

السيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة وبعد ،،،،

بالاحالة الى مشروع اعمال الجسر الترابي القطار الكهربائي السريع قطاع (فوكة / مطروح) - استكمال
اعمال الردم والتأسيس والاساس .

نتشرف بان نرفق لسيادتكم طيه المقاييس المعدلة بعد اعتماد لجنة المفاوضة للقطاعات الاتية :-

م	اسم الشركة	من المحطة	الى المحطة	اتجاه
١	مكتب الفيروز للمقاولات العامة والتوريدات	٥٠٦+٤٦٠	٥٠٦+٦٢٠	قطاع (فوكة / مطروح)

برجاء من سيادتكم التفضل بالاحاطة والتوجيه باللائم

وتفضلوا بقبول فائق الاحترام ،،،،

رئيس الادارة المركزية
منطقة غرب الدلتا
(بالاسكندرية/ مرسى مطروح)
٢٠٢٣
عميد مهندس / هاني محمد محمود طه



مشروع القطار الكهربائي السريع
المقايضة المعدلة لينود أعمال الجسر القريب لمسار القطار الكهربائي السريع للخط الأول (قطاع فوكا / مطروح) (استكمال أعمال الردم والتأسيس والاساس) لتنفيذ المسافة من
الكم 506+460 الى الكم 506+620 بطول 0.160 كم (بالأمر المباشر)

رقم البند	بيان الأعمال	الوحدة	الكمية	الفئة	الإجمالي
3	إعمال الردم				
3-1	بالمتر المكعب أعمال توريد وتشغيل أتربة صالحة للرمد ومطابقة للمواصفات والتشغيل باستخدام الات التسوية بسمك لا يزيد عن 50 سم حتى منسوب -2 متر و بسمك لا يزيد عن 25 سم لاستكمال المنسوب التصميمي لتشكل الجسر والاكثاف (نسبة تحمل كاليفورنيا لا تقل عن 15%) ورشها بالمياه الاصولية للوصول الى نسبة الرطوبة المطلوبة والدمك الجيد بالهراسات للوصول الى اقصى كثافة جافة (95 % من الكثافة الجافة القصوى) ويتم التنفيذ طبقا للمنسبيب التصميمية والقطاعات العرضية والنموذجية والرسومات التفصيلية المعتمدة والبند بجميع مشتلاته طبقا لاصول الصناعة ومواصفات الهيئة العامة للطرق والكبارى وتعليمات المهندس المشرف. في حالة طلب جهاز الإشراف زيادة نسبة الدمك عن 95 % بحسب زيادة 1 جنيه على زيادة نسبة الدمك لكل 1 % - مسافة النقل 2 كم ويتم احتساب علاوة 1.4 جنيه لكل 1 كم بالزيادة أو النقصان - السعر يشمل عمل تشوينات وتخليط واختبارات ونقل لموقع العمل حتى مسافة 2 كم - السعر يشمل قيمة المادة المحجيرة طبقا لإفادة المنطقة بهذا القطاع (7) من الكم 504 إلى 568	3م	20,478.93	85.00	1,740,708.99
	علاوة مسافة النقل 284.5 كم	3م	20,478.93	395.50	8,099,416.53
	علاوة تحصيل رسوم الكارثة والموازن طبقا للائحة الشركة الوطنية	3م	20,478.93	13.00	266,226.08
4	طبقات الاساس				
4-1	بالمتر المكعب أعمال توريد وفرش طبقة تاسيس (prepared Subgrade) من الاحجار الصلبة المترجة ناتج تكسير الكسارات والمطابقة للمواصفات وأقصى حجم للحبيبات 100 مم والا يزيد نسبة المار من منخل 200 عن 12 % والتدرج الوارد بالاشتراطات الخاصة بالمشروع لا تقل نسبة تحمل كاليفورنيا عن 25 % والا يزيد نسبة الفاقد بجهاز لوس انجلوس عن 30 % والا يزيد الامتصاص عن 15% والا يقل معامل المرونة (Ev2) من تجربة لوح التحميل عن 80 ميجاباسكال ويتم فردها على طبقتين باستخدام الات التسوية الحديثة على ان لا يزيد سمك الطبقة بعد تمام الدمك عن 25 سم ورشها بالمياه الاصولية للوصول الى نسبة الرطوبة المطلوبة والدمك الجيد للهراسات للوصول الى اقصى كثافة جافة قصوى (لا تقل عن 95 %) من الكثافة المعملية واللغة تشمل اجراء التجارب المعملية والحقلية ويتم تنفيذ طبقا لاصول الصناعة والرسومات التفصيلية المعتمدة والبند بجميع مشتلاته طبقا للمواصفات الفنية للمشروع وتقرير الاستشاري وتعليمات المهندس المشرف مسافة النقل لا تقل عن 20 كم - يتم احتساب علاوة 1.2 جنيه لكل 1 كم بالزيادة أو النقصان - السعر يشمل قيمة المادة المحجيرة طبقا لإفادة المنطقة بهذا القطاع (7) من الكم 504 إلى 568	3م	1,287.00	278.00	357,786.000
	علاوة مسافة النقل 64 كم		1,287.00	52.80	67,953.600
	علاوة تحصيل رسوم الكارثة والموازن طبقا للائحة الشركة الوطنية		1,287.00	25.00	32,175.000
4-2	بالمتر المكعب أعمال توريد وفرش طبقة أساس من الاحجار الصلبة المترجة ناتج تكسير الكسارات والمطابقة للمواصفات وأقصى حجم للحبيبات ما بين 31.5 مم الى 40 مم والا يزيد نسبة المار من منخل 200 عن 5% والتدرج الوارد بالاشتراطات الخاصة بالمشروع لا تقل نسبة تحمل كاليفورنيا عن 80 % والا يقل معامل المرونة (Ev2) من تجربة لوح التحميل عن 120 ميجاباسكال والا يزيد نسبة الفاقد بجهاز لوس انجلوس عن 30 % والا يزيد الامتصاص عن 15 % ويتم فردها على طبقتين باستخدام الات التسوية الحديثة على ان لا يزيد سمك الطبقة بعد تمام الدمك عن 20 سم ورشها بالمياه الاصولية للوصول الى نسبة الرطوبة المطلوبة والدمك الجيد بالهراسات للوصول الى اقصى كثافة جافة قصوى (لا تقل عن 100%) من الكثافة المعملية والكثافة الجافة القصوى للتجارب المعملية والحقلية ويتم تنفيذ طبقا لاصول الصناعة والرسومات التفصيلية المعتمدة والبند بجميع مشتلاته طبقا للمواصفات الفنية للمشروع وتقرير الاستشاري وتعليمات المهندس المشرف مسافة النقل لا تقل عن 20 كم - يتم احتساب علاوة 1.2 جنيه لكل 1 كم بالزيادة أو النقصان - السعر يشمل قيمة المادة المحجيرة طبقا لإفادة المنطقة بهذا القطاع (7) من الكم 504 إلى 568	3م	938.00	298.00	279,524.000
	علاوة مسافة النقل 206 كم		938.00	223.20	209,361.600
	علاوة تحصيل رسوم الكارثة والموازن طبقا للائحة الشركة الوطنية		938.00	25.00	23,450.000
	الإجمالي				11,076,601.80

(أحد عشر مليون وستة وسبعون ألفا و ستمائة وواحد جنيها وثمانون قرشا فقط لا غير)

مدير عام المشروعات
م / محمد حسني فياض

مدير المشروع المالك
م / إبراهيم الحناوي

مدير المشروع الاستشاري
م / خالد فوزي

مدير المشروع المقاول
م / محمد طه

يعتمد
رئيس الإدارة المركزية
منطقة غرب الدلتا
الاسكندرية - هادي مطروح
عميد مهندس /
هاني محمد محمود طه

مدير المشروع الاستشاري
م / خالد فوزي
م / محمد طه
م / هادي مطروح
م / هاني محمد محمود طه

مدير المشروع المقاول
م / محمد طه
م / هادي مطروح
م / هاني محمد محمود طه

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد فتحي	 قطار التوربينات السريع Electric Express Train SYSTRA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARSA MATROUH From Station 504+000 To Station 568+177	 الهيئة العامة للإسكندرية القاهرة السكة الحديدية مصر
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Opreating Lab	AL Nuby Central Lab
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PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	14-01-2023	Code	ZONE	506+000	507+000
LOCATION	K.P(506+550)	FZ (25)	Material	MIX(soil + aggregate + sand)	
NAME COMPANY	EL FAYROUZ		layer thickness	50 cm	

visual inspection test

Gradient test

gradation of bulk materials				SAMPLE WEIGHT [g]		32625.00		gm	table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	soil classify
Mass retained (g)	0.0	2654.0	2712.0	2836.0	3762.0	2881.0	2714.0		A-1-a
Cumulative Retained (g)	0.0	2654.0	5366.0	8202.0	11964.0	14845.0	17559.0	PRO	2.15
Cumulative Retained %	0.0	8.1	16.4	25.1	36.7	45.5	53.8	WC	6.50
Cumulative Passing %	100.0	91.9	83.6	74.9	63.3	54.5	46.2	CBR	58.70

soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	83.50	241.20	381.00					
Cumulative Retained %	16.70	48.24	76.20					
Cumulative Passing %	83.30	51.76	23.80					

General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	100.0	91.9	83.6	74.9	63.3	54.5	46.2	38.5	23.9	11.0

ATTEBERG LIMTS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	N.L	N.P	N.P.I

Contractor

Consultant



Mostafa Abo Ali

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد فنديل	 SYSTRA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSА MATROUH From Station 504+000 To Station 568+177	 الهيئة العامة للإحصاء مصر
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PROCTOR TEST

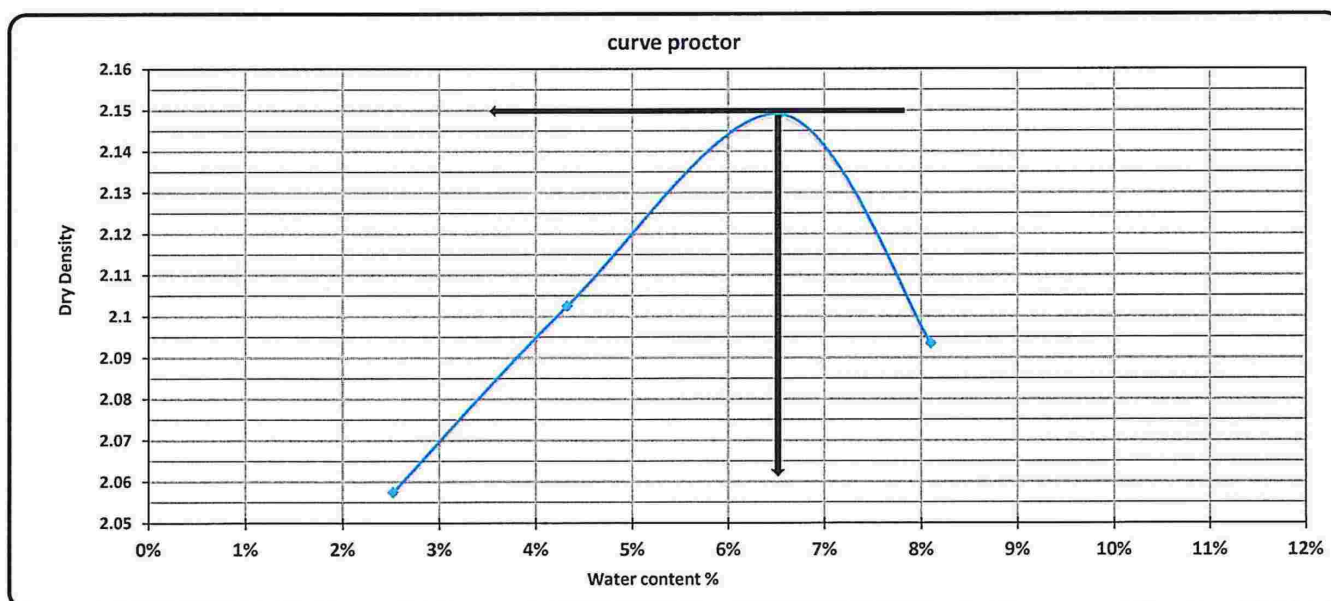
TESTING DATE:	15-01-2023	Code	ZONE	506+000	507+000
LOCATION	K.P(506+550)	FZ (25)	Material	MIX(soil + aggregate + sand)	
NAME COMPANY	EL FAYROUZ		layer thickness	50 cm	

Weight of empty mold :	6062.0
Mold Volume:	2103.0

MAX Dry Density	2.14
Water content %	6.4

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10498.0	10675.0	10877.0	10821	
WT. WET SOIL	4436.0	4613.0	4815.0	4759.0	
Wt. Density	2.109	2.194	2.290	2.263	

Tare No.	11	22	18	7	15	25	16	17		
Tare wt.	56.5	56.5	45	40.5	31.5	56.5	34	41.5		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	147.5	147.9	145.6	145.5	142.8	144.2	141.6	141.6		
Wt. Of water	2.5	2.1	4.4	4.5	7.2	5.8	8.4	8.4		
Wt. Of dry soil	91.0	91.4	100.6	105.0	111.3	87.7	107.6	100.1		
Water content %	2.7%	2.3%	4.4%	4.3%	6.5%	6.6%	7.8%	8.4%		
AV. Water content %	2.5%		4.3%		6.5%		8.1%			
Dry Density	2.057		2.103		2.149		2.093			



Consultant

Mostafa Abo Alw

California Bearing Ratio TEST

Testing Date :	19-01-2023	Code	Zone	506+000	507+000
Location :	(506+550)K.P	FW (25)			
Company Name	EL FAYROUZ				

- : Test Results

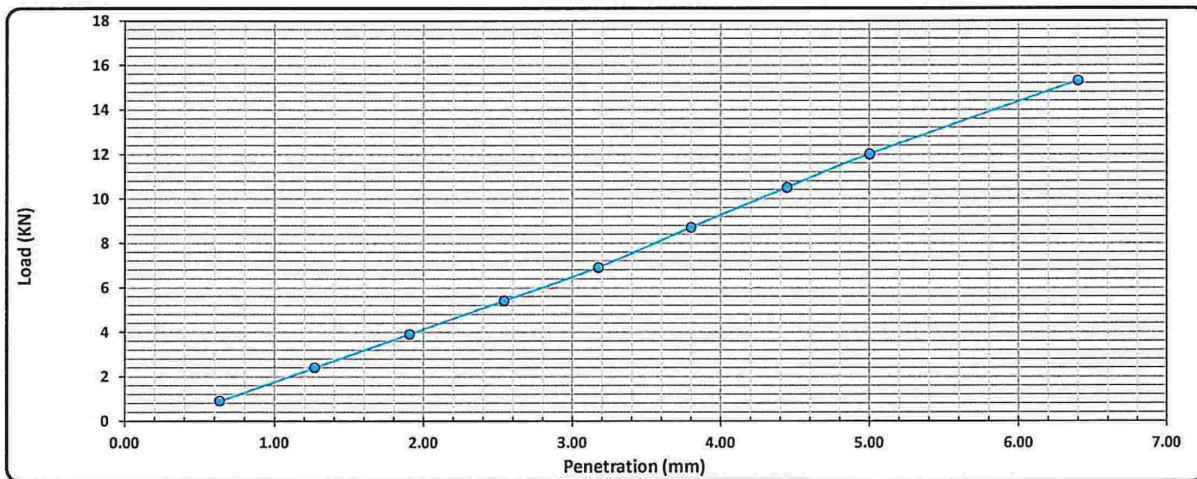
Compaction % for Mold	
Mold No.	6
Mold Vol. (cm ³)	2122
Mold WT. (gm)	5075
Mold WT. + Wet WT. (gm)	9932
Wet WT. (gm)	4857
Wet Density (g/cm ³)	2.289
Dry Density (g/cm ³)	2.152
Proctor Density (g/cm ³)	2.150
Compaction %	100.1

Mositure Ratio After Compacted Mold	
Tare No.	18
Tare WT. (gm)	46.5
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143.8
3398	6.2
Dry WT. (gm)	97.3
Moisture Content %	6.4

Swelling	
Mold No.	6
Date	19-01-2023
Intial Height (mm)	0.00
Final Height (mm)	0.00
Difference	120
Sample Height (mm)	120.00
Swelling Ratio %	100%

Loading Reading :

Penetration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.03	0.08	0.13	0.18	0.23	0.29	0.35	0.40	0.51
Load (KN)	0.9	2.4	3.9	5.4	6.9	8.7	10.5	12.0	15.3



Calculations :-

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	98 عند نسبة %
2.50	5.40	13.4	40.4%	100	98	39.6%
5.00	12.00	20.0	59.9%			58.7%

Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :

Sign :



Consultant Engineer

Name :

Sign :

Mostafa Abo Ali

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	Mohamed Taha									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 14	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS FZ (23)				
Location to be Used	FROM	TO	LEVEL		
	506+140	506+240	(-2)		
	506+240	506+340	(-2)		
	506+340	506+440	(-2)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No	Other			
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	14/1/2023	
2	ATTERBERG	M ³	5000	14/1/2023	
3	PROCTOR	M ³	5000	14/1/2023	
4	CBR	M ³	5000	17/1/2023	
Comments by:		Comments by:			

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Mostafa	Mohammed		
QA/QC *	Mostafa Abo Ali	Mostafa Abo Ali		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ			Designer Company							
Issued by Contractor	Name	Sign		Date	Time						
	ENG/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MAR	C1 KP. 506	C2 EW	C3 CS	DD 17	MM 1	YY 23	HH	MM

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

Description of Materials	PREPARED SUBGRADE <i>FZ (25)</i>			
Location to be Used	FROM	TO	LEVEL	
	506+140	506+240	(-2)	
	506+240	506+340	(-2)	
506+340	506+440	(-2)		
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.15	
4	ASTM D 18832	CBR	58.7%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only



Electric Express Train - HSR	
From El Ain El Sokhna City To El Alamein - MATROUH	
Section - 7 From FOKA To MARS MATROUH	
From Station 504+000 To Station 568+177	



PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	17/1/2023	code	ZONE	506+000	507+000
		FZ-3	Material	K.P 506	
NAME COMPANY	الفيروز				

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT [g]		200/19.00		gm	table classify	
sieve size	2	1 1/2	1	3/4	1/2	3/8	# 4	PASS	soil classify	
(g)Mass retained	422.0	1871.0	1878.0	1400.0	1538.0	1241.0	1984.0		A-1-a	
(g)Cumulative Retained	422.0	2293.0	4171.0	5571.0	7109.0	8350.0	10334.0		PRO	2.157
Cumulative Retained %	2.1	11.5	20.8	27.8	35.5	41.7	51.6		WC	6.5%
Cumulative Passing %	97.9	88.5	79.2	72.2	64.5	58.3	48.4		CBR	58%

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
(g)Cumulative Retained	35.29	262.30	404.66					
Cumulative Retained %	7.06	52.46	80.93					
Cumulative Passing %	92.94	47.54	19.07					

C-General gradient										
(in)sieve size	5	4.0	3	1 1/2	3/4	3/8	# 4	# 10	# 40	# 200
(mm)sieve size	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	97.9	88.5	79.2	72.2	64.5	58.3	48.4	45.0	23.0	9.2

ATTERBERG LIMITS	(. L.L)LIQUID LIMIT	(.P.L)PLASTIC LIMIT	(.P.I)PLASTIC INDEX
	N.P	N.P	N.P

Contractor

Operated by

Consultant

Gomaa Bader Lab

Ramel & M. Tarek

Mostafa Abo Ali

جمعية بدر نوح للمقاولات المعمومية
وانشاء ورصف الطرق والخدمات البترولية
س . ت : ٥٥٣١
ب . ض : ٩٧٠ - ٠٢٨ - ٥٢٢

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي ا.د. خالد فخريل	 SYSTRA شركة شاكير	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH From Station 504+000 To Station 568+177	الهيئة العامة لطرق و الكباري و النقل البري (GARBLT)  الهيئة القومية للإنفاق NATIONAL AUTHORITY FOR FUNDING 
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PROCTOR TEST

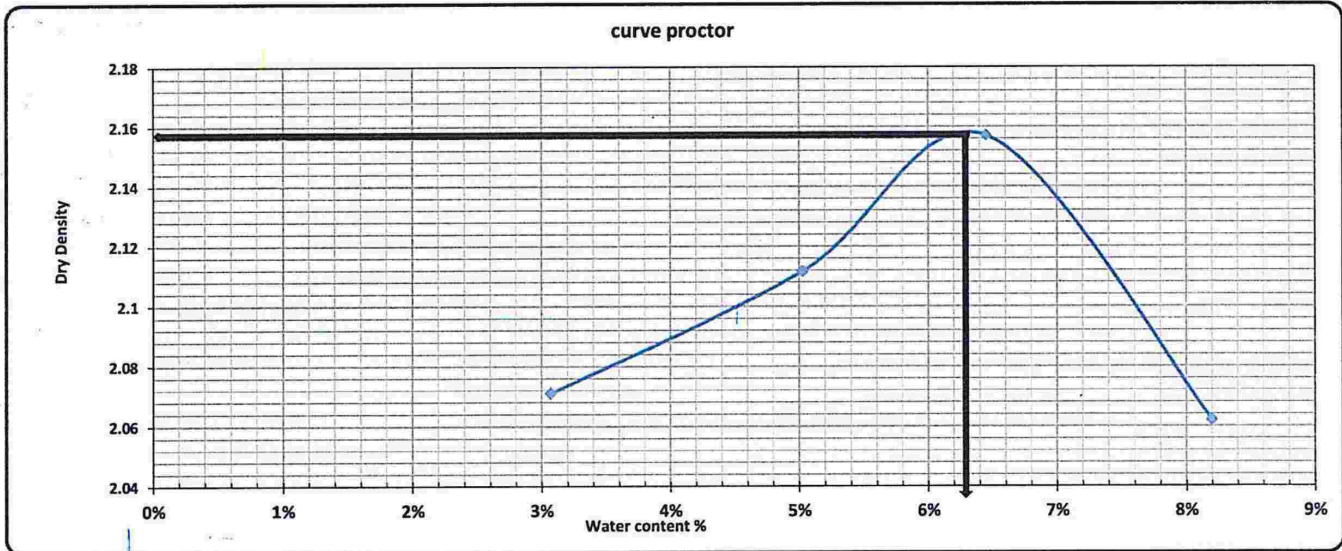
TESTING DATE:	2023/01/17	code	Station	506+000	507+000
TESTING COMPANY:	الفيروز	FZ-3	Material	K.P 506	

Weight of empty mold :	6430.0
Mold Volume:	2104.9

MAX Dry Density	2.157
Water content %	6.50

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	10923.0	11998.0	11263.0	11126		
WT. WET SOIL	4493.0	4668.0	4833.0	4696.0		
Wt. Density	2.135	2.218	2.296	2.231		

Tare No.	3	3	4	4	7	7	23	23				
Tare wt.	23.56	23.56	26.35	26.35	27.65	27.65	22.82	22.82				
Wt. Of wet soil & tare	137.0	137.0	137.3	137.3	138.7	138.7	136.2	136.2				
Wt. Of dry soil & tare	133.58	133.58	131.95	131.95	131.95	131.95	127.56	127.56				
Wt. Of water	3.4	3.4	5.3	5.3	6.7	6.7	8.6	8.6				
Wt. Of dry soil	110.0	110.0	105.6	105.6	104.3	104.3	104.7	104.7				
Water content %	3.1%	3.1%	5.0%	5.0%	6.5%	6.5%	8.2%	8.2%				
AV. Water content %	3.1%		5.0%		6.5%		8.2%					
Dry Density	2.071		2.112		2.157		2.062					



Contractor

Consultant

Barmaam Tuley

Mostafa AboAli

جمعية بدار توح للمقاولات العمومية
 وإنشاء ورصف الطرق والخدمات البترولية
 س. ت. ٥٥٣١
 ب. ض. ٩٧٠١ - ٢٨ - ٥٢٢

California Bearing Ratio TEST

Testing Date :	18/1/2023	Code	FROM STA :	506+000	TO STA :	507+000
		FZ-3	: Material		K.P 506	
Name Company	الفيروز					

- : Test Results

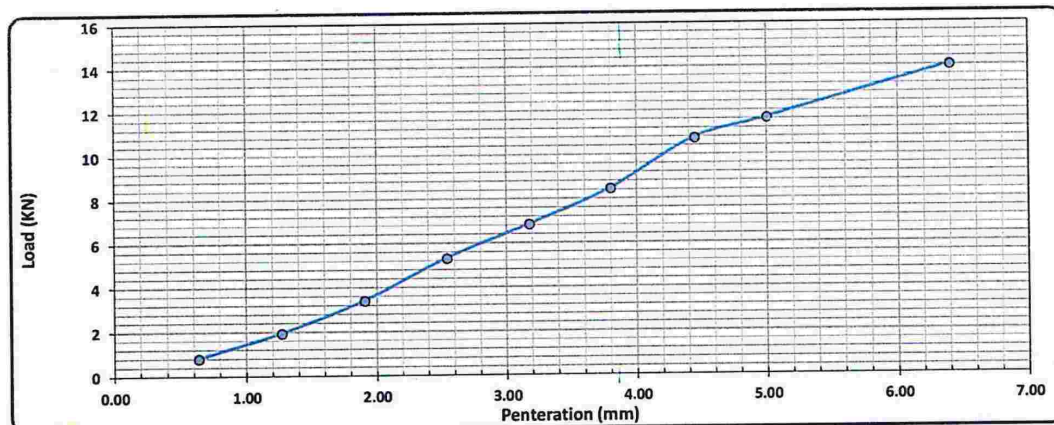
Compaction % for Mold	
Mold No.	2
Mold Vol. (cm ³)	2177.5
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21374
Wet WT. (gm)	4930
Wet Density (g/cm ³)	2.264
Dry Density (g/cm ³)	2.126
Proctor Density (g/cm ³)	2.157
Compaction %	99

Moisture Ratio After Compacted Mold	
Tare No.	11
Tare WT. (gm)	26.79
Tare WT. +Wet WT. (gm)	146.3
Tare WT. +Dry WT. (gm)	139
Water WT. (gm)	7.3
Dry WT. (gm)	112.2
Moisture Content %	6.5

Swelling	
Mold No.	
Date	
Intial Height (mm)	
Final Height (mm)	
Difference	0.0
Sample Height (mm)	
Swelling Ratio %	

Loading Reading :

(mm)Pentration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
(mm)Load Reading	82	197	346	541	697	862	1095	1188	1431
(KN)Load	0.8	1.9	3.4	5.3	6.8	8.4	10.7	11.6	14.0



Calculations :-

Pentration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	100 عند نسبة 100 %
2.50	5.30	13.4	39.7%	99	100	40.3%
5.00	11.64	20.0	58.1%			59.0%

Lab. Specialist

Name: *Ramadan Tolley*

Sign :

Lab. Engineer

Name :

Sign :

Consultant Engineer

Name: *Mostafa Abo Ali*
Sign :

جامعة بدر نوع المقاولات المعمومية
وانشاء وصرف الطرق والخدمات البترولية
س - ت : ٥٥٣١
ب - ض : ٩٧٠ - ٠٢٨ - ٥٢٣

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 17	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL		
	506+440	506+600	(-2)		
	506+600	506+700	(-2)		
	506+700	506+780	(-2)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No			Other	
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	17/1/2023	
2	ATTERBERG	M ³	5000	17/1/2023	
3	PROCTOR	M ³	5000	17/1/2023	
4	CBR	M ³	5000	18/1/2023	
Comments by:			Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohamed Mostafa</i>	<i>Mohamed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ		Designer Company								
Issued by Contractor	Name	Sign	Date	Time							
	ENG/ MOHAMED TAHA	Mohamed Taha									
Received by ER			MAR	C1 KP. 506	C2 EW	C3 CS	DD 18	MM 1	YY 23	HH	MM

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+440	506+600	(-2)	
	506+600	506+700	(-2)	
506+700	506+780	(-2)		
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.157	
4	ASTM D 18832	CBR	58%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Mostafa	Mohammed		
QA/QC *	Mostafa Abo Ali	Mostafa Abo Ali		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد قنديل	 SYSTRA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARS MATROUH From Station 504+000 To Station 568+177	 الهيئة العامة لطرق سكك الحديد والنقل (EG.RAIL) الهيئة القومية للإتفاق NATIONAL AUTHORITY FOR TANKS 2015
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PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	18/1/2023	code	ZONE	506+000	507+000
			Material	K.P 506	
TESTING COMPANY	الفيروز	FZ-4			

1-Visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT [g]		18642.00		gm	table classify	
sieve size	2	1 1/2	1	3/4	1/2	3/8	# 4	PASS	soil classify	
(g)Mass retained	151.0	1670.0	3092.0	1307.0	1499.0	1278.0	2356.0		A-1-a	
(g)Cumulative Retained	151.0	1821.0	4913.0	6220.0	7719.0	8997.0	11353.0		PRO	2.158
Cumulative Retained %	0.8	9.8	26.4	33.4	41.4	48.3	60.9		WC	6.2%
Cumulative Passing %	99.2	90.2	73.6	66.6	58.6	51.7	39.1		CBR	61%

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
(g)Cumulative Retained	25.61	262.98	342.00					
Cumulative Retained %	5.12	52.60	68.40					
Cumulative Passing %	94.88	47.40	31.60					

C-General gradient										
(in)sieve size	5	4.0	3	1 1/2	3/4	3/8	# 4	# 10	# 40	# 200
(mm)sieve size	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	99.2	90.2	73.6	66.6	58.6	51.7	39.1	37.1	18.5	12.4

ATTERBERG LIMITS	(. L.L)LIQUID LIMIT	(.P.L)PLASTIC LIMIT	(.P.I)PLASTIC INDEX
	N.P	N.P	N.P

Contractor

Operated by

Consultant

Ramadan Taky

Gomaa Bader Lab

Mostafa Abu Ali

جمعة بدر نوح للمقاولات المعمومية
 وإنشاء ورصف الطرق والخدمات البترولية
 س.ب. ٥٥٣١٠
 ب.ب. ٥٢٣ - ٠٢٨ - ٩٧٠١

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي إ.د. خالد فتحي	 القطار السريع Electric Express Train SVS/TA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH From Station 506+000 To Station 568+177		 الهيئة العامة للمواصلات والنقل (GARBLT)	 الهيئة القومية للنفاق NATIONAL AUTHORITY FOR ROAD TRANSPORT

PROCTOR TEST

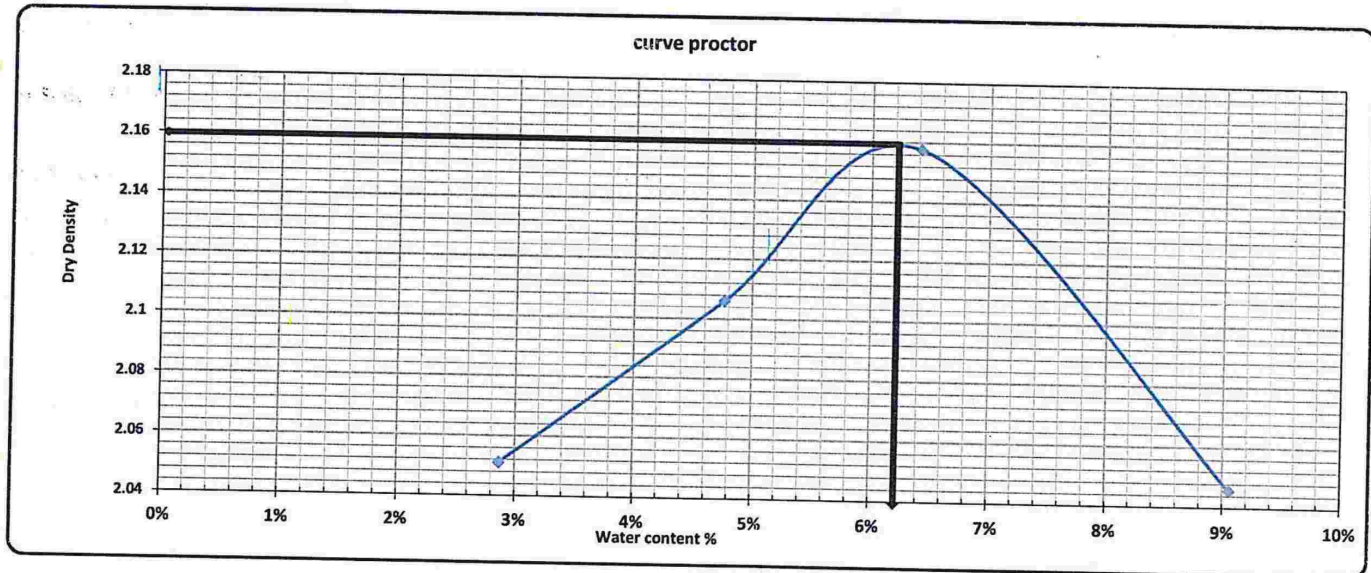
TESTING DATE:	18/1/2023	code	Station	506+000	507+000
			Material	K.P 506	
NAME COMPANY	الفيروز	FZ-4			

Weight of empty mold :	6428.0
Mold Volume:	2104.9

MAX Dry Density	2.158
Water content %	6.20

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	10869.0	11372.0	11261.0	11124		
WT. WET SOIL	4441.0	4644.0	4833.0	4696.0		
Wt. Density	2.110	2.206	2.296	2.231		

Tare No.	45	45	9	9	12	12	15	15				
Tare wt.	24.67	24.67	26.34	26.34	27.09	27.09	25.25	25.25				
Wt. Of wet soil & tare	137.0	137.0	136.3	136.3	143.4	143.4	136.9	136.9				
Wt. Of dry soil & tare	133.85	133.85	131.25	131.25	136.35	136.35	127.58	127.58				
Wt. Of water	3.1	3.1	5.0	5.0	7.0	7.0	9.3	9.3				
Wt. Of dry soil	109.2	109.2	104.9	104.9	109.3	109.3	102.3	102.3				
Water content %	2.9%	2.9%	4.8%	4.8%	6.4%	6.4%	9.1%	9.1%				
AV. Water content %	2.9%		4.8%		6.4%		9.1%					
Dry Density	2.051		2.106		2.158		2.046					



Contractor

Ramadan Taky
 جمعية بدر نوح للتقاولات العمومية
 وإنشاء وصرف الطرق والخدمات البترولية
 س.ت. ٥٥٣١
 ب.ض. ٩٧٠ - ٢٨ - ٥٢٢

Consultant

Mostafa Abo Ali

Electric Express Train - HSR

California Bearing Ratio TEST

Testing Date :	19/1/2023	Code	FROM STA :	506+000	TO STA :	507+000
Name Company :	الفيروز	FZ-4	: Material	K.P 506		

Test Results

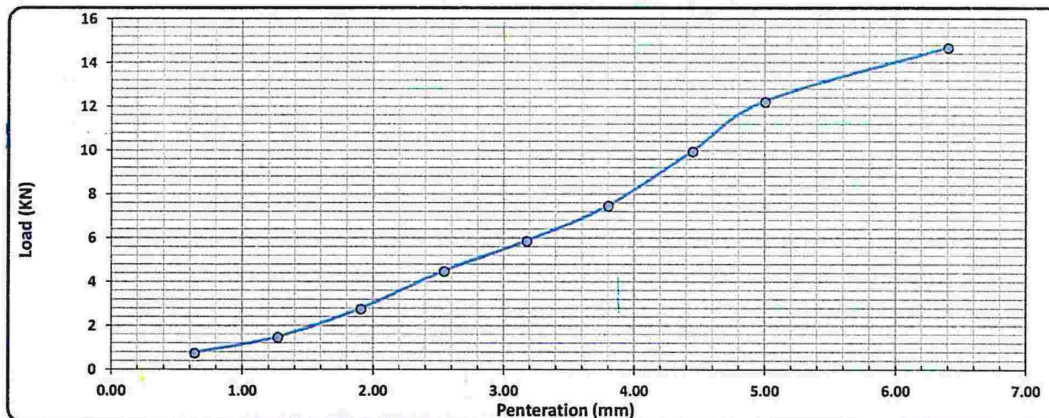
Compaction % for Mold	
Mold No.	2
Mold Vol. (cm ³)	2177.5
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21372
Wet WT. (gm)	4928
Wet Density (g/cm ³)	2.263
Dry Density (g/cm ³)	2.141
Proctor Density (g/cm ³)	2.158
Compaction %	99

Moisture Ratio After Compacted Mold	
Tare No.	4
Tare WT. (gm)	26.31
Tare WT. +Wet WT. (gm)	146.28
Tare WT. +Dry WT. (gm)	139.8
Water WT. (gm)	6.5
Dry WT. (gm)	113.5
Moisture Content %	5.7

Swelling	
Mold No.	
Date	
Initial Height (mm)	0.00
Final Height (mm)	0.00
Difference	0.0
Sample Height (mm)	181.00
Swelling Ratio %	0.0%

Loading Reading :

(mm)Penetration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
(mm)Load Reading	76	149	281	456	597	761	1014	1246	1497
(KN)Load	0.7	1.5	2.8	4.5	5.9	7.5	9.9	12.2	14.7



Calculations :-

Penetration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	% عند نسبة 100
2.50	4.47	13.4	33.5%	99	100	33.7%
5.00	12.21	20.0	61.0%			61.5%

Lab. Specialist

Name : *Ramez Tawel*
Sign :

Lab. Engineer

Name :
Sign :

Consultant Engineer

Name : *Mostafa Abo Ali*
Sign :

جسمة بدرنوح للمقاولات المعمومية
وانشاء ورصف الطرق والخدمات البترولية
س . ت : ٥٥٣١
ب . ض : ٩٧٠ - ٠٢٨ - ٥٢٣

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 18	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL		
	506+780	506+860	(-2)		
	506+000	506+200	(-1.75)		
	506+200	506+300	(-1.75)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No		Other		
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	18/1/2023	
2	ATTERBERG	M ³	5000	18/1/2023	
3	PROCTOR	M ³	5000	18/1/2023	
4	CBR	M ³	5000	19/1/2023	
Comments by:			Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Ali</i>	<i>Mostafa Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ		Designer Company	
Issued by Contractor	Name	Sign	Date	Time
	ENG/ MOHAMED TAHA	<i>Mohamed Taha</i>		
Received by ER			MAR	

C1	C2	C3	DD	MM	YY	HH	MM
KP. 506	EW	CS	19	1	23		

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+780	506+860	(-2)	
	506+000	506+200	(-1.75)	
	506+200	506+300	(-1.75)	
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.158	
4	ASTM D 18832	CBR	61%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSALA MATROUH

From Station 504+000 To Station 568+177

Operating lap

Al Tewkol Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	19-01-2023	code	ZONE	506+000	507+000
LOCATION	K.P (506)	FZ (1)	Material		
NAME COMPANY	الفيروز		layer thickness		

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT [g]		33625.00		gm	table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	
Mass retained (g)	3266.0	2865.0	2855.0	2655.0	2413.0	2815.0	2566.0		
Cumulative Retained (g)	3266.0	6131.0	8986.0	11641.0	14054.0	16869.0	19435.0		PRO
Cumulative Retained %	9.7	18.2	26.7	34.6	41.8	50.2	57.8		WC
Cumulative Passing %	90.3	81.8	73.3	65.4	58.2	49.8	42.2		CBR
									A-1-a
									2.17
									7.20
									55.80

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	55.00	215.00	390.00					
Cumulative Retained %	11.00	43.00	78.00					
Cumulative Passing %	89.00	57.00	22.00					

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	90.3	81.8	73.3	65.4	58.2	49.8	42.2	37.6	24.1	9.3

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	N.L	N.P	N.P

Contractor

Consultant

(Handwritten signature and stamp of the Contractor)

(Handwritten signature of the Consultant: Mostafa Abdo Ali)

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد فخريل	 SVSTRA SHAKER	Electric Express Train - HSR		 الهيئة العامة للنقل وزارة النقل والبحري والملاحة (GARELT)
		From El Ain El Sokhna City To El Alamein - MATROUH		
		Section - 7 From FOKA TO MARSALA MATROUH		
		From Station 504+000 To Station 568+177		

PROCTOR TEST

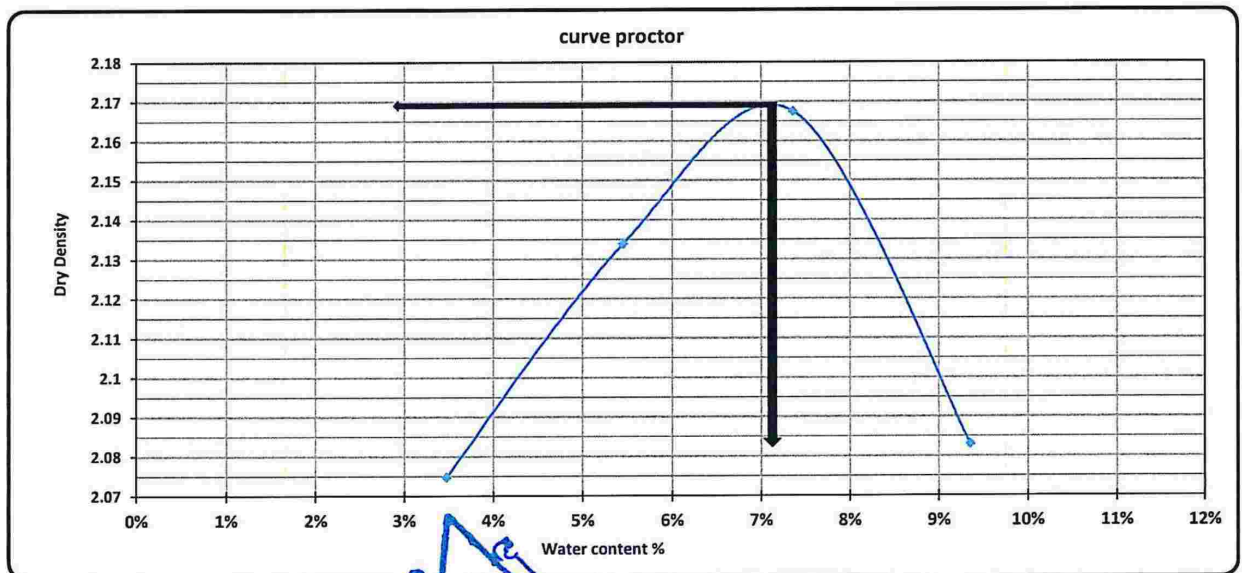
TESTING DATE:	19-01-2023	code	Station	506+000	507+000
LOCATION	K.P (506)	FZ (1)	Material		
NAME COMPANY	الفيروز		layer thickness		

Weight of empty mold :	5620.0
Mold Volume:	2030.0

MAX Dry Density	2.168
Water content %	7.2

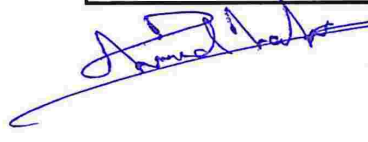
trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	9978.0	10188.0	10344.0	10244	
WT. WET SOIL	4358.0	4568.0	4724.0	4624.0	
Wt. Density	2.147	2.250	2.327	2.278	

Tare No.	2	7	13	11	16	18	20	23		
Tare wt.	52.81	53.52	53.21	55.33	56.51	55.38	55.02	54.4		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	146.8	146.7	144.9	145.2	143.6	143.5	142.0	141.7		
Wt. Of water	3.2	3.3	5.1	4.8	6.4	6.5	8.0	8.3		
Wt. Of dry soil	94.0	93.2	91.7	89.9	87.1	88.1	87.0	87.3		
Water content %	3.4%	3.5%	5.6%	5.3%	7.3%	7.4%	9.2%	9.5%		
AV. Water content %	3.5%		5.5%		7.4%		9.4%			
Dry Density	2.075		2.134		2.168		2.083			



Contractor

طاع فكري - طرورج



Consultant

Mostafa Abo Ali



California Bearing Ratio TEST

Testing Date :	22-01-2023	Code	FROM STA :	506+000	507+000
Location :	K.P (506)	FZ (1)	: Material		
Company Name	الفيروز		: Layer Thickness		

- : Test Results

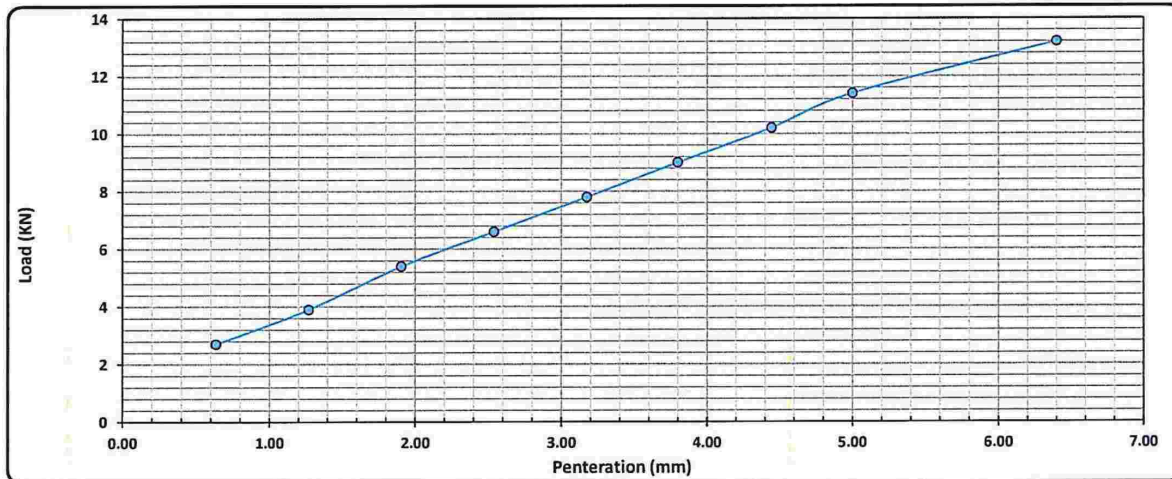
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm ³)	2030
Mold WT. (gm)	5310
Mold WT. + Wet WT. (gm)	10029
Wet WT. (gm)	4719
Wet Density (g/cm ³)	2.325
Dry Density (g/cm ³)	2.169
Proctor Density (g/cm ³)	2.170
Compaction %	100.0

Mositure Ratio After Compacted Mold	
Tare No.	2
Tare WT. (gm)	52.81
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143.5
Water WT. (gm)	6.5
Dry WT. (gm)	90.7
Moisture Content %	7.2

Swelling	
Mold No.	1
Date	22-01-2023
Intial Height (mm)	3.50
Final Height (mm)	3.50
Difference	0
Sample Height (mm)	12.00
Swelling Ratio %	0%

Loading Reading :

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.09	0.13	0.18	0.22	0.26	0.30	0.34	0.38	0.44
Load (KN)	2.7	3.9	5.4	6.6	7.8	9.0	10.2	11.4	13.2



Calculations :-

Penteration (mm)	Load (Kn)	Standard Load (Ib)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR % عند نسبة 98
2.50	6.60	13.4	49.4%	98	98	48.5%
5.00	11.40	20.0	56.9%			55.8%

Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :

Sign :

Consultant Engineer

Name :

Sign :

100%

Mustafa Abo Ali

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY		Designer Company								
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 19	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL		
	506+300	506+400	(-1.75)		
	506+400	506+600	(-1.75)		
	506+600	506+700	(-1.75)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No	Other			
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	19/1/2023	
2	ATTERBERG	M ³	5000	19/1/2023	
3	PROCTOR	M ³	5000	19/1/2023	
4	CBR	M ³	5000	22/1/2023	
Comments by:		Comments by:			

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	ENG/ MOHAMED TAHA	Mohamed Taha									
Received by ER			MAR	C1 KP. 506	C2 EW	C3 CS	DD 22	MM 1	YY 23	HH	MM

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+300	506+400	(-1.75)	
	506+400	506+600	(-1.75)	
506+600	506+700	(-1.75)		
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.17	
4	ASTM D 18832	CBR	55.8%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Mostafa	Mohammed		
QA/QC *	Mostafa Abo Ali	Mostafa Abo Ali		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد قنديل	 SASIRA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARSA MATROUH From Station 504+000 To Station 508+177		 الهيئة العامة للإعطاء الميناء والخطوط البحرية مصر
		Opreating lap		
		Al Tawkol Central Lab		

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	08-04-2023	code	ZONE	506+000	507+000
LOCATION	KP (506+500)	P.S.G.FZ (2)	Material		
NAME COMPANY	الفيروز		layer thickness		

1-visual inspection test

2-Gradient test

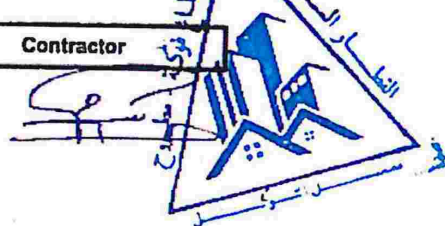
A-gradation of bulk materials				SAMPLE WEIGHT [g]		22530.00		gm	table classify
sieve size	2	15.0	1	4/3	2/1	8/3	# 4	PASS	
Mass retained (g)	0.0	1500.0	3100.0	1885.0	3180.0	1555.0	4280.0		CLASS
Cumulative Retained (g)	0.0	1500.0	4600.0	6565.0	9745.0	11300.0	15580.0		PRO
Cumulative Retained %	0.0	6.7	20.4	29.1	43.3	50.2	69.2		WC
Cumulative Passing %	100.0	93.3	79.6	70.9	56.7	49.8	30.8		CBR
									L.A
									32.40

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	75.00	195.00	325.00					
Cumulative Retained %	15.00	39.00	65.00					
Cumulative Passing %	85.00	61.00	35.00					

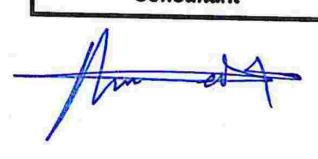
C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	100.0	93.3	79.6	70.9	56.7	49.8	30.8	26.2	18.8	10.80

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	22.62%	18.34%	5.18%

Contractor



Consultant



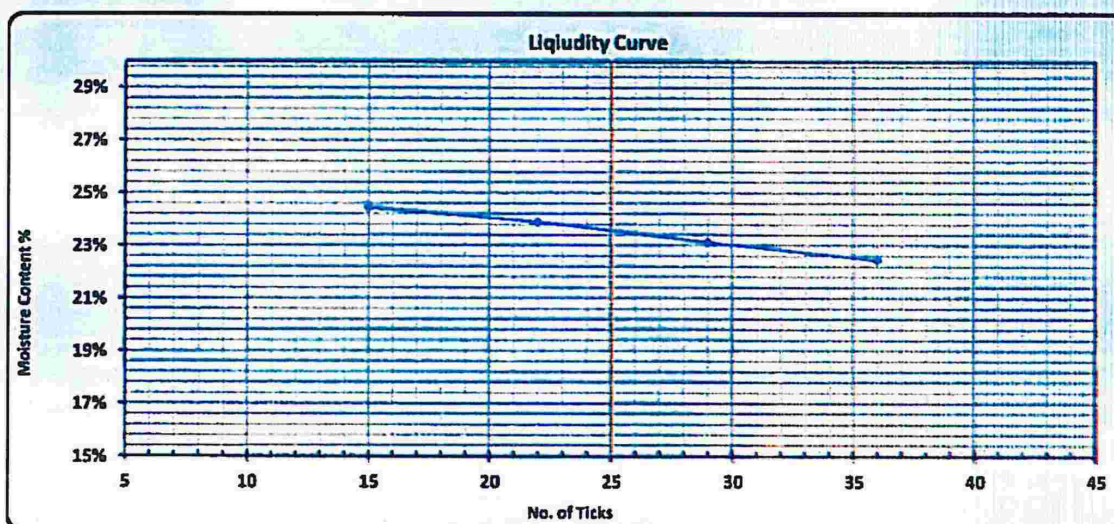
 	Electric Express Train - HSR	 
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Plasticity and Liquidity Test -Atterberg Limits

Testing Date:	8/4/2023	Code:	FROM STA:	506+000	TO STA:	507+000
Location:	KP (506+500)	P.S.G FZ (2)	Material:			
Company Name	الفيروز		Layer Thickness :			

Testing Results :-

Test	Liquid Limit				Plastic Limit	
No. of Ticks	36	29	22	15	-	-
Tare No.	14	12	5	1	16	17
Tare WT. (gm)	53.59	54.75	56.28	57.96	56.52	56.52
Tare WT. + Wet WT. (gm)	73.83	73.17	74.07	81.08	60.58	59.89
Tare WT. + Dry WT. (gm)	70.12	69.71	70.64	76.54	60.0	59.4
Water WT. (gm)	3.71	3.46	3.43	4.54	0.62	0.53
Dry WT. (gm)	16.53	14.96	14.36	18.58	3.44	2.84
Moisture Content %	22.4%	23.1%	23.9%	24.4%	18.0%	18.7%
Average %					18.3%	



LL	PL	PI
23.52%	18.34%	5.18%

Lab. Specialist	Lab. Engineer	Consultant Engineer
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Name :

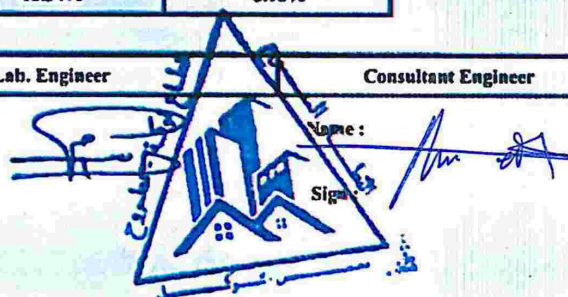
Sign :

Name :

Sign :

Name :

Sign :





Electric Express Train - HSR
From El Ain El Sokhna City To El Alamein - MATROUH
Section - 7 From FOKA TO MARS MATROUH
 From Station 504+000 To Station 508+177



PROCTOR TEST

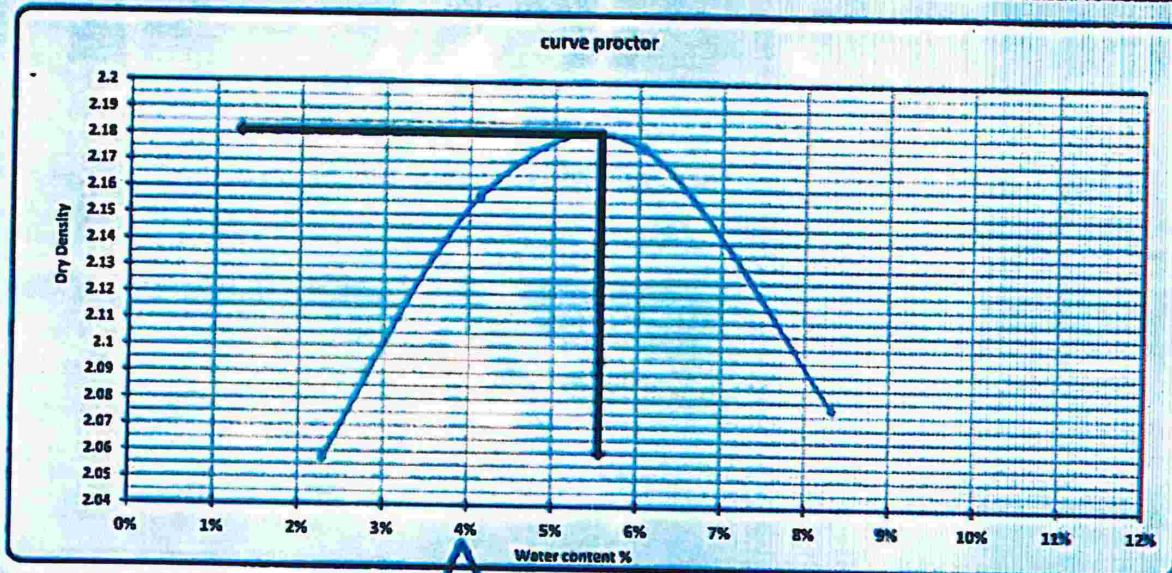
TESTING DATE:	09-04-2023	code	Station	506+000	507+000
LOCATION	KP (506+500)	P.S.G FZ (2)	Material		
NAME COMPANY	المشروع		layer thickness		

Weight of empty mold :	5620.0
Mold Volume:	2124.0

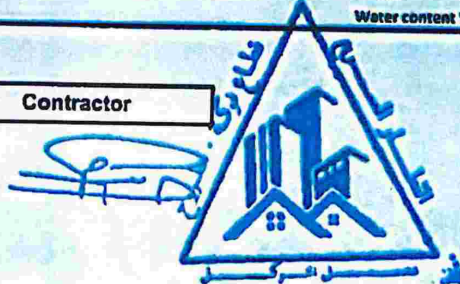
MAX Dry Density	2.18
Water content %	5.8%

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10090.0	10390.0	10521.0	10480	
WT. WET SOIL	4470.0	4770.0	4901.0	4780.0	
Wt. Density	2.105	2.246	2.307	2.250	

Tare No.	1	2	3	4	5	6	7	8		
Tare wt.	54.23	53.36	55.41	55.4	54.82	55.6	55.33	54.7		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	147.90	147.80	146.20	146.30	144.47	144.70	142.80	142.60		
Wt. Of water	2.1	2.2	3.8	3.7	5.5	5.3	7.2	7.4		
Wt. Of dry soil	93.7	94.4	90.8	90.9	89.7	89.1	87.5	87.9		
Water content %	2.2%	2.3%	4.2%	4.1%	6.2%	5.9%	8.2%	8.4%		
AV. Water content %	2.3%		4.1%		6.1%		8.3%			
Dry Density	2.057		2.157		2.176		2.078			



Contractor



Consultant

 KX ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي ا.م. خالد فاضل	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARSA MATROUH From Station 504+000 To Station 503+177		 وزارة النقل الهيئة العامة للقنوات (م.م.م.)

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

TESTING DATE:	10/04/2023	code	Station	504+000	507+000
LOCATION	KP (506+500)	P.S.G FZ (2)	Material		
NAME COMPANY	البيروني		layer thickness		

Weight of sample	2500	gm
Weight of saturated -dry surface sample (B)	2530	gm
Weight of saturated sample in water (C)	1520	gm
Weight of dry sample after heating (A)	2455	gm

Results:-

Bulk specific gravity = $A / (B-C)$	2.431	
Apparent specific gravity = $A / (A-C)$	2.626	
Absorbion = $(B-A)/A$	3.055	%

Los Anglos Abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3380	32.40

Lab. Specialist

Name :

Sign :

Lab. Engineer

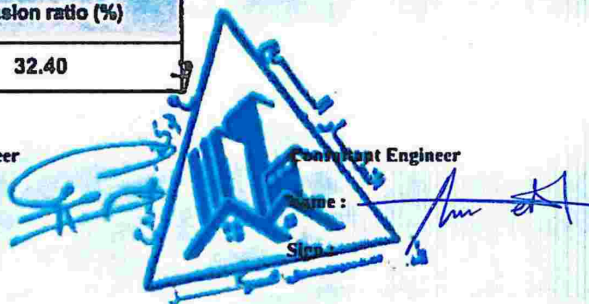
Name :

Sign :

Consultant Engineer

Name :

Sign :





Electric Express Train - HSR



California Bearing Ratio TEST

Testing Date :	4/12/2023	Code	FROM STA :	506+000	507+000
Location :	K.P (506+500)	P.S.G FZ (2)	: Material		
Company Name	الفيروز		: Layer Thickness		

:- Test Results

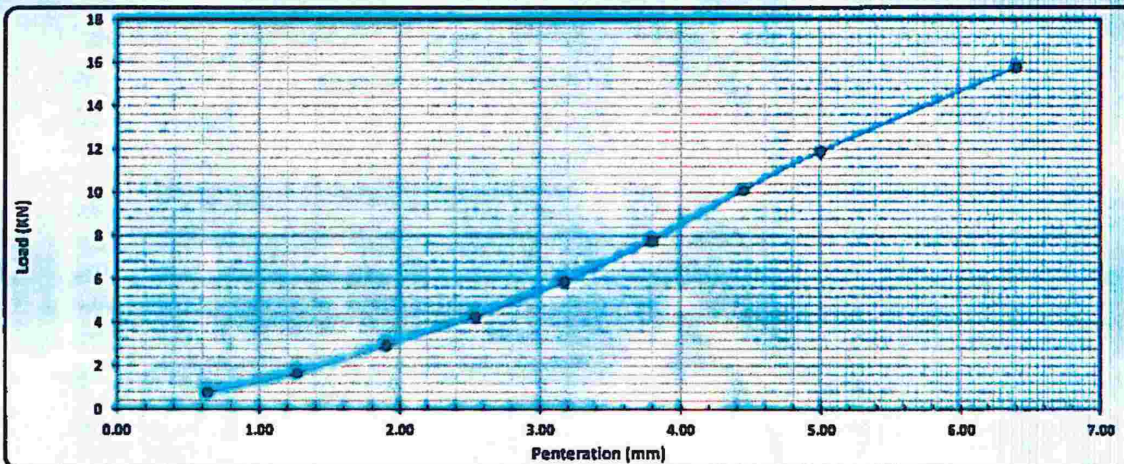
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm ³)	2120
Mold WT. (gm)	5310
Mold WT. + Wet WT. (gm)	10200
Wet WT. (gm)	4890
Wet Density (g/cm ³)	2.307
Dry Density (g/cm ³)	2.179
Proctor Density (g/cm ³)	2.180
Compaction %	100.0

Moisture Ratio After Compacted Mold	
Tare No.	3
Tare WT. (gm)	55.33
Tare WT. + Wet WT. (gm)	150
Tare WT. + Dry WT. (gm)	144.78
Water WT. (gm)	5.2
Dry WT. (gm)	89.5
Moisture Content %	5.8

Swelling	
Mold No.	1
Date	4/12/2023
Initial Height (mm)	5.00
Final Height (mm)	5.12
Difference	0.12
Sample Height (mm)	120
Swelling Ratio %	0.10%

Loading Reading :

Penetration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (Kg)	85	185	325	475	654	863	1121	1321	1754
Load (KN)	0.8	1.7	2.9	4.3	5.9	7.8	10.1	11.9	15.8



Calculations :-

Penetration (mm)	Load (KN)	Standard Load (lb)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR (%)
2.50	4.28	13.4	32.0%	100	95	30.4%
5.00	11.89	20.0	59.4%			56.4%

Lab. Specialist

Name :

Sign :

Lab. Engineer

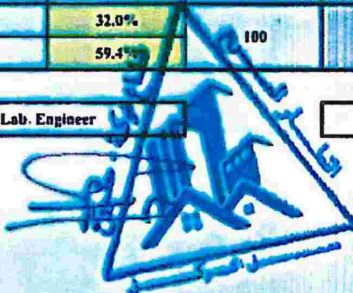
Name :

Sign :

Consultant Engineer

Name :

Sign :



Signature of Consultant Engineer

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	Mohamed Taha									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 18	MM 5	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

Description of Materials		REPLACEMENT FILL MATERIAL RESULTS			
Location to be Used	FROM	TO	LEVEL		
	506+000	506+860	SuBBallast 1 (0.70)		
	506+000	506+860	SuBBallast 2 (0.90)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification		Clause		
Reference Photos	Yes attached / No	Other			
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	17/5/2023	
2	ATTERBERG	M ³	5000	17/5/2023	
3	LOS ANGLOS	M ³	5000	17/5/2023	
4	ABSORPTION & AGGREGATE SPECIFIC GRAVITY	M ³	5000	17/5/2023	
5	PROCTOR	M ³	5000	17/5/2023	
6	CBR	M ³	5000	17/5/2023	
Comments by:		Comments by:			

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Mostafa	Mohammed		
QA/QC *	Youssef Ragab	Youssef Ragab		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ		Designer Company																
Issued by Contractor	Name	Sign	Date	Time															
	ENG/ MOHAMED TAHA	<i>Mohamed Taha</i>																	
Received by ER			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>KP. 506</td> <td>EW</td> <td>CS</td> <td>18</td> <td>5</td> <td>23</td> <td></td> <td></td> </tr> </table>	C1	C2	C3	DD	MM	YY	HH	MM	KP. 506	EW	CS	18	5	23		
C1	C2	C3	DD	MM	YY	HH	MM												
KP. 506	EW	CS	18	5	23														

CODE-1	S1 to S21 Station Reference	D1 to 53 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	SUBBALLAST			
Location to be Used	FROM	TO	LEVEL	
	506+000 506+000	506+860 506+860	SuBBallast 1 (0.70) SuBBallast 2 (0.90)	
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P	
3	ASTM C 535	LOS ANGLOS	22	
4	ASTM C 127 ASTM D 6473	ABSORPTION & AGGREGATE SPECIFIC GRAVITY	2.502	
5	ASTM D 1557	PROCTOR	2.216	
6	ASTM D 18832	CBR	94.33%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed M. S. S. S.</i>	<i>Mohammed M. S. S. S.</i>		
QA/QC *	<i>Youssef Rafab</i>	<i>Youssef Rafab</i>		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

 KK ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد فاضل	 SVSIRA شيفر	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARS MATROUH From Station 504+000 To Station 568+177	 الهيئة العامة للتخطيط والخطط الاقتصادية (GASBL)
Operating Lab	NEGIDA CENTRAL LAB		

PARTICLE SIZE DISTRIBUTION OF SUBBALLAST

TESTING DATE:	13-5-2023	Code	Zone	FROM STATION	TO STATION
LOCATION	KP 506+500	FZ-S1		506+000	507+000
NAME COMPANY	AL Fauroz				

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT (g)		23848.00		gm	Table classify	
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	Soil Classify	A-1-a
Mass retained (g)	0.0	709.0	378.0	5838.0	3037.0	2130.0	4066.0		PRO	2.216
Cumulative Retained (g)	0.0	709.0	1087.0	6925.0	9962.0	12092.0	16158.0		WC	6.80
Cumulative Retained %	0.0	3.0	4.6	29.0	41.8	50.7	67.8		CBR	94.33%
Cumulative Passing %	100.0	97.0	95.4	71.0	58.2	49.3	32.2		Los Angles	22
									SPECIFIC .Gravity	2.502

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	141.00	322.00	426.00					
Cumulative Retained %	28.20	64.40	85.20					
Cumulative Passing %	71.80	35.60	14.80					

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	100.0	97.0	95.4	71.0	58.2	49.3	32.2	23.2	11.5	4.8
SPECIFICATION	—	97	—	70 — 75	—	15 — 60	—	0 — 35	—	0 — 5

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	—	—	N.P

Contractor

Consultant

Youssef Rafab

شركة نجيدة للمقاولات
المعمل المركزي
مشروع القطار السريع / فوكا - مطروح

 وزارة النقل والبنية التحتية (MOTI)	 مشروع القطار السريع / فوكا - مطروح	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH From Station 504+000 To Station 508+177		 الوزارة العامة للتخطيط والتنمية الاقتصادية (MPEDE)

PROCTOR TEST (SUBBALLAST)

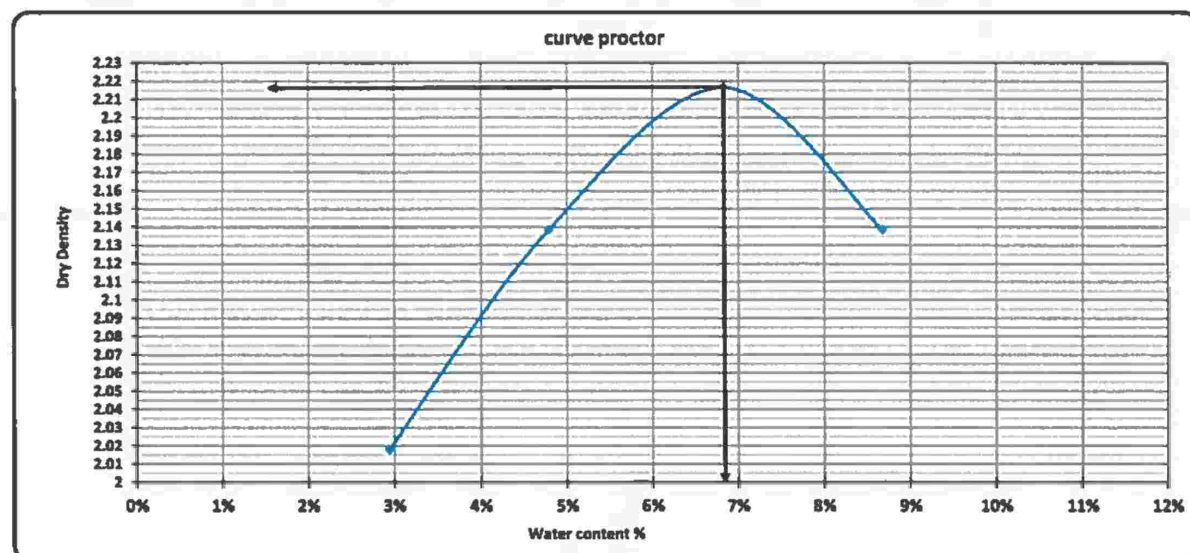
TESTING DATE:	045+060	Code	zone	FROM	TO
LOCATION	KP 506+500	FZ-S1		506+000	507+000
NAME COMPANY	AL Fauroz				

Weight of empty mold :	5698.0
Mold Volume:	2127.0

MAX Dry Density	2.216
Water content %	6.8

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10117.0	10465.0	10735.0	10642	
WT. WET SOIL	4419.0	4767.0	5037.0	4944.0	
Wt. Density	2.078	2.241	2.368	2.324	

Tare No.	7	19	13	17	15	40	31	32		
Tare wt.	42.2	44.1	53.6	53.2	30.9	46.2	80.7	82.7		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	146.3	146.5	144.2	144.0	141.5	141.7	139.3	139.4		
Wt. Of water	3.7	3.6	5.8	6.0	8.5	8.3	10.8	10.6		
Wt. Of dry soil	123.0	123.0	123.0	123.0	123.0	123.0	123.0	123.0		
Water content %	3.0%	2.9%	4.7%	4.9%	6.9%	6.7%	8.7%	8.6%		
AV. Water content %	2.9%		4.8%		6.8%		8.7%			
Dry Density	2.018		2.139		2.217		2.139			



Contractor

شركة نجدة للمقاولات
 العمل المركزي
 مشروع القطار السريع / فوكا - مطروح

Consultant

Youssef Rafab

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد قنديل	 SYSTEM SUMMER	Electric Express Train - HSR	 محافظة مطروح مجلس مطروح مجلس مطروح
		From El Ain El Sokhna City To El Alamein - MATROUH	
		Section - 7 From FOKA To MARSA MATROUH	
		From Station 504+000 To Station 568+177	

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

SUBBALLAST

TESTING DATE:	15-05-2023	code	zone	FROM	TO
LOCATION	KP 506+500	FZ-S1		506+000	507+000
NAME COMPANY	AL Fauroz				

Weight of sample	4987	gm
Weight of saturated -dry surface sample (B)	5051	gm
Weight of saturated sample in water (C)	3077	gm
Weight of dry sample after heating (A)	4939	gm

Results:-

Bulk specific gravity = A / (B-C)	2.502	
Apparent specific gravity = A / (A-C)	2.653	
Asorbtlon = (B-A)/A	2.268	%

Los Anglos abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3890	22

Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :

Sign :



Consultant Engineer

Name : *Youssef Ragab*

Sign :



Electric Express Train - HSR



Operating Lab: NEGIDA CENTRAL LAB

California Bearing Ratio TEST

		SUBBALLAST			
Testing Date :	16/5/2023	Code	ZONE	FROM	TO
Location :	KP 506+500	FZ-S1		506+000	507+000
Company Name	AL Fauroz				

Test Results

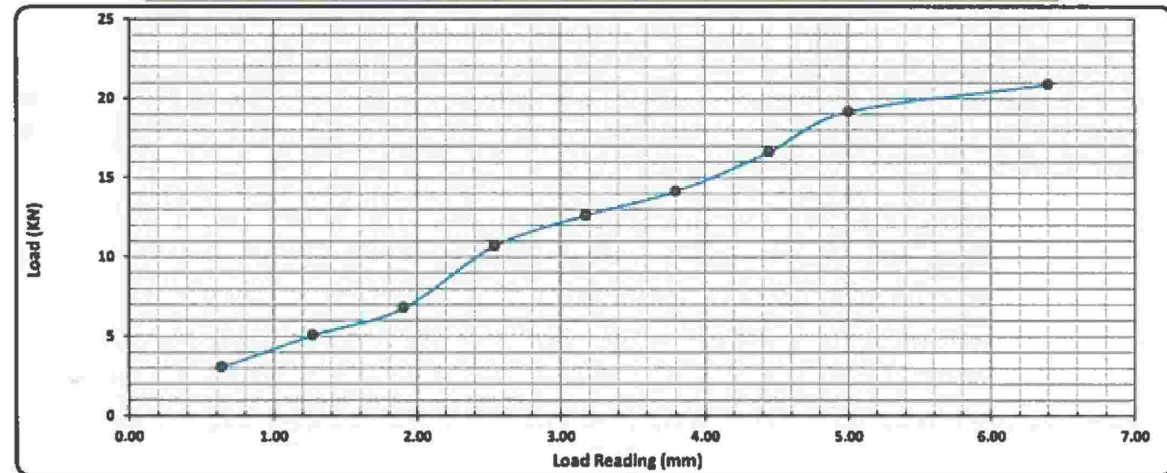
Compaction % for Mold	
Mold No.	2
Mold Vol. (cm ³)	2134
Mold WT. (gm)	8227
Mold WT. + Wet WT. (gm)	13335
Wet WT. (gm)	5108
Wet Density (g/cm ³)	2.394
Dry Density (g/cm ³)	2.248
Proctor Density (g/cm ³)	2.216
Compaction %	101.4

Moisture Ratio After Compacted Mold	
Tare No.	15
Tare WT. (gm)	31.9
Tare WT. + Wet WT. (gm)	150
Tare WT. + Dry WT. (gm)	142.8
Water WT. (gm)	7.2
Dry WT. (gm)	110.9
Moisture Content %	6.5

Swelling	
Mold No.	2
Date	16/5/2023
Initial Height (mm)	0.00
Final Height (mm)	0.00
Difference	0
Sample Height (mm)	120.00
Swelling Ratio %	0.0%

Loading Reading :

Load Reading (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load (KN)	3.1	5.1	6.8	10.7	12.6	14.2	16.6	19.2	20.9
Load (KG)	315.0	519.0	695.0	1092.0	1290.0	1444.0	1695.0	1955.0	2132.0



Calculations :-

Penetration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(KN)	(lb)	(%)	(%)	(%)	100 % نسبة 100
2.50	10.70	13.4	89.3%	101.4	100	79.0%
5.00	19.16	20.0	95.7%			94.3%

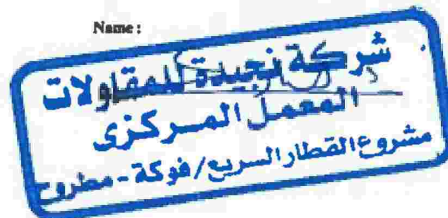
Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :



Consultant Engineer

Name :

Youssef Ragab

Sign :