

							
Project		Electrical Express Train (High Speed-Rail) Project					
		CU41 - ST 552+064 & CU42-ST 553+310					
ملاحظات	الإجمالي	الخصم	إضافة	طول	وحدة	البند	رقم البند
			45.00	45.00	م.ط	بالمادة المطبق توريد وصل، الوصل الرشائلي يصل ٢٠ سم وتعرض 1 سم ببنية قبة إلصقات ومقاومة للشد والرشاش وبالمادة لتسريب المياه من خلالها ولها خاصية الصلابة مع المتغير العنبري ويتم ملء، القواسم ببنية Sealant ذات مركب واحد بآسفي 50%- Polymer Termination لحشو فواصل التمدد والرشاش الرشائلي والمادة تسمح بمتانة حركة (و - 50°) طبقة للواجهة القوسية ASTM 719 ولها الصلابة 100% طبقة للواجهة القوسية ASTM 1382 ولها مقاومة شد 10 ميغا باسكال طبقة للواجهة ASTM D312 ولها قوة الصلابة عالية بحولي القواسم مطبق 14 سم / طبقة للمونة ASTM C79 كما ان لها مقاومة عالية للأجواء الحارة والمواد والكميوكات والمادة من إنتاج إحدى الشركات المتخصصة وعلى المطبق تقديم الكشورجات الفنية لمادة ملء، القواسم للمكبب الرشائلي لإعداد قبل التوريب ويتم تغطية ملء القواسم بعد تغطية القاسم من الأرباب والشحوم والزيوت والمواد وتنظيف المادة باستخدام المسدس ويجب يشمل القاسم من الأرباب والشحوم والزيوت والمواد وتنظيف المادة باستخدام المسدس ويجب يشمل كل ما يلزم لإعمال طبقة الوصلات الفنية وأصول الصناعة.	18
م.ط	45.00	0.00	45.00	الإجمالي			

الهيئة العامة للطرق والكباري

م/محمد حاتم

التوقيع

الإستشاري العام سينترا

م/ محمود أبو السعود

التوقيع

شركة/المحسوب للمقاولات العمومية والتوريدات

م/عصامي جودة

التوقيع

	Electra Express Train - HSR From El Alia Station City To El Alia Station - MATROUH Section - 2 From FOKA TO MATROUH/SH				
	From Station Station To Station Station				
TESTING DATE: LOCATION: NAME COMPANY:	18/05/2023 EL MARGHOUB	SOIL: M-100-1	ZONE: Medium	ROOM NO: PREPARED: QUANTITY:	1000 M3

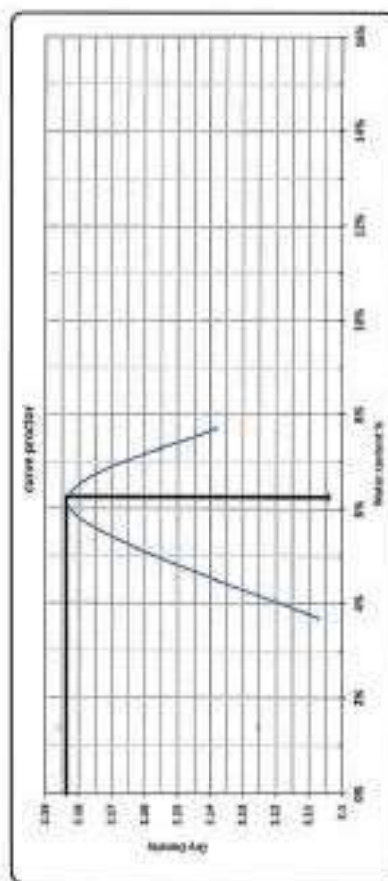
PROCTOR TEST

TESTING DATE:	18/05/2023	SOIL:	M-100-1	ZONE:	Medium	ROOM NO:	1000 M3
LOCATION:	EL MARGHOUB					PREPARED:	
NAME COMPANY:						QUANTITY:	

Weight of empty mold:	580.1 g	MAX Dry Density:	1.110
Mold Volume:	2033.9	Water content %:	6.3%

Test No.	1	2	3	4	5	6	7	8
Wt. of Mold wet soil	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4
Wt. of Mold dry soil	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4
Wt. Density	1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087

Test No.	1	2	3	4	5	6	7	8
Wt. of wet soil & base	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4
Wt. of dry soil & base	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4
Wt. of water	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4
Wt. of dry soil	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4	1051.4
Water content %	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
AV Water content %	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Dry Density	1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087



Signature: Date: 18/05/2023	Signature: Date: 18/05/2023
Inspector	Consultant



Electric Express Train - USSR

California Bearing Ratio Test

Rating Item	Rating	Code	Remarks
Location	100 (100-200)	Normal	
Time	100 (100-200)	Normal	

4.1 Test Results

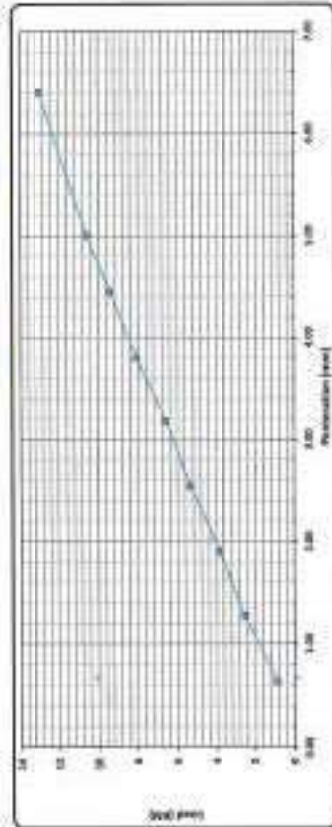
[illegible]

Machine Ratio After Expanded Field	Ratio	Y
Two WT (gal)	10	
Two WT +50 WT (gal)	100	
Two WT +50 WT (gal)	110	
Three WT (gal)	6.6	
Buy WT (gal)	1000	
Multiple Constant Ys	6.2	

Seedling	
Seed no.	3
Year	1943-44
Field (kg/ha)	1.00
Seed (kg/ha)	1.00
Oil (%)	0
Height (kg/ha)	177.00
Seed Rate %	100

Leading Suppliers

	0.01	1.25	0.01	0.01	1.18	0.01	0.01
Power (watts)							
Load (Watts) (kg)	00.00	150.00	300.00	150.00	070.00	020.00	050.00
Load (kg)	0.0	2.2	3.3	1.7	0.8	0.0	0.5



Conclusions

Production	Level	Residual Loss	CRB	Multi-Company	Company	CRB
1000	20%	18%	15%	15%	15%	5.36%
1.50	1.1%	0.4	0.0%	0.0	0.0	0.0%
5.00	0.5%	20.0	0.7%	0.0	0.0	0.7%

Lab Specialist	Lab Engineer	Consultant Engineer
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19 Nov 67 ^{2002'S}



EL Mahroub company

Express Electric Train project



EL Mahroub Lab

**Absorption & Aggregate specific gravity
AASHTO-T85**

Testing date :-	17/06/2022
Location :-	Ka (S45+200)
material :-	prepared subgrade
NAME COMPANY	EL MAHROUB

Weight of sample		gm
Weight of saturated dry surface sample (B)		gm
Weight of saturated sample in water (C)		gm
Weight of dry sample after boiling (A)		gm

Results:

Dry specific gravity = $A / (B - C)$	
Apparent specific gravity = $A / (A - C)$	
Absorption = $(B - A) / A$	

Los Angeles abrasion AASHTO-T96

Results:

Weight of sample before test (gm)	Abrasion ratio (%)
3093	34.72

17/6/2022

Lab Engineer



	Electric Express Train - HSR From El Aia El Salibiya City To El Alawar - MATROUGH Section - 2 From F08A To MARESA MATROUGH From Station 500+000 To Station 599+000		
Testing Date : 22/6/2023	Company :	EL AMERSON COMPANY	
Material :	Code :	Code :	
Location :	Station : 553+000	Code :	
Layer Thickness :	Soil Type :	Code :	
Station :	Soil :	Code :	
Bulk density (unit) (g/cm ³)	1.46	Code :	
wt. of sand sieve test	8082	Code :	
Wt. of sand after test	3122	Code :	
Wt. of sand 100 sieve	2016	Code :	
Wt. of sand in hole	2307	Code :	
Volume of hole	5643	Code :	
Wt. of sample from hole (gms)	5001	Code :	
Bulk density of soil (gms/cm ³)	2.25	Code :	
Average water content %	7.0%	Code :	
Dry density (g/cm ³)	3.16	Code :	
Moisture ratio (g/cm ³)	2.182	Code :	
Compaction ratio %	95.3	Code :	
Classification :	Code :		
Lab Engineer :	AMERSON COMPANY	Consultant Eng. :	Hoda Hossain
Sign :		Sign :	22/6/2023

NOTES

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT REMOVE FROM DRAWINGS ALL DIMENSIONS INDICATED BY PROJECT COMPASS.
3. ALL DIMENSIONS ARE TO BE MAINTAINED.
4. CONCRETE SHALL BE 25 MPa.
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IDA CONSULTANTS
PROJECT SECTOR 7
FROM STATION 554+000
TO STATION 558+750

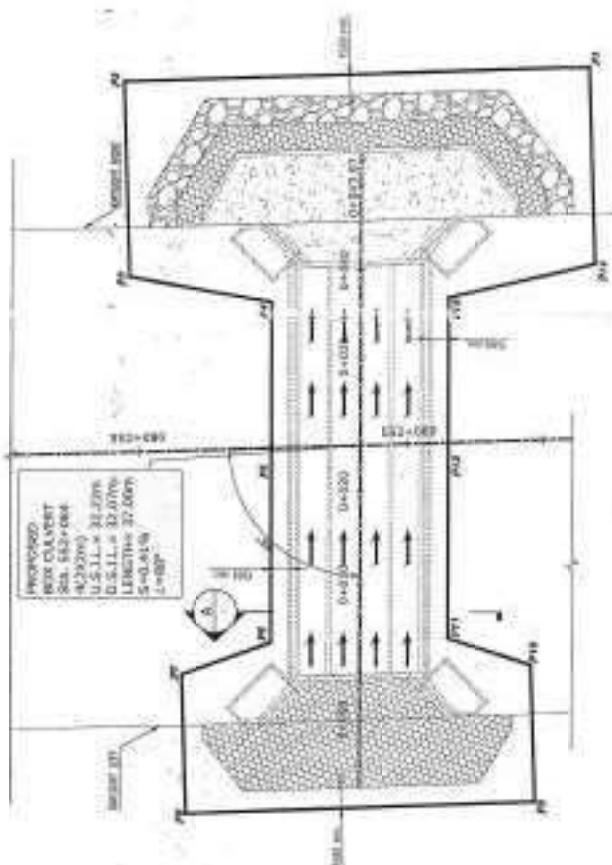
BOX CULVERT AT
558+000 OLD STATION
558+000 NEW STATION
(EXCAVATION DETAILS FOR BOX
REPLACEMENT)

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CULVERT EXCAVATION PLAN



CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION

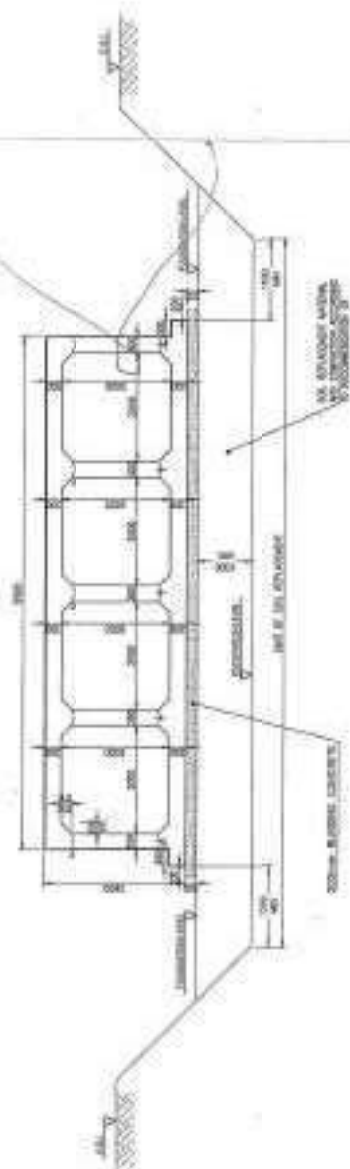


CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION

STATION	EXISTING ELEVATION	PROPOSED EXCAVATION LEVEL
554+000	2.00	2.00
554+050	2.00	2.00
554+100	2.00	2.00
554+150	2.00	2.00
554+200	2.00	2.00
554+250	2.00	2.00
554+300	2.00	2.00
554+350	2.00	2.00
554+400	2.00	2.00
554+450	2.00	2.00
554+500	2.00	2.00
554+550	2.00	2.00
554+600	2.00	2.00
554+650	2.00	2.00
554+700	2.00	2.00
554+750	2.00	2.00



CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION



CULVERT EXCAVATION SECTION



	Exotic Express Train - HSR From El Aila El Azzara City To El Azzara - MATRUH Section - 7 From HOGA TO MATRUH MATRUH		
	From Station MATRUH To MATRUH MATRUH		

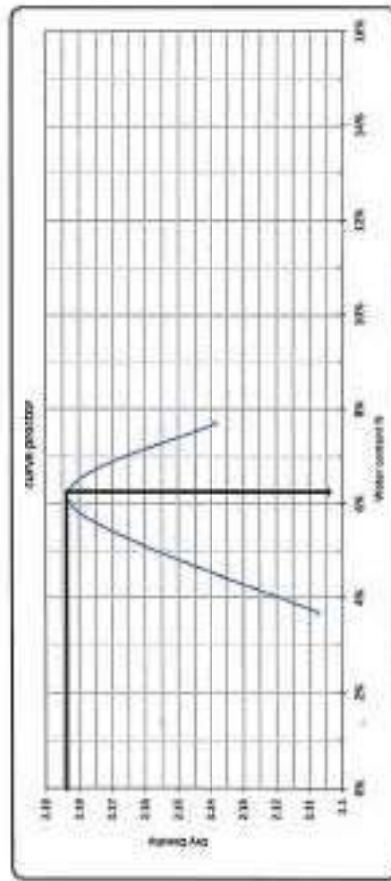
PROCTOR TEST

TESTING DATE:	15/01/2022	ZONE:	EL AILA
LOCATION:	EL AILA (MATRUH)	MATERIAL:	PREPARED
NAME COMPANY:	EL MAHGOUB	QUANTITY:	1500 M3 app

Weight of empty mold:	400.0	MAX Dry Density:	2.180
Mold Volume:	2800.0	Water content %:	6.2%

	1	2	3	4	5
Total wt:					
Wt. Of Moisture soil:	1000.0	1000.0	1000.0	1000.0	1000.0
Wt. Wet Soil:	1000.0	1000.0	1000.0	1000.0	1000.0
Wt. Density:	1.000	1.000	1.000	1.000	1.000

Test No.	1	2	3	4	5	6	7	8
Test wt:	36.12	24.71	18.79	14.99	28.45	24.36		
Wt. Of wet soil & layer:	1036.12	1024.71	1018.79	1014.99	1028.45	1024.36		
Wt. Of dry soil & layer:	1012.0	1000.0	998.7	996.0	1001.2	999.0		
Wt. Of water:	24.12	24.71	20.0	18.99	27.24	25.36		
Wt. Of dry soil:	1012.0	1000.0	998.7	996.0	1001.2	999.0		
Water content %:	2.4%	2.5%	2.0%	1.9%	2.7%	2.5%		
AV. Water content %:	2.4%	2.5%	2.0%	1.9%	2.7%	2.5%		
Dry Density:	1.000	1.000	1.000	1.000	1.000	1.000		



	
Signature of the Engineer Date: 15/01/2022	Signature of the Consultant Date: 15/01/2022

California Bearing Ratio Test

[illegible]

1. Test Results

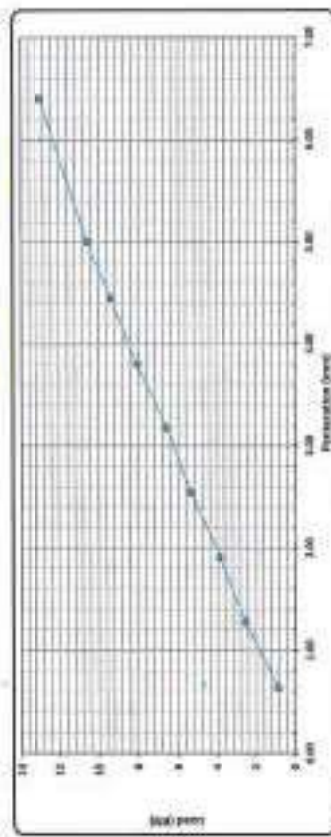
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Moisture Ratio After Compacted State	η
100%	1
Two 90% wet	14
Two 90% + one 100% wet	60
Two 90% + one 90% wet	162
Three 90% wet	0.9
One 90% wet	13.8
Maximum Compaction	0.7

[illegible]

Reading Material

Position (mm)	0.54	1.17	1.81	1.38	3.98	9.88	-1.11	1.02	0.98
Line Reading (μg)	98.95	204.09	300.20	91.58	870.49	337.48	936.20	168.26	1134.05
Load (kg)	0.9	2.3	3.8	2.5	8.8	8.8	9.8	10.1	17.8



Calculus 101

Process action	Lead	Standard of result	CRB	Initial - Comparison	Comparison	CRB
Invest	10-00	0-00	5.56%	376.1	1.3%	No CRB score yet
	2.30	12.0	50.41%			30.0%
5.40	19.24	30.0	65.75%	100	9.0	61.75%

[illegible]

2013

مجلس الشورى

Absorption & Aggregate specific gravity
AASHTO-T85

Testing date >	17/02/03
location >	Ka1549-200
material >	preparer subject
NAME COMPANY	EL MARGOUT

140	(7) Double wrap around lip to 140mm
140	(7) Double wrap around lip to 140mm
140	(8) Double wrap around lip to 140mm
140	(8) Double wrap around lip to 140mm

Discussion

Dry specific gravity = $A_1 / (B - C)$	
Apparent specific gravity = $A / (A - C)$	
Absorption = $(B - A) / A$	

3

Weight of sample before	Weight of sample before test (g)	Absorption ratio (%)
5000	3264	34.72

Life Extension



223



Date: 08/07/2023

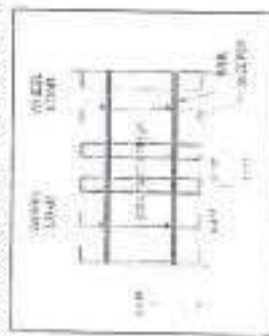
- Project** : ECT From Fida To Marina Matruh
- Company** : شركة الصحوب المثلاني
- Location** : Old Station 532-20-0 New Station 152-081
- Test Date** : 05-07-2023
- Report No.** : 1654
- Type of soil** : Pit Back Gravel according to AASHTO (A-1-a)
- Subject** : Check the immediate settlement of fill due to Rail way of High Speed Electric train, an replacement layer of Pit run Gravel, layer, based on the Results of the P.T no. (33)

1- Introduction

The aim of this report is to analyze the results of plate load test (P.L.T) carried out on the completed layer of Pit run gravel (Spore fragments /Gravel and Sand), prepared for Culvert rail foundation for High Speed Electric Train

The borehole of the site investigation report prepared by AEA Consultant indicates that, the soil formation in the site of B11.61 (Station 532-085) consists of Clayey Silt with interlayers of Sand and crushed stone extends from depth 2.00 To 18.50 m. The Ground water table is at depth 8.7-11.00 m below natural ground surface.

The recommended foundation system is full foundation with dimensions BxL = 7.40 m x 30.61 m on 1.00 m thickness of pit run gravel. The recommended allowable bearing capacity at foundation level is 2.50 kg/cm². According to Technical report prepared by CIVILCDN GRC&P, the in represent a plate load test is taken as 2.50 m x 2.50 m as shown in Figure



2- Plate Load Tests

All Tests were carried out with the following specifications

The test material cut according to ASTM D 1196 and project specs requirements.

مجلس استشارات الهندسية
المسجلين
307-324-027
307-324-027
307-324-027
307-324-027

Test Procedure

1. Clear the ground on test area to the required level with undisturbed soil.
2. Install loading plates 500/300 mm dia. 30 mm thickness, hydraulic jack and 3 dial gauges.
3. Prior to starting the test, applied preloading (about 20 seconds).
4. The strain gauge and the dial gauges shall be set to zero.
5. The (load/strain) ratio recommended soil bearing capacity equal (1.50 kg/cm^2) .
6. In safety, the bearing capacity the footing by 2 times the required with machine 15 tons.

5. Evaluation the Results of P.T.T No. 135

The maximum required allowable bearing capacity at foundation level on the expanded compacted natural ground is $(q) = 2.50 \text{ kg/cm}^2$. The results of P.T.T (35) is shown in Fig. (1).

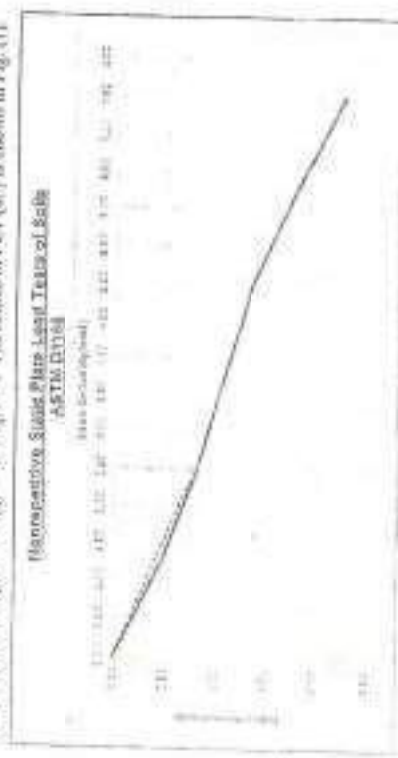


Figure (1) Load-settlement P.T.T (35) on replacement layer for Bath Foundation

- The plate diameter = 0.500 m
- Footing width (B) = 2.30 m
- The settlement of the plate under areas of 2.40 kg/cm² = 0.85 mm

5.1 Footing Immediate Settlement (S_i) based on Settlement of P.T.T (at the end of test)

The plate load test can be used to directly estimate the immediate settlement of a footing. For settlement of medium to dense sands caused by an applied surface loading, an empirical equation developed by Terzaghi and Peck (1948) relates the depth of penetration of the steel plate, S_p , to the settlement of the actual footing, S_f as follows:

$$S_f = \left(1 + \frac{B_f}{B_p}\right)^2 S_p$$



where: S = settlement at the footing (mm)

S_p = settlement of the steel plate (mm)

D = smallest dimension of the steel plate (m)

D_p = smallest dimension of the loading (m)

$$S_p = 4 \times S \times (1 + D_p/D)^2 = 4 \times 0.85 \times (1 + 0.50/2.5)^2 = 1.4 / 1.44 = 1.16 \text{ mm} < 25 \text{ mm (OK)}$$

3.2.3. Verifying immediate settlement (S_i) based on modulus of deformation estimated from the results of plate load test:

$$S_i = \frac{q \cdot D}{E} \cdot \frac{1 + \mu}{2}$$

where: q = unit load (kN/m²)

E = modulus of elasticity (kN/m²)

μ = Poisson's ratio (0.1 for granular soil = 0.30)

D = diameter of the steel plate (m) = 0.82

E = 1100 kg/cm² (Average value of the deformation modulus at stress in the range from 0.30 to 2.50 kg/cm²)

The required allowable bearing capacity over the replacement layer = 2.00 kg/cm²

$$S_i = (0.91/1100) \times (2.50 \times 0.82) = 0.00124 \text{ m} = 1.24 \text{ mm} < 25 \text{ mm (OK)}$$

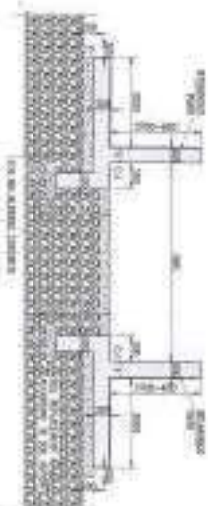
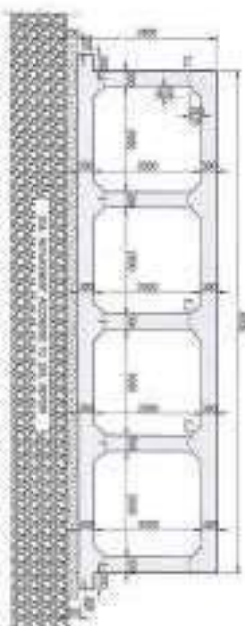
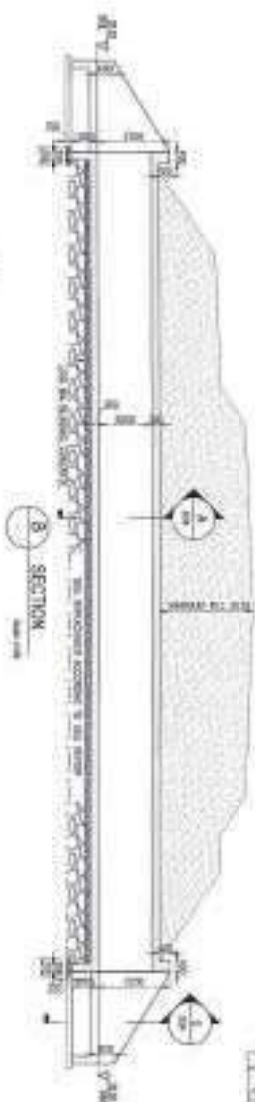
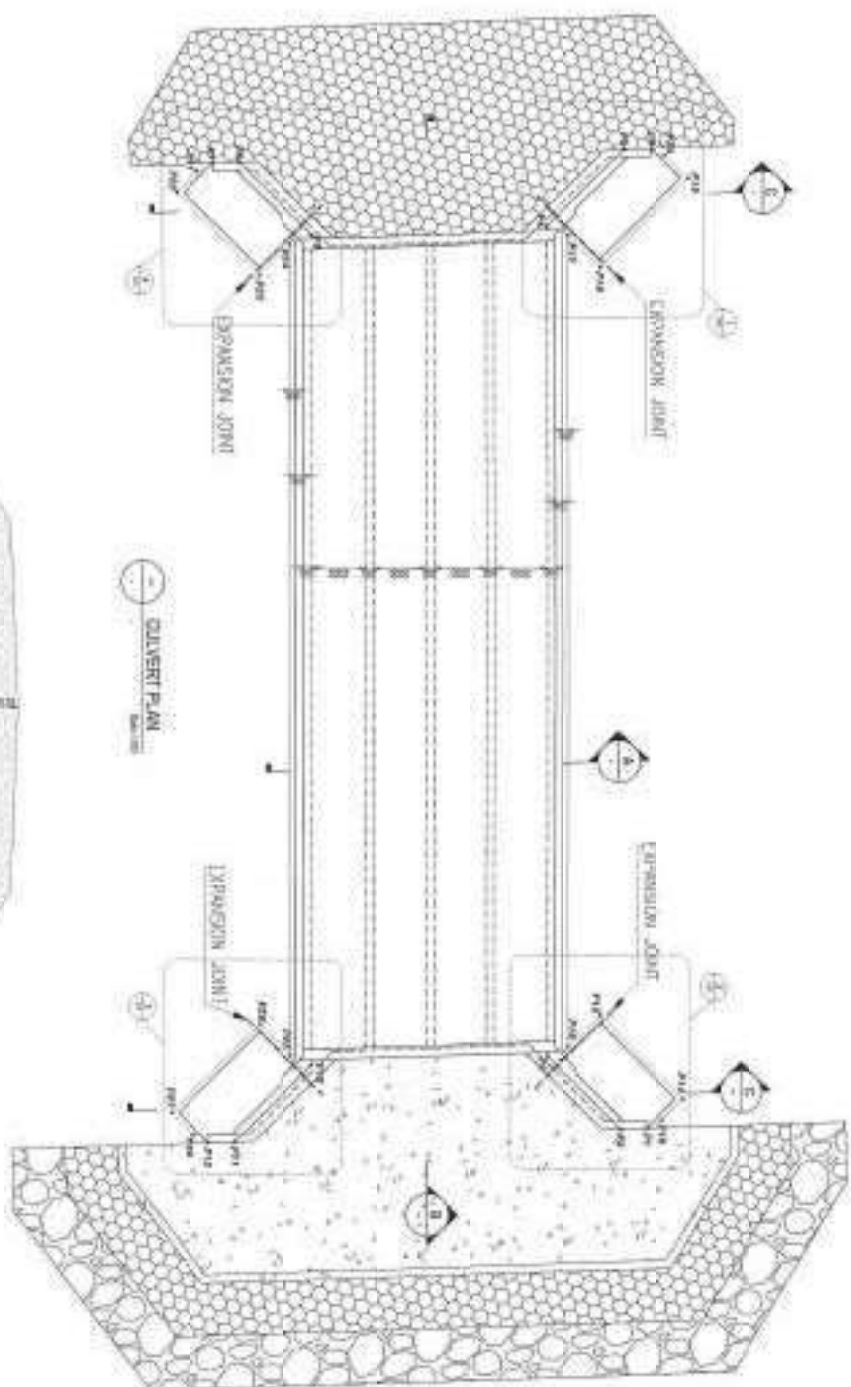


 الهيئة العامة للطرق والمواصلات General Authority of Roads and Transport	Electric Express Train - HSR From El Ain El Subbia City To El Alweina - MATROUH Section - 7 From FOMA To MARSA MATROUH From Station 541+000 To Station 559+000		الهيئة العامة للطرق والمواصلات General Authority of Roads and Transport	
Testing Date: 25/5/2023	Company: EL MAROUTI & COMPANY			
Material:	CUWL 552+051			
Location:				
Layer Thickness:				
Station				
Side no				
Sub grade (cm)				
Sub grade (cm)				
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Sub grade (cm)				



23/6/2023

Signature and Stamp of the Engineer

[illegible]

POST PAID

1000

1. All individuals had no medical history.
2. All individuals had no current medications.
3. All individuals had no current or past alcohol consumption.
4. All individuals had no current or past tobacco consumption.
5. All individuals had no current or past illicit drug consumption.
6. All individuals had no current or past history of psychiatric illness.
7. All individuals had no current or past history of chronic medical illness.
8. All individuals had no current or past history of chronic medical illness.
9. All individuals had no current or past history of chronic medical illness.
10. All individuals had no current or past history of chronic medical illness.

LEONARD



IDR | NDT CONSULTANTS

LET FREEDOM SPEAK FOR ITSELF
 PLEASE TO: NATIONAL
 FREEDOM STATION 904-1000
 TO STATION 888-1776 54

BOX CULVERT AT
(482+054) OLD STATION
(502+051) NEW STATION
CULVERT DETAILS SHEET

Category	Sub-category	Value	Unit
Total	Value	100	%
	Unit	100	Units

Order No.	10000000000000000000
Order Date	10/10/2000
Order Type	Standard
Order Status	Shipped
Order Total	\$100.00
Order Subtotal	\$100.00
Order Tax	\$0.00
Order Shipping	\$0.00
Order Handling	\$0.00
Order Insurance	\$0.00
Order Packaging	\$0.00
Order Pallet	\$0.00
Order Freight	\$0.00
Order Total	\$100.00

	Electric Express Train - HSR From Di Ar Al Sukhra City To El Mawana - MATRUH Samples : 7 From FOKA To MARSA MATRUH From Station 54400 To Station 55000		

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	12/02/2023	TEST	ZONE	
LOCATION:	CU41 (500-m)g	(M)	Material	embankment
NAME COMPANY:	of mawana		type thickness	

Soil classification test

2-Standard test

A-gradation of bulk materials					sample percent %					gms		table classify soil classify
sieve size	2	1.5	1	0.75	0.6	0.425	0.3	0.25	0.15	0.075	PASS	
Mass retained (g)		113.8	896.6	283.0	994.8	219.8	2215.8					A-4
Cumulative Retained %	0.0	113.8	912.5	977.9	1771.8	1986.9	4288.6					
Cumulative Percent %	0.0	8.8	94.8	97.8	99.8	100.0	100.0					A-4
Compaction Passing %	100.0	100.0	100.0	100.0	100.0	100.0	100.0					

B-sift materials analysis					WT OF sample		gms
sieve size	10	40	200				
Mass retained (g)	16.09	85.06	214.66				
Cumulative Retained %	3.26	11.56	62.33				
Cumulative Passing %	96.74	88.44	37.67				

C-general gradient											
sieve size (in)	2	1.5	1	0.75	0.6	0.425	0.3	0.25	0.15	0.075	# 200
Mass retained (g)	30.8	37.5	25.8	18.0	12.5	8.5	4.75	2.00	1.425	0.875	
Cumulative Retained %	100.0	92.2	94.8	95.2	95.2	95.7	95.8	96.0	96.3	96.3	

ATTERBERG LIMITS	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	ELASTIC INDEX (PI)
	19.06	13.10	5.96



14-6-2023

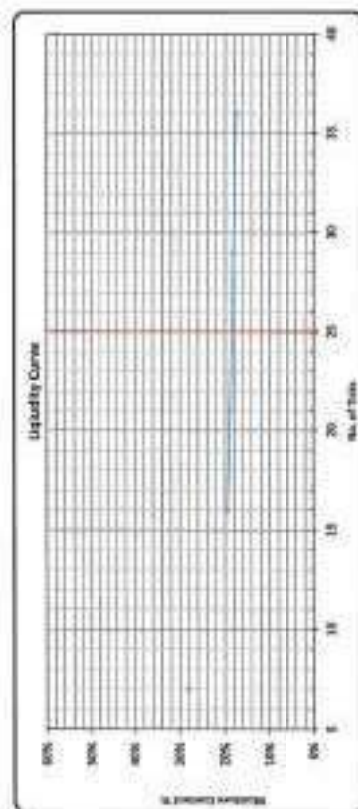
	Electric Express Trains - HSR	
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Plasticity and Liquidity Test - Amberg Limit

Testing Room:	IS-4-2023	Code:	FROM STA:	TO STA:
Location:	(83+664) CDA	801	Material:	embankment
Layer No.:	of road/pav.		Layer Thickness (	

Test Results:

Test	Liquid Limit				Plastic Limit	
	No. of Tests	10	25	30	10	30
No. of Tests Test No.	20	7	13	25	8	33
Test WT. (gms) Test WT. - Wet WT. (gms)	16.01	33.25	17.58	32.39	18.40	17.85
Test WT. - Wet WT. (gms) Test WT. - Dry WT. (gms)	36.15	34.33	34.23	36.56	11.32	18.20
Test WT. - Dry WT. (gms) Water WT. (gms)	33.38	33.18	38.36	28.34	11.32	18.21
Dry WT. (gms) Moisture Content %	2.85	2.23	1.53	3.00	0.18	8.87
	16.15	11.80	18.82	14.77	0.73	8.37
Average %		15.2%	16.5%	17.5%	13.7%	12.8%
						13.1%



LL	PI	PI
15.2%	13.1%	8.8%

Lab. Number:	Test Name:	Correlation Engineer:
		
Name:	Name:	
Job:	Job:	

14-6-2023

	Electric Express Train - HSR From El Alia El Sidiya City To El Alayeh - MATROUHA Section - 3 From FOSHA TO MATROUHA MATROUHA From Station 5044680 To Station 5045177		

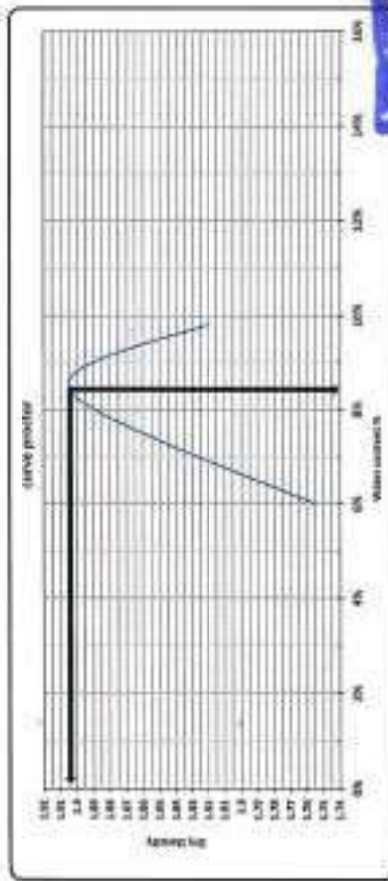
PROCTOR TEST

TESTING DATE:	14/02/2020	CODE:	
LOCATION:	CLM1 (5024004)	Wt:	
NAME COMPANY:	at matrouha		

Weight of empty mold:	5071.9	MAX Dry Density	1.800
Moisture content:	90.9	Water content %	9.3

	1	2	3	4	5	6	7	8
Wt. of mold + wet soil	5081.9	5071.9	5071.9	5071.9	5071.9	5071.9	5071.9	5071.9
Wt. of mold + soil	5081.9	5081.9	5081.9	5081.9	5081.9	5081.9	5081.9	5081.9
Wt. Density	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800

Test No.	1	2	3	4	5	6	7	8
Wt. of wet soil & water	18.00	25.00	30.00	35.00	35.00	35.00	35.00	35.00
Wt. of wet soil & water	151.3	151.3	151.3	151.3	151.3	151.3	151.3	151.3
Wt. of dry soil & water	144.3	144.3	144.3	144.3	144.3	144.3	144.3	144.3
Wt. of water	6.7	8.1	9.3	9.3	9.3	9.3	9.3	9.3
Wt. of dry soil	137.6	136.2	135.0	135.0	135.0	135.0	135.0	135.0
Water content %	4.9%	5.9%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%
AV. Water content %	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%
Dry Density	1.758	1.758	1.758	1.758	1.758	1.758	1.758	1.758



Consultant  14-6-2020	Contractor  14-6-2020
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Plate Load Test Results

excavation bed
5524004 F-27533
18/6/2013

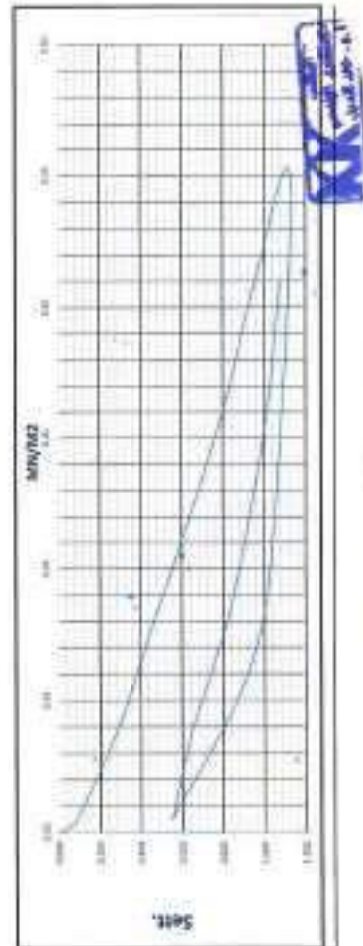
excavation bed

DATE OF ASSESSMENT	ASSESSOR'S NAME
10/10/2010	JOHN DOE

Yearling	Land	Total	Ratio	Total 2		Total 1		Total 3		Total 4	
				W5	W6(W52)	W5	W6	W5	W6	W5	W6
8,000	0.8	0.000	0.81	32.38	32.88	0.000	0.000	0.000	0.000	0.000	0.000
1,000	2.4	0.707	0.81	32.38	32.82	0.100	0.018	0.100	0.018	0.005	0.005
2,000	18.8	5.652	0.68	31.99	32.01	0.000	0.188	0.000	0.188	0.200	0.200
3,000	37.7	12.964	0.36	32.64	32.62	0.000	0.278	0.000	0.278	0.405	0.405
4,000	56.9	17.663	0.26	32.46	32.57	0.000	0.228	0.000	0.228	0.600	0.600
5,000	77.7	21.315	0.23	32.26	32.41	0.000	0.000	0.000	0.000	0.815	0.815
6,000	98.9	26.673	0.42	32.21	32.27	0.000	0.828	0.000	0.828	0.905	0.905
7,000	117.8	35.125	0.58	32.02	32.12	1.200	0.976	1.200	0.976	1.125	1.125
8,000	58.9	17.663	0.25	32.68	32.28	1.200	0.000	1.200	0.000	1.355	1.355
9,000	25.4	8.031	0.12	32.19	32.34	1.100	0.750	1.100	0.750	0.930	0.930
10,000	2.4	0.707	0.81	32.61	32.48	0.000	0.018	0.000	0.018	1.560	1.560
11,000	18.8	5.652	0.68	32.71	32.57	0.700	0.510	0.700	0.510	0.655	0.655
12,000	37.7	12.964	0.36	32.56	32.41	0.900	0.000	0.900	0.000	0.820	0.820
13,000	56.9	17.663	0.25	32.21	32.36	1.000	0.700	1.000	0.700	0.844	0.844
14,000	77.7	21.315	0.23	32.12	32.22	1.178	0.078	1.178	0.078	1.020	1.020
15,000	98.9	26.673	0.42	32.06	32.18	1.244	0.010	1.244	0.010	1.075	1.075

[illegible]

LOADS



THE SCIENCE OF

Subject:

Consultant's Disclosure:

Signature: _____



المكتبة العامة - مكتبة
الكتاب العربي - مكتبة
الكتاب العربي - مكتبة
الكتاب العربي - مكتبة

Layer:
Station:
Date:

excitation best

592064 E273461441 N9471910701

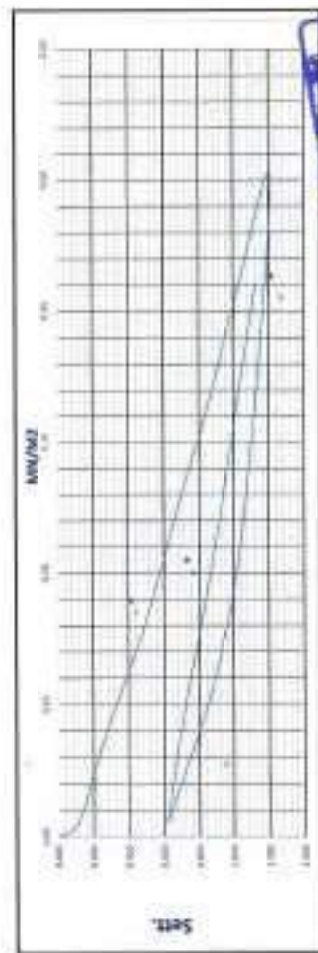
18067074

CONCENTRATION	10 mg/ml
TABLET DISCRIPTION	CH 41 (OAT)

Landmark Height/No.	Land		Total		Depth	Total d	End d	Soak 1		Soak 2		45%	
	Area	Box	Box	Box				min	min	min	min	min	min
0.000	0.0	0.000	0.00	15.15	14.37			0.000	0.000			0.000	
1.000	2.4	0.797	0.01	19.04	18.16			0.110	0.110			0.110	
2.000	18.0	6.652	0.08	19.46	12.60			0.200	0.200			0.275	
0.000	57.7	11.304	0.16	12.72	12.72			0.279	0.200			0.489	
4.000	98.9	11.665	0.26	14.32	13.54			0.634	0.750			0.889	
8.000	77.7	23.417	0.37	14.40	13.31			0.758	0.900			0.855	
6.000	90.9	28.075	0.42	14.25	13.13			0.919	1.000			1.030	
7.000	117.8	25.325	0.46	14.00	11.91			1.078	1.200			1.218	
0.000	26.3	17.065	0.29	14.30	13.09			0.928	1.000			1.065	
9.000	29.4	0.811	0.12	14.36	13.20			0.818	0.990			0.960	
9.000	3.4	0.103	0.01	14.60	13.50			0.250	0.600			0.615	
19.600	3.6	0.787	0.01	16.40	13.50			0.650	0.600			0.615	
11.400	10.8	5.652	0.08	16.25	13.90			0.618	0.750			0.685	
12.000	37.7	11.204	0.16	16.43	13.37			0.740	0.900			0.810	
13.000	50.9	17.065	0.26	16.13	13.23			0.920	0.800			0.900	
14.000	77.7	23.515	0.31	16.24	13.14			0.910	0.750			1.010	
15.000	90.9	29.075	0.42	16.33	13.02			1.000	1.250			1.110	

	α	β	δ	θ
0.1 %	0.30	0.0125	0.00037	0.2
0.3 %	0.10	0.00332		
0.5%	0.25	0.00333		0.2
0.5%	0.25	0.77181		
D (mm)	200			
E_{eff}	160.00			
E_{eff}	167.73			
σ (N/mm ²)	Residual			

		10/11	2000-09
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Lab. Number: _____
Name: _____

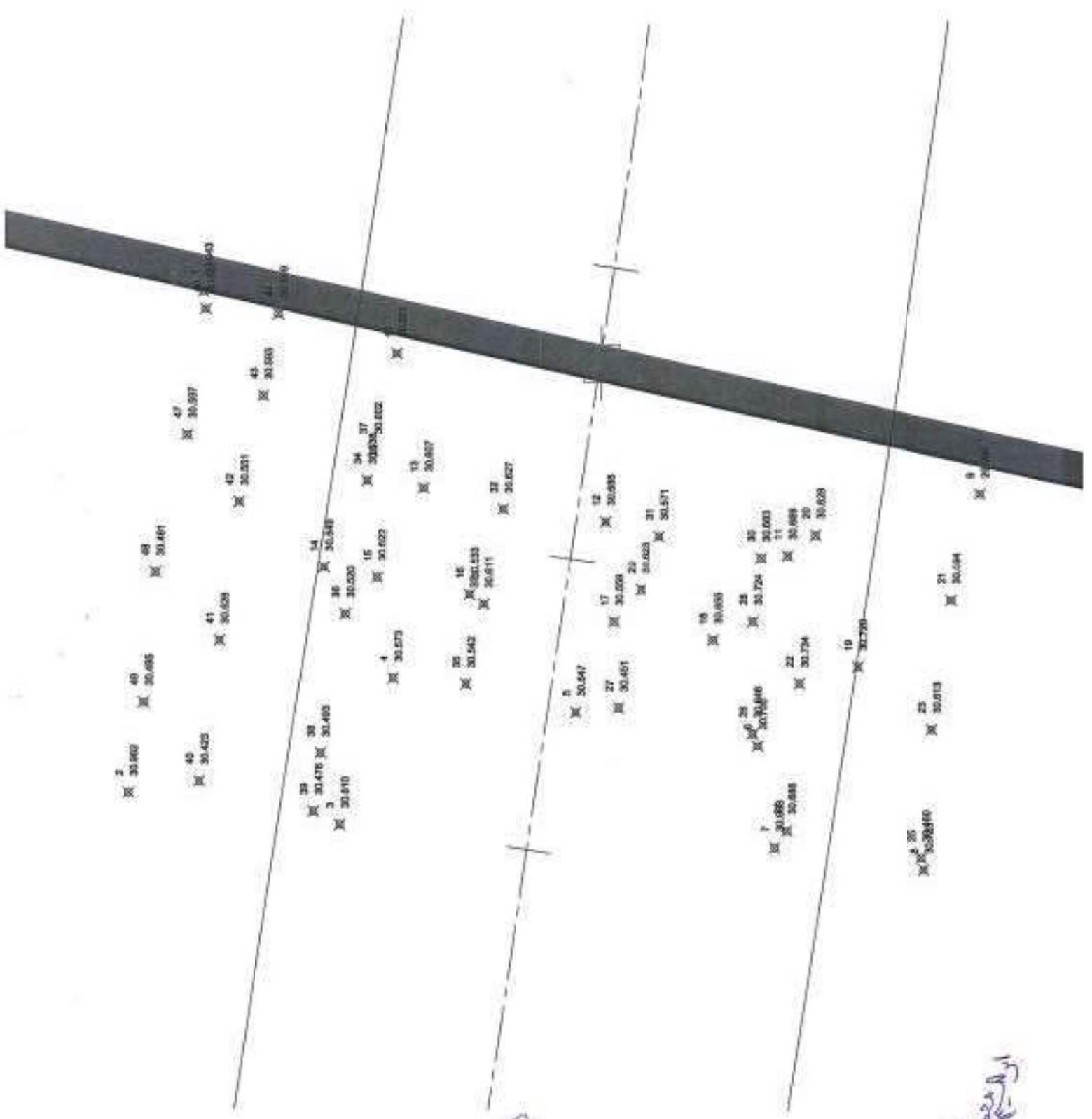
100

Label	Frequency
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مكتبة

contacted by email

Name:
 Page:



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SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
		EL-MAHGOUB COMPANY		IDA Noor Consultants	
Issued by Contractor	Name	Sign	Date	Designation	
	ENG/Ahmed turk		25/11/2023		
Contractor Reference					Revision
Received by ER	Name	Sign	TRF	DD	MM
	A. Idress			14	12
				YY	HH
				23	13
				01	

NB: Package 1 Only(Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	ليشة مسلحة				
Location of Test	CU-41 - AT OLD ST (552+064) NEW ST (552+051)				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	COMORESSIVE STRENGTH OF CONCRETE CUBS AT 28 DAYS				
2					
3					
4					
5					

Comments by:	Comments by:
* Test results are approved as per attached. * Test results are under responsibility of Contractor & 3rd party lab.	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/Ahmed turk		25/11/2023	A
Designer				A
GARB *				
Employers Representative	A. Idress		14/12/23	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected

Reference: POR.001/2016

Project : Express Electric Train

Client : AL MAHGOUB

Location: Matrouh

File No. : 0235

Date : 25/11/2023

Sample: Cube(15x15x15 cm)

Compressive Strength
of Cubical Concrete Specimens
Bs 1881 , Part 4 ,1983

Mix Description : C40 - 400 kg/cm²

Area Loaded : 225 Cm²

Casting by : Concrete Team

Curing by: Concrete Team

Date of Casting : **28-Oct-2023**

Type of Curing : Sub in Water .

Element: RC Footing for Culvert No :41 Station (552 +064)

Cubic Ident No.	Weight Of Sample	Date Of Testing	Age of Cubic (Days)	Comb Strength (kN/cm ²)	Comb Strength (kg/cm ²)	Average Stress (kg/cm ²)
1	0	25-Nov-2023	28	1260	571.032	555.9
2	0	25-Nov-2023	28	1150	521.18	
3	0	25-Nov-2023	28	1270	575.564	

Note:

The concrete specimens have been cured according to (ASTM C31)

QC/QA Department	Name	Signature	Witness by:
Tested by:	Asem		Name: Eng : Mohamed Salah
			Signature: M-salah

SUBMISSION of TEST RESULTS



IDA NOOR CONSULTANTS



Contractor Company	EL-MAHGOUB COMPANY		Designer Company	IDA Noor Consultants																					
Issued by Contractor	Name	Sign	Date	Time																					
	ENG: Ibrahim Mohammed	<i>[Signature]</i>	4 / 11 / 2023																						
Received by ER	A. Zdrass	<i>[Signature]</i>	STR	<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>KMP552 +051</td> <td></td> <td></td> <td>23</td> <td>11</td> <td>23</td> <td>16</td> <td>05</td> </tr> </table>						C1	C2	C3	DD	MM	YY	HH	MM	KMP552 +051			23	11	23	16	05
				C1	C2	C3	DD	MM	YY	HH	MM														
KMP552 +051			23	11	23	16	05																		

CODE - 1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 553 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

NB: Package 1 Only (Package 2 via Aconex)				
THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Description of Test Materials	لينة مسلحة			
Location of Test	CU-41 – At Old st. (552+064) New S.T (552+051)			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	COMPRESSIVE STRENGTH OF CONCRETE CUBES AT 7 DAYS	400	395	
2				
3				
4				
5				

Comments by:	Comments by:
<i>* Approved on per attached.</i> <i>[Signature]</i>	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : Ibrahim Mohammed	<i>[Signature]</i>		A
Designer				A
GARB *				

Reference: POR.001/2016

Project : **Express Electric Train**

File No. : 0235

Client : **AL MAHGOUB**

Date : 04/11/2023

Location: **Matrouh**

Sample: Cube(15x15x15 cm)

Compressive Strength
of Cubical Concrete Specimens
Bs 1881 , Part 4 ,1983

Mix Description : C40 - 400 kg/cm²

Area Loaded : 225 Cm²

Casting by : Concrete Team

Curing by: Concrete Team

Date of Casting : **28-Oct-2023**

Type of Curing : Sub in Water .

Element: RC Footing for Culvert No :41 Station (552 +064)

Cubic Ident No.	Weight Of Sample	Date Of Testing	Age of Cubic (Days)	Comb Strength (kN/cm ²)	Comb Strength (kg/cm ²)	Average Stress (kg/cm ²)
1	8090	4-Nov-2023	7	870	394.284	395.0
2	8100	4-Nov-2023	7	885	401.082	
3	8110	4-Nov-2023	7	860	389.752	

Note:

The concrete specimens have been cured according to (ASTM C31)

QC/QA Department	Name	Signature	Witness by:
Tested by:	Said		Name: Eng : Mohamed Salah
			Signature: m-Salah



SUBMISSION of TEST RESULTS



Contractor Company	EL-MAHGOUB COMPANY		Designer Company	IDA Noor Consultants																
Issued by Contractor	Name	Sign	Date	Time																
	ENG: Ibrahim Mohammed		010/08/2023																	
Received by ER	A. Idress	STR 552	<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>KP 552+064</td> <td>CU</td> <td>CS</td> <td>16</td> <td>8</td> <td>23</td> <td>14</td> <td>30</td> </tr> </table>		C1	C2	C3	DD	MM	YY	HH	MM	KP 552+064	CU	CS	16	8	23	14	30
C1	C2	C3	DD	MM	YY	HH	MM													
KP 552+064	CU	CS	16	8	23	14	30													

CODE-1	S1 to S21 Station Reference	D1 to D3 Depot Reference	Kp 533 Note For Kilometer point only Start Km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

NB: Package 1 Only (Package 2 via Aconex)				
THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Description of Test Materials	لبشة عادية			
Location of Test	CU-38 at st. 552+064			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	COMPRESSIVE STRENGTH OF CONCRETE CUBES AT 28 DAYS			
2				
3				
4				
5				

Comments by: E.R.I.	Comments by:
*Test results are approved as per attached. *Final approval of this element subjected to the approval of 28 days. *Test results are under responsibility of Contractor and lab.	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : Ibrahim Mohammed		10/ 08 /2023	A
Designer				A
GARB *				
Employers Representative	A. Idress		16/8/23	A

* Alignment / Bridges: Culvert Only



شركة كونكريت رندى ميكس للخرسانة الجاهزة

COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : المصمم
Consultant : المهندس
Project : برج 38 (532+044) S.T
Element : ليفة مدبرة
Date of Casting : 12/7/2023

Plant	مبنى خالو
Cement Type	OPC
Cement Content	300
STRENGTH	200

SNO	Description	7 Day		
		19/7/2023		
1	Cube number	1	2	3
2	Weight (gm)	8303	8353	8418
3	Density (gm/cm ³)	2.46	2.47	2.49
4	Failure Load (kN)	874	630	557
5	Comp. Strength Kg/cm ²	268	185	181
6	Average Strength Kg/cm ²	266		
SNO	Description	28 Day		
		9/08/2023		
1	Cube number	1	2	3
2	Weight (gm)	8387	8324	8360
3	Density (gm/cm ³)	2.48	2.44	2.48
4	Failure Load (kN)	809	831	821
5	Comp. Strength Kg/cm ²	364 ✓	374 ✓	371 ✓
6	Average Strength Kg/cm ²	371		

Concrete QC Engineer :
Mohamed Abdelkader

Consultant Engineer :

شركة كونكريت رندى ميكس
إدارة المعمل

SUBMISSION of TEST RESULTS



Contractor Company	ALARABIA for real estate development & contracting		Designer Company																	
Issued by Contractor	Name	Sign	Date	Time																
	ENG: Ibrahim mohammed		09/07/2023																	
Received by ER	AbdulKahman Idress		STR 552	<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>06</td> <td>04</td> <td>05</td> <td>25</td> <td>7</td> <td>23</td> <td>17</td> <td>05</td> </tr> </table>	C1	C2	C3	DD	MM	YY	HH	MM	06	04	05	25	7	23	17	05
C1	C2	C3	DD	MM	YY	HH	MM													
06	04	05	25	7	23	17	05													

CODE - 1	S1 to S23 Station Reference	D1 to S3 Depot Reference	Kp 533 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

NB: Package 1 Only (Package 2 via Aconex)				
THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Description of Test Materials	لبشة عادية			
Location of Test	CU-38 at st. 552+064			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	COMPRESSIVE STRENGTH OF CONCRETE CUBES AT 7 DAYS			
2				
3				
4				
5				

Comments by: L-Ri	Comments by:
+ Test results are approved as per attached. + Final approval subjected to 28 days test. + Test results are under responsibility of Contractor and Lab.	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : Ibrahim mohammed		09 / 07 / 2023	A
Designer				A
GARB *				
Employers Representative	AbdulKahman Idress		25/7/23	A

* Alignment / Bridges: Culvert Only

SUBMISSION of TEST RESULTS



Contractor Company	EL-MAHGOUB COMPANY			Designer Company		IDA Noor Consutants					
Issued by Contractor	Name	Sign		Date		Time					
	ENG: Ibrahim Mohammed			19 / 07 / 2023							
Received by ER			STR	C1	C2	C3	DO	MM	YY	HH	MM

CODE - 1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 533 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test Materials	لبشة عادية			
Location of Test	CU-41 – At Old st. (552+064) New S.T (552+051)			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	COMPRESSIVE STRENGTH OF CONCRETE CUBES AT 7 DAYS	200	266	
2				
3				
4				
5				

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : Ibrahim Mohammed		19 / 07 / 2023	A
Designer				A
GARB *				
Employers Representative				

* Alignment / Bridges: Culvert Only

COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client :
Consultant :
Project :
Element :
Date of Casting :

المحجوب
مسترا
S.T (552+064) 38
لبشة عنية
12/7/2023

Plant	ميدى حليش
Cement Type	OPC
Cement Content	300
STRENGTH	200

SNO	Description	7 Day		
		19/7/2023		
1	Cube number	1	2	3
2	Weight (gm)	8303	8353	8418
3	Density (gm/cm ³)	2.46	2.47	2.49
4	Failure Load (kN)	574	630	557
5	Comp. Strength Kg/cm ²	260	285	252
6	Average Strength Kg/cm ²	266		
SNO	Description	28 Day		
		9/08/2023		
1	Cube number	1	2	3
2	Weight (gm)			
3	Density (gm/cm ³)	0.00	0.00	0.00
4	Failure Load (kN)			
5	Comp. Strength Kg/cm ²	0	0	0
6	Average Strength Kg/cm ²	0		

Concrete QC Engineer :

Mohamed Abdelkder


19/7/23

Consultant Engineer :

شركة كونكريتو
ريدي ميكس
إدارة المعمل

SUBMISSION of TEST RESULTS



Contractor Company	EL-MAHGOUB COMPANY		Designer Company																	
Issued by Contractor	Name ENG: Ibrahim mohamed	Sign	Date 11/07/2023	Time																
Received by ER	Abdel Rahman Idress	STR 552	<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>10</td> <td>14</td> <td>15</td> <td>11</td> <td>7</td> <td>23</td> <td>15</td> <td>10</td> </tr> </table>	C1	C2	C3	DD	MM	YY	HH	MM	10	14	15	11	7	23	15	10	
C1	C2	C3	DD	MM	YY	HH	MM													
10	14	15	11	7	23	15	10													

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 552 Note For Kilometer point only Start Km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

NB: Package 1 Only (Package 2 via Aconex)				
THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Description of Test Materials	Plate load			
Location of Test	CU-38 at st. 552+064			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	Plate load			
2				
3				
4				
5				

Comments by: <i>E.R.I.</i>	Comments by:
* Test results are approved as per attached and as per approved geo tech. report. * Test results are under responsibility of Contractor and 3rd party Lab.	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG: Ibrahim mohamed		11 / 07 / 2023	A
Designer				A
GARB *				
Employers Representative	Abdel Rahman Idress		11/7/23	A

* Alignment / Bridges: Culvert Only

Company

شركة المحجوب للمقاولات

Project : EET From Foka to Marsa Matrouh.
Subject : Determine the deformation and strength characteristics of soil by the plate loading test according ASTM D 1196 and project specs requirements
Test Date : 05/07/2023
Report Date : 08/07/2023
Test location : Old st. 552+064 / New st. 552+051
Test level : Middle embankment.
Report No. : 01

Dear Gentleman,

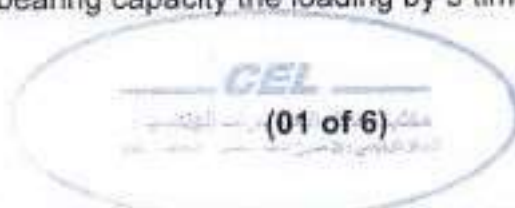
According to the above mentioned subject the test performed as follows:-

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 4 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (2.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until **14.732 ton** to achieve soil stress (**7.5 Kg/cm²**)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



Determine the deformation and strength characteristics of soil
By the plate loading test according specifications
ASTM D 1196

Report

- Test location : Old st. 552+064 / New st. 552+051
- TEST No. : 01
- Type of soil : Middle embankment.

Item	Descriptions
- Plate Diameter (mm)	500
- date of measurement	08/07/2023
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	Settlement (mm)	Soil stress Kg/cm ²
1	2.25 ✓	7.50
2	0.82 ✓	2.50

Signature /


 مكتب معامل الإستشارات الهندسية
 3 شارع الملك الأفدال - القاهرة

(03 of 6)



Consulting Engineering Bureau & Laboratories

مكتب معامل الإستشارات الهندسية

Company Name : شركة المحجوب للمقاولات
Project : EET From Foka to Marsa Matrouh
Test Date : 05/07/2023
report date : 08/07/2023
Location : Old st. 552+064 / New st. 552+051
Test No. : 01

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1196

Data sheet

Loading Stage

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.25	19.70	0.30	19.36	0.64	19.56	0.44	0.46
2	2.50	19.40	0.60	18.95	1.05	19.20	0.80	0.82
3	3.75	19.22	0.78	18.66	1.34	18.90	1.10	1.07
4	5.00	19.04	0.96	18.37	1.63	18.56	1.44	1.34
5	6.25	18.73	1.25	17.95	2.05	18.00	2.00	1.77
6	7.50	18.32	1.68	17.55	2.45	17.39	2.61	2.25

Unloading Stage

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	7.50	18.32	1.68	17.55	2.45	17.39	2.61	2.25
2	5.00	18.36	1.64	17.60	2.40	17.43	2.57	2.20
3	2.50	18.54	1.46	17.83	2.17	17.61	2.39	2.01
4	0.00	19.23	0.77	18.38	1.02	18.55	1.45	1.08

Signature/


مكتب معامل الإستشارات الهندسية
شركة المحجوب للمقاولات (4 of 6)

Company Name : شركة المحجوب للمقاولات
Project : EET From Foka to Marsa Matrouh
Test Date : 05/07/2023
report date : 08/07/2023
Location : Old st. 552+064 / New st. 552+051
Test No. : 01

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p \cdot B (1 - \mu^2 / E_s) \cdot I$$

S (mm) : Settlement immediately
p (kg/cm²) : Stress at foundation level
B (m) : Foundation Width
I : Factor depends on the foundation shape and rigidity
E_s : Modulus of elasticity
μ : Poisson's ratio

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.46	1.25	2455	50	0.3	0.79	976.8
2	0.62	2.50	4911	50	0.3	0.79	1200.4
3	0.82	3.75	7366	50	0.3	0.79	1650.5
4	1.07	5.00	9821	50	0.3	0.79	1674.5
5	1.34	6.25	12277	50	0.3	0.79	1672.4
6	1.77	7.50	14732	50	0.3	0.79	1526.0

Average values of the deformation modulus at mentioned stress is from 0.00 to 7.5 kg/cm²

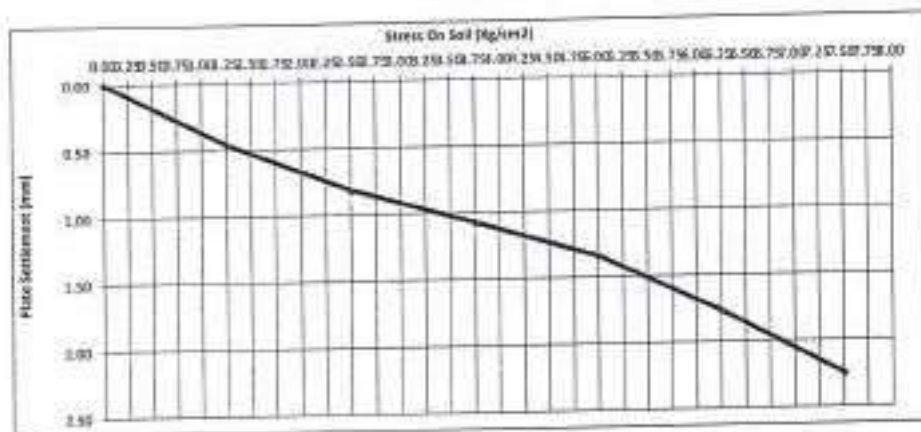
1433.4	kg/cm ²
--------	--------------------

Signature:  CEL
مكتب محامل الإستشارات الهندسية
الزمالك - القاهرة
3 El Malek El Afdal Street
Zamalek, Cairo.
Tel. & Fax : 27367231 - 27363093

(5 of 6)

Company Name : شركة المحجوب للمقاولات
Project : EET From Foka to Marsa Matrouh
Test Date : 05/07/2023
report date : 08/07/2023
Location : Old st. 552+064 / New st. 552+051
Test No. : 01

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1196



Loading	0	1	2	3	4	5	6
Stage(Kg)	0	2455	4911	7366	9821	12277	14732
Stress (Kg/cm²)	0.00	1.25	2.50	3.75	5.00	6.25	7.50
Settlement (mm)	0.00	0.46	0.82	1.07	1.34	1.77	2.25

Unloading	2	3	4	5
Stage(Kg)	14732	9821	4911	0
Stress (Kg/cm²)	7.50	5.00	2.50	0.00
Settlement (mm)	2.25	2.20	2.01	1.08

Signature :

مكتب معامل الاستشارات الهندسية
البريد الإلكتروني: info@cel-egypt.com

(6 of 6)

SUBMISSION of TEST RESULTS



Contractor Company	EL-MAHGOUB COMPANY		Designer Company	IDA Noor Consultants	
Issued by Contractor	Name	Sign	Date	Time	
	ENG: Ibrahim mohammed		22/07/2023		
Received by ER	A-Idress		STR 553	C1	C2
				C3	00
				MM	YY
				HH	MM
				16	8
				23	14
				31	

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

NB: Package 1 Only (Package 2 via Aconex)				
THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Description of Test Materials	Plate load			
Location of Test	CU-39 at ST. 553+310			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1				
2				
3				
4				
5				

Comments by:	Comments by:
* PLT approved as per geo-tech. report. * Test results are under responsibility of Contractor and 3 rd party lab.	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG: Ibrahim mohammed		22/07/2023	A
Designer				A
GARB *				
Employers Representative	A-Idress		18/6/23	A

* Alignment / Bridges: Culvert Only

Company

شركة المحجوب للمقاولات

Project : EET From Foka to Marsa Matrouh.
Subject : Determine the deformation and strength characteristics of soil by the plate loading test according ASTM D 1196 and project specs requirements
Test Date : 23/07/2023
Report Date : 25/07/2023
Test location : 39 - ST (553+310)
Test level : Prepared Subgrade.
Report No. : 02

Dear Gentleman,

According to the above mentioned subject the test performed as follows:-

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 4 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (2.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)

7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 14.732 ton to achieve soil stress (7.5 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and completion of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



Determine the deformation and strength characteristics of soil
By the plate loading test according specifications

ASTM D 1196

Report

- * Test location : 39 برج - ST (553+310)
- * TEST No. : 01
- * Type of soil : Prepared Subgrade.

Item	Descriptions
- Plate Diameter (mm)	500
- date of measurement	23/07/2023
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	Settlement (mm)	Soil stress Kg/cm ²
1	3.37	7.50
2	0.87	2.50



(03 of 6)

Company Name : شركة الجيوب لمطاط
Project : EET From Foka to Marsa Matruh
Test Date : 23/07/2023
Report Date : 25/07/2023
Location : ST (552+310) - برج 39
Test No : 01

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1186

Data sheet

Loading Stage

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.25	19.54	0.43	19.55	0.45	19.35	0.65	0.51
2	2.50	19.25	0.75	19.39	0.60	19.95	1.05	0.87
3	3.75	18.95	1.05	19.05	1.15	19.60	1.40	1.20
4	5.00	18.33	1.67	18.40	1.60	18.85	1.85	1.68
5	6.25	18.15	1.85	17.85	2.15	17.85	2.65	2.22
6	7.50	17.25	2.75	16.70	3.30	16.95	3.05	3.37

Unloading Stage

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	7.50	17.15	2.75	16.70	3.30	16.95	4.05	3.37
2	5.00	17.40	2.70	16.30	3.70	16.05	3.97	3.29
3	2.50	17.55	2.45	16.65	3.05	16.20	3.80	3.12
4	0.00	17.65	1.00	17.05	3.05	16.50	2.50	2.33

CEL
مكتب معمل الاستشارات الهندسية
الساحل الشمالي
رقم تسجيل مصرية : 257 - 554 - 210
شركة القابضة : شارع الملك فيصل - الزمالك - القاهرة
(4 of 6)

Company Name

Project

Test Date

Report Date

Location

Test No.

شركة المنجرب للمباني

EET From Foka to Marsa Matruh

23/07/2023

25/07/2023

39 - برج ST (563*310)

01

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p.B (1 - \nu^2) / E_s M$$

S : Settlement immediately

p : Stress at foundation level

B : Foundation Width

ν : Poisson's ratio depends on the foundation shape and rigidity

E_s : Modulus of elasticity

M : Plate area factor

No.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	ν	I	E_s (kg/cm ²)
1	0.21	1.25	2425	50	0.3	0.79	899.8
2	0.41	2.50	4851	50	0.4	0.79	1584.3
3	0.61	3.75	7276	50	0.4	0.79	1555.3
4	1.01	5.00	9701	50	0.3	0.79	1497.7
5	1.56	6.25	12277	50	0.3	0.79	1411.3
6	2.27	7.50	14702	50	0.3	0.79	1218.3

Average values of the dispersion modulus at mentioned stress is from 8.00 to 7.5 kg/cm²

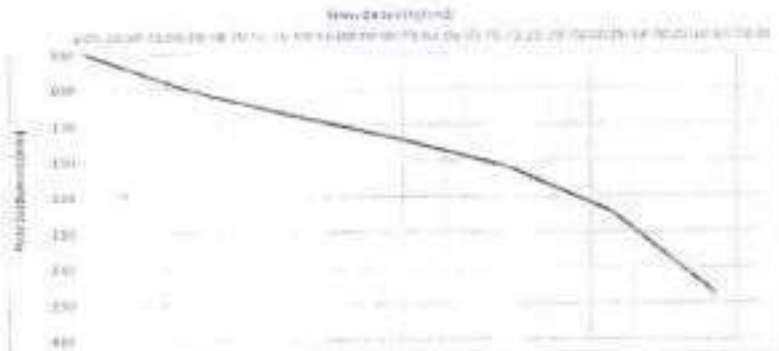
1265.1

kg/cm²



Company Name : شركة المعجم - الجيزة
Project : B51 From Faka to Mena Waterway
Test Date : 25/07/2021
Report No : 250272021
Location : 33 (150+250)
Test No : 1.03

Geotechnical Static Plate Load Tests of Soils
ASTM D1195



Loading	0	1	2	3	4	5	6
Stage(kg)	0	1101	2201	3300	4402	5507	6603
Stress (kg/cm²)	0.00	1.25	2.50	3.75	5.00	6.25	7.50
Settlement (mm)	0.00	0.51	1.07	1.25	1.58	2.22	3.27

Unloading	2	3	4	5
Stage(kg)	1122	2201	3300	4
Stress (kg/cm²)	1.25	2.50	3.75	5.00
Settlement (mm)	1.25	1.58	2.22	3.27

Signature :

مكتب معامل الاستشارات الهندسية

المساحل القبطاني

رقم التسجيل مهنى : 537 - 2001 - 2008
المركز القياسى : 3 شارع توكى الجليل - الزمالة - القاهرة

(6 of 6)