



مشروع القطار الكهربائي السريع القطاع الخامس				
تنفيذ شركة الأهلي للمقاولات				
من الكم 637+952 الي 643+863				
بيان اعمال توضيحي لمستخلص جاري (7) عقد (2024/2023/306)				
كميات الردم	كميات حفر تربة عادية	المستخلص	قيمة العقد	العقد
23100.00	-	جاري 1	عشرون مليون	(2024/2023/306)
121500.00	10000.00	جاري 2		
34400.00	-	جاري 3		
30000.00	-	جاري 4		
35000.00	13000.00	جاري 5		
30000.00	-	جاري 6		
-273000.00	-23000.00	جاري 7		
256649.00	20985.00			
24219.30	-	كميات تم حصرها		
128231.31	14051.66			
33745.88				
30262.98	-			
34397.31	11717.58			
28911.72	-			
269694.06	-25769.24			
	22090.64			
279768.50	22090.64	اجمالي كميات تم حصرها		
23100.00	-	كميات تم صرفها		
121500.00	10000.00			
34400.00	-			
30000.00	-			
35000.00	13000.00			
29000.00	-			
-273000.00	-23000.00			
256649.00	20985.00			
256649.00	20985.00	اجمالي كميات تم صرفها		
33119.50	1105	المشتري من الكمية		
10074.44	-	الكمية التي تم ترحيلها للعقد (2024/2023/305)		

1/1



Edit

To Word

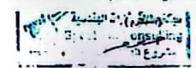
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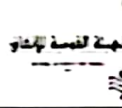
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استشاري اسبكتروم /

استشاري المساحة مكتب برليانت /

مهندس الشركة المنفذة /





وزارة النقل
الهيئة العامة للطرق والكبارى والمنطقة
الثامنة بقنا

3/9/2024

من بداية الاعمال حتى تاريخ

بيان الاعمال بالمستخلص رقم : (7) جارى

بيان اعمال توضيحي لمستخلص جاري (7) لعقد (2024/2023/306) ليند رقم (1-3)

اجمالى كميات الحصر خاصة العتدين رقم : (2024 / 2023 / 306) (2024/2023/305)

تنفيذ شركة انجني تكنولوجيات

تنفيذ شركة

اعمال تحميل وتوريد ونقل اترية مطابقة للمواصفات وتشغيلها باستخدام آلات التسوية بسك لا يزيد عن 50 سم حتى منسوب - (2 متر) اسفل منسوب الفرمة و بسك لا يزيد عن 25 سم اعلى من منسوب - (2 متر) من منسوب الفرمة لاستكمال المنسوب التصميمي لتشكيل الجسر والاكتاف (نسبة تحمل كليفورنيا حتى 20%) ورشها بلمياه لاصونية للوصول الى نسبة الرغوية المطلوبة والدمك الجيد بالهراسات للوصول الى اقصى كثافة جقة (95% من الكثافة الجقة لقصى) ويتم تنفيذ طبقا لمتنيب التصميمية والقطاعات العرضية التمونجية والرسومات التصميمية المعتمدة وليند بجميع مشتتات طبقا لاصول لصناعة ومواصفات الهيئة العامة للطرق والكبارى وتعليمات المهندس المشرف

رقم البند وببته: (1-3)

273,000.00

مقدار لمر السلق

269,694.06

الكمية بالمقايمة

اجمالى كميات اعمال البند

بيان الاعمال بالمقايمة	الموقع الكيلو مترى		الطول (م)	م	الاجمالى م
	من	الى			
اعمال الردم	638+280	639+120	840م	115833.70	337937.21
	639+580	639+960	380م	64244.11	
	640+360	640+760	400م	23689.06	
	641+000	641+880	880م	89542.09	
	642+220	642+480	260م	16076.26	
	642+720	643+220	500م	18182.57	
	643+280	643+560	280م	10369.42	

الاجمالى

269,694.06

اجمالى ما تم تنفيذه حتى تاريخه تعقد

279,768.50

اجمالى كميات الاعمال المنفذة

-10074.44

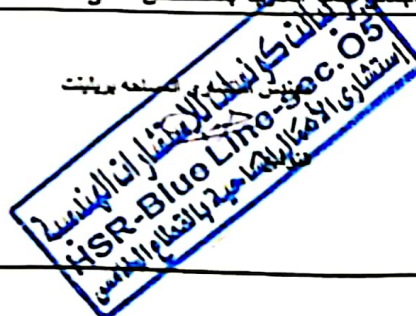
اجمالى الكمية التى تم ترحيلها لعقد (2024/2023/305)

273000-

اجمالى الكمية المدرجة بالمستخلص السابق

256,649.00

اجمالى الكمية المدرجة بالمستخلص الحالى



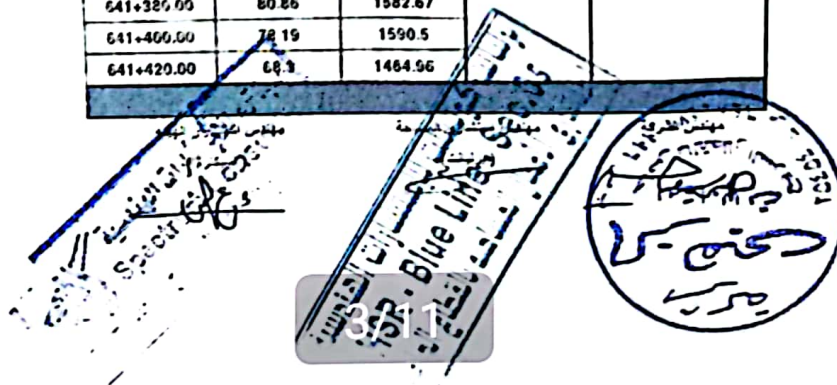
642+900.00	6.7	159.03	الاجمالي
642+920.00	6.07	127.65	
			16,397.61

مجلس الشورى
محافظة الدمام
768-542

HSR - BILAL

HOT

				
مشروع الطريق الكهربائي السريع				
حصر كميات الردم مستخلص جاري (7) شركة الذهبى (863+643-952+637) مشروع الطريق السريع القطاع الخامس (قوس / ارمينت)				
رقم العقد	(2024/2023/305)			
تغطية شركة :	الذهبى للمقاولات			
يغطي حصر الاعمال من 1/8/2023 حتى تاريخ 31/8/2023				
بند رقم (1-3): أعمال تحميل وتوريد ونقل التربة مطبقة لمواصفات وتشغيلها باستخدام الآلات التسوية..... الخ				
Station	Fill Area	Fill Volume	layer	Cum Fill Volume
638+820.00	0.39	0	FILL LAYER (-7.00)	1237.19
638+840.00	9.46	98.5		
638+860.00	18.12	275.8		
638+880.00	15.07	331.93		
638+900.00	13.68	287.51		
638+920.00	10.67	243.45		
638+940.00	0	0	FILL LAYER (-9.50)	306.91
638+960.00	0.82	8.15		
638+980.00	4.25	50.65		
639+000.00	9.6	138.47		
639+020.00	1.37	109.64		
639+040.00	20.27	216.32	FILL LAYER (-7.50)	1403.58
639+060.00	21.7	419.63		
639+080.00	9.56	312.54		
639+100.00	8.91	184.68		
639+120.00	18.13	270.41		
641+000.00	29.47	0	FILL LAYER (-2.00)	4715.20
641+020.00	29.47	589.4		
641+040.00	29.47	589.4		
641+060.00	29.47	589.4		
641+080.00	29.47	589.4		
641+100.00	29.47	589.4		
641+120.00	29.47	589.4		
641+140.00	29.47	589.4		
641+160.00	29.47	589.4		
641+180.00	49.05	785.17		
641+200.00	51.69	1007.42	FILL LAYER (-2.50)	17503.19
641+220.00	64.94	1166.35		
641+240.00	64.94	1298.8		
641+260.00	64.94	1298.8		
641+280.00	64.94	1298.8		
641+300.00	64.94	1298.8		
641+320.00	80.21	1451.47		
641+340.00	84.16	1643.71		
641+360.00	77.41	1615.74		
641+380.00	80.86	1582.67		
641+400.00	78.19	1590.5		
641+420.00	68.3	1464.96		

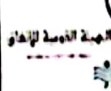


Station	Fill Area	Fill Volume	layer	Cum Fill Volume
641+440.00	21.89	901.98	FILL LAYER (-3.50)	4254.12
641+460.00	31.4	532.94		
641+480.00	35.97	673.68		
641+500.00	25.95	619.14		
641+520.00	20.47	464.2		
641+540.00	14.05	345.22		
641+560.00	3.23	172.76		
641+580.00	13.53	167.59		
641+600.00	7.64	211.73		
641+620.00	8.85	164.88		
642+220.00	17.49	0	FILL LAYER (-0.75)	6172.99
642+240.00	17.49	349.85		
642+260.00	17.49	349.85		
642+280.00	17.49	349.85		
642+300.00	17.49	349.85		
642+320.00	24.2	416.96		
642+340.00	24.2	484.07		
642+360.00	24.2	484.07		
642+380.00	24.2	484.07		
642+400.00	24.2	484.07		
642+420.00	24.2	484.07		
642+440.00	24.2	484.07		
642+460.00	24.2	484.07		
642+480.00	24.2	484.07		
642+500.00	24.2	484.07		
الاجمالي			35,593.18	

مختبر
الهندسة المدنية
الجامعة العراقية
البيروت

المساحة
البيروت
HSR - Blue Line - sec. 3
مختبر الهندسة المدنية - جامعة بغداد

مختبر
الهندسة المدنية
الجامعة العراقية
البيروت

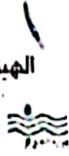
   				
مشروع القطر الكهربائي السريع				
حصر كميات الردم مستخلص جاري (7) شركة الذهبى (863+643-952+637) مشروع القطر السريع القطاع الخامس (لوس /ارمنت)				
رقم العقد	(2024/2023/306)/(2024/2023/305)			
تسمية شركة :	الذهبى للمقاولات			
اجملى حصر الاعمال ابتداء من 9/2023				
بنء رقم (1-3) : اعمال تحمىء وكوربء ونقل اءربة مطابقة للمواصفات وتشغىلها باءستءءم آلات التءرىء الخ				
Station	Fill Area	Fill Volume	layer	Cum Fill Volume
638+640.00	1.56	0	FILL LAYER (-5.00)	1348.97
639+660.00	17.87	194.29		
638+680.00	30.09	479.56		
638+700.00	37.42	675.12		
639+720.00	149.92	1673.4	FILL LAYER (-1.75)	36804.17
639+740.00	154.99	3049.02		
639+760.00	158.14	3131.27		
639+780.00	160.53	3186.73		
638+800.00	151.71	3122.38		
639+820.00	190.19	3418.97		
638+840.00	190.25	3804.38		
638+860.00	190.24	3804.91		
638+880.00	190.2	3804.48		
639+900.00	190.21	3804.1		
638+920.00	190.25	3904.53		
638+940.00	242.45	4325.99	FILL LAYER (-2.5)	25015.85
639+960.00	242.66	4851.09		
639+980.00	242.69	4853.42		
639+000.00	242.72	4854.06		
639+020.00	242.43	4851.5		
639+120.00	127.83	1278.79		
639+580.00	134.19	1341.95		
639+600.00	141.42	2756.11	FILL LAYER (-4.0)	27626.62
639+620.00	148.65	2900.63		
639+640.00	155.69	3043.38		
639+660.00	167.39	3230.79		
639+680.00	160.24	3306.31		
639+700.00	155.05	3152.97		
639+720.00	140.6	2936.53		
639+740.00	122.77	2633.66		
639+760.00	108.66	2314.29		
639+780.00	131.96	2406.22	FILL LAYER (-3.0)	23102.16
639+800.00	125.61	2575.7		
639+820.00	119.91	2455.24		
639+840.00	117.26	2371.74		
639+860.00	124.16	2414.23		
639+880.00	126.74	2509.04		
639+900.00	121.1	2478.46		
639+920.00	111.29	2323.93		
639+940.00	91.99	2032.74		
639+960.00	61.5	1534.86		

مخبر حصر الكمىء
مخبر حصر الكمىء
مخبر حصر الكمىء

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مخبر حصر الكمىء
مخبر حصر الكمىء
مخبر حصر الكمىء

الهيئة العامة للإعطاء



مشروع القطار الكهربائي السريع

حصر كميات الردم مستخلص جاري (7) شركة الذهبى (863+643-952+637) مشروع القطار السريع القطاع الخامس (قوص /ارمنت)

رقم العقد

(2024/2023/306)/(2024/2023/305)

تنفيذ شركة :

الذهبى للمقاولات

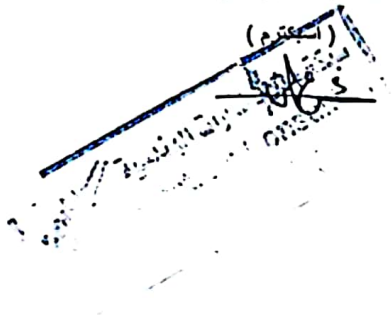
اجمالى حصر الاعمال ابتداء من 22/3/2024

بند رقم (1-3): أعمال تحميل وتوريد ونقل اترية مطابقة للمواصفات وتشغيلها باستخدام آلات التسوية.....الخ

Station	Fill Area	Fill Volume	layer	Cum Fill Volume
638+280.00	31.87	0	FILL LAYER (-1.75)	4403.65
638+300.00	54.38	862.58		
638+320.00	57.48	1118.61		
638+340.00	60.53	1180.05		
638+360.00	15.37	758.97		
638+380.00	15.58	309.49		
638+400.00	1.82	173.95		
638+420.00	28.87	306.82	FILL LAYER (-1.5)	18712.37
638+440.00	40.43	692.96		
638+460.00	57.66	980.92		
638+480.00	46.14	1037.98		
638+500.00	25.44	715.77		
638+520.00	26.36	518.04		
638+540.00	46.22	725.83		
638+560.00	59.94	1061.65		
638+580.00	56.74	1166.89		
638+600.00	56.3	1130.49		
638+620.00	108.61	1649.16		
638+640.00	109.16	2177.76		
638+660.00	109.13	2182.94		
638+680.00	109.13	2182.58		
638+700.00	109.13	2182.58		

مهندس استشارى الهيئة

مهندس استشارى المساحة



Station	Fill Area	Fill Volume	layer	Cum Fill Volume
640+380.00	51.33	0	FILL LAYER (-1.75)	5105.63
640+400.00	51.3	1026.25		
640+420.00	51.33	1026.29		
640+440.00	51.3	1026.35		
640+460.00	51.36	1026.59		
640+480.00	48.66	1000.15		
640+500.00	48.66	973.17	FILL LAYER (-1.25)	13626.86
640+520.00	48.66	973.17		
640+540.00	48.66	973.21		
640+560.00	48.66	973.24		
640+580.00	48.67	973.3		
640+600.00	48.65	973.22		
640+620.00	48.69	973.42		
640+640.00	48.7	973.85		
640+660.00	48.7	973.99		
640+680.00	48.66	973.61		
640+700.00	48.66	973.17		
640+720.00	48.66	973.17		
640+740.00	48.66	973.17		
640+760.00	48.66	973.17		
642+720.00	30.46	0	FILL LAYER (-0.75)	4271.01
642+740.00	30.54	610.02		
642+760.00	30.49	610.34		
642+780.00	30.49	609.86		
642+800.00	30.5	609.98		
642+820.00	30.57	610.79		
642+840.00	30.44	610.18		
642+860.00	30.54	609.84		
642+880.00	19.17	497.07	FILL LAYER (-1.00)	6156.50
642+900.00	19.17	383.38		
642+920.00	19.19	383.58		
642+940.00	18.98	381.62		
642+960.00	17.38	363.58		
642+980.00	12.99	303.71		
643+000.00	16.72	297.12		
643+020.00	32.07	487.95		
643+040.00	39.75	718.19		
643+060.00	40.06	798.06		
643+080.00	40.11	801.72		
643+100.00	33.94	740.52		

مهندس الاستشارات الهندسية

المساحة



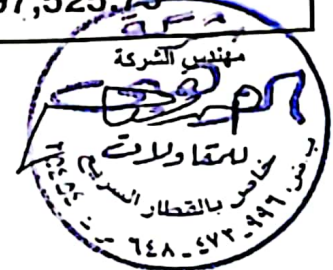
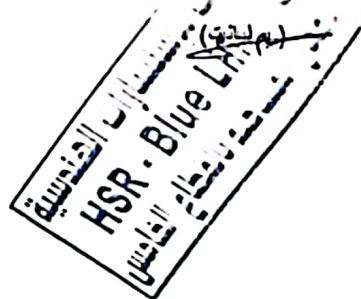
Station	Fill Area	Fill Volume	layer	Cum Fill Volume
643+120.00	81.54	1154.82	FILL LAYER (-2.00)	10009.08
643+140.00	144.16	2824.82		
643+160.00	145.64	2898.02		
643+180.00	52.24	1978.79		
643+200.00	28.97	812.12		
643+220.00	5.08	340.51		
643+280.00	13.5	0	FILL LAYER (-0.25)	1622.08
643+300.00	13.5	270.07		
643+320.00	13.5	270.07		
643+340.00	13.5	270.07		
643+360.00	13.5	270.07		
643+380.00	13.54	270.48		
643+400.00	13.59	271.32		
643+420.00	29.97	435.62	FILL LAYER (-0.75)	4700.92
643+440.00	30.54	605.15		
643+460.00	30.49	610.34		
643+480.00	30.49	609.86		
643+500.00	30.49	609.87		
643+520.00	30.49	609.87		
643+540.00	30.49	609.86		
643+560.00	30.54	610.35		
الاجمالي			97,525.75	

مهندس استشاري الجيوتقنية

(اسمكتم)

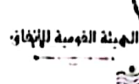
مهندس استشاري المساحة

(اسمكتم)



الاجمالي
مهند





وزارة النقل
الهيئة العامة للطرق والكبارى المنطقة
الثامنة بقنا

3/9/2024

حتى تاريخ

من بداية الاعمال

بيان الاعمال بالمستخلص رقم : (7) جارى

بيان اعمال توضيحي لمستخلص جاري (7) لبند رقم (1-2)

العقد رقم : (2024 / 2023 / 306)

الذهبي للمقاولات

تفليذ شركة

بالمتر المكعب اعمال حفر باستخدام المعدات الميكانيكية لجميع أنواع التربة عدا التربة الصخرية وتسوية السطح بالآلات التسوية والرش بالمياه
الأصولية للوصول الى نسبة الرطوبة المطلوبة والدمك الجيد بالهرامات للوصول الى أقصى كثافة جافه (95% من الكثافة الجافة القصوى)
ومحمل على البند تحميل ونقل الأتربة الزائدة لمسافة 500 متر من محور الطريق ويتم التنفيذ طبقاً للمناسيب التصميمية والقطاعات العرضية
النموجية والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقاً لأصول الصناعة ومواصفات الهيئة العامة للطرق والكبارى وتعليمات
المهندس المشرف.

رقم البند وبيته: (1-2)

23000.000

مقدار العمل السابق

22090

الكثية بالمقايضة

اجمالى كميات اعمال البند

الاجمالى م 3	م 3	الطول (م)	الموقع الكيلو مترى		بيان الأعمال بالمقايضة
			الى	من	
22090.64	13988.40	80م	640+200	640+120	أعمال الحفر
	8102.24	160م	639+340	639+180	

الاجمالى

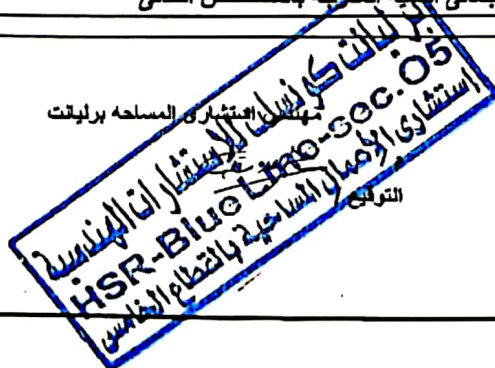
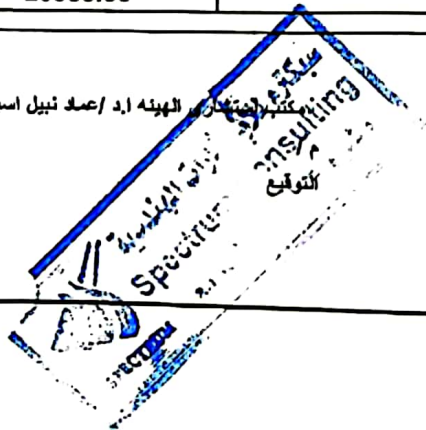
22090.64	اجمالى ما تم تنفيذه حتى تاريخه
25769.24	اجمالى كميات الاعمال السابقة
-3678.60	اجمالى الكمية المنفذة خلال المدة
-23000.00	اجمالى الكمية المدرجة بالمستخلص السابق
20985.00	اجمالى الكمية المدرجة بالمستخلص الحالى

مهندس الشركة المنفذة

استشارى الأعمال

مهندس الشركة المنفذة

لتوقيع



مشروع القطار الكهربائي السريع

حصر كميات القطع مستخلص جاري (7) شركة الذهبي (863+643-952+637) مشروع القطار السريع القطاع الخامس (قوص /ارمنت)

رقم العقد

(2024/2023/306)

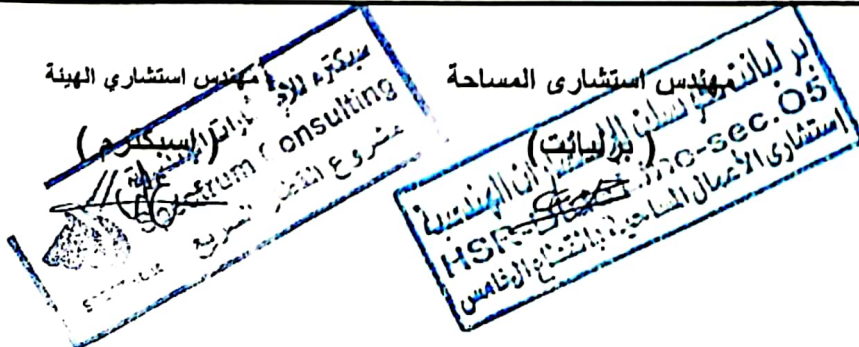
تنفيذ شركة :

شركة الذهبي للمقاولات

اجمالي حصر الاعمال حتى تاريخ 3/9/2024

بند رقم (1-2): بالمتر المكعب أعمال حفر باستخدام المعدات الميكانيكية للتربة العادية.....الخ

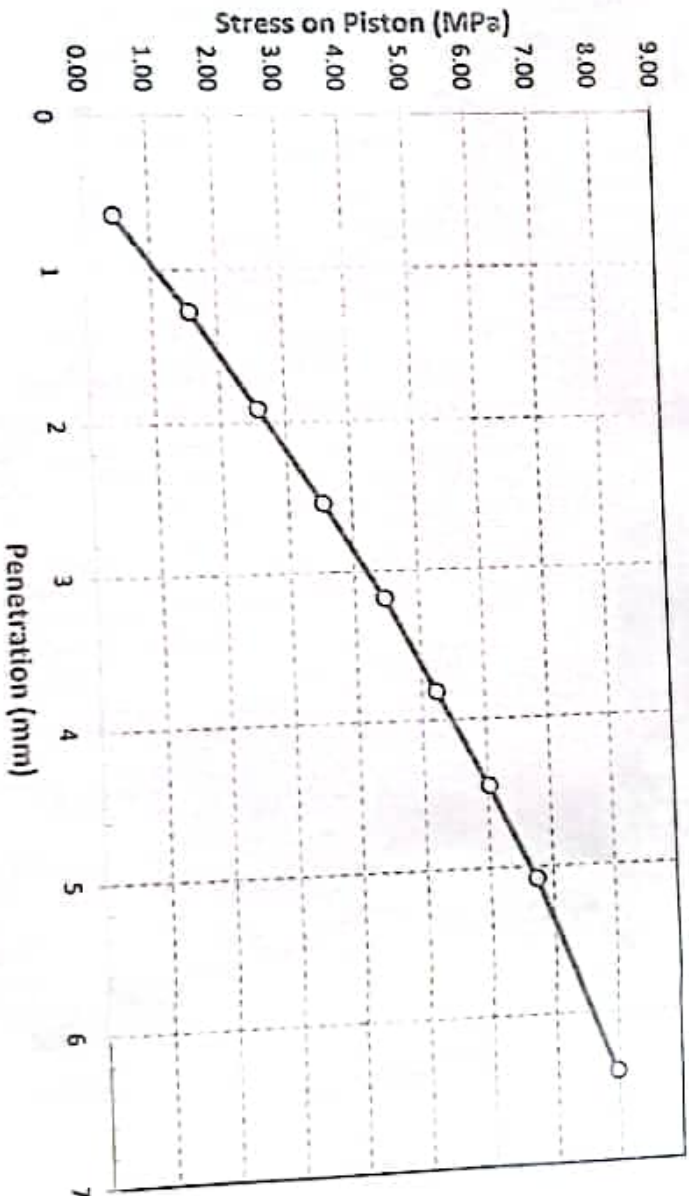
Station	Cut Area	Cut Vol	Cum Cut Volume	Notse
639+180.00	118.31	0.00	0.00	
639+200.00	112.54	2,308.49	2308.49	
639+220.00	24.70	1,372.44	3680.93	
639+240.00	0.1	248.07	3929.00	
639+260.00	52.84	529.42	4458.42	
639+280.00	63.14	1,159.80	5618.22	
639+300.00	61.43	1,245.67	6863.89	
639+320.00	31.15	925.80	7789.69	
639+340.00	0.1	312.55	8102.24	
640+120.00	4.61	0	0.00	
640+140.00	83.08	876.90	876.90	
640+160.00	277.66	3,607.40	4484.30	
640+180.00	307.76	5,854.20	10338.50	
640+200.00	57.23	3,649.90	13988.40	
الاجمالي			22090.64	



Company Name : *CEL*
 Project : Electric Express Train - HSR From Qous To Arman
 Location : ST:641+400 E= 492410.088 N=2862759.57
 Type of sample : Soil Embankment (Upper Embankment 0.0 M)
 Delivery Date : 31/12/2023
 Reporting Date : 04/1/2024
 Reporting No. : 10-19

Load Penetration Curve of CBR Test

ASTM D-1883



Signature / *J. A. M.*



Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

Dear Gentleman,

Attached here with the delivered on 26 / 4 / 2023

This sample is representative for 5.000 M³

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Signature /



Consultant Eng : Abderrahman Ahmed

3 El Malek El Afdal Street
Zamalek, Cairo
Tel& Fax 2736723 2736703



3 شارع الملك الافضل
الزمالك - القاهرة
تليفون - فاكس : 2736723 2736703

CEL
Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : شركة الذهبي
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	91.0
37.5	1.5	85.3
25	1	80.6
19	¾	74.9
12.50	½	70.1
9.50	3/8	62.3
4.75	4	55.4
2.00	10	39.2
0.425	40	18.6

Signature / 
مكتب معامل الاستشارات الهندسية
مشروعات ، الاقصر
رقم الترخيص الرئيسي 219 991.437
الإدارة الرئيسية 3 شارع الملك الأفضل - الزمالك - القاهرة

3 El Malek E Aldal Street
Zamalek, Cairo
Tel. Fax : 23363001 - 23363000



ش.ع. الملك الأفضل
الزمالك - القاهرة
تليفون : ٢٣٣٦٣٠٠١ - ٢٣٣٦٣٠٠٠

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	8.1

Signature /.....



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Zamalek, Cairo
Tel & Fax: 27367211 - 27363993



٢ شارع الملك الافضل
الزمالك - القاهرة
هاتف : ٢٧٣٦٧٢١١ - ٢٧٣٦٣٩٩٣

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0

Signature /
CEL
مكتب معامل الاستشارات الهندسية
شروعات ، الاقصر
رقم الترخيص المبرسي 219 991 437
المركز الرئيسى : 3 شارع الملك الافضل - الزمالة - القاهرة

3 E Malek E Mida Street
Zamalek, Cairo
Tel & Fax : 2736723 - 27363093



ش الملك الافضل
الزمالة - القاهرة
الهاتف - فاكس : ٢٧٣٦٧٢٣ - ٢٧٣٦٣٠٩٣

Company Name : شركة الذهبي
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	39.2	Max 50 %	-----	-----
0.425 mm (No. 40).	18.6	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	8.1	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	-----	-----	-----	-----
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature



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Zamalek, Cairo
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٢ ش الملك الافضل
الزمالك - القاهرة
تليفون - فاكس : ٢٧٣٦٩٧٢٠ - ٢٧٣٦٩٠٩٣

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Testing Date : 30 / 04 /2024
Soil type : Middle Embankment
Location : ST From 643+740 To 643+840
Level : - 1.5 M
Report No. : 173

Compaction test by using Sand – Cone Test Method

ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	643+760	1489.9	2.27	6.3	2.14	95.5%	Comply
2	643+780	1575.2	2.31	6.8	2.16	96.6%	Comply
3	643+800	1490.6	2.25	6.3	2.12	94.6%	Comply
4	643+820	1348.3	2.33	6.3	2.19	97.9%	Comply

Degree of compaction based on proctor test dated At

Max. dry density = 2.24 gm/cm³

At optimum moisture content = 5.8 %

Signature:  Consultant Eng : Abderrahman Ahmed

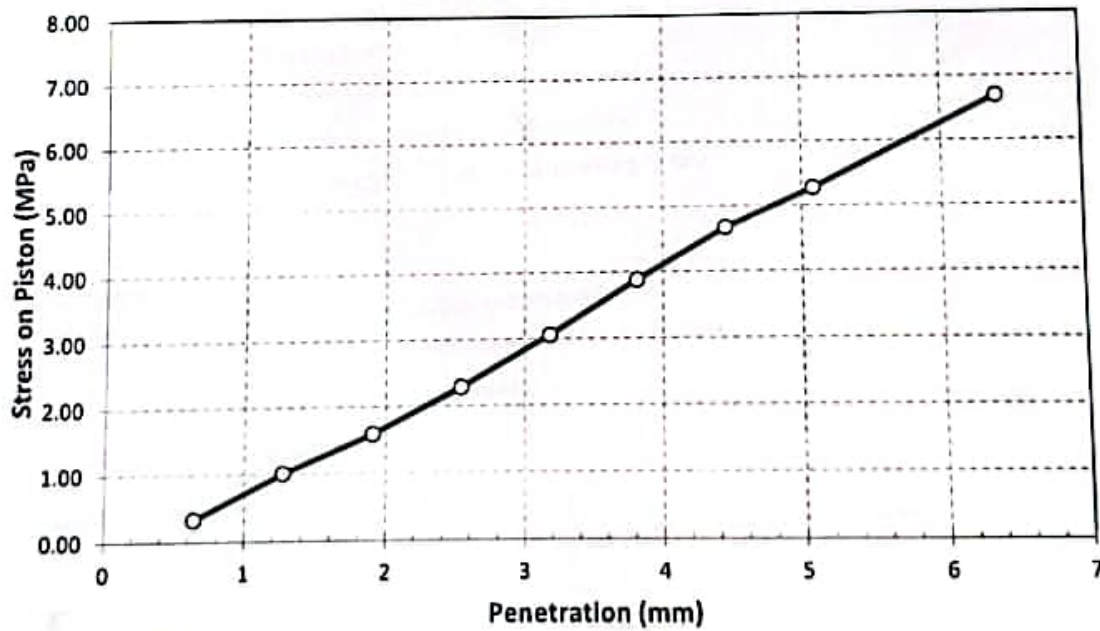
3 El Malek E Afdal Street
Zamalek, Cairo
Tel & Fax : 27367211 - 27367003



ش. الملك الاعضا
الرمالك القاهرة
تليفون : ٢٧٣٦٧٢١١ - ٢٧٣٦٧٠٠٣

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

Load Penetration Curve of CBR Test
ASTM D-1883



CEL
Signature: [Handwritten Signature]
المركز الرئيسى 3 شارع الملك الافضل - القاهرة
437 101 101

3 El Malek E Afdal Street
Zamalek, Cairo
Tel: 111 111 111 Fax: 111 111 111



3 شارع الملك الافضل
الزمالك القاهرة
تليفون : 111 111 111 فاكس : 111 111 111

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

Test Results of California Bearing Ratio on Base Materials
ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.33
1.27	0.050	1.01
1.91	0.075	1.60
2.54	0.100	2.28
3.18	0.125	3.06
3.81	0.150	3.88
4.45	0.175	4.68
5.08	0.200	5.27
6.35	0.250	6.69

CBR Result	Stress (Mpa)		CBR 100 %
	St. Value	Sample results	
At 0.2 inch (5.08 mm) penetration	10.3	5.27	51.2 %

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.24 (gm /cm³)
At = 5.8 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature /

3 El Malek E Ahal Street
Zamalek, Giza
Tel & Fax: 27367231 27363000



3 شارع الملك الإيفضل
الزمامك - القاهرة
تليفون : ٢٧٣٦٧٢٣١ فاكس : ٢٧٣٦٣٠٠٠

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Testing Date : 08 / 05 /2024
Soil type : Upeer Embankment
Location : ST From 643+280 643+400 (120m)
Level : - 0.75 M
Report No. : 182

**Compaction test by using Sand – Cone Test Method
ASTM D- 1556**

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	643+300	1570.5	2.33	5.8	2.20	98.2%	Comply
2	643+325	1777.4	2.28	5.3	2.17	96.7%	Comply
3	643+350	1430.8	2.31	5.3	2.20	98.1%	Comply
4	643+375	1650.0	2.28	6.3	2.14	95.6%	Comply
5	643+397	1423.3	2.28	6.4	2.14	95.7%	Comply

Degree of compaction based on proctor test dated At
Max. dry density = 2.24 gm/cm³
At optimum moisture content = 5.8 %

Consultant Eng .

Name : *أحمد عبد الرحمن*

Sign / *[Signature]*

Laboratory Eng.

Name : *محمد عبد الله*
Sign / *[Signature]*

3 El Malek El Afdal Street
Zamalek, Cairo
Tel & Fax : 27367223 - 27363093



3 شارع الملك الافضل
الزمالك القاهرة
تليفون : ٢٧٣٦٧٢٢٣ - ٢٧٣٦٣٠٩٣

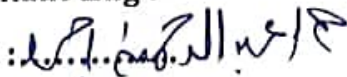
Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Testing Date : 09 / 05 / 2024
Soil type : Middle Embankment
Location : ST From 640+460 To 640+760 (300m)
Level : - 2 M
Report No. : 186

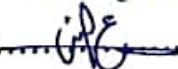
Compaction test by using Sand – Cone Test Method
ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	640+480	1411.0	2.30	6.3	2.16	96.6%	Comply
2	640+520	1681.5	2.27	6.1	2.14	95.4%	Comply
3	640+570	1578.8	2.31	5.8	2.19	97.7%	Comply
4	640+610	1487.0	2.32	6.3	2.19	97.6%	Comply
5	640+650	1602.7	2.29	6.3	2.16	96.2%	Comply
6	640+700	1466.4	2.29	5.3	2.17	97.0%	Comply
7	640+750	1493.2	2.30	6.4	2.16	96.6%	Comply

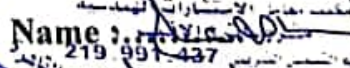
Degree of compaction based on proctor test dated At
Max. dry density = 2.24 gm/cm³
At optimum moisture content = 5.8 %

Consultant Eng .

Name : 

Sign / 

Laboratory Eng.

Name : 
219 991 437
Sign / 

3 El Malek El Aldal Street
Zamalek, Cairo
Tel & Fax : 27367231 - 27363063



ش.م.م الملك الامين
الرمك القاهره
تليفون : فاكس : 27367231 - 27363063

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Testing Date : 14 / 05 /2024
Soil type : Middle Embankment
Location : ST From 642+740 To 642+860 (120 m)
Level : - 1.0 M
Report No. : 189

Compaction test by using Sand – Cone Test Method
ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	642+760	1493.2	2.33	5.8	2.20	97.0%	Comply
2	642+780	1547.9	2.33	6.1	2.20	96.9%	Comply
3	642+800	1463.0	2.32	6.3	2.19	96.3%	Comply
4	642+820	1537.0	2.35	6.1	2.21	97.5%	Comply
5	642+840	1469.9	2.35	6.3	2.21	97.4%	Comply
6	642+850	1669.9	2.31	6.4	2.18	95.8%	Comply

Degree of compaction based on proctor test dated At

Max. dry density = 2.27 gm/cm³

At optimum moisture content = 6 %

Consultant Eng .

Name *د. محمد السيد*

Sign /....

Laboratory Eng

Name *د. محمد السيد*
Sign /....

3 El Malek El Afdal Street
Zamalek, Gairo
Tel & Fax: 27367231 - 27363003



٣ شارع الملك الأفدال
الزمالك القاهرة
هاتف وفاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٠٣

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

Dear Gentleman,

Attached here with the delivered on 07 / 05 / 2023

This sample is representative for 5.000 M³

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Consultant Eng .

Name : 

Sign / 

Laboratory Eng.

Name : 

Sign / 
CEL
مكتب معامل الاستشارات الهندسية
رقم التسجيل 219 991 437
المركز الرئيسى 3 شارع الملك الافضل - الزمالك - القاهرة

3 El Malek El Afdal Street
Zamalek, Cairo
Tel & Fax 27367291 27363693



ش الملك الافضل
الزمالك، القاهرة
تليفون ٢٧٣٦٧٢٩١ ٢٧٣٦٣٦٩٣

CEL
Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	92.3
37.5	1.5	88.1
25	1	78.4
19	¾	70.7
12.50	½	68.1
9.50	3/8	63.3
4.75	4	54.1
2.00	10	34.7
0.425	40	14.4

Signature /



3 El Malek El Afendi Street
Zamalek, Cairo
Tel & Fax: 27367231 - 27367093



شركة الملك الأفندي
الزمالك - القاهرة
تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٧٠٩٣

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	5.5

Signature /.....



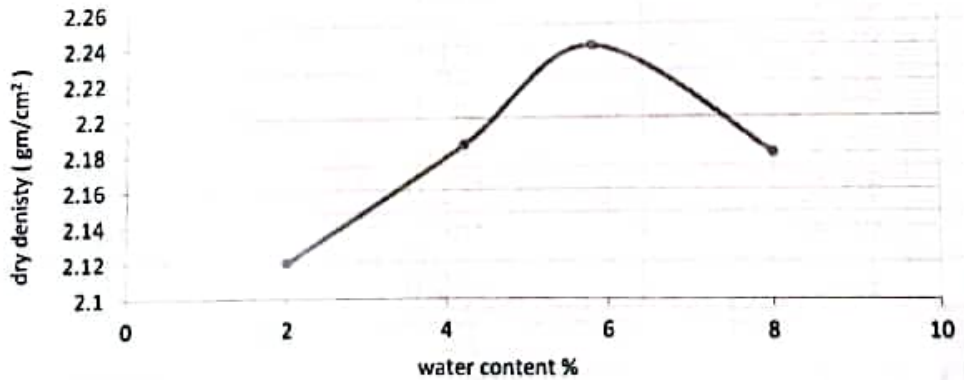
3 El Malek El Afdal Street
Zamalek, Cairo
Te & Fax : 27367231 - 27363093



٢ عن الملك الافضل
الزمالك - القاهرة
تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/4/2024
Reporting No. : 10-20

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.24
- Optimum moisture content % : 5.8 %

Signature / 

مكتب معامل الاستشارات الهندسية
مشاريع و الأقسام
رقم الترخيص المهنى 191 437
المركز الرئيسى 3 شارع الملك الأفندى - الهرم - القاهرة

3 El Maek El Ahdal Street
Zakaria - Cairo
Tel&Fax 2736722 2736350



الملك الأفندى
الهرم - القاهرة
تليفون - فاكس 2736722 2736350

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	34.7	Max 50 %	-----	-----
0.425 mm (No. 40).	14.4	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	5.5	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	23.74	-----	-----	-----
Plasticity index	3.9	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply ☐ Not Comply) with specifications limits

Signature /



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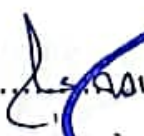


الزكرى الويليس
الزكرى الويليس
الزكرى الويليس

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	23.74
Plastic Limit	19.84
Plasticity Index	3.9

Signature / ...  

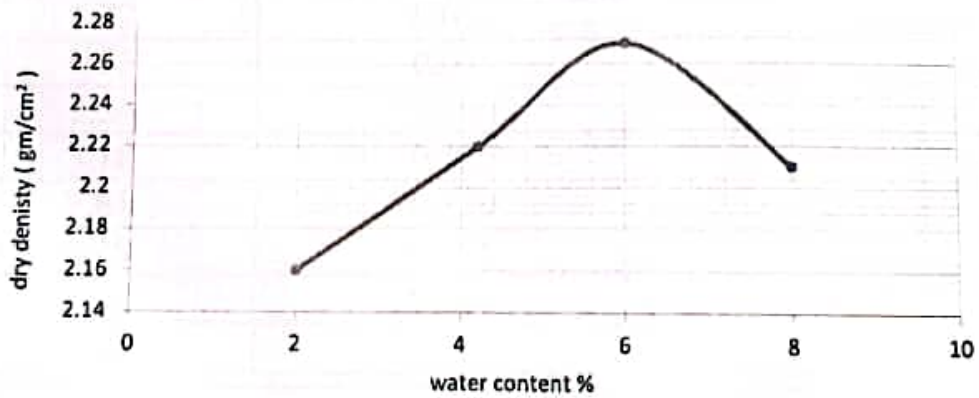
3 El Malek El Afdal Street
Zamalek, Cairo
Tel & Fax : 27362231 - 27362203



3 شارع الملك الافضل
الزمالك - القاهرة
هاتف - فاكس : 27362203 - 27362231

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.27
- Optimum moisture content % : 6 %

Signature /



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Zamalek, Cairo
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ش.ع. الملك الأفندي
الزمالك - القاهرة
تليفون : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٦٩٣

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

Test Results of California Bearing Ratio on Base Materials
ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.36
1.27	0.050	1.32
1.91	0.075	2.31
2.54	0.100	3.32
3.18	0.125	4.34
3.81	0.150	5.17
4.45	0.175	5.88
5.08	0.200	6.25
6.35	0.250	6.69

CBR Result	Stress (Mpa)		CBR 100 %
At 0.2 inch (5.08 mm) penetration	St. Value	Sample results	60.7 %
	10.3	6.25	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.27 (gm /cm³)
At = 6 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / ..

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Zamalek, Cairo
Tel, Fax: 22457231 22459683



ش.ع. الملك الافيفاتى
الزمالك - القاهرة
الهاتف : ٢٢٤٥٧٢٣١ - ٢٢٤٥٩٦٨٣

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	5.5

Signature /.....



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٢ شارع الملك الافضل
الزمالك - القاهرة
تليفون : فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٦٩٣

CEL

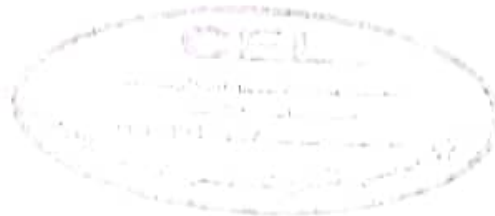
Consulting Engineering Bureau & Laboratories
مكتب محامل الاستشارات الهندسية

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Arman
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 31/12/2023
Reporting Date : 04/1/2024
Reporting No. : 10-19

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	95.1
37.5	1.5	91.9
25	1	80.7
19	¾	72.2
12.50	½	64.1
9.50	3/8	45.8
4.75	4	34.6
2.00	10	27.5
0.425	40	15.6

Signature / ...



Machine: F 60 L Steel
Machine: 1000
Date: 04/01/2024



Machine: 1000
Date: 04/01/2024

CEL

Consulting Engineering Bureau & Laboratories
مكتب استشارات الهندسة

Company Name : شركة الدقني
Project : Electric Express Train – HSR From Qous To Arman
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 31/12/2023
Reporting Date : 04/1/2024
Reporting No. : 10-19

Dear Gentleman,

Attached here with the delivered on 31 / 12 / 2023

This sample is representative for 5.000 M³

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Signature /.....

Consultant Eng : Abderrahman Ahmed



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CEL Logo & Global Stamp

CEL Logo & Global Stamp



Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Testing Date : 05 / 05 /2024
Soil type : Middle Embankment
Location : ST From 638+620 To 638+720 (100 m)
Level : - 4 M
Report No. : 176

**Compaction test by using Sand – Cone Test Method
ASTM D- 1556**

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	638+640	1625.3	2.31	5	2.20	98.7%	Comply
2	638+660	1550.7	2.34	5.3	2.22	99.5%	Comply
3	638+680	1546.6	2.27	5.5	2.15	96.5%	Comply
4	638+700	1654.8	2.27	6	2.14	96.0%	Comply

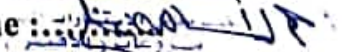
Degree of compaction based on proctor test dated At
Max. dry density = 2.23 gm/cm³
At optimum moisture content = 5.8 %

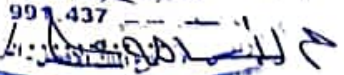
Consultant Eng .

Name : احمد الطمدى احمد

Sign / 

Laboratory Eng.

Name : 

Sign / 

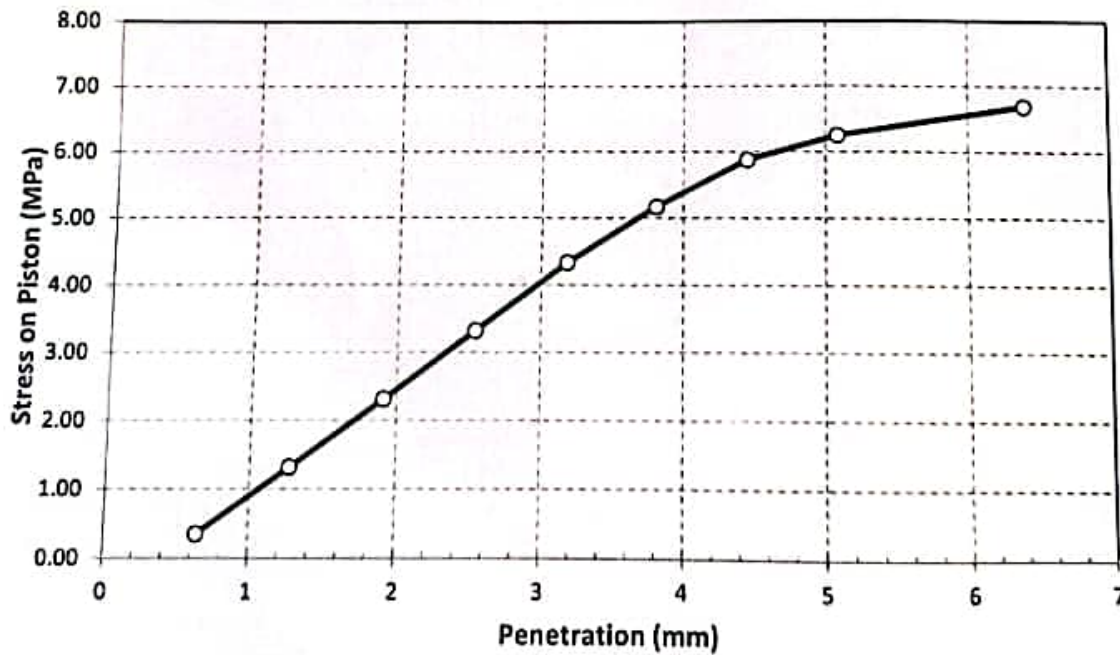
3 El Malek El Aldal Street
Zamalek, Cairo
Tel& Fax : 27367231 - 27369093



ش.م.م. الملك الامتثال
الرمالك القاهرة
تليفون : ٢٧٣٦٧٢٣١ - ٢٧٣٦٩٠٩٣

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 07/05/2024
Reporting Date : 11/5/2024
Reporting No. : 10-21

Load Penetration Curve of CBR Test
ASTM D-1883



Signature / ...



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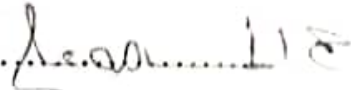
د. ش. الملك الأفدي
الزمالك القاهرة
تليفون : ٢٧٣٦٧٢٣١ - ٢٧٣٦٩٠٩٠

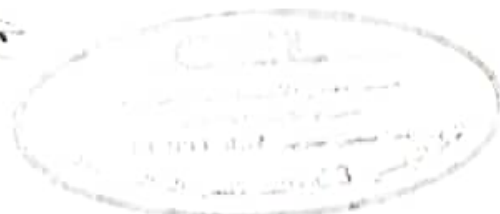
Company Name : شركة الذهبى
 Project : Electric Express Train -- HSR From Qous To Arman
 Location : ST:641+400 E= 492410,088 N=2862759,57
 Type of sample : Soil Embankment (Upper Embankment 0.0 M)
 Delivery Date : 31/12/2023
 Reporting Date : 04/1/2024
 Reporting No. : 10-19

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	27.5	Max 50 %	----	----
0.425 mm (No. 40).	15.6	Max 30 %	Max 50 %	----
0.075 mm (No. 200).	9.1	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	----	-----	-----	-----
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature / ...



As Made For Client Copy
 04/01/2024
 10-19





Consulting Engineering Bureau & Laboratories
مكتب محاسن الاستشارات والاختبارات

Company Name : شركة الدخيلي
Project : Electric Express Train -- HSR From Qous To Armanat
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 31/12/2023
Reporting Date : 04/1/2024
Reporting No. : 10-19

**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0

Signature /.....



Mr. Mohamed El-Sherbini
Z. El-Sherbini
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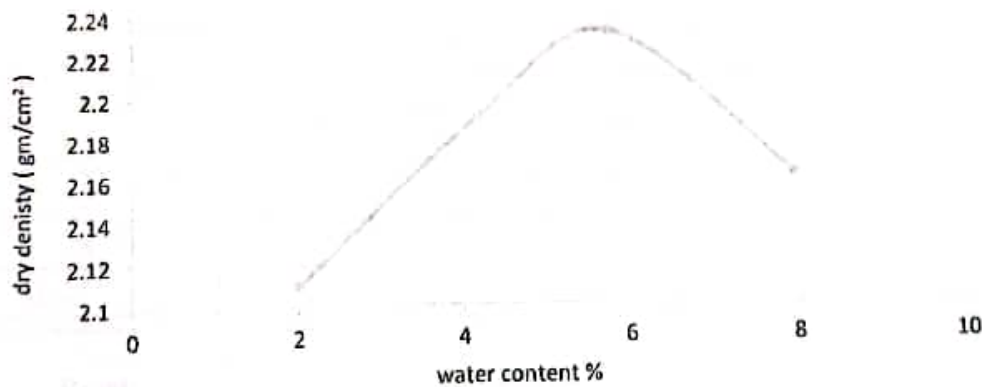
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CEL

Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

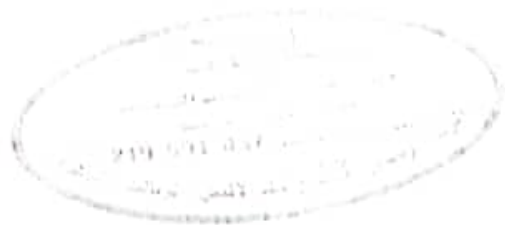
Company Name : شركة الذهبى
Project : Electric Express Train - HSR From Qous To Arman
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 31/12/2023
Reporting Date : 04/1/2024
Reporting No. : 10-19

Moisture - Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.23
- Optimum moisture content % : 5.8 %

Signature / ...



Company Name : شركة الذمعي
 Project : Electric Express Train – HSR From Qons To Arment
 Location : ST:641+400 E= 492410,088 N=2862759,57
 Type of sample : Soil Embankment (Upper Embankment 0.0 M)
 Delivery Date : 31/12/2023
 Reporting Date : 04/1/2024
 Reporting No. : 10-19

Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.46
1.27	0.050	1.58
1.91	0.075	2.58
2.54	0.100	3.55
3.18	0.125	4.47
3.81	0.150	5.23
4.45	0.175	6.03
5.08	0.200	6.74
6.35	0.250	7.97

CBR Result	Stress (Mpa)		CBR 100 %
At 0.2 inch (5.08 mm) penetration	St. Value	Sample results	65.4 %
	10.3	3.55	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.23 (gm /cm³)
At = 5.8 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature /

Company Name : شركة النجاشي
Project : Electric Express Train - HSR From Qous To Armani
Testing Date : 19 / 02 / 2024
Soil type : Middle Embankment
Location : ST From 642+740 To 642+860
Level : - 1.75 M
Report No. : 167

Compaction test by using Sand - Cone Test Method

ASTM D - 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	642+760	1616.7	2.32	6.4	2.18	97.6%	Comply
2	642+800	1591.7	2.26	6.4	2.13	95.4%	Comply
3	642+832	1623.6	2.28	6.4	2.14	96.0%	Comply
4	642+857	1519.4	2.30	6.4	2.16	97.1%	Comply

Degree of compaction based on proctor test dated At

Max. dry density = 2.21 gm/cm³

At optimum moisture content = 6.4 %

Signature /



Consultant Eng : Abderrahman Ahmed



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Zamalek, Cairo
Tel Fax 2736723- 27367603



إلى العالم العربي
الرمال القاهرة
طريق 3 شارع الملك العزيز، الزمالة، القاهرة
219 - 991 - 437

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Testing Date : 05 / 05 /2024
Soil type : Upper Embankment
Location : ST From 642+740 TO 642+840 (100 m)
Level : - 1.25 M
Report No. : 175

Compaction test by using Sand – Cone Test Method
ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	642+760	1278.1	2.32	5.5	2.20	99.1%	Comply
2	642+780	1550.7	2.31	5.4	2.19	98.6%	Comply
3	642+800	1626.7	2.27	5	2.17	97.5%	Comply
4	642+820	1628.1	2.26	5.5	2.15	96.7%	Comply

Degree of compaction based on proctor test dated At
Max. dry density = 2.22 gm/cm³
At optimum moisture content = 5.8 %

Consultant Eng .

Name : *أ.م.ع. أحمد الدين*

Sign / *أ.م.ع. أحمد الدين*

Laboratory Eng.

Name : *أ.م.ع. أحمد الدين*

Sign / *أ.م.ع. أحمد الدين*

3 El Malek El Afdal Street
Zamalek, Cairo
Te & Fax 27367231 27363693



ش.م.ع. الملك الأفدل
الزمالك - القاهرة
تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٦٩٣

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 13/05/2024
Reporting Date : 17/05/2024
Reporting No. : 08-19

Test Results of California Bearing Ratio on Base Materials
ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.28
1.27	0.050	1.17
1.91	0.075	1.94
2.54	0.100	2.65
3.18	0.125	3.47
3.81	0.150	4.11
4.45	0.175	4.82
5.08	0.200	5.46
6.35	0.250	6.42

CBR Result	Stress (Mpa)		CBR 100 %
At 0.2 inch (5.08 mm) penetration	St. Value	Sample results	53.0 %
	10.3	5.46	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.26 (gm /cm³)
At = 6 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / ...

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Zamalek, Cairo
Tel & Fax 27367231 - 27363093



شركة الهندسة والبناء
الزمالك القاهرة
الهاتف - فاكس 27367231 - 27363093

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 13/05/2024
Reporting Date : 17/05/2024
Reporting No. : 08-19

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	47.8	Max 50 %	-----	-----
0.425 mm (No. 40).	18.9	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	12.1	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	0	-----	-----	-----
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature /



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Zamalek, Cairo.
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ش.م.م. المعامل الهندسي
الزمالة - القاهرة
تليفون : ٢٧٣٦٧٠٢ - ٢٧٣٦٧٠٩

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 13/05/2024
Reporting Date : 17/05/2024
Reporting No. : 08-19

**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0

Signature:

مكتب معامل الاستشارات الهندسية
مشروعات ، الأقبية
رقم الترخيص: 219 991 437
المركز الرئيسي: 3 شارع الملك الافضل - البردكة - الجيزة

3 El Malek El Ahdal Street
Zamalek, Cairo
Tel & Fax: 21967211 - 21969093



3 شارع الملك الافضل
الزمالك - القاهرة
تليفون - فاكس : 21967211 - 21969093

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Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 13/05/2024
Reporting Date : 17/05/2024
Reporting No. : 08-19

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	12.1

Signature / ...

مكتب معامل الاستشارات الهندسية
مشروعات , الاقصر
رقم الترخيص المصري 219.991.437
المركز الرئيسي 3 شارع الملك الافضل - الزمالة - القاهرة

3 E Malek E Afdal Street
Zamalek, Cairo
Tel & Fax: 27367231 - 27363093



شركة العماد الهندسية
الزمالك - القاهرة
تليفون - فاكس : 27367231 - 27363093

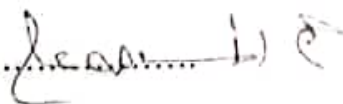


Consulting Engineering Bureau & Laboratories
مكتب محامل الاستشارات الهندسية

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Arman
Location : ST:641+400 E= 492410,088 N=2862759,57
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 31/12/2023
Reporting Date : 04/1/2024
Reporting No. : 10-19

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	9.1

Signature /...



Mr. Maher El-Dabbas
Manager - QP
Tel: 0111 444 4444



Mr. Mohamed El-Dabbas
Manager - QP
Tel: 0111 444 4444

CEL

Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبي
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 13/05/2024
Reporting Date : 17/05/2024
Reporting No. : 08-19

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	97.9
37.5	1.5	90.5
25	1	80.5
19	¾	73.9
12.50	½	69.9
9.50	3/8	64.2
4.75	4	52.5
2.00	10	47.8
0.425	40	18.9

Signature



3 El Marek El Afdal Street
Zamalek, Cairo
Tel & Fax: 27367531 - 27363693



شركة الملك الافضل
الزمالك - القاهرة
تليفون - فاكس : 27367531 - 27363693

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Testing Date : 24 / 04 /2024
Soil type : Middle Embankment
Location : ST From 638+620 To 638+700
Level : - 4.5 M
Report No. : 171

Compaction test by using Sand – Cone Test Method

ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	638+640	1475.0	2.27	6.4	2.13	96.0%	Comply
2	638+685	1561.1	2.26	6.4	2.12	95.5%	Comply
3	638+685	1719.4	2.31	6.4	2.18	98.0%	Comply

Degree of compaction based on proctor test dated At

Max. dry density = 2.22 gm/cm³

At optimum moisture content = 6.4 %

Signature /



Consultant Eng : Abderrahman Ahmed

3 El Malek El Afdal Street
Zamalek, Cairo
Tel & Fax: 27367231 - 27367093



3 شارع الملك الافضل
الزمالة - القاهرة
تليفون : فاكس : 27367231 - 27367093

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Testing Date : 22 / 05 /2024
Soil type : Upper Embankment
Location : ST From 643+280 To 643+400 (120 m)
Level : - 0.5 M
Report No. : 193

Compaction test by using Sand – Cone Test Method
ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	643+300	1677.9	2.33	6.3	2.19	97.0%	Comply
2	643+320	1513.1	2.33	6.4	2.19	96.8%	Comply
3	643+340	1692.4	2.28	6.1	2.15	95.3%	Comply
4	643+360	1665.5	2.34	5.8	2.21	97.8%	Comply
5	643+380	1589.7	2.27	5.8	2.15	95.0%	Comply

Max. dry density = 2.26 gm/cm³

At optimum moisture content = 6.2 %

Consultant Eng .

Name :

Sign /

Laboratory Eng.

Name :

Sign :

3 El Malek E Akkad Street
Zamalek, Cairo
Tel& Fax: 27367771- 27367993



3 شارع الملك الأكاد
الزمالك القاهرة
تليفون وفاكس : 27367771 - 27367993

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 13/05/2024
Reporting Date : 17/05/2024
Reporting No. : 08-19

Dear Gentleman,

Attached here with the delivered on 13 / 05 / 2024

This sample is representative for 5.000 M³

Materials test

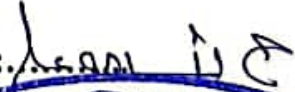
1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Consultant Eng .

Name :.....

Sign / 

Laboratory Eng.

Name : 

Sign / 



3 El Malek E Afdal Street
Zamalek, Cairo
Tel & Fax 27367521 - 27363093



٢ شارع الملك الافضل
الزمالك - القاهرة
تليفون - فاكس : ٢٧٣٦٧٥٢١ - ٢٧٣٦٣٠٩٣

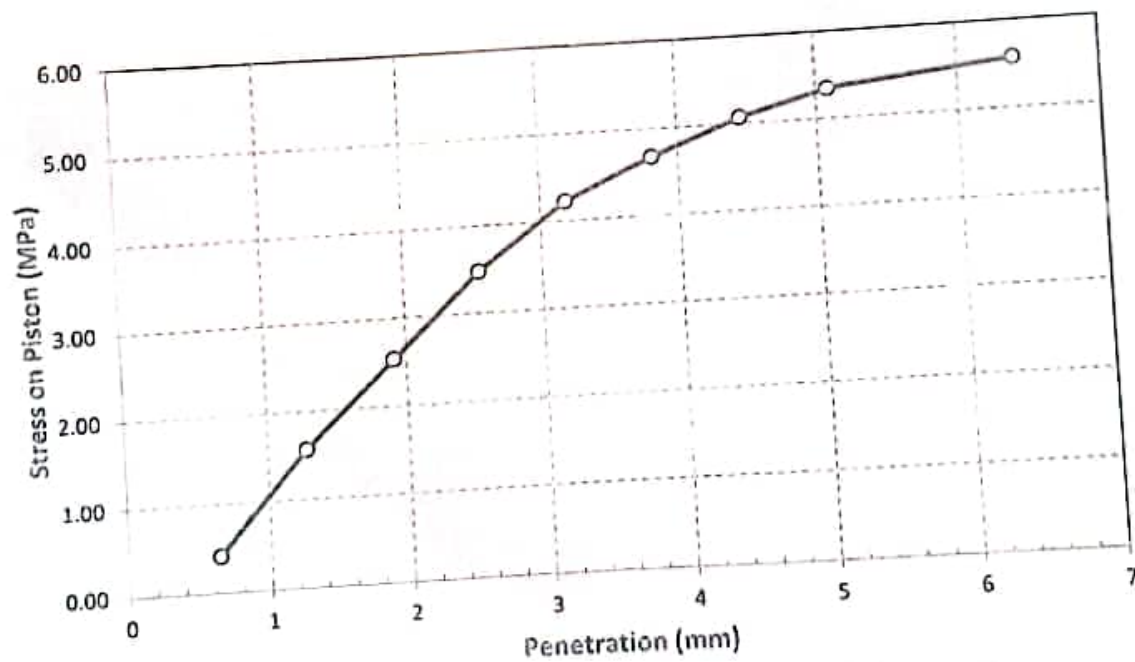
CEL

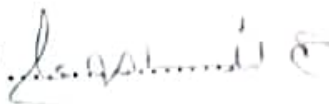
Consulting Engineering Bureau & Laboratories

مكتب استشارات الهندسة ومختبرات

Company Name : شركة الذهبى
Project : Electric Express Train - HSR From Qous To Arment
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 09/12/2023
Reporting Date : 13/12/2023
Reporting No. : 08-15

Load Penetration Curve of CBR Test ASTM D-1883



Signature / 



IAS
ACCREDITED
Testing Laboratory

CEL

Consulting Engineering Bureau & Laboratories
مكتب محامل الاستشارات الهندسية

Company Name : شركة الذهبي
Project : Electric Express Train - HSR From Qous To Arman
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 09/12/2023
Reporting Date : 13/12/2023
Reporting No. : 08-15

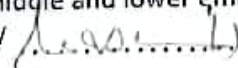
Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.41
1.27	0.050	1.57
1.91	0.075	2.54
2.54	0.100	3.47
3.18	0.125	4.22
3.81	0.150	4.68
4.45	0.175	5.07
5.08	0.200	5.35
6.35	0.250	5.58

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	50.3%
	6.90	3.47	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.22(gm /cm³)
At = 6.4 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / 

Signature of Alpha Name

Signature Name

Signature Name



CEL

Consulting Engineering Bureau & Laboratories
مكتب استشارات الهندسة ومختبرات

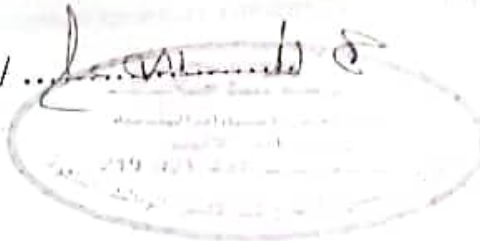
Company Name : شركة الذهبى
Project : Electric Express Train - HSR From Qous To Armani
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 09/12/2023
Reporting Date : 13/12/2023
Reporting No. : 08-15

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	47.7	Max 50 %	-----	-----
0.425 mm (No. 40).	28.8	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	10.0	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	---	-----	-----	-----
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature /



Dr. Maher El-Ahmed
Laboratory Manager
Tel: 011 423 4234



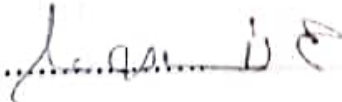
CEL

Consulting Engineering Bureau & Laboratories
مكتب دراسات الاستشارات الهندسية

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armanat
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 09/12/2023
Reporting Date : 13/12/2023
Reporting No. : 08-15

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	10.0

Signature / 



Lab. Manager / Abdul Samad
The Lab. Address :
Lab. Phone : 011 42210100



CEL

Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armanat
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 09/12/2023
Reporting Date : 13/12/2023
Reporting No. : 08-15

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	97.5
37.5	1.5	92.7
25	1	84.2
19	¾	82.8
12.50	½	71.3
9.50	3/8	62.6
4.75	4	47.9
2.00	10	43.0
0.425	40	28.8

Signature / ...



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Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : شركة الذهبي
Project : Electric Express Train – HSR From Qous To Arman
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 09/12/2023
Reporting Date : 13/12/2023
Reporting No. : 08-15

Dear Gentleman,

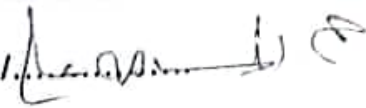
Attached here with the delivered on 9 / 12 / 2023

This sample is representative for 5.000 M³

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Signature /



Consultant Eng : Abderrahman Ahmed



24, Quai F. Aude Street
Zamalek, Cairo
Tel: 11539903



Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/04/2024
Reporting No. : 08-16

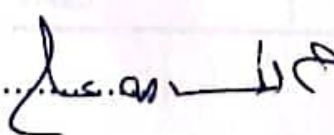
Dear Gentleman,

Attached here with the delivered on 26 / 4 / 2024

This sample is representative for 5.000 M³

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Signature /.....  Consultant Eng : Abderrahman Ahmed



3 El Malek El Aldal Street
Zamalek, Cairo
Tel & Fax : 27367631 - 27363693



أش الملك اللىلى
الزمالك - القاهرة
تليفون : ٢٧٣٦٧٦٣١ - ٢٧٣٦٣٦٩٣

Project : Electric Express Train – HSR From Qous To Armant
Consultant : Spectrum Engineering Consultants (مكتب د / عماد نبيل)
Company Name : شركة الذهبى
Testing Date : 11 / 05 / 2024
Soil type : Middle Embankment
Location : ST From 639+580 639+780 (200m)
Level : - 3.5 M
Report No. : 180

Compaction test by using Sand – Cone Test Method
ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Molsture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	639+620	1536.3	2.24	5.3	2.13	95.5%	Comply
2	639+665	1430.1	2.27	5.3	2.15	96.5%	Comply
3	639+700	1588.4	2.30	6.4	2.16	96.8%	Comply
4	639+730	1505.5	2.27	6.4	2.13	95.5%	Comply
5	639+775	1491.8	2.24	5.3	2.13	95.5%	Comply

Degree of compaction based on proctor test dated At

Max. dry density = 2.23 gm/cm³

At optimum molsture content = 6.4 %

Consultant Eng .

Name / ...

Sign / ...

Laboratory Eng.

Name : ...

Sign / ...

1-E. Malek E. Abdel Street
Zarqalet, Cairo
Tel & Fax : 27367131 / 27363093



ش. الملك الأفضل
الزمالك - القاهرة
تليفون - فاكس : 27367131 / 27363093

CEL
Consulting Engineering Bureau & Laboratories
مكتب معامال الاستشارات الهندسية

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Testing Date : 27 / 4 / 2024
Soil type : Middle Embankment
Location : ST From 643+460 To 643+560
Level : - 1.75 M
Report No. : 172

Compaction test by using Sand – Cone Test Method

ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	643+485	1484.6	2.26	5.8	2.14	96.7%	Comply
2	643+510	1461.7	2.33	5.8	2.20	99.8%	Comply
3	643+530	1489.3	2.34	5.8	2.21	99.9%	Comply
4	643+555	1528.2	2.29	5.8	2.16	98.0%	Comply

Degree of compaction based on proctor test dated At

Max. dry density = 2.21 gm/cm³

At optimum moisture content = 6.4 %



Signature / Consultant Eng : Abderrahman Ahmed

3 El Malek El Afdal Street
Zamalek, Cairo
Tel & Fax : 27367231 - 27367093



3 شارع الملك الاكبر
الزمالك - القاهرة
تليفون : ٢٧٣٦٧٢٣١ - ٢٧٣٦٧٠٩٣

Company Name : شركة الذهبي
Project : Electric Express Train – HSR From Qous To Armant
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/04/2024
Reporting No. : 08-16

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	91.0
37.5	1.5	82.1
25	1	74.5
19	¾	71.6
12.50	½	62.7
9.50	3/8	61.4
4.75	4	57.4
2.00	10	42.6
0.425	40	24.5

Signature /.....



3 El Malek El Afrial Street
Zakaria, Cairo
Tel & Fax 2736723 - 27363003

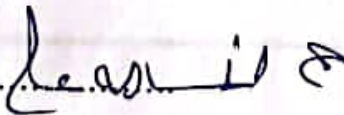


أش ملك الإسماعيل
الرمالك الناصري
تلفون ٢٧٣٦٧٢٣ - ٢٧٣٦٣٠٠٣

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/04/2024
Reporting No. : 08-16

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	11.2

Signature /....



3 El Malek El Aldal Street
Zewail, Cairo
Tel & Fax: 2736723 / 2736903



أشرف المالك الأستاذ
البريد الإلكتروني: cel@cel.net.eg
تلفون فاكس: 2736723 / 2736903

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/04/2024
Reporting No. : 08-16

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-a)			
2.00 mm (No.10).	42.6	Max 50 %	-----	-----
0.425 mm (No. 40).	24.5	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	11.2	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	---	-----	-----	-----
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature / ...



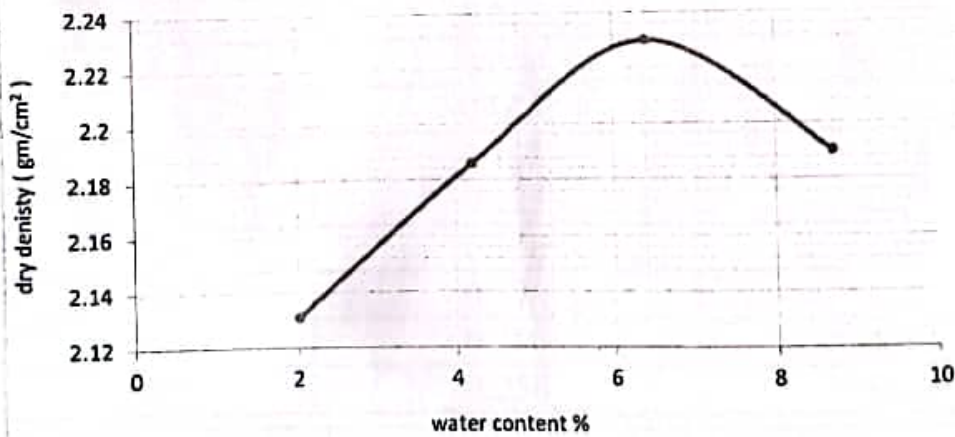
3 El Malek E Afital Street
Zamalek, Cairo
Tel/Fax: 27367511 - 27363693



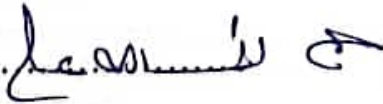
أبو مالك الأفندي
المركز الجادو
تلفون : 27367511 - 27363693

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/04/2024
Reporting No. : 08-16

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.23
- Optimum moisture content % : 6.4 %

Signature / ... 



3 El Malek El Afridi Street
Zamalek, Cairo
Tel & Fax: 21967231 21963663



اشرف امين احمد
الزمالك القاهرة
تليفون - فاكس : ٢١٩٦٧٢٣١ - ٢١٩٦٣٦٦٣

Company Name : شركة الذهبى
Project : Electric Express Train – HSR From Qous To Armant
Location : ST: 639+000 E=32°54'25.6" N=25°53'59.1"
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 26/4/2024
Reporting Date : 30/04/2024
Reporting No. : 08-16

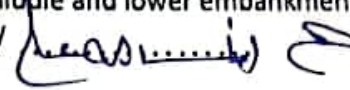
Test Results of California Bearing Ratio on Base Materials
ASTM D 1883

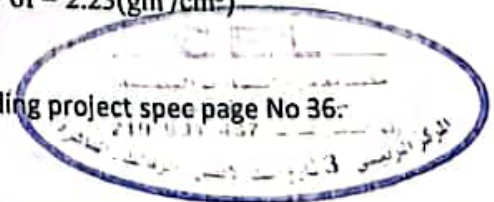
penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.34
1.27	0.050	0.99
1.91	0.075	1.52
2.54	0.100	2.31
3.18	0.125	2.94
3.81	0.150	3.65
4.45	0.175	4.36
5.08	0.200	4.98
6.35	0.250	5.59

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	48.4%
	10.3	4.98	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.23(gm /cm³)
At = 6.4 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / 



El Malek El Afdal Street
Zamalek, Cairo
Tel & Fax: 27367231 - 27369093



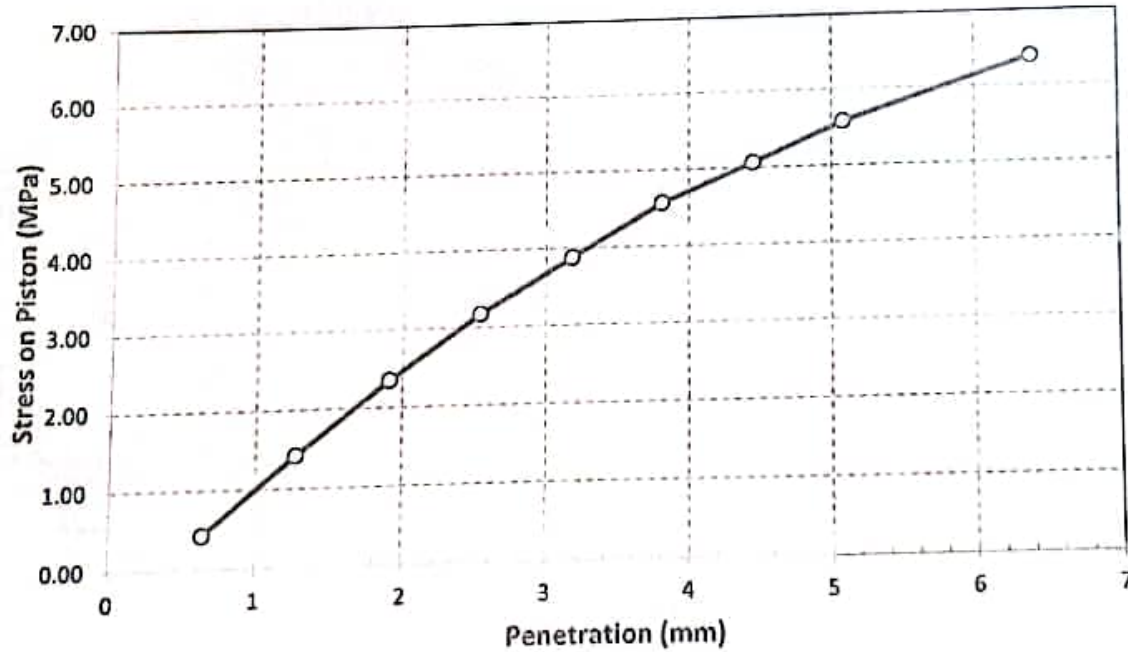
أشرف المالك الأفندى
المهندس الاستشاري
مكتب معامل الاستشارات الهندسية

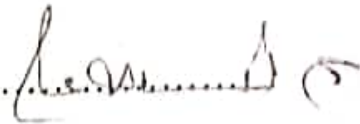
CEL

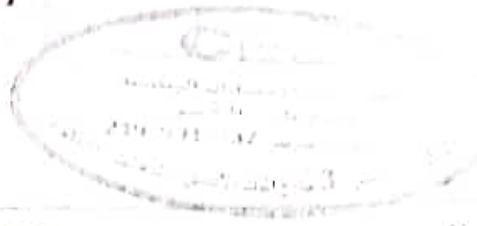
Consulting Engineering Bureau & Laboratories
مكتب استشارات الهندسة

Company Name : شركة الأهلي
Project : Electric Express Train – HSR From Qous To Arman
Location : ST: 643+000 N= 25.8667200, E= 32.9242360
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
Delivery Date : 04/01/2024
Reporting Date : 08/01/2024
Reporting No. : 07-3

Load Penetration Curve of CBR Test ASTM D-1883



Signature / 



CEL Office: F. Abdel-Samad
Tel: 011-23111111
Fax: 011-23111111

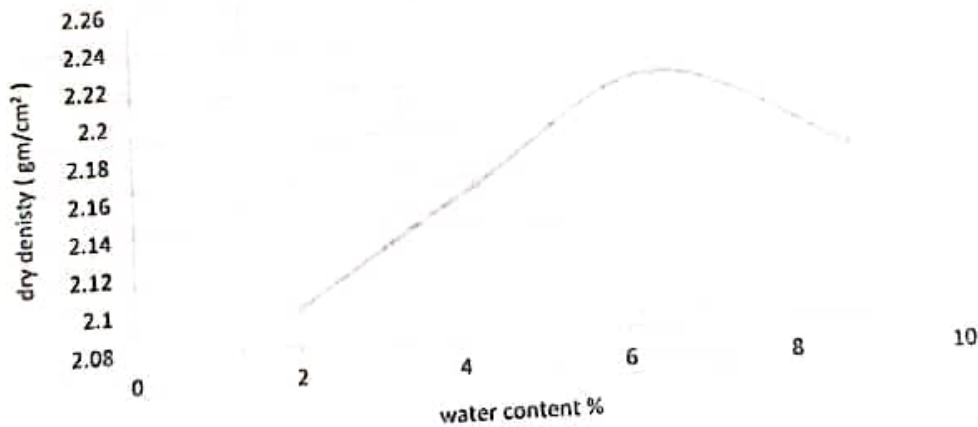


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Company Name : شركة الذهبية
Project : Electric Express Train – HSR From Qous To Arman
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Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.21
- Optimum moisture content % : 6.4 %

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Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.43
1.27	0.050	1.42
1.91	0.075	2.35
2.54	0.100	3.17
3.18	0.125	3.88
3.81	0.150	4.56
4.45	0.175	5.07
5.08	0.200	5.58
6.35	0.250	6.39

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	45.9 %
	6.90	3.17	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.21 (gm /cm³)
At = 6.4 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / ...



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RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	93.1
37.5	1.5	85.6
25	1	80.1
19	3/4	71.6
12.50	1/2	51.2
9.50	3/8	46.4
4.75	4	41.2
2.00	10	40.0
0.425	40	20.4

Signature /



Project : Electric Express Train - HSR From Qous To Arman
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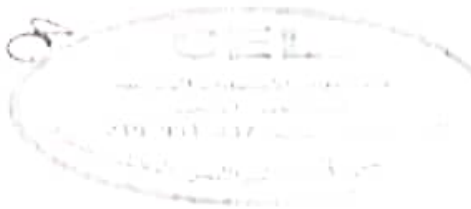
Company Name : شركة الذهبى
Project : Electric Express Train - HSR From Qous To Arment
Location : ST: 643+000 N= 25.8667200, E= 32.9242360
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Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-a)			
2.00 mm (No.10).	41.3	Max 50 %	-----	-----
0.425 mm (No. 40).	20.4	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	10.4	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	---	-----	-----	-----
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature /



Company Name : **CEL**
 Project : **Electric Express Train – HSR From Qous To Arram**
 Location : **ST. 643+000 N= 25.8667200, E= 32.9242360**
 Type of sample : **Soil Embankment (Upper Embankment 0.0 M)**
 Delivery Date : **04/01/2024**
 Reporting Date : **08/01/2024**
 Reporting No. : **07-3**

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0

Signature /... *[Handwritten Signature]*





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مكتب استشارات الهندسة ومختبرات

Company Name : شركة الأهلي
Project : Electric Express Train - HSR from Qous To Arman
Location : ST: 643+000 N= 25.8667200, E= 32.9242360
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
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**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0

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مكتب معامل الاستشارات الهندسية

Company Name : شركة الذهبى
Project : Electric Express Train - HSR From Qous To Arman
Location : ST: 643+000 N= 25.8667200, E= 32.9242360
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
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Dear Gentleman,

Attached here with the delivered on 04 / 01 / 2024

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Signature /

Consultant Eng : Abderrahman Ahmed



Company Name : شركة إلكترو
Project : Electric Express Train -- ISR From Qons To Arman
Location : ST: 643+000 N= 25.8667200, E= 32.9242360
Type of sample : Soil Embankment (Upper Embankment 0.0 M)
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Materials finer than 75 µm (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 µm (No.200)	10.4

Signature /... *Le. M. I. E*

