MATERIAL INSPECTION REQUEST		وزارة النقل	SCAC	مركز الإستشارات المندسية لنقل و تمارت و همرن (خير، مونيون) درگتوار سعد الجيوشي		المية العامة (GARB)	SAPELLA CARACTER
Contractor	Landmarks for	rks for gener	general contracting	Bu	Designer	Designer Company	SGAC
Issued by Contractor	Name	y imp P	Sign	W	Date 911	2023	Time lo:15
Received by ER				MIR	C	C2 C3 DD	MM YY HH
CODE-1	S1 station	S1 to S21 Station Reference		D1 to S3 Depot Reference	53 ference	For Kilome	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2 CODE - 3				Work Activity Sub Element of Activity	of Activity		
Description of Materials	laterials						
Location to be Used	sed		425+30	425+300-425+600 (-2.0) 425+160-42	ភៃ	425+100-425+160 (-0.25) ;+240 (-0.25)	(-0.25)
MAR Approval No	0					Date	
Supplier Name							
Test Requirement	Ħ			Specification	ation	Clause	
<b>Reference Photos</b>	Š	Yes attached / No	d / No	Other			
Item Description	on		M <sup>3</sup>	Unit M <sup>3</sup>	Quantity 5000	Arrival Date 18/1/2023	Note
2 Classification	tion		M <sup>3</sup>	3	5000	18/1/2023	
	0.M.C		M <sup>3</sup>	ω ω	5000	18/1/2023	
4 L.L & P.L & P 5 C.B.R	& PI		M <sup>3</sup>	ω ω	5000	18/1/2023 18/1/2023	
Comments by:		のないないでもない	ALL CARDEN	100	Comments by:	A SPECIAL	
Organisation	Name	and the second second	APPR	APPROVAL STATUS Sign	TUS	Date	A-AWC-R
	1	ما بودنج	1 -con/	2.	تحد ( بی	2.2)116 (2.	W
QA/QC*/	2	mar		A	12		A
GARB**	3	Nes	3	( .	hm		
Employers Representative							
* Designer ** Alignment / Bridges: Culvert Only	lvert Only						

Page 1 of 1

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	محتب معامل الاستشارات الهيدسية
Company Name : Land Marks	: Land Marks
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
<b>Fype of sample</b>	Type of sample : Soil Embankment
Location	: (424+600) : (425+600)
<b>Delivery Date</b>	: 03/01/2023
<b>Reporting Date</b>	: 09/01/2023
<b>Reporting No.</b>	: 09
Sample No.	: 03

Dear Gentleman,

Attached here with the Soil Embankment delivered on 03/01/2023

### Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2 Material finer than sieve No. 200 according to ASTM D-1140
- $\boldsymbol{\omega}$ 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

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature CLAN the the 218-661-527 (muandaranda) Arth and Bade - meridi Ilay Adami. datas yerse

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



ٔ ش الهلک الأفضل لزمائک - القاهرة تلیفون + فاکس ، ۲۷۳۱۷۲۴۱ - ۲۷۳۹۳۰۲۹۴ www.cel-egypt.com

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0.150	0.300	0.425	0.600	1.18	2.00	2.36	4.75	9.50	12.50	19	25	37.5	50	Sieve Size (mm)
9,9	12.2	15.5	18.4	21.9	24.7	24.8	24.8	47.3	58.1	70.0	81.2	92.3	100	Passing %

Project **Delivery Date** Type of sample **Company Name Reporting No. Reporting Date** Location : Land Marks : 09 : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh •• •• : Soil Embankment : 09/01/2023 03/01/2023 (424+600): (425+600) Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسيد

## **RESULTS OF SIEVE ANALYSIS According to ASTM D-422**

Sample No.

: 03

الممسوحة ضوئيا بـ CamScanner

3 El Malek El Afdal Street Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093	Signature I. J.	Percentage of materia Sieve Size 75 μΜ		1			Delivery Date : Reporting Date :		Type of sample :	ny Name :		
IAS	Contraction - And	Percentage of material finer than Sieve Size 75 μΜ (No.200)	Test	<u>Materials finer than 75 μm (no.200) sieve</u> <u>by washing ASTM D-1140</u> .	: 03	: 09	: 03/01/2023 : 09/01/2023	(424+600) : (425+600)	Electric Express Train, fro Soil Embankment	: Land Marks	د Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسية	CE
۳ ش الملك الأفضل الزمالك ـ القاهرة تليفون + فاكس : ۲۷۳۲۷۲۲ ـ ۲۴۰۳۲۳۷۲۲		7.9	Results (%)	<u>μm (no.200) sieve</u> <u>M D-1140</u> .					Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Soil Embankment		eau & Laboratories مکتب معامل ا	
									CamSc	ب anner	حة ضوئيا	الممسوء

Festing La



Company Name : Land Marks	: Land Marks
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample	: Soil Embankment
Location	: (424+600) : (425+600)
<b>Delivery Date</b>	: 03/01/2023
<b>Reporting Date</b>	: 09/01/2023
<b>Reporting No.</b>	: 09
Sample No.	: 03

### <u>Results of liquid limit and plasticity index</u> of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	23.2
Plastic Limit	19.5
Plasticity Index	3.7

Signature Martin Later Januar

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۲ ش الملك الأفضل



### Land Marks

Electric Express Train, from Al Ain Sokhna to Marsa Matroub

- Soil Embankment
- (424+600): (425+600)
- ••
- : 03/01/2023 : 09/01/2023
- :09
- :03

## Jassification According to Project Specs (Embankment)

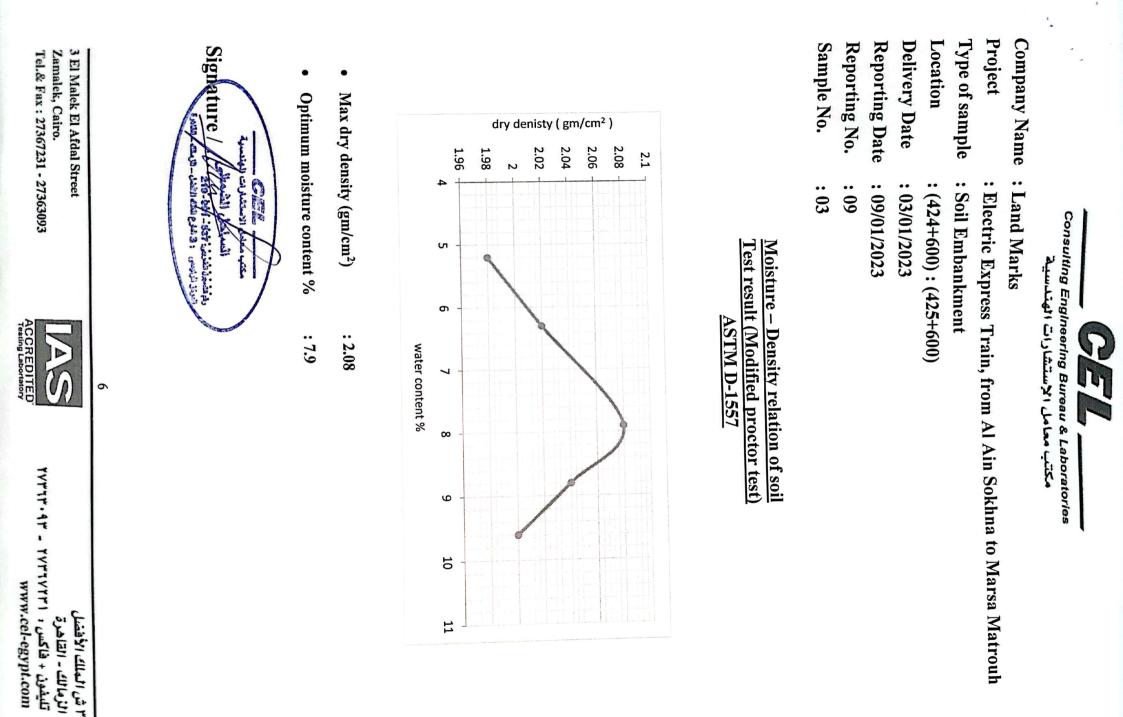
¢		of fraction passing 0.425 mm (No.40)	200)	10)	101	fication	ST	
3.7	13.2	25 mm (No.40)	7.9	15.5	24.7	(A-1-a)	Results (%)	
Max 6 %	١		Max 15 %	Max 30 %	Max ou ve	(A-1-a)	Limits a Projec	
Max 6 %	1		Max in the	May 15 %	Max 50 %		Limits according Projects Specs (A-1-b)	

ults are N Comply - D Not Comply) with specifications limits

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reet	SVI		۲ ش البلك الأفضل الأمالك - القادة
27363093		TYP1P-4P - TYP1	الرمانك - الناغرة للبنون + فاكس : ۲۷۲۱۷۲۴۱ - ۲۷۲۱۲۰۹۴ مسم المسمع المرسم



* Designer ** Alignment / Bridges: Culvert Only	Employers Representative	GARB** Mr Ut	QA/QC* Rince	Contractor	Organisation Name		Comments by:	5 C.B.R		3 Proctor & O.M.C		Item Description	Reference Photos Yes at	Test Requirement	Supplier Name	MAR Approval No	Location to be Used	Description of Materials	CODE-3	Stat	CODE-1 S1 to S21	Received by ER	Issued by Contractor Contractor		MATERIAL INSPECTION REQUEST
	C	erm .	6	1	Sign	ADDDC		M <sup>3</sup>	M <sup>3</sup>	M <sup>3</sup>	M <sup>3</sup>	Unit	Yes attached / No				425+100- 425+240- 425+160- 425+100- 425+240- 425+240-			_			-5	Landmarks for general contracting	
		(···	tan .				Comments by:	5000	5000	5000	5000		Other	Specification			425+100-425+160 (-2.0) 425+240-425+300 (-2.0) 425+160-425+240 (-1.75) 425+100-425+160 (-1.5) 425+240-425+300 (-1.5) 425+160-425+240 (1.25) 425+160-425+240 (1.25)		Sub Element of Activity	Depot Reference Work Activity	D1 to S3	MIR	اادا أحسرا	Desig	مركز الإستشارات المندسية للنتن والمرك والمرق أخرد،وليون دكتوارا سعد الجيوشايي
		¥.	0	of 151	Date		s by:	10/1/2023			10/1/2023	tity		Clause		Date	+160 (-2.0) 425+160-425+240 (-2.0) +300 (-2.0) 425+160-425+160 (1.75) +240 (-1.75) 425+240-425+300 (1.75) -160 (-1.5) 425+160-425+240 (-1.5) +300 (-1.5) 425+100-425+160 (-1.25) -240 (1.25) 425+300-425+600 (-2.5) 425+100-425+160 (-1.0)		Y	FOR NI		۲ <u>۲</u>	2023	Designer Company Date	المربع الكبر المربع و الكبراري (GARB)
			A	1011/2023 A	e A-AWC-R			13	23			ate Note					+240 (-2.0) +160 (1.75) +300 (1.75) 5+240 (-1.5) -160 (-1.25) 5+600 (-2.5)			FOR VIIOMETER POINT ONLY STALT VIII IS USED	Kp XXX Note		Co: B	SGAC Time	M. M. Z.6

Page 1 of 1



<b>Company Name</b>	: Land Marks
Project	: Electric Express Train, from
Type of sample	: Soil Embankment
Location	: St. (424+600) : (425+600)
<b>Delivery Date</b>	: 03/01/2023
<b>Reporting Date</b>	: 10/01/2023
<b>Reporting No.</b>	: 10
Sample No.	: 04

Dear Gentleman,

Attached here with the Soil Embankment delivered on 03/01/2023

### Materials test

- -Sieve analysis according to ASTM D-422
- 2 Material finer than sieve No. 200 according to ASTM D-1140
- $\boldsymbol{\omega}$ Liquid limits and plasticity index of soil according to ASTM D-4318.
- 4 Soil classification according to Project Specs
- S. Proctor Test according to ASTM D-1557
- 6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not

Signature יייני ונא 5 رام المعدمان المدرامية 1937 + 1939 - 1949 - 1949 - 1947 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 الساحل أكث E. مكتب معلال

responsible for the way it is taken

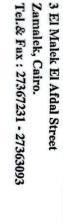
Tel.& Fax : 27367231 - 27363093 3 El Malek El Afdal Street ACCREDITED Testing Laboratory تلیفون + فاکس ، ۲۷۳۱۷۲۳۱ - ۲۷۳۱۳۰۹۳ www.cel-egypt.com

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Zamalek, Cairo.

Al Ain Sokhna to Marsa Matrouh

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t.com	تليفون	الأرمالك	۳ ش اله	



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								100 miles	4 JO 12					
0.150	0.300	0.425	0.600	1.18	2.00	2.36	4.75	9.50	12.50	19	25	37.5	50	Sieve Size (mm)
10.8	14.8	16.3	17.9	23.3	25.1	26.2	27.8	50.3	61.8	72.4	82.3	95.2	100	Passing %

الممسوحة ضوئيا بـ CamScanner

Project **Reporting No. Delivery Date** Type of sample **Company Name** Sample No. **Reporting Date** Location :04 :10 •• : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh : Land Marks : 10/01/2023 : St. (424+600) : (425+600) : 03/01/2023 Soil Embankment

**RESULTS OF SIEVE ANALYSIS According to ASTM D-422** 

Consulting Engineering Bureau & Laboratories

مكتب معامل الإستشارات الهندسية

3 El Malek El Afdal Street Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093 ACCREDITED	Signature / Status of the s	Percentage of material finer than Sieve Size 75 μΜ (No.200)	Test	<u>Materials finer than 75 μm (no.200) sieve</u> <u>by washing ASTM D-1140</u> .	• te	Type of sample : Soil Embankment Location : St. (424+600) : (425+600) Delivery Date : 03/01/2023	Company Name : Land Marks Project : Electric Express Train, fro	Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسید
۳ ش المللك الأفضل الزمالك - القاهرة تليفون + فاكس ، ۲۷۳٦۷۲۳ - ۲۷۳۲۳۰۹۳		8.1	Results (%)	μm (no.200) sieve M D-1140.			Land Marks Electric Express Train, from Al Ain Sokhna to Marsa Matrouh	eau & Laboratories کتب معامل ۱

Signature	Plasticity Index NP	Plastic Limit NP	Liquid Limit NP	Test Results (%)	<b>Results of liquid limit and plasticity index</b> of soils according to ASTM D-4318	Sample No. : 04	 Delivery Date : 03/01/2023	 Type of sample : Soil Embankment	ny Name :	Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسید	
	NP	NP	NP	Results (%)	y index 318			oknna to ivlarsa ivlatroun		ories	



Land Marks	: Electric Express Train, from Al Ain Sokhna to Marsa I	: Soil Embankment	: St. (424+600) : (425+600)	: 03/01/2023	: 10/01/2023	10	: 04	
					-			
Company Name : Land Marks	Project	Type of sample	Location	Delivery Date	<b>Reporting Date</b>	Reporting No.	Sample No.	

Matrouh

# Soil Classification According to Project Specs (Embankment)

	and the second se		
TEST	Results (%)	Limits a Project	Limits according Projects Specs
Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	25.1	Max 50 %	
0.425 mm (No. 40).	16.3	Max 30 %	Max 50 %
0.075 mm (No. 200).	8.1	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)	25 mm (No.40)		
Liquid Limit	NP		
Plasticity index	NP	Max 6 %	Max 6 %
The test results are ( Comply - Not Comply) with specifications limits	□ Not Compl	y) with specific	ations limits

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۲ ش الملك الأفضل الزمائك - القاهرة

דוובני + בוציים : דעדעדעד - דעריעדעד שעיייבפיאקעניכסוי

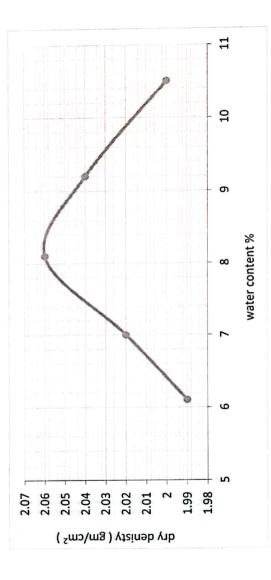
> ACCREDITED Testing Labortatory

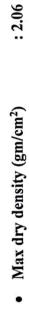
Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093



Company Name : Land Marks	ject : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh	Type of sample : Soil Embankment	ation : St. (424+600) : (425+600)	ivery Date : 03/01/2023	Reporting Date : 10/01/2023	Reporting No. : 10	nple No. : 04	
Company l	Project	Type of sai	Location	<b>Delivery Date</b>	Reporting	Reporting	Sample No.	







Optimum moisture content % : 8.1



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۲ ش الملك الأفضل الزمائك - القاهرة

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Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسید

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh St. (424+600) : (425+600) Soil Embankment : Land Marks : 10/01/2023 : 03/01/2023 : 10 : 04 .. .. **Company Name Reporting Date** Type of sample Reporting No. **Delivery Date** Sample No. Location Project

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

bene	penetration	stress 0	stress on piston (Mpa)
mm	Inch		
0.64	0.025		2.51
1.27	0.050		2.70
1.91	0.075		2.96
2.54	0.100		3.30
3.18	0.125		3.61
3.81	0.150		3.88
4.45	0.175		4.23
5.08	0.200		4.50
5.71	0.225		4.71
6.35	0.250		4.88
CBR Result	<u></u>	Stress (Mpa)	CBR %
At 0.1 inch (2.54 mm)	St. Value	Sample results	87 78
penetration	6.90	3.30	

Notes:

Attached graph shows penetration resistance versus penetration magnitude. The sample was compacted to dry density of 2.06 (gm /cm<sup>3</sup>) Content. at 8.1 % operationum water Surcharge toal 4:50 احل الشه Signature <u>\_</u> 5 å

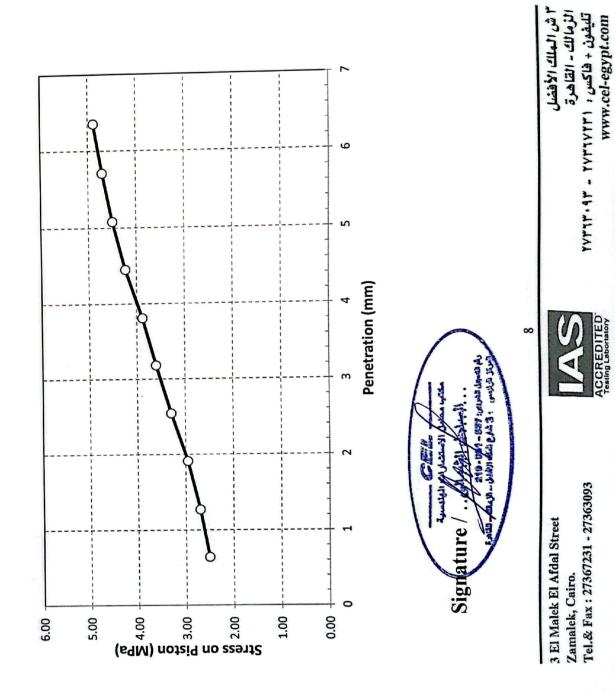
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### Load Penetration Curve of CBR Test **ASTM D-1883**



ACCREDITED Testing Labortatory

MATERIAL					_	M.m.	12.	ľ
INSPECTION	وزارة النقل	المندسية المرق بالمرق	مركز الإستشارات المندسية لانتل والمارت والمرق (ى خود موليره) ركتهرار سعد الجيهشي	المية العامة الطرق و الكباري (GARB)		SVSTIA	orlaad man e femere tran	ĝ
Contractor Company Landmark	Landmarks for general contracting	acting	Designer	Designer Company	SGAC	ĉ		
Issued by Name	Sign		Date		Time	le		
Contractor	1 may 1	بدابه ركز	$\equiv$	2023		:0	•	
Received by ER				ຊ ເ <u>ເ</u>	DD MM	¥	H	MM
CODE-1 S1 to S21	S1 to S21	,	D1 to S3		ą	Kp XXX Note		
CODE - 2		Sub EL	Work Activity	FOT NIC	ineter poi	nt only sta	For Niloimeter point only start km is used	ed
Description of Materials								
Location to be Used	425+ 425+	425+300-425+600 (-1.5) 425+240-425+300 (-0.25) 425+240-42	ίΩ	425+300-425+600 (-1.25) 425+100-425+160 (Ferma) +300 (Ferma)	-600 (-1 160 (Fer	.25) ma)		
MAR Approval No				Date				
Supplier Name								
Test Requirement		Spe	Specification	Clause				
Reference Photos	Yes attached / No	Other	er					
em		Unit	Quantity	Arrival Date		Note		
		N <sup>3</sup>	5000	18/1/2023				
		, N	5000	18/1/2023				
4 L.L & P.L & PI		M <sup>3</sup>	5000	18/1/2023				
5 C.B.R	ALC: NO DE LA COMPANY	M <sup>3</sup>	5000	18/1/2023				
Comments by:			Comments by:	• 1819 1910 1910 1910				
		•						
Organisation Name	A	APPROVAL STATUS	STATUS	Date		Δ	A-AWC-R	
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aavac*	amel	1	1 and	U			Þ	
GARB** ア・ヘ	Jer m	( -	m					
Employers Representative								
<ul> <li>Designer</li> <li>Alignment / Bridges: Culvert Only</li> </ul>								

Page 1 of 1



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Company Name :Land Marks	: Land Marks
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location	: St. (424+600) : (425+600)
<b>Fype of sample</b>	: Soil Embankment
<b>Delivery Date</b>	: 08/01/2023
<b>Reporting Date</b>	: 14/01/2023
Reporting No.	: 49
Sample No.	: 26
,	

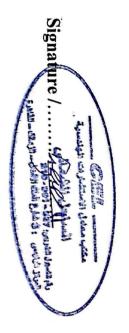
Dear Gentleman,

Attached here with the Soil Embankment delivered on 08/01/2023

### Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2 Material finer than sieve No. 200 according to ASTM D-1140
- ω 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

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken



D تليفون + فاكس : ۲۷۳۲۷۲۳۱ - ۲۷۳۲۳۰۹۳ ۲ ش الملك الأفضل الزمالك - القاهرة

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Zamalek, Cairo.

Tel.& Fax : 27367231 - 27363093

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3 El Malek El Afdal Street Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093 Signature /......

0.150	0.300	0.425	0.600	1.18	2.00	2.36	4.75	9.50	12.50	19	25	37.5	50	Sieve Size (mm)
16.0	22.2	27.8	29.1	33.8	36.9	44.4	46.4	58.2	61.2	72.6	83.1	97.1	100	Passing %

**RESULTS OF SIEVE ANALYSIS According to ASTM D-422.** 

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Sample No.

: 26

الممسوحة ضوئيا بـ CamScanner

Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسية

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Project **Company Name Reporting Date** Type of sample Location **Reporting No. Delivery Date** : Land Marks : 49 : Soil Embankment : St. (424+600) : (425+600) : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh : 14/01/2023 08/01/2023

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Signature / Tel & Fax : 27367231 - 27363093	Percentage of material finer than Sieve Size 75 μΜ (No.200)	Test	• • • • • • • •	 	e 	 Type of sample : Soil Embankment		- Project : Electric Express Tr	Company Name : Land Marks	ات الهندسية	
AGEGREEDING The second	n 12.1	Results (%)	<u>Materials finer than 75 μm (no.200) sieve</u> <u>by washing ASTM D-1140</u> .				5+600)	Electric Express Train, from Al Ain Sokhna to Marsa Matrouh		Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسية	

3 El Malek El Afdal Street Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093	Signature /	Plasticity Index	Plastic Limit	Liquid Limit		•	Sample No. :	e	Delivery Date :	Location : Type of sample :		Company Name :		
ACCREDIT	Colored and and a second	Index	nit	nit	Test	<u>Results of liquid limit and plasticity index</u> of soils according to ASTM D-4318	: 49 : 26	14/01/2023			Electric Express Train, from	La	Consulting Engineering Bureau & Laboratories	25
۲ ش الهلك الأفضل الزمائك - القاهرة تليفون + فاكس ، ۲۷۳۱۷۲۳۱ - ۲۷۳۹۲۰۹۳ www.cel-egypt.com		NP	NP	NP	Results (%)	d plasticity index ASTM D-4318					Electric Express Train, from Al Ain Sokhna to Marsa Matrouh	مكتب معامل	au & Laboratories	
										Can	nScanner	سوئيا ب r	مسوحة ذ	المر

Consulting Engineering Bureau & Laboratories	
Buroau & Lat	
ooratories	

Project **Company Name** ŝ : Land Marks •• יין ייי ואיייניין 

Location St. (424+600) : (425+600) Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample Soil Embankment

**Delivery Date** •• 08/01/2023

**Reporting Date** •• 14/01/2023

Sample No. **Reporting No.** :49

: 26

# Soil Classification According to Project Specs (Embankment)

•

Max 6 %	Max 6 %	NP	Plasticity index
		NP	Liquid Limit
		25 mm (No.40)	Characteristics of fraction passing 0.425 mm (No.40)
Max 15 %	Max 15 %	12.1	0.075 mm (No. 200).
Max 50 %	Max 30 %	27.8	0.425 mm (No. 40).
	Max 50 %	36.9	2.00 mm (No.10).
(A-1-b)	(A-1-a)	(A-1-a)	Group Classification
s Specs	Limits according Projects Specs	Results (%)	TEST

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

3 El Malek El Afdal Street Tel.& Fax : 27367231 - 27363093 ACCREDITED Testing Labortatory تليفون + فاكس + ۲۷۳۲۷۳۱ - ۲۷۳۲۳۰۹۳ www.cel-egypt.com

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Zamalek, Cairo.

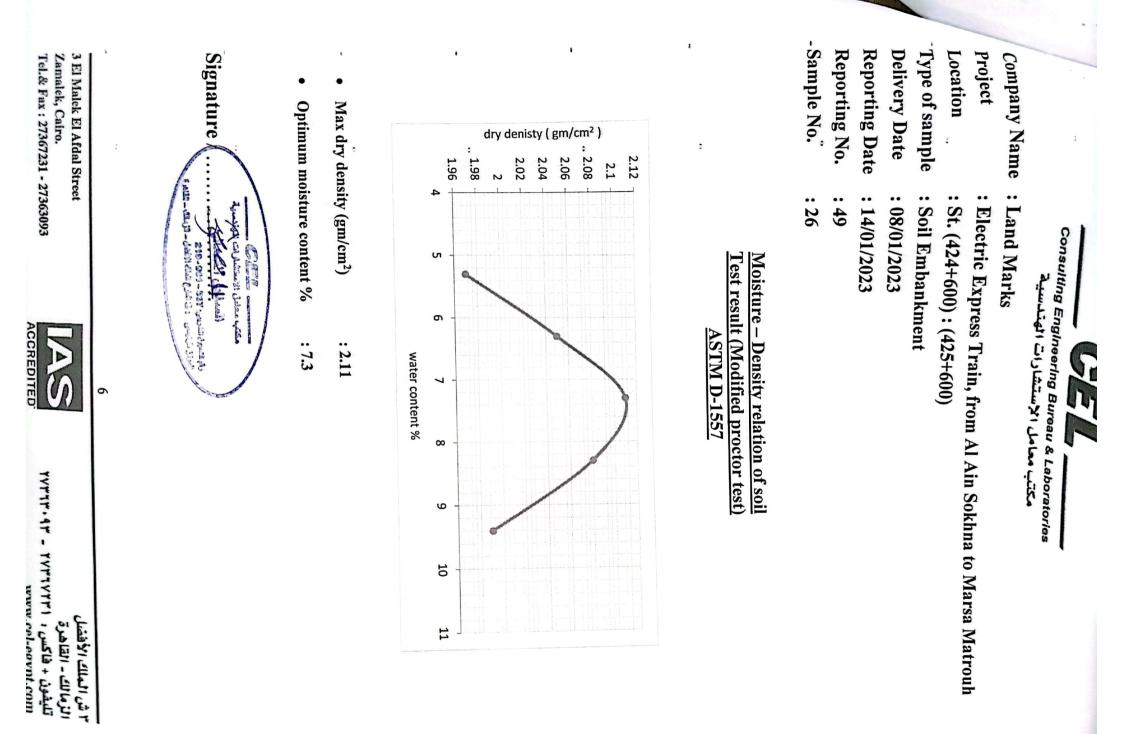


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Signature

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**Consulting Engineering Bureau & Laboratories** مكتب معامل الإستشارات الهندسية

Project Type of sample Location Company Name : Land Marks : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh •• .. Soil Embankment St. (424+600) : (425+600)

**Delivery Date** 08/01/2023

**Reporting Date** •• 49 14/01/2023

Sample No. **Reporting No.** •• 26

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

penetration         stress on piston (Mpa)           nmm         Inch         stress on piston (Mpa) $0.64$ $0.025$ $2.79$ $1.27$ $0.050$ $3.04$ $1.91$ $0.075$ $3.30$ $2.54$ $0.100$ $3.55$ $3.18$ $0.125$ $3.80$ $3.81$ $0.150$ $4.06$ $4.45$ $0.175$ $4.31$ $4.45$ $0.200$ $4.56$ $5.71$ $0.225$ $4.82$ $6.35$ $0.250$ $5.07$ $6.35$ $0.250$ $5.07$ $6.35$ $0.250$ $5.07$ $6.35$ $0.250$ $5.07$ $6.35$ $0.5.71$ $0.5.77$ $6.35$ $0.250$ $5.07$ $6.35$ $0.200$ $5.07$ $6.35$ $0.250$ $5.07$ $6.35$ $0.250$ $5.07$ $6.35$ $0.250$ $5.07$	0.10	3.55		6.90	penetration
penetration       Inch         0.025       0.025         0.050       0.050         0.075       0.100         0.100       0.125         0.125       0.150         0.175       0.175         0.200       0.225         0.250       0.250	<u>л</u> л	mple results	Sai	St. Value	 At 0.1 inch (2.54 mm)
penetration Inch 0.025 0.050 0.050 0.075 0.100 0.125 0.150 0.175 0.225 0.250	CBR %	4)	Stress (Mpa	70	<b>CBR</b> Result
penetration Inch 0.025 0.050 0.050 0.075 0.100 0.125 0.125 0.150 0.175 0.225	5.07		0	0.25	6.35
penetration         Inch       0.025         0.025       0.050         0.050       0.075         0.100       0.125         0.125       0.150         0.175       0.175         0.200       0.200	4.82	6	S	0.22	5.71
penetration         Inch       0.025         0.025       0.050         0.075       0.075         0.125       0.125         0.150       0.175	1.56	4	0	0.20	5.08
penetration         Inch       0.025         0.050       0.050         0.075       0.100         0.125       0.150	1.31	4	5	0.17	4.45
penetration Inch 0.025 0.050 0.075 0.100 0.125	1.06	4	0	0.15	3.81
penetration Inch 0.025 0.050 0.075 0.100	3.80	3	5	0.12	3.18
penetration Inch 0.025 0.050 0.075	1.55	3	0	0.10	2.54
penetration Inch 0.025 0.050	.30	3	S	0.07:	1.91
penetration Inch 0.025	.04	3	0	0.05	1.27
penetration Inch	.79	2	5	0.02:	0.64
	Contraction (Starbar)			Inch	mm
	viston (Mna)	stress on n		tration	, pene

Notes :

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Attached graph shows penetration resistance versus penetration magnitude. The sample was compacted to dry density of 2.11 (gm /cm<sup>3</sup>) at 7.3% optimum water content

2-

Ψ Surpharge\_load 4/50 Kg

Signature

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Zamalek, Cairo.

Tel.& Fax : 27367231 - 27363093

ACCREDITED Testing Laboratory

تليفون + فاكس : ۲۷۳۲۷۲۳۱ - ۲۷۳۲۳۰۹۳

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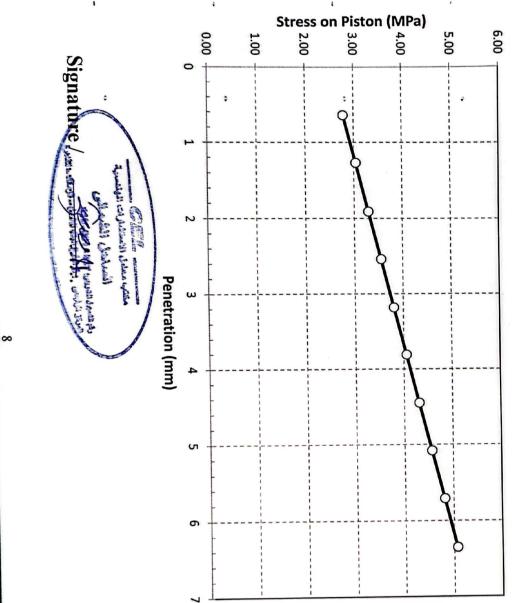
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الممسوحة ضوئيا بـ CamScanner

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### Load Penetration Curve of CBR Test <u>ASTM D-1883</u>

\$

project **Delivery Date** Type of sample Sample No. **Reporting No. Reporting Date** Location **Company** Name ٥ •• : 26 : 49 St. (424+600) : (425+600) Land Marks 14/01/2023 08/01/2023 Soil Embankment Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

الممسوحة ضوئيا بـ CamScanner

		مركز الإستشارات المندسية تنتقر والمارت والمزق			H. M. 25
REQUEST	AMALEN CALL AND	(غراء دوليون) دكتور/ سعد الجيوشي		(GARB)	Event Charles
_	Landmarks for general contracting	cting	Designer Company	Company	SGAC
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الالالالالالالالالالالالالالالالالالال	W	کی ارد	=	2523	3:00
Received by ER		R	C1 C2	2 C3 DD	MM YY HH MM
CODE-1 S1 Station	S1 to S21 Station Reference	D1 to Depot Re	o S3 eference	For Kilomet	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2 CODE - 3		Work Activity Sub Element of Activity	t of Activity		
Description of Materials					
Location to be Used		425-	425+300-425+600 (-3.0)	0 (-3.0)	
MAR Approval No				Date	
Supplier Name					
Test Requirement		Specification	ation	Clause	
<b>Reference Photos</b>	Yes attached / No	Other			
em	State of the state of the state of the	Unit	Quantity	Arrival Date	Note
2 Classification		M <sup>3</sup>	5000	3/1/2023	
		M <sup>3</sup>	5000	3/1/2023	
4 LL&P.L&PI 5 C.B.R		M <sup>3</sup>	5000	3/1/2023 3/1/2023	
Comments by:	and the second state of the second states	Co	Comments by:		
		•			
and the second of the second of the second se	AF	APPROVAL STATUS	TUS		
Organisation Name	5	Sign	, , , , , , , , , , , , , , , , , , , ,	Date	A-AWC-R
QA/QC*	omel		they want	U	
GARB**	· Ne m		my		
Employers Representative	C		-		
* Designer ** Alignment / Bridges: Culvert Only					

Page 1 of 1



2

Type of sample Project **Company Name** Sample No. **Reporting No. Reporting Date Delivery Date** Location •• : 25 : 48 : St. (424+600) : (425+600) : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh : 09/01/2023 : 03/01/2023 Land Marks Soil Embankment

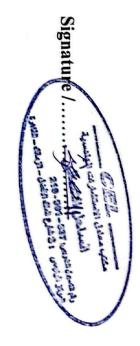
Dear Gentleman,

Attached here with the Soil Embankment delivered on 03/01/2023

### Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2 Material finer than sieve No. 200 according to ASTM D-1140
- $\omega$ 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

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken



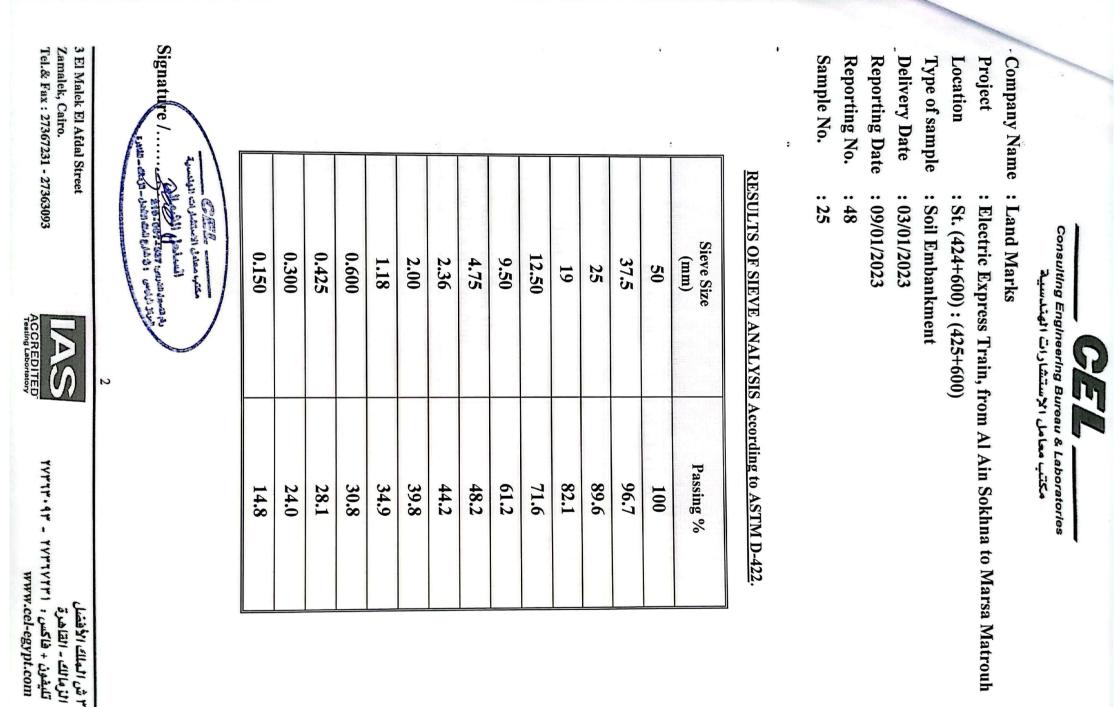
۲ ش الملك الأفضل الزمالك - القاهرة تليفون + فاكس ، ۲۷۳۶۷۲۴۱ - ۲۷۳۹۳

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Zamalek, Cairo.

Tel.& Fax : 27367231 - 27363093

ACCREDITED Testing Laboratory



ACCREDITED	Signature	Percentage of material finer than Sieve Size 75 μΜ (No.200) 12.7	Test Result (%)	Materials finer than 75 μm (no.200) sieve by washing ASTM D-1140.	Sample No. : 25	Reporting No. : 48	te :	 Location : St. (424+600) : (425+600) Type of sample : Soil Embankment		Company Name : Land M	مکتب معامل الاستشارات الهندسیة مکتب معامل الاستشارات الهندسیة	
۳ ش الملك الأفضل الزمالك - القاهرة تليفون + فاكس : ۲۷۳۲۷۲۳۱ - ۲۷۳۲۳		12.7	Results (%)	<u>no.200) sieve</u> - <u>1140</u> .					Ain Sokhna to Marsa Matrouh		Laboratories	



project : Electric Expr	: Electric Express Train, from Al Ain Sokhna to Marsa J
Location	: St. (424+600) : (425+600)
Type of sample	Type of sample : Soil Embankment
Delivery Date : 03/01/2023	: 03/01/2023
Reporting Date : 09/01/2023	: 09/01/2023
Reporting No.	: 50
Comple Vo.	:::::::::::::::::::::::::::::::::::::

### Results of liquid limit and plasti of soils according to ASTM D-4318 ty index

Plastic	Plastic Limit	Liquid Limit			
Plasticity Index	Limit	Limit		-	
				Test	
	NP	NP	NP	(%)	



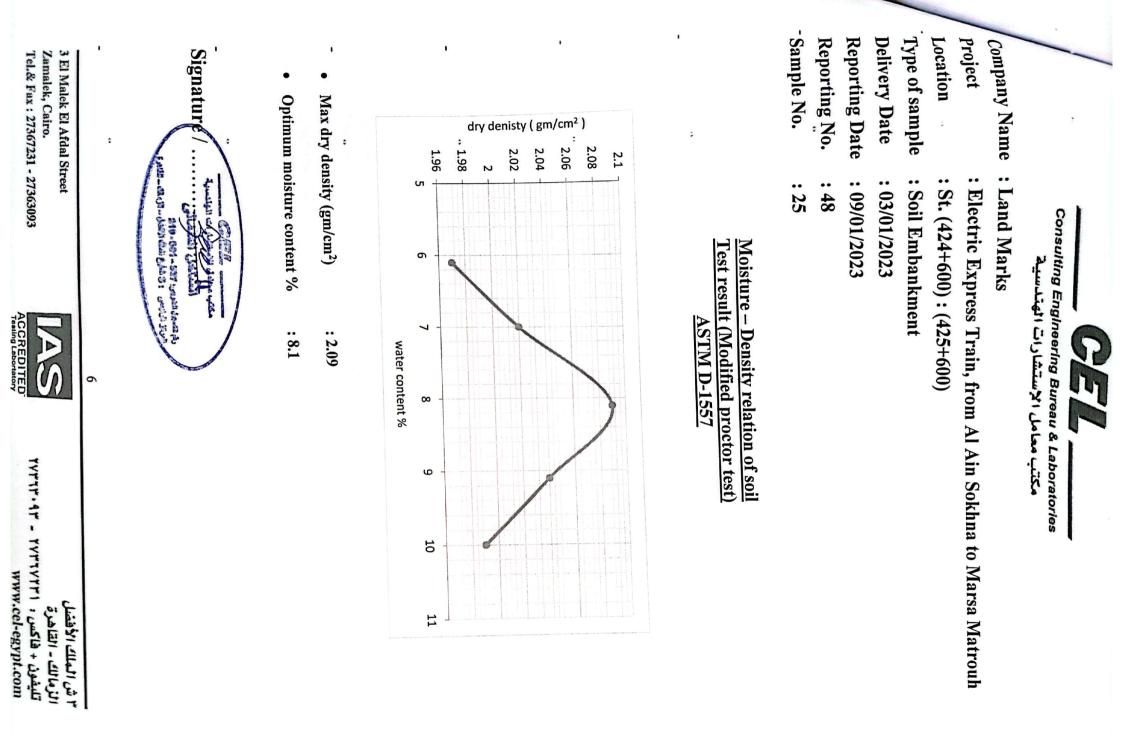
3 El Malek El Aldal Street

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الممسوحة ضوئيا بـ CamScanner

Marrouh

3 El Malek El Afdal Street	S	The test results are ( Comply - $\Box$ Not Comply) with specifications limits	Plasticity index NP Max 6 % Max 6 %	Liquid Limit NP	Characteristics of fraction passing 0.425 mm (No.40)	0.075 mm (No. 200). 12.7 Max 15 % Max 15 %	0.425 mm (No. 40). 28.1 Max 30 % Max 50 %	2.00 mm (No.10). 39.8 Max 50 %	• Group Classification (A-1-a) (A-1-a) (A-1-b)		Results Limits according	Soil Classification According to Project Specs (Embankment)		n : sample :	ny Name : Land Marks	ounsulting Engineering Bureau & L ع a salar الاستشارات الهندسية		Ain Sokhna to Ma Specs (Embankme Max 50 % Max 15 % Max 6 %	rain, from Al , rain, from Al , s+600) S+600 (A-1-a) (A-1-a) NP NP NP NP NP S+600	$[S_{\text{Term}}] \xrightarrow{\text{Structure}} S_{\text{Structure}} \xrightarrow{\text{Structure}} \xrightarrow{\text{Structure}} S_{\text{Structure}} \xrightarrow{\text{Structure}} S_{\text{Structure}} \xrightarrow{\text{Structure}} \xrightarrow{\text{Structure}} S_{\text{Structure}} \xrightarrow{\text{Structure}} $	Company Ni Project Location Type of sam Delivery Da Reporting I Reporting No. Sample No. 0.425 mn 0.425 mn 0.425 mn Character Liquid Li Plasticity Plasticity Signature Signature
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تليفون + فاكس ، ۲۷۳۶۷۳۱۱ - ۲۷۳۹۳ www.cel-egypt.com ٣ ش الملك الأفضل الزمالك - القاهرة



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**3 El Malek El Afdal Street** Tel.& Fax: 27367231 - 27363093 Zamalek, Cairo.

Signature မှ Surcharge load 450 Kg مكتب معادل الاستثبار ات الهند and the state Sugara and a sugar pa 5

at 8.1% optimum water content

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The sample was compacted to dry density of 2.09 (gm /cm<sup>3</sup>)

2--

Attached graph shows penetration resistance versus penetration magnitude.

Notes :

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		0.70
	the second s	TUIU

penetration         stress on piston (Mpa)           nmm         Inch $2.28$ 0.64 $0.025$ $2.28$ 1.27 $0.050$ $2.54$ 1.91 $0.075$ $2.79$ 3.18 $0.125$ $3.30$ 4.45 $0.175$ $3.30$ 5.71 $0.225$ $4.06$ 5.71 $0.225$ $4.31$ 6.35 $0.250$ $4.56$ 6.35 $0.250$ $4.56$ 6.35 $0.250$ $4.56$ At 0.1 inch (2.54 mm)         St. Value         Sample results $441$		3.04	06.9	penetration	
penetration       Inch         0.025       0.025         0.050       0.075         0.075       0.100         0.125       0.125         0.150       0.175         0.220       0.225         0.250       0.250	44.1	Sample results	St. Value	At 0.1 inch (2.54 mm)	•
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	CBR %	ess (Mpa)	Str	<b>CBR</b> Result	
penetration Inch 0.025 0.050 0.075 0.100 0.125 0.125 0.150 0.175 0.225	4.56		0.250	6.35	
penetration Inch 0.025 0.050 0.075 0.100 0.125 0.125 0.150 0.175 0.200	4.31	4	0.225	5.71	'
penetration Inch 0.025 0.050 0.075 0.100 0.125 0.150 0.175	1.06	4	0.200	5,08	
penetration       Inch         0.025       0.025         0.050       0.075         0.075       0.100         0.125       0.150	3.80	3	0.175	4.45	
penetration Inch 0.025 0.050 0.075 0.100 0.125	1.55	ω	0.150	3.81	
penetration Inch 0.025 0.050 0.075 0.100	.30	ω	0.125	3.18	
penetration Inch 0.025 0.050 0.075	.04	ω	0.100	2:54	÷
penetration Inch 0.025 0.050	.79	2	0.075	1.91	
penetration Inch 0.025	.54	2	0.050	1.27	
penetration Inch	.28	2	0.025	0.64	
			Inch	mm	•
	iston (Mpa)	stress on p	tration	, pene	10.000
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الممسوحة ضوئيا بـ CamScanner

Consulting Engineering Bureau & Laboratories

مكتب معامل الإستشارات الهندسية

Sample No. Type of sample Location Project **Company Name Reporting No. Reporting Date Delivery Date** : Land Marks •• : 25 : 48 : 03/01/2023 : St. (424+600) : (425+600) : 09/01/2023 Soil Embankment Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

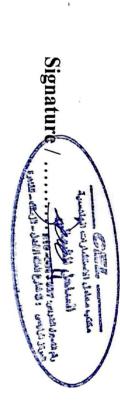
Test Results of California Bearing Ratio on Base Materials **ASTM D 1883** 

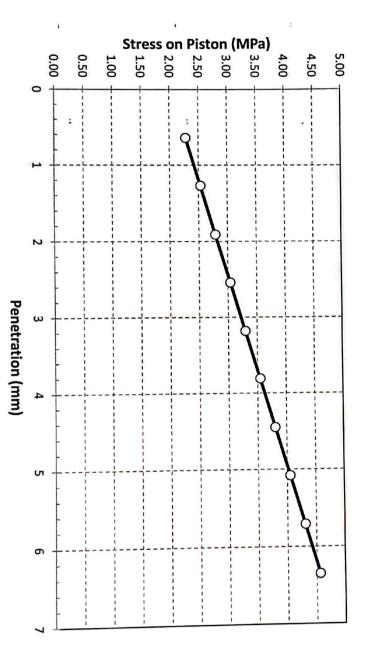
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### **ASTM D-1883**

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## Load Penetration Curve of CBR Test

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Sample No.

25

- Delivery Date Project Type of sample **Reporting No. Reporting Date** Location **Company Name** : Land Marks •• : 09/01/2023 •• Electric Express Train, from Al Ain Sokhna to Marsa Matrouh 48 St. (424+600) : (425+600) Soil Embankment 03/01/2023 Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

<ul> <li>Designer</li> <li>Alignment / Bridges: Culvert Only</li> </ul>	Employers	GARB** Mr. N.	QA/QC* Com e		Organisation Name		omm			2 Classification 3 Proctor & O.M.C		Item Description	Reference Photos Yes atta	Test Requirement	Supplier Name	MAR Approval No	Location to be Used	Description of Materials	CODE-2 CODE-3		CODE-1 \$1 to \$21	Received by ER	Contractor	Contractor Company Landmarks for general contracting	INSPECTION REQUEST	MATERIAL
		Sm (	es I	21.37	Sign	APPROVAL STATUS	Con	M <sup>3</sup>	M <sup>3</sup>	M <sup>3</sup>	M3	Unit	Yes attached / No Other	Specification			425+300-425+600 (-1.75) 425+160-425+240 (-1.0) 425+100-425+160 (-0.75) 425+240-425+300 (-0.75) 425+160-425+240(-0.5)		Sub Element of Activity	Depot Ref Work Ac	D1 to S3	MIR		neral contracting		مركز الإستشارات المندسية الاقار المندسية
		MM	the	5141251 151	Date	TUS	Comments by:	5000 18/1/2023			5000 18/1/2023	tity	-	ation Clause		Date	(-1.75) 425+240-425+300 (1.25) (-1.0) 425+240-425+300 (-1.0) (-0.75 425+160-425+240 (-0.75) (-0.75) 425+100-425+160 (-0.5) (-0.5) 425+240-425+300(-0.5)		of Activity			c1 C2 C3	1511 12023	Designer Company Date	لطرق و الکباری الم (GARB) للماری	
			Þ	A 1	e A-AWC-R			G	ŭ	ū							+300 (1.25) 5+300 (-1.0) -240 (-0.75) i+160 (-0.5) 5+300(-0.5)				Kp XXX Note	DD MM	11:00	SGAC Time	THE CASE OF THE CA	M. M. 28

Page 1 of 1

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Consulting Engineering Bureau & Laborat مکتب معامل الاستشارات الهندسیة	CEL
& Laboratories لعه بتكم	

	مكتب معامل الإستشارات الهندسية
Company Name : Land Marks	: Land Marks
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample	: Soil Embankment
Location	: St. (424+600) : (425+600)
<b>Delivery Date</b>	: 08/01/2023
<b>Reporting Date</b>	: 15/01/2023
<b>Reporting No.</b>	80 :
Sample No.	: 02
	<ul> <li>Electric Express Train, from Al Ain Sokhna to Marsa Matro</li> <li>Soil Embankment</li> <li>St. (424+600) : (425+600)</li> <li>08/01/2023</li> <li>15/01/2023</li> <li>08</li> <li>02</li> </ul>

Dear Gentleman,

Attached here with the Soil Embankment delivered on 08/01/2023

### Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2 Material finer than sieve No. 200 according to ASTM D-1140
- ω 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

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signatur 3 El Malek El Afdal Street ولم التعميل المدومية 237 - 230 - 21 الساحل الغ F

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**3 El Malek El Afdal Street** Tel.& Fax : 27367231 - 27363093 Zamalek, Cairo.

Signature المرينة الماليس المدرمين 213-091-021 مليس المدرمة المريد المرينة الماليس المدينة 3: «مسليا الملية المريد الساحل القاما " andeb (Varian EL. F

0.150	0.300	0.425	0.600	1.18	2.00	2.36	4.75	9.50	12.50	19	25	37.5	50	Sieve Size (mm)
8.8	10.8	13.6	21.1	25.9	27.8	28.0	28.7	49.8	60.1	73.8	84.2	95.5	100	Passing %

**RESULTS OF SIEVE ANALYSIS According to ASTM D-422** 

الممسوحة ضوئيا بـ CamScanner

Project Type of sample **Company Name** Sample No. **Reporting Date Delivery Date** Location **Reporting No.** •• : Land Marks : 02 : 08 •• : St. (424+600) : (425+600) •• : 15/01/2023 08/01/2023 Soil Embankment Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

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Consulting Engineering Bureau & Laboratories کتب معامل الإستشارات الهندسید	u & Laboratories مکتب معامل	الممسوحة ضوئ
•••••	Land Marks Electric Express Train, from Al Ain Sokhna to Marsa Matrouh	ا بـ CamScanner
		ſ
Delivery Date : 08/01/2023 Reporting Date : 15/01/2023		
Sample No. : 02		
<u>Materials finer than 75 μm (no.200) sieve</u> by washing ASTM D-1140.	<u>m (no.200) sieve</u> I <u>D-1140</u> .	
Test	Results (%)	
Percentage of material finer than Sieve Size 75 μΜ (No.200)	7.8	
Signature 1		
ω		
3 El Malek El Afdal Street Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093 ACCREDITED	۱ س الهلك الافضل الزمالك - القاهرة تليفون + فاكس ، ۲۷۳٦۷۲۲ - ۲۴۰۳۲۳۷۲	

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Sign ature A CEL Marth Johns دل الشريعي، 1037 - 203 مالي المريدي لالاسمى : 3 شارع المالك الاطنيل مكتب معامل ألا עוצר ולוווייט 2

Plasticity Index	Plastic Limit	Liquid Limit	Test
4.3	19.8	24.1	Results (%)

: Soil Embankment : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh : St. (424+600) : (425+600)

**Reporting Date** 

: 15/01/2023

**Reporting No.** 

: 08

Sample No.

: 02

**Delivery Date** 

: 08/01/2023

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

الممسوحة ضوئيا بـ CamScanner

Project

Type of sample

Location

**Company Name** 

: Land Marks

**Consulting Engineering Bureau & Laboratories** 

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The test results are  $( \Delta Comply - \Box Not Comply)$  with specifications limits

	(%)	Project	Projects Specs
Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	27.8	Max 50 %	
0.425 mm (No. 40).	13.6	Max 30 %	Max 50 %
0.075 mm (No. 200).	8.7	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)	25 mm (No.40)		
Liquid Limit	24.1	-	
Plasticity index	4.3	Max 6 %	Max 6 %
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# Soil Classification According to Project Specs (Embankment)

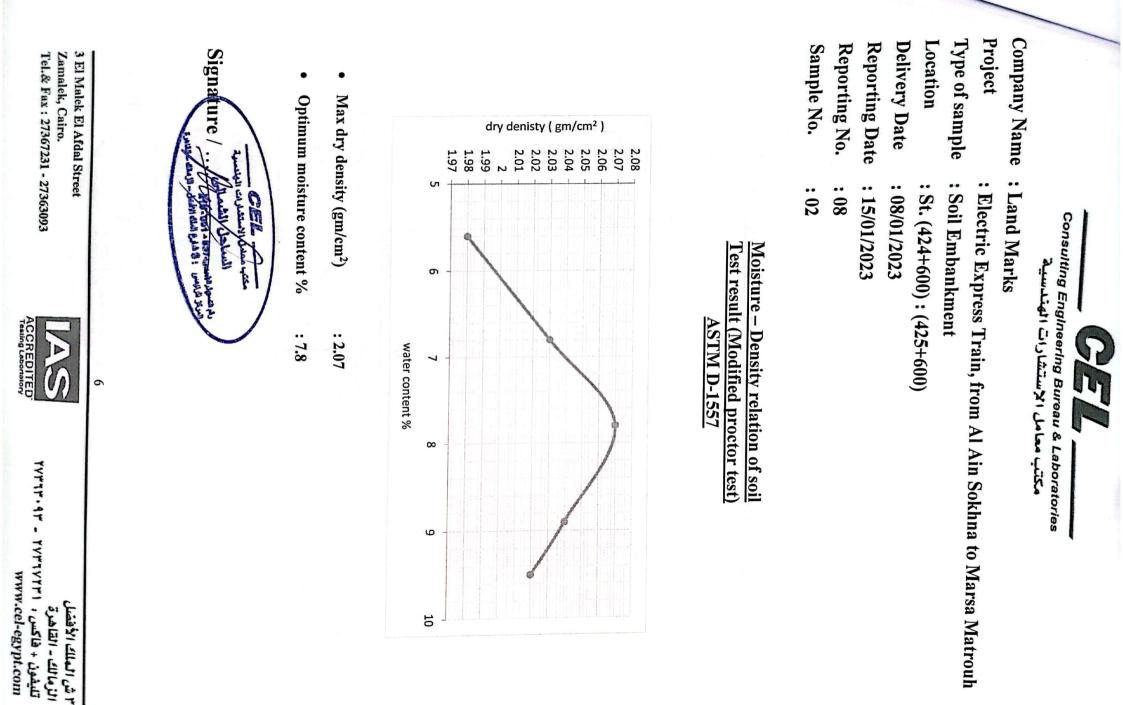
TEST	Results (%)	Limits a Project	Limits according Projects Specs
<ul> <li>Group Classification</li> </ul>	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	27.8	Max 50 %	
0.425 mm (No. 40).	13.6	Max 30 %	Max 50 %
0.075 mm (No. 200).	7.8	Max 15 %	Max 15 %

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Project **Reporting Date Delivery Date** Location Type of sample **Company Name** Sample No. **Reporting No.** : 02 : 08 •• : Land Marks : 08/01/2023 •• : 15/01/2023 St. (424+600) : (425+600) Soil Embankment Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

الممسوحة ضوئيا بـ CamScanner





Consulting Engineering Bureau & مكتب معامل الإستشارات الهندسية Laboratories

الممسوحة ضوئيا بـ CamScanner

- project **Delivery Date** Location Type of sample Company Name : Land Marks : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Soil Embankment St. (424+600) : (425+600) 08/01/2023
- **Reporting Date** 15/01/2023
- **Reporting No.** 8
- Sample No. : 02

# <u>Test Results of California Bearing Ratio on Base Materials</u> ASTM D 1883

A REAL PROPERTY AND A REAL

	3.13	0,90	penetration
45.42	Sample results	St. Value	At 0.1 inch (2.54 mm)
CBR %	Stress (Mpa)	Stress	CBR Result
4.72		0.250	6.35
4.62		0.225	5.71
4.37		0.200	5.08
4.00		0.175	4.45
3.72		0.150	3.81
3.48		0.125	3.18
3.13		0.100	2.54
2.85		0.075	1.91
2.64		0.050	1.27
2.47		0.025	0.64
		Inch	mm
stress on piston (Mpa)	stress on 1	penetration	pene

Notes :

- Attached graph shows penetration resistance versus penetration magnitude
- -
- 2 The sample was compacted to dry density of 2.07 (gm /cm<sup>3</sup>)
- $\frac{1}{2}$ at 7.8 % optimum water content.
- Surcharge load 4.50 Kg

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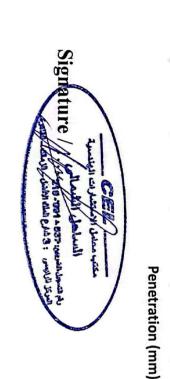
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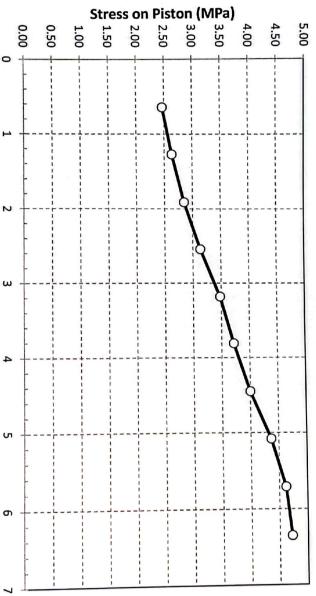
۳ ش الهلك الأفضل الزمالك - القاهرة تليفون + فاكس ، ۲۷۳۲۷۲۳۱ - ۲۷۳۲۲۳۹ www.cel-egypt.com

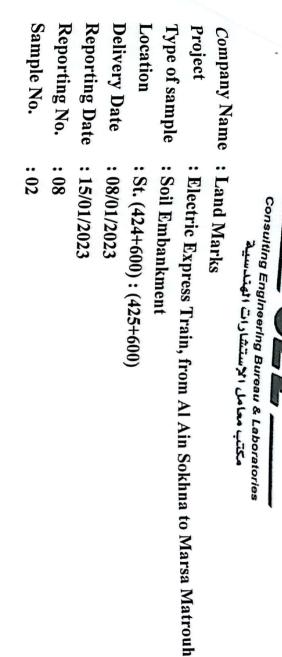


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### Load Penetration Curve of CBR Test <u>ASTM D-1883</u>



### السيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة.. وبعد،،

بالإحالة إلى مشروع القطار الكهربائى فائق السرعه ( العلمين – فوكة ) ( القطاع السادس ) نتشرف بأن نرفق لسيادتكم طيه المقايسة المعدلة بعد المفاوضة لبنود الأعمال بتاريخ ١٨-١٢-١٢ للقطاع الآتى:

الأتجاه	إلى المحطة	من المحطة	اسم الشركة	مسلسل
العلمين	220+1	٤٢٤+٦٠٠	لاندماركس للمقاولات العمومية	١

برجاء من سيادتكم التفضل بالأحاطه والتوجيه بالازم

وتفضلوا بقبول فائق الأحترام والتقدير،،،

رئيس الإدارة المركزية

المنطقة الخامسة غرب الدلتا

عميد مهندس/ C.CELCC

"هاتي محمد محمود طه "





**صركز الإستشارات الهندسية** للنقل و الطارات و الطرق ( خبراء دوليون ) دكتور/ سعد الجيوشي



inale!	عمومية اتحاوا			مشروع القطار الكهربائي فائق السرعة قطاع ( المقايسة المعدلة بعد المفاوضة بتاريخ ١٨-١٢-٢١ ٢٠ لبنود الاعمال تنفيذ ش	
			CONTRACTOR OF A DESCRIPTION OF A DESCRIP	القطاع من المحطة ٢٠٠ + ٢٤ الى .	
الاجمالي	القنة	الكمية	الوحدة	بيان الأعسال	قم البند
and the second second			and the second	اعمال الردم	*

				بالمتر المكعب اعمال تحميل وتوريد ونقل أتربة مطابقة للمواصفات وتشغيلها بإستخدام آلات	
				التسوية بسمك لا يزيد عن ٥٠ سم حتى منسوب ٢ متر وبسمك لايزيد عن ٢٥ سم	
				للإستكمال المنسوب التصميمي لتشكيل الجسر والأكتاف	
				( نسبة تحمل كاليفورنيا لا تقل عن ١٥% ) ورشها بالمياه الأصولية للوصول إلى نسبة	
				الرطوبة المطلوبة والدمك الجيد بالهر اسات للوصول إلى أقصى كثافة جافة ( ٩٥% من	
				الكثافة الجافة القصوى ) ويتم التنفيذ طبقاً للمناسب التصميمية والقطاعات العرضية	
1,017,104	۹.	14154,000	٣٩	النموذجية والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقآ لأصول الصناعة	
				ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف.	
				- في حالة طلب جهاز الإشراف زيادة نسبة الدمك عن ٩٩% يحسب زيادة ١ جنيه على	1-1"
				زيادة نسبة الدمك لكل ١ %	
				<ul> <li>مسافة النقل ۲ كم و يتم احتساب علاوة ١,٥ جنيه لكل كم بالزيادة</li> </ul>	
				<ul> <li>السعر يشمل عمل تشوينات وتخليط واختبارات ونقل لموقع العمل.</li> </ul>	
				-السعر يشمل قيمة المادة المحجرية	
				علاوة مسافة النقل ١٥٥ كم	
4,441,474	444,0.	14154,404	٣٩		
				علاوة تحصيل رسوم الكارتة والموازين طبقا للائحة الشركة الوطنية	
444,800	١٣	14184,804	٣۴		1
0, Y ,				الإجمالي	
			( uév hi	ا خمس ملايين وسبعمانة ألفاً جنيه مضري فه	

مدير المشروع الاستشارى مدير المشروع الهينة مدير المشروع المقاول العناوى م / مصطفى نجم م / أحمد أبوبكر م/ ابراه أحداثونكر شركة لاند ماركس للقاولات العمومية واعمال متكاملة وتوريدات -1.5 Lawles 107-497-799:0 GA.

Z م/محمد حسني فياض CALOH. Utte يعتمد رئيس الادارة المركزية منطقة غرب الدلتا الاسكندرية - مرسى مطرول 0 عميد مهندس / " هانی محمد محمول طه

مدير عام مشروعات الهينة



قائمة الكميات الواردة بالمستخلص جاري (٢)

اعمال الجسر الترابي لمشروع القطار الكهربائي السريع(العين السخنة -العاصمة الادارية -العلمين - مطروح ) قطاع (العلمين -فوكة ) لتنفيذ المسافة من الكم ٢٠٠ +٢٤ الي الكم ٢٠٠ +٢٢ يطول ١ كم اتجاه العلمين

رقم البند و بيانه : ( ٢-١ ) علاوة تحصيل رسوم الكارتة والموازين طبقا للائحة الشركة الوطنية

تــنفيـذ : شركة لاندماركس للمقاولات العمومية

مقدار العمل السابق : . . . .

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	الابعاد ( متر )		لكيلومتري	الموقع اا	بيان الاعمال بالمقايسة	
	مساحة المقطع	طول	الى	من		
9077,00. 19,100		0	٤٢٥+١٠.	٤٢٤+٦٠٠	القطاع الأول	
٧٥٦٥,٣٠٧	10,181	0	٤٢٥+٦٠٠	٤٢٥+١٠.	القطاع الثاني	
12127,00	/	اجمالي الكميات خلال فترة المستخلص الحالية (٣٥)				
18127,00	/		الكلـي (٣م)	الاجمالــي		

مهندس الإستشاري مهندس الشركة مكتب XYZ م [محمد خليل م/احمد ابوبکر احمر او دکر

مهندس الاستشاري مكتب د/سعد الجيوشي م/مصطفي نجم my

الحناوى

مهندس الهيئة



قائمة الكميات الواردة بالمستخلص جاري (٢)

اعمال الجسر الترابي لمشروع القطار الكهربائي السريع(العين السخنة -العاصمة الادارية -العلمين - مطروح ) قطاع (العلمين -فوكة ) لتنفيذ المسافة من الكم ٢٠٠ -٤٢٤ الي الكم ٢٠٠ -٤٢٤ بطول ١ كم اتجاه العلمين

رقم البند و بيانه : ( ٢-١ ) علاوة مسافة النقل ١٥٥ كم

تنفيذ : شركة لاندماركس للمقاولات العمومية

مقدار العمل السابق : ... ٣

الكمية	الابعاد ( متر )		لكيلومتري	الموقع ا	بيان الاعمال بالمقايسة	
	مساحة المقطع	طول	من الى			
9077,00.	19,100	0	٤٢٥+١٠٠	٤٢٤+٦	القطاع الأول	
٧٥٦٥,٣٠٧	10,181	0	٤٢٥+٦٠٠	٤٢٥+١٠٠	القطاع الثاني	
17127,00	/	لية (٣م)	اجمالي			
17127,00	V		الكلـي (٣م)	الاجمالــي		

مهندس الاستشاري مهندس الاستشاري مهندس الهيئة مهندس الشركة مکتب XYZ مكتب د/سعد الجيوشي الحناوى م / إبراه م/مصطفي نجم م / محمد خليل م / أحمد أيوبكر in احمالور



Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

### : Land marks Co. Company

Project : Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka Subject : Determine the deformation and strength characteristics of soil by the plate loading test according specifications DIN 18134:2012-04 and project requirements Test Location: Station (425 + 300 to 425 + 600) . Test Date : 30/01/2023 Repot Date : 31/01/2023 Type of soil : A-1-a Test level : Uber Embankment (Ferma) Report No. : 31:36

### Dear Gentleman.

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

### Apparatus

- 1. Loading plates consists of two plates with 600 mm and 300 mm diameter
- 2. The thickness of plates 30 mm
- 3. Dial gauges with accuracy 0.01 mm to measuring the settlement
- 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 roller compactor 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 600 mm and 300 mm diameter, hydraulic jack and 3 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. For a 600 mm loading plate, the limit values are 2.5 kg/cm<sup>2</sup>
- 6. The load shall be applied in six stages, in approximately equal increments, until the required maximum normal stress is reached.
- 7. Each change in load (from stage to stage) shall be completed within one minute
- 8. The load shall be released in 3 stages, to 50 %, 25 %, and approximately 2 % of the maximum load.
- 9. Following unloading, a further (2nd) loading cycle shall be carried out, in which, however, the load is to be increased only to the penultimate stage of the first cycle (so that the full load is not reached).
- 10. At each stage the load shall be maintained until the rate of settlement of the plate becomes less than 0.02 mm/min. CEI

11. Remove the loads

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### 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 plate
- Measuring device used Type of soil
- Type of Bedding material below the plate -Weathering condition
- Time and date of measurements Unusual observation made during test
- Dial gauge reading and corresponding normal stress Loading-settlement curve
- Description of the soil condition below the plate after testing

### Report

Type of soil : A-1-a Test level : Uber Embankment (Ferma) • Job requirement : Ev2 > 600 Kg/cm<sup>2</sup> (60 MPa).

Item	Descriptions
- Type of bedding material below the plate	Natural Soil
- Weather condition	Sunny
- Plate Diameter (mm)	600
- date of measurement	30/01/2023
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

### Evaluation and representation of results

Test	Stat	tion	First Cycle	Second Cycle	Ev2/ Ev1	
No.	From To		Ev1 (kg/cm <sup>2</sup> )	Ev2 (kg/cm <sup>2</sup> )	Ratio	
1	425+300	425+350	900	1500	1.7	
2	425+350	425+400	957	1552	1.6	
3	425+400	425+450	1957	1800	0.9	
4	425+450	425+500	1047	1286	1.2	
5	425+500	425+550	900	1667	1.9	
6	425+550	425+600	1452	2143	1.5	



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Consulting Engineering Bureau & Laboratories

مكتب معامل الإستشارات الهندسية

Company Name	: Land marks Co.
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka
Test Date	: 30/01/2023
report date	: 31/01/2023
Location	: Station 425+300 to 425+350
Test No.	: 01
Nonreg	etitive Static Plate Load Tests of Soils

Nonrepetitive Static Plate Load Tests of Soils DIN 18134

Data sheet

### Loading Stage (1)

Loading	g Stress Kg/cm2	Dial 1	Settlement	Dial 2	Settlement	Dial 2	Settlement	A
		Dial	mm	Dial 2	mm	Dial 3	mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.42	19.84	0.16	19.45	0.55	19.43	0.57	0.43
2	0.83	19.56	0.44	19.19	0.81	19.13	0.87	0.71
3	1.25	19.38	0.62	18.95	1.05	18.88	1.12	0.93
4	1.67	19.22	0.78	18.73	1.27	18.71	1.29	1.11
5	2.08	19.04	0.96	18.54	1.46	18.52	1.48	1.30
6	2.50	18.90	1.10	18.40	1.60	18.36	1.64	1.45

### Unloading Stage (1)

Loading	Stress	Dial 1	Settlement	Diel 2	Settlement	Dial 2	Settlement	0
Loading	Kg/cm2	Dial I	mm	Dial 2	mm	Dial 3	mm	Average
1	2.50	18.90	1.10	18.40	1.60	18.36	1.64	1.45
2	1 25	19 00	1.00	18.52	1.48	18.48	1.52	1.33
3	0.625	19.18	0.82	18.73	1.27	18.66	1.34	1.14
4	0.01	19.48	0.52	19.23	0.77	19.18	0.82	0.70

### Loading Stage (2)

Loading	Stress	Dial 1	Settlement	Diel 2 Settlement	Dial 2	Settlement	0	
	Kg/cm2	Dial I	mm	Dial 2	mm	Dial 3	mm	Average
0	0.42	19.36	0.64	18.95	1.05	18.97	1.03	0.91
1	0.83	19.26	0.74	18.81	1.19	18.83	1.17	1.03
2	1.25	19.15	0.85	18.68	1.32	18.69	1.31	1.16
3	1.67	19.06	0.94	18.56	1.44	18.58	1.42	1.27
4	2.08	18.92	1.08	18.47	1.53	18.48	1.52	1.38
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!

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Company Name Project Test Date report date Location Test No.

• •

: Land marks Co.

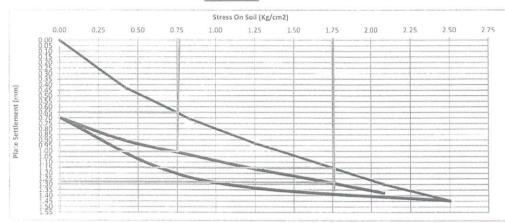
: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka : 30/01/2023

: 31/01/2023

: Station 425+300 to 425+350

: 01

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm2)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.43	0.71	0.93	1.11	1.30	1.45

	0.42	0.83	1.25	1.67	2.08	2.50	Stress (Kg/cm2)	2.50
	0.43	0.71	0.93	1.11	1.30	1.45	Settlement (mm)	1.45
					- <b>hereiten men er en </b>			descenario a secondo
	S1 (mm)≃	0.65	S2(mm)=	1.15	ΔS =	0.50		
;		900	and the second se	Contraction of the second second	Roman V	1.111.111.111.111		
	1	2	3	4	5	]	Ev2/Ev1 = 1.7	1
			1	and the second second second second	- Provinsi in an	1	Terrent and the second and the second s	-

UnLoading (1)

Stage(Kg)

1

7065

2

3533

1.25

1.33

3

1768

0.625

1.14

4

0

0.01

0.70

		-		
Ev1	(kg/cm2)	=	(0.75*D*∆σ)/∆S	900

600

D (mm) =

Loading (2)		0	1	2	3	4	5	
Stage(Kg)		0	1186.92	2345.6	3532.5	4719.4	5878.1	
Stress (Kg/	cm2)	0.01	0.42	0.83	1.25	1.67	2.08	
Settlement	(mm)	0.70	0.91	1.03	1.16	1.27	1.38	
An feit on the state of the sta								
D (mm) =	600		S1 (mm)=	1.00	S2(mm)=	1.30	ΔS =	0.3

Ev1 = Modulus of deformation during the loading stage.

Ev2 = Modulus of deformation during the Reloading stage.

D = Plate diameter (mm)

Ds = The difference between 0.3 and 0.7 from the maximum loading (smax) (kg/cm<sup>2</sup>)

DS = Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)



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Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

Company Name	: Land marks Co.	
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh	Priority Sector (6) – Alamein to Foka
Test Date	: 30/01/2023	
report date	: 31/01/2023	
Location	: Station 425+350 to 425+400	
Test No.	: 02	
Nonrep	etitive Static Plate Load Tests of Soils	Data sheet
	DIN 18134	Data Sheet

### Loading Stage (1)

1

Loading	Stress	Dial 1	Settlement	Diel 2	Settlement	Dial 2	Settlement	Average
	Kg/cm2	Dial 1	mm	Dial 2	mm	Dial 3	mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.42	19.84	0.16	19.76	0.24	19.70	0.30	0.23
2	0.83	19.72	0.28	19.57	0.43	19.48	0.52	0.41
3	1.25	19.57	0.43	19.35	0.65	19.38	0.62	0.57
4	1.67	19.39	0.61	19.04	0.96	19.09	0.91	0.83
5	2.08	19.21	0.79	18.84	1.16	18.90	1.10	1.02
6	2.50	19.00	1.00	18.68	1.32	18.79	1.21	1.18

### Unloading Stage (1)

Loading	Stress	Dial 1	Settlement	Dial 2	Settlement	Dial 3	Settlement	Average
Loading	Kg/cm2	Dial I	mm	mm		Dial S	mm	Average
1	2.50	19.00	1.00	18.68	1.32	18.79	1.21	1.18
2	1.25	19.09	0.91	18.84	1.16	18.87	1.13	1.07
3	0.625	19.24	0.76	19.05	0.95	19.06	0.94	0.88
4	0.01	19.61	0.39	19.48	0.52	19.45	0.55	0.49

### Loading Stage (2)

Loading Stress	Stress	Dial 1	Settlement	Dial 2	Settlement	Diel 2	Settlement	Augrage	
	Kg/cm2	Dial I	mm	Dial 2	mm	Dial 3	mm	Average	
0	0.42	19.44	0.56	19.30	0.70	19 31	0.69	0.65	
1	0.83	19.31	0.69	19.13	0.87	19.17	0.83	0.80	
2	1.25	19.22	0.78	18.99	1.01	19.03	0.97	0.92	
3	1.67	19.13	0.87	18.86	1.14	18.93	1.07	1.03	
4	2.08	19.04	0.96	18.73	1.27	18.83	1.17	1.13	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	

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Company Name Project Test Date report date Location Test No.

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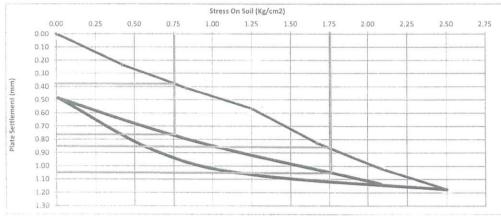
: Land marks Co. : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka : 30/01/2023

: 31/01/2023

: Station 425+350 to 425+400

:02

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm2)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.23	0.41	0.57	0.83	1.02	1.18

UnLoading (1)	1	2	3	4
Stage(Kg)	7065	3533	1768	0
Stress (Kg/cm2)	2.50	1.25	0.625	0.01
Settlement (mm)	1.18	1.07	0.88	0.49

Ev2/Ev1 = 1.6

D (mm) = 600		S1 (mm)=	0.38	S2(mm)=	0.85	∆S =	0.47
Ev1 (kg/cm2) = (0.75°D	Δσ)/Δ5		957				
Loading (2)	0	1	2	3	4	5	
Stage(Kg)	0	1186 92	2345 6	3532.5	4719.4	5878.1	
Stress (Kg/cm2)	0.01	0.42	0.83	1.25	1.67	2.08	
Settlement (mm)	0.49	0.65	0.80	0.92	1.03	1.13	
D /	1						
D (mm) = 600	L	S1 (mm)=	0.76	S2(mm)=	1.05	∆S =	0.29
Ev2 (kg/cm2) = (0.75*D*	Δσ)/ΔS		1552				

Ev2 = Modulus of deformation during the Reloading stage.

D = Plate diameter (mm)

Ds = The difference between 0.3 and 0.7 from the maximum loading (smax) (kg/cm<sup>2</sup>)

DS = Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)



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Company Name	: Land marks Co.	
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Price	ority Sector (6) – Alamein to Foka
lest Date	: 30/01/2023	
report date	: 31/01/2023	
Location	: Station 425+400 to 425+450	
Test No.	: 03	
Nonrep	etitive Static Plate Load Tests of Soils	Data sheet
	DIN 18134	Data sheet

### Loading Stage (1)

. . .

Loading Stres	Stress	Dial 1	Settlement	Dial 2	Settlement	Dial 2	Settlement	A	
	Kg/cm2	Dial	mm	Dial 2	mm	Dial 3	mm	Average	
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00	
1	0.42	19.66	0.34	19.62	0.38	19.61	0.39	0.37	
2	0.83	19.58	0.42	19.48	0.52	19.48	0.52	0.49	
3	1.25	19.50	0.50	19.34	0.66	19.34	0.66	0.61	
4	1.67	19.45	0.55	19.25	0.75	19.24	0.76	0.69	
5	2.08	19.38	0.62	19.14	0.86	19.17	0.83	0.77	
6	2.50	19.30	0.70	19.03	0.97	19.08	0.92	0.86	

### Unloading Stage (1)

Loading	Stress	Dial 1	Settlement	Diel 2	Settlement	Dial 2	Settlement	A
Loading	Kg/cm2	Dial I	mm	Dial 2 Dial 3		Average		
1	2.50	19.30	0.70	19.03	0.97	19.08	0.92	0.86
2	1.25	19.38	0.62	19.18	0.82	19.19	0.81	0.75
3	0.625	19.43	0.57	19.33	0.67	19.36	0.64	0.63
4	0.01	19.70	0.30	19.69	0.31	19.81	0.19	0.27

### Loading Stage (2)

Loading Sti	Stress	Dial 1	Settlement	Dial 2	Settlement	Dial 2	Settlement	A	
	Kg/cm2	Dial I	mm Dial 2		mm	Dial 3	mm	Average	
0	0.42	19.56	0.44	19.50	0.50	19.59	0.41	0.45	
1	0.83	19.49	0.51	19.39	0.61	19.47	0.53	0.55	
2	1.25	19.43	0.57	19.28	0.72	19.32	0.68	0.66	
3	1.67	19.35	0.65	19.17	0.83	19.19	0.81	0.76	
4	2.08	19.28	0.72	19.02	0.98	19.08	0.92	0.87	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	

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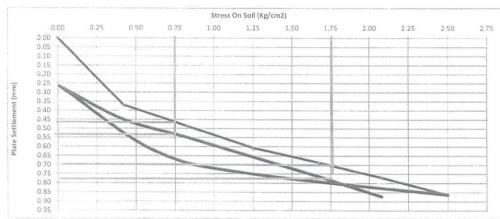


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Company Name Project Test Dato report date Location Test No. : Land marks Co. : Electric Express Train, from Al Aln Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka : 30/01/2023 : 31/01/2023 : Station 425+400 to 425+450

: 03

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm2)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.37	0.49	0.61	0.69	0.77	0.86

UnLoading (1)	1	2	3	4
Stage(Kg)	7065	3533	1768	0
Stress (Kg/cm2)	2.50	1.25	0.625	0.01
Settlement (mm)	0.86	0.75	0.63	0.27

Ev2/Ev1 =

0.9

D (mm) = 600		S1 (mm)=	0.47	S2(mm)=	0.70	AS =	0.23
Ev1 (kg/cm2) = (0.75*D	*Δσ)/ΔS		1957				
Loading (2)	0	1	2	3	4	5	
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	
Stress (Kg/cm2)	0.01	0.42	0.83	1.25	1.67	2.08	
Settlement (mm)	0.27	0.45	0.55	0.66	0.76	0.87	
D ()	٦		0.50				
D (mm) = 600	1	S1 (mm)=	0.53	S2(mm)=	0.78	ΔS =	0.25
Ev2 (kg/cm2) = (0.75*D	*Δσ)/ΔS		1800				

Ev1 = Modulus of deformation during the loading stage.

Ev2 = Modulus of deformation during the Reloading stage.

D = Plate diameter (mm)

Ds = The difference between 0.3 and 0.7 from the maximum loading (smax) (kg/cm<sup>2</sup>)

DS = Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)





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 Company Name
 : Land marks Co.

 Project
 : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka

 Test Date
 : 30/01/2023

 report date
 : 31/01/2023

 Location
 : Station 425+450 to 425+500

 Test No.
 : 04

 Nonrepetitive Static Plate Load Tests of Soils
 Deter cheet

DIN 18134

Data sheet

### Loading Stage (1)

Loading	Stress	Dial 1	Settlement	Diel 2	Settlement	Diel 2	Settlement	A
	Kg/cm2	Dial I	mm	Dial 2	mm	Dial 3	mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.42	19.67	0.33	19.93	0.07	19.34	0.66	0.35
2	0.83	19.54	0.46	19.81	0.19	19.25	0.75	0.47
3	1.25	19.36	0.64	19.65	0.35	18.94	1.06	0.68
4	1.67	19.19	0.81	19.56	0.44	18.74	1.26	0.84
5	2.08	18.98	1.02	19.42	0.58	18.45	1.55	1.05
6	2.50	18.80	1.20	19.31	0.69	18.25	1.75	1.21

### Unloading Stage (1)

Loading	Stress	Dial 1	Settlement	Dial 2	Settlement	Dial 3	Settlement	A	
Loaung	Kg/cm2	Dial I	mm	Diai 2	mm Diai		mm	Average	
1	2.50	18.80	1.20	19.31	0.69	18.25	1.75	1.21	
2	1.25	18.97	1.03	19.40	0.60	18.41	1.59	1.07	
3	0.625	19.20	0.80	19.51	0.49	18.68	1.32	0.87	
4	0.01	19.69	0.31	19.77	0.23	19.08	0.92	0.49	

### Loading Stage (2)

Loading	Stress	- Dial 1	Settlement	Dial 2	Settlement	Diel 2	Settlement	A	
	Kg/cm2		mm	Dial 2	mm	Dial 3	mm	Average	
0	0.42	19.45	0.55	19.44	0.56	18.94	1.06	. 0.72	
1	0.83	19.25	0.75	19.11	0.89	18.74	1.26	0.97	
2	1.25	19.08	0.92	18.85	1.15	18.54	1.46	1.18	
3	1.67	19.00	1.00	18.67	1.33	18.45	1.55	1.29	
4	2.08	18.90	1.10	18.57	1.43	18.36	1.64	1.39	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	

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Company Name Project Test Date report date Location Test No.

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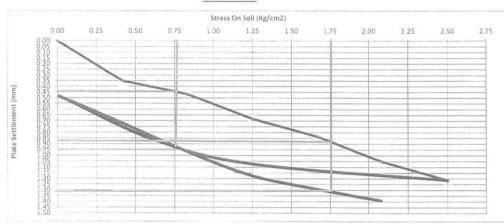
: Land marks Co.

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka : 30/01/2023

: 31/01/2023 : Station 425+450 to 425+500

:04

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm2)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.35	0.47	0.68	0.84	1.05	1.21

D (mm) = 600		S1 (mm)=	0.45	S2(mm)=	0.88	ΔS =	0.43
/1 (kg/cm2) = (0.75*D	*Δσ)/ΔS		1047			Laurenza fallen den er en	
Loading (2)	0	1	2	3	4	5	
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	
Stress (Kg/cm2)	0.01	0.42	0.83	1.25	1.67	2.08	
	0.49	0.72	0.97	1.18	1.29	1.39	

D (mm) =	600	S1 (mm)=	0.95	S2(mm)=	1.30	ΔS =	0.35
Ev2 (kg/cm2) =	(0.75*D*Δσ)/ΔS		1286				

UnLoading (1)	1	2	3	4
Stage(Kg)	7065	3533	1768	0
Stress (Kg/cm2)	2.50	1.25	0.625	0.01
Settlement (mm)	1.21	1.07	0.87	0.49

Ev2/Ev1 = 1.2

Ev1 = Modulus of deformation during the loading stage.

Ev2 = Modulus of deformation during the Reloading stage.

D = Plate diameter (mm)

Ds = The difference between 0.3 and 0.7 from the maximum loading (smax) (kg/cm<sup>2</sup>)

DS = Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)



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Company Name	: Land marks Co.	
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka	a
Test Date	: 30/01/2023	
report date	: 31/01/2023	
Location	: Station 425+500 to 425+550	
Test No.	: 05	
Nonrep	etitive Static Plate Load Tests of Soils	
	DIN 18134 Data sheet	

DIN 18134

### Loading Stage (1)

F,

Loading	Stress	Dial 1	Settlement	Dial O	Settlement	0.10	Settlement		
	Kg/cm2	Diai I	mm	Dial 2	mm	Dial 3	mm	Average	
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00	
1	0.42	19.54	0.46	19.69	0.31	19.51	0.49	0.42	
2	0.83	19.17	0.83	19.58	0.42	19.35	0.65	0.63	
3	1.25	18.95	1.05	19.36	0.64	19.21	0.79	0.83	
4	1.67	18.54	1.46	19.20	0.80	19.06	0.94	1.07	
5	2.08	18.26	1.74	19.16	0.84	18.88	1.12	1.23	
6	2.50	18.10	1.90	18.88	1.12	18.73	1.27	1.43	

### Unloading Stage (1)

Loading	Stress	Dial 1	Dial 1 Settlement Dial 2		Settlement	D: 1 0	Settlement		
Louding	Kg/cm2		mm	Dial 2	mm	Dial 3	mm	Average	
1	2.50	18.10	1.90	18.88	1.12	18.73	1.27	1.43	
2	1.25	18.12	1.88	18.93	1.07	18.76	1.24	1.40	
3	0.625	18 26	174	19.00	1.00	18.84	1.16	1.30	
4	0.01	18.61	1.39	19.27	0.73	19.01	0.99	1.04	

### Loading Stage (2)

Loading	Stress	Dial 1	Settlement	Dial 0	Settlement		Settlement		
	Kg/cm2	Diai I	mm	Dial 2	mm	Dial 3	mm	Average	
0	0.42	18.58	1.42	19.22	0.78	18.92	1.08	1.09	
1	0.83	18.46	1.54	19.12	0.88	18.79	1.21	1.21	
2	1.25	18.33	1.67	19.05	0.95	18.63	1.37	1.33	
3	1.67	18.19	1.81	18.96	1.04	18.51	1.49	1.45	
4	2.08	18.09	1.91	18.83	1.17	18.38	1.62	1.57	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	



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Company Name Project Test Date report date Location Test No.

: Land marks Co.

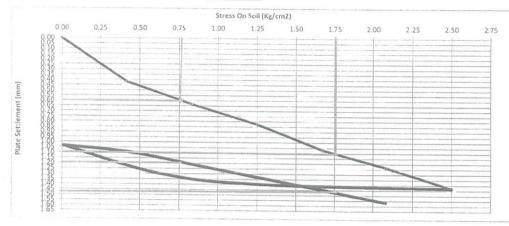
: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka

: 30/01/2023

: 31/01/2023

: Station 425+500 to 425+550 : 05

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm2)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.42	0.63	0.83	1.07	1.23	1.43

0.60

900

S2(mm)=

1.10

 $\Delta S =$ 

0.50

S1 (mm)=

UnLoading (1)	1	2	3	4
Stage(Kg)	7065	3533	1768	0
Stress (Kg/cm2)	2.50	1.25	0.625	0.01
Settlement (mm)	1.43	1.40	1.30	1.04

Ev2/Ev1 = 1.9

Stage(Kg)         0         1186.92         2345.6         3532.5         4719.4         5878.1           Stress (Kg/cm2)         0 01         0.42         0.83         1.25         1 67         2 08           Settlement (mm)         1.04         1.09         1 21         1.33         1.45         1.57           D (mm) =         600         S1 (mm)=         1.20         S2(mm)=         1 47         0.5 =         0.2	Loading	(2)	0	1	2	3	4	5	
Settlement (mm) 1.04 1.09 1.21 1.33 1.45 1.57	Stage(K	g)	0	1186.92	2345.6	3532.5	4719.4	5878.1	
	Stress (Kg/	cm2)	0.01	0.42	0.83	1.25	1 67	2 08	
D(mm) = 600 $S1(mm) = 120$ $S2(mm) = 147$ $AC = 0.2$	Settlement	(mm)	1.04	1.09	1.21	1.33	1.45	1.57	
	D (mm) =	600	1	S1 (mm)=	1.20	S2(mm)=	1.47	AS =	0 27

Ev1 = Modulus of deformation during the loading stage.

Ev2 = Modulus of deformation during the Reloading stage.

D = Plate diameter (mm)

D (mm) =

600

Ev1 (kg/cm2) =  $(0.75^{*}D^{*}\Delta\sigma)/\Delta S$ 

 $\ensuremath{\texttt{Ds}}$  = The difference between 0.3 and 0.7 from the maximum loading (smax) (kg/cm²)

DS = Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)



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Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

 Company Name
 : Land marks Co.

 Project
 : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka

 Test Date
 : 30/01/2023

 report date
 : 31/01/2023

 Location
 : Station 425+550 to 425+600

 Test No.
 : 06

 Date about

DIN 18134

Data sheet

### Loading Stage (1)

5

Loading	Stress	Dial 1	Settlement	Diel 0	Settlement	Dial 2	Settlement	A.u.o.v.o.c.o.	
	Kg/cm2 Dial 1		mm	Dial 2	mm	Dial 3	mm	Average	
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00	
1	0.42	19.75	0.25	19.77	0.23	19.72	0.28	0.25	
2	0.83	19.56	0.44	19.64	0.36	19.65	0.35	0.38	
3	1.25	19.42	0.58	19.48	0.52	19.58	0.42	0.51	
4	1.67	19.24	0.76	19.31	0.69	19.52	0.48	0.64	
5	2.08	19.12	0.88	19.19	0.81	19.42	0.58	0.76	
6	2.50	18.99	1.01	19.02	0.98	19.34	0.66	0.88	

### Unloading Stage (1)

Loading	Stress	Dial 1	Settlement	Dial 2	Settlement	Dial 2	Settlement	Average
Loaung	Kg/cm2	Dial I	mm	Dial Z	mm	Dial 3	mm	Average
1	2.50	18.99	1.01	19.02	0.98	19.34	0.66	0.88
2	1.25	19.10	0.90	19.18	0.82	19.42	0.58	0.77
3	0.625	19.23	0.77	19.31	0.69	19.50	0.50	0.65
4	0.01	19.66	0.34	19.70	0.30	19.85	0.15	0.26

### Loading Stage (2)

Loading	Stress	Dial 1	Settlement	Dial 2	Settlement	Dial 2	Settlement	Average	
	Kg/cm2 Dial 1		mm	Dial 2	mm	Dial 3	mm	Average	
0	0.42	19.46	0.54	19.51	0.49	19.64	0.36	0.46	
1	0 83	19.33	0.67	19.38	0.62	19.51	0.49	0.59	
2	1.25	19.22	0.78	19.26	0.74	19.48	0.52	0.68	
3	1.67	19.15	0.85	19.19	0.81	19.42	0.58	0.75	
4	2.08	19.04	0.96	19.02	0.98	19.36	0.64	0.86	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	



۳ ش الملك الأفضل الزمالك - القاهرة تليفون + فاكس : ۲۷۳٦۷۲۳۱ - ۲۷۳٦۳۰۹۳ www.cel-egypt.com

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مكتب معامل الإستشارات الهندسية

Company Name Project Test Date report date Location Test No.

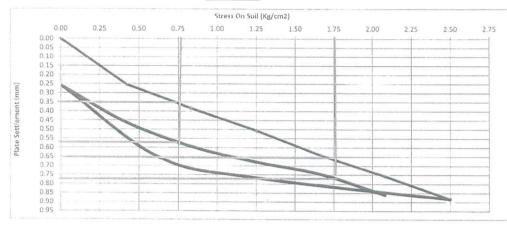
: Land marks Co.

: Flectric Express Train, from Al Ain Sokhna to Marsa, Matrouh Priority Sector (6) Alamein to Foka : 30/01/2023

: 31/01/2023

: Station 425+550 to 425+600 :06

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm2)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.25	0.38	0.51	0.64	0.76	0.88

0.35

\$2(mm)=

0.66

S1 (mm)=

UnLoading (1)	1	2	3	4
Stage(Kg)	7065	3533	1768	0
Stress (Kg/cm2)	2.50	1.25	0.625	0.01
Settlement (mm)	0.88	0.77	0.65	0.26

1.5

1452				
2	3	4	5	Ev2/Ev1 =

 $\Delta S =$ 

0.31

Loading (2	2)	0	1	2	3	4	5	
Stage(Kg	)	0	1186.92	2345.6	3532.5	4719.4	5878.1	
Stress (Kg/c	:m2)	0.01	0.42	0.83	1.25	1.67	2.08	
Settlement (mm)		0.26	0.46	0.59	0.68	0.75	0.86	
					0.00	0.10	0.00	
D (mm) =	600		S1 (mm)=	0.57	S2(mm)=	0.78	ΔS =	0.2

Ev1 = Modulus of deformation	during the	loading stage.
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Ev2 = Modulus of deformation during the Reloading stage.

D = Plate diameter (mm)

D (mm) =

600

Ev1 (kg/cm2) =  $(0.75*D*\Delta\sigma)/\Delta S$ 

Ds = The difference between 0.3 and 0.7 from the maximum loading (smax) (kg/cm<sup>2</sup>)

DS = Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)



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