

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 66
Sample No. : 03

Dear Gentleman,

Attached here with the Soil Embankment delivered on 12/10/2022

Materials test

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

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

Signature /



Company Name : EG CONTRACK
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Type of sample : Soil Embankment – middle embankment
 Location : St (500+000): (504+160)
 Delivery Date : 12/10/2022
 Reporting Date : 18/10/2022
 Reporting No. : 66
 Sample No. : 03

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	96.1
25	82.9
19	73.7
12.50	59.1
9.50	44.2
4.75	35.9
2.36	32.8
2.00	30.8
1.18	28.0
0.600	26.7
0.425	24.9
0.300	20.2
0.150	16.8

Signature /

مكتب معامل الاستشارات الهندسية
 ٢٧٣٦٣٠٩٣ - ٢٧٣٦٧٢٣١
 ٢٧٣٦٣٠٩٣ - ٢٧٣٦٧٢٣١

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 66
Sample No. : 03

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	14.9

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

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 66
Sample No. : 03

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

Test	Results (%)
Liquid Limit	22.6
Plastic Limit	17.8
Plasticity Index	4.8

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 66
Sample No. : 03

Soil Classification According to Project Specs (Embankment)

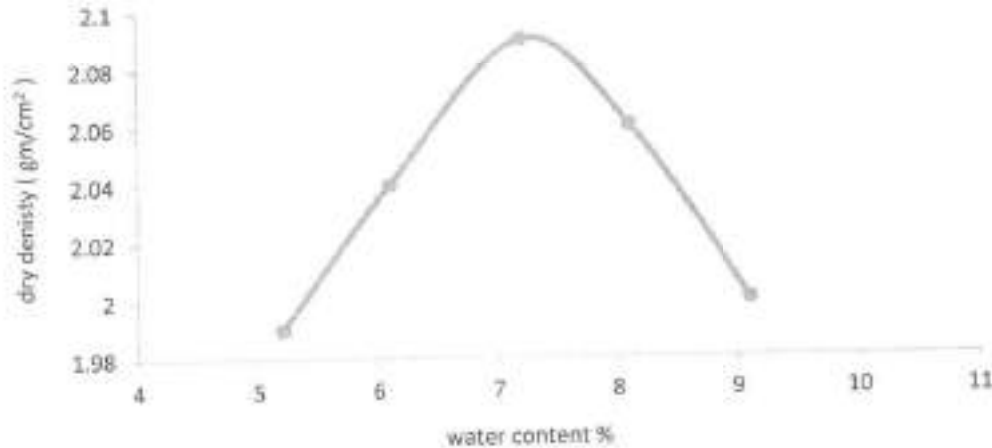
TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	29.8	Max 50 %	-----
0.425 mm (No. 40).	24.1	Max 30 %	Max 50 %
0.075 mm (No. 200).	14.6	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	22.6	-----	-----
Plasticity index	4.8	Max 6 %	Max 6 %

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

Signature / 
مكتب معامل الاستشارات الهندسية
3 شارع الملك فيصل - القاهرة
تليفون : 27367231 - 27363093
فاكس : 27367231

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 66
Sample No. : 03

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



- Max dry density (gm/cm³) : 2.09
- Optimum moisture content % : 7.2

Signature /

مكتب معامل الاستشارات الهندسية
الضاحي
د. محمد
البركات
البركات

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

Dear Gentleman,

Attached here with the Soil Embankment delivered on 12/10/2022

Materials test

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

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

Signature /

The stamp contains the CEL logo and the following text: مكتب معامل الاستشارات الهندسية, القاهرة, رقم التسجيل: 237 - 222 - 219, and a signature.

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	98.6
25	84.4
19	77.2
12.50	63.6
9.50	46.5
4.75	37.1
2.36	34.0
2.00	30.8
1.18	28.7
0.600	26.0
0.425	24.9
0.300	20.4
0.150	17.0

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	14.9

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

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

Test	Results (%)
Liquid Limit	22.1
Plastic Limit	17.2
Plasticity Index	4.9

Signature 
م.م. محمد عبد الحليم عبد الحليم
المهندس الاستشاري
رقم الترخيص: 1337 - 1999 - 2418
الحيات: 1 - شارع شاذي - 11511 - القاهرة

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

Soil Classification According to Project Specs (Embankment)

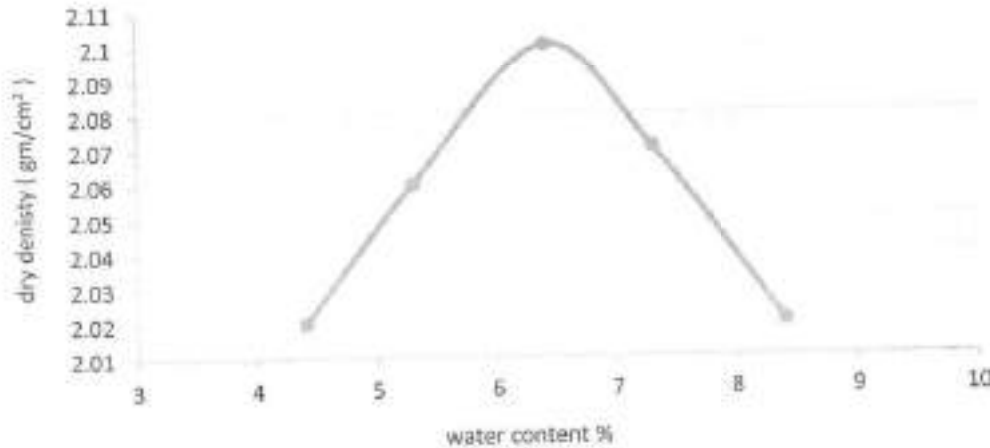
TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	30.8	Max 50 %	-----
0.425 mm (No. 40).	24.9	Max 30 %	Max 50 %
0.075 mm (No. 200).	14.9	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	22.1	-----	-----
Plasticity index	4.9	Max 6 %	Max 6 %

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

Signature 

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

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



- Max dry density (gm/cm³) : 2.10
- Optimum moisture content % : 6.4

Signature /

مكتب معامل الإستشارات الهندسية
الهندسة
د. محمد عبد الله
210/2021 - 007
210/2021 - 007
210/2021 - 007

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

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

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	2.08
1.27	0.050	2.31
1.91	0.075	2.54
2.54	0.100	2.76
3.18	0.125	2.99
3.81	0.150	3.22
4.45	0.175	3.42
5.08	0.200	3.63
5.71	0.225	3.78
6.35	0.250	3.85

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	40.1
	6.90	2.76	

Notes :

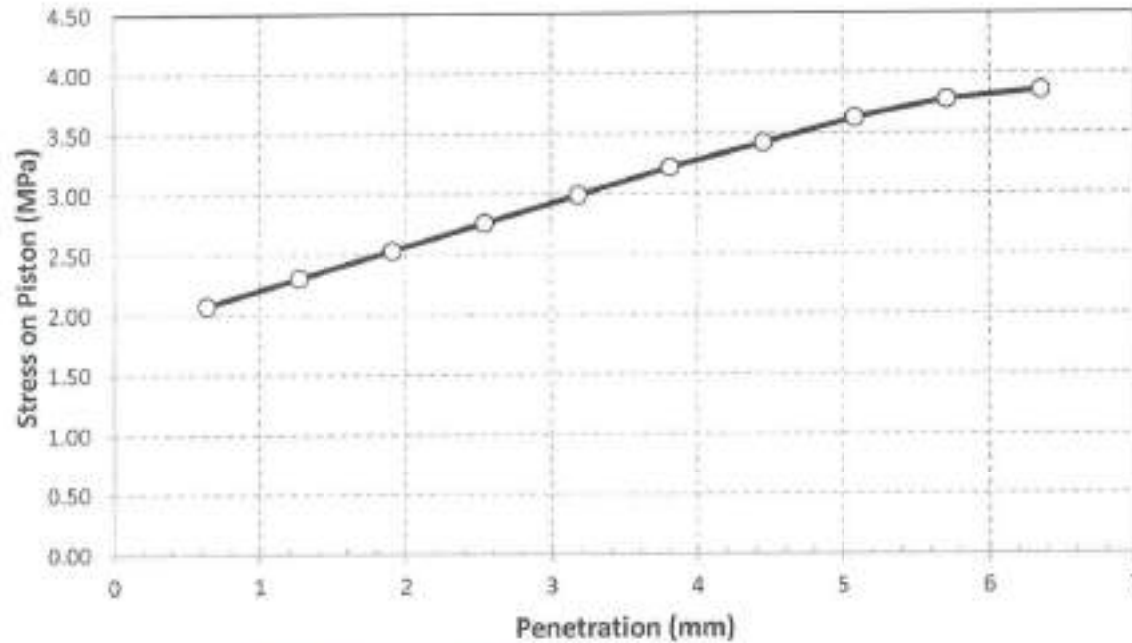
- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.10 (gm /cm³) at 6.4 % optimum water content.
- 3- Surcharge load = 50 Kg.

Signature /

مكتب معامل الاستشارات الهندسية
البريد الإلكتروني: info@cel-egypt.com
رقم هاتف القاهرة: ٢٧٣٦٧٢٣١ - ٢٧٣٦٧٢٣٢
البريد الإلكتروني: info@cel-egypt.com - القاهرة

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (500+000): (504+160)
Delivery Date : 12/10/2022
Reporting Date : 18/10/2022
Reporting No. : 67
Sample No. : 04

Load Penetration Curve of CBR Test
ASTM D-1883



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مكتب معامل الاستشارات الهندسية
الهندس / 
م.ع. ٢٧٣٦٣٠٩٣ - ٢٧٣٦٧٢٣١

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 68
Sample No. : 05

Dear Gentleman,

Attached here with the Soil Embankment delivered on 25/10/2022

Materials test

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

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

Signature 

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 68
Sample No. : 05

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.1
25	80.3
19	71.5
12.50	59.2
9.50	43.3
4.75	36.1
2.36	34.3
2.00	30.7
1.18	28.7
0.600	26.9
0.425	23.5
0.300	22.2
0.150	15.9

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 68
Sample No. : 05

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	13.1

Signature 

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 68
Sample No. : 05

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

Test	Results (%)
Liquid Limit	24.1
Plastic Limit	18.9
Plasticity Index	5.2


Signature /
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رئيس قسم المعاملات - القاهرة
مكتب معامل الاستشارات الهندسية

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 68
Sample No. : 05

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	30.7	Max 50 %	-----
0.425 mm (No. 40).	23.5	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.1	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	24.1	-----	-----
Plasticity index	5.2	Max 6 %	Max 6 %

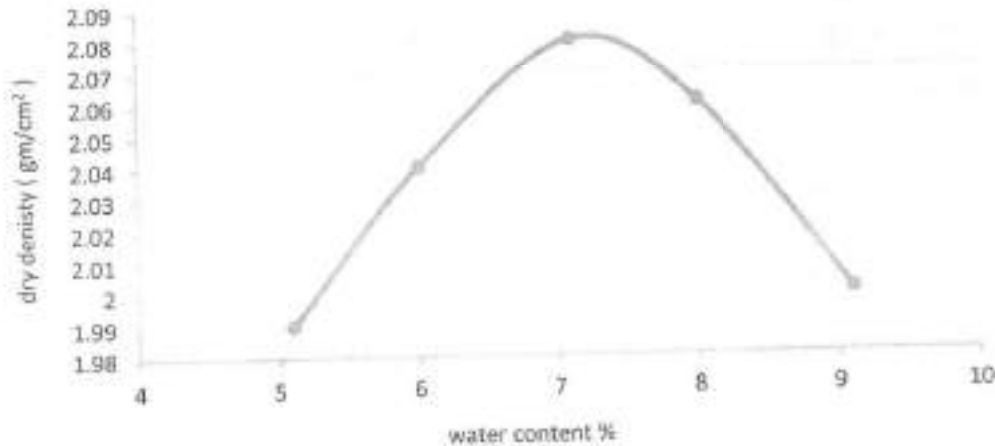
The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 68
Sample No. : 05

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



- Max dry density (gm/cm³) : 2.08
- Optimum moisture content % : 7.1

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

Dear Gentleman,

Attached here with the Soil Embankment delivered on 25/10/2022

Materials test

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

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

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	95.5
25	79.8
19	70.3
12.50	58.1
9.50	46.2
4.75	32.8
2.36	29.2
2.00	27.9
1.18	25.8
0.600	23.2
0.425	21.3
0.300	19.0
0.150	14.5

Signature /

مكتب معامل الاستشارات الهندسية
المعامل الشمسية
رقم التسجيل: ٢٧٣٦٧٢٣١
تاريخ الترخيص: ٢٠١٩/٠٩/٢٣

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	11.9


 Signature / *[Signature]*
 الزمالة - القاهرة
 ٢٧٣٦٣٠٩٣ - ٢٧٣٦٧٢٣١
 ٢٧٣٦٣٠٩٣ - ٢٧٣٦٧٢٣١

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

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

Test	Results (%)
Liquid Limit	23.5
Plastic Limit	18.6
Plasticity Index	4.9

Signature / 

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	27.9	Max 50 %	-----
0.425 mm (No. 40).	21.3	Max 30 %	Max 50 %
0.075 mm (No. 200).	11.9	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	2.07	-----	-----
Plasticity index	7.4	Max 6 %	Max 6 %

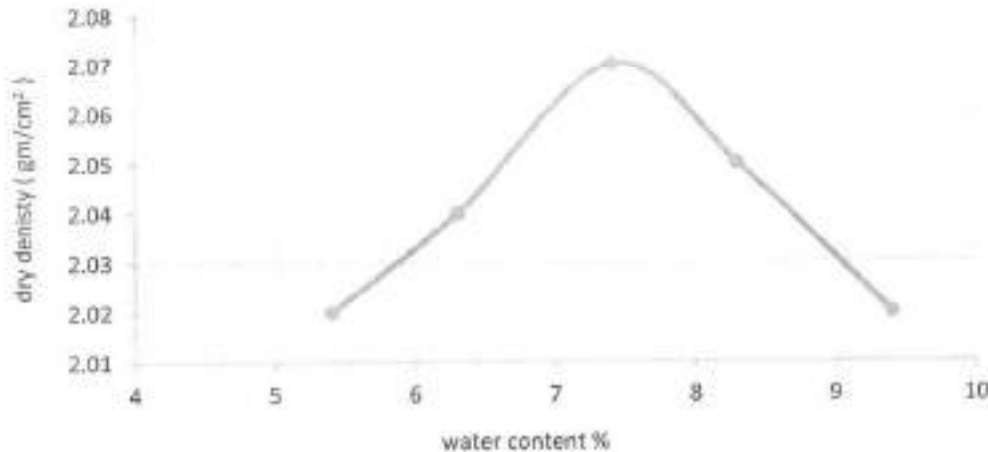
The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature


مكتب معامل الاستشارات الهندسية
الخبير المهندس
د. محمد عبد الله عبد الله
رقم ترخيص المهندس: ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٤٣
مركز الشدني ١ شارع بركة الدخان - الزمالة - القاهرة

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

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



- Max dry density (gm/cm³) : 2.07
- Optimum moisture content % : 7.4

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

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

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	1.83
1.27	0.050	1.97
1.91	0.075	2.12
2.54	0.100	2.32
3.18	0.125	2.53
3.81	0.150	2.64
4.45	0.175	2.73
5.08	0.200	2.83
5.71	0.225	2.92
6.35	0.250	2.97

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	33.7
	6.90	2.32	

Notes :

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.07 (gm /cm³) at 7.4 % optimum water content.
- 3- Surcharge load 4.50 Kg.

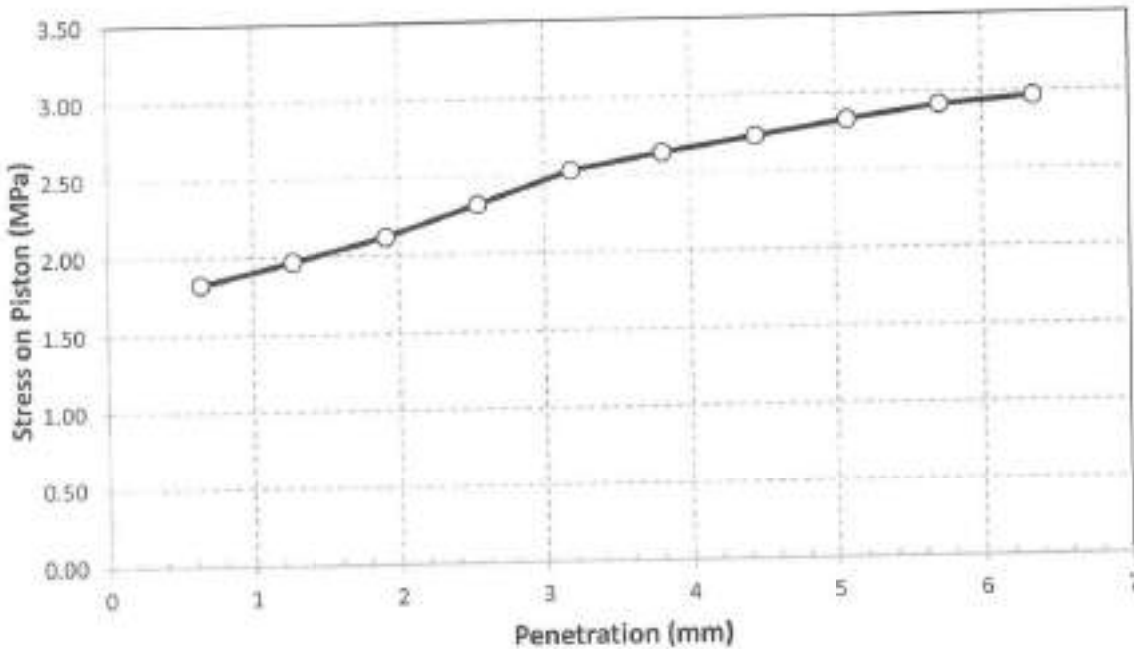
Signature / ...

مكتب معامل الاستشارات الهندسية

رقم التسجيل المميز : 2287 - 2001 - 2005
مركز عمل : شارع نيكيتا - القاهرة

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (503+500): (504+160)
Delivery Date : 25/10/2022
Reporting Date : 01/11/2022
Reporting No. : 69
Sample No. : 06

Load Penetration Curve of CBR Test ASTM D-1883



Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 70
Sample No. : 01

Dear Gentleman,

Attached here with the Soil Embankment delivered on 01/11/2022

Materials test

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

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

Signature /


Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 70
Sample No. : 01

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.4
25	82.5
19	73.3
12.50	59.7
9.50	44.4
4.75	36.6
2.36	33.5
2.00	30.1
1.18	27.5
0.600	23.8
0.425	20.2
0.300	17.0
0.150	16.2

Signature /.....



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 70
Sample No. : 01

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	13.2

Signature /



Company Name : EG CONTRACK
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Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 70
Sample No. : 01

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

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

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 70
Sample No. : 01

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	30.1	Max 50 %	-----
0.425 mm (No. 40).	20.2	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.2	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

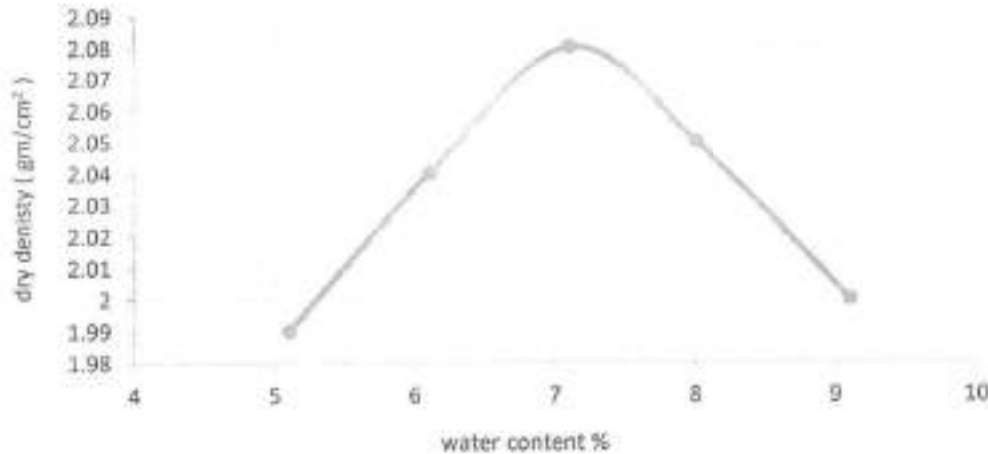
The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 70
Sample No. : 01

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



- Max dry density (gm/cm³) : 2.08
- Optimum moisture content % : 7.1

Signature /

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 71
Sample No. : 02

Dear Gentleman,

Attached here with the Soil Embankment delivered on 01/11/2022

Materials test

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

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

Signature /.....



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 71
Sample No. : 02

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.1
25	84.5
19	75.1
12.50	62.8
9.50	48.3
4.75	35.1
2.36	30.7
2.00	28.8
1.18	25.5
0.600	21.7
0.425	19.6
0.300	16.7
0.150	14.0

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 71
Sample No. : 02

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	12.6

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 71
Sample No. : 02

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

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

Signature / ..
مكتب معامل الاستشارات الهندسية
3 شارع الملك الراحل
27367231 - 27363093
www.cel-egypt.com

Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 71
Sample No. : 02

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	28.8	Max 50 %	-----
0.425 mm (No. 40).	19.6	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.6	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

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

Company Name : EG CONTRACT

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Embankment – middle embankment

Location : St (501+660): (503+900)

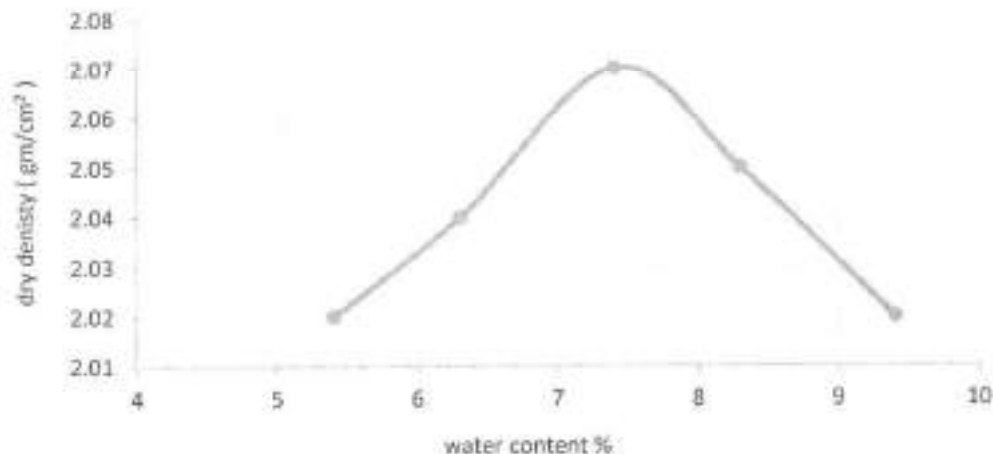
Delivery Date : 01/11/2022

Reporting Date : 06/11/2022

Reporting No. : 71

Sample No. : 02

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



- Max dry density (gm/cm²) : 2.07
- Optimum moisture content % : 7.4

Signature /



Company Name : EG CONTRACK
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Type of sample : Soil Embankment – middle embankment
Location : St (501+660): (503+900)
Delivery Date : 01/11/2022
Reporting Date : 06/11/2022
Reporting No. : 71
Sample No. : 02

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

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	2.08
1.27	0.050	2.23
1.91	0.075	2.43
2.54	0.100	2.64
3.18	0.125	2.79
3.81	0.150	2.94
4.45	0.175	3.04
5.08	0.200	3.14
5.71	0.225	3.25
6.35	0.250	3.35

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	38.2
	6.90	2.64	

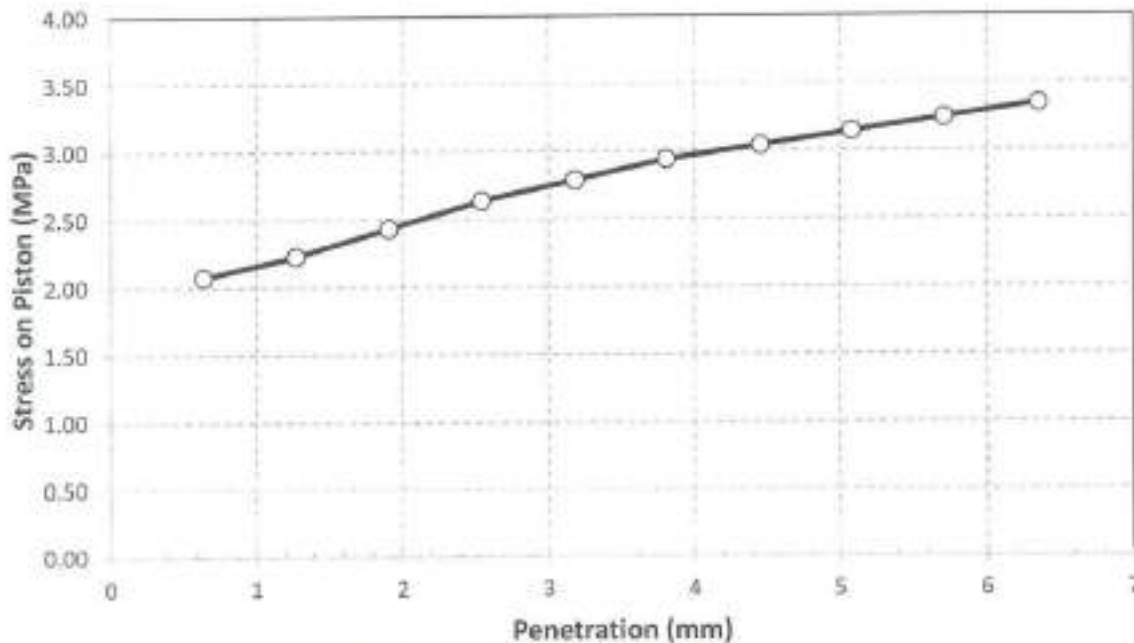
Notes :

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.07 (gm /cm³) at 7.4 % optimum water content.
- 3- Surcharge load 4.50 Kg.

Signature / 

Company Name : EG CONTRACK
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Reporting No. : 71
Sample No. : 02

Load Penetration Curve of CBR Test ASTM D-1883



Signature /

مكتب معامل الاستشارات الهندسية
القاهرة
م.م. محمد الشاذلي
م.م. أحمد الشاذلي
م.م. أحمد الشاذلي

قائمة الكميات الواردة بالمستخلص جاري (2)

مشروع: أعمال الجسر القروي والأعمال الصناعية لمشروع القطار الكهربائي السريع (العين السخنة - مطروح) لتنفيذ أعمال الجسر القروي (قطاع العلين / فوكه) المسافة من الكم 500+000 إلى 504+160 بطول 4.16 كيلو متر اتجاه النجيلة

رقم البند وبيانه : (١-٣) أعمال توريد وتشغيل التربة صالحة للردم
تسفيد : شركة ايجي كونترك

مقدار العمل السابق : 0.00 م 3

الكمية	الأبعاد (متر)		الموقع الكيلومري		بيان الأعمال بالمقايضة
	مساحة المقطع	طول	من	إلى	
14098.64	5.423	2600	502+600	500+000	القطاع الأول
13608.09	8.723	1560	504+160	502+600	القطاع الثاني
27706.73	إجمالي الكميات خلال فترة المستخلص الحالية (م ³)				
27706.73	الاجمالي الكلي (م ³)				

مهندس الشركة
م / محمود عمر
مهندس الاستشاري
مكتب XYZ
م / محمد خليل
مهندس الاستشاري
مكتب د سعد الجوشي
م / مصطفى نجم
مهندس الهيئة
م / أحمد محمد حناوي

قائمة الكميات الواردة بالمستخلص جاري (2)

مشروع: أعمال الجسر القروي والأعمال الصناعية لمشروع القطار الكهربائي السريع (العين السخنة - مطروح) لتنفيذ أعمال الجسر القروي (قطاع العلمين / فوكه) المسافة من الكم 500+000 إلى الكم 504+160 بطول 4.16 كيلو متر اتجاه التجهيلة

رقم البند و بيانه : (١-٣) علاوة مسافة نقل 245 كم

تنفيذ : شركة انجي كونترالك

مقدار العمل السابق : 0.00 م 3

الكمية	الأبعاد (متر)		الموقع الكيلومري		بيان الأعمال بالمقاييس
	مساحة المقطع	طول	إلى	من	
14098.64	5.423	2600	502+600	500+000	القطاع الأول
13608.09	8.723	1560	504+160	502+600	القطاع الثاني
27706.73	اجمالي الكميات خلال فترة المستخلص الحالية (م ³)				
27706.73	الاجمالي الكلي (م ³)				

مهندس الهيئة

م / إبراهيم الحناوي

مهندس الاستشاري

م / مصطفى نجم

مهندس الاستشاري

م / محمد خليل

مهندس الشركة

م / محمود عمر

قائمة الكميات الواردة بالمستخلص جاري (2)

مشروع: اعمال الجسر الترابي والاعمال الصناعية لمشروع القطار الكهربائي السريع (العين السخنة - مطروح) لتنفيذ اعمال الجسر الترابي (قطاع العلين / فوكه) المسافة من الكم 500+000 الى الكم 504+160 بطول 4.16 كيلو متر اتجاه النجيلة

رقم البند و بيانه : (١٠٣) علاوة تحصيل رسوم الكارثة والموازن طبقا للائحة الشركة الوطنية
تسفيد : شركة ايجي كونتراك

مقدار العمل السابق : 0.00 م 3

الكمية	الابعاد (متر)		الموقع الكيلومري		بيان الاعمال بالمقايضة
	مساحة المقطع	طول	الى	من	
14098.64	5.423	2600	502+600	500+000	القطاع الأول
13608.09	8.723	1560	504+160	502+600	القطاع الثاني
27706.73	اجمالي الكميات خلال فترة المستخلص الحالية (م ³)				
27706.73	الاجمالي الكلي (م ³)				

مهندس الهيئة

م / ابراهيم العنوي

مهندس الاستشاري

م / مصطفى نجم

مهندس الاستشاري

م / محمد خليل

مهندس الشركة

م / محمود عمر

المنطقة الخامسة - (غرب الدلتا)

المسيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة.. وبعد،،

بالإحالة إلى مشروع القطار الكهربائي فائق السرعة (العلمين - فوكه) (القطاع السادس)
نتشرف بأن نرفق لميادنتكم طيه المقايسة المعدلة بعد المفاوضة تاريخ 2023-12-18
للقطاع الآتي:

مسلسل	اسم الشركة	بداية القطاع (كم)	نهاية القطاع (كم)	الاتجاه
1	ايجي كونتراك	500,000	504,160	النجيلة

برجاء من سيادتكم التفضل بالأحاطه والتوجيه بالازم

وتفضلوا بقبول فائق الاحترام والتقدير،،

رئيس الإدارة المركزية

المنطقة الخامسة - غرب الدلتا

عميد مهندس /
"هاني محمد محمود طه"



مدير المشروع المفضل
2012
م / محمد بن حمير
إهداء الطریق
إلى
مجلس إدارة
EGCONTRACT
Contracting & Real Estate