

السيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة.. وبعد،،

بالإحالة إلى مشروع القطار الكهربائي فائق السرعة قطاع (برج العرب - العلمين)
نتشرف بأن نرفق لسيادتكم طيه المقاييس المعدلة بعد اعتماد لجنة المفاوضه
للقطاعات الآتية:

المسلسل	اسم الشركة	من المحطة	إلى المحطة	المرحلة
1	شركة الصفا للمقاولات العامة وإنشاء الطرق	392+000	394+500	مرحلة استكمال أعمال الفلتر والتربة المسلحة.

برجاء من سيادتكم التفضل بالأحاطه والتوجيه بالازم

وتفضلوا بقبول فائق الاحترام والتقدير،،

رئيس الإدارة المركزية

المنطقة الخامسة - غرب الدلتا

عميد مهندس /
٢٠٢٤
١١/١٢
"هاني محمد محمود طه"

قائمة الكميات الواردة بالمستخلص جاري (3)

مشروع : القطار الكهربائي السريع (العين السخنة -العاصمة الادارية -العلمين -مطروح) قطاع غرب النيل في المسافة من الكم 392+000 الى الكم 500+394 بطول 2.5 كم مرحلة أستكمال أعمال الفلتر والترية المسلحة

رقم البند و بيانه : (2 - 10) بالمتر المسطح توريد وتركيب طبقة من النسيج الصناعى جيوجريد مستورد التداخل لا يقل عن 10% و يتم التنفيذ طبقا لاصول الصناعة و الرسومات التفصيلية المعتمدة و البند بجميع مشتملاته طبقا لمواصفات الهيئة العامة للطرق و الكبارى.

ذات قوة شد 30 ك . نيوتن فى الاتجاهين Biaxial
تنفيذ : شركة الصفا للمقاولات العامة وانشاء الطرق

مقدار العمل السابق : 0.0 م 2 كمية المقايسة 5,771.619 م 2

الكمية	الابعاد (متر)		الموقع الكيلومترى		رقم الطلب	بيان الاعمال بالمقايسة
	العرض	طول	الى	من		
3216.00	16.08	200	393400 393+100	392900 392+900	1	بالمتر المسطح توريد وتركيب طبقة من النسيج الصناعى جيوجريد مستورد التداخل لا يقل عن 10% و يتم التنفيذ طبقا لاصول الصناعة و الرسومات التفصيلية المعتمدة و البند بجميع مشتملاته طبقا لمواصفات الهيئة العامة للطرق و الكبارى.
2412.00	16.08	150	393250 393+250	393400 393+100	2	ذات قوة شد 30 ك . نيوتن فى الاتجاهين Biaxial
5628.00	اجمالي الكميات خلال فترة المستخلص الحالية (م ²)					
5628.00	الاجمالي الكلي (م ²)					

مهندس الهيئة
م / مارجريت مجدي

مهندس الاستشاري
مكتب د/ عماد نبيل
م / مازن عصامي



مهندس الاستشاري
مكتب XY2
م / محمد خليل



MATERIAL APPROVAL REQUEST



المجلة العامة
للمطرق والكباري
(GARB)



المجلة العامة للمطرق والكباري
Ministry of Transport and Public Works



Contractor Company		Al-Safa General Contracting Company		Designer Company		(SPECTRUM) Engineering Consulting Office						
Issued by Contractor	Name	Sign		Date/Serial Number		Time						
	Eng. Ahmed Ragab			30/11/2022		10:00						
				(SS-B-SF-QT-024)								
Received by GARB CONSULTANT	Eng. Mazen Essamy			MAR	C1	C2	C3	C4	MM	YY	DD	MM
					392	EW	CS	1	12	22	10	0

LOOM 1	S13	D3	Kp 393+000
		EW	
		MS	

Description of Materials		Filter Layer (20000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600	
		REV35	393+084		REV35	393+784	
Sample only	Yes		Materials Type		Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER		Data Sheet provided		Yes attached		
Reference in BoQ			Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG23-122.1) VERSION1-2022 BY CIVILCON GROUP		
Prequalification reference			Test Samples Results		Yes attached		
Reference Photos	No		Other				
Comments by: Eng. Mazen Essamy (SPECTRUM)			Comments by: Eng. Alaa Abd-Allatif (ER)				
1-Quality test Results by Third Party Lab (COMIBASSAL) IS Approved			1-All testes carried-out Third Party Lab (COMIBASSAL).				
2-This Sample Representative (5000 m3) only .			2-Results report attached and acceptable with the project specifications.				



APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC	Eng. Mazen Essamy			A
GARB**	Eng. Mohammed Fayad			
Employers Representative	Eng. Alaa Abd-Allatif			A

* Designer

** Alignment/Bridges, Culverts only



الهيئة العامة للنقل

Serial No.
QT
(24)

مكتب ا.د. عصام لبيب

Electrical Express Train From Borg
Alarab to Alamein
From Station 325+393 To StationDate
5/12/2022

Material Inspection Request

We request your attendance to inspect the following works :

Discipline : ☒ Material submittal ☐ FIELD DENSITY TEST ☐ PLATE LOAD TEST

Location :	Zone	From Station	To Station	Quantity
	alsafa CO. for Contracting	392+900	393+600	20000 M3

References Specification: EET L1.1.Earthworks Specifications and Testing Report

Purpose of the Inspection

1. Earthworks

- | | |
|--|--------------------------------------|
| ☐ Natural Sub Grade | ☐ Sub Ballast |
| ☐ Upper Embankment | ☐ Ballast |
| ☒ L / M Embankment | ☐ excavation |

Attachments

1- Quality Tests Report

2-

3-

4

5-

6

7-

8-

Works To be Inspected

Quality Tests For Crushed Stone Mix Aggregate(1-2&3) by COMIBASSAL Laboratory

Submitted by: alsafa CO. for Contracting

Signature: *Abd Radeb*

GARP Consultant Engineer's Comments :

Date of Inspection:- 05 / 12 /2022

The quality test result of filter aggregates 1,2,3 by third party laboratory is ok. This sample representative 5000m only

The works are : ☒ Approved (A) ☐ Approved as Noted (B) ☐ Revised ResubmitName: *Mazen Esamy*Signature: *Mazen Esamy*

General Consultant's Comments:

Date:-

- 1- one sample was selected for Quality test.
- 2- Quality test was carried out by third party lab [Comibassal]
- 3- Results attached and found acceptable and comply with Proj. spec.
- 4- final approval is subject to above mentioned comments.

The works are : ☒ Approved (A) ☐ Approved as Noted (B) ☐ Revised ResubmitName: *Abas Abdellatif*Signature: *Abas Abdellatif*

GARP Engineer's Comments:

Date:-

Name:

Signature:

General Consultant Eng.

GARP Eng.



S5-B-SF



COMIBASSAL International Controllers

الجمعية التعاونية الانتاجية لأعمال الوزن والمراجعة والخبرة الدولية (كوميبسال)

حاصلة على شهادة الأيزو ISO 9001:2015

Accredited by:

Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٤ / ٢٩ / ١١٠١١ / ٢٠١١

S5-B-SF

ABSORPTION AND SPECIFIC GRAVITY FOR COARSE AGGREGATE

ASTM C 127 - AASHTO T 85 - BS :812 part 107

PROJECT: Electric Express Train

DATE: 01/12/2022

General Consultant :- SYSTRA

Consultant :- SPECTRUM

CONTRACTOR: شركة الصفا للمقاولات

Material / Source of Soil :- Agg. Crushed Stone. (خليط من)

LAB. REF. Q.C. 1935/1

TRIAL NO	1	2	AVERAGE
A. WEIGHT OF Oven Dry TEST SAMPLE IN AIR (g)	4718.0	4010.0	4364.0
B. WEIGHT OF S.S.D. TEST SAMPLE IN AIR. (g)	4759.0	4046.0	4402.5
C. WEIGHT OF S. TEST SAMPLE IN WATER. (g)	2920.0	2485.0	2702.5
D. ABSORPTION = (B - A)	41.0	36.0	38.5
E. ABSORPTION % = [(B - A)/A] X 100	0.87	0.90	0.88
F. SPECIFIC GRAVITY:			
a) Bulk sp. Gr. , Oven Dry {A / (B - C)}	2.57	2.57	2.57
b) Bulk, Sat. Surface Dry {B / (B - C)}	2.59	2.59	2.59
c) Apparent sp. Gr. {A / (A - C)}	2.62	2.63	2.63
Tested By : Mostfa			
Checked By : Eng. Eman E. Kandil			





COMIBASSAL International Controllers

الجمعية التعاونية للإنشائية لأعمال الوزن والمراجعة والبطيرة الدولية (كوميباسال)

حاصلة على شهادة الأيزو 9001:2015

Accredited by:

Egyptian General Authority for Petroleum

Under No.: 34/29.11.2011

1935 - 2 - center

26/12/2022

Report No:

Date:

قطاع التفتيش الداخلي والمعامل

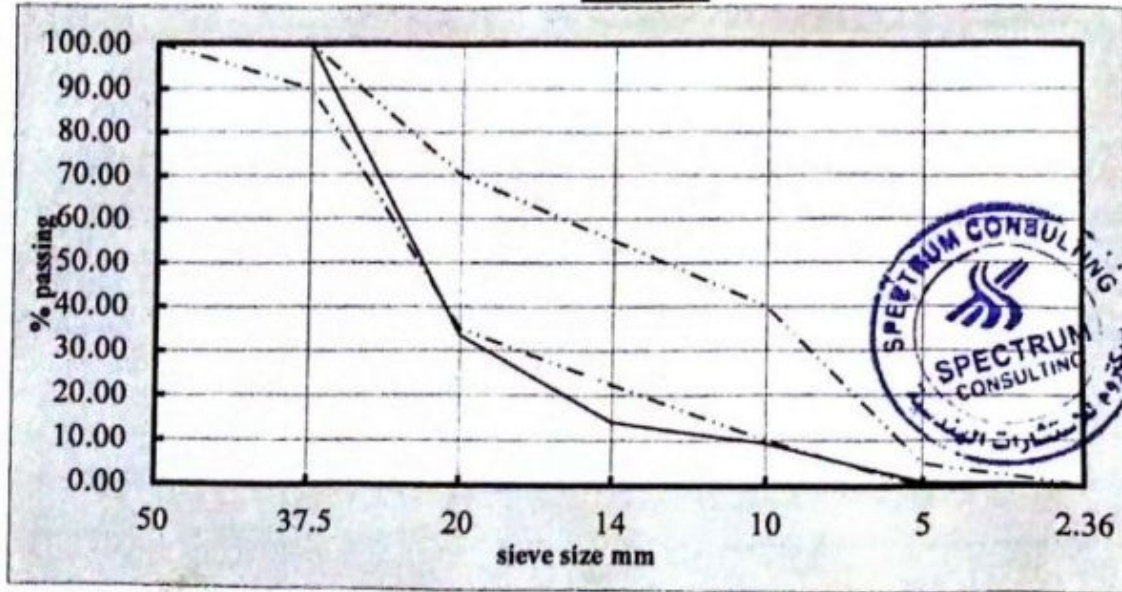
معتمد لدى الهيئة المصرية العامة للبترول

تحت رقم ٢٠١١/١١٠٢٩/٢٤

SIEVE ANALYSIS FOR COARSE AGGREGATE

General consultant	:	SYSTRA
Consultant	:	SPECTRUM
Contractor	:	شركة الصفا للمقاولات
Project	:	Electric express train
Test method	:	BS 882 Table 4. 40-5 mm
Sample	:	COARSE AGGREGATE (Mix Agg)
Date of Test	:	1/12/2022

Results



sieve size mm	50	37.5	20	14	10	5	2.36
passing %	100	100	34	14	9	1	0

S5-B-SF



Civil. Eng Department

Eman

Eng : Eman. E. Kandil

الإدارة، ٤٠ ش سفية زغلول - الإسكندرية - ص ب ١٥٧
ت: ٤٨٧٠٥٧٢ - ف: ٤٨٦٩٧٩٨ - ٤٨٧٠٦٦٥
40safia zaghloul st., p.o.Box 157 Alex, Egypt
Tel:4870573 - Fax + Tel : 4869798 - 4870665



القطاع، خلف ٤٩ طريق الحرية - الإسكندرية - مصر
ت: ٣٩٢٠١٧٦ - ٣٩٣١٤٨٢ - ف: ٣٩٠٠٤٧٦
49 EL Horria Ave., Alex, Egypt
Tel: 3920176 - 3931482 - Fax: 3900476
E-mail : internal-inspection@comibassal.com



COMIBASSAL International Controllers

الجمعية التعاونية الانتاجية لأعمال الوزن والمراجعة والقياس الدولية (كوميبسال)

ISO 9001:2015 حاصلة على شهادة الأيزو

Accredited by:

Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

Report no : 65 / 1 / center

Date : 5 / 1 / 2023

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٩ / ١١٠٢٩ / ٢٠١١

ABRASION AND IMPACT " LOS ANGELES " TEST

(For small size coarse aggregate)

ASTM- C 131-96 / AASHTO-T-96

General consultant :

SYSTRA

Consultan :

SPECTRUM

Contractor :

شركة الصفا للمقاولات

Project :

Electric express train

Sample :

COARSE AGGREGATE (Mix Agg)

Date of Test :

01/12/2022

Results

Speed	Rotate at 30 to 33 Rpm For 500 Revolution
Trial Grading	A
Intitial Weight (W1) gms	5000
Weight of tested sample (W2) gms Retained on sieve No.12	3720
% Wear By Weight Passing on Sieve No.12	25.6%

S5-B-SF



Civil Eng. Depart.

Eng: Eman E. Kandil



الإدارة: ٤٠ ش صفيية زغلول - الإسكندرية - ص.ب ١٥٧

ت. ٤٨٧٠٥٢٢ - ف. ٤٨٧٩٧٨ - ٤٨٧٠٦٦٥

40safia zaghoul st., p.o.Box 157 Alex, Egypt

Tel: 4870573 - Fax + Tel : 4869798 - 4870665



٢٩٠٤٦٦١ - ٢٩٢١٤٨٢ - ٢٩٢١٤٨٢ - ٢٩٠٤٦٦١

49 EL Horria Ave. - Alex; Egypt

Tel: 3920176 - 3931482 - Fax: 3900476

E-mail : internal-inspection@comibassal.co



CamScanner

المسوحة ضوئياً بـ CamScanner



COMIBASSAL International Controllers

الجمعية التعاونية الانتاجية لأعمال الوزن والتراجعة والخبرة الدولية (كوميباسال)

ISO 9001:2015 حاصلة على شهادة الأيزو

Accredited by:

Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٠١١/١١٠٢٩/٢٤

Report no : 65 / 1 / center
Date : 5 / 1 / 2023

ABRASION AND IMPACT " LOS ANGELES " TEST

(For small size coarse aggregate)

ASTM- C 131-96 / AASHTO-T-96

General consultant :

SYSTRA

Consultan :

SPECTRUM

Contractor :

شركة الصفا للمقاولات

Project :

Electric express train

Sample :

COARSE AGGREGATE (Mix Agg)

Date of Test :

01/12/2022

Results

Speed	Rotate at 30 to 33 Rpm For 500 Revolution
Trial Grading	A
Intitial Weight (W1) gms	5000
Weight of tested sample (W2) gms Retained on sieve No.12	3720
% Wear By Weight Passing on Sieve No.12	25.6%

S5-B-SF



Civil Eng. Depart.

Eng: Eman E. Kandil



الإدارة، ٤٠ ش صفيّة زغلول - الإسكندرية - مصر

٤٨٧٠٥٧٢ - ٤٨٧٠٦٦٥ - ٤٨٦٩٧٩٨ - ٤٨٧٠٥٧٢

40safia zaghloul st., p.o.Box 157 Alex, Egypt
Tel:4870573 - Fax + Tel : 4869798 - 4870665



القطاع الهندسي - الإسكندرية - مصر
٢٩٠٠٤٧٦ - ٢٩٣١٤٨٢ - ٣٩٠٠٤٧٦

49 EL Horria Ave .-Alex;Egypt
Tel: 3920176 - 3931482 - Fax: 3900476
E-mail : internal-insp@comibassal.com





COMIBASSAL International Controllers

الجمعية التعاونية الانتاجية لأعمال الوزن والمراجعة والخبرة الدولية (كوميباسال)

ISO 9001:2015 حاصلة على شهادة الأيزو
Accredited by:
Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٠١١/١١٠٢٩/٢٤

الرقم : ٠٢٢/٣/٧٢٩ : معامل

التاريخ : ٢٠٢٢ / ١٢ / ٤ م.

شهادة تحليل كيميائي

الإستشاري العام : سيسترا.

إستشاري هيئة الطرق والكباري : سيكترم للإستشارات الهندسية

المقاول : شركة الصفا للمقاولات

المشروع : القطار الكهربائي السريع

العينة : عينة سن خليط بتاريخ ٢٠٢٢/١٢/١

• مقدمة بمعرفة العميل لتقدير المواد العضوية و الكلوريدات و الكبريتات.

درجة حرارة المعمل : ٢٠ °م الرطوبة النسبية : ٥٠ %

تاريخ و مكان التحليل : ٢٠٢٢/٢١/٣ - كوميبصل المركز الدولي للتحاليل والاختبارات - العامرية.

المواصفة المستخدمة	النتائج	التحليل
ASTM D 2974	٠,٠٠١٧ %	الكلوريدات Cl^-
	٠,٠٠٣١ %	الكبريتات SO_3
	لا يوجد	المواد العضوية



مدير إدارة المعامل

ك. / مصطفى عسكر

S5-B-SF



N



MATERIAL APPROVAL REQUEST

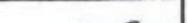


الهيئة العامة
للمطرق والكباري
(GARB)



الهيئة العامة
للمياه والكهرباء
مملكة العربية السعودية



Contractor Company	Al-SAFA General Contracting Company			Designer Company				(SPECTRUM) Engineering Consulting Office			
Issued by Contractor	Name	Sign		Date/Serial Number				Time			
	Eng. Ahmed Ragab			14/12/2022				10:00			
			(55-B-SF-QT-028)								
Received by GARB CONSULTANT	Eng. Mazen Essamy	 MAR		C1	C2	C3	DD	MM	YY	HH	MM
				393	EW	CS	15	12	22	10	0

CODE 1	S15	D3	Kp 393+000
CODE 2	EW		
CODE 3	MS		

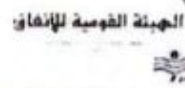
Description of Materials		Filter Layer (25000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600	
		REV35	393+084		REV35	393+784	
Sample only	Yes		Materials Type		Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER		Data Sheet provided		Yes attached		
Reference in BoQ			Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP		
Prequalification reference			Test Samples Results		Yes attached		
Reference Photos	No		Other				
Comments by: Eng. Mazen Essamy (SPECTRUM)			Comments by: Eng. Alaa Abd-Allatif (ER)				
1-Quality test Results by Third Party Lab (COMIBASSAL) IS Approved.			1-All testes carried-out Third Party Lab (COMIBASSAL).				
his Sample Representative (5000 m3) only .			2-Results report attached and acceptable with the project specifications.				



APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC*	Eng. Mazen Essamy			A
GARB**	Eng. Mohammed Fayad			
Employers Representative	Eng. Alaa Abd-Allatif			A

* Designer

** Alignment/Bridges; Culvert only



Serial No.
QT
(28)



مكتب أ.د. عماد توبيل

Electrical Express Train From Borg
Alarab to Alamein
From Station 325+393 To Station



Date
19/12/2022

Material Inspection Request

We request your attendance to inspect the following works :

Discipline : ☒ Material submittal ☐ FIELD DENSITY TEST ☐ PLATE LOAD TEST

Location :	Zone	From Station	To Station	Quantity
	alsafa CO. for Contracting	392+900	393+600	25000 M3

References : Specification: EET L1.1. Earthworks Specifications and Testing Report

Purpose of the inspection

1. Earthworks

- | | |
|--|--------------------------------------|
| ☐ Natural Sub Grade | ☐ Sub Ballast |
| ☐ Upper Embankment | ☐ Ballast |
| ☒ L / M Embankment | ☐ excavation |

Attachments

1- Quality Tests Report

2-

3-

4-

5-

6-

7-

8-

Works To be Inspected

Quality Tests For Crushed Stone Mix Aggregate(1-2&3) by COMIBASSAL Laboratory

Submitted by: alsafa CO. for Contracting

Signature:

Ahmed Ragab

GARP Consultant Engineer's Comments :

Date of Inspection: - 19 / 12 /2022

The quality test result of filter aggregates 1, 2, 3 by third party laboratory is ok.
This sample representative 500m³ and

The works are :

☒ Approved (A)

☐ Approved as Noted (B)

☐ Revised Resubmit (C)

☐ Rejected (D)

Name: Maren Esamy

Signature:

Date: -

General Consultant's Comments:

1- one sample was selected for Quality test.
2- Quality test was carried out by third party lab [Comibassal]
3- Results attached and found acceptable and comply with proj. spec
4- final approval is subject to above mentioned comments.

The works are :

☒ Approved (A)

☐ Approved as Noted (B)

☐ Revised Resubmit (C)

☐ Rejected (D)

Name: Alaa Abdelkhalik

Signature:

Date: -

GARP Engineer's Comments:

Name:

Signature:

General Consultant Eng.

GARP Eng.



S5-B-SF

S5-B-SF

COMIBASSAL International Controllers

الجمعية التعاونية الإنتاجية لأعمال الوزن والمراجعة والخبرة الدولية (كوميباسال)



ISO 9001:2015 حاصلة على شهادة الأيزو

Accredited by:

Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٤ / ٢٩ / ١١٠٢٩

ABSORPTION AND SPECIFIC GRAVITY FOR COARSE AGGREGATE

ASTM C 127 - AASHTO T 85 - BS :812 part 107

PROJECT: Electric Express Train

DATE: 15/12/2022

General Consultant :- SYSTRA

Consultant :- SPECTRUM

CONTRACTOR: شركة الصفا للمقاولات

Material / Source of Soil :- Agg. Crushed Stone. (خليط سن)

LAB. REF. Q.C. 82/1

TRIAL NO	1	2	AVERAGE
A. WEIGHT OF Oven Dry TEST SAMPLE IN AIR (g)	2000.0	4010.0	3005.0
B. WEIGHT OF S.S.D. TEST SAMPLE IN AIR. (g)	2007.0	4044.0	3030.5
C. WEIGHT OF S. TEST SAMPLE IN WATER. (g)	242.0	2485.0	1863.5
D. ABSORPTION = (B - A)	17.0	34.0	25.5
E. ABSORPTION % = [(B - A)/A] X 100	0.85	0.85	0.85
F. SPECIFIC GRAVITY:			
a) Bulk sp. Gr. , Oven Dry { A / (B - C) }	2.58	2.57	2.58
b) Bulk, Sat. Surface Dry { B / (B - C) }	2.60	2.59	2.60
c) Apparent sp. Gr. { A / (A - C) }	2.64	2.63	2.63

Tested By : Mostfa

Checked By : Eng. Eman E. Kandil

الإدارة: ٤٠ ش. صفية زغلول - الإسكندرية - ب. ١٥٧

ت. ٤٨٧٠٥٧٣ - ف. ٤٨٦٩٧٩٨ - ٤٨٧٠٦٦٥

40safia zaghloul st., p.o.Box 157 Alex, Egypt

Tel:4870573 - Fax + Tel : 4869798 - 4870665



القطاع: خلف ٤٩ طريق الحرية - الإسكندرية - مصر

ت. ٣٩٠٠٤٣٦ - ٣٩٣١٤٨٢ - ٣٩٢٠١٣٦

49 EL Horria Ave. - Alex, Egypt

Tel: 3920176 - 3931482 Fax: 3900476

E-mail : internal-inspection@comibassal.com

CS CamScanner

المسوحة ضوئياً بـ CamScanner

COMIBASSAL International Controllers

الجمعية التعاونية للإنشائية لأعمال الوزن والمراجعة والخبرة الدولية (كوميباسال)

حاصلة على شهادة الأيزو 9001:2015

Accredited by:

Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

Report No:

82-2 - center

Date:

05/01/2023

قطاع التفتيش الداخلي والمعامل

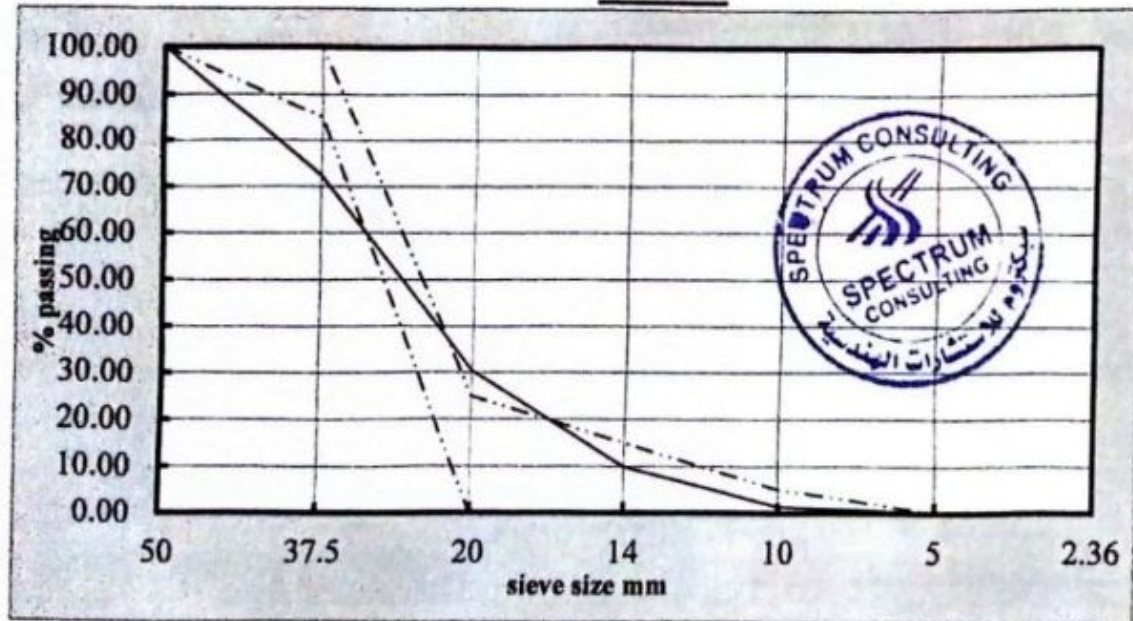
معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٠١١/١١٠٢٩/٢٤

SIEVE ANALYSIS FOR COARSE AGGREGATE

General consultant : SYSTRA
Consultant : SPECTRUM
Contractor : شركة الصفا للمقاولات
Project : Electric express train
Test method : BS 882 Table 4. 40 mm
Sample : COARSE AGGREGATE (Mix Agg)
Date of Test : 15/12/2022

S5-B-SF

Results



sieve size mm	50	37.5	20	14	10	5	2.36
passing %	100	72	30	10	1	0	0



Civil. Eng Department

Erg : Eman. E. Kandil

القطاع ، خلف ٤٩ طريق الحرية - الإسكندرية - مصر
ت : ٣٩٢٠١٧٦ - ٣٩٣١٤٨٢ - ٣٩٠٠٤٧١٠٥

49 EL Horria Ave .-Alex; Egypt
Tel: 3920176 - 3931482 Fax: 3900476

E-mail : internal-inspection@comibassal.com



الإدارة: ٤٠ ش صغية زغلول - الإسكندرية ص - ب ١٥٧
ت : ٤٨٧٠٥٧٢ - ٤٨٦٩٧٩٨ - ٤٨٧٠٦٦٥

40safia zaghloul st ., p.o.Box 157 Alex, Egypt
Tel:4870573 - Fax + Tel ; 4869798 - 4870665



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الجمعية التعاونية الانتاجية لأعمال الوزن والمراجعة والخبرة الدولية (كوميباسال)

حاصلة على شهادة الأيزو ISO 9001:2015

Accredited by:

Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٤ / ١١٠٢٩ / ٢٠١١

Report no : 82 / 3 / center
Date : 5 / 1 / 2023

ABRASION AND IMPACT " LOS ANGELES " TEST

(For small size coarse aggregate)

ASTM- C 131-96 / AASHTO-T-96

S5-B-SF

General consultant :

SYSTRA

Consultan :

SPECTRUM

Contractor :

شركة الصفا للمقاولات

Project :

Electric express train

Sample :

COARSE AGGREGATE (Mix Agg)

Date of Test :

15/12/2022

Results

Speed	Rotate at 30 to 33 Rpm For 500 Revolution
Trial Grading	A
Intitial Weight (W1) gms	5000
Weight of tested sample (W2) gms Retained on sieve No.12	3530
% Wear By Weight Passing on Sieve No.12	29.4%



Civil Eng. Depart.

Eng: Eman E.Kandil

الإدارة، ٤٠ ش صفيية زغلول - الإسكندرية ص - ب ١٥٧

ت: ٤٨٧٠٥٧٢ - ف: ٤٨٦٩٧٩٨ - ٤٨٧٠٦٦٥

40safia zaghloul st., p.o.Box 157 Alex, Egypt

Tel:4870573 - Fax + Tel : 4869798 - 4870665



القطاع خلف ٤٩ طريق الحرية - الإسكندرية - مصر

ت: ٣٩٢٠١٧١ - ٣٩٣١٤٨٢ - ف: ٣٩٠٠٤٧٦

49 EL Horria Ave. - Alex; Egypt

Tel: 3920176 - 3931482 - Fax: 3900476

E-mail : internal-inspection@comibassal.com



المسوحة ضوئياً بـ CamScanner



COMIBASSAL International Controllers

الجمعية التعاونية الانتاجية لأعمال الوزن والمراجعة والخبرة الدولية (كوميباسال)

حاصلة على شهادة الأيزو ISO 9001:2008
Accredited by:
Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

مُعتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٤ / ١١٠٢٩ / ٢٠١١

الرقم : ٢٣ / ١ / ١٢٧ : معامل

التاريخ : ٢٠٢٢ / ١٢ / ١٨ م.

شهادة تحليل كيميائي

الإستشاري العام : سيسـترا.

إستشاري هيئة الطرق والكباري : سبكترم للإستشارات الهندسية

المقاول : شركة الصفا للمقاولات

المشروع : القطار الكهربائي السريع

العينة : عينة سن خليط بتاريخ ٢٠٢٢/١٢/١٥ م.

• مقدمة بمعرفة العميل لتقدير المواد العضوية والكلوريدات والكبريتات .

• درجة حرارة المعمل : ١٨ °م الرطوبة النسبية : ٥٠ %

تاريخ و مكان التحليل : ٢٠٢٢/١٢/١٧ - كوميبصل المركز الدولي للتحاليل والاختبارات - العامرية.

المواصفة المستخدمة	النتائج	التحليل
ASTM D 2974	%٠,٠٠٧٥	الكلوريدات Cl^-
	%٠,٠٠٢٤	الكبريتات SO_3^{--}
	لا يوجد	المواد العضوية

مدير إدارة المعامل

م. مصطفى عسكر



S5-B-SF

R.



الإدارة: ٤٠ ش صفيية زغلول - الإسكندرية - ص - ب ١٥٧

ت: ٤٨٧٠٥٧٢ - ف: ٤٨٦٩٧٩٨ - ٤٨٧٠٦٦٥

40safia zaghloul st., p.o.Box 157 Alex, Egypt

Tel:4870573 - Fax + Tel : 4869798 - 4870665



القطاع : خلف ٤٩ طريق الحرية - الإسكندرية - مصر

ت: ٣٩٢٠١٧٦ - ٣٩٣١٤٨٢ - ف: ٣٩٠٠٤٣٦

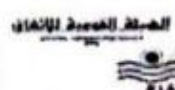
49 EL Horria Ave .-Alex;Egypt

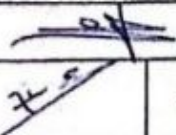
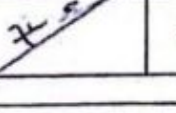
Tel: 3920176 - 3931482 - Fax: 3900476

E-mail : internal - inspect@comibassal.com

CS CamScanner

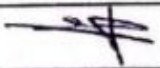
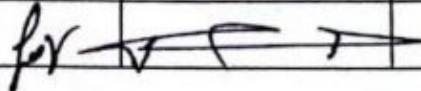
المسوحة ضوئياً بـ CamScanner

MATERIAL APPROVAL REQUEST	    	
	الهيئة العامة للمواصلات والكباري (GARB)	

Contractor Company	Al-Safa General Contracting Company		Designer Company	[SPECTRUM] Engineering Consulting Office																
Issued by Contractor	Name	Sign	Date/Serial Number	Time																
	Eng. Ahmed Ragab		27/12/2022 (55-B-SF-QT-034)	10:00																
Received by GARB CONSULTANT	Eng. Mazen Essamy		MAR	<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>393</td> <td>EW</td> <td>CS</td> <td>28</td> <td>12</td> <td>22</td> <td>10</td> <td>0</td> </tr> </table>	C1	C2	C3	DD	MM	YY	HH	MM	393	EW	CS	28	12	22	10	0
C1	C2	C3	DD	MM	YY	HH	MM													
393	EW	CS	28	12	22	10	0													

CODE-1	S15	D3	Kp 393+000
		EW	
		MS	

Description of Materials	Filter Layer (30000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600
		REV35	393+084		REV35	393+784
Sample only	Yes	Materials Type		Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER	Data Sheet provided		Yes attached		
Reference in BoQ		Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP		
Prequalification reference		Test Samples Results		Yes attached		
Reference Photos	No	Other				
Comments by: Eng. Mazen Essamy (SPECTRUM) 1-Quality test Results by Third Party Lab (COMIBASSAL) IS Approved. 2-Is Sample Representative (5000 m3) only.				Comments by: Eng. Alaa Abd-Allatif (ER) 1-All testes carried-out Third Party Lab (COMIBASSAL). 2-Results report attached and acceptable with the project specifications.		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
	Eng. Ahmed Ragab			A
	Eng. Mazen Essamy			A
	Eng. Mohammed Fayad			
	Eng. Alaa Abd-Allatif			A

* Designer
** Alignment/Bridges: Culvert only

MATERIAL APPROVAL REQUEST							
	الهيئة العامة للمواصلات والكباري (GARB) مادة الكمر الهيئة العامة للإستشارات مؤسسة العامة SPECTRA SHARER						

Contractor Company	Al-Safa General Contracting Company		Designer Company	(SPECTRUM) Engineering Consulting Office							
Issued by Contractor	Name	Eng. Ahmed Ragab	Sign	Date/Serial Number		Time					
				27/12/2022		10:00					
Received by GARB CONSULTANT	Eng. Mazen Essamy		MAR	C1	C2	C3	DO	MM	YY	HH	MM
				393	EW	CS	28	12	22	10	0

CODE 1	S15	D3	Kp 393+000
CODE 2	EW		
CODE 3	MS		

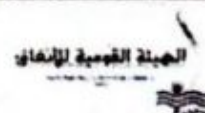
Description of Materials	Filter Layer (30000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600
		REV35	393+084		REV35	393+784
Sample only	Yes	Materials Type		Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER	Data Sheet provided		Yes attached		
Reference in BoQ		Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION 1-2022 BY CIVECON GROUP		
Prequalification reference		Test Samples Results		Yes attached		
Reference Photos	No	Other				
Comments by: Eng. Mazen Essamy (SPECTRUM)				Comments by: Eng. Alaa Abd-Allatif (ER)		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC *	Eng. Mazen Essamy			A
GARB**	Eng. Mohammed Fayad			
Employers Representative	Eng. Alaa Abd-Allatif			

* Designer

** Alignment/Bridges/Culvert only





Serial No.
QT
(34)



مكتب أ/د. محمد نبيل

Electrical Express Train From Borg
Alarah To Alamein
From Station 325+393 To Station



Date

28-Dec-2022

Material Inspection Request

We request your attendance to inspect the following works :

Discipline : ☒ Material submittal ☐ FIELD DENSITY TEST ☐ PLATE LOAD TEST

Location :	Zone	From Station	To Station	Quantity
	alsafa CO. for Contracting	392+900	393+600	30000 M3

References Specification: EET L1.1. Earthworks Specifications and Testing Report

Purpose of the Inspection

1. Earthworks

- | | |
|---|--------------------------------------|
| ☒ Natural Sub Grade | ☐ Sub Ballast |
| ☐ Upper Embankment | ☐ Ballast |
| ☐ L / M Embankment | ☐ Excavation |

Attachments

1- Quality Tests Report

2-

3-

4-

5-

6-

7-

8-

Works To be Inspected

Quality Tests For Crushed Stone Mix Aggregate (1-2 & 3) by COMIBASSAL Laboratory

Submitted by: Alsafa CO. for Contracting

Signature:

Date of Inspection: 28 / 12 / 2022

GARB Consultant Engineer's Comments:

* This sample representative 5000 m3 only.

* The Quality test result of filter aggregates 1,2,3.

The works are :

☒ Approved (A) ☐ Approved as Noted (B) ☐ Revised Resubmit (C) ☐ Reject (D)

Name: Mazen Gamy

Signature:

Date: -

General Consultant's Comments:

- 1-One sample selected for quality test.
- 2-Quality test was carried out by Third Party lab (COMIBASSAL).
- 3-Results report attached and acceptable with The project specifications.
- 4-Final approval is subject to above mentioned comment.

The works are :

☒ Approved (A) ☐ Approved as Noted (B) ☐ Revised Resubmit (C) ☐ Reject (D)

Name: Abdellatif

Signature:

Date: -

GARB Engineer's Comments:

General Consultant Eng.

Signature:

GARB Eng.



S5-B-SF



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حاصلة على شهادة الأيزو ISO 9001:2008
Accredited by:
Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٤ / ١١٠٢٩ / ٢٠١١

الرقم : ٢٣ / ٢ / ١٢٧٠٢٣ معامل

التاريخ : ٢٠٢٢ / ١٢ / ٣١ م.

شهادة تحليل كيميائي

الإستشاري العام : سيسټرا.

إستشاري هيئة الطرق والكباري : سبكترم للإستشارات الهندسية

المقاول : شركة الصفا للمقاولات

المشروع : القطار الكهربائي السريع

العينة : عينة سن خليط بتاريخ ٢٠٢٢ / ١٢ / ٢٨ م.

• مقدمة بمعرفة العميل لتقدير المواد العضوية والكلوريدات والكبريتات .

• درجة حرارة المعمل : ١٨ °C الرطوبة النسبية : ٥٠ %

تاريخ ومكان التحليل : ٢٠٢٢ / ١٢ / ٢٩ - كوميبصل المركز الدولي للتحاليل والاختبارات - العامرية.

المواصفة المستخدمة	النتائج	التحليل
ASTM D 2974	٠.٠٠٨٩ %	الكلوريدات Cl^-
	٠.٠٠٥٥ %	الكبريتات SO_3^{--}
	لا يوجد	المواد العضوية

مدير إدارة المعامل

مصطفى عسكر



S5-B-SF

R.

الإدارة: ٤٠ ش صفيية زغلول - الإسكندرية ص - ١٥٧

ت: ٤٨٧٠٥٧٣ - ف: ٤٨٦٩٧٩٨ - ٤٨٧٠٦٦٥

40safia zaghloul st., p.o.Box 157 Alex, Egypt

Tel: 4870573 - Fax + Tel : 4869798 - 4870665



القطاع خلف ٤٩ طريق الحرية - الإسكندرية - مصر

ت: ٣٩٢٠١٧٦ - ٣٩٣١٤٨٢ - ف: ٣٩٠٠٤٧١

49 EL Horria Ave .-Alex; Egypt

Tel: 3920176 - 3931482 - Fax: 3900476

E-mail : internal - inspecti@comibassal.com



CamScanner

الممسوحة ضوئياً بـ CamScanner



ABSORPTION AND SPECIFIC GRAVITY FOR COARSE AGGREGATE

ASTM C 127 - AASHTO T 85 - BS :812 part 107

PROJECT: Electric Express Train

DATE: 28/12/2022

General Consultant :- SYSTRA

Consultant :- SPECTRUM

CONTRACTOR: شركة الصفا للمقاولات

Material / Source of Soil :- Agg. Crushed Stone. (خليط سن)

LAB. REF. Q.C. 83/1

TRIAL NO	1	2	AVERAGE
A. WEIGHT OF Oven Dry TEST SAMPLE IN AIR (g)	2000.0	2000.0	2000.0
B. WEIGHT OF S.S.D. TEST SAMPLE IN AIR. (g)	2017.0	2017.0	2017.0
C. WEIGHT OF S. TEST SAMPLE IN WATER. (g)	1242.0	1237.0	1239.5
D. ABSORPTION = (B - A)	17.0	17.0	17.0
E. ABSORPTION % = [(B - A)/A] X 100	0.85	0.85	0.85
F. SPECIFIC GRAVITY:			
a) Bulk sp. Gr. , Oven Dry {A / (B - C)}	2.58	2.56	2.57
b) Bulk, Sat. Surface Dry {B / (B - C)}	2.60	2.59	2.59
c) Apparent sp. Gr. {A / (A - C)}	2.64	2.62	2.63

Tested By : Mostfa

Checked By : Eng. Eman E. Khamis

S5-B-SF





COMIBASSAL International Controllers

الجمعية المصرية للتجارة الدولية لأعمال الوزن والمقاييس (كوميباسال)

حاصلة على شهادة الأيزو ISO 9001:2015

Accredited by:

Egyptian General Authority for Petroleum
Under No: 34/29.11.2011

Report No:

83 - 2 - center

Date:

05/01/2023

قطاع التفقيش الداخلي والمعامل

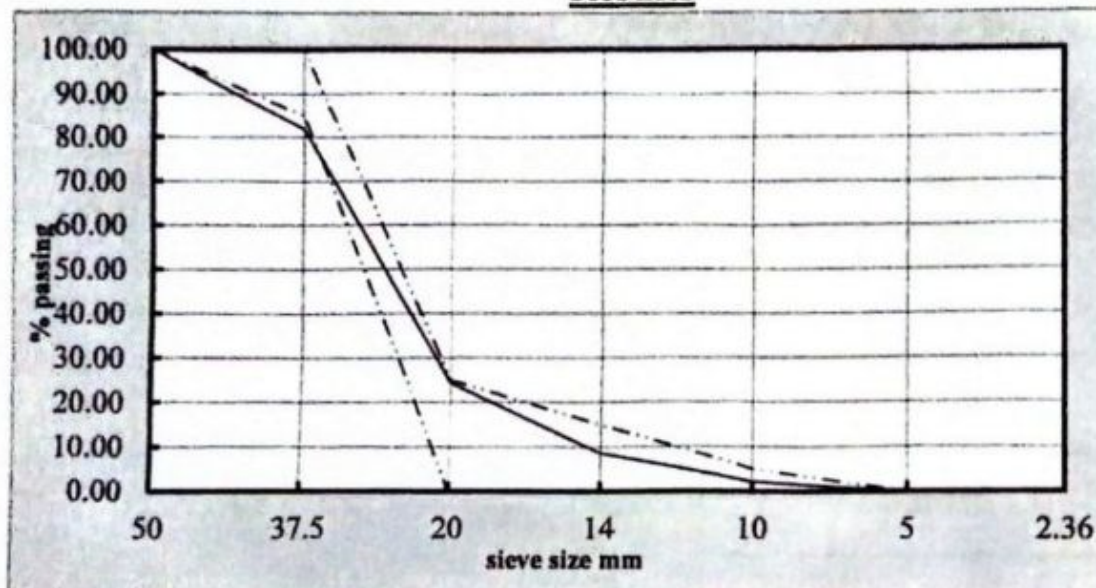
معتمد لدى الهيئة المصرية العامة للترول

رقم ٢٤ / ٢٩ / ١١٠١١

SIEVE ANALYSIS FOR COARSE AGGREGATE

General consultant :	SYSTRA
Consultant :	SPECTRUM
Contractor :	شركة الصفا للمقاولات
Project :	Electric express train
Test method :	BS 882 Table 4. 40 mm
Sample :	COARSE AGGREGATE (Mix Agg)
Date of Test :	28/12/2022

Results



sieve size mm	50	37.5	20	14	10	5	2.36
passing %	100	82	24	9	2	0	0

S5-B-SF



Civil. Eng Department

Eman

Eng : Eman. E. Kandil



الإدارة: ٤٠ ش صفيية زغلول - الإسكندرية - مصر

ت: ٤٨٧٠٥٢٢ - ف: ٤٨٧٩٢٩٨ - ٤٨٧٠٦٦٥

40safia zaghloul st., p.o.Box 157 Alex, Egypt

Tel: 4870573 - Fax + Tel: 4869798 - 4870665



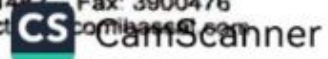
القطاع: خلف ٤٩ طريق الحرية - الإسكندرية - مصر

ت: ٣٩٢٠١٧٦ - ٣٩٣١٤٨٢ - ف: ٣٩٠٠٤٧٦

49 EL Horria Ave. - Alex, Egypt

Tel: 3920176 - 3931482 Fax: 3900476

E-mail: internal-inspect@comibassal.com



المسوحة ضوئياً بـ CamScanner



COMIBASSAL International Controllers

الجمعية التعاونية الانتاجية لأعمال الوزن والمراجعة والخبرة الدولية (كوميبسال)

ISO 9001:2015 حاصلة على شهادة الأيزو

Accredited by:

Egyptian General Authority for Petroleum
Under No.: 34/29.11.2011

قطاع التفتيش الداخلي والمعامل

معتمد لدى الهيئة المصرية العامة للبترول
تحت رقم ٢٤ / ٢٩ / ١١٠١١ / ٢٠١١

Report no : 83 / 3 / center
Date : 5 / 1 / 2023

ABRASION AND IMPACT " LOS ANGELES " TEST

(For small size coarse aggregate)

ASTM- C 131-96 / AASHTO-T-96

General consultant :

SYSTRA

Consultan :

SPECTRUM

Contractor :

شركة الصفا للمقاولات

Project :

Electric express train

Sample :

COARSE AGGREGATE (Mix Agg)

Date of Test :

28/12/2022

Results

Speed	Rotate at 30 to 33 Rpm For 500 Revolution
Trial Grading	A
Intital Weight (W1) gms	5000
Weight of tested sample (W2) gms Retained on sieve No.12	3570
% Wear By Weight Passing on Sieve No.12	28.6%

Civil Eng. Depart.

S5-B-SF



Eng: Eman E. Kabil



الإدارة، ٤٠ ش صغية زغلول - الإسكندرية ص - ب ١٥٧
ت: ٤٨٧٠٥٧٢ - ف: ٤٨٦٩٣٩٨ - ٤٨٧٠٦٦٥

40safia zaghloul st., p.o.Box 157 Alex, Egypt
Tel: 4870573 - Fax + Tel : 4869798 - 4870665



القطاع خلف ٤٩ طريق الحرية - الإسكندرية - مصر
ت: ٣٩٢١٤٨٢ - ٣٩٢٠١٧٦ - ف: ٣٩٠٠٤٧٦

49 EL Horria Ave. - Alex; Egypt
Tel: 3920176 - 3931482 - Fax: 3900476
F-mail : internal-inspec@comibassal.com



المسوحة ضوئياً بـ CamScanner

MATERIAL INSPECTION REQUEST								
	الهيئة العامة للمطرق و الإنشاءات (GARB)		وزارة التخطيط		وزارة التخطيط والمعاشرة		وزارة الإسكان والتخطيط العمراني	

Contractor Company	AL-Safa General Contracting & Road Construction			Designer Company	(SPECTRUM) Engineering Consulting Office						
Issued by Contractor	Name	Sign		Date/Serial Number	Time						
	Eng. Ahmed Ragab			16/1/2023 (55-B-SF-PLT-007)	10:00 AM						
Received by GARB CONSULTANT	Eng. Mazen Essamy		MIR	C1	C2	C3	DO	MM	YY	HH	MM
				393	EW	CS	17	1	23	10	0

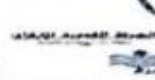
CODE-1	51 to 521	D1 to 53	Kp XXX Note
	Station Reference	Depot Reference	For Kilometer point only Start Km is used
	Work Activity		
	Sub Element of Activity		

Description of Materials	Filter Layer (level 6.80).					REV
Location to be Used	From	392+900	TO	393+600	25	
	From	393+084	TO	393+784	35	
MAR & UIR Approval No	UIR (55-B-SF-"FF-01-2-3&4"		Date	3-7/1/2023		
	MAR (55-B-SF-"QT-14-18-20-24-28-34-36")			7/9/2022 : 7/1/2023		
Supplier Name	EL-BARAKA CRUCHER					
Test Requirement	PLT (DIN 18314)		Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (C321 41.2) VERSION 2 BY CIVECON GROUP		
Reference Photos	No/Yes		Other			
Item	Description	Unit	Quantity	Arrival Date	Note	
1	PLT (DIN 18314)	NUMBER	7	18/1/2023		
2						
3						
4						

Comments by: Eng. Mazen Essamy (SPECTRUM)	Comments by: Eng. Alaa Abd-Allatif (ER)
 1-The plate load Test Result PLT is Approved	1-P.L.T was carried -out by EJUST Laboratory . 2-Results report attached and acceptable with project specification.

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
	Contractor	Eng. Ahmed Ragab		A
	QA/QC	Eng. Mazen Essamy		A
	GARB**	Eng. Mohammed Fayad		
	Employers Representative	Eng. Alaa Abd-Allatif		

* Designer
 ** Alignment/Bridges: Culvert only



Company	AL-Safa General Contracting Company		Designer Company		SPECTRUM Engineering Consulting Office						
Contractor	Name	Sign	Date/Serial Number		Time						
	Eng. Ahmed Ragab		17/1/2023 (PLT 07)		10:00 AM						
Received by GARB CONSULTANT	Eng. Mazen Essamy	Sign	MIR	C1	C2	C3	DD	MM	YY	HH	MM
				392	EW	CS	17	1	23	10	0

CODE 1	S1 TO S21	D1 TO D3 Depot Reference	Kp 392+000
	Station Reference	Depot Reference	For Kilometer point only Start Km is used
CODE 2	Work Activity		
CODE 3	Sub Element of Activity		

Description of Materials	Filter Layer (Level 6.80)			
Location to be Used	From	392+900	TO	393+600
MAR & UIR Approval No	F.(F.F 01-02-03 &4)		Date	1/17/2023
	M.A.R.(14-18-20-24-28-34&36)			
Supplier Name	Crushed Stone			
Test Requirement	PLT (DIN 18314)	Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122-1) VERSION 1 -2022 BY CIVECON GROUP	
Reference Photos	No/Yes	Other		

Item	Description	Unit	Quantity	Arrival Date	Note
1	PLT (DIN 18314)	NUMBER	7	17/1/2023	
2					
3					
4					

Comments by: Eng. Mazen Essamy (SPECTRUM)	Comments by: Eng. Alaa Abd-Allatif (ER)
1-The Plate Load Test Result P.L.T (DIN 18314) is approved.	1-P.L.T was carried - out by EGYPT - JAPAN UNIVERSITY OF SCIENCE & TECHNOLOGY 2-Results report attached and acceptable with project specifications. 3-Final approval is subject to above mentioned comments.

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab		23/01/2023	A
QA/QC *	Eng. Mazen Essamy			A
GARB**	Eng. Mohammed Fayad			
Employers	Eng. Alaa Abd-Allatif		27/01/2023	A.M.C



Technical Report

Plate Loading Tests

KM 393+550, KM 393+450,
KM 393+350, KM 393+250,
KM 393+150, KM 393+050,
and KM 392+950

S5-B-SF

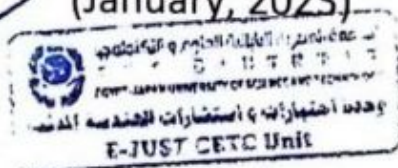
Project

**Electric Express Train (Sokhna - New capital - 6th
of October city - New Elalamein city)**

Prepared for
Al-Safa Contracting Company

55 Mazadat land - Sheikh Zayed - Ismailia

(January, 2023)



4. Closure

Test results presented herein report the load-settlement data obtained from 7 plate loading tests conducted on the Crushed Stone Filter Layer of the Electric Express train project at 7 locations (KM 393+550, KM 393+450, KM 393+350, KM 393+250, KM 393+150, KM 393+050, and KM 392+950) in accordance with German Standard, DIN18134.

Location	E_{v1} MN/m ²	E_{v2} MN/m ²	E_{v2}/E_{v1} ratio
KM 393+550	57.89	109.42	1.89
KM 393+450	70.91	124.06	1.75
KM 393+350	35.44	106.17	3.00
KM 393+250	52.49	84.65	1.61
KM 393+150	63.77	103.99	1.63
KM 393+050	51.06	87.36	1.71
KM 392+950	48.19	94.44	1.96

• Note: Before interpreting these test results for future applications, the Crushed Stone Filter Layer in-situ variability between the testing locations should be considered.

Technical committee

Dr. Mahmoud Ahmed

Prof. Dr. Mohamed F. M. Fahmy



Lab Engineer

Mohamed A. Al-Najjar



S5-B-SF



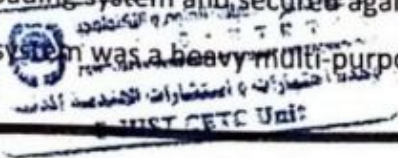
1. Introduction

The Civil Engineering Testing & Consulting Unit (CETCU) of the Egypt-Japan University of Science and Technology (EJUST) was retained by Al-Safa Contracting Company to conduct 7 plate loading tests on the Crushed Stone Filter Layer of the Electric Express Train project at 7 locations (KM 393+550, KM 393+450, KM 393+350, KM 393+250, KM 393+150, KM 393+050, and KM 392+950) in accordance with the German Standard DIN18134. The mandate was communicated by Eng. Ahmed Rajab Abdeen of Al-Safa Contracting Company. Field team members (Mr. Mohamed Mamdouh) from the working CETCU team visited the project site on January 12, 2023 and performed the required tests. This report summarizes the plate loading test procedure according to DIN18134, the test results and their interpretations, and the CETCU pertaining recommendations.

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2. Test Set Up and Instrumentation

- The German standard DIN18134 was applied to define the test setup including the loading system, test conditions, and procedure for the plate loading tests.
- The tests were carried out to determine the Strain Moduli (E_{v1} and E_{v2}) and their ratio (E_{v2}/E_{v1}) from a stress – deformation relationship of two consecutive loading from Loading-Unloading-Loading regime.
- The loading plate has a diameter of 600 mm and a thickness of 25 mm and it is provided with equally spaced stiffeners. The upper plate face is parallel to the bottom face of the plate to allow a 300-mm plate to be placed on the 600-mm plate top.
- The loading system consisted of a hydraulic pump connected to a hydraulic jack of 700 bar capacity, which can apply and release the load increments.
- The dial gauge used to measure the plate settlement has a resolution of 0.01 mm and the lever ratio was equal to 1.
- The temperature at the time of the test was $16 \pm 1^\circ\text{C}$.
- The plate was carried out on a Crushed Stone Filter Layer (according to the company) at 7 points. The test surface area was levelled, and the plate was bedded on this surface.
- The hydraulic jack was placed on the middle of, and normal to, the loading plate beneath the reaction loading system and secured against tilting.
- The reaction loading system was a heavy multi-purpose Loader KAWSAKI



3. Test Procedure and Results

The plate load test was conducted in accordance with the DIN18134. Loading, unloading, and reloading regimes were considered to estimate the resilient modulus of the tested soil. Prior to the test, the force transducer and dial gauge were reset to zero, and then a load corresponding to a stress of 0.01 MN/m² was applied. The load was increased in the first loading cycle until a normal stress of 0.25 MN/m² was reached, and the loading increment was 0.025 MN/m². The load was gradually released in four stages. Following unloading, a second loading cycle was performed, but the load was only increased to the penultimate stage of the first cycle. 7 plate loading tests on the Crushed Stone Filter Layer of the Electric Express Train project were conducted at 7 locations (KM 393+550, KM 393+450, KM 393+350, KM 393+250, KM 393+150, KM 393+050, and KM 392+950) and the data collected at the 7 test points is included in Appendix A.

Table 1 presents the load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 393+550), while Table 2 shows the data obtained at the second loading stage.

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Table 1: Load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 393+550)

Loading stage	Load (F) kN	Normal MN/m ²	Settleme mm
0	1.414	0.005	0.00
1	7.07	0.025	0.18
2	14.14	0.050	0.34
3	21.21	0.075	0.61
4	28.28	0.100	0.85
5	35.35	0.125	1.00
6	42.42	0.150	1.20
7	49.49	0.175	1.38
8	56.56	0.200	1.53
9	63.63	0.225	1.70
10	70.7	0.250	1.90
11	56.56	0.200	1.90
12	49.49	0.175	1.89
13	35.35	0.125	1.74
14	21.21	0.075	1.54
15	1.414	0.005	0.97

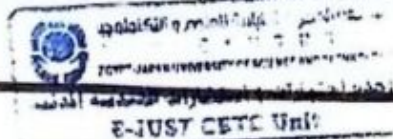


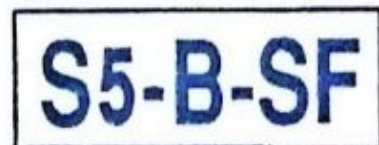
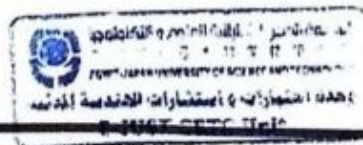
Table 2: Load-settlement data obtained at the second loading and unloading stages of the plate loading test performed at the location (KM 393+550)

Loading stage	Load (F)	Normal stress (s_v)	Settlement (s)
	kN	MN/m ²	mm
0	1.414	0.005	0.97
1	7.07	0.025	1.20
2	14.14	0.050	1.30
3	21.21	0.075	1.40
4	28.28	0.100	1.53
5	35.35	0.125	1.64
6	42.42	0.150	1.72
7	49.49	0.175	1.83
8	56.56	0.200	1.90
9	63.63	0.225	1.97

The load-settlement data obtained in all loading and unloading stages for the test performed at the first location (KM 393+550) are shown in Figure 1. Table 3 shows the calculations of the resilient modulus of the tested soil according to DIN18134. The testing data corresponding to the second testing point (KM 393+450) is provided in Tables 4-6 and Figure 2. The testing data corresponding to the third testing point (KM 393+350) is provided in Tables 7-9 and Figure 3. The testing data corresponding to the fourth testing point (KM 393+250) is provided in Tables 10-12 and Figure 4. The testing data corresponding to the fifth testing point (KM 393+150) is provided in Tables 13-15 and Figure 5.

Table 3: Calculations of the resilient modulus of the tested soil according to DIN18134: (KM 393+550)

Parameters	1st loading cycle	2nd loading cycle
(s_v max) MN/m ²	0.25	0.25
s_v (mm)	-0.07	0.99
a_1 (mm/(MN/m ²))	9.39	6.35
a_2 (mm/(MN ² /m ²))	-6.49	-8.95
$E_v = 1.5 r / (a_1 + a_2 \cdot s_v \text{ max})$	57.89	109.42
E_{v2}/E_{v1}	1.89	



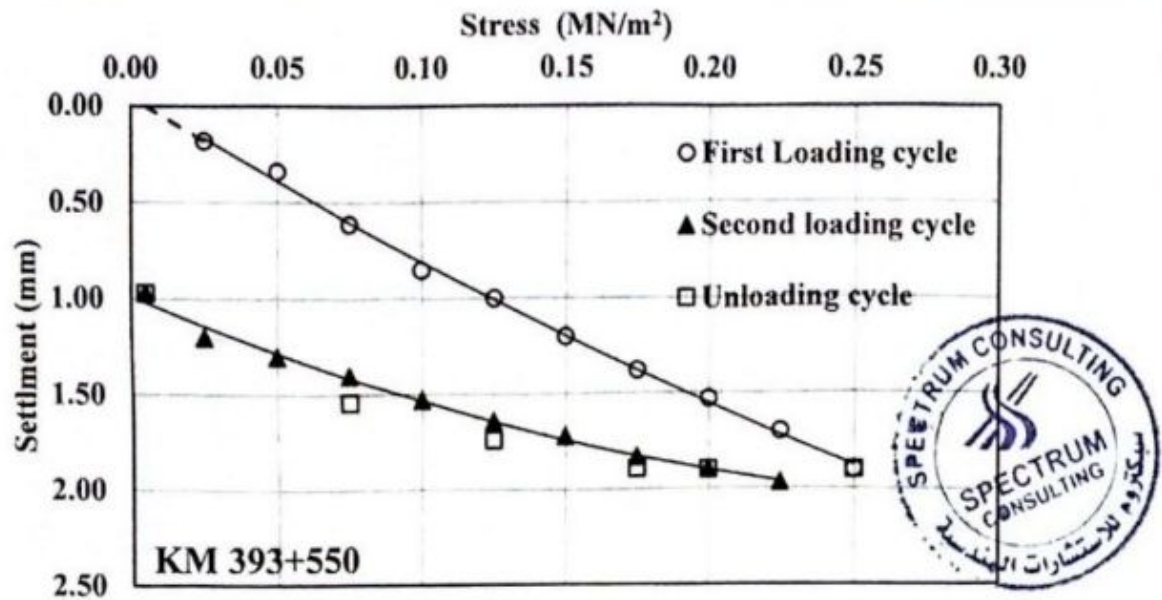


Figure 1: Load-settlement data: plate loading test performed at (KM 393+550)

Table 4: Load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 393+450)

Loading stage	Load (F)	Normal stress (s_v)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	0.00
1	7.07	0.025	0.10
2	14.14	0.050	0.22
3	21.21	0.075	0.41
4	28.28	0.100	0.64
5	35.35	0.125	0.79
6	42.42	0.150	0.95
7	49.49	0.175	1.10
8	56.56	0.200	1.20
9	63.63	0.225	1.33
10	70.7	0.250	1.43
11	56.56	0.200	1.43
12	49.49	0.175	1.39
13	35.35	0.125	1.29
14	21.21	0.075	1.14
15	1.414	0.005	0.63

Table 5: Load-settlement data obtained at the second loading and unloading stages of the plate loading test performed at the location (KM 393+450)

Loading stage	Load (F)	Normal stress (s_v)		Settlement (S)
	kN	MN/m ²		mm
0	1.414	0.005		0.63
1	7.07	0.025		0.78
2	14.14	0.050		0.88
3	21.21	0.075		0.97
4	28.28	0.100		1.09
5	35.35	0.125		1.19
6	42.42	0.150		1.28
7	49.49	0.175		1.33
8	56.56	0.200		1.41
9	63.63	0.225		1.49

Table 6: Calculations of the resilient modulus of the tested soil according to DIN18134: (KM 393+450)

Parameters	1st loading cycle	2nd loading cycle
($s_{v,max}$) MN/m ²	0.25	0.25
a_0 (mm)	-0.15	0.62
a_1 (mm/(MN/m ²))	8.63	5.33
a_2 (mm/(MN ² /m ⁴))	-9.16	-6.79
$E_v = 1.5 r / (a_1 + a_2 \cdot s_{v,max})$	70.91	124.06
E_{v2}/E_{v1}	1.75	

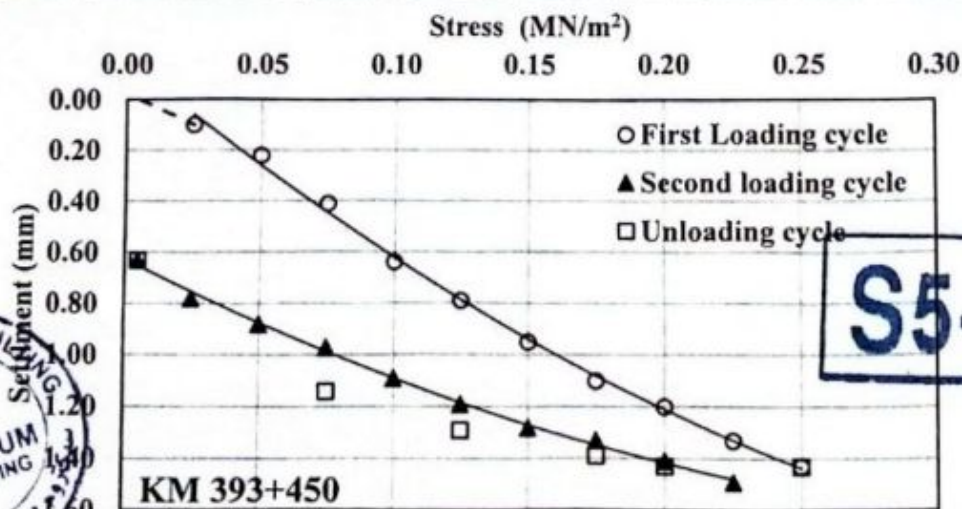


Figure 2: Load-settlement data: plate loading test performed at (KM 393+450)

Table 7: Load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 393+350)

Loading stage	Load (F)	Normal stress (s_v)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	0.00
1	7.07	0.025	0.30
2	14.14	0.050	0.46
3	21.21	0.075	0.84
4	28.28	0.100	1.33
5	35.35	0.125	1.69
6	42.42	0.150	1.95
7	49.49	0.175	2.30
8	56.56	0.200	2.50
9	63.63	0.225	2.68
10	70.7	0.250	2.88
11	56.56	0.200	2.88
12	49.49	0.175	2.83
13	35.35	0.125	2.73
14	21.21	0.075	2.59
15	1.414	0.005	2.03

Table 8: Load-settlement data obtained at the second loading and unloading stages of the plate loading test performed at the location (KM 393+350)

Loading stage	Load (F)	Normal stress (s_v)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	2.03
1	7.07	0.025	2.33
2	14.14	0.050	2.41
3	21.21	0.075	2.50
4	28.28	0.100	2.60
5	35.35	0.125	2.70
6	42.42	0.150	2.79
7	49.49	0.175	2.88
8	56.56	0.200	3.00
9	63.63	0.225	3.12

Table 9: Calculations of the resilient modulus of the tested soil according to DIN18134: (KM 393+350)

Parameters	1st loading cycle	2nd loading cycle
$(s_v)_{max}$ (MN/m ²)	0.25	0.25
a_0 (mm)	-0.27	2.10
a_1 (mm/(MN/m ²))	17.90	5.57
a_2 (mm/(MN ² /m ⁴))	-20.80	-5.33
$Ev = 1.5 r / (a_1 + a_2 \cdot s_v)_{max}$	35.44	106.17
Ev_1/Ev_2	3.00	

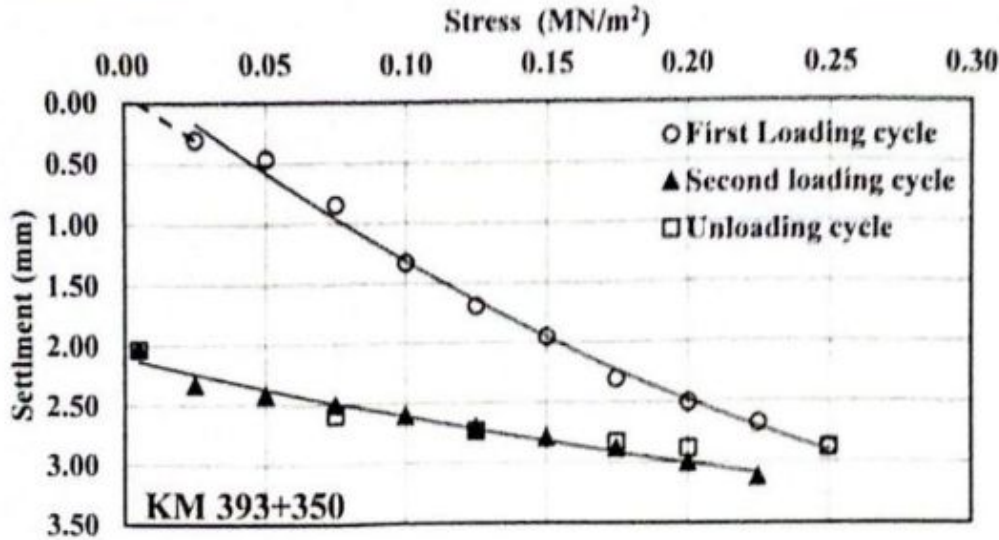


Figure 3: Load-settlement data: plate loading test performed at (KM 393+350)

Table 10: Load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 393+250)

Loading stage	Load (F)	Normal stress (s_n)	Settlement (S)
	kN	MN/m^2	mm
0	1.414	0.005	0.00
1	7.07	0.025	0.23
2	14.14	0.050	0.31
3	21.21	0.075	0.49
4	28.28	0.100	0.72
5	35.35	0.125	0.91
6	42.42	0.150	1.20
7	49.49	0.175	1.47
8	56.56	0.200	1.66
9	63.63	0.225	1.89
10	70.7	0.250	2.07
11	56.56	0.200	2.07
12	49.49	0.175	2.03
13	35.35	0.125	1.87
14	21.21	0.075	1.70
15	1.414	0.005	1.02

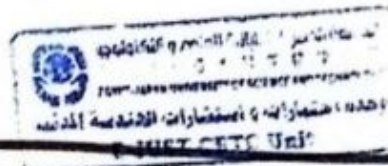


Table 11: Load-settlement data obtained at the second loading and unloading stages of the plate loading test performed at the location (KM 393+250)

Loading stage	Load (F)	Normal stress (σ_v)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	1.02
1	7.07	0.025	1.13
2	14.14	0.050	1.35
3	21.21	0.075	1.45
4	28.28	0.100	1.59
5	35.35	0.125	1.76
6	42.42	0.150	1.86
7	49.49	0.175	1.97
8	56.56	0.200	2.10
9	63.63	0.225	2.23

Table 12: Calculations of the resilient modulus of the tested soil according to DIN18134: (KM 393+250)

Parameters	1st loading cycle	2nd loading cycle
($\sigma_{v, \max}$) MN/m ²	0.25	0.25
s_v (mm)	-0.02	0.99
a_1 (mm/(MN/m ²))	7.00	6.66
a_2 (mm/(MN ² /m ⁴))	6.31	-5.38
$E_v = 1.5 r / (a_1 + a_2 \cdot \sigma_{v, \max})$	52.49	84.65
E_{v2}/E_{v1}	1.61	

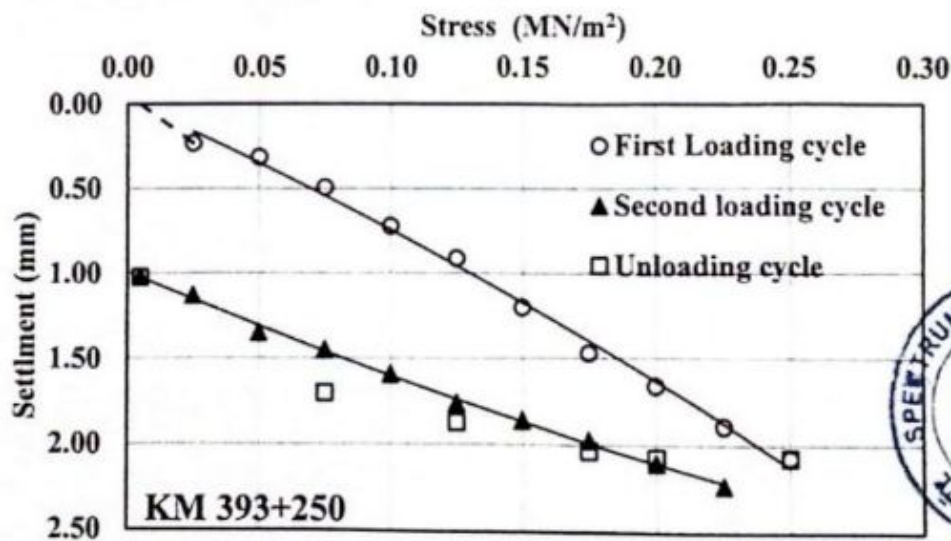


Figure 4: Load-settlement data: plate loading test performed at (KM 393+250)

Table 13: Load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 393+150)

Loading stage	Load (F)	Normal stress (s_0)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	0.00
1	7.07	0.025	0.25
2	14.14	0.050	0.35
3	21.21	0.075	0.49
4	28.28	0.100	0.70
5	35.35	0.125	0.87
6	42.42	0.150	1.05
7	49.49	0.175	1.27
8	56.56	0.200	1.45
9	63.63	0.225	1.65
10	70.7	0.250	1.77
11	56.56	0.200	1.77
12	49.49	0.175	1.69
13	35.35	0.125	1.60
14	21.21	0.075	1.44
15	1.414	0.005	0.80

Table 14: Load-settlement data obtained at the second loading and unloading stages of the plate loading test performed at the location (KM 393+150)

Loading stage	Load (F)	Normal stress (s_0)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	0.80
1	7.07	0.025	1.00
2	14.14	0.050	1.12
3	21.21	0.075	1.21
4	28.28	0.100	1.35
5	35.35	0.125	1.45
6	42.42	0.150	1.55
7	49.49	0.175	1.64
8	56.56	0.200	1.74
9	63.63	0.225	1.84

Table 15: Calculations of the resilient modulus of the tested soil according to DIN18134: (KM 393+150)

Parameters	1st loading cycle	2nd loading cycle
($s_{0,max}$) MN/m ²	0.25	0.25
s_0 (mm)	0.05	0.81
a_1 (mm/(MN/m ²))	6.16	5.93
a_2 (mm/(MN ² /m ⁴))	3.58	-6.42
$E_v = 1.5 \tau / (a_1 + a_2 \cdot s_{0,max})$	63.77	103.99
E_{v2}/E_{v1}		1.63

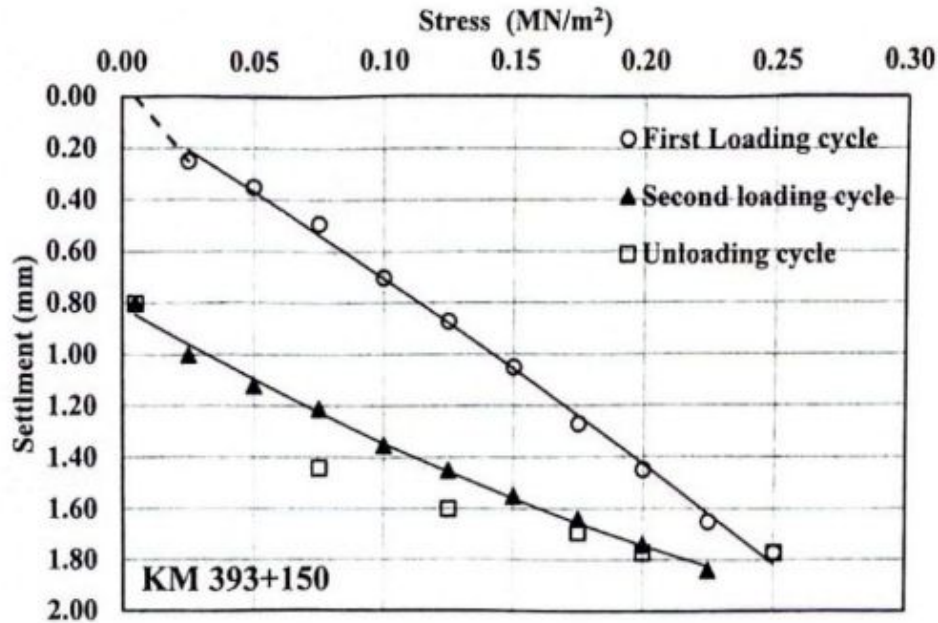


Figure 5: Load-settlement data: plate loading test performed at (KM 393+150)

The testing data corresponding to the sixth testing point (KM 393+050) is provided in Tables 16-18 and Figure 6. The testing data corresponding to the seventh testing point (KM 392+950) is provided in Tables 19-21 and Figure 7.

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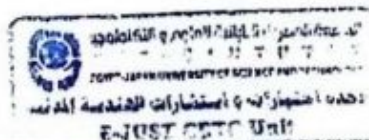


Table 16: Load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 393+050)

Loading stage	Load (F)	Normal stress (s_0)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	0.00
1	7.07	0.025	0.20
2	14.14	0.050	0.32
3	21.21	0.075	0.46
4	28.28	0.100	0.73
5	35.35	0.125	1.00
6	42.42	0.150	1.20
7	49.49	0.175	1.48
8	56.56	0.200	1.69
9	63.63	0.225	1.90
10	70.7	0.250	2.10
11	56.56	0.200	2.10
12	49.49	0.175	2.03
13	35.35	0.125	1.90
14	21.21	0.075	1.73
15	1.414	0.005	0.99

Table 17: Load-settlement data obtained at the second loading and unloading stages of the plate loading test performed at the location (KM 393+050)

Loading stage	Load (F)	Normal stress (s_0)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	0.99
1	7.07	0.025	1.22
2	14.14	0.050	1.31
3	21.21	0.075	1.45
4	28.28	0.100	1.60
5	35.35	0.125	1.72
6	42.42	0.150	1.84
7	49.49	0.175	1.97
8	56.56	0.200	2.08
9	63.63	0.225	2.20

Table 18: Calculations of the resilient modulus of the tested soil according to DIN18134: (KM 393+050)

Parameters	1st loading cycle	2nd loading cycle
($s_{0, \max}$) MN/m ²	0.25	0.25
a_0 (mm)	-0.06	1.00
a_1 (mm/(MN/m ²))	7.81	6.43
a_2 (mm/(MN ² /m ⁴))	-4.00	-5.11
$E_v = 1.5 \pi / (a_1 + a_2 \cdot s_{0, \max})$	51.06	87.36
E_{v1}/E_{v2}	1.71	



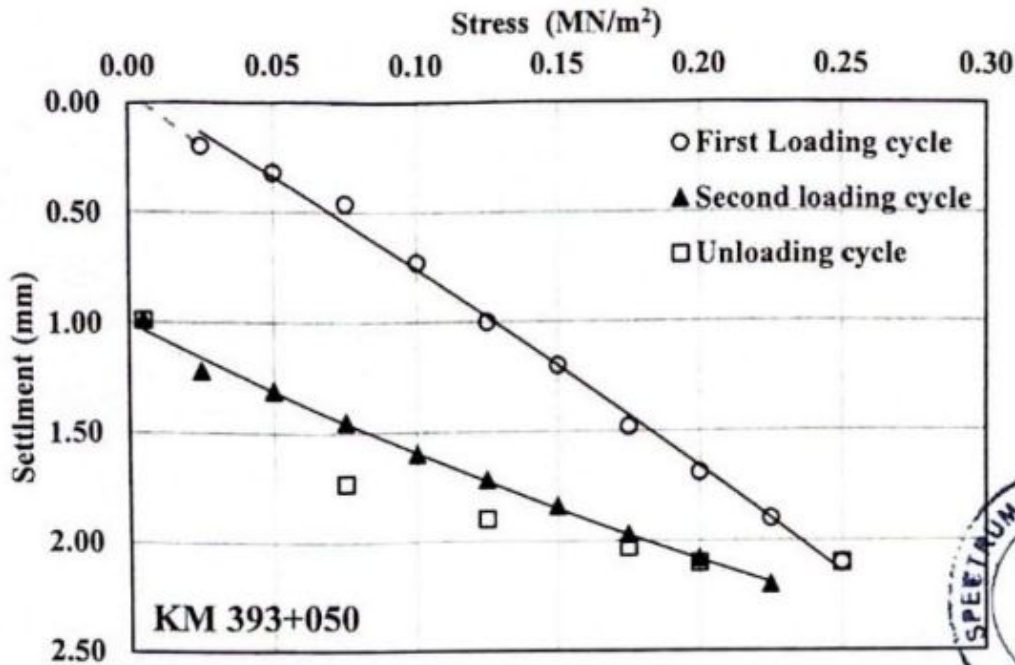


Figure 6: Load-settlement data: plate loading test performed at (KM 393+050)

Table 19: Load-settlement data obtained at the first loading and unloading stages of the plate loading test performed at the location (KM 392+950)

Loading stage	Load (F)	Normal stress (s_0)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	0.00
1	7.07	0.025	0.24
2	14.14	0.050	0.40
3	21.21	0.075	0.50
4	28.28	0.100	0.70
5	35.35	0.125	0.97
6	42.42	0.150	1.25
7	49.49	0.175	1.59
8	56.56	0.200	1.80
9	63.63	0.225	2.08
10	70.7	0.250	2.32
11	56.56	0.200	2.32
12	49.49	0.175	2.30
13	35.35	0.125	2.17
14	21.21	0.075	1.95
15	1.414	0.005	1.31

Table 20: Load-settlement data obtained at the second loading and unloading stages of the plate loading test performed at the location (KM 392+950)

Loading stage	Load (F)	Normal stress (σ_0)	Settlement (S)
	kN	MN/m ²	mm
0	1.414	0.005	1.31
1	7.07	0.025	1.58
2	14.14	0.050	1.67
3	21.21	0.075	1.75
4	28.28	0.100	1.90
5	35.35	0.125	2.02
6	42.42	0.150	2.11
7	49.49	0.175	2.24
8	56.56	0.200	2.35
9	63.63	0.225	2.47

Table 21: Calculations of the resilient modulus of the tested soil according to DIN18134: (KM 392+950)

Parameters	1st loading cycle	2nd loading cycle
$(\sigma_0 \text{ max}) \text{ MN/m}^2$	0.25	0.25
$a_0 \text{ (mm)}$	0.04	1.35
$a_1 \text{ (mm/(MN/m}^2\text{))}$	5.90	5.89
$a_2 \text{ (mm/(MN}^2\text{/m}^4\text{))}$	13.76	-4.49
$E_v = 1.5 r / (a_1 + a_2 \cdot \sigma_0 \text{ max})$	48.19	94.44
E_{v2}/E_{v1}	1.96	

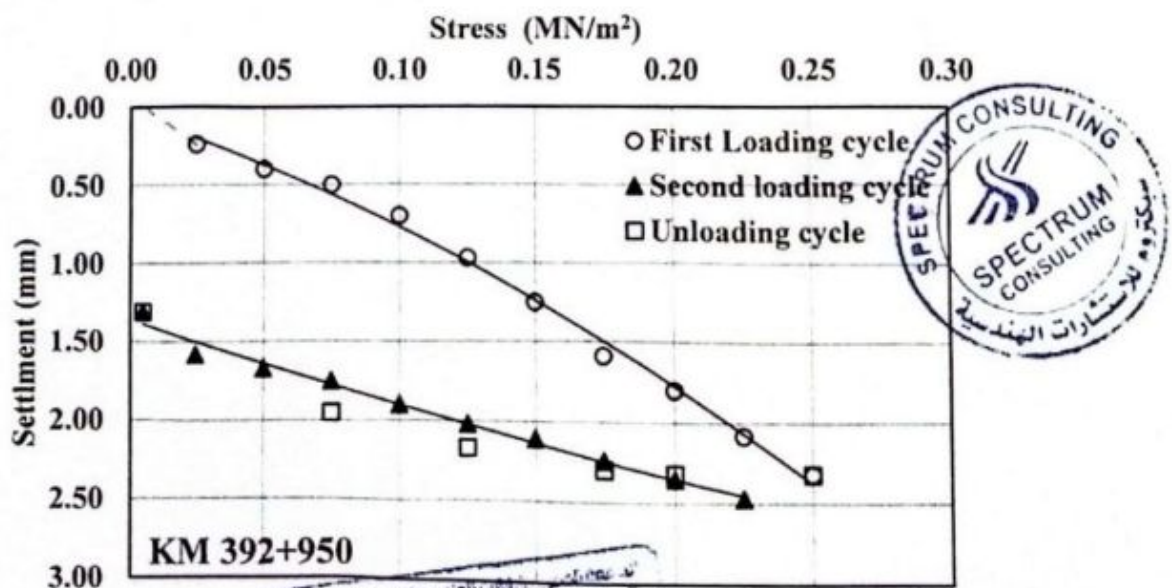


Figure 7: Load-settlement data: plate loading test performed at (KM 392+950)

Appendix A



S5-B-SF



Location of test site:	KM 393+550		Field team	Mr.Mohamed Mamdouh
Project title:	Electric Express Train Project - Al-Safa Contracting Company		Date:	12/1/2023
Diameter of loading plate	600		Time	1:03:00 pm
				1:30:00 pm
Lever ratio	1		Note: KAWSAKI	
Type of Soil	Crushed Stone Filter Layer			
Bedding material	---			
Temperature	16°C			
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Loading Stage	0	1.414	10.00	
	1	7.07	9.82	
	2	14.14	9.66	
	3	21.21	9.39	
	4	28.28	9.15	
	5	35.35	9.00	
	6	42.42	8.80	
	7	49.49	8.62	
	8	56.56	8.47	
	9	63.63	8.30	
	10	70.7	8.10	
Unloading Stage	11	56.56	8.10	
	12	49.49	8.11	
	13	35.35	8.26	
	14	21.21	8.46	
	15	1.414	9.03	
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Reloading Stage	0	1.414	9.03	
	1	7.07	8.80	
	2	14.14	8.70	
	3	21.21	8.60	
	4	28.28	8.47	
	5	35.35	8.36	
	6	42.42	8.28	
	7	49.49	8.17	
	8	56.56	8.10	
	9	63.63	8.03	



S5-B-SF

Civil Engineering Testing &
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المدنية

Location of test site:	KM 393+450		Field team	Mr.Mohamed Mamdouh
Project title:	Electric Express Train Project - Al-Safa Contracting Company		Date:	12/1/2023
Diameter of loading plate	600		Time	1:38:00 pm 2:09:00 pm
Lever ratio	1		Note: KAWSAKI	
Type of Soil	Crushed Stone Filter Layer			
Bedding material	---			
Temperature	16°C			
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Loading Stage	0	1.414	10.00	
	1	7.07	9.90	
	2	14.14	9.78	
	3	21.21	9.59	
	4	28.28	9.36	
	5	35.35	9.21	
	6	42.42	9.05	
	7	49.49	8.90	
	8	56.56	8.80	
	9	63.63	8.63	
Unloading Stage	10	70.7	8.57	
	11	56.56	8.52	
	12	49.49	8.61	
	13	35.35	8.71	
	14	21.21	8.86	
Reloading Stage	15	1.414	9.37	
	0	1.414	9.37	
	1	7.07	9.22	
	2	14.14	9.12	
	3	21.21	9.03	
	4	28.28	8.91	
	5	35.35	8.81	
	6	42.42	8.72	
	7	49.49	8.67	
	8	56.56	8.59	
9	63.63	8.51		



S5-B-SF

Civil Engineering Testing &
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وحدة اختبارات واستشارات الهندسة
المدنية

Location of test site:	KM 393+350		Field team	Mr.Mohamed Mamdouh
Project title:	Electric Express Train Project - Al-Safa Contracting Company		Date:	12/1/2023
Diameter of loading plate	600		Time	2:20:00 pm 2:47:00 pm
Lever ratio	1		Note: KAWSAKI	
Type of Soil	Crushed Stone Filter Layer			
Bedding material	---			
Temperature	16°C			
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Loading Stage	0	1.414	10.00	
	1	7.07	9.70	
	2	14.14	9.54	
	3	21.21	9.16	
	4	28.28	8.67	
	5	35.35	8.31	
	6	42.42	8.05	
	7	49.49	7.70	
	8	56.56	7.50	
	9	63.63	7.32	
	10	70.7	7.12	
Unloading Stage	11	56.56	7.12	
	12	49.49	7.17	
	13	35.35	7.27	
	14	21.21	7.41	
	15	1.414	7.97	
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Reloading Stage	0	1.414	7.97	
	1	7.07	7.67	
	2	14.14	7.59	
	3	21.21	7.50	
	4	28.28	7.40	
	5	35.35	7.30	
	6	42.42	7.21	
	7	49.49	7.12	
	8	56.56	7.00	
	9	63.63	6.88	

Location of test site:	KM 393+250		Field team	Mr.Mohamed Mamdouh
Project title:	Electric Express Train Project - Al-Safa Contracting Company		Date:	12/1/2023
Diameter of loading plate	600		Time	2:57:00 pm 3:25:00 pm
Lever ratio	1		Note: KAWSAKI	
Type of Soil	Crushed Stone Filter Layer			
Bedding material	---			
Temperature	16°C			
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Loading Stage	0	1.414	10.00	
	1	7.07	9.77	
	2	14.14	9.69	
	3	21.21	9.51	
	4	28.28	9.28	
	5	35.35	9.09	
	6	42.42	8.80	
	7	49.49	8.53	
	8	56.56	8.34	
	9	63.63	8.11	
	10	70.7	7.93	
Unloading Stage	11	56.56	7.93	
	12	49.49	7.97	
	13	35.35	8.13	
	14	21.21	8.30	
	15	1.414	8.98	
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Reloading Stage	0	1.414	8.98	
	1	7.07	8.87	
	2	14.14	8.65	
	3	21.21	8.55	
	4	28.28	8.41	
	5	35.35	8.24	
	6	42.42	8.14	
	7	49.49	8.03	
	8	56.56	7.90	
	9	63.63	7.77	



Location of test site:	KM 393+150		Field team	Mr.Mohamed Mamdouh
Project title:	Electric Express Train Project - Al-Safa Contracting Company		Date:	12/1/2023
Diameter of loading plate	600		Time	3:34:00 pm 4:02:00 pm
Lever ratio	1		Note: KAWSAKI	
Type of Soil	Crushed Stone Filter Layer			
Bedding material	---			
Temperature	16°C			
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Loading Stage	0	1.414	10.00	
	1	7.07	9.75	
	2	14.14	9.65	
	3	21.21	9.51	
	4	28.28	9.30	
	5	35.35	9.13	
	6	42.42	8.95	
	7	49.49	8.73	
	8	56.56	8.55	
	9	63.63	8.35	
Unloading Stage	10	70.7	8.23	
	11	56.56	8.23	
	12	49.49	8.31	
	13	35.35	8.40	
	14	21.21	8.56	
Reloading Stage	15	1.414	9.20	
	0	1.414	9.20	
	1	7.07	9.00	
	2	14.14	8.88	
	3	21.21	8.79	
	4	28.28	8.65	
	5	35.35	8.55	
	6	42.42	8.45	
	7	49.49	8.36	
	8	56.56	8.26	
9	63.63	8.16		





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S5-B-SF

Civil Engineering Testing & Consulting Unit

وحدة اختبارات واستشارات الهندسة المدنية

Location of test site:	KM 393+050		Field team	Mr.Mohamed Mamdouh
Project title:	Electric Express Train Project - Al-Safa Contracting Company		Date:	12/1/2023
Diameter of loading plate	600		Time	4:10:00 pm 4:37:00 pm
Lever ratio	1		Note: KAWSAKI	
Type of Soil	Crushed Stone Filter Layer			
Bedding material	---			
Temperature	16°C			
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Loading Stage	0	1.414	10.00	
	1	7.07	9.80	
	2	14.14	9.68	
	3	21.21	9.54	
	4	28.28	9.27	
	5	35.35	9.00	
	6	42.42	8.80	
	7	49.49	8.52	
	8	56.56	8.31	
	9	63.63	8.10	
	10	70.7	7.90	
Unloading Stage	11	56.56	7.90	
	12	49.49	7.97	
	13	35.35	8.10	
	14	21.21	8.27	
	15	1.414	9.01	
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Reloading Stage	0	1.414	9.01	
	1	7.07	8.78	
	2	14.14	8.69	
	3	21.21	8.55	
	4	28.28	8.40	
	5	35.35	8.28	
	6	42.42	8.16	
	7	49.49	8.03	
	8	56.56	7.92	
	9	63.63	7.80	





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S5-B-SF

Civil Engineering Testing & Consulting Unit

وحدة اختبارات واستشارات الهندسة المدنية

Location of test site:	KM 392+950		Field team	Mr.Mohamed Mamdouh
Project title:	Electric Express Train Project - Al-Safa Contracting Company		Date:	12/1/2023
Diameter of loading plate	600		Time	4:45:00 pm 5:13:00 pm
Lever ratio	1		Note: KAWSAKI	
Type of Soil	Crushed Stone Filter Layer			
Bedding material	---			
Temperature	16°C			
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Loading Stage	0	1.414	10.00	
	1	7.07	9.76	
	2	14.14	9.60	
	3	21.21	9.50	
	4	28.28	9.30	
	5	35.35	9.03	
	6	42.42	8.75	
	7	49.49	8.41	
	8	56.56	8.20	
	9	63.63	7.92	
	10	70.7	7.68	
Unloading Stage	11	56.56	7.68	
	12	49.49	7.70	
	13	35.35	7.83	
	14	21.21	8.05	
	15	1.414	8.69	
Test regime	Loading Stage No.	Load (kN)	Dial Gauge Reading (mm)	
Reloading Stage	0	1.414	8.69	
	1	7.07	8.42	
	2	14.14	8.33	
	3	21.21	8.25	
	4	28.28	8.10	
	5	35.35	7.98	
	6	42.42	7.89	
	7	49.49	7.76	
	8	56.56	7.65	
	9	63.63	7.53	



SPECTRUM CONSULTING
مستشارات الهندسة



Japan University of Science and Technology
الجامعة المصرية للعلوم والتكنولوجيا
エジプト日本科学技術大学

UNIVERSAL INSPECTION REQUEST



الهيئة العامة
للمنشآت والبنية التحتية
(GARB)



الهيئة العامة
للمنشآت والبنية التحتية
(GARB)



RECEIPT of NOTIFICATION-Minimum Notice Period not less than 24 Hours

The Work described below will be complete and ready for inspection at planned time shown

Contractor Company	AL-Safa for General Contracting and Road Construction			Designer Company*	(SPECTRUM) Engineering Consulting Office						
Issued by Contractor	Name	Sign	Date/Serial Number	Time							
	Eng. Ahmed Abbas		06/01/2023 (S5-B-SF-FF-04)	10:00 AM							
Received by GARB CONSULTANT	Eng. Saied Saif		UIR	C1	C2	C3	DD	MM	YY	HH	MM
				393	EW	CS	07	01	2023	01	00

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

EXPLANATION OF WORK TO BE INSPECTED

Description	REV	Element	Item
From St. 393+140 To St. 393+300	29	At level (6.80) m .	FILTER LAYER
From St. 393+324 To St. 393+484	35		

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time

Planned Inspection Date	Planned Inspection Time
-------------------------	-------------------------

COMPLIANCE EVIDENCE Must be Included as appropriate

Checklist Attached	Test Results Attached	Calibration Attached	Other as indicated
Drawing Reference	References	MS Reference	
Plan and Profile REV. 35	MAR (QT-36) - MIR (PLT-07)	-Specification: EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.2)VERSION2 BY CIVECON GROUP. -TECHNICAL REPORT (CG21-122.1) VERSION 1 BY CIVECON GROUP.	

Comments by: Eng. Mohamed Mansour (XYZ)

Attached Master Sheet approved by SPECTRUM.



Comments by: Eng. Saied Saif (SPECTRUM)

Comments by: Eng. Alaa Abd-Allatif (ER)

1-تم استلام القطاع فحص وقياسه 2-تم مراجعة شيفت الملاحظات	1-Coordinates & level and width checked by GARB consultant
---	--

INSPECTION RESULT

Organisation	Name	Sign	Date	Time	Approval Status	Please Tick if Not Attend
Contractor	Eng. Ahmed Abbas				A	
XYZ Survey	Eng. Mohamed Mansour				A	
QA/QC	Eng. Saied Saif				A	
GARB	Eng. Mohammed Fayad					
Employers Representative	Eng. Alaa Abd-Allatif				A	

UNIVERSAL INSPECTION REQUEST



إمارة دبي
المطارات والكباري
(GARB)



الهيئة العامة للغذاء والدواء
SAGRA



RECEIPT of NOTIFICATION-Minimum Notice Period not less than 24 Hours

The Work described below will be complete and ready for inspection at planned time shown

Contractor Company	AL-Safa for General Contracting and Road Construction			Designer Company*	(SPECTRUM) Engineering Consulting Office						
Issued by Contractor	Name	Sign	Date/Serial Number	Time							
	Eng. Ahmed Abbas		06/01/2023 (S5-B-SF-FF-03)	10:00 AM							
Received by GARB CONSULTANT	Eng. Saied Saif		UIR	C1	C2	C3	DD	MM	YY	HH	MM
				393	EW	CS	07	01	2023	01	00

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

EXPLANATION OF WORK TO BE INSPECTED

Description	REV	Element	Item
From St. 392+900 To St. 393+140	29	At level (6.80) m .	FILTER LAYER
From St. 393+084 To St. 393+324	35		

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time

Planned Inspection Date	Planned Inspection Time
-------------------------	-------------------------

COMPLIANCE EVIDENCE Must be Included as appropriate

Checklist Attached	Test Results Attached	Calibration Attached	Other as indicated
Drawing Reference	References	MS Reference	
Plan and Profile REV. 35	MAR (QT-28& 34) - MIR (PLT-07)	-Specification: EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.2)VERSION2 BY CIVECON GROUP. -TECHNICAL REPORT (CG21-122.1) VERSION 1 BY CIVECON GROUP.	

Comments by: Eng. Mohamed Mansour (XYZ)

Attached Master Sheet approved by SPECTRUM.



Comments by: Eng. Saied Saif (SPECTRUM)

Comments by: Eng. Alaa Abd-Allatif (ER)

1-Coordinates & level and width checked by GARB consultant
--

INSPECTION RESULT

Organisation	Name	Sign	Date	Time	Approval Status	Please Tick if Not Attend
Contractor	Eng. Ahmed Abbas				A	
XYZ Survey	Eng. Mohamed Mansour				A	
QA/QC	Eng. Saied Saif				A	
GARB Representative	Eng. Mohammed Fayad					
Employers Representative	Eng. Alaa Abd-Allatif				A	

UNIVERSAL INSPECTION REQUEST



الهيئة العامة
للمطرق والجسور
(GARB)



الهيئة العامة
للتنظيم العمراني
(GARB)



RECEIPT of NOTIFICATION-Minimum Notice Period not less than 24 Hours

The Work described below will be complete and ready for inspection at planned time shown

Contractor Company	AL-Safa for General Contracting and Road Construction		Designer Company*	(SPECTRUM) Engineering Consulting Office						
Issued by Contractor	Name	Sign	Date/Serial Number	Time						
	Eng. Ahmed Abbas		02/01/2023 (S5-B-SF-FF-01)	10:00 AM						
Received by GARB CONSULTANT	Eng. Saied Saif	Sign	C1	C2	C3	DD	MM	YY	HH	MM
			393	EW	CS	03	01	2023	01	00

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

EXPLANATION OF WORK TO BE INSPECTED

Description	REV	Element	Item
From St. 393+340 To St. 393+580	29	At level (6.80) m .	FILTER LAYER
From St. 393+524 To St. 393+764	35		

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time

Planned Inspection Date	Planned Inspection Time
-------------------------	-------------------------

COMPLIANCE EVIDENCE Must be included as appropriate

Checklist Attached	Test Results Attached	Calibration Attached	Other as indicated
Drawing Reference	References	MS Reference	
Plan and Profile REV. 35	MAR (QT-14 & 18) - MIR (PLT-07)	-Specification: EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.2) VERSION2 BY CIVECON GROUP. -TECHNICAL REPORT (CG21-122.1) VERSION 1 BY CIVECON GROUP.	

Comments by: Eng. Mohamed Mansour (MRZ)

Attached Master Sheet approved by SPECTRUM.



Comments by: Eng. Saied Saif (SPECTRUM)

1-تم استلام القطاع فحص بصري
2-تم مراجعة شيت التأسيس

Comments by: Eng. Alaa Abd-Allatif (ER)

1-Coordinates & level and width checked by GARB consultant

INSPECTION RESULT

Organisation	Name	Sign	Date	Time	Approval Status	Please Tick if Not Attend
Contractor	Eng. Ahmed Abbas				A-AWC-R	
XYZ Survey	Eng. Mohamed Mansour				A	
QA/QC*	Eng. Saied Saif				A	
GARB	Eng. Mohammed Fayad					
Employers Representative	Eng. Alaa Abd-Allatif				A	



**MATERIAL
APPROVAL
REQUEST**




الهيئة العامة
للمطرق والكباري
(GARB)



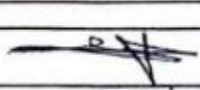
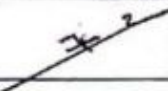
الهيئة العامة للإسكان
وزارة الإسكان



الهيئة العامة للمياه
وزارة المياه

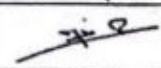


الهيئة العامة للكهرباء
وزارة الكهرباء

Contractor Company	Al-SAFA General Contracting Company			Designer Company	[SPECTRUM] Engineering Consulting Office					
Issued by Contractor	Name	Sign	Date/Serial Number		Time					
	Eng. Ahmed Ragab		16/9/2022		10:00					
			(SS-B-SF-QT-014)							
Received by GARB CONSULTANT	Eng. Mazen Essamy		C1	C2	C3	D0	MM	YY	HH	MM
			MAR	393	EW	CS	17	9	22	10

CODE-1	S15	D3	Kp 393+000
		EW	
		MS	

Description of Materials	Filter Layer (5000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600
		REV35	393+084		REV35	393+784
Sample only	Yes	Materials Type		Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER	Data Sheet provided		Yes attached		
Reference in BoQ		Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP		
Prequalification reference		Test Samples Results		Yes attached		
Reference Photos	No	Other				
Comments by: Eng. Mazen Essamy (SPECTRUM) 1-Quality test Results by Third Party Lab (COMIBASSAL) IS Attached This Sample Representative (5000 m3) only .				Comments by: Eng. Alaa Abd-Allatif (ER) 1-All testes carried-out Third Party Lab (COMIBASSAL). 2-Results report attached and acceptable with the project specifications.		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC *	Eng. Mazen Essamy			A
GARB**	Eng. Mohammed Fayad			
Employers Representative	Eng. Alaa Abd-Allatif			A

* Designer

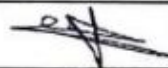
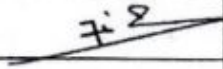
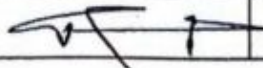
** Alignment/Bridges: Culvert only

    	MATERIAL APPROVAL REQUEST	
	الحبة العامة للمرور والكباري (GARB)	

Contractor Company	Al-Safa General Contracting Company		Designer Company	(SPECTRUM) Engineering Consulting Office	
Issued by Contractor	Name	Sign	Date/Serial Number	Time	
	Eng. Ahmed Ragab		14/10/2022	10:00	
			(SS-B-SF-QT-018)		
Received by GARB CONSULTANT	Eng. Mazen Essamy	Sign	DATE	MM	YY
			393	10	22

CODE-1	S15	D3	Kp 393+000
		EW	
		MS	

Description of Materials	Filter Layer (10000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600
		REV35	393+084		REV35	393+784
Sample only	Yes		Materials Type	Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER		Data Sheet provided	Yes attached		
Reference in BoQ			Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP		
Prequalification reference			Test Samples Results	Yes attached		
Reference Photos	No		Other			
Comments by: Eng. Mazen Essamy (SPECTRUM) 1-Quality test Results by Third Party Lab (COMIBASSAL) IS Approved This Sample Representative (5000 m3) only .				Comments by: Eng. Alaa Abd-Allatif (ER) 1-All testes carried-out Third Party Lab (COMIBASSAL). 2-Results report attached and acceptable with the project specifications.		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC	Eng. Mazen Essamy			A
GARB	Eng. Mohammed Fayad			
Employer's Representative	Eng. Alaa Abd-Allatif			A

* Designer
** Alignment/Bridges: Cover only

MATERIAL APPROVAL REQUEST



الهيئة العامة
للمطرق والكباري
(GARB)



الهيئة العامة
للمياه والكهرباء



Contractor Company	Al-SAFA General Contracting Company			Designer Company				(SPECTRUM) Engineering Consulting Office			
Issued by Contractor	Name	Sign		Date/Serial Number				Time			
	Eng. Ahmed Ragab			4/11/2022				10:00			
				(55-B-SF-QT-020)							
Received by GARB CONSULTANT	Eng. Mazen Essamy		MAR	C1	C2	C3	DD	MM	YY	HH	MM
				393	EW	CS	5	11	22	10	0

CODE-1	S15	D3	Kp 393+000
CODE-2	EW		
CODE-3	MS		

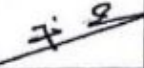
Description of Materials	Filter Layer (15000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600
		REV35	393+084		REV35	393+784
Sample only	Yes		Materials Type	Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER		Data Sheet provided	Yes attached		
Reference in BoQ			Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP		
Prequalification reference			Test Samples Results	Yes attached		
Reference Photos	No		Other			
Comments by: Eng. Mazen Essamy (SPECTRUM)				Comments by: Eng. Alaa Abd-Allatif (ER)		
1-Quality test Results by Third Party Lab (COMIBASSAL) IS Approved				1-All testes carried-out Third Party Lab (COMIBASSAL).		
This Sample Representative (5000 m3) only .				2-Results report attached and acceptable with the project specifications.		



APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC	Eng. Mazen Essamy			A
GARB	Eng. Mohammed Fayad			
Employers Representative	Eng. Alaa Abd-Allatif			A

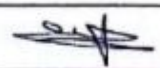
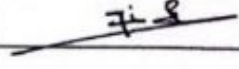
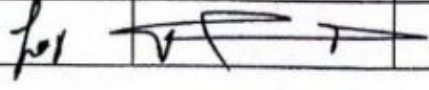
* Designer

** Alignment/Bridges: Culvert only

Contractor Company	Al-Safa General Contracting Company			Designer Company	(SPECTRUM) Engineering Consulting Office						
Issued by Contractor	Name	Sign	Date/Serial Number			Time					
	Eng. Ahmed Ragab		30/11/2022			10:00					
				(SS-B-SF-QT-024)							
Received by GARB CONSULTANT	Eng. Mazen Essamy		MAR	C1	C2	C3	D0	MM	YY	HH	MM
				393	EW	CS	1	12	22	10	0

CODE-1	S15	D3	Kp 393+000
		EW	
		MS	

Description of Materials	Filter Layer (20000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600
		REV35	393+084		REV35	393+784
Sample only	Yes	Materials Type		Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER	Data Sheet provided		Yes attached		
Reference in BoQ		Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP		
Prequalification reference		Test Samples Results		Yes attached		
Reference Photos	No	Other				
Comments by: Eng. Mazen Essamy (SPECTRUM) 1-Quality test Results by Third Party Lab (COMIBASSAL) IS Approved This Sample Representative (5000 m3) only .				Comments by: Eng. Alaa Abd-Allatif (ER) 1-All testes carried-out Third Party Lab (COMIBASSAL). 2-Results report attached and acceptable with the project specifications.		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
	Eng. Ahmed Ragab			A
	Eng. Mazen Essamy			A
	Eng. Mohammed Fayad			
	Eng. Alaa Abd-Allatif			A

* Designer
** Alignment/Bridges: Culvert only

MATERIAL APPROVAL REQUEST



الهيئة العامة
للمطرق والكبارى
(GARB)



المكتب الهندسي للإدارة
بوزارة التخطيط



Contractor Company	Al-SAFA General Contracting Company			Designer Company				(SPECTRUM) Engineering Consulting Office			
Issued by Contractor	Name	Sign		Date/Serial Number				Time			
	Eng. Ahmed Ragab			14/12/2022				10:00			
				(SS-B-SF- QT-028)							
Received by GARB CONSULTANT	Eng. Mazen Essamy		MAR	C1	C2	C3	DD	MM	YY	HH	MM
				393	EW	CS	15	12	22	10	0

CODE-1	S15	D3	Kp 393+000
CODE-2	EW		
CODE-3	MS		

Description of Materials	Filter Layer (25000)m3.					
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600
		REV35	393+084		REV35	393+784
Sample only	Yes		Materials Type	Crushed stone #1-#2		
Supplier Name	ALBARAKA CRUSHER		Data Sheet provided	Yes attached		
Reference in BoQ			Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (LG21-122.1) VERSION1-2022 BY CIVECON GROUP		
Prequalification reference			Test Samples Results	Yes attached		
Reference Photos	No		Other			
Comments by: Eng. Mazen Essamy (SPECTRUM)			Comments by: Eng. Alaa Abd-Allatif (ER)			
1-Quality test Results by Third Party Lab (COMIBASSAL) IS Approved			1-All testes carried-out Third Party Lab (COMIBASSAL).			
his Sample Representative (5000 m3) only .			2-Results report attached and acceptable with the project specifications.			



APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC *	Eng. Mazen Essamy			A
GARB**	Eng. Mohammed Fayad			
Employers Representative	Eng. Alaa Abd-Allatif			A

* Designer

** Alignment/Bridges: Culvert only

MATERIAL APPROVAL REQUEST			الهيئة العامة للمطرق والكباري (GARB)																

Contractor Company	Al-Safa General Contracting Company			Designer Company	(SPECTRUM) Engineering Consulting Office						
Issued by Contractor	Name	Eng. Ahmed Ragab	Sign	Date/Serial Number			Time				
				27/12/2022			10:00				
				(SS-B-SF-QT-034)							
Received by GARB CONSULTANT	Eng. Mazen Essamy	Sign	MAR	C1	C2	C3	GO	MM	YY	HH	MM
				393	EW	CS	28	12	22	10	0

COOF-1	S15	D3	Kp 393+000
		EW	
		MS	

Description of Materials	Filter Layer (30000)m3.						
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600	
		REV35	393+084		REV35	393+784	
Sample only	Yes	Materials Type		Crushed stone #1-#2			
Supplier Name	ALBARAKA CRUSHER	Data Sheet provided		Yes attached			
Reference in BoQ		Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP			
Prequalification reference		Test Samples Results		Yes attached			
Reference Photos	No	Other					
Comments by: Eng. Mazen Essamy (SPECTRUM)				Comments by: Eng. Alaa Abd-Allatif (ER)			
Quality test Results by Third Party Lab (COMIBASSAL) IS Approved. This Sample Representative (5000 m3) only.				1-All testes carried-out Third Party Lab (COMIBASSAL). 2-Results report attached and acceptable with the project specifications.			

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
	Contractor	Eng. Ahmed Ragab		A
	QA/QC	Eng. Mazen Essamy		A
	GARB**	Eng. Mohammed Fayad		
	Employers Representative	Eng. Alaa Abd-Allatif		A

* Designer
** Alignment/Bridges: Culvert only

MATERIAL APPROVAL REQUEST										
	شركة السفا العامة للتقانة		شركة نطا واريان		الهيئة العامة للطرق والكباري (GARB)		الهيئة العامة للتخطيط والمالية		وزارة الإسكان والتخطيط العمراني	

Contractor Company	Al-Safa General Contracting Company			Designer Company	[SPECTRUM] Engineering Consulting Office						
Issued by Contractor	Name	Sign		Date/Serial Number	Time						
	Eng. Ahmed Ragab			4/1/2023	10:00						
				(SS-B-SF-QT-036)							
Received by GARB CONSULTANT	Eng. Mazen Essamy		MAR	C1	C2	C3	DO	MM	YY	HH	MM
				393	EW	CS	S	1	23	10	0

CODE-1	S15	D3	Kp 393+000
		EW	
		MS	

Description of Materials	Filter Layer (35000)m3.						
Location to be Used	From Station	REV29	392+900	To Station	REV29	393+600	
		REV35	393+084		REV35	393+784	
Sample only	Yes	Materials Type		Crushed stone #1-#2			
Supplier Name	ALBARAKA CRUSHER	Data Sheet provided		Yes attached			
Reference in BoQ		Specification		EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-122.1) VERSION1-2022 BY CIVECON GROUP			
Prequalification reference		Test Samples Results		Yes attached			
Reference Photos	No	Other					
Comments by: Eng. Mazen Essamy (SPECTRUM) 1-Quality test Results by Third Party Lab (COMIBASSAL) is approved. This Sample Representative (5000 m3) only .				Comments by: Eng. Alaa Abd-Allatif (ER) 1-All testes carried-out Third Party Lab (COMIBASSAL). 2-Results report attached and acceptable with the project specifications.			

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Ahmed Ragab			A
QA/QC*	Eng. Mazen Essamy			A
GARB	Eng. Mohammed Fayad			
Employers Representative	Eng. Alaa Abd-Allatif			A

* Designer
** Alignment Engineer Only