.40	-0.05	0.87	2.34
196	231	SLE-INV	Max	0.06	-5.89	-0.29	-6.04	-4.36	0.26	0.87	2.31
196	204	SLE-INV	Max	0.16	-5.87	-0.28	-5.64	-4.21	0.29	0.83	2.31
196	205	SLE-INV	Max	0.15	-5.91	-0.04	-5.73	-4.26	-0.03	0.83	2.34
196	232	SLE-INV	Min	0.06	-5.93	-0.05	-7.60	-5.23	-0.07	0.70	0.92
196	231	SLE-INV	Min	0.06	-5.89	-0.29	-7.49	-5.17	0.19	0.70	0.90
196	204	SLE-INV	Min	0.16	-5.87	-0.28	-6.91	-4.80	0.22	0.67	0.90
196	205	SLE-INV	Min	0.15	-5.91	-0.04	-7.02	-4.85	-0.04	0.67	0.92
196	232	SLU-INV	Max	0.08	-5.93	-0.05	-8.27	-5.95	-0.07	1.76	9.57
196	231	SLU-INV	Max	0.09	-5.89	-0.29	-8.15	-5.88	0.63	1.76	9.49
196	204	SLU-INV	Max	0.22	-5.87	-0.28	-7.62	-5.69	0.68	1.66	9.49
196	205	SLU-INV	Max	0.21	-5.91	-0.04	-7.73	-5.75	-0.03	1.66	9.57
196	232	SLU-INV	Min	0.06	-8.00	-0.06	-15.14	-9.43	-0.16	0.94	1.25
196	231	SLU-INV	Min	0.06	-7.95	-0.39	-14.92	-9.33	0.25	0.94	1.22
196	204	SLU-INV	Min	0.16	-7.93	-0.38	-13.42	-8.00	0.29	0.91	1.22
196	205	SLU-INV	Min	0.15	-7.98	-0.05	-13.64	-7.90	-0.10	0.91	1.25
197	233	SLE-INV	Max	0.06	-5.86	0.45	-5.97	-4.32	-0.25	-1.28	2.29
197	232	SLE-INV	Max	0.05	-5.93	0.21	-6.13	-4.40	-0.01	-1.28	2.34
197	205	SLE-INV	Max	0.14	-5.91	0.20	-5.74	-4.26	-0.07	-1.24	2.34
197	206	SLE-INV	Max	0.16	-5.84	0.44	-5.58	-4.17	-0.31	-1.24	2.29
197	233	SLE-INV	Min	0.06	-5.86	0.45	-7.41	-5.12	-0.35	-1.60	0.89
197	232	SLE-INV	Min	0.05	-5.93	0.21	-7.61	-5.23	-0.02	-1.60	0.92
197	205	SLE-INV	Min	0.14	-5.91	0.20	-7.03	-4.86	-0.09	-1.54	0.92
197	206	SLE-INV	Min	0.16	-5.84	0.44	-6.83	-4.75	-0.42	-1.54	0.89
197	233	SLU-INV	Max	0.08	-5.86	0.61	-8.06	-5.83	-0.34	-1.73	9.43
197	232	SLU-INV	Max	0.06	-5.93	0.29	-8.28	-5.95	-0.02	-1.73	9.57
197	205	SLU-INV	Max	0.19	-5.91	0.26	-7.74	-5.75	-0.09	-1.67	9.57
197	206	SLU-INV	Max	0.21	-5.84	0.59	-7.53	-5.63	-0.42	-1.67	9.43
197	233	SLU-INV	Min	0.06	-7.91	0.45	-14.75	-9.25	-0.86	-3.26	1.20
197	232	SLU-INV	Min	0.05	-8.00	0.21	-15.15	-9.42	-0.08	-3.26	1.25
197	205	SLU-INV	Min	0.14	-7.98	0.20	-13.65	-7.91	-0.18	-3.08	1.25
197	206	SLU-INV	Min	0.16	-7.88	0.44	-13.26	-7.72	-0.97	-3.08	1.20
198	234	SLE-INV	Max	0.02	-5.70	0.97	-5.70	-4.11	-0.63	-3.17	2.17
198	233	SLE-INV	Max	-0.01	-5.87	0.71	-6.03	-4.33	-0.21	-3.27	2.29
198	206	SLE-INV	Max	0.08	-5.85	0.67	-5.66	-4.19	-0.35	-3.17	2.29
198	207	SLE-INV	Max	0.12	-5.68	0.93	-5.25	-3.98	-0.58	-3.17	2.17
198	234	SLE-INV	Min	0.02	-5.70	0.97	-6.96	-4.88	-0.61	-4.09	0.81
198	233	SLE-INV	Min	-0.01	-5.87	0.71	-7.47	-5.13	-0.30	-4.09	0.89
198	206	SLE-INV	Min	0.08	-5.85	0.67	-6.93	-4.78	-0.46	-3.93	0.89
198	207	SLE-INV	Min	0.12	-5.68	0.93	-6.43	-4.52	-0.77	-3.93	0.81
198	234	SLU-INV	Max	0.03	-5.70	1.31	-7.59	-5.55	-0.59	-4.42	9.09
198	233	SLU-INV	Max	-0.01	-5.87	0.96	-8.14	-5.84	-0.28	-4.42	9.45
198	206	SLU-INV	Max	0.11	-5.85	0.90	-7.64	-5.66	-0.47	-4.28	9.45
198	207	SLU-INV	Max	0.16	-5.68	1.25	-7.09	-5.37	-0.78	-4.28	9.09
198	234	SLU-INV	Min	0.02	-7.69	0.97	-13.83	-8.81	-1.52	-8.29	1.09
198	233	SLU-INV	Min	-0.02	-7.93	0.71	-14.87	-9.26	-0.79	-8.29	1.20
198	206	SLU-INV	Min	0.08	-7.90	0.67	-13.44	-7.78	-1.05	-7.84	1.20
198	207	SLU-INV	Min	0.12	-7.67	0.93	-12.43	-7.32	-1.78	-7.84	1.09
199	235	SLE-INV	Max	0.03	-5.40	1.44	-4.69	-3.64	-0.83	-5.21	1.96
199	235	SLE-INV	Max	-0.05	-5.42	1.51	-5.01	-3.76	-0.60	-5.37	1.96
199	234	SLE-INV	Max	-0.12	-5.73	1.24	-5.73	-4.13	-0.39	-5.37	2.18
199	207	SLE-INV	Max	-0.03	-5.71	1.17	-5.41	-4.01	-0.62	-5.21	2.18
199	208	SLE-INV	Min	0.03	-5.40	1.44	-5.72	-4.13	-1.11	-6.46	0.68
199	235	SLE-INV	Min	-0.05	-5.42	1.51	-6.20	-4.46	-0.86	-6.72	0.68
199	234	SLE-INV	Min	-0.12	-5.73	1.24	-7.10	-4.90	-0.56	-6.72	0.82
199	207	SLE-INV	Min	-0.03	-5.71	1.17	-6.62	-4.57	-0.82	-6.46	0.82
199	208	SLE-INV	Max	0.04	-5.40	1.94	-6.33	-4.91	-1.12	-7.03	8.52
199	235	SLU-INV	Max	-0.05	-5.42	2.03	-6.77	-5.07	-0.81	-7.25	8.52
199	234	SLU-INV	Max	-0.12	-5.73	1.68	-7.74	-5.58	-0.58	-7.25	9.14
199	207	SLU-INV	Max	-0.03	-5.71	1.59	-7.31	-5.42	-0.83	-7.03	9.14
199	208	SLU-INV	Min	0.03	-7.30	1.44	-10.99	-6.63	-2.56	-12.86	0.91
199	235	SLU-INV	Min	-0.07	-7.32	1.51	-12.25	-8.06	-2.15	-13.59	0.91
199	234	SLU-INV	Min	-0.16	-7.73	1.24	-14.06	-8.83	-1.45	-13.59	1.10
199	207	SLU-INV	Min	-0.04	-7.71	1.17	-12.77	-7.42	-1.86	-12.86	1.10
200	209	SLE-INV	Max	-0.11	-5.03	1.99	-3.90	-3.18	-1.03	-7.40	1.69
200	236	SLE-INV	Max	-0.18	-5.05	2.09	-4.15	-3.27	-0.72	-7.61	1.69
200	235	SLE-INV	Max	-0.27	-5.46	1.80	-5.17	-3.79	-0.56	-7.61	1.97
200	208	SLE-INV	Max	-0.19	-5.45	1.70	-4.92	-3.69	-0.86	-7.40	1.97
200	209	SLE-INV	Min	-0.11	-5.03	1.99	-4.73	-3.59	-1.38	-9.17	0.50
200	236	SLE-INV	Min	-0.18	-5.05	2.09	-5.10	-3.89	-1.04	-9.51	0.50
200	235	SLE-INV	Min	-0.27	-5.46	1.80	-6.38	-4.49	-0.81	-9.51	0.68
200	208	SLE-INV	Min	-0.19	-5.45	1.70	-6.00	-4.20	-1.15	-9.17	0.68
200	209	SLU-INV	Max	-0.11	-5.03	2.69	-5.27	-4.29	-1.39	-9.99	7.73
200	236	SLU-INV	Max	-0.18	-5.05	2.82	-5.60	-4.42	-0.98	-10.28	7.73
200	235	SLU-INV	Max	-0.27	-5.46	2.43	-6.98	-5.11	-0.76	-10.28	8.58
200	208	SLU-INV	Max	-0.19	-5.45	2.30	-6.65	-4.98	-1.17	-9.99	8.58
200	209	SLU-INV	Min	-0.14	-6.79	1.99	-8.97	-5.70	-3.19	-18.20	0.68
200	236	SLU-INV	Min	-0.25	-6.81	2.09	-10.00	-7.02	-2.64	-19.20	0.68
200	235	SLU-INV	Min	-0.36	-7.38	1.80	-12.57	-8.07	-2.08	-19.20	0.92
200	208	SLU-INV	Min	-0.26	-7.36	1.70	-11.50	-6.78	-2.63	-18.20	0.92
201	210	SLE-INV	Max	-0.29	-4.56	2.57	-2.84	-2.60	-1.16	-9.70	1.36
201	237	SLE-INV	Max	-0.35	-4.58	2.69	-2.99	-2.66	-0.79	-9.94	1.36
201	236	SLE-INV	Max	-0.46	-5.10	2.39	-4.33	-3.30	-0.69	-9.94	1.71
201	209	SLE-INV	Max	-0.40	-5.09	2.27	-4.17	-3.24	-1.06	-9.70	1.71
201	210	SLE-INV	Min	-0.29	-4.56	2.57	-3.40	-2.51	-1.50	-12.00	0.30
201	237	SLE-INV	Min	-0.35	-4.58	2.69	-3.65	-3.16	-1.15	-12.40	0.30

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	127 di 180			
201	236	SLE-INV	Min	-0.46	-5.10	2.39	-5.32	-3.91	-1.00	-12.40	0.51
201	209	SLE-INV	Min	-0.40	-5.09	2.27	-5.06	-3.67	-1.42	-12.00	0.51
201	210	SLU-INV	Max	-0.29	-4.56	3.47	-3.83	-3.51	-1.56	-13.09	6.76
201	237	SLU-INV	Max	-0.35	-4.58	3.64	-4.04	-3.60	-1.07	-13.42	6.76
201	236	SLU-INV	Max	-0.46	-5.10	3.23	-5.85	-4.46	-0.93	-13.42	7.81
201	209	SLU-INV	Max	-0.40	-5.09	3.07	-5.64	-4.37	-1.43	-13.09	7.81
201	210	SLU-INV	Min	-0.40	-6.16	2.57	-6.30	-4.52	-3.63	-23.74	0.41
201	237	SLU-INV	Min	-0.48	-6.18	2.69	-7.03	-5.70	-2.96	-24.97	0.41
201	236	SLU-INV	Min	-0.62	-6.89	2.39	-10.38	-7.03	-2.58	-24.97	0.69
201	209	SLU-INV	Min	-0.54	-6.87	2.27	-9.59	-5.88	-3.25	-23.74	0.69
202	211	SLE-INV	Max	-0.53	-4.01	3.19	-1.46	-1.91	-1.21	-12.13	1.00
202	238	SLE-INV	Max	-0.56	-4.02	3.34	-1.50	-1.94	-0.80	-12.39	1.00
202	237	SLE-INV	Max	-0.69	-4.64	3.02	-3.17	-2.69	-0.77	-12.39	1.38
202	210	SLE-INV	Max	-0.65	-4.64	2.87	-3.13	-2.66	-1.18	-12.13	1.38
202	211	SLE-INV	Min	-0.53	-4.01	3.19	-1.69	-2.10	-1.64	-14.98	0.09
202	238	SLE-INV	Min	-0.56	-4.02	3.34	-1.79	-2.30	-1.17	-15.42	0.09
202	237	SLE-INV	Min	-0.69	-4.64	3.02	-3.87	-3.19	-1.12	-15.42	0.31
202	210	SLE-INV	Min	-0.65	-4.64	2.87	-3.76	-3.00	-1.59	-14.98	0.31
202	211	SLU-INV	Max	-0.53	-4.01	4.31	-1.97	-2.57	-1.63	-16.38	5.65
202	238	SLU-INV	Max	-0.56	-4.02	4.51	-2.03	-2.62	-1.08	-16.72	5.65
202	237	SLU-INV	Max	-0.69	-4.64	4.07	-4.28	-3.64	-1.04	-16.72	6.86
202	210	SLU-INV	Max	-0.65	-4.64	3.87	-4.22	-3.59	-1.60	-16.38	6.86
202	211	SLU-INV	Min	-0.71	-5.42	3.19	-2.89	-3.11	-3.82	-29.53	0.13
202	238	SLU-INV	Min	-0.76	-5.43	3.34	-3.26	-4.14	-3.07	-30.96	0.13
202	237	SLU-INV	Min	-0.93	-6.27	3.02	-7.42	-5.70	-2.92	-30.96	0.42
202	210	SLU-INV	Min	-0.88	-6.26	2.87	-6.97	-4.73	-3.67	-29.53	0.42
203	212	SLE-INV	Max	-0.81	-3.39	3.86	0.48	-1.12	-1.17	-14.73	0.64
203	239	SLE-INV	Max	-0.81	-3.39	4.03	0.55	-1.12	-0.73	-14.97	0.64
203	238	SLE-INV	Max	-0.95	-4.10	3.68	-1.65	-1.96	-0.79	-14.97	1.03
203	211	SLE-INV	Max	-0.95	-4.10	3.52	-1.72	-1.97	-1.22	-14.73	1.03
203	212	SLE-INV	Min	-0.81	-3.39	3.86	0.30	-1.18	-1.59	-18.15	-0.10
203	239	SLE-INV	Min	-0.81	-3.39	4.03	0.38	-1.32	-1.09	-18.61	-0.10
203	238	SLE-INV	Min	-0.95	-4.10	3.68	-1.97	-2.32	-1.16	-18.61	0.10
203	211	SLE-INV	Min	-0.95	-4.10	3.52	-2.02	-2.19	-1.65	-18.15	0.10
203	212	SLU-INV	Max	-0.81	-3.39	5.21	1.38	-1.49	-1.57	-19.89	4.43
203	239	SLU-INV	Max	-0.81	-3.39	5.43	1.42	-1.51	-0.99	-20.21	4.43
203	238	SLU-INV	Max	-0.95	-4.10	4.97	-2.22	-2.65	-1.06	-20.21	5.77
203	211	SLU-INV	Max	-0.95	-4.10	4.75	-2.32	-2.65	-1.65	-19.89	5.77
203	212	SLU-INV	Min	-1.09	-4.58	3.86	0.40	-1.60	-3.74	-35.63	-0.14
203	239	SLU-INV	Min	-1.09	-4.58	4.03	0.51	-2.34	-2.94	-37.21	-0.14
203	238	SLU-INV	Min	-1.28	-5.13	3.68	-3.53	-4.01	-3.04	-37.21	0.14
203	211	SLU-INV	Min	-1.28	-5.13	3.52	-3.53	-3.33	-3.85	-35.63	0.14
204	213	SLE-INV	Max	-1.12	-2.70	4.59	3.19	-0.15	-1.02	-17.53	0.31
204	240	SLE-INV	Max	-1.08	-2.70	4.78	3.44	-0.22	-0.60	-17.71	0.31
204	239	SLE-INV	Max	-1.24	-3.48	4.39	0.46	-1.13	-0.74	-17.71	0.67
204	212	SLE-INV	Max	-1.28	-3.48	4.21	0.24	-1.16	-1.16	-17.53	0.67
204	213	SLE-INV	Min	-1.12	-2.70	4.59	2.51	-0.24	-1.40	-21.55	-0.25
204	240	SLE-INV	Min	-1.08	-2.70	4.78	2.72	-0.24	-0.92	-21.97	-0.25
204	239	SLE-INV	Min	-1.24	-3.48	4.39	0.31	-1.31	-1.10	-21.97	-0.09
204	212	SLE-INV	Min	-1.28	-3.48	4.21	0.12	-1.25	-1.58	-21.55	-0.09
204	213	SLU-INV	Max	-1.12	-2.70	6.20	6.64	0.31	-1.38	-23.66	3.15
204	240	SLU-INV	Max	-1.08	-2.70	6.45	7.14	-0.30	-0.81	-23.91	3.15
204	239	SLU-INV	Max	-1.24	-3.48	5.93	1.23	-1.52	-1.00	-23.91	4.56
204	212	SLU-INV	Max	-1.28	-3.48	5.68	0.86	-1.56	-1.57	-23.66	4.56
204	213	SLU-INV	Min	-1.51	-3.65	4.59	3.39	-0.33	-3.33	-42.10	-0.34
204	240	SLU-INV	Min	-1.46	-3.64	4.78	3.67	-0.35	-2.55	-43.75	-0.34
204	239	SLU-INV	Min	-1.67	-4.69	4.39	0.42	-2.27	-2.95	-43.75	-0.13
204	212	SLU-INV	Min	-1.72	-4.70	4.21	0.16	-1.70	-3.77	-42.10	-0.33
205	214	SLE-INV	Max	-1.47	-1.97	5.34	6.54	0.94	-0.78	-20.54	0.04
205	241	SLE-INV	Max	-1.38	-1.95	5.53	6.98	0.90	-0.41	-20.63	0.04
205	240	SLE-INV	Max	-1.55	-2.79	5.20	3.50	-0.20	-0.62	-20.63	0.34
205	213	SLE-INV	Max	-1.64	-2.81	5.00	3.11	-0.19	-1.00	-20.54	0.34
205	214	SLE-INV	Min	-1.47	-1.97	5.34	5.27	0.69	-1.07	-25.19	-0.32
205	241	SLE-INV	Min	-1.38	-1.95	5.53	5.59	0.73	-0.65	-25.54	-0.32
205	240	SLE-INV	Min	-1.55	-2.79	5.20	2.78	-0.21	-0.95	-25.54	-0.24
205	213	SLE-INV	Min	-1.64	-2.81	5.00	2.47	-0.26	-1.37	-25.19	-0.24
205	214	SLU-INV	Max	-1.47	-1.97	7.20	13.07	2.25	-1.05	-27.73	1.89
205	241	SLU-INV	Max	-1.38	-1.95	7.47	14.05	1.78	-0.55	-27.85	1.89
205	240	SLU-INV	Max	-1.55	-2.79	7.02	7.18	-0.23	-0.84	-27.85	3.30
205	213	SLU-INV	Max	-1.64	-2.81	6.75	6.37	0.14	-1.34	-27.73	3.30
205	214	SLU-INV	Min	-1.98	-2.66	5.34	7.11	0.93	-2.59	-48.98	-0.43
205	241	SLU-INV	Min	-1.87	-2.64	5.53	7.55	0.98	-1.90	-50.64	-0.43
205	240	SLU-INV	Min	-2.09	-3.77	5.20	3.75	-0.28	-1.60	-50.64	-0.33
205	213	SLU-INV	Min	-2.21	-3.79	5.00	3.34	-0.34	-3.29	-48.98	-0.33
206	215	SLE-INV	Max	-1.84	-1.20	6.56	10.68	2.08	-0.44	-23.81	-0.11
206	242	SLE-INV	Max	-1.70	-1.17	6.76	11.26	2.07	-0.18	-23.75	-0.11
206	241	SLE-INV	Max	-1.87	-2.05	5.76	7.26	0.98	-0.46	-23.75	0.07
206	214	SLE-INV	Max	-2.02	-2.08	5.56	6.72	0.96	-0.73	-23.81	0.07
206	215	SLE-INV	Min	-1.84	-1.20	6.56	8.68	1.65	-0.62	-29.12	-0.27
206	242	SLE-INV	Min	-1.70	-1.17	6.76	9.10	1.69	-0.31	-29.33	-0.27
206	241	SLE-INV	Min	-1.87	-2.05	5.76	5.85	0.78	-0.71	-29.33	-0.32
206	214	SLE-INV	Min	-2.02	-2.08	5.56	5.46	0.73	-1.02	-29.12	-0.32
206	215	SLU-INV	Max	-1.84	-1.20	8.85	20.87	4.26	-0.60	-32.14	0.71
206	242	SLU-INV	Max	-1.70	-1.17	9.12	22.32	3.98	-0.24	-32.06	0.71
206	241	SLU-INV	Max	-1.87	-2.05	7.78	14.45	1.99	-0.62	-32.06	2.05
206	214	SLU-INV	Max	-2.02	-2.08	7.51	13.19	2.15	-0.98	-32.14	2.05
206	215	SLU-INV	Min	-2.48	-1.62	6.56	11.72	2.23	-1.51	-56.30	-0.36
206	242	SLU-INV	Min	-2.29	-1.58	6.76	12.29	2.28	-1.01	-57.89	-0.36
206	241	SLU-INV	Min	-2.53	-2.77	5.76	7.90	1.05	-2.00	-57.89	-0.43
206	214	SLU-INV	Min	-2.72	-2.81	5.56	7.37	0.98	-2.50	-56.30	-0.43
207	216	SLE-INV	Max	-2.22	-0.44	4.70	15.73	3.22	-0.05	-27.33	-0.05
207	243	SLE-INV	Max	-2.04	-0.41	4.99	16.42	3.21	0.05	-27.07	-0.05
207	242	SLE-INV	Max	-2.21	-1.27	8.77	11.84	2.20	-0.26	-27.07	-0.08
207	215	SLE-INV	Max	-2.40	-1.31	8.48	11.22	2.17	-0.36	-27.33	-0.08
207	216	SLE-INV	Min	-2.22	-0.44	4.70	12.88	2.62	-0.06	-33.34	-0.09
207	243	SLE-INV	Min	-2.04	-0.41	4.99	13.34	2.63	0.05	-33.36	-0.09
207	242	SLE-INV	Min	-2.21	-1.27	8.77	9.62	1.79	-0.41	-33.36	-0.27
207	215	SLE-INV	Min	-2.40	-1.31	8.48	9.20	1.76	-0.53	-33.34	-0.27
207	216	SLU-INV	Max	-2.22	-0.44	6.35	30.30	6.30	-0.07	-36.89	-0.07
207	243	SLU-INV	Max	-2.04	-0.41	6.74	32.16	6.19	0.08	-36.54	-0.07
207	242	SLU-INV	Max	-2.21	-1.27	11.84	23.21	4.30	-0.35	-36.54	0.89
207	215	SLU-INV	Max	-2.40	-1.31	11.45	21.58	4.27	-0.49	-36.89	0.89
207	216	SLU-INV	Min	-3.00	-0.60	4.70	17.39	3.53	-0.12	-64.11	-0.31
207	243	SLU-INV	Min	-2.75	-0.55	4.99	18.01	3.55	0.07	-65.52	-0.31
207	242	SLU-INV	Min	-2.98	-1.72	8.77	12.99	2.42	-1.16	-65.52	-0.36
207	215	SLU-INV	Min	-3.24	-1.77	8.48	12.41	2.37	-1.36	-64.11	-0.36
208	244	SLE-INV	Max	-1.88	-0.38	-5.25	16.81	3.33	-0.04	33.29	0.00
208	217	SLE-INV	Max	-2.05	-0.41	-4.99	16.43	3.32	0.05	33.64	0.00
208	218	SLE-INV	Max	-2.20	-1.14	-9.05	12.21	2.37	0.29	33.64	-0.32
208	245	SLE-									



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 128 di 180			
208	217	SLE-INV	Min	-2.05	-0.41	-4.99	13.34	2.67	0.04	27.30	-0.04
208	218	SLE-INV	Min	-2.20	-1.14	-9.05	9.92	1.90	0.16	27.30	-0.46
208	245	SLE-INV	Min	-2.02	-1.10	-9.32	10.10	1.94	0.08	26.74	-0.46
208	244	SLU-INV	Max	-1.88	-0.38	-5.25	33.58	6.55	-0.05	66.78	0.00
208	217	SLU-INV	Max	-2.05	-0.41	-4.99	32.25	6.62	0.09	66.03	0.00
208	218	SLU-INV	Max	-2.20	-1.14	-9.05	23.93	4.73	0.94	66.03	0.41
208	245	SLU-INV	Max	-2.02	-1.10	-9.32	25.06	4.77	0.79	66.78	0.41
208	244	SLU-INV	Min	-2.53	-0.51	-7.09	18.26	3.65	-0.06	36.11	-0.20
208	217	SLU-INV	Min	-2.77	-0.55	-6.73	18.01	3.61	0.06	36.86	-0.20
208	218	SLU-INV	Min	-2.97	-1.54	-12.22	13.39	2.57	0.22	36.86	-0.62
208	245	SLU-INV	Min	-2.73	-1.49	-12.58	13.63	2.62	0.10	36.11	-0.62
209	245	SLE-INV	Max	-1.60	-1.02	-7.25	11.99	2.30	0.12	29.70	-0.32
209	218	SLE-INV	Max	-1.72	-1.04	-7.07	11.62	2.25	0.36	29.86	-0.32
209	219	SLE-INV	Max	-1.87	-1.78	-6.03	7.86	1.24	0.60	29.86	-0.45
209	246	SLE-INV	Max	-1.75	-1.76	-6.21	8.20	1.31	0.35	29.70	-0.45
209	245	SLE-INV	Min	-1.60	-1.02	-7.25	9.61	1.86	0.01	23.81	-0.44
209	218	SLE-INV	Min	-1.72	-1.04	-7.07	9.37	1.77	0.23	24.18	-0.44
209	219	SLE-INV	Min	-1.87	-1.78	-6.03	6.34	0.95	0.37	24.18	-0.75
209	246	SLE-INV	Min	-1.75	-1.76	-6.21	6.56	1.04	0.15	23.81	-0.75
209	245	SLU-INV	Max	-1.60	-1.02	-7.25	24.19	4.51	0.66	59.81	0.30
209	218	SLU-INV	Max	-1.72	-1.04	-7.07	23.08	4.66	1.06	58.88	0.30
209	219	SLU-INV	Max	-1.87	-1.78	-6.03	15.65	2.71	1.78	58.88	1.06
209	246	SLU-INV	Max	-1.75	-1.76	-6.21	16.59	2.65	1.37	59.81	1.06
209	245	SLU-INV	Min	-2.16	-1.38	-9.79	12.97	2.51	0.01	32.15	-0.59
209	218	SLU-INV	Min	-2.33	-1.41	-9.55	12.66	2.39	0.31	32.65	-0.59
209	219	SLU-INV	Min	-2.53	-2.41	-8.14	8.55	1.28	0.50	32.65	-1.01
209	246	SLU-INV	Min	-2.36	-2.38	-8.38	8.86	1.41	0.21	32.15	-1.01
210	246	SLE-INV	Max	-1.32	-1.68	-6.02	7.86	1.23	0.30	26.29	-0.46
210	219	SLE-INV	Max	-1.40	-1.69	-5.84	7.53	1.18	0.66	26.26	-0.46
210	221	SLE-INV	Max	-1.55	-2.41	-5.53	4.20	0.14	0.87	26.26	-0.44
210	247	SLE-INV	Max	-1.47	-2.41	-5.71	4.57	0.23	0.51	26.29	-0.44
210	246	SLE-INV	Min	-1.32	-1.68	-6.02	6.27	1.00	0.11	21.03	-0.73
210	219	SLE-INV	Min	-1.40	-1.69	-5.84	6.05	0.88	0.42	21.21	-0.73
210	221	SLE-INV	Min	-1.55	-2.41	-5.53	3.32	0.02	0.56	21.21	-0.89
210	247	SLE-INV	Min	-1.47	-2.41	-5.71	3.60	0.16	0.25	21.03	-0.89
210	246	SLU-INV	Max	-1.32	-1.68	-6.02	15.97	2.43	1.28	53.17	0.94
210	219	SLU-INV	Max	-1.40	-1.69	-5.84	15.14	2.70	1.90	52.05	0.94
210	221	SLU-INV	Max	-1.55	-2.41	-5.53	8.69	0.76	2.44	52.05	1.86
210	247	SLU-INV	Max	-1.47	-2.41	-5.71	9.52	0.60	1.85	53.17	1.89
210	246	SLU-INV	Min	-1.79	-2.27	-8.13	8.47	1.34	0.15	28.39	-0.99
210	219	SLU-INV	Min	-1.90	-2.29	-7.89	8.16	1.19	0.57	28.69	-0.99
210	221	SLU-INV	Min	-2.09	-3.26	-7.47	4.49	0.03	0.76	28.64	-1.20
210	247	SLU-INV	Min	-1.98	-3.25	-7.71	4.86	0.22	0.34	28.39	-1.20
211	247	SLE-INV	Max	-1.07	-2.31	-5.29	4.39	0.18	0.47	23.01	-0.51
211	221	SLE-INV	Max	-1.09	-2.31	-5.12	4.08	0.13	0.90	22.81	-0.51
211	223	SLE-INV	Max	-1.23	-3.01	-4.74	1.17	-0.84	1.06	22.81	-0.35
211	248	SLE-INV	Max	-1.21	-3.02	-4.92	1.51	-0.69	0.63	23.01	-0.34
211	247	SLE-INV	Min	-1.07	-2.31	-5.29	3.47	0.14	0.22	18.38	-0.93
211	221	SLE-INV	Min	-1.09	-2.31	-5.12	3.23	0.00	0.59	18.39	-0.93
211	223	SLE-INV	Min	-1.23	-3.01	-4.74	0.86	-0.88	0.70	18.39	-0.94
211	248	SLE-INV	Min	-1.21	-3.02	-4.92	1.14	-0.80	0.33	18.38	-0.94
211	247	SLU-INV	Max	-1.07	-2.31	-5.29	9.07	0.42	1.78	46.71	1.65
211	221	SLU-INV	Max	-1.09	-2.31	-5.12	8.43	0.81	2.50	45.39	1.62
211	223	SLU-INV	Max	-1.23	-3.01	-4.74	2.75	-1.09	2.87	45.39	2.71
211	248	SLU-INV	Max	-1.21	-3.02	-4.92	3.40	-0.93	2.17	46.71	2.76
211	247	SLU-INV	Min	-1.44	-3.12	-7.15	4.69	0.19	0.30	24.81	-1.26
211	221	SLU-INV	Min	-1.48	-3.11	-6.91	4.37	0.00	0.79	24.82	-1.26
211	223	SLU-INV	Min	-1.67	-4.06	-6.40	1.46	-1.16	0.95	24.02	-1.27
211	248	SLU-INV	Min	-1.63	-4.07	-6.64	1.55	-1.37	0.45	24.81	-1.28
212	248	SLE-INV	Max	-0.83	-2.90	-4.56	1.51	-0.68	0.62	19.86	-0.45
212	223	SLE-INV	Max	-0.82	-2.89	-4.40	1.26	-0.84	1.06	19.61	-0.46
212	225	SLE-INV	Max	-0.95	-3.53	-4.05	-1.04	-1.60	1.14	19.61	-0.25
212	249	SLE-INV	Max	-0.95	-3.53	-4.22	-0.87	-1.46	0.70	19.86	-0.25
212	248	SLE-INV	Min	-0.83	-2.90	-4.56	1.13	-0.80	0.32	15.85	-1.02
212	223	SLE-INV	Min	-0.82	-2.89	-4.40	0.92	-0.86	0.71	15.79	-1.02
212	225	SLE-INV	Min	-0.95	-3.53	-4.05	-1.22	-1.78	0.77	15.79	-0.98
212	249	SLE-INV	Min	-0.95	-3.53	-4.22	-1.04	-1.73	0.39	15.85	-0.98
212	248	SLU-INV	Max	-0.83	-2.90	-4.56	3.42	-0.92	2.15	40.39	2.45
212	223	SLU-INV	Max	-0.82	-2.89	-4.40	3.00	-0.97	2.85	39.11	2.40
212	225	SLU-INV	Max	-0.95	-3.53	-4.05	-1.41	-2.16	3.03	39.11	3.46
212	249	SLU-INV	Max	-0.95	-3.53	-4.22	-1.18	-1.97	2.31	40.39	3.48
212	248	SLU-INV	Min	-1.11	-3.92	-6.16	1.53	-1.43	0.43	21.40	-1.38
212	223	SLU-INV	Min	-1.11	-3.90	-5.93	1.24	-1.16	0.95	21.32	-1.38
212	225	SLU-INV	Min	-1.28	-4.76	-5.47	-2.10	-2.70	1.04	21.32	-1.32
212	249	SLU-INV	Min	-1.29	-4.77	-5.70	-1.89	-3.14	0.52	21.40	-1.32
213	249	SLE-INV	Max	-0.60	-3.45	-3.88	-0.81	-1.43	0.71	16.87	-0.30
213	225	SLE-INV	Max	-0.58	-3.44	-3.73	-0.90	-1.59	1.14	16.66	-0.30
213	226	SLE-INV	Max	-0.69	-4.00	-3.41	-2.56	-2.29	1.16	16.66	-0.12
213	250	SLE-INV	Max	-0.71	-4.00	-3.56	-2.50	-2.14	0.72	16.87	-0.12
213	249	SLE-INV	Min	-0.60	-3.45	-3.88	-0.92	-1.71	0.39	13.44	-1.00
213	225	SLE-INV	Min	-0.58	-3.44	-3.73	-1.00	-1.74	0.77	13.40	-1.00
213	226	SLE-INV	Min	-0.69	-4.00	-3.41	-3.10	-2.59	0.79	13.40	-0.96
213	250	SLE-INV	Min	-0.71	-4.00	-3.56	-3.08	-2.56	0.41	13.44	-0.96
213	249	SLU-INV	Max	-0.60	-3.45	-3.88	-1.09	-1.93	2.33	34.42	3.31
213	225	SLU-INV	Max	-0.58	-3.44	-3.73	-1.22	-2.15	3.02	33.35	3.29
213	226	SLU-INV	Max	-0.69	-4.00	-3.41	-3.46	-3.09	3.01	33.35	4.18
213	250	SLU-INV	Max	-0.71	-4.00	-3.56	-3.38	-2.90	2.30	34.42	4.18
213	249	SLU-INV	Min	-0.81	-4.66	-5.23	-1.52	-3.11	0.53	18.15	-1.35
213	225	SLU-INV	Min	-0.78	-4.64	-5.04	-1.51	-2.53	1.04	18.08	-1.35
213	226	SLU-INV	Min	-0.93	-5.40	-4.61	-5.83	-4.11	1.07	18.08	-1.30
213	250	SLU-INV	Min	-0.96	-5.40	-4.80	-6.02	-4.68	0.56	18.15	-1.30
214	250	SLE-INV	Max	-0.40	-3.94	-3.23	-2.38	-2.11	0.74	14.02	-0.13
214	226	SLE-INV	Max	-0.36	-3.94	-3.11	-2.38	-2.26	1.14	13.82	-0.13
214	227	SLE-INV	Max	-0.46	-4.42	-2.80	-3.79	-2.89	1.09	13.82	0.04
214	251	SLE-INV	Max	-0.50	-4.43	-2.92	-3.79	-2.74	0.69	14.02	0.04
214	250	SLE-INV	Min	-0.40	-3.94	-3.23	-2.92	-2.53	0.43	11.15	-0.95
214	226	SLE-INV	Min	-0.36	-3.94	-3.11	-2.85	-2.53	0.78	11.09	-0.95
214	227	SLE-INV	Min	-0.46	-4.42	-2.80	-4.61	-3.29	0.76	11.09	-0.91
214	251	SLE-INV	Min	-0.50	-4.43	-2.92	-4.69	-3.28	0.41	11.15	-0.91
214	250	SLU-INV	Max	-0.40	-3.94	-3.23	-3.22	-2.85	2.33	28.69	4.11
214	226	SLU-INV	Max	-0.36	-3.94	-3.11	-3.21	-3.05	2.99	27.77	4.11
214	227	SLU-INV	Max	-0.46	-4.42	-2.80	-5.11	-3.90	2.81	27.77	4.87
214	251	SLU-INV	Max	-0.50	-4.43	-2.92	-5.12	-3.70	2.15	28.69	4.87
214	250	SLU-INV	Min	-0.54	-5.33	-4.36	-5.67	-4.66	0.58	15.05	-1.29
214	226	SLU-INV	Min	-0.49	-5.31	-4.19	-5.30	-3.95	1.06	14.97	-1.29
214	227	SLU-INV	Min	-0.62	-5.97	-3.78	-8.84	-5.34	1.02	14.97	-1.22
214	251	SLU-INV	Min	-0.67	-5.98	-3.95	-9.28	-6.01	0.55	15.05	-1.22
215	251	SLE-INV	Max	-0.23	-4.38	-2.61	-3.65	-2.71	0.72	11.26	0.03
215	227	SLE-INV	Max	-0.17	-4.36	-2.51	-3.58	-2.85	1.07	11.07	0.03
215	228	SLE-INV	Max	-0.26	-4.77	-2.21	-4.71	-3.88	0.96	11.07	0.19
215	252	SLE-INV	Max	-0.32	-4.78	-2.32	-4.78</				

Opera	Tratto	Settore	CEE	WBS	Id.doc	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	129 di 180			
215	251	SLE-INV	Min	-0.23	-4.38	-2.61	-4.53	-3.25	0.43	8.94	-0.90
215	227	SLE-INV	Min	-0.17	-4.36	-2.51	-4.37	-3.23	0.74	8.87	-0.90
215	228	SLE-INV	Min	-0.26	-4.77	-2.21	-5.78	-3.86	0.67	8.87	-0.84
215	252	SLE-INV	Min	-0.32	-4.78	-2.32	-5.94	-3.88	0.36	8.94	-0.84
215	251	SLE-INV	Max	-0.23	-4.38	-2.61	-4.93	-3.66	2.19	23.10	4.81
215	227	SLE-INV	Max	-0.17	-4.36	-2.51	-4.84	-3.84	2.77	22.30	4.81
215	228	SLE-INV	Max	-0.26	-4.77	-2.21	-6.36	-4.56	2.43	22.30	5.47
215	252	SLE-INV	Max	-0.32	-4.78	-2.32	-6.45	-4.38	1.85	23.10	5.47
215	251	SLE-INV	Min	-0.32	-5.91	-3.53	-8.99	-6.00	0.58	12.07	-1.22
215	227	SLE-INV	Min	-0.24	-5.89	-3.38	-8.37	-5.19	0.99	11.97	-1.22
215	228	SLE-INV	Min	-0.35	-6.44	-2.99	-11.23	-6.35	0.90	11.97	-1.14
215	252	SLE-INV	Min	-0.43	-6.46	-3.13	-11.90	-7.13	0.49	12.07	-1.14
216	252	SLE-INV	Max	-0.10	-4.74	-2.02	-4.65	-3.21	0.64	8.58	0.18
216	228	SLE-INV	Max	-0.03	-4.72	-1.94	-4.52	-3.34	0.92	8.42	0.18
216	229	SLE-INV	Max	-0.09	-5.04	-1.65	-5.38	-3.75	0.76	8.42	0.32
216	253	SLE-INV	Max	-0.16	-5.06	-1.73	-5.50	-3.63	0.48	8.58	0.32
216	252	SLE-INV	Min	-0.10	-4.74	-2.02	-5.79	-3.85	0.39	6.81	-0.84
216	228	SLE-INV	Min	-0.03	-4.72	-1.94	-5.55	-3.81	0.64	6.74	-0.84
216	229	SLE-INV	Min	-0.09	-5.04	-1.65	-6.62	-4.31	0.54	6.74	-0.78
216	253	SLE-INV	Min	-0.16	-5.06	-1.73	-6.87	-4.34	0.29	6.81	-0.78
216	252	SLE-INV	Max	-0.10	-4.74	-2.02	-6.27	-4.34	1.91	17.65	5.42
216	229	SLE-INV	Max	-0.03	-4.72	-1.94	-6.10	-4.51	2.37	17.01	5.42
216	228	SLE-INV	Max	-0.09	-5.04	-1.65	-7.27	-5.07	1.92	17.01	5.95
216	253	SLE-INV	Max	-0.16	-5.06	-1.73	-7.43	-4.90	1.46	17.65	5.95
216	252	SLE-INV	Min	-0.14	-6.40	-2.72	-11.61	-7.11	0.53	9.20	-1.13
216	228	SLE-INV	Min	-0.03	-6.38	-2.61	-10.80	-6.23	0.87	9.10	-1.13
216	229	SLE-INV	Min	-0.12	-6.81	-2.23	-12.97	-7.13	0.73	9.10	-1.06
216	253	SLE-INV	Min	-0.22	-6.83	-2.34	-13.83	-8.00	0.39	9.20	-1.06
217	253	SLE-INV	Max	0.00	-5.03	-1.44	-5.39	-3.61	0.52	5.98	0.31
217	229	SLE-INV	Max	0.08	-5.01	-1.38	-5.22	-3.72	0.73	5.85	0.31
217	230	SLE-INV	Max	0.04	-5.24	-1.11	-5.82	-4.02	0.53	5.85	0.42
217	254	SLE-INV	Max	-0.05	-5.25	-1.16	-5.99	-3.90	0.32	5.98	0.42
217	253	SLE-INV	Min	0.00	-5.03	-1.44	-6.73	-4.32	0.32	4.74	-0.78
217	229	SLE-INV	Min	0.08	-5.01	-1.38	-6.43	-4.27	0.50	4.68	-0.78
217	230	SLE-INV	Min	0.04	-5.24	-1.11	-7.18	-4.62	0.37	4.68	-0.73
217	254	SLE-INV	Min	-0.05	-5.25	-1.16	-7.48	-4.67	0.19	4.74	-0.73
217	253	SLE-INV	Max	0.00	-5.03	-1.44	-7.28	-4.87	1.52	12.30	5.91
217	229	SLE-INV	Max	0.11	-5.01	-1.38	-7.05	-5.03	1.86	11.84	5.91
217	230	SLE-INV	Max	0.05	-5.24	-1.11	-7.86	-5.43	1.31	11.84	6.29
217	254	SLE-INV	Max	-0.05	-5.25	-1.16	-8.08	-5.27	0.97	12.30	6.29
217	253	SLE-INV	Min	0.00	-6.88	-1.94	-13.60	-7.98	0.44	6.40	-1.05
217	229	SLE-INV	Min	0.08	-6.76	-1.86	-12.62	-7.03	0.68	6.32	-1.05
217	230	SLE-INV	Min	0.04	-7.07	-1.49	-14.14	-7.68	0.50	6.32	-0.99
217	254	SLE-INV	Min	-0.06	-7.09	-1.57	-15.14	-8.61	0.26	6.40	-0.99
218	254	SLE-INV	Max	0.06	-5.23	-0.88	-5.91	-3.89	0.36	3.42	0.41
218	230	SLE-INV	Max	0.15	-5.21	-0.84	-5.71	-4.00	0.48	3.34	0.41
218	231	SLE-INV	Max	0.12	-5.34	-0.57	-6.05	-4.17	0.26	3.34	0.47
218	255	SLE-INV	Max	0.03	-5.36	-0.60	-6.25	-4.06	0.14	3.42	0.47
218	254	SLE-INV	Min	0.06	-5.23	-0.88	-7.39	-4.66	0.23	2.71	-0.73
218	230	SLE-INV	Min	0.15	-5.21	-0.84	-7.05	-4.59	0.34	2.67	-0.73
218	231	SLE-INV	Min	0.12	-5.34	-0.57	-7.48	-4.79	0.19	2.67	-0.70
218	255	SLE-INV	Min	0.03	-5.36	-0.60	-7.82	-4.86	0.08	2.71	-0.70
218	254	SLE-INV	Max	0.08	-5.23	-0.88	-7.97	-5.25	1.04	7.04	6.27
218	230	SLE-INV	Max	0.20	-5.21	-0.84	-7.71	-5.40	1.24	6.77	6.27
218	231	SLE-INV	Max	0.17	-5.34	-0.57	-8.17	-5.63	0.63	6.77	6.49
218	255	SLE-INV	Max	0.05	-5.36	-0.60	-8.43	-5.48	0.44	7.04	6.49
218	254	SLE-INV	Min	0.06	-7.06	-1.18	-14.97	-8.60	0.31	3.66	-0.99
218	230	SLE-INV	Min	0.15	-7.04	-1.14	-13.89	-7.61	0.45	3.61	-0.99
218	231	SLE-INV	Min	0.12	-7.22	-0.77	-14.76	-7.98	0.25	3.61	-0.95
218	255	SLE-INV	Min	0.03	-7.24	-0.81	-15.85	-8.96	0.11	3.66	-0.95
219	255	SLE-INV	Max	0.08	-5.35	-0.32	-6.21	-4.05	0.18	0.89	0.47
219	231	SLE-INV	Max	0.18	-5.33	-0.31	-6.00	-4.16	0.21	0.87	0.47
219	232	SLE-INV	Max	0.17	-5.37	-0.04	-6.09	-4.20	-0.01	0.87	0.49
219	256	SLE-INV	Max	0.08	-5.39	-0.05	-6.30	-4.10	-0.04	0.89	0.49
219	255	SLE-INV	Min	0.08	-5.35	-0.32	-7.77	-4.85	0.12	0.70	-0.70
219	231	SLE-INV	Min	0.18	-5.33	-0.31	-7.41	-4.78	0.15	0.69	-0.70
219	232	SLE-INV	Min	0.17	-5.37	-0.04	-7.52	-4.83	-0.02	0.69	-0.69
219	256	SLE-INV	Min	0.08	-5.39	-0.05	-7.88	-4.91	-0.06	0.70	-0.69
219	255	SLE-INV	Max	0.11	-5.35	-0.32	-8.38	-5.47	0.51	1.82	6.48
219	231	SLE-INV	Max	0.24	-5.33	-0.31	-8.09	-5.61	0.56	1.75	6.48
219	232	SLE-INV	Max	0.23	-5.37	-0.04	-8.21	-5.67	-0.02	1.75	6.54
219	256	SLE-INV	Max	0.10	-5.39	-0.05	-8.50	-5.53	-0.05	1.82	6.54
219	255	SLE-INV	Min	0.08	-7.23	-0.43	-15.77	-8.95	0.16	0.95	-0.95
219	231	SLE-INV	Min	0.16	-7.20	-0.42	-14.64	-7.95	0.20	0.94	-0.95
219	232	SLE-INV	Min	0.17	-7.25	-0.06	-14.87	-8.04	-0.08	0.94	-0.94
219	256	SLE-INV	Min	0.08	-7.27	-0.07	-16.00	-9.05	-0.13	0.95	-0.94
220	256	SLE-INV	Max	0.07	-5.39	0.23	-6.30	-4.10	0.00	-1.30	0.49
220	232	SLE-INV	Max	0.16	-5.37	0.21	-6.09	-4.20	-0.05	-1.28	0.49
220	233	SLE-INV	Max	0.17	-5.30	0.49	-5.93	-4.12	-0.21	-1.28	0.46
220	257	SLE-INV	Max	0.08	-5.32	0.50	-6.14	-4.01	-0.16	-1.30	0.46
220	256	SLE-INV	Min	0.07	-5.39	0.23	-7.89	-4.91	-0.01	-1.64	-0.69
220	232	SLE-INV	Min	0.16	-5.37	0.21	-7.53	-4.83	-0.07	-1.60	-0.69
220	233	SLE-INV	Min	0.17	-5.30	0.49	-7.33	-4.73	-0.30	-1.60	-0.71
220	257	SLE-INV	Min	0.08	-5.32	0.50	-7.68	-4.81	-0.24	-1.64	-0.71
220	256	SLE-INV	Max	0.09	-5.39	0.31	-8.50	-5.53	0.00	-1.75	6.54
220	232	SLE-INV	Max	0.21	-5.37	0.29	-8.22	-5.68	-0.07	-1.73	6.54
220	233	SLE-INV	Max	0.23	-5.30	0.66	-8.00	-5.56	-0.28	-1.73	6.43
220	257	SLE-INV	Max	0.11	-5.32	0.68	-8.28	-5.42	-0.21	-1.75	6.43
220	256	SLE-INV	Min	0.07	-7.27	0.23	-16.00	-9.04	-0.06	-3.38	-0.94
220	232	SLE-INV	Min	0.16	-7.25	0.21	-14.88	-8.05	-0.16	-3.25	-0.94
220	233	SLE-INV	Min	0.17	-7.16	0.49	-14.47	-7.87	-0.79	-3.25	-0.96
220	257	SLE-INV	Min	0.08	-7.18	0.50	-15.58	-8.87	-0.69	-3.38	-0.96
221	257	SLE-INV	Max	0.01	-5.34	0.78	-6.18	-4.02	-0.12	-3.31	0.46
221	233	SLE-INV	Max	0.10	-5.32	0.74	-6.00	-4.13	-0.25	-3.27	0.46
221	234	SLE-INV	Max	0.13	-5.15	1.02	-5.58	-3.92	-0.39	-3.27	0.39
221	258	SLE-INV	Max	0.05	-5.17	1.07	-5.77	-3.81	-0.26	-3.31	0.39
221	257	SLE-INV	Min	0.01	-5.34	0.78	-7.74	-4.81	-0.20	-4.18	-0.71
221	233	SLE-INV	Min	0.10	-5.32	0.74	-7.40	-4.75	-0.35	-4.09	-0.71
221	234	SLE-INV	Min	0.13	-5.15	1.02	-6.88	-4.50	-0.57	-4.09	-0.74
221	258	SLE-INV	Min	0.05	-5.17	1.07	-7.21	-4.56	-0.42	-4.18	-0.74
221	257	SLE-INV	Max	0.02	-5.34	1.06	-8.35	-5.43	-0.16	-4.47	6.45
221	233	SLE-INV	Max	0.13	-5.32	1.00	-8.09	-5.58	-0.34	-4.41	6.45
221	234	SLE-INV	Max	0.18	-5.15	1.38	-7.53	-5.29	-0.53	-4.41	6.18
221	258	SLE-INV	Max	0.06	-5.17	1.44	-7.79	-5.14	-0.36	-4.47	6.18
221	257	SLE-INV	Min	0.01	-7.20	0.78	-15.68	-8.87	-0.61	-8.61	-0.96
221	233	SLE-INV	Min	0.10	-7.18	0.74	-14.61	-7.91	-0.86	-8.28	-0.96
221	234	SLE-INV	Min	0.13	-6.96	1.02	-13.55	-7.45	-1.45	-8.28	-1.01
221	258	SLE-INV	Min	0.05	-6.98	1.07	-14.60	-8.42	-1.21	-8.61	-1.01
222	235	SLE-INV	Max	0.05	-4.90	1.59	-4.97	-3.58	-0.56	-5.36	0.27
222	259	SLE-INV	Max	-0.03	-4.92	1.66	-5.12	-3.46	-0.69	-5.43	0.27
222	258	SLE-INV	Max	-0.09	-5.20						

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc	N.prog.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	130 di 180			
222	234	SLE-INV	Max	-0.01	-5.18	1.30	-5.70	-3.95	-0.43	-5.36	0.39
222	235	SLE-INV	Min	0.05	-4.90	1.59	-6.11	-4.10	-0.81	-6.71	-0.80
222	259	SLE-INV	Min	-0.03	-4.92	1.66	-6.39	-4.15	-0.58	-6.85	-0.80
222	258	SLE-INV	Min	-0.09	-5.20	1.37	-7.32	-4.58	-0.38	-6.85	-0.75
222	234	SLE-INV	Min	-0.01	-5.18	1.30	-7.03	-4.53	-0.61	-6.71	-0.75
222	235	SLE-INV	Max	0.07	-4.90	2.14	-6.71	-4.83	-0.76	-7.24	5.74
222	259	SLE-INV	Max	-0.03	-4.92	2.24	-6.91	-4.67	-0.48	-7.33	5.74
222	258	SLE-INV	Max	-0.09	-5.20	1.84	-7.91	-5.17	-0.31	-7.33	6.21
222	234	SLE-INV	Max	-0.01	-5.18	1.75	-7.70	-5.33	-0.58	-7.24	6.21
222	235	SLE-INV	Min	0.05	-6.62	1.59	-11.96	-6.73	-2.08	-13.57	-1.08
222	259	SLE-INV	Min	-0.04	-6.64	1.66	-12.88	-7.66	-1.69	-14.10	-1.08
222	258	SLE-INV	Min	-0.12	-7.02	1.37	-14.78	-8.44	-1.14	-14.10	-1.01
222	234	SLE-INV	Min	-0.01	-7.00	1.30	-13.83	-7.53	-1.52	-13.57	-1.01
223	236	SLE-INV	Max	-0.08	-4.56	2.20	-4.11	-3.12	-0.69	-7.60	0.12
223	260	SLE-INV	Max	-0.15	-4.57	2.29	-4.21	-2.99	-0.42	-7.68	0.12
223	259	SLE-INV	Max	-0.23	-4.96	1.98	-5.25	-3.49	-0.32	-7.68	0.28
223	235	SLE-INV	Max	-0.16	-4.94	1.88	-5.15	-3.62	-0.60	-7.60	0.28
223	236	SLE-INV	Min	-0.08	-4.56	2.20	-5.02	-3.55	-1.00	-9.49	-0.87
223	260	SLE-INV	Min	-0.15	-4.57	2.29	-5.23	-3.58	-0.69	-9.67	-0.87
223	259	SLE-INV	Min	-0.23	-4.96	1.98	-6.54	-4.17	-0.54	-9.67	-0.80
223	235	SLE-INV	Min	-0.16	-4.94	1.88	-6.33	-4.14	-0.85	-9.49	-0.80
223	236	SLE-INV	Max	-0.08	-4.56	2.96	-5.54	-4.21	-0.93	-10.26	5.16
223	260	SLE-INV	Max	-0.15	-4.57	3.09	-5.68	-4.03	-0.56	-10.36	5.16
223	259	SLE-INV	Max	-0.23	-4.96	2.67	-7.08	-4.71	-0.43	-10.36	5.79
223	235	SLE-INV	Max	-0.16	-4.94	2.54	-6.95	-4.88	-0.81	-10.26	5.79
223	236	SLE-INV	Min	-0.11	-6.15	2.20	-9.72	-5.76	-2.58	-19.17	-1.18
223	260	SLE-INV	Min	-0.21	-6.17	2.29	-10.46	-6.61	-2.06	-19.88	-1.18
223	259	SLE-INV	Min	-0.31	-6.69	1.98	-13.14	-7.68	-1.63	-19.88	-1.08
223	235	SLE-INV	Min	-0.22	-6.67	1.88	-12.35	-6.85	-2.14	-19.17	-1.08
224	237	SLE-INV	Max	-0.26	-4.13	2.83	-2.95	-2.53	-0.77	-9.93	-0.06
224	261	SLE-INV	Max	-0.32	-4.14	2.94	-2.99	-2.39	-0.44	-10.00	-0.06
224	260	SLE-INV	Max	-0.41	-4.62	2.62	-4.35	-3.02	-0.39	-10.00	0.12
224	236	SLE-INV	Max	-0.36	-4.61	2.50	-4.31	-3.16	-0.72	-9.93	0.12
224	237	SLE-INV	Min	-0.26	-4.13	2.83	-3.58	-2.86	-1.12	-12.39	-0.94
224	261	SLE-INV	Min	-0.32	-4.14	2.94	-3.69	-2.87	-0.74	-12.59	-0.94
224	260	SLE-INV	Min	-0.41	-4.62	2.62	-5.39	-3.61	-0.65	-12.59	-0.87
224	236	SLE-INV	Min	-0.36	-4.61	2.50	-5.27	-3.60	-1.03	-12.39	-0.87
224	237	SLE-INV	Max	-0.26	-4.13	3.81	-3.99	-3.42	-1.04	-13.41	4.44
224	261	SLE-INV	Max	-0.32	-4.14	3.97	-4.04	-3.23	-0.59	-13.50	4.44
224	260	SLE-INV	Max	-0.41	-4.62	3.53	-5.87	-4.07	-0.52	-13.50	5.22
224	236	SLE-INV	Max	-0.36	-4.61	3.37	-5.82	-4.26	-0.97	-13.41	5.22
224	237	SLE-INV	Min	-0.36	-5.58	2.83	-6.77	-4.53	-2.91	-24.94	-1.26
224	261	SLE-INV	Min	-0.43	-5.59	2.94	-7.26	-5.30	-2.29	-25.81	-1.26
224	260	SLE-INV	Min	-0.56	-6.24	2.62	-10.74	-6.62	-2.01	-25.81	-1.18
224	236	SLE-INV	Min	-0.49	-6.23	2.50	-10.19	-5.90	-2.63	-24.94	-1.18
225	238	SLE-INV	Max	-0.48	-3.63	3.49	-1.47	-1.84	-0.78	-12.37	-0.23
225	262	SLE-INV	Max	-0.51	-3.63	3.62	-1.43	-1.69	-0.41	-12.42	-0.23
225	261	SLE-INV	Max	-0.63	-4.20	3.28	-3.12	-2.42	-0.42	-12.42	-0.05
225	237	SLE-INV	Max	-0.60	-4.20	3.15	-3.16	-2.57	-0.79	-12.37	-0.05
225	238	SLE-INV	Min	-0.48	-3.63	3.49	-1.72	-2.04	-1.15	-15.41	-0.98
225	262	SLE-INV	Min	-0.51	-3.63	3.62	-1.73	-2.02	-0.73	-15.61	-0.98
225	261	SLE-INV	Min	-0.63	-4.20	3.28	-3.85	-2.89	-0.72	-15.61	-0.94
225	237	SLE-INV	Min	-0.60	-4.20	3.15	-3.83	-2.92	-1.14	-15.41	-0.94
225	238	SLE-INV	Max	-0.48	-3.63	4.71	-1.98	-2.48	-1.06	-16.71	3.64
225	262	SLE-INV	Max	-0.51	-3.63	4.89	-1.94	-2.28	-0.56	-16.77	3.64
225	261	SLE-INV	Max	-0.63	-4.20	4.43	-4.22	-3.27	-0.56	-16.77	4.52
225	237	SLE-INV	Max	-0.60	-4.20	4.25	-4.26	-3.47	-1.06	-16.71	4.52
225	238	SLE-INV	Min	-0.65	-4.40	3.49	-3.49	-3.07	-3.07	-30.93	-1.33
225	262	SLE-INV	Min	-0.69	-4.91	3.62	-3.22	-3.73	-2.34	-31.92	-1.33
225	261	SLE-INV	Min	-0.85	-5.67	3.28	-7.54	-5.29	-2.25	-31.92	-1.27
225	237	SLE-INV	Min	-0.81	-5.67	3.15	-7.25	-4.69	-2.95	-30.93	-1.27
226	239	SLE-INV	Max	-0.74	-3.06	4.19	0.60	-1.05	-0.73	-14.96	-0.37
226	263	SLE-INV	Max	-0.74	-3.06	4.35	0.72	-0.90	-0.34	-14.96	-0.37
226	262	SLE-INV	Max	-0.87	-3.71	3.99	-1.53	-1.72	-0.40	-14.96	-0.22
226	238	SLE-INV	Max	-0.87	-3.71	3.83	-1.64	-1.87	-0.79	-14.96	-0.22
226	239	SLE-INV	Min	-0.74	-3.06	4.19	0.40	-1.11	-1.09	-18.59	-0.99
226	263	SLE-INV	Min	-0.74	-3.06	4.35	0.51	-1.07	-0.65	-18.77	-0.99
226	262	SLE-INV	Min	-0.87	-3.71	3.99	-1.84	-2.04	-0.72	-18.77	-0.99
226	238	SLE-INV	Min	-0.87	-3.71	3.83	-1.93	-2.09	-1.16	-18.59	-0.99
226	239	SLE-INV	Max	-0.74	-3.06	5.66	1.64	-1.41	-0.99	-20.20	2.77
226	263	SLE-INV	Max	-0.74	-3.06	5.87	1.75	-1.21	-0.47	-20.19	2.77
226	262	SLE-INV	Max	-0.87	-3.71	5.38	-2.06	-2.32	-0.55	-20.19	3.72
226	238	SLE-INV	Max	-0.87	-3.71	5.17	-2.21	-2.52	-1.07	-20.20	3.72
226	239	SLE-INV	Min	-1.00	-4.14	4.19	0.54	-1.51	-2.93	-37.18	-1.33
226	263	SLE-INV	Min	-1.00	-4.14	4.35	0.69	-1.94	-2.21	-38.25	-1.33
226	262	SLE-INV	Min	-1.18	-5.00	3.99	-3.43	-3.70	-2.33	-38.25	-1.33
226	238	SLE-INV	Min	-1.18	-5.00	3.83	-3.45	-3.23	-3.05	-37.18	-1.33
227	240	SLE-INV	Max	-1.03	-2.44	4.96	3.48	-0.08	-0.62	-17.71	-0.46
227	264	SLE-INV	Max	-1.00	-2.44	5.12	3.70	-0.02	-0.24	-17.63	-0.46
227	263	SLE-INV	Max	-1.14	-3.14	4.73	0.69	-0.91	-0.35	-17.63	-0.36
227	239	SLE-INV	Max	-1.17	-3.15	4.56	0.49	-1.06	-0.72	-17.71	-0.36
227	240	SLE-INV	Min	-1.03	-2.44	4.96	2.73	-0.18	-0.94	-21.97	-0.92
227	264	SLE-INV	Min	-1.00	-2.44	5.12	2.91	-0.04	-0.51	-22.08	-0.92
227	263	SLE-INV	Min	-1.14	-3.14	4.73	0.50	-1.07	-0.66	-22.08	-1.00
227	239	SLE-INV	Min	-1.17	-3.15	4.56	0.32	-1.14	-1.08	-21.97	-1.00
227	240	SLE-INV	Max	-1.03	-2.44	6.69	7.33	0.44	-0.83	-23.91	1.89
227	264	SLE-INV	Max	-1.00	-2.44	6.92	7.77	0.04	-0.33	-23.80	1.89
227	263	SLE-INV	Max	-1.14	-3.14	6.38	1.68	-1.23	-0.47	-23.80	2.87
227	239	SLE-INV	Max	-1.17	-3.15	6.16	1.35	-1.43	-0.98	-23.91	2.87
227	240	SLE-INV	Min	-1.39	-3.30	4.96	3.68	-0.25	-2.58	-43.74	-1.25
227	264	SLE-INV	Min	-1.35	-3.29	5.12	3.92	-0.05	-1.88	-44.84	-1.25
227	263	SLE-INV	Min	-1.54	-4.24	4.73	0.67	-1.87	-2.22	-44.84	-1.35
227	239	SLE-INV	Min	-1.59	-4.25	4.56	0.44	-1.55	-2.92	-43.74	-1.35
228	241	SLE-INV	Max	-1.35	-1.78	5.73	7.00	1.02	-0.44	-20.64	-0.46
228	265	SLE-INV	Max	-1.27	-1.77	5.91	7.31	1.08	-0.12	-20.64	-0.46
228	264	SLE-INV	Max	-1.42	-2.52	5.56	3.82	0.01	-0.27	-20.64	-0.46
228	240	SLE-INV	Max	-1.50	-2.54	5.38	3.53	-0.08	-0.59	-20.64	-0.46
228	241	SLE-INV	Min	-1.35	-1.78	5.73	5.59	0.74	-0.69	-25.55	-0.76
228	265	SLE-INV	Min	-1.27	-1.77	5.91	5.82	0.87	-0.33	-25.56	-0.76
228	264	SLE-INV	Min	-1.42	-2.52	5.56	3.02	-0.03	-0.54	-25.56	-0.94
228	240	SLE-INV	Min	-1.50	-2.54	5.38	2.80	-0.16	-0.91	-25.55	-0.94
228	241	SLE-INV	Max	-1.35	-1.78	7.73	14.19	2.43	-0.60	-27.86	1.06
228	265	SLE-INV	Max	-1.27	-1.77	7.97	14.97	2.14	-0.17	-27.60	1.06
228	264	SLE-INV	Max	-1.42	-2.52	7.50	7.94	0.16	-0.36	-27.60	2.00
228	240	SLE-INV	Max	-1.50	-2.54	7.26	7.29	0.35	-0.80	-27.86	2.00
228	241	SLE-INV	Min	-1.82	-2.41	5.73	7.55	1.00	-1.97	-50.64	-1.03
228	265	SLE-INV	Min	-1.72	-2.39	5.91	7.85	1.18	-1.37	-51.70	-1.03
228	264	SLE-INV	Min	-1.92	-3.40	5.56	4.07	-0.03	-1.93	-51.70	-1.27
228	240	SLE-INV	Min	-2.02	-3.43	5.38	3.77	-0.21	-2.54	-50.64	-1.27
229	242	SLE-INV	Max	-1.68	-1.09	6.96	11.26	2.16	-0.44	-23.77	-0.44
229	266	SLE-INV	Max	-1.56	-1.06	7.14	11.64	2.21	-0.01	-23.42	-0.34



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 131 di 180			
229	265	SLE-INV	Max	-1.72	-1.86	6.14	7.63	1.15	-0.17	-23.42	-0.46
229	241	SLE-INV	Max	-1.84	-1.88	5.95	7.29	1.07	-0.40	-23.77	-0.46
229	242	SLE-INV	Min	-1.68	-1.09	6.96	9.08	1.70	-0.39	-29.35	-0.47
229	266	SLE-INV	Min	-1.56	-1.06	7.14	9.32	1.80	-0.13	-29.22	-0.47
229	265	SLE-INV	Min	-1.72	-1.86	6.14	6.10	0.91	-0.38	-29.22	-0.78
229	241	SLE-INV	Min	-1.84	-1.88	5.95	5.87	0.81	-0.64	-29.35	-0.78
229	242	SLU-INV	Max	-1.68	-1.09	9.40	22.42	4.51	-0.33	-32.09	0.34
229	266	SLU-INV	Max	-1.56	-1.06	9.64	23.50	4.33	-0.02	-31.61	0.34
229	265	SLU-INV	Max	-1.72	-1.86	8.28	15.47	2.34	-0.23	-31.61	1.18
229	241	SLU-INV	Max	-1.84	-1.88	8.04	14.54	2.40	-0.54	-32.09	1.18
229	242	SLU-INV	Min	-2.27	-1.47	6.96	12.26	2.30	-1.13	-57.91	-0.63
229	266	SLU-INV	Min	-2.11	-1.44	7.14	12.58	2.42	-0.70	-58.87	-0.63
229	265	SLU-INV	Min	-2.32	-2.51	6.14	8.24	1.23	-1.46	-58.87	-1.05
229	241	SLU-INV	Min	-2.48	-2.54	5.95	7.93	1.10	-1.89	-57.91	-1.05
230	243	SLE-INV	Max	-2.04	-0.41	4.99	16.40	3.31	-0.04	-27.11	0.00
230	267	SLE-INV	Max	-1.86	-0.37	5.26	16.77	3.32	0.05	-26.56	0.00
230	266	SLE-INV	Max	-2.02	-1.15	9.24	12.23	2.33	-0.08	-26.56	-0.33
230	242	SLE-INV	Max	-2.19	-1.19	8.98	11.90	2.29	-0.17	-27.11	-0.33
230	243	SLE-INV	Min	-2.04	-0.41	4.99	13.31	2.66	-0.05	-33.40	-0.04
230	267	SLE-INV	Min	-1.86	-0.37	5.26	13.50	2.70	0.04	-33.06	-0.04
230	266	SLE-INV	Min	-2.02	-1.15	9.24	9.84	1.88	-0.21	-33.06	-0.49
230	242	SLE-INV	Min	-2.19	-1.19	8.98	9.66	1.84	-0.31	-33.40	-0.49
230	243	SLU-INV	Max	-2.04	-0.41	6.74	32.20	6.61	-0.06	-36.60	0.00
230	267	SLU-INV	Max	-1.86	-0.37	7.10	33.52	6.53	0.07	-35.85	0.00
230	266	SLU-INV	Max	-2.02	-1.15	12.48	24.44	4.63	-0.11	-35.85	0.47
230	242	SLU-INV	Max	-2.19	-1.19	12.12	23.31	4.58	-0.23	-36.60	0.47
230	243	SLU-INV	Min	-2.75	-0.55	4.99	17.97	3.60	-0.10	-65.58	-0.21
230	267	SLU-INV	Min	-2.51	-0.50	5.26	18.22	3.64	0.06	-66.34	-0.21
230	266	SLU-INV	Min	-2.72	-1.56	9.24	13.28	2.54	-0.84	-66.34	-0.66
230	242	SLU-INV	Min	-2.96	-1.61	8.98	13.05	2.48	-1.00	-65.58	-0.66
231	268	SLE-INV	Max	-1.72	-0.34	-5.48	16.89	3.38	-0.04	32.72	0.03
231	244	SLE-INV	Max	-1.88	-0.38	-5.25	16.77	3.35	0.04	33.34	0.03
231	245	SLE-INV	Max	-2.01	-1.03	-9.51	12.59	2.42	0.11	33.34	-0.50
231	269	SLE-INV	Max	-1.85	-1.00	-9.73	12.69	2.47	0.03	32.72	-0.50
231	268	SLE-INV	Min	-1.72	-0.34	-5.48	13.44	2.72	-0.04	25.98	0.01
231	244	SLE-INV	Min	-1.88	-0.38	-5.25	13.48	2.67	0.04	26.78	0.01
231	245	SLE-INV	Min	-2.01	-1.03	-9.51	10.13	1.93	0.01	26.78	-0.62
231	269	SLE-INV	Min	-1.85	-1.00	-9.73	10.11	1.97	-0.07	25.98	-0.62
231	268	SLU-INV	Max	-1.72	-0.34	-5.48	34.48	6.78	-0.05	67.15	0.05
231	244	SLU-INV	Max	-1.88	-0.38	-5.25	33.57	6.83	0.08	66.85	0.05
231	245	SLU-INV	Max	-2.01	-1.03	-9.51	25.16	4.94	0.65	66.85	0.11
231	269	SLU-INV	Max	-1.85	-1.00	-9.73	25.91	4.99	0.51	67.15	0.11
231	268	SLU-INV	Min	-2.32	-0.46	-7.39	18.15	3.67	-0.06	35.08	-0.14
231	244	SLU-INV	Min	-2.53	-0.51	-7.09	18.20	3.60	0.05	36.16	-0.14
231	245	SLU-INV	Min	-2.71	-1.40	-12.84	13.68	2.61	0.01	36.16	-0.84
231	269	SLU-INV	Min	-2.50	-1.35	-13.14	13.64	2.67	-0.09	35.08	-0.84
232	269	SLE-INV	Max	-1.46	-0.93	-7.60	12.16	2.38	-0.04	29.30	-0.48
232	245	SLE-INV	Max	-1.58	-0.95	-7.45	11.96	2.28	0.18	29.73	-0.48
232	246	SLE-INV	Max	-1.72	-1.62	-6.38	8.23	1.32	0.30	29.73	-0.84
232	270	SLE-INV	Max	-1.60	-1.60	-6.54	8.41	1.42	0.08	29.30	-0.84
232	269	SLE-INV	Min	-1.46	-0.93	-7.60	9.64	1.92	-0.12	23.23	-0.58
232	245	SLE-INV	Min	-1.58	-0.95	-7.45	9.57	1.79	0.06	23.84	-0.58
232	246	SLE-INV	Min	-1.72	-1.62	-6.38	6.58	1.01	0.10	23.84	-1.08
232	270	SLE-INV	Min	-1.60	-1.60	-6.54	6.67	1.13	-0.08	23.23	-1.08
232	269	SLU-INV	Max	-1.46	-0.93	-7.60	25.04	4.75	0.40	60.32	0.02
232	245	SLU-INV	Max	-1.58	-0.95	-7.45	24.22	4.82	0.76	59.86	0.02
232	246	SLU-INV	Max	-1.72	-1.62	-6.38	16.68	2.91	1.28	59.86	0.41
232	270	SLU-INV	Max	-1.60	-1.60	-6.54	17.35	3.02	0.92	60.32	0.41
232	269	SLU-INV	Min	-1.98	-1.25	-10.27	13.02	2.59	-0.16	31.36	-0.79
232	245	SLU-INV	Min	-2.14	-1.28	-10.05	12.91	2.41	0.09	32.18	-0.79
232	246	SLU-INV	Min	-2.32	-2.19	-8.61	8.88	1.36	0.14	32.18	-1.46
232	270	SLU-INV	Min	-2.16	-2.15	-8.83	9.00	1.53	-0.11	31.36	-1.46
233	270	SLE-INV	Max	-1.22	-1.52	-6.36	8.09	1.37	0.03	26.01	-0.82
233	246	SLE-INV	Max	-1.30	-1.54	-6.19	7.87	1.23	0.34	26.27	-0.82
233	247	SLE-INV	Max	-1.42	-2.18	-5.88	4.57	0.27	0.47	26.27	-1.04
233	271	SLE-INV	Max	-1.35	-2.16	-6.05	4.77	0.41	0.16	26.01	-1.04
233	270	SLE-INV	Min	-1.22	-1.52	-6.36	6.38	1.11	-0.12	20.59	-1.05
233	246	SLE-INV	Min	-1.30	-1.54	-6.19	6.25	0.91	0.14	21.04	-1.05
233	247	SLE-INV	Min	-1.42	-2.18	-5.88	3.61	0.13	0.21	21.04	-1.42
233	271	SLE-INV	Min	-1.35	-2.16	-6.05	3.75	0.31	-0.05	20.59	-1.42
233	270	SLU-INV	Max	-1.22	-1.52	-6.36	16.83	2.74	0.84	53.72	0.32
233	246	SLU-INV	Max	-1.30	-1.54	-6.19	16.18	2.87	1.35	53.07	0.32
233	247	SLU-INV	Max	-1.42	-2.18	-5.88	9.47	0.98	1.77	53.07	0.86
233	271	SLU-INV	Max	-1.35	-2.16	-6.05	10.00	0.93	1.26	53.72	0.86
233	270	SLE-INV	Min	-1.64	-2.05	-8.58	8.62	1.49	-0.17	27.79	-1.42
233	246	SLE-INV	Min	-1.75	-2.07	-8.36	8.44	1.23	0.19	28.40	-1.42
233	247	SLE-INV	Min	-1.92	-2.94	-7.94	4.87	0.17	0.29	28.40	-1.91
233	271	SLE-INV	Min	-1.82	-2.92	-8.16	5.06	0.42	-0.07	27.79	-1.91
234	271	SLE-INV	Max	-0.98	-2.09	-5.63	4.62	0.39	0.13	22.84	-1.03
234	247	SLE-INV	Max	-1.02	-2.10	-5.47	4.41	0.23	0.03	23.00	-1.03
234	248	SLE-INV	Max	-1.14	-2.70	-5.08	1.51	-0.70	0.61	23.00	-1.16
234	272	SLE-INV	Max	-1.10	-2.69	-5.24	1.71	-0.47	0.25	22.84	-1.16
234	271	SLE-INV	Min	-0.98	-2.09	-5.63	3.61	0.31	-0.08	18.06	-1.39
234	247	SLE-INV	Min	-1.02	-2.10	-5.47	3.46	0.07	0.24	18.38	-1.39
234	248	SLE-INV	Min	-1.14	-2.70	-5.08	1.15	-0.71	0.31	18.38	-1.65
234	272	SLE-INV	Min	-1.10	-2.69	-5.24	1.30	-0.54	0.00	18.06	-1.65
234	271	SLU-INV	Max	-0.98	-2.09	-5.63	9.77	0.82	1.22	47.34	0.78
234	247	SLU-INV	Max	-1.02	-2.10	-5.47	9.30	1.01	1.81	46.61	0.78
234	248	SLU-INV	Max	-1.14	-2.70	-5.08	3.40	-0.79	2.12	46.61	1.38
234	272	SLU-INV	Max	-1.10	-2.69	-5.24	3.77	-0.63	1.53	47.34	1.38
234	271	SLU-INV	Min	-1.33	-2.82	-7.60	4.87	0.42	-0.11	24.37	-1.88
234	247	SLU-INV	Min	-1.38	-2.83	-7.38	4.67	0.10	0.32	24.81	-1.88
234	248	SLU-INV	Min	-1.54	-3.85	-6.86	1.55	-0.96	0.42	24.81	-2.23
234	272	SLU-INV	Min	-1.49	-3.64	-7.07	1.76	-0.92	-0.01	24.37	-2.23
235	272	SLE-INV	Max	-0.76	-2.62	-4.87	1.66	-0.46	0.23	19.80	-1.15
235	248	SLE-INV	Max	-0.77	-2.63	-4.72	1.51	-0.72	0.63	19.88	-1.15
235	249	SLE-INV	Max	-0.88	-3.19	-4.36	-0.88	-1.46	0.71	19.88	-1.21
235	273	SLE-INV	Max	-0.87	-3.19	-4.51	-0.73	-1.20	0.31	19.80	-1.21
235	272	SLE-INV	Min	-0.76	-2.62	-4.87	1.26	-0.54	-0.02	15.63	-1.63
235	248	SLE-INV	Min	-0.77	-2.63	-4.72	1.12	-0.72	0.33	15.85	-1.63
235	249	SLE-INV	Min	-0.88	-3.19	-4.36	-1.00	-1.62	0.39	15.85	-1.81
235	273	SLE-INV	Min	-0.87	-3.19	-4.51	-0.85	-1.44	0.04	15.63	-1.81
235	272	SLU-INV	Max	-0.76	-2.62	-4.87	3.71	-0.62	1.48	41.16	1.31
235	248	SLU-INV	Max	-0.77	-2.63	-4.72	3.47	-0.72	2.16	40.49	1.31
235	249	SLU-INV	Max	-0.88	-3.19	-4.36	-1.18	-1.97	2.33	40.49	1.86
235	273	SLU-INV	Max	-0.87	-3.19	-4.51	-0.98	-1.62	1.65	41.16	1.86
235	272	SLU-INV	Min	-1.02	-3.54	-6.57	1.71	-0.99	-0.03	21.10	-2.20
235	248	SLU-INV	Min	-1.04	-3.55	-6.37	1.52	-0.98	0.44	21.39	-2.20
235	249	SLU-INV	Min	-1.19	-4.31	-5.89	-1.66	-2.45	0.52	21.39	-2.44
235	273	SLU-INV	Min	-1.18	-4.10	-6.09	-1.51				

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1**Tratto Fabriano - Matelica Nord****Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita****Relazione di calcolo**

Opera L0703	Tratto 211	Settore E	CEE 16	WBS OI6800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 132 di 180			
236	249	SLE-INV	Max	-0.54	-3.12	-4.02	-0.81	-1.46	0.70	16.88	-1.20
236	250	SLE-INV	Max	-0.64	-3.63	-3.68	-2.51	-2.14	0.74	16.88	-1.21
236	274	SLE-INV	Max	-0.65	-3.64	-3.81	-2.39	-1.85	0.35	16.88	-1.21
236	273	SLE-INV	Min	-0.55	-3.12	-4.16	-0.82	-1.42	0.05	13.30	-1.79
236	249	SLE-INV	Min	-0.54	-3.12	-4.02	-0.91	-1.61	0.39	13.44	-1.79
236	250	SLE-INV	Min	-0.64	-3.63	-3.68	-3.04	-2.42	0.43	13.44	-1.90
236	274	SLE-INV	Min	-0.65	-3.64	-3.81	-2.96	-2.24	0.09	13.30	-1.90
236	273	SLU-INV	Max	-0.55	-3.12	-4.16	-0.94	-1.59	1.66	35.17	1.81
236	249	SLU-INV	Max	-0.54	-3.12	-4.02	-1.09	-1.97	2.32	34.48	1.81
236	250	SLU-INV	Max	-0.64	-3.63	-3.68	-3.38	-2.88	2.33	34.48	2.37
236	274	SLU-INV	Max	-0.65	-3.64	-3.81	-3.22	-2.50	1.67	35.17	2.37
236	273	SLU-INV	Min	-0.75	-4.22	-5.61	-1.43	-2.70	0.06	17.95	-2.42
236	249	SLU-INV	Min	-0.72	-4.21	-5.43	-1.43	-2.35	0.52	18.14	-2.42
236	250	SLU-INV	Min	-0.86	-4.90	-4.97	-5.80	-3.90	0.58	18.14	-2.57
236	274	SLU-INV	Min	-0.88	-4.91	-5.15	-5.88	-4.21	0.11	17.95	-2.57
237	274	SLE-INV	Max	-0.37	-3.58	-3.47	-2.31	-1.82	0.36	14.05	-1.20
237	250	SLE-INV	Max	-0.33	-3.57	-3.36	-2.38	-2.12	0.72	14.01	-1.20
237	251	SLE-INV	Max	-0.42	-4.02	-3.03	-3.79	-2.72	0.71	14.01	-1.17
237	275	SLE-INV	Max	-0.46	-4.03	-3.15	-3.71	-2.42	0.35	14.05	-1.17
237	274	SLE-INV	Min	-0.37	-3.58	-3.47	-2.87	-2.22	0.10	11.06	-1.89
237	250	SLE-INV	Min	-0.33	-3.57	-3.36	-2.89	-2.40	0.41	11.14	-1.89
237	251	SLE-INV	Min	-0.42	-4.02	-3.03	-4.66	-3.11	0.43	11.14	-1.96
237	275	SLE-INV	Min	-0.46	-4.03	-3.15	-4.64	-2.93	0.11	11.06	-1.96
237	274	SLU-INV	Max	-0.37	-3.58	-3.47	-3.12	-2.46	1.70	29.34	2.32
237	250	SLU-INV	Max	-0.33	-3.57	-3.36	-3.21	-2.87	2.30	28.67	2.32
237	251	SLU-INV	Max	-0.42	-4.02	-3.03	-5.12	-3.67	2.18	28.67	2.87
237	275	SLU-INV	Max	-0.46	-4.03	-3.15	-5.01	-3.27	1.58	29.34	2.87
237	274	SLU-INV	Min	-0.49	-4.83	-4.69	-5.71	-4.21	0.13	14.93	-2.55
237	250	SLU-INV	Min	-0.44	-4.82	-4.53	-5.48	-3.80	0.56	15.04	-2.55
237	251	SLU-INV	Min	-0.56	-5.43	-4.09	-9.13	-5.14	0.57	15.04	-2.65
237	275	SLU-INV	Min	-0.62	-5.44	-4.25	-9.41	-5.52	0.15	14.93	-2.65
238	275	SLE-INV	Max	-0.21	-3.98	-2.82	-3.61	-2.39	0.37	11.30	-1.17
238	251	SLE-INV	Max	-0.15	-3.97	-2.72	-3.64	-2.70	0.69	11.25	-1.17
238	252	SLE-INV	Max	-0.23	-4.34	-2.40	-4.78	-3.19	0.64	11.25	-1.12
238	276	SLE-INV	Max	-0.28	-4.35	-2.50	-4.74	-2.89	0.32	11.30	-1.12
238	275	SLE-INV	Min	-0.21	-3.98	-2.82	-4.52	-2.90	0.13	8.89	-1.95
238	251	SLE-INV	Min	-0.15	-3.97	-2.72	-4.48	-3.08	0.41	8.94	-1.95
238	252	SLE-INV	Min	-0.23	-4.34	-2.40	-5.91	-3.68	0.39	8.94	-1.99
238	276	SLE-INV	Min	-0.28	-4.35	-2.50	-5.96	-3.50	0.11	8.89	-1.99
238	275	SLU-INV	Max	-0.21	-3.98	-2.82	-4.88	-3.23	1.62	23.65	2.82
238	251	SLU-INV	Max	-0.15	-3.97	-2.72	-4.92	-3.64	2.14	23.08	2.82
238	252	SLU-INV	Max	-0.23	-4.34	-2.40	-6.45	-4.31	1.91	23.08	3.29
238	276	SLU-INV	Max	-0.28	-4.35	-2.50	-6.40	-3.91	1.38	23.65	3.29
238	275	SLU-INV	Min	-0.28	-5.37	-3.80	-9.20	-5.52	0.17	12.00	-2.63
238	251	SLU-INV	Min	-0.21	-5.36	-3.67	-8.78	-5.04	0.55	12.06	-2.63
238	252	SLU-INV	Min	-0.31	-5.86	-3.24	-11.72	-6.16	0.53	12.06	-2.68
238	276	SLU-INV	Min	-0.38	-5.88	-3.38	-12.18	-6.62	0.15	12.00	-2.68
239	276	SLE-INV	Max	-0.08	-4.31	-2.18	-4.64	-2.87	0.35	8.63	-1.12
239	252	SLE-INV	Max	-0.01	-4.30	-2.10	-4.63	-3.17	0.61	8.58	-1.12
239	253	SLE-INV	Max	-0.07	-4.60	-1.80	-5.50	-3.57	0.52	8.58	-1.08
239	277	SLE-INV	Max	-0.14	-4.61	-1.88	-5.50	-3.26	0.26	8.63	-1.08
239	276	SLE-INV	Min	-0.08	-4.31	-2.18	-5.84	-3.48	0.14	6.78	-1.98
239	252	SLE-INV	Min	-0.01	-4.30	-2.10	-5.74	-3.65	0.36	6.81	-1.98
239	253	SLE-INV	Min	-0.07	-4.60	-1.80	-6.83	-4.12	0.32	6.81	-2.00
239	277	SLE-INV	Min	-0.14	-4.61	-1.88	-6.93	-3.95	0.09	6.78	-2.00
239	276	SLU-INV	Max	-0.08	-4.31	-2.18	-6.26	-3.87	1.43	18.09	3.25
239	252	SLU-INV	Max	-0.01	-4.30	-2.10	-6.25	-4.28	1.86	17.63	3.25
239	253	SLU-INV	Max	-0.07	-4.60	-1.80	-7.02	-4.81	1.52	17.63	3.63
239	277	SLU-INV	Max	-0.14	-4.61	-1.88	-7.42	-4.40	1.08	18.09	3.63
239	276	SLU-INV	Min	-0.11	-5.82	-2.94	-11.98	-6.60	0.18	9.16	-2.67
239	252	SLU-INV	Min	-0.02	-5.80	-2.84	-11.39	-6.06	0.49	9.19	-2.67
239	253	SLU-INV	Min	-0.10	-6.21	-2.43	-13.63	-6.95	0.43	9.19	-2.70
239	277	SLU-INV	Min	-0.19	-6.22	-2.53	-14.26	-7.47	0.13	9.16	-2.70
240	277	SLE-INV	Max	0.01	-4.58	-1.56	-5.41	-3.24	0.29	6.02	-1.07
240	253	SLE-INV	Max	0.09	-4.56	-1.51	-5.38	-3.55	0.48	5.97	-1.07
240	254	SLE-INV	Max	0.05	-4.78	-1.20	-5.98	-3.83	0.36	5.97	-1.04
240	278	SLE-INV	Max	-0.03	-4.79	-1.26	-6.00	-3.52	0.17	6.02	-1.04
240	277	SLE-INV	Min	0.01	-4.58	-1.56	-6.82	-3.93	0.13	4.73	-1.99
240	253	SLE-INV	Min	0.09	-4.56	-1.51	-6.68	-4.09	0.29	4.74	-1.99
240	254	SLE-INV	Min	0.05	-4.78	-1.20	-7.44	-4.43	0.23	4.74	-2.00
240	278	SLE-INV	Min	-0.03	-4.79	-1.26	-7.58	-4.27	0.06	4.73	-2.00
240	277	SLU-INV	Max	0.02	-4.58	-1.56	-7.30	-4.37	1.14	12.63	3.61
240	253	SLU-INV	Max	0.07	-4.56	-1.51	-7.26	-4.79	1.45	12.29	3.61
240	254	SLU-INV	Max	0.07	-4.78	-1.20	-8.07	-5.17	1.04	12.29	3.88
240	278	SLU-INV	Max	-0.03	-4.79	-1.26	-8.11	-4.76	0.73	12.63	3.88
240	277	SLU-INV	Min	0.01	-6.18	-2.11	-14.07	-7.46	0.17	6.38	-2.69
240	253	SLU-INV	Min	0.09	-6.16	-2.04	-13.36	-6.87	0.39	6.39	-2.69
240	254	SLU-INV	Min	0.05	-6.45	-1.63	-14.93	-7.50	0.31	6.39	-2.70
240	278	SLU-INV	Min	-0.04	-6.47	-1.70	-15.66	-8.07	0.09	6.38	-2.70
241	278	SLE-INV	Max	0.07	-4.77	-0.95	-5.94	-3.51	0.21	3.44	-1.03
241	254	SLE-INV	Max	0.16	-4.76	-0.92	-5.89	-3.81	0.32	3.41	-1.03
241	255	SLE-INV	Max	0.13	-4.88	-0.63	-6.23	-3.98	0.18	3.41	-1.01
241	279	SLE-INV	Max	0.05	-4.89	-0.66	-6.28	-3.67	0.07	3.44	-1.01
241	278	SLE-INV	Min	0.07	-4.77	-0.95	-7.51	-4.25	0.10	2.70	-1.99
241	254	SLE-INV	Min	0.16	-4.76	-0.92	-7.34	-4.41	0.19	2.71	-1.99
241	255	SLE-INV	Min	0.13	-4.88	-0.63	-7.77	-4.61	0.12	2.71	-2.00
241	279	SLE-INV	Min	0.05	-4.89	-0.66	-7.94	-4.45	0.02	2.70	-2.00
241	278	SLU-INV	Max	0.10	-4.77	-0.95	-8.02	-4.73	0.79	7.23	3.87
241	254	SLU-INV	Max	0.21	-4.76	-0.92	-7.95	-5.15	0.97	7.03	3.87
241	255	SLU-INV	Max	0.18	-4.88	-0.63	-8.41	-5.37	0.50	7.03	4.03
241	279	SLU-INV	Max	0.07	-4.89	-0.66	-8.48	-4.96	0.32	7.23	4.03
241	278	SLU-INV	Min	0.07	-6.44	-1.28	-15.54	-8.06	0.13	3.65	-2.69
241	254	SLU-INV	Min	0.16	-6.42	-1.24	-14.73	-7.45	0.26	3.65	-2.69
241	255	SLU-INV	Min	0.13	-6.59	-0.84	-15.63	-7.82	0.16	3.65	-2.69
241	279	SLU-INV	Min	0.05	-6.61	-0.89	-16.44	-8.42	0.03	3.65	-2.69
242	279	SLE-INV	Max	0.10	-4.89	-0.35	-6.25	-3.66	0.11	0.89	-1.01
242	255	SLE-INV	Max	0.18	-4.87	-0.34	-6.19	-3.97	0.14	0.88	-1.01
242	256	SLE-INV	Max	0.18	-4.90	-0.04	-6.28	-4.01	0.00	0.88	-1.00
242	280	SLE-INV	Max	0.09	-4.92	-0.05	-6.34	-3.71	-0.03	0.89	-1.00
242	279	SLE-INV	Min	0.10	-4.89	-0.35	-7.91	-4.44	0.06	0.70	-1.99
242	255	SLE-INV	Min	0.18	-4.87	-0.34	-7.72	-4.60	0.08	0.70	-1.99
242	256	SLE-INV	Min	0.18	-4.90	-0.04	-7.83	-4.64	-0.01	0.70	-1.99
242	280	SLE-INV	Min	0.09	-4.92	-0.05	-8.02	-4.49	-0.04	0.70	-1.99
242	279	SLU-INV	Max	0.13	-4.89	-0.35	-8.44	-4.94	0.39	1.87	4.02
242	255	SLU-INV	Max	0.24	-4.87	-0.34	-8.36	-5.36	0.43	1.82	4.02
242	256	SLU-INV	Max	0.24	-4.90	-0.04	-8.48	-5.42	0.00	1.82	4.07
242	280	SLU-INV	Max	0.12	-4.92	-0.05	-8.56	-5.00	-0.04	1.87	4.07
242	279	SLU-INV	Min	0.10	-6.60	-0.47	-16.37	-8.41	0.08	0.95	-2.69
242	255	SLU-INV	Min	0.18	-6.57	-0.46	-15.54	-7.79	0.11	0.95	-2.69
242	256	SLU-INV	Min	0.18	-6.61	-0.06	-15.77	-7.88	-0.06	0.95	-2.69
242	280	SLU-INV	Min	0.09	-6.64	-0.07	-16.61	-8.51	-0.10	0.95	-2.69

**2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1****Tratto Fabriano - Matelica Nord****Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita****Relazione di calcolo**

Opera	Tratto	Settore	CEE	WBS	Id.doc	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	133 di 180			
243	280	SLE-INV	Max	0.08	-4.92	0.25	-6.34	-3.71	0.01	-1.30	-1.00
243	256	SLE-INV	Max	0.16	-4.90	0.24	-6.28	-4.01	-0.04	-1.30	-1.00
243	257	SLE-INV	Max	0.18	-4.84	0.53	-6.12	-3.93	-0.12	-1.30	-1.02
243	281	SLE-INV	Max	0.09	-4.86	0.54	-6.18	-3.62	-0.07	-1.30	-1.02
243	280	SLE-INV	Min	0.08	-4.92	0.25	-8.02	-4.49	0.00	-1.65	-1.99
243	256	SLE-INV	Min	0.16	-4.90	0.24	-7.84	-4.65	-0.05	-1.64	-1.99
243	257	SLE-INV	Min	0.18	-4.84	0.53	-7.63	-4.55	-0.20	-1.64	-1.99
243	281	SLE-INV	Min	0.09	-4.86	0.54	-7.81	-4.39	-0.15	-1.65	-1.99
243	280	SLE-INV	Max	0.11	-4.92	0.34	-8.56	-5.00	0.01	-1.75	4.07
243	256	SLE-INV	Max	0.22	-4.90	0.32	-8.48	-5.42	-0.05	-1.75	4.07
243	257	SLE-INV	Max	0.24	-4.84	0.71	-8.26	-5.31	-0.16	-1.75	3.99
243	281	SLE-INV	Max	0.13	-4.86	0.73	-8.34	-4.89	-0.10	-1.75	3.99
243	280	SLE-INV	Min	0.08	-6.64	0.25	-16.62	-8.50	-0.03	-3.48	-2.69
243	256	SLE-INV	Min	0.16	-6.62	0.24	-15.77	-7.89	-0.13	-3.38	-2.69
243	257	SLE-INV	Min	0.18	-6.53	0.53	-15.34	-7.71	-0.62	-3.38	-2.69
243	281	SLE-INV	Min	0.09	-6.56	0.54	-16.18	-8.33	-0.53	-3.48	-2.69
244	281	SLE-INV	Max	0.03	-4.87	0.85	-6.21	-3.63	-0.04	-3.30	-1.02
244	257	SLE-INV	Max	0.11	-4.85	0.81	-6.17	-3.94	-0.11	-3.31	-1.02
244	258	SLE-INV	Max	0.14	-4.70	1.12	-5.75	-3.74	-0.23	-3.31	-1.05
244	282	SLE-INV	Max	0.06	-4.72	1.16	-5.80	-3.43	-0.11	-3.30	-1.05
244	281	SLE-INV	Min	0.03	-4.87	0.85	-7.86	-4.40	-0.11	-4.21	-2.00
244	257	SLE-INV	Min	0.11	-4.85	0.81	-7.69	-4.56	-0.24	-4.17	-2.00
244	258	SLE-INV	Min	0.14	-4.70	1.12	-7.16	-4.32	-0.38	-4.17	-1.99
244	282	SLE-INV	Min	0.06	-4.72	1.16	-7.32	-4.16	-0.24	-4.21	-1.99
244	281	SLE-INV	Max	0.04	-4.87	1.14	-8.39	-4.91	-0.05	-4.46	4.00
244	257	SLE-INV	Max	0.15	-4.85	1.09	-8.33	-5.32	-0.21	-4.47	4.00
244	258	SLE-INV	Max	0.19	-4.70	1.51	-7.76	-5.05	-0.31	-4.47	3.80
244	282	SLE-INV	Max	0.08	-4.72	1.57	-7.82	-4.63	-0.15	-4.46	3.80
244	281	SLE-INV	Min	0.03	-6.57	0.85	-16.25	-8.33	-0.46	-8.85	-2.69
244	257	SLE-INV	Min	0.11	-6.55	0.81	-15.46	-7.74	-0.69	-8.61	-2.69
244	258	SLE-INV	Min	0.14	-6.35	1.12	-14.36	-7.29	-1.14	-8.61	-2.69
244	282	SLE-INV	Min	0.06	-6.37	1.16	-15.13	-7.90	-0.91	-8.85	-2.69
245	259	SLE-INV	Max	0.06	-4.46	1.73	-5.11	-3.41	-0.32	-5.42	-1.09
245	283	SLE-INV	Max	-0.01	-4.48	1.79	-5.13	-3.10	-0.13	-5.41	-1.09
245	282	SLE-INV	Max	-0.07	-4.74	1.48	-5.87	-3.45	-0.07	-5.41	-1.05
245	258	SLE-INV	Max	0.01	-4.73	1.42	-5.85	-3.75	-0.26	-5.42	-1.05
245	259	SLE-INV	Min	0.06	-4.46	1.73	-6.34	-3.93	-0.54	-6.84	-1.99
245	282	SLE-INV	Min	-0.01	-4.48	1.79	-6.47	-3.76	-0.32	-6.89	-1.99
245	283	SLE-INV	Min	-0.07	-4.74	1.48	-7.40	-4.18	-0.20	-6.89	-2.00
245	258	SLE-INV	Min	0.01	-4.73	1.42	-7.97	-4.34	-0.42	-6.84	-2.00
245	259	SLE-INV	Max	0.08	-4.46	2.33	-6.89	-4.60	-0.43	-7.32	3.49
245	283	SLE-INV	Max	-0.01	-4.48	2.42	-6.92	-4.19	-0.18	-7.31	3.49
245	282	SLE-INV	Max	-0.07	-4.74	2.00	-7.92	-4.66	-0.10	-7.31	3.83
245	258	SLE-INV	Max	0.01	-4.73	1.92	-7.89	-5.07	-0.35	-7.32	3.83
245	259	SLE-INV	Min	0.06	-6.03	1.73	-12.64	-6.57	-1.63	-14.08	-2.68
245	283	SLE-INV	Min	-0.02	-6.05	1.79	-13.32	-7.14	-1.27	-14.47	-2.68
245	282	SLE-INV	Min	-0.09	-6.40	1.48	-15.28	-7.90	-0.85	-14.47	-2.70
245	258	SLE-INV	Min	0.01	-6.38	1.42	-14.57	-7.35	-1.21	-14.08	-2.70
246	260	SLE-INV	Max	-0.07	-4.15	2.39	-4.20	-2.96	-0.39	-7.67	-1.15
246	284	SLE-INV	Max	-0.13	-4.16	2.47	-4.18	-2.65	-0.14	-7.64	-1.15
246	283	SLE-INV	Max	-0.20	-4.52	2.14	-5.22	-3.13	-0.10	-7.64	-1.09
246	259	SLE-INV	Max	-0.14	-4.50	2.05	-5.24	-3.43	-0.35	-7.67	-1.09
246	260	SLE-INV	Min	-0.07	-4.15	2.39	-5.18	-3.39	-0.65	-9.67	-1.97
246	284	SLE-INV	Min	-0.13	-4.16	2.47	-5.26	-3.22	-0.36	-9.73	-1.97
246	283	SLE-INV	Min	-0.20	-4.52	2.14	-6.58	-3.78	-0.28	-9.73	-2.00
246	259	SLE-INV	Min	-0.14	-4.50	2.05	-6.50	-3.96	-0.57	-9.67	-2.00
246	260	SLE-INV	Max	-0.07	-4.15	3.22	-5.67	-3.99	-0.52	-10.36	3.07
246	284	SLE-INV	Max	-0.13	-4.16	3.34	-5.65	-3.56	-0.18	-10.32	3.07
246	283	SLE-INV	Max	-0.20	-4.52	2.88	-7.05	-4.22	-0.14	-10.32	3.52
246	259	SLE-INV	Max	-0.14	-4.50	2.77	-7.08	-4.63	-0.48	-10.36	3.52
246	260	SLE-INV	Min	-0.09	-5.60	2.39	-10.23	-5.60	-2.01	-19.86	-2.66
246	284	SLE-INV	Min	-0.18	-5.61	2.47	-10.74	-6.12	-1.53	-20.38	-2.66
246	283	SLE-INV	Min	-0.27	-6.10	2.14	-13.50	-7.15	-1.21	-20.38	-2.69
246	259	SLE-INV	Min	-0.19	-6.08	2.05	-12.95	-6.66	-1.69	-19.86	-2.69
247	261	SLE-INV	Max	-0.24	-3.75	3.06	-2.99	-2.39	-0.41	-10.00	-1.19
247	285	SLE-INV	Max	-0.28	-3.76	3.16	-2.93	-2.09	-0.11	-9.93	-1.19
247	284	SLE-INV	Max	-0.37	-4.21	2.82	-4.29	-2.68	-0.11	-9.93	-1.15
247	260	SLE-INV	Max	-0.33	-4.20	2.72	-4.35	-2.98	-0.41	-10.00	-1.15
247	261	SLE-INV	Min	-0.24	-3.75	3.06	-3.65	-2.71	-0.71	-12.58	-1.92
247	285	SLE-INV	Min	-0.28	-3.76	3.16	-3.66	-2.53	-0.37	-12.63	-1.92
247	284	SLE-INV	Min	-0.37	-4.21	2.82	-5.38	-3.24	-0.34	-12.63	-1.98
247	260	SLE-INV	Min	-0.33	-4.20	2.72	-5.37	-3.42	-0.68	-12.58	-1.98
247	261	SLE-INV	Max	-0.24	-3.75	4.13	-4.03	-3.23	-0.56	-13.50	2.57
247	285	SLE-INV	Max	-0.28	-3.76	4.27	-3.96	-2.82	-0.15	-13.41	2.57
247	284	SLE-INV	Max	-0.37	-4.21	3.81	-5.79	-3.62	-0.43	-13.41	3.12
247	260	SLE-INV	Max	-0.33	-4.20	3.67	-5.87	-4.02	-0.56	-13.50	3.12
247	261	SLE-INV	Min	-0.32	-5.07	3.06	-7.05	-4.36	-2.25	-25.79	-2.60
247	285	SLE-INV	Min	-0.38	-5.08	3.16	-7.38	-4.82	-1.68	-26.41	-2.60
247	284	SLE-INV	Min	-0.50	-5.68	2.82	-10.96	-6.12	-1.48	-26.41	-2.67
247	260	SLE-INV	Min	-0.44	-5.67	2.72	-10.58	-5.70	-2.06	-25.79	-2.67
248	262	SLE-INV	Max	-0.44	-3.29	3.76	-1.44	-1.72	-0.40	-12.42	-1.21
248	286	SLE-INV	Max	-0.47	-3.30	3.89	-1.34	-1.43	-0.07	-12.30	-1.21
248	285	SLE-INV	Max	-0.57	-3.82	3.52	-3.02	-2.12	-0.10	-12.30	-1.19
248	261	SLE-INV	Max	-0.55	-3.81	3.40	-3.12	-2.41	-0.43	-12.42	-1.19
248	262	SLE-INV	Min	-0.44	-3.29	3.76	-1.70	-1.91	-0.71	-15.61	-1.84
248	286	SLE-INV	Min	-0.47	-3.30	3.89	-1.63	-1.73	-0.33	-15.62	-1.84
248	285	SLE-INV	Min	-0.57	-3.82	3.52	-3.76	-2.56	-0.35	-15.62	-1.94
248	261	SLE-INV	Min	-0.55	-3.81	3.40	-3.82	-2.74	-0.73	-15.61	-1.94
248	262	SLE-INV	Max	-0.44	-3.29	5.08	-1.94	-2.32	-0.54	-16.77	2.01
248	286	SLE-INV	Max	-0.47	-3.30	5.25	-1.81	-1.93	-0.09	-16.61	2.01
248	285	SLE-INV	Max	-0.57	-3.82	4.76	-4.08	-2.86	-0.13	-16.61	2.62
248	261	SLE-INV	Max	-0.55	-3.81	4.59	-4.22	-3.25	-0.58	-16.77	2.62
248	262	SLE-INV	Min	-0.60	-4.44	3.76	-3.04	-2.91	-2.32	-31.91	-2.48
248	286	SLE-INV	Min	-0.64	-4.45	3.89	-3.13	-3.29	-1.69	-32.60	-2.48
248	285	SLE-INV	Min	-0.78	-5.16	3.52	-7.56	-4.81	-1.65	-32.60	-2.62
248	261	SLE-INV	Min	-0.74	-5.15	3.40	-7.40	-4.48	-2.28	-31.91	-2.62
249	263	SLE-INV	Max	-0.68	-2.78	4.50	0.73	-0.95	-0.35	-14.96	-1.18
249	287	SLE-INV	Max	-0.68	-2.78	4.64	0.87	-0.68	0.00	-14.77	-1.18
249	286	SLE-INV	Max	-0.80	-3.36	4.26	-1.39	-1.45	-0.06	-14.77	-1.21
249	262	SLE-INV	Max	-0.80	-3.36	4.12	-1.53	-1.72	-0.41	-14.96	-1.21
249	263	SLE-INV	Min	-0.68	-2.78	4.50	0.50	-1.00	-0.65	-18.77	-1.69
249	287	SLE-INV	Min	-0.68	-2.78	4.64	0.63	-0.82	-0.26	-18.73	-1.69
249	286	SLE-INV	Min	-0.80	-3.36	4.26	-1.69	-1.75	-0.33	-18.73	-1.85
249	262	SLE-INV	Min	-0.80	-3.36	4.12	-1.82	-1.93	-0.72	-18.77	-1.85
249	263	SLE-INV	Max	-0.68	-2.78	6.07	1.91	-1.24	-0.47	-20.19	1.44
249	287	SLE-INV	Max	-0.68	-2.78	6.26	2.05	-0.92	0.00	-19.94	1.44
249	286	SLE-INV	Max	-0.80	-3.36	5.75	-1.87	-1.96	-0.08	-19.94	2.08
249	262	SLE-INV	Max	-0.80	-3.36	5.57	-2.06	-2.32	-0.55	-20.19	2.08
249	263	SLE-INV	Min	-0.92	-3.75	4.50	0.68	-1.36	-2.22	-38.24	-2.28
249	287	SLE-INV	Min	-0.92	-3.75	4.64	0.85	-1.56	-2.15	-38.97	-2.28
249	286	SLE-INV	Min	-1.08	-4.54	4.26	-3.24	-3.26</			

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS 016800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 134 di 180			
249	262	SLU-INV	Min	-1.08	-4.54	4.12	-3.31	-3.01	-2.33	-38.24	-2.50
250	264	SLE-INV	Max	-0.95	-2.21	5.29	3.70	0.00	-0.26	-17.63	-1.07
250	288	SLE-INV	Max	-0.92	-2.21	5.44	3.90	0.17	0.07	-17.34	-1.07
250	287	SLE-INV	Max	-1.05	-2.85	5.03	0.89	-0.69	-0.01	-17.34	-1.18
250	263	SLE-INV	Max	-1.08	-2.85	4.88	0.71	-0.94	-0.34	-17.63	-1.18
250	264	SLE-INV	Min	-0.95	-2.21	5.29	2.89	-0.11	-0.53	-22.08	-1.45
250	288	SLE-INV	Min	-0.92	-2.21	5.44	3.04	0.13	-0.15	-21.96	-1.45
250	287	SLE-INV	Min	-1.05	-2.85	5.03	0.66	-0.82	-0.27	-21.96	-1.71
250	263	SLE-INV	Min	-1.08	-2.85	4.88	0.50	-1.00	-0.64	-22.08	-1.71
250	264	SLE-INV	Max	-0.95	-2.21	7.14	7.89	0.60	-0.35	-23.80	0.89
250	288	SLE-INV	Max	-0.92	-2.21	7.34	8.29	0.39	0.09	-23.41	0.89
250	287	SLE-INV	Max	-1.05	-2.85	6.79	2.09	-0.94	-0.01	-23.41	1.51
250	263	SLE-INV	Max	-1.08	-2.85	6.58	1.79	-1.26	-0.46	-23.80	1.51
250	264	SLE-INV	Min	-1.28	-2.99	5.29	3.89	-0.15	-1.91	-44.84	-1.96
250	288	SLE-INV	Min	-1.24	-2.98	5.44	4.10	0.18	-1.29	-45.54	-1.96
250	287	SLE-INV	Min	-1.41	-3.84	5.03	0.89	-1.47	-1.58	-45.54	-2.31
250	263	SLE-INV	Min	-1.46	-3.85	4.88	0.67	-1.36	-2.20	-44.84	-2.31
251	265	SLE-INV	Max	-1.24	-1.62	6.07	7.30	1.08	-0.16	-20.46	-0.86
251	289	SLE-INV	Max	-1.17	-1.60	6.23	7.52	1.23	0.12	-20.04	-0.86
251	288	SLE-INV	Max	-1.31	-2.28	5.88	4.05	0.19	0.04	-20.04	-1.08
251	264	SLE-INV	Max	-1.38	-2.30	5.72	3.84	0.04	-0.24	-20.46	-1.08
251	265	SLE-INV	Min	-1.24	-1.62	6.07	5.78	0.78	-0.37	-25.57	-1.11
251	289	SLE-INV	Min	-1.17	-1.60	6.23	5.93	0.99	-0.05	-25.32	-1.11
251	288	SLE-INV	Min	-1.31	-2.28	5.88	3.17	0.13	-0.18	-25.32	-1.48
251	264	SLE-INV	Min	-1.38	-2.30	5.72	3.02	-0.06	-0.50	-25.57	-1.48
251	265	SLE-INV	Max	-1.24	-1.62	8.20	15.06	2.60	-0.22	-27.62	0.40
251	289	SLE-INV	Max	-1.17	-1.60	8.41	15.68	2.45	0.16	-27.05	0.40
251	288	SLE-INV	Max	-1.31	-2.28	7.94	8.53	0.50	0.06	-27.05	0.97
251	264	SLE-INV	Max	-1.38	-2.30	7.72	8.02	0.57	-0.32	-27.62	0.97
251	265	SLE-INV	Min	-1.68	-2.18	6.07	7.81	1.06	-1.44	-51.72	-1.50
251	289	SLE-INV	Min	-1.58	-2.16	6.23	8.00	1.33	-0.90	-52.36	-1.50
251	288	SLE-INV	Min	-1.76	-3.08	5.88	4.28	0.18	-1.33	-52.36	-2.00
251	264	SLE-INV	Min	-1.86	-3.10	5.72	4.08	-0.08	-1.87	-51.72	-2.00
252	266	SLE-INV	Max	-1.55	-0.99	7.33	11.61	2.20	-0.07	-23.44	-0.52
252	290	SLE-INV	Max	-1.43	-0.97	7.49	11.82	2.30	0.13	-22.86	-0.52
252	289	SLE-INV	Max	-1.58	-1.68	6.46	7.85	1.28	0.08	-22.86	-0.88
252	265	SLE-INV	Max	-1.69	-1.71	6.30	7.66	1.17	-0.12	-23.44	-0.88
252	266	SLE-INV	Min	-1.55	-0.99	7.33	9.28	1.75	-0.19	-29.24	-0.62
252	290	SLE-INV	Min	-1.43	-0.97	7.49	9.36	1.82	0.03	-28.84	-0.62
252	289	SLE-INV	Min	-1.58	-1.68	6.46	6.22	1.01	-0.09	-28.84	-1.15
252	265	SLE-INV	Min	-1.69	-1.71	6.30	6.12	0.88	-0.32	-29.24	-1.15
252	266	SLE-INV	Max	-1.55	-0.99	9.90	23.54	4.68	-0.10	-31.65	0.04
252	290	SLE-INV	Max	-1.43	-0.97	10.11	24.35	4.59	0.17	-30.85	0.04
252	289	SLE-INV	Max	-1.58	-1.68	8.72	16.22	2.63	0.11	-30.85	0.49
252	265	SLE-INV	Max	-1.69	-1.71	8.51	15.55	2.63	-0.16	-31.65	0.49
252	266	SLE-INV	Min	-2.09	-1.34	7.33	12.53	2.32	-0.81	-58.90	-0.84
252	290	SLE-INV	Min	-1.93	-1.30	7.49	12.64	2.50	-0.43	-59.41	-0.84
252	289	SLE-INV	Min	-2.13	-2.27	6.46	8.39	1.37	-0.98	-59.41	-1.55
252	265	SLE-INV	Min	-2.28	-2.30	6.30	8.26	1.19	-1.36	-58.90	-1.55
253	267	SLE-INV	Max	-1.86	-0.37	5.26	16.73	3.34	-0.04	-26.60	0.03
253	291	SLE-INV	Max	-1.70	-0.34	5.48	16.85	3.38	0.04	-25.81	0.03
253	290	SLE-INV	Max	-1.84	-1.05	9.66	12.38	2.40	0.07	-25.81	-0.53
253	266	SLE-INV	Max	-2.00	-1.08	9.43	12.27	2.35	-0.01	-26.60	-0.53
253	267	SLE-INV	Min	-1.86	-0.37	5.26	13.45	2.66	-0.05	-33.11	0.01
253	291	SLE-INV	Min	-1.70	-0.34	5.48	13.42	2.71	0.04	-32.50	0.01
253	290	SLE-INV	Min	-1.84	-1.05	9.66	9.85	1.92	-0.03	-32.50	-0.67
253	266	SLE-INV	Min	-2.00	-1.08	9.43	9.88	1.87	-0.12	-33.11	-0.67
253	267	SLE-INV	Max	-1.86	-0.37	7.10	33.52	6.82	-0.15	-35.81	0.05
253	291	SLE-INV	Max	-1.70	-0.34	7.40	34.42	6.77	0.06	-34.84	0.05
253	290	SLE-INV	Max	-1.84	-1.05	13.04	25.28	4.85	0.09	-34.84	0.14
253	266	SLE-INV	Max	-2.00	-1.08	12.74	24.53	4.80	-0.01	-35.91	0.14
253	267	SLE-INV	Min	-2.51	-0.50	5.26	18.16	3.59	-0.09	-66.41	-0.14
253	291	SLE-INV	Min	-2.30	-0.46	5.48	18.11	3.66	0.05	-66.73	-0.14
253	290	SLE-INV	Min	-2.49	-1.42	9.66	13.30	2.59	-0.55	-66.73	-0.90
253	266	SLE-INV	Min	-2.70	-1.46	9.43	13.33	2.53	-0.69	-66.41	-0.90
254	292	SLE-INV	Max	-1.57	-0.31	-5.68	16.73	3.38	-0.03	31.92	0.06
254	268	SLE-INV	Max	-1.72	-0.34	-5.48	16.83	3.33	0.03	32.76	0.06
254	269	SLE-INV	Max	-1.84	-0.94	-9.91	12.73	2.45	-0.04	32.76	-0.65
254	293	SLE-INV	Max	-1.69	-0.91	-10.12	12.64	2.49	-0.11	31.92	-0.65
254	292	SLE-INV	Min	-1.57	-0.31	-5.68	13.16	2.69	-0.03	25.03	0.04
254	268	SLE-INV	Min	-1.72	-0.34	-5.48	13.39	2.62	0.03	26.02	0.04
254	269	SLE-INV	Min	-1.84	-0.94	-9.91	10.13	1.93	-0.12	26.02	-0.75
254	293	SLE-INV	Min	-1.69	-0.91	-10.12	9.94	1.97	-0.18	25.03	-0.75
254	292	SLE-INV	Max	-1.57	-0.31	-5.68	34.99	6.94	-0.04	67.15	0.09
254	268	SLE-INV	Max	-1.72	-0.34	-5.48	34.85	6.95	0.07	67.22	0.09
254	269	SLE-INV	Max	-1.84	-0.94	-9.91	26.00	5.11	0.39	67.22	-0.14
254	293	SLE-INV	Max	-1.69	-0.91	-10.12	26.42	5.16	0.28	67.15	-0.14
254	292	SLE-INV	Min	-2.12	-0.42	-7.67	17.77	3.63	-0.05	33.79	-0.08
254	268	SLE-INV	Min	-2.32	-0.46	-7.39	18.07	3.54	0.04	35.13	-0.08
254	269	SLE-INV	Min	-2.48	-1.26	-13.38	13.68	2.60	-0.17	35.13	-1.01
254	293	SLE-INV	Min	-2.28	-1.22	-13.66	13.42	2.66	-0.25	33.79	-1.01
255	293	SLE-INV	Max	-1.34	-0.84	-7.93	12.16	2.43	-0.16	28.68	-0.61
255	269	SLE-INV	Max	-1.45	-0.86	-7.79	12.11	2.29	0.02	29.33	-0.61
255	270	SLE-INV	Max	-1.57	-1.46	-6.69	8.44	1.38	0.03	29.33	-1.14
255	294	SLE-INV	Max	-1.46	-1.44	-6.83	8.48	1.52	-0.15	28.68	-1.14
255	293	SLE-INV	Min	-1.34	-0.84	-7.93	9.53	1.94	-0.23	22.46	-0.69
255	269	SLE-INV	Min	-1.45	-0.86	-7.79	9.59	1.77	-0.07	23.25	-0.69
255	270	SLE-INV	Min	-1.57	-1.46	-6.69	6.68	1.05	-0.13	23.25	-1.35
255	294	SLE-INV	Min	-1.46	-1.44	-6.83	6.65	1.20	-0.28	22.46	-1.35
255	293	SLE-INV	Max	-1.34	-0.84	-7.93	25.60	4.95	0.18	60.49	-0.19
255	269	SLE-INV	Max	-1.45	-0.86	-7.79	25.04	4.96	0.49	60.37	-0.19
255	270	SLE-INV	Max	-1.57	-1.46	-6.69	17.43	3.09	0.84	60.37	-0.09
255	294	SLE-INV	Max	-1.46	-1.44	-6.83	17.89	3.15	0.53	60.49	-0.09
255	293	SLE-INV	Min	-1.81	-1.13	-10.70	12.86	2.62	-0.31	30.32	-0.94
255	269	SLE-INV	Min	-1.96	-1.16	-10.51	12.94	2.39	-0.10	31.39	-0.94
255	270	SLE-INV	Min	-2.12	-1.98	-9.03	9.01	1.41	-0.17	31.39	-1.82
255	294	SLE-INV	Min	-1.98	-1.95	-9.22	8.97	1.62	-0.38	30.32	-1.82
256	294	SLE-INV	Max	-1.12	-1.38	-6.66	8.18	1.48	-0.19	25.54	-1.11
256	270	SLE-INV	Max	-1.19	-1.39	-6.51	8.05	1.28	0.17	26.03	-1.11
256	271	SLE-INV	Max	-1.31	-1.97	-6.19	4.78	0.37	0.13	26.03	-1.51
256	295	SLE-INV	Max	-1.24	-1.95	-6.34	4.91	0.57	-0.13	25.54	-1.51
256	294	SLE-INV	Min	-1.12	-1.38	-6.66	6.38	1.18	-0.32	19.97	-1.30
256	270	SLE-INV	Min	-1.19	-1.39	-6.51	6.33	0.94	-0.09	20.60	-1.30
256	271	SLE-INV	Min	-1.31	-1.97	-6.19	3.75	0.21	-0.08	20.60	-1.82
256	295	SLE-INV	Min	-1.24	-1.95	-6.34	3.82	0.44	-0.31	19.97	-1.82
256	294	SLE-INV	Max	-1.12	-1.38	-6.66	17.37	3.00	0.46	54.01	-0.15
256	270	SLE-INV	Max	-1.19	-1.39	-6.51	16.86	3.02	0.90	53.75	-0.15
256	271	SLE-INV	Max	-1.31	-1.97	-6.19	10.08	1.20	1.21	53.75	0.07
256	295	SLE-INV	Max	-1.24	-1.95	-6.34	10.49	1.23	0.77	54.01	0.07
256	294	SLE-INV	Min	-1.51	-1.86	-8.99	8.61	1.60	-0.43	26.96	-1.76
256	270	SLE-INV	Min	-1.61	-1.88	-8.79					



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 135 di 180			
256	271	SLU-INV	Min	-1.77	-2.66	-8.36	5.06	0.28	-0.11	27.82	-2.46
256	295	SLU-INV	Min	-1.67	-2.64	-8.56	5.16	0.59	-0.42	26.96	-2.46
257	295	SLU-INV	Max	-0.91	-1.89	-5.91	4.74	0.56	-0.16	22.50	-1.48
257	271	SLU-INV	Max	-0.94	-1.89	-5.77	4.59	0.31	0.16	22.86	-1.48
257	272	SLU-INV	Max	-1.05	-2.45	-5.38	1.71	-0.58	0.23	22.86	-1.78
257	296	SLU-INV	Max	-1.02	-2.44	-5.52	1.86	-0.28	-0.09	22.50	-1.78
257	295	SLU-INV	Min	-0.91	-1.89	-5.91	3.67	0.44	-0.33	17.57	-1.78
257	271	SLU-INV	Min	-0.94	-1.89	-5.77	3.56	0.13	-0.06	18.07	-1.78
257	272	SLU-INV	Min	-1.05	-2.45	-5.38	1.29	-0.58	-0.02	18.07	-2.19
257	296	SLU-INV	Min	-1.02	-2.44	-5.52	1.42	-0.33	-0.29	17.57	-2.19
257	295	SLU-INV	Max	-0.91	-1.89	-5.91	10.20	1.13	0.72	47.71	0.02
257	271	SLU-INV	Max	-0.94	-1.89	-5.77	9.83	1.18	1.26	47.35	0.02
257	272	SLU-INV	Max	-1.05	-2.45	-5.38	3.85	-0.58	1.49	47.35	0.32
257	296	SLU-INV	Max	-1.02	-2.44	-5.52	4.13	-0.38	0.95	47.71	0.32
257	295	SLU-INV	Min	-1.22	-2.55	-7.98	4.95	0.60	-0.45	23.72	-2.40
257	271	SLU-INV	Min	-1.27	-2.56	-7.80	4.81	0.18	-0.08	24.39	-2.40
257	272	SLU-INV	Min	-1.42	-3.31	-7.26	1.75	-0.79	-0.03	24.39	-2.95
257	296	SLU-INV	Min	-1.37	-3.30	-7.45	1.92	-0.58	-0.40	23.72	-2.95
258	296	SLU-INV	Max	-0.70	-2.38	-5.14	1.80	-0.27	-0.10	19.56	-1.75
258	272	SLU-INV	Max	-0.71	-2.38	-5.01	1.65	-0.61	0.24	19.81	-1.75
258	273	SLU-INV	Max	-0.81	-2.90	-4.64	-0.74	-1.30	0.30	19.81	-1.96
258	297	SLU-INV	Max	-0.80	-2.89	-4.77	-0.59	-0.95	-0.03	19.56	-1.96
258	296	SLU-INV	Min	-0.70	-2.38	-5.14	1.36	-0.33	-0.30	15.26	-2.15
258	272	SLU-INV	Min	-0.71	-2.38	-5.01	1.23	-0.62	-0.01	15.63	-2.15
258	273	SLU-INV	Min	-0.81	-2.90	-4.64	-0.85	-1.44	0.04	15.63	-2.46
258	297	SLU-INV	Min	-0.80	-2.89	-4.77	-0.70	-1.16	-0.25	15.26	-2.46
258	296	SLU-INV	Max	-0.70	-2.38	-5.14	4.03	-0.36	0.94	41.57	0.27
258	272	SLU-INV	Max	-0.71	-2.38	-5.01	3.80	-0.55	1.50	41.16	0.27
258	273	SLU-INV	Max	-0.81	-2.90	-4.64	-1.00	-1.75	1.64	41.16	0.61
258	297	SLU-INV	Max	-0.80	-2.89	-4.77	-0.79	-1.28	1.08	41.57	0.61
258	296	SLU-INV	Min	-0.95	-3.21	-6.94	1.84	-0.64	-0.41	20.60	-2.90
258	272	SLU-INV	Min	-0.96	-3.21	-6.76	1.65	-0.84	-0.02	21.11	-2.90
258	273	SLU-INV	Min	-1.10	-3.91	-6.27	-1.41	-2.17	0.05	21.11	-3.32
258	297	SLU-INV	Min	-1.09	-3.91	-6.44	-1.25	-2.22	-0.34	20.60	-3.32
259	297	SLU-INV	Max	-0.51	-2.83	-4.41	-0.58	-0.92	-0.04	16.71	-1.94
259	273	SLU-INV	Max	-0.49	-2.83	-4.29	-0.73	-1.32	0.30	16.88	-1.94
259	274	SLU-INV	Max	-0.59	-3.30	-3.93	-2.40	-1.94	0.35	16.88	-2.08
259	298	SLU-INV	Max	-0.60	-3.31	-4.05	-2.24	-1.55	0.01	16.71	-2.08
259	297	SLU-INV	Min	-0.51	-2.83	-4.41	-0.69	-1.14	-0.25	13.02	-2.43
259	273	SLU-INV	Min	-0.49	-2.83	-4.29	-0.83	-1.45	0.04	13.30	-2.43
259	274	SLU-INV	Min	-0.59	-3.30	-3.93	-2.95	-2.21	0.09	13.30	-2.66
259	298	SLU-INV	Min	-0.60	-3.31	-4.05	-2.82	-1.90	-0.20	13.02	-2.66
259	297	SLU-INV	Max	-0.51	-2.83	-4.41	-0.79	-1.25	1.07	35.59	0.56
259	273	SLU-INV	Max	-0.49	-2.83	-4.29	-0.98	-1.78	1.65	35.17	0.56
259	274	SLU-INV	Max	-0.59	-3.30	-3.93	-3.24	-2.62	1.69	35.17	0.91
259	298	SLU-INV	Max	-0.60	-3.31	-4.05	-3.03	-2.09	1.11	35.59	0.91
259	297	SLU-INV	Min	-0.69	-3.83	-5.95	-1.24	-2.25	-0.34	17.58	-3.28
259	273	SLU-INV	Min	-0.67	-3.82	-5.79	-1.31	-2.12	0.06	17.96	-3.28
259	274	SLU-INV	Min	-0.79	-4.46	-5.31	-5.77	-3.60	0.12	17.96	-3.60
259	298	SLU-INV	Min	-0.81	-4.46	-5.47	-5.76	-3.70	-0.27	17.58	-3.60
260	298	SLU-INV	Max	-0.34	-3.25	-3.70	-2.20	-1.52	0.02	13.94	-2.06
260	274	SLU-INV	Max	-0.30	-3.25	-3.59	-2.33	-1.95	0.34	14.05	-2.06
260	275	SLU-INV	Max	-0.38	-3.66	-3.25	-3.73	-2.49	0.37	14.05	-2.15
260	299	SLU-INV	Max	-0.42	-3.67	-3.36	-3.58	-2.08	0.05	13.94	-2.15
260	298	SLU-INV	Min	-0.34	-3.25	-3.70	-2.76	-1.88	-0.19	10.85	-2.64
260	274	SLU-INV	Min	-0.30	-3.25	-3.59	-2.86	-2.20	0.08	11.06	-2.64
260	275	SLU-INV	Min	-0.38	-3.66	-3.25	-4.64	-2.87	0.12	11.06	-2.81
260	299	SLU-INV	Min	-0.42	-3.67	-3.36	-4.32	-2.55	-0.15	10.85	-2.81
260	298	SLU-INV	Max	-0.34	-3.25	-3.70	-2.96	-2.06	1.13	29.74	0.88
260	274	SLU-INV	Max	-0.30	-3.25	-3.59	-3.15	-2.63	1.67	29.33	0.88
260	275	SLU-INV	Max	-0.38	-3.66	-3.25	-5.03	-3.36	1.21	29.33	1.22
260	299	SLU-INV	Max	-0.42	-3.67	-3.36	-4.83	-2.80	1.07	29.74	1.22
260	298	SLU-INV	Min	-0.45	-4.39	-5.00	-5.66	-3.71	-0.26	14.65	-3.56
260	274	SLU-INV	Min	-0.41	-4.38	-4.85	-5.56	-3.53	0.11	14.92	-3.56
260	275	SLU-INV	Min	-0.52	-4.95	-4.38	-9.28	-4.83	0.17	14.92	-3.79
260	299	SLU-INV	Min	-0.57	-4.95	-4.53	-9.43	-4.97	-0.21	14.65	-3.79
261	299	SLU-INV	Max	-0.19	-3.62	-3.01	-3.51	-2.05	0.07	11.24	-2.14
261	275	SLU-INV	Max	-0.14	-3.61	-2.92	-3.63	-2.49	0.35	11.30	-2.14
261	276	SLU-INV	Max	-0.21	-3.97	-2.59	-4.75	-2.95	0.34	11.30	-2.19
261	300	SLU-INV	Max	-0.26	-3.98	-2.68	-4.62	-2.51	0.06	11.24	-2.19
261	299	SLU-INV	Min	-0.19	-3.62	-3.01	-4.45	-2.53	-0.14	8.74	-2.79
261	275	SLU-INV	Min	-0.14	-3.61	-2.92	-4.51	-2.86	0.11	8.89	-2.79
261	276	SLU-INV	Min	-0.21	-3.97	-2.59	-5.94	-3.42	-0.13	8.89	-2.91
261	300	SLU-INV	Min	-0.26	-3.98	-2.68	-5.88	-3.09	-0.11	8.74	-2.91
261	299	SLU-INV	Max	-0.19	-3.62	-3.01	-4.71	-2.76	1.11	24.02	1.19
261	275	SLU-INV	Max	-0.14	-3.61	-2.92	-4.90	-3.36	1.58	23.65	1.19
261	276	SLU-INV	Max	-0.21	-3.97	-2.59	-6.41	-3.98	1.42	23.65	1.49
261	300	SLU-INV	Max	-0.26	-3.98	-2.68	-6.24	-3.39	0.94	24.02	1.49
261	299	SLU-INV	Min	-0.25	-4.89	-4.06	-9.29	-4.97	-0.18	11.80	-3.77
261	275	SLU-INV	Min	-0.18	-4.88	-3.94	-9.03	-4.75	0.15	12.00	-3.77
261	276	SLU-INV	Min	-0.28	-5.35	-3.49	-12.03	-5.84	0.18	12.00	-3.93
261	300	SLU-INV	Min	-0.35	-5.37	-3.62	-12.33	-6.03	-0.15	11.80	-3.93
262	300	SLU-INV	Max	-0.07	-3.94	-2.34	-4.55	-2.49	0.09	8.60	-2.18
262	276	SLU-INV	Max	0.00	-3.93	-2.27	-4.65	-2.94	0.32	8.63	-2.18
262	277	SLU-INV	Max	-0.06	-4.20	-1.94	-5.51	-3.31	0.29	8.63	-2.21
262	301	SLU-INV	Max	-0.12	-4.22	-2.01	-5.39	-2.86	0.06	8.60	-2.21
262	300	SLU-INV	Min	-0.07	-3.94	-2.34	-5.79	-3.07	-0.09	6.68	-2.90
262	276	SLU-INV	Min	0.00	-3.93	-2.27	-5.82	-3.40	0.11	6.78	-2.90
262	277	SLU-INV	Min	-0.06	-4.20	-1.94	-6.91	-3.85	0.12	6.78	-2.98
262	301	SLU-INV	Min	-0.12	-4.22	-2.01	-6.88	-3.51	-0.08	6.68	-2.98
262	300	SLU-INV	Max	-0.07	-3.94	-2.34	-6.14	-3.36	0.99	18.39	1.47
262	276	SLU-INV	Max	0.00	-3.93	-2.27	-6.28	-3.97	1.37	18.08	1.47
262	277	SLU-INV	Max	-0.06	-4.20	-1.94	-7.43	-4.46	1.14	18.08	1.72
262	301	SLU-INV	Max	-0.12	-4.22	-2.01	-7.28	-3.86	0.76	18.39	1.72
262	300	SLU-INV	Min	-0.09	-5.32	-3.16	-12.17	-6.02	-0.12	9.02	-3.91
262	276	SLU-INV	Min	0.00	-5.30	-3.06	-11.80	-5.77	0.15	9.15	-3.91
262	277	SLU-INV	Min	-0.08	-5.68	-2.61	-14.10	-6.62	0.17	9.15	-4.02
262	301	SLU-INV	Min	-0.16	-5.69	-2.71	-14.50	-6.85	-0.10	9.02	-4.02
263	301	SLU-INV	Max	0.03	-4.19	-1.68	-5.33	-2.83	0.09	6.00	-2.20
263	277	SLU-INV	Max	0.09	-4.17	-1.62	-5.42	-3.30	0.26	6.02	-2.20
263	278	SLU-INV	Max	0.05	-4.37	-1.30	-6.01	-3.56	0.21	6.02	-2.22
263	302	SLU-INV	Max	-0.01	-4.39	-1.36	-5.92	-3.10	0.04	6.00	-2.22
263	301	SLU-INV	Min	0.03	-4.19	-1.68	-6.81	-3.49	-0.05	4.66	-2.97
263	277	SLU-INV	Min	0.09	-4.17	-1.62	-6.80	-3.83	0.10	4.72	-2.97
263	278	SLU-INV	Min	0.05	-4.37	-1.30	-7.56	-4.15	0.09	4.72	-3.02
263	302	SLU-INV	Min	-0.01	-4.39	-1.36	-7.57	-3.81	-0.05	4.66	-3.02
263	301	SLU-INV	Max	0.04	-4.19	-1.68	-7.19	-3.83	0.81	12.85	1.71
263	277	SLU-INV	Max	0.13	-4.17	-1.62	-7.31	-4.45	1.09	12.62	1.71
263	278	SLU-INV	Max	0.07	-4.37	-1.30	-8.12	-4.80	0.78	12.62	1.89
263	302	SLU-INV	Max	-0.01	-4.39	-1.36	-7.99	-4.18	0.50	12.85	1.89
263	301	SLU-INV	Min								

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di	Pag.		
L0703	211	E	16	016800	REL	01	A	136	di 180		
263	277	SLU-INV	Min	0.09	-5.63	-2.19	-13.88	-6.56	0.13	6.38	-4.01
263	278	SLU-INV	Min	0.05	-5.91	-1.76	-15.49	-7.17	0.13	6.38	-4.08
263	302	SLU-INV	Min	-0.02	-5.92	-1.83	-15.99	-7.44	-0.07	6.29	-4.08
264	302	SLE-INV	Max	0.08	-4.37	-1.03	-5.87	-3.08	0.07	3.43	-2.21
264	278	SLE-INV	Max	0.16	-4.35	-1.00	-5.95	-3.55	0.17	3.44	-2.21
264	279	SLE-INV	Max	0.13	-4.47	-0.67	-6.29	-3.70	0.11	3.44	-2.22
264	303	SLE-INV	Max	0.06	-4.48	-0.70	-6.21	-3.24	0.01	3.43	-2.22
264	302	SLE-INV	Min	0.08	-4.37	-1.03	-7.51	-3.79	-0.02	2.67	-3.01
264	278	SLE-INV	Min	0.16	-4.35	-1.00	-7.48	-4.13	0.06	2.70	-3.01
264	279	SLE-INV	Min	0.13	-4.47	-0.67	-7.92	-4.32	0.05	2.70	-3.04
264	303	SLE-INV	Min	0.06	-4.48	-0.70	-7.94	-3.98	-0.03	2.67	-3.04
264	302	SLE-INV	Max	0.11	-4.37	-1.03	-7.93	-4.16	0.56	7.36	1.88
264	278	SLU-INV	Max	0.21	-4.35	-1.00	-8.03	-4.79	0.72	7.22	1.88
264	279	SLU-INV	Max	0.18	-4.47	-0.67	-8.49	-5.00	0.39	7.22	1.99
264	303	SLU-INV	Max	0.08	-4.48	-0.70	-8.38	-4.37	0.22	7.36	1.99
264	302	SLU-INV	Min	0.08	-5.90	-1.38	-15.89	-7.43	-0.03	3.60	-4.07
264	278	SLU-INV	Min	0.16	-5.88	-1.34	-15.34	-7.13	0.09	3.65	-4.07
264	279	SLU-INV	Min	0.13	-6.03	-0.91	-16.26	-7.48	0.07	3.65	-4.11
264	303	SLU-INV	Min	0.06	-6.05	-0.95	-16.82	-7.77	-0.04	3.60	-4.11
265	303	SLE-INV	Max	0.10	-4.48	-0.37	-6.18	-3.23	0.05	0.89	-2.22
265	279	SLE-INV	Max	0.18	-4.46	-0.37	-6.26	-3.70	0.07	0.89	-2.22
265	280	SLE-INV	Max	0.17	-4.49	-0.05	-6.35	-3.73	0.01	0.89	-2.22
265	304	SLE-INV	Max	0.10	-4.50	-0.06	-6.27	-3.27	-0.01	0.89	-2.22
265	303	SLE-INV	Min	0.10	-4.48	-0.37	-7.92	-3.97	0.00	0.59	-3.04
265	279	SLE-INV	Min	0.18	-4.46	-0.37	-7.88	-4.31	0.02	0.70	-3.04
265	280	SLE-INV	Min	0.17	-4.49	-0.05	-7.99	-4.36	0.00	0.70	-3.05
265	304	SLE-INV	Min	0.10	-4.50	-0.06	-8.03	-4.02	-0.02	0.69	-3.05
265	303	SLU-INV	Max	0.14	-4.48	-0.37	-8.35	-4.36	0.28	1.90	1.99
265	279	SLU-INV	Max	0.24	-4.46	-0.37	-8.45	-4.99	0.32	1.87	1.99
265	280	SLU-INV	Max	0.24	-4.49	-0.05	-8.57	-5.04	0.01	1.87	2.02
265	304	SLU-INV	Max	0.13	-4.50	-0.06	-8.47	-4.41	-0.02	1.90	2.02
265	303	SLU-INV	Min	0.10	-6.04	-0.51	-16.77	-7.77	0.00	0.93	-4.10
265	279	SLU-INV	Min	0.18	-6.02	-0.50	-16.18	-7.46	0.00	0.94	-4.10
265	280	SLU-INV	Min	0.17	-6.06	-0.07	-16.42	-7.55	-0.04	0.94	-4.11
265	304	SLU-INV	Min	0.10	-6.08	-0.08	-17.01	-7.85	-0.08	0.93	-4.11
266	304	SLE-INV	Max	0.09	-4.51	0.27	-6.27	-3.27	0.02	-1.28	-2.22
266	280	SLE-INV	Max	0.17	-4.49	0.25	-6.35	-3.74	-0.02	-1.30	-2.22
266	281	SLE-INV	Max	0.18	-4.43	0.57	-6.18	-3.66	-0.04	-1.30	-2.22
266	305	SLE-INV	Max	0.10	-4.45	0.59	-6.11	-3.19	0.01	-1.28	-2.22
266	304	SLE-INV	Min	0.09	-4.51	0.27	-8.03	-4.02	0.01	-1.65	-3.05
266	280	SLE-INV	Min	0.17	-4.49	0.25	-8.00	-4.26	-0.04	-1.65	-3.05
266	281	SLE-INV	Min	0.18	-4.43	0.57	-7.79	-4.27	-0.11	-1.65	-3.04
266	305	SLE-INV	Min	0.10	-4.45	0.59	-7.82	-3.93	-0.06	-1.65	-3.04
266	304	SLE-INV	Max	0.12	-4.51	0.36	-8.47	-4.41	0.02	-1.73	2.02
266	280	SLU-INV	Max	0.22	-4.49	0.34	-8.57	-5.04	-0.03	-1.75	2.02
266	281	SLU-INV	Max	0.24	-4.43	0.77	-8.35	-4.94	-0.05	-1.75	1.96
266	305	SLU-INV	Max	0.13	-4.45	0.80	-8.25	-4.31	0.01	-1.73	1.96
266	304	SLU-INV	Min	0.09	-6.08	0.27	-17.01	-7.85	-0.02	-3.55	-4.11
266	280	SLU-INV	Min	0.17	-6.06	0.25	-16.43	-7.55	-0.10	-3.48	-4.11
266	281	SLU-INV	Min	0.18	-5.98	0.57	-15.99	-7.38	-0.46	-3.48	-4.10
266	305	SLU-INV	Min	0.10	-6.01	0.59	-16.56	-7.68	-0.38	-3.55	-4.10
267	305	SLE-INV	Max	0.04	-4.46	0.91	-6.14	-3.20	0.04	-3.26	-2.22
267	281	SLE-INV	Max	0.11	-4.45	0.88	-6.22	-3.67	-0.07	-3.30	-2.22
267	282	SLE-INV	Max	0.14	-4.30	1.21	-5.80	-3.48	-0.08	-3.30	-2.21
267	306	SLE-INV	Max	0.07	-4.32	1.24	-5.72	-3.01	0.03	-3.26	-2.21
267	305	SLE-INV	Min	0.04	-4.46	0.91	-7.85	-3.94	-0.02	-4.20	-3.04
267	281	SLE-INV	Min	0.11	-4.45	0.88	-7.83	-4.28	-0.14	-4.21	-3.04
267	282	SLE-INV	Min	0.14	-4.30	1.21	-7.20	-3.40	-0.10	-4.21	-3.04
267	306	SLE-INV	Min	0.07	-4.32	1.24	-7.32	-3.71	-0.08	-4.20	-3.01
267	305	SLU-INV	Max	0.05	-4.46	1.23	-8.29	-4.32	0.05	-4.40	1.98
267	281	SLU-INV	Max	0.15	-4.45	1.18	-8.40	-4.95	-0.09	-4.46	1.98
267	282	SLU-INV	Max	0.19	-4.30	1.63	-7.84	-4.70	-0.10	-4.46	1.84
267	306	SLU-INV	Max	0.09	-4.32	1.68	-7.73	-4.07	0.04	-4.40	1.84
267	305	SLU-INV	Min	0.04	-6.02	0.91	-16.62	-7.69	-0.31	-9.01	-4.10
267	281	SLU-INV	Min	0.11	-6.00	0.88	-16.07	-7.40	-0.52	-8.84	-4.10
267	282	SLU-INV	Min	0.14	-5.81	1.21	-14.94	-6.97	-0.85	-8.84	-4.06
267	306	SLU-INV	Min	0.07	-5.83	1.24	-15.48	-7.26	-0.65	-9.01	-4.06
268	283	SLE-INV	Max	0.06	-4.08	1.87	-5.14	-3.17	-0.10	-5.41	-2.20
268	307	SLE-INV	Max	0.00	-4.09	1.93	-5.05	-2.71	0.06	-5.34	-2.20
268	306	SLE-INV	Max	-0.05	-4.34	1.59	-5.77	-3.03	0.06	-5.34	-2.22
268	282	SLE-INV	Max	0.02	-4.33	1.53	-5.87	-3.49	-0.11	-5.41	-2.22
268	283	SLE-INV	Min	0.06	-4.08	1.87	-6.45	-3.67	-0.28	-6.89	-2.95
268	307	SLE-INV	Min	0.00	-4.09	1.93	-6.44	-3.33	-0.09	-6.87	-2.95
268	306	SLE-INV	Min	-0.05	-4.34	1.59	-7.38	-3.72	-0.05	-6.87	-3.01
268	282	SLE-INV	Min	0.02	-4.33	1.53	-7.38	-4.06	-0.24	-6.89	-3.01
268	283	SLE-INV	Max	0.09	-4.08	2.52	-6.94	-4.27	-0.14	-7.31	1.62
268	307	SLU-INV	Max	0.00	-4.09	2.60	-6.81	-3.65	0.09	-7.20	1.62
268	306	SLU-INV	Max	-0.05	-4.34	2.15	-7.80	-4.09	0.08	-7.20	1.86
268	282	SLU-INV	Max	0.02	-4.33	2.06	-7.93	-4.71	-0.14	-7.31	1.86
268	283	SLU-INV	Min	0.06	-5.51	1.87	-13.13	-6.27	-1.21	-14.46	-3.98
268	307	SLU-INV	Min	0.00	-5.53	1.93	-13.57	-6.54	-0.89	-14.72	-3.98
268	306	SLU-INV	Min	-0.07	-5.86	1.59	-15.57	-7.27	-0.59	-14.72	-4.07
268	282	SLU-INV	Min	0.02	-5.84	1.53	-15.11	-7.01	-0.91	-14.46	-4.07
269	284	SLE-INV	Max	-0.06	-3.78	2.56	-4.20	-2.74	-0.11	-7.64	-2.17
269	308	SLE-INV	Max	-0.11	-3.79	2.65	-4.09	-2.29	0.11	-7.52	-2.17
269	307	SLE-INV	Max	-0.18	-4.13	2.29	-5.12	-2.73	0.09	-7.52	-2.20
269	283	SLE-INV	Max	-0.12	-4.12	2.21	-5.23	-3.17	-0.13	-7.64	-2.20
269	284	SLE-INV	Min	-0.06	-3.78	2.56	-5.24	-3.16	-0.34	-9.72	-2.86
269	308	SLE-INV	Min	-0.11	-3.79	2.65	-5.20	-2.82	-0.08	-9.68	-2.86
269	307	SLE-INV	Min	-0.18	-4.13	2.29	-6.52	-3.35	-0.06	-9.68	-2.96
269	283	SLE-INV	Min	-0.12	-4.12	2.21	-6.56	-3.69	-0.31	-9.72	-2.96
269	284	SLU-INV	Max	-0.06	-3.78	3.46	-5.67	-3.69	-0.15	-10.31	1.35
269	308	SLU-INV	Max	-0.11	-3.79	3.57	-5.52	-3.09	0.15	-10.16	1.35
269	307	SLU-INV	Max	-0.18	-4.13	3.09	-6.91	-3.69	0.12	-10.16	1.65
269	283	SLU-INV	Max	-0.12	-4.12	2.98	-7.07	-4.29	-0.17	-10.31	1.65
269	284	SLU-INV	Min	-0.08	-5.10	2.56	-10.57	-5.30	-1.48	-20.37	-3.85
269	308	SLU-INV	Min	-0.15	-5.12	2.65	-10.90	-5.55	-1.06	-20.71	-3.85
269	307	SLU-INV	Min	-0.24	-5.57	2.29	-13.71	-6.55	-0.83	-20.71	-3.99
269	283	SLU-INV	Min	-0.17	-5.56	2.21	-13.35	-6.33	-1.26	-20.37	-3.99
270	285	SLE-INV	Max	-0.21	-3.41	3.28	-2.95	-2.20	-0.09	-9.93	-2.11
270	309	SLE-INV	Max	-0.26	-3.42	3.38	-2.82	-1.77	0.17	-9.76	-2.11
270	308	SLE-INV	Max	-0.34	-3.84	3.01	-4.16	-2.32	0.13	-9.76	-2.18
270	284	SLE-INV	Max	-0.30	-3.83	2.91	-4.30	-2.74	-0.13	-9.93	-2.18
270	285	SLE-INV	Min	-0.21	-3.41	3.28	-3.65	-2.51	-0.35	-12.63	-2.72
270	309	SLE-INV	Min	-0.26	-3.42	3.38	-3.57	-2.18	-0.05	-12.55	-2.72
270	308	SLE-INV	Min	-0.34	-3.84	3.01	-5.28	-2.84	-0.06	-12.55	-2.87
270	284	SLE-INV	Min	-0.30	-3.83	2.91	-5.37	-3.17	-0.36	-12.63	-2.87
270	285	SLU-INV	Max	-0.21	-3.41	4.42	-3.99	-2.97	-0.13	-13.41	1.02
270	309	SLU-INV	Max	-0.26	-3.42	4.56	-3.81	-2.39	0.23	-13.17	1.02
270	308	SLU-INV	Max	-0.34	-3.84	4.07	-5.62	-3.13	0.18	-13.17	1.38
270	284	SLU-INV	Max	-0.30	-3.83	3.93	-5.80	-3.70	-0.18	-13.41	1.38



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

				Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 137 di 180
270	285	SLU-INV	Min	-0.29	-4.61	3.28	-7.22	-4.10	-1.64	-26.40	-3.67	
270	309	SLU-INV	Min	-0.35	-4.62	3.38	-7.39	-4.30	-1.13	-26.80	-3.67	
270	308	SLU-INV	Min	-0.46	-5.18	3.01	-11.03	-5.55	-1.02	-26.80	-3.88	
270	284	SLU-INV	Min	-0.40	-5.17	2.91	-10.82	-5.38	-1.52	-26.40	-3.88	
270	286	SLU-INV	Max	-0.41	-2.99	4.01	-1.37	-1.56	-0.06	-12.31	-2.00	
271	310	SLE-INV	Max	-0.43	-2.99	4.13	-1.23	-1.16	0.23	-12.06	-2.00	
271	309	SLE-INV	Max	-0.53	-3.48	3.75	-2.88	-1.80	0.18	-12.06	-2.12	
271	285	SLE-INV	Max	-0.51	-3.47	3.64	-3.03	-2.20	-0.11	-12.31	-2.12	
271	286	SLE-INV	Min	-0.41	-2.99	4.01	-1.64	-1.74	-0.32	-15.62	-2.52	
271	310	SLE-INV	Min	-0.43	-2.99	4.13	-1.52	-1.43	0.01	-15.49	-2.52	
271	309	SLE-INV	Min	-0.53	-3.48	3.75	-3.64	-2.21	-0.03	-15.49	-2.74	
271	285	SLE-INV	Min	-0.51	-3.47	3.64	-3.75	-2.52	-0.36	-15.62	-2.74	
271	286	SLU-INV	Max	-0.41	-2.99	5.42	-1.85	-2.11	-0.08	-16.61	0.68	
271	310	SLU-INV	Max	-0.43	-2.99	5.57	-1.66	-1.56	0.31	-16.28	0.68	
271	309	SLU-INV	Max	-0.53	-3.48	5.07	-3.89	-2.43	0.24	-16.28	1.07	
271	285	SLU-INV	Max	-0.51	-3.47	4.91	-4.10	-2.97	-0.15	-16.61	1.07	
271	286	SLU-INV	Min	-0.55	-4.03	4.01	-3.00	-2.67	-1.67	-32.59	-3.40	
271	310	SLU-INV	Min	-0.58	-4.04	4.13	-3.00	-2.82	-1.11	-33.02	-3.40	
271	309	SLU-INV	Min	-0.71	-4.69	3.75	-7.50	-4.29	-1.10	-33.02	-3.70	
271	285	SLU-INV	Min	-0.68	-4.69	3.64	-7.44	-4.18	-1.67	-32.59	-3.70	
272	287	SLE-INV	Max	-0.63	-2.51	4.78	0.85	-0.84	0.00	-14.78	-1.82	
272	311	SLE-INV	Max	-0.63	-2.51	4.91	1.00	-0.47	0.29	-14.43	-1.82	
272	310	SLE-INV	Max	-0.74	-3.05	4.52	-1.24	-1.18	0.23	-14.43	-2.01	
272	286	SLE-INV	Max	-0.74	-3.05	4.39	-1.40	-1.55	-0.06	-14.78	-2.01	
272	287	SLE-INV	Min	-0.63	-2.51	4.78	0.59	-0.87	-0.26	-18.73	-2.25	
272	311	SLE-INV	Min	-0.63	-2.51	4.91	0.74	-0.58	0.08	-18.52	-2.25	
272	310	SLE-INV	Min	-0.74	-3.05	4.52	-1.54	-1.45	0.01	-18.52	-2.55	
272	286	SLE-INV	Min	-0.74	-3.05	4.39	-1.69	-1.74	-0.33	-18.73	-2.55	
272	287	SLU-INV	Max	-0.63	-2.51	6.45	2.16	-1.04	-0.01	-19.95	0.35	
272	311	SLU-INV	Max	-0.63	-2.51	6.63	2.34	-0.63	0.39	-19.49	0.35	
272	310	SLU-INV	Max	-0.74	-3.05	6.10	-1.68	-1.60	0.32	-19.49	0.73	
272	286	SLU-INV	Max	-0.74	-3.05	5.92	-1.89	-2.09	-0.08	-19.95	0.73	
272	287	SLU-INV	Min	-0.85	-3.39	4.78	0.80	-1.18	-1.56	-38.97	-3.03	
272	311	SLU-INV	Min	-0.85	-3.39	4.91	1.00	-1.14	-0.99	-39.39	-3.03	
272	310	SLU-INV	Min	-1.00	-4.12	4.52	-3.03	-2.79	-1.11	-39.39	-3.44	
272	286	SLU-INV	Min	-1.00	-4.12	4.39	-3.14	-2.73	-1.68	-38.97	-3.44	
273	288	SLE-INV	Max	-0.88	-2.00	5.59	3.87	0.09	0.05	-17.36	-1.56	
273	312	SLE-INV	Max	-0.85	-1.99	5.72	4.02	0.35	0.33	-16.90	-1.56	
273	311	SLE-INV	Max	-0.96	-2.58	5.31	1.05	-0.49	0.28	-16.90	-1.84	
273	287	SLE-INV	Max	-0.99	-2.59	5.17	0.90	-0.80	0.00	-17.36	-1.84	
273	288	SLE-INV	Min	-0.88	-2.00	5.59	2.99	-0.04	-0.17	-21.97	-1.88	
273	312	SLE-INV	Min	-0.85	-1.99	5.72	3.11	0.28	0.15	-21.65	-1.88	
273	311	SLE-INV	Min	-0.96	-2.58	5.31	0.78	-0.58	0.07	-21.65	-2.28	
273	287	SLE-INV	Min	-0.99	-2.59	5.17	0.65	-0.85	-0.25	-21.97	-2.28	
273	288	SLU-INV	Max	-0.88	-2.00	7.54	8.36	0.78	0.07	-23.43	0.07	
273	312	SLU-INV	Max	-0.85	-1.99	7.73	8.70	0.72	0.45	-22.81	0.07	
273	311	SLU-INV	Max	-0.96	-2.58	7.16	2.43	-0.66	0.38	-22.81	0.40	
273	287	SLU-INV	Max	-0.99	-2.59	6.98	2.17	-1.08	0.00	-23.43	0.40	
273	288	SLU-INV	Min	-1.18	-2.70	5.59	4.04	-0.06	-1.32	-45.56	-2.53	
273	312	SLU-INV	Min	-1.14	-2.69	5.72	4.20	0.38	-0.77	-45.94	-2.53	
273	311	SLU-INV	Min	-1.30	-3.48	5.31	1.06	-1.08	-1.00	-45.94	-3.08	
273	287	SLU-INV	Min	-1.34	-3.49	5.17	0.88	-1.15	-1.55	-45.56	-3.08	
274	289	SLE-INV	Max	-1.14	-1.46	6.38	7.48	1.12	0.09	-20.06	-1.18	
274	313	SLE-INV	Max	-1.08	-1.45	6.53	7.61	1.34	0.33	-19.45	-1.18	
274	312	SLE-INV	Max	-1.20	-2.07	6.17	4.19	0.36	0.31	-19.45	-1.59	
274	288	SLE-INV	Max	-1.27	-2.08	6.03	4.06	0.15	0.07	-20.06	-1.59	
274	289	SLE-INV	Min	-1.14	-1.46	6.38	5.87	0.81	-0.08	-25.34	-1.38	
274	313	SLE-INV	Min	-1.08	-1.45	6.53	5.93	1.07	0.19	-24.89	-1.38	
274	312	SLE-INV	Min	-1.20	-2.07	6.17	3.25	0.28	0.12	-24.89	-1.92	
274	288	SLE-INV	Min	-1.27	-2.08	6.03	3.17	0.03	-0.15	-25.34	-1.92	
274	289	SLU-INV	Max	-1.14	-1.46	8.62	15.72	2.73	0.12	-27.08	-0.13	
274	313	SLU-INV	Max	-1.08	-1.45	8.82	16.20	2.70	0.44	-26.26	-0.13	
274	312	SLU-INV	Max	-1.20	-2.07	8.34	9.00	0.82	0.42	-26.26	0.12	
274	288	SLU-INV	Max	-1.27	-2.08	8.14	8.61	0.79	0.10	-27.08	0.12	
274	289	SLU-INV	Min	-1.54	-1.97	6.38	7.93	1.09	-0.96	-52.38	-1.87	
274	313	SLU-INV	Min	-1.45	-1.95	6.53	8.01	1.44	-0.50	-52.67	-1.87	
274	312	SLU-INV	Min	-1.62	-2.79	6.17	4.39	0.37	-0.82	-52.67	-2.59	
274	288	SLU-INV	Min	-1.71	-2.81	6.03	4.28	0.04	-1.28	-52.38	-2.59	
275	290	SLE-INV	Max	-1.42	-0.89	7.67	11.77	2.21	0.08	-22.89	-0.66	
275	314	SLE-INV	Max	-1.31	-0.87	7.81	11.82	2.36	0.24	-22.11	-0.66	
275	313	SLE-INV	Max	-1.44	-1.52	6.75	7.93	1.37	0.29	-22.11	-1.21	
275	289	SLE-INV	Max	-1.55	-1.54	6.61	7.87	1.23	0.12	-22.89	-1.21	
275	290	SLE-INV	Min	-1.42	-0.89	7.67	9.30	1.70	-0.02	-28.87	-0.75	
275	314	SLE-INV	Min	-1.31	-0.87	7.81	9.26	1.88	0.17	-28.24	-0.75	
275	313	SLE-INV	Min	-1.44	-1.52	6.75	6.23	1.08	0.15	-28.24	-1.44	
275	289	SLE-INV	Min	-1.55	-1.54	6.61	6.23	0.92	-0.04	-28.87	-1.44	
275	290	SLU-INV	Max	-1.42	-0.89	10.36	24.35	4.81	0.10	-30.90	-0.19	
275	314	SLU-INV	Max	-1.31	-0.87	10.54	24.91	4.79	0.33	-29.85	-0.19	
275	313	SLU-INV	Max	-1.44	-1.52	9.12	16.75	2.86	0.39	-29.85	-0.07	
275	289	SLU-INV	Max	-1.55	-1.54	8.93	16.30	2.80	0.17	-30.90	-0.07	
275	290	SLU-INV	Min	-1.91	-1.21	7.67	12.56	2.30	-0.53	-59.46	-1.01	
275	314	SLU-INV	Min	-1.77	-1.18	7.81	12.50	2.54	-0.20	-59.60	-1.01	
275	313	SLU-INV	Min	-1.95	-2.05	6.75	8.38	1.46	-0.56	-59.60	-1.94	
275	289	SLU-INV	Min	-2.09	-2.08	6.61	8.41	1.25	-0.90	-59.46	-1.94	
276	291	SLE-INV	Max	-1.70	-0.34	5.48	16.80	3.32	-0.03	-25.85	0.07	
276	315	SLE-INV	Max	-1.56	-0.31	5.69	16.71	3.38	0.04	-24.87	0.07	
276	314	SLE-INV	Max	-1.68	-0.95	10.04	12.33	2.42	0.19	-24.87	-0.70	
276	290	SLE-INV	Max	-1.83	-0.98	9.84	12.42	2.38	0.13	-25.85	-0.70	
276	291	SLE-INV	Min	-1.70	-0.34	5.48	13.36	2.62	-0.04	-32.55	0.04	
276	315	SLE-INV	Min	-1.56	-0.31	5.69	13.14	2.68	0.03	-31.72	0.04	
276	314	SLE-INV	Min	-1.68	-0.95	10.04	9.70	1.92	0.11	-31.72	-0.81	
276	290	SLE-INV	Min	-1.83	-0.98	9.84	9.89	1.87	0.04	-32.55	-0.81	
276	291	SLU-INV	Max	-1.70	-0.34	7.40	34.40	6.95	-0.04	-34.90	0.09	
276	315	SLU-INV	Max	-1.56	-0.31	7.68	34.94	6.92	0.05	-33.57	0.09	
276	314	SLU-INV	Max	-1.68	-0.95	13.56	25.79	5.02	0.26	-33.57	-0.13	
276	290	SLU-INV	Max	-1.83	-0.98	13.28	25.36	4.96	0.17	-34.90	-0.13	
276	291	SLU-INV	Min	-2.30	-0.46	5.48	18.03	3.53	-0.07	-66.80	-0.08	
276	315	SLU-INV	Min	-2.10	-0.42	5.69	17.74	3.62	0.05	-66.74	-0.08	
276	314	SLU-INV	Min	-2.27	-1.28	10.04	13.09	2.59	-0.30	-66.74	-1.09	
276	290	SLU-INV	Min	-2.47	-1.32	9.84	13.35	2.52	-0.42	-66.80	-1.09	
277	316	SLE-INV	Max	-1.43	-0.29	-5.86	16.39	3.34	-0.03	30.95	0.09	
277	292	SLE-INV	Max	-1.57	-0.31	-5.68	16.67	3.28	0.03	31.96	0.09	
277	293	SLE-INV	Max	-1.68	-0.84	-10.28	12.67	2.43	-0.16	31.96	-0.76	
277	317	SLE-INV	Max	-1.54	-0.82	-10.46	12.42	2.48	-0.22	30.95	-0.76	
277	316	SLE-INV	Min	-1.43	-0.29	-5.86	12.72	2.62	-0.03	23.93	0.07	
277	292	SLE-INV	Min	-1.57	-0.31	-5.68						

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N. progr.	REV.	Pag.di Pag.			
L0703	211	E	16	O16800	REL	01	A	138 di 180			
277	317	SLU-INV	Max	-1.54	-0.82	-10.46	26.64	5.24	0.09	66.85	-0.33
277	316	SLU-INV	Min	-1.93	-0.39	-7.92	17.17	3.53	-0.04	32.30	-0.03
277	292	SLU-INV	Min	-2.12	-0.42	-7.67	17.68	3.44	0.03	33.84	-0.03
277	293	SLU-INV	Min	-2.26	-1.14	-13.88	13.45	2.55	-0.31	33.84	-1.15
277	317	SLU-INV	Min	-2.08	-1.10	-14.12	13.01	2.61	-0.38	32.30	-1.15
278	293	SLU-INV	Max	-1.23	-0.75	-8.22	12.00	2.44	-0.26	27.89	-0.71
278	293	SLU-INV	Max	-1.33	-0.77	-8.09	12.09	2.27	-0.12	28.71	-0.71
278	294	SLE-INV	Max	-1.44	-1.31	-6.97	8.50	1.42	-0.19	28.71	-1.39
278	318	SLE-INV	Max	-1.34	-1.30	-7.10	8.43	1.57	-0.34	27.89	-1.39
278	317	SLE-INV	Min	-1.23	-0.75	-8.22	9.28	1.92	-0.32	21.54	-0.78
278	293	SLE-INV	Min	-1.33	-0.77	-8.09	9.46	1.73	-0.19	22.48	-0.78
278	294	SLE-INV	Min	-1.44	-1.31	-6.97	6.65	1.06	-0.32	22.48	-1.56
278	318	SLE-INV	Min	-1.34	-1.30	-7.10	6.52	1.23	-0.45	21.54	-1.56
278	317	SLU-INV	Max	-1.23	-0.75	-8.22	25.91	5.07	0.01	60.36	-0.36
278	293	SLU-INV	Max	-1.33	-0.77	-8.09	25.57	5.03	0.26	60.54	-0.36
278	294	SLU-INV	Max	-1.44	-1.31	-6.97	17.95	3.23	0.46	60.54	-0.51
278	318	SLU-INV	Max	-1.34	-1.30	-7.10	18.21	3.32	0.21	60.36	-0.51
278	317	SLU-INV	Min	-1.66	-1.02	-11.09	12.53	2.60	-0.43	29.07	-1.05
278	293	SLU-INV	Min	-1.80	-1.04	-10.92	12.77	2.34	-0.26	30.35	-1.05
278	294	SLU-INV	Min	-1.94	-1.77	-9.41	8.97	1.43	-0.43	30.35	-2.10
278	318	SLU-INV	Min	-1.81	-1.75	-9.58	8.80	1.66	-0.60	29.07	-2.10
279	318	SLE-INV	Max	-1.03	-1.23	-6.92	8.15	1.56	-0.37	24.91	-1.34
279	294	SLE-INV	Max	-1.10	-1.25	-6.79	8.12	1.30	-0.16	25.56	-1.34
279	295	SLE-INV	Max	-1.20	-1.77	-6.48	4.91	0.45	-0.16	25.56	-1.88
279	319	SLE-INV	Max	-1.14	-1.76	-6.61	4.96	0.70	-0.38	24.91	-1.88
279	318	SLE-INV	Min	-1.03	-1.23	-6.92	6.28	1.23	-0.48	19.21	-1.50
279	294	SLE-INV	Min	-1.10	-1.25	-6.79	6.31	0.94	-0.29	19.99	-1.50
279	295	SLE-INV	Min	-1.20	-1.77	-6.48	3.81	0.27	-0.33	19.99	-2.14
279	319	SLE-INV	Min	-1.14	-1.76	-6.61	3.81	0.54	-0.52	19.21	-2.14
279	318	SLU-INV	Max	-1.03	-1.23	-6.92	17.71	3.20	0.14	54.02	-0.54
279	294	SLU-INV	Max	-1.10	-1.25	-6.79	17.37	3.14	0.52	54.05	-0.54
279	295	SLU-INV	Max	-1.20	-1.77	-6.48	10.55	1.37	0.72	54.05	-0.56
279	319	SLU-INV	Max	-1.14	-1.76	-6.61	10.82	1.48	0.34	54.02	-0.56
279	318	SLU-INV	Min	-1.40	-1.67	-9.35	8.48	1.67	-0.64	25.94	-2.02
279	294	SLU-INV	Min	-1.48	-1.68	-9.17	8.52	1.27	-0.39	26.99	-2.02
279	295	SLU-INV	Min	-1.62	-2.39	-8.75	5.14	0.37	-0.45	26.99	-2.88
279	319	SLU-INV	Min	-1.54	-2.38	-8.93	5.15	0.73	-0.70	25.94	-2.88
280	295	SLE-INV	Max	-0.84	-1.70	-6.18	4.80	0.70	-0.40	22.00	-1.84
280	319	SLE-INV	Max	-0.87	-1.71	-6.05	4.69	0.38	-0.14	22.52	-1.84
280	296	SLE-INV	Max	-0.97	-2.21	-5.64	1.86	0.44	-0.11	22.52	-2.26
280	320	SLE-INV	Max	-0.94	-2.21	-5.77	1.98	-0.21	-0.26	22.00	-2.26
280	319	SLE-INV	Min	-0.84	-1.70	-6.18	3.67	0.56	-0.54	16.96	-2.08
280	295	SLE-INV	Min	-0.87	-1.71	-6.05	3.60	0.19	-0.32	17.59	-2.08
280	296	SLE-INV	Min	-0.97	-2.21	-5.64	1.40	-0.46	-0.31	17.59	-2.60
280	320	SLE-INV	Min	-0.94	-2.21	-5.77	1.50	-0.13	-0.53	16.96	-2.60
280	319	SLU-INV	Max	-0.84	-1.70	-6.18	10.53	1.40	0.31	47.81	-0.59
280	295	SLU-INV	Max	-0.87	-1.71	-6.05	10.22	1.33	0.75	47.73	-0.59
280	296	SLU-INV	Max	-0.97	-2.21	-5.64	4.20	-0.33	0.93	47.73	-0.52
280	320	SLU-INV	Max	-0.94	-2.21	-5.77	4.44	-0.15	0.49	47.81	-0.52
280	319	SLU-INV	Min	-1.13	-2.30	-8.34	4.96	0.75	-0.73	22.89	-2.81
280	295	SLU-INV	Min	-1.17	-2.31	-8.17	4.86	0.26	-0.43	23.74	-2.81
280	296	SLU-INV	Min	-1.31	-2.99	-7.62	1.89	-0.62	-0.42	23.74	-3.51
280	320	SLU-INV	Min	-1.27	-2.98	-7.80	2.02	-0.23	-0.72	22.89	-3.51
281	320	SLE-INV	Max	-0.65	-2.15	-5.39	1.90	-0.08	-0.38	19.18	-2.23
281	297	SLE-INV	Max	-0.65	-2.15	-5.27	1.76	-0.49	-0.09	19.57	-2.23
281	296	SLE-INV	Max	-0.75	-2.63	-4.90	-0.61	-1.13	-0.04	19.57	-2.55
281	321	SLE-INV	Max	-0.74	-2.63	-5.02	-0.46	-0.71	-0.32	19.18	-2.55
281	320	SLE-INV	Min	-0.65	-2.15	-5.39	1.85	-0.41	-0.26	14.76	-2.55
281	296	SLE-INV	Min	-0.65	-2.15	-5.27	1.30	-0.52	-0.30	15.27	-2.56
281	297	SLE-INV	Min	-0.75	-2.63	-4.90	-0.71	-1.26	-0.26	15.27	-2.97
281	321	SLE-INV	Min	-0.74	-2.63	-5.02	-0.55	-0.89	-0.50	14.76	-2.97
281	320	SLU-INV	Max	-0.65	-2.15	-5.39	4.29	-0.11	0.46	41.74	-0.55
281	296	SLU-INV	Max	-0.65	-2.15	-5.27	4.07	-0.34	0.95	41.59	-0.55
281	297	SLU-INV	Max	-0.75	-2.63	-4.90	-0.83	-1.53	1.07	41.59	-0.42
281	321	SLU-INV	Max	-0.74	-2.63	-5.02	-0.62	-0.96	0.58	41.74	-0.42
281	320	SLU-INV	Min	-0.87	-2.90	-7.28	1.93	-0.28	-0.73	19.93	-3.45
281	296	SLU-INV	Min	-0.88	-2.90	-7.12	1.76	-0.70	-0.40	20.61	-3.45
281	297	SLU-INV	Min	-1.01	-3.55	-6.61	-1.18	-1.89	-0.35	20.61	-4.01
281	321	SLU-INV	Min	-1.00	-3.55	-6.77	-1.02	-1.80	-0.68	19.93	-4.01
282	321	SLE-INV	Max	-0.47	-2.57	-4.64	-0.47	-0.68	-0.32	16.42	-2.53
282	297	SLE-INV	Max	-0.45	-2.57	-4.53	-0.64	-1.17	-0.04	16.72	-2.53
282	298	SLE-INV	Max	-0.54	-3.01	-4.16	-2.27	-1.73	0.02	16.72	-2.77
282	322	SLE-INV	Max	-0.56	-3.01	-4.28	-2.08	-1.26	-0.27	16.42	-2.77
282	321	SLE-INV	Min	-0.47	-2.57	-4.64	-0.56	-0.87	-0.50	12.63	-2.93
282	297	SLE-INV	Min	-0.45	-2.57	-4.53	-0.72	-1.28	-0.26	13.02	-2.93
282	298	SLE-INV	Min	-0.54	-3.01	-4.16	-2.83	-1.98	-0.20	13.02	-3.26
282	322	SLE-INV	Min	-0.56	-3.01	-4.28	-2.66	-1.57	-0.44	12.63	-3.26
282	321	SLU-INV	Max	-0.47	-2.57	-4.64	-0.63	-0.92	0.58	35.80	-0.45
282	297	SLU-INV	Max	-0.45	-2.57	-4.53	-0.86	-1.57	1.07	35.60	-0.45
282	298	SLU-INV	Max	-0.54	-3.01	-4.16	-3.07	-2.33	1.12	35.60	-0.28
282	322	SLU-INV	Max	-0.56	-3.01	-4.28	-2.81	-1.70	0.64	35.80	-0.28
282	321	SLU-INV	Min	-0.64	-3.47	-6.27	-1.05	-1.83	-0.68	17.05	-3.96
282	297	SLU-INV	Min	-0.61	-3.47	-6.12	-1.17	-1.87	-0.35	17.58	-3.96
282	298	SLU-INV	Min	-0.73	-4.06	-5.62	-5.67	-3.27	-0.27	17.58	-4.40
282	322	SLU-INV	Min	-0.75	-4.07	-5.77	-5.60	-3.20	-0.60	17.05	-4.40
283	322	SLE-INV	Max	-0.31	-2.96	-3.91	-2.06	-1.23	-0.26	13.72	-2.75
283	298	SLE-INV	Max	-0.28	-2.96	-3.81	-2.24	-1.75	0.01	13.94	-2.75
283	299	SLE-INV	Max	-0.36	-3.35	-3.45	-3.61	-2.24	0.06	13.94	-2.93
283	323	SLE-INV	Max	-0.39	-3.35	-3.55	-3.40	-1.73	-0.21	13.72	-2.93
283	322	SLE-INV	Min	-0.31	-2.96	-3.91	-2.63	-1.55	-0.44	10.55	-3.23
283	298	SLE-INV	Min	-0.28	-2.96	-3.81	-2.79	-1.99	-0.20	10.85	-3.23
283	299	SLE-INV	Min	-0.36	-3.35	-3.45	-4.54	-2.60	-0.14	10.85	-3.48
283	323	SLE-INV	Min	-0.39	-3.35	-3.55	-4.38	-2.17	-0.37	10.55	-3.48
283	322	SLU-INV	Max	-0.31	-2.96	-3.91	-2.78	-1.65	0.65	29.96	-0.30
283	298	SLU-INV	Max	-0.28	-2.96	-3.81	-3.03	-2.36	1.12	29.75	-0.30
283	299	SLU-INV	Max	-0.36	-3.35	-3.45	-4.87	-3.03	1.10	29.75	-0.12
283	323	SLU-INV	Max	-0.39	-3.35	-3.55	-4.60	-2.34	0.63	29.96	-0.12
283	322	SLU-INV	Min	-0.41	-4.00	-5.28	-5.56	-3.21	-0.59	14.24	-4.36
283	298	SLU-INV	Min	-0.37	-3.99	-5.14	-5.56	-3.23	-0.28	14.65	-4.36
283	299	SLU-INV	Min	-0.48	-4.52	-4.66	-9.32	-4.45	-0.19	14.65	-4.70
283	323	SLU-INV	Min	-0.52	-4.53	-4.80	-9.36	-4.41	-0.50	14.24	-4.70
284	323	SLE-INV	Max	-0.17	-3.31	-3.20	-3.36	-1.70	-0.19	11.08	-2.91
284	299	SLE-INV	Max	-0.12	-3.30	-3.11	-3.55	-2.25	0.05	11.24	-2.91
284	300	SLE-INV	Max	-0.19	-3.63	-2.75	-4.65	-2.67	0.08	11.24	-3.04
284	324	SLE-INV	Max	-0.23	-3.64	-2.84	-4.44	-2.13	-0.15	11.08	-3.04
284	323	SLE-INV	Min	-0.17	-3.31	-3.20	-4.33	-2.14	-0.36	8.51	-3.45
284	299	SLE-INV	Min	-0.12	-3.30	-3.11	-4.47	-2.60	-0.15	8.74	-3.45
284	300	SLE-INV	Min	-0.19	-3.63	-2.75	-5.89	-3.12	-0.09	8.74	-3.64
284	324	SLE-INV	Min	-0.23	-3.64	-2.84	-5.74	-2.66	-0.30	8.51	-3.64
284	323	SLU-INV	Max	-0.17	-3.31	-3.20	-4.53	-3.11	-0.21	24.23	-0.

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 139 di 180			
284	300	SLU-INV	Max	-0.19	-3.63	-2.75	-6.28	-3.60	0.99	24.02	0.03
284	324	SLU-INV	Max	-0.23	-3.64	-2.84	-6.00	-2.87	0.58	24.23	0.03
284	323	SLU-INV	Min	-0.23	-4.47	-4.31	-9.27	-4.41	-0.49	11.49	-4.66
284	299	SLU-INV	Min	-0.16	-4.46	-4.20	-9.17	-4.41	-0.21	11.80	-4.66
284	300	SLU-INV	Min	-0.25	-4.41	-3.72	-12.21	-5.43	-0.12	11.80	-4.92
284	324	SLU-INV	Min	-0.32	-4.92	-3.84	-12.35	-5.41	-0.40	11.49	-4.92
285	324	SLE-INV	Max	-0.05	-3.61	-2.48	-4.39	-2.10	-0.13	8.49	-3.03
285	300	SLE-INV	Max	0.00	-3.60	-2.42	-4.58	-2.67	0.06	8.60	-3.03
285	301	SLE-INV	Max	-0.05	-3.86	-2.07	-5.42	-3.00	0.09	8.60	-3.12
285	325	SLE-INV	Max	-0.10	-3.87	-2.14	-5.22	-2.44	-0.11	8.49	-3.12
285	324	SLE-INV	Min	-0.05	-3.61	-2.48	-5.68	-2.64	-0.28	6.52	-3.62
285	300	SLE-INV	Min	0.00	-3.60	-2.42	-5.80	-3.11	-0.11	6.68	-3.62
285	301	SLE-INV	Min	-0.05	-3.86	-2.07	-6.89	-3.52	-0.05	6.68	-3.76
285	325	SLE-INV	Min	-0.10	-3.87	-2.14	-6.76	-3.05	-0.22	6.52	-3.76
285	324	SLU-INV	Max	-0.05	-3.61	-2.48	-5.93	-2.84	0.61	18.57	0.01
285	300	SLU-INV	Max	0.00	-3.60	-2.42	-6.19	-3.61	0.95	18.39	0.01
285	301	SLU-INV	Max	-0.05	-3.86	-2.07	-7.32	-4.05	0.80	18.39	0.16
285	325	SLU-INV	Max	-0.10	-3.87	-2.14	-7.05	-3.29	0.46	18.57	0.16
285	324	SLU-INV	Min	-0.07	-4.87	-3.35	-12.25	-5.40	-0.38	8.80	-4.89
285	300	SLU-INV	Min	0.00	-4.85	-3.26	-12.04	-5.38	-0.15	9.02	-4.89
285	301	SLU-INV	Min	-0.07	-5.21	-2.80	-14.37	-6.19	-0.07	9.02	-5.07
285	325	SLU-INV	Min	-0.14	-5.23	-2.89	-14.61	-6.20	-0.30	8.80	-5.07
286	325	SLE-INV	Max	0.03	-3.85	-1.79	-5.17	-2.42	-0.08	5.93	-3.11
286	301	SLE-INV	Max	0.10	-3.83	-1.74	-5.36	-3.00	0.06	6.00	-3.11
286	302	SLE-INV	Max	0.06	-4.02	-1.39	-5.95	-3.24	0.07	6.00	-3.16
286	326	SLE-INV	Max	0.00	-4.04	-1.44	-5.75	-2.66	-0.07	5.93	-3.16
286	325	SLE-INV	Min	0.03	-3.85	-1.79	-6.70	-3.03	-0.20	4.55	-3.74
286	301	SLE-INV	Min	0.10	-3.83	-1.74	-6.81	-3.52	-0.08	4.66	-3.74
286	302	SLE-INV	Min	0.06	-4.02	-1.39	-7.57	-3.81	-0.02	4.66	-3.83
286	326	SLE-INV	Min	0.00	-4.04	-1.44	-7.45	-3.33	-0.15	4.55	-3.83
286	325	SLE-INV	Max	0.04	-3.85	-1.79	-6.98	-3.26	0.51	12.98	0.15
286	301	SLU-INV	Max	0.13	-3.83	-1.74	-7.24	-4.05	0.75	12.85	0.15
286	302	SLU-INV	Max	0.08	-4.02	-1.39	-8.03	-4.37	0.56	12.85	0.26
286	326	SLU-INV	Max	0.00	-4.04	-1.44	-7.77	-3.59	0.31	12.98	0.26
286	325	SLU-INV	Min	0.03	-5.19	-2.42	-14.51	-6.19	-0.27	6.14	-5.05
286	301	SLU-INV	Min	0.10	-5.17	-2.35	-14.23	-6.15	-0.10	6.29	-5.05
286	302	SLU-INV	Min	0.06	-5.43	-1.88	-15.86	-6.72	-0.03	6.29	-5.17
286	326	SLU-INV	Min	-0.01	-5.45	-1.95	-16.15	-6.75	-0.20	6.14	-5.17
287	326	SLE-INV	Max	0.09	-4.02	-1.09	-5.72	-2.64	-0.04	3.40	-3.16
287	302	SLE-INV	Max	0.15	-4.00	-1.06	-5.90	-3.24	0.04	3.43	-3.16
287	303	SLE-INV	Max	0.13	-4.12	-0.73	-6.24	-3.77	0.04	3.43	-3.19
287	327	SLE-INV	Max	0.07	-4.13	-0.75	-6.05	-2.78	-0.04	3.40	-3.19
287	326	SLE-INV	Min	0.09	-4.02	-1.09	-7.41	-3.31	-0.12	2.61	-3.82
287	302	SLE-INV	Min	0.15	-4.00	-1.06	-7.51	-3.80	-0.05	2.67	-3.82
287	303	SLE-INV	Min	0.13	-4.12	-0.73	-7.94	-3.97	0.00	2.67	-3.87
287	327	SLE-INV	Min	0.07	-4.13	-0.75	-7.84	-3.48	-0.07	2.61	-3.87
287	326	SLU-INV	Max	0.12	-4.02	-1.09	-7.72	-3.57	0.36	7.44	0.26
287	302	SLU-INV	Max	0.21	-4.00	-1.06	-7.97	-4.37	0.51	7.36	0.26
287	303	SLU-INV	Max	0.18	-4.12	-0.73	-8.42	-4.55	0.27	7.36	0.33
287	327	SLU-INV	Max	0.09	-4.13	-0.75	-8.16	-3.76	0.13	7.44	0.33
287	326	SLU-INV	Min	0.09	-5.42	-1.47	-16.09	-6.74	-0.16	3.52	-5.16
287	302	SLU-INV	Min	0.15	-5.41	-1.43	-15.74	-6.69	-0.07	3.60	-5.16
287	303	SLU-INV	Min	0.13	-5.56	-0.98	-16.67	-7.03	0.00	3.60	-5.23
287	327	SLU-INV	Min	0.07	-5.57	-1.02	-17.03	-7.07	-0.10	3.52	-5.23
288	327	SLE-INV	Max	0.11	-4.12	-0.40	-6.03	-2.77	-0.01	0.88	-3.18
288	303	SLE-INV	Max	0.18	-4.11	-0.40	-6.21	-3.37	0.01	0.89	-3.18
288	304	SLE-INV	Max	0.17	-4.14	-0.05	-6.33	-3.41	0.02	0.89	-3.18
288	328	SLE-INV	Max	-0.10	-4.15	-0.06	-6.11	-2.81	0.00	0.88	-3.19
288	327	SLE-INV	Min	0.11	-4.12	-0.40	-7.82	-3.48	-0.05	0.67	-3.87
288	303	SLE-INV	Min	0.18	-4.11	-0.40	-7.92	-3.97	-0.03	0.69	-3.87
288	304	SLE-INV	Min	0.17	-4.14	-0.05	-8.03	-4.01	0.01	0.69	-3.88
288	328	SLE-INV	Min	0.10	-4.15	-0.06	-7.93	-3.52	-0.01	0.67	-3.88
288	327	SLU-INV	Max	0.15	-4.12	-0.40	-8.14	-3.75	0.18	1.92	0.32
288	303	SLU-INV	Max	0.24	-4.11	-0.40	-8.39	-4.55	0.22	1.90	0.32
288	304	SLU-INV	Max	0.23	-4.14	-0.05	-8.51	-4.60	0.02	1.90	0.34
288	328	SLU-INV	Max	0.14	-4.15	-0.06	-8.25	-3.79	0.00	1.92	0.34
288	327	SLU-INV	Min	0.11	-5.56	-0.54	-16.98	-7.06	-0.06	0.91	-5.22
288	303	SLU-INV	Min	0.18	-5.54	-0.53	-16.62	-7.01	-0.04	0.93	-5.22
288	304	SLU-INV	Min	0.17	-5.58	-0.07	-16.86	-7.10	-0.02	0.93	-5.24
288	328	SLU-INV	Min	0.10	-5.60	-0.08	-17.22	-7.15	-0.06	0.91	-5.24
289	328	SLE-INV	Max	0.10	-4.15	0.29	-6.11	-2.81	0.03	-1.25	-3.19
289	304	SLE-INV	Max	0.16	-4.14	0.28	-6.30	-3.41	-0.01	-1.28	-3.19
289	305	SLE-INV	Max	0.17	-4.08	0.61	-6.14	-3.34	0.03	-1.28	-3.18
289	329	SLE-INV	Max	0.11	-4.09	0.63	-5.95	-2.74	0.07	-1.25	-3.18
289	328	SLE-INV	Min	0.08	-4.15	0.29	-7.93	-3.97	0.04	-1.64	-3.88
289	304	SLE-INV	Min	0.16	-4.14	0.28	-8.03	-4.01	-0.02	-1.65	-3.88
289	305	SLE-INV	Min	0.17	-4.08	0.61	-7.82	-3.93	-0.02	-1.65	-3.86
289	329	SLE-INV	Min	0.11	-4.09	0.63	-7.72	-3.44	0.02	-1.64	-3.86
289	328	SLU-INV	Max	0.13	-4.15	0.39	-8.26	-3.79	0.04	-1.69	0.34
289	304	SLU-INV	Max	0.22	-4.14	0.37	-8.51	-4.60	-0.01	-1.73	0.34
289	305	SLU-INV	Max	0.23	-4.08	0.83	-8.29	-4.51	0.05	-1.73	0.31
289	329	SLU-INV	Max	0.14	-4.09	0.85	-8.04	-3.70	0.10	-1.69	0.31
289	328	SLU-INV	Min	0.10	-5.60	0.29	-17.23	-7.15	0.00	-3.59	-5.24
289	304	SLU-INV	Min	0.16	-5.59	0.28	-16.86	-7.10	-0.08	-3.55	-5.24
289	305	SLU-INV	Min	0.17	-5.51	0.61	-16.41	-6.93	-0.32	-3.55	-5.21
289	329	SLU-INV	Min	0.11	-5.53	0.63	-16.77	-6.99	-0.25	-3.59	-5.21
290	329	SLE-INV	Max	0.05	-4.11	0.97	-5.97	-2.75	0.10	-3.19	-3.18
290	305	SLE-INV	Max	0.11	-4.09	0.94	-6.17	-3.34	0.01	-3.26	-3.18
290	306	SLE-INV	Max	0.14	-3.96	1.30	-5.76	-3.17	0.06	-3.26	-3.15
290	330	SLE-INV	Max	0.07	-3.97	1.33	-5.57	-2.58	0.15	-3.19	-3.15
290	329	SLE-INV	Min	0.05	-4.11	0.97	-7.75	-3.44	0.05	-4.16	-3.87
290	305	SLE-INV	Min	0.11	-4.09	0.94	-7.85	-3.93	-0.05	-4.20	-3.87
290	306	SLE-INV	Min	0.14	-3.96	1.30	-7.32	-3.72	-0.05	-4.20	-3.81
290	330	SLE-INV	Min	0.07	-3.97	1.33	-7.22	-3.23	0.06	-4.16	-3.81
290	329	SLU-INV	Max	0.06	-4.11	1.31	-8.07	-3.71	0.13	-4.30	0.31
290	305	SLU-INV	Max	0.15	-4.09	1.26	-8.32	-4.51	0.01	-4.40	0.31
290	306	SLU-INV	Max	0.19	-3.96	1.75	-7.77	-4.28	0.08	-4.40	0.23
290	330	SLU-INV	Max	0.10	-3.97	1.80	-7.52	-3.48	0.20	-4.30	0.23
290	329	SLU-INV	Min	0.05	-5.54	0.97	-16.81	-6.99	-0.20	-9.11	-5.22
290	305	SLU-INV	Min	0.11	-5.53	0.94	-16.47	-6.95	-0.37	-9.01	-5.22
290	306	SLU-INV	Min	0.14	-5.34	1.30	-15.33	-6.54	-0.59	-9.01	-5.14
290	330	SLU-INV	Min	0.07	-5.36	1.33	-15.65	-6.59	-0.41	-9.11	-5.14
291	307	SLE-INV	Max	0.07	-3.74	1.99	-5.08	-2.88	0.09	-5.34	-3.08
291	331	SLE-INV	Max	0.01	-3.75	2.05	-4.89	-2.30	0.23	-5.21	-3.08
291	330	SLE-INV	Max	-0.04	-3.99	1.70	-5.61	-2.59	0.17	-5.21	-3.15
291	306	SLE-INV	Max	0.02	-3.98	1.64	-5.80	-3.17	0.03	-5.34	-3.15
291	307	SLE-INV	Min	0.07	-3.74	1.99	-6.45	-3.37	-0.06	-6.87	-3.70
291	331	SLE-INV	Min	0.01	-3.75	2.05	-6.33	-2.89	0.10	-6.79	-3.70
291	330	SLE-INV	Min	-0.04	-3.99	1.70	-7.26	-3.25	0.09	-6.79	-3.82
291	306	SLE-INV	Min	0.02	-3.98	1.64	-7.68	-3.73	-0.08	-6.87	-3.82
291	307	SLU-INV	Max	0.09	-3.74	2.69	-6.86	-3.89	0.12	-7.21	0.10

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 140 di 180
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291	331	SLU-INV	Max	0.01	-3.75	2.76	-6.60	-3.10	0.31	-7.04	0.10
291	330	SLU-INV	Max	-0.04	-3.99	2.29	-7.57	-3.50	0.23	-7.04	0.24
291	306	SLU-INV	Max	0.03	-3.98	2.21	-7.83	-4.28	0.04	-7.21	0.24
291	307	SLU-INV	Min	0.07	-5.05	1.99	-13.43	-5.86	-0.84	-14.72	-5.00
291	331	SLU-INV	Min	0.01	-5.07	2.05	-13.70	-5.90	-0.56	-14.88	-5.00
291	330	SLU-INV	Min	-0.05	-5.39	1.70	-15.72	-6.59	-0.36	-14.88	-5.15
291	306	SLU-INV	Min	0.02	-5.37	1.64	-15.44	-6.57	-0.64	-14.72	-5.15
292	308	SLE-INV	Max	-0.05	-3.46	2.74	-4.13	-2.48	0.13	-7.52	-2.98
292	332	SLE-INV	Max	-0.10	-3.47	2.81	-3.93	-1.92	0.32	-7.34	-2.98
292	331	SLE-INV	Max	-0.16	-3.79	2.43	-4.94	-2.32	0.25	-7.34	-3.09
292	307	SLE-INV	Max	-0.11	-3.78	2.36	-5.14	-2.88	0.07	-7.52	-3.09
292	308	SLE-INV	Min	-0.05	-3.46	2.74	-5.21	-2.89	-0.05	-9.68	-3.55
292	332	SLE-INV	Min	-0.10	-3.47	2.81	-5.08	-2.42	0.16	-9.56	-3.55
292	331	SLE-INV	Min	-0.16	-3.79	2.43	-6.39	-2.91	0.13	-9.56	-3.72
292	307	SLE-INV	Min	-0.11	-3.78	2.36	-6.53	-3.37	-0.09	-9.68	-3.72
292	308	SLE-INV	Max	-0.05	-3.46	3.69	-5.57	-3.35	0.48	-10.16	-0.06
292	332	SLU-INV	Max	-0.10	-3.47	3.80	-5.31	-2.59	0.43	-9.90	-0.06
292	331	SLU-INV	Max	-0.16	-3.79	3.29	-6.67	-3.14	0.34	-9.90	0.12
292	307	SLU-INV	Max	-0.11	-3.78	3.18	-6.94	-3.89	0.09	-10.16	0.12
292	308	SLU-INV	Min	-0.06	-4.67	2.74	-10.77	-4.94	-1.01	-20.71	-4.80
292	332	SLU-INV	Min	-0.13	-4.68	2.81	-10.93	-4.96	-0.64	-20.91	-4.80
292	331	SLU-INV	Min	-0.22	-5.11	2.43	-13.78	-5.90	-0.52	-20.91	-5.02
292	307	SLU-INV	Min	-0.15	-5.10	2.36	-13.59	-5.91	-0.88	-20.71	-5.02
292	309	SLE-INV	Max	-0.20	-3.11	3.48	-2.87	-1.98	0.18	-9.76	-2.83
293	333	SLE-INV	Max	-0.23	-3.12	3.57	-2.68	-1.45	0.40	-9.50	-2.83
293	332	SLE-INV	Max	-0.31	-3.51	3.20	-3.98	-1.95	0.34	-9.50	-3.00
293	308	SLE-INV	Max	-0.28	-3.51	3.10	-4.19	-2.48	0.11	-9.76	-3.00
293	309	SLE-INV	Min	-0.20	-3.11	3.48	-3.59	-2.28	-0.03	-12.55	-3.34
293	333	SLE-INV	Min	-0.23	-3.12	3.57	-3.44	-1.83	0.23	-12.37	-3.34
293	332	SLE-INV	Min	-0.31	-3.51	3.20	-5.13	-2.44	0.18	-12.37	-3.58
293	308	SLE-INV	Min	-0.28	-3.51	3.10	-5.29	-2.89	-0.08	-12.55	-3.58
293	309	SLU-INV	Max	-0.20	-3.11	4.70	-3.87	-2.68	0.25	-13.18	-0.23
293	333	SLU-INV	Max	-0.23	-3.12	4.82	-3.62	-1.95	0.54	-12.82	-0.23
293	332	SLU-INV	Max	-0.31	-3.51	4.31	-5.38	-2.63	0.45	-12.82	-0.03
293	308	SLU-INV	Max	-0.28	-3.51	4.19	-5.65	-3.34	0.15	-13.18	-0.03
293	309	SLU-INV	Min	-0.27	-4.20	3.48	-7.28	-3.78	-1.11	-26.80	-4.51
293	333	SLU-INV	Min	-0.32	-4.21	3.57	-7.34	-3.77	-0.66	-27.02	-4.51
293	332	SLU-INV	Min	-0.42	-4.74	3.20	-11.02	-4.96	-0.61	-27.02	-4.83
293	308	SLU-INV	Min	-0.37	-4.73	3.10	-10.93	-4.99	-1.05	-26.80	-4.83
294	310	SLE-INV	Max	-0.38	-2.71	4.25	-1.28	-1.39	0.24	-12.07	-2.62
294	334	SLE-INV	Max	-0.40	-2.72	4.36	-1.10	-0.89	0.48	-11.71	-2.62
294	333	SLE-INV	Max	-0.49	-3.17	3.97	-2.71	-1.48	0.41	-11.71	-2.85
294	309	SLE-INV	Max	-0.47	-3.17	3.86	-2.91	-1.97	0.17	-12.07	-2.85
294	310	SLE-INV	Min	-0.38	-2.71	4.25	-1.55	-1.56	0.02	-15.49	-3.06
294	334	SLE-INV	Min	-0.40	-2.72	4.36	-1.39	-1.13	0.30	-15.23	-3.06
294	333	SLE-INV	Min	-0.49	-3.17	3.97	-3.48	-1.85	0.24	-15.23	-3.37
294	309	SLE-INV	Min	-0.47	-3.17	3.86	-3.64	-2.27	-0.04	-15.49	-3.37
294	310	SLE-INV	Max	-0.38	-2.71	5.73	-1.73	-1.88	0.32	-16.29	-0.40
294	334	SLU-INV	Max	-0.40	-2.72	5.88	-1.49	-1.21	0.65	-15.81	-0.40
294	333	SLU-INV	Max	-0.49	-3.17	5.35	-3.66	-2.00	0.56	-15.81	-0.20
294	309	SLU-INV	Max	-0.47	-3.17	5.20	-3.93	-2.66	0.23	-16.29	-0.20
294	310	SLU-INV	Min	-0.51	-3.66	4.25	-2.92	-2.40	-1.09	-33.02	-4.13
294	334	SLU-INV	Min	-0.54	-3.67	4.36	-2.84	-2.37	-0.62	-33.24	-4.13
294	333	SLU-INV	Min	-0.66	-4.28	3.97	-7.38	-3.76	-0.65	-33.24	-4.55
294	309	SLU-INV	Min	-0.63	-4.27	3.86	-7.41	-3.82	-1.12	-33.02	-4.55
295	311	SLE-INV	Max	-0.58	-2.27	5.03	0.96	-0.72	0.29	-14.45	-2.33
295	335	SLE-INV	Max	-0.58	-2.27	5.15	1.11	-0.27	0.53	-13.98	-2.33
295	334	SLE-INV	Max	-0.68	-2.78	4.75	-1.10	-0.92	0.48	-13.98	-2.65
295	310	SLE-INV	Max	-0.68	-2.78	4.64	-1.27	-1.36	0.24	-14.45	-2.65
295	311	SLE-INV	Min	-0.58	-2.27	5.03	0.68	-0.73	0.08	-18.53	-2.69
295	335	SLE-INV	Min	-0.58	-2.27	5.15	0.82	-0.35	0.36	-18.17	-2.69
295	334	SLE-INV	Min	-0.68	-2.78	4.75	-1.38	-1.16	0.30	-18.17	-3.10
295	310	SLE-INV	Min	-0.68	-2.78	4.64	-1.55	-1.54	0.02	-18.53	-3.10
295	311	SLU-INV	Max	-0.58	-2.27	6.80	2.40	-0.81	0.39	-19.50	-0.53
295	335	SLU-INV	Max	-0.58	-2.27	6.96	2.58	-0.36	0.72	-18.88	-0.53
295	334	SLU-INV	Max	-0.68	-2.78	6.42	-1.49	-1.25	0.65	-18.88	-0.37
295	310	SLU-INV	Max	-0.68	-2.78	6.26	-1.71	-1.84	0.32	-19.50	-0.37
295	311	SLU-INV	Min	-0.79	-3.07	5.03	0.91	-0.99	-1.00	-39.40	-3.63
295	335	SLU-INV	Min	-0.79	-3.07	5.15	1.11	-0.76	-0.50	-39.58	-3.63
295	334	SLU-INV	Min	-0.92	-3.75	4.75	-2.82	-2.34	-0.61	-39.58	-4.18
295	310	SLU-INV	Min	-0.92	-3.75	4.64	-2.95	-2.43	-1.10	-39.40	-4.18
296	312	SLE-INV	Max	-0.81	-1.80	5.86	3.97	0.17	0.32	-16.91	-1.94
296	336	SLE-INV	Max	-0.79	-1.80	5.99	4.10	0.51	0.55	-16.32	-1.94
296	335	SLE-INV	Max	-0.89	-2.34	5.56	1.18	-0.29	0.53	-16.32	-2.37
296	311	SLE-INV	Max	-0.92	-2.34	5.43	1.05	-0.69	0.30	-16.91	-2.37
296	312	SLE-INV	Min	-0.81	-1.80	5.86	3.04	0.02	0.13	-21.66	-2.21
296	336	SLE-INV	Min	-0.79	-1.80	5.99	3.13	0.41	0.40	-21.18	-2.21
296	335	SLE-INV	Min	-0.89	-2.34	5.56	0.88	-0.36	0.35	-21.18	-2.73
296	311	SLE-INV	Min	-0.92	-2.34	5.43	0.77	-0.69	0.09	-21.66	-2.73
296	312	SLE-INV	Max	-0.81	-1.80	7.91	8.74	0.94	0.43	-22.83	-0.59
296	336	SLU-INV	Max	-0.79	-1.80	8.08	9.03	1.00	0.74	-22.03	-0.59
296	335	SLU-INV	Max	-0.89	-2.34	7.51	2.73	-0.40	0.71	-22.03	-0.50
296	311	SLU-INV	Max	-0.92	-2.34	7.33	2.50	-0.81	0.40	-22.83	-0.50
296	312	SLU-INV	Min	-1.09	-2.44	5.86	4.11	0.03	-0.80	-45.95	-2.98
296	336	SLU-INV	Min	-1.06	-2.43	5.99	4.23	0.56	-0.35	-46.06	-2.98
296	335	SLU-INV	Min	-1.20	-3.15	5.56	1.19	-0.71	-0.52	-46.06	-3.69
296	311	SLU-INV	Min	-1.24	-3.16	5.43	1.03	-0.93	-0.98	-45.95	-3.69
297	313	SLE-INV	Max	-1.05	-1.31	6.67	7.55	1.16	0.30	-19.48	-1.43
297	337	SLE-INV	Max	-0.99	-1.30	6.80	7.60	1.42	0.49	-18.73	-1.43
297	336	SLE-INV	Max	-1.11	-1.86	6.44	4.26	0.51	0.53	-18.73	-1.98
297	312	SLE-INV	Max	-1.16	-1.87	6.31	4.19	0.25	0.33	-19.48	-1.98
297	313	SLE-INV	Min	-1.05	-1.31	6.67	5.86	0.82	0.16	-24.91	-1.60
297	337	SLE-INV	Min	-0.99	-1.30	6.80	5.85	1.13	0.38	-24.28	-1.60
297	336	SLE-INV	Min	-1.11	-1.86	6.44	3.27	0.39	0.38	-24.28	-2.26
297	312	SLE-INV	Min	-1.16	-1.87	6.31	3.24	0.11	0.15	-24.91	-2.26
297	313	SLU-INV	Max	-1.05	-1.31	9.00	16.20	2.86	0.40	-26.29	-0.56
297	337	SLU-INV	Max	-0.99	-1.30	9.18	16.54	2.92	0.66	-25.28	-0.56
297	336	SLU-INV	Max	-1.11	-1.86	8.69	9.33	1.09	0.71	-25.28	-0.56
297	312	SLU-INV	Max	-1.16	-1.87	8.52	9.06	0.98	0.45	-26.29	-0.56
297	313	SLU-INV	Min	-1.42	-1.77	6.67	7.91	1.11	-0.56	-52.70	-2.16
297	337	SLU-INV	Min	-1.34	-1.75	6.80	7.90	1.53	-0.16	-52.70	-2.16
297	336	SLU-INV	Min	-1.49	-2.52	6.44	4.41	0.53	-0.37	-52.70	-3.05
297	312	SLU-INV	Min	-1.57	-2.53	6.31	4.38	0.15	-0.77	-52.70	-3.05
298	314	SLE-INV	Max	-1.30	-0.80	7.97	11.75	2.19	0.20	-22.14	-0.76
298	338	SLE-INV	Max	-1.21	-0.79	8.10	11.68	2.37	0.33	-21.21	-0.76
298	337	SLE-INV	Max	-1.32	-1.37	7.02	7.89	1.44	0.46	-21.21	-1.48
298	313	SLE-INV	Max	-1.42	-1.38	6.89	7.95	1.28	0.33	-22.14	-1.48
298	314	SLE-INV	Min	-1.30	-0.80	7.97	9.18	1.67	0.12	-28.28	-0.84
298	338	SLE-INV	Min	-1.21	-0.79	8.10	9.03	1.87	0.28	-27.47	-0.84
298	337	SLE-INV	Min	-1.32	-1.37	7.02	6.10	1.13	0.35	-27.47	-1.66
298	313	SLE-INV									

**2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1****Tratto Fabriano - Matelica Nord**

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 141 di 180			
298	314	SLU-INV	Max	-1.30	-0.80	10.76	24.88	4.88	0.27	-29.89	-0.38
298	338	SLU-INV	Max	-1.21	-0.79	10.94	25.22	4.92	0.45	-28.64	-0.38
298	337	SLU-INV	Max	-1.32	-1.37	9.48	17.07	3.05	0.62	-28.64	-0.52
298	313	SLU-INV	Max	-1.42	-1.38	9.30	16.81	2.95	0.44	-29.89	-0.52
298	314	SLU-INV	Min	-1.76	-1.09	7.97	12.40	2.25	-0.28	-59.65	-1.13
298	338	SLU-INV	Min	-1.63	-1.06	8.10	12.19	2.53	-0.02	-59.49	-1.13
298	337	SLU-INV	Min	-1.79	-1.84	7.02	8.23	1.52	-0.23	-59.49	-2.24
298	313	SLU-INV	Min	-1.91	-1.87	6.89	8.39	1.28	-0.49	-59.65	-2.24
299	315	SLE-INV	Max	-1.56	-0.31	5.69	16.64	3.27	-0.02	-24.91	0.09
299	339	SLE-INV	Max	-1.42	-0.28	5.87	16.37	3.33	0.03	-23.77	0.09
299	338	SLE-INV	Max	-1.54	-0.85	10.38	12.12	2.41	0.29	-23.77	-0.82
299	314	SLE-INV	Max	-1.67	-0.88	10.20	12.37	2.36	0.24	-24.91	-0.82
299	315	SLE-INV	Min	-1.56	-0.31	5.69	13.07	2.54	-0.03	-31.76	0.07
299	339	SLE-INV	Min	-1.42	-0.28	5.87	12.70	2.62	0.03	-30.75	0.07
299	338	SLE-INV	Min	-1.54	-0.85	10.38	9.41	1.88	0.23	-30.75	-0.91
299	314	SLE-INV	Min	-1.67	-0.88	10.20	9.73	1.84	0.17	-31.76	-0.91
299	315	SLU-INV	Max	-1.56	-0.31	7.68	34.89	7.00	-0.03	-33.63	0.12
299	339	SLU-INV	Max	-1.42	-0.28	7.93	35.13	7.00	0.05	-32.09	0.12
299	338	SLU-INV	Max	-1.54	-0.85	14.02	26.02	5.11	0.40	-32.09	-0.35
299	314	SLU-INV	Max	-1.67	-0.88	13.78	25.86	5.05	0.33	-33.63	-0.35
299	315	SLU-INV	Min	-2.10	-0.42	5.69	17.64	3.43	-0.06	-66.81	-0.03
299	339	SLU-INV	Min	-1.92	-0.38	5.87	17.14	3.53	0.04	-66.45	-0.03
299	338	SLU-INV	Min	-2.07	-1.15	10.38	12.70	2.54	-0.10	-66.45	-1.23
299	314	SLU-INV	Min	-2.26	-1.19	10.20	13.13	2.48	-0.20	-66.81	-1.23
300	340	SLE-INV	Max	-1.30	-0.26	-6.03	15.90	3.26	-0.02	29.84	0.11
300	316	SLE-INV	Max	-1.43	-0.29	-5.86	16.32	3.19	0.02	30.99	0.11
300	317	SLE-INV	Max	-1.53	-0.75	-10.60	12.44	2.39	-0.26	30.99	-0.85
300	341	SLE-INV	Max	-1.40	-0.72	-10.77	12.07	2.43	-0.30	29.84	-0.85
300	340	SLE-INV	Min	-1.30	-0.26	-6.03	12.14	2.52	-0.02	22.71	0.09
300	316	SLE-INV	Min	-1.43	-0.29	-5.86	12.64	2.44	0.01	23.96	0.09
300	317	SLE-INV	Min	-1.53	-0.75	-10.60	9.65	1.83	-0.32	23.96	-0.92
300	341	SLE-INV	Min	-1.40	-0.72	-10.77	9.22	1.87	-0.35	22.71	-0.92
300	340	SLU-INV	Max	-1.30	-0.26	-6.03	35.11	7.03	-0.03	66.30	0.15
300	316	SLU-INV	Max	-1.43	-0.29	-5.86	35.12	7.01	0.04	66.91	0.15
300	317	SLU-INV	Max	-1.53	-0.75	-10.60	26.70	5.24	0.01	66.91	-0.49
300	341	SLU-INV	Max	-1.40	-0.72	-10.77	26.64	5.29	-0.06	66.30	-0.49
300	340	SLU-INV	Min	-1.76	-0.35	-8.13	16.39	3.40	-0.03	30.65	0.01
300	316	SLU-INV	Min	-1.93	-0.39	-7.92	17.07	3.29	0.02	32.35	0.01
300	317	SLU-INV	Min	-2.06	-1.01	-14.32	13.03	2.47	-0.43	32.35	-1.25
300	341	SLU-INV	Min	-1.88	-0.98	-14.54	12.45	2.53	-0.48	30.65	-1.25
301	341	SLE-INV	Max	-1.13	-0.67	-8.47	11.73	2.42	-0.41	26.99	-0.78
301	317	SLE-INV	Max	-1.22	-0.69	-8.36	11.93	2.23	-0.22	27.92	-0.78
301	318	SLE-INV	Max	-1.32	-1.17	-7.22	8.43	1.43	-0.37	27.92	-1.57
301	342	SLE-INV	Max	-1.23	-1.16	-7.33	8.27	1.60	-0.49	26.96	-1.57
301	341	SLE-INV	Min	-1.13	-0.67	-8.47	8.94	1.88	-0.38	20.50	-0.84
301	317	SLE-INV	Min	-1.22	-0.69	-8.36	9.20	1.67	-0.28	21.56	-0.84
301	318	SLE-INV	Min	-1.32	-1.17	-7.22	6.51	1.06	-0.47	21.56	-1.71
301	342	SLE-INV	Min	-1.23	-1.16	-7.33	6.30	1.24	-0.58	20.50	-1.71
301	341	SLU-INV	Max	-1.13	-0.67	-8.47	26.00	5.16	-0.13	59.99	-0.50
301	317	SLU-INV	Max	-1.22	-0.69	-8.36	25.86	5.07	0.08	60.41	-0.50
301	318	SLU-INV	Max	-1.32	-1.17	-7.22	18.26	3.32	0.15	60.41	-0.84
301	342	SLU-INV	Max	-1.23	-1.16	-7.33	18.35	3.44	-0.07	59.99	-0.84
301	341	SLU-INV	Min	-1.52	-0.90	-11.43	12.06	2.54	-0.52	27.68	-1.14
301	317	SLU-INV	Min	-1.65	-0.93	-11.28	12.43	2.26	-0.38	29.11	-1.14
301	318	SLU-INV	Min	-1.78	-1.58	-9.75	8.79	1.43	-0.64	29.11	-2.31
301	342	SLU-INV	Min	-1.65	-1.56	-9.89	8.50	1.67	-0.78	27.68	-2.31
302	342	SLE-INV	Max	-0.95	-1.10	-7.17	8.04	1.60	-0.52	24.14	-1.51
302	318	SLE-INV	Max	-1.01	-1.11	-7.05	8.08	1.61	-0.35	24.93	-1.51
302	319	SLE-INV	Max	-1.10	-1.59	-6.73	4.95	0.53	-0.40	24.93	-2.16
302	343	SLE-INV	Max	-1.05	-1.57	-6.85	4.94	0.80	-0.57	24.14	-2.16
302	342	SLE-INV	Min	-0.95	-1.10	-7.17	6.10	1.26	-0.60	18.35	-1.64
302	318	SLE-INV	Min	-1.01	-1.11	-7.05	6.20	0.94	-0.45	19.23	-1.64
302	319	SLE-INV	Min	-1.10	-1.59	-6.73	3.79	0.33	-0.54	19.23	-2.37
302	343	SLE-INV	Min	-1.05	-1.57	-6.85	3.75	0.63	-0.69	18.35	-2.37
302	342	SLU-INV	Max	-0.95	-1.10	-7.17	17.91	3.35	-0.11	53.79	-0.85
302	318	SLU-INV	Max	-1.01	-1.11	-7.05	17.68	3.21	0.19	54.05	-0.85
302	319	SLU-INV	Max	-1.10	-1.59	-6.73	10.87	1.55	0.30	54.05	-1.07
302	343	SLU-INV	Max	-1.05	-1.57	-6.85	11.05	1.71	0.01	53.79	-1.07
302	342	SLU-INV	Min	-1.29	-1.49	-9.68	8.24	1.70	-0.81	24.77	-2.22
302	318	SLU-INV	Min	-1.36	-1.50	-9.51	8.37	1.26	-0.61	25.97	-2.22
302	319	SLU-INV	Min	-1.49	-2.14	-9.09	5.12	0.45	-0.73	25.97	-3.21
302	343	SLU-INV	Min	-1.41	-2.13	-9.25	5.06	0.85	-0.93	24.77	-3.21
303	343	SLE-INV	Max	-0.77	-1.52	-6.42	4.79	0.81	-0.59	21.38	-2.11
303	319	SLE-INV	Max	-0.80	-1.53	-6.30	4.73	0.44	-0.38	22.02	-2.11
303	320	SLE-INV	Max	-0.90	-1.99	-5.90	1.96	0.31	-0.38	22.02	-2.64
303	344	SLE-INV	Max	-0.87	-1.99	-6.01	2.05	0.05	-0.59	21.38	-2.64
303	343	SLE-INV	Min	-0.77	-1.52	-6.42	3.63	0.65	-0.70	16.24	-2.31
303	319	SLE-INV	Min	-0.80	-1.53	-6.30	3.59	0.24	-0.52	16.97	-2.31
303	320	SLE-INV	Min	-0.90	-1.99	-5.90	1.47	-0.35	-0.54	16.97	-2.92
303	344	SLE-INV	Min	-0.87	-1.99	-6.01	1.54	0.04	-0.72	16.24	-2.92
303	343	SLU-INV	Max	-0.77	-1.52	-6.42	10.75	1.64	-0.03	47.70	-1.08
303	319	SLU-INV	Max	-0.80	-1.53	-6.30	10.52	1.48	0.34	47.84	-1.08
303	320	SLU-INV	Max	-0.90	-1.99	-5.90	4.49	-0.11	0.46	47.84	-1.19
303	344	SLU-INV	Max	-0.87	-1.99	-6.01	4.67	0.08	0.09	47.70	-1.19
303	343	SLU-INV	Min	-1.05	-2.05	-8.66	4.90	0.88	-0.95	21.92	-3.12
303	319	SLU-INV	Min	-1.08	-2.06	-8.51	4.85	0.32	-0.71	22.91	-3.12
303	320	SLU-INV	Min	-1.21	-2.69	-7.96	1.98	-0.47	-0.73	22.91	-3.94
303	344	SLU-INV	Min	-1.17	-2.68	-8.11	2.08	0.06	-0.97	21.92	-3.94
304	344	SLE-INV	Max	-0.60	-1.93	-5.63	1.98	0.08	-0.60	18.68	-2.59
304	320	SLE-INV	Max	-0.61	-1.94	-5.51	1.84	-0.37	-0.37	19.19	-2.59
304	321	SLE-INV	Max	-0.69	-2.38	-5.13	-0.50	-0.96	-0.33	19.19	-3.01
304	345	SLE-INV	Max	-0.69	-2.38	-5.24	-0.34	-0.49	-0.55	18.68	-3.01
304	344	SLE-INV	Min	-0.60	-1.93	-5.63	1.48	0.07	-0.73	14.17	-2.86
304	320	SLE-INV	Min	-0.61	-1.94	-5.51	1.36	-0.41	-0.54	14.77	-2.86
304	321	SLE-INV	Min	-0.69	-2.38	-5.13	-0.57	-1.06	-0.50	14.77	-3.36
304	345	SLE-INV	Min	-0.69	-2.38	-5.24	-0.41	-0.64	-0.70	14.17	-3.36
304	344	SLU-INV	Max	-0.60	-1.93	-5.63	4.52	0.10	0.08	41.71	-1.20
304	320	SLU-INV	Max	-0.61	-1.94	-5.51	4.31	-0.14	0.47	41.76	-1.20
304	321	SLU-INV	Max	-0.69	-2.38	-5.13	-0.67	-1.30	0.58	41.76	-1.24
304	345	SLU-INV	Max	-0.69	-2.38	-5.24	-0.46	-0.66	0.19	41.71	-1.24
304	344	SLU-INV	Min	-0.81	-2.61	-7.60	2.00	0.04	-0.98	19.13	-3.87
304	320	SLU-INV	Min	-0.82	-2.61	-7.44	1.83	-0.56	-0.72	19.94	-3.87
304	321	SLU-INV	Min	-0.94	-3.21	-6.92	-0.96	-1.59	-0.68	19.94	-4.53
304	345	SLU-INV	Min	-0.93	-3.21	-7.08	-0.79	-1.39	-0.94	19.13	-4.53
305	345	SLE-INV	Max	-0.44	-2.33	-4.86	-0.36	-0.46	-0.56	16.03	-2.98
305	321	SLE-INV	Max	-0.42	-2.33	-4.75	-0.54	-1.01	-0.32	16.43	-2.98
305	322	SLE-INV	Max	-0.51	-2.74	-4.38	-2.12	-1.51	-0.26	16.43	-3.31
305	346	SLE-INV	Max	-0.52	-2.75	-4.49	-1.91	-0.98	-0.50	16.03	-3.31
305	345	SLE-INV	Min	-0.44	-2.33	-4.86	-0.44	-0.61	-0.70	12.15	-3.31
305	321	SLE-INV	Min	-0.42	-2.33	-4.75	-0.52				

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 142 di 180
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305	346	SLE-INV	Min	-0.52	-2.75	-4.49	-2.49	-1.26	-0.64	12.15	-3.71
305	345	SLU-INV	Max	-0.44	-2.33	-4.86	-0.48	-0.62	0.17	35.83	-1.25
305	321	SLU-INV	Max	-0.42	-2.33	-4.75	-0.73	-1.36	0.59	35.81	-1.25
305	346	SLU-INV	Max	-0.51	-2.74	-4.38	-2.87	-2.04	0.65	35.81	-1.24
305	345	SLU-INV	Max	-0.52	-2.75	-4.49	-2.58	-1.32	0.24	35.83	-1.24
305	321	SLU-INV	Min	-0.59	-3.14	-6.56	-0.86	-1.41	-0.95	16.43	-4.47
305	322	SLU-INV	Min	-0.68	-3.70	-5.92	-5.53	-2.92	-0.59	17.06	-5.01
305	346	SLU-INV	Min	-0.70	-3.71	-6.06	-5.42	-2.72	-0.86	16.41	-5.01
306	346	SLE-INV	Max	-0.29	-2.70	-4.11	-1.90	-0.94	-0.49	13.42	-3.28
306	322	SLE-INV	Max	-0.25	-2.69	-4.01	-2.13	-1.54	-0.27	13.73	-3.28
306	323	SLE-INV	Max	-0.33	-3.07	-3.64	-3.45	-1.98	-0.20	13.73	-3.53
306	347	SLE-INV	Max	-0.36	-3.07	-3.74	-3.20	-1.40	-0.42	13.42	-3.53
306	346	SLE-INV	Min	-0.29	-2.70	-4.11	-2.47	-1.23	-0.63	10.17	-3.67
306	322	SLE-INV	Min	-0.25	-2.69	-4.01	-2.68	-1.76	-0.45	10.55	-3.67
306	323	SLE-INV	Min	-0.33	-3.07	-3.64	-4.40	-2.32	-0.36	10.55	-3.99
306	347	SLE-INV	Min	-0.36	-3.07	-3.74	-4.19	-1.80	-0.55	10.17	-3.99
306	346	SLU-INV	Max	-0.29	-2.70	-4.11	-2.56	-1.27	0.25	30.03	-1.25
306	322	SLU-INV	Max	-0.25	-2.69	-4.01	-2.87	-2.08	0.63	29.97	-1.25
306	323	SLU-INV	Max	-0.33	-3.07	-3.64	-4.66	-2.67	0.65	29.97	-1.20
306	347	SLU-INV	Max	-0.36	-3.07	-3.74	-4.32	-1.88	0.28	30.03	-1.20
306	346	SLU-INV	Min	-0.39	-3.65	-5.55	-5.41	-2.72	-0.85	13.73	-4.96
306	322	SLU-INV	Min	-0.34	-3.64	-5.42	-5.50	-2.90	-0.60	14.24	-4.96
306	323	SLU-INV	Min	-0.44	-4.14	-4.92	-9.29	-4.05	-0.49	14.24	-5.38
306	347	SLU-INV	Min	-0.49	-4.15	-5.04	-9.23	-3.85	-0.74	13.73	-5.38
307	347	SLE-INV	Max	-0.15	-3.03	-3.36	-3.17	-1.37	-0.40	10.85	-3.51
307	323	SLE-INV	Max	-0.11	-3.02	-3.28	-3.42	-2.00	-0.21	11.08	-3.51
307	324	SLE-INV	Max	-0.18	-3.35	-2.92	-4.49	-2.37	-0.14	11.08	-3.70
307	348	SLE-INV	Max	-0.22	-3.35	-3.00	-4.22	-1.75	-0.33	10.85	-3.70
307	347	SLE-INV	Min	-0.15	-3.03	-3.36	-4.16	-1.77	-0.54	8.22	-3.96
307	323	SLE-INV	Min	-0.11	-3.02	-3.28	-4.37	-2.33	-0.37	8.51	-3.96
307	324	SLE-INV	Min	-0.18	-3.35	-2.92	-5.76	-2.80	-0.28	8.51	-4.20
307	348	SLE-INV	Min	-0.22	-3.35	-3.00	-5.54	-2.25	-0.45	8.22	-4.20
307	347	SLU-INV	Max	-0.15	-3.03	-3.36	-4.28	-1.84	0.29	24.31	-1.21
307	323	SLU-INV	Max	-0.11	-3.02	-3.28	-4.62	-2.70	0.64	24.23	-1.21
307	324	SLU-INV	Max	-0.18	-3.35	-2.92	-6.06	-3.20	0.60	24.23	-1.15
307	348	SLU-INV	Max	-0.22	-3.35	-3.00	-5.70	-2.36	0.26	24.31	-1.15
307	347	SLU-INV	Min	-0.20	-4.09	-4.54	-9.20	-3.85	-0.73	11.10	-5.34
307	323	SLU-INV	Min	-0.15	-4.08	-4.43	-9.20	-4.02	-0.50	11.49	-5.34
307	324	SLU-INV	Min	-0.24	-4.52	-3.94	-12.26	-4.98	-0.38	11.49	-5.67
307	348	SLU-INV	Min	-0.29	-4.53	-4.05	-11.29	-4.79	-0.61	11.10	-5.67
308	348	SLE-INV	Max	-0.04	-3.32	-2.63	-4.19	-1.72	-0.32	8.32	-3.68
308	324	SLE-INV	Max	0.01	-3.31	-2.56	-4.45	-2.38	-0.16	8.49	-3.68
308	325	SLE-INV	Max	-0.04	-3.57	-2.20	-5.27	-2.68	-0.09	8.49	-3.82
308	349	SLE-INV	Max	-0.10	-3.58	-2.26	-4.99	-2.02	-0.25	8.32	-3.82
308	348	SLE-INV	Min	-0.04	-3.32	-2.63	-5.50	-2.22	-0.44	6.30	-4.17
308	324	SLE-INV	Min	0.01	-3.31	-2.56	-5.71	-2.80	-0.30	6.52	-4.17
308	325	SLE-INV	Min	-0.04	-3.57	-2.20	-6.78	-3.17	-0.20	6.52	-4.35
308	349	SLE-INV	Min	-0.10	-3.58	-2.26	-6.56	-2.60	-0.34	6.30	-4.35
308	348	SLU-INV	Max	-0.04	-3.32	-2.63	-5.65	-2.32	0.29	18.65	-1.16
308	324	SLU-INV	Max	0.01	-3.31	-2.56	-6.01	-3.21	0.57	18.57	-1.16
308	325	SLU-INV	Max	-0.04	-3.57	-2.20	-7.11	-3.61	0.50	18.57	-1.09
308	349	SLU-INV	Max	-0.10	-3.58	-2.26	-6.74	-2.73	0.23	18.65	-1.09
308	348	SLU-INV	Min	-0.06	-4.48	-3.55	-12.22	-4.79	-0.59	8.51	-5.64
308	324	SLU-INV	Min	0.01	-4.47	-3.46	-12.16	-4.96	-0.40	8.80	-5.64
308	325	SLU-INV	Min	-0.06	-4.81	-2.96	-14.51	-5.71	-0.27	8.80	-5.87
309	349	SLU-INV	Min	-0.13	-4.83	-3.45	-14.58	-5.53	-0.46	8.51	-5.87
309	349	SLE-INV	Max	0.04	-3.85	-1.89	-4.96	-2.05	-0.67	5.82	-3.80
309	325	SLE-INV	Max	0.09	-3.54	-1.84	-5.23	-2.68	-0.11	5.93	-3.80
309	326	SLE-INV	Max	0.06	-3.72	-1.48	-5.80	-2.89	-0.05	5.93	-3.90
309	350	SLE-INV	Max	0.00	-3.74	-1.53	-5.52	-2.22	-0.17	5.82	-3.90
309	349	SLE-INV	Min	0.04	-3.55	-1.89	-6.52	-2.58	-0.32	4.41	-4.33
309	325	SLE-INV	Min	0.09	-3.54	-1.84	-6.73	-3.17	-0.22	4.55	-4.33
309	326	SLE-INV	Min	0.06	-3.72	-1.48	-7.47	-3.44	-0.13	4.55	-4.45
309	350	SLE-INV	Min	0.00	-3.74	-1.53	-7.26	-2.85	-0.23	4.41	-4.45
309	349	SLU-INV	Max	0.05	-3.55	-1.89	-6.69	-2.70	0.26	13.05	-1.10
309	325	SLU-INV	Max	0.13	-3.54	-1.84	-7.06	-3.62	0.47	12.98	-1.10
309	326	SLU-INV	Max	0.08	-3.72	-1.48	-7.83	-3.90	0.36	12.98	-1.05
309	350	SLU-INV	Max	0.00	-3.74	-1.53	-7.45	-2.99	0.15	13.05	-1.05
309	349	SLU-INV	Min	0.04	-4.79	-2.55	-14.53	-5.52	-0.43	5.95	-5.85
309	325	SLU-INV	Min	0.09	-4.78	-2.49	-14.40	-5.68	-0.30	6.14	-5.85
309	326	SLU-INV	Min	0.06	-5.03	-2.00	-16.05	-6.22	-0.17	6.14	-6.01
309	350	SLU-INV	Min	0.00	-5.04	-2.07	-16.18	-6.05	-0.31	5.95	-6.01
310	350	SLE-INV	Max	0.09	-3.72	-1.16	-5.49	-2.20	-0.14	3.33	-3.80
310	326	SLE-INV	Max	0.15	-3.71	-1.13	-5.77	-2.89	-0.07	3.40	-3.89
310	327	SLE-INV	Max	0.13	-3.81	-0.77	-6.09	-3.02	-0.01	3.40	-3.94
310	351	SLE-INV	Max	0.07	-3.83	-0.79	-5.81	-2.33	-0.08	3.33	-3.94
310	350	SLE-INV	Min	0.09	-3.72	-1.16	-7.23	-2.83	-0.21	2.52	-4.44
310	326	SLE-INV	Min	0.15	-3.71	-1.13	-7.44	-3.44	-0.15	2.61	-4.44
310	327	SLE-INV	Min	0.13	-3.81	-0.77	-7.86	-3.59	-0.05	2.61	-4.51
310	351	SLE-INV	Min	0.07	-3.83	-0.79	-7.66	-2.99	-0.11	2.52	-4.51
310	350	SLU-INV	Max	0.12	-3.72	-1.16	-7.41	-2.98	0.19	7.48	-1.05
310	326	SLU-INV	Max	0.20	-3.71	-1.13	-7.79	-3.91	0.31	7.44	-1.05
310	327	SLU-INV	Max	0.17	-3.81	-0.77	-8.23	-4.07	0.18	7.44	-1.02
310	351	SLU-INV	Max	0.09	-3.83	-0.79	-7.85	-3.14	0.06	7.48	-1.02
310	350	SLU-INV	Min	0.09	-5.02	-1.57	-16.13	-6.05	-0.28	3.41	-6.00
310	326	SLU-INV	Min	0.15	-5.00	-1.53	-15.98	-6.20	-0.20	3.52	-6.00
310	327	SLU-INV	Min	0.13	-5.15	-1.04	-16.92	-6.51	-0.07	3.52	-6.09
310	351	SLU-INV	Min	0.07	-5.17	-1.07	-17.07	-6.35	-0.15	3.41	-6.09
311	351	SLE-INV	Max	0.11	-3.82	-0.42	-5.80	-2.32	-0.06	0.86	-3.93
311	327	SLE-INV	Max	0.17	-3.81	-0.42	-6.08	-3.02	-0.04	0.88	-3.93
311	328	SLE-INV	Max	0.17	-3.83	-0.06	-6.16	-3.05	0.02	0.88	-3.95
311	352	SLE-INV	Max	0.10	-3.85	-0.07	-5.88	-2.35	0.01	0.86	-3.95
311	351	SLE-INV	Min	0.11	-3.82	-0.42	-7.64	-2.98	-0.09	0.65	-4.50
311	327	SLE-INV	Min	0.17	-3.81	-0.42	-7.84	-3.59	-0.07	0.67	-4.50
311	328	SLE-INV	Min	0.17	-3.83	-0.06	-7.95	-3.63	0.02	0.67	-4.52
311	352	SLE-INV	Min	0.10	-3.85	-0.07	-7.75	-3.02	0.00	0.65	-4.52
311	351	SLU-INV	Max	0.15	-3.82	-0.42	-7.83	-3.13	0.11	1.93	-1.02
311	327	SLU-INV	Max	0.23	-3.81	-0.42	-8.20	-4.07	0.14	1.92	-1.02
311	328	SLU-INV	Max	0.22	-3.83	-0.06	-8.32	-4.11	0.03	1.92	-1.01
311	352	SLU-INV	Max	0.14	-3.85	-0.07	-7.94	-3.18	0.01	1.93	-1.01
311	351	SLU-INV	Min	0.11	-5.15	-0.57	-17.05	-6.35	-0.12	0.88	-6.08
311	327	SLU-INV	Min	0.17	-5.14	-0.56	-16.87	-6.50	-0.10	0.91	-6.08
311	328	SLU-INV	Min	0.17	-5.18	-0.08	-17.11	-6.58	-0.01	0.91	-6.10
311	352	SLU-INV	Min	0.10	-5.19	-0.09	-17.30	-6.43	-0.04	0.88	-6.10
312	352	SLE-INV	Max	0.09	-3.85	0.31	-5.88	-2.35	0.03	-1.22	-3.95
312	328	SLE-INV	Max	0.16	-3.83	0.29	-6.16	-3.05	0.00	-1.25	-3.95
312	329	SLE-INV	Max	0.17	-3.78	0.65	-6.00	-2.99	0.10	-1.25	-3.92
312	353	SLE-INV	Max	0.10	-3.79	0.67	-5.73	-2.29	0.13	-1.22	-3.92
312	352	SLE-INV	Min	0.09	-3.85	0.31	-7.05	-3.02	-0.03	-1.11	-4.52
312	328	SLE-INV	Min	0.16	-3.83	0.29					



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto Z11	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 143 di 180			
312	329	SLE-INV	Min	0.17	-3.78	0.65	-7.75	-3.55	0.05	-1.64	-4.49
312	353	SLE-INV	Min	0.10	-3.79	0.67	-7.54	-2.94	0.08	-1.61	-4.49
312	352	SLU-INV	Max	0.13	-3.85	0.41	-7.94	-3.18	0.04	-1.64	-1.01
312	328	SLU-INV	Max	0.21	-3.83	0.39	-8.32	-4.11	0.00	-1.69	-1.01
312	329	SLU-INV	Max	0.23	-3.78	0.88	-8.11	-4.03	0.13	-1.69	-1.03
312	353	SLU-INV	Max	0.14	-3.79	0.90	-7.73	-3.10	0.17	-1.64	-1.03
312	352	SLU-INV	Min	0.09	-5.19	0.31	-17.29	-6.42	0.00	-3.61	-6.10
312	328	SLU-INV	Min	0.16	-5.18	0.29	-17.12	-6.58	-0.06	-3.59	-6.10
312	329	SLU-INV	Min	0.17	-5.10	0.65	-16.66	-6.43	-0.19	-3.59	-6.06
312	353	SLU-INV	Min	0.10	-5.12	0.67	-16.83	-6.28	-0.13	-3.61	-6.06
313	353	SLE-INV	Max	0.05	-3.80	1.03	-5.74	-2.30	0.15	-3.09	-3.93
313	329	SLE-INV	Max	0.11	-3.79	1.00	-6.02	-2.99	0.07	-3.19	-3.93
313	330	SLE-INV	Max	0.14	-3.66	1.37	-5.62	-2.83	0.17	-3.19	-3.87
313	354	SLE-INV	Max	0.08	-3.67	1.41	-5.35	-2.15	0.24	-3.09	-3.87
313	353	SLE-INV	Min	0.05	-3.80	1.03	-7.56	-2.95	0.11	-4.08	-4.50
313	329	SLE-INV	Min	0.11	-3.79	1.00	-7.77	-3.55	0.12	-4.16	-4.50
313	330	SLE-INV	Min	0.14	-3.66	1.37	-7.24	-3.36	0.08	-4.16	-4.42
313	354	SLE-INV	Min	0.08	-3.67	1.41	-7.04	-2.76	0.17	-4.08	-4.42
313	353	SLU-INV	Max	0.07	-3.80	1.39	-7.75	-3.11	0.20	-4.17	-1.02
313	329	SLU-INV	Max	0.15	-3.79	1.35	-8.13	-4.03	0.10	-4.31	-1.02
313	330	SLU-INV	Max	0.18	-3.66	1.85	-7.59	-3.83	0.23	-4.31	-1.06
313	354	SLU-INV	Max	0.10	-3.67	1.90	-7.22	-2.90	0.33	-4.17	-1.06
313	353	SLU-INV	Min	0.05	-5.14	1.03	-16.86	-6.28	-0.09	-9.16	-6.07
313	329	SLU-INV	Min	0.11	-5.12	1.00	-16.69	-6.44	-0.24	-9.11	-6.07
313	330	SLU-INV	Min	0.14	-4.94	1.37	-15.54	-6.06	-0.37	-9.11	-5.96
313	354	SLU-INV	Min	0.08	-4.95	1.41	-15.69	-5.90	-0.22	-9.16	-5.96
314	331	SLE-INV	Max	0.07	-3.45	2.12	-4.95	-2.57	0.25	-5.21	-3.77
314	355	SLE-INV	Max	0.01	-3.46	2.17	-4.68	-1.90	0.37	-5.05	-3.77
314	354	SLE-INV	Max	-0.03	-3.69	1.79	-5.37	-2.16	0.26	-5.05	-3.88
314	330	SLE-INV	Max	0.02	-3.68	1.74	-5.65	-2.83	0.15	-5.21	-3.88
314	331	SLE-INV	Min	0.07	-3.45	2.12	-6.36	-3.04	0.13	-6.79	-4.28
314	355	SLE-INV	Min	0.01	-3.46	2.17	-6.15	-2.45	0.26	-6.67	-4.28
314	354	SLE-INV	Min	-0.03	-3.69	1.79	-7.07	-2.77	0.19	-6.67	-4.43
314	330	SLE-INV	Min	0.02	-3.68	1.74	-7.28	-3.36	0.06	-6.79	-4.43
314	331	SLU-INV	Max	0.09	-3.45	2.86	-6.68	-3.47	0.34	-7.04	-1.12
314	355	SLU-INV	Max	0.02	-3.46	2.93	-6.31	-2.56	0.50	-6.81	-1.12
314	354	SLU-INV	Max	-0.03	-3.69	2.42	-7.25	-2.92	0.36	-6.81	-1.06
314	330	SLU-INV	Max	0.03	-3.68	2.35	-7.63	-3.82	0.20	-7.04	-1.06
314	331	SLU-INV	Min	0.07	-4.66	2.12	-13.60	-5.42	-0.51	-14.88	-5.78
314	355	SLU-INV	Min	0.01	-4.67	2.17	-13.68	-5.26	-0.28	-14.95	-5.78
314	354	SLU-INV	Min	-0.05	-4.98	1.79	-15.73	-5.20	-0.18	-14.95	-5.98
314	330	SLU-INV	Min	0.02	-4.97	1.74	-15.62	-6.08	-0.41	-14.88	-5.98
315	332	SLE-INV	Max	-0.04	-3.18	2.89	-4.00	-2.21	0.34	-7.34	-3.61
315	356	SLE-INV	Max	-0.09	-3.19	2.96	-3.74	-1.56	0.49	-7.09	-3.61
315	355	SLE-INV	Max	-0.15	-3.49	2.57	-4.71	-1.92	0.39	-7.09	-3.78
315	331	SLE-INV	Max	-0.10	-3.49	2.50	-4.98	-2.56	0.24	-7.34	-3.78
315	332	SLE-INV	Min	-0.04	-3.18	2.89	-5.12	-2.59	0.18	-9.56	-4.09
315	356	SLE-INV	Min	-0.09	-3.19	2.96	-4.91	-2.02	0.36	-9.37	-4.09
315	355	SLE-INV	Min	-0.15	-3.49	2.57	-6.19	-2.47	0.29	-9.37	-4.30
315	331	SLE-INV	Min	-0.10	-3.49	2.50	-6.41	-3.03	0.11	-9.56	-4.30
315	332	SLU-INV	Max	-0.04	-3.18	3.91	-5.39	-2.98	0.45	-9.91	-1.18
315	356	SLU-INV	Max	-0.09	-3.19	4.00	-5.04	-2.11	0.66	-9.58	-1.18
315	355	SLU-INV	Max	-0.15	-3.49	3.47	-6.36	-2.59	0.52	-9.58	-1.11
315	331	SLU-INV	Max	-0.10	-3.49	3.38	-6.73	-3.46	0.32	-9.91	-1.11
315	332	SLU-INV	Min	-0.05	-4.29	2.89	-10.85	-4.53	-0.61	-20.91	-5.52
315	356	SLU-INV	Min	-0.12	-4.30	2.96	-10.88	-4.36	-0.30	-20.99	-5.52
315	355	SLU-INV	Min	-0.20	-4.72	2.57	-13.75	-5.26	-0.24	-20.99	-5.81
315	331	SLU-INV	Min	-0.14	-4.71	2.50	-13.69	-5.44	-0.55	-20.91	-5.81
316	333	SLE-INV	Max	-0.18	-2.84	3.67	-2.75	-1.76	0.42	-9.50	-3.40
316	357	SLE-INV	Max	-0.22	-2.85	3.76	-2.51	-1.14	0.59	-9.17	-3.40
316	356	SLE-INV	Max	-0.29	-3.23	3.37	-3.77	-1.59	0.50	-9.17	-3.63
316	332	SLE-INV	Max	-0.25	-3.22	3.28	-4.03	-2.19	0.32	-9.50	-3.63
316	333	SLE-INV	Min	-0.18	-2.84	3.67	-3.49	-2.03	0.24	-12.37	-3.82
316	357	SLE-INV	Min	-0.22	-2.85	3.76	-3.28	-1.49	0.45	-12.10	-3.82
316	356	SLE-INV	Min	-0.29	-3.23	3.37	-4.94	-2.04	0.37	-12.10	-4.11
316	332	SLE-INV	Min	-0.25	-3.22	3.28	-5.16	-2.58	0.17	-12.37	-4.11
316	333	SLU-INV	Max	-0.18	-2.84	4.96	-3.71	-2.37	0.56	-12.83	-1.24
316	357	SLU-INV	Max	-0.22	-2.85	5.08	-3.38	-1.54	0.80	-12.38	-1.24
316	356	SLU-INV	Max	-0.29	-3.23	4.54	-5.09	-2.14	0.68	-12.38	-1.17
316	332	SLU-INV	Max	-0.25	-3.22	4.42	-5.44	-2.96	0.43	-12.83	-1.17
316	333	SLU-INV	Min	-0.24	-3.84	3.67	-7.27	-3.43	-0.64	-27.03	-5.16
316	357	SLU-INV	Min	-0.29	-3.85	3.76	-7.22	-3.26	-0.27	-27.10	-5.16
316	356	SLU-INV	Min	-0.39	-4.36	3.37	-10.92	-4.36	-0.28	-27.10	-5.55
316	332	SLU-INV	Min	-0.34	-4.35	3.28	-10.94	-4.56	-0.64	-27.03	-5.55
317	334	Max	Max	-0.35	-2.46	4.46	-2.46	-1.77	0.48	-11.72	-3.11
317	358	SLE-INV	Max	-0.37	-2.47	4.56	-0.97	-0.64	0.68	-11.28	-3.11
317	357	SLE-INV	Max	-0.46	-2.90	4.17	-2.53	-1.17	0.60	-11.28	-3.42
317	333	SLE-INV	Max	-0.44	-2.90	4.07	-2.75	-1.73	0.41	-11.72	-3.42
317	334	SLE-INV	Min	-0.35	-2.46	4.46	-1.44	-1.36	0.30	-15.24	-3.47
317	358	SLE-INV	Min	-0.37	-2.47	4.56	-1.25	-0.85	0.53	-14.88	-3.47
317	357	SLE-INV	Min	-0.46	-2.90	4.17	-3.30	-1.51	0.46	-14.88	-3.85
317	333	SLE-INV	Min	-0.44	-2.90	4.07	-3.50	-2.01	0.23	-15.24	-3.85
317	334	SLU-INV	Max	-0.35	-2.46	6.03	-1.59	-1.64	0.65	-15.82	-1.26
317	358	SLU-INV	Max	-0.37	-2.47	6.16	-1.31	-0.87	0.92	-15.23	-1.26
317	357	SLU-INV	Max	-0.46	-2.90	5.62	-3.41	-1.58	0.81	-15.23	-1.22
317	333	SLU-INV	Max	-0.44	-2.90	5.49	-3.72	-2.33	0.55	-15.82	-1.22
317	334	SLU-INV	Min	-0.47	-3.33	4.46	-2.80	-2.10	-0.61	-33.25	-4.68
317	358	SLU-INV	Min	-0.50	-3.33	4.56	-2.68	-1.92	-0.21	-33.29	-4.68
317	357	SLU-INV	Min	-0.61	-3.91	4.17	-7.23	-3.25	-0.25	-33.29	-5.20
317	333	SLU-INV	Min	-0.59	-3.91	4.07	-7.31	-3.45	-0.66	-33.25	-5.20
318	335	SLE-INV	Max	-0.54	-2.05	5.27	1.05	-0.60	0.53	-13.99	-2.73
318	359	SLE-INV	Max	-0.54	-2.05	5.38	1.21	-0.09	0.73	-13.44	-2.73
318	358	SLE-INV	Max	-0.64	-2.52	4.97	-0.96	-0.68	0.68	-13.44	-3.14
318	334	SLE-INV	Max	-0.63	-2.52	4.86	-1.14	-1.17	0.48	-13.99	-3.14
318	335	SLE-INV	Min	-0.54	-2.05	5.27	0.74	-0.60	0.36	-18.18	-3.02
318	359	SLE-INV	Min	-0.54	-2.05	5.38	0.89	-0.14	0.59	-17.71	-3.02
318	358	SLE-INV	Min	-0.64	-2.52	4.97	-1.23	-0.88	0.53	-17.71	-3.51
318	334	SLE-INV	Min	-0.63	-2.52	4.86	-1.40	-1.32	0.30	-18.18	-3.51
318	335	SLU-INV	Max	-0.54	-2.05	7.12	2.60	-0.59	0.72	-18.89	-1.23
318	359	SLU-INV	Max	-0.54	-2.05	7.27	2.80	-0.12	0.98	-18.14	-1.23
318	358	SLU-INV	Max	-0.64	-2.52	6.71	-1.30	-0.92	0.92	-18.14	-1.25
318	334	SLU-INV	Max	-0.63	-2.52	6.56	-1.54	-1.58	0.65	-18.89	-1.25
318	335	SLU-INV	Min	-0.73	-2.77	5.27	1.01	-0.81	-0.51	-39.60	-4.07
318	359	SLU-INV	Min	-0.73	-2.77	5.38	1.21	-0.42	-0.11	-39.58	-4.07
318	358	SLU-INV	Min	-0.86	-3.40	4.97	-2.61	-1.90	-0.21	-39.58	-4.74
318	334	SLU-INV	Min	-0.85	-3.40	4.86	-2.77	-2.11	-0.61	-39.60	-4.74
319	336	SLE-INV	Max	-0.75	-1.61	6.11	4.02	0.25	0.53	-16.34	-2.23
319	360	SLE-INV	Max	-0.73	-1.61	6.22	4.11	0.64	0.72	-15.64	-2.23
319	359	SLE-INV	Max	-0.83	-2.11	5.79	1.28	-0.12	0.72	-15.64	-2.77
319	335	SLE-INV	Max	-0.85	-2.11	5.68	1.17	-0.33	0.54	-16.34	-2.77
319	336	SLE-INV	Min	-0.75	-1.61	6.11	3.05	0.09	0.38	-21.20	-2.45



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 144 di 180			
319	360	SLE-INV	Min	-0.73	-1.61	6.22	3.11	0.52	0.60	-20.60	-2.45
319	359	SLE-INV	Min	-0.83	-2.11	5.79	0.95	-0.16	0.58	-20.60	-3.07
319	335	SLE-INV	Min	-0.85	-2.11	5.68	0.85	-0.54	0.37	-21.20	-3.07
319	336	SLU-INV	Max	-0.75	-1.61	8.25	9.02	1.11	0.72	-22.06	-1.12
319	360	SLU-INV	Max	-0.73	-1.61	8.40	9.25	1.27	0.97	-21.11	-1.12
319	359	SLU-INV	Max	-0.83	-2.11	7.82	2.96	-0.16	0.97	-21.11	-1.21
319	335	SLE-INV	Max	-0.85	-2.11	7.67	2.78	-0.57	0.72	-22.06	-1.21
319	336	SLU-INV	Min	-1.01	-2.18	6.11	4.11	0.12	-0.38	-46.09	-3.31
319	360	SLU-INV	Min	-0.98	-2.17	6.22	4.20	0.70	0.01	-45.98	-3.31
319	359	SLU-INV	Min	-1.11	-2.85	5.79	1.28	-0.38	-0.12	-45.98	-4.15
319	335	SLU-INV	Min	-1.14	-2.85	5.68	1.15	-0.73	-0.50	-46.09	-4.15
320	337	SLE-INV	Max	-0.97	-1.17	6.92	7.53	1.17	0.47	-18.75	-1.62
320	361	SLE-INV	Max	-0.92	-1.16	7.04	7.51	1.48	0.62	-17.89	-1.62
320	360	SLE-INV	Max	-1.02	-1.67	6.68	4.26	0.63	0.70	-17.89	-2.29
320	336	SLE-INV	Max	-1.07	-1.68	6.56	4.25	0.34	0.55	-18.75	-2.29
320	337	SLE-INV	Min	-0.97	-1.17	6.92	5.77	0.82	0.36	-24.31	-1.76
320	361	SLE-INV	Min	-0.92	-1.16	7.04	5.70	1.17	0.53	-23.55	-1.76
320	360	SLE-INV	Min	-1.02	-1.67	6.68	3.23	0.49	0.58	-23.55	-2.52
320	336	SLE-INV	Min	-1.07	-1.68	6.56	3.25	0.18	0.40	-24.31	-2.52
320	337	SLU-INV	Max	-0.97	-1.17	9.34	16.52	2.94	0.63	-25.32	-0.90
320	361	SLU-INV	Max	-0.92	-1.16	9.51	16.75	3.08	0.84	-24.16	-0.90
320	360	SLU-INV	Max	-1.02	-1.67	9.02	9.55	1.34	0.95	-24.16	-1.11
320	336	SLU-INV	Max	-1.07	-1.68	8.86	9.37	1.17	0.74	-25.32	-1.11
320	337	SLU-INV	Min	-1.31	-1.58	6.92	7.79	1.11	-0.21	-52.73	-2.37
320	361	SLU-INV	Min	-1.24	-1.57	7.04	7.70	1.57	0.10	-52.50	-2.37
320	360	SLU-INV	Min	-1.38	-2.25	6.68	4.36	0.67	-0.03	-52.50	-3.40
320	336	SLU-INV	Min	-1.44	-2.27	6.56	4.39	0.24	-0.34	-52.73	-3.40
321	338	SLE-INV	Max	-1.19	-0.72	8.24	11.60	2.15	0.30	-21.25	-0.85
321	362	SLE-INV	Max	-1.11	-0.70	8.35	11.42	2.36	0.41	-20.20	-0.85
321	361	SLE-INV	Max	-1.21	-1.22	7.25	7.75	1.48	0.60	-20.20	-1.68
321	337	SLE-INV	Max	-1.30	-1.24	7.14	7.90	1.29	0.49	-21.25	-1.68
321	338	SLE-INV	Min	-1.19	-0.72	8.24	8.94	1.61	0.24	-27.51	-0.91
321	362	SLE-INV	Min	-1.11	-0.70	8.35	8.70	1.84	0.36	-26.57	-0.91
321	361	SLE-INV	Min	-1.21	-1.22	7.25	5.90	1.14	0.51	-26.57	-1.83
321	337	SLE-INV	Min	-1.30	-1.24	7.14	6.10	0.95	0.38	-27.51	-1.83
321	338	SLU-INV	Max	-1.19	-0.72	11.13	25.17	4.92	0.40	-28.68	-0.53
321	362	SLU-INV	Max	-1.11	-0.70	11.27	25.33	5.02	0.55	-27.27	-0.53
321	361	SLU-INV	Max	-1.21	-1.22	9.79	17.22	3.18	0.81	-27.27	-0.89
321	337	SLU-INV	Max	-1.30	-1.24	9.65	17.12	3.05	0.66	-28.68	-0.89
321	338	SLU-INV	Min	-1.61	-0.97	8.24	12.08	2.17	-0.09	-59.54	-1.23
321	362	SLU-INV	Min	-1.49	-0.94	8.35	11.75	2.48	0.14	-59.41	-1.23
321	361	SLU-INV	Min	-1.63	-1.65	7.25	7.97	1.55	0.06	-59.14	-2.47
321	337	SLU-INV	Min	-1.75	-1.67	7.14	8.23	1.28	-0.17	-59.54	-2.47
322	339	SLE-INV	Max	-1.42	-0.28	5.87	16.29	3.18	-0.02	-23.82	0.11
322	363	SLE-INV	Max	-1.29	-0.26	6.03	15.88	3.26	0.03	-22.56	0.11
322	362	SLE-INV	Max	-1.39	-0.76	10.69	11.78	2.37	0.37	-22.56	-0.92
322	338	SLE-INV	Max	-1.52	-0.78	10.52	12.15	2.32	0.33	-23.82	-0.92
322	339	SLE-INV	Min	-1.42	-0.28	5.87	12.62	2.43	-0.02	-30.80	0.10
322	363	SLE-INV	Min	-1.29	-0.26	6.03	12.13	2.52	0.02	-29.66	0.10
322	362	SLE-INV	Min	-1.39	-0.76	10.69	9.00	1.83	0.32	-29.66	-1.00
322	338	SLE-INV	Min	-1.52	-0.78	10.52	9.43	1.78	0.28	-30.80	-1.00
322	339	SLU-INV	Max	-1.42	-0.28	7.93	35.07	7.00	-0.02	-32.15	0.15
322	363	SLU-INV	Max	-1.29	-0.26	8.15	35.07	7.02	0.04	-30.46	0.15
322	362	SLU-INV	Max	-1.39	-0.76	14.43	26.02	5.16	0.50	-30.46	-0.52
322	338	SLU-INV	Max	-1.52	-0.78	14.21	26.08	5.10	0.45	-32.15	-0.52
322	339	SLU-INV	Min	-1.92	-0.38	5.87	17.03	3.28	-0.04	-66.52	0.01
322	363	SLU-INV	Min	-1.75	-0.35	6.03	16.37	3.40	0.03	-65.91	0.01
322	362	SLU-INV	Min	-1.88	-1.02	10.69	12.15	2.47	0.06	-65.91	-1.44
322	338	SLU-INV	Min	-2.05	-1.05	10.52	12.73	2.40	-0.02	-66.52	-1.34
323	364	SLE-INV	Max	-1.17	-0.23	-6.16	15.29	3.15	-0.02	28.62	0.12
323	340	SLE-INV	Max	-1.30	-0.26	-6.03	15.82	3.07	0.01	29.87	0.12
323	341	SLE-INV	Max	-1.38	-0.66	-10.89	12.08	2.31	-0.34	29.87	-0.92
323	365	SLE-INV	Max	-1.25	-0.63	-11.02	11.62	2.36	-0.37	28.62	-0.92
323	364	SLE-INV	Min	-1.17	-0.23	-6.16	11.47	2.40	-0.02	21.40	0.11
323	340	SLE-INV	Min	-1.30	-0.26	-6.03	12.07	2.31	0.01	22.74	0.11
323	341	SLE-INV	Min	-1.38	-0.66	-10.89	9.23	1.75	-0.38	22.74	-0.98
323	365	SLE-INV	Min	-1.25	-0.63	-11.02	8.72	1.79	-0.41	21.40	-0.98
323	364	SLU-INV	Max	-1.17	-0.23	-6.16	34.83	7.01	-0.03	65.56	0.17
323	340	SLU-INV	Max	-1.30	-0.26	-6.03	35.04	6.97	0.04	66.36	0.17
323	341	SLU-INV	Max	-1.38	-0.66	-10.89	26.69	5.23	-0.12	66.36	-0.61
323	365	SLU-INV	Max	-1.25	-0.63	-11.02	26.46	5.28	-0.19	65.56	-0.61
323	364	SLU-INV	Min	-1.58	-0.32	-8.31	15.49	3.24	-0.03	28.89	0.05
323	340	SLU-INV	Min	-1.76	-0.35	-8.13	16.29	3.12	0.01	30.69	0.05
323	341	SLU-INV	Min	-1.87	-0.89	-14.70	12.46	2.36	-0.51	30.69	-1.32
323	365	SLU-INV	Min	-1.69	-0.85	-14.88	11.77	2.41	-0.55	28.89	-1.32
324	365	SLE-INV	Max	-1.03	-0.59	-8.69	11.36	2.37	-0.40	25.93	-0.84
324	341	SLE-INV	Max	-1.12	-0.61	-8.59	11.65	2.16	-0.31	26.99	-0.84
324	342	SLE-INV	Max	-1.20	-1.03	-7.44	8.27	1.42	-0.52	26.99	-1.71
324	366	SLE-INV	Max	-1.11	-1.01	-7.54	8.03	1.61	-0.60	25.93	-1.71
324	365	SLE-INV	Min	-1.03	-0.59	-8.69	8.51	1.82	-0.43	19.38	-0.88
324	341	SLE-INV	Min	-1.12	-0.61	-8.59	8.85	1.60	-0.36	20.53	-0.88
324	342	SLE-INV	Min	-1.20	-1.03	-7.44	6.29	1.04	-0.60	20.53	-1.83
324	366	SLE-INV	Min	-1.11	-1.01	-7.54	6.01	1.23	-0.67	19.38	-1.83
324	365	SLU-INV	Max	-1.03	-0.59	-8.69	25.94	5.18	-0.23	59.42	-0.60
324	341	SLU-INV	Max	-1.12	-0.61	-8.59	25.94	5.06	-0.08	60.04	-0.60
324	342	SLU-INV	Max	-1.20	-1.03	-7.44	18.38	3.40	-0.11	60.04	-1.10
324	366	SLU-INV	Max	-1.11	-1.01	-7.54	18.35	3.54	-0.26	59.42	-1.10
324	365	SLU-INV	Min	-1.39	-0.79	-11.74	11.49	2.46	-0.58	26.17	-1.19
324	341	SLU-INV	Min	-1.51	-0.82	-11.60	11.95	2.15	-0.48	27.71	-1.19
324	342	SLU-INV	Min	-1.62	-1.39	-10.04	8.49	1.40	-0.81	27.71	-2.46
324	366	SLU-INV	Min	-1.50	-1.36	-10.17	8.12	1.66	-0.90	26.17	-2.46
325	366	SLE-INV	Max	-0.87	-0.96	-7.38	7.85	1.62	-0.63	23.28	-1.64
325	342	SLE-INV	Max	-0.93	-0.97	-7.28	7.95	1.31	-0.49	24.17	-1.64
325	343	SLE-INV	Max	-1.01	-1.41	-6.97	4.92	0.59	-0.59	24.17	-2.37
325	367	SLE-INV	Max	-0.96	-1.40	-7.07	4.86	0.88	-0.72	23.28	-2.37
325	366	SLE-INV	Min	-0.87	-0.96	-7.38	5.87	1.26	-0.69	17.40	-1.75
325	342	SLE-INV	Min	-0.93	-0.97	-7.28	6.01	0.92	-0.58	18.37	-1.75
325	343	SLE-INV	Min	-1.01	-1.41	-6.97	3.72	0.37	-0.70	18.37	-2.54
325	367	SLE-INV	Min	-0.96	-1.40	-7.07	3.63	0.69	-0.81	17.40	-2.54
325	366	SLU-INV	Max	-0.87	-0.96	-7.38	17.96	3.47	-0.31	53.83	-1.09
325	342	SLU-INV	Max	-0.93	-0.97	-7.28	17.86	3.28	-0.06	53.83	-1.09
325	343	SLU-INV	Max	-1.01	-1.41	-6.97	11.08	1.68	-0.02	53.83	-1.46
325	367	SLU-INV	Max	-0.96	-1.40	-7.07	11.16	1.88	-0.27	53.83	-1.46
325	366	SLU-INV	Min	-1.18	-1.30	-9.96	7.92	1.71	-0.93	23.49	-2.36
325	342	SLU-INV	Min	-1.25	-1.31	-9.82	8.12	1.24	-0.78	24.79	-2.36
325	343	SLU-INV	Min	-1.37	-1.90	-9.41	5.02	0.50	-0.95	24.79	-3.43
325	367	SLU-INV	Min	-1.30	-1.88	-9.54	4.90	0.93	-1.10	23.49	-3.43
326	367	SLE-INV	Max	-0.72	-1.35	-6.64	4.74	0.91	-0.74	20.67	-2.31
326	343	SLE-INV	Max	-0.74	-1.35	-6.53	4.71	0.50	-0.58	21.40	-2.31
326	344	SLE-INV	Max	-0.83	-1.7						



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 145 di 180
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326	367	SLE-INV	Min	-0.72	-1.35	-6.64	3.54	0.72	-0.82	15.44	-2.47
326	343	SLE-INV	Min	-0.74	-1.35	-6.53	3.53	0.28	-0.69	16.25	-2.47
326	344	SLE-INV	Min	-0.83	-1.78	-6.12	1.50	-0.24	-0.73	16.25	-3.14
326	368	SLE-INV	Min	-0.80	-1.78	-6.22	1.55	0.18	-0.86	15.44	-3.14
326	367	SLE-INV	Max	-0.72	-1.35	-6.64	10.90	1.83	-0.28	47.41	-1.46
326	343	SLU-INV	Max	-0.74	-1.35	-6.53	10.72	1.60	-0.01	47.73	-1.46
326	344	SLU-INV	Max	-0.83	-1.78	-6.12	4.71	0.11	0.07	47.73	-1.72
326	368	SLU-INV	Max	-0.80	-1.78	-6.22	4.86	0.37	-0.20	47.41	-1.72
326	367	SLU-INV	Min	-0.97	-1.82	-8.96	4.78	0.98	-1.11	20.85	-3.34
326	343	SLU-INV	Min	-1.00	-1.82	-8.81	4.77	0.38	-0.93	21.94	-3.34
326	344	SLU-INV	Min	-1.12	-2.40	-8.26	2.03	-0.32	-0.99	21.94	-4.24
326	368	SLU-INV	Min	-1.08	-2.40	-8.40	2.10	0.24	-1.17	20.85	-4.24
327	368	SLE-INV	Max	-0.56	-1.73	-5.83	2.02	0.24	-0.77	18.10	-2.86
327	344	SLE-INV	Max	-0.56	-1.73	-5.73	1.90	-0.25	-0.59	18.69	-2.86
327	345	SLE-INV	Max	-0.65	-2.15	-5.35	-0.39	-0.80	-0.56	18.69	-3.35
327	369	SLE-INV	Max	-0.64	-2.15	-5.45	-0.23	-0.29	-0.74	18.10	-3.35
327	368	SLE-INV	Min	-0.56	-1.73	-5.83	1.50	0.22	-0.87	13.52	-3.08
327	344	SLE-INV	Min	-0.56	-1.73	-5.73	1.39	-0.31	-0.72	14.19	-3.08
327	345	SLE-INV	Min	-0.65	-2.15	-5.35	-0.45	-0.88	-0.70	14.19	-3.63
327	369	SLE-INV	Min	-0.64	-2.15	-5.45	-0.29	-0.41	-0.85	13.52	-3.63
327	368	SLU-INV	Max	-0.56	-1.73	-5.83	4.69	0.34	-0.23	41.53	-1.71
327	344	SLU-INV	Max	-0.56	-1.73	-5.73	4.51	0.07	0.10	41.74	-1.71
327	345	SLU-INV	Max	-0.65	-2.15	-5.35	-0.52	-1.08	0.17	41.74	-1.88
327	369	SLU-INV	Max	-0.64	-2.15	-5.45	-0.31	-0.39	-0.15	41.53	-1.88
327	368	SLE-INV	Min	-0.75	-2.33	-7.87	2.03	0.29	-1.18	18.25	-4.16
327	344	SLU-INV	Min	-0.76	-2.33	-7.74	1.88	-0.42	-0.98	19.15	-4.16
327	345	SLU-INV	Min	-0.87	-2.91	-7.22	-0.76	-1.31	-0.95	19.15	-4.91
327	369	SLU-INV	Min	-0.87	-2.91	-7.36	-0.60	-1.03	-1.15	18.25	-4.91
328	369	SLE-INV	Max	-0.41	-2.11	-5.06	-0.25	-0.25	-0.74	15.56	-3.31
328	345	SLE-INV	Max	-0.39	-2.10	-4.97	-0.44	-0.85	-0.56	16.03	-3.31
328	346	SLE-INV	Max	-0.47	-2.50	-4.58	-1.97	-1.29	-0.49	16.03	-3.70
328	370	SLE-INV	Max	-0.49	-2.51	-4.68	-1.74	-0.71	-0.67	15.56	-3.70
328	369	SLE-INV	Min	-0.41	-2.11	-5.06	-0.32	-0.38	-0.85	11.62	-3.59
328	345	SLE-INV	Min	-0.39	-2.10	-4.97	-0.51	-0.93	-0.70	12.16	-3.59
328	346	SLE-INV	Min	-0.47	-2.50	-4.58	-2.52	-1.50	-0.64	12.16	-4.03
328	370	SLE-INV	Min	-0.49	-2.51	-4.68	-2.31	-0.96	-0.79	11.62	-4.03
328	369	SLU-INV	Max	-0.41	-2.11	-5.06	-0.33	-0.34	-0.14	35.71	-1.88
328	345	SLU-INV	Max	-0.39	-2.10	-4.97	-0.60	-1.15	0.17	35.84	-1.88
328	346	SLU-INV	Max	-0.47	-2.50	-4.58	-2.65	-1.74	0.25	35.84	-1.99
328	370	SLU-INV	Max	-0.49	-2.51	-4.68	-2.35	-0.96	-0.07	35.71	-1.99
328	369	SLU-INV	Min	-0.55	-2.84	-6.84	-0.67	-1.04	-1.15	15.62	-4.84
328	345	SLU-INV	Min	-0.53	-2.84	-6.70	-0.86	-1.33	-0.95	16.42	-4.84
328	346	SLU-INV	Min	-0.63	-3.38	-6.18	-5.38	-2.56	-0.86	16.42	-5.45
328	370	SLU-INV	Min	-0.66	-3.38	-6.31	-5.22	-2.25	-1.06	15.68	-5.45
329	370	SLE-INV	Max	-0.26	-2.46	-4.29	-1.73	-0.68	-0.67	13.05	-3.67
329	346	SLE-INV	Max	-0.24	-2.46	-4.20	-1.98	-1.33	-0.49	13.43	-3.67
329	347	SLE-INV	Max	-0.31	-2.82	-3.83	-3.26	-1.71	-0.41	13.43	-3.98
329	371	SLE-INV	Max	-0.34	-2.83	-3.91	-2.98	-1.08	-0.58	13.05	-3.98
329	370	SLE-INV	Min	-0.26	-2.46	-4.29	-2.31	-0.94	-0.78	9.74	-3.99
329	346	SLE-INV	Min	-0.24	-2.46	-4.20	-2.54	-1.53	-0.64	10.18	-3.99
329	347	SLE-INV	Min	-0.31	-2.82	-3.83	-4.23	-2.03	-0.54	10.18	-4.35
329	371	SLE-INV	Min	-0.34	-2.83	-3.91	-3.98	-1.45	-0.69	9.74	-4.35
329	370	SLU-INV	Max	-0.26	-2.46	-4.29	-2.34	-0.91	-0.07	29.97	-1.99
329	346	SLU-INV	Max	-0.24	-2.46	-4.20	-2.68	-1.79	0.25	30.04	-1.99
329	347	SLU-INV	Max	-0.31	-2.82	-3.83	-4.40	-2.31	0.29	30.04	-2.04
329	371	SLU-INV	Max	-0.34	-2.83	-3.91	-4.02	-1.46	-0.03	29.97	-2.04
329	370	SLU-INV	Min	-0.36	-3.32	-5.79	-5.26	-2.26	-1.06	13.15	-5.39
329	346	SLU-INV	Min	-0.32	-3.32	-5.67	-5.07	-2.56	-0.85	13.74	-5.39
329	347	SLU-INV	Min	-0.42	-3.81	-5.17	-9.18	-3.63	-0.73	13.74	-5.88
329	371	SLU-INV	Min	-0.45	-3.82	-5.28	-9.07	-3.32	-0.93	13.15	-5.88
330	371	SLE-INV	Max	-0.14	-2.79	-3.53	-2.96	-1.05	-0.57	10.57	-3.95
330	347	SLE-INV	Max	-0.10	-2.78	-3.45	-3.25	-1.74	-0.42	10.86	-3.95
330	348	SLE-INV	Max	-0.16	-3.09	-3.07	-4.28	-2.07	-0.32	10.86	-4.18
330	372	SLE-INV	Max	-0.21	-3.10	-3.14	-3.97	-1.39	-0.47	10.57	-4.18
330	371	SLE-INV	Min	-0.14	-2.79	-3.53	-3.96	-1.42	-0.68	7.89	-4.32
330	347	SLE-INV	Min	-0.10	-2.78	-3.45	-4.22	-2.05	-0.55	8.23	-4.32
330	348	SLE-INV	Min	-0.16	-3.09	-3.07	-5.58	-2.47	-0.44	8.23	-4.60
330	372	SLE-INV	Min	-0.21	-3.10	-3.14	-5.31	-1.84	-0.57	7.89	-4.60
330	371	SLU-INV	Max	-0.14	-2.79	-3.53	-4.00	-1.42	-0.01	24.28	-2.05
330	347	SLU-INV	Max	-0.10	-2.78	-3.45	-4.39	-2.35	0.27	24.31	-2.05
330	348	SLU-INV	Max	-0.16	-3.09	-3.07	-5.78	-2.79	0.29	24.31	-2.07
330	372	SLU-INV	Max	-0.21	-3.10	-3.14	-5.36	-1.87	0.02	24.28	-2.07
330	371	SLU-INV	Min	-0.19	-3.76	-4.76	-9.05	-3.31	-0.92	10.65	-5.83
330	347	SLU-INV	Min	-0.14	-3.75	-4.66	-9.16	-3.63	-0.75	11.11	-5.83
330	348	SLU-INV	Min	-0.22	-4.18	-4.14	-10.23	-4.51	-0.59	11.11	-6.21
330	372	SLU-INV	Min	-0.28	-4.19	-4.24	-12.14	-4.19	-0.77	10.65	-6.21
331	372	SLE-INV	Max	-0.04	-3.07	-2.75	-3.94	-1.36	-0.46	8.12	-4.16
331	348	SLE-INV	Max	0.01	-3.06	-2.69	-4.26	-2.08	-0.33	8.33	-4.16
331	349	SLE-INV	Max	-0.04	-3.31	-2.32	-5.05	-2.34	-0.23	8.33	-4.34
331	373	SLE-INV	Max	-0.09	-3.32	-2.38	-4.72	-1.63	-0.36	8.12	-4.34
331	372	SLE-INV	Min	-0.04	-3.07	-2.75	-5.28	-1.82	-0.56	6.06	-4.57
331	348	SLE-INV	Min	0.01	-3.06	-2.69	-5.55	-2.48	-0.45	6.31	-4.57
331	349	SLE-INV	Min	-0.04	-3.31	-2.32	-6.60	-2.81	-0.33	6.31	-4.78
331	373	SLE-INV	Min	-0.09	-3.32	-2.38	-6.32	-2.16	-0.43	6.06	-4.78
331	372	SLU-INV	Max	-0.04	-3.07	-2.75	-5.33	-1.83	0.04	18.65	-2.07
331	348	SLU-INV	Max	0.01	-3.06	-2.69	-5.75	-2.81	0.27	18.65	-2.07
331	349	SLU-INV	Max	-0.04	-3.31	-2.32	-6.82	-3.16	0.25	18.65	-2.08
331	373	SLU-INV	Max	-0.09	-3.32	-2.38	-6.37	-2.19	0.02	18.65	-2.08
331	372	SLU-INV	Min	-0.05	-4.14	-3.72	-12.11	-4.19	-0.75	8.17	-6.17
331	348	SLU-INV	Min	0.01	-4.13	-3.64	-12.16	-4.50	-0.61	8.51	-6.17
331	349	SLU-INV	Min	-0.06	-4.48	-3.13	-14.52	-5.20	-0.44	8.51	-6.45
331	373	SLU-INV	Min	-0.12	-4.49	-3.21	-14.48	-4.88	-0.58	8.17	-6.45
332	373	SLE-INV	Max	0.03	-3.30	-1.99	-4.69	-1.60	-0.34	5.68	-4.32
332	349	SLE-INV	Max	0.09	-3.29	-1.95	-5.03	-2.35	-0.25	5.82	-4.32
332	350	SLE-INV	Max	0.05	-3.47	-1.56	-5.58	-2.53	-0.14	5.82	-4.44
332	374	SLE-INV	Max	0.00	-3.48	-1.61	-5.24	-1.79	-0.24	5.68	-4.44
332	373	SLE-INV	Min	0.03	-3.30	-1.99	-6.29	-2.14	-0.42	4.24	-4.76
332	349	SLE-INV	Min	0.09	-3.29	-1.95	-6.57	-2.82	-0.34	4.41	-4.76
332	350	SLE-INV	Min	0.05	-3.47	-1.56	-7.30	-3.05	-0.21	4.41	-4.90
332	374	SLE-INV	Min	0.00	-3.48	-1.61	-7.01	-2.38	-0.29	4.24	-4.90
332	373	SLU-INV	Max	0.04	-3.30	-1.99	-6.34	-2.17	0.05	13.05	-2.08
332	349	SLU-INV	Max	0.12	-3.29	-1.95	-6.79	-3.17	0.22	13.05	-2.08
332	350	SLU-INV	Max	0.07	-3.47	-1.56	-7.53	-3.42	0.19	13.05	-2.08
332	374	SLU-INV	Max	0.00	-3.48	-1.61	-7.07	-2.42	0.02	13.05	-2.08
332	373	SLU-INV	Min	0.03	-4.45	-2.69	-14.44	-4.87	-0.56	5.72	-6.42
332	349	SLU-INV	Min	0.09	-4.44	-2.63	-14.46	-5.19	-0.46	5.95	-6.42
332	350	SLU-INV	Min	0.05	-4.69	-2.11	-16.11	-5.69	-0.28	5.95	-6.61
332	374	SLU-INV	Min	0.00	-4.70	-2.17	-16.10	-5.37	-0.39	5.72	-6.61
333	374	SLE-INV	Max	0.08	-3.47	-1.22	-5.22	-1.78	-0.22	3.26	-4.43
333	350	SLE-INV	Max	0.14	-3.45	-1.19	-5.14	-2.54	-0.14	3.23	-4.43
333	351	SLE-INV	Max	0.12	-3.56	-0.82	-5.88	-2.65	-0.06	3.33	-4.49

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	146 di 180			
333	375	SLE-INV	Max	0.06	-3.57	-0.84	-5.53	-1.89	-0.11	3.26	-4.49
333	374	SLE-INV	Min	0.08	-3.47	-1.22	-6.99	-2.37	-0.27	2.43	-4.89
333	350	SLE-INV	Min	0.14	-3.45	-1.19	-7.28	-3.05	-0.22	2.52	-4.89
333	351	SLE-INV	Min	0.12	-3.56	-0.82	-7.70	-3.19	-0.09	2.52	-4.97
333	374	SLE-INV	Min	0.06	-3.57	-0.84	-7.41	-2.51	-0.14	2.43	-4.97
333	350	SLE-INV	Max	0.11	-3.47	-1.22	-7.04	-2.40	0.06	7.48	-2.08
333	350	SLE-INV	Max	0.19	-3.45	-1.19	-7.51	-3.43	0.16	7.48	-2.08
333	351	SLE-INV	Max	0.16	-3.56	-0.82	-7.93	-3.57	0.10	7.48	-2.07
333	375	SLE-INV	Max	0.08	-3.57	-0.84	-7.46	-2.55	0.00	7.48	-2.07
333	374	SLE-INV	Min	0.08	-4.68	-1.64	-16.07	-5.36	-0.37	3.28	-6.60
333	350	SLE-INV	Min	0.14	-4.66	-1.61	-16.05	-5.68	-0.30	3.41	-6.60
333	351	SLE-INV	Min	0.12	-4.81	-1.10	-17.00	-5.97	-0.12	3.41	-6.70
333	375	SLE-INV	Min	0.06	-4.82	-1.14	-17.02	-5.65	-0.18	3.28	-6.70
334	375	SLE-INV	Max	0.10	-3.57	-0.45	-5.52	-1.88	-0.09	0.84	-4.49
334	351	SLE-INV	Max	0.16	-3.55	-0.45	-5.87	-2.65	-0.08	0.86	-4.49
334	352	SLE-INV	Max	0.16	-3.58	-0.06	-5.95	-2.68	0.03	0.86	-4.51
334	376	SLE-INV	Max	0.09	-3.59	-0.07	-5.60	-1.91	0.02	0.84	-4.51
334	375	SLE-INV	Min	0.10	-3.57	-0.45	-7.39	-2.50	-0.12	0.63	-4.96
334	351	SLE-INV	Min	0.16	-3.55	-0.45	-7.68	-3.19	-0.11	0.65	-4.96
334	352	SLE-INV	Min	0.16	-3.58	-0.06	-7.79	-3.23	0.02	0.65	-4.98
334	376	SLE-INV	Min	0.09	-3.59	-0.07	-7.50	-2.53	0.01	0.63	-4.98
334	375	SLE-INV	Max	0.13	-3.57	-0.45	-7.45	-2.54	0.04	1.93	-2.07
334	351	SLE-INV	Max	0.22	-3.55	-0.45	-7.92	-3.58	0.06	1.93	-2.07
334	352	SLE-INV	Max	0.21	-3.58	-0.06	-8.03	-3.61	0.04	1.93	-2.07
334	376	SLE-INV	Max	0.12	-3.59	-0.07	-7.55	-2.58	0.02	1.93	-2.07
334	375	SLE-INV	Min	0.10	-4.81	-0.61	-16.99	-5.64	-0.16	0.85	-6.70
334	351	SLE-INV	Min	0.16	-4.80	-0.60	-16.98	-5.96	-0.15	0.88	-6.70
334	352	SLE-INV	Min	0.16	-4.83	-0.08	-17.22	-6.03	0.01	0.88	-6.73
334	376	SLE-INV	Min	0.09	-4.85	-0.09	-17.24	-5.71	-0.02	0.85	-6.73
335	376	SLE-INV	Max	0.09	-3.59	0.33	-5.60	-1.91	0.03	-1.17	-4.51
335	352	SLE-INV	Max	0.15	-3.58	0.31	-5.95	-2.68	0.01	-1.22	-4.51
335	353	SLE-INV	Max	0.16	-3.53	0.69	-5.79	-2.62	0.15	-1.22	-4.48
335	377	SLE-INV	Max	0.10	-3.54	0.70	-5.45	-1.86	0.17	-1.17	-4.48
335	376	SLE-INV	Min	0.09	-3.59	0.33	-7.50	-2.53	0.03	-1.57	-4.98
335	352	SLE-INV	Min	0.15	-3.58	0.31	-7.79	-3.23	0.00	-1.61	-4.98
335	353	SLE-INV	Min	0.16	-3.53	0.69	-7.59	-3.16	0.11	-1.61	-4.95
335	377	SLE-INV	Min	0.10	-3.54	0.70	-7.30	-2.47	0.13	-1.57	-4.95
335	376	SLE-INV	Max	0.12	-3.59	0.44	-7.55	-2.58	0.05	-1.58	-2.07
335	352	SLE-INV	Max	0.20	-3.58	0.42	-8.03	-3.61	0.02	-1.64	-2.07
335	353	SLE-INV	Max	0.21	-3.53	0.93	-7.82	-3.54	0.20	-1.64	-2.07
335	377	SLE-INV	Max	0.13	-3.54	0.94	-7.35	-2.51	0.23	-1.58	-2.07
335	376	SLE-INV	Min	0.09	-4.85	0.33	-17.24	-5.71	0.02	-3.62	-6.73
335	352	SLE-INV	Min	0.15	-4.84	0.31	-17.21	-6.03	-0.03	-3.61	-6.73
335	353	SLE-INV	Min	0.16	-4.76	0.69	-16.75	-5.89	-0.10	-3.61	-6.68
335	377	SLE-INV	Min	0.10	-4.78	0.70	-16.78	-5.57	-0.05	-3.62	-6.68
336	377	SLE-INV	Max	0.04	-3.55	1.08	-5.45	-1.87	0.19	-2.98	-4.48
336	353	SLE-INV	Max	0.10	-3.54	1.05	-5.80	-2.62	0.13	-3.09	-4.48
336	354	SLE-INV	Max	0.13	-3.41	1.45	-5.42	-2.49	0.26	-3.09	-4.40
336	378	SLE-INV	Max	0.07	-3.42	1.48	-5.07	-1.73	0.32	-2.98	-4.40
336	377	SLE-INV	Min	0.04	-3.55	1.08	-7.31	-2.47	0.12	-3.99	-4.95
336	353	SLE-INV	Min	0.10	-3.54	1.05	-7.60	-3.16	0.09	-4.09	-4.95
336	354	SLE-INV	Min	0.13	-3.41	1.45	-7.09	-2.99	0.19	-4.09	-4.86
336	378	SLE-INV	Min	0.07	-3.42	1.48	-6.80	-2.30	0.26	-3.99	-4.86
336	377	SLE-INV	Max	0.06	-3.55	1.46	-7.36	-2.52	0.25	-4.02	-2.07
336	353	SLE-INV	Max	0.14	-3.54	1.42	-7.84	-3.54	0.17	-4.18	-2.07
336	354	SLE-INV	Max	0.17	-3.41	1.96	-7.31	-3.36	0.36	-4.18	-2.08
336	378	SLE-INV	Max	0.09	-3.42	2.00	-6.85	-2.34	0.43	-4.02	-2.08
336	377	SLE-INV	Min	0.04	-4.09	1.08	-16.78	-5.57	-0.01	-9.17	-6.69
336	353	SLE-INV	Min	0.10	-4.78	1.05	-16.78	-5.90	-0.13	-9.16	-6.69
336	354	SLE-INV	Min	0.13	-4.60	1.45	-15.63	-5.54	-0.17	-9.16	-6.56
336	378	SLE-INV	Min	0.07	-4.62	1.48	-15.62	-5.23	-0.05	-9.17	-6.56
337	355	SLE-INV	Max	0.06	-3.20	2.23	-4.75	-2.25	0.39	-5.05	-4.27
337	379	SLE-INV	Max	0.01	-3.21	2.28	-4.42	-1.51	0.48	-4.85	-4.27
337	378	SLE-INV	Max	-0.03	-3.44	1.89	-5.09	-1.75	0.34	-4.85	-4.41
337	354	SLE-INV	Max	0.02	-3.43	1.84	-5.43	-2.48	0.25	-5.05	-4.41
337	355	SLE-INV	Min	0.06	-3.20	2.23	-6.20	-2.69	0.28	-6.67	-4.70
337	379	SLE-INV	Min	0.01	-3.21	2.28	-5.92	-2.02	0.39	-6.51	-4.70
337	378	SLE-INV	Min	-0.03	-3.44	1.89	-6.82	-2.32	0.28	-6.51	-4.87
337	354	SLE-INV	Min	0.02	-3.43	1.84	-7.10	-2.98	0.17	-6.67	-4.87
337	355	SLE-INV	Max	0.09	-3.20	3.01	-6.42	-3.04	0.52	-6.82	-2.08
337	379	SLE-INV	Max	0.02	-3.21	3.07	-5.97	-2.04	0.64	-6.55	-2.08
337	378	SLE-INV	Max	-0.03	-3.44	2.55	-6.87	-2.36	0.46	-6.55	-2.07
337	354	SLE-INV	Max	0.03	-3.43	2.48	-7.33	-3.35	0.33	-6.82	-2.07
337	355	SLE-INV	Min	0.06	-4.32	2.23	-13.63	-4.94	-0.25	-14.95	-6.34
337	379	SLE-INV	Min	0.01	-4.34	2.28	-13.60	-4.62	-0.05	-14.96	-6.34
337	378	SLE-INV	Min	-0.04	-4.64	1.89	-15.65	-5.23	-0.02	-14.96	-6.58
337	354	SLE-INV	Min	0.02	-4.63	1.84	-15.66	-5.55	-0.21	-14.95	-6.58
338	356	SLE-INV	Max	-0.03	-2.93	3.05	-3.82	-1.93	0.50	-7.10	-4.08
338	380	SLE-INV	Max	-0.08	-2.94	3.11	-3.51	-1.22	0.62	-6.81	-4.08
338	379	SLE-INV	Max	-0.14	-3.24	2.70	-4.45	-1.54	0.49	-6.81	-4.29
338	355	SLE-INV	Max	-0.09	-3.23	2.63	-4.77	-2.24	0.37	-7.10	-4.29
338	356	SLE-INV	Min	-0.03	-2.93	3.05	-4.96	-2.29	0.38	-9.37	-4.47
338	380	SLE-INV	Min	-0.08	-2.94	3.11	-4.69	-1.64	0.51	-9.13	-4.47
338	379	SLE-INV	Min	-0.14	-3.24	2.70	-5.95	-2.04	0.40	-9.13	-4.72
338	355	SLE-INV	Min	-0.09	-3.23	2.63	-6.23	-2.68	0.27	-9.37	-4.72
338	356	SLE-INV	Max	-0.03	-2.93	4.11	-5.15	-2.61	0.68	-9.58	-2.07
338	380	SLE-INV	Max	-0.08	-2.94	4.20	-4.73	-1.64	0.84	-9.20	-2.07
338	379	SLE-INV	Max	-0.14	-3.24	3.64	-6.00	-2.07	0.66	-9.20	-2.08
338	355	SLE-INV	Max	-0.09	-3.23	3.55	-6.44	-3.02	0.50	-9.58	-2.08
338	356	SLE-INV	Min	-0.05	-3.96	3.05	-10.83	-4.11	-0.27	-21.00	-6.03
338	380	SLE-INV	Min	-0.11	-3.97	3.11	-10.75	-3.80	-0.02	-20.99	-6.03
338	379	SLE-INV	Min	-0.19	-4.38	2.70	-13.62	-4.62	-0.03	-20.99	-6.37
338	355	SLE-INV	Min	-0.13	-4.36	2.63	-13.68	-4.95	-0.27	-21.00	-6.37
339	357	SLE-INV	Max	-0.17	-2.60	3.85	-2.59	-1.52	0.60	-9.18	-3.81
339	381	SLE-INV	Max	-0.20	-2.61	3.93	-2.32	-0.85	0.74	-8.79	-3.81
339	380	SLE-INV	Max	-0.27	-2.98	3.53	-3.53	-1.25	0.63	-8.79	-4.10
339	356	SLE-INV	Max	-0.24	-2.97	3.45	-3.82	-1.91	0.49	-9.18	-4.10
339	357	SLE-INV	Min	-0.17	-2.60	3.85	-3.34	-1.77	0.46	-12.11	-4.16
339	381	SLE-INV	Min	-0.20	-2.61	3.93	-3.09	-1.16	0.63	-11.78	-4.16
339	380	SLE-INV	Min	-0.27	-2.98	3.53	-4.71	-1.66	0.53	-11.78	-4.50
339	356	SLE-INV	Min	-0.24	-2.97	3.45	-4.98	-2.27	0.36	-12.11	-4.50
339	357	SLE-INV	Max	-0.17	-2.60	5.20	-3.50	-2.05	0.81	-12.39	-2.02
339	381	SLE-INV	Max	-0.20	-2.61	5.31	-3.13	-1.15	1.00	-11.87	-2.02
339	380	SLE-INV	Max	-0.27	-2.98	4.76	-4.77	-1.68	0.85	-11.87	-2.06
339	356	SLE-INV	Max	-0.24	-2.97	4.65	-5.16	-2.57	0.66	-12.39	-2.06
339	357	SLE-INV	Min	-0.23	-3.51	3.85	-7.18	-3.06	-0.26	-27.11	-5.61
339	381	SLE-INV	Min	-0.27	-3.52	3.93	-7.07	-2.75	0.04	-27.07	-5.61
339	380	SLE-INV	Min	-0.37	-4.02	3.53	-10.77	-3.80	0.01	-27.07	-6.07
339	356	SLE-INV	Min	-0.32	-4.01	3.45	-10.86	-4.12	-0.29	-27.11	-6.07
340	358	SLE-INV	Max	-0.32	-2.23	4.67	-1.06	-1.04	0.68	-11.29	-3.46
340	382	SLE-INV	Max	-0.34	-2.24	4.76	-0.84	-0.42			



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS OI6800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 147 di 180			
340	381	SLE-INV	Max	-0.43	-2.65	4.35	-2.33	-0.88	0.75	-10.80	-3.84
340	357	SLE-INV	Max	-0.41	-2.65	4.25	-2.58	-1.49	0.60	-11.29	-3.84
340	358	SLE-INV	Min	-0.32	-2.23	4.67	-1.32	-1.16	0.54	-14.89	-3.76
340	382	SLE-INV	Min	-0.34	-2.24	4.76	-1.11	-0.60	0.71	-14.46	-3.76
340	381	SLE-INV	Min	-0.43	-2.65	4.35	-3.10	-1.19	0.63	-14.46	-4.20
340	357	SLE-INV	Min	-0.41	-2.65	4.25	-3.33	-1.74	0.46	-14.89	-4.20
340	358	SLE-INV	Max	-0.32	-2.23	6.30	-1.43	-1.40	0.92	-15.25	-1.93
340	382	SLE-INV	Max	-0.34	-2.24	6.43	-1.13	-0.56	1.12	-14.57	-1.93
340	381	SLE-INV	Max	-0.43	-2.65	5.87	-3.14	-1.19	1.01	-14.57	-2.02
340	357	SLE-INV	Max	-0.41	-2.65	5.74	-3.48	-2.01	0.81	-15.25	-2.02
340	358	SLE-INV	Min	-0.43	-3.02	4.67	-2.67	-1.81	-0.20	-33.31	-5.07
340	382	SLE-INV	Min	-0.47	-3.02	4.76	-2.49	-1.52	0.12	-33.31	-5.07
340	381	SLE-INV	Min	-0.58	-3.58	4.35	-7.04	-2.74	0.04	-33.31	-5.67
340	357	SLE-INV	Min	-0.55	-3.58	4.25	-7.18	-3.06	-0.27	-33.31	-5.67
341	359	SLE-INV	Max	-0.50	-1.84	5.49	1.13	-0.46	0.72	-13.45	-3.01
341	383	SLE-INV	Max	-0.50	-1.84	5.59	1.28	0.07	0.87	-12.83	-3.01
341	382	SLE-INV	Max	-0.59	-2.29	5.18	-0.83	-0.45	0.83	-12.83	-3.50
341	358	SLE-INV	Max	-0.59	-2.29	5.08	-1.01	-0.99	0.68	-13.45	-3.50
341	359	SLE-INV	Min	-0.50	-1.84	5.49	0.80	-0.48	0.58	-17.73	-3.25
341	383	SLE-INV	Min	-0.50	-1.84	5.59	0.95	0.05	0.76	-17.18	-3.25
341	382	SLE-INV	Min	-0.59	-2.29	5.18	-1.09	-0.63	0.72	-17.18	-3.81
341	358	SLE-INV	Min	-0.59	-2.29	5.08	-1.26	-1.12	0.54	-17.73	-3.81
341	359	SLE-INV	Max	-0.50	-1.84	7.41	2.80	-0.37	0.97	-18.16	-1.78
341	383	SLE-INV	Max	-0.50	-1.84	7.54	2.98	0.10	1.18	-17.32	-1.78
341	382	SLE-INV	Max	-0.59	-2.29	6.99	-1.12	-0.61	1.12	-17.32	-1.93
341	358	SLE-INV	Max	-0.59	-2.29	6.86	-1.36	-1.33	0.92	-18.16	-1.93
341	359	SLE-INV	Min	-0.68	-2.48	5.49	1.08	-0.65	-0.12	-39.60	-4.39
341	383	SLE-INV	Min	-0.68	-2.48	5.59	1.28	-0.09	0.21	-39.43	-4.39
341	382	SLE-INV	Min	-0.80	-3.09	5.18	-2.42	-1.50	0.12	-39.43	-5.14
341	358	SLE-INV	Min	-0.80	-3.09	5.08	-2.57	-1.80	-0.20	-39.60	-5.14
342	360	SLE-INV	Max	-0.69	-1.43	6.34	4.03	0.32	0.71	-15.66	-2.45
342	384	SLE-INV	Max	-0.67	-1.43	6.44	4.09	0.75	0.84	-14.89	-2.45
342	383	SLE-INV	Max	-0.76	-1.89	6.01	1.34	0.03	0.87	-14.89	-3.06
342	359	SLE-INV	Max	-0.78	-1.89	5.90	1.25	-0.40	0.73	-15.66	-3.06
342	360	SLE-INV	Min	-0.69	-1.43	6.34	3.01	0.14	0.59	-20.62	-2.63
342	384	SLE-INV	Min	-0.67	-1.43	6.44	3.05	0.61	0.75	-19.93	-2.63
342	383	SLE-INV	Min	-0.76	-1.89	6.01	0.99	0.02	0.75	-19.93	-3.31
342	359	SLE-INV	Min	-0.78	-1.89	5.90	0.91	-0.41	0.59	-20.62	-3.31
342	360	SLE-INV	Max	-0.69	-1.43	8.55	9.22	1.24	0.95	-21.34	-1.53
342	384	SLE-INV	Max	-0.67	-1.43	8.70	9.41	1.48	1.14	-20.10	-1.53
342	383	SLE-INV	Max	-0.76	-1.89	8.11	3.15	0.05	1.17	-20.10	-1.78
342	359	SLE-INV	Max	-0.78	-1.89	7.96	2.99	-0.32	0.98	-21.34	-1.78
342	360	SLE-INV	Min	-0.93	-1.93	6.34	4.07	0.19	-0.01	-46.01	-3.55
342	384	SLE-INV	Min	-0.91	-1.93	6.44	4.12	0.82	0.28	-45.73	-3.55
342	383	SLE-INV	Min	-1.03	-2.55	6.01	1.34	-0.06	0.18	-45.73	-4.47
342	359	SLE-INV	Min	-1.06	-2.56	5.90	1.23	-0.55	-0.10	-46.01	-4.47
343	361	SLE-INV	Max	-0.89	-1.03	7.15	7.42	1.18	0.60	-17.92	-1.75
343	385	SLE-INV	Max	-0.84	-1.02	7.25	7.35	1.52	0.72	-16.98	-1.75
343	384	SLE-INV	Max	-0.93	-1.48	6.90	4.21	0.73	0.83	-16.98	-2.51
343	360	SLE-INV	Max	-0.98	-1.49	6.80	4.25	0.41	0.72	-17.92	-2.51
343	361	SLE-INV	Min	-0.89	-1.03	7.15	5.61	0.81	0.51	-23.58	-1.87
343	385	SLE-INV	Min	-0.84	-1.02	7.25	5.49	1.18	0.65	-22.73	-1.87
343	384	SLE-INV	Min	-0.93	-1.48	6.90	3.14	0.57	0.74	-22.73	-2.70
343	360	SLE-INV	Min	-0.98	-1.49	6.80	3.20	0.23	0.60	-23.58	-2.70
343	361	SLE-INV	Max	-0.89	-1.03	9.65	16.70	3.02	0.81	-24.19	-1.16
343	385	SLE-INV	Max	-0.84	-1.02	9.79	16.82	3.22	0.97	-22.92	-1.16
343	384	SLE-INV	Max	-0.93	-1.48	9.31	9.68	1.53	1.12	-22.92	-1.53
343	360	SLE-INV	Max	-0.98	-1.49	9.17	9.59	1.31	0.97	-24.19	-1.53
343	361	SLE-INV	Min	-1.20	-1.38	7.15	7.57	1.10	0.06	-52.54	-2.52
343	385	SLE-INV	Min	-1.13	-1.37	7.25	7.42	1.60	0.31	-52.12	-2.52
343	384	SLE-INV	Min	-1.26	-2.00	6.90	4.24	0.77	0.26	-52.12	-3.64
343	360	SLE-INV	Min	-1.33	-2.01	6.80	4.33	0.32	0.00	-52.54	-3.64
344	362	SLE-INV	Max	-1.09	-0.63	8.47	11.33	2.09	0.38	-20.23	-0.90
344	386	SLE-INV	Max	-1.01	-0.61	8.58	11.07	2.31	0.45	-19.11	-0.90
344	385	SLE-INV	Max	-1.10	-1.07	7.46	7.54	1.50	0.70	-19.11	-1.82
344	361	SLE-INV	Max	-1.18	-1.08	7.36	7.75	1.30	0.62	-20.23	-1.82
344	362	SLE-INV	Min	-1.09	-0.63	8.47	8.61	1.54	0.33	-26.61	-0.96
344	386	SLE-INV	Min	-1.01	-0.61	8.58	8.29	1.78	0.42	-25.57	-0.96
344	385	SLE-INV	Min	-1.10	-1.07	7.46	5.64	1.14	0.63	-25.57	-1.95
344	361	SLE-INV	Min	-1.18	-1.08	7.36	5.90	0.94	0.54	-26.61	-1.95
344	362	SLE-INV	Max	-1.09	-0.63	11.44	25.26	4.92	0.51	-27.32	-0.65
344	386	SLE-INV	Max	-1.01	-0.61	11.58	25.28	5.05	0.61	-25.80	-0.65
344	385	SLE-INV	Max	-1.10	-1.07	10.07	17.24	3.29	0.94	-25.80	-1.17
344	361	SLE-INV	Max	-1.18	-1.08	9.34	17.26	3.14	0.84	-27.32	-1.17
344	362	SLE-INV	Min	-1.47	-0.85	8.47	11.62	2.07	0.08	-59.19	-1.29
344	386	SLE-INV	Min	-1.36	-0.83	8.58	11.19	2.40	0.24	-58.60	-1.29
344	385	SLE-INV	Min	-1.48	-1.44	7.46	7.62	1.55	0.26	-58.60	-2.64
344	361	SLE-INV	Min	-1.60	-1.46	7.36	7.96	1.27	0.11	-59.19	-2.64
345	363	SLE-INV	Max	-1.29	-0.26	6.03	15.80	3.06	-0.01	-22.61	0.13
345	387	SLE-INV	Max	-1.16	-0.23	6.17	15.28	3.15	0.03	-21.27	0.13
345	386	SLE-INV	Max	-1.25	-0.66	10.94	11.35	2.30	0.43	-21.27	-0.99
345	362	SLE-INV	Max	-1.38	-0.69	10.81	11.81	2.25	0.40	-22.61	-0.99
345	363	SLE-INV	Min	-1.29	-0.26	6.03	12.04	2.30	-0.01	-29.70	0.11
345	387	SLE-INV	Min	-1.16	-0.23	6.17	11.46	2.40	0.02	-28.45	0.11
345	386	SLE-INV	Min	-1.25	-0.66	10.94	8.51	1.74	0.39	-28.45	-1.05
345	362	SLE-INV	Min	-1.38	-0.69	10.81	9.02	1.70	0.63	-29.70	-1.05
345	363	SLE-INV	Max	-1.29	-0.26	8.15	34.99	6.96	-0.01	-30.52	0.17
345	387	SLE-INV	Max	-1.16	-0.23	8.32	34.79	7.00	0.03	-28.72	0.17
345	386	SLE-INV	Max	-1.25	-0.66	14.77	25.85	5.15	0.58	-28.72	-0.66
345	362	SLE-INV	Max	-1.38	-0.69	14.60	26.07	5.09	0.54	-30.52	-0.66
345	363	SLE-INV	Min	-1.75	-0.35	6.03	16.26	3.11	-0.04	-65.98	0.05
345	387	SLE-INV	Min	-1.57	-0.31	6.17	15.47	3.24	0.03	-65.19	0.05
345	386	SLE-INV	Min	-1.69	-0.89	10.94	11.49	2.36	0.20	-65.19	-1.42
345	362	SLE-INV	Min	-1.86	-0.93	10.81	12.17	2.29	0.13	-65.98	-1.42
346	388	SLE-INV	Max	-1.03	-0.21	-6.27	14.61	3.02	-0.02	27.34	0.13
346	364	SLE-INV	Max	-1.17	-0.23	-6.16	15.21	2.94	0.01	28.65	0.13
346	365	SLE-INV	Max	-1.24	-0.56	-11.13	11.63	2.23	-0.40	28.65	-0.96
346	389	SLE-INV	Max	-1.10	-0.53	-11.24	11.09	2.27	-0.42	27.34	-0.96
346	388	SLE-INV	Min	-1.03	-0.21	-6.27	10.73	2.26	-0.02	20.04	0.12
346	364	SLE-INV	Min	-1.17	-0.23	-6.16	11.39	2.17	0.00	21.43	0.12
346	365	SLE-INV	Min	-1.24	-0.56	-11.13	8.72	1.65	-0.43	21.43	-1.01
346	389	SLE-INV	Min	-1.10	-0.53	-11.24	8.15	1.69	-0.45	20.04	-1.01
346	388	SLE-INV	Max	-1.03	-0.21	-6.27	34.40	6.94	-0.02	64.66	0.18
346	364	SLE-INV	Max	-1.17	-0.23	-6.16	34.75	6.89	0.02	65.61	0.18
346	365	SLE-INV	Max	-1.24	-0.56	-11.13	26.50	5.21	-0.23	65.61	-0.71
346	389	SLE-INV	Max	-1.10	-0.53	-11.24	26.14	5.26	-0.27	64.66	-0.71
346	388	SLE-INV	Min	-1.40	-0.28	-8.46	14.49	3.05	-0.02	27.05	0.07
346	364	SLE-INV	Min	-1.58	-0.32	-8.31	15.38	2.93	0.00	28.93	0.07
346	365	SLE-INV	Min	-1.67	-0.75	-15.02	11.77	2.23	-0.58	28.93	-1.36
346	389	SLE-INV	Min	-1.48	-0.72	-15.17	11.00	2.28	-0.60	27.05	-1.36
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2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS 016800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 148 di 180
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347	365	SLE-INV	Max	-1.01	-0.51	-8.80	11.27	2.09	-0.37	25.96	-0.87
347	366	SLE-INV	Max	-1.09	-0.88	-7.63	8.02	1.40	-0.62	25.96	-1.80
347	390	SLE-INV	Max	-0.99	-0.86	-7.71	7.73	1.59	-0.69	24.84	-1.80
347	389	SLE-INV	Min	-0.92	-0.49	-8.87	8.02	1.75	-0.46	18.21	-0.91
347	366	SLE-INV	Min	-1.01	-0.51	-8.80	8.42	1.51	-0.41	19.41	-0.91
347	390	SLE-INV	Min	-1.09	-0.88	-7.63	6.00	1.00	-0.68	19.41	-1.80
347	390	SLE-INV	Min	-0.99	-0.86	-7.71	5.68	1.20	-0.74	18.21	-1.89
347	389	SLE-INV	Max	-0.92	-0.49	-8.87	25.74	5.20	-0.31	58.72	-0.68
347	365	SLE-INV	Max	-1.01	-0.51	-8.80	25.86	5.05	-0.18	59.47	-0.68
347	366	SLE-INV	Max	-1.09	-0.88	-7.63	18.38	3.43	-0.29	59.47	-1.30
347	390	SLE-INV	Max	-0.99	-0.86	-7.71	18.24	3.58	-0.42	58.72	-1.30
347	389	SLE-INV	Min	-1.24	-0.67	-11.98	10.83	2.36	-0.62	24.58	-1.23
347	365	SLE-INV	Min	-1.37	-0.69	-11.88	11.36	2.04	-0.55	26.20	-1.23
347	366	SLE-INV	Min	-1.47	-1.19	-10.30	8.09	1.35	-0.92	26.20	-2.56
347	390	SLE-INV	Min	-1.34	-1.16	-10.41	7.66	1.62	-0.99	24.58	-2.56
348	390	SLE-INV	Max	-0.79	-0.82	-7.57	7.61	1.62	-0.70	22.36	-1.72
348	366	SLE-INV	Max	-0.85	-0.83	-7.47	7.75	1.29	-0.61	23.30	-1.72
348	366	SLE-INV	Max	-0.92	-1.22	-7.16	4.84	0.64	-0.74	23.30	-2.50
348	391	SLE-INV	Max	-0.87	-1.21	-7.26	4.74	0.95	-0.82	22.36	-2.50
348	390	SLE-INV	Min	-0.79	-0.82	-7.57	5.59	1.25	-0.75	16.40	-1.81
348	366	SLE-INV	Min	-0.85	-0.83	-7.47	5.77	0.89	-0.67	17.42	-1.81
348	367	SLE-INV	Min	-0.92	-1.22	-7.16	3.60	0.41	-0.83	17.42	-2.65
348	391	SLE-INV	Min	-0.87	-1.21	-7.26	3.48	0.73	-0.90	16.40	-2.65
348	390	SLE-INV	Max	-0.79	-0.82	-7.57	17.94	3.54	-0.44	52.83	-1.27
348	366	SLE-INV	Max	-0.85	-0.83	-7.47	17.90	3.31	-0.28	53.41	-1.27
348	367	SLE-INV	Max	-0.92	-1.22	-7.16	11.17	1.81	-0.29	53.41	-1.76
348	391	SLE-INV	Max	-0.87	-1.21	-7.26	11.20	2.05	-0.45	52.83	-1.76
348	390	SLE-INV	Min	-1.07	-1.11	-10.22	7.54	1.69	-1.01	22.14	-2.44
348	366	SLE-INV	Min	-1.14	-1.13	-10.09	7.79	1.20	-0.91	23.51	-2.44
348	367	SLE-INV	Min	-1.25	-1.65	-9.67	4.85	0.55	-1.11	23.51	-3.58
348	391	SLE-INV	Min	-1.17	-1.63	-9.80	4.69	0.99	-1.21	22.14	-3.58
349	391	SLE-INV	Max	-0.65	-1.16	-6.82	4.65	0.98	-0.84	19.90	-2.44
349	367	SLE-INV	Max	-0.68	-1.17	-6.73	4.65	0.55	-0.72	20.69	-2.44
349	368	SLE-INV	Max	-0.76	-1.58	-6.33	2.06	-0.07	-0.77	20.69	-3.09
349	392	SLE-INV	Max	-0.73	-1.57	-6.41	2.10	0.34	-0.88	19.90	-3.09
349	391	SLE-INV	Min	-0.65	-1.16	-6.82	3.42	0.78	-0.91	14.60	-2.57
349	367	SLE-INV	Min	-0.68	-1.17	-6.73	3.44	0.32	-0.81	15.46	-2.57
349	368	SLE-INV	Min	-0.76	-1.58	-6.33	1.51	-0.14	-0.87	15.46	-3.28
349	392	SLE-INV	Min	-0.73	-1.57	-6.41	1.54	0.29	-0.97	14.60	-3.28
349	391	SLE-INV	Max	-0.65	-1.16	-6.82	10.97	2.02	-0.48	47.00	-1.74
349	367	SLE-INV	Max	-0.68	-1.17	-6.73	10.85	1.73	-0.62	47.44	-1.74
349	368	SLE-INV	Max	-0.76	-1.58	-6.33	4.87	0.30	-0.22	47.44	-2.11
349	392	SLE-INV	Max	-0.73	-1.57	-6.41	4.97	0.60	-0.45	47.00	-2.11
349	391	SLE-INV	Min	-0.88	-1.57	-9.21	4.61	1.05	-1.23	19.71	-3.48
349	367	SLE-INV	Min	-0.92	-1.58	-9.09	4.64	0.43	-1.10	20.87	-3.48
349	368	SLE-INV	Min	-1.03	-2.13	-8.54	2.03	-0.19	-1.18	20.87	-4.43
349	392	SLE-INV	Min	-0.99	-2.13	-8.66	2.08	0.39	-1.31	19.71	-4.43
350	392	SLE-INV	Max	-0.51	-1.53	-6.03	2.05	0.38	-0.88	17.46	-3.04
350	368	SLE-INV	Max	-0.52	-1.53	-5.94	1.93	-0.14	-0.76	18.11	-3.04
350	369	SLE-INV	Max	-0.60	-1.94	-5.54	-0.29	-0.64	-0.74	18.11	-3.57
350	393	SLE-INV	Max	-0.59	-1.94	-5.64	-0.14	-0.11	-0.86	17.46	-3.57
350	392	SLE-INV	Min	-0.51	-1.53	-6.03	1.51	0.34	-0.97	12.81	-3.22
350	368	SLE-INV	Min	-0.52	-1.53	-5.94	1.40	-0.22	-0.87	13.53	-3.22
350	369	SLE-INV	Min	-0.60	-1.94	-5.54	-0.34	-0.70	-0.85	13.53	-3.81
350	393	SLE-INV	Min	-0.59	-1.94	-5.64	-0.18	-0.20	-0.96	12.81	-3.81
350	392	SLE-INV	Max	-0.51	-1.53	-6.03	4.84	0.59	-0.45	41.21	-2.09
350	368	SLE-INV	Max	-0.52	-1.53	-5.94	4.65	0.25	-0.22	41.55	-2.09
350	369	SLE-INV	Max	-0.60	-1.94	-5.54	-0.19	-0.64	-0.72	41.55	-2.67
350	393	SLE-INV	Max	-0.59	-1.94	-5.64	-0.19	-0.15	-0.37	41.21	-2.67
350	392	SLE-INV	Min	-0.69	-2.07	-8.14	2.04	0.45	-1.31	17.29	-4.35
350	368	SLE-INV	Min	-0.70	-2.07	-8.01	1.89	-0.29	-1.17	18.26	-4.35
350	369	SLE-INV	Min	-0.81	-2.62	-7.48	-0.58	-1.02	-1.15	18.26	-5.14
350	393	SLE-INV	Min	-0.80	-2.61	-7.61	-0.42	-0.68	-1.29	17.29	-5.14
351	393	SLE-INV	Max	-0.37	-1.89	-5.24	-0.15	-0.07	-0.87	15.04	-3.53
351	369	SLE-INV	Max	-0.36	-1.89	-5.15	-0.35	-0.69	-0.73	15.57	-3.53
351	370	SLE-INV	Max	-0.44	-2.29	-4.77	-1.80	-1.08	-0.67	15.57	-3.96
351	394	SLE-INV	Max	-0.45	-2.29	-4.86	-1.56	-0.47	-0.80	15.04	-3.96
351	393	SLE-INV	Min	-0.37	-1.89	-5.24	-0.21	-0.17	-0.96	11.04	-3.76
351	369	SLE-INV	Min	-0.36	-1.89	-5.15	-0.40	-0.75	-0.85	11.62	-3.76
351	370	SLE-INV	Min	-0.44	-2.29	-4.77	-2.36	-1.26	-0.79	11.62	-4.24
351	394	SLE-INV	Min	-0.45	-2.29	-4.86	-2.13	-0.69	-0.89	11.04	-4.24
351	369	SLE-INV	Max	-0.37	-1.89	-5.24	-0.20	-0.09	-0.39	35.49	-2.35
351	393	SLE-INV	Max	-0.36	-1.89	-5.15	-0.47	-0.94	-0.14	35.73	-2.35
351	370	SLE-INV	Max	-0.44	-2.29	-4.77	-2.43	-1.45	-0.07	35.73	-2.55
351	394	SLE-INV	Max	-0.45	-2.29	-4.86	-2.11	-0.64	-0.32	35.49	-2.55
351	393	SLE-INV	Min	-0.50	-2.55	-7.07	-0.51	-0.68	-1.29	14.90	-5.07
351	369	SLE-INV	Min	-0.49	-2.55	-6.96	-0.69	-1.06	-1.15	15.69	-5.07
351	370	SLE-INV	Min	-0.60	-3.09	-6.44	-5.20	-2.21	-1.06	15.69	-5.72
351	394	SLE-INV	Min	-0.61	-3.09	-6.56	-5.04	-1.83	-1.21	14.90	-5.72
352	394	SLE-INV	Max	-0.25	-2.25	-4.46	-1.56	-0.44	-0.80	12.63	-3.93
352	370	SLE-INV	Max	-0.22	-2.24	-4.38	-1.83	-1.12	-0.67	13.06	-3.93
352	371	SLE-INV	Max	-0.29	-2.60	-3.99	-3.05	-1.45	-0.57	13.06	-4.27
352	395	SLE-INV	Max	-0.32	-2.61	-4.07	-2.75	-0.79	-0.70	12.63	-4.27
352	394	SLE-INV	Min	-0.25	-2.25	-4.46	-2.13	-0.66	-0.89	9.28	-4.20
352	370	SLE-INV	Min	-0.22	-2.24	-4.38	-2.39	-1.30	-0.79	9.75	-4.20
352	371	SLE-INV	Min	-0.29	-2.60	-3.99	-4.03	-1.74	-0.68	9.75	-4.58
352	395	SLE-INV	Min	-0.32	-2.61	-4.07	-3.75	-1.12	-0.79	9.28	-4.58
352	394	SLE-INV	Max	-0.25	-2.25	-4.46	-2.10	-0.59	-0.31	29.81	-2.55
352	370	SLE-INV	Max	-0.22	-2.24	-4.38	-2.47	-1.51	-0.08	29.98	-2.55
352	371	SLE-INV	Max	-0.29	-2.60	-3.99	-4.12	-1.96	-0.01	29.98	-2.68
352	395	SLE-INV	Max	-0.32	-2.61	-4.07	-3.71	-1.06	-0.24	29.81	-2.68
352	394	SLE-INV	Min	-0.34	-3.04	-6.03	-5.06	-1.83	-1.20	12.52	-5.66
352	370	SLE-INV	Min	-0.30	-3.03	-5.92	-5.26	-2.23	-1.06	13.16	-5.66
352	371	SLE-INV	Min	-0.39	-3.52	-5.38	-9.04	-3.21	-0.92	13.16	-6.19
352	395	SLE-INV	Min	-0.43	-3.52	-5.49	-8.86	-2.81	-1.06	12.52	-6.19
353	395	SLE-INV	Max	-0.14	-2.57	-3.67	-2.73	-0.75	-0.69	10.25	-4.24
353	371	SLE-INV	Max	-0.10	-2.57	-3.60	-3.05	-1.48	-0.58	10.58	-4.24
353	372	SLE-INV	Max	-0.16	-2.88	-3.21	-4.04	-1.76	-0.46	10.58	-4.51
353	396	SLE-INV	Max	-0.20	-2.89	-3.28	-3.70	-1.05	-0.58	10.25	-4.51
353	395	SLE-INV	Min	-0.14	-2.57	-3.67	-3.74	-1.09	-0.78	7.53	-4.55
353	371	SLE-INV	Min	-0.10	-2.57	-3.60	-4.03	-1.77	-0.69	7.89	-4.55
353	372	SLE-INV	Min	-0.16	-2.88	-3.21	-5.36	-2.14	-0.56	7.89	-4.85
353	396	SLE-INV	Min	-0.20	-2.89	-3.28	-5.05	-1.47	-0.65	7.53	-4.85
353	395	SLE-INV	Max	-0.14	-2.57	-3.67	-3.69	-1.02	-0.23	24.18	-2.68
353	371	SLE-INV	Max	-0.10	-2.57	-3.60	-4.12	-2.00	-0.02	24.29	-2.68
353	372	SLE-INV	Max	-0.16	-2.88	-3.21	-5.45	-2.38	0.03	24.29	-2.77
353	396	SLE-INV	Max	-0.20	-2.89	-3.28	-4.99	-1.41	-0.18	24.18	-2.77
353	395	SLE-INV	Min	-0.18	-3.47	-4.95	-8.88	-2.80	-1.06	10.16	-6.14
353	371	SLE-INV	Min	-0.13	-3.46	-4.86	-9.04	-3.22	-0.93	10.66	-6.14
353	372	SLE-INV	Min	-0.22	-3.89	-4.34	-12.10	-4.35	-0.66	10.66	



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.prog.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	149 di 180			
354	396	SLE-INV	Max	-0.05	-2.86	-2.88	-3.68	-1.02	-0.57	7.88	-4.49
354	372	SLE-INV	Max	0.00	-2.85	-2.83	-4.03	-1.78	-0.47	8.12	-4.49
354	373	SLE-INV	Max	-0.05	-3.10	-2.42	-4.79	-2.01	-0.34	8.12	-4.69
354	397	SLE-INV	Max	-0.10	-3.11	-2.48	-4.42	-1.25	-0.44	7.88	-4.69
354	396	SLE-INV	Min	-0.05	-2.86	-2.88	-5.03	-1.45	-0.64	5.78	-4.83
354	372	SLE-INV	Min	0.00	-2.85	-2.83	-5.35	-2.15	-0.57	6.06	-4.83
354	373	SLE-INV	Min	-0.05	-3.10	-2.42	-6.37	-2.44	-0.47	6.06	-5.05
354	397	SLE-INV	Min	-0.10	-3.11	-2.48	-6.03	-1.74	-0.50	5.78	-5.05
354	396	SLU-INV	Max	-0.05	-2.86	-2.88	-4.96	-1.38	-0.16	18.58	-2.77
354	372	SLU-INV	Max	0.01	-2.85	-2.83	-5.45	-2.41	-0.16	18.65	-2.77
354	373	SLU-INV	Max	-0.05	-3.10	-2.42	-6.47	-2.71	0.05	18.65	-2.83
354	397	SLU-INV	Max	-0.10	-3.11	-2.48	-5.96	-1.69	-0.12	18.58	-2.83
354	396	SLU-INV	Min	-0.07	-3.86	-3.89	-11.93	-3.62	-0.87	7.81	-6.51
354	372	SLU-INV	Min	0.00	-3.84	-3.81	-12.09	-4.05	-0.77	8.18	-6.51
354	373	SLU-INV	Min	-0.06	-4.19	-3.27	-14.44	-4.69	-0.57	8.18	-6.82
354	397	SLU-INV	Min	-0.14	-4.20	-3.35	-14.30	-4.26	-0.67	7.81	-6.82
355	397	SLE-INV	Max	0.02	-3.09	-2.07	-4.40	-1.23	-0.42	5.52	-4.67
355	373	SLE-INV	Max	0.08	-3.08	-2.04	-4.78	-2.02	-0.35	5.68	-4.67
355	374	SLE-INV	Max	0.04	-3.26	-1.64	-5.31	-2.18	-0.22	5.68	-4.80
355	398	SLE-INV	Max	-0.02	-3.27	-1.68	-4.92	-1.40	-0.29	5.52	-4.80
355	397	SLE-INV	Min	0.02	-3.09	-2.07	-6.02	-1.72	-0.49	4.05	-5.03
355	373	SLE-INV	Min	0.08	-3.08	-2.04	-6.35	-2.46	-0.43	4.24	-5.03
355	374	SLE-INV	Min	0.04	-3.26	-1.64	-7.07	-2.66	-0.27	4.24	-5.19
355	398	SLE-INV	Min	-0.02	-3.27	-1.68	-6.72	-1.94	-0.33	4.05	-5.19
355	397	SLU-INV	Max	0.02	-3.09	-2.07	-5.94	-1.66	-0.10	13.01	-2.82
355	373	SLU-INV	Max	0.10	-3.08	-2.04	-6.45	-2.73	0.03	13.05	-2.82
355	374	SLU-INV	Max	0.05	-3.26	-1.64	-7.17	-2.94	0.05	13.05	-2.86
355	398	SLU-INV	Max	-0.02	-3.27	-1.68	-6.64	-1.88	-0.08	13.01	-2.86
355	397	SLU-INV	Min	0.02	-4.17	-2.80	-14.29	-4.25	-0.66	5.47	-6.79
355	373	SLU-INV	Min	0.08	-4.16	-2.75	-14.40	-4.69	-0.58	5.72	-6.79
355	374	SLU-INV	Min	0.04	-4.40	-2.22	-16.05	-5.15	-0.37	5.72	-7.00
355	398	SLU-INV	Min	-0.03	-4.42	-2.27	-15.94	-4.71	-0.45	5.47	-7.00
356	398	SLE-INV	Max	0.05	-3.26	-1.28	-4.90	-1.38	-0.28	3.16	-4.79
356	374	SLE-INV	Max	0.13	-3.25	-1.25	-5.30	-2.19	-0.24	3.26	-4.79
356	375	SLE-INV	Max	0.10	-3.35	-0.85	-5.60	-2.28	-0.10	3.26	-4.87
356	399	SLE-INV	Max	0.03	-3.37	-0.87	-5.20	-1.48	-0.14	3.16	-4.87
356	398	SLE-INV	Min	0.05	-3.26	-1.28	-6.70	-1.92	-0.32	2.32	-5.17
356	374	SLE-INV	Min	0.13	-3.25	-1.25	-7.05	-2.67	-0.29	2.43	-5.17
356	375	SLE-INV	Min	0.10	-3.35	-0.85	-7.46	-2.79	-0.12	2.43	-5.26
356	399	SLE-INV	Min	0.02	-3.37	-0.87	-7.11	-2.05	-0.16	2.32	-5.26
356	398	SLU-INV	Max	0.07	-3.26	-1.28	-6.62	-1.87	-0.06	7.46	-2.86
356	374	SLU-INV	Max	0.17	-3.25	-1.25	-7.15	-2.95	0.02	7.48	-2.86
356	375	SLU-INV	Max	0.14	-3.35	-0.85	-7.56	-3.07	0.04	7.48	-2.88
356	399	SLU-INV	Max	0.04	-3.37	-0.87	-7.02	-1.99	-0.04	7.46	-2.88
356	398	SLU-INV	Min	0.05	-4.40	-1.72	-15.91	-4.70	-0.43	3.14	-6.98
356	374	SLU-INV	Min	0.13	-4.38	-1.69	-16.03	-5.14	-0.39	3.28	-6.98
356	375	SLU-INV	Min	0.10	-4.53	-1.15	-16.97	-5.41	-0.16	3.28	-7.10
356	399	SLU-INV	Min	0.03	-4.55	-1.18	-16.86	-4.96	-0.21	3.14	-7.10
357	399	SLE-INV	Max	0.07	-3.36	-0.47	-5.19	-1.47	-0.12	0.82	-4.86
357	375	SLE-INV	Max	0.14	-3.35	-0.46	-5.59	-2.28	-0.11	0.84	-4.86
357	376	SLE-INV	Max	0.14	-3.37	-0.07	-5.67	-2.30	0.03	0.84	-4.88
357	400	SLE-INV	Max	0.06	-3.39	-0.07	-5.27	-1.49	0.02	0.82	-4.88
357	399	SLE-INV	Min	0.07	-3.36	-0.47	-7.10	-2.04	-0.14	0.60	-5.25
357	375	SLE-INV	Min	0.14	-3.35	-0.46	-7.45	-2.79	-0.13	0.63	-5.25
357	376	SLE-INV	Min	0.14	-3.37	-0.07	-7.56	-2.82	0.03	0.63	-5.28
357	400	SLE-INV	Min	0.06	-3.39	-0.07	-7.21	-2.07	0.02	0.60	-5.28
357	399	SLU-INV	Max	0.09	-3.36	-0.47	-7.07	-1.98	-0.01	1.92	-2.87
357	375	SLU-INV	Max	0.19	-3.45	-0.46	-7.45	-3.08	0.01	1.93	-2.87
357	376	SLU-INV	Max	0.18	-3.37	-0.07	-7.66	-3.11	0.04	1.93	-2.88
357	400	SLU-INV	Max	0.08	-3.39	-0.07	-7.11	-2.02	0.03	1.92	-2.88
357	399	SLU-INV	Min	0.07	-4.54	-0.63	-16.86	-4.96	-0.19	0.81	-7.09
357	375	SLU-INV	Min	0.14	-4.52	-0.62	-16.94	-5.40	-0.18	0.85	-7.09
357	376	SLU-INV	Min	0.14	-4.55	-0.09	-17.19	-5.47	0.01	0.85	-7.12
357	400	SLU-INV	Min	0.06	-4.57	-0.10	-17.10	-5.03	-0.01	0.81	-7.12
358	400	SLE-INV	Max	0.05	-3.39	0.33	-5.27	-1.50	0.04	-1.12	-4.89
358	376	SLE-INV	Max	0.13	-3.37	0.32	-5.67	-2.30	0.02	-1.17	-4.89
358	377	SLE-INV	Max	0.14	-3.32	0.72	-5.53	-2.26	0.19	-1.17	-4.85
358	401	SLE-INV	Max	0.06	-3.34	0.74	-5.12	-1.45	0.20	-1.12	-4.85
358	400	SLE-INV	Min	0.05	-3.39	0.33	-7.20	-2.07	0.03	-1.53	-5.28
358	376	SLE-INV	Min	0.13	-3.37	0.32	-7.56	-2.82	0.01	-1.57	-5.28
358	377	SLE-INV	Min	0.14	-3.32	0.72	-7.36	-2.76	0.15	-1.57	-5.24
358	401	SLE-INV	Min	0.06	-3.34	0.74	-7.01	-2.01	0.17	-1.53	-5.24
358	400	SLU-INV	Max	0.07	-3.39	0.45	-7.11	-2.02	0.05	-1.52	-2.88
358	376	SLU-INV	Max	0.17	-3.37	0.44	-7.66	-3.11	0.03	-1.59	-2.88
358	377	SLU-INV	Max	0.19	-3.32	0.98	-7.46	-3.05	0.25	-1.59	-2.87
358	401	SLU-INV	Max	0.09	-3.34	0.99	-6.92	-1.96	0.27	-1.52	-2.87
358	400	SLU-INV	Min	0.05	-4.58	0.33	-17.09	-5.03	0.02	-3.61	-7.12
358	376	SLU-INV	Min	0.13	-4.56	0.32	-17.19	-5.47	-0.02	-3.62	-7.12
358	377	SLU-INV	Min	0.14	-4.48	0.72	-16.74	-5.34	-0.01	-3.62	-7.07
358	401	SLU-INV	Min	0.06	-4.50	0.74	-16.63	-4.90	0.03	-3.61	-7.07
359	401	SLE-INV	Max	0.02	-3.34	1.14	-5.13	-1.46	0.21	-2.85	-4.86
359	377	SLE-INV	Max	0.08	-3.33	1.11	-5.53	-2.25	0.17	-2.98	-4.86
359	378	SLE-INV	Max	0.11	-3.20	1.52	-5.16	-2.14	0.33	-2.98	-4.76
359	402	SLE-INV	Max	0.05	-3.21	1.55	-4.77	-1.34	0.38	-2.85	-4.76
359	401	SLE-INV	Min	0.02	-3.34	1.14	-7.01	-2.02	0.19	-3.88	-5.24
359	377	SLE-INV	Min	0.08	-3.33	1.11	-7.36	-2.76	0.14	-3.99	-5.24
359	378	SLE-INV	Min	0.11	-3.20	1.52	-6.86	-2.61	0.27	-3.99	-5.14
359	402	SLE-INV	Min	0.05	-3.21	1.55	-6.52	-1.87	0.33	-3.88	-5.14
359	401	SLU-INV	Max	0.02	-3.34	1.53	-6.93	-1.97	0.29	-3.85	-2.87
359	377	SLU-INV	Max	0.11	-3.33	1.50	-7.47	-3.04	0.23	-4.02	-2.87
359	378	SLU-INV	Max	0.15	-3.20	2.05	-6.96	-2.89	0.45	-4.02	-2.85
359	402	SLU-INV	Max	0.06	-3.21	2.09	-6.43	-1.81	0.51	-3.85	-2.85
359	401	SLU-INV	Min	0.02	-4.52	1.14	-16.64	-4.90	0.06	-9.15	-7.08
359	377	SLU-INV	Min	0.08	-4.50	1.11	-16.74	-5.34	-0.04	-9.18	-7.08
359	378	SLU-INV	Min	0.11	-4.32	1.52	-15.58	-5.01	-0.03	-9.18	-6.94
359	402	SLU-INV	Min	0.05	-4.33	1.55	-15.47	-4.58	0.07	-9.15	-6.94
360	379	SLE-INV	Max	0.06	-2.99	2.34	-4.51	-1.93	0.49	-4.86	-4.61
360	403	SLE-INV	Max	-0.01	-3.00	2.38	-4.14	-1.15	0.55	-4.64	-4.61
360	402	SLE-INV	Max	-0.05	-3.23	1.97	-4.78	-1.35	0.39	-4.64	-4.78
360	378	SLE-INV	Max	0.01	-3.22	1.92	-5.16	-2.13	0.32	-4.86	-4.78
360	379	SLE-INV	Max	0.06	-2.99	2.34	-5.99	-2.35	0.41	-6.51	-4.96
360	403	SLE-INV	Min	-0.01	-3.00	2.38	-5.66	-1.62	0.48	-6.32	-4.96
360	402	SLE-INV	Min	-0.05	-3.23	1.97	-6.53	-1.88	0.34	-6.32	-5.15
360	378	SLE-INV	Min	0.01	-3.22	1.92	-6.87	-2.60	0.26	-6.51	-5.15
360	379	SLU-INV	Max	0.08	-2.99	3.15	-6.09	-2.61	0.66	-6.56	-2.81
360	403	SLU-INV	Max	-0.01	-3.00	3.21	-5.58	-1.56	0.75	-6.27	-2.81
360	402	SLU-INV	Max	-0.05	-3.23	2.66	-6.45	-1.83	0.52	-6.27	-2.85
360	378	SLU-INV	Max	0.02	-3.22	2.59	-6.97	-2.87	0.44	-6.56	-2.85
360	379	SLU-INV	Max	0.06	-4.04	2.34	-13.57	-4.45	-0.02	-14.96	-6.70
360	403	SLU-INV	Min	-0.01	-4.05	2.38	-13.43	-4.50	0.13	-14.91	-6.70
360	402	SLU-INV	Min	-0.07	-4.36	1.97	-15.47	-4.58	0.09	-14.91	-6.96

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N. progr.	REV.	Pag. di Pag.			
L0703	211	E	16	016800	REL	01	A	150 di 180			
360	378	SLU-INV	Min	0.01	-4.34	1.92	-15.60	-5.02	-0.05	-14.96	-6.96
361	380	SLE-INV	Max	-0.04	-2.72	3.18	-3.60	-1.65	0.63	-6.82	-4.39
361	404	SLE-INV	Max	-0.08	-2.73	3.24	-3.26	-0.90	0.71	-6.51	-4.39
361	403	SLE-INV	Max	-0.14	-3.03	2.82	-4.16	-1.18	0.56	-6.51	-4.63
361	379	SLE-INV	Max	-0.10	-3.02	2.76	-4.52	-1.92	0.48	-6.82	-4.63
361	380	SLE-INV	Min	-0.04	-2.72	3.18	-4.77	-1.98	0.52	-9.14	-4.71
361	404	SLE-INV	Min	-0.08	-2.73	3.24	-4.46	-1.28	0.63	-8.86	-4.71
361	403	SLE-INV	Min	-0.14	-3.03	2.82	-5.68	-1.64	0.50	-8.86	-4.99
361	379	SLE-INV	Min	-0.10	-3.02	2.76	-6.00	-2.33	0.39	-9.14	-4.99
361	380	SLE-INV	Max	-0.04	-2.72	4.29	-4.86	-2.23	0.85	-9.21	-2.73
361	404	SLE-INV	Max	-0.08	-2.73	4.37	-4.40	-1.21	0.96	-8.79	-2.73
361	403	SLE-INV	Max	-0.14	-3.03	3.81	-5.61	-1.59	0.76	-8.79	-2.81
361	379	SLE-INV	Max	-0.10	-3.02	3.73	-6.10	-2.59	0.65	-9.21	-2.81
361	380	SLE-INV	Min	-0.05	-3.67	3.18	-10.73	-3.67	0.00	-20.99	-6.36
361	404	SLE-INV	Min	-0.11	-3.68	3.24	-10.59	-3.25	0.19	-20.91	-6.36
361	403	SLE-INV	Min	-0.19	-4.09	2.82	-13.45	-4.02	0.15	-20.91	-6.73
361	379	SLE-INV	Min	-0.13	-4.08	2.76	-13.58	-4.46	-0.04	-20.99	-6.73
362	381	SLE-INV	Max	-0.15	-2.39	4.02	-2.41	-1.29	0.75	-8.80	-4.09
362	405	SLE-INV	Max	-0.19	-2.40	4.10	-2.11	-0.58	0.85	-8.38	-4.09
362	404	SLE-INV	Max	-0.26	-2.76	3.67	-3.27	-0.93	0.72	-8.38	-4.42
362	380	SLE-INV	Max	-0.23	-2.75	3.59	-3.60	-1.62	0.62	-8.80	-4.42
362	381	SLE-INV	Min	-0.15	-2.39	4.02	-3.18	-1.52	0.63	-11.79	-4.37
362	405	SLE-INV	Min	-0.19	-2.40	4.10	-2.89	-0.86	0.75	-11.42	-4.37
362	404	SLE-INV	Min	-0.26	-2.76	3.67	-4.47	-1.31	0.64	-11.42	-4.74
362	380	SLE-INV	Min	-0.23	-2.75	3.59	-4.76	-1.96	0.52	-11.79	-4.74
362	381	SLE-INV	Max	-0.15	-2.39	5.43	-3.26	-1.74	1.01	-11.88	-2.62
362	405	SLE-INV	Max	-0.19	-2.40	5.53	-2.85	-0.79	1.14	-11.32	-2.62
362	404	SLE-INV	Max	-0.26	-2.76	4.95	-4.42	-1.25	0.97	-11.32	-2.74
362	380	SLE-INV	Max	-0.23	-2.75	4.85	-4.86	-2.19	0.84	-11.88	-2.74
362	381	SLE-INV	Min	-0.21	-3.22	4.02	-7.07	-2.70	0.06	-27.08	-5.91
362	405	SLE-INV	Min	-0.26	-3.23	4.10	-6.88	-2.29	0.27	-26.94	-5.91
362	404	SLE-INV	Min	-0.36	-3.73	3.67	-10.56	-3.25	0.20	-26.94	-6.41
362	380	SLE-INV	Min	-0.31	-3.72	3.59	-10.74	-3.67	-0.02	-27.08	-6.41
363	382	SLE-INV	Max	-0.30	-2.02	4.85	-0.94	-0.86	0.83	-10.81	-3.70
363	406	SLE-INV	Max	-0.32	-2.02	4.93	-0.71	-0.21	0.94	-10.27	-3.70
363	405	SLE-INV	Max	-0.40	-2.44	4.52	-2.13	-0.62	0.85	-10.27	-4.12
363	381	SLE-INV	Max	-0.38	-2.43	4.44	-2.39	-1.25	0.74	-10.81	-4.12
363	382	SLE-INV	Min	-0.30	-2.02	4.85	-1.19	-0.97	0.71	-14.47	-3.94
363	406	SLE-INV	Min	-0.32	-2.02	4.93	-0.97	-0.36	0.84	-13.99	-3.94
363	405	SLE-INV	Min	-0.40	-2.44	4.52	-2.90	-0.89	0.76	-13.99	-4.42
363	381	SLE-INV	Min	-0.38	-2.43	4.44	-3.14	-1.49	0.63	-14.47	-4.42
363	382	SLE-INV	Max	-0.30	-2.02	6.55	-1.27	-1.16	1.12	-14.59	-2.44
363	406	SLE-INV	Max	-0.32	-2.02	6.66	-0.95	-0.28	1.27	-13.87	-2.44
363	405	SLE-INV	Max	-0.40	-2.44	6.10	-2.87	-0.84	1.15	-13.87	-2.62
363	381	SLE-INV	Max	-0.38	-2.43	5.99	-3.22	-1.69	1.00	-14.59	-2.62
363	382	SLE-INV	Min	-0.41	-2.73	4.85	-2.51	-1.51	0.11	-33.23	-5.32
363	406	SLE-INV	Min	-0.43	-2.73	4.93	-2.32	-1.13	0.36	-33.02	-5.32
363	405	SLE-INV	Min	-0.54	-3.29	4.52	-6.84	-2.29	0.29	-33.02	-5.96
363	381	SLE-INV	Min	-0.52	-3.29	4.44	-7.01	-2.68	0.04	-33.23	-5.96
364	383	SLE-INV	Max	-0.46	-1.64	5.69	1.19	-0.33	0.87	-12.84	-3.20
364	407	SLE-INV	Max	-0.46	-1.64	5.78	1.34	0.21	0.97	-12.17	-3.20
364	406	SLE-INV	Max	-0.55	-2.07	5.36	-0.70	-0.25	0.94	-12.17	-3.74
364	382	SLE-INV	Max	-0.55	-2.07	5.27	-0.88	-0.81	0.83	-12.84	-3.74
364	383	SLE-INV	Min	-0.46	-1.64	5.69	0.84	-0.37	0.76	-17.19	-3.40
364	407	SLE-INV	Min	-0.46	-1.64	5.78	0.99	0.21	0.89	-16.58	-3.40
364	406	SLE-INV	Min	-0.55	-2.07	5.36	-0.95	-0.39	0.84	-16.58	-3.99
364	382	SLE-INV	Min	-0.55	-2.07	5.27	-1.13	-0.92	0.72	-17.19	-3.99
364	383	SLE-INV	Max	-0.46	-1.64	7.68	2.66	-0.16	1.17	-17.34	-2.19
364	407	SLE-INV	Max	-0.46	-1.64	7.81	3.14	0.29	1.32	-16.43	-2.19
364	406	SLE-INV	Max	-0.55	-2.07	7.24	-0.94	-0.34	1.27	-16.43	-2.45
364	382	SLE-INV	Max	-0.55	-2.07	7.11	-1.19	-1.09	1.13	-17.34	-2.45
364	383	SLE-INV	Min	-0.62	-2.21	5.69	1.14	-0.50	0.20	-39.45	-4.59
364	407	SLE-INV	Min	-0.63	-2.21	5.78	1.33	0.19	0.43	-39.15	-4.59
364	406	SLE-INV	Min	-0.74	-2.79	5.36	-2.22	-1.12	0.35	-39.15	-5.39
364	382	SLE-INV	Min	-0.74	-2.79	5.27	-2.40	-1.48	0.12	-39.45	-5.39
365	384	SLE-INV	Max	-0.64	-1.25	6.54	4.00	0.38	0.83	-14.91	-2.59
365	408	SLE-INV	Max	-0.61	-1.24	6.63	4.03	0.84	0.93	-14.09	-2.59
365	407	SLE-INV	Max	-0.70	-1.68	6.20	1.38	0.17	0.97	-14.09	-3.26
365	383	SLE-INV	Max	-0.72	-1.69	6.11	1.31	-0.26	0.87	-14.91	-3.26
365	384	SLE-INV	Min	-0.64	-1.25	6.54	2.95	0.19	0.74	-19.95	-2.74
365	408	SLE-INV	Min	-0.61	-1.24	6.63	2.96	0.68	0.86	-19.20	-2.74
365	407	SLE-INV	Min	-0.70	-1.68	6.20	1.01	0.17	0.88	-19.20	-3.46
365	383	SLE-INV	Min	-0.72	-1.69	6.11	0.95	-0.30	0.76	-19.95	-3.46
365	384	SLE-INV	Max	-0.64	-1.25	8.83	9.36	1.38	1.12	-20.12	-1.83
365	408	SLE-INV	Max	-0.61	-1.24	8.95	9.50	1.68	1.24	-19.02	-1.83
365	407	SLE-INV	Max	-0.70	-1.68	8.37	3.29	0.23	1.31	-19.02	-2.20
365	383	SLE-INV	Max	-0.72	-1.69	8.25	3.17	-0.11	1.18	-20.12	-2.20
365	384	SLE-INV	Min	-0.86	-1.68	6.54	3.98	0.25	0.25	-45.76	-3.70
365	408	SLE-INV	Min	-0.83	-1.68	6.63	4.00	0.92	0.48	-45.35	-3.70
365	407	SLE-INV	Min	-0.94	-2.27	6.20	1.36	0.21	0.43	-45.35	-4.68
365	383	SLE-INV	Min	-0.98	-2.28	6.11	1.28	-0.40	0.20	-45.76	-4.68
366	385	SLE-INV	Max	-0.81	-0.88	7.35	7.25	1.16	0.70	-17.01	-1.84
366	409	SLE-INV	Max	-0.76	-0.87	7.44	7.13	1.53	0.78	-16.02	-1.84
366	408	SLE-INV	Max	-0.85	-1.29	7.09	4.12	0.81	0.92	-16.02	-2.66
366	384	SLE-INV	Max	-0.90	-1.30	6.99	4.19	0.48	0.84	-17.01	-2.66
366	385	SLE-INV	Min	-0.81	-0.88	7.35	5.39	0.79	0.63	-22.76	-1.94
366	409	SLE-INV	Min	-0.76	-0.87	7.44	5.24	1.18	0.72	-21.84	-1.94
366	408	SLE-INV	Min	-0.85	-1.29	7.09	3.02	0.63	0.84	-21.84	-2.81
366	384	SLE-INV	Min	-0.90	-1.30	6.99	3.11	0.28	0.75	-22.76	-2.81
366	385	SLE-INV	Max	-0.81	-0.88	9.92	16.76	3.06	0.95	-22.96	-1.36
366	409	SLE-INV	Max	-0.76	-0.87	10.05	16.82	3.30	1.05	-21.62	-1.36
366	408	SLE-INV	Max	-0.85	-1.29	9.57	9.74	1.72	1.24	-21.62	-1.85
366	384	SLE-INV	Max	-0.90	-1.30	9.44	9.70	1.46	1.14	-22.96	-1.85
366	385	SLE-INV	Min	-1.10	-1.19	7.35	7.27	1.07	0.28	-52.16	-2.62
366	409	SLE-INV	Min	-1.03	-1.17	7.44	7.07	1.59	0.45	-51.60	-2.62
366	408	SLE-INV	Min	-1.14	-1.74	7.09	4.08	0.85	0.45	-51.60	-3.80
366	384	SLE-INV	Min	-1.21	-1.75	6.99	4.20	0.38	0.28	-52.16	-3.80
367	386	SLE-INV	Max	-0.99	-0.53	8.68	10.97	2.02	0.43	-19.14	-0.94
367	410	SLE-INV	Max	-0.90	-0.51	8.75	10.65	2.26	0.49	-17.96	-0.94
367	409	SLE-INV	Max	-0.98	-0.91	7.64	7.27	1.49	0.77	-17.96	-1.92
367	385	SLE-INV	Max	-1.07	-0.93	7.56	7.53	1.29	0.71	-19.14	-1.92
367	386	SLE-INV	Min	-0.99	-0.53	8.68	8.19	1.46	0.39	-25.60	-0.98
367	410	SLE-INV	Min	-0.90	-0.51	8.75	7.83	1.71	0.46	-24.50	-0.98
367	409	SLE-INV	Min	-0.98	-0.91	7.64	5.33	1.12	0.71	-24.50	-2.03
367	385	SLE-INV	Min	-1.07	-0.93	7.56	5.63	0.92	0.65	-25.60	-2.03
367	386	SLE-INV	Max	-0.99	-0.53	11.72	25.20	4.91	0.59	-25.84	-0.73
367	410	SLE-INV	Max	-0.90	-0.51	11.82	25.09	5.07	0.66	-24.25	-0.73
367	409	SLE-INV	Max	-0.98	-0.91	10.31	17.15	3.34	1.04	-24.25	-1.38
367	385	SLE-INV	Max	-1.07	-0.93	10.21	17.27	3.18	0.96	-25.84	-1.38
367	386	SLE-INV	Min	-1.34	-0.72	8.68	11.06	1.96	1.19	-	



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 151 di 180			
367	409	SLU-INV	Min	-1.32	-1.23	7.64	7.20	1.52	0.44	-57.92	-2.74
367	385	SLU-INV	Min	-1.45	-1.26	7.56	7.60	1.24	0.30	-58.66	-2.74
368	387	SLE-INV	Max	-1.16	-0.23	6.17	15.19	2.93	0.00	-21.31	0.14
368	411	SLE-INV	Max	-1.03	-0.21	6.28	14.59	3.02	0.02	-19.92	0.14
368	410	SLE-INV	Max	-1.10	-0.55	11.16	10.84	2.22	0.47	-19.92	-1.04
368	386	SLE-INV	Max	-1.23	-0.58	11.04	11.36	2.17	0.45	-21.31	-1.04
368	387	SLE-INV	Min	-1.35	-0.23	6.17	11.37	2.16	-0.01	-28.50	0.13
368	411	SLE-INV	Min	-1.03	-0.21	6.28	10.73	2.26	0.02	-27.18	0.13
368	410	SLE-INV	Min	-1.10	-0.55	11.16	7.96	1.65	0.44	-27.18	-1.09
368	386	SLE-INV	Min	-1.23	-0.58	11.04	8.52	1.61	0.42	-28.50	-1.09
368	387	SLE-INV	Max	-1.16	-0.23	8.32	34.71	6.88	0.00	-28.77	0.19
368	411	SLE-INV	Max	-1.03	-0.21	8.48	34.37	6.93	0.02	-26.90	0.19
368	410	SLE-INV	Max	-1.10	-0.55	15.06	25.54	5.13	0.64	-26.90	-0.76
368	386	SLE-INV	Max	-1.23	-0.58	14.91	25.89	5.08	0.61	-28.77	-0.76
368	387	SLE-INV	Min	-1.57	-0.31	6.17	15.35	2.92	-0.02	-65.25	0.07
368	411	SLE-INV	Min	-1.39	-0.28	6.28	14.48	3.05	0.02	-64.31	0.07
368	410	SLE-INV	Min	-1.48	-0.75	11.16	10.75	2.23	0.28	-64.31	-1.47
368	386	SLE-INV	Min	-1.67	-0.79	11.04	11.51	2.17	0.24	-65.25	-1.47
369	412	SLE-INV	Max	-0.87	-0.17	-6.34	13.86	2.88	-0.01	26.01	0.14
369	388	SLE-INV	Max	-1.03	-0.21	-6.27	14.52	2.79	0.00	27.37	0.14
369	389	SLE-INV	Max	-1.08	-0.45	-11.32	11.10	2.13	-0.43	27.37	-0.98
369	413	SLE-INV	Max	-0.92	-0.42	-11.39	10.52	2.17	-0.45	26.01	-0.98
369	412	SLE-INV	Min	-0.87	-0.17	-6.34	9.95	2.11	-0.01	18.65	0.13
369	388	SLE-INV	Min	-1.03	-0.21	-6.27	10.65	2.01	0.00	20.06	0.13
369	389	SLE-INV	Min	-1.08	-0.45	-11.32	8.15	1.54	-0.46	20.06	-1.02
369	413	SLE-INV	Min	-0.92	-0.42	-11.39	7.55	1.58	-0.47	18.65	-1.02
369	412	SLE-INV	Max	-0.87	-0.17	-6.34	33.86	6.85	-0.02	63.67	0.19
369	388	SLE-INV	Max	-1.03	-0.21	-6.27	34.32	6.79	0.02	64.72	0.19
369	389	SLE-INV	Max	-1.08	-0.45	-11.32	26.17	5.13	-0.29	64.72	-0.77
369	413	SLE-INV	Max	-0.92	-0.42	-11.39	25.74	5.18	-0.33	63.67	-0.77
369	412	SLE-INV	Min	-1.17	-0.23	-8.56	13.44	2.85	-0.02	25.18	0.09
369	388	SLE-INV	Min	-1.40	-0.28	-8.46	14.38	2.72	0.00	27.08	0.09
369	389	SLE-INV	Min	-1.46	-0.61	-15.29	11.00	2.08	-0.62	27.08	-1.38
369	413	SLE-INV	Min	-1.24	-0.57	-15.38	10.19	2.13	-0.63	25.18	-1.38
370	413	SLE-INV	Max	-0.79	-0.39	-9.03	10.44	2.23	-0.45	23.70	-0.89
370	389	SLE-INV	Max	-0.90	-0.42	-8.96	10.83	2.00	-0.42	24.86	-0.89
370	390	SLE-INV	Max	-0.96	-0.72	-7.78	7.72	1.37	-0.70	24.86	-1.84
370	414	SLE-INV	Max	-0.85	-0.69	-7.85	7.39	1.56	-0.73	23.70	-1.84
370	413	SLE-INV	Min	-0.79	-0.39	-9.03	7.50	1.65	-0.47	17.01	-0.92
370	389	SLE-INV	Min	-0.90	-0.42	-8.96	7.93	1.41	-0.45	18.23	-0.92
370	390	SLE-INV	Min	-0.96	-0.72	-7.78	5.66	0.96	-0.75	18.23	-1.92
370	414	SLE-INV	Min	-0.85	-0.69	-7.85	5.31	1.16	-0.77	17.01	-1.92
370	413	SLE-INV	Max	-0.79	-0.39	-9.03	25.45	5.16	-0.34	57.90	-0.73
370	389	SLE-INV	Max	-0.90	-0.42	-8.96	25.65	4.99	-0.29	58.76	-0.73
370	390	SLE-INV	Max	-0.96	-0.72	-7.78	18.26	3.46	-0.44	58.76	-1.43
370	414	SLE-INV	Max	-0.85	-0.69	-7.85	18.06	3.63	-0.50	57.90	-1.43
370	413	SLE-INV	Min	-1.07	-0.53	-12.19	10.12	2.23	-0.64	22.97	-1.24
370	389	SLE-INV	Min	-1.22	-0.56	-12.09	10.71	1.91	-0.61	24.61	-1.24
370	390	SLE-INV	Min	-1.30	-0.97	-10.51	7.64	1.30	-1.01	24.61	-2.60
370	414	SLE-INV	Min	-1.15	-0.94	-10.60	7.16	1.56	-1.04	22.97	-2.60
371	414	SLE-INV	Max	-0.69	-0.66	-7.71	7.32	1.61	-0.74	21.39	-1.76
371	390	SLE-INV	Max	-0.76	-0.68	-7.64	7.51	1.27	-0.68	22.38	-1.76
371	391	SLE-INV	Max	-0.83	-1.03	-7.35	4.71	0.67	-0.84	22.38	-2.57
371	415	SLE-INV	Max	-0.76	-1.02	-7.42	4.58	0.99	-0.89	21.39	-2.57
371	414	SLE-INV	Min	-0.69	-0.66	-7.71	5.27	1.22	-0.78	15.37	-1.83
371	390	SLE-INV	Min	-0.76	-0.68	-7.64	5.49	0.86	-0.74	16.41	-1.83
371	391	SLE-INV	Min	-0.83	-1.03	-7.35	3.44	0.43	-0.91	16.41	-2.69
371	415	SLE-INV	Min	-0.76	-1.02	-7.42	3.29	0.76	-0.95	15.37	-2.69
371	414	SLE-INV	Max	-0.69	-0.66	-7.71	17.82	3.61	-0.54	52.18	-1.40
371	390	SLE-INV	Max	-0.76	-0.68	-7.64	17.86	3.35	-0.41	52.86	-1.40
371	391	SLE-INV	Max	-0.83	-1.03	-7.35	11.21	1.90	-0.47	52.86	-1.96
371	415	SLE-INV	Max	-0.76	-1.02	-7.42	11.17	2.15	-0.60	52.18	-1.96
371	414	SLE-INV	Min	-0.93	-0.89	-10.41	7.12	1.65	-1.05	20.75	-2.48
371	390	SLE-INV	Min	-1.03	-0.91	-10.32	7.41	1.16	-0.99	22.16	-2.48
371	391	SLE-INV	Min	-1.12	-1.40	-9.92	4.64	0.58	-1.22	22.16	-3.64
371	415	SLE-INV	Min	-1.02	-1.38	-10.01	4.44	1.02	-1.29	20.75	-3.64
372	415	SLE-INV	Max	-0.58	-0.98	-6.99	4.54	1.03	-0.90	19.09	-2.51
372	391	SLE-INV	Max	-0.62	-0.99	-6.91	4.55	0.58	-0.83	19.91	-2.51
372	392	SLE-INV	Max	-0.69	-1.37	-6.50	2.06	0.04	-0.89	19.91	-3.19
372	416	SLE-INV	Max	-0.65	-1.37	-6.58	2.09	0.46	-0.95	19.09	-3.19
372	415	SLE-INV	Min	-0.58	-0.98	-6.99	3.27	0.82	-0.96	13.73	-2.62
372	391	SLE-INV	Min	-0.62	-0.99	-6.91	3.31	0.34	-0.90	14.61	-2.62
372	392	SLE-INV	Min	-0.69	-1.37	-6.50	1.49	-0.05	-0.97	14.61	-3.34
372	416	SLE-INV	Min	-0.65	-1.37	-6.58	1.51	0.39	-1.03	13.73	-3.34
372	415	SLE-INV	Max	-0.58	-0.98	-6.99	11.60	2.14	-0.60	46.48	-1.93
372	391	SLE-INV	Max	-0.62	-0.99	-6.91	10.90	1.81	-0.47	47.02	-1.93
372	392	SLE-INV	Max	-0.69	-1.37	-6.50	4.98	0.50	-0.45	47.02	-2.38
372	416	SLE-INV	Max	-0.65	-1.37	-6.58	5.07	0.84	-0.58	46.48	-2.38
372	415	SLE-INV	Min	-0.78	-1.33	-9.44	4.42	1.10	-1.29	18.53	-3.53
372	391	SLE-INV	Min	-0.83	-1.34	-9.33	4.47	0.46	-1.22	19.73	-3.53
372	392	SLE-INV	Min	-0.94	-1.86	-8.77	2.01	-0.07	-1.31	19.73	-4.51
372	416	SLE-INV	Min	-0.88	-1.85	-8.88	2.03	0.52	-1.38	18.53	-4.51
373	416	SLE-INV	Max	-0.45	-1.33	-6.19	2.06	0.50	-0.96	16.78	-3.13
373	392	SLE-INV	Max	-0.47	-1.33	-6.11	1.96	-0.03	-0.88	17.47	-3.13
373	393	SLE-INV	Max	-0.55	-1.74	-5.73	-0.20	-0.49	-0.87	17.47	-3.69
373	417	SLE-INV	Max	-0.53	-1.73	-5.80	-0.06	0.05	-0.95	16.78	-3.69
373	416	SLE-INV	Min	-0.45	-1.33	-6.19	1.50	0.44	-1.03	12.08	-3.28
373	392	SLE-INV	Min	-0.47	-1.33	-6.11	1.40	-0.12	-0.97	12.82	-3.28
373	393	SLE-INV	Min	-0.55	-1.74	-5.73	-0.23	-0.54	-0.96	12.82	-3.89
373	417	SLE-INV	Min	-0.53	-1.73	-5.80	-0.09	-0.02	-1.02	12.08	-3.89
373	416	SLE-INV	Max	-0.45	-1.33	-6.19	4.93	0.83	-0.60	40.82	-2.36
373	392	SLE-INV	Max	-0.47	-1.33	-6.11	4.79	0.44	-0.43	41.24	-2.36
373	393	SLE-INV	Max	-0.55	-1.74	-5.73	-0.27	-0.66	-0.39	41.24	-2.70
373	417	SLE-INV	Max	-0.53	-1.73	-5.80	-0.08	0.06	-0.56	40.82	-2.70
373	416	SLE-INV	Min	-0.61	-1.79	-8.35	2.02	0.59	-1.39	16.31	-4.43
373	392	SLE-INV	Min	-0.64	-1.80	-8.25	1.89	-0.17	-1.30	17.31	-4.43
373	393	SLE-INV	Min	-0.75	-2.35	-7.73	-0.41	-0.77	-1.30	17.31	-5.25
373	417	SLE-INV	Min	-0.72	-2.34	-7.84	-0.27	-0.37	-1.38	16.31	-5.25
374	417	SLE-INV	Max	-0.34	-1.70	-5.41	-0.05	0.09	-0.95	14.49	-3.64
374	393	SLE-INV	Max	-0.33	-1.69	-5.33	-0.25	-0.55	-0.87	15.05	-3.64
374	394	SLE-INV	Max	-0.41	-2.09	-4.93	-1.63	-0.87	-0.80	15.05	-4.11
374	418	SLE-INV	Max	-0.42	-2.09	-5.01	-1.39	-0.26	-0.88	14.49	-4.11
374	417	SLE-INV	Min	-0.34	-1.70	-5.41	-0.10	0.02	-1.02	10.44	-3.83
374	393	SLE-INV	Min	-0.33	-1.69	-5.33	-0.30	-0.59	-0.96	11.05	-3.83
374	394	SLE-INV	Min	-0.41	-2.09	-4.93	-2.19	-1.03	-0.89	11.05	-4.33
374	418	SLE-INV	Min	-0.42	-2.09	-5.01	-1.95	-0.45	-0.96	10.44	-4.33
374	417	SLE-INV	Max	-0.34	-1.70	-5.41	-0.07	0.12	-0.55	35.19	-2.69
374	393	SLE-INV	Max	-0.33	-1.69	-5.33	-0.34	-0.74	-0.39	35.51	-2.69
374	394	SLE-INV	Max	-0.41	-2.09	-4.93	-2.21	-1.18	-0.31	35.51	-2.95
374	418	SLE-INV	Max	-0.42	-2.09	-5.01	-1.88	-0.77	-0.47	35.19	-2.95

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 152 di 180
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374	393	SLU-INV	Min	-0.45	-2.29	-7.20	-0.55	-0.81	-1.29	14.91	-5.17
374	394	SLU-INV	Min	-0.56	-2.82	-6.65	-5.03	-1.86	-1.20	14.91	-5.85
374	418	SLU-INV	Min	-0.56	-2.82	-6.76	-4.83	-1.42	-1.29	14.09	-5.85
375	418	SLE-INV	Max	-0.23	-2.05	-4.60	-1.38	-0.22	-0.88	12.19	-4.07
375	394	SLE-INV	Max	-0.21	-2.05	-4.54	-1.66	-0.92	-0.80	12.64	-4.07
375	395	SLE-INV	Max	-0.28	-2.42	-4.14	-2.82	-1.20	-0.69	12.64	-4.44
375	419	SLE-INV	Max	-0.30	-2.42	-4.21	-2.51	-0.52	-0.78	12.19	-4.44
375	418	SLE-INV	Min	-0.23	-2.05	-4.60	-1.96	-0.41	-0.96	8.79	-4.29
375	394	SLE-INV	Min	-0.21	-2.05	-4.54	-2.22	-1.07	-0.89	9.28	-4.29
375	395	SLE-INV	Min	-0.28	-2.42	-4.14	-3.81	-1.46	-0.78	9.28	-4.69
375	419	SLE-INV	Min	-0.30	-2.42	-4.21	-3.52	-0.82	-0.85	8.79	-4.69
375	418	SLE-INV	Max	-0.23	-2.05	-4.60	-1.87	-0.29	-0.48	29.59	-2.94
375	394	SLU-INV	Max	-0.21	-2.05	-4.54	-2.24	-1.24	-0.31	29.83	-2.94
375	395	SLU-INV	Max	-0.28	-2.42	-4.14	-3.81	-1.62	-0.24	29.83	-3.13
375	419	SLU-INV	Max	-0.30	-2.42	-4.21	-3.39	-0.70	-0.41	29.59	-3.13
375	418	SLU-INV	Min	-0.31	-2.77	-6.21	-4.89	-1.42	-1.29	11.87	-5.79
375	394	SLU-INV	Min	-0.28	-2.76	-6.12	-5.09	-1.89	-1.20	12.53	-5.79
375	395	SLU-INV	Min	-0.38	-3.26	-5.59	-8.85	-2.81	-1.06	12.53	-6.33
375	419	SLU-INV	Min	-0.41	-3.27	-5.68	-8.66	-2.34	-1.15	11.87	-6.33
376	419	SLE-INV	Max	-0.15	-2.39	-3.80	-2.49	-0.49	-0.77	9.91	-4.40
376	395	SLE-INV	Max	-0.10	-2.38	-3.74	-2.83	-1.23	-0.70	10.25	-4.40
376	396	SLE-INV	Max	-0.16	-2.70	-3.33	-3.78	-1.47	-0.57	10.25	-4.69
376	420	SLE-INV	Max	-0.21	-2.71	-3.39	-3.41	-0.74	-0.64	9.91	-4.69
376	419	SLE-INV	Min	-0.15	-2.39	-3.80	-3.50	-0.79	-0.85	7.15	-4.65
376	395	SLE-INV	Min	-0.10	-2.38	-3.74	-3.82	-1.49	-0.79	7.53	-4.65
376	396	SLE-INV	Min	-0.16	-2.70	-3.33	-5.11	-1.81	-0.65	7.53	-4.97
376	420	SLE-INV	Min	-0.21	-2.71	-3.39	-4.77	-1.12	-0.71	7.15	-4.97
376	419	SLU-INV	Max	-0.15	-2.39	-3.80	-3.37	-0.66	-0.39	24.02	-3.12
376	395	SLU-INV	Max	-0.10	-2.38	-3.74	-3.83	-1.66	-0.25	24.19	-3.12
376	396	SLU-INV	Max	-0.16	-2.70	-3.33	-5.10	-1.98	-0.16	24.19	-3.26
376	420	SLU-INV	Max	-0.21	-2.71	-3.39	-4.61	-0.99	-0.31	24.02	-3.26
376	419	SLU-INV	Min	-0.20	-3.23	-5.13	-8.66	-2.33	-1.14	9.65	-6.28
376	395	SLU-INV	Min	-0.13	-3.21	-5.05	-8.89	-2.82	-1.06	10.17	-6.28
376	396	SLU-INV	Min	-0.22	-3.64	-4.50	-11.94	-3.58	-0.87	10.17	-6.71
376	420	SLU-INV	Min	-0.28	-3.66	-4.57	-11.72	-3.09	-0.95	9.65	-6.71
377	420	SLE-INV	Max	-0.08	-2.68	-2.97	-3.40	-0.71	-0.63	7.62	-4.67
377	396	SLE-INV	Max	-0.01	-2.67	-2.93	-3.78	-1.49	-0.57	7.88	-4.67
377	397	SLE-INV	Max	-0.06	-2.93	-2.53	-4.50	-1.68	-0.43	7.88	-4.88
377	421	SLE-INV	Max	-0.13	-2.94	-2.57	-4.10	-1.98	-0.49	7.62	-4.88
377	420	SLE-INV	Min	-0.08	-2.68	-2.97	-4.76	-1.10	-0.70	5.50	-4.94
377	396	SLE-INV	Min	-0.01	-2.67	-2.93	-5.11	-1.81	-0.65	5.79	-4.94
377	397	SLE-INV	Min	-0.06	-2.93	-2.53	-6.10	-2.09	-0.49	5.79	-5.18
377	421	SLE-INV	Min	-0.13	-2.94	-2.57	-5.73	-1.36	-0.54	5.50	-5.18
377	420	SLU-INV	Max	-0.08	-2.68	-2.97	-4.58	-0.96	-0.30	18.47	-3.25
377	396	SLU-INV	Max	-0.01	-2.67	-2.93	-5.10	-2.01	-0.17	18.59	-3.25
377	397	SLU-INV	Max	-0.06	-2.93	-2.53	-6.07	-2.27	-0.11	18.59	-3.35
377	421	SLU-INV	Max	-0.13	-2.94	-2.57	-5.54	-1.22	-0.23	18.47	-3.35
377	420	SLU-INV	Min	-0.10	-3.62	-4.01	-11.73	-3.08	-0.95	7.43	-6.67
377	396	SLU-INV	Min	-0.02	-3.60	-3.96	-11.93	-3.59	-0.88	7.81	-6.67
377	397	SLU-INV	Min	-0.09	-3.95	-3.41	-14.28	-4.18	-0.66	7.81	-6.99
377	421	SLU-INV	Min	-0.17	-3.97	-3.47	-14.09	-3.67	-0.73	7.43	-6.99
378	421	SLE-INV	Max	-0.03	-2.92	-2.15	-4.08	-0.89	-0.48	5.34	-4.86
378	397	SLE-INV	Max	0.05	-2.90	-2.12	-4.50	-1.70	-0.44	5.52	-4.86
378	398	SLE-INV	Max	0.02	-3.09	-1.70	-5.00	-1.83	-0.28	5.52	-5.01
378	422	SLE-INV	Max	-0.07	-3.11	-1.74	-4.58	-1.03	-0.32	5.34	-5.01
378	421	SLE-INV	Min	-0.03	-2.92	-2.15	-5.72	-1.34	-0.53	3.86	-5.16
378	397	SLE-INV	Min	0.05	-2.90	-2.12	-6.11	-2.10	-0.50	4.05	-5.16
378	398	SLE-INV	Min	0.02	-3.09	-1.70	-6.59	-2.28	-0.32	4.25	-5.32
378	422	SLE-INV	Min	-0.07	-3.11	-1.74	-6.40	-1.53	-0.36	3.86	-5.32
378	421	SLU-INV	Max	-0.03	-2.92	-2.15	-5.51	-1.20	-0.22	12.94	-3.35
378	397	SLU-INV	Max	0.07	-2.90	-2.12	-6.07	-2.29	-0.13	13.01	-3.35
378	398	SLU-INV	Max	0.02	-3.09	-1.70	-6.75	-2.47	-0.05	13.01	-3.41
378	422	SLU-INV	Max	-0.07	-3.11	-1.74	-6.18	-1.38	-0.15	12.94	-3.41
378	421	SLU-INV	Min	-0.05	-3.94	-2.91	-14.07	-3.67	-0.72	5.21	-6.96
378	397	SLU-INV	Min	0.05	-3.92	-2.87	-14.28	-4.19	-0.67	5.47	-6.96
378	398	SLU-INV	Min	0.02	-4.17	-2.30	-15.92	-4.61	-0.43	5.47	-7.18
378	422	SLU-INV	Min	-0.10	-4.20	-2.34	-15.71	-4.08	-0.48	5.21	-7.18
379	422	SLE-INV	Max	-0.01	-3.09	-1.32	-4.57	-1.01	-0.31	3.06	-5.00
379	398	SLE-INV	Max	0.09	-3.08	-1.30	-5.00	-1.84	-0.39	3.16	-5.00
379	399	SLE-INV	Max	0.07	-3.18	-0.89	-5.29	-1.91	-0.13	3.16	-5.08
379	423	SLE-INV	Max	-0.03	-3.20	-0.91	-4.85	-1.09	-0.15	3.06	-5.08
379	422	SLE-INV	Min	-0.01	-3.09	-1.32	-6.39	-1.51	-0.35	2.21	-5.31
379	398	SLE-INV	Min	0.09	-3.08	-1.30	-6.78	-2.29	-0.33	2.32	-5.31
379	399	SLE-INV	Min	0.07	-3.18	-0.89	-7.18	-2.39	-0.15	2.32	-5.40
379	423	SLE-INV	Min	-0.03	-3.20	-0.91	-6.88	-1.62	-0.17	2.21	-5.40
379	422	SLU-INV	Max	-0.01	-3.09	-1.32	-6.17	-1.37	-0.13	7.42	-3.41
379	398	SLU-INV	Max	0.12	-3.08	-1.30	-6.74	-2.48	-0.07	7.46	-3.41
379	399	SLU-INV	Max	0.09	-3.18	-0.89	-7.14	-2.58	-0.02	7.46	-3.44
379	423	SLU-INV	Max	-0.03	-3.20	-0.91	-6.55	-1.48	-0.08	7.42	-3.44
379	422	SLU-INV	Min	-0.01	-4.18	-1.78	-15.71	-4.08	-0.47	2.99	-7.16
379	398	SLU-INV	Min	0.09	-4.15	-1.75	-15.90	-4.61	-0.44	3.14	-7.16
379	399	SLU-INV	Min	0.07	-4.30	-1.20	-16.84	-4.85	-0.20	3.14	-7.29
379	423	SLU-INV	Min	-0.04	-4.32	-1.23	-16.66	-4.32	-0.23	2.99	-7.29
380	423	SLU-INV	Max	0.00	-3.20	-0.49	-4.84	-1.09	-0.14	0.79	-5.07
380	399	SLE-INV	Max	0.11	-3.18	-0.49	-5.28	-1.92	-0.14	0.82	-5.07
380	400	SLE-INV	Max	0.10	-3.20	-0.07	-5.36	-1.94	0.03	0.82	-5.09
380	424	SLE-INV	Max	-0.01	-3.22	-0.07	-4.92	-1.11	0.03	0.79	-5.09
380	423	SLE-INV	Min	0.00	-3.20	-0.49	-6.77	-1.62	-0.16	0.57	-5.39
380	399	SLE-INV	Min	0.11	-3.18	-0.49	-7.17	-2.40	-0.15	0.60	-5.39
380	400	SLE-INV	Min	0.10	-3.20	-0.07	-7.28	-2.42	0.03	0.60	-5.42
380	424	SLE-INV	Min	-0.01	-3.22	-0.07	-6.87	-1.64	0.02	0.57	-5.42
380	423	SLU-INV	Max	0.00	-3.20	-0.49	-6.54	-1.47	-0.06	1.91	-3.44
380	399	SLU-INV	Max	0.14	-3.18	-0.49	-7.13	-2.59	-0.04	1.92	-3.44
380	400	SLU-INV	Max	0.13	-3.20	-0.07	-7.23	-2.62	0.05	1.92	-3.45
380	424	SLU-INV	Max	-0.01	-3.22	-0.07	-6.64	-1.49	0.04	1.91	-3.45
380	423	SLU-INV	Min	0.00	-4.32	-0.66	-16.64	-4.32	-0.21	0.77	-7.28
380	399	SLU-INV	Min	0.11	-4.29	-0.66	-16.83	-4.85	-0.21	0.81	-7.28
380	400	SLU-INV	Min	0.10	-4.33	-0.09	-17.08	-4.91	0.02	0.81	-7.31
380	424	SLU-INV	Min	-0.01	-4.35	-0.09	-16.88	-4.38	0.01	0.77	-7.31
381	424	SLE-INV	Max	-0.01	-3.23	0.35	-4.92	-1.11	0.04	-1.07	-5.09
381	400	SLE-INV	Max	0.09	-3.21	0.34	-5.36	-1.94	0.03	-1.13	-5.09
381	401	SLE-INV	Max	0.10	-3.15	0.75	-5.21	-1.90	0.21	-1.13	-5.06
381	425	SLE-INV	Max	0.00	-3.17	0.76	-4.78	-1.07	0.22	-1.07	-5.06
381	424	SLE-INV	Min	-0.01	-3.23	0.35	-6.88	-1.64	0.04	-1.49	-5.42
381	400	SLE-INV	Min	0.09	-3.21	0.34	-7.27	-2.42	0.02	-1.53	-5.42
381	401	SLE-INV	Min	0.10	-3.15	0.75	-7.08	-2.37	0.18	-1.53	-5.37
381	425	SLE-INV	Min	0.00	-3.17	0.76	-6.69	-1.59	0.20	-1.49	-5.37
381	424	SLU-INV	Max	-0.01	-3.23	0.47	-6.64	-1.50	0.05	-1.45	-3.45
381	400	SLU-INV	Max	0.12	-3.21	0.46	-7.23	-2.61	0.04	-1.52	-3.45
381	401	SLU-INV	Max	0.14	-3.19	1.01	-7.14	-2.56	0.29	-1.52	-3.43
381	425	SLU-INV	Max	0.00	-3.17	1.02	-6.45				

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.progr. 01	REV. A	Pag.di Pag. 153 di 180			
381	424	SLU-INV	Min	-0.01	-4.35	0.35	-16.89	-4.38	0.03	-3.59	-7.31
381	400	SLU-INV	Min	0.09	-4.33	0.34	-17.06	-4.91	0.00	-3.61	-7.31
381	401	SLU-INV	Min	0.10	-4.25	0.75	-16.61	-4.79	0.05	-3.61	-7.25
381	425	SLU-INV	Min	0.00	-4.28	0.76	-16.43	-4.26	0.08	-3.59	-7.25
382	401	SLU-INV	Max	-0.04	-3.18	1.17	-4.78	-1.08	0.23	-2.72	-5.06
382	402	SLU-INV	Max	0.06	-3.16	1.15	-5.22	-1.89	0.20	-2.85	-5.06
382	426	SLU-INV	Max	0.08	-3.03	1.59	-4.86	-1.80	0.39	-2.85	-4.96
382	426	SLU-INV	Max	-0.01	-3.04	1.61	-4.43	-0.98	0.41	-2.72	-4.96
382	425	SLU-INV	Min	-0.04	-3.18	1.17	-6.69	-1.60	0.21	-3.76	-5.38
382	401	SLU-INV	Min	0.06	-3.16	1.15	-7.08	-2.37	0.18	-3.88	-5.38
382	402	SLU-INV	Min	0.08	-3.03	1.59	-6.59	-2.24	0.34	-3.88	-5.27
382	426	SLU-INV	Min	-0.01	-3.04	1.61	-6.20	-1.47	0.37	-3.76	-5.27
382	425	SLU-INV	Max	-0.04	-3.18	1.58	-6.46	-1.45	0.31	-3.67	-3.44
382	401	SLU-INV	Max	0.07	-3.16	1.55	-7.04	-2.56	0.28	-3.85	-3.44
382	402	SLU-INV	Max	0.11	-3.03	2.14	-6.56	-2.43	0.52	-3.85	-3.40
382	426	SLU-INV	Max	-0.01	-3.04	2.17	-5.99	-1.32	0.56	-3.67	-3.40
382	425	SLU-INV	Min	-0.06	-4.29	1.17	-16.41	-4.26	0.09	-9.10	-7.27
382	401	SLU-INV	Min	0.06	-4.27	1.15	-16.61	-4.79	0.03	-9.15	-7.27
382	402	SLU-INV	Min	0.08	-4.08	1.59	-15.46	-4.49	0.10	-9.15	-7.12
382	426	SLU-INV	Min	-0.02	-4.11	1.61	-15.25	-3.97	0.16	-9.10	-7.12
383	403	SLU-INV	Max	0.03	-2.81	2.42	-4.24	-1.62	0.56	-4.65	-4.80
383	427	SLU-INV	Max	-0.04	-2.83	2.46	-3.84	-0.82	0.60	-4.42	-4.80
383	426	SLU-INV	Max	-0.09	-3.06	2.04	-4.45	-0.99	0.42	-4.42	-4.98
383	402	SLU-INV	Max	-0.01	-3.04	2.01	-4.86	-1.79	0.38	-4.65	-4.98
383	403	SLU-INV	Min	0.03	-2.81	2.42	-5.74	-2.01	0.49	-6.33	-5.09
383	427	SLU-INV	Min	-0.04	-2.83	2.46	-5.37	-1.25	0.54	-6.12	-5.09
383	426	SLU-INV	Min	-0.09	-3.06	2.04	-6.22	-1.48	0.38	-6.12	-5.29
383	402	SLU-INV	Min	-0.01	-3.04	2.01	-6.59	-2.23	0.33	-6.33	-5.29
383	403	SLU-INV	Max	0.04	-2.81	3.27	-5.72	-2.19	0.76	-6.27	-3.32
383	427	SLU-INV	Max	-0.04	-2.83	3.32	-5.18	-1.11	0.81	-5.97	-3.32
383	426	SLU-INV	Max	-0.09	-3.06	2.76	-6.00	-1.34	0.57	-5.97	-3.40
383	402	SLU-INV	Max	-0.01	-3.04	2.71	-6.56	-2.41	0.51	-6.27	-3.40
383	403	SLU-INV	Min	0.03	-3.80	2.42	-13.43	-3.97	0.14	-14.92	-6.87
383	427	SLU-INV	Min	-0.06	-3.82	2.46	-13.23	-3.45	0.25	-14.83	-6.87
383	426	SLU-INV	Min	-0.12	-4.13	2.04	-15.26	-3.97	0.18	-14.83	-7.14
383	402	SLU-INV	Min	-0.02	-4.11	2.01	-15.45	-4.49	0.07	-14.92	-7.14
384	404	SLU-INV	Max	-0.04	-2.53	3.31	-3.36	-1.38	0.72	-6.51	-4.56
384	428	SLU-INV	Max	-0.11	-2.55	3.36	-2.99	-0.61	0.77	-6.19	-4.56
384	427	SLU-INV	Max	-0.17	-2.85	2.91	-3.85	-0.84	0.61	-6.19	-4.82
384	428	SLU-INV	Max	-0.11	-2.84	2.86	-4.23	-1.60	0.56	-6.51	-4.82
384	404	SLU-INV	Min	-0.04	-2.31	3.31	-4.54	-1.68	0.64	-8.37	-4.82
384	428	SLU-INV	Min	-0.11	-2.55	3.36	-4.20	-0.96	0.70	-8.58	-4.82
384	427	SLU-INV	Min	-0.17	-2.85	2.91	-5.38	-1.27	0.55	-8.58	-5.11
384	403	SLU-INV	Min	-0.11	-2.84	2.86	-5.74	-1.99	0.49	-8.87	-5.11
384	404	SLU-INV	Max	-0.04	-2.53	4.47	-4.54	-1.86	0.97	-8.79	-3.20
384	428	SLU-INV	Max	-0.11	-2.55	4.54	-4.04	-0.82	1.05	-8.35	-3.20
384	427	SLU-INV	Max	-0.17	-2.85	3.93	-5.20	-1.14	0.82	-8.35	-3.32
384	403	SLU-INV	Max	-0.11	-2.84	3.86	-5.72	-2.16	0.75	-8.79	-3.32
384	404	SLU-INV	Min	-0.06	-3.42	3.31	-10.59	-3.25	0.21	-20.92	-6.51
384	428	SLU-INV	Min	-0.14	-3.44	3.36	-10.37	-2.75	0.35	-20.78	-6.51
384	427	SLU-INV	Min	-0.22	-3.85	2.91	-13.21	-3.45	0.26	-20.78	-6.90
384	403	SLU-INV	Min	-0.14	-3.84	2.86	-13.43	-3.96	0.13	-20.92	-6.90
385	405	SLU-INV	Max	-0.15	-2.20	4.17	-2.22	-1.07	0.85	-8.39	-4.24
385	429	SLU-INV	Max	-0.18	-2.20	4.23	-1.91	-0.34	0.91	-7.96	-4.24
385	428	SLU-INV	Max	-0.26	-2.58	3.80	-3.01	-0.64	0.78	-7.96	-4.59
385	404	SLU-INV	Max	-0.23	-2.57	3.74	-3.35	-1.35	0.72	-8.39	-4.59
385	405	SLU-INV	Min	-0.15	-2.20	4.17	-2.99	-1.27	0.76	-11.43	-4.47
385	429	SLU-INV	Min	-0.18	-2.20	4.23	-2.69	-0.59	0.84	-11.03	-4.47
385	428	SLU-INV	Min	-0.26	-2.58	3.80	-4.21	-0.98	0.71	-11.03	-4.86
385	404	SLU-INV	Min	-0.23	-2.57	3.74	-4.53	-1.66	0.63	-11.43	-4.86
385	405	SLU-INV	Max	-0.15	-2.20	5.62	-3.00	-1.44	1.15	-11.33	-3.03
385	429	SLU-INV	Max	-0.18	-2.20	5.71	-2.58	-0.46	1.23	-10.74	-3.03
385	428	SLU-INV	Max	-0.26	-2.58	5.13	-4.06	-0.86	1.05	-10.74	-3.21
385	404	SLU-INV	Max	-0.23	-2.57	5.05	-4.52	-1.82	0.97	-11.33	-3.21
385	405	SLU-INV	Min	-0.20	-2.97	4.17	-6.90	-2.33	0.27	-26.96	-6.04
385	429	SLU-INV	Min	-0.25	-2.98	4.23	-6.69	-1.85	0.44	-26.76	-6.04
385	428	SLU-INV	Min	-0.35	-3.48	3.80	-10.35	-2.75	0.36	-26.76	-6.56
385	404	SLU-INV	Min	-0.31	-3.47	3.74	-10.55	-3.23	0.20	-26.96	-6.56
386	406	SLU-INV	Max	-0.28	-1.82	5.02	-0.82	-0.69	0.94	-10.28	-3.82
386	430	SLU-INV	Max	-0.29	-1.83	5.10	-0.58	-0.03	1.01	-9.72	-3.82
386	429	SLU-INV	Max	-0.37	-2.24	4.66	-1.92	-0.38	0.91	-9.72	-4.28
386	405	SLU-INV	Max	-0.36	-2.24	4.59	-2.19	-1.02	0.85	-10.28	-4.28
386	406	SLU-INV	Min	-0.28	-1.82	5.02	-1.07	-0.78	0.85	-14.00	-4.02
386	430	SLU-INV	Min	-0.29	-1.83	5.10	-0.83	-0.15	0.93	-13.49	-4.02
386	429	SLU-INV	Min	-0.37	-2.24	4.66	-2.69	-0.62	0.84	-13.49	-4.52
386	405	SLU-INV	Min	-0.36	-2.24	4.59	-2.95	-1.23	0.76	-14.00	-4.52
386	406	SLU-INV	Max	-0.28	-1.82	6.78	-1.10	-0.94	1.27	-13.88	-2.80
386	430	SLU-INV	Max	-0.29	-1.83	6.88	-0.78	-0.04	1.36	-13.13	-2.80
386	429	SLU-INV	Max	-0.37	-2.24	6.30	-2.59	-0.51	1.23	-13.13	-3.04
386	405	SLU-INV	Max	-0.36	-2.24	6.20	-2.96	-1.38	1.15	-13.88	-3.04
386	406	SLU-INV	Min	-0.37	-2.46	5.02	-2.36	-1.23	0.37	-33.04	-5.43
386	430	SLU-INV	Min	-0.39	-2.47	5.10	-2.14	-0.79	0.53	-32.76	-5.43
386	429	SLU-INV	Min	-0.51	-3.03	4.66	-6.63	-1.85	0.44	-32.76	-6.10
386	405	SLU-INV	Min	-0.48	-3.02	4.59	-6.83	-2.30	0.28	-33.04	-6.10
387	407	SLU-INV	Max	-0.42	-1.43	5.86	1.24	-0.21	0.97	-12.19	-3.30
387	431	SLU-INV	Max	-0.41	-1.43	5.94	1.38	0.35	1.04	-11.49	-3.30
387	430	SLU-INV	Max	-0.50	-1.87	5.52	-0.58	-0.07	1.01	-11.49	-3.87
387	406	SLU-INV	Max	-0.51	-1.87	5.45	-0.76	-0.64	0.94	-12.19	-3.87
387	407	SLU-INV	Min	-0.42	-1.43	5.86	0.87	-0.26	0.88	-16.60	-3.46
387	431	SLU-INV	Min	-0.41	-1.43	5.94	1.01	0.33	0.96	-15.96	-3.46
387	430	SLU-INV	Min	-0.50	-1.87	5.52	-0.83	-0.19	0.93	-15.96	-4.08
387	406	SLU-INV	Min	-0.51	-1.87	5.45	-1.00	-0.73	0.85	-16.60	-4.08
387	407	SLU-INV	Max	-0.42	-1.43	7.92	3.09	0.05	1.31	-16.45	-2.47
387	431	SLU-INV	Max	-0.41	-1.43	8.02	3.25	0.48	1.40	-15.52	-2.47
387	430	SLU-INV	Max	-0.50	-1.87	7.46	-0.79	-0.10	1.36	-15.52	-2.81
387	406	SLU-INV	Max	-0.51	-1.87	7.36	-1.03	-0.86	1.27	-16.45	-2.81
387	407	SLU-INV	Min	-0.57	-1.94	5.86	1.18	-0.35	0.42	-39.18	-4.68
387	431	SLU-INV	Min	-0.55	-1.93	5.94	1.36	0.45	0.59	-38.80	-4.68
387	430	SLU-INV	Min	-0.67	-2.52	5.52	-2.06	-0.79	0.54	-38.80	-5.51
387	406	SLU-INV	Min	-0.69	-2.53	5.45	-2.22	-1.19	0.36	-39.18	-5.51
388	408	SLU-INV	Max	-0.58	-1.06	6.72	3.93	0.43	0.92	-14.11	-2.66
388	432	SLU-INV	Max	-0.54	-1.06	6.80	3.95	0.91	0.98	-13.26	-2.66
388	431	SLU-INV	Max	-0.63	-1.48	6.36	1.40	0.31	1.03	-13.26	-3.36
388	407	SLU-INV	Max	-0.66	-1.48	6.28	1.34	-0.14	0.98	-14.11	-3.36
388	408	SLU-INV	Min	-0.58	-1.06	6.72	2.85	0.23	0.85	-19.22	-2.78
388	432	SLU-INV	Min	-0.54	-1.06	6.80	2.85	0.73	0.92	-18.43	-2.78
388	431	SLU-INV	Min	-0.63	-1.48	6.36	1.01	0.28	0.96	-18.43	-3.53
388	407	SLU-INV	Min	-0.66	-1.48	6.28	0.96	-0.19	0.89	-19.22	-3.53
388	408	SLU-INV	Max	-0.58	-1.06	9.07	9.43	1.49	1.25	-19.04	-2.05
388	432	SLU-INV	Max	-0.54	-1.06	9.18	9.55				



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc	N.progr.	REV.	Pag.di Pag.
L0703	211	E	16	O16800	REL	01	A	154 di 180

388	407	SLU-INV	Max	-0.66	-1.48	8.48	3.29	0.12	1.32	-19.04	-2.49
388	408	SLU-INV	Min	-0.78	-1.43	6.72	3.85	0.31	0.47	-45.38	-3.76
388	432	SLU-INV	Min	-0.73	-1.42	6.80	3.85	0.99	0.60	-44.87	-3.76
388	431	SLU-INV	Min	-0.85	-1.99	6.36	1.37	0.38	0.57	-44.87	-4.77
388	407	SLU-INV	Min	-0.89	-2.00	6.28	1.30	-0.25	0.44	-45.38	-4.77
389	409	SLU-INV	Max	-0.73	-0.72	7.52	7.03	1.15	0.77	-16.04	-1.89
389	433	SLU-INV	Max	-0.66	-0.70	7.59	6.88	1.53	0.82	-15.03	-1.89
389	432	SLU-INV	Max	-0.74	-1.10	7.25	3.99	0.86	0.98	-15.03	-2.73
389	408	SLU-INV	Max	-0.81	-1.11	7.18	4.09	0.52	0.93	-16.04	-2.73
389	409	SLU-INV	Min	-0.73	-0.72	7.52	5.13	0.77	0.71	-21.87	-1.96
389	433	SLU-INV	Min	-0.66	-0.70	7.59	4.96	1.16	0.77	-20.91	-1.96
389	432	SLU-INV	Min	-0.74	-1.10	7.25	2.87	0.67	0.92	-20.91	-2.86
389	408	SLU-INV	Min	-0.81	-1.11	7.18	2.98	0.32	0.85	-21.87	-2.86
389	409	SLU-INV	Max	-0.73	-0.72	10.15	16.74	3.11	1.04	-21.66	-1.49
389	433	SLU-INV	Max	-0.66	-0.70	10.24	16.73	3.38	1.10	-20.29	-1.49
389	432	SLU-INV	Max	-0.74	-1.10	9.78	9.74	1.85	1.32	-20.29	-2.07
389	408	SLU-INV	Max	-0.81	-1.11	9.69	9.75	1.57	1.26	-21.66	-2.07
389	409	SLU-INV	Min	-0.99	-0.97	7.52	6.93	1.04	0.42	-51.64	-2.65
389	433	SLU-INV	Min	-0.90	-0.95	7.59	6.69	1.57	0.55	-50.99	-2.65
389	432	SLU-INV	Min	-1.00	-1.48	7.25	3.87	0.90	0.61	-50.99	-3.86
389	409	SLU-INV	Min	-1.09	-1.50	7.18	4.03	0.43	0.47	-51.64	-3.86
390	410	SLU-INV	Max	-0.88	-0.43	8.84	10.55	1.93	0.00	-17.99	-0.96
390	434	SLU-INV	Max	-0.78	-0.41	8.91	10.19	2.18	0.50	-16.79	-0.96
390	433	SLU-INV	Max	-0.84	-0.74	7.78	6.95	1.47	0.81	-16.79	-1.97
390	409	SLU-INV	Max	-0.95	-0.76	7.71	7.26	1.27	0.78	-17.99	-1.97
390	410	SLU-INV	Min	-0.88	-0.43	8.84	7.72	1.36	0.45	-24.53	-0.99
390	434	SLU-INV	Min	-0.78	-0.41	8.91	7.32	1.62	0.48	-23.39	-0.99
390	433	SLU-INV	Min	-0.84	-0.74	7.78	4.99	1.10	0.76	-23.39	-2.06
390	409	SLU-INV	Min	-0.95	-0.76	7.71	5.32	0.89	0.73	-24.53	-2.06
390	410	SLU-INV	Max	-0.88	-0.43	11.93	25.01	4.86	0.64	-24.29	-0.79
390	434	SLU-INV	Max	-0.78	-0.41	12.03	24.83	5.03	0.68	-22.67	-0.79
390	433	SLU-INV	Max	-0.84	-0.74	10.51	16.99	3.41	1.09	-22.67	-1.53
390	409	SLU-INV	Max	-0.95	-0.76	10.41	17.17	3.23	1.05	-24.29	-1.53
390	410	SLU-INV	Min	-1.19	-0.58	8.84	10.43	1.84	0.30	-57.97	-1.34
390	434	SLU-INV	Min	-1.05	-0.55	8.91	9.89	2.19	0.36	-57.13	-1.34
390	433	SLU-INV	Min	-1.14	-1.00	7.78	6.74	1.48	0.52	-57.13	-2.78
390	409	SLU-INV	Min	-1.28	-1.03	7.71	7.18	1.19	0.46	-57.97	-2.78
391	411	SLU-INV	Max	-1.03	-0.21	6.28	14.50	2.79	0.00	-19.96	0.15
391	435	SLU-INV	Max	-0.86	-0.17	6.35	13.86	2.88	0.01	-18.55	0.15
391	434	SLU-INV	Max	-0.92	-0.44	11.31	10.28	2.12	0.59	-18.55	-1.06
391	410	SLU-INV	Max	-1.08	-0.47	11.24	10.85	2.07	0.48	-18.55	-1.06
391	411	SLU-INV	Min	-1.03	-0.21	6.28	10.64	2.01	0.00	-27.22	0.14
391	435	SLU-INV	Min	-0.86	-0.17	6.35	9.95	2.11	0.01	-25.87	0.14
391	434	SLU-INV	Min	-0.92	-0.44	11.31	7.37	1.54	0.47	-25.87	-1.10
391	410	SLU-INV	Min	-1.08	-0.47	11.24	7.97	1.50	0.46	-27.22	-1.10
391	411	SLU-INV	Max	-1.03	-0.21	8.48	34.28	6.78	0.00	-26.95	0.20
391	435	SLU-INV	Max	-0.86	-0.17	8.57	33.84	6.84	0.02	-25.04	0.20
391	434	SLU-INV	Max	-0.92	-0.44	15.27	25.15	5.06	0.07	-25.04	-0.83
391	410	SLU-INV	Max	-1.08	-0.47	15.18	25.58	5.01	0.65	-26.95	-0.83
391	411	SLU-INV	Min	-1.39	-0.28	6.28	14.36	2.71	-0.02	-64.37	0.09
391	435	SLU-INV	Min	-1.17	-0.23	6.35	13.43	2.85	0.02	-63.33	0.09
391	434	SLU-INV	Min	-1.24	-0.59	11.31	9.95	2.08	0.35	-63.33	-1.49
391	410	SLU-INV	Min	-1.46	-0.64	11.24	10.76	2.03	0.31	-64.37	-1.49
392	436	SLU-INV	Max	-0.66	-0.13	-6.39	13.10	2.73	-0.01	24.68	0.14
392	412	SLU-INV	Max	-0.87	-0.17	-6.34	13.79	2.64	-0.01	26.04	0.14
392	413	SLU-INV	Max	-0.90	-0.32	-11.45	10.53	2.03	-0.45	26.04	-0.98
392	437	SLU-INV	Max	-0.69	-0.28	-11.50	9.93	2.07	-0.45	24.68	-0.98
392	436	SLU-INV	Min	-0.66	-0.13	-6.39	9.16	1.95	-0.01	17.26	0.14
392	412	SLU-INV	Min	-0.87	-0.17	-6.34	9.88	1.86	-0.01	18.67	0.14
392	413	SLU-INV	Min	-0.90	-0.32	-11.45	7.55	1.43	-0.47	18.67	-1.02
392	437	SLU-INV	Min	-0.69	-0.28	-11.50	6.93	1.47	-0.48	17.26	-1.02
392	436	SLU-INV	Max	-0.66	-0.13	-6.39	33.28	6.74	0.00	62.61	0.19
392	412	SLU-INV	Max	-0.87	-0.17	-6.34	33.78	6.68	0.00	63.71	0.19
392	413	SLU-INV	Max	-0.90	-0.32	-11.45	25.76	5.08	-0.35	63.71	-0.81
392	437	SLU-INV	Max	-0.69	-0.28	-11.50	25.29	5.13	-0.35	62.61	-0.81
392	436	SLU-INV	Min	-0.89	-0.18	-8.63	12.36	2.63	-0.01	23.31	0.10
392	412	SLU-INV	Min	-1.17	-0.23	-8.56	13.33	2.51	-0.01	25.21	0.10
392	413	SLU-INV	Min	-1.21	-0.43	-15.46	10.19	1.93	-0.64	25.21	-1.37
392	437	SLU-INV	Min	-0.93	-0.38	-15.52	9.36	1.98	-0.64	23.31	-1.37
393	437	SLU-INV	Max	-0.62	-0.26	-9.11	9.92	2.14	-0.46	22.56	-0.89
393	413	SLU-INV	Max	-0.77	-0.30	-9.08	10.35	1.91	-0.44	23.72	-0.89
393	414	SLU-INV	Max	-0.82	-0.54	-7.92	7.37	1.33	-0.73	23.72	-1.85
393	438	SLU-INV	Max	-0.66	-0.51	-7.95	7.03	1.52	-0.75	22.56	-1.85
393	437	SLU-INV	Min	-0.62	-0.26	-9.11	6.96	1.56	-0.48	15.82	-0.91
393	413	SLU-INV	Min	-0.77	-0.30	-9.08	7.41	1.32	-0.47	17.03	-0.91
393	414	SLU-INV	Min	-0.82	-0.54	-7.92	5.28	0.91	-0.78	17.03	-1.91
393	438	SLU-INV	Min	-0.66	-0.51	-7.95	4.92	1.10	-0.79	15.82	-1.91
393	437	SLU-INV	Max	-0.62	-0.26	-9.11	25.10	5.14	-0.38	57.03	-0.76
393	413	SLU-INV	Max	-0.77	-0.30	-9.08	25.37	4.96	-0.31	57.95	-0.76
393	414	SLU-INV	Max	-0.82	-0.54	-7.92	18.07	3.45	-0.51	57.95	-1.51
393	438	SLU-INV	Max	-0.66	-0.51	-7.95	17.83	3.62	-0.57	57.03	-1.51
393	437	SLU-INV	Min	-0.83	-0.36	-12.30	9.39	2.10	-0.65	21.35	-1.23
393	413	SLU-INV	Min	-1.04	-0.40	-12.26	10.00	1.78	-0.63	22.99	-1.23
393	414	SLU-INV	Min	-1.11	-0.73	-10.69	7.13	1.23	-1.05	22.99	-2.58
393	438	SLU-INV	Min	-0.90	-0.69	-10.73	6.64	1.49	-1.07	21.35	-2.58
394	438	SLU-INV	Max	-0.55	-0.49	-7.84	7.02	1.58	-0.75	20.42	-1.76
394	414	SLU-INV	Max	-0.66	-0.51	-7.77	7.23	1.23	-0.74	21.41	-1.76
394	415	SLU-INV	Max	-0.72	-0.83	-7.48	4.54	0.70	-0.90	21.41	-2.58
394	439	SLU-INV	Max	-0.62	-0.81	-7.54	4.40	1.02	-0.91	20.42	-2.58
394	438	SLU-INV	Min	-0.55	-0.49	-7.84	4.94	1.18	-0.79	14.35	-1.82
394	414	SLU-INV	Min	-0.66	-0.51	-7.77	5.17	0.82	-0.78	15.39	-1.82
394	415	SLU-INV	Min	-0.72	-0.83	-7.48	3.25	0.45	-0.96	15.39	-2.68
394	439	SLU-INV	Min	-0.62	-0.81	-7.54	3.09	0.77	-0.97	14.35	-2.68
394	438	SLU-INV	Max	-0.55	-0.49	-7.84	17.68	3.63	-0.56	51.46	-1.47
394	414	SLU-INV	Max	-0.66	-0.51	-7.77	17.74	3.35	-0.53	52.21	-1.47
394	415	SLU-INV	Max	-0.72	-0.83	-7.48	11.17	2.01	-0.60	52.21	-2.09
394	439	SLU-INV	Max	-0.62	-0.81	-7.54	11.11	2.28	-0.64	51.46	-2.09
394	438	SLU-INV	Min	-0.75	-0.66	-10.58	6.67	1.60	-1.07	19.37	-2.46
394	414	SLU-INV	Min	-0.89	-0.69	-10.50	6.98	1.10	-1.05	20.77	-2.46
394	415	SLU-INV	Min	-0.97	-1.12	-10.10	4.39	0.60	-1.29	20.77	-3.62
394	439	SLU-INV	Min	-0.83	-1.09	-10.18	4.17	1.04	-1.31	19.37	-3.62
395	439	SLU-INV	Max	-0.46	-0.77	-7.11	4.39	1.08	-0.92	18.27	-2.51
395	415	SLU-INV	Max	-0.54	-0.79	-7.06	4.43	0.62	-0.89	19.10	-2.51
395	416	SLU-INV	Max	-0.62	-1.18	-6.66	2.04	0.13	-0.96	19.10	-3.20
395	440	SLU-INV	Max	-0.54	-1.16	-6.72	2.05	0.55	-1.00	18.27	-3.20
395	439	SLU-INV	Min	-0.46	-0.77	-7.11	3.11	0.84	-0.97	12.86	-2.60
395	415	SLU-INV	Min	-0.54	-0.79	-7.06	3.17	0.37	-0.95	13.74	-2.60
395	416	SLU-INV	Min	-0.62	-1.18	-6.66	1.45	0.02	-1.03	13.74	-3.33
395	440	SLU-INV	Min	-0.54	-1.16	-6.72	1.45	0.46	-1.05	12.86	-3.33
395	439	SLU-INV	Max	-0.46	-0.77	-7.11	10.96	2.28	-0.67	45.01	-2.05
395	415	SLU-INV	Max	-0.54	-0.79	-7.06					

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 155 di 180			
395	416	SLU-INV	Max	-0.62	-1.18	-6.66	5.07	0.67	-0.60	46.51	-2.54
395	440	SLU-INV	Max	-0.54	-1.16	-6.72	5.11	1.02	-0.69	45.91	-2.54
395	439	SLU-INV	Min	-0.62	-1.05	-9.60	4.20	1.13	-1.32	17.36	-3.51
395	415	SLU-INV	Min	-0.73	-1.07	-9.53	4.27	0.50	-1.28	18.55	-3.51
395	416	SLU-INV	Min	-0.83	-1.59	-8.99	1.96	0.03	-1.39	18.55	-4.49
395	440	SLU-INV	Min	-0.73	-1.57	-9.07	1.96	0.62	-1.42	17.36	-4.49
396	440	SLE-INV	Max	-0.38	-1.13	-6.34	2.06	0.60	-0.99	16.10	-3.14
396	416	SLE-INV	Max	-0.41	-1.14	-6.27	1.96	0.06	-0.96	16.80	-3.14
396	417	SLE-INV	Max	-0.50	-1.54	-5.87	-0.12	-0.35	-0.95	16.80	-3.71
396	441	SLE-INV	Max	-0.46	-1.54	-5.93	0.02	0.18	-0.98	16.10	-3.71
396	440	SLE-INV	Min	-0.38	-1.13	-6.34	1.48	0.52	-1.05	11.36	-3.26
396	416	SLE-INV	Min	-0.41	-1.14	-6.27	1.39	-0.04	-1.03	12.09	-3.26
396	417	SLE-INV	Min	-0.50	-1.54	-5.87	-0.15	-0.38	-1.03	12.09	-3.87
396	441	SLE-INV	Min	-0.46	-1.54	-5.93	-0.01	0.14	-1.05	11.36	-3.87
396	440	SLU-INV	Max	-0.38	-1.13	-6.34	5.02	1.02	-0.68	40.36	-2.52
396	416	SLU-INV	Max	-0.41	-1.14	-6.27	4.86	0.61	-0.60	40.84	-2.52
396	417	SLU-INV	Max	-0.50	-1.54	-5.87	-0.17	-0.48	-0.55	40.84	-2.91
396	441	SLU-INV	Max	-0.46	-1.54	-5.93	0.02	0.25	-0.63	40.36	-2.91
396	440	SLU-INV	Min	-0.51	-1.52	-8.55	1.99	0.70	-1.42	15.33	-4.40
396	416	SLU-INV	Min	-0.56	-1.53	-8.46	1.87	-0.06	-1.39	16.33	-4.40
396	417	SLU-INV	Min	-0.67	-2.08	-7.92	-0.28	-0.51	-1.38	16.33	-5.22
396	441	SLU-INV	Min	-0.62	-2.07	-8.01	-0.12	-0.08	-1.42	15.33	-5.22
397	441	SLE-INV	Max	-0.29	-1.50	-5.53	0.04	0.23	-0.98	13.93	-3.66
397	417	SLE-INV	Max	-0.30	-1.50	-5.47	-0.16	-0.40	-0.94	14.40	-3.66
397	418	SLE-INV	Max	-0.38	-1.91	-5.08	-1.47	-0.68	-0.88	14.50	-4.13
397	442	SLE-INV	Max	-0.37	-1.91	-5.14	-1.23	-0.07	-0.92	13.93	-4.13
397	441	SLE-INV	Min	-0.29	-1.50	-5.53	-0.01	0.18	-1.05	9.84	-3.81
397	417	SLE-INV	Min	-0.30	-1.50	-5.47	-0.20	-0.43	-1.02	10.45	-3.81
397	418	SLE-INV	Min	-0.38	-1.91	-5.08	-2.02	-0.82	-0.96	10.45	-4.32
397	442	SLE-INV	Min	-0.37	-1.91	-5.14	-1.79	-0.23	-0.99	9.84	-4.32
397	441	SLU-INV	Max	-0.29	-1.50	-5.53	0.05	0.31	-0.65	34.83	-2.88
397	417	SLU-INV	Max	-0.30	-1.50	-5.47	-0.22	-0.54	-0.54	35.20	-2.88
397	418	SLU-INV	Max	-0.38	-1.91	-5.08	-1.98	-0.92	-0.48	35.20	-3.19
397	442	SLU-INV	Max	-0.37	-1.91	-5.14	-1.66	-0.09	-0.59	34.83	-3.19
397	441	SLU-INV	Min	-0.39	-2.03	-7.46	-0.22	-0.08	-1.42	13.28	-5.15
397	417	SLU-INV	Min	-0.41	-2.03	-7.39	-0.39	-0.58	-1.38	14.10	-5.15
397	418	SLU-INV	Min	-0.52	-2.59	-6.86	-4.83	-1.54	-1.29	14.10	-5.83
397	442	SLU-INV	Min	-0.50	-2.58	-6.93	-4.66	-1.07	-1.34	13.28	-5.83
398	442	SLE-INV	Max	-0.22	-1.88	-4.72	-1.21	-0.03	-0.92	11.74	-4.09
398	418	SLE-INV	Max	-0.20	-1.88	-4.68	-1.49	-0.72	-0.88	12.20	-4.09
398	419	SLE-INV	Max	-0.27	-2.25	-4.26	-2.99	-0.26	-0.72	12.20	-4.47
398	443	SLE-INV	Max	-0.30	-2.26	-4.30	-2.27	-0.28	-0.81	11.74	-4.47
398	442	SLE-INV	Min	-0.22	-1.88	-4.72	-1.77	-0.20	-0.99	8.31	-4.27
398	418	SLE-INV	Min	-0.20	-1.88	-4.68	-2.05	-0.86	-0.96	8.80	-4.27
398	419	SLE-INV	Min	-0.27	-2.25	-4.26	-3.58	-1.20	-0.85	8.80	-4.68
398	443	SLE-INV	Min	-0.30	-2.26	-4.30	-3.28	-0.54	-0.88	8.31	-4.68
398	442	SLU-INV	Max	-0.22	-1.88	-4.72	-1.63	-0.03	-0.58	29.32	-3.18
398	418	SLU-INV	Max	-0.20	-1.88	-4.68	-2.01	-0.98	-0.49	29.60	-3.18
398	419	SLU-INV	Max	-0.27	-2.25	-4.26	-3.50	-1.29	-0.39	29.60	-3.41
398	443	SLU-INV	Max	-0.30	-2.26	-4.30	-3.07	-0.38	-0.49	29.32	-3.41
398	442	SLU-INV	Min	-0.30	-2.54	-6.38	-4.68	-1.06	-1.34	11.21	-5.77
398	418	SLU-INV	Min	-0.26	-2.53	-6.31	-4.93	-1.57	-1.30	11.88	-5.77
398	419	SLU-INV	Min	-0.37	-3.04	-5.75	-8.66	-2.41	-1.14	11.88	-6.31
398	443	SLU-INV	Min	-0.40	-3.05	-5.81	-8.42	-1.90	-1.18	11.21	-6.31
399	443	SLE-INV	Max	-0.17	-2.23	-3.88	-2.26	-0.25	-0.81	9.55	-4.43
399	419	SLE-INV	Max	-0.11	-2.22	-3.85	-2.60	-0.99	-0.77	9.91	-4.43
399	420	SLE-INV	Max	-0.18	-2.55	-3.44	-3.50	-1.19	-0.64	9.91	-4.73
399	444	SLE-INV	Max	-0.24	-2.56	-3.48	-3.22	-0.46	-0.65	9.55	-4.73
399	443	SLU-INV	Min	-0.17	-2.23	-3.88	-3.27	-0.52	-0.88	6.77	-4.64
399	419	SLU-INV	Min	-0.11	-2.22	-3.85	-3.60	-1.23	-0.85	7.15	-4.64
399	420	SLU-INV	Min	-0.18	-2.55	-3.44	-4.84	-1.51	-0.70	7.15	-4.96
399	444	SLU-INV	Min	-0.24	-2.56	-3.48	-4.49	-0.81	-0.73	6.77	-4.96
399	443	SLE-INV	Max	-0.17	-2.23	-3.88	-3.05	-0.33	-0.49	23.82	-3.39
399	419	SLE-INV	Max	-0.11	-2.22	-3.85	-3.51	-1.34	-0.39	24.03	-3.39
399	420	SLE-INV	Max	-0.18	-2.55	-3.44	-4.72	-1.60	-0.31	24.03	-3.57
399	444	SLE-INV	Max	-0.24	-2.56	-3.48	-4.22	-0.62	-0.40	23.82	-3.57
399	443	SLU-INV	Min	-0.23	-3.01	-5.24	-8.46	-1.89	-1.18	9.13	-6.26
399	419	SLU-INV	Min	-0.15	-3.00	-5.19	-8.69	-2.43	-1.14	9.65	-6.26
399	420	SLU-INV	Min	-0.24	-3.44	-4.64	-11.72	-3.13	-0.95	9.65	-6.69
399	444	SLU-INV	Min	-0.32	-3.45	-4.69	-11.49	-2.59	-0.99	9.13	-6.69
400	444	SLE-INV	Max	-0.15	-2.54	-3.05	-3.11	-0.43	-0.67	7.36	-4.70
400	420	SLE-INV	Max	-0.04	-2.52	-3.02	-3.50	-1.21	-0.64	7.63	-4.70
400	421	SLE-INV	Max	-0.10	-2.78	-2.60	-4.19	-1.37	-0.48	7.63	-4.92
400	445	SLE-INV	Max	-0.20	-2.80	-2.62	-3.78	-0.59	-0.51	7.36	-4.92
400	444	SLU-INV	Min	-0.15	-2.54	-3.05	-4.05	-0.78	-0.73	5.22	-4.93
400	420	SLU-INV	Min	-0.04	-2.52	-3.02	-4.85	-1.53	-0.71	5.50	-4.93
400	421	SLU-INV	Min	-0.10	-2.78	-2.60	-5.81	-1.74	-0.53	5.50	-5.16
400	445	SLU-INV	Min	-0.20	-2.80	-2.62	-5.42	-1.01	-0.56	5.22	-5.16
400	444	SLU-INV	Max	-0.15	-2.54	-3.05	-4.19	-0.58	-0.39	18.32	-3.56
400	420	SLU-INV	Max	-0.04	-2.52	-3.02	-4.72	-1.64	-0.32	18.47	-3.56
400	421	SLU-INV	Max	-0.10	-2.78	-2.60	-5.65	-1.84	-0.21	18.47	-3.68
400	445	SLU-INV	Max	-0.20	-2.80	-2.62	-5.10	-0.80	-0.29	18.32	-3.68
400	444	SLU-INV	Min	-0.20	-3.43	-4.12	-11.49	-2.58	-0.98	7.04	-6.65
400	420	SLU-INV	Min	-0.06	-3.40	-4.08	-11.75	-3.14	-0.95	7.43	-6.65
400	421	SLU-INV	Min	-0.13	-3.75	-3.50	-14.08	-3.68	-0.72	7.43	-6.97
400	445	SLU-INV	Min	-0.27	-3.78	-3.54	-13.82	-3.12	-0.75	7.04	-6.97
401	445	SLE-INV	Max	-0.13	-2.79	-2.20	-3.76	-0.57	-0.51	5.16	-4.90
401	421	SLE-INV	Max	0.00	-2.76	-2.18	-4.19	-1.38	-0.49	5.34	-4.90
401	422	SLE-INV	Max	-0.04	-2.95	-1.76	-4.67	-1.49	-0.32	5.34	-5.05
401	446	SLE-INV	Max	-0.16	-2.97	-1.78	-4.23	-0.69	-0.34	5.16	-5.05
401	445	SLE-INV	Min	-0.13	-2.79	-2.20	-5.41	-0.99	-0.56	3.66	-5.14
401	421	SLE-INV	Min	0.00	-2.76	-2.18	-5.80	-1.76	-0.54	3.86	-5.14
401	422	SLE-INV	Min	-0.04	-2.95	-1.76	-6.48	-1.91	-0.35	3.86	-5.31
401	446	SLE-INV	Min	-0.16	-2.97	-1.78	-6.07	-1.15	-0.37	3.66	-5.31
401	445	SLU-INV	Max	-0.13	-2.79	-2.20	-5.08	-0.78	-0.28	12.84	-3.67
401	421	SLU-INV	Max	0.00	-2.76	-2.18	-5.65	-1.87	-0.22	12.94	-3.67
401	422	SLU-INV	Max	-0.04	-2.95	-1.76	-6.30	-2.01	-0.14	12.94	-3.75
401	446	SLU-INV	Max	-0.16	-2.97	-1.78	-5.72	-0.93	-0.20	12.84	-3.75
401	445	SLU-INV	Min	-0.17	-3.76	-2.97	-13.84	-3.12	-0.74	4.94	-6.94
401	421	SLU-INV	Min	0.00	-3.73	-2.94	-14.08	-3.69	-0.73	5.21	-6.94
401	422	SLU-INV	Min	-0.05	-3.98	-2.38	-15.71	-4.07	-0.48	5.21	-7.16
401	446	SLU-INV	Min	-0.22	-4.01	-2.40	-15.47	-3.50	-0.50	4.94	-7.16
402	446	SLE-INV	Max	-0.13	-2.96	-1.35	-4.22	-0.68	-0.34	2.96	-5.04
402	422	SLE-INV	Max	0.03	-2.93	-1.34	-4.67	-1.50	-0.32	3.07	-5.04
402	423	SLE-INV	Max	0.01	-3.04	-0.91	-4.95	-1.56	-0.14	3.07	-5.13
402	447	SLE-INV	Max	-0.15	-3.07	-0.92	-4.49	-0.74	-0.16	2.96	-5.13
402	446	SLE-INV	Min	-0.13	-2.96	-1.35	-6.06	-1.14	-0.37	2.10	-5.29
402	422	SLE-INV	Min	0.03	-2.93	-1.34	-6.47	-1.92	-0.36	2.21	-5.29
402	423	SLE-INV	Min	0.01	-3.04	-0.91	-6.86	-2.01	-0.16	2.21	-5.39
402	447	SLE-INV	Min	-0.15	-3.07	-0.92	-6.44	-1.23	-0.17	2.10	-5.39
402	446	SLU-INV	Max	-0.13	-2.96	-1.35	-5.70	-0.91	-0.18	7.37	-3.75

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 156 di 180
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402	422	SLU-INV	Max	0.04	-2.93	-1.34	-6.30	-2.03	-0.15	7.42	-3.75
402	423	SLU-INV	Max	0.01	-3.04	-0.91	-6.68	-2.11	-0.05	7.42	-3.80
402	447	SLU-INV	Max	-0.15	-3.07	-0.92	-6.06	-1.00	-0.09	7.37	-3.80
402	446	SLU-INV	Min	-0.17	-4.00	-1.83	-15.46	-3.50	-0.49	2.84	-7.15
402	422	SLU-INV	Min	0.03	-3.96	-1.81	-15.71	-4.08	-0.48	2.99	-7.15
402	423	SLU-INV	Min	0.01	-4.11	-1.23	-16.65	-4.30	-0.22	2.99	-7.27
402	447	SLU-INV	Min	-0.20	-4.15	-1.24	-16.39	-3.72	-0.23	2.84	-7.27
403	447	SLE-INV	Max	-0.13	-3.07	-0.50	-4.49	-0.74	-0.15	0.76	-5.12
403	423	SLE-INV	Max	0.03	-3.04	-0.49	-4.94	-1.57	-0.15	0.79	-5.12
403	424	SLE-INV	Max	0.03	-3.06	-0.07	-5.01	-1.58	0.03	0.79	-5.14
403	448	SLE-INV	Max	-0.13	-3.09	-0.08	-4.56	-0.76	0.03	0.76	-5.14
403	447	SLE-INV	Min	-0.13	-3.07	-0.50	-6.44	-1.23	-0.17	0.54	-5.38
403	423	SLE-INV	Min	0.03	-3.04	-0.49	-6.85	-2.01	-0.16	0.57	-5.38
403	424	SLE-INV	Min	0.03	-3.06	-0.07	-6.95	-2.04	0.03	0.57	-5.40
403	448	SLE-INV	Min	-0.13	-3.09	-0.08	-6.53	-1.25	0.03	0.54	-5.40
403	447	SLU-INV	Max	-0.13	-3.07	-0.50	-6.06	-1.00	-0.08	1.90	-3.79
403	423	SLU-INV	Max	0.04	-3.04	-0.49	-6.67	-2.12	-0.07	1.91	-3.79
403	424	SLU-INV	Max	0.04	-3.06	-0.07	-6.77	-2.14	0.05	1.91	-3.80
403	448	SLU-INV	Max	-0.13	-3.09	-0.08	-6.15	-1.02	0.04	1.90	-3.80
403	447	SLU-INV	Min	-0.17	-4.14	-0.67	-16.40	-3.71	-0.23	0.73	-7.26
403	423	SLU-INV	Min	0.03	-4.10	-0.67	-16.63	-4.30	-0.22	0.77	-7.26
403	424	SLU-INV	Min	0.03	-4.14	-0.10	-16.88	-4.36	0.02	0.77	-7.29
403	448	SLU-INV	Min	-0.18	-4.18	-0.10	-16.64	-3.77	0.01	0.73	-7.29
404	448	SLE-INV	Max	-0.14	-3.10	0.35	-4.56	-0.76	0.04	-1.02	-5.14
404	424	SLE-INV	Max	0.02	-3.06	0.35	-5.01	-1.58	0.03	-1.07	-5.14
404	425	SLE-INV	Max	0.03	-3.01	0.78	-4.88	-1.55	0.23	-1.07	-5.10
404	449	SLE-INV	Max	-0.13	-3.04	0.78	-4.42	-0.72	0.23	-1.02	-5.10
404	448	SLE-INV	Min	-0.14	-3.10	0.35	-6.53	-1.25	0.03	-1.44	-5.40
404	424	SLE-INV	Min	0.02	-3.06	0.35	-6.95	-2.04	0.03	-1.49	-5.40
404	425	SLE-INV	Min	0.03	-3.01	0.78	-6.77	-1.99	0.21	-1.49	-5.36
404	449	SLE-INV	Min	-0.13	-3.04	0.78	-6.34	-1.20	0.22	-1.44	-5.36
404	448	SLU-INV	Max	-0.14	-3.10	0.47	-6.15	-1.02	0.05	-1.38	-3.80
404	424	SLU-INV	Max	0.03	-3.06	0.47	-6.77	-2.14	0.04	-1.45	-3.80
404	425	SLU-INV	Max	0.05	-3.01	1.05	-6.58	-2.10	0.31	-1.45	-3.78
404	449	SLU-INV	Max	-0.13	-3.04	1.05	-5.97	-0.98	0.32	-1.38	-3.78
404	448	SLU-INV	Min	-0.19	-4.18	0.35	-16.62	-3.77	0.02	-3.57	-7.30
404	424	SLU-INV	Min	0.02	-4.14	0.35	-16.88	-4.35	0.00	-3.60	-7.30
404	425	SLU-INV	Min	0.03	-4.06	0.78	-16.43	-4.25	0.10	-3.60	-7.24
404	449	SLU-INV	Min	-0.17	-4.11	0.78	-16.17	-3.66	0.12	-3.57	-7.24
404	424	SLU-INV	Max	-0.15	-3.05	1.20	-4.43	-0.73	0.24	-2.58	-5.11
405	425	SLE-INV	Max	-0.01	-3.02	1.19	-4.88	-1.55	0.23	-2.75	-5.11
405	426	SLE-INV	Max	0.02	-2.88	1.63	-4.54	-1.47	0.42	-2.72	-5.01
405	450	SLE-INV	Max	-0.12	-2.91	1.64	-4.10	-0.65	0.43	-2.58	-5.01
405	449	SLE-INV	Min	-0.15	-3.05	1.20	-6.35	-1.21	0.22	-3.64	-5.37
405	425	SLE-INV	Min	-0.01	-3.02	1.19	-6.76	-1.99	0.20	-3.76	-5.37
405	426	SLE-INV	Min	0.02	-2.88	1.63	-6.29	-1.88	0.38	-3.76	-5.26
405	450	SLE-INV	Min	-0.12	-2.91	1.64	-5.88	-1.10	0.39	-3.64	-5.26
405	449	SLU-INV	Max	-0.15	-3.05	1.62	-5.98	-0.99	0.32	-3.49	-3.78
405	425	SLU-INV	Max	-0.01	-3.02	1.60	-6.58	-2.09	0.30	-3.67	-3.78
405	426	SLU-INV	Max	0.02	-2.88	2.19	-6.12	-1.98	0.56	-3.67	-3.73
405	450	SLU-INV	Max	-0.12	-2.91	2.21	-5.53	-0.88	0.58	-3.49	-3.73
405	449	SLU-INV	Min	-0.20	-4.11	1.20	-16.17	-3.66	0.13	-9.04	-7.25
405	425	SLU-INV	Min	-0.01	-4.07	1.19	-16.41	-4.24	0.09	-9.11	-7.25
405	426	SLU-INV	Min	0.02	-3.89	1.63	-15.26	-3.97	0.17	-9.11	-7.10
405	450	SLU-INV	Min	-0.17	-3.93	1.64	-15.02	-3.39	0.21	-9.04	-7.10
406	427	SLU-INV	Max	-0.01	-2.67	2.50	-3.94	-1.32	0.61	-4.43	-4.84
406	451	SLU-INV	Max	-0.13	-2.69	2.52	-3.52	-0.52	0.63	-4.20	-4.84
406	450	SLE-INV	Max	-0.18	-2.92	2.08	-4.10	-0.66	0.43	-4.20	-5.02
406	426	SLE-INV	Max	-0.06	-2.90	2.06	-4.53	-1.45	0.41	-4.43	-5.02
406	427	SLE-INV	Min	-0.01	-2.67	2.50	-5.46	-1.68	0.55	-6.13	-5.07
406	451	SLE-INV	Min	-0.13	-2.69	2.52	-5.07	-0.91	0.58	-5.92	-5.07
406	450	SLE-INV	Min	-0.18	-2.92	2.08	-5.89	-1.11	0.40	-5.92	-5.27
406	426	SLE-INV	Min	-0.06	-2.90	2.06	-6.29	-1.86	0.40	-6.13	-5.27
406	427	SLU-INV	Max	-0.01	-2.67	3.38	-5.32	-1.78	0.82	-5.97	-3.64
406	451	SLU-INV	Max	-0.13	-2.69	3.41	-4.76	-0.70	0.85	-5.67	-3.64
406	450	SLU-INV	Max	-0.18	-2.92	2.81	-5.54	-0.90	0.59	-5.67	-3.74
406	426	SLU-INV	Max	-0.06	-2.90	2.78	-6.12	-1.96	0.56	-5.97	-3.74
406	427	SLU-INV	Min	-0.02	-3.60	2.50	-13.25	-3.49	0.27	-14.84	-6.85
406	451	SLU-INV	Min	-0.18	-3.64	2.52	-12.98	-2.93	0.33	-14.72	-6.85
406	450	SLU-INV	Min	-0.24	-3.95	2.08	-15.00	-3.39	0.22	-14.72	-7.12
406	426	SLU-INV	Min	-0.08	-3.91	2.06	-15.26	-3.96	0.16	-14.84	-7.12
407	428	SLE-INV	Max	-0.07	-2.38	3.40	-3.10	-1.11	0.78	-6.20	-4.59
407	452	SLE-INV	Max	-0.15	-2.40	3.43	-2.73	-0.35	0.80	-5.87	-4.59
407	451	SLE-INV	Max	-0.21	-2.71	2.99	-3.54	-0.54	0.63	-5.87	-4.66
407	427	SLU-INV	Max	-0.13	-2.69	2.06	-3.03	-1.30	0.61	-6.20	-4.86
407	428	SLE-INV	Max	-0.07	-2.38	3.40	-4.29	-1.39	0.71	-8.58	-4.81
407	452	SLE-INV	Min	-0.15	-2.40	3.43	-3.94	-0.66	0.74	-8.28	-4.81
407	451	SLE-INV	Min	-0.21	-2.71	2.99	-5.08	-0.93	0.58	-8.28	-5.10
407	427	SLE-INV	Min	-0.13	-2.69	2.96	-5.45	-1.66	0.55	-8.58	-5.10
407	428	SLU-INV	Max	-0.07	-2.38	4.59	-4.19	-1.50	1.05	-8.36	-3.49
407	452	SLU-INV	Max	-0.15	-2.40	4.63	-3.68	-0.47	1.08	-7.92	-3.49
407	451	SLU-INV	Max	-0.21	-2.71	4.03	-4.78	-0.73	0.85	-7.92	-3.64
407	427	SLU-INV	Max	-0.13	-2.69	3.99	-5.31	-1.75	0.82	-8.36	-3.64
407	428	SLU-INV	Min	-0.10	-3.22	3.40	-10.39	-2.82	0.35	-20.79	-6.49
407	452	SLU-INV	Min	-0.20	-3.24	3.43	-10.15	-2.27	0.44	-20.62	-6.49
407	451	SLU-INV	Min	-0.29	-3.66	2.99	-12.98	-2.93	0.34	-20.62	-6.88
407	427	SLU-INV	Min	-0.18	-3.64	2.96	-13.21	-3.48	0.26	-20.79	-6.88
408	429	SLE-INV	Max	-0.15	-2.03	4.30	-2.02	-0.85	0.92	-7.97	-4.27
408	453	SLE-INV	Max	-0.20	-2.04	4.34	-1.70	-0.13	0.94	-7.53	-4.27
408	452	SLE-INV	Max	-0.27	-2.42	3.89	-2.74	-0.38	0.80	-7.53	-4.62
408	428	SLE-INV	Max	-0.23	-2.41	3.84	-3.09	-1.08	0.78	-7.97	-4.62
408	429	SLE-INV	Min	-0.15	-2.03	4.30	-2.79	-1.04	0.84	-11.04	-4.46
408	453	SLE-INV	Min	-0.20	-2.04	4.34	-2.48	-0.35	0.88	-10.64	-4.46
408	452	SLE-INV	Min	-0.27	-2.42	3.89	-3.95	-0.69	0.74	-10.64	-4.84
408	428	SLE-INV	Min	-0.23	-2.41	3.84	-4.28	-1.37	0.71	-11.04	-4.84
408	429	SLU-INV	Max	-0.15	-2.03	5.80	-2.73	-1.15	1.24	-10.75	-3.29
408	453	SLU-INV	Max	-0.20	-2.04	5.86	-2.30	-0.17	1.28	-10.16	-3.29
408	452	SLU-INV	Max	-0.27	-2.42	5.25	-3.70	-0.51	1.09	-10.16	-3.50
408	428	SLU-INV	Max	-0.23	-2.41	5.19	-4.17	-1.46	1.05	-10.75	-3.50
408	429	SLU-INV	Min	-0.20	-2.75	4.30	-6.73	-1.98	0.45	-26.77	-6.02
408	453	SLU-INV	Min	-0.26	-2.76	4.34	-6.47	-1.46	0.54	-26.53	-6.02
408	452	SLU-INV	Min	-0.37	-3.27	3.89	-10.11	-2.28	0.44	-26.53	-6.54
408	428	SLU-INV	Min	-0.30	-3.26	3.84	-10.35	-2.80	0.35	-26.77	-6.54
409	430	SLE-INV	Max	-0.25	-1.64	5.16	-0.69	-0.53	1.01	-9.74	-3.84
409	454	SLE-INV	Max	-0.25	-1.64	5.21	-0.45	0.13	1.04	-9.18	-3.84
409	453	SLE-INV	Max	-0.34	-2.07	4.79	-1.72	-0.17	0.95	-9.18	-4.30
409	429	SLE-INV	Max	-0.34	-2.07	4.73	-1.99	-0.81	0.91	-9.74	-4.30
409	430	SLU-INV	Min	-0.25	-1.64	5.16	-0.93	-0.60	0.92	-13.51	-4.01
409	454	SLU-INV	Min	-0.25	-1.64	5.21	-0.71	0.04	0.97	-12.99	-4.01
409	453	SLU-INV	Min	-0.34	-2.07	4.79	-2.50	-0.79	0.88	-12.99	-4.50
409	429	SLU-INV	Min	-0.34	-2.07	4.73	-2.75	-			



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 157 di 180
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409	430	SLU-INV	Max	-0.25	-1.64	6.97	-0.93	-0.72	1.36	-13.15	-3.01
409	454	SLU-INV	Max	-0.25	-1.64	7.04	-0.61	0.18	1.40	-12.39	-3.01
409	453	SLU-INV	Max	-0.34	-2.07	6.46	-2.33	-0.23	1.28	-12.39	-3.30
409	429	SLU-INV	Max	-0.34	-2.07	6.39	-2.69	-1.09	1.23	-13.15	-3.30
409	430	SLU-INV	Min	-0.34	-2.22	5.16	-2.19	-0.94	0.51	-32.78	-5.41
409	454	SLU-INV	Min	-0.34	-2.22	5.21	-1.99	-0.46	0.62	-32.45	-5.41
409	453	SLU-INV	Min	-0.46	-2.80	4.79	-6.44	-1.46	0.55	-32.45	-6.07
409	429	SLU-INV	Min	-0.46	-2.80	4.73	-6.63	-1.95	0.44	-32.78	-6.07
410	431	SLE-INV	Max	-0.37	-1.24	6.02	1.27	-0.10	1.04	-11.51	-3.32
410	455	SLE-INV	Max	-0.34	-1.24	6.09	1.41	0.47	1.06	-10.82	-3.32
410	454	SLE-INV	Max	-0.43	-1.68	5.65	-0.47	0.09	1.03	-10.82	-3.89
410	430	SLE-INV	Max	-0.46	-1.68	5.59	-0.65	-0.48	1.01	-11.51	-3.89
410	431	SLE-INV	Min	-0.37	-1.24	6.02	0.89	-0.16	0.96	-15.98	-3.45
410	455	SLE-INV	Min	-0.34	-1.24	6.09	1.03	0.43	1.00	-15.33	-3.45
410	454	SLE-INV	Min	-0.43	-1.68	5.65	-0.71	0.00	0.97	-15.33	-4.06
410	430	SLE-INV	Min	-0.46	-1.68	5.59	-0.88	-0.55	0.93	-15.98	-4.06
410	431	SLU-INV	Max	-0.37	-1.24	8.13	3.19	0.24	1.40	-15.54	-2.65
410	455	SLU-INV	Max	-0.34	-1.24	8.22	3.37	0.67	1.44	-14.60	-2.65
410	454	SLU-INV	Max	-0.43	-1.68	7.63	-0.64	0.11	1.40	-14.60	-3.03
410	430	SLU-INV	Max	-0.46	-1.68	7.54	-0.88	-0.65	1.36	-15.54	-3.03
410	431	SLU-INV	Min	-0.50	-1.68	6.02	1.21	-0.22	0.59	-38.82	-4.65
410	455	SLU-INV	Min	-0.47	-1.67	6.09	1.38	0.58	0.68	-38.38	-4.65
410	454	SLU-INV	Min	-0.58	-2.26	5.65	-1.89	-0.46	0.61	-38.38	-5.48
410	430	SLU-INV	Min	-0.62	-2.27	5.59	-2.07	-0.90	0.53	-38.82	-5.48
411	432	SLE-INV	Max	-0.50	-0.86	6.87	3.84	0.49	0.98	-13.28	-2.67
411	456	SLE-INV	Max	-0.44	-0.85	6.92	3.84	0.97	1.00	-12.44	-2.67
411	455	SLE-INV	Max	-0.52	-1.27	6.50	1.40	0.42	1.06	-12.44	-3.38
411	431	SLE-INV	Max	-0.59	-1.29	6.44	1.36	-0.03	1.04	-13.28	-3.38
411	432	SLE-INV	Min	-0.50	-0.86	6.87	2.74	0.27	0.91	-18.45	-2.77
411	456	SLE-INV	Min	-0.44	-0.85	6.92	2.73	0.77	0.95	-17.66	-2.77
411	455	SLE-INV	Min	-0.52	-1.27	6.50	1.00	0.37	1.00	-17.66	-3.51
411	431	SLE-INV	Min	-0.59	-1.29	6.44	0.96	-0.09	0.96	-18.45	-3.51
411	432	SLU-INV	Max	-0.50	-0.86	9.27	9.48	1.62	1.32	-17.93	-2.17
411	456	SLU-INV	Max	-0.44	-0.85	9.35	9.54	1.99	1.35	-16.79	-2.17
411	455	SLU-INV	Max	-0.52	-1.27	8.78	3.47	0.67	1.44	-16.79	-2.67
411	431	SLU-INV	Max	-0.59	-1.29	8.70	3.40	0.30	1.40	-17.93	-2.67
411	432	SLU-INV	Min	-0.68	-1.16	6.87	3.70	0.36	0.58	-44.90	-3.74
411	456	SLU-INV	Min	-0.59	-1.14	6.92	3.68	1.04	0.68	-44.34	-3.74
411	455	SLU-INV	Min	-0.70	-1.72	6.50	1.35	0.50	0.68	-44.34	-4.74
411	431	SLU-INV	Min	-0.79	-1.74	6.44	1.30	-0.13	0.59	-44.90	-4.74
412	433	SLE-INV	Max	-0.63	-0.55	7.65	6.77	1.13	0.81	-15.05	-1.89
412	457	SLE-INV	Max	-0.53	-0.53	7.72	6.61	1.50	0.82	-14.04	-1.89
412	456	SLE-INV	Max	-0.61	-0.88	7.38	3.85	0.91	1.00	-14.04	-2.74
412	432	SLE-INV	Max	-0.70	-0.90	7.31	3.96	0.57	0.98	-15.05	-2.74
412	433	SLE-INV	Min	-0.63	-0.55	7.65	4.84	0.74	0.77	-20.94	-1.95
412	457	SLE-INV	Min	-0.53	-0.53	7.72	4.65	1.13	0.79	-19.97	-1.95
412	456	SLE-INV	Min	-0.61	-0.88	7.38	2.70	0.70	0.94	-19.97	-2.85
412	432	SLE-INV	Min	-0.70	-0.90	7.31	2.83	0.35	0.92	-20.94	-2.85
412	433	SLU-INV	Max	-0.63	-0.55	10.33	16.64	3.12	1.09	-20.32	-1.57
412	457	SLU-INV	Max	-0.53	-0.53	10.42	16.61	3.41	1.11	-18.95	-1.57
412	456	SLU-INV	Max	-0.61	-0.88	9.96	9.71	1.99	1.35	-18.95	-2.21
412	432	SLU-INV	Max	-0.70	-0.90	9.87	9.74	1.70	1.33	-20.32	-2.21
412	433	SLU-INV	Min	-0.85	-0.74	7.65	6.54	1.00	0.54	-51.02	-2.64
412	457	SLU-INV	Min	-0.72	-0.71	7.72	6.28	1.53	0.58	-50.30	-2.64
412	456	SLU-INV	Min	-0.82	-1.19	7.38	3.65	0.94	0.65	-50.30	-3.85
412	432	SLU-INV	Min	-0.95	-1.21	7.31	3.82	0.47	0.61	-51.02	-3.85
413	434	SLE-INV	Max	-0.76	-0.31	8.96	10.09	1.85	0.50	-16.82	-0.96
413	458	SLE-INV	Max	-0.61	-0.28	9.00	9.69	2.10	0.51	-15.62	-0.96
413	457	SLE-INV	Max	-0.66	-0.55	7.88	6.62	1.44	0.82	-15.62	-1.98
413	433	SLE-INV	Max	-0.81	-0.58	7.85	6.94	1.23	0.81	-16.82	-1.98
413	434	SLE-INV	Min	-0.76	-0.31	8.96	7.22	1.27	0.47	-23.42	-0.99
413	458	SLE-INV	Min	-0.61	-0.28	9.00	6.80	1.53	0.49	-22.27	-0.99
413	457	SLE-INV	Min	-0.66	-0.55	7.88	4.63	1.05	0.79	-22.27	-2.05
413	433	SLE-INV	Min	-0.81	-0.58	7.85	4.97	0.84	0.77	-23.42	-2.05
413	434	SLU-INV	Max	-0.76	-0.31	12.10	24.74	4.83	0.67	-22.71	-0.82
413	458	SLU-INV	Max	-0.61	-0.28	12.15	24.50	5.02	0.69	-21.09	-0.82
413	457	SLU-INV	Max	-0.66	-0.55	10.64	16.78	3.41	1.11	-21.09	-1.61
413	433	SLU-INV	Max	-0.81	-0.58	10.59	17.01	3.23	1.10	-22.71	-1.61
413	434	SLU-INV	Min	-1.02	-0.41	8.96	9.75	1.72	0.33	-57.18	-1.33
413	458	SLU-INV	Min	-0.82	-0.37	9.00	9.18	2.07	0.40	-56.29	-1.33
413	457	SLU-INV	Min	-0.89	-0.74	7.88	6.25	1.42	0.59	-56.29	-2.76
413	433	SLU-INV	Min	-1.09	-0.78	7.85	6.71	1.14	0.53	-57.18	-2.76
413	435	SLE-INV	Max	-0.86	-0.17	6.35	13.77	2.64	0.51	-18.58	0.15
413	459	SLE-INV	Max	-0.65	-0.13	6.40	13.10	2.74	0.01	-17.18	0.15
414	458	SLE-INV	Max	-0.69	-0.29	11.42	9.70	2.02	0.50	-17.18	-1.06
414	434	SLE-INV	Max	-0.90	-0.34	11.37	10.29	1.98	0.50	-18.58	-1.06
414	435	SLE-INV	Min	-0.86	-0.17	6.35	9.86	1.85	0.01	-25.91	0.14
414	459	SLE-INV	Min	-0.65	-0.13	6.40	9.16	1.95	0.01	-24.56	0.14
414	458	SLE-INV	Min	-0.69	-0.29	11.42	6.77	1.43	0.48	-24.56	-1.10
414	434	SLE-INV	Min	-0.90	-0.34	11.37	7.38	1.39	0.48	-25.91	-1.10
414	435	SLU-INV	Max	-0.86	-0.17	8.57	33.75	6.67	0.01	-25.09	0.20
414	459	SLU-INV	Max	-0.65	-0.13	8.64	33.26	6.73	0.01	-23.19	0.20
414	458	SLU-INV	Max	-0.69	-0.29	15.42	24.71	5.02	0.68	-23.19	-0.88
414	434	SLU-INV	Max	-0.90	-0.34	15.35	25.18	4.96	0.68	-25.09	-0.88
414	435	SLU-INV	Min	-1.17	-0.23	6.35	13.31	2.50	0.00	-63.38	0.10
414	459	SLU-INV	Min	-0.88	-0.18	6.40	12.36	2.64	0.00	-62.28	0.10
414	458	SLU-INV	Min	-0.93	-0.40	11.42	9.14	1.94	0.37	-62.28	-1.48
414	434	SLU-INV	Min	-1.21	-0.45	11.37	9.96	1.88	0.36	-63.38	-1.48
415	460	SLE-INV	Max	-0.36	-0.07	-6.37	12.34	2.58	-0.01	23.37	0.14
415	436	SLE-INV	Max	-0.66	-0.13	-6.39	13.02	2.49	-0.01	24.71	0.14
415	437	SLE-INV	Max	-0.67	-0.17	-11.53	9.93	1.91	-0.45	24.71	-0.96
415	461	SLE-INV	Max	-0.36	-0.11	-11.51	9.34	1.94	-0.45	23.37	-0.96
415	460	SLE-INV	Min	-0.36	-0.07	-6.37	8.36	1.79	-0.01	15.91	0.14
415	436	SLE-INV	Min	-0.66	-0.13	-6.39	9.08	1.70	-0.01	17.29	0.14
415	437	SLE-INV	Min	-0.67	-0.17	-11.53	6.92	1.31	-0.47	17.29	-0.99
415	461	SLE-INV	Min	-0.36	-0.11	-11.51	6.31	1.34	-0.47	15.91	-0.99
415	460	SLU-INV	Max	-0.36	-0.07	-6.37	32.67	6.62	-0.01	61.52	0.19
415	436	SLU-INV	Max	-0.66	-0.13	-6.39	33.19	6.55	0.01	62.65	0.19
415	437	SLU-INV	Max	-0.67	-0.17	-11.53	25.30	4.98	-0.35	62.65	-0.83
415	461	SLU-INV	Max	-0.36	-0.11	-11.51	24.82	5.02	-0.36	61.52	-0.83
415	460	SLU-INV	Min	-0.48	-0.10	-8.61	11.29	2.42	-0.01	21.48	0.10
415	436	SLU-INV	Min	-0.89	-0.18	-8.63	12.26	2.29	-0.01	23.34	0.10
415	437	SLU-INV	Min	-0.90	-0.23	-15.56	9.35	1.76	-0.64	23.34	-1.33
415	461	SLU-INV	Min	-0.49	-0.15	-15.54	8.52	1.81	-0.64	21.48	-1.33
416	461	SLE-INV	Max	-0.37	-0.11	-9.17	9.41	2.04	-0.44	21.43	-0.87
416	437	SLE-INV	Max	-0.59	-0.16	-9.14	9.83	1.81	-0.46	22.58	-0.87
416	438	SLE-INV	Max	-0.63	-0.33	-7.98	7.01	1.29	-0.75	22.58	-1.81
416	462	SLE-INV	Max	-0.40	-0.28	-8.01	6.66	1.47	-0.74	21.43	-1.81
416	461										

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.progr. 01	REV. A	Pag.di Pag. 158 di 180			
416	462	SLE-INV	Min	-0.40	-0.28	-8.01	4.52	1.05	-0.78	14.65	-1.86
416	461	SLU-INV	Max	-0.37	-0.11	-9.17	24.75	5.05	-0.33	56.12	-0.77
416	437	SLU-INV	Max	-0.59	-0.16	-9.14	25.02	4.87	-0.37	57.06	-0.77
416	438	SLU-INV	Max	-0.63	-0.33	-7.98	17.83	3.48	-0.57	57.06	-1.55
416	462	SLU-INV	Max	-0.40	-0.28	-8.01	17.59	3.65	-0.53	56.12	-1.55
416	461	SLU-INV	Min	-0.50	-0.15	-12.38	8.65	1.95	-0.63	19.78	-1.20
416	437	SLU-INV	Min	-0.80	-0.21	-12.34	9.27	1.64	-0.64	21.38	-1.20
416	438	SLU-INV	Min	-0.85	-0.44	-10.77	6.60	1.16	-1.07	21.38	-2.51
416	462	SLU-INV	Min	-0.54	-0.38	-10.81	6.10	1.42	-1.05	19.78	-2.51
417	462	SLE-INV	Max	-0.34	-0.27	-7.89	6.70	1.55	-0.75	19.46	-1.73
417	438	SLE-INV	Max	-0.52	-0.31	-7.87	6.93	1.21	-0.74	20.44	-1.73
417	439	SLE-INV	Max	-0.58	-0.62	-7.60	4.37	0.72	-0.92	20.44	-2.53
417	463	SLE-INV	Max	-0.40	-0.58	-7.62	4.21	1.03	-0.92	19.46	-2.53
417	462	SLE-INV	Min	-0.34	-0.27	-7.89	4.60	1.14	-0.78	13.35	-1.77
417	438	SLE-INV	Min	-0.52	-0.31	-7.87	4.84	0.78	-0.78	14.36	-1.77
417	439	SLE-INV	Min	-0.58	-0.62	-7.60	3.05	0.45	-0.97	14.36	-2.60
417	463	SLE-INV	Min	-0.40	-0.58	-7.62	2.88	0.77	-0.97	13.35	-2.60
417	462	SLU-INV	Max	-0.34	-0.27	-7.89	17.47	3.67	-0.57	50.72	-1.49
417	438	SLU-INV	Max	-0.52	-0.31	-7.87	17.60	3.39	-0.54	51.49	-1.49
417	439	SLU-INV	Max	-0.58	-0.62	-7.60	11.11	2.07	-0.65	51.49	-2.13
417	463	SLU-INV	Max	-0.40	-0.58	-7.62	11.00	2.34	-0.68	50.72	-2.13
417	462	SLU-INV	Min	-0.46	-0.36	-10.65	6.21	1.53	-1.05	18.03	-2.39
417	438	SLU-INV	Min	-0.70	-0.41	-10.62	6.53	1.05	-1.06	19.39	-2.39
417	439	SLU-INV	Min	-0.78	-0.83	-10.26	4.11	0.61	-1.31	19.39	-3.52
417	463	SLU-INV	Min	-0.54	-0.78	-10.29	3.88	1.04	-1.31	18.03	-3.52
418	463	SLE-INV	Max	-0.30	-0.56	-7.22	4.25	1.09	-0.92	17.46	-2.46
418	439	SLE-INV	Max	-0.42	-0.59	-7.17	4.29	0.65	-0.92	18.28	-2.46
418	440	SLE-INV	Max	-0.50	-0.97	-6.76	2.00	0.22	-0.99	18.28	-3.13
418	464	SLE-INV	Max	-0.38	-0.95	-6.81	2.01	0.63	-0.99	17.46	-3.13
418	463	SLE-INV	Min	-0.30	-0.56	-7.22	2.94	0.84	-0.97	12.02	-2.53
418	439	SLE-INV	Min	-0.42	-0.59	-7.17	3.00	0.38	-0.97	12.87	-2.53
418	440	SLE-INV	Min	-0.50	-0.97	-6.76	1.40	0.09	-1.05	12.87	-3.23
418	464	SLE-INV	Min	-0.38	-0.95	-6.81	1.40	0.52	-1.05	12.02	-3.23
418	463	SLU-INV	Max	-0.30	-0.56	-7.22	10.93	2.36	-0.66	45.30	-2.09
418	439	SLU-INV	Max	-0.42	-0.59	-7.17	10.88	2.00	-0.67	45.93	-2.09
418	440	SLU-INV	Max	-0.50	-0.97	-6.76	5.10	0.85	-0.68	45.93	-2.61
418	464	SLU-INV	Max	-0.38	-0.95	-6.81	5.16	1.21	-0.68	45.30	-2.61
418	463	SLU-INV	Min	-0.41	-0.76	-9.74	3.97	1.14	-1.30	16.22	-3.41
418	439	SLU-INV	Min	-0.57	-0.79	-9.68	4.05	0.52	-1.31	17.38	-3.41
418	440	SLU-INV	Min	-0.68	-1.31	-9.13	1.88	0.13	-1.42	17.38	-4.37
418	464	SLU-INV	Min	-0.51	-1.28	-9.19	1.88	0.70	-1.41	16.22	-4.37
419	464	SLE-INV	Max	-0.25	-0.92	-6.41	2.03	0.69	-0.99	15.43	-3.07
419	440	SLE-INV	Max	-0.34	-0.94	-6.38	1.95	0.16	-0.99	16.11	-3.07
419	441	SLE-INV	Max	-0.43	-1.37	-6.00	-0.05	-0.23	-0.99	16.11	-3.63
419	465	SLE-INV	Max	-0.33	-1.35	-6.03	0.07	0.29	-0.99	15.43	-3.63
419	464	SLE-INV	Min	-0.25	-0.92	-6.41	1.44	0.58	-1.05	10.65	-3.17
419	440	SLE-INV	Min	-0.34	-0.94	-6.38	1.37	0.04	-1.05	11.37	-3.17
419	441	SLE-INV	Min	-0.43	-1.37	-6.00	-0.07	-0.23	-1.05	11.37	-3.76
419	465	SLE-INV	Min	-0.33	-1.35	-6.03	0.06	0.27	-1.05	10.65	-3.76
419	464	SLU-INV	Max	-0.25	-0.92	-6.41	5.05	1.22	-0.70	39.88	-2.57
419	440	SLU-INV	Max	-0.34	-0.94	-6.38	4.95	0.79	-0.66	40.38	-2.57
419	441	SLU-INV	Max	-0.43	-1.37	-6.00	-0.07	-0.27	-0.65	40.38	-2.98
419	465	SLU-INV	Max	-0.33	-1.35	-6.03	0.10	0.39	-0.69	39.88	-2.98
419	464	SLU-INV	Min	-0.33	-1.24	-8.66	1.95	0.79	-1.42	14.38	-4.28
419	440	SLU-INV	Min	-0.46	-1.27	-8.61	1.85	0.05	-1.42	15.34	-4.28
419	441	SLU-INV	Min	-0.57	-1.85	-8.09	-0.14	-0.32	-1.42	15.34	-5.07
419	465	SLU-INV	Min	-0.45	-1.83	-8.14	-0.04	0.16	-1.42	14.38	-5.07
420	465	SLE-INV	Max	-0.23	-1.33	-5.62	0.93	0.34	-0.99	13.34	-3.58
420	441	SLE-INV	Max	-0.25	-1.34	-5.59	-0.08	-0.27	-0.99	13.93	-3.58
420	442	SLE-INV	Max	-0.34	-1.76	-5.17	-1.31	-0.50	-0.92	13.93	-4.04
420	466	SLE-INV	Max	-0.31	-1.75	-5.20	-1.07	0.09	-0.92	13.38	-4.04
420	465	SLE-INV	Min	-0.23	-1.33	-5.62	0.09	0.32	-1.05	9.26	-3.70
420	441	SLE-INV	Min	-0.25	-1.34	-5.59	-0.11	-0.28	-1.05	9.84	-3.70
420	442	SLE-INV	Min	-0.34	-1.76	-5.17	-1.86	-0.62	-0.99	9.84	-4.19
420	466	SLE-INV	Min	-0.31	-1.75	-5.20	-1.62	-0.04	-0.99	9.26	-4.19
420	465	SLU-INV	Max	-0.23	-1.33	-5.62	0.16	0.46	-0.68	34.45	-2.96
420	441	SLU-INV	Max	-0.25	-1.34	-5.59	-0.10	-0.31	-0.65	34.85	-2.96
420	442	SLU-INV	Max	-0.34	-1.76	-5.17	-1.76	-0.68	-0.58	34.85	-3.29
420	466	SLU-INV	Max	-0.31	-1.75	-5.20	-1.44	0.13	-0.60	34.45	-3.29
420	465	SLU-INV	Min	-0.31	-1.80	-7.59	-0.07	0.17	-1.42	12.50	-5.00
420	441	SLU-INV	Min	-0.34	-1.81	-7.55	-0.28	-0.38	-1.42	13.29	-5.00
420	442	SLU-INV	Min	-0.46	-2.38	-6.97	-4.67	-1.22	-1.34	13.29	-5.66
420	466	SLU-INV	Min	-0.42	-2.37	-7.01	-4.46	-0.73	-1.33	12.50	-5.66
421	466	SLE-INV	Max	-0.22	-1.74	-4.77	-1.04	0.14	-0.92	11.30	-4.00
421	442	SLE-INV	Max	-0.19	-1.73	-4.76	-1.32	-0.54	-0.92	11.75	-4.00
421	443	SLE-INV	Max	-0.27	-2.12	-4.35	-2.36	-0.73	-0.81	11.75	-4.37
421	467	SLE-INV	Max	-0.30	-2.12	-4.36	-2.05	-0.08	-0.82	11.30	-4.37
421	466	SLE-INV	Min	-0.22	-1.74	-4.77	-1.61	0.00	-0.99	7.84	-4.14
421	442	SLE-INV	Min	-0.19	-1.73	-4.76	-1.88	-0.66	-0.99	8.31	-4.14
421	443	SLE-INV	Min	-0.27	-2.12	-4.35	-3.35	-0.95	-0.88	8.31	-4.54
421	467	SLE-INV	Min	-0.30	-2.12	-4.36	-3.06	-0.31	-0.88	7.84	-4.54
421	466	SLU-INV	Max	-0.22	-1.74	-4.77	-1.40	0.18	-0.88	29.03	-3.26
421	442	SLU-INV	Max	-0.19	-1.73	-4.76	-1.78	-0.73	-0.57	29.33	-3.26
421	443	SLU-INV	Max	-0.27	-2.12	-4.35	-3.18	-0.99	-0.49	29.33	-3.52
421	467	SLU-INV	Max	-0.30	-2.12	-4.36	-2.76	-0.10	-0.54	29.03	-3.52
421	466	SLU-INV	Min	-0.29	-2.34	-6.44	-4.52	-0.73	-1.33	10.58	-5.60
421	442	SLU-INV	Min	-0.26	-2.34	-6.42	-4.73	-1.25	-1.33	11.22	-5.60
421	443	SLU-INV	Min	-0.37	-2.86	-5.87	-8.43	-2.03	-1.18	11.22	-6.12
421	467	SLU-INV	Min	-0.40	-2.86	-5.89	-8.22	-1.51	-1.18	10.58	-6.12
422	467	SLE-INV	Max	-0.24	-2.11	-3.93	-2.02	-0.04	-0.82	9.21	-4.34
422	443	SLE-INV	Max	-0.14	-2.09	-3.93	-2.37	-0.76	-0.82	9.56	-4.34
422	444	SLE-INV	Max	-0.21	-2.42	-3.49	-3.21	-0.92	-0.67	9.56	-4.63
422	468	SLE-INV	Max	-0.31	-2.44	-3.49	-2.84	-0.21	-0.68	9.21	-4.63
422	467	SLE-INV	Min	-0.24	-2.11	-3.93	-3.03	-0.28	-0.88	6.40	-4.50
422	443	SLE-INV	Min	-0.14	-2.09	-3.93	-3.37	-0.98	-0.88	6.77	-4.50
422	444	SLE-INV	Min	-0.21	-2.42	-3.49	-4.57	-1.21	-0.73	6.77	-4.81
422	468	SLE-INV	Min	-0.31	-2.44	-3.49	-4.21	-0.53	-0.73	6.40	-4.81
422	467	SLU-INV	Max	-0.24	-2.11	-3.93	-2.73	-0.06	-0.53	23.60	-3.50
422	443	SLU-INV	Max	-0.14	-2.09	-3.93	-3.19	-1.03	-0.50	23.82	-3.50
422	444	SLU-INV	Max	-0.21	-2.42	-3.49	-4.34	-1.25	-0.39	23.82	-3.69
422	468	SLU-INV	Max	-0.31	-2.44	-3.49	-3.83	-0.29	-0.42	23.60	-3.69
422	467	SLU-INV	Min	-0.33	-2.85	-5.31	-8.23	-1.50	-1.18	8.64	-6.08
422	443	SLU-INV	Min	-0.19	-2.82	-5.30	-8.50	-2.05	-1.18	9.14	-6.08
422	444	SLU-INV	Min	-0.28	-3.26	-4.71	-11.50	-2.69	-0.98	9.14	-6.49
422	468	SLU-INV	Min	-0.41	-3.29	-4.72	-11.23	-2.13	-0.98	8.64	-6.49
423	468	SLE-INV	Max	-0.27	-2.43	-3.06	-2.82	-0.19	-0.68	7.10	-4.60
423	444	SLE-INV	Max	-0.12	-2.40	-3.06	-3.21	-0.95	-0.67	7.36	-4.60
423	445	SLE-INV	Max	-0.17	-2.65	-2.64	-3.87	-1.07	-0.51	7.36	-4.81
423	469	SLE-INV	Max	-0.32	-2.68	-2.64	-3.46	-0.32	-0.52	7.10	-4.81
423	468	SLE-INV	Min	-0.27	-2.43	-3.06	-4.20	-0.50	-0.73	4.94	-4.78
423	444	SLE-INV	Min	-0.12	-2.40	-3.06	-4.57	-1			



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc	N.prog.	REV.	Pag.di Pag.			
L0703	211	E	16	O16800	REL	01	A	159 di 180			
423	445	SLE-INV	Min	-0.17	-2.65	-2.64	-5.50	-1.42	-0.56	5.22	-5.01
423	469	SLE-INV	Min	-0.32	-2.68	-2.64	-5.11	-0.70	-0.56	4.94	-5.01
423	468	SLE-INV	Max	-0.27	-2.43	-3.06	-3.81	-0.25	-0.42	18.17	-3.68
423	444	SLE-INV	Max	-0.12	-2.40	-3.06	-4.34	-1.28	-0.39	18.33	-3.68
423	445	SLE-INV	Max	-0.17	-2.65	-2.64	-5.22	-1.44	-0.29	18.33	-3.81
423	469	SLE-INV	Max	-0.32	-2.68	-2.64	-4.67	-0.43	-0.32	18.17	-3.81
423	468	SLE-INV	Min	-0.37	-3.28	-4.14	-11.26	-2.13	-0.98	6.67	-6.45
423	444	SLE-INV	Min	-0.16	-3.24	-4.14	-11.52	-2.70	-0.98	7.05	-6.45
423	445	SLE-INV	Min	-0.23	-3.58	-3.57	-13.83	-3.20	-0.75	7.05	-6.76
423	469	SLE-INV	Min	-0.43	-3.62	-3.57	-13.58	-2.62	-0.75	6.67	-6.76
424	469	SLE-INV	Max	-0.31	-2.68	-2.21	-3.44	-0.30	-0.52	4.99	-4.80
424	445	SLE-INV	Max	-0.10	-2.64	-2.22	-3.87	-1.08	-0.51	5.16	-4.80
424	446	SLE-INV	Max	-0.13	-2.82	-1.78	-4.33	-1.17	-0.34	5.16	-4.94
424	470	SLE-INV	Max	-0.35	-2.86	-1.77	-3.89	-0.39	-0.34	4.99	-4.94
424	469	SLE-INV	Min	-0.31	-2.68	-2.21	-5.10	-0.68	-0.56	3.47	-4.99
424	445	SLE-INV	Min	-0.10	-2.64	-2.22	-5.50	-1.43	-0.56	3.66	-4.99
424	446	SLE-INV	Min	-0.13	-2.82	-1.78	-6.15	-1.56	-0.37	3.66	-5.15
424	470	SLE-INV	Min	-0.35	-2.86	-1.77	-5.74	-0.81	-0.37	3.47	-5.15
424	469	SLE-INV	Max	-0.31	-2.68	-2.21	-4.65	-0.41	-0.32	12.74	-3.81
424	445	SLE-INV	Max	-0.10	-2.64	-2.22	-5.22	-1.46	-0.30	12.85	-3.81
424	446	SLE-INV	Max	-0.13	-2.82	-1.78	-5.84	-1.58	-0.18	12.85	-3.90
424	470	SLE-INV	Max	-0.35	-2.86	-1.77	-5.25	-0.53	-0.20	12.74	-3.90
424	469	SLE-INV	Min	-0.42	-3.62	-2.99	-13.57	-2.61	-0.75	4.69	-6.74
424	445	SLE-INV	Min	-0.13	-3.56	-2.99	-13.86	-3.21	-0.75	4.94	-6.74
424	446	SLE-INV	Min	-0.18	-3.80	-2.40	-15.48	-3.55	-0.50	4.94	-6.95
424	470	SLE-INV	Min	-0.47	-3.86	-2.40	-15.19	-2.96	-0.50	4.69	-6.95
425	470	SLE-INV	Max	-0.34	-2.86	-1.35	-3.88	-0.38	-0.34	2.86	-4.93
425	446	SLE-INV	Max	-0.09	-2.81	-1.35	-4.32	-1.18	-0.34	2.96	-4.93
425	447	SLE-INV	Max	-0.12	-2.91	-0.93	-4.59	-1.23	-0.16	2.96	-5.01
425	471	SLE-INV	Max	-0.36	-2.96	-0.93	-4.14	-0.44	-0.16	2.86	-5.01
425	470	SLE-INV	Min	-0.34	-2.86	-1.35	-5.73	-0.80	-0.37	1.99	-5.13
425	446	SLE-INV	Min	-0.09	-2.81	-1.35	-6.15	-1.57	-0.37	2.10	-5.13
425	447	SLE-INV	Min	-0.12	-2.91	-0.93	-6.52	-1.64	-0.17	2.10	-5.22
425	471	SLE-INV	Min	-0.36	-2.96	-0.93	-6.10	-0.88	-0.17	1.99	-5.22
425	470	SLE-INV	Max	-0.34	-2.86	-1.35	-5.24	-0.52	-0.20	7.31	-3.89
425	446	SLE-INV	Max	-0.09	-2.81	-1.35	-5.84	-1.59	-0.19	7.37	-3.89
425	447	SLE-INV	Max	-0.12	-2.91	-0.93	-6.19	-1.66	-0.09	7.37	-3.94
425	471	SLE-INV	Max	-0.36	-2.96	-0.93	-5.59	-0.59	-0.10	7.31	-3.94
425	470	SLE-INV	Min	-0.46	-3.86	-1.82	-15.20	-2.96	-0.50	2.69	-6.93
425	446	SLE-INV	Min	-0.13	-3.79	-1.83	-15.47	-3.56	-0.50	2.84	-6.93
425	447	SLE-INV	Min	-0.16	-3.93	-1.26	-16.40	-2.76	-0.23	2.84	-7.05
425	471	SLE-INV	Min	-0.48	-3.99	-1.25	-16.13	-3.16	-0.23	2.69	-7.05
426	471	SLE-INV	Max	-0.36	-2.96	-0.50	-4.13	-0.43	-0.16	0.74	-5.01
426	447	SLE-INV	Max	-0.09	-2.91	-0.50	-4.59	-1.24	-0.16	0.76	-5.01
426	448	SLE-INV	Max	-0.10	-2.93	-0.07	-4.66	-1.25	0.03	0.76	-5.03
426	472	SLE-INV	Max	-0.36	-2.99	-0.07	-4.20	-0.44	0.03	0.74	-5.03
426	471	SLE-INV	Min	-0.36	-2.96	-0.50	-6.09	-0.88	-0.17	0.51	-5.22
426	447	SLE-INV	Min	-0.09	-2.91	-0.50	-6.52	-1.65	-0.17	0.54	-5.22
426	448	SLE-INV	Min	-0.10	-2.93	-0.07	-6.62	-1.67	0.03	0.54	-5.24
426	472	SLE-INV	Min	-0.36	-2.99	-0.07	-6.19	-0.90	0.03	0.51	-5.24
426	471	SLE-INV	Max	-0.36	-2.96	-0.50	-5.58	-0.58	-0.09	1.88	-3.94
426	447	SLE-INV	Max	-0.09	-2.91	-0.50	-6.19	-1.67	-0.09	1.90	-3.94
426	448	SLE-INV	Max	-0.10	-2.93	-0.07	-6.28	-1.68	0.05	1.90	-3.96
426	472	SLE-INV	Max	-0.36	-2.99	-0.07	-5.67	-0.60	0.05	1.88	-3.96
426	471	SLE-INV	Min	-0.48	-4.00	-0.68	-16.12	-3.15	-0.23	0.69	-7.04
426	447	SLE-INV	Min	-0.13	-3.92	-0.68	-16.41	-3.76	-0.23	0.73	-7.04
426	448	SLE-INV	Min	-0.13	-3.96	-0.09	-16.65	-3.81	0.02	0.73	-7.08
426	472	SLE-INV	Min	-0.49	-4.03	-0.09	-16.43	-3.20	0.02	0.69	-7.08
427	472	SLE-INV	Max	-0.36	-2.98	0.36	-4.20	-0.44	0.03	-0.97	-5.03
427	448	SLE-INV	Max	-0.11	-2.93	0.36	-4.65	-1.25	0.03	-1.02	-5.03
427	449	SLE-INV	Max	-0.10	-2.88	0.78	-4.52	-1.22	0.24	-1.02	-4.99
427	473	SLE-INV	Max	-0.35	-2.93	0.78	-4.07	-0.42	0.24	-0.97	-4.99
427	472	SLE-INV	Min	-0.36	-2.98	0.36	-6.19	-0.90	0.03	-1.39	-5.24
427	448	SLE-INV	Min	-0.11	-2.93	0.36	-6.61	-1.67	0.03	-1.44	-5.24
427	449	SLE-INV	Min	-0.10	-2.88	0.78	-6.43	-1.63	0.22	-1.44	-5.22
427	473	SLE-INV	Min	-0.35	-2.93	0.78	-6.01	-0.86	0.22	-1.39	-5.20
427	472	SLE-INV	Max	-0.36	-2.98	0.48	-5.67	-0.60	0.05	-1.31	-3.95
427	448	SLE-INV	Max	-0.11	-2.93	0.48	-6.28	-1.68	0.05	-1.38	-3.95
427	449	SLE-INV	Max	-0.10	-2.88	1.05	-6.11	-1.65	0.32	-1.38	-3.93
427	473	SLE-INV	Max	-0.35	-2.93	1.05	-5.50	-0.56	0.32	-1.31	-3.93
427	472	SLE-INV	Min	-0.49	-4.03	0.36	-16.36	-3.20	0.02	-3.55	-7.08
427	448	SLE-INV	Min	-0.14	-3.96	0.36	-16.63	-3.81	0.02	-3.57	-7.08
427	449	SLE-INV	Min	-0.13	-3.89	0.78	-16.18	-3.71	0.12	-3.57	-7.02
427	473	SLE-INV	Min	-0.47	-3.96	0.78	-15.91	-3.11	0.12	-3.55	-7.02
428	473	SLE-INV	Max	-0.36	-2.93	1.19	-4.07	-0.43	0.24	-2.45	-5.00
428	449	SLE-INV	Max	-0.12	-2.89	1.20	-4.52	-1.22	0.24	-2.58	-5.00
428	450	SLE-INV	Max	-0.09	-2.76	1.65	-4.20	-1.15	0.43	-2.58	-4.90
428	474	SLE-INV	Max	-0.33	-2.81	1.65	-3.76	-0.36	0.43	-2.45	-4.90
428	473	SLE-INV	Min	-0.36	-2.93	1.19	-6.01	-0.86	0.22	-3.52	-5.21
428	449	SLE-INV	Min	-0.12	-2.89	1.20	-6.43	-1.62	0.22	-3.64	-5.21
428	450	SLE-INV	Min	-0.09	-2.76	1.65	-5.97	-1.53	0.40	-3.64	-5.10
428	474	SLE-INV	Min	-0.33	-2.81	1.65	-5.56	-0.77	0.40	-3.52	-5.10
428	473	SLE-INV	Max	-0.36	-2.93	1.61	-5.50	-0.57	0.32	-3.31	-3.93
428	449	SLE-INV	Max	-0.12	-2.89	1.62	-6.11	-1.64	0.32	-3.49	-3.93
428	450	SLE-INV	Max	-0.09	-2.76	2.23	-5.67	-1.56	0.58	-3.49	-3.87
428	474	SLE-INV	Max	-0.33	-2.81	2.23	-5.08	-0.49	0.58	-3.31	-3.87
428	473	SLE-INV	Min	-0.48	-3.96	1.19	-15.89	-3.11	0.13	-8.97	-7.03
428	449	SLE-INV	Min	-0.16	-3.90	1.20	-16.18	-3.71	0.11	-9.05	-7.03
428	450	SLE-INV	Min	-0.12	-3.72	1.65	-15.04	-3.46	0.23	-9.05	-6.88
428	474	SLE-INV	Min	-0.45	-3.79	1.65	-14.75	-2.86	0.25	-8.97	-6.88
429	451	SLE-INV	Max	-0.10	-2.55	2.53	-3.63	-1.04	0.63	-4.20	-4.73
429	475	SLE-INV	Max	-0.29	-2.59	2.53	-3.22	-0.26	0.63	-3.98	-4.73
429	474	SLE-INV	Max	-0.34	-2.81	2.09	-3.77	-0.37	0.43	-3.98	-4.91
429	450	SLE-INV	Max	-0.15	-2.77	2.10	-4.20	-1.14	0.43	-4.20	-4.91
429	451	SLE-INV	Min	-0.10	-2.55	2.53	-5.16	-1.36	0.58	-5.92	-4.92
429	475	SLE-INV	Min	-0.29	-2.59	2.53	-4.78	-0.61	0.58	-5.72	-4.92
429	474	SLE-INV	Min	-0.34	-2.81	2.09	-5.56	-0.78	0.40	-5.72	-5.12
429	450	SLE-INV	Min	-0.15	-2.77	2.10	-5.96	-1.52	0.40	-5.92	-5.12
429	451	SLE-INV	Max	-0.10	-2.55	3.42	-4.90	-1.40	0.85	-5.67	-3.76
429	475	SLE-INV	Max	-0.29	-2.59	3.41	-4.34	-0.35	0.85	-5.38	-3.76
429	474	SLE-INV	Max	-0.34	-2.81	2.83	-5.09	-0.50	0.58	-5.38	-3.88
429	450	SLE-INV	Max	-0.15	-2.77	2.83	-5.66	-1.54	0.58	-5.67	-3.88
429	451	SLE-INV	Min	-0.14	-3.44	2.53	-13.01	-3.02	0.33	-14.73	-6.64
429	475	SLE-INV	Min	-0.39	-3.49	2.53	-12.74	-2.44	0.36	-14.61	-6.64
429	474	SLE-INV	Min	-0.45	-3.79	2.09	-14.74	-2.86	0.25	-14.61	-6.91
429	450	SLE-INV	Min	-0.20	-3.74	2.10	-15.00	-3.45	0.22	-14.73	-6.91
430	452	SLE-INV	Max	-0.12	-2.26	3.47	-2.84	-0.87	0.80	-5.87	-4.49
430	476	SLE-INV	Max	-0.26	-2.28	3.47	-2.46	-0.12	0.80	-5.56	-4.49
430	475	SLE-INV	Max	-0.32	-2.59	3.00	-3.23	-0.28	0.63	-5.56	-4.75
430	451	SLE-INV	Max	-0.18	-2.66	2.99	-3.63	-0.73	0.63	-5.56	-4.75
430	452	SLE-INV	Min	-0.12	-2.26	3.47	-4.04	-1.12	0.75	-8.29	-4.67



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc	N.prog.	REV.	Pag.di Pag.
L0703	211	E	16	O16800	REL	01	A	160 di 180

430	476	SLE-INV	Min	-0.26	-2.28	3.47	-3.68	-0.40	0.75	-7.99	-4.67
430	475	SLE-INV	Min	-0.32	-2.59	3.00	-4.78	-0.63	0.58	-7.99	-4.95
430	451	SLE-INV	Min	-0.18	-2.56	2.99	-5.16	-1.34	0.58	-8.29	-4.95
430	452	SLU-INV	Max	-0.12	-2.26	4.68	-3.83	-1.17	1.09	-7.93	-3.61
430	476	SLU-INV	Max	-0.26	-2.28	4.68	-3.32	-0.16	1.08	-7.50	-3.61
430	475	SLU-INV	Max	-0.32	-2.59	4.04	-4.36	-0.38	0.85	-7.50	-3.78
430	451	SLU-INV	Max	-0.18	-2.56	4.04	-4.90	-1.37	0.85	-7.93	-3.78
430	452	SLU-INV	Min	-0.16	-3.05	3.47	-10.19	-2.41	0.45	-20.63	-6.30
430	476	SLU-INV	Min	-0.35	-3.08	3.47	-9.91	-1.85	0.48	-20.44	-6.30
430	475	SLU-INV	Min	-0.43	-3.50	3.00	-12.71	-2.44	0.36	-20.44	-6.68
430	451	SLU-INV	Min	-0.25	-3.46	2.99	-12.98	-3.01	0.33	-20.63	-6.68
431	453	SLE-INV	Max	-0.17	-1.89	4.37	-1.82	-0.65	0.94	-7.54	-4.17
431	477	SLE-INV	Max	-0.22	-1.91	4.38	-1.50	0.05	0.94	-7.11	-4.17
431	476	SLE-INV	Max	-0.30	-2.29	3.93	-2.49	-0.15	0.80	-7.11	-4.52
431	452	SLE-INV	Max	-0.24	-2.28	3.92	-2.83	-0.84	0.80	-7.54	-4.52
431	453	SLE-INV	Min	-0.17	-1.89	4.37	-2.58	-0.81	0.88	-10.65	-4.32
431	477	SLE-INV	Min	-0.22	-1.91	4.38	-2.29	-0.13	0.88	-10.25	-4.32
431	476	SLE-INV	Min	-0.30	-2.29	3.93	-3.70	-0.43	0.75	-10.25	-4.70
431	452	SLE-INV	Min	-0.24	-2.28	3.92	-4.02	-1.09	0.75	-10.65	-4.70
431	453	SLU-INV	Max	-0.17	-1.89	5.90	-2.45	-0.88	1.27	-10.17	-3.38
431	477	SLU-INV	Max	-0.22	-1.91	5.91	-2.03	0.07	1.27	-9.60	-3.38
431	476	SLU-INV	Max	-0.30	-2.29	5.31	-3.36	-0.21	1.09	-9.60	-3.62
431	452	SLU-INV	Max	-0.24	-2.28	5.29	-3.82	-1.13	1.09	-10.17	-3.62
431	453	SLU-INV	Min	-0.22	-2.56	4.37	-6.52	-1.63	0.53	-26.54	-5.84
431	477	SLU-INV	Min	-0.30	-2.57	4.38	-6.29	-1.09	0.58	-26.28	-5.84
431	476	SLU-INV	Min	-0.40	-3.09	3.93	-9.89	-1.85	0.49	-26.28	-6.34
431	452	SLU-INV	Min	-0.33	-3.08	3.92	-10.12	-2.39	0.44	-26.54	-6.34
432	454	SLE-INV	Max	-0.22	-1.48	5.27	-0.57	-0.38	1.04	-9.19	-3.76
432	478	SLE-INV	Max	-0.22	-1.48	5.30	-0.33	0.26	1.03	-8.65	-3.76
432	477	SLE-INV	Max	-0.31	-1.92	4.84	-1.53	0.01	0.94	-8.65	-4.21
432	453	SLE-INV	Max	-0.31	-1.92	4.81	-1.80	-0.61	0.94	-9.19	-4.21
432	454	SLE-INV	Min	-0.22	-1.48	5.27	-0.81	-0.43	0.97	-13.00	-3.89
432	478	SLE-INV	Min	-0.22	-1.48	5.30	-0.58	0.19	0.97	-12.49	-3.89
432	477	SLE-INV	Min	-0.31	-1.92	4.84	-2.30	-0.17	0.88	-12.49	-4.37
432	453	SLE-INV	Min	-0.31	-1.92	4.81	-2.56	-0.77	0.88	-13.00	-4.37
432	454	SLU-INV	Max	-0.22	-1.48	7.12	-0.77	-0.52	1.40	-12.41	-3.09
432	478	SLU-INV	Max	-0.22	-1.48	7.15	-0.45	0.36	1.40	-11.68	-3.09
432	477	SLU-INV	Max	-0.31	-1.92	6.53	-2.07	0.02	1.27	-11.68	-3.41
432	453	SLU-INV	Max	-0.31	-1.92	6.50	-2.43	-0.82	1.28	-12.41	-3.41
432	454	SLU-INV	Min	-0.30	-2.00	5.27	-2.05	-0.69	0.63	-32.46	-5.25
432	478	SLU-INV	Min	-0.30	-2.00	5.30	-1.82	-0.39	0.66	-32.11	-5.25
432	477	SLU-INV	Min	-0.42	-2.60	4.84	-6.22	-1.09	0.57	-32.11	-5.90
432	453	SLU-INV	Min	-0.42	-2.60	4.81	-6.45	-1.60	0.54	-32.46	-5.90
433	455	SLE-INV	Max	-0.31	-1.05	6.13	1.30	0.02	1.06	-10.83	-3.24
433	479	SLE-INV	Max	-0.23	-1.04	6.16	1.42	0.57	1.06	-10.16	-3.24
433	478	SLE-INV	Max	-0.33	-1.50	5.74	-0.38	0.21	1.04	-10.16	-3.81
433	454	SLE-INV	Max	-0.40	-1.52	5.71	-0.54	-0.33	1.04	-10.83	-3.81
433	455	SLE-INV	Min	-0.31	-1.05	6.13	0.91	-0.07	0.99	-15.34	-3.35
433	479	SLE-INV	Min	-0.23	-1.04	6.16	1.03	0.51	1.00	-14.70	-3.35
433	478	SLE-INV	Min	-0.33	-1.50	5.74	-0.61	0.15	0.98	-14.70	-3.94
433	454	SLE-INV	Min	-0.40	-1.52	5.71	-0.76	-0.38	0.97	-15.34	-3.94
433	455	SLU-INV	Max	-0.31	-1.05	8.28	3.30	0.44	1.43	-14.62	-2.70
433	479	SLU-INV	Max	-0.23	-1.04	8.32	3.42	0.89	1.43	-13.72	-2.70
433	478	SLU-INV	Max	-0.33	-1.50	7.75	-0.51	0.29	1.40	-13.72	-3.11
433	454	SLU-INV	Max	-0.40	-1.52	7.71	-0.73	-0.45	1.40	-14.62	-3.11
433	455	SLU-INV	Min	-0.41	-1.42	6.13	1.23	-0.09	0.65	-38.41	-4.52
433	479	SLU-INV	Min	-0.31	-1.40	6.16	1.39	0.69	0.70	-37.95	-4.52
433	478	SLU-INV	Min	-0.44	-2.03	5.74	-1.78	-0.67	0.67	-37.95	-5.92
433	454	SLU-INV	Min	-0.54	-2.05	5.71	-1.90	-0.64	0.63	-38.41	-5.92
434	456	SLE-INV	Max	-0.40	-0.66	6.98	3.73	0.53	1.00	-12.46	-2.61
434	480	SLE-INV	Max	-0.28	-0.63	7.03	3.73	1.00	0.99	-11.64	-2.61
434	479	SLE-INV	Max	-0.37	-1.06	6.59	1.40	0.52	1.06	-11.64	-3.30
434	455	SLE-INV	Max	-0.48	-1.09	6.54	1.36	0.08	1.06	-12.46	-3.30
434	456	SLE-INV	Min	-0.40	-0.66	6.98	2.61	0.30	0.95	-17.67	-2.69
434	480	SLE-INV	Min	-0.28	-0.63	7.03	2.59	0.78	0.94	-16.89	-2.69
434	479	SLE-INV	Min	-0.37	-1.06	6.59	0.98	0.45	0.99	-16.89	-3.41
434	455	SLE-INV	Min	-0.48	-1.09	6.54	0.94	0.00	1.00	-17.67	-3.41
434	456	SLU-INV	Max	-0.40	-0.66	9.43	9.46	1.70	1.35	-16.81	-2.22
434	480	SLU-INV	Max	-0.28	-0.63	9.49	9.54	2.08	1.34	-15.71	-2.22
434	479	SLU-INV	Max	-0.37	-1.06	8.90	3.54	0.89	1.42	-15.71	-2.74
434	455	SLU-INV	Max	-0.48	-1.09	8.84	3.46	0.51	1.44	-16.81	-2.74
434	456	SLU-INV	Min	-0.54	-0.89	6.98	3.53	0.40	0.68	-44.36	-3.63
434	480	SLU-INV	Min	-0.38	-0.86	7.03	3.50	1.06	0.68	-43.77	-3.63
434	479	SLU-INV	Min	-0.50	-1.44	6.59	1.32	0.60	0.67	-43.77	-4.61
434	455	SLU-INV	Min	-0.65	-1.47	6.54	1.28	-0.17	0.68	-44.36	-4.61
435	457	SLE-INV	Max	-0.50	-0.34	7.75	6.50	1.12	0.82	-14.06	-1.85
435	481	SLE-INV	Max	-0.33	-0.30	7.78	6.32	1.48	0.82	-13.08	-1.85
435	480	SLE-INV	Max	-0.40	-0.66	7.46	3.69	0.93	1.00	-13.08	-2.68
435	456	SLE-INV	Max	-0.57	-0.69	7.43	3.82	0.60	1.00	-14.06	-2.68
435	457	SLE-INV	Min	-0.50	-0.34	7.75	4.54	0.71	0.78	-20.00	-1.90
435	481	SLE-INV	Min	-0.33	-0.30	7.78	4.34	1.09	0.78	-19.05	-1.90
435	480	SLE-INV	Min	-0.40	-0.66	7.46	2.52	0.71	0.95	-19.05	-2.77
435	456	SLE-INV	Min	-0.57	-0.69	7.43	2.66	0.37	0.94	-20.00	-2.77
435	457	SLU-INV	Max	-0.50	-0.34	10.47	16.52	3.17	1.11	-18.98	-1.60
435	481	SLU-INV	Max	-0.33	-0.30	10.50	16.43	3.47	1.10	-17.66	-1.60
435	480	SLU-INV	Max	-0.40	-0.66	10.07	9.63	2.07	1.34	-17.66	-2.25
435	456	SLU-INV	Max	-0.57	-0.69	10.04	9.71	1.78	1.35	-18.98	-2.25
435	457	SLU-INV	Min	-0.67	-0.46	7.75	6.13	0.96	0.56	-50.34	-2.56
435	481	SLU-INV	Min	-0.44	-0.41	7.78	5.86	1.48	0.59	-49.60	-2.56
435	480	SLU-INV	Min	-0.54	-0.89	7.46	3.41	0.95	0.70	-49.60	-3.74
435	456	SLU-INV	Min	-0.77	-0.93	7.43	3.60	0.50	0.66	-50.34	-3.74
436	458	SLE-INV	Max	-0.58	-0.16	9.03	9.59	1.76	0.51	-15.65	-0.94
436	482	SLE-INV	Max	-0.36	-0.12	9.05	9.20	2.00	0.49	-14.48	-0.94
436	481	SLE-INV	Max	-0.40	-0.32	7.94	6.27	1.40	0.81	-14.48	-1.94
436	457	SLE-INV	Max	-0.62	-0.36	7.92	6.60	1.20	0.83	-15.65	-1.94
436	458	SLE-INV	Min	-0.58	-0.16	9.03	6.70	1.17	0.49	-22.30	-0.96
436	482	SLE-INV	Min	-0.36	-0.12	9.05	6.27	1.43	0.47	-21.17	-0.96
436	481	SLE-INV	Min	-0.40	-0.32	7.94	4.26	1.00	0.77	-21.17	-1.99
436	457	SLE-INV	Min	-0.62	-0.36	7.92	4.61	0.80	0.79	-22.30	-1.99
436	458	SLU-INV	Max	-0.58	-0.16	12.19	24.41	4.75	0.68	-21.12	-0.83
436	482	SLU-INV	Max	-0.36	-0.12	12.22	24.17	4.94	0.67	-19.55	-0.83
436	481	SLU-INV	Max	-0.40	-0.32	10.73	16.57	3.45	1.10	-19.55	-1.65
436	457	SLU-INV	Max	-0.62	-0.36	10.69	16.79	3.27	1.11	-21.12	-1.65
436	458	SLU-INV	Min	-0.79	-0.22	9.03	9.04	1.58	0.39	-56.33	-1.29
436	482	SLU-INV	Min	-0.49	-0.16	9.05	8.47	1.92	0.36	-55.40	-1.29
436	481	SLU-INV	Min	-0.55	-0.43	7.94	5.75	1.35	0.56	-55.40	-2.69
436	457	SLU-INV	Min	-0.84	-0.49	7.92	6.22	1.08	0.59	-56.33	-2.69
437	459	SLE-INV	Max	-0.65	-0.13	6.40	13.01	2.49	0.01	-17.21	0.15
437	483	SLE-INV	Max	-0.36	-0.07	6.39	12.34	2.58	0.01	-15.84	0.15
437	482	SLE-INV	Max								

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	161 di 180			
437	459	SLE-INV	Min	-0.65	-0.13	6.40	9.07	1.69	0.01	-24.59	0.14
437	483	SLE-INV	Min	-0.36	-0.07	6.39	8.37	1.79	0.01	-23.26	0.14
437	482	SLE-INV	Min	-0.37	-0.12	11.43	6.16	1.32	0.48	-23.26	-1.07
437	458	SLE-INV	Min	-0.66	-0.18	11.45	6.77	1.28	0.48	-24.59	-1.07
437	459	SLE-INV	Max	-0.65	-0.13	8.64	33.16	6.55	0.01	-23.24	0.20
437	483	SLE-INV	Max	-0.36	-0.07	8.62	32.65	6.62	0.01	-21.38	0.20
437	482	SLE-INV	Max	-0.37	-0.12	15.43	24.26	4.91	0.68	-21.38	-0.89
437	458	SLE-INV	Max	-0.66	-0.18	15.45	24.73	4.86	0.68	-23.24	-0.89
437	459	SLE-INV	Min	-0.88	-0.18	6.40	12.24	2.28	-0.01	-62.33	0.10
437	483	SLE-INV	Min	-0.48	-0.10	6.39	11.29	2.42	0.01	-61.21	0.10
437	482	SLE-INV	Min	-0.49	-0.16	11.43	8.32	1.78	0.38	-61.21	-1.44
437	458	SLE-INV	Min	-0.90	-0.24	11.45	9.14	1.72	0.37	-62.33	-1.44
438	484	SLE-INV	Max	0.10	0.02	-6.33	11.60	2.43	0.00	22.12	0.14
438	460	SLE-INV	Max	-0.36	-0.07	-6.37	12.27	2.34	-0.01	23.39	0.14
438	461	SLE-INV	Max	-0.34	0.03	-11.49	9.34	1.81	-0.45	23.39	-0.92
438	485	SLE-INV	Max	0.12	0.12	-11.45	8.76	1.84	-0.43	22.12	-0.92
438	484	SLE-INV	Min	0.10	0.02	-6.33	7.59	1.63	0.00	14.62	0.13
438	460	SLE-INV	Min	-0.36	-0.07	-6.37	8.29	1.54	-0.01	15.93	0.13
438	461	SLE-INV	Min	-0.34	0.03	-11.49	6.30	1.19	-0.47	15.93	-0.94
438	485	SLE-INV	Min	0.12	0.12	-11.45	5.70	1.23	-0.46	14.62	-0.94
438	484	SLE-INV	Max	0.13	0.03	-6.33	32.12	6.50	0.02	60.44	0.19
438	460	SLE-INV	Max	-0.36	-0.07	-6.37	32.60	6.44	-0.02	61.56	0.19
438	461	SLE-INV	Max	-0.34	0.05	-11.49	24.85	4.95	-0.35	61.56	-0.82
438	485	SLE-INV	Max	0.16	0.17	-11.45	24.40	4.99	-0.31	60.44	-0.82
438	484	SLE-INV	Min	0.10	0.02	-8.54	10.25	2.20	0.00	19.74	0.10
438	460	SLE-INV	Min	-0.48	-0.10	-8.61	11.19	2.08	-0.02	21.50	0.10
438	461	SLE-INV	Min	-0.45	0.03	-15.52	8.51	1.61	-0.63	21.50	-1.27
438	485	SLE-INV	Min	0.12	0.12	-15.45	7.70	1.66	-0.61	19.74	-1.27
439	485	SLE-INV	Max	0.03	0.11	-9.12	8.90	1.95	-0.43	20.37	-0.83
439	461	SLE-INV	Max	-0.34	0.03	-9.15	9.32	1.73	-0.44	21.45	-0.83
439	462	SLE-INV	Max	-0.37	-0.09	-8.03	6.64	1.23	-0.74	21.45	-1.72
439	486	SLE-INV	Max	0.00	-0.02	-8.00	6.29	1.41	-0.73	20.37	-1.72
439	485	SLE-INV	Min	0.03	0.11	-9.12	5.87	1.34	-0.45	13.54	-0.84
439	461	SLE-INV	Min	-0.34	0.03	-9.15	6.32	1.12	-0.47	14.67	-0.84
439	462	SLE-INV	Min	-0.37	-0.09	-8.03	4.49	0.80	-0.78	14.67	-1.77
439	486	SLE-INV	Min	0.00	-0.02	-8.00	4.12	0.98	-0.76	13.54	-1.77
439	485	SLE-INV	Max	0.04	0.14	-9.12	24.38	5.04	-0.33	55.24	-0.76
439	461	SLE-INV	Max	-0.34	0.04	-9.15	24.67	4.86	-0.32	56.16	-0.76
439	462	SLE-INV	Max	-0.37	-0.09	-8.03	17.59	3.45	-0.54	56.16	-1.51
439	486	SLE-INV	Max	0.00	-0.02	-8.00	17.33	3.61	-0.55	55.24	-1.51
439	485	SLE-INV	Min	0.03	0.11	-12.31	7.92	1.81	-0.61	18.29	-1.14
439	461	SLE-INV	Min	-0.46	0.03	-12.35	8.54	1.51	-0.63	19.80	-1.14
439	462	SLE-INV	Min	-0.49	-0.13	-10.84	6.06	1.08	-1.05	19.80	-2.38
439	486	SLE-INV	Min	0.00	-0.03	-10.79	5.57	1.32	-1.03	18.29	-2.38
440	486	SLE-INV	Max	-0.01	-0.02	-7.92	6.40	1.49	-0.71	18.56	-1.65
440	462	SLE-INV	Max	-0.30	-0.08	-7.91	6.61	1.16	-0.75	19.48	-1.65
440	463	SLE-INV	Max	-0.36	-0.38	-7.63	4.17	0.74	-0.92	19.48	-2.41
440	487	SLE-INV	Max	-0.07	-0.32	-7.65	4.02	1.03	-0.88	18.56	-2.41
440	486	SLE-INV	Min	-0.01	-0.02	-7.92	4.26	1.07	-0.75	12.41	-1.68
440	462	SLE-INV	Min	-0.30	-0.08	-7.91	4.50	0.73	-0.78	13.36	-1.68
440	463	SLE-INV	Min	-0.36	-0.38	-7.63	2.83	0.46	-0.97	13.36	-2.47
440	487	SLE-INV	Min	-0.07	-0.32	-7.65	2.66	0.76	-0.94	12.41	-2.47
440	486	SLE-INV	Max	-0.01	-0.02	-7.92	17.30	3.64	-0.50	49.98	-1.47
440	462	SLE-INV	Max	-0.30	-0.08	-7.91	17.39	3.37	-0.58	50.75	-1.47
440	463	SLE-INV	Max	-0.36	-0.38	-7.63	11.00	2.17	-0.67	50.75	-2.10
440	487	SLE-INV	Max	-0.07	-0.32	-7.65	10.93	2.44	-0.59	49.98	-2.10
440	486	SLE-INV	Min	-0.01	-0.02	-10.70	5.75	1.45	-1.02	16.75	-2.27
440	462	SLE-INV	Min	-0.41	-0.11	-10.68	6.07	0.99	-1.07	16.04	-2.27
440	463	SLE-INV	Min	-0.49	-0.51	-10.30	3.82	0.62	-1.30	18.04	-3.33
440	487	SLE-INV	Min	-0.09	-0.43	-10.32	3.60	1.02	-1.26	16.75	-3.33
441	487	SLE-INV	Max	-0.01	-0.31	-7.22	4.09	1.10	-0.89	16.70	-2.34
441	463	SLE-INV	Max	-0.26	-0.36	-7.23	4.15	0.68	-0.91	17.48	-2.34
441	464	SLE-INV	Max	-0.35	-0.79	-6.85	1.96	0.28	-0.99	17.48	-2.97
441	488	SLE-INV	Max	-0.10	-0.74	-6.84	1.95	0.68	-0.97	16.70	-2.97
441	487	SLE-INV	Min	-0.01	-0.31	-7.22	2.77	0.84	-0.94	11.23	-2.39
441	463	SLE-INV	Min	-0.26	-0.36	-7.23	2.84	0.40	-0.96	12.03	-2.39
441	464	SLE-INV	Min	-0.35	-0.79	-6.85	1.34	0.15	-1.05	12.03	-3.06
441	488	SLE-INV	Min	-0.10	-0.74	-6.84	1.33	0.55	-1.02	11.23	-3.06
441	487	SLE-INV	Max	-0.01	-0.31	-7.22	10.82	2.46	-0.62	44.71	-2.05
441	463	SLE-INV	Max	-0.26	-0.36	-7.23	10.85	2.11	-0.64	45.33	-2.05
441	464	SLE-INV	Max	-0.35	-0.79	-6.85	5.14	0.98	-0.70	43.33	-2.56
441	488	SLE-INV	Max	-0.10	-0.74	-6.84	5.13	1.33	-0.69	44.71	-2.56
441	487	SLE-INV	Min	-0.02	-0.42	-9.75	3.74	1.13	-1.26	15.15	-3.23
441	463	SLE-INV	Min	-0.35	-0.48	-9.76	3.83	0.54	-1.30	16.24	-3.23
441	464	SLE-INV	Min	-0.47	-1.06	-9.24	1.80	0.20	-1.41	16.24	-4.13
441	488	SLE-INV	Min	-0.13	-1.00	-9.23	1.79	0.74	-1.38	15.15	-4.13
442	488	SLE-INV	Max	-0.06	-0.73	-6.45	2.02	0.74	-0.96	14.80	-2.92
442	464	SLE-INV	Max	-0.21	-0.76	-6.45	1.93	0.24	-1.00	15.44	-2.92
442	465	SLE-INV	Max	-0.31	-1.22	-6.03	0.00	-0.10	-0.99	15.44	-3.45
442	489	SLE-INV	Max	-0.15	-1.19	-6.02	0.13	0.38	-0.95	14.80	-3.45
442	488	SLE-INV	Min	-0.06	-0.73	-6.45	1.42	0.62	-1.02	9.99	-3.00
442	464	SLE-INV	Min	-0.21	-0.76	-6.45	1.34	0.10	-1.02	10.66	-3.00
442	465	SLE-INV	Min	-0.31	-1.22	-6.03	-0.01	-0.12	-1.05	10.66	-3.55
442	489	SLE-INV	Min	-0.15	-1.19	-6.02	0.12	0.37	-1.02	9.99	-3.55
442	488	SLE-INV	Max	-0.06	-0.73	-6.45	5.11	1.35	-0.67	39.40	-2.53
442	464	SLE-INV	Max	-0.21	-0.76	-6.45	4.97	0.93	-0.71	39.90	-2.53
442	465	SLE-INV	Max	-0.31	-1.22	-6.03	0.01	-0.03	-0.67	39.90	-2.94
442	489	SLE-INV	Max	-0.15	-1.19	-6.02	0.18	0.51	-0.63	39.40	-2.94
442	488	SLE-INV	Min	-0.09	-0.99	-8.70	1.91	0.83	-1.37	13.49	-4.05
442	464	SLE-INV	Min	-0.29	-1.03	-8.71	1.81	0.13	-1.42	14.39	-4.05
442	465	SLE-INV	Min	-0.41	-1.64	-8.14	-0.06	-0.16	-1.42	14.39	-4.79
442	489	SLE-INV	Min	-0.21	-1.60	-8.13	0.09	0.39	-1.37	13.49	-4.79
443	489	SLE-INV	Max	-0.13	-1.18	-5.59	0.19	0.43	-0.96	12.86	-3.40
443	465	SLE-INV	Max	-0.20	-1.20	-5.62	0.01	-0.14	-0.98	13.39	-3.40
443	466	SLE-INV	Max	-0.29	-1.63	-5.21	-1.15	-0.34	-0.93	13.39	-3.83
443	490	SLE-INV	Max	-0.22	-1.62	-5.19	-0.93	0.22	-0.90	12.86	-3.83
443	489	SLE-INV	Min	-0.13	-1.18	-5.59	0.16	0.42	-1.02	8.71	-3.50
443	465	SLE-INV	Min	-0.20	-1.20	-5.62	-0.01	-0.16	-1.05	9.26	-3.50
443	466	SLE-INV	Min	-0.29	-1.63	-5.21	-1.69	-0.44	-0.99	9.26	-3.95
443	490	SLE-INV	Min	-0.22	-1.62	-5.19	-1.48	0.11	-0.96	8.71	-3.95
443	489	SLE-INV	Max	-0.13	-1.18	-5.59	0.26	0.58	-0.64	34.08	-2.91
443	465	SLE-INV	Max	-0.20	-1.20	-5.62	0.01	-0.08	-0.66	34.47	-2.91
443	466	SLE-INV	Max	-0.29	-1.63	-5.21	-1.55	-0.46	-0.62	34.47	-3.23
443	490	SLE-INV	Max	-0.22	-1.62	-5.19	-1.25	0.30	-0.60	34.08	-3.23
443	489	SLE-INV	Min	-0.17	-1.59	-7.55	0.01	0.40	-1.37	11.76	-4.72
443	465	SLE-INV	Min	-0.27	-1.61	-7.59	-0.13	-0.21	-1.41	12.50	-4.72
443	466	SLE-INV	Min	-0.39	-2.21	-7.04	-4.48	-0.92	-1.33	12.50	-5.33
443	490	SLE-INV	Min	-0.29	-2.19	-7.00	-4.33	-0.45	-1.29	11.76	-5.33
444	490	SLE-INV	Max	-0.25	-1.63	-4.74	-0.88	0.26	-0.90	10.89	-3.79
444	466	SLE-INV	Max	-0.19	-1.62						



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 162 di 180			
444	491	SLE-INV	Max	-0.32	-2.01	-4.30	-1.83	0.09	-0.79	10.89	-4.14
444	490	SLE-INV	Min	-0.25	-1.63	-4.74	-1.44	0.15	-0.96	7.40	-3.91
444	466	SLE-INV	Min	-0.19	-1.62	-4.79	-1.71	-0.47	-0.99	7.84	-3.91
444	467	SLE-INV	Min	-0.27	-2.00	-4.34	-3.13	-0.71	-0.87	7.84	-4.27
444	491	SLE-INV	Min	-0.32	-2.01	-4.30	-2.83	-0.11	-0.84	7.40	-4.27
444	490	SLE-INV	Max	-0.25	-1.63	-4.74	-1.18	0.36	-0.60	28.73	-3.22
444	466	SLE-INV	Max	-0.19	-1.62	-4.79	-1.55	-0.51	-0.62	29.04	-3.22
444	467	SLE-INV	Max	-0.27	-2.00	-4.34	-2.88	-0.71	-0.52	29.04	-3.47
444	491	SLE-INV	Max	-0.32	-2.01	-4.30	-2.46	0.12	-0.50	28.73	-3.47
444	490	SLE-INV	Min	-0.33	-2.20	-6.40	-4.33	-0.44	-1.29	9.99	-5.27
444	466	SLE-INV	Min	-0.26	-2.18	-6.46	-4.58	-0.96	-1.33	10.59	-5.27
444	467	SLE-INV	Min	-0.36	-2.69	-5.86	-8.24	-1.67	-1.18	10.59	-5.77
444	491	SLE-INV	Min	-0.44	-2.71	-5.80	-7.99	-1.15	-1.14	9.99	-5.77
445	491	SLE-INV	Max	-0.38	-2.02	-3.86	-1.80	0.13	-0.79	8.89	-4.11
445	467	SLE-INV	Max	-0.22	-1.99	-3.91	-2.13	-0.55	-0.82	9.21	-4.11
445	468	SLE-INV	Max	-0.28	-2.29	-3.49	-2.93	-0.68	-0.68	9.21	-4.38
445	492	SLE-INV	Max	-0.44	-2.32	-3.44	-2.57	-0.01	-0.65	8.89	-4.38
445	491	SLE-INV	Min	-0.38	-2.02	-3.86	-2.82	-0.08	-0.84	6.05	-4.24
445	467	SLE-INV	Min	-0.22	-1.99	-3.91	-3.13	-0.74	-0.87	6.40	-4.24
445	468	SLE-INV	Min	-0.28	-2.29	-3.49	-4.29	-0.94	-0.73	6.40	-4.52
445	492	SLE-INV	Min	-0.44	-2.32	-3.44	-3.95	-0.29	-0.70	6.05	-4.52
445	491	SLE-INV	Max	-0.38	-2.02	-3.86	-2.42	0.17	-0.50	23.37	-3.45
445	467	SLE-INV	Max	-0.22	-1.99	-3.91	-2.87	-0.75	-0.52	23.60	-3.45
445	468	SLE-INV	Max	-0.28	-2.29	-3.49	-3.95	-0.92	-0.43	23.60	-3.64
445	492	SLE-INV	Max	-0.44	-2.32	-3.44	-3.47	-0.01	-0.41	23.37	-3.64
445	491	SLE-INV	Min	-0.51	-2.72	-5.22	-8.04	-1.14	-1.14	8.17	-5.72
445	467	SLE-INV	Min	-0.29	-2.68	-5.28	-8.27	-1.69	-1.18	8.64	-5.72
445	468	SLE-INV	Min	-0.38	-3.09	-4.71	-11.25	-2.26	-0.98	8.64	-6.11
445	492	SLE-INV	Min	-0.59	-3.14	-4.65	-11.01	-1.72	-0.95	8.17	-6.11
446	492	SLE-INV	Max	-0.51	-2.34	-3.01	-2.55	0.01	-0.66	6.86	-4.36
446	468	SLE-INV	Max	-0.24	-2.28	-3.06	-2.93	-0.70	-0.68	7.11	-4.36
446	469	SLE-INV	Max	-0.29	-2.52	-2.62	-3.55	-0.79	-0.52	7.11	-4.56
446	493	SLE-INV	Max	-0.56	-2.57	-2.57	-3.15	-0.09	-0.50	6.86	-4.56
446	492	SLE-INV	Min	-0.51	-2.34	-3.01	-3.93	-0.27	-0.70	4.68	-4.50
446	468	SLE-INV	Min	-0.24	-2.28	-3.06	-4.30	-0.96	-0.73	4.94	-4.50
446	469	SLE-INV	Min	-0.29	-2.52	-2.62	-5.19	-1.11	-0.56	4.94	-4.71
446	493	SLE-INV	Min	-0.56	-2.57	-2.57	-4.81	-0.43	-0.53	4.68	-4.71
446	492	SLE-INV	Max	-0.51	-2.34	-3.01	-3.44	0.02	-0.42	18.01	-3.63
446	468	SLE-INV	Max	-0.24	-2.28	-3.06	-3.95	-0.94	-0.43	18.17	-3.63
446	469	SLE-INV	Max	-0.29	-2.52	-2.62	-4.79	-1.07	-0.31	18.17	-3.77
446	493	SLE-INV	Max	-0.56	-2.57	-2.57	-4.25	-0.12	-0.31	18.01	-3.77
446	492	SLE-INV	Min	-0.69	-3.16	-4.06	-11.01	-1.71	-0.95	6.32	-6.07
446	468	SLE-INV	Min	-0.33	-3.08	-4.13	-11.30	-2.28	-0.98	6.67	-6.07
446	469	SLE-INV	Min	-0.39	-3.40	-3.53	-13.59	-2.72	-0.75	6.67	-6.36
446	493	SLE-INV	Min	-0.75	-3.47	-3.47	-13.31	-2.15	-0.72	6.32	-6.36
447	493	SLE-INV	Max	-0.62	-2.59	-2.15	-3.14	-0.07	-0.50	4.82	-4.54
447	469	SLE-INV	Max	-0.28	-2.52	-2.19	-3.55	-0.81	-0.51	4.99	-4.54
447	470	SLE-INV	Max	-0.31	-2.68	-1.77	-3.98	-0.87	-0.34	4.99	-4.68
447	494	SLE-INV	Max	-0.65	-2.74	-1.73	-3.56	-0.14	-0.33	4.82	-4.68
447	493	SLE-INV	Min	-0.62	-2.59	-2.15	-4.81	-0.41	-0.54	3.30	-4.69
447	469	SLE-INV	Min	-0.28	-2.52	-2.19	-5.19	-1.12	-0.55	3.47	-4.69
447	470	SLE-INV	Min	-0.31	-2.68	-1.77	-5.82	-1.23	-0.37	3.47	-4.84
447	494	SLE-INV	Min	-0.65	-2.74	-1.73	-5.42	-0.52	-0.35	3.30	-4.84
447	493	SLE-INV	Max	-0.62	-2.59	-2.15	-4.24	-0.10	-0.30	12.63	-3.76
447	469	SLE-INV	Max	-0.28	-2.52	-2.19	-4.79	-1.09	-0.31	12.74	-3.76
447	470	SLE-INV	Max	-0.31	-2.68	-1.77	-5.38	-1.18	-0.21	12.74	-3.85
447	494	SLE-INV	Max	-0.65	-2.74	-1.73	-4.81	-0.19	-0.20	12.63	-3.85
447	493	SLE-INV	Min	-0.84	-3.49	-2.90	-13.33	-2.15	-0.72	4.45	-6.33
447	469	SLE-INV	Min	-0.37	-3.40	-2.95	-13.60	-2.73	-0.75	4.69	-6.33
447	470	SLE-INV	Min	-0.42	-3.61	-2.39	-15.20	-3.04	-0.50	4.69	-6.53
447	494	SLE-INV	Min	-0.88	-3.70	-2.34	-14.94	-2.46	-0.48	4.45	-6.53
448	494	SLE-INV	Max	-0.70	-2.75	-1.32	-3.55	-0.13	-0.33	2.77	-4.66
448	470	SLE-INV	Max	-0.30	-2.67	-1.34	-3.98	-0.88	-0.34	2.86	-4.66
448	471	SLE-INV	Max	-0.32	-2.77	-0.91	-4.23	-0.92	-0.16	2.86	-4.74
448	495	SLE-INV	Max	-0.72	-2.85	-0.89	-3.79	-0.17	-0.15	2.77	-4.74
448	494	SLE-INV	Min	-0.70	-2.75	-1.32	-5.41	-0.51	-0.36	1.89	-4.83
448	470	SLE-INV	Min	-0.30	-2.67	-1.34	-5.82	-1.24	-0.37	1.99	-4.83
448	471	SLE-INV	Min	-0.32	-2.77	-0.91	-6.18	-1.30	-0.17	1.99	-4.91
448	495	SLE-INV	Min	-0.72	-2.85	-0.89	-5.77	-0.57	-0.16	1.89	-4.91
448	494	SLE-INV	Max	-0.70	-2.75	-1.32	-4.80	-0.18	-0.20	7.25	-3.84
448	470	SLE-INV	Max	-0.30	-2.67	-1.34	-5.38	-1.19	-0.21	7.31	-3.84
448	471	SLE-INV	Max	-0.32	-2.77	-0.91	-5.71	-1.24	-0.09	7.31	-3.90
448	495	SLE-INV	Max	-0.72	-2.85	-0.89	-5.12	-0.23	-0.08	7.25	-3.90
448	494	SLE-INV	Min	-0.95	-3.72	-1.78	-14.93	-2.45	-0.48	2.56	-6.51
448	470	SLE-INV	Min	-0.41	-3.61	-1.21	-15.22	-3.05	-0.49	2.59	-6.51
448	471	SLE-INV	Min	-0.43	-3.73	-1.23	-16.15	-3.23	-0.23	2.69	-6.63
448	495	SLE-INV	Min	-0.97	-3.84	-1.20	-15.86	-2.63	-0.22	2.56	-6.63
449	495	SLE-INV	Max	-0.74	-2.85	-0.48	-3.79	-0.17	-0.15	0.71	-4.74
449	471	SLE-INV	Max	-0.32	-2.77	-0.49	-4.23	-0.92	-0.15	0.74	-4.74
449	472	SLE-INV	Max	-0.32	-2.79	-0.08	-4.29	-0.93	0.03	0.74	-4.76
449	496	SLE-INV	Max	-0.75	-2.87	-0.07	-3.85	-0.18	0.03	0.71	-4.76
449	495	SLE-INV	Max	-0.74	-2.85	-0.48	-5.77	-0.57	-0.16	0.49	-4.90
449	471	SLE-INV	Min	-0.32	-2.77	-0.49	-6.18	-1.30	-0.17	0.51	-4.90
449	472	SLE-INV	Min	-0.32	-2.79	-0.08	-6.27	-1.32	0.03	0.51	-4.92
449	496	SLE-INV	Min	-0.75	-2.87	-0.07	-5.86	-0.59	0.03	0.49	-4.92
449	495	SLE-INV	Max	-0.74	-2.85	-0.48	-5.12	-0.23	-0.09	1.86	-3.89
449	471	SLE-INV	Max	-0.32	-2.77	-0.49	-5.71	-1.25	-0.09	1.88	-3.89
449	472	SLE-INV	Max	-0.32	-2.79	-0.08	-5.80	-1.26	0.04	1.88	-3.91
449	496	SLE-INV	Max	-0.75	-2.87	-0.07	-5.20	-0.24	0.05	1.86	-3.91
449	495	SLE-INV	Min	-1.00	-3.85	-0.65	-15.87	-2.63	-0.22	0.66	-6.62
449	471	SLE-INV	Min	-0.43	-3.73	-0.66	-16.14	-3.23	-0.23	0.69	-6.62
449	472	SLE-INV	Min	-0.44	-3.76	-0.10	-16.37	-3.27	0.01	0.69	-6.65
449	496	SLE-INV	Min	-1.01	-3.88	-0.10	-16.10	-2.68	0.02	0.66	-6.65
450	496	SLE-INV	Max	-0.74	-2.87	0.34	-3.85	-0.18	0.03	-0.93	-4.76
450	472	SLE-INV	Max	-0.32	-2.79	0.35	-4.29	-0.93	0.04	-0.97	-4.76
450	473	SLE-INV	Max	-0.31	-2.74	0.77	-4.17	-0.91	0.23	-0.97	-4.72
450	497	SLE-INV	Max	-0.74	-2.83	0.76	-3.73	-0.16	0.23	-0.93	-4.72
450	496	SLE-INV	Min	-0.74	-2.87	0.34	-5.85	-0.59	0.03	-1.35	-4.93
450	472	SLE-INV	Min	-0.32	-2.79	0.35	-6.27	-1.32	0.03	-1.39	-4.93
450	473	SLE-INV	Min	-0.31	-2.74	0.77	-6.10	-1.29	0.22	-1.39	-4.89
450	497	SLE-INV	Min	-0.74	-2.83	0.76	-5.68	-0.56	0.21	-1.35	-4.89
450	496	SLE-INV	Max	-0.74	-2.87	0.45	-5.20	-0.24	0.04	-1.25	-3.91
450	472	SLE-INV	Max	-0.32	-2.79	0.47	-5.80	-1.26	0.05	-1.31	-3.91
450	473	SLE-INV	Max	-0.31	-2.74	1.04	-5.63	-1.23	0.32	-1.31	-3.88
450	497	SLE-INV	Max	-0.74	-2.83	1.03	-5.04	-0.21	0.31	-1.25	-3.88
450	496	SLE-INV	Min	-1.01	-3.88	0.34	-16.09	-2.67	0.01	-3.52	-6.65
450	472	SLE-INV	Min	-0.43	-3.76	0.35	-16.38	-3.27	0.02	-3.55	-6.65
450	473	SLE-INV	Min	-0.42	-3.70	0.77	-15.93	-3.19	0.13	-3.55	-6.60
450	497	SLE-INV	Min	-0.99	-3.82	0.76	-15.64	-2.59	0.13	-3.52	-6.60
451	497	SLE-INV	Max	-0.70	-2.82	1.16	-3.74	-0.17	0.23	-2.33	-4.73
451	473	SLE-INV	Max	-0.32	-2.74	1.19	-4.17	-0.91	0.24	-2.45	-4.73

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 163 di 180
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451	474	SLE-INV	Max	-0.30	-2.63	1.62	-3.86	-0.86	0.43	-2.45	-4.63
451	498	SLE-INV	Max	-0.68	-2.71	1.60	-3.44	-0.11	0.42	-2.33	-4.63
451	497	SLE-INV	Min	-0.70	-2.82	1.16	-5.68	-0.56	0.21	-3.41	-4.89
451	473	SLE-INV	Min	-0.32	-2.74	1.19	-6.09	-1.28	0.22	-3.52	-4.89
451	474	SLE-INV	Min	-0.30	-2.63	1.62	-5.65	-1.21	0.40	-3.52	-4.79
451	498	SLE-INV	Min	-0.68	-2.71	1.60	-5.25	-0.48	0.39	-3.41	-4.79
451	497	SLU-INV	Max	-0.70	-2.82	1.57	-5.05	-0.22	0.30	-3.15	-3.88
451	473	SLU-INV	Max	-0.32	-2.74	1.61	-5.63	-1.23	0.32	-3.31	-3.88
451	474	SLU-INV	Max	-0.30	-2.63	2.19	-5.21	-1.16	0.58	-3.31	-3.82
451	498	SLU-INV	Max	-0.68	-2.71	2.16	-4.64	-0.15	0.56	-3.15	-3.82
451	497	SLU-INV	Min	-0.94	-3.81	1.16	-15.64	-2.59	0.13	-8.90	-6.61
451	473	SLU-INV	Min	-0.43	-3.70	1.19	-15.90	-3.18	0.14	-8.98	-6.61
451	474	SLU-INV	Min	-0.40	-3.55	1.62	-14.77	-2.96	0.24	-8.98	-6.47
451	498	SLU-INV	Min	-0.91	-3.66	1.60	-14.50	-2.37	0.23	-8.90	-6.47
452	498	SLE-INV	Max	-0.62	-2.70	2.03	-3.45	-0.13	0.41	-3.78	-4.65
452	474	SLE-INV	Max	-0.30	-2.63	2.07	-3.86	-0.85	0.43	-3.99	-4.65
452	475	SLE-INV	Max	-0.26	-2.43	2.52	-3.32	-0.77	0.63	-3.99	-4.48
452	499	SLE-INV	Max	-0.58	-2.49	2.48	-2.92	-0.04	0.61	-3.78	-4.48
452	498	SLE-INV	Min	-0.62	-2.70	2.03	-5.25	-0.50	0.38	-5.53	-4.81
452	474	SLE-INV	Min	-0.30	-2.63	2.07	-5.64	-1.19	0.38	-5.72	-4.81
452	475	SLE-INV	Min	-0.26	-2.43	2.52	-4.87	-1.06	0.58	-5.72	-4.63
452	499	SLE-INV	Min	-0.58	-2.49	2.48	-4.49	-0.36	0.57	-5.53	-4.63
452	498	SLU-INV	Max	-0.62	-2.70	2.74	-4.65	-0.17	0.56	-5.11	-3.83
452	474	SLU-INV	Max	-0.30	-2.63	2.79	-5.21	-1.15	0.58	-5.38	-3.83
452	475	SLU-INV	Max	-0.26	-2.43	3.40	-4.49	-1.04	0.85	-5.38	-3.72
452	499	SLU-INV	Max	-0.58	-2.49	3.34	-3.95	-0.05	0.82	-5.11	-3.72
452	498	SLU-INV	Min	-0.84	-3.64	2.03	-14.47	-2.37	0.23	-14.48	-6.49
452	474	SLU-INV	Min	-0.41	-3.55	2.07	-14.76	-2.95	0.24	-14.61	-6.49
452	475	SLU-INV	Min	-0.35	-3.28	2.52	-12.78	-2.57	0.37	-14.61	-6.25
452	499	SLU-INV	Min	-0.79	-3.37	2.48	-12.49	-1.99	0.35	-14.48	-6.25
453	476	SLE-INV	Max	-0.23	-2.15	3.44	-2.57	-0.64	0.80	-5.56	-4.25
453	500	SLE-INV	Max	-0.45	-2.19	3.40	-2.21	0.07	0.77	-5.27	-4.25
453	499	SLE-INV	Max	-0.50	-2.48	2.94	-2.94	-0.06	0.60	-5.27	-4.50
453	475	SLE-INV	Max	-0.29	-2.44	2.99	-3.32	-0.75	0.63	-5.56	-4.50
453	476	SLE-INV	Min	-0.23	-2.15	3.44	-3.78	-0.86	0.75	-8.00	-4.39
453	500	SLE-INV	Min	-0.45	-2.19	3.40	-3.44	-0.18	0.72	-7.72	-4.39
453	499	SLE-INV	Min	-0.50	-2.48	2.94	-4.50	-0.38	0.56	-7.72	-4.65
453	475	SLE-INV	Min	-0.29	-2.44	2.99	-4.86	-1.05	0.59	-8.00	-4.65
453	476	SLU-INV	Max	-0.23	-2.15	4.65	-3.47	-0.86	1.08	-7.51	-3.55
453	500	SLU-INV	Max	-0.45	-2.19	4.59	-2.99	0.09	1.05	-7.11	-3.55
453	499	SLU-INV	Max	-0.50	-2.48	3.97	-3.97	-0.08	0.82	-7.11	-3.72
453	475	SLU-INV	Max	-0.29	-2.44	4.03	-4.48	-1.01	0.85	-7.51	-3.72
453	476	SLU-INV	Min	-0.31	-2.90	3.44	-9.95	-2.02	0.47	-20.45	-5.93
453	500	SLU-INV	Min	-0.60	-2.96	3.40	-9.70	-1.46	0.45	-20.26	-5.93
453	499	SLU-INV	Min	-0.68	-3.35	2.94	-12.47	-1.99	0.35	-20.26	-6.28
453	475	SLU-INV	Min	-0.39	-3.29	2.99	-12.72	-2.56	0.37	-20.45	-6.28
454	477	SLE-INV	Max	-0.20	-1.79	4.39	-1.61	-0.46	0.94	-7.12	-3.95
454	501	SLE-INV	Max	-0.31	-1.81	4.34	-1.31	0.20	0.91	-6.73	-3.95
454	500	SLE-INV	Max	-0.38	-2.18	3.86	-2.24	0.03	0.77	-6.73	-4.28
454	476	SLE-INV	Max	-0.27	-2.16	3.91	-2.57	-0.61	0.80	-7.12	-4.28
454	477	SLE-INV	Min	-0.20	-1.79	4.39	-2.39	-0.60	0.88	-10.26	-4.07
454	501	SLE-INV	Min	-0.31	-1.81	4.34	-2.09	0.04	0.86	-9.88	-4.07
454	500	SLE-INV	Min	-0.38	-2.18	3.86	-3.45	-0.21	0.72	-9.88	-4.42
454	476	SLE-INV	Min	-0.27	-2.16	3.91	-3.77	-0.84	0.75	-10.26	-4.42
454	477	SLU-INV	Max	-0.20	-1.79	5.92	-2.18	-0.62	1.27	-9.61	-3.34
454	501	SLU-INV	Max	-0.31	-1.81	5.86	-1.76	0.27	1.23	-9.08	-3.34
454	500	SLU-INV	Max	-0.38	-2.18	5.21	-3.02	0.05	1.04	-9.08	-3.57
454	476	SLU-INV	Max	-0.27	-2.16	5.27	-3.47	-0.82	1.08	-9.61	-3.57
454	477	SLU-INV	Min	-0.27	-2.41	4.39	-6.35	-1.31	0.59	-26.29	-5.50
454	501	SLU-INV	Min	-0.41	-2.44	4.34	-6.08	-0.78	0.57	-26.03	-5.50
454	500	SLU-INV	Min	-0.52	-2.94	3.86	-9.65	-1.46	0.45	-26.03	-5.97
454	476	SLU-INV	Min	-0.37	-2.91	3.91	-9.91	-2.00	0.47	-26.29	-5.97
455	478	SLE-INV	Max	-0.19	-1.35	5.29	-0.45	-0.24	1.03	-8.66	-3.57
455	502	SLE-INV	Max	-0.17	-1.35	5.26	-0.22	0.37	1.00	-8.16	-3.57
455	501	SLE-INV	Max	-0.26	-1.80	4.81	-1.35	0.16	0.91	-8.16	-3.99
455	477	SLE-INV	Max	-0.28	-1.80	4.85	-1.61	-0.43	0.94	-8.66	-3.99
455	478	SLE-INV	Min	-0.19	-1.35	5.29	-0.68	-0.27	0.97	-12.50	-3.67
455	502	SLE-INV	Min	-0.17	-1.35	5.26	-0.47	0.32	0.94	-12.02	-3.67
455	501	SLE-INV	Min	-0.26	-1.80	4.81	-2.12	0.00	0.86	-12.02	-4.11
455	477	SLE-INV	Min	-0.28	-1.80	4.85	-2.37	-0.57	0.89	-12.50	-4.11
455	478	SLU-INV	Max	-0.19	-1.35	7.14	-0.60	-0.33	1.39	-11.69	-3.04
455	502	SLU-INV	Max	-0.17	-1.35	7.10	-0.30	0.49	1.35	-11.01	-3.04
455	501	SLU-INV	Max	-0.26	-1.80	6.50	-1.83	0.21	1.23	-11.01	-3.35
455	477	SLU-INV	Max	-0.28	-1.80	6.54	-2.17	-0.58	1.27	-11.69	-3.35
455	478	SLU-INV	Min	-0.26	-1.83	5.29	-1.89	-0.42	0.64	-32.13	-4.95
455	502	SLU-INV	Min	-0.22	-1.82	5.26	-1.71	0.07	0.63	-31.78	-4.95
455	501	SLU-INV	Min	-0.35	-2.43	4.81	-6.07	-0.78	0.57	-31.78	-5.55
455	477	SLU-INV	Min	-0.38	-2.44	4.85	-6.24	-1.27	0.59	-32.13	-5.55
456	479	SLE-INV	Max	-0.20	-0.89	6.20	1.31	0.11	1.06	-10.17	-3.08
456	503	SLE-INV	Max	-0.08	-0.86	6.19	1.44	0.64	1.03	-9.55	-3.08
456	502	SLE-INV	Max	-0.18	-1.35	5.73	-0.28	0.31	1.00	-9.55	-3.61
456	478	SLE-INV	Max	-0.30	-1.37	5.74	-0.45	-0.20	1.03	-10.17	-3.61
456	479	SLU-INV	Min	-0.20	-0.89	6.20	0.92	0.02	1.00	-14.72	-3.17
456	503	SLU-INV	Min	-0.08	-0.86	6.19	1.04	0.56	0.97	-14.12	-3.17
456	502	SLU-INV	Min	-0.18	-1.35	5.73	-0.50	0.27	0.94	-14.12	-3.72
456	478	SLU-INV	Min	-0.30	-1.37	5.74	-0.67	-0.23	0.97	-14.72	-3.72
456	479	SLU-INV	Max	-0.20	-0.89	8.36	3.34	0.60	1.43	-13.73	-2.66
456	503	SLU-INV	Max	-0.08	-0.86	8.35	3.51	1.04	1.39	-12.89	-2.66
456	502	SLU-INV	Max	-0.18	-1.35	7.73	-0.38	0.42	1.35	-12.89	-3.07
456	478	SLU-INV	Max	-0.30	-1.37	7.74	-0.60	-0.27	1.39	-13.73	-3.07
456	479	SLU-INV	Min	-0.27	-1.20	6.20	1.24	0.02	0.71	-37.97	-4.27
456	503	SLU-INV	Min	-0.11	-1.17	6.19	1.40	0.76	0.67	-37.51	-4.27
456	502	SLU-INV	Min	-0.24	-1.82	5.73	-1.63	0.06	0.61	-37.51	-5.02
456	478	SLU-INV	Min	-0.40	-1.86	5.74	-1.80	-0.38	0.65	-37.97	-5.02
457	480	SLE-INV	Max	-0.24	-0.44	7.04	3.62	0.57	0.99	-11.65	-2.49
457	504	SLE-INV	Max	-0.02	-0.39	7.03	3.60	1.02	0.96	-10.89	-2.49
457	503	SLE-INV	Max	-0.11	-0.87	6.62	1.37	0.58	1.03	-10.89	-3.14
457	479	SLE-INV	Max	-0.34	-0.92	6.63	1.35	0.16	1.06	-11.65	-3.14
457	480	SLE-INV	Min	-0.24	-0.44	7.04	2.48	0.33	0.93	-16.91	-2.55
457	504	SLE-INV	Min	-0.02	-0.39	7.03	2.46	0.79	0.91	-16.18	-2.55
457	503	SLE-INV	Min	-0.11	-0.87	6.62	0.95	0.49	0.97	-16.18	-3.23
457	479	SLE-INV	Min	-0.34	-0.92	6.63	0.92	0.07	1.00	-16.91	-3.23
457	480	SLU-INV	Max	-0.24	-0.44	9.51	9.46	1.83	1.34	-15.73	-2.17
457	504	SLU-INV	Max	-0.02	-0.39	9.50	9.46	2.21	1.30	-14.70	-2.17
457	503	SLU-INV	Max	-0.11	-0.87	8.93	3.54	1.03	1.39	-14.70	-2.69
457	479	SLU-INV	Max	-0.34	-0.92	8.95	3.53	0.66	1.43	-15.73	-2.69
457	480	SLU-INV	Min	-0.33	-0.59	7.04	3.35	0.44	0.65	-43.80	-3.44
457	504	SLU-INV	Min	-0.02	-0.53	7.03	3.32	1.06	0.64	-43.22	-3.44
457	503	SLU-INV	Min	-0.15	-1.17	6.62	1.28	0.66	0.69	-43.22	-4.35
457	479	SLU-INV	Min	-0.46	-1.24	6.63	1.25	0.9			



**2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo**

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 164 di 180
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458	505	SLE-INV	Max	-0.01	-0.05	7.81	6.04	1.43	0.79	-12.17	-1.76
458	504	SLE-INV	Max	-0.08	-0.40	7.49	3.53	0.95	0.96	-12.17	-2.56
458	480	SLE-INV	Max	-0.36	-0.46	7.47	3.65	0.63	0.99	-13.10	-2.56
458	481	SLE-INV	Min	-0.29	-0.11	7.80	4.24	0.68	0.78	-19.07	-1.80
458	505	SLE-INV	Min	-0.01	-0.05	7.81	4.04	1.04	0.74	-18.18	-1.80
458	504	SLE-INV	Min	-0.08	-0.40	7.49	2.35	0.71	0.90	-18.18	-2.62
458	480	SLE-INV	Min	-0.36	-0.46	7.47	2.48	0.39	0.94	-19.07	-2.62
458	481	SLU-INV	Max	-0.29	-0.11	10.53	16.34	3.16	1.10	-17.68	-1.57
458	505	SLU-INV	Max	-0.01	-0.05	10.55	16.28	3.45	1.06	-16.43	-1.57
458	504	SLU-INV	Max	-0.08	-0.40	10.11	9.58	2.19	1.30	-16.43	-2.22
458	480	SLU-INV	Max	-0.36	-0.46	10.09	9.62	1.90	1.34	-17.68	-2.22
458	481	SLU-INV	Min	-0.39	-0.15	7.80	5.72	0.91	0.60	-49.63	-2.43
458	505	SLU-INV	Min	-0.01	-0.07	7.81	5.45	1.40	0.52	-48.89	-2.43
458	504	SLU-INV	Min	-0.11	-0.55	7.49	3.17	0.95	0.61	-48.89	-3.54
458	480	SLU-INV	Min	-0.48	-0.62	7.47	3.35	0.52	0.68	-49.63	-3.54
459	482	SLE-INV	Max	-0.33	0.03	9.04	9.10	1.68	0.50	-14.51	-0.90
459	506	SLE-INV	Max	0.02	0.10	9.01	8.70	1.92	0.48	-13.40	-0.90
459	505	SLE-INV	Max	-0.01	-0.05	7.94	5.92	1.34	0.80	-13.40	-1.84
459	481	SLE-INV	Max	-0.37	-0.13	7.96	6.25	1.16	0.81	-14.51	-1.84
459	482	SLE-INV	Min	-0.33	0.03	9.04	6.17	1.08	0.47	-21.20	-0.91
459	506	SLE-INV	Min	0.02	0.10	9.01	5.75	1.33	0.46	-20.13	-0.91
459	505	SLE-INV	Min	-0.01	-0.05	7.94	3.89	0.94	0.76	-20.13	-1.89
459	481	SLE-INV	Min	-0.37	-0.13	7.96	4.24	0.75	0.77	-21.20	-1.89
459	482	SLE-INV	Max	-0.33	0.04	12.20	24.08	4.73	0.67	-19.58	-0.82
459	506	SLU-INV	Max	0.03	0.14	12.17	23.81	4.93	0.65	-18.09	-0.82
459	505	SLU-INV	Max	-0.01	-0.05	10.71	16.33	3.42	1.07	-18.09	-1.62
459	481	SLU-INV	Max	-0.37	-0.13	10.75	16.57	3.24	1.10	-19.58	-1.62
459	482	SLU-INV	Min	-0.45	0.03	9.04	8.34	1.46	0.34	-55.45	-1.23
459	506	SLU-INV	Min	0.02	0.10	9.01	7.76	1.79	0.35	-54.55	-1.23
459	505	SLU-INV	Min	-0.01	-0.07	7.94	5.25	1.27	0.57	-54.55	-2.55
459	481	SLU-INV	Min	-0.49	-0.17	7.96	5.72	1.01	0.56	-55.45	-2.55
460	483	SLE-INV	Max	-0.36	-0.07	6.39	12.26	2.34	0.01	-15.87	0.14
460	507	SLE-INV	Max	0.09	0.02	6.34	11.61	2.43	0.00	-14.56	0.14
460	506	SLE-INV	Max	0.11	0.12	11.37	8.56	1.81	0.48	-14.56	-0.99
460	482	SLE-INV	Max	-0.33	0.03	11.42	9.13	1.77	0.49	-15.87	-0.99
460	483	SLE-INV	Min	-0.36	-0.07	6.39	8.28	1.54	0.01	-23.29	0.13
460	507	SLE-INV	Min	0.09	0.02	6.34	7.60	1.64	0.00	-22.02	0.13
460	506	SLE-INV	Min	0.11	0.12	11.37	5.57	1.20	0.46	-22.02	-1.02
460	482	SLE-INV	Min	-0.33	0.03	11.42	6.17	1.77	0.47	-23.29	-1.02
460	483	SLE-INV	Max	-0.36	-0.07	8.62	32.57	6.43	0.02	-21.42	0.19
460	507	SLU-INV	Max	0.13	0.03	8.56	32.10	6.50	0.00	-19.56	0.19
460	506	SLU-INV	Max	0.15	0.16	15.35	23.85	4.88	0.65	-21.66	-0.89
460	482	SLU-INV	Max	-0.33	0.04	15.41	24.29	4.83	0.67	-21.42	-0.89
460	483	SLU-INV	Min	-0.48	-0.10	6.39	11.18	2.08	0.02	-61.25	0.10
460	507	SLU-INV	Min	0.09	0.02	6.34	10.26	2.21	-0.02	-60.14	0.10
460	506	SLU-INV	Min	0.11	0.12	11.37	7.52	1.63	0.33	-60.14	-1.37
460	482	SLU-INV	Min	-0.45	0.03	11.42	8.32	1.58	0.37	-61.25	-1.37
461	508	SLE-INV	Max	0.82	0.16	-6.17	10.90	2.28	0.00	20.95	0.13
461	484	SLE-INV	Max	0.10	0.02	-6.33	11.53	2.20	-0.01	22.14	0.13
461	485	SLE-INV	Max	0.15	0.28	-11.39	8.76	1.69	-0.42	22.14	-0.85
461	509	SLE-INV	Max	0.87	0.42	-11.23	8.21	1.72	-0.42	20.95	-0.85
461	508	SLE-INV	Min	0.82	0.16	-6.17	6.85	1.48	0.00	13.42	0.12
461	484	SLE-INV	Min	0.10	0.02	-6.33	7.52	1.40	-0.01	14.64	0.12
461	485	SLE-INV	Min	0.15	0.28	-11.39	5.70	1.07	-0.45	14.64	-0.87
461	509	SLE-INV	Min	0.87	0.42	-11.23	5.12	1.10	-0.44	13.42	-0.87
461	508	SLU-INV	Max	1.10	0.22	-6.17	31.61	6.40	0.00	59.43	0.18
461	484	SLU-INV	Max	0.13	0.03	-6.33	32.04	6.33	0.00	60.48	0.18
461	485	SLU-INV	Max	0.20	0.38	-11.39	24.41	4.82	-0.28	60.48	-0.78
461	509	SLU-INV	Max	1.17	0.57	-11.23	24.03	4.86	-0.29	59.43	-0.78
461	508	SLU-INV	Min	0.82	0.16	-8.33	9.25	2.00	-0.01	18.12	0.09
461	484	SLU-INV	Min	0.10	0.02	-8.54	10.15	1.88	-0.01	19.76	0.09
461	485	SLU-INV	Min	0.15	0.28	-15.37	7.69	1.45	-0.60	19.76	-1.17
461	509	SLU-INV	Min	0.87	0.42	-15.16	6.91	1.49	-0.59	18.12	-1.17
462	509	SLE-INV	Max	0.65	0.38	-9.03	8.41	1.83	-0.39	19.37	-0.77
462	485	SLE-INV	Max	0.06	0.26	-9.06	8.81	1.63	-0.44	20.38	-0.77
462	486	SLE-INV	Max	0.05	0.20	-7.96	6.26	1.19	-0.72	20.38	-1.59
462	510	SLE-INV	Max	0.64	0.32	-7.93	5.93	1.36	-0.67	19.37	-1.59
462	509	SLE-INV	Min	0.65	0.38	-9.03	5.35	1.22	-0.42	12.53	-0.78
462	485	SLE-INV	Min	0.06	0.26	-9.06	5.79	1.02	-0.46	13.56	-0.78
462	486	SLE-INV	Min	0.05	0.20	-7.96	4.10	0.74	-0.75	13.56	-1.62
462	510	SLE-INV	Min	0.64	0.32	-7.93	3.74	0.91	-0.72	12.53	-1.62
462	509	SLU-INV	Max	0.88	0.52	-9.03	24.07	4.92	-0.22	54.38	-0.72
462	485	SLU-INV	Max	0.08	0.35	-9.06	24.29	4.74	-0.35	55.26	-0.72
462	486	SLU-INV	Max	0.06	0.27	-7.96	17.33	3.20	-0.52	55.26	-1.44
462	510	SLU-INV	Max	0.87	0.42	-7.93	17.13	3.65	-0.39	54.38	-1.44
462	509	SLU-INV	Min	0.65	0.38	-12.19	7.23	1.65	-0.57	16.91	-1.05
462	485	SLU-INV	Min	0.06	0.26	-12.23	7.81	1.37	-0.62	18.30	-1.05
462	486	SLU-INV	Min	0.05	0.20	-10.75	5.53	1.00	-1.02	18.30	-2.19
462	510	SLU-INV	Min	0.64	0.32	-10.70	5.05	1.22	-0.97	16.91	-2.19
463	510	SLE-INV	Max	0.57	0.31	-7.82	6.08	1.45	-0.68	17.73	-1.52
463	486	SLE-INV	Max	0.03	0.20	-7.89	6.31	1.14	-0.71	18.57	-1.52
463	487	SLE-INV	Max	-0.04	-0.17	-7.65	3.97	0.73	-0.88	18.57	-2.21
463	511	SLE-INV	Max	0.50	-0.06	-7.58	3.81	1.00	-0.85	17.73	-2.21
463	510	SLE-INV	Min	0.57	0.31	-7.82	3.93	1.01	-0.72	11.56	-1.54
463	486	SLE-INV	Min	0.03	0.20	-7.89	4.17	0.70	-0.75	12.42	-1.54
463	487	SLE-INV	Min	-0.04	-0.17	-7.65	2.62	0.44	-0.93	12.42	-2.26
463	511	SLE-INV	Min	0.50	-0.06	-7.58	2.44	0.72	-0.90	11.56	-2.26
463	510	SLU-INV	Max	0.77	0.41	-7.82	17.05	3.69	-0.44	49.30	-1.38
463	486	SLU-INV	Max	0.04	0.27	-7.89	17.22	3.42	-0.47	50.01	-1.38
463	487	SLU-INV	Max	-0.04	-0.17	-7.65	10.92	2.20	-0.62	50.01	-1.97
463	511	SLU-INV	Max	0.67	-0.06	-7.58	10.77	2.45	-0.59	49.30	-1.97
463	510	SLU-INV	Min	0.57	0.31	-10.56	5.31	1.36	-0.97	35.60	-2.09
463	486	SLU-INV	Min	0.03	0.20	-10.65	5.63	0.94	-1.02	36.77	-2.09
463	487	SLU-INV	Min	-0.05	-0.23	-10.33	3.53	0.60	-1.26	36.77	-3.05
463	511	SLU-INV	Min	0.50	-0.08	-10.23	3.30	0.97	-1.22	35.60	-3.05
464	511	SLE-INV	Max	0.42	-0.08	-7.17	3.95	1.07	-0.84	16.01	-2.15
464	487	SLE-INV	Max	0.02	-0.16	-7.22	3.99	0.69	-0.89	16.71	-2.15
464	488	SLE-INV	Max	-0.08	-0.63	-6.79	1.89	0.34	-0.96	16.71	-2.73
464	512	SLE-INV	Max	0.33	-0.55	-6.74	1.90	0.70	-0.90	16.01	-2.73
464	511	SLE-INV	Min	0.42	-0.08	-7.17	2.61	0.80	-0.89	10.51	-2.19
464	487	SLE-INV	Min	0.02	-0.16	-7.22	2.67	0.40	-0.94	11.23	-2.19
464	488	SLE-INV	Min	-0.08	-0.63	-6.79	1.26	0.19	-1.02	11.23	-2.79
464	512	SLE-INV	Min	0.33	-0.55	-6.74	1.26	0.56	-0.97	10.51	-2.79
464	511	SLU-INV	Max	0.57	-0.08	-7.17	10.79	2.48	-0.55	44.15	-1.94
464	487	SLU-INV	Max	0.02	-0.16	-7.22	10.74	2.14	-0.65	44.73	-1.94
464	488	SLU-INV	Max	-0.08	-0.63	-6.79	5.10	1.12	-0.66	44.73	-2.41
464	512	SLU-INV	Max	0.44	-0.55	-6.74	5.17	1.45	-0.56	44.15	-2.41
464	511	SLU-INV	Min	0.42	-0.10	-9.68	3.53	1.08	-1.21	14.19	-2.96
464	487	SLU-INV	Min	0.02	-0.21	-9.75	3.60	0.54	-1.27	15.17	-2.96
464	488	SLU-INV	Min	-0.10	-0.65	-9.16	1.71	0.26	-1.37	15.17	-3.

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 165 di 180
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465	512	SLE-INV	Max	0.25	-0.56	-6.30	1.99	0.76	-0.90	14.23	-2.68
465	488	SLE-INV	Max	-0.04	-0.62	-6.39	1.92	0.30	-0.96	14.81	-2.68
465	489	SLE-INV	Max	-0.14	-1.11	-6.00	0.06	0.00	-0.96	14.81	-3.15
465	513	SLE-INV	Max	0.15	-1.06	-5.90	0.18	0.44	-0.90	14.23	-3.15
465	512	SLE-INV	Min	0.25	-0.56	-6.30	1.38	0.63	-0.97	9.40	-2.74
465	488	SLE-INV	Min	-0.04	-0.62	-6.39	1.31	0.15	-1.02	10.00	-2.74
465	489	SLE-INV	Min	-0.14	-1.11	-6.00	0.06	-0.03	-1.02	10.00	-3.23
465	513	SLE-INV	Min	0.15	-1.06	-5.90	0.17	0.42	-0.97	9.40	-3.23
465	512	SLU-INV	Max	0.34	-0.56	-6.30	5.08	1.47	-0.57	38.96	-2.37
465	488	SLU-INV	Max	-0.04	-0.62	-6.39	5.04	1.07	-0.64	39.42	-2.37
465	489	SLU-INV	Max	-0.14	-1.11	-6.00	0.08	0.15	-0.66	39.42	-2.76
465	513	SLU-INV	Max	0.20	-1.06	-5.90	0.24	0.60	-0.59	38.96	-2.76
465	512	SLU-INV	Min	0.25	-0.76	-8.50	1.87	0.84	-1.30	12.69	-3.69
465	488	SLU-INV	Min	-0.05	-0.84	-8.63	1.77	0.21	-1.37	13.50	-3.69
465	489	SLU-INV	Min	-0.19	-1.50	-8.09	0.06	-0.04	-1.37	13.50	-4.36
465	513	SLU-INV	Min	0.15	-1.42	-7.97	0.12	0.54	-1.30	12.69	-4.36
466	513	SLE-INV	Max	-0.03	-1.09	-5.44	0.27	0.49	-0.90	12.40	-3.11
466	489	SLE-INV	Max	-0.11	-1.11	-5.57	0.09	-0.03	-0.96	12.87	-3.11
466	490	SLE-INV	Max	-0.20	-1.53	-5.10	-1.00	-0.20	-0.89	12.87	-3.50
466	514	SLE-INV	Max	-0.12	-1.52	-4.97	-0.78	0.31	-0.83	12.40	-3.50
466	513	SLE-INV	Min	-0.03	-1.09	-5.44	0.25	0.47	-0.96	8.23	-3.18
466	489	SLE-INV	Min	-0.11	-1.11	-5.57	0.07	-0.06	-1.02	8.72	-3.18
466	490	SLE-INV	Min	-0.20	-1.53	-5.10	-1.55	-0.28	-0.95	8.72	-3.59
466	514	SLE-INV	Min	-0.12	-1.52	-4.97	-1.33	0.22	-0.89	8.23	-3.59
466	513	SLU-INV	Max	-0.03	-1.09	-5.44	0.37	0.66	-0.58	33.73	-2.74
466	489	SLU-INV	Max	-0.11	-1.11	-5.57	0.12	0.11	-0.66	34.09	-2.74
466	490	SLU-INV	Max	-0.20	-1.53	-5.10	-1.35	-0.28	-0.58	34.09	-3.04
466	514	SLU-INV	Max	-0.12	-1.52	-4.97	-1.06	0.41	-0.50	33.73	-3.04
466	513	SLU-INV	Min	-0.05	-1.47	-7.34	0.15	0.56	-1.30	11.11	-4.30
466	489	SLU-INV	Min	-0.15	-1.50	-7.51	-0.06	-0.08	-1.38	11.77	-4.30
466	490	SLU-INV	Min	-0.27	-2.07	-6.88	-4.36	-0.66	-1.29	11.77	-4.84
466	514	SLU-INV	Min	-0.16	-2.05	-6.71	-4.15	-0.22	-1.21	11.11	-4.84
467	514	SLE-INV	Max	-0.34	-1.56	-4.53	-0.73	0.35	-0.83	10.52	-3.46
467	490	SLE-INV	Max	-0.23	-1.54	-4.66	-0.98	-0.23	-0.89	10.89	-3.46
467	491	SLE-INV	Max	-0.30	-1.88	-4.23	-1.91	-0.35	-0.79	10.89	-3.77
467	515	SLE-INV	Max	-0.41	-1.90	-4.10	-1.62	0.22	-0.73	10.52	-3.77
467	514	SLE-INV	Min	-0.34	-1.56	-4.53	-1.29	0.26	-0.89	7.01	-3.55
467	490	SLE-INV	Min	-0.23	-1.54	-4.66	-1.54	-0.31	-0.95	7.40	-3.55
467	491	SLE-INV	Min	-0.30	-1.88	-4.23	-2.91	-0.51	-0.85	7.40	-3.87
467	515	SLE-INV	Min	-0.41	-1.90	-4.10	-2.64	0.04	-0.79	7.01	-3.87
467	514	SLU-INV	Max	-0.34	-1.56	-4.53	-0.98	0.47	-0.51	28.46	-3.01
467	490	SLU-INV	Max	-0.23	-1.54	-4.66	-1.32	-0.31	-0.58	28.74	-3.01
467	491	SLU-INV	Max	-0.30	-1.88	-4.23	-2.58	-0.47	-0.52	28.74	-3.25
467	515	SLU-INV	Max	-0.41	-1.90	-4.10	-2.19	0.29	-0.43	28.46	-3.25
467	514	SLU-INV	Min	-0.46	-2.11	-6.12	-4.20	-0.21	-1.21	9.46	-4.79
467	490	SLU-INV	Min	-0.31	-2.08	-6.29	-4.39	-0.69	-1.29	9.99	-4.79
467	491	SLU-INV	Min	-0.40	-2.53	-5.71	-8.02	-1.33	-1.14	9.99	-5.23
467	515	SLU-INV	Min	-0.55	-2.56	-5.54	-7.82	-0.85	-1.06	9.46	-5.23
468	515	SLE-INV	Max	-0.65	-1.95	-3.67	-1.58	0.25	-0.73	8.60	-3.74
468	491	SLE-INV	Max	-0.35	-1.89	-3.80	-1.90	-0.37	-0.79	8.89	-3.74
468	492	SLE-INV	Max	-0.40	-2.15	-3.35	-2.66	-0.46	-0.65	8.89	-3.98
468	516	SLE-INV	Max	-0.71	-2.21	-3.22	-2.32	0.15	-0.60	8.60	-3.98
468	515	SLE-INV	Min	-0.65	-1.95	-3.67	-2.60	0.07	-0.79	5.75	-3.84
468	491	SLE-INV	Min	-0.35	-1.89	-3.80	-2.91	-0.53	-0.84	6.06	-3.84
468	492	SLE-INV	Min	-0.40	-2.15	-3.35	-4.03	-0.69	-0.70	6.06	-4.09
468	516	SLE-INV	Min	-0.71	-2.21	-3.22	-3.70	-0.10	-0.65	5.75	-4.09
468	515	SLU-INV	Max	-0.65	-1.95	-3.67	-2.14	0.34	-0.43	23.17	-3.24
468	491	SLU-INV	Max	-0.35	-1.89	-3.80	-2.86	-0.73	-0.51	23.50	-3.24
468	492	SLU-INV	Max	-0.40	-2.15	-3.35	-3.59	-0.62	-0.40	23.38	-3.41
468	516	SLU-INV	Max	-0.71	-2.21	-3.22	-3.13	0.20	-0.33	23.17	-3.41
468	515	SLU-INV	Min	-0.88	-2.63	-4.95	-7.82	-0.84	-1.07	7.76	-5.19
468	491	SLU-INV	Min	-0.47	-2.55	-5.13	-8.08	-1.35	-1.14	8.18	-5.19
468	492	SLU-INV	Min	-0.54	-2.90	-4.53	-11.03	-1.86	-0.95	8.18	-5.53
468	516	SLU-INV	Min	-0.95	-2.99	-4.35	-10.78	-1.35	-0.88	7.76	-5.53
469	516	SLE-INV	Max	-0.92	-2.26	-2.82	-2.30	0.17	-0.60	6.65	-3.96
469	492	SLE-INV	Max	-0.48	-2.17	-2.92	-2.65	-0.48	-0.65	6.87	-3.96
469	493	SLE-INV	Max	-0.51	-2.35	-2.51	-3.24	-0.54	-0.50	6.87	-4.14
469	517	SLE-INV	Max	-0.96	-2.44	-2.41	-2.87	0.09	-0.45	6.65	-4.14
469	516	SLE-INV	Min	-0.92	-2.26	-2.82	-3.69	-0.08	-0.65	4.46	-4.07
469	492	SLE-INV	Min	-0.48	-2.17	-2.92	-4.02	-0.71	-0.70	4.69	-4.07
469	493	SLE-INV	Min	-0.51	-2.35	-2.51	-4.89	-0.82	-0.54	4.69	-4.26
469	517	SLE-INV	Min	-0.96	-2.44	-2.41	-4.54	-0.21	-0.49	4.46	-4.26
469	516	SLU-INV	Max	-0.92	-2.26	-2.82	-3.10	0.23	-0.33	17.85	-3.40
469	492	SLU-INV	Max	-0.48	-2.17	-2.92	-3.58	-0.64	-0.40	18.01	-3.40
469	493	SLU-INV	Max	-0.51	-2.35	-2.51	-4.37	-0.31	-0.31	18.01	-3.53
469	517	SLU-INV	Max	-0.96	-2.44	-2.41	-3.87	0.13	-0.24	17.85	-3.53
469	516	SLU-INV	Min	-1.25	-3.04	-3.80	-10.81	-1.35	-0.88	6.02	-5.49
469	492	SLU-INV	Min	-0.64	-2.92	-3.95	-11.05	-1.88	-0.94	6.33	-5.49
469	493	SLU-INV	Min	-0.69	-3.17	-3.39	-13.32	-2.26	-0.73	6.33	-5.75
469	517	SLU-INV	Min	-1.30	-3.29	-3.25	-13.09	-1.73	-0.67	6.02	-5.75
470	517	SLE-INV	Max	-1.14	-2.48	-2.01	-2.85	0.11	-0.46	4.67	-4.12
470	493	SLE-INV	Max	-0.58	-2.36	-2.10	-3.24	-0.56	-0.49	4.82	-4.12
470	494	SLE-INV	Max	-0.60	-2.49	-1.68	-3.65	-0.60	-0.33	4.82	-4.25
470	518	SLE-INV	Max	-1.17	-2.60	-1.60	-3.26	0.06	-0.29	4.67	-4.25
470	517	SLE-INV	Min	-1.14	-2.48	-2.01	-4.53	-0.19	-0.50	3.14	-4.24
470	493	SLE-INV	Min	-0.58	-2.36	-2.10	-4.89	-0.84	-0.53	3.30	-4.24
470	494	SLE-INV	Min	-0.60	-2.49	-1.68	-5.50	-0.92	-0.36	3.30	-4.37
470	518	SLE-INV	Min	-1.17	-2.60	-1.60	-5.13	-0.28	-0.32	3.14	-4.37
470	517	SLU-INV	Max	-1.14	-2.48	-2.01	-3.85	0.15	-0.25	12.53	-3.52
470	493	SLU-INV	Max	-0.58	-2.36	-2.10	-4.37	-0.75	-0.30	12.63	-3.52
470	494	SLU-INV	Max	-0.60	-2.49	-1.68	-4.93	-0.81	-0.20	12.63	-3.61
470	518	SLU-INV	Max	-1.17	-2.60	-1.60	-4.40	0.08	-0.15	12.53	-3.61
470	517	SLU-INV	Min	-1.54	-3.34	-2.72	-13.10	-1.73	-0.67	4.24	-5.73
470	493	SLU-INV	Min	-0.78	-3.19	-2.83	-13.36	-2.27	-0.72	4.45	-5.73
470	494	SLU-INV	Min	-0.81	-3.36	-2.27	-14.95	-2.54	-0.48	4.45	-5.90
470	518	SLU-INV	Min	-1.58	-3.52	-2.16	-14.69	-1.99	-0.44	4.24	-5.90
471	518	SLE-INV	Max	-1.29	-2.63	-1.22	-3.25	0.07	-0.30	2.69	-4.24
471	494	SLE-INV	Max	-0.65	-2.50	-1.27	-3.65	-0.61	-0.32	2.77	-4.24
471	495	SLE-INV	Max	-0.67	-2.57	-0.88	-3.89	-0.64	-0.16	2.77	-4.31
471	519	SLE-INV	Max	-1.30	-2.70	-0.83	-3.48	0.04	-0.13	2.69	-4.31
471	518	SLE-INV	Min	-1.29	-2.63	-1.22	-5.13	-0.27	-0.33	1.81	-4.36
471	494	SLE-INV	Min	-0.65	-2.50	-1.27	-5.50	-0.93	-0.35	1.89	-4.36
471	495	SLE-INV	Min	-0.67	-2.57	-0.88	-5.85	-0.97	-0.17	1.89	-4.43
471	519	SLE-INV	Min	-1.30	-2.70	-0.83	-5.47	-0.32	-0.15	1.81	-4.43
471	518	SLU-INV	Max	-1.29	-2.63	-1.22	-4.39	0.09	-0.15	7.19	-3.60
471	494	SLU-INV	Max	-0.65	-2.50	-1.27	-4.93	-0.82	-0.19	7.25	-3.60
471	495	SLU-INV	Max	-0.67	-2.57	-0.88	-5.25	-0.86	-0.10	7.25	-3.65
471	519	SLU-INV	Max	-1.30	-2.70	-0.83	-4.70	0.05	-0.07	7.19	-3.65
471	518	SLU-INV	Min	-1.74	-3.55	-1.65	-14.71	-1.99	-0.45	2.44	-5.89
471	494	SLU-INV	Min	-0.88	-3.38	-1.71	-14.95	-2.55	-0.47	2.56	-5.89
471	495	SLU-INV	Min	-0.90	-3.47	-1.18	-15.87	-2.70	-0.22	2.56	-5.99

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di			
L0703	211	E	16	016800	REL	01	A	Pag. 166 di 180			
471	519	SLU-INV	Min	-1.76	-3.64	-1.12	-15.63	-2.14	-0.20	2.44	-5.99
472	519	SLE-INV	Max	-1.36	-2.71	-0.46	-3.48	0.04	-0.14	0.69	-4.30
472	495	SLE-INV	Max	-0.69	-2.57	-0.47	-3.89	-0.64	-0.15	0.71	-4.30
472	496	SLE-INV	Max	-0.69	-2.59	-0.07	-3.95	-0.65	0.03	0.71	-4.32
472	520	SLE-INV	Max	-1.37	-2.72	-0.06	-3.54	0.04	0.03	0.69	-4.32
472	519	SLE-INV	Min	-1.36	-2.71	-0.46	-5.46	-0.31	-0.15	0.46	-4.43
472	495	SLE-INV	Min	-0.69	-2.57	-0.47	-5.85	-0.98	-0.16	0.49	-4.43
472	496	SLE-INV	Min	-0.69	-2.59	-0.07	-5.94	-0.99	0.03	0.49	-4.45
472	520	SLE-INV	Min	-1.37	-2.72	-0.06	-5.55	-0.33	0.03	0.46	-4.45
472	519	SLE-INV	Max	-1.36	-2.71	-0.46	-4.69	0.06	-0.08	1.85	-3.65
472	495	SLE-INV	Max	-0.69	-2.57	-0.47	-5.25	-0.86	-0.09	1.86	-3.65
472	496	SLE-INV	Max	-0.69	-2.59	-0.07	-5.33	-0.87	0.04	1.86	-3.66
472	520	SLE-INV	Max	-1.37	-2.72	-0.06	-4.77	0.05	0.05	1.85	-3.66
472	519	SLE-INV	Min	-1.84	-3.66	-0.62	-15.62	-2.14	-0.21	0.62	-5.98
472	495	SLE-INV	Min	-0.93	-3.47	-0.63	-15.88	-2.70	-0.21	0.66	-5.98
472	496	SLE-INV	Min	-0.93	-3.50	-0.09	-16.12	-2.74	0.01	0.66	-6.01
472	520	SLE-INV	Min	-1.84	-3.68	-0.08	-15.86	-2.18	0.02	0.62	-6.01
473	520	SLE-INV	Max	-1.35	-2.72	0.31	-3.54	0.03	0.03	-0.88	-4.32
473	496	SLE-INV	Max	-0.69	-2.59	0.34	-3.95	-0.65	0.04	-0.93	-4.32
473	497	SLE-INV	Max	-0.68	-2.56	0.72	-3.83	-0.63	0.22	-0.93	-4.29
473	521	SLE-INV	Max	-1.35	-2.69	0.70	-3.42	0.05	0.21	-0.88	-4.29
473	520	SLE-INV	Min	-1.35	-2.72	0.31	-5.55	-0.33	0.02	-1.31	-4.45
473	496	SLE-INV	Min	-0.69	-2.59	0.34	-5.93	-0.99	0.04	-1.35	-4.45
473	497	SLE-INV	Min	-0.68	-2.56	0.72	-5.76	-0.97	0.20	-1.35	-4.41
473	521	SLE-INV	Min	-1.35	-2.69	0.70	-5.39	-0.30	0.19	-1.31	-4.41
473	520	SLE-INV	Max	-1.35	-2.72	0.42	-4.77	0.05	0.04	-1.19	-3.66
473	496	SLE-INV	Max	-0.69	-2.59	0.46	-5.33	-0.87	0.05	-1.25	-3.66
473	497	SLE-INV	Max	-0.68	-2.56	0.98	-5.17	-0.86	0.30	-1.25	-3.64
473	521	SLE-INV	Max	-1.35	-2.69	0.95	-4.62	0.07	0.20	-1.19	-3.64
473	520	SLE-INV	Min	-1.83	-3.67	0.31	-15.86	-2.18	0.01	-3.49	-6.01
473	496	SLE-INV	Min	-0.93	-3.50	0.34	-16.10	-2.74	0.03	-3.52	-6.01
473	497	SLE-INV	Min	-0.92	-3.45	0.72	-15.66	-2.67	0.12	-3.52	-5.96
473	521	SLE-INV	Min	-1.82	-3.63	0.70	-15.41	-2.11	0.10	-3.49	-5.96
474	521	SLE-INV	Max	-1.27	-2.67	1.07	-3.42	0.04	0.21	-2.23	-4.29
474	497	SLE-INV	Max	-0.65	-2.55	1.13	-3.83	-0.63	0.23	-2.33	-4.29
474	498	SLE-INV	Max	-0.63	-2.46	1.55	-3.54	-0.60	0.41	-2.33	-4.21
474	522	SLE-INV	Max	-1.25	-2.59	1.49	-3.14	0.08	0.39	-2.23	-4.21
474	521	SLE-INV	Min	-1.27	-2.67	1.07	-5.38	-0.31	0.19	-3.31	-4.42
474	497	SLE-INV	Min	-0.65	-2.55	1.13	-5.76	-0.96	0.21	-3.41	-4.42
474	498	SLE-INV	Min	-0.63	-2.46	1.55	-5.33	-0.90	0.38	-3.41	-4.33
474	522	SLE-INV	Min	-1.25	-2.59	1.49	-4.96	-0.25	0.36	-3.41	-4.33
474	521	SLE-INV	Max	-1.27	-2.67	1.44	-4.62	0.06	0.28	-3.00	-3.64
474	497	SLE-INV	Max	-0.65	-2.55	1.52	-5.17	-0.85	0.31	-3.15	-3.64
474	498	SLE-INV	Max	-0.63	-2.46	2.10	-4.77	-0.81	0.56	-3.15	-3.58
474	522	SLE-INV	Max	-1.25	-2.59	2.01	-4.24	0.11	0.52	-3.00	-3.58
474	521	SLE-INV	Min	-1.71	-3.61	1.07	-15.39	-2.10	0.09	-8.83	-5.97
474	497	SLE-INV	Min	-0.87	-3.44	1.13	-15.65	-2.66	0.12	-8.91	-5.97
474	498	SLE-INV	Min	-0.85	-3.32	1.55	-14.53	-2.47	0.23	-8.91	-5.85
474	522	SLE-INV	Min	-1.69	-3.49	1.49	-14.26	-1.92	0.19	-8.83	-5.85
475	522	SLE-INV	Max	-1.10	-2.55	1.89	-3.15	0.07	0.38	-3.60	-4.22
475	498	SLE-INV	Max	-0.57	-2.45	1.98	-3.53	-0.59	0.42	-3.78	-4.22
475	499	SLE-INV	Max	-0.54	-2.29	2.40	-3.02	-0.53	0.60	-3.78	-4.07
475	523	SLE-INV	Max	-1.07	-2.40	2.31	-2.65	0.13	0.56	-3.60	-4.07
475	522	SLE-INV	Min	-1.10	-2.55	1.89	-4.96	-0.26	0.35	-5.36	-4.35
475	499	SLE-INV	Min	-0.57	-2.45	1.98	-5.32	-0.89	0.39	-5.54	-4.35
475	498	SLE-INV	Min	-0.54	-2.29	2.40	-4.58	-0.79	0.56	-5.54	-4.19
475	523	SLE-INV	Min	-1.07	-2.40	2.31	-4.23	-0.15	0.52	-5.36	-4.19
475	522	SLE-INV	Max	-1.10	-2.55	2.56	-4.55	-0.25	0.51	-4.85	-3.59
475	498	SLE-INV	Max	-0.57	-2.45	2.68	-4.77	-0.79	0.57	-5.11	-3.59
475	499	SLE-INV	Max	-0.54	-2.29	3.24	-4.08	-0.71	0.81	-5.11	-3.48
475	523	SLE-INV	Max	-1.07	-2.40	3.11	-3.58	0.18	0.76	-4.86	-3.48
475	522	SLE-INV	Min	-1.48	-3.45	1.89	-14.25	-1.92	0.18	-14.37	-5.87
475	498	SLE-INV	Min	-0.77	-3.31	1.98	-14.48	-2.46	0.24	-14.49	-5.87
475	499	SLE-INV	Min	-0.73	-3.10	2.40	-12.52	-2.13	0.34	-14.49	-5.65
475	523	SLE-INV	Min	-1.44	-3.24	2.31	-12.28	-1.59	0.28	-14.37	-5.65
476	500	SLE-INV	Max	-0.42	-2.04	3.33	-2.32	-0.43	0.77	-5.27	-3.87
476	524	SLE-INV	Max	-0.81	-2.12	3.21	-1.98	0.21	0.72	-5.01	-3.87
476	523	SLE-INV	Max	-0.86	-2.36	2.74	-2.67	0.11	0.56	-5.01	-4.09
476	499	SLE-INV	Max	-0.46	-2.28	2.86	-3.03	-0.51	0.61	-5.27	-4.09
476	500	SLE-INV	Min	-0.42	-2.04	3.33	-3.53	-0.63	0.72	-7.72	-3.98
476	524	SLE-INV	Min	-0.81	-2.12	3.21	-3.20	-0.01	0.67	-7.48	-3.98
476	523	SLE-INV	Min	-0.86	-2.36	2.74	-4.23	-0.17	0.51	-7.48	-4.21
476	499	SLE-INV	Min	-0.46	-2.28	2.86	-4.57	-0.77	0.56	-7.72	-4.21
476	500	SLE-INV	Max	-0.42	-2.04	4.50	-3.13	-0.58	1.04	-7.12	-3.34
476	524	SLE-INV	Max	-0.81	-2.12	4.33	-2.67	0.29	0.98	-6.76	-3.34
476	523	SLE-INV	Max	-0.86	-2.36	3.70	-3.60	0.15	0.75	-6.76	-3.49
476	499	SLE-INV	Max	-0.46	-2.28	3.86	-4.08	-0.69	0.82	-7.12	-3.49
476	500	SLE-INV	Min	-0.56	-2.76	3.33	-9.74	-1.64	0.46	-20.27	-5.37
476	524	SLE-INV	Min	-1.09	-2.86	3.21	-9.48	-1.12	0.39	-20.09	-5.37
476	523	SLE-INV	Min	-1.15	-3.18	2.74	-12.23	-1.59	0.27	-20.09	-5.68
476	499	SLE-INV	Min	-0.63	-3.08	2.86	-12.49	-2.12	0.34	-20.27	-5.68
477	501	SLE-INV	Max	-0.29	-1.71	4.25	-1.41	-0.30	0.91	-6.73	-3.60
477	525	SLE-INV	Max	-0.49	-1.75	4.12	-1.13	0.30	0.85	-6.39	-3.60
477	524	SLE-INV	Max	-0.55	-2.07	3.67	-2.01	0.18	0.72	-6.39	-3.90
477	500	SLE-INV	Max	-0.35	-2.03	3.79	-2.32	-0.41	0.78	-6.73	-3.90
477	501	SLE-INV	Min	-0.29	-1.71	4.25	-2.19	-0.41	0.85	-9.89	-3.70
477	525	SLE-INV	Min	-0.49	-1.75	4.12	-1.91	0.17	0.79	-9.56	-3.70
477	524	SLE-INV	Min	-0.55	-2.07	3.67	-3.23	-0.04	0.66	-9.56	-4.00
477	500	SLE-INV	Min	-0.35	-2.03	3.79	-3.52	-0.61	0.73	-9.89	-4.00
477	501	SLE-INV	Max	-0.29	-1.71	5.74	-1.91	-0.40	1.23	-9.09	-3.12
477	525	SLE-INV	Max	-0.49	-1.75	5.56	-1.52	0.41	1.15	-8.62	-3.12
477	524	SLE-INV	Max	-0.55	-2.07	4.95	-2.71	0.24	0.97	-8.62	-3.34
477	500	SLE-INV	Max	-0.35	-2.03	5.12	-3.13	-0.55	1.05	-9.09	-3.34
477	501	SLE-INV	Min	-0.39	-2.30	4.25	-6.14	-1.01	0.55	-26.04	-4.99
477	525	SLE-INV	Min	-0.66	-2.36	4.12	-5.93	-0.51	0.46	-25.79	-4.99
477	524	SLE-INV	Min	-0.74	-2.79	3.67	-9.46	-1.12	0.38	-25.79	-5.41
477	500	SLE-INV	Min	-0.47	-2.74	3.79	-9.67	-1.62	0.47	-26.04	-5.41
478	502	SLE-INV	Max	-0.15	-1.28	5.22	-0.33	-0.13	1.00	-8.17	-3.26
478	526	SLE-INV	Max	-0.15	-1.28	5.09	-0.11	0.43	0.94	-7.72	-3.26
478	525	SLE-INV	Max	-0.24	-1.70	4.59	-1.18	0.26	0.85	-7.72	-3.64
478	501	SLE-INV	Max	-0.24	-1.70	4.72	-1.43	-0.27	0.91	-8.17	-3.64
478	502	SLE-INV	Min	-0.15	-1.28	5.22	-0.57	-0.14	0.95	-12.03	-3.34
478	526	SLE-INV	Min	-0.15	-1.28	5.09	-0.35	0.40	0.88	-11.60	-3.34
478	525	SLE-INV	Min	-0.24	-1.70	4.59	-1.95	0.13	0.79	-11.60	-3.73
478	501	SLE-INV	Min	-0.24	-1.70	4.72	-2.19	-0.39	0.85	-12.03	-3.73
478	502	SLE-INV	Max	-0.15	-1.28	7.05	-0.45	-0.17	1.35	-11.02	-2.86
478	526	SLE-INV	Max	-0.15	-1.28	6.87	-0.15	0.57	1.27	-10.42	-2.86
478	525	SLE-INV	Max	-0.24	-1.70	6.20	-1.59	0.35	1.15	-10.42	-3.15
478	501	SLE-INV	Max	-0.24	-1.70	6.38	-1.93	-0.37	1.23	-11.02	-3.15
478	502	SLE-INV	Min	-0.20	-1.72	5.22	-1.78	-0.21	0.65	-31.79	-4.51
478	526	SLE-INV	Min	-0.21	-1.72						

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1**Tratto Fabriano - Matelica Nord****Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita****Relazione di calcolo**

Opera	Tratto	Settore	CEE	WBS	Id.doc	N.prog.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	167 di 180			
478	525	SLU-INV	Min	-0.32	-2.29	4.59	-5.86	-0.52	0.46	-31.47	-5.04
478	501	SLU-INV	Min	-0.32	-2.29	4.72	-6.09	-0.98	0.55	-31.79	-5.04
479	503	SLE-INV	Max	-0.06	-0.76	6.13	1.34	0.20	1.02	-9.56	-2.82
479	527	SLE-INV	Max	0.17	-0.72	6.03	1.44	0.68	0.97	-9.00	-2.82
479	526	SLE-INV	Max	0.07	-1.23	5.58	-0.20	0.37	0.95	-9.00	-3.30
479	502	SLE-INV	Max	-0.16	-1.28	5.69	-0.35	-0.10	1.00	-9.56	-3.30
479	503	SLE-INV	Min	-0.06	-0.76	6.13	0.93	0.08	0.96	-14.13	-2.89
479	527	SLE-INV	Min	0.17	-0.72	6.03	1.04	0.58	0.91	-13.59	-2.89
479	526	SLE-INV	Min	0.07	-1.23	5.58	-0.43	0.35	0.89	-13.59	-3.38
479	502	SLE-INV	Min	-0.16	-1.28	5.69	-0.57	-0.11	0.94	-14.13	-3.38
479	503	SLU-INV	Max	-0.06	-0.76	8.28	3.43	0.77	1.38	-12.90	-2.50
479	527	SLU-INV	Max	0.23	-0.72	8.14	3.51	1.19	1.31	-12.15	-2.50
479	526	SLU-INV	Max	0.09	-1.23	7.54	-0.28	0.50	1.28	-12.15	-2.88
479	502	SLU-INV	Max	-0.16	-1.28	7.68	-0.48	-0.13	1.35	-12.90	-2.88
479	503	SLU-INV	Min	-0.08	-1.03	6.13	1.26	0.11	0.64	-37.53	-3.90
479	527	SLU-INV	Min	0.17	-0.97	6.03	1.40	0.78	0.58	-37.10	-3.90
479	526	SLU-INV	Min	0.07	-1.66	5.58	-1.56	0.24	0.57	-37.10	-4.57
479	502	SLU-INV	Min	-0.22	-1.73	5.69	-1.65	-0.17	0.64	-37.53	-4.57
480	504	SLE-INV	Max	0.01	-0.25	7.03	3.50	0.59	0.97	-10.90	-2.29
480	528	SLE-INV	Max	0.38	-0.18	6.98	3.50	1.00	0.92	-10.21	-2.29
480	527	SLE-INV	Max	0.28	-0.70	6.51	1.36	0.62	0.97	-10.21	-2.88
480	503	SLE-INV	Max	-0.09	-0.77	6.57	1.32	0.24	1.02	-10.90	-2.88
480	504	SLE-INV	Min	0.01	-0.25	7.03	2.35	0.34	0.92	-16.19	-2.33
480	528	SLE-INV	Min	0.38	-0.18	6.98	2.33	0.76	0.86	-15.52	-2.33
480	527	SLE-INV	Min	0.28	-0.70	6.51	0.92	0.51	0.91	-15.52	-2.94
480	503	SLE-INV	Min	-0.09	-0.77	6.57	0.89	0.12	0.96	-16.19	-2.94
480	504	SLU-INV	Max	0.02	-0.25	9.49	9.38	1.88	1.31	-14.72	-2.05
480	528	SLU-INV	Max	0.51	-0.18	9.42	9.45	2.23	1.24	-13.79	-2.05
480	527	SLU-INV	Max	0.37	-0.70	8.79	3.60	1.17	1.31	-13.79	-2.54
480	503	SLU-INV	Max	-0.09	-0.77	8.86	3.52	0.82	1.38	-14.72	-2.54
480	504	SLU-INV	Min	0.01	-0.34	7.03	3.17	0.46	0.67	-43.24	-3.15
480	528	SLU-INV	Min	0.38	-0.24	6.98	3.15	1.03	0.56	-42.69	-3.15
480	527	SLU-INV	Min	0.28	-0.94	6.51	1.24	0.69	0.56	-42.69	-3.97
480	503	SLU-INV	Min	-0.12	-1.04	6.57	1.20	0.16	0.66	-43.24	-3.97
481	505	SLE-INV	Max	0.03	0.16	7.78	5.94	1.07	0.79	-12.19	-1.63
481	529	SLE-INV	Max	0.55	0.27	7.71	5.75	1.39	0.76	-11.35	-1.63
481	528	SLE-INV	Max	0.47	-0.16	7.42	3.35	0.92	0.93	-11.35	-2.35
481	504	SLE-INV	Max	-0.05	-0.26	7.49	3.49	0.64	0.96	-12.19	-2.35
481	505	SLE-INV	Min	0.03	0.16	7.78	3.94	0.65	0.74	-18.20	-1.65
481	529	SLE-INV	Min	0.55	0.27	7.71	3.73	0.98	0.71	-17.39	-1.65
481	528	SLE-INV	Min	0.47	-0.16	7.42	2.16	0.67	0.88	-17.39	-2.40
481	504	SLE-INV	Min	-0.05	-0.26	7.49	2.30	0.38	0.91	-18.20	-2.40
481	505	SLU-INV	Max	0.04	0.22	10.50	16.20	3.22	1.06	-16.46	-1.48
481	529	SLU-INV	Max	0.74	0.36	10.41	16.05	3.50	1.02	-15.33	-1.48
481	528	SLU-INV	Max	0.63	-0.16	10.01	9.44	2.21	1.25	-15.33	-2.08
481	504	SLU-INV	Max	-0.05	-0.26	10.11	9.57	1.94	1.30	-16.46	-2.08
481	505	SLU-INV	Min	0.03	0.16	7.78	5.31	0.87	0.49	-48.93	-2.23
481	529	SLU-INV	Min	0.55	0.27	7.71	5.04	1.32	0.46	-48.24	-2.23
481	528	SLU-INV	Min	0.47	-0.22	7.42	2.91	0.91	0.60	-48.24	-3.24
481	504	SLU-INV	Min	-0.07	-0.36	7.49	3.11	0.52	0.63	-48.93	-3.24
482	506	SLE-INV	Max	0.06	0.27	8.95	8.61	1.58	0.49	-13.42	-0.83
482	530	SLE-INV	Max	0.65	0.39	8.92	8.24	1.80	0.45	-12.41	-0.83
482	529	SLE-INV	Max	0.62	0.28	7.87	5.59	1.30	0.76	-12.41	-1.70
482	505	SLE-INV	Max	0.04	0.16	7.90	5.90	1.12	0.79	-13.42	-1.70
482	506	SLE-INV	Min	0.06	0.27	8.95	5.66	0.99	0.47	-20.15	-0.84
482	530	SLE-INV	Min	0.65	0.39	8.92	5.25	1.21	0.42	-19.16	-0.84
482	529	SLE-INV	Min	0.62	0.28	7.87	3.53	0.87	0.70	-19.16	-1.74
482	505	SLE-INV	Min	0.04	0.16	7.90	3.86	0.70	0.75	-20.15	-1.74
482	506	SLU-INV	Max	0.08	0.36	12.09	23.72	4.63	0.66	-18.12	-0.77
482	530	SLU-INV	Max	0.87	0.52	12.04	23.51	4.81	0.61	-16.75	-0.77
482	529	SLU-INV	Max	0.84	0.38	10.63	16.15	3.47	1.02	-16.75	-1.54
482	505	SLU-INV	Max	0.05	0.22	10.67	16.33	3.30	1.07	-18.12	-1.54
482	506	SLU-INV	Min	0.06	0.27	8.95	7.64	1.33	0.37	-54.58	-1.13
482	530	SLU-INV	Min	0.65	0.39	8.92	7.09	1.63	0.24	-53.71	-1.13
482	529	SLU-INV	Min	0.62	0.28	7.87	4.76	1.18	0.41	-53.71	-2.34
482	505	SLU-INV	Min	0.04	0.16	7.90	5.22	0.94	0.54	-54.58	-2.34
483	507	SLE-INV	Max	0.09	0.02	6.34	11.52	2.20	0.01	-14.59	0.13
483	531	SLE-INV	Max	0.81	0.16	6.18	10.91	2.29	0.00	-13.38	0.13
483	530	SLE-INV	Max	0.86	0.43	11.16	8.02	1.68	0.47	-13.38	-0.92
483	506	SLE-INV	Max	0.15	0.29	11.31	8.56	1.65	0.47	-14.59	-0.92
483	507	SLE-INV	Min	0.09	0.02	6.34	7.52	1.39	0.01	-22.05	0.13
483	531	SLE-INV	Min	0.81	0.16	6.18	6.86	1.48	0.00	-20.86	0.13
483	530	SLE-INV	Min	0.86	0.43	11.16	5.00	1.08	0.44	-20.86	-0.94
483	506	SLE-INV	Min	0.15	0.29	11.31	5.57	1.05	0.45	-22.05	-0.94
483	507	SLU-INV	Max	0.13	0.03	8.56	32.01	6.33	0.01	-19.69	0.18
483	531	SLU-INV	Max	1.09	0.22	8.35	31.59	6.40	0.01	-18.06	0.18
483	530	SLU-INV	Max	1.17	0.58	15.06	23.49	4.75	0.63	-18.06	-0.84
483	506	SLU-INV	Max	0.20	0.39	15.27	23.87	4.71	0.64	-19.69	-0.84
483	507	SLU-INV	Min	0.09	0.02	6.34	10.15	1.88	0.00	-60.19	0.09
483	531	SLU-INV	Min	0.81	0.16	6.18	9.26	2.00	0.00	-59.14	0.09
483	530	SLU-INV	Min	0.86	0.43	11.16	6.75	1.46	0.31	-59.14	-1.26
483	506	SLU-INV	Min	0.15	0.29	11.31	7.52	1.42	0.30	-60.19	-1.26
484	532	SLE-INV	Max	2.01	0.40	-5.94	10.25	2.14	0.01	19.91	0.12
484	508	SLE-INV	Max	0.82	0.16	-6.17	10.84	2.07	-0.01	20.96	0.12
484	509	SLE-INV	Max	0.91	0.64	-11.10	8.21	1.60	-0.40	20.96	-0.76
484	533	SLE-INV	Max	2.10	0.88	-10.88	7.70	1.63	-0.37	19.91	-0.76
484	532	SLE-INV	Min	2.01	0.40	-5.94	6.15	1.33	0.00	12.36	0.11
484	508	SLE-INV	Min	0.82	0.16	-6.17	6.79	1.26	-0.02	13.44	0.11
484	509	SLE-INV	Min	0.91	0.64	-11.10	5.11	0.97	-0.43	13.44	-0.76
484	533	SLE-INV	Min	2.10	0.88	-10.88	4.56	0.99	-0.42	12.36	-0.76
484	532	SLU-INV	Max	2.71	0.54	-5.94	31.25	6.31	0.04	58.49	0.16
484	508	SLU-INV	Max	1.10	0.22	-6.17	31.55	6.25	-0.02	59.45	0.16
484	509	SLU-INV	Max	1.23	0.86	-11.10	24.06	4.86	-0.25	59.45	-0.72
484	533	SLU-INV	Max	2.84	1.18	-10.88	23.79	4.90	-0.16	58.49	-0.72
484	532	SLU-INV	Min	2.01	0.40	-8.02	8.30	1.80	0.00	16.69	0.07
484	508	SLU-INV	Min	0.82	0.16	-8.33	9.16	1.70	-0.05	18.14	0.07
484	509	SLU-INV	Min	0.91	0.64	-14.98	6.90	1.31	-0.58	18.14	-1.03
484	533	SLU-INV	Min	2.10	0.88	-14.68	6.15	1.34	-0.56	16.69	-1.03
485	533	SLE-INV	Max	1.78	0.81	-8.74	7.93	1.74	-0.38	18.51	-0.68
485	509	SLE-INV	Max	0.70	0.60	-8.90	8.34	1.57	-0.39	19.39	-0.68
485	510	SLE-INV	Max	0.67	0.47	-7.87	5.90	1.11	-0.67	19.39	-1.40
485	534	SLE-INV	Max	1.75	0.69	-7.71	5.56	1.25	-0.66	18.51	-1.40
485	533	SLE-INV	Min	1.78	0.81	-8.74	4.85	1.12	-0.42	11.64	-0.68
485	509	SLE-INV	Min	0.70	0.60	-8.90	5.28	0.94	-0.43	12.54	-0.68
485	510	SLE-INV	Min	0.67	0.47	-7.87	3.71	0.66	-0.72	12.54	-1.42
485	534	SLE-INV	Min	1.75	0.69	-7.71	3.35	0.80	-0.71	11.64	-1.42
485	533	SLU-INV	Max	2.40	1.10	-8.74	23.70	4.94	-0.22	53.65	-0.64
485	509	SLU-INV	Max	0.94	0.80	-8.90	24.00	4.78	-0.19	54.42	-0.64
485	510	SLU-INV	Max	0.91	0.64	-7.87	17.13	3.40	-0.41	54.42	-1.28
485	534	SLU-INV	Max	2.37	0.93	-7.71	16.87	3.54	-0.43	53.65	-1.28
485	533	SLU-INV	Min	1.78	0.81	-11.80	6.5				



**2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo**

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 168 di 180
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485	509	SLU-INV	Min	0.70	0.60	-12.02	7.13	1.26	-0.58	16.93	-0.92
485	510	SLU-INV	Min	0.67	0.47	-10.62	5.01	0.89	-0.97	16.93	-1.92
485	534	SLU-INV	Min	1.75	0.69	-10.40	4.53	1.08	-0.96	15.72	-1.92
486	534	SLE-INV	Max	1.48	0.63	-7.66	5.81	1.35	-0.63	17.01	-1.34
486	510	SLE-INV	Max	0.60	0.46	-7.76	5.99	1.08	-0.69	17.74	-1.34
486	511	SLE-INV	Max	0.51	0.02	-7.46	3.76	0.71	-0.83	17.74	-1.94
486	535	SLE-INV	Max	1.39	0.19	-7.36	3.63	0.95	-0.78	17.01	-1.94
486	534	SLE-INV	Min	1.48	0.63	-7.66	3.63	0.91	-0.69	10.82	-1.36
486	510	SLE-INV	Min	0.60	0.46	-7.76	3.84	0.64	-0.73	11.56	-1.36
486	511	SLE-INV	Min	0.51	0.02	-7.46	2.40	0.41	-0.89	11.56	-1.97
486	535	SLE-INV	Min	1.39	0.19	-7.36	2.25	0.65	-0.85	10.82	-1.97
486	534	SLE-INV	Max	2.00	0.86	-7.66	16.92	3.58	-0.35	48.68	-1.25
486	510	SLE-INV	Max	0.81	0.62	-7.76	16.96	3.34	-0.49	49.32	-1.25
486	511	SLE-INV	Max	0.69	0.02	-7.46	10.74	2.25	-0.54	49.32	-1.77
486	535	SLE-INV	Max	1.88	0.26	-7.36	10.72	2.47	-0.40	48.68	-1.77
486	534	SLE-INV	Min	1.48	0.63	-10.34	4.90	1.23	-0.93	14.61	-1.83
486	510	SLE-INV	Min	0.60	0.46	-10.47	5.19	0.86	-0.99	15.61	-1.83
486	511	SLE-INV	Min	0.51	0.02	-10.07	3.23	0.56	-1.20	15.61	-2.66
486	535	SLE-INV	Min	1.39	0.19	-9.94	3.03	0.88	-1.15	14.61	-2.66
487	535	SLE-INV	Max	1.19	0.15	-6.85	3.80	1.03	-0.78	15.43	-1.88
487	511	SLE-INV	Max	0.43	0.00	-7.05	3.86	0.69	-0.83	16.02	-1.88
487	512	SLE-INV	Max	0.32	-0.58	-6.65	1.84	0.36	-0.90	16.02	-2.37
487	536	SLE-INV	Max	1.08	-0.43	-6.45	1.83	0.67	-0.85	15.43	-2.37
487	535	SLE-INV	Min	1.19	0.15	-6.85	2.46	0.74	-0.85	9.90	-1.92
487	511	SLE-INV	Min	0.43	0.00	-7.05	2.52	0.39	-0.90	10.52	-1.92
487	512	SLE-INV	Min	0.32	-0.58	-6.65	1.20	0.20	-0.96	10.52	-2.42
487	536	SLE-INV	Min	1.08	-0.43	-6.45	1.19	0.52	-0.91	9.90	-2.42
487	535	SLE-INV	Max	1.61	0.21	-6.85	10.63	2.50	-0.43	43.66	-1.72
487	511	SLE-INV	Max	0.59	0.00	-7.05	10.71	2.20	-0.51	44.17	-1.72
487	512	SLE-INV	Max	0.43	-0.58	-6.65	5.13	1.16	-0.60	44.17	-2.14
487	536	SLE-INV	Max	1.45	-0.43	-6.45	5.07	1.45	-0.52	43.66	-2.14
487	535	SLE-INV	Min	1.19	0.15	-9.25	3.32	1.00	-1.14	13.37	-2.59
487	511	SLE-INV	Min	0.43	0.00	-9.52	3.40	0.53	-1.21	14.20	-2.59
487	512	SLE-INV	Min	0.32	-0.78	-8.98	1.62	0.27	-1.30	14.20	-3.27
487	536	SLE-INV	Min	1.08	-0.58	-8.70	1.61	0.70	-1.23	13.37	-3.27
488	536	SLE-INV	Max	0.63	-0.52	-5.94	2.00	0.74	-0.84	13.76	-2.34
488	512	SLE-INV	Max	0.24	-0.59	-6.21	1.89	0.34	-0.92	14.24	-2.34
488	513	SLE-INV	Max	0.15	-1.06	-5.70	0.11	0.07	-0.89	14.24	-2.73
488	537	SLE-INV	Max	0.53	-0.98	-5.43	0.24	0.45	-0.81	13.76	-2.73
488	536	SLE-INV	Min	0.63	-0.52	-5.94	1.37	0.59	-0.90	8.90	-2.38
488	512	SLE-INV	Min	0.24	-0.59	-6.21	1.29	0.18	-0.98	9.40	-2.38
488	513	SLE-INV	Min	0.15	-1.06	-5.70	1.10	0.03	-0.96	9.40	-2.79
488	537	SLE-INV	Min	0.53	-0.98	-5.43	0.23	0.42	-0.88	8.90	-2.79
488	536	SLE-INV	Max	0.84	-0.52	-5.94	5.18	1.48	-0.50	38.59	-2.13
488	512	SLE-INV	Max	0.33	-0.59	-6.21	5.00	1.13	-0.62	38.97	-2.13
488	513	SLE-INV	Max	0.20	-1.06	-5.70	0.14	0.27	-0.54	38.97	-2.45
488	537	SLE-INV	Max	0.72	-0.98	-5.43	0.33	0.62	-0.42	38.59	-2.45
488	536	SLE-INV	Min	0.63	-0.70	-8.02	1.85	0.80	-1.22	12.02	-3.21
488	512	SLE-INV	Min	0.24	-0.80	-8.39	1.74	0.24	-1.32	12.70	-3.21
488	513	SLE-INV	Min	0.15	-1.43	-7.70	0.08	0.04	-1.29	12.70	-3.77
488	537	SLE-INV	Min	0.53	-1.32	-7.33	0.27	0.57	-1.19	12.02	-3.77
489	537	SLE-INV	Max	0.00	-1.09	-4.97	0.34	0.50	-0.80	12.01	-2.70
489	513	SLE-INV	Max	-0.03	-1.09	-5.24	0.18	0.05	-0.90	12.40	-2.70
489	514	SLE-INV	Max	-0.10	-1.43	-4.80	-0.86	-0.09	-0.83	12.40	-3.02
489	538	SLE-INV	Max	-0.06	-1.42	-4.53	-0.66	0.34	-0.73	12.01	-3.02
489	537	SLE-INV	Min	0.00	-1.09	-4.97	0.32	0.47	-0.88	7.82	-2.75
489	513	SLE-INV	Min	-0.03	-1.09	-5.24	0.16	0.01	-0.96	8.23	-2.75
489	514	SLE-INV	Min	-0.10	-1.43	-4.80	-0.40	-0.15	-0.90	8.23	-3.09
489	538	SLE-INV	Min	-0.06	-1.42	-4.53	-1.21	0.28	-0.81	7.82	-3.09
489	537	SLE-INV	Max	0.01	-1.09	-4.97	0.46	0.68	-0.40	33.42	-2.42
489	513	SLE-INV	Max	-0.03	-1.09	-5.24	0.24	0.24	-0.56	33.74	-2.42
489	514	SLE-INV	Max	-0.10	-1.43	-4.80	-1.16	-0.13	-0.51	33.74	-2.68
489	538	SLE-INV	Max	-0.06	-1.42	-4.53	-0.89	0.47	-0.35	33.42	-2.68
489	537	SLE-INV	Min	0.00	-1.47	-6.71	0.22	0.64	-1.18	10.56	-3.71
489	513	SLE-INV	Min	-0.05	-1.48	-7.08	0.08	0.02	-1.30	11.11	-3.71
489	514	SLE-INV	Min	-0.14	-1.93	-6.49	-4.18	-0.44	-1.21	11.11	-4.17
489	538	SLE-INV	Min	-0.08	-1.92	-6.12	-4.03	-0.05	-1.09	10.56	-4.17
490	538	SLE-INV	Max	-0.62	-1.53	-4.08	-0.58	0.39	-0.74	10.21	-2.99
490	514	SLE-INV	Max	-0.32	-1.47	-4.36	-0.82	-0.11	-0.83	10.52	-2.99
490	515	SLE-INV	Max	-0.37	-1.73	-3.91	-1.70	-0.20	-0.73	10.52	-3.25
490	539	SLE-INV	Max	-0.67	-1.79	-3.63	-1.44	0.29	-0.63	10.21	-3.25
490	538	SLE-INV	Min	-0.62	-1.53	-4.08	-1.14	0.32	-0.81	6.68	-3.06
490	514	SLE-INV	Min	-0.32	-1.47	-4.36	-1.38	-0.17	-0.89	7.01	-3.06
490	515	SLE-INV	Min	-0.37	-1.73	-3.91	-2.71	-0.33	-0.79	7.01	-3.32
490	539	SLE-INV	Min	-0.67	-1.79	-3.63	-2.45	0.14	-0.70	6.68	-3.32
490	538	SLE-INV	Max	-0.62	-1.53	-4.08	-0.78	0.52	-0.35	28.23	-2.67
490	514	SLE-INV	Max	-0.32	-1.47	-4.36	-1.11	-0.15	-0.51	28.47	-2.67
490	515	SLE-INV	Max	-0.37	-1.73	-3.91	-2.30	-0.26	-0.41	28.47	-2.86
490	539	SLE-INV	Max	-0.67	-1.79	-3.63	-1.94	0.39	-0.25	28.23	-2.86
490	538	SLE-INV	Min	-0.84	-2.07	-5.51	-4.02	-0.04	-1.09	9.02	-4.12
490	514	SLE-INV	Min	-0.43	-1.99	-5.89	-4.26	-0.47	-1.21	9.47	-4.12
490	515	SLE-INV	Min	-0.50	-2.33	-5.27	-7.85	-1.03	-1.06	9.47	-4.49
490	539	SLE-INV	Min	-0.90	-2.41	-4.89	-7.62	-0.60	-0.95	9.02	-4.49
491	539	SLE-INV	Max	-1.17	-1.88	-3.24	-1.40	0.32	-0.63	8.36	-3.22
491	515	SLE-INV	Max	-0.62	-1.78	-3.47	-1.68	-0.21	-0.72	8.60	-3.22
491	516	SLE-INV	Max	-0.65	-1.94	-3.07	-2.40	-0.27	-0.60	8.60	-3.43
491	540	SLE-INV	Max	-1.20	-2.05	-2.84	-2.10	0.25	-0.51	8.36	-3.43
491	539	SLE-INV	Min	-1.17	-1.88	-3.24	-2.42	0.17	-0.71	5.49	-3.30
491	515	SLE-INV	Min	-0.62	-1.78	-3.47	-2.69	-0.35	-0.78	5.75	-3.30
491	516	SLE-INV	Min	-0.65	-1.94	-3.07	-3.77	-0.47	-0.66	5.75	-3.51
491	540	SLE-INV	Min	-1.20	-2.05	-2.84	-3.49	0.04	-0.58	5.49	-3.51
491	539	SLE-INV	Max	-1.17	-1.88	-3.24	-1.88	0.43	-0.25	22.98	-2.85
491	515	SLE-INV	Max	-0.62	-1.78	-3.47	-2.26	-0.29	-0.41	23.17	-2.85
491	516	SLE-INV	Max	-0.65	-1.94	-3.07	-3.24	-0.37	-0.34	23.17	-3.00
491	540	SLE-INV	Max	-1.20	-2.05	-2.84	-2.83	0.33	-0.18	22.98	-3.00
491	539	SLE-INV	Min	-1.58	-2.54	-4.37	-7.68	-0.60	-0.95	7.42	-4.45
491	515	SLE-INV	Min	-0.83	-2.40	-4.68	-7.87	-1.05	-1.06	7.76	-4.45
491	516	SLE-INV	Min	-0.88	-2.62	-4.15	-10.79	-1.47	-0.88	7.76	-4.74
491	540	SLE-INV	Min	-1.62	-2.77	-3.84	-10.60	-1.02	-0.78	7.42	-4.74
492	540	SLE-INV	Max	-1.62	-2.13	-2.47	-2.07	0.27	-0.52	6.47	-3.41
492	516	SLE-INV	Max	-0.87	-1.98	-2.67	-2.39	-0.29	-0.60	6.65	-3.41
492	517	SLE-INV	Max	-0.89	-2.10	-2.27	-2.95	-0.33	-0.46	6.65	-3.56
492	541	SLE-INV	Max	-1.65	-2.25	-2.08	-2.62	0.22	-0.38	6.47	-3.56
492	540	SLE-INV	Min	-1.62	-2.13	-2.47	-3.47	0.06	-0.58	4.27	-3.49
492	516	SLE-INV	Min	-0.87	-1.98	-2.67	-3.77	-0.48	-0.65	4.46	-3.49
492	517	SLE-INV	Min	-0.89	-2.10	-2.27	-4.61	-0.57	-0.50	4.46	-3.65
492	541	SLE-INV	Min	-1.65	-2.25	-2.08	-4.30	-0.04	-0.44	4.27	-3.65
492	540	SLE-INV	Max	-1.62	-2.13	-2.47	-2.80	0.36	-0.20	17.72	-2.99
492	516	SLE-INV	Max	-0.87	-1.98	-2.67	-3.23	-0.39	-0.33	17.86	-2.99
492	517	SLE-INV	Max	-0.89	-2.10	-2.27	-3.98	-0.44	-0.44	17.86	-3.11
492	541	SLE-INV	Max	-1.65	-2.25	-2.08	-3.53	0.29	-0.11	17.72	-3.11

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492	540	SLU-INV	Min	-2.19	-2.88	-3.34	-10.63	-1.02	-0.79	5.76	-4.71
492	516	SLU-INV	Min	-1.17	-2.68	-3.60	-10.85	-1.49	-0.87	6.02	-4.71
492	517	SLU-INV	Min	-1.21	-2.84	-3.07	-13.10	-1.81	-0.67	6.02	-4.92
492	541	SLU-INV	Min	-2.23	-3.04	-2.80	-12.89	-1.34	-0.59	5.76	-4.92
493	517	SLE-INV	Max	-1.97	-2.32	-1.74	-2.61	0.23	-0.39	4.55	-3.54
493	517	SLE-INV	Max	-1.08	-2.14	-1.88	-2.95	-0.34	-0.45	4.68	-3.54
493	518	SLE-INV	Max	-1.09	-2.21	-1.52	-3.34	-0.37	-0.30	4.68	-3.65
493	542	SLE-INV	Max	-1.98	-2.38	-1.39	-2.99	0.20	-0.25	4.55	-3.65
493	541	SLE-INV	Min	-1.97	-2.32	-1.74	-4.29	-0.03	-0.44	3.01	-3.63
493	517	SLE-INV	Min	-1.08	-2.14	-1.88	-4.61	-0.58	-0.49	3.14	-3.63
493	518	SLE-INV	Min	-1.09	-2.21	-1.52	-5.20	-0.64	-0.33	3.14	-3.74
493	542	SLE-INV	Min	-1.98	-2.38	-1.39	-4.88	-0.09	-0.28	3.01	-3.74
493	541	SLU-INV	Max	-1.97	-2.32	-1.74	-3.52	0.31	-0.13	12.44	-3.10
493	517	SLU-INV	Max	-1.08	-2.14	-1.88	-3.98	-0.46	-0.23	12.53	-3.10
493	518	SLU-INV	Max	-1.09	-2.21	-1.52	-4.51	-0.50	-0.17	12.53	-3.17
493	542	SLU-INV	Max	-1.98	-2.38	-1.39	-4.04	0.27	-0.06	12.44	-3.17
493	541	SLU-INV	Min	-2.66	-3.13	-2.35	-12.93	-1.34	-0.60	4.06	-4.90
493	517	SLU-INV	Min	-1.45	-2.89	-2.53	-13.12	-1.82	-0.66	4.24	-4.90
493	518	SLU-INV	Min	-1.47	-2.98	-2.05	-14.70	-2.04	-0.45	4.24	-5.05
493	542	SLU-INV	Min	-2.67	-3.22	-1.87	-14.51	-1.55	-0.38	4.06	-5.05
494	542	SLE-INV	Max	-2.19	-2.43	-1.06	-2.98	0.21	-0.26	2.62	-3.64
494	518	SLE-INV	Max	-1.21	-2.23	-1.14	-3.34	-0.37	-0.29	2.69	-3.64
494	519	SLE-INV	Max	-1.22	-2.27	-0.78	-3.57	-0.39	-0.14	2.69	-3.70
494	543	SLE-INV	Max	-2.20	-2.47	-0.70	-3.21	0.19	-0.11	2.62	-3.70
494	542	SLE-INV	Min	-2.19	-2.43	-1.06	-4.87	-0.08	-0.29	1.73	-3.73
494	518	SLE-INV	Min	-1.21	-2.23	-1.14	-5.20	-0.65	-0.32	1.81	-3.73
494	519	SLE-INV	Min	-1.22	-2.27	-0.78	-5.54	-0.68	-0.15	1.81	-3.79
494	543	SLE-INV	Min	-2.20	-2.47	-0.70	-5.21	-0.12	-0.13	1.73	-3.79
494	542	SLE-INV	Max	-2.19	-2.43	-1.06	-4.03	0.28	-0.09	7.14	-3.17
494	518	SLU-INV	Max	-1.21	-2.23	-1.14	-4.51	-0.51	-0.14	7.19	-3.17
494	519	SLU-INV	Max	-1.22	-2.27	-0.78	-4.82	-0.53	-0.08	7.19	-3.21
494	543	SLU-INV	Max	-2.20	-2.47	-0.70	-4.33	0.25	-0.02	7.14	-3.21
494	542	SLU-INV	Min	-2.96	-3.28	-1.43	-14.53	-1.55	-0.40	2.34	-5.03
494	518	SLU-INV	Min	-1.63	-3.01	-1.54	-14.73	-2.04	-0.43	2.44	-5.03
494	519	SLU-INV	Min	-1.64	-3.07	-1.06	-15.63	-2.17	-0.21	2.44	-5.12
494	543	SLU-INV	Min	-2.97	-3.33	-0.95	-15.44	-1.68	-0.17	2.34	-5.12
495	543	SLE-INV	Max	-2.30	-2.49	-0.39	-3.20	0.19	-0.12	0.67	-3.69
495	519	SLE-INV	Max	-1.28	-2.28	-0.41	-3.57	-0.39	-0.13	0.69	-3.69
495	520	SLE-INV	Max	-1.28	-2.29	-0.07	-3.62	-0.40	0.02	0.69	-3.71
495	544	SLE-INV	Max	-2.30	-2.50	-0.05	-3.26	0.19	0.03	0.67	-3.71
495	543	SLE-INV	Min	-2.30	-2.49	-0.39	-5.21	-0.11	-0.14	0.44	-3.79
495	519	SLE-INV	Min	-1.28	-2.28	-0.41	-5.54	-0.68	-0.14	0.46	-3.79
495	520	SLE-INV	Min	-1.28	-2.29	-0.07	-5.63	-0.69	0.02	0.46	-3.80
495	544	SLE-INV	Min	-2.30	-2.50	-0.05	-5.29	-0.12	0.03	0.44	-3.80
495	543	SLU-INV	Max	-2.30	-2.49	-0.39	-4.32	0.26	-0.04	1.84	-3.21
495	519	SLU-INV	Max	-1.28	-2.28	-0.41	-4.81	-0.53	-0.05	1.85	-3.21
495	520	SLU-INV	Max	-1.28	-2.29	-0.07	-4.89	-0.54	0.03	1.85	-3.22
495	544	SLU-INV	Max	-2.30	-2.50	-0.05	-4.40	0.25	0.04	1.84	-3.22
495	543	SLU-INV	Min	-3.10	-3.36	-0.53	-15.45	-1.68	-0.19	0.60	-5.11
495	519	SLU-INV	Min	-1.72	-3.08	-0.56	-15.63	-2.17	-0.19	0.62	-5.11
495	520	SLU-INV	Min	-1.73	-3.09	-0.09	-15.86	-2.20	0.00	0.62	-5.13
495	544	SLU-INV	Min	-3.10	-3.37	-0.07	-15.69	-1.71	0.01	0.60	-5.13
496	544	SLE-INV	Max	-2.28	-2.49	0.26	-3.26	0.19	0.02	-0.85	-3.71
496	520	SLE-INV	Max	-1.27	-2.29	0.30	-3.62	-0.40	0.03	-0.88	-3.71
496	521	SLE-INV	Max	-1.26	-2.27	0.65	-3.51	-0.39	0.20	-0.88	-3.68
496	545	SLE-INV	Max	-2.28	-2.47	0.61	-3.15	0.19	0.19	-0.85	-3.68
496	544	SLE-INV	Min	-2.28	-2.49	0.26	-5.29	-0.12	0.02	-1.28	-3.90
496	520	SLE-INV	Min	-1.27	-2.29	0.30	-5.27	-0.69	0.03	-1.30	-3.80
496	521	SLE-INV	Min	-1.26	-2.27	0.65	-5.46	-0.68	0.19	-1.31	-3.77
496	545	SLE-INV	Min	-2.28	-2.47	0.61	-5.13	-0.11	0.17	-1.28	-3.77
496	544	SLE-INV	Max	-2.28	-2.49	0.35	-4.40	0.25	0.03	-1.15	-3.22
496	520	SLU-INV	Max	-1.27	-2.29	0.41	-4.89	-0.54	0.05	-1.19	-3.22
496	521	SLU-INV	Max	-1.26	-2.27	0.88	-4.74	-0.53	0.28	-1.19	-3.20
496	545	SLU-INV	Max	-2.28	-2.47	0.82	-4.25	0.26	0.26	-1.15	-3.20
496	544	SLU-INV	Min	-3.08	-3.36	0.26	-15.67	-1.71	-0.01	-3.47	-5.13
496	520	SLU-INV	Min	-1.71	-3.09	0.30	-15.86	-2.20	0.02	-3.49	-5.13
496	521	SLU-INV	Min	-1.70	-3.06	0.65	-15.42	-2.14	0.09	-3.49	-5.10
496	545	SLU-INV	Min	-3.08	-3.34	0.61	-15.23	-1.65	0.06	-3.47	-5.10
497	545	SLE-INV	Max	-2.14	-2.45	0.92	-3.15	0.19	0.18	-2.14	-3.69
497	521	SLE-INV	Max	-1.18	-2.25	1.02	-3.51	-0.38	0.21	-2.23	-3.69
497	522	SLE-INV	Max	-1.17	-2.21	1.38	-3.23	-0.37	0.38	-2.23	-3.61
497	546	SLE-INV	Max	-2.13	-2.40	1.29	-2.88	0.21	0.34	-2.14	-3.61
497	545	SLE-INV	Min	-2.14	-2.45	0.92	-5.12	-0.11	0.16	-3.22	-3.78
497	521	SLE-INV	Min	-1.18	-2.25	1.02	-5.45	-0.67	0.20	-3.31	-3.78
497	522	SLE-INV	Min	-1.17	-2.21	1.38	-5.04	-0.63	0.34	-3.31	-3.71
497	546	SLE-INV	Min	-2.13	-2.40	1.29	-4.71	-0.07	0.30	-3.22	-3.71
497	545	SLU-INV	Max	-2.14	-2.45	1.24	-4.26	0.26	0.24	-2.88	-3.20
497	521	SLU-INV	Max	-1.18	-2.25	1.37	-4.74	-0.52	0.29	-3.00	-3.20
497	522	SLU-INV	Max	-1.17	-2.21	1.87	-4.36	-0.49	0.51	-3.00	-3.15
497	546	SLU-INV	Max	-2.13	-2.40	1.74	-3.89	0.29	0.46	-2.88	-3.15
497	545	SLU-INV	Min	-2.89	-3.30	0.92	-15.21	-1.64	0.03	-8.77	-5.10
497	521	SLU-INV	Min	-1.60	-3.04	1.02	-15.39	-2.13	0.11	-8.84	-5.10
497	522	SLU-INV	Min	-1.59	-2.98	1.38	-14.28	-1.99	0.17	-8.84	-5.00
497	546	SLU-INV	Min	-2.88	-3.24	1.29	-14.09	-1.50	0.09	-8.77	-5.00
498	546	SLE-INV	Max	-1.87	-2.35	1.62	-2.89	0.20	0.33	-3.46	-3.63
498	522	SLE-INV	Max	-1.02	-2.18	1.78	-3.23	-0.36	0.39	-3.61	-3.63
498	523	SLE-INV	Max	-1.00	-2.08	2.18	-2.74	-0.32	0.56	-3.61	-3.50
498	547	SLE-INV	Max	-1.85	-2.25	2.01	-2.41	0.24	0.50	-3.46	-3.50
498	546	SLE-INV	Min	-1.87	-2.35	1.62	-4.71	-0.08	0.29	-5.22	-3.72
498	522	SLE-INV	Min	-1.02	-2.18	1.78	-5.03	-0.62	0.35	-5.37	-3.72
498	523	SLE-INV	Min	-1.00	-2.08	2.18	-4.31	-0.55	0.51	-5.37	-3.58
498	547	SLE-INV	Min	-1.85	-2.25	2.01	-3.99	0.00	0.45	-5.22	-3.58
498	546	SLE-INV	Max	-1.87	-2.35	2.19	-3.89	0.27	0.45	-4.66	-3.16
498	522	SLU-INV	Max	-1.02	-2.18	2.41	-4.36	-0.48	0.52	-4.87	-3.16
498	523	SLU-INV	Max	-1.00	-2.08	2.94	-3.71	-0.43	0.75	-4.87	-3.06
498	547	SLU-INV	Max	-1.85	-2.25	2.72	-3.25	0.33	0.68	-4.66	-3.06
498	546	SLU-INV	Min	-2.53	-3.17	1.62	-14.04	-1.49	0.07	-14.27	-5.02
498	522	SLU-INV	Min	-1.38	-2.94	1.78	-14.25	-1.97	0.18	-14.37	-5.02
498	523	SLU-INV	Min	-1.35	-2.81	2.18	-12.30	-1.70	0.27	-14.37	-4.84
498	547	SLU-INV	Min	-2.50	-3.04	2.01	-12.09	-1.22	0.16	-14.27	-4.84
499	524	SLE-INV	Max	-0.76	-1.90	3.02	-2.07	-0.25	0.72	-5.01	-3.33
499	548	SLE-INV	Max	-1.43	-2.03	2.82	-1.77	0.29	0.64	-4.80	-3.33
499	547	SLE-INV	Max	-1.46	-2.17	2.40	-2.43	0.23	0.49	-4.80	-3.52
499	523	SLE-INV	Max	-0.79	-2.04	2.61	-2.75	-0.31	0.57	-5.01	-3.52
499	524	SLE-INV	Min	-0.76	-1.90	3.02	-3.29	-0.43	0.66	-7.48	-3.41
499	548	SLE-INV	Min	-1.43	-2.03	2.82	-3.00	0.11	0.57	-7.27	-3.41
499	547	SLE-INV	Min	-1.46	-2.17	2.40	-4.00	-0.01	0.44	-7.27	-3.60
499	523	SLU-INV	Min	-0.79	-2.04	2.61	-4.30	-0.53	0.52	-7.48	-3.60
499	524	SLU-INV	Max	-0.76	-1.90	4.08	-2.80	-0.34	0.97	-6.77	-2.93
499	548	SLU-INV	Max	-1.43	-2.03	3.80	-2.89	0.39	0.87	-6.47	-2.93
499	547	SLU-INV	Max	-1.46	-2.17	3.24	-3.28	0.31	0.67	-6.47	-3.07

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 170 di 180
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499	523	SLU-INV	Max	-0.79	-2.04	3.52	-3.71	-0.41	0.76	-6.77	-3.07
499	524	SLU-INV	Min	-1.03	-2.56	3.02	-9.52	-1.30	0.36	-20.09	-4.60
499	548	SLU-INV	Min	-1.93	-2.74	2.82	-9.32	-0.84	0.21	-19.94	-4.60
499	547	SLU-INV	Min	-1.97	-2.93	2.40	-12.05	-1.22	0.14	-19.94	-4.86
499	523	SLU-INV	Min	-1.07	-2.75	2.61	-12.24	-1.68	0.29	-20.09	-4.86
500	525	SLE-INV	Max	-0.46	-1.62	3.95	-1.23	-0.16	0.85	-6.39	-3.11
500	549	SLE-INV	Max	-0.89	-1.71	3.69	-0.96	0.35	0.77	-6.10	-3.11
500	548	SLE-INV	Max	-0.94	-1.93	3.21	-1.80	0.26	0.64	-6.10	-3.36
500	524	SLE-INV	Max	-0.51	-1.85	3.48	-2.09	-0.24	0.72	-6.39	-3.36
500	525	SLE-INV	Min	-0.46	-1.62	3.95	-2.00	-0.26	0.79	-9.56	-3.18
500	549	SLE-INV	Min	-0.89	-1.71	3.69	-1.74	0.25	0.70	-9.29	-3.18
500	548	SLE-INV	Min	-0.94	-1.93	3.21	-3.02	0.08	0.57	-9.29	-3.44
500	524	SLE-INV	Min	-0.51	-1.85	3.48	-3.30	-0.41	0.66	-9.56	-3.44
500	525	SLE-INV	Max	-0.46	-1.62	5.33	-1.66	-0.22	1.15	-8.63	-2.76
500	549	SLE-INV	Max	-0.89	-1.71	4.98	-1.30	0.48	1.04	-8.23	-2.76
500	548	SLE-INV	Max	-0.94	-1.93	4.34	-2.43	0.36	0.86	-8.23	-2.95
500	524	SLE-INV	Max	-0.51	-1.85	4.70	-2.82	-0.32	0.97	-8.63	-2.95
500	525	SLE-INV	Min	-0.62	-2.19	3.95	-5.98	-0.75	0.48	-25.80	-4.29
500	549	SLE-INV	Min	-1.20	-2.30	3.69	-5.75	-0.31	0.32	-25.59	-4.29
500	548	SLE-INV	Min	-1.26	-2.61	3.21	-9.25	-0.84	0.21	-25.59	-4.64
500	524	SLE-INV	Min	-0.68	-2.49	3.48	-9.48	-1.28	0.37	-25.80	-4.64
501	526	SLE-INV	Max	-0.15	-1.25	4.89	-0.21	-0.04	0.94	-7.72	-2.82
501	550	SLE-INV	Max	-0.25	-1.27	4.61	-0.01	0.44	0.86	-7.35	-2.82
501	549	SLE-INV	Max	-0.31	-1.59	4.15	-1.03	0.32	0.77	-7.35	-3.14
501	525	SLE-INV	Max	-0.21	-1.57	4.42	-1.25	-0.14	0.85	-7.72	-3.14
501	526	SLE-INV	Min	-0.15	-1.25	4.89	-0.44	-0.04	0.88	-11.61	-2.88
501	550	SLE-INV	Min	-0.25	-1.27	4.61	-0.25	0.43	0.78	-11.25	-2.88
501	549	SLE-INV	Min	-0.31	-1.59	4.15	-1.80	0.21	0.69	-11.25	-3.21
501	525	SLE-INV	Min	-0.21	-1.57	4.42	-2.01	-0.24	0.79	-11.61	-3.21
501	526	SLE-INV	Max	-0.15	-1.25	6.60	-0.29	-0.05	1.27	-10.43	-2.52
501	550	SLE-INV	Max	-0.25	-1.27	6.23	-0.02	0.59	1.15	-9.92	-2.52
501	549	SLE-INV	Max	-0.31	-1.59	5.60	-1.39	0.43	1.04	-9.92	-2.77
501	525	SLE-INV	Max	-0.21	-1.57	5.97	-1.69	-0.19	1.15	-10.43	-2.77
501	526	SLE-INV	Min	-0.20	-1.69	4.89	-1.62	-0.05	0.54	-31.48	-3.89
501	550	SLE-INV	Min	-0.33	-1.71	4.61	-1.46	0.36	0.37	-31.19	-3.89
501	549	SLE-INV	Min	-0.42	-2.14	4.15	-5.73	-0.31	0.31	-31.19	-4.33
501	525	SLE-INV	Min	-0.29	-2.12	4.42	-5.89	-0.72	0.48	-31.48	-4.33
502	527	SLE-INV	Max	0.16	-0.75	5.92	1.35	0.24	0.98	-9.01	-2.46
502	551	SLE-INV	Max	0.43	-0.70	5.64	1.48	0.66	0.90	-8.54	-2.46
502	550	SLE-INV	Max	0.33	-1.15	5.10	-0.11	0.39	0.86	-8.54	-2.86
502	526	SLE-INV	Max	0.07	-1.21	5.38	-0.27	-0.02	0.94	-9.01	-2.86
502	527	SLE-INV	Min	0.16	-0.75	5.92	0.94	0.12	0.92	-13.60	-2.50
502	551	SLE-INV	Min	0.43	-0.70	5.64	1.06	0.55	0.83	-13.15	-2.50
502	550	SLE-INV	Min	0.33	-1.15	5.10	-0.32	0.38	0.78	-13.15	-2.92
502	526	SLE-INV	Min	0.07	-1.21	5.38	-0.49	-0.02	0.87	-13.60	-2.92
502	527	SLE-INV	Max	0.22	-0.75	7.99	3.43	0.84	1.32	-12.16	-2.24
502	551	SLE-INV	Max	0.57	-0.70	7.61	3.64	1.21	1.22	-11.53	-2.24
502	550	SLE-INV	Max	0.45	-1.15	6.88	-0.15	0.52	1.16	-11.53	-2.55
502	526	SLE-INV	Max	0.10	-1.21	7.26	-0.37	-0.02	1.27	-12.16	-2.55
502	527	SLE-INV	Min	0.16	-1.02	5.92	1.27	0.17	0.62	-37.12	-3.38
502	551	SLE-INV	Min	0.43	-0.95	5.64	1.43	0.75	0.49	-36.76	-3.38
502	550	SLE-INV	Min	0.33	-1.56	5.10	-1.39	0.35	0.39	-36.76	-3.94
502	526	SLE-INV	Min	0.07	-1.63	5.38	-1.60	-0.03	0.52	-37.12	-3.94
503	528	SLE-INV	Max	0.39	-0.12	6.86	3.40	0.60	0.92	-10.22	-2.00
503	552	SLE-INV	Max	1.07	0.01	6.63	3.38	0.96	0.87	-9.64	-2.00
503	551	SLE-INV	Max	0.95	-0.60	6.18	1.32	0.60	0.91	-9.64	-2.50
503	527	SLE-INV	Max	0.27	-0.73	6.40	1.30	0.26	0.97	-10.22	-2.50
503	528	SLE-INV	Min	0.39	-0.12	6.86	2.24	0.34	0.86	-15.64	-2.03
503	552	SLE-INV	Min	1.07	0.01	6.63	2.22	0.71	0.80	-14.97	-2.03
503	551	SLE-INV	Min	0.95	-0.60	6.18	0.89	0.48	0.85	-14.97	-2.55
503	527	SLE-INV	Min	0.27	-0.73	6.40	0.86	0.15	0.91	-15.64	-2.55
503	528	SLE-INV	Max	0.53	-0.12	9.25	9.37	1.95	1.24	-13.80	-1.82
503	552	SLE-INV	Max	1.45	0.02	8.95	9.32	2.26	1.17	-13.01	-1.82
503	551	SLE-INV	Max	1.28	-0.60	8.34	3.54	1.19	1.23	-13.01	-2.24
503	527	SLE-INV	Max	0.36	-0.73	8.65	3.57	0.88	1.31	-13.80	-2.24
503	528	SLE-INV	Min	0.39	-0.17	6.86	3.02	0.46	0.52	-42.72	-2.74
503	552	SLE-INV	Min	1.07	0.01	6.63	2.99	0.96	0.45	-42.25	-2.74
503	551	SLE-INV	Min	0.95	-0.80	6.18	1.20	0.65	0.52	-42.25	-3.44
503	527	SLE-INV	Min	0.27	-0.99	6.40	1.16	0.20	0.59	-42.72	-3.44
504	529	SLE-INV	Max	0.58	0.41	7.65	5.65	1.01	0.77	-11.37	-1.43
504	553	SLE-INV	Max	1.43	0.58	7.54	5.50	1.30	0.72	-10.65	-1.43
504	552	SLE-INV	Max	1.32	0.06	7.19	3.21	0.88	0.87	-10.65	-2.06
504	528	SLE-INV	Max	0.48	-0.11	7.30	3.31	0.63	0.92	-11.37	-2.06
504	529	SLE-INV	Min	0.58	0.41	7.65	3.64	0.59	0.72	-17.40	-1.45
504	553	SLE-INV	Min	1.43	0.58	7.54	2.46	0.89	0.66	-16.70	-1.45
504	552	SLE-INV	Min	1.32	0.06	7.19	1.99	0.62	0.80	-16.70	-2.09
504	528	SLE-INV	Min	0.48	-0.11	7.30	2.11	0.36	0.86	-17.40	-2.09
504	529	SLE-INV	Max	0.78	0.55	10.32	15.96	3.15	1.04	-15.35	-1.33
504	553	SLE-INV	Max	1.93	0.78	10.18	15.94	3.40	0.97	-14.37	-1.33
504	552	SLE-INV	Max	1.79	0.08	9.71	9.41	2.24	1.18	-14.37	-1.87
504	528	SLE-INV	Max	0.64	-0.11	9.85	9.42	2.00	1.24	-15.35	-1.87
504	529	SLE-INV	Min	0.58	0.41	7.65	4.91	0.80	0.51	-48.26	-1.96
504	553	SLE-INV	Min	1.43	0.58	7.54	4.68	1.20	0.36	-47.65	-1.96
504	552	SLE-INV	Min	1.32	0.06	7.19	2.69	0.83	0.41	-47.65	-2.82
504	528	SLE-INV	Min	0.48	-0.14	7.30	2.85	0.49	0.55	-48.26	-2.82
505	530	SLE-INV	Max	0.69	0.60	8.80	8.16	1.53	0.45	-12.43	-0.73
505	554	SLE-INV	Max	1.75	0.81	8.65	7.77	1.72	0.44	-11.55	-0.73
505	553	SLE-INV	Max	1.71	0.64	7.65	5.25	1.20	0.74	-11.55	-1.49
505	529	SLE-INV	Max	0.65	0.43	7.80	5.57	1.05	0.75	-12.43	-1.49
505	530	SLE-INV	Min	0.69	0.60	8.80	5.17	0.91	0.41	-19.19	-0.74
505	554	SLE-INV	Min	1.75	0.81	8.65	4.77	1.11	0.41	-18.33	-0.74
505	553	SLE-INV	Min	1.71	0.64	7.65	3.17	0.77	0.69	-18.33	-1.52
505	529	SLE-INV	Min	0.65	0.43	7.80	3.50	0.62	0.70	-19.19	-1.52
505	530	SLE-INV	Max	0.93	0.81	11.88	23.43	4.67	0.61	-16.78	-0.70
505	554	SLE-INV	Max	2.36	1.10	11.67	23.15	4.84	0.60	-15.59	-0.70
505	553	SLE-INV	Max	2.31	0.86	10.33	15.90	3.36	1.00	-15.59	-1.37
505	529	SLE-INV	Max	0.88	0.57	10.54	16.14	3.21	1.01	-16.78	-1.37
505	530	SLE-INV	Min	0.69	0.60	8.80	6.98	1.23	0.21	-53.76	-1.00
505	554	SLE-INV	Min	1.75	0.81	8.65	6.43	1.49	0.23	-53.00	-1.00
505	553	SLE-INV	Min	1.71	0.64	7.65	4.28	1.04	0.45	-53.00	-2.05
505	529	SLE-INV	Min	0.65	0.43	7.80	4.73	0.84	0.43	-53.76	-2.05
506	531	SLE-INV	Max	0.81	0.16	6.18	10.83	2.07	0.02	-13.40	0.12
506	555	SLE-INV	Max	2.00	0.40	5.95	10.26	2.15	0.00	-12.33	0.12
506	554	SLE-INV	Max	2.10	0.88	10.80	7.52	1.60	0.44	-12.33	-0.82
506	530	SLE-INV	Max	0.91	0.65	11.04	8.03	1.57	0.46	-13.40	-0.82
506	531	SLE-INV	Min	0.81	0.16	6.18	6.79	1.25	0.01	-20.89	0.12
506	555	SLE-INV	Min	2.00	0.40	5.95	6.16	1.34	-0.01	-19.83	0.12
506	554	SLE-INV	Min	2.10	0.88	10.80	4.45	0.97	0.40	-19.83	-0.83
506	530	SLE-INV	Min	0.91	0.65	11.04	5.00	0.95	0.42	-20.89	-0.83
506	531	SLE-INV	Max	1.09	0.22	8.35	31.53	6.24	0.05		



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	171 di 180			
506	554	SLU-INV	Max	2.83	1.19	14.59	23.25	4.80	0.60	-16.64	-0.77
506	530	SLU-INV	Max	1.22	0.87	14.90	23.52	4.75	0.62	-18.09	-0.77
506	531	SLU-INV	Min	0.81	0.16	6.18	9.16	1.69	0.02	-59.17	0.07
506	555	SLU-INV	Min	2.00	0.40	5.95	8.31	1.80	-0.04	-58.21	0.07
506	554	SLU-INV	Min	2.10	0.88	10.80	6.00	1.31	0.18	-59.17	-1.11
506	530	SLU-INV	Min	0.91	0.65	11.04	6.74	1.28	0.26	-59.17	-1.11
507	556	SLU-INV	Max	4.18	0.84	-5.55	9.61	2.01	-0.01	19.05	0.11
507	532	SLE-INV	Max	2.01	0.40	-5.94	10.19	1.95	0.01	19.92	0.11
507	533	SLE-INV	Max	2.14	1.06	-10.61	7.69	1.45	-0.37	19.92	-0.61
507	557	SLE-INV	Max	4.32	1.50	-10.22	7.18	1.47	-0.40	19.05	-0.61
507	556	SLE-INV	Min	4.18	0.84	-5.55	5.45	1.18	-0.02	11.48	0.11
507	532	SLE-INV	Min	2.01	0.40	-5.94	6.09	1.12	0.00	12.37	0.11
507	533	SLE-INV	Min	2.14	1.06	-10.61	4.54	0.83	-0.42	12.37	-0.62
507	557	SLE-INV	Min	4.32	1.50	-10.22	3.98	0.85	-0.43	11.48	-0.62
507	556	SLU-INV	Max	5.65	1.13	-5.55	30.90	6.24	-0.02	57.73	0.15
507	532	SLU-INV	Max	2.71	0.54	-5.94	31.18	6.18	0.04	58.53	0.15
507	533	SLU-INV	Max	2.89	1.43	-10.61	23.78	4.64	-0.14	58.53	-0.59
507	557	SLU-INV	Max	5.83	2.02	-10.22	23.56	4.67	-0.22	57.73	-0.59
507	556	SLU-INV	Min	4.18	0.84	-7.50	7.36	1.60	-0.04	15.50	0.07
507	532	SLU-INV	Min	2.01	0.40	-8.02	8.22	1.52	0.00	16.70	0.07
507	533	SLU-INV	Min	2.14	1.06	-14.33	6.13	1.12	-0.56	16.70	-0.84
507	557	SLU-INV	Min	4.32	1.50	-13.80	5.37	1.14	-0.58	15.50	-0.84
507	557	SLE-INV	Max	3.62	1.36	-8.38	7.50	1.59	-0.37	17.80	-0.55
508	533	SLE-INV	Max	1.82	1.00	-8.48	7.86	1.44	-0.40	18.52	-0.55
508	534	SLE-INV	Max	1.76	0.74	-7.52	5.53	1.03	-0.65	18.52	-1.14
508	558	SLE-INV	Max	3.57	1.10	-7.42	5.23	1.14	-0.61	17.80	-1.14
508	557	SLE-INV	Min	3.62	1.36	-8.38	4.38	0.98	-0.42	10.92	-0.56
508	533	SLE-INV	Min	1.82	1.00	-8.48	4.78	0.83	-0.43	11.65	-0.56
508	534	SLE-INV	Min	1.76	0.74	-7.52	3.32	0.57	-0.70	11.65	-1.16
508	558	SLE-INV	Min	3.57	1.10	-7.42	2.98	0.68	-0.69	10.92	-1.16
508	557	SLU-INV	Max	4.89	1.83	-8.38	23.47	4.70	-0.10	52.98	-0.53
508	533	SLU-INV	Max	2.45	1.34	-8.48	23.62	4.57	-0.27	53.66	-0.53
508	534	SLU-INV	Max	2.38	1.00	-7.52	16.85	3.39	-0.38	53.66	-1.09
508	558	SLU-INV	Max	4.82	1.49	-7.42	16.72	3.51	-0.20	52.98	-1.09
508	557	SLU-INV	Min	3.62	1.36	-11.32	5.91	1.32	-0.56	14.75	-0.75
508	533	SLU-INV	Min	1.82	1.00	-11.45	6.45	1.12	-0.58	15.73	-0.75
508	534	SLU-INV	Min	1.76	0.74	-10.15	4.48	0.77	-0.94	15.73	-1.56
508	558	SLU-INV	Min	3.57	1.10	-10.02	4.02	0.92	-0.93	14.75	-1.56
509	558	SLU-INV	Max	3.31	1.05	-7.08	5.52	1.24	-0.63	16.45	-1.09
509	534	SLU-INV	Max	1.49	0.69	-7.47	5.73	1.03	-0.63	17.02	-1.09
509	535	SLE-INV	Max	1.33	-0.10	-7.20	3.58	0.61	-0.78	17.02	-1.56
509	559	SLE-INV	Max	3.15	0.27	-6.81	3.42	0.80	-0.78	16.45	-1.56
509	558	SLE-INV	Min	3.31	1.05	-7.08	3.36	0.80	-0.69	10.24	-1.11
509	534	SLE-INV	Min	1.49	0.69	-7.47	3.55	0.57	-0.70	10.83	-1.11
509	535	SLE-INV	Min	1.33	-0.10	-7.20	2.19	0.33	-0.84	10.83	-1.59
509	559	SLE-INV	Min	3.15	0.27	-6.81	2.05	0.52	-0.84	10.24	-1.59
509	558	SLU-INV	Max	4.47	1.42	-7.08	16.55	3.53	-0.32	48.20	-1.02
509	534	SLU-INV	Max	2.01	0.93	-7.47	16.84	3.34	-0.26	48.72	-1.02
509	535	SLU-INV	Max	1.80	-0.10	-7.20	10.68	2.07	-0.47	48.72	-1.44
509	559	SLU-INV	Max	4.26	0.36	-6.81	10.43	2.25	-0.53	48.20	-1.44
509	558	SLU-INV	Min	3.31	1.05	-9.56	4.53	1.08	-0.93	13.83	-1.49
509	534	SLU-INV	Min	1.49	0.69	-10.09	4.80	0.78	-0.94	14.62	-1.49
509	535	SLU-INV	Min	1.33	-0.13	-9.72	2.96	0.45	-1.14	14.62	-2.14
509	559	SLU-INV	Min	3.15	0.27	-9.19	2.77	0.71	-1.13	13.83	-2.14
510	559	SLE-INV	Max	2.16	0.07	-6.13	3.75	0.89	-0.75	14.98	-1.54
510	535	SLE-INV	Max	1.13	-0.14	-6.69	3.71	0.62	-0.82	15.43	-1.54
510	536	SLE-INV	Max	1.04	-0.62	-6.05	1.76	0.31	-0.81	15.43	-1.90
510	560	SLE-INV	Max	2.06	-0.41	-5.49	1.85	0.57	-0.74	14.98	-1.90
510	559	SLE-INV	Min	2.16	0.07	-6.13	2.38	0.62	-0.81	9.44	-1.55
510	535	SLE-INV	Min	1.13	-0.14	-6.69	2.38	0.34	-0.87	9.91	-1.55
510	536	SLE-INV	Min	1.04	-0.62	-6.05	1.13	0.17	-0.89	9.91	-1.93
510	560	SLE-INV	Min	2.06	-0.41	-5.49	1.18	0.43	-0.82	9.44	-1.93
510	559	SLU-INV	Max	2.91	0.09	-6.13	10.76	2.30	-0.45	43.32	-1.46
510	535	SLU-INV	Max	1.53	-0.14	-6.69	10.52	2.05	-0.54	43.68	-1.46
510	536	SLU-INV	Max	1.40	-0.62	-6.05	5.00	1.04	-0.41	43.68	-1.75
510	560	SLU-INV	Max	2.78	-0.41	-5.49	5.25	1.29	-0.32	43.32	-1.75
510	559	SLU-INV	Min	2.16	0.07	-8.27	3.22	0.83	-1.09	12.74	-2.09
510	535	SLU-INV	Min	1.13	-0.18	-9.03	3.21	0.46	-1.18	13.37	-2.09
510	536	SLU-INV	Min	1.04	-0.83	-8.17	1.52	0.23	-1.20	13.37	-2.61
510	560	SLU-INV	Min	2.06	-0.56	-7.41	1.59	0.58	-1.11	12.74	-2.61
511	560	SLE-INV	Max	0.92	-0.64	-5.01	2.01	0.63	-0.71	13.39	-1.87
511	536	SLE-INV	Max	0.59	-0.71	-5.54	1.91	0.31	-0.84	13.76	-1.87
511	537	SLE-INV	Max	0.53	-0.98	-5.08	0.17	0.10	-0.80	13.76	-2.17
511	561	SLE-INV	Max	0.87	-0.91	-4.55	0.30	0.40	-0.68	13.39	-2.17
511	560	SLE-INV	Min	0.92	-0.64	-5.01	1.38	0.50	-0.80	8.52	-1.90
511	536	SLE-INV	Min	0.59	-0.71	-5.54	1.29	0.17	-0.91	8.90	-1.90
511	537	SLE-INV	Min	0.53	-0.98	-5.08	0.17	0.06	-0.88	8.90	-2.21
511	561	SLE-INV	Min	0.87	-0.91	-4.55	0.29	0.37	-0.77	8.52	-2.21
511	560	SLU-INV	Max	1.25	-0.64	-5.01	5.23	1.31	-0.24	38.28	-1.72
511	536	SLU-INV	Max	0.79	-0.71	-5.54	5.09	1.03	-0.49	38.59	-1.72
511	537	SLU-INV	Max	0.72	-0.98	-5.08	0.23	0.30	-0.43	38.59	-1.97
511	561	SLU-INV	Max	1.17	-0.91	-4.55	0.41	0.59	-0.17	38.28	-1.97
511	560	SLU-INV	Min	0.92	-0.87	-6.77	1.86	0.67	-1.09	11.50	-2.56
511	536	SLU-INV	Min	0.59	-0.96	-7.48	1.74	0.23	-1.22	12.02	-2.56
511	537	SLU-INV	Min	0.53	-1.32	-6.86	0.21	0.08	-1.18	12.02	-2.99
511	561	SLU-INV	Min	0.87	-1.23	-6.14	0.36	0.50	-1.05	11.50	-2.99
512	561	SLE-INV	Max	-0.25	-1.14	-4.08	0.42	0.45	-0.67	11.71	-2.15
512	537	SLE-INV	Max	0.00	-1.09	-4.62	0.26	0.09	-0.81	12.01	-2.15
512	538	SLE-INV	Max	-0.03	-1.26	-4.14	-0.73	-0.02	-0.72	12.01	-2.39
512	562	SLE-INV	Max	-0.29	-1.31	-3.61	-0.53	0.33	-0.59	11.71	-2.39
512	561	SLE-INV	Min	-0.25	-1.14	-4.08	0.42	0.42	-0.77	7.51	-2.18
512	537	SLE-INV	Min	0.00	-1.09	-4.62	0.24	0.06	-0.88	7.82	-2.18
512	538	SLE-INV	Min	-0.03	-1.26	-4.14	-1.28	-0.07	-0.80	7.82	-2.44
512	562	SLE-INV	Min	-0.29	-1.31	-3.61	-1.07	0.27	-0.69	7.51	-2.44
512	561	SLU-INV	Max	-0.25	-1.14	-4.08	0.57	0.61	-0.17	33.19	-1.96
512	537	SLU-INV	Max	0.01	-1.09	-4.62	0.35	0.28	-0.43	33.43	-1.96
512	538	SLU-INV	Max	-0.03	-1.26	-4.14	-0.98	-0.03	-0.31	33.43	-2.16
512	562	SLU-INV	Max	-0.29	-1.31	-3.61	-0.72	0.44	-0.05	33.19	-2.16
512	561	SLU-INV	Min	-0.34	-1.53	-5.51	0.38	0.56	-1.04	10.14	-2.95
512	537	SLU-INV	Min	0.00	-1.46	-6.23	0.15	0.07	-1.19	10.56	-2.95
512	538	SLU-INV	Min	-0.04	-1.70	-5.59	-4.07	-0.30	-1.09	10.56	-3.29
512	562	SLU-INV	Min	-0.39	-1.77	-4.87	-3.84	0.02	-0.94	10.14	-3.29
513	562	SLU-INV	Max	-1.26	-1.51	-3.26	-0.46	0.36	-0.59	9.97	-2.37
513	538	SLE-INV	Max	-0.59	-1.37	-3.69	-0.67	-0.03	-0.73	10.21	-2.37
513	539	SLE-INV	Max	-0.60	-1.45	-3.31	-1.51	-0.08	-0.64	10.21	-2.56
513	563	SLE-INV	Max	-1.28	-1.58	-2.88	-1.28	0.30	-0.49	9.97	-2.56
513	562	SLE-INV	Min	-1.26	-1.51	-3.26	-1.02	0.31	-0.69	6.44	-2.41
513	538	SLE-INV	Min	-0.59	-1.37	-3.69	-1.22	-0.08	-0.81	6.68	-2.41
513	539	SLE-INV	Min	-0.60	-1.45	-3.31	-2.51	-0.19	-0.71	6.68	-2.62
513	563	SLE-INV	Min	-1.28	-1.58	-2.88	-2.29	0.19	-0.40	6.44	-2.62
513	562	SLU-INV	Max	-1.26	-1.51	-3.26	-0.62	0.49	-0.04	28.04	-2.14

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 172 di 180
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513	538	SLU-INV	Max	-0.59	-1.37	-3.69	-0.90	-0.04	-0.33	28.23	-2.14
513	539	SLU-INV	Max	-0.60	-1.45	-3.31	-2.04	-0.11	-0.27	28.23	-2.29
513	563	SLU-INV	Max	-1.28	-1.58	-2.88	-1.73	0.41	0.03	28.04	-2.29
513	562	SLU-INV	Min	-1.70	-2.03	-4.40	-3.92	0.02	-0.94	8.69	-3.25
513	538	SLU-INV	Min	-0.79	-1.85	-4.98	-4.08	-0.32	-1.09	9.02	-3.25
513	539	SLU-INV	Min	-0.81	-1.95	-4.47	-7.65	-0.74	-0.96	9.02	-3.53
513	563	SLU-INV	Min	-1.72	-2.13	-3.89	-7.49	-0.40	-0.80	8.69	-3.53
514	563	SLE-INV	Max	-2.09	-1.74	-2.55	-1.23	0.33	-0.50	8.17	-2.54
514	539	SLE-INV	Max	-1.10	-1.54	-2.93	-1.48	-0.09	-0.63	8.36	-2.54
514	540	SLE-INV	Max	-1.11	-1.60	-2.56	-2.17	-0.12	-0.52	8.36	-2.70
514	564	SLE-INV	Max	-2.10	-1.80	-2.19	-1.91	0.28	-0.39	8.17	-2.70
514	563	SLE-INV	Min	-2.09	-1.74	-2.55	-2.26	0.21	-0.60	5.30	-2.59
514	539	SLE-INV	Min	-1.10	-1.54	-2.93	-2.50	-0.20	-0.70	5.49	-2.59
514	540	SLE-INV	Min	-1.11	-1.60	-2.56	-3.55	-0.28	-0.58	5.49	-2.75
514	564	SLE-INV	Min	-2.10	-1.80	-2.19	-3.30	0.12	-0.48	5.30	-2.75
514	563	SLE-INV	Max	-2.09	-1.74	-2.55	-1.66	0.44	0.00	22.84	-2.29
514	539	SLU-INV	Max	-1.10	-1.54	-2.93	-1.99	-0.12	-0.25	22.99	-2.29
514	540	SLU-INV	Max	-1.11	-1.60	-2.56	-2.93	-0.17	-0.18	22.99	-2.40
514	564	SLU-INV	Max	-2.10	-1.80	-2.19	-2.57	0.38	0.07	22.84	-2.40
514	563	SLU-INV	Min	-2.82	-2.35	-3.44	-7.54	-0.40	-0.81	7.16	-3.50
514	539	SLU-INV	Min	-1.48	-2.09	-3.95	-7.71	-0.76	-0.95	7.42	-3.50
514	540	SLU-INV	Min	-1.50	-2.16	-3.46	-10.61	-1.10	-0.79	7.42	-3.72
514	564	SLU-INV	Min	-2.84	-2.43	-2.95	-10.45	-0.73	-0.65	7.16	-3.72
515	564	SLE-INV	Max	-2.74	-1.92	-1.92	-1.89	0.30	-0.40	6.33	-2.68
515	540	SLE-INV	Max	-1.53	-1.68	-2.19	-2.15	-0.13	-0.51	6.47	-2.68
515	541	SLE-INV	Max	-1.54	-1.70	-1.88	-2.69	-0.16	-0.39	6.47	-2.79
515	565	SLE-INV	Max	-2.74	-1.94	-1.61	-2.41	0.27	-0.29	6.33	-2.79
515	564	SLE-INV	Min	-2.74	-1.92	-1.92	-3.30	0.13	-0.49	4.12	-2.74
515	540	SLE-INV	Min	-1.53	-1.68	-2.19	-3.54	-0.29	-0.57	4.27	-2.74
515	541	SLE-INV	Min	-1.54	-1.70	-1.88	-4.36	-0.35	-0.44	4.27	-2.86
515	565	SLE-INV	Min	-2.74	-1.94	-1.61	-4.11	0.07	-0.36	4.12	-2.86
515	564	SLU-INV	Max	-2.74	-1.92	-1.92	-2.55	0.40	0.05	17.62	-2.39
515	540	SLU-INV	Max	-1.53	-1.68	-2.19	-2.91	-0.18	-0.17	17.72	-2.39
515	541	SLU-INV	Max	-1.54	-1.70	-1.88	-3.63	-0.21	-0.14	17.72	-2.48
515	565	SLU-INV	Max	-2.74	-1.94	-1.61	-3.25	0.37	0.08	17.62	-2.48
515	564	SLU-INV	Min	-3.70	-2.60	-2.59	-10.53	-0.74	-0.66	5.56	-3.70
515	540	SLU-INV	Min	-2.07	-2.27	-2.96	-10.65	-1.11	-0.77	5.76	-3.70
515	541	SLU-INV	Min	-2.08	-2.29	-2.54	-12.88	-1.34	-0.60	5.76	-3.86
515	565	SLU-INV	Min	-3.70	-2.61	-2.17	-12.77	-0.97	-0.49	5.56	-3.86
516	565	SLE-INV	Max	-3.21	-2.03	-1.35	-2.40	0.28	-0.31	4.46	-2.78
516	541	SLE-INV	Max	-1.86	-1.76	-1.55	-2.69	-0.38	-0.38	4.55	-2.78
516	542	SLE-INV	Max	-1.86	-1.77	-1.25	-3.07	-0.18	-0.26	4.55	-2.86
516	566	SLE-INV	Max	-3.22	-2.04	-1.04	-2.77	0.26	-0.19	4.46	-2.86
516	565	SLE-INV	Min	-3.21	-2.03	-1.35	-4.10	0.08	-0.37	2.91	-2.84
516	541	SLE-INV	Min	-1.86	-1.76	-1.55	-4.36	-0.36	-0.43	3.01	-2.84
516	542	SLE-INV	Min	-1.86	-1.77	-1.25	-4.94	-0.40	-0.29	3.01	-2.93
516	566	SLE-INV	Min	-3.22	-2.04	-1.04	-4.67	0.03	-0.24	2.91	-2.93
516	565	SLU-INV	Max	-3.21	-2.03	-1.35	-3.24	0.38	0.05	12.37	-2.48
516	541	SLU-INV	Max	-1.86	-1.76	-1.55	-3.63	-0.22	-0.11	12.44	-2.48
516	542	SLU-INV	Max	-1.86	-1.77	-1.25	-4.14	-0.24	-0.18	12.44	-2.54
516	566	SLU-INV	Max	-3.22	-2.04	-1.04	-3.74	0.36	0.07	12.37	-2.54
516	565	SLU-INV	Min	-4.34	-2.74	-1.82	-12.82	-0.97	-0.51	3.93	-3.84
516	541	SLU-INV	Min	-2.51	-2.38	-2.09	-12.93	-1.36	-0.58	4.06	-3.84
516	542	SLU-INV	Min	-2.51	-2.39	-1.68	-14.50	-1.52	-0.40	4.06	-3.95
516	566	SLU-INV	Min	-4.34	-2.76	-1.41	-14.40	-1.13	-0.32	3.93	-3.95
517	566	SLU-INV	Max	-3.52	-2.10	-0.81	-2.77	0.27	-0.20	2.56	-2.85
517	542	SLU-INV	Max	-2.07	-1.81	-0.92	-3.06	-0.18	-0.24	2.62	-2.85
517	543	SLU-INV	Max	-2.07	-1.81	-0.65	-3.28	-0.29	-0.21	2.62	-2.95
517	567	SLE-INV	Max	-3.52	-2.10	-0.54	-2.98	0.26	-0.08	2.56	-2.90
517	566	SLE-INV	Min	-3.52	-2.10	-0.81	-4.68	0.04	-0.25	1.68	-2.92
517	542	SLE-INV	Min	-2.07	-1.81	-0.92	-4.94	-0.40	-0.28	1.73	-2.92
517	543	SLE-INV	Min	-2.07	-1.81	-0.65	-5.27	-0.42	-0.14	1.73	-2.96
517	567	SLE-INV	Min	-3.52	-2.10	-0.54	-5.00	0.02	-0.10	1.68	-2.96
517	566	SLU-INV	Max	-3.52	-2.10	-0.81	-3.73	0.36	0.04	7.10	-2.53
517	542	SLU-INV	Max	-2.07	-1.81	-0.92	-4.13	-0.25	-0.05	7.14	-2.53
517	543	SLU-INV	Max	-2.07	-1.81	-0.65	-4.43	-0.26	-0.05	7.14	-2.57
517	567	SLU-INV	Max	-3.52	-2.10	-0.54	-4.02	0.35	0.04	7.10	-2.57
517	566	SLU-INV	Min	-4.75	-2.84	-1.10	-14.44	-1.14	-0.33	2.26	-3.94
517	542	SLU-INV	Min	-2.80	-2.45	-1.24	-14.52	-1.53	-0.38	2.34	-3.94
517	543	SLU-INV	Min	-2.80	-2.45	-0.87	-15.42	-1.62	-0.19	2.34	-4.00
517	567	SLU-INV	Min	-4.75	-2.84	-0.72	-15.34	-1.22	-0.14	2.26	-4.00
518	567	SLE-INV	Max	-3.65	-2.13	-0.31	-2.98	0.26	-0.10	0.66	-2.90
518	543	SLE-INV	Max	-2.17	-1.83	-0.34	-3.28	-0.19	-0.11	0.67	-2.90
518	544	SLE-INV	Max	-2.17	-1.83	-0.06	-3.34	-0.20	0.02	0.67	-2.91
518	568	SLE-INV	Max	-3.65	-2.13	-0.33	-3.03	0.26	0.03	0.66	-2.91
518	567	SLE-INV	Min	-3.65	-2.13	-0.31	-5.00	0.02	-0.12	0.43	-2.96
518	543	SLE-INV	Min	-2.17	-1.83	-0.34	-5.27	-0.43	-0.13	0.44	-2.96
518	544	SLE-INV	Min	-2.17	-1.83	-0.06	-5.35	-0.43	0.02	0.44	-2.97
518	568	SLE-INV	Min	-3.65	-2.13	-0.03	-5.09	0.01	0.03	0.43	-2.97
518	567	SLU-INV	Max	-3.65	-2.13	-0.31	-4.02	0.36	0.01	1.82	-2.56
518	543	SLU-INV	Max	-2.17	-1.83	-0.34	-4.43	-0.26	-0.02	1.84	-2.56
518	544	SLU-INV	Max	-2.17	-1.83	-0.06	-4.50	-0.26	0.03	1.84	-2.57
518	568	SLU-INV	Max	-3.65	-2.13	-0.03	-4.09	0.35	0.04	1.82	-2.57
518	567	SLU-INV	Min	-4.93	-2.88	-0.42	-15.35	-1.22	-0.16	0.58	-4.00
518	543	SLU-INV	Min	-2.93	-2.48	-0.45	-15.44	-1.62	-0.17	0.60	-4.00
518	544	SLU-INV	Min	-2.93	-2.48	-0.08	-15.67	-1.64	-0.01	0.60	-4.01
518	568	SLU-INV	Min	-4.93	-2.88	-0.04	-15.59	-1.25	0.01	0.58	-4.01
519	568	SLE-INV	Max	-3.62	-2.13	0.20	-3.03	0.26	0.02	-0.82	-2.91
519	544	SLE-INV	Max	-2.15	-1.83	0.25	-3.33	-0.19	0.03	-0.85	-2.91
519	545	SLE-INV	Max	-2.15	-1.83	0.52	-3.23	-0.19	0.18	-0.85	-2.89
519	569	SLE-INV	Max	-3.63	-2.13	0.47	-2.93	0.26	0.16	-0.82	-2.89
519	568	SLE-INV	Min	-3.62	-2.13	0.20	-5.08	0.01	0.01	-1.25	-2.97
519	544	SLE-INV	Min	-2.15	-1.83	0.25	-5.35	-0.43	0.03	-1.28	-2.97
519	545	SLE-INV	Min	-2.15	-1.83	0.52	-5.19	-0.42	0.15	-1.28	-2.95
519	569	SLE-INV	Min	-3.63	-2.13	0.47	-4.92	0.02	0.13	-1.25	-2.95
519	568	SLU-INV	Max	-3.62	-2.13	0.27	-4.09	0.35	0.02	-1.11	-2.57
519	544	SLU-INV	Max	-2.15	-1.83	0.34	-4.50	-0.26	0.05	-1.15	-2.57
519	545	SLU-INV	Max	-2.15	-1.83	0.70	-4.36	-0.26	0.24	-1.15	-2.56
519	569	SLU-INV	Max	-3.63	-2.13	0.63	-3.95	0.36	0.22	-1.11	-2.56
519	568	SLU-INV	Min	-4.89	-2.87	0.20	-15.58	-1.24	-0.02	-3.45	-4.01
519	544	SLU-INV	Min	-2.90	-2.47	0.25	-15.66	-1.64	0.03	-3.47	-4.01
519	545	SLU-INV	Min	-2.90	-2.47	0.52	-15.22	-1.60	0.02	-3.47	-3.98
519	569	SLU-INV	Min	-4.89	-2.87	0.47	-15.14	-1.21	-0.02	-3.45	-3.98
520	569	SLE-INV	Max	-3.44	-2.09	0.69	-2.93	0.26	0.15	-2.07	-2.89
520	545	SLE-INV	Max	-2.01	-1.80	0.83	-3.23	-0.19	0.19	-2.14	-2.89
520	546	SLE-INV	Max	-2.01	-1.80	1.14	-2.96	-0.18	0.33	-2.14	-2.84
520	570	SLE-INV	Max	-3.44	-2.08	0.99	-2.66	0.27	0.29	-2.07	-2.84
520	569	SLE-INV	Min	-3.44	-2.09	0.69	-4.92	0.02	0.11	-3.16	-2.96
520	545	SLE-INV	Min	-2.01	-1.80	0.83	-5.19	-0.42	0.17	-3.22	-2.96
520	546	SLE-INV	Min	-2.01	-1.80	1.14	-4.78	-0.39	0.29	-3.22	-2.90
520	570	SLE-INV	Min	-3.44	-2.08	0.99	-4.52	0.05	0.24	-3.16	-2.90



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N. progr. 01	REV. A	Pag. di Pag. 173 di 180			
520	569	SLU-INV	Max	-3.44	-2.09	0.93	-3.95	0.35	0.20	-2.79	-2.56
520	545	SLU-INV	Max	-2.01	-1.80	1.12	-4.36	-0.25	0.26	-2.88	-2.56
520	546	SLU-INV	Max	-2.01	-1.80	1.53	-3.99	-0.24	0.45	-2.88	-2.52
520	570	SLU-INV	Max	-3.44	-2.08	1.34	-3.60	0.37	0.39	-2.79	-2.52
520	569	SLU-INV	Min	-4.64	-2.82	0.69	-15.10	-1.20	-0.06	-8.73	-3.99
520	545	SLU-INV	Min	-2.72	-2.44	0.83	-15.20	-1.59	0.05	-8.78	-3.99
520	546	SLU-INV	Min	-2.72	-2.43	1.14	-14.09	-1.48	0.07	-8.78	-3.92
520	570	SLU-INV	Min	-4.64	-2.81	0.99	-13.99	-1.09	-0.04	-8.73	-3.92
521	547	SLE-INV	Max	-1.75	-1.74	1.77	-2.49	-0.16	0.49	-3.46	-2.75
521	571	SLE-INV	Max	-3.06	-2.00	1.55	-2.21	0.29	0.42	-3.34	-2.75
521	570	SLE-INV	Max	-3.06	-2.01	1.25	-2.67	0.27	0.28	-3.34	-2.85
521	546	SLE-INV	Max	-1.75	-1.75	1.47	-2.96	-0.17	0.35	-3.46	-2.85
521	547	SLE-INV	Min	-1.75	-1.74	1.77	-4.06	-0.34	0.43	-5.22	-2.81
521	571	SLE-INV	Min	-3.06	-2.00	1.55	-3.81	0.09	0.34	-5.12	-2.81
521	570	SLE-INV	Min	-3.06	-2.01	1.25	-4.51	0.04	0.22	-5.12	-2.91
521	546	SLE-INV	Min	-1.75	-1.75	1.47	-4.77	-0.38	0.31	-5.22	-2.91
521	547	SLU-INV	Max	-1.75	-1.74	2.39	-3.36	-0.21	0.66	-4.67	-2.45
521	571	SLU-INV	Max	-3.06	-2.00	2.10	-2.99	0.39	0.57	-4.51	-2.45
521	570	SLU-INV	Max	-3.06	-2.01	1.69	-3.60	0.36	0.38	-4.51	-2.52
521	546	SLU-INV	Max	-1.75	-1.75	1.98	-3.99	-0.23	0.47	-4.67	-2.52
521	547	SLU-INV	Min	-2.36	-2.35	1.77	-12.10	-1.28	0.13	-14.27	-3.79
521	571	SLU-INV	Min	-4.13	-2.70	1.55	-12.00	-0.90	-0.06	-14.18	-3.79
521	570	SLU-INV	Min	-4.13	-2.71	1.25	-13.94	-1.08	-0.08	-14.18	-3.93
521	546	SLU-INV	Min	-2.37	-2.36	1.47	-14.04	-1.47	0.11	-14.27	-3.93
522	548	SLE-INV	Max	-1.35	-1.62	2.53	-1.85	-0.12	0.64	-4.80	-2.63
522	572	SLE-INV	Max	-2.47	-1.85	2.20	-1.59	0.31	0.55	-4.63	-2.63
522	571	SLE-INV	Max	-2.48	-1.89	1.83	-2.23	0.27	0.41	-4.63	-2.76
522	547	SLE-INV	Max	-1.36	-1.66	2.16	-2.50	-0.15	0.50	-4.80	-2.76
522	548	SLE-INV	Min	-1.35	-1.62	2.53	-3.08	-0.25	0.57	-7.27	-2.68
522	572	SLE-INV	Min	-2.47	-1.85	2.20	-2.83	0.16	0.45	-7.12	-2.68
522	571	SLE-INV	Min	-2.48	-1.89	1.83	-3.81	0.08	0.33	-7.12	-2.82
522	547	SLE-INV	Min	-1.36	-1.66	2.16	-4.06	-0.33	0.44	-7.27	-2.82
522	548	SLU-INV	Max	-1.35	-1.62	3.41	-2.50	-0.16	0.86	-6.48	-2.35
522	572	SLU-INV	Max	-2.47	-1.85	2.97	-2.15	0.42	0.74	-6.26	-2.35
522	571	SLU-INV	Max	-2.48	-1.89	2.47	-3.00	0.37	0.56	-6.26	-2.46
522	547	SLU-INV	Max	-1.36	-1.66	2.92	-3.38	-0.20	0.68	-6.48	-2.46
522	548	SLU-INV	Min	-1.82	-2.19	2.53	-9.35	-0.96	0.60	-19.94	-3.62
522	572	SLU-INV	Min	-3.34	-2.49	2.20	-9.20	-0.59	-0.02	-19.82	-3.62
522	571	SLU-INV	Min	-3.35	-2.55	1.83	-11.91	-0.89	-0.08	-19.82	-3.81
522	547	SLU-INV	Min	-1.83	-2.24	2.16	-12.06	-1.26	0.15	-19.94	-3.93
523	549	SLE-INV	Max	-0.84	-1.47	3.31	-1.05	-0.06	0.76	-6.18	-2.46
523	573	SLE-INV	Max	-1.68	-1.64	2.92	-0.82	0.34	0.65	-5.88	-2.46
523	572	SLE-INV	Max	-1.69	-1.69	2.53	-1.63	0.29	0.54	-5.88	-2.64
523	548	SLE-INV	Max	-0.86	-1.52	2.93	-1.87	-0.10	0.65	-6.10	-2.64
523	549	SLE-INV	Min	-0.84	-1.47	3.31	-1.82	-0.14	0.68	-9.29	-2.50
523	573	SLE-INV	Min	-1.68	-1.64	2.92	-1.61	0.26	0.55	-9.08	-2.50
523	572	SLE-INV	Min	-1.69	-1.69	2.53	-2.85	0.15	0.44	-9.08	-2.70
523	548	SLE-INV	Min	-0.86	-1.52	2.93	-3.08	-0.24	0.58	-9.29	-2.70
523	549	SLU-INV	Max	-0.84	-1.47	4.47	-1.41	-0.08	1.03	-8.24	-2.21
523	573	SLU-INV	Max	-1.68	-1.64	3.94	-1.11	0.47	0.88	-7.94	-2.21
523	572	SLU-INV	Max	-1.69	-1.69	3.42	-2.19	0.39	0.73	-7.94	-2.36
523	548	SLU-INV	Max	-0.86	-1.52	3.95	-2.53	-0.14	0.87	-8.24	-2.36
523	549	SLU-INV	Min	-1.14	-1.98	3.31	-5.79	-0.54	0.29	-25.59	-3.38
523	573	SLU-INV	Min	-2.27	-2.21	2.92	-5.65	-0.20	0.00	-25.42	-3.38
523	572	SLU-INV	Min	-2.28	-2.28	2.53	-9.12	-0.58	-0.05	-25.42	-3.64
523	548	SLU-INV	Min	-1.15	-2.06	2.93	-9.27	-0.93	0.23	-25.59	-3.64
524	550	SLE-INV	Max	-0.23	-1.21	4.26	-0.10	0.02	0.86	-7.35	-2.24
524	574	SLE-INV	Max	-0.68	-1.30	3.75	0.09	0.40	0.75	-7.07	-2.24
524	573	SLE-INV	Max	-0.71	-1.44	3.27	-0.88	0.31	0.65	-7.07	-2.48
524	549	SLE-INV	Max	-0.26	-1.35	3.77	-1.10	-0.05	0.76	-7.35	-2.48
524	550	SLE-INV	Min	-0.23	-1.21	4.26	-0.34	0.02	0.78	-11.25	-2.28
524	574	SLE-INV	Min	-0.68	-1.30	3.75	-0.14	0.39	0.65	-10.98	-2.28
524	573	SLE-INV	Min	-0.71	-1.44	3.27	-1.64	0.23	0.55	-10.98	-2.53
524	549	SLE-INV	Min	-0.26	-1.35	3.77	-1.86	-0.13	0.68	-11.25	-2.53
524	550	SLU-INV	Max	-0.23	-1.21	5.75	-0.14	0.04	1.16	-9.93	-2.04
524	574	SLU-INV	Max	-0.68	-1.30	5.06	0.12	0.54	1.01	-9.54	-2.04
524	573	SLU-INV	Max	-0.71	-1.44	4.41	-1.19	0.42	0.88	-9.54	-2.23
524	549	SLU-INV	Max	-0.26	-1.35	5.09	-1.48	-0.07	1.03	-9.93	-2.23
524	550	SLU-INV	Min	-0.31	-1.63	4.26	-1.53	0.03	0.40	-31.20	-3.08
524	574	SLU-INV	Min	-0.92	-1.75	3.75	-1.30	0.37	0.13	-30.99	-3.08
524	573	SLU-INV	Min	-0.96	-1.95	3.27	-5.54	-0.19	0.01	-30.99	-3.41
524	549	SLU-INV	Min	-0.35	-1.82	3.77	-5.77	-0.52	0.28	-31.20	-3.41
524	551	SLE-INV	Max	0.40	-0.84	5.23	1.39	0.23	0.90	-8.54	-1.96
525	575	SLE-INV	Max	0.53	-0.82	4.70	1.51	0.57	0.80	-8.18	-1.96
524	574	SLE-INV	Max	0.48	-1.06	4.22	-0.24	0.35	0.75	-8.18	-2.27
525	550	SLE-INV	Max	0.35	-1.09	4.74	-0.18	0.03	0.86	-8.54	-2.27
525	551	SLE-INV	Min	0.40	-0.84	5.23	0.97	0.13	0.83	-13.16	-1.99
525	575	SLE-INV	Min	0.53	-0.82	4.70	1.09	0.47	0.70	-12.81	-1.99
525	574	SLE-INV	Min	0.48	-1.06	4.22	-0.24	0.35	0.65	-12.81	-2.31
525	550	SLE-INV	Min	0.35	-1.09	4.74	-0.39	0.03	0.78	-13.16	-2.31
525	551	SLU-INV	Max	0.54	-0.84	7.06	3.55	0.77	1.22	-11.53	-1.80
525	575	SLU-INV	Max	0.71	-0.82	6.35	3.69	1.07	1.08	-11.05	-1.80
525	574	SLU-INV	Max	0.64	-1.06	5.69	-0.05	0.47	1.01	-11.05	-2.05
525	550	SLU-INV	Max	0.47	-1.09	6.40	-0.24	0.07	1.16	-11.53	-2.05
525	551	SLU-INV	Min	0.40	-1.14	5.23	1.31	0.17	0.47	-36.77	-2.69
525	575	SLU-INV	Min	0.53	-1.11	4.70	1.47	0.64	0.20	-36.48	-2.69
525	574	SLU-INV	Min	0.48	-1.44	4.22	-1.30	0.36	0.13	-36.48	-3.12
525	550	SLU-INV	Min	0.35	-1.47	4.74	-1.44	0.04	0.40	-36.77	-3.12
526	552	SLE-INV	Max	1.01	-0.29	6.43	3.29	0.54	0.89	-9.65	-1.62
526	576	SLE-INV	Max	1.85	-0.12	5.86	3.36	0.83	0.82	-9.20	-1.62
526	575	SLE-INV	Max	1.76	-0.57	5.20	1.37	0.51	0.81	-9.20	-2.00
526	551	SLE-INV	Max	0.92	-0.74	5.77	1.26	0.24	0.89	-9.65	-2.00
526	552	SLE-INV	Min	1.01	-0.29	6.43	2.13	0.30	0.84	-14.98	-1.64
526	576	SLE-INV	Min	1.85	-0.12	5.86	2.17	0.59	0.75	-14.56	-1.64
526	575	SLE-INV	Min	1.76	-0.57	5.20	0.90	0.40	0.72	-14.56	-2.03
526	551	SLE-INV	Min	0.92	-0.74	5.77	0.82	0.13	0.81	-14.98	-2.03
526	552	SLU-INV	Max	1.37	-0.29	8.69	9.21	1.80	1.20	-13.02	-1.54
526	576	SLU-INV	Max	2.49	-0.12	7.91	9.49	2.06	1.10	-12.43	-1.54
526	575	SLU-INV	Max	2.37	-0.57	7.02	3.76	1.05	1.10	-12.43	-1.83
526	551	SLU-INV	Max	1.25	-0.74	7.79	3.48	0.79	1.20	-13.02	-1.83
526	552	SLU-INV	Min	1.01	-0.39	6.43	2.87	0.40	0.56	-42.26	-2.21
526	576	SLU-INV	Min	1.85	-0.16	5.86	2.93	0.80	0.43	-41.93	-2.21
526	575	SLU-INV	Min	1.76	-0.77	5.20	1.22	0.54	0.27	-41.93	-2.74
526	551	SLU-INV	Min	0.92	-1.00	5.77	1.11	0.18	0.40	-42.26	-2.74
527	553	SLE-INV	Max	1.43	0.58	7.36	5.42	0.96	0.73	-10.66	-1.17
527	577	SLE-INV	Max	3.16	0.93	6.93	5.25	1.20	0.71	-10.10	-1.17
527	576	SLE-INV	Max	2.99	0.11	6.57	3.03	0.74	0.85	-10.10	-1.65
527	552	SLE-INV	Max	1.26	-0.24	7.00	3.16	0.54	0.86	-10.66	-1.65
527	553	SLE-INV	Min	1.43	0.58	7.36	3.38	0.54	0.66	-16.72	-1.18
527	577	SLE-INV	Min	3.16	0.93	6.93	3.22	0.77	0.65	-16.17	-1.18
527	576	SLE-INV	Min	2.99	0.11	6.57					



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1

Tratto Fabriano - Matelica Nord

Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita

Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc	N. progr.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	174 di 180			
527	552	SLE-INV	Min	1.26	-0.24	7.00	1.94	0.29	0.80	-16.72	-1.68
527	553	SLU-INV	Max	1.93	0.79	9.93	15.84	3.14	0.99	-14.39	-1.10
527	577	SLU-INV	Max	4.26	1.26	9.35	15.62	3.35	0.96	-13.63	-1.10
527	576	SLU-INV	Max	4.04	0.15	8.87	9.17	2.01	1.14	-13.63	-1.53
527	552	SLU-INV	Max	1.71	-0.24	9.44	9.37	1.82	1.16	-14.39	-1.53
527	553	SLU-INV	Min	1.43	0.58	7.36	4.56	0.73	0.29	-47.69	-1.60
527	577	SLU-INV	Min	3.16	0.93	6.93	4.35	1.05	0.34	-47.21	-1.60
527	576	SLU-INV	Min	2.99	0.11	6.57	2.47	0.66	0.52	-47.21	-2.27
527	552	SLU-INV	Min	1.26	-0.32	7.00	2.62	0.39	0.48	-47.69	-2.27
528	554	SLE-INV	Max	1.79	1.00	8.38	7.70	1.40	0.45	-11.56	-0.60
528	578	SLE-INV	Max	3.58	1.36	8.28	7.36	1.56	0.44	-10.85	-0.60
528	577	SLE-INV	Max	3.51	1.00	7.37	4.93	1.09	0.72	-10.85	-1.22
528	553	SLE-INV	Max	1.72	0.64	7.47	5.22	0.97	0.73	-11.56	-1.22
528	554	SLE-INV	Min	1.79	1.00	8.38	4.69	0.81	0.42	-18.34	-0.60
528	578	SLE-INV	Min	3.58	1.36	8.28	4.32	0.97	0.39	-17.64	-0.60
528	577	SLE-INV	Min	3.51	1.00	7.37	2.82	0.65	0.64	-17.64	-1.23
528	553	SLE-INV	Min	1.72	0.64	7.47	3.14	0.53	0.67	-18.34	-1.23
528	554	SLU-INV	Max	2.41	1.36	11.32	23.06	4.45	0.61	-15.61	-0.58
528	578	SLU-INV	Max	4.84	1.84	11.18	22.92	4.59	0.60	-14.64	-0.58
528	577	SLU-INV	Max	4.74	1.35	9.94	15.75	3.33	0.97	-14.64	-1.16
528	553	SLU-INV	Max	2.32	0.87	10.08	15.88	3.20	0.98	-15.61	-1.16
528	554	SLU-INV	Min	1.79	1.00	8.38	6.33	1.09	0.28	-53.01	-0.81
528	578	SLU-INV	Min	3.58	1.36	8.28	5.83	1.30	0.11	-52.36	-0.81
528	577	SLU-INV	Min	3.51	1.00	7.37	3.80	0.88	0.23	-52.36	-1.67
528	553	SLU-INV	Min	1.72	0.64	7.47	4.23	0.72	0.40	-53.01	-1.67
529	555	SLE-INV	Max	2.00	0.40	5.95	10.19	1.95	0.00	-12.35	0.12
529	579	SLE-INV	Max	4.16	0.83	5.58	9.62	2.01	0.02	-11.46	0.12
529	578	SLE-INV	Max	4.30	1.51	10.17	7.01	1.44	0.46	-11.46	-0.66
529	554	SLE-INV	Max	2.13	1.07	10.54	7.51	1.42	0.44	-12.35	-0.66
529	555	SLE-INV	Min	2.00	0.40	5.95	6.09	1.12	-0.01	-19.86	0.11
529	579	SLE-INV	Min	4.16	0.83	5.58	5.46	1.19	0.01	-18.98	0.11
529	578	SLE-INV	Min	4.30	1.51	10.17	3.88	0.83	0.42	-18.98	-0.67
529	554	SLE-INV	Min	2.13	1.07	10.54	4.44	0.81	0.40	-19.86	-0.67
529	555	SLU-INV	Max	2.70	0.54	8.03	31.16	6.17	0.00	-16.67	0.16
529	579	SLU-INV	Max	5.62	1.12	7.53	30.88	6.23	0.04	-15.47	0.16
529	578	SLU-INV	Max	5.80	2.03	13.73	23.02	4.57	0.62	-15.47	-0.64
529	554	SLU-INV	Max	2.88	1.45	14.23	23.25	4.54	0.60	-16.67	-0.64
529	555	SLU-INV	Min	2.00	0.40	5.95	8.23	1.51	-0.03	-58.26	0.07
529	579	SLU-INV	Min	4.16	0.83	5.58	7.38	1.61	0.02	-57.47	0.07
529	578	SLU-INV	Min	4.30	1.51	10.17	5.24	1.11	0.23	-57.47	-0.20
529	554	SLU-INV	Min	2.13	1.07	10.54	5.99	1.09	0.16	-58.26	-0.90
530	580	SLE-INV	Max	8.22	1.64	-4.72	8.92	1.87	-0.02	18.41	0.11
530	556	SLE-INV	Max	4.18	0.84	-5.55	9.57	1.83	0.02	19.05	0.11
530	557	SLE-INV	Max	4.34	1.60	-10.15	7.16	1.35	-0.42	19.05	-0.42
530	581	SLE-INV	Max	8.37	2.41	-9.31	6.57	1.36	-0.44	18.41	-0.42
530	580	SLE-INV	Min	8.22	1.64	-4.72	4.68	1.03	-0.02	10.84	0.10
530	556	SLE-INV	Min	4.18	0.84	-5.55	5.40	0.99	0.01	11.49	0.10
530	557	SLE-INV	Min	4.34	1.60	-10.15	3.95	0.68	-0.46	11.49	-0.42
530	581	SLE-INV	Min	8.37	2.41	-9.31	3.30	0.69	-0.50	10.84	-0.42
530	580	SLU-INV	Max	11.10	2.22	-4.72	30.59	6.17	0.04	57.11	0.15
530	556	SLU-INV	Max	5.65	1.13	-5.55	30.87	6.13	0.02	57.73	0.15
530	557	SLU-INV	Max	5.85	2.16	-10.15	23.58	4.76	-0.25	57.73	-0.45
530	581	SLU-INV	Max	11.30	3.25	-9.31	23.34	4.78	-0.15	57.11	-0.45
530	580	SLU-INV	Min	8.22	1.64	-6.37	6.32	1.39	-0.03	14.64	0.06
530	556	SLU-INV	Min	4.18	0.84	-7.50	7.29	1.33	-0.04	15.51	0.06
530	557	SLU-INV	Min	4.34	1.60	-13.70	5.34	0.92	-0.62	15.51	-0.57
530	581	SLU-INV	Min	8.37	2.41	-12.57	4.45	0.93	-0.68	14.64	-0.57
531	581	SLE-INV	Max	8.39	2.41	-7.29	6.98	1.47	-0.53	17.33	-0.38
531	557	SLE-INV	Max	3.64	1.46	-8.31	7.43	1.37	-0.33	17.83	-0.38
531	558	SLE-INV	Max	3.37	0.12	-7.19	5.17	0.75	-0.64	17.83	-0.79
531	582	SLE-INV	Max	8.12	1.07	-6.18	4.78	0.82	-0.81	17.33	-0.79
531	581	SLE-INV	Min	8.39	2.41	-7.29	3.91	0.84	-0.54	10.44	-0.39
531	557	SLE-INV	Min	3.64	1.46	-8.31	4.31	0.73	-0.42	10.93	-0.39
531	558	SLE-INV	Min	3.37	0.12	-7.19	2.93	0.36	-0.69	10.93	-0.80
531	582	SLE-INV	Min	8.12	1.07	-6.18	2.58	0.43	-0.83	10.44	-0.80
531	581	SLU-INV	Max	11.32	3.25	-7.29	22.64	4.73	-0.48	52.58	-0.34
531	557	SLU-INV	Max	4.91	1.97	-8.31	23.37	4.63	0.10	53.06	-0.34
531	558	SLU-INV	Max	4.55	0.16	-7.19	16.65	2.74	-0.39	53.06	-0.74
531	582	SLU-INV	Max	10.96	1.44	-6.18	15.98	2.81	-0.97	52.58	-0.74
531	581	SLU-INV	Min	8.39	2.41	-9.84	5.28	1.13	-0.73	14.09	-0.52
531	557	SLU-INV	Min	3.64	1.46	-11.21	5.82	0.99	-0.57	14.76	-0.52
531	558	SLU-INV	Min	3.37	0.12	-9.71	3.96	0.48	-0.93	14.76	-1.08
531	582	SLU-INV	Min	8.12	1.07	-8.34	3.49	0.58	-1.13	14.09	-1.08
532	582	SLE-INV	Max	5.42	0.53	-5.49	5.51	0.96	-0.74	16.12	-0.79
532	558	SLE-INV	Max	3.11	0.07	-6.85	5.42	0.81	-0.73	16.45	-0.79
532	559	SLE-INV	Max	3.04	-0.29	-6.02	3.34	0.40	-0.68	16.45	-1.07
532	583	SLE-INV	Max	5.35	0.17	-4.66	3.46	0.53	-0.69	16.12	-1.07
532	582	SLE-INV	Min	5.42	0.53	-5.49	3.26	0.57	-0.74	9.88	-0.80
532	558	SLE-INV	Min	3.11	0.07	-6.85	3.28	0.42	-0.75	10.24	-0.80
532	559	SLE-INV	Min	3.04	-0.29	-6.02	1.98	0.19	-0.77	10.24	-1.08
532	583	SLE-INV	Min	5.35	0.17	-4.66	2.00	0.32	-0.76	9.88	-1.08
532	582	SLU-INV	Max	7.32	0.72	-5.49	17.00	2.92	-0.73	47.99	-0.85
532	558	SLU-INV	Max	4.20	0.09	-6.85	16.39	2.77	-0.62	48.21	-0.85
532	559	SLU-INV	Max	4.11	-0.29	-6.02	10.28	1.45	-0.22	48.21	-1.03
532	583	SLU-INV	Max	7.23	0.23	-4.66	10.91	1.59	-0.33	47.99	-1.03
532	582	SLU-INV	Min	5.42	0.53	-7.41	4.40	0.78	-1.00	13.34	-1.08
532	558	SLU-INV	Min	3.11	0.07	-9.25	4.43	0.57	-1.02	13.83	-1.08
532	559	SLU-INV	Min	3.04	-0.39	-8.13	2.68	0.25	-1.04	13.83	-1.46
532	583	SLU-INV	Min	5.35	0.17	-6.29	2.71	0.43	-1.03	13.34	-1.46
533	583	SLE-INV	Max	2.77	-0.34	-4.24	3.74	0.62	-0.61	14.68	-1.04
533	559	SLE-INV	Max	2.05	-0.49	-5.34	3.67	0.43	-0.76	14.98	-1.04
533	560	SLE-INV	Max	2.04	-0.53	-4.81	1.77	0.22	-0.73	14.98	-1.28
533	584	SLE-INV	Max	2.76	-0.39	-3.71	1.88	0.39	-0.57	14.68	-1.28
533	583	SLE-INV	Min	2.77	-0.34	-4.24	2.34	0.42	-0.71	9.13	-1.05
533	559	SLE-INV	Min	2.05	-0.49	-5.34	2.31	0.23	-0.82	9.44	-1.05
533	560	SLE-INV	Min	2.04	-0.53	-4.81	1.11	0.11	-0.81	9.44	-1.30
533	584	SLE-INV	Min	2.76	-0.39	-3.71	1.18	0.28	-0.70	9.13	-1.30
533	583	SLU-INV	Max	3.74	-0.34	-4.24	10.89	1.64	-0.08	43.05	-0.97
533	559	SLU-INV	Max	2.76	-0.49	-5.34	10.61	1.47	-0.47	43.31	-0.97
533	560	SLU-INV	Max	2.75	-0.53	-4.81	5.14	0.76	-0.30	43.31	-1.18
533	584	SLU-INV	Max	3.73	-0.39	-3.71	5.42	0.93	0.09	43.05	-1.18
533	583	SLU-INV	Min	2.77	-0.46	-5.73	3.16	0.56	-0.96	12.33	-1.42
533	559	SLU-INV	Min	2.05	-0.66	-7.21	3.12	0.31	-1.11	12.74	-1.42
533	560	SLU-INV	Min	2.04	-0.72	-6.49	1.50	0.15	-1.09	12.74	-1.75
533	584	SLU-INV	Min	2.76	-0.52	-5.00	1.60	0.38	-0.94	12.33	-1.75
534	584	SLE-INV	Max	0.58	-0.82	-3.30	2.07	0.44	-0.56	13.15	-1.26
534	560	SLE-INV	Max	0.90	-0.76	-4.33	1.93	0.23	-0.73	13.39	-1.26
534	561	SLE-INV	Max	0.90	-0.74	-3.84	0.23	0.07	-0.65	13.39	-1.45
534	585	SLE-INV	Max	0.58	-0.80	-2.82	0.40	0.27	-0.48	13.15	-1.45
534	584										

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc. REL	N.prog. 01	REV. A	Pag.di Pag. 175 di 180
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534	561	SLE-INV	Min	0.90	-0.74	-3.84	0.22	0.05	-0.76	8.52	-1.47
534	585	SLE-INV	Min	0.58	-0.80	-2.82	0.36	0.25	-0.63	8.27	-1.47
534	584	SLU-INV	Max	0.78	-0.82	-3.30	5.45	0.94	0.10	38.09	-1.17
534	560	SLU-INV	Max	1.21	-0.76	-4.33	5.12	0.75	-0.31	38.28	-1.17
534	561	SLU-INV	Max	1.22	-0.74	-3.84	0.32	0.18	-0.11	38.28	-1.33
534	585	SLU-INV	Max	0.78	-0.80	-2.82	0.60	0.38	0.30	38.09	-1.33
534	584	SLU-INV	Min	0.58	-1.11	-4.46	1.91	0.47	-0.93	11.17	-1.72
534	560	SLU-INV	Min	0.90	-1.03	-5.84	1.76	0.17	-1.10	11.50	-1.72
534	561	SLU-INV	Min	0.90	-1.00	-5.18	0.28	0.07	-1.03	11.50	-1.99
534	585	SLU-INV	Min	0.58	-1.08	-3.80	0.49	0.34	-0.85	11.17	-1.99
535	585	SLE-INV	Max	-1.17	-1.15	-2.59	0.49	0.31	-0.47	11.52	-1.43
535	561	SLE-INV	Max	-0.22	-0.96	-3.38	0.35	0.07	-0.67	11.71	-1.43
535	562	SLE-INV	Max	-0.19	-0.84	-3.04	-0.60	0.02	-0.59	11.71	-1.58
535	586	SLE-INV	Max	-1.14	-1.03	-2.25	-0.43	0.25	-0.39	11.52	-1.58
535	585	SLE-INV	Min	-1.17	-1.15	-2.59	0.49	0.30	-0.63	7.31	-1.45
535	561	SLE-INV	Min	-0.22	-0.96	-3.38	0.35	0.06	-0.77	7.51	-1.45
535	562	SLE-INV	Min	-0.19	-0.84	-3.04	-1.13	-0.02	-0.70	7.51	-1.61
535	586	SLE-INV	Min	-1.14	-1.03	-2.25	-0.97	0.21	-0.55	7.31	-1.61
535	585	SLU-INV	Max	-1.17	-1.15	-2.59	0.67	0.42	0.35	33.02	-1.31
535	561	SLU-INV	Max	-0.22	-0.96	-3.38	0.48	0.17	-0.15	33.19	-1.31
535	562	SLU-INV	Max	-0.19	-0.84	-3.04	-0.81	0.02	-0.07	33.19	-1.44
535	586	SLU-INV	Max	-1.14	-1.03	-2.25	-0.59	0.33	0.43	33.02	-1.44
535	585	SLU-INV	Min	-1.58	-1.56	-3.49	0.48	0.38	-0.84	9.87	-1.96
535	561	SLU-INV	Min	-0.22	-1.30	-4.56	0.31	0.07	-1.04	10.14	-1.96
535	562	SLU-INV	Min	-0.26	-1.14	-4.10	-3.89	-0.18	-0.94	10.14	-2.18
535	586	SLU-INV	Min	-1.55	-1.40	-3.04	-3.72	0.04	-0.75	9.87	-2.18
536	586	SLE-INV	Max	-2.54	-1.31	-2.01	-0.35	0.28	-0.40	9.82	-1.57
536	562	SLE-INV	Max	-1.17	-1.04	-2.69	-0.53	0.02	-0.58	9.97	-1.57
536	563	SLE-INV	Max	-1.15	-0.95	-2.39	-1.34	-0.01	-0.50	9.97	-1.69
536	587	SLE-INV	Max	-2.53	-1.23	-1.71	-1.15	0.24	-0.32	9.82	-1.69
536	586	SLE-INV	Min	-2.54	-1.31	-2.01	-0.92	0.23	-0.56	6.28	-1.59
536	562	SLE-INV	Min	-1.17	-1.04	-2.69	-1.09	-0.02	-0.69	6.43	-1.59
536	563	SLE-INV	Min	-1.15	-0.95	-2.39	-2.35	-0.09	-0.60	6.43	-1.72
536	587	SLE-INV	Min	-2.53	-1.23	-1.71	-2.17	0.16	-0.47	6.28	-1.72
536	586	SLE-INV	Max	-2.54	-1.31	-2.01	-0.48	0.37	0.40	27.91	-1.43
536	562	SLU-INV	Max	-1.17	-1.04	-2.69	-0.71	0.02	-0.03	28.04	-1.43
536	563	SLU-INV	Max	-1.15	-0.95	-2.39	-1.81	-0.02	0.03	28.04	-1.54
536	587	SLU-INV	Max	-2.53	-1.23	-1.71	-1.55	0.32	0.46	27.91	-1.54
536	586	SLU-INV	Min	-3.43	-1.77	-2.72	-3.83	0.02	-0.76	8.47	-2.15
536	562	SLU-INV	Min	-1.58	-1.40	-3.63	-3.96	-0.20	-0.33	8.69	-2.15
536	563	SLU-INV	Min	-1.55	-1.29	-3.22	-7.50	-0.49	-0.81	8.69	-2.33
536	587	SLU-INV	Min	-3.41	-1.66	-2.31	-7.38	-0.26	-0.63	8.47	-2.33
537	587	SLE-INV	Max	-3.61	-1.45	-1.55	-1.11	0.26	-0.33	8.05	-1.68
537	563	SLE-INV	Max	-1.97	-1.12	-2.06	-1.30	-0.02	-0.49	8.17	-1.68
537	564	SLE-INV	Max	-1.95	-1.01	-1.82	-1.97	-0.03	-0.41	8.17	-1.78
537	588	SLE-INV	Max	-3.59	-1.34	-1.31	-1.76	0.24	-0.24	8.05	-1.78
537	587	SLE-INV	Min	-3.61	-1.45	-1.55	-2.16	0.17	-0.48	5.18	-1.71
537	563	SLE-INV	Min	-1.97	-1.12	-2.06	-2.32	-0.10	-0.59	5.30	-1.71
537	564	SLE-INV	Min	-1.95	-1.01	-1.82	-3.36	-0.14	-0.49	5.30	-1.81
537	588	SLE-INV	Min	-3.59	-1.34	-1.31	-3.18	0.13	-0.38	5.18	-1.81
537	587	SLU-INV	Max	-3.61	-1.45	-1.55	-1.50	0.35	0.44	22.75	-1.52
537	563	SLU-INV	Max	-1.97	-1.12	-2.06	-1.75	-0.02	0.44	22.84	-1.52
537	564	SLU-INV	Max	-1.95	-1.01	-1.82	-2.66	-0.04	0.44	22.84	-1.60
537	588	SLU-INV	Max	-3.59	-1.34	-1.31	-2.38	0.32	0.44	22.75	-1.60
537	587	SLU-INV	Min	-4.88	-1.95	-2.10	-7.51	-0.27	-0.64	6.99	-2.31
537	563	SLU-INV	Min	-2.66	-1.51	-2.78	-7.56	-0.51	-0.80	7.15	-2.31
537	564	SLU-INV	Min	-2.63	-1.37	-2.45	-10.44	-0.69	-0.67	7.15	-2.44
537	588	SLU-INV	Min	-4.85	-1.41	-1.77	-10.41	-0.45	-0.65	6.99	-2.46
538	588	SLE-INV	Max	-4.42	-1.51	-1.15	-1.74	0.25	-0.26	6.24	-1.77
538	564	SLE-INV	Max	-2.58	-1.14	-1.55	-1.95	-0.03	-0.39	6.33	-1.77
538	565	SLE-INV	Max	-2.57	-1.08	-1.32	-2.47	-0.04	-0.30	6.33	-1.84
538	589	SLE-INV	Max	-4.41	-1.44	-0.93	-2.25	0.24	-0.18	6.24	-1.84
538	588	SLE-INV	Min	-4.42	-1.51	-1.15	-3.18	0.13	-0.39	4.03	-1.80
538	564	SLE-INV	Min	-2.58	-1.14	-1.55	-3.35	-0.14	-0.48	4.12	-1.80
538	565	SLE-INV	Min	-2.57	-1.08	-1.32	-4.15	-0.18	-0.37	4.12	-1.87
538	589	SLE-INV	Min	-4.41	-1.44	-0.93	-3.97	0.10	-0.28	4.03	-1.87
538	588	SLE-INV	Max	-4.42	-1.51	-1.15	-2.35	0.34	0.39	17.55	-1.60
538	564	SLU-INV	Max	-2.58	-1.14	-1.55	-2.63	-0.05	0.08	17.62	-1.60
538	565	SLU-INV	Max	-2.57	-1.08	-1.32	-3.34	-0.06	0.05	17.62	-1.65
538	589	SLU-INV	Max	-4.41	-1.44	-0.93	-3.04	0.32	0.36	17.55	-1.65
538	588	SLU-INV	Min	-5.97	-2.04	-1.56	-10.51	-0.47	-0.52	5.44	-2.43
538	564	SLU-INV	Min	-3.49	-1.54	-2.09	-10.53	-0.71	-0.65	5.56	-2.43
538	565	SLU-INV	Min	-3.47	-1.45	-1.79	-12.75	-0.86	-0.50	5.56	-2.53
539	589	SLU-INV	Min	-5.95	-1.95	-1.26	-12.75	-0.61	-0.38	5.44	-2.53
539	588	SLE-INV	Max	-4.99	-1.56	-0.81	-2.25	0.25	-0.19	4.40	-1.83
539	565	SLE-INV	Max	-3.04	-1.17	-1.06	-2.46	-0.05	-0.29	4.46	-1.83
539	566	SLE-INV	Max	-3.03	-1.11	-0.87	-2.83	-0.05	-0.20	4.46	-1.88
539	590	SLE-INV	Max	-4.98	-1.50	-0.61	-2.61	0.24	-0.11	4.40	-1.88
539	589	SLE-INV	Min	-4.99	-1.56	-0.81	-3.98	0.10	-0.29	2.85	-1.86
539	565	SLE-INV	Min	-3.04	-1.17	-1.06	-4.16	-0.18	-0.36	2.91	-1.86
539	566	SLE-INV	Min	-3.03	-1.11	-0.87	-4.72	-0.20	-0.25	2.91	-1.92
539	590	SLE-INV	Min	-4.98	-1.50	-0.61	-4.54	0.08	-0.18	2.85	-1.92
539	589	SLU-INV	Max	-4.99	-1.56	-0.81	-3.03	0.33	0.32	12.32	-1.65
539	565	SLU-INV	Max	-3.04	-1.17	-1.06	-3.33	-0.06	0.09	12.37	-1.65
539	566	SLU-INV	Max	-3.03	-1.11	-0.87	-3.82	-0.07	0.03	12.37	-1.69
539	590	SLU-INV	Max	-4.98	-1.50	-0.61	-3.52	0.32	0.26	12.32	-1.69
539	589	SLU-INV	Min	-6.74	-2.11	-1.09	-12.84	-0.62	-0.40	3.84	-2.52
539	565	SLU-INV	Min	-4.11	-1.58	-1.44	-12.80	-0.87	-0.49	3.93	-2.52
539	566	SLU-INV	Min	-4.09	-1.50	-1.18	-14.36	-0.96	-0.34	3.93	-2.59
539	590	SLU-INV	Min	-6.72	-2.03	-0.83	-14.41	-0.70	-0.24	3.84	-2.59
540	590	SLE-INV	Max	-5.35	-1.58	-0.49	-2.60	0.24	-0.13	2.53	-1.87
540	566	SLE-INV	Max	-3.33	-1.17	-0.64	-2.83	-0.05	-0.18	2.56	-1.87
540	567	SLE-INV	Max	-3.32	-1.14	-0.45	-3.04	-0.06	-0.10	2.56	-1.90
540	591	SLE-INV	Max	-5.35	-1.55	-0.30	-2.81	0.24	-0.04	2.53	-1.90
540	590	SLE-INV	Min	-5.35	-1.58	-0.49	-4.54	0.09	-0.19	1.64	-1.91
540	566	SLE-INV	Min	-3.33	-1.17	-0.64	-4.72	-0.20	-0.23	1.67	-1.91
540	567	SLE-INV	Min	-3.32	-1.14	-0.45	-5.05	-0.21	-0.12	1.67	-1.94
540	591	SLE-INV	Min	-5.35	-1.55	-0.30	-4.86	0.08	-0.08	1.64	-1.94
540	590	SLU-INV	Max	-5.35	-1.58	-0.49	-3.52	0.33	0.21	7.08	-1.69
540	566	SLU-INV	Max	-3.33	-1.17	-0.64	-3.82	-0.07	0.08	7.10	-1.69
540	567	SLU-INV	Max	-3.32	-1.14	-0.45	-4.11	-0.08	0.01	7.10	-1.71
540	591	SLU-INV	Max	-5.35	-1.55	-0.30	-3.80	0.32	0.14	7.08	-1.71
540	590	SLU-INV	Min	-7.23	-2.13	-0.66	-14.46	-0.71	-0.26	2.21	-2.58
540	566	SLU-INV	Min	-4.49	-1.58	-0.86	-14.41	-0.97	-0.32	2.26	-2.58
540	567	SLU-INV	Min	-4.49	-1.54	-0.61	-15.30	-1.03	-0.16	2.26	-2.62
540	591	SLU-INV	Min	-7.22	-2.09	-0.41	-15.36	-0.76	-0.11	2.21	-2.62
541	591	SLE-INV	Max	-5.51	-1.58	-0.19	-2.81	0.24	-0.06	0.65	-1.90
541	567	SLE-INV	Max	-3.46	-1.17	-0.22	-3.04	-0.06	-0.08	0.66	-1.90
541	568	SLE-INV	Max	-3.46	-1.16	-0.05	-3.10	-0.06	0.01	0.66	-1.91
541	592	SLE-INV	Max	-5.51	-1.57	-0.11	-2.66	0.24	0.02	0.65	-1.91
541	591	SLE-INV	Min	-5.51	-1.58	-0.19	-4.87	0.08	-0.09	0.42	-1.94

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera	Tratto	Settore	CEE	WBS	Id.doc.	N.prog.	REV.	Pag.di Pag.			
L0703	211	E	16	016800	REL	01	A	176 di 180			
541	567	SLE-INV	Min	-3.46	-1.17	-0.22	-5.05	-0.22	-0.10	0.43	-1.94
541	568	SLE-INV	Min	-3.46	-1.16	-0.05	-5.13	-0.22	0.01	0.43	-1.94
541	592	SLE-INV	Min	-5.51	-1.57	-0.01	-4.95	0.07	0.02	0.42	-1.94
541	591	SLU-INV	Max	-5.51	-1.58	-0.19	-3.80	0.33	0.09	1.82	-1.71
541	567	SLU-INV	Max	-3.46	-1.17	-0.22	-4.11	-0.08	0.05	1.82	-1.71
541	568	SLU-INV	Max	-3.46	-1.16	-0.05	-4.18	-0.08	0.02	1.82	-1.71
541	592	SLU-INV	Max	-5.51	-1.57	-0.01	-3.87	0.32	0.03	1.82	-1.71
541	591	SLU-INV	Min	-7.44	-2.14	-0.25	-15.39	-0.77	-0.13	0.56	-2.61
541	567	SLU-INV	Min	-4.67	-1.58	-0.30	-15.31	-1.03	-0.14	0.58	-2.61
541	568	SLU-INV	Min	-4.67	-1.57	-0.06	-15.54	-1.04	-0.03	0.58	-2.62
541	592	SLU-INV	Min	-7.44	-2.12	-0.02	-15.62	-0.78	0.00	0.56	-2.62
542	592	SLE-INV	Max	-5.48	-1.57	0.10	-2.86	0.24	0.01	-0.81	-1.91
542	568	SLE-INV	Max	-3.43	-1.16	0.18	-3.10	-0.06	0.03	-0.82	-1.91
542	569	SLE-INV	Max	-3.43	-1.17	0.36	-2.99	-0.06	0.15	-0.82	-1.89
542	593	SLE-INV	Max	-5.48	-1.58	0.28	-2.76	0.24	0.13	-0.81	-1.89
542	592	SLE-INV	Min	-5.48	-1.57	0.10	-4.95	0.07	0.00	-1.24	-1.94
542	568	SLE-INV	Min	-3.43	-1.16	0.18	-5.13	-0.22	0.03	-1.25	-1.94
542	569	SLE-INV	Min	-3.43	-1.17	0.36	-4.97	-0.21	0.11	-1.25	-1.93
542	593	SLE-INV	Min	-5.48	-1.58	0.28	-4.79	0.08	0.09	-1.24	-1.93
542	592	SLE-INV	Max	-5.48	-1.57	0.14	-3.87	0.32	0.01	-1.09	-1.71
542	568	SLU-INV	Max	-3.43	-1.16	0.24	-4.18	-0.08	0.04	-1.11	-1.71
542	569	SLU-INV	Max	-3.43	-1.17	0.49	-4.04	-0.08	0.20	-1.11	-1.70
542	593	SLU-INV	Max	-5.48	-1.58	0.38	-3.73	0.33	0.17	-1.09	-1.70
542	592	SLU-INV	Min	-7.40	-2.12	0.10	-15.60	-0.78	-0.05	-3.44	-2.63
542	568	SLU-INV	Min	-4.63	-1.56	0.18	-15.54	-1.04	0.02	-3.45	-2.63
542	569	SLU-INV	Min	-4.64	-1.58	0.36	-15.10	-1.01	-0.06	-3.45	-2.61
542	593	SLU-INV	Min	-7.40	-2.13	0.28	-15.16	-0.75	-0.13	-3.44	-2.61
543	593	SLE-INV	Max	-5.25	-1.53	0.40	-2.76	0.24	0.11	-2.02	-1.90
543	569	SLE-INV	Max	-3.25	-1.13	0.58	-2.99	-0.05	0.16	-2.07	-1.90
543	570	SLE-INV	Max	-3.25	-1.18	0.78	-2.73	-0.05	0.28	-2.07	-1.86
543	594	SLE-INV	Max	-5.26	-1.58	0.60	-2.50	0.24	0.23	-2.02	-1.86
543	593	SLE-INV	Min	-5.25	-1.53	0.40	-4.78	0.08	0.06	-3.12	-1.93
543	569	SLE-INV	Min	-3.25	-1.13	0.58	-4.96	-0.21	0.13	-3.16	-1.93
543	570	SLE-INV	Min	-3.25	-1.18	0.78	-4.57	-0.20	0.22	-3.16	-1.90
543	594	SLE-INV	Min	-5.26	-1.58	0.60	-4.39	0.09	0.15	-3.12	-1.90
543	593	SLU-INV	Max	-5.25	-1.53	0.54	-3.73	0.32	0.15	-2.73	-1.70
543	569	SLU-INV	Max	-3.25	-1.13	0.78	-4.04	-0.07	0.22	-2.79	-1.70
543	570	SLU-INV	Max	-3.25	-1.18	1.05	-3.68	-0.07	0.37	-2.79	-1.68
543	594	SLU-INV	Max	-5.26	-1.58	0.80	-3.38	0.33	0.31	-2.73	-1.68
543	593	SLU-INV	Min	-7.09	-2.07	0.40	-15.12	-0.74	-0.18	-8.70	-2.61
543	569	SLU-INV	Min	-4.38	-1.53	0.58	-15.06	-1.11	-0.11	-8.71	-2.61
543	570	SLU-INV	Min	-4.39	-1.59	0.78	-13.96	-0.95	-0.09	-8.73	-2.56
543	594	SLU-INV	Min	-7.10	-2.13	0.60	-14.01	-0.69	-0.25	-8.70	-2.56
544	571	SLE-INV	Max	-2.89	-1.16	1.24	-2.28	-0.04	0.41	-3.34	-1.81
544	595	SLE-INV	Max	-4.81	-1.54	0.93	-2.06	0.25	0.33	-3.27	-1.81
544	594	SLE-INV	Max	-4.79	-1.48	0.72	-2.51	0.24	0.21	-3.27	-1.87
544	570	SLE-INV	Max	-2.88	-1.10	1.03	-2.73	-0.05	0.29	-3.34	-1.87
544	571	SLE-INV	Min	-2.89	-1.16	1.24	-3.87	-0.17	0.33	-5.12	-1.84
544	595	SLE-INV	Min	-4.81	-1.54	0.93	-3.69	0.12	0.22	-5.05	-1.84
544	594	SLE-INV	Min	-4.79	-1.48	0.72	-4.38	0.09	0.13	-5.05	-1.91
544	570	SLE-INV	Min	-2.88	-1.10	1.03	-4.56	-0.19	0.24	-5.12	-1.91
544	571	SLU-INV	Max	-2.89	-1.16	1.68	-3.08	-0.06	0.55	-4.51	-1.63
544	595	SLU-INV	Max	-4.81	-1.54	1.26	-2.78	0.34	0.45	-4.42	-1.63
544	594	SLU-INV	Max	-4.79	-1.48	0.97	-3.39	0.32	0.29	-4.42	-1.68
544	570	SLU-INV	Max	-2.88	-1.10	1.39	-3.69	-0.07	0.39	-4.51	-1.68
544	571	SLU-INV	Min	-3.90	-1.57	1.24	-11.98	-0.81	-0.09	-14.19	-2.49
544	595	SLU-INV	Min	-6.49	-2.08	0.93	-12.00	-0.56	-0.34	-14.13	-2.49
544	594	SLU-INV	Min	-6.47	-2.00	0.72	-13.93	-0.68	-0.08	-14.13	-2.57
544	570	SLU-INV	Min	-3.88	-1.49	1.03	-13.91	-0.94	-0.05	-14.19	-2.57
545	572	SLE-INV	Max	-2.33	-1.14	1.76	-1.66	-0.03	0.54	-4.63	-1.73
545	596	SLE-INV	Max	-4.09	-1.50	1.33	-1.46	0.25	0.43	-4.53	-1.73
545	595	SLE-INV	Max	-4.07	-1.40	1.09	-2.08	0.24	0.32	-4.53	-1.82
545	571	SLE-INV	Max	-2.31	-1.05	1.52	-2.29	-0.04	0.43	-4.63	-1.82
545	572	SLE-INV	Min	-2.33	-1.14	1.76	-2.89	-0.13	0.44	-7.12	-1.76
545	596	SLE-INV	Min	-4.09	-1.50	1.33	-2.72	0.15	0.29	-7.02	-1.76
545	595	SLE-INV	Min	-4.07	-1.40	1.09	-3.68	0.11	0.20	-7.02	-1.85
545	571	SLE-INV	Min	-2.31	-1.05	1.52	-3.86	-0.16	0.35	-7.12	-1.85
545	572	SLU-INV	Max	-2.33	-1.14	2.38	-2.24	-0.04	0.72	-6.25	-1.57
545	596	SLU-INV	Max	-4.09	-1.50	1.80	-1.97	0.34	0.58	-6.11	-1.57
545	595	SLU-INV	Max	-4.07	-1.40	1.47	-2.80	0.32	0.43	-6.11	-1.64
545	571	SLU-INV	Max	-2.31	-1.05	2.06	-3.09	-0.05	0.57	-6.25	-1.64
545	572	SLU-INV	Min	-3.15	-1.54	1.76	-9.20	-0.63	-0.07	-19.82	-2.38
545	596	SLU-INV	Min	-5.53	-2.02	1.33	-9.18	-0.39	-0.43	-19.74	-2.38
545	595	SLU-INV	Min	-5.50	-1.89	1.09	-11.88	-0.54	-0.40	-19.74	-2.50
545	571	SLU-INV	Min	-3.12	-1.41	1.52	-11.89	-0.79	-0.04	-19.82	-2.50
546	573	SLE-INV	Max	-1.57	-1.08	2.39	-0.89	0.00	0.65	-5.88	-1.62
546	597	SLE-INV	Max	-3.10	-1.38	1.79	-0.70	0.27	0.53	-5.74	-1.62
546	596	SLE-INV	Max	-3.08	-1.29	1.49	-1.49	0.24	0.42	-5.74	-1.74
546	572	SLE-INV	Max	-1.55	-0.99	2.09	-1.69	-0.02	0.55	-5.88	-1.74
546	573	SLE-INV	Min	-1.57	-1.08	2.39	-1.67	-0.06	0.54	-9.08	-1.65
546	597	SLE-INV	Min	-3.10	-1.38	1.79	-1.50	0.21	0.37	-8.94	-1.65
546	596	SLE-INV	Min	-3.08	-1.29	1.49	-2.72	0.14	0.28	-8.94	-1.78
546	572	SLE-INV	Min	-1.55	-0.99	2.09	-2.90	-0.12	0.45	-9.08	-1.78
546	573	SLU-INV	Max	-1.57	-1.08	3.23	-1.20	0.00	0.88	-7.94	-1.48
546	597	SLU-INV	Max	-3.10	-1.38	2.41	-0.95	0.36	0.71	-7.75	-1.48
546	596	SLU-INV	Max	-3.08	-1.29	2.01	-2.01	0.32	0.57	-7.75	-1.58
546	572	SLU-INV	Max	-1.55	-0.99	2.83	-2.28	-0.03	0.74	-7.94	-1.58
546	573	SLU-INV	Min	-2.12	-1.45	2.39	-5.68	-0.34	-0.01	-25.42	-2.23
546	597	SLU-INV	Min	-4.18	-1.87	1.79	-5.57	-0.11	-0.41	-25.32	-2.23
546	596	SLU-INV	Min	-4.16	-1.75	1.49	-9.04	-0.37	-0.45	-25.32	-2.40
546	572	SLU-INV	Min	-2.09	-1.33	2.09	-9.13	-0.61	-0.05	-25.42	-2.40
547	574	SLE-INV	Max	-0.63	-1.01	3.08	0.02	0.04	0.74	-7.07	-1.49
547	598	SLE-INV	Max	-1.77	-1.24	2.35	0.17	0.29	0.60	-6.89	-1.49
547	597	SLE-INV	Max	-1.74	-1.11	2.02	-0.77	0.24	0.52	-6.89	-1.64
547	573	SLE-INV	Max	-0.60	-0.88	2.74	-0.94	0.00	0.66	-7.07	-1.64
547	574	SLE-INV	Min	-0.63	-1.01	3.08	-0.21	0.03	0.64	-10.98	-1.51
547	598	SLE-INV	Min	-1.77	-1.24	2.35	-0.06	0.28	0.44	-10.81	-1.51
547	597	SLE-INV	Min	-1.74	-1.11	2.02	-1.54	0.19	0.36	-10.81	-1.67
547	573	SLE-INV	Min	-0.60	-0.88	2.74	-1.70	-0.05	0.56	-10.98	-1.67
547	574	SLU-INV	Max	-0.63	-1.01	4.16	0.02	0.05	1.00	-9.54	-1.36
547	598	SLU-INV	Max	-1.77	-1.24	3.17	0.23	0.39	0.81	-9.30	-1.36
547	597	SLU-INV	Max	-1.74	-1.11	2.72	-1.04	0.33	0.70	-9.30	-1.49
547	573	SLU-INV	Max	-0.60	-0.88	3.71	-1.27	0.00	0.89	-9.54	-1.49
547	574	SLU-INV	Min	-0.84	-1.37	3.08	-1.37	0.00	0.10	-30.98	-2.04
547	598	SLU-INV	Min	-2.39	-1.68	2.35	-1.23	0.22	-0.39	-30.83	-2.04
547	597	SLU-INV	Min	-2.36	-1.50	2.02	-5.44	-0.09	-0.46	-30.83	-2.25
547	573	SLU-INV	Min	-0.81	-1.19	2.74	-5.57	-0.32	0.04	-30.98	-2.25
548	575	SLE-INV	Max	0.52	-0.83	4.02	1.43	0.18	0.81	-8.18	-1.32
548	599	SLE-INV	Max	-0.05	-0.95	3.05	1.59	0.40	0.68	-7.96	-1.32
548	598	SLE-INV	Max	-0.04	-0.90	2.57	0.05	0.25	0.61	-7.96	-1.51
548	574	SLE-INV	Max	0.53	-0.78	3.54	-0.10	0.03	0.74	-8.18	-1.51

2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.progr. 01	REV. A	Pag.di Pag. 177 di 180			
548	575	SLE-INV	Min	0.52	-0.83	4.02	1.01	0.10	0.72	-12.81	-1.33
548	599	SLE-INV	Min	-0.05	-0.95	3.05	1.14	0.33	0.54	-12.59	-1.33
548	598	SLE-INV	Min	-0.04	-0.90	2.57	-0.13	0.24	0.45	-12.59	-1.53
548	574	SLE-INV	Min	0.53	-0.78	3.54	-0.30	0.03	0.63	-12.81	-1.53
548	575	SLE-INV	Max	0.71	-0.83	5.43	3.59	0.57	1.09	-11.05	-1.23
548	599	SLE-INV	Max	-0.05	-0.95	4.12	3.90	0.76	0.91	-10.74	-1.23
548	598	SLE-INV	Max	-0.04	-0.90	3.47	0.07	0.33	0.82	-10.74	-1.38
548	574	SLE-INV	Max	0.72	-0.78	4.78	-0.13	0.04	1.00	-11.05	-1.38
548	575	SLE-INV	Min	0.52	-1.13	4.02	1.37	0.14	0.26	-36.48	-1.80
548	599	SLE-INV	Min	-0.07	-1.28	3.05	1.54	0.45	-0.16	-36.31	-1.80
548	598	SLE-INV	Min	-0.05	-1.21	2.57	-1.07	0.23	-0.35	-36.31	-2.07
548	574	SLE-INV	Min	0.53	-1.05	3.54	-1.36	0.02	0.07	-36.48	-2.07
549	576	SLE-INV	Max	1.75	-0.58	5.06	3.27	0.37	0.83	-9.20	-1.09
549	600	SLE-INV	Max	2.16	-0.50	3.99	3.36	0.57	0.71	-8.92	-1.09
549	599	SLE-INV	Max	2.16	-0.51	3.45	1.41	0.35	0.68	-8.92	-1.34
549	575	SLE-INV	Max	1.75	-0.59	4.52	1.30	0.17	0.80	-9.20	-1.34
549	576	SLE-INV	Min	1.75	-0.58	5.06	2.09	0.20	0.76	-14.55	-1.11
549	600	SLE-INV	Min	2.16	-0.50	3.99	2.14	0.40	0.59	-14.27	-1.11
549	599	SLE-INV	Min	2.16	-0.51	3.45	0.92	0.27	0.54	-14.27	-1.36
549	575	SLE-INV	Min	1.75	-0.59	4.52	0.84	0.09	0.72	-14.55	-1.36
549	576	SLE-INV	Max	2.37	-0.58	6.83	9.34	1.26	1.11	-12.42	-1.01
549	600	SLE-INV	Max	2.92	-0.50	5.39	9.59	1.43	0.95	-12.04	-1.01
549	599	SLE-INV	Max	2.92	-0.51	4.66	3.90	0.76	0.92	-12.04	-1.23
549	575	SLE-INV	Max	2.37	-0.59	6.10	3.65	0.59	1.08	-12.42	-1.23
549	576	SLE-INV	Min	1.75	-0.78	5.06	2.82	0.27	0.43	-41.92	-1.49
549	600	SLE-INV	Min	2.16	-0.67	3.99	2.89	0.54	-0.01	-41.66	-1.49
549	599	SLE-INV	Min	2.16	-0.68	3.45	1.25	0.36	-0.17	-41.66	-1.84
549	575	SLE-INV	Min	1.75	-0.79	4.52	1.13	0.12	0.27	-41.92	-1.84
550	577	SLE-INV	Max	2.96	-0.06	6.63	5.15	0.74	0.78	-10.10	-0.84
550	601	SLE-INV	Max	4.91	0.33	5.26	5.27	0.90	0.75	-9.76	-0.84
550	600	SLE-INV	Max	4.86	0.04	4.40	3.10	0.48	0.75	-9.76	-1.13
550	576	SLE-INV	Max	2.90	-0.35	5.76	2.96	0.34	0.78	-10.10	-1.13
550	577	SLE-INV	Min	2.96	-0.06	6.63	3.14	0.39	0.76	-16.17	-0.85
550	601	SLE-INV	Min	4.91	0.33	5.26	3.15	0.55	0.74	-15.85	-0.85
550	600	SLE-INV	Min	4.86	0.04	4.40	1.82	0.30	0.66	-15.85	-1.14
550	576	SLE-INV	Min	2.90	-0.35	5.76	1.77	0.16	0.69	-16.17	-1.14
550	577	SLE-INV	Max	3.99	-0.06	8.95	15.45	2.55	1.05	-13.63	-0.89
550	601	SLE-INV	Max	6.63	0.44	7.10	16.09	2.71	1.01	-13.17	-0.89
550	600	SLE-INV	Max	6.56	0.05	5.94	9.68	1.40	1.01	-13.17	-1.07
550	576	SLE-INV	Max	3.91	-0.35	7.78	9.03	1.25	1.05	-13.63	-1.07
550	577	SLE-INV	Min	2.96	-0.09	6.63	4.24	0.52	0.66	-47.02	-1.14
550	601	SLE-INV	Min	4.91	0.33	5.26	4.25	0.74	0.68	-47.01	-1.14
550	600	SLE-INV	Min	4.86	0.04	4.40	2.45	0.41	0.22	-47.01	-1.54
550	576	SLE-INV	Min	2.90	-0.48	5.76	2.39	0.22	0.20	-47.22	-1.54
551	578	SLE-INV	Max	3.59	1.40	8.21	7.28	1.33	0.45	-10.87	-0.42
551	602	SLE-INV	Max	8.17	2.31	7.14	6.88	1.45	0.56	-10.38	-0.42
551	601	SLE-INV	Max	7.89	0.92	5.99	4.53	0.76	0.84	-10.38	-0.84
551	577	SLE-INV	Max	3.31	0.01	7.06	4.88	0.68	0.71	-10.87	-0.84
551	578	SLE-INV	Min	3.59	1.40	8.21	4.24	0.71	0.37	-17.67	-0.42
551	602	SLE-INV	Min	8.17	2.31	7.14	3.89	0.83	0.55	-17.19	-0.42
551	601	SLE-INV	Min	7.89	0.92	5.99	2.47	0.40	0.82	-17.19	-0.85
551	577	SLE-INV	Min	3.31	0.01	7.06	2.77	0.32	0.66	-17.67	-0.85
551	578	SLE-INV	Max	4.84	1.89	11.09	22.81	4.51	0.61	-14.67	-0.39
551	602	SLE-INV	Max	11.03	3.12	9.64	22.19	4.61	0.76	-14.02	-0.39
551	601	SLE-INV	Max	10.65	1.25	8.09	15.10	2.59	1.14	-14.02	-0.80
551	577	SLE-INV	Max	4.47	0.01	9.54	15.68	2.52	0.96	-14.67	-0.80
551	578	SLE-INV	Min	3.59	1.40	8.21	5.73	0.96	-0.06	-52.45	-0.57
551	602	SLE-INV	Min	8.17	2.31	7.14	5.25	1.12	0.49	-52.98	-0.57
551	601	SLE-INV	Min	7.89	0.92	5.99	3.33	0.55	0.95	-51.98	-1.15
551	577	SLE-INV	Min	3.31	0.01	7.06	3.74	0.44	0.39	-52.45	-1.15
552	579	SLE-INV	Max	4.16	0.83	5.58	9.57	1.83	-0.01	-11.47	0.11
552	603	SLE-INV	Max	8.22	1.64	4.72	8.93	1.87	0.03	-10.83	0.11
552	602	SLE-INV	Max	8.37	2.35	9.24	6.42	1.32	0.53	-10.83	-0.46
552	578	SLE-INV	Max	4.30	1.54	10.10	7.00	1.31	0.49	-11.47	-0.46
552	579	SLE-INV	Min	4.16	0.83	5.58	5.41	0.99	-0.02	-19.00	0.10
552	603	SLE-INV	Min	8.22	1.64	4.72	4.70	1.03	0.02	-18.36	0.10
552	602	SLE-INV	Min	8.37	2.35	9.24	3.21	0.67	0.47	-18.36	-0.46
552	578	SLE-INV	Min	4.30	1.54	10.10	3.86	0.66	0.45	-19.00	-0.46
552	579	SLE-INV	Max	5.62	1.12	7.53	30.85	6.12	0.03	-15.49	0.15
552	603	SLE-INV	Max	11.10	2.22	6.37	30.55	6.16	0.03	-14.62	0.15
552	602	SLE-INV	Max	11.29	3.18	12.48	22.78	4.65	0.71	-14.62	-0.49
552	578	SLE-INV	Max	5.81	2.08	13.64	23.04	4.63	0.66	-15.49	-0.49
552	579	SLE-INV	Min	4.16	0.83	5.58	7.30	1.33	-0.02	-57.47	0.06
552	603	SLE-INV	Min	8.22	1.64	4.72	6.35	1.40	-0.02	-56.85	0.06
552	602	SLE-INV	Min	8.37	2.35	9.24	4.34	0.90	0.19	-57.47	-0.62
552	578	SLE-INV	Min	4.30	1.54	10.10	5.21	0.89	0.24	-57.47	-0.62
553	604	SLE-INV	Max	23.89	4.78	-4.55	7.36	1.62	-0.15	18.13	0.18
553	580	SLE-INV	Max	8.22	1.64	-4.72	8.83	1.61	0.22	18.45	0.18
553	581	SLE-INV	Max	7.80	-0.47	-7.14	6.47	0.64	-0.67	18.45	-0.08
553	605	SLE-INV	Max	23.47	2.67	-6.97	5.08	0.62	-0.96	18.13	-0.08
553	604	SLE-INV	Min	23.89	4.78	-4.55	3.40	0.81	-0.27	10.54	0.15
553	580	SLE-INV	Min	8.22	1.64	-4.72	4.61	0.80	0.14	10.86	0.15
553	581	SLE-INV	Min	7.80	-0.47	-7.14	3.23	0.25	-0.72	10.86	-0.11
553	605	SLE-INV	Min	23.47	2.67	-6.97	2.08	0.23	-1.25	10.54	-0.11
553	604	SLE-INV	Max	32.25	6.45	-4.55	27.61	5.80	-0.20	56.93	0.34
553	580	SLE-INV	Max	11.10	2.22	-4.72	30.37	5.79	0.87	57.26	0.34
553	581	SLE-INV	Max	10.53	-0.47	-7.14	23.06	2.64	-0.90	57.26	0.07
553	605	SLE-INV	Max	31.68	3.60	-6.97	20.44	2.57	-1.30	56.93	0.07
553	604	SLE-INV	Min	23.89	4.78	-6.14	4.60	1.09	-0.89	14.23	0.20
553	580	SLE-INV	Min	8.22	1.64	-6.37	6.23	1.07	0.19	14.66	0.20
553	581	SLE-INV	Min	7.80	-0.63	-9.64	4.36	0.34	-0.97	14.66	-0.15
553	605	SLE-INV	Min	23.47	2.67	-9.41	2.80	0.32	-2.73	14.23	-0.15
554	605	SLE-INV	Max	11.77	0.33	-3.72	7.34	0.92	-0.89	17.23	-0.22
554	581	SLE-INV	Max	7.81	-0.47	-5.12	6.85	0.87	-0.73	17.33	-0.22
554	582	SLE-INV	Max	7.95	0.19	-3.70	4.65	0.19	-0.51	17.33	-0.32
554	606	SLE-INV	Max	11.90	0.98	-2.30	5.17	0.22	-0.77	17.23	-0.32
554	605	SLE-INV	Min	11.77	0.33	-3.72	3.99	0.52	-1.11	10.31	-0.25
554	581	SLE-INV	Min	7.81	-0.47	-5.12	3.84	0.47	-0.85	10.44	-0.25
554	582	SLE-INV	Min	7.95	0.19	-3.70	2.51	0.05	-0.62	10.44	-0.34
554	606	SLE-INV	Min	11.90	0.98	-2.30	2.69	0.09	-0.79	10.31	-0.34
554	605	SLE-INV	Max	15.88	0.44	-3.72	24.49	2.97	-1.21	52.60	-0.30
554	581	SLE-INV	Max	10.55	-0.47	-5.12	22.27	2.90	-0.98	52.58	-0.30
554	582	SLE-INV	Max	10.73	0.26	-3.70	15.60	0.87	0.04	52.58	-0.41
554	606	SLE-INV	Max	16.06	1.33	-2.30	17.84	0.93	-0.67	52.60	-0.41
554	605	SLE-INV	Min	11.77	0.33	-5.02	5.39	0.70	-2.20	13.92	-0.42
554	581	SLE-INV	Min	7.81	-0.63	-6.91	5.18	0.63	-1.48	14.09	-0.42
554	582	SLE-INV	Min	7.95	0.19	-4.99	3.39	0.07	-0.84	14.09	-0.46
554	606	SLE-INV	Min	11.90	0.98	-3.10	3.63	0.12	-1.06	13.92	-0.46
555	606	SLE-INV	Max	5.60	-0.28	-2.16	5.55	0.35	-0.51	15.94	-0.28
555	582	SLE-INV	Max	5.25	-0.35	-3.01	5.40	0.29	-0.77	16.09	-0.28
555	583	SLE-INV	Max	5.35	0.15	-2.79	3.36	0.			

**2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1****Tratto Fabriano - Matelica Nord****Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita****Relazione di calcolo**

Opera L0703	Tratto 211	Settore E	CEE 16	WBS OI6800	Id.doc REL	N. progr. 01	REV. A	Pag.di Pag. 178 di 180
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555	607	SLE-INV	Max	5.70	0.22	-1.94	3.53	0.19	-0.41	15.94	-0.40
555	606	SLE-INV	Min	5.60	-0.28	-2.16	3.23	0.22	-0.64	9.73	-0.29
555	582	SLE-INV	Min	5.25	-0.35	-3.01	3.19	0.16	-0.77	9.87	-0.29
555	583	SLE-INV	Min	5.35	0.15	-2.79	1.94	0.05	-0.74	9.87	-0.41
555	607	SLE-INV	Min	5.70	0.22	-1.94	2.01	0.09	-0.61	9.73	-0.41
555	606	SLU-INV	Max	7.56	-0.28	-2.16	17.40	0.99	0.13	47.72	-0.23
555	582	SLU-INV	Max	7.09	-0.35	-3.01	16.69	0.94	-0.77	47.91	-0.23
555	583	SLU-INV	Max	7.22	0.21	-2.79	10.63	0.62	-0.29	47.91	-0.39
555	607	SLU-INV	Max	7.70	0.30	-1.94	11.34	0.66	0.61	47.72	-0.39
555	606	SLU-INV	Min	5.60	-0.37	-2.92	4.37	0.30	-0.86	13.13	-0.39
555	582	SLU-INV	Min	5.25	-0.47	-4.06	4.31	0.22	-1.03	13.32	-0.39
555	583	SLU-INV	Min	5.35	0.15	-3.76	2.61	0.06	-0.99	13.32	-0.55
555	607	SLU-INV	Min	5.70	0.22	-2.62	2.71	0.13	-0.82	13.13	-0.55
556	607	SLE-INV	Max	1.68	-0.58	-1.49	3.84	0.26	-0.42	14.56	-0.39
556	583	SLE-INV	Max	2.77	-0.36	-2.37	3.66	0.19	-0.65	14.67	-0.39
556	584	SLE-INV	Max	2.84	0.03	-2.13	1.80	0.05	-0.53	14.67	-0.48
556	608	SLE-INV	Max	1.76	-0.18	-1.25	1.99	0.11	-0.31	14.56	-0.48
556	607	SLE-INV	Min	1.68	-0.58	-1.49	2.38	0.18	-0.60	9.02	-0.39
556	583	SLE-INV	Min	2.77	-0.36	-2.37	2.29	0.11	-0.74	9.13	-0.39
556	584	SLE-INV	Min	2.84	0.03	-2.13	1.13	0.01	-0.67	9.13	-0.48
556	608	SLE-INV	Min	1.76	-0.18	-1.25	1.24	0.08	-0.54	9.02	-0.48
556	607	SLU-INV	Max	2.27	-0.58	-1.49	11.28	0.67	0.51	42.92	-0.36
556	583	SLU-INV	Max	3.73	-0.36	-2.37	10.70	0.61	-0.19	43.03	-0.36
556	584	SLU-INV	Max	3.84	0.05	-2.13	5.26	0.22	0.20	43.03	-0.46
556	608	SLU-INV	Max	2.38	-0.18	-1.25	5.83	0.28	0.90	42.92	-0.46
556	607	SLU-INV	Min	1.68	-0.78	-2.02	3.21	0.24	-0.82	12.17	-0.53
556	583	SLU-INV	Min	2.77	-0.49	-3.20	3.09	0.14	-1.00	12.32	-0.53
556	584	SLU-INV	Min	2.84	0.03	-2.88	1.52	0.02	-0.91	12.32	-0.65
556	608	SLU-INV	Min	1.76	-0.25	-1.69	1.68	0.10	-0.73	12.17	-0.65
557	608	SLE-INV	Max	-1.09	-0.75	-1.14	2.13	0.15	-0.28	13.05	-0.46
557	584	SLE-INV	Max	0.66	-0.40	-1.73	2.01	0.07	-0.56	13.14	-0.46
557	585	SLE-INV	Max	0.74	0.01	-1.61	0.34	0.02	-0.48	13.14	-0.53
557	609	SLE-INV	Max	-1.01	-0.34	-1.02	0.48	0.10	-0.20	13.05	-0.53
557	608	SLE-INV	Min	-1.09	-0.75	-1.14	1.45	0.13	-0.52	8.18	-0.47
557	584	SLE-INV	Min	0.66	-0.40	-1.73	1.36	0.05	-0.69	8.27	-0.47
557	585	SLE-INV	Min	0.74	0.01	-1.61	0.31	0.01	-0.63	8.27	-0.54
557	609	SLE-INV	Min	-1.01	-0.34	-1.02	0.42	0.09	-0.46	8.18	-0.54
557	608	SLU-INV	Max	-1.09	-0.75	-1.14	5.58	0.26	0.98	37.98	-0.42
557	584	SLU-INV	Max	0.89	-0.40	-1.73	5.33	0.20	0.12	38.06	-0.42
557	585	SLU-INV	Max	1.00	0.02	-1.61	0.52	0.08	0.28	38.06	-0.49
557	609	SLU-INV	Max	-1.01	-0.34	-1.02	0.75	0.16	1.14	37.98	-0.49
557	608	SLU-INV	Min	-1.47	-1.02	-1.53	1.96	0.18	-0.71	11.04	-0.63
557	584	SLU-INV	Min	0.66	-0.54	-2.33	1.84	0.07	-0.93	11.16	-0.63
557	585	SLU-INV	Min	0.74	0.01	-2.17	0.42	0.02	-0.85	11.16	-0.73
557	609	SLU-INV	Min	-1.36	-0.46	-1.37	0.57	0.12	-0.63	11.04	-0.73
558	609	SLE-INV	Max	-3.15	-0.77	-0.84	0.56	0.12	-0.22	11.44	-0.52
558	585	SLE-INV	Max	-1.01	-0.34	-1.38	0.44	0.03	-0.46	11.52	-0.52
558	586	SLE-INV	Max	-0.95	-0.07	-1.27	-0.49	0.00	-0.39	11.52	-0.58
558	610	SLE-INV	Max	-3.09	-0.50	-0.73	-0.36	0.08	-0.15	11.44	-0.58
558	609	SLE-INV	Min	-3.15	-0.77	-0.84	0.55	0.12	-0.47	7.24	-0.53
558	585	SLE-INV	Min	-1.01	-0.34	-1.38	0.44	0.03	-0.62	7.31	-0.53
558	586	SLE-INV	Min	-0.95	-0.07	-1.27	-1.02	-0.01	-0.55	7.31	-0.59
558	610	SLE-INV	Min	-3.09	-0.50	-0.73	-0.90	0.07	-0.40	7.24	-0.59
558	609	SLU-INV	Max	-3.15	-0.77	-0.84	0.75	0.16	1.06	32.96	-0.48
558	585	SLU-INV	Max	-1.01	-0.34	-1.38	0.60	0.05	0.36	33.02	-0.48
558	586	SLU-INV	Max	-0.95	-0.07	-1.27	-0.65	0.00	0.43	33.02	-0.53
558	610	SLU-INV	Max	-3.09	-0.50	-0.73	-0.48	0.11	1.13	32.96	-0.53
558	609	SLU-INV	Min	-4.25	-1.04	-1.13	0.13	0.13	-0.64	9.77	-0.42
558	585	SLU-INV	Min	-1.36	-0.46	-1.86	0.42	0.04	-0.84	9.87	-0.72
558	586	SLU-INV	Min	-1.28	-0.09	-1.72	-3.75	-0.09	-0.75	9.87	-0.80
558	610	SLU-INV	Min	-4.18	-0.67	-0.99	-3.65	-0.01	-0.54	9.77	-0.80
559	610	SLE-INV	Max	-4.71	-0.82	-0.66	-0.28	0.11	-0.16	9.76	-0.57
559	586	SLE-INV	Max	-2.35	-0.35	-1.04	-0.40	0.01	-0.39	9.81	-0.57
559	587	SLE-INV	Max	-2.30	-0.09	-0.96	-1.20	0.00	-0.33	9.81	-0.62
559	611	SLE-INV	Max	-4.66	-0.56	-0.59	-1.07	0.09	-0.10	9.76	-0.62
559	610	SLE-INV	Min	-4.71	-0.82	-0.66	-0.87	0.08	-0.40	6.22	-0.58
559	586	SLE-INV	Min	-2.35	-0.35	-1.04	-0.97	-0.01	-0.55	6.27	-0.58
559	587	SLE-INV	Min	-2.30	-0.09	-0.96	-2.21	-0.03	-0.48	6.27	-0.63
559	611	SLE-INV	Min	-4.66	-0.56	-0.59	-2.11	0.06	-0.33	6.22	-0.63
559	610	SLU-INV	Max	-4.71	-0.82	-0.66	-0.38	0.15	1.11	27.86	-0.52
559	586	SLU-INV	Max	-2.35	-0.35	-1.04	-0.54	0.02	0.44	27.91	-0.52
559	587	SLU-INV	Max	-2.30	-0.09	-0.96	-1.62	0.00	0.41	27.91	-0.56
559	611	SLU-INV	Max	-4.66	-0.56	-0.59	-1.44	0.12	1.08	27.86	-0.56
559	610	SLU-INV	Min	-6.36	-1.11	-0.89	-3.87	-0.04	-0.55	8.39	-0.78
559	586	SLU-INV	Min	-3.17	-0.47	-1.40	-3.85	-0.12	-0.74	8.47	-0.78
559	587	SLU-INV	Min	-3.10	-0.12	-1.30	-7.37	-0.17	-0.65	8.47	-0.85
559	611	SLU-INV	Min	-6.29	-0.76	-0.79	-7.41	-0.08	-0.45	8.39	-0.85
560	611	SLE-INV	Max	-5.89	-0.81	-0.49	-1.03	0.11	-0.12	8.01	-0.61
560	587	SLE-INV	Max	-3.39	-0.31	-0.81	-1.16	0.00	-0.31	8.05	-0.61
560	588	SLE-INV	Max	-3.35	-0.14	-0.74	-1.82	0.00	-0.26	8.05	-0.64
560	612	SLE-INV	Max	-5.86	-0.64	-0.42	-1.68	0.09	-0.07	8.01	-0.64
560	611	SLE-INV	Min	-5.89	-0.81	-0.49	-2.10	0.07	-0.34	5.13	-0.62
560	587	SLE-INV	Min	-3.39	-0.31	-0.81	-2.19	-0.03	-0.47	5.17	-0.62
560	588	SLE-INV	Min	-3.35	-0.14	-0.74	-3.21	-0.04	-0.39	5.17	-0.66
560	612	SLE-INV	Min	-5.86	-0.64	-0.42	-3.12	0.05	-0.26	5.13	-0.66
560	611	SLU-INV	Max	-5.89	-0.81	-0.49	-1.39	0.14	1.01	22.72	-0.56
560	587	SLU-INV	Max	-3.39	-0.31	-0.81	-1.56	0.01	0.48	22.75	-0.56
560	588	SLU-INV	Max	-3.35	-0.14	-0.74	-2.45	0.00	0.40	22.75	-0.59
560	612	SLU-INV	Max	-5.86	-0.64	-0.42	-2.26	0.13	0.92	22.72	-0.59
560	611	SLU-INV	Min	-7.95	-1.09	-0.66	-7.60	-0.12	-0.46	6.93	-0.83
560	587	SLU-INV	Min	-4.57	-0.41	-1.09	-7.50	-0.20	-0.63	6.99	-0.83
560	588	SLU-INV	Min	-4.53	-0.19	-1.00	-10.37	-0.26	-0.52	6.99	-0.88
560	612	SLU-INV	Min	-7.91	-0.86	-0.57	-10.49	-0.17	-0.36	6.93	-0.88
561	612	SLE-INV	Max	-6.76	-0.82	-0.37	-1.66	0.10	-0.09	6.21	-0.64
561	588	SLE-INV	Max	-4.18	-0.30	-0.58	-1.79	0.00	-0.24	6.24	-0.64
561	589	SLE-INV	Max	-4.15	-0.16	-0.53	-2.30	0.00	-0.20	6.24	-0.66
561	613	SLE-INV	Max	-6.74	-0.68	-0.32	-2.16	0.10	-0.04	6.21	-0.66
561	612	SLE-INV	Min	-6.76	-0.82	-0.37	-3.13	0.05	-0.28	4.00	-0.65
561	588	SLE-INV	Min	-4.18	-0.30	-0.58	-3.21	-0.05	-0.38	4.03	-0.65
561	589	SLE-INV	Min	-4.15	-0.16	-0.53	-4.00	-0.05	-0.29	4.03	-0.68
561	613	SLE-INV	Min	-6.74	-0.68	-0.32	-3.91	0.05	-0.19	4.00	-0.68
561	612	SLU-INV	Max	-6.76	-0.82	-0.37	-2.24	0.14	0.87	17.53	-0.58
561	588	SLU-INV	Max	-4.18	-0.30	-0.58	-2.42	0.00	0.44	17.55	-0.58
561	589	SLU-INV	Max	-4.15	-0.16	-0.53	-3.11	-0.01	0.31	17.55	-0.60
561	613	SLU-INV	Max	-6.74	-0.68	-0.32	-2.92	0.13	0.74	17.53	-0.60
561	612	SLU-INV	Min	-9.13	-1.11	-0.50	-10.65	-0.20	-0.37	5.39	-0.88
561	588	SLU-INV	Min	-5.64	-0.41	-0.79	-10.47	-0.28	-0.51	5.44	-0.88
561	589	SLU-INV	Min	-5.60	-0.21	-0.72	-12.69	-0.31	-0.40	5.44	-0.91
561	613	SLU-INV	Min	-9.09	-0.91	-0.43	-12.88	-0.21	-0.26	5.39	-0.91
562	613	SLE-INV	Max	-7.38	-0.80	-0.25	-2.55	0.10	-0.07	4.37	-0.66
562	589	SLE-INV	Max	-4.73	-0.28	-0.41	-2.30	-0.01	-0.17	4.40	-0.66



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 179 di 180
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562	590	SLE-INV	Max	-4.72	-0.19	-0.36	-2.66	-0.01	-0.13	4.40	-0.68
562	614	SLE-INV	Max	-7.36	-0.72	-0.20	-2.51	0.10	-0.02	4.37	-0.68
562	613	SLE-INV	Min	-7.38	-0.80	-0.25	-3.93	0.05	-0.21	2.82	-0.67
562	589	SLE-INV	Min	-4.73	-0.28	-0.41	-4.01	-0.06	-0.28	2.85	-0.67
562	590	SLE-INV	Min	-4.72	-0.19	-0.36	-4.57	-0.06	-0.19	2.85	-0.69
562	614	SLE-INV	Min	-7.36	-0.72	-0.20	-4.48	0.04	-0.12	2.82	-0.69
562	613	SLU-INV	Max	-7.38	-0.80	-0.25	-2.91	0.14	0.67	12.31	-0.62
562	589	SLU-INV	Max	-4.73	-0.28	-0.41	-3.10	-0.01	0.37	12.32	-0.60
562	590	SLU-INV	Max	-4.72	-0.19	-0.36	-3.59	-0.01	0.21	12.32	-0.61
562	614	SLU-INV	Max	-7.36	-0.72	-0.20	-3.39	0.13	0.50	12.31	-0.61
562	613	SLU-INV	Min	-9.96	-1.09	-0.33	-13.00	-0.24	-0.28	3.81	-0.91
562	589	SLU-INV	Min	-6.39	-0.37	-0.55	-12.78	-0.33	-0.38	3.84	-0.91
562	590	SLU-INV	Min	-6.37	-0.26	-0.48	-14.33	-0.35	-0.26	3.84	-0.93
562	614	SLU-INV	Min	-9.94	-0.97	-0.27	-14.56	-0.25	-0.17	3.81	-0.93
563	614	SLE-INV	Max	-7.76	-0.80	-0.15	-2.51	0.10	-0.04	2.52	-0.68
563	590	SLE-INV	Max	-5.09	-0.26	-0.23	-2.65	-0.01	-0.11	2.53	-0.68
563	591	SLE-INV	Max	-5.08	-0.21	-0.19	-2.86	-0.01	-0.07	2.53	-0.69
563	615	SLE-INV	Max	-7.75	-0.74	-0.11	-2.71	0.10	0.00	2.52	-0.69
563	614	SLE-INV	Min	-7.76	-0.80	-0.15	-4.49	0.04	-0.14	1.63	-0.69
563	590	SLE-INV	Min	-5.09	-0.26	-0.23	-4.57	-0.07	-0.18	1.64	-0.69
563	591	SLE-INV	Min	-5.08	-0.21	-0.19	-4.89	-0.07	-0.09	1.64	-0.70
563	615	SLE-INV	Min	-7.75	-0.74	-0.11	-4.81	0.04	-0.05	1.63	-0.70
563	614	SLU-INV	Max	-7.76	-0.80	-0.15	-3.39	0.13	0.44	7.07	-0.62
563	590	SLU-INV	Max	-5.09	-0.26	-0.23	-3.58	-0.01	0.27	7.08	-0.62
563	591	SLU-INV	Max	-5.08	-0.21	-0.19	-3.86	-0.01	0.08	7.08	-0.62
563	615	SLU-INV	Max	-7.75	-0.74	-0.11	-3.66	0.13	0.25	7.07	-0.62
563	614	SLU-INV	Min	-10.48	-1.08	-0.20	-14.64	-0.27	-0.19	2.20	-0.93
563	590	SLU-INV	Min	-6.87	-0.36	-0.31	-14.39	-0.36	-0.24	2.21	-0.93
563	591	SLU-INV	Min	-6.86	-0.28	-0.26	-15.28	-0.37	-0.13	2.21	-0.94
563	615	SLU-INV	Min	-10.46	-1.00	-0.14	-15.54	-0.27	-0.07	2.20	-0.94
564	615	SLE-INV	Max	-7.93	-0.78	-0.05	-2.71	0.10	-0.03	0.64	-0.68
564	591	SLE-INV	Max	-5.24	-0.24	-0.08	-2.86	-0.01	-0.04	0.65	-0.68
564	592	SLE-INV	Max	-5.24	-0.23	-0.03	-2.91	-0.01	0.01	0.65	-0.69
564	616	SLE-INV	Max	-7.93	-0.77	-0.01	-2.77	0.10	0.02	0.64	-0.69
564	615	SLE-INV	Min	-7.93	-0.78	-0.05	-4.82	0.04	-0.07	0.41	-0.70
564	591	SLE-INV	Min	-5.24	-0.24	-0.08	-4.90	-0.07	-0.08	0.42	-0.70
564	592	SLE-INV	Min	-5.24	-0.23	-0.03	-4.98	-0.07	0.00	0.42	-0.70
564	616	SLE-INV	Min	-7.93	-0.77	-0.01	-4.90	0.13	0.02	0.41	-0.70
564	615	SLU-INV	Max	-7.93	-0.78	-0.05	-3.66	0.04	0.19	1.82	-0.62
564	591	SLU-INV	Max	-5.24	-0.24	-0.08	-3.86	-0.01	0.14	1.82	-0.62
564	592	SLU-INV	Max	-5.24	-0.23	-0.03	-3.93	-0.01	0.01	1.82	-0.62
564	616	SLU-INV	Max	-7.93	-0.77	-0.01	-3.73	0.13	0.03	1.82	-0.62
564	615	SLU-INV	Min	-10.70	-1.05	-0.07	-15.57	-0.28	-0.09	0.56	-0.94
564	591	SLU-INV	Min	-7.08	-0.33	-0.10	-15.31	-0.38	-0.11	0.56	-0.94
564	592	SLU-INV	Min	-7.08	-0.31	-0.04	-15.54	-0.38	-0.05	0.56	-0.94
564	616	SLU-INV	Min	-10.70	-1.04	-0.01	-15.80	-0.28	-0.01	0.56	-0.94
565	616	SLE-INV	Max	-7.89	-0.76	0.04	-2.76	0.10	0.00	-0.80	-0.69
565	592	SLE-INV	Max	-5.21	-0.22	0.08	-2.91	-0.01	0.03	-0.81	-0.69
565	593	SLE-INV	Max	-5.22	-0.25	0.12	-2.81	-0.01	0.11	-0.81	-0.68
565	617	SLE-INV	Max	-7.90	-0.79	0.08	-2.66	0.10	0.09	-0.80	-0.68
565	616	SLE-INV	Min	-7.89	-0.76	0.04	-4.90	0.04	-0.01	-1.23	-0.70
565	592	SLE-INV	Min	-5.21	-0.22	0.08	-4.98	-0.07	0.02	-1.24	-0.70
565	593	SLE-INV	Min	-5.22	-0.25	0.12	-4.82	-0.07	0.06	-1.24	-0.69
565	617	SLE-INV	Min	-7.90	-0.79	0.08	-4.74	0.04	0.03	-1.23	-0.69
565	616	SLU-INV	Max	-7.89	-0.76	0.06	-3.73	0.13	0.01	-1.08	-0.62
565	592	SLU-INV	Max	-5.21	-0.22	0.11	-3.93	-0.01	0.03	-1.09	-0.62
565	593	SLU-INV	Max	-5.22	-0.25	0.17	-3.79	-0.01	0.15	-1.09	-0.62
565	617	SLU-INV	Max	-7.90	-0.79	0.11	-3.60	0.19	0.02	-1.08	-0.62
565	616	SLU-INV	Min	-10.65	-1.03	0.04	-15.79	-0.28	-0.08	-3.44	-0.94
565	592	SLU-INV	Min	-7.03	-0.30	0.08	-15.52	-0.38	0.01	-3.44	-0.94
565	593	SLU-INV	Min	-7.04	-0.34	0.12	-15.09	-0.38	-0.18	-3.44	-0.94
565	617	SLU-INV	Min	-10.66	-1.06	0.08	-15.35	-0.28	-0.27	-3.44	-0.94
566	617	SLE-INV	Max	-7.65	-0.74	0.13	-2.66	0.10	0.08	-2.01	-0.68
566	593	SLE-INV	Max	-4.98	-0.20	0.24	-2.81	-0.01	0.13	-2.02	-0.68
566	594	SLE-INV	Max	-4.99	-0.27	0.29	-2.55	-0.01	0.21	-2.02	-0.67
566	618	SLE-INV	Max	-7.66	-0.80	0.18	-2.41	0.10	0.16	-2.01	-0.67
566	617	SLE-INV	Min	-7.65	-0.74	0.13	-4.73	0.04	0.01	-3.10	-0.70
566	593	SLE-INV	Min	-4.98	-0.20	0.24	-4.81	-0.07	0.09	-3.12	-0.70
566	594	SLE-INV	Min	-4.99	-0.27	0.29	-4.42	-0.06	0.13	-3.12	-0.68
566	618	SLE-INV	Min	-7.66	-0.80	0.18	-4.34	0.04	0.05	-3.10	-0.68
566	617	SLU-INV	Max	-7.65	-0.74	0.18	-3.59	0.13	0.10	-2.71	-0.62
566	593	SLU-INV	Max	-4.98	-0.20	0.33	-3.79	-0.01	0.17	-2.73	-0.62
566	594	SLU-INV	Max	-4.99	-0.27	0.40	-3.45	-0.01	0.29	-2.73	-0.61
566	618	SLU-INV	Max	-7.66	-0.80	0.25	-3.25	0.14	0.22	-2.71	-0.62
566	617	SLU-INV	Min	-10.32	-1.00	0.13	-15.30	-0.27	-0.33	-8.69	-0.94
566	593	SLU-INV	Min	-6.73	-0.28	0.24	-15.04	-0.37	-0.13	-8.70	-0.94
566	594	SLU-INV	Min	-6.74	-0.36	0.29	-13.95	-0.35	-0.31	-8.70	-0.92
566	618	SLU-INV	Min	-10.34	-1.08	0.18	-14.19	-0.26	-0.52	-8.69	-0.92
567	595	SLE-INV	Max	-4.56	-0.30	0.46	-2.11	-0.01	0.32	-3.27	-0.65
567	619	SLE-INV	Max	-7.18	-0.82	0.29	-1.97	0.10	0.24	-3.24	-0.65
567	618	SLE-INV	Max	-7.16	-0.70	0.25	-2.41	0.10	0.15	-3.24	-0.67
567	594	SLE-INV	Max	-4.53	-0.17	0.42	-2.56	0.00	0.23	-3.27	-0.67
567	595	SLE-INV	Min	-4.56	-0.30	0.46	-3.72	-0.06	0.20	-5.05	-0.66
567	619	SLE-INV	Min	-7.18	-0.82	0.29	-3.64	0.05	0.07	-5.02	-0.66
567	618	SLE-INV	Min	-7.16	-0.70	0.25	-4.32	0.04	0.03	-5.02	-0.69
567	594	SLE-INV	Min	-4.53	-0.17	0.42	-4.41	-0.06	0.15	-5.05	-0.69
567	595	SLU-INV	Max	-4.56	-0.30	0.63	-2.85	-0.01	0.43	-4.41	-0.60
567	619	SLU-INV	Max	-7.18	-0.82	0.40	-2.66	0.14	0.32	-4.38	-0.60
567	618	SLU-INV	Max	-7.16	-0.70	0.33	-3.26	0.13	0.20	-4.38	-0.61
567	594	SLU-INV	Max	-4.53	-0.17	0.56	-3.45	-0.01	0.31	-4.41	-0.61
567	595	SLU-INV	Min	-6.15	-0.40	0.46	-11.94	-0.32	-0.41	-14.13	-0.90
567	619	SLU-INV	Min	-9.69	-1.11	0.29	-12.15	-0.23	-0.76	-14.12	-0.90
567	618	SLU-INV	Min	-9.66	-0.94	0.25	-14.08	-0.24	-0.59	-14.12	-0.93
567	594	SLU-INV	Min	-6.12	-0.23	0.42	-13.86	-0.33	-0.24	-14.13	-0.93
568	596	SLE-INV	Max	-3.86	-0.30	0.69	-1.51	0.00	0.42	-4.53	-0.63
568	620	SLE-INV	Max	-6.41	-0.82	0.41	-1.37	0.10	0.31	-4.49	-0.63
568	619	SLE-INV	Max	-6.38	-0.66	0.35	-1.98	0.09	0.22	-4.49	-0.66
568	595	SLE-INV	Max	-3.82	-0.15	0.62	-2.12	0.00	0.33	-4.53	-0.66
568	596	SLE-INV	Min	-3.86	-0.30	0.69	-2.76	-0.04	0.27	-7.02	-0.64
568	620	SLE-INV	Min	-6.41	-0.82	0.41	-2.67	0.06	0.11	-6.98	-0.64
568	619	SLE-INV	Min	-6.38	-0.66	0.35	-3.62	0.05	0.05	-6.98	-0.67
568	595	SLE-INV	Min	-3.82	-0.15	0.62	-3.71	-0.05	0.22	-7.02	-0.67
568	596	SLU-INV	Max	-3.86	-0.30	0.93	-2.03	0.00	0.57	-6.11	-0.57
568	620	SLU-INV	Max	-6.41	-0.82	0.56	-1.85	0.14	0.42	-6.06	-0.57
568	619	SLU-INV	Max	-6.38	-0.66	0.47	-2.68	0.13	0.30	-6.06	-0.60
568	595	SLU-INV	Max	-3.82	-0.15	0.84	-2.87	-0.01	0.45	-6.11	-0.60
568	596	SLU-INV	Min	-5.20	-0.41	0.69	-9.16	-0.24	-0.48	-19.74	-0.86
568	620	SLU-INV	Min	-8.66	-1.10	0.41	-9.29	-0.16	-0.93	-19.72	-0.86
568	619	SLU-INV	Min	-8.62	-0.89	0.35	-11.99	-0.20	-0.81	-19.72	-0.90
568	595	SLU-INV	Min	-5.16	-0.20	0.62	-11.83	-0.30	-0.35	-19.74	-0.90
569	597	SLE-INV	Max	-2.89	-0.35	0.91	-0.75	0.01	0.51	-5.74	-0.59



2.1.1 PEDEMONTANA DELLE MARCHE- Lotto funzionale del Sub lotto 2.1
Tratto Fabriano - Matelica Nord
Tombino Ø1500 Pr. 6+716 in sinistra su viabilità interferita
Relazione di calcolo

Opera L0703	Tratto 211	Settore E	CEE 16	WBS O16800	Id.doc REL	N.prog. 01	REV. A	Pag.di Pag. 180 di 180		
569	621	SLE-INV Max	-5.33	-0.83	0.58	-0.63	0.11	0.38	-5.69	-0.59
569	620	SLE-INV Max	-5.28	-0.59	0.51	-1.40	0.09	0.30	-5.69	-0.63
569	596	SLE-INV Max	-2.84	-0.10	0.84	-1.54	0.00	0.43	-5.74	-0.63
569	597	SLE-INV Min	-2.89	-0.35	0.91	-1.54	-0.02	0.35	-8.94	-0.60
569	621	SLE-INV Min	-5.33	-0.83	0.58	-1.45	0.07	0.14	-8.89	-0.60
569	620	SLE-INV Min	-5.28	-0.59	0.51	-2.66	0.06	0.08	-8.89	-0.64
569	596	SLE-INV Min	-2.84	-0.10	0.84	-2.76	-0.03	0.30	-8.94	-0.64
569	597	SLU-INV Max	-2.89	-0.35	1.23	-1.02	0.01	0.69	-7.75	-0.54
569	621	SLU-INV Max	-5.33	-0.83	0.78	-0.85	0.14	0.51	-7.68	-0.54
569	620	SLU-INV Max	-5.28	-0.59	0.69	-1.89	0.12	0.40	-7.68	-0.57
569	596	SLU-INV Max	-2.84	-0.10	1.14	-2.08	0.00	0.58	-7.75	-0.57
569	597	SLU-INV Min	-3.90	-0.47	0.91	-5.58	-0.17	-0.47	-25.31	-0.81
569	621	SLU-INV Min	-7.19	-1.12	0.58	-5.65	-0.09	-1.08	-25.27	-0.81
569	620	SLU-INV Min	-7.12	-0.79	0.51	-9.10	-0.12	-1.01	-25.27	-0.87
569	596	SLU-INV Min	-3.83	-0.14	0.84	-9.01	-0.21	-0.40	-25.31	-0.87
570	598	SLE-INV Max	-1.59	-0.34	1.25	0.12	0.02	0.60	-6.89	-0.54
570	622	SLE-INV Max	-3.84	-0.79	0.75	0.24	0.12	0.45	-6.82	-0.54
570	621	SLE-INV Max	-3.79	-0.53	0.65	-0.69	0.09	0.37	-6.82	-0.60
570	597	SLE-INV Max	-1.54	-0.08	1.14	-0.82	0.00	0.52	-6.89	-0.60
570	598	SLE-INV Min	-1.59	-0.34	1.25	-0.11	0.02	0.43	-10.80	-0.55
570	622	SLE-INV Min	-3.84	-0.79	0.75	0.00	0.11	0.20	-10.74	-0.55
570	621	SLE-INV Min	-3.79	-0.53	0.65	-1.46	0.06	0.13	-10.74	-0.61
570	597	SLE-INV Min	-1.54	-0.08	1.14	-1.58	-0.02	0.36	-10.80	-0.61
570	598	SLU-INV Max	-1.59	-0.34	1.68	0.16	0.03	0.81	-9.30	-0.50
570	622	SLU-INV Max	-3.84	-0.79	1.01	0.32	0.16	0.61	-9.21	-0.50
570	621	SLU-INV Max	-3.79	-0.53	0.88	-0.93	0.12	0.50	-9.21	-0.55
570	597	SLU-INV Max	-1.54	-0.08	1.54	-1.11	0.00	0.70	-9.30	-0.55
570	598	SLU-INV Min	-2.15	-0.46	1.25	-1.27	0.00	-0.41	-30.83	-0.74
570	622	SLU-INV Min	-5.19	-1.07	0.75	-1.20	0.07	-1.08	-30.78	-0.74
570	621	SLU-INV Min	-5.11	-0.71	0.65	-5.40	-0.05	-1.11	-30.78	-0.82
570	597	SLU-INV Min	-2.08	-0.10	1.14	-5.45	-0.14	-0.44	-30.83	-0.82
571	599	SLE-INV Max	0.06	-0.41	1.59	1.53	0.05	0.67	-7.95	-0.48
571	623	SLE-INV Max	-1.85	-0.79	1.03	1.64	0.14	0.50	-7.87	-0.48
571	622	SLE-INV Max	-1.77	-0.38	0.92	0.12	0.09	0.44	-7.87	-0.55
571	598	SLE-INV Max	0.14	0.00	1.47	0.00	0.01	0.61	-7.95	-0.55
571	599	SLE-INV Min	0.06	-0.41	1.59	1.09	0.04	0.53	-12.58	-0.49
571	623	SLE-INV Min	-1.85	-0.79	1.03	1.19	0.13	0.25	-12.50	-0.49
571	622	SLE-INV Min	-1.77	-0.38	0.92	-0.06	0.09	0.18	-12.50	-0.56
571	598	SLE-INV Min	0.14	0.00	1.47	-0.18	0.01	0.46	-12.58	-0.56
571	599	SLU-INV Max	0.08	-0.41	2.14	3.80	0.12	0.91	-10.73	-0.44
571	623	SLU-INV Max	-1.85	-0.79	1.40	3.98	0.18	0.69	-10.62	-0.41
571	622	SLU-INV Max	-1.77	-0.38	1.24	0.16	0.12	0.59	-10.62	-0.51
571	598	SLU-INV Max	0.19	0.00	1.98	0.00	0.03	0.82	-10.73	-0.51
571	599	SLU-INV Min	0.06	-0.55	1.59	1.47	0.05	-0.20	-36.28	-0.66
571	623	SLU-INV Min	-2.49	-1.06	1.03	1.60	0.17	-1.05	-36.20	-0.66
571	622	SLU-INV Min	-2.38	-0.51	0.92	-0.96	0.11	-1.17	-36.20	-0.76
571	598	SLU-INV Min	0.14	0.00	1.47	-1.13	0.01	-0.32	-36.28	-0.76
572	600	SLE-INV Max	2.19	-0.39	2.21	3.29	0.17	0.73	-8.91	-0.41
572	624	SLE-INV Max	0.87	-0.65	1.37	3.45	0.24	0.59	-8.81	-0.41
572	623	SLE-INV Max	0.95	-0.23	1.14	1.52	0.10	0.52	-8.81	-0.50
572	599	SLE-INV Max	2.27	0.04	1.98	1.34	0.03	0.66	-8.91	-0.50
572	600	SLE-INV Min	2.19	-0.39	2.21	2.08	0.10	0.63	-14.27	-0.41
572	624	SLE-INV Min	0.87	-0.65	1.37	2.18	0.17	0.39	-14.16	-0.41
572	623	SLE-INV Min	0.95	-0.23	1.14	0.99	0.07	0.28	-14.16	-0.50
572	599	SLE-INV Min	2.27	0.04	1.98	0.87	0.01	0.51	-14.27	-0.50
572	600	SLU-INV Max	2.95	-0.39	2.99	9.43	0.53	0.98	-12.03	-0.38
572	624	SLU-INV Max	1.17	-0.65	1.85	9.95	0.59	0.80	-11.89	-0.38
572	623	SLU-INV Max	1.28	-0.23	1.54	4.27	0.22	0.70	-11.89	-0.48
572	599	SLU-INV Max	3.07	0.05	2.68	3.77	0.15	0.39	-12.03	-0.48
572	600	SLU-INV Min	2.19	-0.52	2.21	2.81	0.13	0.10	-41.65	-0.56
572	624	SLU-INV Min	0.87	-0.88	1.37	2.95	0.23	-0.61	-41.54	-0.56
572	623	SLU-INV Min	0.95	-0.31	1.14	1.33	0.10	-0.97	-41.54	-0.68
572	599	SLU-INV Min	2.27	0.04	1.98	1.17	0.01	-0.27	-41.65	-0.68
573	601	SLE-INV Max	4.77	-0.37	2.84	5.16	0.25	0.77	-9.74	-0.29
573	625	SLE-INV Max	4.74	-0.38	2.02	5.30	0.31	0.62	-9.60	-0.29
573	624	SLE-INV Max	4.85	0.15	1.79	3.16	0.17	0.59	-9.60	-0.42
573	600	SLE-INV Max	4.88	0.15	2.62	3.01	0.12	0.73	-9.74	-0.42
573	601	SLE-INV Min	4.77	-0.37	2.84	3.08	0.14	0.75	-15.82	-0.31
573	625	SLE-INV Min	4.74	-0.38	2.02	3.13	0.21	0.47	-15.68	-0.31
573	624	SLE-INV Min	4.85	0.15	1.79	1.82	0.09	0.37	-15.68	-0.43
573	600	SLE-INV Min	4.88	0.15	2.62	1.75	0.04	0.65	-15.82	-0.43
573	601	SLU-INV Max	6.44	-0.37	3.84	15.80	0.80	1.04	-13.15	-0.24
573	625	SLU-INV Max	6.41	-0.38	2.72	16.41	0.85	0.84	-12.97	-0.24
573	624	SLU-INV Max	6.55	0.20	2.42	10.03	0.60	0.79	-12.97	-0.40
573	600	SLU-INV Max	6.59	0.21	3.54	9.42	0.55	0.99	-13.15	-0.40
573	601	SLU-INV Min	4.77	-0.50	2.84	4.16	0.19	0.67	-46.92	-0.41
573	625	SLU-INV Min	4.74	-0.51	2.02	4.22	0.28	-0.29	-46.74	-0.41
573	624	SLU-INV Min	4.85	0.15	1.79	2.46	0.12	-0.74	-46.74	-0.58
573	600	SLU-INV Min	4.88	0.15	2.62	2.36	0.06	0.23	-46.92	-0.58
574	602	SLE-INV Max	7.61	-0.51	4.92	6.76	0.83	0.89	-10.38	-0.23
574	626	SLE-INV Max	10.88	0.15	3.48	7.27	0.89	1.10	-10.26	-0.23
574	625	SLE-INV Max	11.03	0.88	2.14	4.95	0.19	0.76	-10.26	-0.34
574	601	SLE-INV Max	7.75	0.22	3.57	4.41	0.15	0.62	-10.38	-0.34
574	602	SLE-INV Min	7.61	-0.51	4.92	3.81	0.46	0.76	-17.19	-0.27
574	626	SLE-INV Min	10.88	0.15	3.48	3.99	0.51	0.90	-17.08	-0.27
574	625	SLE-INV Min	11.03	0.88	2.14	2.60	0.07	0.72	-17.08	-0.36
574	601	SLU-INV Min	7.75	0.22	3.57	2.39	0.03	0.51	-17.19	-0.36
574	602	SLU-INV Max	10.27	-0.51	6.64	21.82	2.75	1.53	-14.02	-0.32
574	626	SLU-INV Max	14.69	0.20	4.70	24.03	2.82	2.10	-13.85	-0.32
574	625	SLU-INV Max	14.89	1.18	2.89	16.96	0.80	1.03	-13.85	-0.42
574	601	SLU-INV Max	10.46	0.30	4.82	14.73	0.74	0.84	-14.02	-0.42
574	602	SLU-INV Min	7.61	-0.69	4.92	5.15	0.61	1.03	-51.98	-0.43
574	626	SLU-INV Min	10.88	0.15	3.48	5.39	0.69	1.21	-51.99	-0.43
574	625	SLU-INV Min	11.03	0.88	2.14	3.51	0.09	0.48	-51.99	-0.48
574	601	SLU-INV Min	7.75	0.22	3.57	3.23	0.05	-0.09	-51.98	-0.48
575	603	SLE-INV Max	8.22	1.64	4.72	8.83	1.62	-0.14	-10.85	0.17
575	627	SLE-INV Max	23.46	4.69	4.49	7.46	1.64	0.26	-10.54	0.17
575	626	SLE-INV Max	23.03	2.58	6.78	5.01	0.58	1.25	-10.54	-0.10
575	602	SLE-INV Max	7.80	-0.47	7.02	6.32	0.60	0.74	-10.85	-0.10
575	603	SLE-INV Min	8.22	1.64	4.72	4.63	0.80	-0.25	-18.40	0.15
575	627	SLE-INV Min	23.46	4.69	4.49	3.49	0.82	0.14	-18.09	0.15
575	626	SLE-INV Min	23.03	2.58	6.78	2.05	0.21	0.97	-18.09	-0.13
575	602	SLE-INV Min	7.80	-0.47	7.02	3.15	0.23	0.69	-18.40	-0.13
575	603	SLU-INV Max	11.10	2.22	6.37	30.32	5.80	-0.18	-14.65	0.31
575	627	SLU-INV Max	31.67	6.33	6.06	27.79	5.82	0.86	-14.23	0.31
575	626	SLU-INV Max	31.10	3.48	9.16	20.11	2.43	2.67	-14.23	0.03
575	602	SLU-INV Max	10.53	-0.47	9.48	22.51	2.50	1.00	-14.65	0.03
575	603	SLU-INV Min	8.22	1.64	4.72	6.26	1.09	-0.84	-57.02	0.20
575	627	SLU-INV Min	23.46	4.69	4.49	4.71	1.11	0.20	-56.70	0.20
575	626	SLU-INV Min	23.03	2.58	6.78	2.77	0.29	0.70	-56.70	-0.17
575	602	SLU-INV Min	7.80	-0.64	7.02	4.25	0.31	0.93	-57.02	-0.17