Profilul ~~Santului~~ Forajului Nr. S4-FP-14

~~Pit~~ Borehole Profile

REZULTATELE ANALIZELOR DE LABORATOR
LABORATORY TEST RESULTS

geotesting® STUDII GEOTEHNICE ȘI GEOFIZICE

LUCRAREA / DESIGN	Studiu geotehnic pentru revizuirea Studiului de fezabilitate Autostrada Sibiu-Pitesti - Sectiunea 4 (Valeni-Curtea de Arges)
AMPLASAMENT / LOCATION	Autostrada Sibiu-Pitesti X : 464850.01 Y: 413199.06
DATA / DATE	16.08.2016

Cota fata de: 0.00 Foraj / Level vs: 0.00 Bore-hole (pit)

Numarul probelor / Number and type of samples: Borcan / Jar; Stut / Tube (☒); Carota / Core

Adancime strat (m)	Grosimea stratului / Stratum thickness (m)	Adancimea apei subterane / Underground water depth (m)	Denumirea stratului (conform Stas 1243-88 si SR EN ISO 14688/2-2005) / Stratum description (according to Stas 1243-88 and SR EN ISO 14688/2-2005)	Numarul probelor / Number of samples	Adancimea / Depth (m)	Argila / Clay <0.002	Praf / Silt 0.063	Nisip fin / Fine sand 0.2	Nisip mediu / Medium sand 0.63	Nisip mare / Coarse sand 2	Pietris mic / Small gravel 6.3	Pietris mediu / Medium gravel 20	Pietris mare / Coarse gravel 63	Bolovanis / Cobbles 200	Coeficientul de neuniformitate / Non-uniformity coefficient Un=d60/d10	Limita de curgere / Liquid limit W_L	Limita de plasticitate / Plastic limit W_P	Indicele de plasticitate / Plasticity index I_P	Umiditatea / Water content w %	Indicele de consistenta / Consistency index I_C	Densitatea scheletului mineral / Skeletal mineral density ρ_s	Greutatea volumica / Unit weight γ kN/m³	Greutatea volumica in stare uscata / Unit dry weight γ_d kN/m³	Porozitatea / Porosity n %	Indicele porilor / Void ratio e	Gradul de umiditate / Degree of saturation Sr	Modulul de deformatie edometrica / Oedometer deformation modulus $M_{200-300}$ kPa	Tasare specifica la 200 kPa / Specific settlement at 200 kPa ε_{200} %	Coeficientul de compresibilitate / Coefficient of compressibility $a_{200-300}$ 1/kPa	Efort / Effective stress σ/τ 1	2	3	Unghiul de frecare int. / Angle of int. friction Φ °	Coeziunea / Cohesion c kPa	Felul determinarii / Type of test	Penetrarea dinamica standard / Standard penetration test N/30 cm
1.90	1.90	1.90	Pietris cu nisip cafeniu si rar bolovanis.																																	
																																				2.00 35/41/R
7.40	5.50		Argila nisipoasa, cafenie - cenusie ... cenusie, plastic vartoasa.	1 ☒	4.37-4.68	12	39	37	11	1						27.7	11.4	16.3	11.6 10.8	0.98		19.1	17.3	34.83	0.53	0.54	12935.3	2.96	0.00012							
																																				6.00 40/R
10.10	2.70		Nisip argilos, cenusiu.	2 ☒	8.27-8.5	9	18	13	22	27	11				>15				12.6 12.4			22.2	19.8	25.47	0.34	0.96	18854.0	1.99	0.00007							
																																				10.10 48/R
13.40	3.30		Argila cafenie, tare.	3 ☒	12.65-12.88	52	48									84.9	25.7	59.2	17.8 19.7	>1		21.2	18.0	28.48	0.40	1.00				200 115.4	300 133.8	400 173.2	16°8'	54.0	FCU i.	
																			19.2			21.1	17.7	29.80	0.43	1.00	13648.3	3.89	0.00010							
			Nisip argilos, cenusiu, plastic vartos.																																	14.20 42/R
				4 ☒	16-16.25	15	20	13	25	26	1					27.9	12.5	15.4	12.1 12.8	0.98		22.7	20.2	25.7	0.35	0.95	16686.7	2.70	0.00008							

Other columns (all empty on this page): Stratificatia / Stratification; Formatiunea geologica / Geological formation; Contractilitatea / Shrinkage-swelling (Umflarea libera / Unconfined swelling U_L; Suctiunea 15 bari / Suction 15 bars w_{15}; Contractia volumica / Volume shrinkage C_v (Tub. Netulb. / Dist. Undist.); Limita de contractie / Shrinkage limit w_s; Presiunea de umflare / Swelling pressure Pu kPa); Coef. compresibilitate volumica / Coefficient of volume change m_v; Sensibilitatea la umezire / Susceptibility to wetting im_{300} %; Efort / Stress σ kPa; Indice de recompresiune / Recompression index RSC; Coeficientul de consolidare / Coefficient of consolidation c_v cm²/sec; Rezistenta la compresiune cu deformare laterala libera / Unconfined compressive strength p_c kPa; Coeficient de permeabilitate / Permeability coefficient k; Continutul in materii organice / Organic matter content %.

Forajul continua

geotesting®
STUDII GEOTEHNICE ŞI GEOFIZICE

Profilul ~~Forajului~~ ~~Santului~~ / ~~Borehole~~ ~~Pit~~ Profile Nr. S4-FP-14 continuare

REZULTATELE ANALIZELOR DE LABORATOR
LABORATORY TEST RESULTS

LUCRAREA DESIGN: Studiu geotehnic pentru revizuirea Studiului de fezabilitate Autostrada Sibiu-Pitesti - Sectiunea 4 (Valeni-Curtea de Arges)

AMPLASAMENT LOCATION: Autostrada Sibiu-Pitesti X: 464350.01 Y: 413199.06

DATA DATE: 16.08.2016

Cota luata de: 16.0 Foraj / Level vs: 16.0 Bore-hole (plt)	Grosimea stratului / Stratum thickness	Adancimea apei subterane / Underground water depth	Stratificatia / Stratification	Formatiunea geologica / Geological formation	DENUMIREA STRATULUI (conform Stas 1243-88 si SR EN ISO 14688/2-2005) / STRATUM DESCRIPTION (according to Stas 1243-88 and SR EN ISO 14688/2-2005)	Numarul probelor / Number and type of samples	Adancimea / Depth	Compozitie granulometrica (d. in mm) SR EN ISO 14688/2-2005 / Particle size distribution SR EN ISO 14688/2-2005										Coeficientul de neuniformitate / Non-uniformity coefficient	Limitele Aterberg / Aterberg's limits		Indicele de plasticitate / Plasticity index	Umiditatea / Water content	Indicele de consistenta / Consistency index	Densitatea scheletului mineral / Skeletal mineral density	Greutatea volumica / Unit weight	Greutatea volumica in stare uscata / Unit dry weight	Porozitatea / Porosity	Indicele porilor / Void ratio	Gradul de umiditate / Degree of saturation	Contractilitatea / Shrinkage-swelling				Compresibilitatea / Compressibility							Rezistenta la forfecare / Shear strength					Felul determinarii / Type of test	Rezistenta la compresiune cu deformatie laterala libera / Unconfined compressive strength	Coeficient de permeabilitate / Permeability coefficient	Continutul in CaCO3 / CaCO3 content	Penetrarea dinamica standard / Standard penetration test
						Borcan / Stut / Carota		Argila / Clay	Praf / Silt	Nisip fin / Fine sand	Nisip mediu / Medium sand	Nisip mare / Coarse sand	Pietris mic / Small gravel	Pietris mediu / Medium gravel	Pietris mare / Coarse gravel	Bolovanis / Cobbles		Liquid limit	Plastic limit							Unconfined swelling	Suction 15 bars	Volume shrinkage	Shrinkage limit	Swelling pressure	Oedometer deformation modulus	Specific settlement at 200 kPa	Coefficient of volume change	Coefficient of compressibility	Susceptibility to wetting	Stress	Recompression index	Coefficient of consolidation	Effort 1	Effort 2	Effort 3	Angle of int. friction	Cohesion						
	m	m					m	<0.002	0.063	0.2	0.63	2	6.3	20	63	200 / 250	w_L	w_p	I_p	w %	I_c	ρ_s	kN/m³ γ	kN/m³ γ_d	n %	e	Sr	U_L	w_{15}	C_v	w_c	Pu kPa	$M_{200-300}$ kPa	ε_{200} %	m_v 1/kPa	$a_{v\ 50-100}$ 1/kPa	Im_{pc} %	q kPa	RSC	c_v cm²/sec	σ/τ	σ/τ	σ/τ	Φ °	c kPa		p_c kPa	K cm/sec	CaCO3 %	N/30 cm
16.0 Foraj	4.50				Nisip argilos, cenusiu, plastic vartos.																																									
18.00																																															18.10 R
	3.30				Argila prafoasa, cafenie - cenusie, tare.	5	20.00-20.50	27	56	11	5	1										36.9	13.2	23.7	12.3 13.5	>1		21.2	18.9	26.11	0.35	0.89													400 163.3	500 193.4	600 236.6	20°7'	14.6	FCU i.			3.35	
21.30																																														
						6	24-24.35	8	16	22	40	13	1				>15							13.8 16.3			21.1	18.5	27.48	0.38	0.93					55	6097.6 7462.7 9375.0	2.45 3.79 5.65		0.00023 0.00019 0.00015		200 300 500	0.59	3.15*10⁻⁴ 3.34*10⁻⁴ 2.23*10⁻⁴											5.25*10⁻⁶ 4.57*10⁻⁶ 2.45*10⁻⁶			22.00 46/R
					Nisip argilos cenusiu, indesat, cu intercalatii de argila prafoasa, cenusie, plastic vartoasa la 28.00 m.	7	28-28.30	27	59	4	4	4	2									40.9	12.8	28.1	16.4 13.9 14.2	0.95		21.6 21.8	18.8 19.1	29.88 26.90	0.43 0.37	1.00 0.98								16686.7	2.75		0.00009								500 183.4	600 206.8	700 233.4	14°3'	57.8	FCU i.				26.30 45/R
32.00	8.00																																													

Forajul continua

geotesting®
STUDII GEOTEHNICE ŞI GEOFIZICE

Profilul ~~Santului~~ Forajului Nr. S4-FP-14 continuare
Borehole ~~Pit~~ Profile

REZULTATELE ANALIZELOR DE LABORATOR
LABORATORY TEST RESULTS

LUCRAREA / DESIGN: Studiu geotehnic pentru revizuirea Studiului de fezabilitate Autostrada Sibiu-Pitesti - Sectiunea 4 (Valeni-Curtea de Arges)

AMPLASAMENT / LOCATION: Autostrada Sibiu-Pitesti
X : 464850.01 Y: 413199.06

DATA / DATE: 16.08.2016

Cota fata de / Level vs: 32.0 (Foraj / Bore-hole (pit))

Sample type key: ☐ Borcan / Jar; ☒ Stut / Tube; ■ Carota / Core

Cota (m)	Grosimea stratului / Stratum thickness (m)	Adancimea apei subterane / Underground water depth (m)	Stratificatia / Stratification	Formatiunea geologica / Geological formation	Denumirea stratului (conform Stas 1243-88 si SR EN ISO 14688/2-2005) / Stratum description (according to Stas 1243-88 and SR EN ISO 14688/2-2005)	Numarul probelor / Number and type of samples	Adancimea / Depth (m)	Argila / Clay <0.002	Praf / Silt 0.063	Nisip fin / Fine sand 0.2	Nisip mediu / Medium sand 0.63	Nisip mare / Coarse sand 2	Pietris mic / Small gravel 6.3	Pietris mediu / Medium gravel 20	Pietris mare / Coarse gravel 63	Bolovanis / Cobbles 200	Coeficientul de neuniformitate / Non-uniformity coefficient Un=d60/d10	Limita de curgere / Liquid limit W_L	Limita de plasticitate / Plastic limit W_P	Indicele de plasticitate / Plasticity index I_P	Umiditatea / Water content w %	Indicele de consistenta / Consistency index I_C	Densitatea scheletului mineral / Skeletal mineral density ρ_s	Greutatea volumica / Unit weight γ kN/m³	Greutatea volumica in stare uscata / Unit dry weight γ_d kN/m³	Porozitatea / Porosity n %	Indicele porilor / Void ratio e	Gradul de umiditate / Degree of saturation Sr
32.70	0.70				Argila prafoasa, cenusie, tare.	8 ☒	32.5-32.7	26	67	5	2							47.4	15.0	32.4	15.0	1.00						
																					14.6			19.5	17.0	37.61	0.60	0.66
35.00	2.30				Nisip argilos cenusiu.																							

Contractilitatea / Shrinkage-swelling: Umflarea libera / Unconfined swelling U_L	Suctiunea 15 bari / Suction 15 bars w_{15}	Contractia volumica / Volume shrinkage C_v (Tulb./Netulb. – Dist./Undist.)	Limita de contractie / Shrinkage limit w_s	Presiunea de umflare / Swelling pressure Pu kPa	Compresibilitatea / Compressibility: Modulul de deformatie edometrica / Oedometer deformation modulus $M_{200-300}$ kPa	Tasare specifica la 200 kPa / Specific settlement at 200 kPa ε_{200} %	Coef. compresibilitate volumica / Coefficient of volume change m_v	Coeficientul de compresibilitate / Coefficient of compressibility $a_{v\,200-300}$ 1/kPa	Sensibilitatea la umezire / Susceptibility to wetting im_{200} %	Efort / Stress σ kPa	Indice de recompresiune / Recompression index RSC	Coeficientul de consolidare / Coefficient of consolidation c cm²/sec	Rezistenta la forfecare / Shear strength: Efort / Effective stress σ/τ 1	2	3	Unghiul de frecare int. / Angle of int. friction Φ °	Coeziunea / Cohesion c kPa	Felul determinarii / Type of test	Rezistenta la compresiune cu deformatie laterala libera / Unconfined compressive strength p_c kPa	Coeficient de permeabilitate / Permeability coefficient k	Continutul in materii organice / Organic matter content %	Penetrarea dinamica standard / Standard penetration test N/30 cm

Nota:
FCU L = Forfecare consolidata redrenata inundata

Intocmit: ing. V. Marin

Verificat: ing. A. Diaconu