الهيئة العامة
للطرق والكباري

محضر استلام موقع

مشروع: أعمال الجسر الترابى والاعمال الصناعية لمشروع القطار الكهربائى السريع (العين السخنة - العاصمة الادارية - العلمين - مطروح) قطاع فوكة مطروح (مرحلة الحفر وتشكيل الجسور والتأسيس والأساس والخرسانة) لتنفيذ المسافة من الكم 500+524 الى الكم 880+524 بطول 0.38 كم

تنفيذ: شركة المصطفى للمقاولات "أحمد مصطفى عبدالمحسن"

إشراف : المنطقة الخامسة – منطقة غرب الدلتا

طبقاً للعقد رقم (2024/2023/336) بتاريخ : 7/9/2023

إنه في يوم الخميس الموافق 2023/9/27 اجتمع كل من:-

1- السيد المهندس / محمد حسني فياض — مدير عام المشروعات - الهيئة العامة للطرق والكباري

2- السيد المهندس /إبراهيم عبد الله الحناوي — مهندس العملية - الهيئة العامة للطرق والكباري

3- السيد المهندس / مصطفى محمد ثابت — مدير مشروع - شركة المصطفى للمقاولات

وذلك للمرور على مسار العملية المذكورة عاليه لاستلام الموقع :-

وقد تبين أن الموقع خالياً من العوائق الظاهرية ويسمح بالبدء في التنفيذ وبناء عليه يعتبر تاريخ 2023/9/27 هو تاريخ استلام الموقع وبدء الأعمال بالعملية.

واقفل المحضر على ذلك ووقع الحضور

التوقيعات

3-

2-

1-

رئيس الإدارة المركزية
منطقة غرب الدلتا
الاسكندرية - مرســـــى مطروح
عميد . مهندس /
"هاني محمد محمود طه"

Owner Consultant | Contractor Consultant | Contractor | Owner

Compressive Strength For Stone Sample

Testing date	13-04-2023
Company Name	AL MUSTAFA
Location	524+500 To 524+800

Sample No.	Station	Weight (gm)	Volume (Cm3)	Density (gm/cm3)	Average Density (gm/cm3)	Load (KN)	Strength (Kg/Cm2)	Average Strength (Kg/Cm2)
1	524+500 To 524+560	999	421.88	2.37	2.31	249	450.69	463.4
2		915	421.88	2.17		132	238.92	
3		1007	421.88	2.39		387	700.47	
4	524+560 To 524+620	1042	421.88	2.47	2.22	395	466.495	318.5
5		948	421.88	2.25		299	353.119	
6		823.5	421.88	1.95		115	135.815	
7	524+620 To 524+680	714	343.00	2.08	2.17	117	243.36	251.8
8		726.8	343.00	2.12		166	345.28	
9		853	367.50	2.32		86	166.84	
10	524+680 To 524+740	841	421.88	1.99	1.97	75	135.75	152.0
11		866.6	421.88	2.05		86	155.66	
12		789	421.88	1.87		91	164.71	
13	524+740To 524+800	850	421.88	2.48	2.53	80	144.8	131.5
14		802	343.00	2.55		60	124.8	
15		879	421.88	2.66		69	124.89	

Lab. Engineer

Name :

Sign :

Consultant Engineer

Name : Hassan

Sign :

Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA TO MARSA MATROUH

From Station 504+009 To Station 560+177

Compressive Strength of stone sample

Testing Date :	25-2-2023		Station	524+500 To 524+750
Location :	K.P (524+500)		Material	Rock
Company Name :	المصطفى			

Operating Lab : AL Nuby Central Lab

Sample No.	Station	wieght (gm)	deristy (gm/cm3)	Average Density	load (KN)	Strength (Kg/cm2)	Average Strength (Kg/cm2)
1	524+500 To 524+550	910	2.65	2.50	384	796.7	641.3
2		898	2.62		409	850.7	
3		766	2.23		132	276.6	
4	524+550 To 524+600	866.5	2.53	2.54	602	1252.2	1107.9
5		828	2.41		398	827.8	
6		921	2.69		598	1243.9	
7	524+600 To 524+650	980.9	2.86	2.63	510	1060.8	857.7
8		947.8	2.76		586	1218.9	
9		776	2.26		141	293.3	
10	524+650 To 524+700	948.4	2.75	2.73	699	1453.9	1248.4
11		938	2.73		513.6	1068.3	
12		931	2.71		588	1223.0	
13	524+700 To 524+750	850.4	2.48	2.58	634	1318.7	1218.2
14		889.4	2.59		645	1341.6	
15		912	2.66		478	994.2	

Lab. Engineer

Name :

Sign :

Consultant Engineer

Name :

Sign :

Alexandria University
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Properties and strength of Material Lab.
Structural Engineering Dept

جامعة الاسكندرية
كلية الهندسة
المركز الهندسى للخدمة العامة
معمل خواص ومقاومة المواد
قسم الهندسة الإنشائية

اختبار الضغط على عينات حجر

- الجهـــة : وزارة النقل – الهيئة العامة للطرق والكبارى والنقل البرى – المنطقة الخامسة – غرب الدلتا الاسكندرية – مطروح
- الشركة المنفذة: المصطفى للمقاولات
- الاشراف: المنطقة الخامسة – غرب الدلتا (اسكندرية – مطروح)
- المشروع: القطار الكهربائى السريع القطاع السابع فوكه – مطروح
- توريد العينات: 6-2-2023

عينة رقم (2)

(من المحطة 540+524 الى المحطة 580+ 524)

نتائج الأختبار :-

رقم	أبعاد العينة (سم)			مساحة المقطع (سم2)	وزن العينة (جم)	حمل الكسر (kN)	إجهاد الكسر (كجم/سم2)	ملاحظات
	طول	عرض	ارتفاع					
1	7.0	7.0	6.8	49.0	850	265	551.3	-----
2	7.0	6.8	7.0	47.6	772	105	224.9	
3	7.0	6.9	7.0	48.3	805	283	597.3	

- ملحوظة هامة:
- تم تحديد عدد العينات (3) بمعرفة العميل ، مع العلم أن هذا العدد غير مطابق للمواصفات القياسية لهذا الاختبار
- تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها .

المشرف على الاختبار
د. إسماعيل أحمد محمد محروس

مدير المعمل
د. عبد اللطيف السيد ابوســـن

تحريرا فى : 2023/2/9
رقم التقرير:-

Alexandria University
Faculty of Engineering
Engineering Center for Community Development
Properties and strength of Material Lab.
Structural Engineering Dept

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اختبار الضغط على عينات حجر

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- توريد العينات: 6-2-2023

عينة رقم (3)

(من المحطة 580+524 الى المحطة 620 + 524)

نتائج الأختبار :-

رقم	أبعاد العينة (سم)			مساحة المقطع (سم2)	وزن العينة (جم)	حمل الكسر (kN)	إجهاد الكسر (كجم/سم2)	ملاحظات
	طول	عرض	ارتفاع					
1	7.0	7.0	7.1	49.0	873	293	609.5	-----
2	7.0	7.0	7.0	49.0	870	209	434.8	
3	7.0	7.0	7.1	49.0	845	257	534.6	

- **ملحوظة هامة:**
- تم تحديد عدد العينات (3) بمعرفة العميل ، مع العلم أن هذا العدد غير مطابق للمواصفات القياسية لهذا الاختبار
- تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها .

المشرف على الأختبار
د. إسماعيل أحمد محمد محروس

مدير المعمل
د. عبد اللطيف السيد أبوســـن

تحريرا فى : 2023/2/9
رقم التقرير :-
٩٦١/٢٠٢٣

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اختبار الضغط على عينات حجر

- الجهـــة : وزارة النقل – الهيئة العامة للطرق والكبارى والنقل البرى – المنطقة الخامسة – غرب الدلتا الاسكندرية – مطروح
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- توريد العينات: 6-2-2023

عينة رقم (4)

(من المحطة 620 +524 الى المحطة 660 + 524)

نتائج الأختبار:-

رقم	أبعاد العينة (سم)			مساحة المقطع (سم2)	وزن العينة (جم)	حمل الكسر (kN)	إجهاد الكسر (كجم/سم2)	ملاحظات
	طول	عرض	ارتفاع					
1	7.0	7.0	7.0	49.0	786	153	318.3	-----
2	7.0	7.0	6.9	49.0	816	296	615.8	
3	7.0	7.0	7.1	49.0	855	249	518.0	

- **ملحوظة هامة:**
- تم تحديد عدد العينات (3) بمعرفة العميل ، مع العلم أن هذا العدد غير مطابق للمواصفات القياسية لهذا الاختبار
- تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها .

المشرف على الاختبار

د. إسماعيل أحمد محمد محروس

مدير المعمل

د. عبد اللطيف السيد أبوســـن

تحريرا فى : 2023/2/9

رقم التقرير:

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اختبار الضغط على عينات حجر

- الجهـــة : وزارة النقل – الهيئة العامة للطرق والكبارى والنقل البرى – المنطقة الخامسة – غرب الدلتا الاسكندرية – مطروح
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- توريد العينات: 6-2-2023

عينة رقم (5)

(من المحطة 660 +524 الى المحطة 700+ 524)

نتائج الأختبار:-

رقم	أبعاد العينة (سم)			مساحة المقطع (سم2)	وزن العينة (جم)	حمل الكسر (kN)	إجهاد الكسر (كجم/سم2)	ملاحظات
	طول	عرض	ارتفاع					
1	7.0	7.0	6.9	49.0	877	244	507.6	------
2	7.0	7.0	7.0	49.0	868	226	470.2	
3	7.1	7.0	6.9	49.7	825	319	654.3	

- **ملحوظة هامة:**
- تم تحديد عدد العينات (3) بمعرفة العميل ، مع العلم أن هذا العدد غير مطابق للمواصفات القياسية لهذا الاختبار
- تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها

المشرف على الاختبار
د. إسماعيل أحمد محمد محروس

مدير المعمل
د. عبد اللطيف السيد أبوســـن

تحريرا فى : 2023/2/9
رقم التقرير :
٢٠٢٣/٩٦٣

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اختبار الضغط على عينات حجر

- الجهـــة : وزارة النقل – الهيئة العامة للطرق والكبارى والنقل البرى – المنطقة الخامسة – غرب الدلتا الاسكندرية – مطروح
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- توريد العينات: 6-2-2023

عينة رقم (1)

(من المحطة 500+524 الى المحطة 540+ 524)

نتائج الأختبار :-

رقم	أبعاد العينة (سم)			مساحة المقطع (سم2)	وزن العينة (جم)	حمل الكسر (kN)	إجهاد الكسر (كجم/سم2)	ملاحظات
	طول	عرض	ارتفاع					
1	7.0	6.8	7.0	47.60	793	196	419.7	-----
2	7.0	6.5	7.0	45.50	767	196	439.1	
3	6.9	6.9	7.0	47.61	765	135	289.0	

- ملحوظة هامة:
- تم تحديد عدد العينات (3) بمعرفة العميل ، مع العلم ان هذا العدد غير مطابق للمواصفات القياسية لهذا الاختبار
- تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها .

المشرف على الاختبار
د. إسماعيل أحمد محمد محروس

مدير المعمل
د. عبد اللطيف السيد ابوســـن

تحريرا فى : 2023/2/9
رقم التقرير:-
٩٥٩/٢٠٢٣

MATERIAL INSPECTION REQUEST

Contractor Company	AL-MOSTAFA COMPANY				Designer Company	K.K						
Issued by Contractor	Name	Sign			Date	Time						
	MOSTAFA THABET	Mostafa Thabet			26-02-2023							
Received by ER			MIR		C1	C2	C3	DD	MM	YY	HH	MM
					KP 524	E-W	D.T	26	02	2023		

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	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	From	TO			
	524+900	524+920	FILL (-3.00 m)		
	524+880	524+920	FILL (-2.50 m)		
	524+880	524+920	FILL (-2.00 m)		
	524+820	524+920	FILL (-1.75 m)		
	524+820	524+920	FILL (-1.50 m)		
	524+820	524+920	FILL (-1.25 m)		
	524+800	524+920	FILL (-1.00 m)		
	524+800	524+920	FILL (-0.75 m)		
	524+800	524+920	FILL (-0.50 m)		
MAR Approval No				Date	
Supplier Name					
Test Requirement			Specification	Clause	
Reference Photos	Yes attached / No		Other		

Item	Description	Unit	Quantity	Arrival Date	Note
1	Sieve analysis	M3	5000	26-02-2023	
2	Classification	M3	5000	26-02-2023	
3	Proctor & O.M.C	M3	5000	26-02-2023	
4	L.L & P.L & PI	M3	5000	26-02-2023	
5	C.B.R	M3	10000	26-02-2023	

Comments by:	Comments by:
A sample has been taken from fill material by K.K office to (GOUMA BADR LAB) and the results founded meet the specifications and accepted.	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mostafa Thabet	Mostafa Thabet		
QA/QC *	Abdallah SAMY	Abdallah		
GARB**				
Employers Representative				

SUBMISSION of TEST RESULTS

Contractor Company	AL-MOSTAFA COMPANY			Designer Company	K.K					
Issued by Contractor	Name	Sign		Date	Time					
	Mostafa Thabet	Mostafa Thabet		28-02-2023						
Received by ER			STR	C1	C2	C3	DD	MM	YY	HH	MM
				K.P 524	E-W	Q.T	28	02	2023		

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

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test Materials	Soil (A-1-b)
Location of Test	K.P (524)

Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	ASTM D 75	Aggregate sampling	According to specification	
2	ASTM C 136	Sieve Analysis	According to specification	
3	ASTM D 1440	Passing sieve #200	13.2	
4	ASTM D 4318	Atterberg limit	N.P	
5	ASTM D 2974	Moisture content	6.3	
6	ASTM D 1557	Modified proctor	2.16	
7	ASTM D 1883	C.B.R	53.0	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mostafa Thabet			A
Designer	Hassan	28/2/2023		A
GARB *				
Employers Representative				

* Alignment / Bridges: Culvert Only

Electric Express Train - HSR

AL Nuby Central Lab

California Bearing Ratio TEST

Testing Date :	1/3/202023	Code			
Location :	K.P (524+800)	MO (2)	[illegible] STA :	[illegible]	525+000
Company Name	AL Mustafa				

-: Test Results

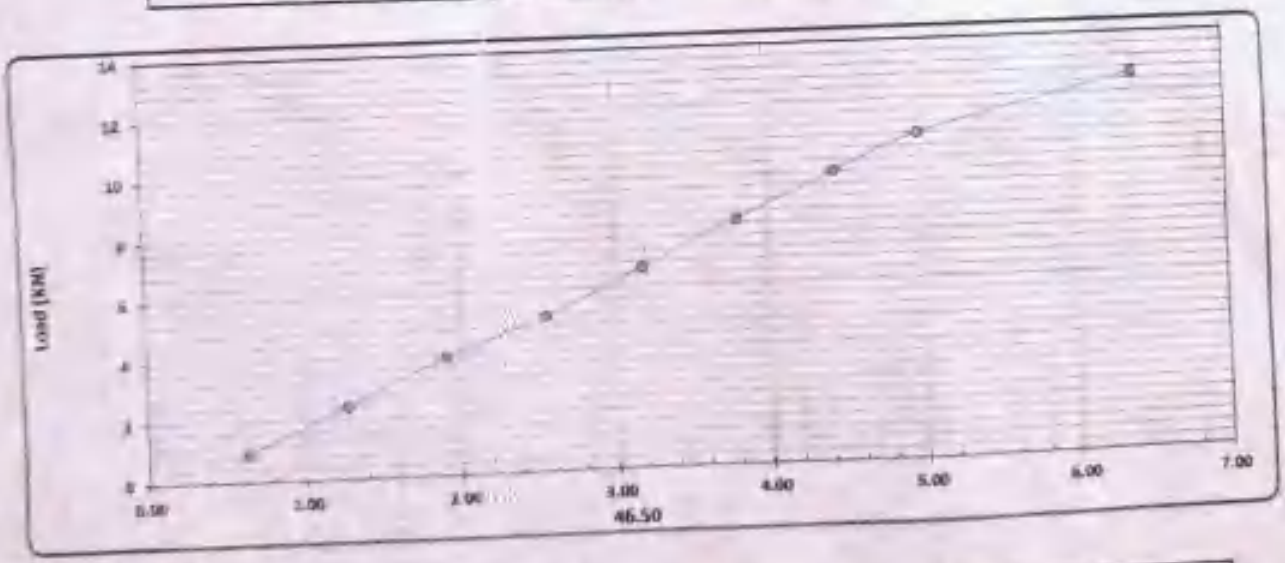
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm^3)	2158
Mold WT. (gm)	6890
Mold WT. + Wet WT. (gm)	9811
Wet WT. (gm)	492
Wet Density (g/cm^3)	2.280
Dry Density (g/cm^3)	2.154
Proctor Density (g/cm^3)	2.160
Compaction %	99.7

Moisture Ratio After Compacted Mold	
Tare No.	18
Tare WT. (gm)	43.7
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	144.1
3398	5.9
Dry WT. (gm)	100.4
Moisture Content %	5.9

Swelling	
Mold No.	1
Date	1/3/202023
Initial Height (mm)	5.00
Final Height (mm)	5.15
Difference	0
Sample Height (mm)	120.00
Swelling Ratio %	0.1%

Loading Reading :

46.50	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	0.17	0.22	0.27	0.32	0.36	0.42
Load (KN)	0.9	2.4	3.9	5.1	6.6	8.1	9.6	10.8	12.6



Calculations :-

Penetration (mm)	Load (Kn)	Standard Load (lb)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR
2.50	[illegible]	13.4	[illegible]	100	[illegible]	37.5%
5.00	[illegible]	19.0	[illegible]			53.0%

Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :

Sign :

Consultant Engineer

Name :

Sign :

Electric Express Train - HSR

AL Nuby Central Lab

California Bearing Ratio TEST

Testing Date :	1/3/202023	Code			
Location :	K.P (524+800)	MO (2)			525+600
Company Name:	AL Mustafa				

-: Test Results

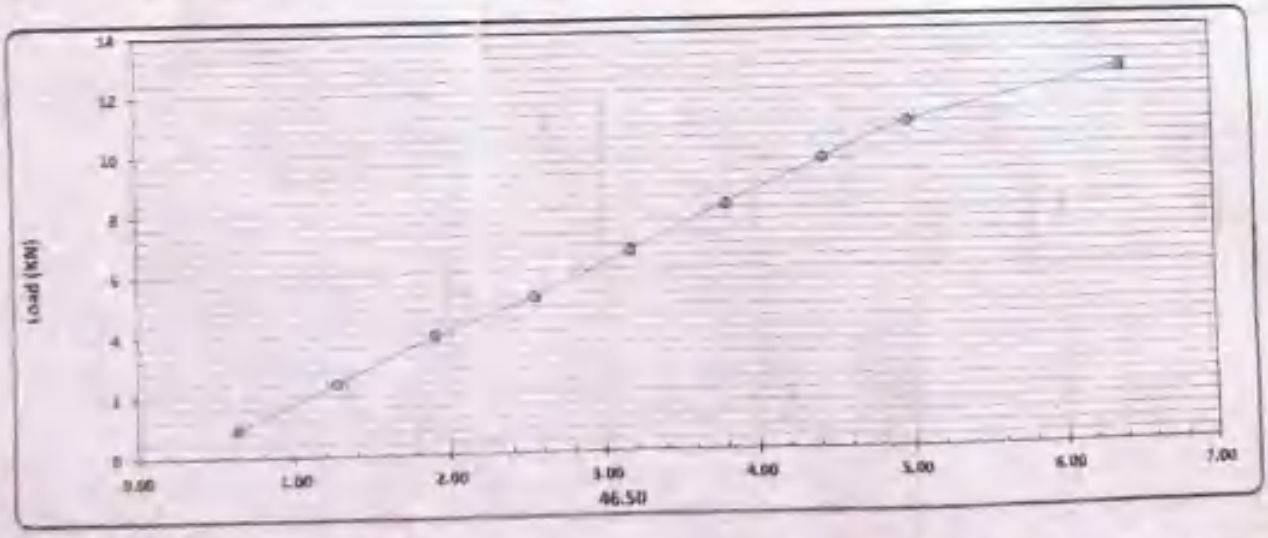
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm^3)	2150
Mold WT. (gm)	4890
Mold WT. + Wet WT. (gm)	9811
Wet WT. (gm)	4921
Wet Density (g/cm^3)	2.288
Dry Density (g/cm^3)	2.154
Proctor Density (g/cm^3)	2.180
Compaction %	98.7

Mesiture Ratio After Compacted Mold	
Tare No.	10
Tare WT. (gm)	43.7
Tare WT. + Wet WT. (gm)	150
Tare WT. + Dry WT. (gm)	144.1
1299	5.9
Dry WT. (gm)	100.4
Moisture Content %	5.9

Swelling	
Mold No.	1
Date	1/3/202023
Initial Height (mm)	5.00
Final Height (mm)	5.15
Difference	0
Sample Height (mm)	120.00
Swelling Ratio %	0.1%

Loading Reading :

46.50	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	0.17	0.22	0.27	0.32	0.36	0.42
Load (KN)	0.9	2.4	3.9	5.1	6.6	8.1	9.6	10.8	12.6



Calculations : -

Penetration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	% من قيمة
2.50	[illegible]	13.4	[illegible]	100	[illegible]	37.5%
5.00	[illegible]	20.0	[illegible]			53.0%

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSA MATROUH

From Station 604+000 To Station 249+177

Operating Lab | AL Nuby Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	26-2-2023	Code	zone	524+500	525+000
LOCATION	K.P (524+800)	NO (2)			
NAME COMPANY	AL Mustafa				

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT (g)		25246.00		gm		table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS		soil classify
Mass retained (g)	0.0	2215.0	2143.0	1987.0	2104.0	2201.0	2141.0			A-1-b
Cumulative Retained (g)	0.0	2215.0	4357.0	6344.0	8448.0	10649.0	12790.0		PRO	2.16
Cumulative Retained %	0.0	8.8	17.3	25.1	33.5	42.2	50.7		WC	6.30
Cumulative Passing %	100.0	91.2	82.7	74.9	66.5	57.8	49.3		CBR	53%

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	26.60	160.00	346.70					
Cumulative Retained %	5.32	32.00	73.34					
Cumulative Passing %	94.68	68.00	26.66					

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	91.2	82.7	74.9	66.5	57.8	49.3	38.7	23.8	13.2

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

Contractor

Consultant

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 558+177

PROCTOR TEST

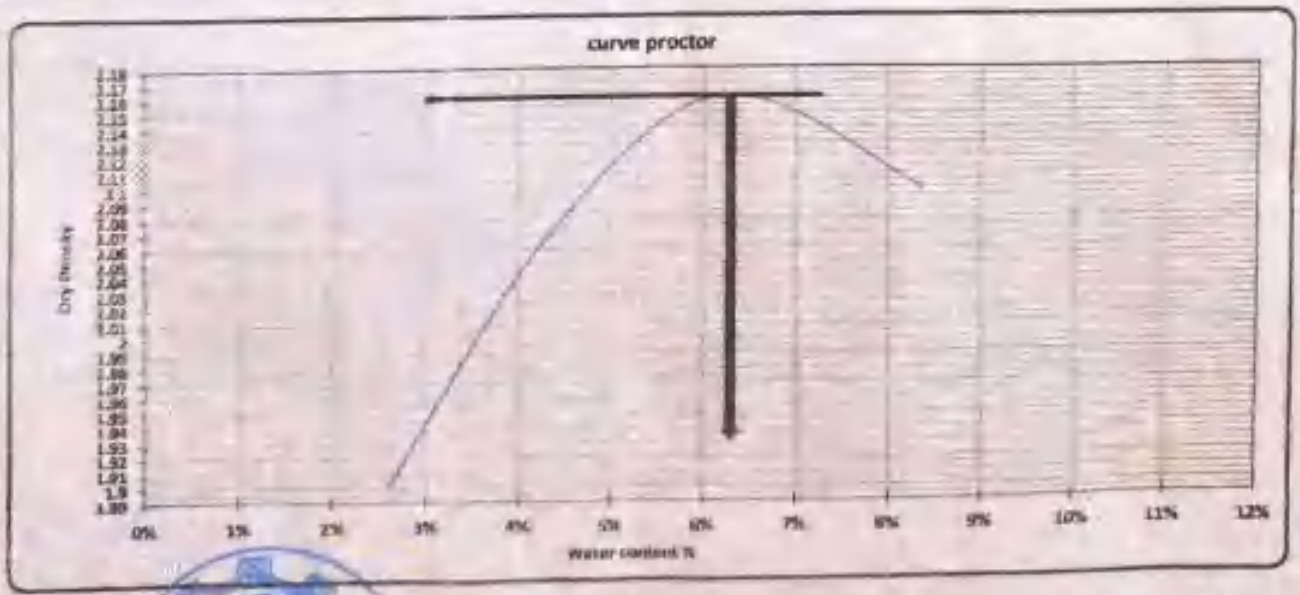
TESTING DATE:	26-2-2023	Code	zone	524+500	525+000
LOCATION	K.P (524+800)	MO (2)			
NAME COMPANY	AL Mustafa				

Weight of empty mold :	6037.0
Mold Volume:	2193.0

MAX Dry Density	2.16
Water content %	8.3

Trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10145.0	10575.0	10865.0	10821	
WT. WET SOIL	4108.0	4538.0	4828.0	4784.0	
Wt. Density	1.953	2.158	2.296	2.275	

Tare No.	20	18	73	7	10	8	11	20		
Tare wt.	60.0	77.7	42.5	42.6	43.3	46.7	46.3	60.3		
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	146.7	143.1	145.5	145.6	143.7	144.0	141.9	143.2		
Wt. Of water	3.3	6.9	4.5	4.4	6.3	6.0	8.1	6.8		
Wt. Of dry soil	123.0	267.8	103.0	103.0	100.4	97.3	95.6	82.9		
Water content %	2.7%	2.6%	4.4%	4.3%	6.3%	6.2%	8.5%	8.2%		
AV. Water content %	2.6%		4.3%		6.2%		8.3%			
Dry Density	1.903		2.069		2.161		2.100			



Contractor

Consultant

Hassan

MATERIAL INSPECTION REQUEST

Contractor Company	AL-MOSTAFA COMPANY				Designer Company	K.K							
Issued by Contractor	Name	Sign			Date	Time							
	MOSTAFA THABET	Mostafa Thabet			26-03-2023								
Received by ER				MIR	C1	C2	C3	DD	MM	YY	HH	MM	
					KP 524	C-W	O.T	26	03	2023			

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	REPLACEMENT FILL MATERIAL RESULTS		
Location to be Used	From	TO	
	524+900	524+920	FILL (-0.25 m)
	524+880	524+920	FERMA
	524+920	525+000	FILL (-3.00 m)
	524+920	525+000	FILL (-2.50 m)
	524+920	525+000	FILL (-2.00 m)

MAR Approval No		Date	
Supplier Name			
Test Requirement		Specification	Clause
Reference Photos	Yes attached / No	Other	

Item	Description	Unit	Quantity	Arrival Date	Note
1	Sieve analysis	M3	5000	26-03-2023	
2	Classification	M3	5000	26-03-2023	
3	Proctor & O.M.C	M3	5000	26-03-2023	
4	L.L & P.L & PI	M3	5000	26-03-2023	
5	C.B.R	M3	10000	26-03-2023	

Comments by:	Comments by:
A sample has been taken from fill material by K.K office to (GOUMA BADR LAB) and the results founded meet the specifications and accepted.	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mostafa Thabet	Mostafa Thabet		
QA/QC *	Abdallah SAMY			
GARB**				
Employers Representative				

SUBMISSION of TEST RESULTS

Contractor Company	AL-MOSTAFA COMPANY				Designer Company	K.K					
Issued by Contractor	Name	Sign			Date	Time					
	Mostafa Thabet	Mostafa Thabet			28-03-2023						
Received by ER			STR	C1	C2	C3	DD	MM	YY	H H	MM
				K.P 524	E.W	O.T	28	03	2023		

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

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test Materials	Soil (A-1-a)
Location of Test	K.P (524)

Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	ASTM D 75	Aggregate sampling	According to specification	
2	ASTM C 136	Sieve Analysis	According to specification	
3	ASTM D 1440	Passing sieve #200	12.8	
4	ASTM D 4318	Atterberg limit	N.P	
5	ASTM D 2974	Moisture content	6.4	
6	ASTM D 1557	Modified proctor	2.16	
7	ASTM D 1883	C.B.R	56.0	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mostafa Thabet			A
Designer	Hassan			A
GARB *				
Employers Representative				

* Alignment / Bridges: Culvert Only

Electric Express Train - HSR

California Bearing Ratio TEST

TESTING DATE	28/3/2023		ZONE	S24+500	S25+000
location	K.P524+500				
NAME COMPANY	Al. Moustafa				

operate by: GOMAA BADER LAB

-: Test Results

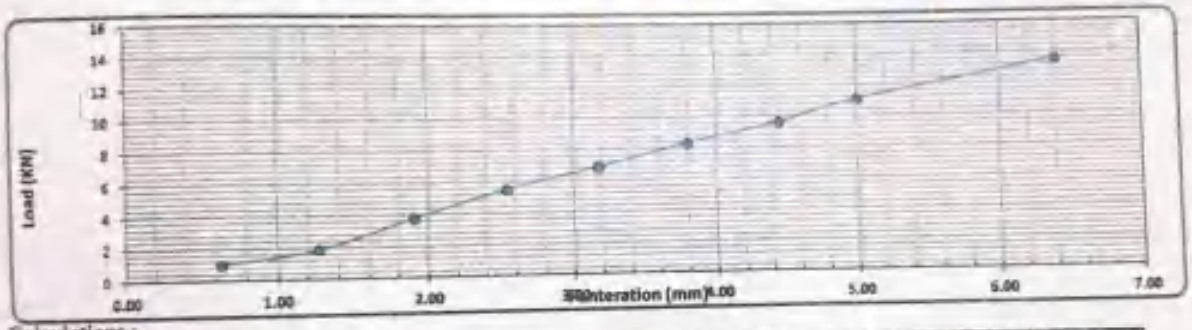
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm^3)	2117.8
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21346
Wet WT. (gm)	4902
Wet Density ($g./cm^3$)	2.251
Dry Density ($g./cm^3$)	2.121
Proctor Density ($g./cm^3$)	2.168
Compaction %	98

Moisture Ratio After Compacted Mold	
Tare No.	4
Tare WT. (gm)	24.61
Tare WT. +Wet WT. (gm)	196.45
Tare WT. +Dry WT. (gm)	188.86
Wt. Of water	7.6
Dry WT. (gm)	124.3
Moisture Content %	6.1

Swelling	
Mold No.	1
Date	
Initial Height (mm)	
Final Height (mm)	
Difference	0
Sample Height (mm)	
Swelling Ratio %	

Loading Reading :

penetration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (kg)	97.00	187.00	379.00	[illegible]	697.00	845.00	978.00	[illegible]	1376.00
Load (KN)	1.0	1.8	3.7	[illegible]	6.8	8.3	9.6	[illegible]	13.5



Calculations : -

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	% 100 عند نسبة
2.50	8.47	13.4	41.8%	98	100	41.7%
5.00	11.82	28.0	55.8%			56.0%

Lab. Specialist

Name :

Sign :

المعمل المركزى
شركة جمعة بدر نوح

Consultant Engineer

Name :

Sign :

Electric Express Train - HSR

From: El Ain El Sokhna City To El Alamein - MATROUH

Section - 1 From FOKA TO MARSA MATROUH

From Station [illegible] To Station [illegible]

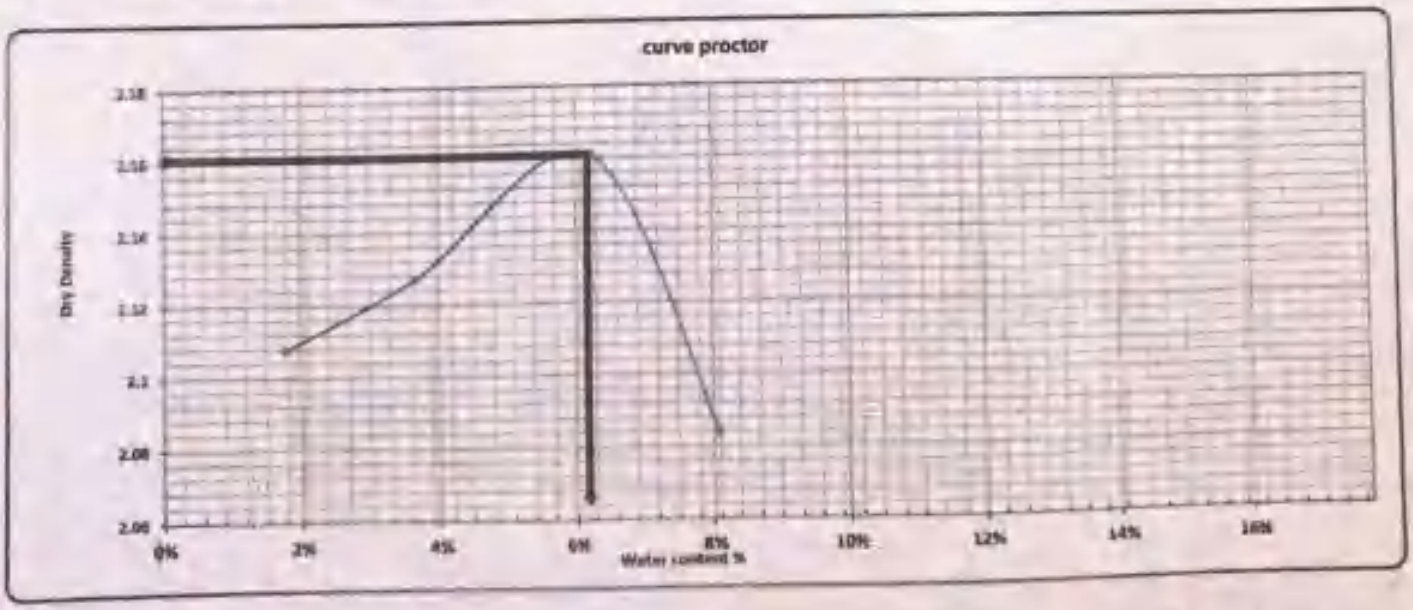
PROCTOR TEST

TESTING DATE	27/3/2023	[illegible]	ZONE	524+500	525+000
location	K.P524+800	[illegible]			
NAME COMPANY	AL Moustafa				
	operate by	GOMAA BADER LAB			

Weight of empty mold :	8536.0	MAX Dry Density	6.488
Mold Volume:	2104.9	Water content %	2.16

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	11060.0	11194.9	11376.0	11386		
WT. WET SOIL	4524.0	4658.0	4840.0	4758.0		
Wt. Density	2.149	2.209	2.299	2.257		

Tare No.	3	3	1	1	2	2	14	14				
Tare wt.	35.34	35.34	26.92	26.92	22.84	22.84	27	27				
Wt. Of wet soil & tare	146.39	146.39	150.66	150.66	148.34	148.34	121.85	121.85				
Wt. Of dry soil & tare	144	144	143.76	143.76	133.25	133.25	114.57	114.57				
Wt. Of water	2.3	2.3	4.9	4.9	7.1	7.1	7.3	7.3				
Wt. Of dry soil	118.9	118.9	126.8	126.8	110.4	110.4	87.6	87.6				
Water content %	2.0%	2.0%	3.9%	3.9%	6.4%	6.4%	8.3%	8.3%				
AV.Water content %	2.0%		3.9%		6.4%		8.3%					
Dry Density	2.108		2.127		2.161		2.084					



Contractor

Consultant

المعمل المركزى
شركة جمعة بدر نوح

Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSA MATROUH

From Station 564+099 To Station 568+177

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE	26/3/2023	code	ZONE	524+500	525+000
location	K.P524+800	[illegible]			
NAME COMPANY	AL Moustafa				

1-visual inspection test | operate by | GOMAA BADER LAB

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT (g)		33045.00		gm		table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS		soil classify
Mass retained (g)	320.0	1880.0	3300.0	2000.0	5280.0	2520.0	4490.0			A-1-a
Cumulative Retained (g)	320.0	2160.0	5680.0	7680.0	12960.0	15810.0	20270.0		PRO	2.151
Cumulative Retained %	0.7	5.4	16.9	23.8	38.9	47.8	61.3		WC	6.4
Cumulative Passing %	99.3	93.6	83.1	77.0	60.1	52.2	38.7		CBR	55.0%

B-soft material gradation				WT.OF sample		600.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	80.00	170.00	355.00					
Cumulative Retained %	13.30	34.00	87.00					
Cumulative Passing %	86.20	66.00	33.00					

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.8	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	99.3	93.6	83.1	77.0	60.1	52.2	38.7	33.3	26.3	17.9

	H.P	N.P	N.P

Contractor

Consultant

Hassan

المعمل المركزى
شركة جمعه بدر نوح

MATERIAL INSPECTION REQUEST

Contractor Company	AL-MOSTAFA COMPANY				Designer Company	K.K					
Issued by Contractor	Name	Sign			Date	Time					
	MOSTAFA THABET	Mostafa Thabet			11-04-2023						
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
				S.P 524	E.W	D.T	11	04	2023		

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	PREPARED SUBGRADE MATERIAL RESULTS				
Location to be Used	From	TO			
	524+780	525+000	P.SUB 1 (+0.25)		
	524+500	525+000	P.SUB 2 (+0.50)		
MAR Approval No				Date	
Supplier Name					
Test Requirement			Specification	Clause	
Reference Photos	Yes attached / No		Other		

Item	Description	Unit	Quantity	Arrival Date	Note
1	Sieve analysis	M3	5000	11-04-2023	
2	Classification	M3	5000	11-04-2023	
3	Proctor & O.M.C	M3	5000	11-04-2023	
4	L.L & P.L & PI	M3	5000	11-04-2023	
5	C.B.R	M3	10000	11-04-2023	

Comments by:	Comments by:
A sample has been taken from fill material by K.K office to (Al NOUBI LAB) and the results founded meet the specifications and accepted.	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mostafa Thabet	Mostafa Thabet		
QA/QC *	Abdallah SAMY	Abdallah		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

SUBMISSION of TEST RESULTS

Contractor Company	AL-MOSTAFA COMPANY				Designer Company		K.K					
Issued by Contractor	Name	Sign			Date		Time					
	Mostafa Thabet	Mostafa Thabet			11-04-2023							
Received by ER			MAR		C1	C2	C3	DD	MM	YY	H H	MM
					K.P 524	E-W	O.T	11	04	2023		

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

NB: Package 1 Only (Package 2 via Aconex)				
THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Description of Test Materials	Soil (A-1-a)			
Location of Test	K.P (524)			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	ASTM D 75	Aggregate sampling	According to specification	
2	ASTM C 136	Sieve Analysis	According to specification	
3	ASTM D 1440	Passing sieve #200	8.30	
4	ASTM D 4318	Atterberg limit	N.P	
5	ASTM D 2974	Moisture content	6.50	
6	ASTM D 1557	Modified proctor	2.175	
7	ASTM D 1883	C.B.R	89.90	

Comments by:	Comments by:

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mostafa Thabet			A
Designer	Youssef Rafat	Youssef		A
GARB *				
Employers Representative				

* Alignment / Bridges: Culvert Only

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 569+177

Opreating Lab	AL Nuby Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	11-4-2023	Code	Zone	524+500	525+000
LOCATION	K.P (524+800)	MQ (P-1)			
NAME COMPANY	Al Mustafa				

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT (g)		17419.00		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)	122.0	1836.0	2489.0	812.0	961.0	1098.0	4079.0		PRO	2.175
Cumulative Retained (g)	122.0	1958.0	4447.0	5069.0	6030.0	7128.0	11207.0		WC	6.50
Cumulative Retained %	0.7	11.2	25.6	29.1	34.6	40.9	64.3		CBR	
Cumulative Passing %	99.3	88.8	74.4	70.9	65.4	59.1	35.7		Los Angles	30.96

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	133.00	258.00	383.00					
Cumulative Retained %	26.60	51.60	76.60					
Cumulative Passing %	73.40	48.40	23.40					

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 %	99.3	88.8	74.4	70.9	65.4	59.1	35.7	26.2	17.3	8.3

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

Contractor	Consultant
	Yousef Rafat

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 569+177

PROCTOR TEST

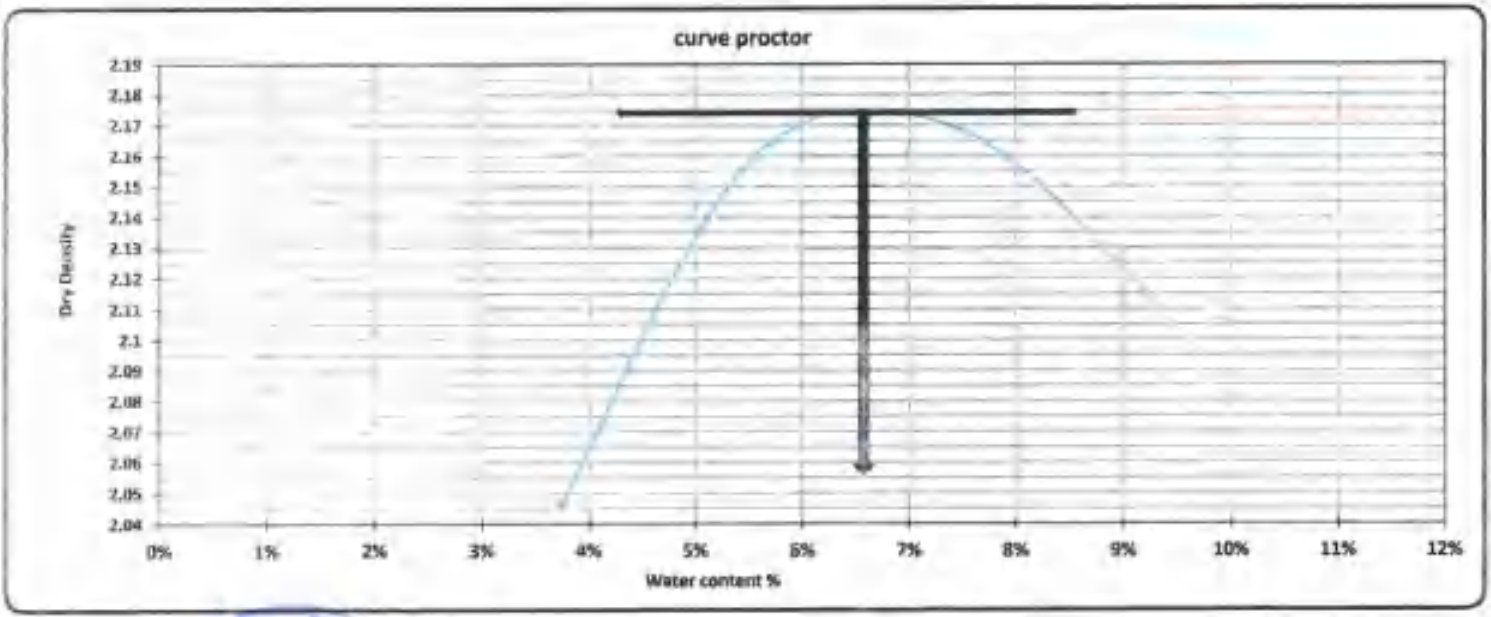
TESTING DATE:	11-4-2023	Code	zone	524++500	525+000
LOCATION	K.P (524+800)	MO (P-1)			
NAME COMPANY	Al Mustafa				

Weight of empty mold :	6037.0
Mold Volume:	2113.0

MAX Dry Density	2.175
Water content %	6.5

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10523.0	10854.0	10962.0	10899	
WT. WET SOIL	4486.0	4817.0	4925.0	4862.0	
Wt. Density	2.123	2.280	2.331	2.301	

Tare No.	75	16	22	40	8	15	26	19		
Tare wt.	88	33.9	84.1	46.4	46.8	31.9	55	44.4		
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	146.5	145.9	145.0	144.5	142.7	141.8	141.7	140.7		
Wt. Of water	3.5	4.1	5.0	5.5	7.3	8.2	8.3	9.3		
Wt. Of dry soil	91.5	112.0	90.9	98.1	95.9	109.9	86.7	96.3		
Water content %	3.8%	3.7%	5.5%	5.6%	7.6%	7.5%	9.6%	9.7%		
AV.Water content %	3.7%		5.6%		7.5%		9.6%			
Dry Density	2.046		2.160		2.167		2.099			



Contractor

Consultant

Youssef Rafat

TESTING DATE:	11-4-2023	code	zone	524+500	525+000
LOCATION	K.P (524+800+)	MO (P-1)			
NAME COMPANY	Al Mustafa				

Los Anglos abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3452	30.96

Lab. Specialist
Name :
Sign :

Lab. Engineer
Name :
Sign :

Consultant Engineer
Name : Youssef Rafat
Sign :

Electric Express Train - HSR

Qarabag LLC — Al Nuby Central Lab

California Bearing Ratio TEST

		Code			
Testing Date	13-4-2023	MO (P-1)	FROM STA :	524+500	525+000
Location	K.P (524+800)				
Company Name	Al Mustafa				

-: Test Results

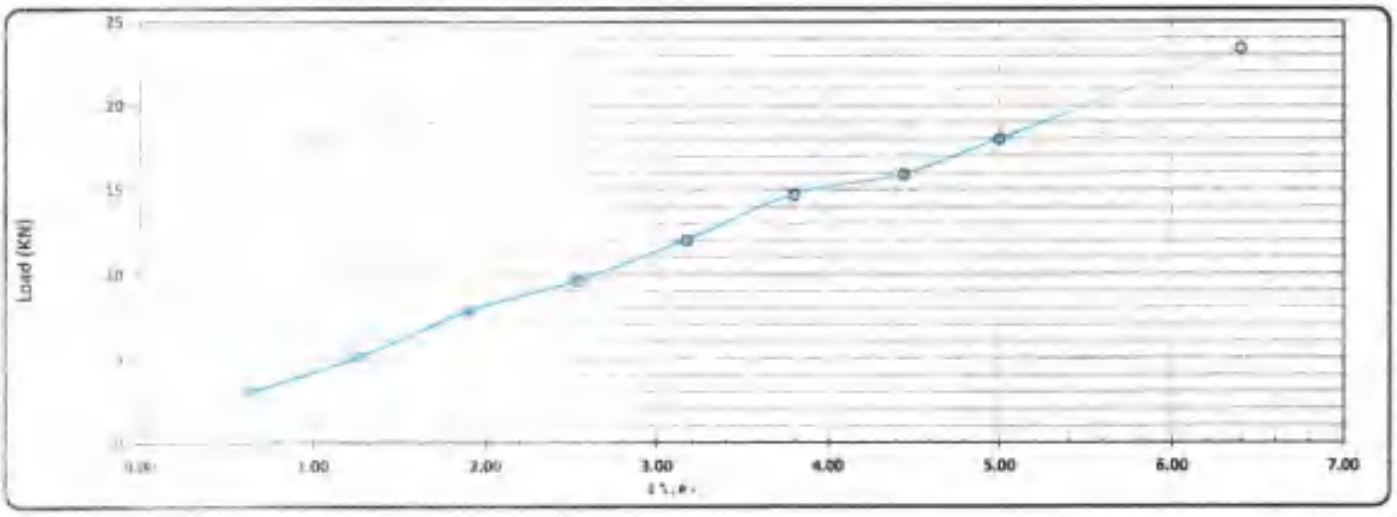
Compaction % for Mold	
Mold No	3
Mold Vol. (cm^3)	2025
Mold Wt. (gm)	5034
Mold WT. + Wet Wt. (gm)	9725
Wet Wt. (gm)	4691
Wet Density (g/cm^3)	2.317
Dry Density (g/cm^3)	2.175
Proctor Density (g/cm^3)	2.175
Compaction %	100.0

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.	3
Date	13-4-2023
Intial Height (mm)	0.00
Final Height (mm)	0.00
Difference	0
Sample Height (mm)	120.00
Swelling Ratio %	0.0%

Loading Reading :

46.50	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.10	0.17	0.26	0.32	0.40	0.49	0.53	0.60	0.78
Load (KN)	3.0	5.1	7.8	9.6	12.0	14.7	15.9	18.0	23.4



Calculations :

Penetration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	CBR عند نسبة ٩٨ %
2.50	9.60	13.4	71.9%	100	98	70.5%
5.00	18.00	20.0	89.9%			88.1%

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Yousef Rafat
Sign :	Sign :	Sign :

MATERIAL INSPECTION REQUEST

Contractor Company	AL-MOSTAFA COMPANY			Designer Company	K.K					
Issued by Contractor	Name	Sign		Date	Time					
	MOSTAFA THABET	مصطفى ثابت		10-09-2023						
Received by ER			MIR	C1 / C2 / C3	C2	C3	DD	MM	YY	HH / MM
				S.P S24	L40	0.7	10	09	2023	

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	SUB-BALLAST MATERIAL RESULTS				
Location to be Used	From	TO			
	524+500	525+000	SUB BALLAST 1 (+0.70)		
	524+500	525+000	SUB BALLAST 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	Sieve analysis	M3	5000	10-09-2023	
2	Classification	M3	5000	10-09-2023	
3	Proctor & O.M.C	M3	5000	10 09 2023	
4	L.L & P.L & PI	M3	5000	10-09-2023	
5	C.B.R	M3	10000	10-09-2023	

Comments by:	Comments by:
A sample has been taken from fill material by K.K office to (Al TAWAKOL LAB) and the results founded meet the specifications and accepted.	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	مصطفى ثابت	مصطفى ثابت		
QA/QC *	Hassan			
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

SUBMISSION of TEST RESULTS

Contractor Company	AL-MOSTAFA COMPANY					Designer Company	K.K				
Issued by Contractor	Name	Sign				Date	Time				
	Mostafa Thabet	مصطفى ثابت				12-09-2023					
Received by ER			MAR	C1	C2	C3	DD	MM	YY	H H	MM
				KP 524	S.W	D.T	02	09	2023		

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

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test Materials	Soil (A-1-a)
Location of Test	K.P (524)

Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	ASTM D 75	Aggregate sampling	According to specification	
2	ASTM C 136	Sieve Analysis	According to specification	
3	ASTM D 1440	Passing sieve #200	4.65	
4	ASTM D 4318	Atterberg limit	N.P	
5	ASTM D 2974	Moisture content	7.10	
6	ASTM D 1557	Modified proctor	2.23	
7	ASTM D 1883	C.B.R	93.4	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	مصطفى ثابت	مصطفى ثابت		A
Designer	Hassan	Dec 12 2023		A
GARB *				
Employers Representative				

* Alignment / Bridges: Culvert Only

	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 569+177	

Opreating lap	Al Tawkol Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	10-09-2023	code	ZONE	524+500	525+000
LOCATION	K.P (524+750)	(mix) SUB BALLAST (1)	Material	SUB BALLAST	
NAME COMPANY	Al Mostafa		QUANTITY	5000 M	

visual inspection test

Gradient test

gradation of bulk materials				SAMPLE WEIGHT [gm]		41486.000		gm		table classify
sieve size	2 "	1.5 "	1 "	3/4 "	1/2 "	3/8 "	# 4	PASS		soil classify
Mass retained (g)	0.0	1254.0	4775.0	4523.0	6850.0	6960.0	5070.0	12054.0	CLASS	A-1-a
umulative Retained (g)	0.0	1254.0	6029.0	10552.0	17402.0	24362.0	29432.0		PRO	2.230
Cumulative Retained %	0.0	3.0	14.5	25.4	41.9	58.7	70.9		WC	7.1
Cumulative Passing %	100.0	97.0	85.5	74.6	58.1	41.3	29.09		CBR	93.40
									LA	25.4
									S.G	2.520

soft material gradation				WT.OF sample		500.00		gm
sieve size	#10	#40	#200					
umulative Retained (g)	150.00	320.00	420.00					
Cumulative Retained %	30.00	64.00	84.00					
umulative Passing %	70.00	36.00	16.00					

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
umulative Passing %	100.0	85.00	85.5	74.60	58.1	41.3	29.1	29.3	10.5	4.60

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

Contractor	Consultant
ENG AHMED HALEEM	Hassan

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 588+177

Absorbtion & Aggregate specific gravity AASHTO-T85

TESTING DATE:	10/09/2023	code	Station	524+500	525+000
LOCATION	K.P (524+750)	(mos) SUB BALLAST (1)	Material	SUB BALLAST	
NAME COMPANY	Al Mostafa		QUANTITY	5000 M	

Weight of sample	2500	gm
Weight of saturated surface dry sample (B)	2540	gm
Weight of saturated sample in water (C)	1553	gm
Weight of dry sample after heating (A)	2490	gm

Results:-

Bulk specific gravity = A / (B-C)	2.523	
Bulk specific gravity (S.S.D) = B / (B-C)	2.573	
Apparent specific gravity = A /(A-C)	2.657	
Absorbation = (B-A)/A	2.008	%

Los Anglos Abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3730	25.40

Lab. Specialist

Name :

Sign :

Lab. Engineer

Name : AHMED HALEEM

Sign :

Consultant Engineer

Name : Hassan

Sign :

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 566+177

MODIFIED PROCTOR TEST ASTM D-1557

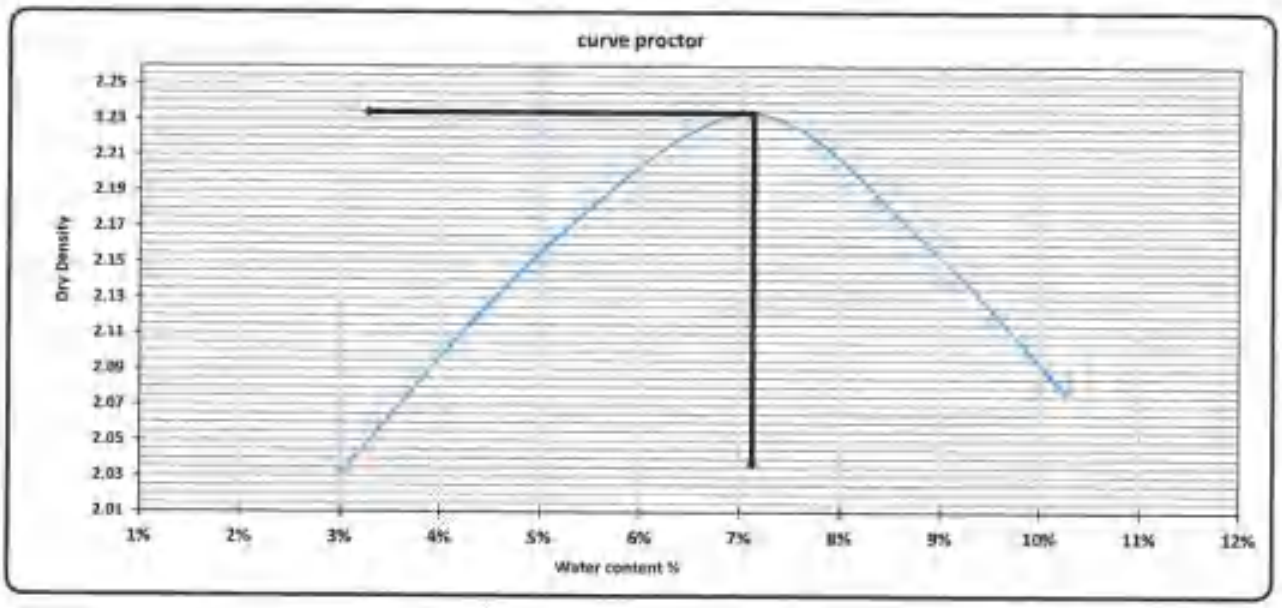
TESTING DATE:	11-09-2023	code:	ZONE	524+500	525+000
LOCATION	K.P (524+750)	(mm) SUB BALLAST (1)	Material	SUB BALLAST	
NAME COMPANY	Al Mostafa		QUANTITY	5000 M	

Weight of empty mold :	5620.0
Mold Volume:	2124.0

MAX Dry Density	2.233
Water content %	7.1%

trial no :	1	2	3	4	5
Wt. Of Mold+ wet soil	10070.0	10430.0	10700.0	10615	10485
WT. WET SOIL	4450.0	4810.0	5080.0	4995.0	4865.0
Wt. Density	2.095	2.265	2.392	2.352	2.290

Tare No.	10	11	1	2	3	4	5	6	7	8
Tare wt.	53.3	53.1	56.4	53.2	55.2	53.6	53.2	56.1	55.3	53.2
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
Wt. Of dry soil & tare	147.2	147.1	145.5	145.4	143.65	143.70	142.0	142.5	141.8	141.2
Wt. Of water	2.8	2.9	4.5	4.6	6.3	6.3	8.0	7.5	8.2	8.8
Wt. Of dry soil	93.9	94.0	89.1	92.2	88.5	90.1	88.8	86.4	85.7	88.0
Water content %	3.0%	3.1%	5.1%	5.0%	7.2%	7.0%	9.0%	8.7%	10.5%	10.0%
AV.Water content %	3.0%		5.0%		7.1%		8.9%		10.3%	
Dry Density	2.033		2.156		2.233		2.160		2.078	



Contractor

Consultant

Electric Express Train - HSR

California Bearing Ratio TEST

Testing Date :	12/9/2023	Code	FROM STA :	524+500	525+000
Location :	K.P (524+750)	(mos) SUB BALLAST(1)	: Material	SUB BALLAST	
Company Name	Al Mostafa		: Layer Thickness	500M	

-: Test Results

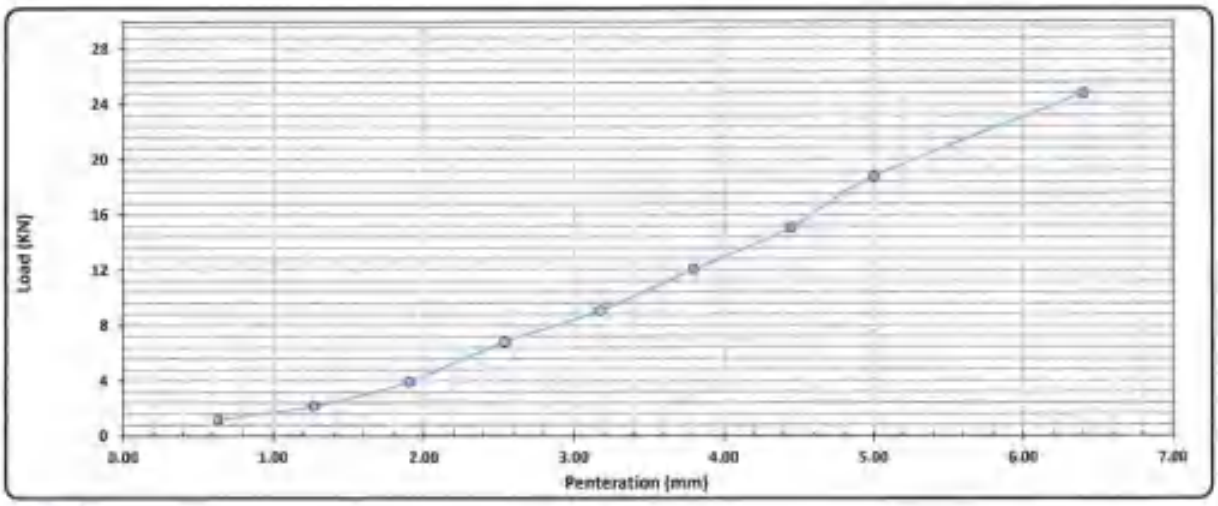
Compaction % for Mold	
Mold No.	1
Mold Vol.(cm^3)	2120
Mold WT. (gm)	5310
Mold WT. + Wet WT. (gm)	10385
Wet WT. (gm)	5075
Wet Density (g/cm^3)	2.394
Dry Density (g/cm^3)	2.238
Proctor Density (g/cm^3)	2.231
Compaction %	100.3

Moisture Ratio After Compacted Mold	
Tare No.	15
Tare WT. (gm)	55
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143.8
Water WT. (gm)	6.2
Dry WT. (gm)	88.8
Moisture Content %	7.0

Swelling	
Mold No.	1
Date:	12/9/2023
Intial Height (mm)	0.00
Final Height (mm)	0.00
Difference	0.00
Sample Height (mm)	120
Swelling Ratio %	0.00%

Loading Reading :

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (Kg)	130	240	435	755	1005	1340	1675	2105	2755
Load (KN)	1.2	2.2	3.9	6.8	9.0	12.1	15.1	18.8	24.8



Calculations :-

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	100 عند نسبة %
2.50	6.80	13.4	50.9%	100.3	100	50.7%
5.00	18.77	20.0	93.7%			93.4%

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

Plate Load Test Results

Company Name	Al Mustafa		
Location	524+820	To	524+920
Taste Date	21/3/2023		
Layer level	**-1.5**		

Station	524+900

EQUIPMENT AND TEST PROCEDURE

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.

F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	14.92	13.45		0.000	0.000		0.000
1.000	2.4	0.707	0.01	14.80	13.40		0.120	0.050		0.085
2.000	18.8	5.652	0.08	14.40	13.15		0.520	0.300		0.410
3.000	37.7	11.304	0.16	14.02	12.95		0.900	0.500		0.700
4.000	58.9	17.663	0.25	13.80	12.85		1.120	0.600		0.860
5.000	77.7	23.315	0.33	13.55	12.70		1.370	0.750		1.060
6.000	98.9	29.673	0.42	13.35	12.60		1.570	0.850		1.210
7.000	117.8	35.325	0.50	13.10	12.50		1.820	0.950		1.385
8.000	58.9	17.663	0.25	13.15	12.58		1.770	0.870		1.320
9.000	29.4	8.831	0.12	13.25	12.65		1.670	0.800		1.235
9.000	2.4	0.707	0.01	13.85	13.02		1.070	0.430		0.750
10.000	2.4	0.707	0.01	13.85	13.02		1.070	0.430		0.750
11.000	18.8	5.652	0.08	13.60	12.85		1.320	0.600		0.960
12.000	37.7	11.304	0.16	13.40	12.75		1.520	0.700		1.110
13.000	58.9	17.663	0.25	13.30	12.70		1.620	0.750		1.185
14.000	77.7	23.315	0.33	13.15	12.65		1.770	0.800		1.285
15.000	98.9	29.673	0.42	13.00	12.55		1.920	0.900		1.410

		v	ΔS	Δσ
$0.7\sigma_1$	0.35	1.05688	0.39313	0.2
$0.3\sigma_1$	0.15	0.66375		
$0.7\sigma_2$	0.35	1.31278	0.14276	0.2
$0.3\sigma_2$	0.15	1.17002		
D (mm)	300			
E_{V1}	114.47			
E_{V2}	315.22			
Area (sq m)	0.07065			

Ev2/Ev1	2.75		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

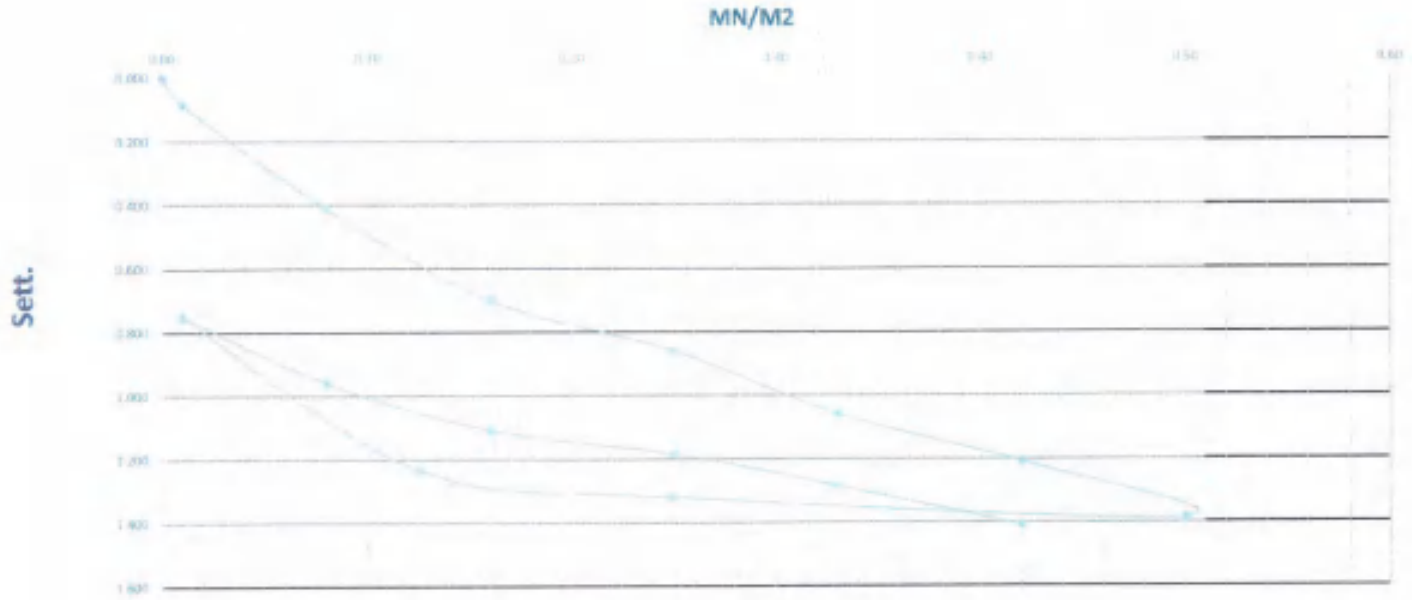
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δ_s = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign :

Plate Load Test Results

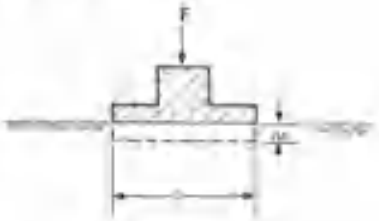
Company Name	المصطفي			
Location	524+800	To	524+920	
Taste Date	11-04-2023			
Layer level	**ferma**			

Station	524+880

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.94	19.90		0.060	0.100		0.080
2.000	17.1	5.652	0.08	19.82	19.80		0.180	0.200		0.190
0.080	34.2	11.304	0.16	19.55	19.72		0.450	0.280		0.365
4.000	53.3	17.663	0.25	19.36	19.61		0.640	0.390		0.515
5.000	70.5	23.315	0.33	19.19	19.52		0.810	0.480		0.645
6.000	89.8	29.673	0.42	18.96	19.40		1.040	0.600		0.820
7.000	106.8	35.325	0.50	18.76	19.31		1.240	0.690		0.965
8.000	53.4	17.663	0.25	18.84	19.38		1.160	0.620		0.890
9.000	26.7	8.831	0.12	18.94	19.49		1.060	0.510		0.785
9.000	2.1	0.707	0.01	19.18	19.60		0.820	0.400		0.610
10.000	2.1	0.707	0.01	19.18	19.60		0.820	0.400		0.610
11.000	17.1	5.652	0.08	19.14	19.56		0.860	0.440		0.650
12.000	34.2	11.304	0.16	19.05	19.50		0.950	0.500		0.725
13.000	53.3	17.663	0.25	18.95	19.46		1.050	0.540		0.795
14.000	70.5	23.315	0.33	18.88	19.41		1.120	0.590		0.855
15.000	89.8	29.673	0.42	18.78	19.36		1.220	0.640		0.930

		ν	ΔS	Δσ
$0.7\sigma_1$	0.35	0.69313	0.35	0.2
$0.3\sigma_1$	0.15	0.34313		
$0.7\sigma_2$	0.35	0.87167	0.38166	0.2
$0.3\sigma_2$	0.15	0.69		
D (mm)	300			
Ev_1	128.57			
Ev_2	247.71			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.93		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

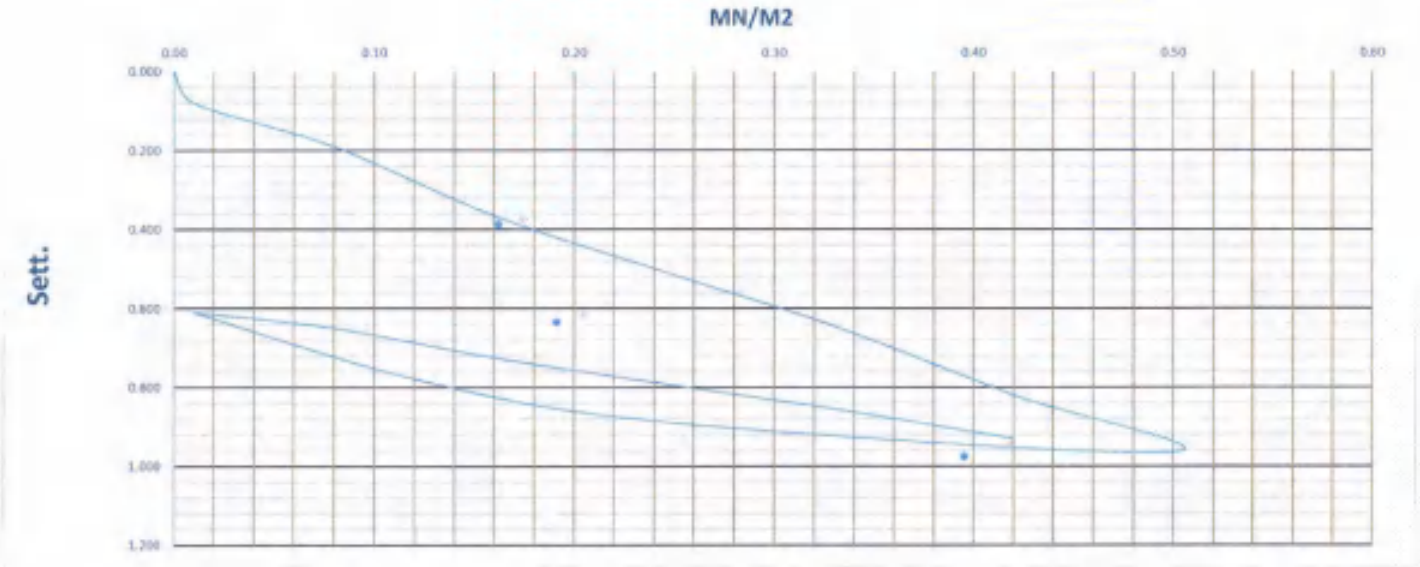
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Youssef Rafat
Sign :	Sign :	Sign :

Plate Load Test Results

Company Name	المصطفي				
Location	524+800	To	524+920	Station	524+840
Taste Date	11-04-2023				
Layer level	**ferma**				

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.

F = load

= settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.94	19.96		0.060	0.040		0.050
2.000	17.1	5.652	0.08	19.81	19.88		0.190	0.120		0.155
3.000	34.2	11.304	0.16	19.61	19.81		0.390	0.190		0.290
4.000	53.3	17.663	0.25	19.35	19.72		0.650	0.280		0.465
5.000	70.5	23.315	0.33	19.20	19.68		0.800	0.320		0.560
6.000	89.8	29.673	0.42	19.05	19.62		0.950	0.380		0.665
7.000	106.8	35.325	0.50	18.90	19.58		1.100	0.420		0.760
8.000	53.4	17.663	0.25	18.95	19.63		1.050	0.370		0.710
9.000	26.7	8.831	0.12	19.06	19.69		0.940	0.310		0.625
9.000	2.1	0.707	0.01	19.28	19.79		0.720	0.210		0.465
10.000	2.1	0.707	0.01	19.28	19.79		0.720	0.210		0.465
11.000	17.1	5.652	0.08	19.23	19.77		0.760	0.230		0.495
12.000	34.2	11.304	0.16	19.16	19.76		0.840	0.240		0.540
13.000	53.3	17.663	0.25	19.10	19.72		0.900	0.280		0.590
14.000	70.5	23.315	0.33	19.05	19.66		0.950	0.340		0.645
15.000	89.8	29.673	0.42	18.98	19.60		1.020	0.400		0.710

		v	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.58187	0.30875	0.2
$0.3\,\sigma_1$	0.15	0.27313		
$0.7\sigma_2$	0.35	0.65944	0.13444	0.2
$0.3\sigma_2$	0.15	0.525		
D (mm)	300			
E_{v1}	145.75			
E_{v2}	334.72			
Area (A_{pl},m²)	0.07065			

E_{v2}/E_{v1}	2.30		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

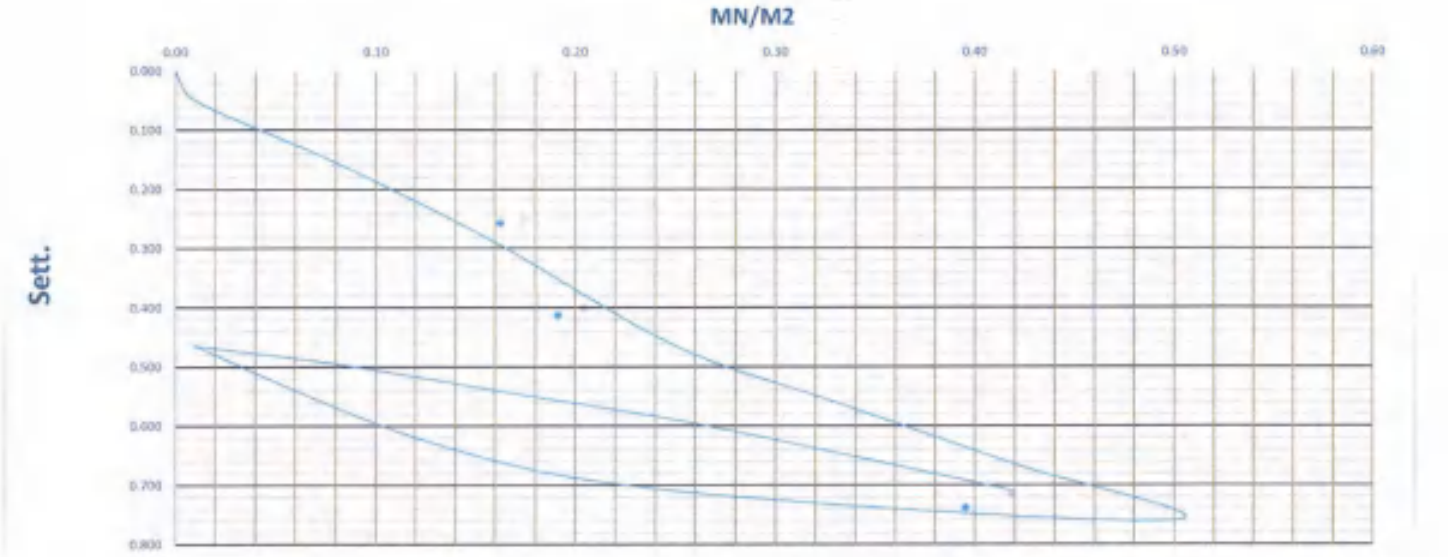
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Youssef Rafat
Sign :	Sign :	Sign :

Plate Load Test Results

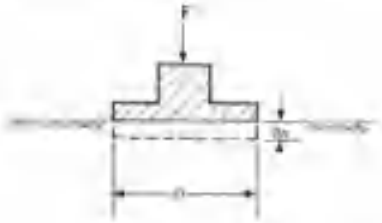
Company Name	المصطفي			
Location	524+820	To	524+900	
Taste Date	16-04-2023			
Layer level	**P.S.G + 0.5**			

Station	524+880

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 cm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.87		0.050	0.130		0.090
2.000	17.1	5.652	0.08	19.55	19.61		0.450	0.390		0.420
0.080	34.2	11.304	0.16	19.10	19.40		0.900	0.600		0.750
4.000	53.3	17.663	0.25	18.85	19.10		1.150	0.900		1.025
5.000	70.5	23.315	0.33	18.66	18.98		1.340	1.020		1.180
6.000	89.8	29.673	0.42	18.46	18.82		1.540	1.180		1.360
7.000	106.8	35.325	0.50	18.25	18.66		1.750	1.340		1.545
8.000	53.4	17.663	0.25	18.33	18.74		1.670	1.260		1.465
9.000	26.7	8.831	0.12	18.42	18.82		1.580	1.180		1.380
9.000	2.1	0.707	0.01	18.69	19.03		1.310	0.970		1.140
10.000	2.1	0.707	0.01	18.69	19.03		1.310	0.970		1.140
11.000	17.1	5.652	0.08	18.64	19.00		1.360	1.000		1.180
12.000	34.2	11.304	0.16	18.55	18.93		1.450	1.070		1.260
13.000	53.3	17.663	0.25	18.44	18.85		1.560	1.150		1.355
14.000	70.5	23.315	0.33	18.36	18.77		1.640	1.230		1.435
15.000	89.8	29.673	0.42	18.26	18.70		1.740	1.300		1.520

		Δs	ΔS	$\Delta \sigma$
0.7 σ_1	0.35	1.19813	0.48937	0.2
0.3 σ_2	0.15	0.70875		
0.7σ_2	0.35	1.45389	0.23388	0.2
0.3σ_1	0.15	1.22		
D (mm)	300			
Ev_1	91.95			
Ev_2	192.40			
Area (Sqm)	0.07065			

Ev2/Ev1	2.09		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

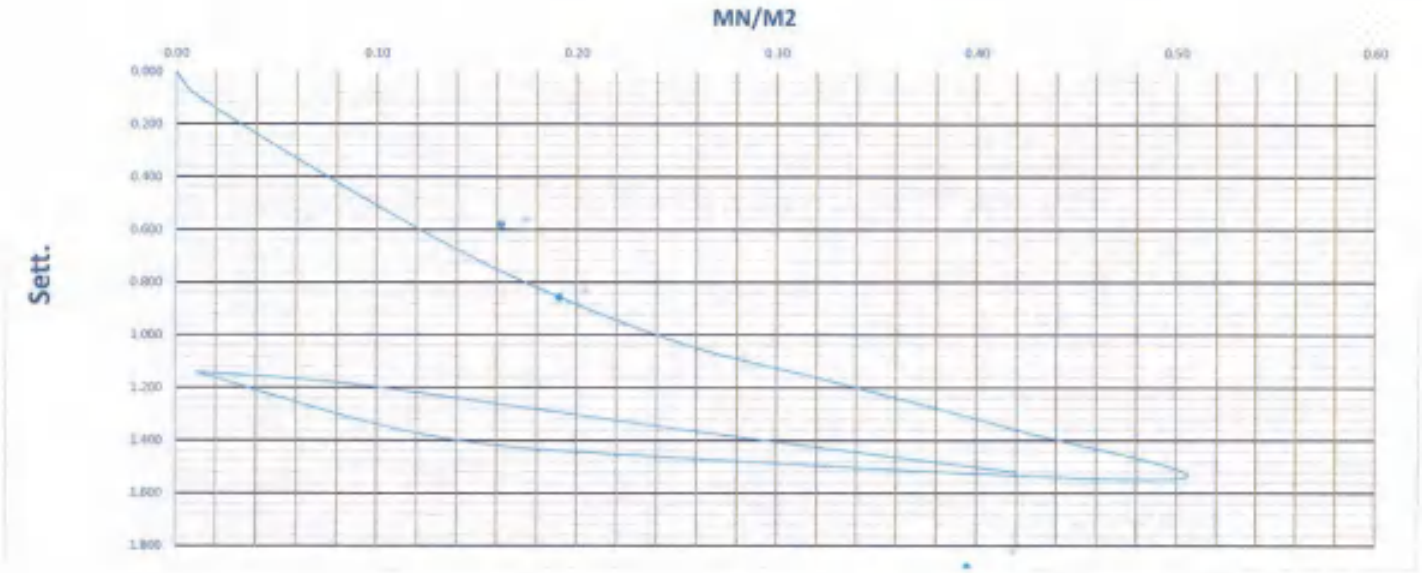
E_v = deformation modulus

D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

17/7/2023

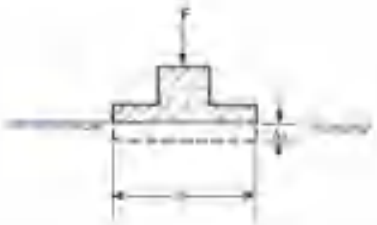
Plate Load Test Results

Company Name	المصطفى				
Location	524+820	To	524+900	Station	524+830
Taste Date	16-04-2023				
Layer level	P.S.G + 0.5				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

s = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 5 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Steps No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.75	19.95		0.250	0.050		0.150
2.000	17.1	5.652	0.08	19.15	19.65		0.850	0.350		0.600
3.000	34.2	11.304	0.16	18.75	19.40		1.250	0.600		0.925
4.000	53.3	17.663	0.25	18.42	19.15		1.580	0.850		1.215
5.000	70.5	23.315	0.33	18.15	19.03		1.850	0.970		1.410
6.000	89.8	29.673	0.42	17.92	18.85		2.080	1.150		1.615
7.000	106.8	35.325	0.50	17.68	18.71		2.320	1.290		1.805
8.000	53.4	17.663	0.25	17.75	18.80		2.250	1.200		1.725
9.000	26.7	8.831	0.12	17.85	18.90		2.150	1.100		1.625
9.000	2.1	0.707	0.01	18.15	19.12		1.850	0.880		1.365
10.000	2.1	0.707	0.01	18.15	19.12		1.850	0.880		1.365
11.000	17.1	5.652	0.08	18.07	19.06		1.930	0.940		1.435
12.000	34.2	11.304	0.16	18.02	19.00		1.980	1.000		1.490
13.000	53.3	17.663	0.25	17.87	18.91		2.130	1.090		1.610
14.000	70.5	23.315	0.33	17.77	18.85		2.230	1.150		1.690
15.000	89.8	29.673	0.42	17.65	18.78		2.350	1.220		1.785

		s	Δδ	Δσ
$0.7\sigma_1$	0.35	1.44875	0.56437	0.2
$0.3\sigma_1$	0.15	0.88438		
$0.7\sigma_2$	0.35	1.71111	0.2661	0.2
$0.3\sigma_2$	0.15	1.50561		
D (mm)	300			
Ev_1	79.23			
Ev_2	218.34			
Area / Sq.m	0.07065			

Ev2/Ev1	2.76		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

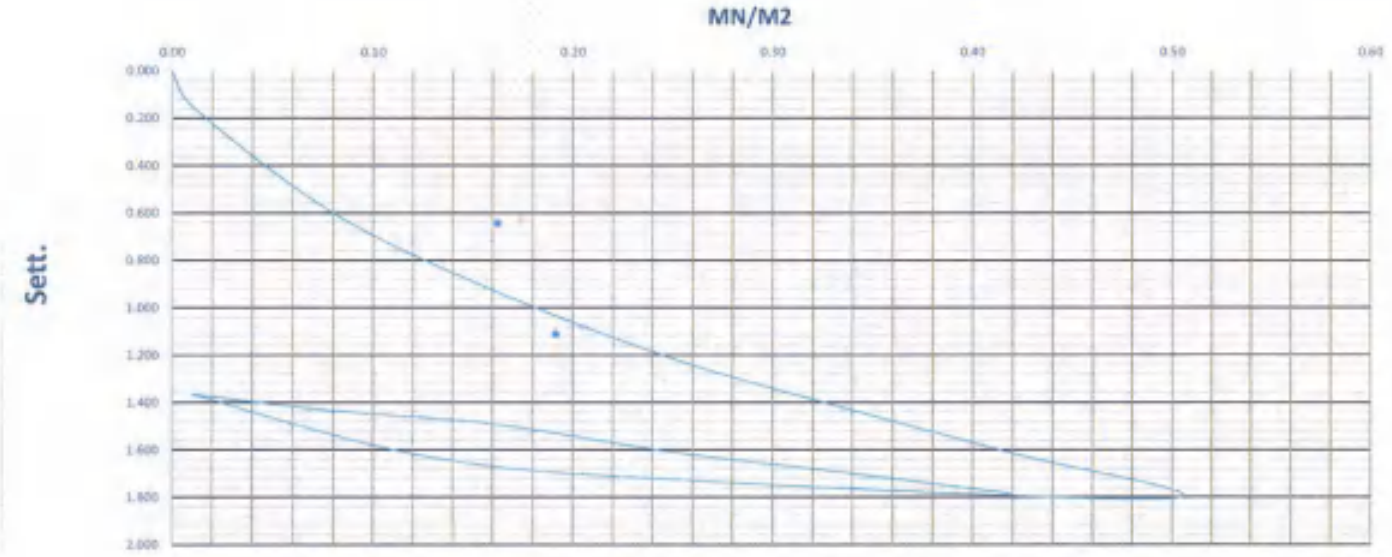
E_v = deformation modulus

D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign : 17/7/2023

Owner Consultant | Contractor Consultant | Contractor | Owner

Plate Load Test Results

Company Name	المصطفي				
Location	524+820	To	524+900	Station	524+860
Taste Date	16-04-2023				
Layer level	**P.S.G + 0.5**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.

F = load

s = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	kN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.88	19.90		0.120	0.100		0.110
2.000	17.1	5.652	0.08	19.40	19.65		0.600	0.350		0.475
0.080	34.2	11.304	0.16	19.15	19.30		0.850	0.700		0.775
4.000	53.3	17.663	0.25	18.82	19.12		1.180	0.880		1.030
5.000	70.5	23.315	0.33	18.70	18.90		1.300	1.100		1.200
6.000	89.8	29.673	0.42	18.42	18.70		1.580	1.300		1.440
7.000	106.8	35.325	0.50	18.30	18.60		1.700	1.400		1.550
8.000	53.4	17.663	0.25	18.40	18.70		1.600	1.300		1.450
9.000	26.7	8.831	0.12	18.60	18.80		1.400	1.200		1.300
9.000	2.1	0.707	0.01	18.70	19.00		1.300	1.000		1.150
10.000	2.1	0.707	0.01	18.70	19.00		1.300	1.000		1.150
11.000	17.1	5.652	0.08	18.65	18.95		1.350	1.050		1.200
12.000	34.2	11.304	0.16	18.60	18.90		1.400	1.100		1.250
13.000	53.3	17.663	0.25	18.45	18.80		1.550	1.200		1.375
14.000	70.5	23.315	0.33	18.40	18.75		1.600	1.250		1.425
15.000	89.8	29.673	0.42	18.32	18.62		1.680	1.380		1.530

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	1.34375	0.60625	0.2
$0.3\,\sigma_1$	0.15	0.7375		
$0.7\sigma_2$	0.35	1.44833	0.19833	0.2
$0.3\sigma_2$	0.15	1.25000		
D (mm)	300			
Ev_1	74.23			
Ev_2	226.90			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.06		

$$E_s = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

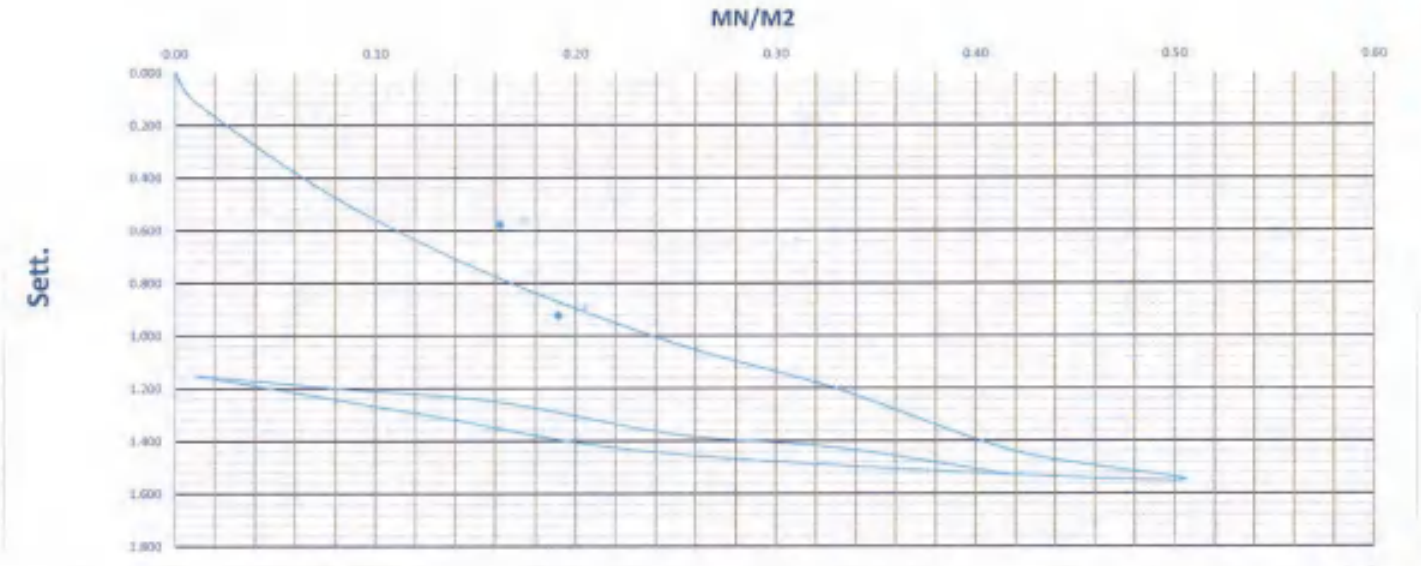
E_s = deformation modulus

D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

17/12/20

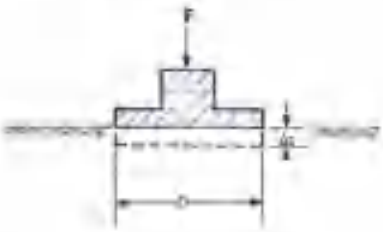
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+500	To	524+580	Station	524+520
Taste Date	9-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

s = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Rate	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.80	19.75		0.200	0.250		0.225
2.000	17.1	5.652	0.08	19.60	19.55		0.400	0.450		0.425
0.000	34.2	11.304	0.16	19.25	19.26		0.750	0.740		0.745
4.000	53.3	17.663	0.25	18.80	19.05		1.200	0.950		1.075
5.000	70.5	23.315	0.33	18.55	18.95		1.450	1.050		1.250
6.000	89.8	29.673	0.42	18.40	18.80		1.600	1.200		1.400
7.000	106.8	35.325	0.50	18.05	18.72		1.950	1.280		1.615
8.000	53.4	17.663	0.25	18.10	18.76		1.900	1.240		1.570
9.000	26.7	8.831	0.12	18.18	18.89		1.820	1.110		1.465
9.000	2.1	0.707	0.01	18.31	19.00		1.690	1.000		1.345
10.000	2.1	0.707	0.01	18.31	19.00		1.690	1.000		1.345
11.000	17.1	5.652	0.08	18.30	18.99		1.700	1.010		1.355
12.000	34.2	11.304	0.16	18.22	18.95		1.780	1.050		1.415
13.000	53.3	17.663	0.25	18.16	18.86		1.840	1.140		1.490
14.000	70.5	23.315	0.33	18.14	18.80		1.860	1.200		1.530
15.000	89.8	29.673	0.42	18.06	18.71		1.940	1.290		1.615

		ν	ΔS	$\Delta\sigma$
$0.7\,\sigma_1$	0.35	1.21168	0.50688	0.2
$0.3\,\sigma_1$	0.15	0.705		
$0.7\sigma_2$	0.35	1.54889	0.18389	0.2
$0.3\sigma_2$	0.15	1.305		
D (mm)	300			
E_{V1}	88.78			
E_{V2}	244.71			
Area (Sq.m)	0.07065			

E_{v2}/E_{v1}	2.76		

$$E_s = 0.75 \cdot B \cdot \Delta\sigma / \Delta s$$

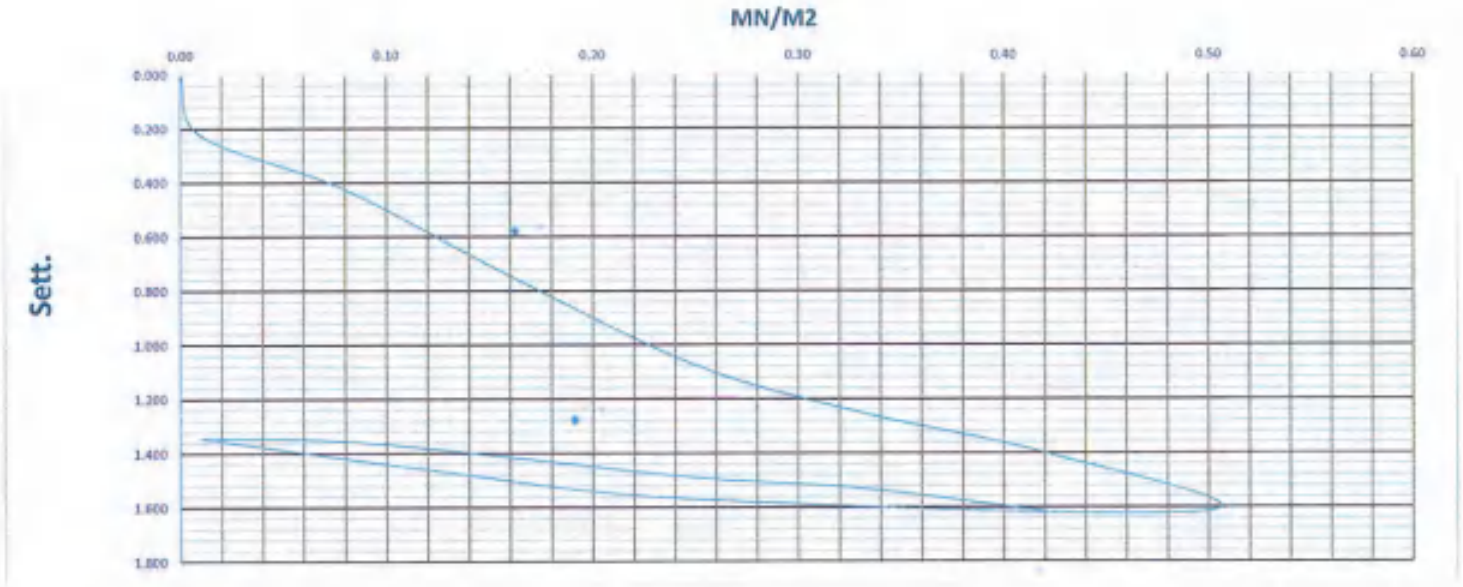
E_s = deformation modulus

$D\sigma$ = load increment

Ds = settlement increment

B = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Common Consultant | Contractor | Owner

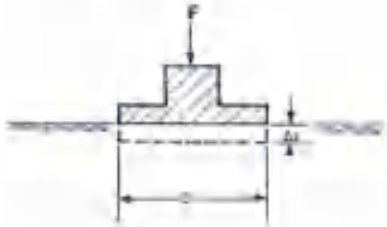
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+500	To	524+580	Station	524+540
Taste Date	9-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Set. 1 mm	Set. 2 mm	Set. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.85	19.79		0.150	0.210		0.180
2.000	17.1	5.652	0.08	19.63	19.57		0.370	0.430		0.400
3.000	34.2	11.304	0.16	19.27	19.28		0.730	0.720		0.725
4.000	53.3	17.663	0.25	18.85	19.06		1.150	0.940		1.045
5.000	70.5	23.315	0.33	18.50	18.99		1.500	1.010		1.255
6.000	89.8	29.673	0.42	18.35	18.85		1.650	1.150		1.400
7.000	106.8	35.325	0.50	18.07	18.70		1.930	1.300		1.615
8.000	53.4	17.663	0.25	18.12	18.76		1.880	1.240		1.560
9.000	26.7	8.831	0.12	18.17	18.90		1.830	1.100		1.465
9.000	2.1	0.707	0.01	18.33	19.02		1.670	0.980		1.325
10.000	2.1	0.707	0.01	18.33	19.02		1.670	0.980		1.325
11.000	17.1	5.652	0.08	18.32	18.99		1.680	1.010		1.345
12.000	34.2	11.304	0.16	18.25	18.93		1.750	1.070		1.410
13.000	53.3	17.663	0.25	18.17	18.84		1.830	1.160		1.495
14.000	70.5	23.315	0.33	18.10	18.80		1.900	1.200		1.550
15.000	89.8	29.673	0.42	18.05	18.70		1.950	1.300		1.625

		ε	ΔS	$\Delta\sigma$
$0.7\sigma_1$	0.35	1.23188	0.5275	0.2
$0.3\sigma_1$	0.15	0.68438		
$0.7\sigma_2$	0.35	1.56667	0.28166	0.2
$0.3\sigma_2$	0.15	1.365		
D (mm)	300			
F_{σ_1}	85.31			
F_{σ_2}	223.14			
Area (Sq.m)	0.07065			

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$			

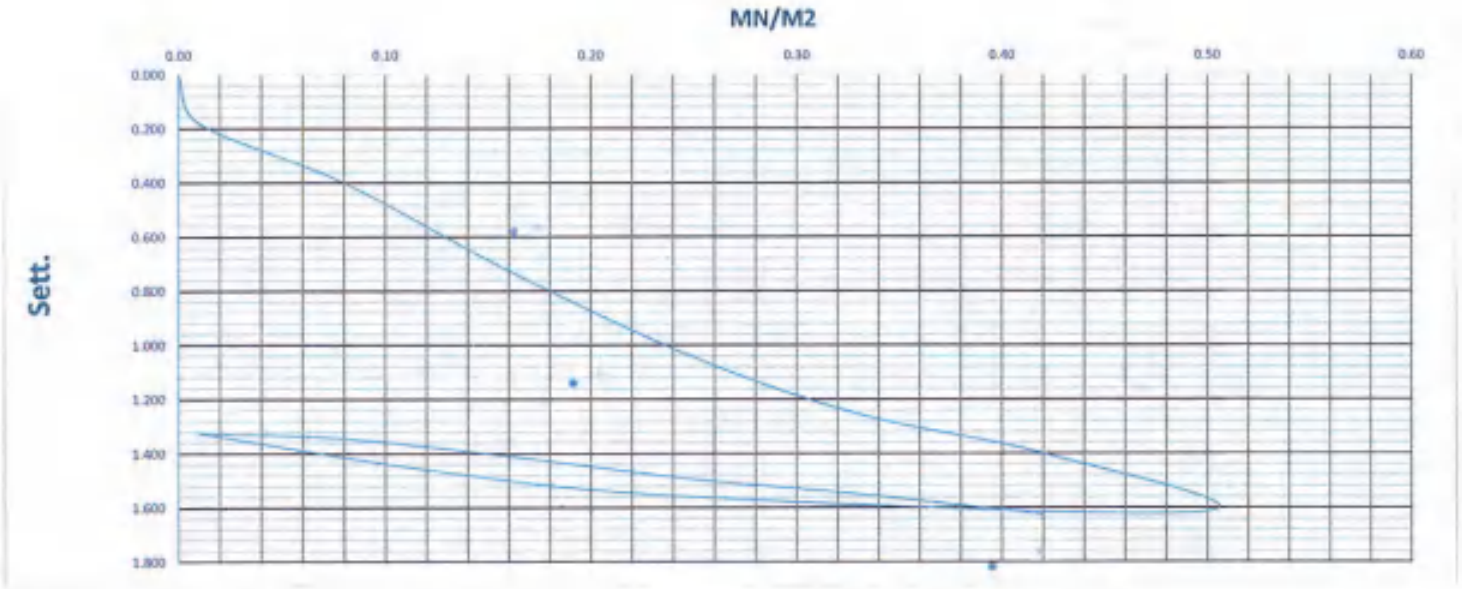
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

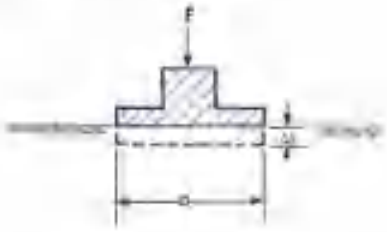
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+500	To	524+580	Station	524+560
Taste Date	9-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modules of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

s = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a rollovable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.87	19.80		0.130	0.200		0.165
2.000	17.1	5.652	0.08	19.50	19.59		0.500	0.410		0.455
0.080	34.2	11.304	0.16	19.20	19.32		0.800	0.680		0.740
4.000	53.3	17.663	0.25	18.80	19.08		1.200	0.920		1.060
5.000	70.5	23.315	0.33	18.51	18.93		1.490	1.070		1.280
6.000	89.8	29.673	0.42	18.25	18.87		1.750	1.130		1.440
7.000	106.8	35.325	0.50	18.04	18.62		1.960	1.380		1.670
8.000	53.4	17.663	0.25	18.12	18.77		1.880	1.230		1.555
9.000	26.7	8.831	0.12	18.17	18.93		1.830	1.070		1.450
9.000	2.1	0.707	0.01	18.35	19.05		1.650	0.950		1.300
10.000	2.1	0.707	0.01	18.35	19.05		1.650	0.950		1.300
11.000	17.1	5.652	0.08	18.33	18.99		1.670	1.010		1.340
12.000	34.2	11.304	0.16	18.22	18.95		1.780	1.050		1.415
13.000	53.3	17.663	0.25	18.18	18.83		1.820	1.170		1.495
14.000	70.5	23.315	0.33	18.13	18.78		1.870	1.220		1.545
15.000	89.8	29.673	0.42	18.08	18.70		1.920	1.300		1.610

		I_s	ΔS	$\Delta\sigma$
$0.7\sigma_1$	0.35	1.23875	0.53437	0.2
$0.3\sigma_1$	0.15	0.70438		
$0.7\sigma_2$	0.35	1.55944	0.47944	0.2
$0.3\sigma_2$	0.15	1.38		
D (mm)	300			
Es_1	84.21			
Es_2	250.78			
Area (S_0,m)	0.07065			

Es2/Es1	2.98		

$$E_s = 0.79 \cdot D \cdot \Delta\sigma / \Delta s$$

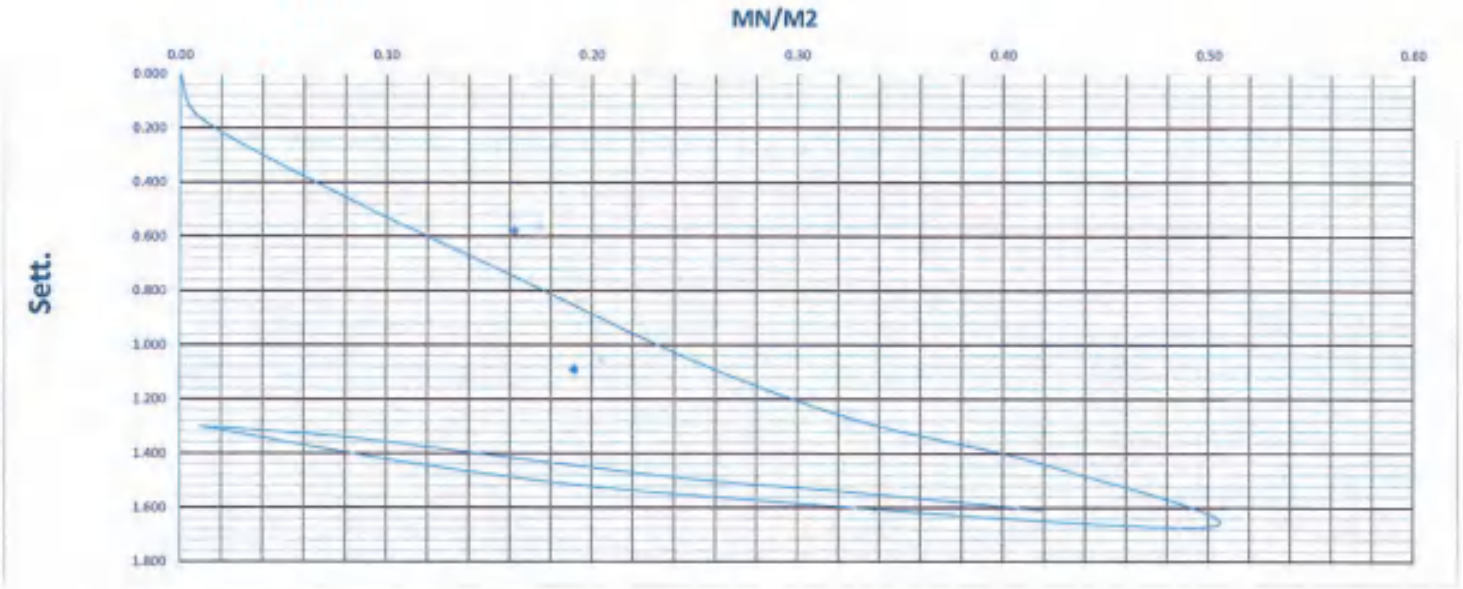
E_s = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

العمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contractor | Owner

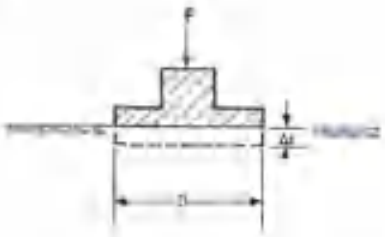
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+580	To	524+660	Station	524+585
Taste Date	9-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.85	19.76		0.150	0.240		0.195
2.000	17.1	5.652	0.08	19.62	19.52		0.380	0.480		0.430
0.000	34.2	11.304	0.16	19.34	19.29		0.660	0.710		0.685
4.000	53.3	17.663	0.25	19.00	19.09		1.000	0.910		0.955
5.000	70.5	23.315	0.33	18.89	18.93		1.110	1.070		1.090
6.000	89.8	29.673	0.42	18.55	18.86		1.450	1.140		1.295
7.000	106.8	35.325	0.50	18.44	18.70		1.560	1.300		1.430
8.000	53.4	17.663	0.25	18.49	18.82		1.510	1.180		1.345
9.000	26.7	8.831	0.12	18.56	18.92		1.440	1.080		1.260
9.000	2.1	0.707	0.01	18.69	19.09		1.310	0.910		1.110
10.000	2.1	0.707	0.01	18.69	19.09		1.310	0.910		1.110
11.000	17.1	5.652	0.08	18.67	19.05		1.330	0.950		1.140
12.000	34.2	11.304	0.16	18.62	19.01		1.380	0.990		1.185
13.000	53.3	17.663	0.25	18.55	18.92		1.450	1.080		1.265
14.000	70.5	23.315	0.33	18.51	18.84		1.490	1.160		1.325
15.000	89.8	29.673	0.42	18.48	18.72		1.520	1.280		1.400

		s	ΔS	$\Delta\sigma$
0.7 σ_1	0.35	1.17688	0.52375	0.2
0.3 σ_1	0.15	0.65313		
0.7σ_2	0.35	1.34167	0.17166	0.2
0.3σ_2	0.15	1.17		
D (mm)	300			
Es_1	85.92			
Es_2	262.14			
Area (Sq.m)	0.07065			

E2/E1	3.05		

$$E_s = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

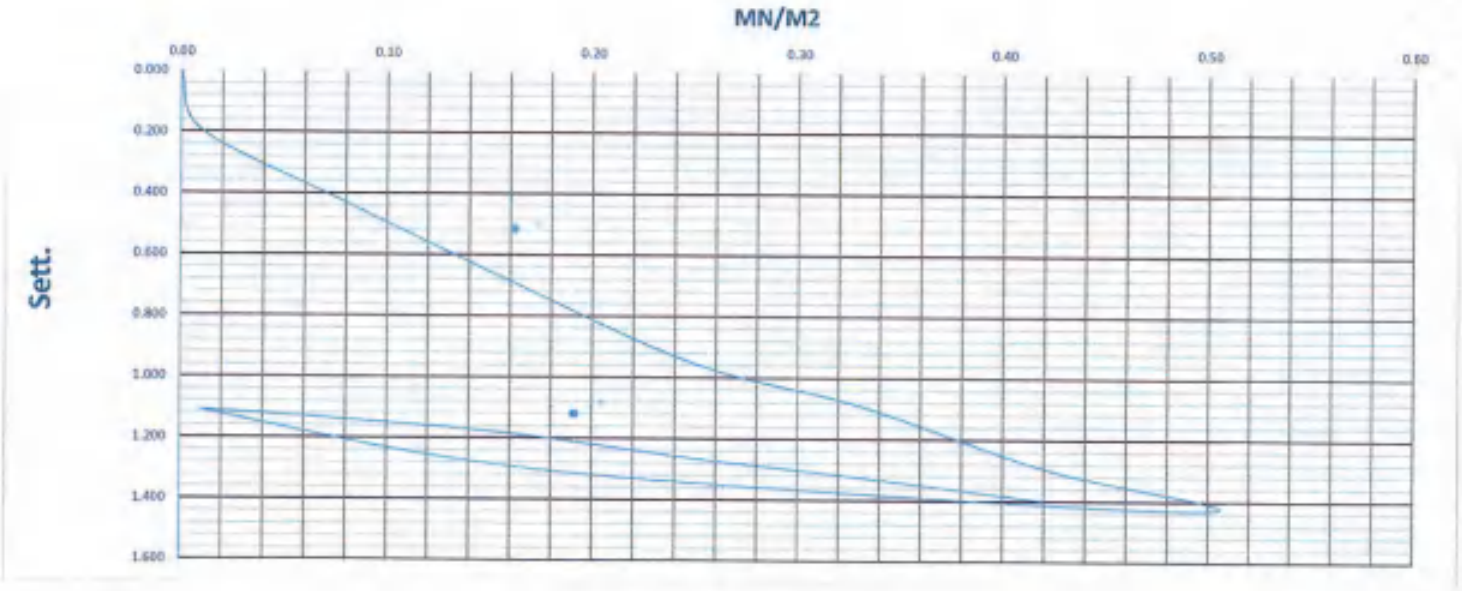
E_s = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

العمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contractor | Owner

Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+580	To	524+660	Station	524+600
Taste Date	9-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.

F = load
Δs = settlement
D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Settl. 1 mm	Settl. 2 mm	Settl. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.85	19.78		0.150	0.220		0.185
2.000	17.1	5.652	0.08	19.61	19.55		0.390	0.450		0.420
0.080	34.2	11.304	0.16	19.33	19.32		0.670	0.680		0.675
4.000	53.3	17.663	0.25	19.02	19.12		0.980	0.880		0.930
5.000	70.5	23.315	0.33	18.92	18.95		1.080	1.050		1.065
6.000	89.8	29.673	0.42	18.57	18.87		1.430	1.130		1.280
7.000	106.8	35.325	0.50	18.45	18.71		1.550	1.290		1.420
8.000	53.4	17.663	0.25	18.49	18.83		1.510	1.170		1.340
9.000	26.7	8.831	0.12	18.57	18.95		1.430	1.050		1.240
9.000	2.1	0.707	0.01	18.70	19.12		1.300	0.880		1.090
10.000	2.1	0.707	0.01	18.70	19.12		1.300	0.880		1.090
11.000	17.1	5.652	0.08	18.67	19.07		1.330	0.930		1.130
12.000	34.2	11.304	0.16	18.63	19.00		1.370	1.000		1.185
13.000	53.3	17.663	0.25	18.50	18.93		1.500	1.070		1.285
14.000	70.5	23.315	0.33	18.47	18.85		1.530	1.150		1.340
15.000	89.8	29.673	0.42	18.42	18.77		1.580	1.230		1.405

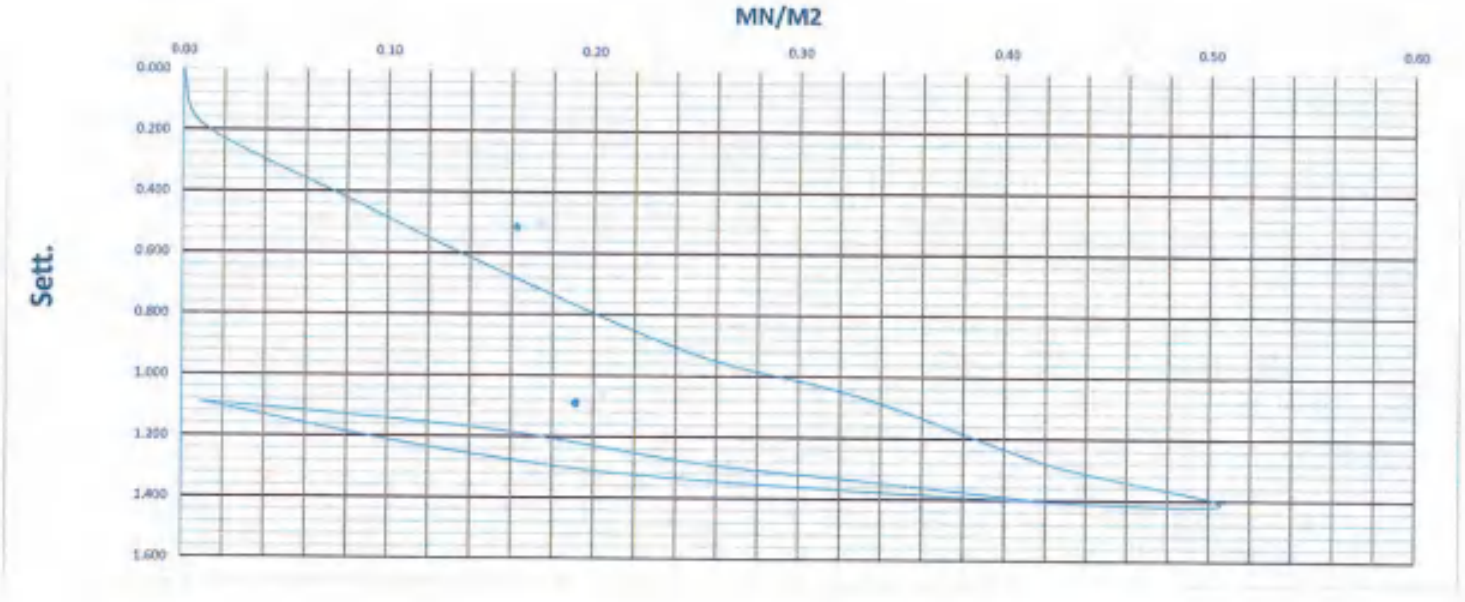
0.7 σ_1	0.35	1.1575	0.51437	0.2
0.3 σ_1	0.15	0.64313		
0.7σ_2	0.35	1.35444	0.18444	0.2
0.3σ_2	0.15	1.17		
D (mm)	300			
E_{V1}	87.48			
E_{V2}	243.98			
Area (Sq.m)	0.07069			

Ev2/Ev1	2.79		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus
$\Delta\sigma$ = load increment
Δs = settlement increment
D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

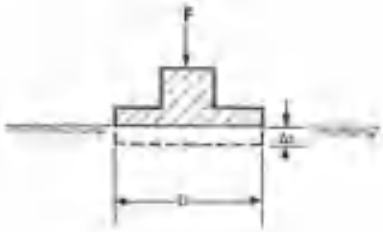
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+580	To	524+660	Station	524+620
Taste Date	9-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Δs1-Δs2
Step No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.90	19.80		0.100	0.200		0.150
2.000	17.1	5.652	0.08	19.65	19.58		0.350	0.420		0.385
0.000	34.2	11.304	0.16	19.38	19.38		0.620	0.620		0.620
4.000	53.3	17.663	0.25	19.07	19.18		0.930	0.820		0.875
5.000	70.5	23.315	0.33	18.94	18.99		1.060	1.010		1.035
6.000	89.8	29.673	0.42	18.65	18.90		1.350	1.100		1.225
7.000	106.8	35.325	0.50	18.47	18.78		1.530	1.220		1.375
8.000	53.4	17.663	0.25	18.52	18.83		1.480	1.170		1.325
9.000	26.7	8.831	0.12	18.59	18.96		1.410	1.040		1.225
9.000	2.1	0.707	0.01	18.75	19.16		1.250	0.840		1.045
10.000	2.1	0.707	0.01	18.75	19.16		1.250	0.840		1.045
11.000	17.1	5.652	0.08	18.70	19.10		1.300	0.900		1.100
12.000	34.2	11.304	0.16	18.65	19.04		1.350	0.960		1.155
13.000	53.3	17.663	0.25	18.55	18.93		1.450	1.070		1.260
14.000	70.5	23.315	0.33	18.48	18.85		1.520	1.150		1.335
15.000	89.8	29.673	0.42	18.43	18.79		1.570	1.210		1.390

		s	Δs	Δσ
0.7 σ_3	0.35	1.00378	0.50313	0.2
0.3 σ_4	0.15	0.59063		
0.7σ_3	0.35	1.34722	0.19222	0.3
0.3σ_3	0.15	1.15501		
D (mm)	300			
Ev_1	80.44			
Ev_2	234.11			
Area (S_0,m)	0.07065			

F/2/Ev1	2.62		

$$E_v = 0.75 \cdot B \cdot \Delta\sigma / \Delta s$$

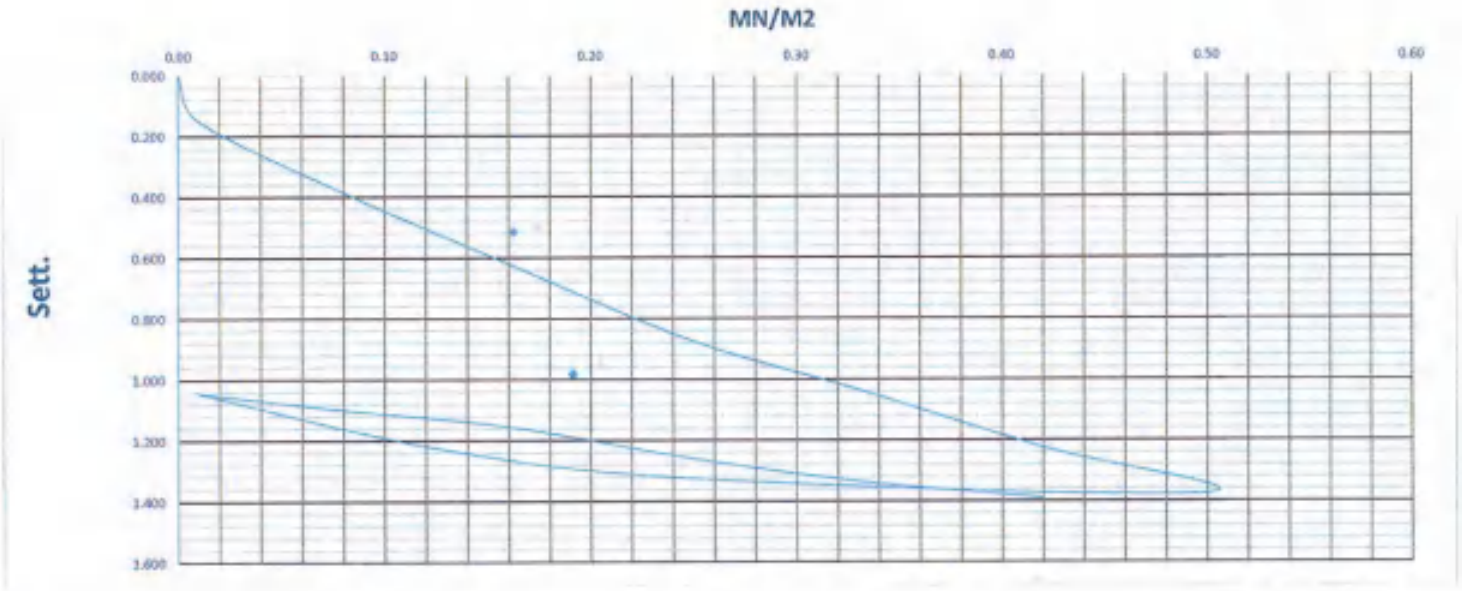
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

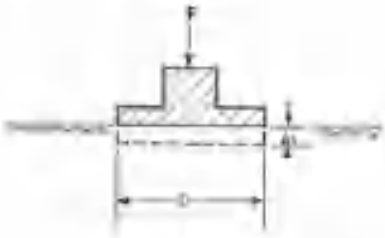
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+580	To	524+660	Station	524+640
Taste Date	9-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load
s = settlement
D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is released in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load kN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.85	19.83		0.150	0.170		0.160
2.000	17.1	5.652	0.08	19.63	19.61		0.370	0.390		0.380
0.080	34.2	11.304	0.16	19.35	19.34		0.650	0.660		0.655
4.000	53.3	17.663	0.25	19.17	19.12		0.830	0.880		0.855
5.000	70.5	23.315	0.33	18.98	18.94		1.020	1.060		1.040
6.000	89.8	29.673	0.42	18.68	18.86		1.320	1.140		1.230
7.000	106.8	35.325	0.50	18.46	18.78		1.540	1.220		1.380
8.000	53.4	17.663	0.25	18.52	18.84		1.480	1.160		1.320
9.000	26.7	8.831	0.12	18.61	18.99		1.390	1.010		1.200
9.000	2.1	0.707	0.01	18.72	19.12		1.280	0.880		1.080
10.000	2.1	0.707	0.01	18.72	19.12		1.280	0.880		1.080
11.000	17.1	5.652	0.08	18.68	19.08		1.320	0.920		1.120
12.000	34.2	11.304	0.16	18.62	19.04		1.380	0.960		1.170
13.000	53.3	17.663	0.25	18.55	18.94		1.450	1.060		1.255
14.000	70.5	23.315	0.33	18.49	18.86		1.510	1.140		1.325
15.000	89.8	29.673	0.42	18.45	18.80		1.550	1.200		1.375

		ν	ΔS	$\Delta\sigma$
$0.7\,\sigma_1$	0.35	1.09875	0.47813	0.2
$0.3\,\sigma_1$	0.15	0.62063		
$0.7\sigma_2$	0.35	1.33611	0.17611	0.2
$0.3\sigma_2$	0.15	1.16		
D (mm)	300			
E_{v1}	94.32			
E_{v2}	255.51			
Area (S_{v1},e)	0.01965			

E_{v2}/E_{v1}	2.71		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

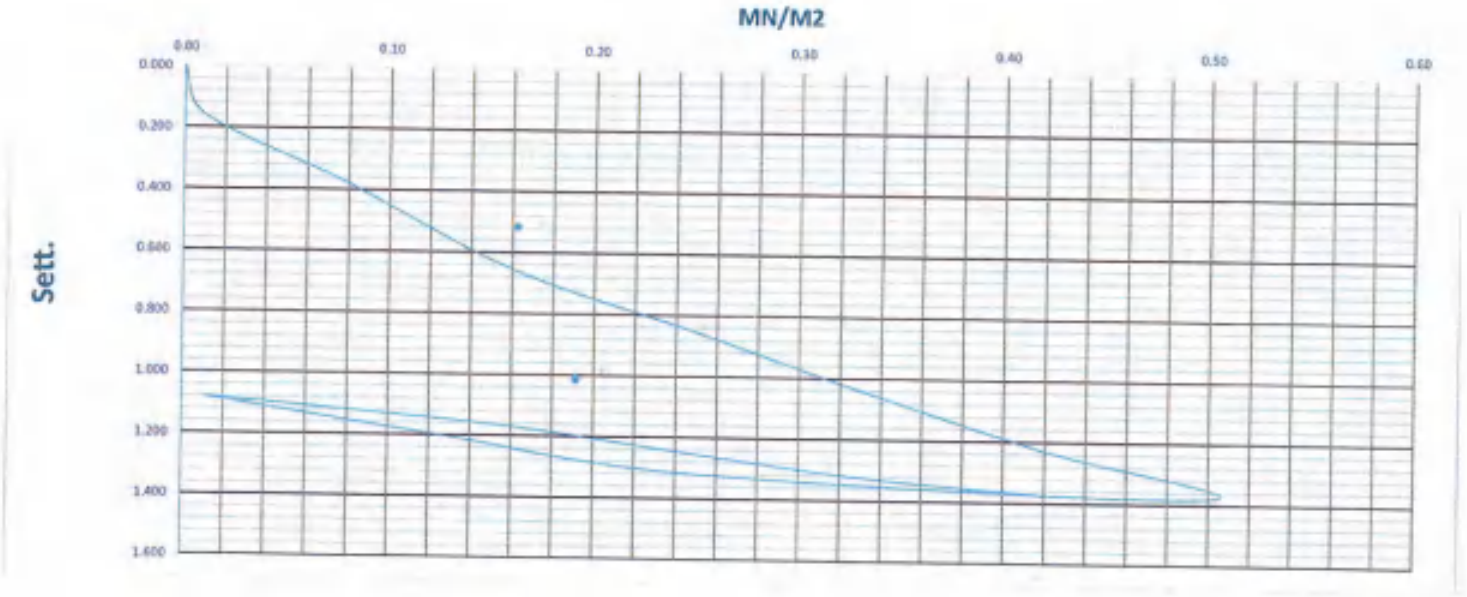
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Client | Owner

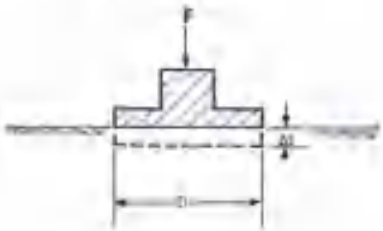
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+660	To	524+740	Station	524+665
Taste Date	8-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.86	19.85		0.140	0.150		0.145
2.000	17.1	5.652	0.08	19,71	19.60		0.290	0.400		0.345
3.000	34.2	11.304	0.16	19,47	19.30		0.530	0.700		0.615
4.000	53.3	17.663	0.25	19,30	19.10		0.700	0.900		0.800
5.000	70.5	23.315	0.33	19,10	18.93		0.900	1.070		0.985
6.000	89.8	29.673	0.42	18,95	18.80		1.050	1.200		1.125
7.000	106.8	35.325	0.50	18.81	18.73		1.190	1.270		1.230
8.000	53.4	17.663	0.25	18.83	18.75		1.170	1.250		1.210
9.000	26.7	8.831	0.12	18,90	18.81		1.100	1.190		1.145
9.000	2.1	0.707	0.01	18.98	18.93		1.020	1.070		1.045
10.000	2.1	0.707	0.01	18.98	18.93		1.020	1.070		1.045
11.000	17.1	5.652	0.08	18.97	18.92		1.030	1.080		1.055
12.000	34.2	11.304	0.16	18.93	18.86		1.070	1.140		1.105
13.000	53.3	17.663	0.25	18,90	18.80		1.100	1.200		1.150
14.000	70.5	23.315	0.33	18.88	18.76		1.120	1.240		1.180
15.000	89.8	29.673	0.42	18.84	18.72		1.160	1.280		1.220

		s	Δs	Δσ
0.7 σ_1	0.35	1.03313	0.45188	0.2
0.3 σ_1	0.15	0.58125		
0.7σ_2	0.35	1.18889	0.12389	0.2
0.3σ_2	0.15	1.065		
D (mm)	300			
E_{v1}	99.50			
E_{v2}	363.23			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.65		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

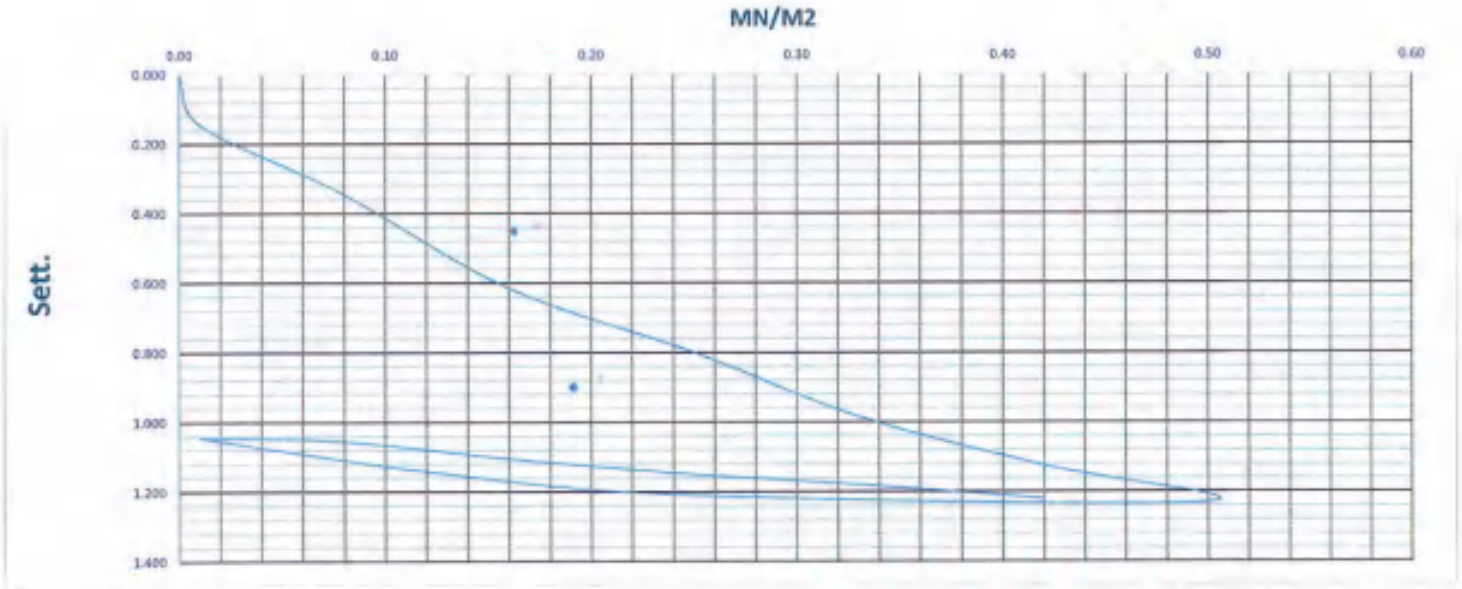
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

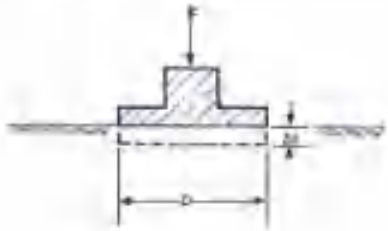
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+660	To	524+740	Station	524+690
Taste Date	8-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

s = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Def 1 mm	Def 2 mm	Def 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.89	19.92		0.110	0.080		0.095
2.000	17.1	5.652	0.08	19.73	19.63		0.270	0.370		0.320
0.080	34.2	11.304	0.16	19.45	19.36		0.550	0.640		0.595
4.000	53.3	17.663	0.25	19.32	19.14		0.680	0.860		0.770
5.000	70.5	23.315	0.33	19.13	18.95		0.870	1.050		0.960
6.000	89.8	29.673	0.42	18.97	18.84		1.030	1.160		1.095
7.000	106.8	35.325	0.50	18.80	18.70		1.200	1.300		1.250
8.000	53.4	17.663	0.25	18.85	18.77		1.150	1.230		1.190
9.000	26.7	8.831	0.12	18.92	18.83		1.080	1.170		1.125
9.000	2.1	0.707	0.01	18.97	18.94		1.030	1.060		1.045
10.000	2.1	0.707	0.01	18.97	18.94		1.030	1.060		1.045
11.000	17.1	5.652	0.08	18.95	18.93		1.050	1.070		1.060
12.000	34.2	11.304	0.16	18.92	18.87		1.080	1.130		1.105
13.000	53.3	17.663	0.25	18.90	18.82		1.100	1.180		1.140
14.000	70.5	23.315	0.33	18.87	18.75		1.130	1.250		1.190
15.000	89.8	29.673	0.42	18.81	18.70		1.190	1.300		1.245

		v	ΔS	$\Delta \sigma$
$0.7\ \sigma_1$	0.35	0.95938	0.39875	0.2
$0.3\ \sigma_1$	0.15	0.56063		
$0.7\sigma_2$	0.35	1.20222	0.12722	0.2
$0.3\sigma_2$	0.15	1.075		
D (mm)	300			
Σv_1	132.85			
Σv_2	353.72			
Area (Sq.m)	0.07065			

$\Sigma v2/\Sigma v1$	2.13		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

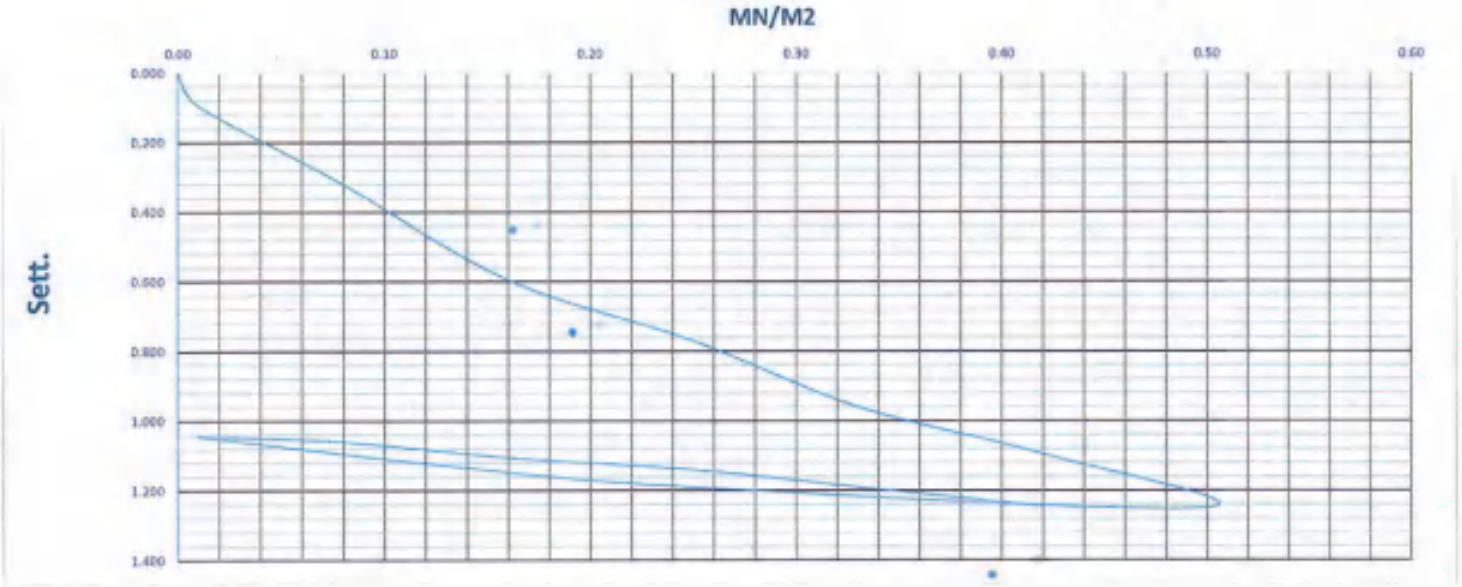
E_v = deformation modulus

$D\sigma$ = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contractor | Owner

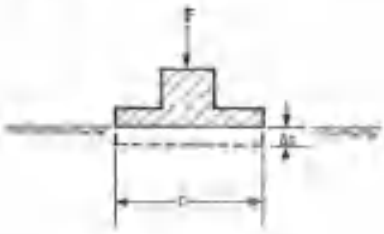
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+660	To	524+740	Station	524+720
Taste Date	8-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied in a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load kN	Stress MN/m2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.92	19.90		0.080	0.100		0.090
2.000	17.1	5.652	0.08	19.74	19.59		0.260	0.410		0.335
0.080	34.2	11.304	0.16	19.50	19.28		0.500	0.720		0.610
4.000	53.3	17.663	0.25	19.25	19.16		0.750	0.840		0.795
5.000	70.5	23.315	0.33	19.17	18.91		0.830	1.090		0.960
6.000	89.8	29.673	0.42	18.94	18.81		1.060	1.190		1.125
7.000	106.8	35.325	0.50	18.70	18.68		1.300	1.320		1.310
8.000	53.4	17.663	0.25	18.80	18.75		1.200	1.250		1.225
9.000	26.7	8.831	0.12	18.90	18.80		1.100	1.200		1.150
9.000	2.1	0.707	0.01	19.05	18.94		0.950	1.060		1.005
10.000	2.1	0.707	0.01	19.05	18.94		0.950	1.060		1.005
11.000	17.1	5.652	0.08	18.98	18.90		1.020	1.100		1.060
12.000	34.2	11.304	0.16	18.90	18.85		1.100	1.150		1.125
13.000	53.3	17.663	0.25	18.81	18.82		1.190	1.180		1.185
14.000	70.5	23.315	0.33	18.82	18.73		1.180	1.270		1.225
15.000	89.8	29.673	0.42	18.74	18.70		1.260	1.300		1.280

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.96313	0.3875	0.2
$0.3\,\sigma_1$	0.15	0.57563		
$0.7\sigma_2$	0.35	1.23722	0.12222	0.2
$0.3\sigma_2$	0.15	1.11501		
D (mm)	300			
Ev_1	116.13			
Ev_2	360.20			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.1		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

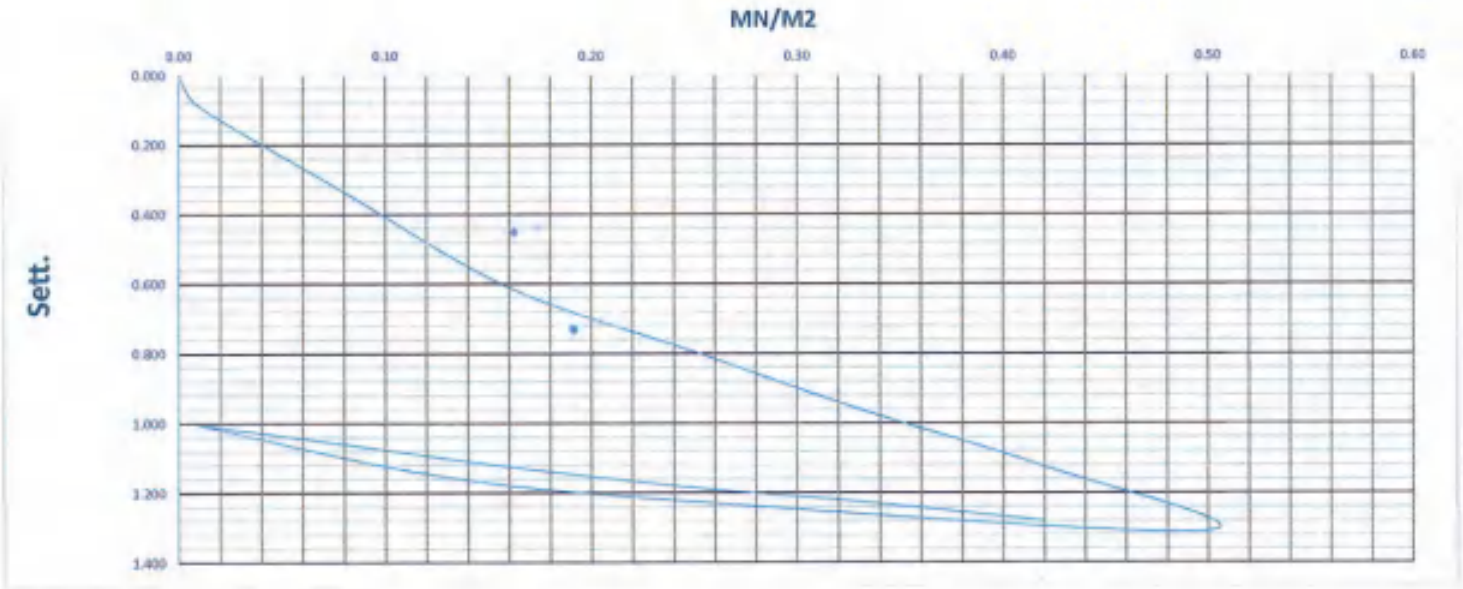
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

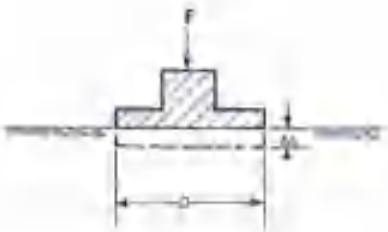
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+740	To	524+820	Station	524+760
Taste Date	7-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

s = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress N/MM2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.92	19.95		0.080	0.050		0.065
2.000	17.1	5.652	0.08	19.80	19.87		0.200	0.130		0.165
3.000	34.2	11.304	0.16	19.60	19.80		0.400	0.200		0.300
4.000	53.3	17.663	0.25	19.32	19.70		0.680	0.300		0.490
5.000	70.5	23.315	0.33	19.20	19.65		0.800	0.350		0.575
6.000	89.8	29.673	0.42	19.05	19.60		0.950	0.400		0.675
7.000	106.8	35.325	0.50	18.91	19.59		1.090	0.410		0.750
8.000	53.4	17.663	0.25	18.96	19.65		1.040	0.350		0.695
9.000	26.7	8.831	0.12	19.07	19.70		0.930	0.300		0.615
9.000	2.1	0.707	0.01	19.28	19.79		0.720	0.210		0.465
10.000	2.1	0.707	0.01	19.28	19.79		0.720	0.210		0.465
11.000	17.1	5.652	0.08	19.26	19.78		0.740	0.220		0.480
12.000	34.2	11.304	0.16	19.15	19.75		0.850	0.250		0.550
13.000	53.3	17.663	0.25	19.10	19.70		0.900	0.300		0.600
14.000	70.5	23.315	0.33	19.04	19.65		0.960	0.350		0.655
15.000	89.8	29.673	0.42	18.96	19.58		1.040	0.420		0.730

		ν	ΔS	$\Delta\sigma$
$0.7\,\sigma_1$	0.35	0.60937	0.32625	0.2
$0.3\,\sigma_1$	0.15	0.28312		
$0.7\sigma_2$	0.35	0.67167	0.17067	0.2
$0.3\sigma_2$	0.15	0.495		
D (mm)	300			
E_{V1}	137.93			
E_{V2}	153.72			
Area (Sqm)	0.07065			

E_{V2}/E_{V1}	1.85		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

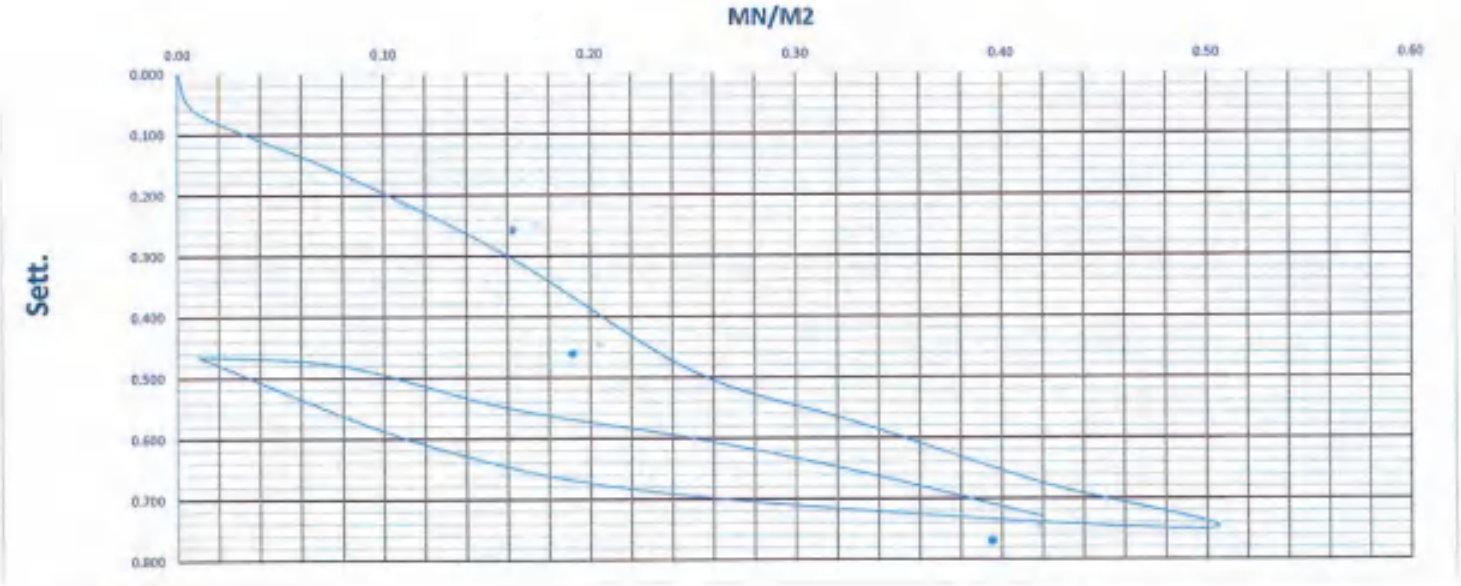
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

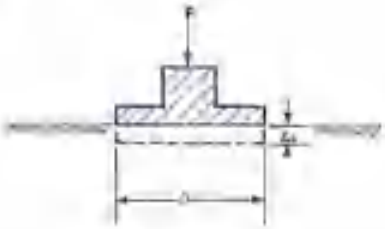
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+740	To	524+820	Station	524+780
Taste Date	7-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



P = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Settl. 1 mm	Settl. 2 mm	Settl. 3 mm	Avg. Settl. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.90	19.92		0.100	0.080		0.090
2.000	17.1	5.652	0.08	19.70	19.85		0.300	0.150		0.225
3.000	34.2	11.304	0.16	19.52	19.78		0.480	0.220		0.350
4.000	53.3	17.663	0.25	19.32	19.68		0.680	0.320		0.500
5.000	70.5	23.315	0.33	19.18	19.64		0.820	0.360		0.590
6.000	89.8	29.673	0.42	19.02	19.60		0.980	0.400		0.690
7.000	106.8	35.325	0.50	18.88	19.55		1.120	0.450		0.785
8.000	53.4	17.663	0.25	18.97	19.65		1.030	0.350		0.690
9.000	26.7	8.831	0.12	19.10	19.72		0.900	0.280		0.590
9.900	2.1	0.707	0.01	19.30	19.80		0.700	0.200		0.450
10.000	2.1	0.707	0.01	19.30	19.80		0.700	0.200		0.450
11.000	17.1	5.652	0.08	19.25	19.77		0.750	0.230		0.490
12.000	34.2	11.304	0.16	19.16	19.74		0.840	0.260		0.550
13.000	53.3	17.663	0.25	19.06	19.70		0.940	0.300		0.620
14.000	70.5	23.315	0.33	19.00	19.66		1.000	0.340		0.670
15.000	89.8	29.673	0.42	18.92	19.59		1.080	0.410		0.745

		Δs	ΔS	$\Delta \sigma$
$0.7\,\sigma_1$	0.35	0.60687	0.2725	0.2
$0.3\,\sigma_1$	0.15	0.33438		
$0.7\sigma_2$	0.35	0.68967	0.15666	0.2
$0.3\sigma_2$	0.15	0.53		
D (mm)	300			
E_{v1}	165.14			
E_{v2}	287.24			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.74		

$$E_s = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

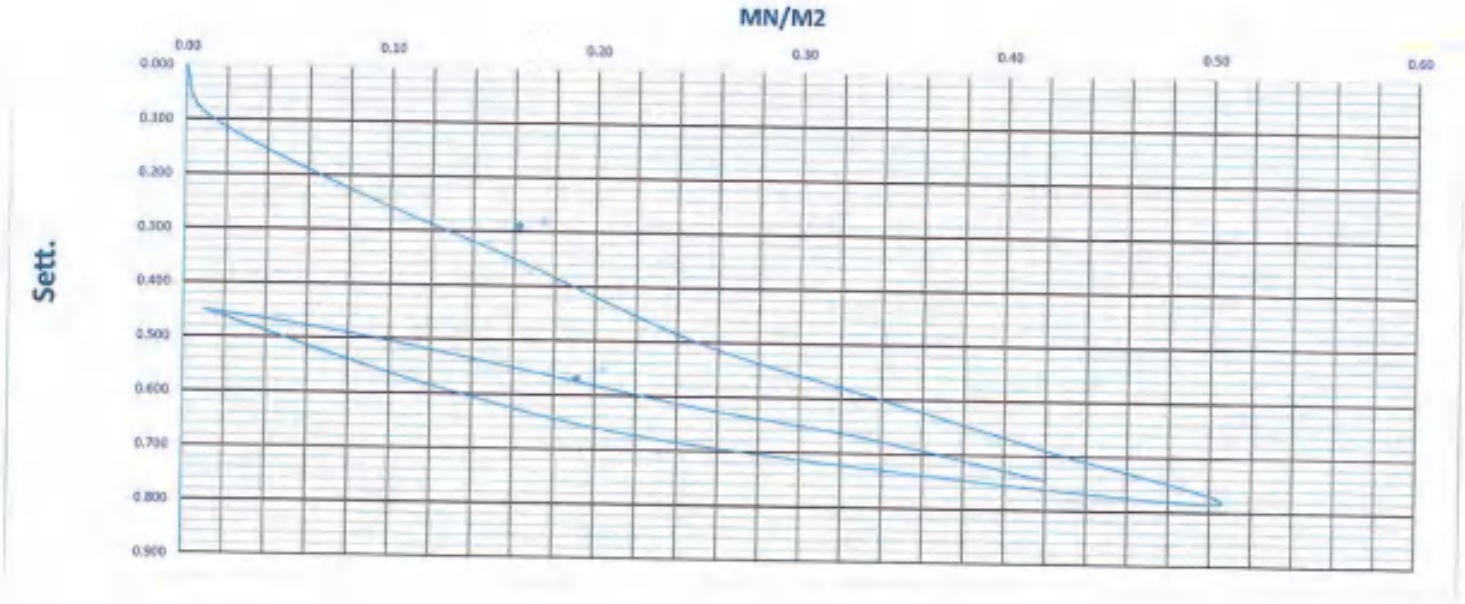
E_s = deformation modulus

ΔS = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

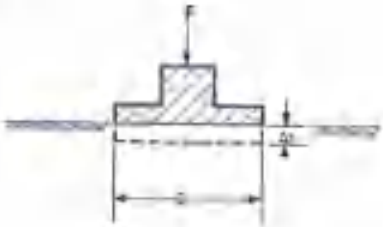
Plate Load Test Results

Company Name	AL MOSTAFA			
Location	524+740	To	524+820	Station 524+600
Taste Date	7-09-2023			
Layer level	**P.S.G +0.50**			

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Set. 1 mm	Set. 2 mm	Set. 3 mm	Avg. Set. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.98		0.030	0.020		0.025
2.000	17.1	5.652	0.08	19.83	19.88		0.170	0.120		0.145
0.000	34.2	11.304	0.16	19.50	19.75		0.500	0.250		0.375
4.000	53.3	17.663	0.25	19.30	19.67		0.700	0.330		0.515
5.000	70.5	23.315	0.33	19.15	19.64		0.850	0.360		0.605
6.000	89.8	29.673	0.42	19.00	19.58		1.000	0.420		0.710
7.000	106.8	35.325	0.50	18.85	19.52		1.150	0.480		0.815
8.000	53.4	17.663	0.25	18.90	19.60		1.100	0.400		0.750
9.000	26.7	8.831	0.12	19.00	19.72		1.000	0.280		0.640
9.000	2.1	0.707	0.01	19.20	19.80		0.800	0.200		0.500
10.000	2.1	0.707	0.01	19.20	19.80		0.800	0.200		0.500
11.000	17.1	5.652	0.08	19.18	19.70		0.820	0.300		0.560
12.000	34.2	11.304	0.16	19.10	19.65		0.900	0.350		0.625
13.000	53.3	17.663	0.25	19.06	19.57		0.940	0.430		0.685
14.000	70.5	23.315	0.33	19.00	19.52		1.000	0.480		0.740
15.000	89.8	29.673	0.42	18.92	19.45		1.080	0.550		0.815

		s	Δs	Δσ
$0.7\sigma_1$	0.35	0.61813	0.27188	0.2
$0.3\sigma_1$	0.15	0.34625		
$0.7\sigma_2$	0.35	0.75667	0.13666	0.2
$0.3\sigma_2$	0.15	0.62001		
D (mm)	300			
E_{s1}	165.52			
E_{s2}	329.28			
Area (Sq.m)	0.07065			

E_{s2}/E_{s1}	1.99		

$E_s = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

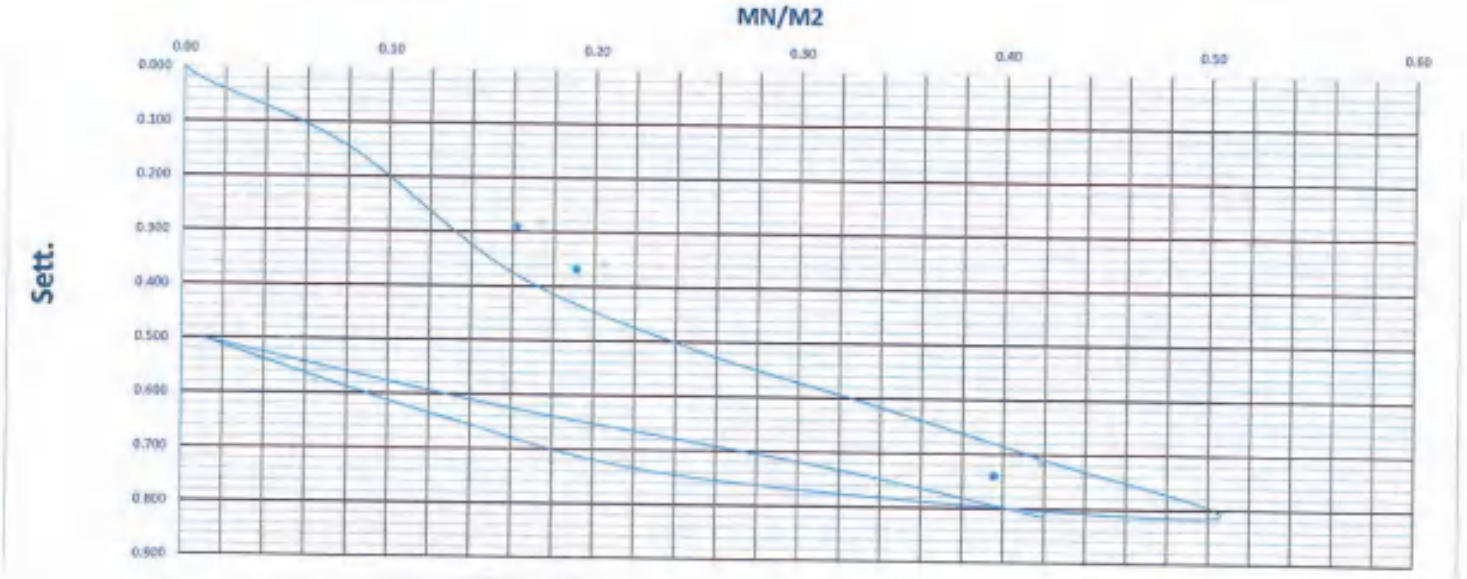
E_s = deformation modulus

Δs = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contractor | Owner

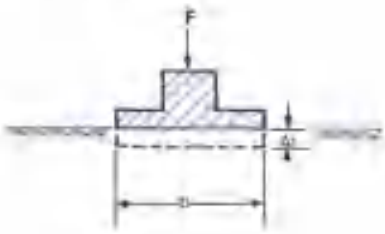
Plate Load Test Results

Company Name	AL MOSTAFA				
Location	524+740	To	524+820	Station	524+815
Taste Date	7-09-2023				
Layer level	**P.S.G +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δz = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.96		0.030	0.040		0.035
2.000	17.1	5.652	0.08	19.80	19.80		0.200	0.200		0.200
3.000	34.2	11.304	0.16	19.50	19.55		0.500	0.450		0.475
4.000	53.3	17.663	0.25	19.25	19.31		0.750	0.690		0.720
5.000	70.5	23.315	0.33	19.05	19.12		0.950	0.880		0.915
6.000	89.8	29.673	0.42	18.84	18.93		1.160	1.070		1.115
7.000	106.8	35.325	0.50	18.62	18.60		1.380	1.400		1.390
8.000	53.4	17.663	0.25	18.72	18.68		1.280	1.320		1.300
9.000	26.7	8.831	0.12	18.80	18.90		1.200	1.100		1.150
9.000	2.1	0.707	0.01	18.93	19.07		1.070	0.930		1.000
10.000	2.1	0.707	0.01	18.93	19.07		1.070	0.930		1.000
11.000	17.1	5.652	0.08	18.92	19.04		1.080	0.960		1.020
12.000	34.2	11.304	0.16	18.88	18.90		1.120	1.100		1.110
13.000	53.3	17.663	0.25	18.82	18.82		1.180	1.180		1.180
14.000	70.5	23.315	0.33	18.75	18.74		1.250	1.260		1.255
15.000	89.8	29.673	0.42	18.70	18.66		1.300	1.340		1.320

		q	ΔS	Δσ
0.7 σ_1	0.35	0.87438	0.43375	0.2
0.3 σ_1	0.15	0.44063		
0.7σ_1	0.35	1.26944	0.22944	0.2
0.3σ_1	0.15	1.04		
D (mm)	300			
EV_1	103.75			
EV_2	196.13			
Area (Sq m)	0.07065			

EV_2/EV_1	1.89		

$$E_s = 0.75 \cdot h \cdot \Delta\sigma / \Delta s$$

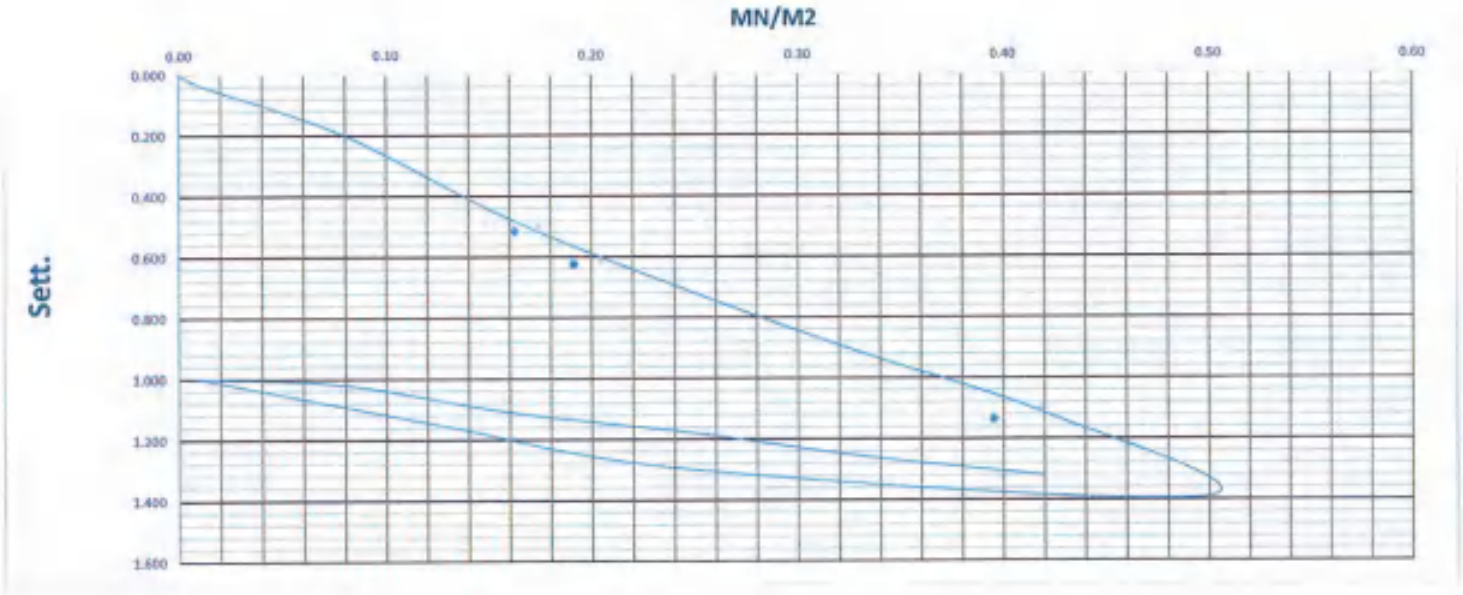
E_s = deformation modulus

$D\sigma$ = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name :
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 760	To	524 + 900
Taste Date	28-09-2023		
Layer level	SUB BALLAST +0.90		

Station	524+895

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load (kg)	Load (kN)	Stress (kN/m2)	Dial 1 (mm)	Dial 2 (mm)	Dial 3 (mm)	Set. 1 (mm)	Set. 2 (mm)	Set. 3 (mm)	Avg. Set. (mm)
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.96		0.050	0.040		0.045
2.000	17.1	5.652	0.08	19.80	19.60		0.200	0.400		0.300
3.000	34.2	11.304	0.16	19.59	19.40		0.410	0.600		0.505
4.000	53.3	17.663	0.25	19.40	19.20		0.600	0.800		0.700
5.000	70.5	23.315	0.33	19.30	18.92		0.700	1.080		0.890
6.000	89.8	29.673	0.42	19.10	18.80		0.900	1.200		1.050
7.000	104.8	35.321	0.50	19.00	18.54		1.000	1.460		1.230
8.000	123.4	37.863	0.25	19.02	18.55		0.980	1.450		1.215
9.000	26.7	8.831	0.12	19.08	18.63		0.920	1.390		1.155
9.890	2.1	0.707	0.01	19.18	18.81		0.820	1.190		1.005
10.000	2.1	0.707	0.01	19.18	18.81		0.820	1.190		1.005
11.000	17.1	5.652	0.08	19.17	18.80		0.830	1.200		1.015
12.000	36.2	11.304	0.16	19.10	18.77		0.900	1.230		1.065
13.000	53.3	17.663	0.25	19.05	18.66		0.950	1.340		1.145
14.000	70.5	23.315	0.33	19.03	18.59		0.970	1.410		1.190
15.000	89.8	29.673	0.42	19.01	18.52		0.990	1.480		1.235

0.7 σ_1	0.35	0.82625	0.35687	0.2
0.3 σ_1	0.15	0.47539		
0.7 σ_2	0.35	1.2	0.173	0.2
0.3 σ_2	0.15	1.025		
D (mm)	300			
Ev_1	120.00			
Ev_2	257.14			
Area (sq.m)	0.07069			

K=Ev2/Ev1	2.14		

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

9/5/M1

Sett.

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Client Cashilbak	Consultant Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 760	To	524 + 900
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

Section	524-865

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 6 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading	Load	Load	Pressure	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Sett. Mean
Stage No.	Kn	KN	kN/m2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.96	19.97		0.040	0.030		0.035
2.000	17.1	5.652	0.08	19.78	19.88		0.220	0.120		0.170
3.000	34.2	11.298	0.16	19.59	19.78		0.410	0.220		0.315
4.000	53.3	17.643	0.25	19.40	19.62		0.600	0.380		0.490
5.000	70.5	23.315	0.33	19.23	19.50		0.770	0.500		0.635
6.000	85.8	28.673	0.42	19.12	19.44		0.880	0.560		0.720
7.000	106.8	35.325	0.50	19.02	19.37		0.980	0.630		0.805
8.000	53.4	17.643	0.25	19.08	19.41		0.940	0.590		0.765
9.000	26.7	8.821	0.12	19.14	19.49		0.860	0.570		0.690
9.000	2.1	0.707	0.01	19.54	19.87		0.460	0.390		0.525
10.000	2.1	0.707	0.01	19.34	19.67		0.660	0.390		0.525
11.000	17.1	5.652	0.08	19.22	19.55		0.880	0.430		0.565
12.000	34.2	11.298	0.16	19.21	19.52		0.750	0.480		0.615
13.000	53.3	17.643	0.25	19.14	19.47		0.860	0.530		0.695
14.000	70.5	23.315	0.33	19.09	19.41		0.940	0.590		0.765
15.000	85.8	28.673	0.42	19.02	19.38		0.980	0.620		0.800

		Δ	$\Delta\Delta$	$\Delta\sigma$
$0.7\sigma_1$	0.35	0.64582	0.34875	0.2
$0.3\sigma_1$	0.15	0.29688		
$0.7\sigma_2$	0.35	0.77279	0.16777	0.2
$0.3\sigma_2$	0.15	0.605		
D (mm)	300			
Ev_1	129.03			
Ev_2	268.23			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.08		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

D_σ = load increment

D_s = settlement increment

H = diameter of the plate, generally 0.30 m

Lab Specialist	Lab Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Client Consultant	Construction Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 760	To	524 + 900
Taste Date	28-09-2023		
Layer level	SUB BALLAST +0.90		

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material steel plates with diameter $D = 0.60$ m and $D = 0.762$ m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No	Load Bar	Load KN	Stress N/mm²	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.93		0.030	0.070		0.050
2.000	17.1	5.652	0.08	19.53	19.51		0.470	0.490		0.480
3.000	34.2	11.304	0.16	19.41	19.24		0.590	0.760		0.675
4.000	53.2	17.663	0.25	19.16	18.95		0.820	1.050		0.935
5.000	70.5	23.315	0.33	18.98	18.76		0.940	1.240		1.090
6.000	89.8	29.673	0.42	19.26	18.51		0.740	1.490		1.115
7.000	106.8	35.325	0.50	19.21	18.32		0.790	1.680		1.235
8.000	53.4	17.663	0.25	19.22	18.37		0.780	1.630		1.205
9.000	26.7	8.831	0.12	19.34	18.39		0.700	1.610		1.155
9.000	2.1	0.707	0.01	19.36	18.57		0.640	1.430		1.035
10.000	2.1	0.707	0.01	19.36	18.57		0.640	1.430		1.035
11.000	17.1	5.652	0.08	19.35	18.56		0.650	1.440		1.045
12.000	34.2	11.304	0.16	19.34	18.52		0.660	1.480		1.070
13.000	53.3	17.663	0.25	19.31	18.42		0.690	1.580		1.135
14.000	70.5	23.315	0.33	19.28	18.30		0.720	1.700		1.210
15.000	89.8	29.673	0.42	19.24	18.25		0.760	1.750		1.270

For this calculation $\Delta\sigma$ and Δs are usually taken from the load-span between $0.3\,\sigma_{max}$ and $0.7\,\sigma_{max}$.

		s_1	Δs	$\Delta\sigma$
$0.7\,\sigma_1$	0.35	1.01	0.36	0.2
$0.3\,\sigma_1$	0.15	0.65		
$0.7\sigma_2$	0.35	1.22353	0.57353	0.2
$0.3\sigma_2$	0.15	0.855		
D (mm)	300			
E_{V1}	125.00			
E_{V2}	297.33			
Area (cm^2)	0.07065			

Excess	0.01		

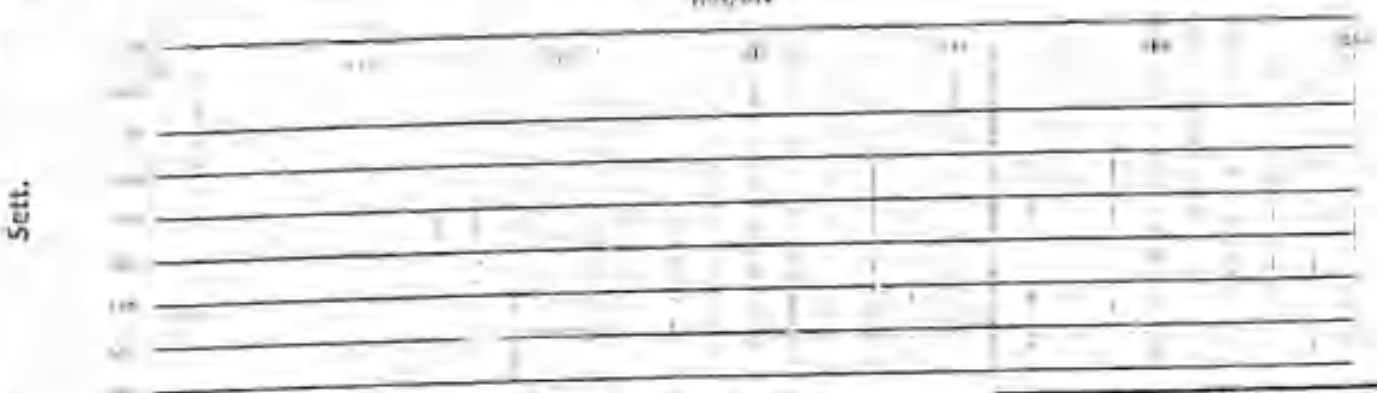
$$E_v = \Delta\sigma \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Contractor Name/Rep	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 760	To	524 + 900
Taste Date	28-09-2023		
Layer level	SUB BALLAST +0.90		

	524+825

EQUIPMENT AND TEST PROCEDURE : :

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweights for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Ton	Load kN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.90	19.90		0.100	0.040		0.070
2.000	17.1	5.652	0.08	19.70	19.80		0.300	0.200		0.250
3.000	34.2	11.304	0.16	19.30	19.70		0.700	0.300		0.500
4.000	53.3	17.663	0.25	19.03	19.58		0.970	0.420		0.695
5.000	70.5	23.315	0.33	18.81	19.40		1.190	0.600		0.895
6.000	89.8	29.673	0.42	18.65	19.22		1.350	0.780		1.065
7.000	106.8	35.325	0.50	18.41	18.05		1.590	0.950		1.270
8.000	53.4	17.663	0.25	18.45	19.08		1.550	0.920		1.235
9.000	26.7	8.831	0.12	18.54	19.13		1.460	0.870		1.165
9.000	2.1	0.707	0.01	18.71	19.22		1.290	0.780		1.035
10.000	2.1	0.707	0.01	18.71	19.22		1.290	0.780		1.035
11.000	17.1	5.652	0.08	18.70	19.21		1.300	0.790		1.045
12.000	34.2	11.304	0.16	18.62	19.16		1.380	0.840		1.110
13.000	53.3	17.663	0.25	18.50	19.11		1.500	0.890		1.195
14.000	70.5	23.315	0.33	18.43	19.08		1.570	0.920		1.245
15.000	89.8	29.673	0.42	18.39	19.03		1.620	0.970		1.295

For this calculation $\Delta\sigma$ and Δs are usually taken from the most span between $0.3\,\sigma_{max}$ and $0.7\,\sigma_{max}$

$0.7\sigma_1$	0.35	0.883567	0.11688
$0.3\sigma_1$	0.15	0.468716	
$0.7\sigma_2$	0.35	1.25611	0.29111
$0.3\sigma_2$	0.15	1.033	
D (mm)	300		
E_{V1}	187.85		
E_{V2}	223.78		
Area (sq.mm)	Average		

Ev2/Ev1	1.91		

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2

Sett.

Lab. Specialist	Lab. Engineer	Contractor Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Client Consultant	Contractor Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 760	To	524 + 900
Taste Date	28-09-2023		
Layer level	SUB BALLAST +0.90		

Station	524+800

EQUIPMENT AND TEST PROCEDURE :

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No	Load Bar	Load KN	Time Minute	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg Sett mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.83		0.030	0.170		0.100
2.000	17.1	5.652	0.08	19.70	19.56		0.300	0.420		0.360
3.000	34.2	11.304	0.16	19.61	19.38		0.390	0.610		0.500
4.000	53.3	17.663	0.25	19.50	19.08		0.500	0.920		0.710
5.000	70.5	23.315	0.33	19.40	18.87		0.600	1.130		0.865
6.000	89.8	29.673	0.42	19.27	18.75		0.730	1.250		0.990
7.000	106.8	33.324	0.50	19.12	18.52		0.880	1.480		1.180
8.000	53.4	17.663	0.25	19.16	18.54		0.840	1.460		1.150
8.000	36.7	8.831	0.12	19.19	18.64		0.810	1.360		1.085
9.000	2.1	0.707	0.01	19.30	18.80		0.700	1.200		0.950
10.000	2.1	0.707	0.01	19.30	18.80		0.700	1.200		0.950
11.000	17.1	5.652	0.08	19.28	18.79		0.720	1.210		0.965
12.000	34.2	11.304	0.16	19.23	18.70		0.760	1.300		1.030
13.000	53.3	17.663	0.25	19.22	18.60		0.780	1.400		1.090
14.000	70.5	23.315	0.33	19.20	18.50		0.800	1.500		1.150
15.000	89.8	29.673	0.42	19.12	18.43		0.880	1.570		1.225

0.7 σ_1	0.35	0.82373	0.38125	0.2	
0.3 σ_1	0.15	0.4825			
0.7 σ_2	0.35	1.16087	0.18667	0.2	
0.3 σ_2	0.15	0.38			
D (mm)	300				
Ev_1	131.87				
Ev_2	241.07				
Area (sq.m)	0.07065				

E_2/E_1	1.83		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation the settlement values from the load span between 0.3 σ = ___ and 0.7 σ = ___

REMARKS

Sett.

Lab Specialist	Lab Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name : Yassief Refaat
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Client

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 760	To	524 + 900
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.00		

Station	524+760

EQUIPMENT AND TEST PROCEDURE : -

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 8 load increments of equal size. Under each load step the settlement must come to a noticeable rest (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is released in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Set. 1 mm	Set. 2 mm	Set. 3 mm	Set. Total mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.87	19.87		0.130	0.130		0.130
2.000	17.1	5.652	0.08	19.63	19.72		0.370	0.280		0.325
3.000	34.2	11.304	0.16	19.46	19.57		0.540	0.430		0.485
4.000	51.3	17.663	0.25	19.30	19.42		0.700	0.580		0.640
5.000	70.5	23.315	0.33	19.14	19.25		0.860	0.750		0.805
6.000	89.6	29.673	0.42	19.02	19.14		0.980	0.860		0.920
7.000	106.8	35.325	0.50	18.90	19.01		1.100	0.990		1.045
8.000	53.4	17.663	0.25	18.92	19.05		1.080	0.950		1.015
9.000	26.7	8.831	0.12	19.00	19.18		1.000	0.820		0.910
9.000	2.1	0.707	0.01	19.10	19.30		0.900	0.700		0.800
10.000	2.1	0.707	0.01	19.10	19.30		0.900	0.700		0.800
11.000	17.1	5.652	0.08	19.09	19.29		0.910	0.710		0.810
12.000	34.2	11.304	0.16	19.05	19.22		0.950	0.780		0.865
13.000	53.3	17.663	0.25	19.00	19.15		1.000	0.850		0.925
14.000	70.5	23.315	0.33	18.96	19.09		1.040	0.910		0.975
15.000	89.6	29.673	0.42	18.90	19.03		1.100	0.970		1.035

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}

0.3 σ_0	0.35	0.61063	0.38563	0.2
0.7 σ_0	0.85	0.9463		
0.7 σ_0	0.85	0.94632	0.19632	0.2
0.3 σ_0	0.35	0.82		
D (mm)	300			
$P_{0.7}$	134.26			
$P_{0.3}$	787.23			
Area (πr^2)	0.07065			

Δs	0.65		

$$E_v = 0.75 \cdot D \cdot \frac{\Delta\sigma}{\Delta s}$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2

Sett.

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name : Yousef Rafat
Sign :	Sign :	Sign :

Contractor Consultant	CENTRAL LAB	Contractor	

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 640	To	524 + 760
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

Station	524+661

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 5 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Step No.	Load Bar	Load KN	Stress	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.95		0.050	0.050		0.050
2.000	17.1	5.652	0.08	19.70	19.80		0.300	0.140		0.220
3.000	34.2	11.304	0.16	19.60	19.52		0.400	0.480		0.440
4.000	53.3	17.663	0.25	19.57	19.30		0.430	0.700		0.565
5.000	70.5	23.315	0.33	19.36	19.20		0.650	0.800		0.725
6.000	89.8	29.673	0.42	19.25	19.07		0.750	0.930		0.840
7.000	106.8	35.325	0.50	19.15	18.93		0.850	1.070		0.960
8.000	53.4	17.663	0.25	19.18	18.98		0.820	1.020		0.920
9.000	26.7	8.831	0.12	19.21	18.84		0.790	0.960		0.875
9.000	2.1	0.707	0.01	19.33	19.15		0.670	0.850		0.760
10.000	2.1	0.707	0.01	19.33	19.15		0.670	0.850		0.760
11.000	17.1	5.652	0.08	19.32	19.14		0.680	0.860		0.770
12.000	34.2	11.304	0.16	19.26	19.07		0.740	0.930		0.835
13.000	53.3	17.663	0.25	19.21	19.01		0.790	0.980		0.890
14.000	70.5	23.315	0.33	19.16	18.95		0.840	1.050		0.945
15.000	89.8	29.673	0.42	19.15	18.91		0.850	1.090		0.970

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}

0.7 σ_2	0.35	0.795	0.3725
0.3 σ_1	0.15	0.4125	
0.7 σ_2	0.35	0.94275	0.16275
0.3 σ_1	0.15	0.78	
D (mm)	300		
$D\Delta_1$	138.53		
$D\Delta_2$	278.45		
Area (kg/m²)	0.07065		

Ev1/Ev2	1.98		

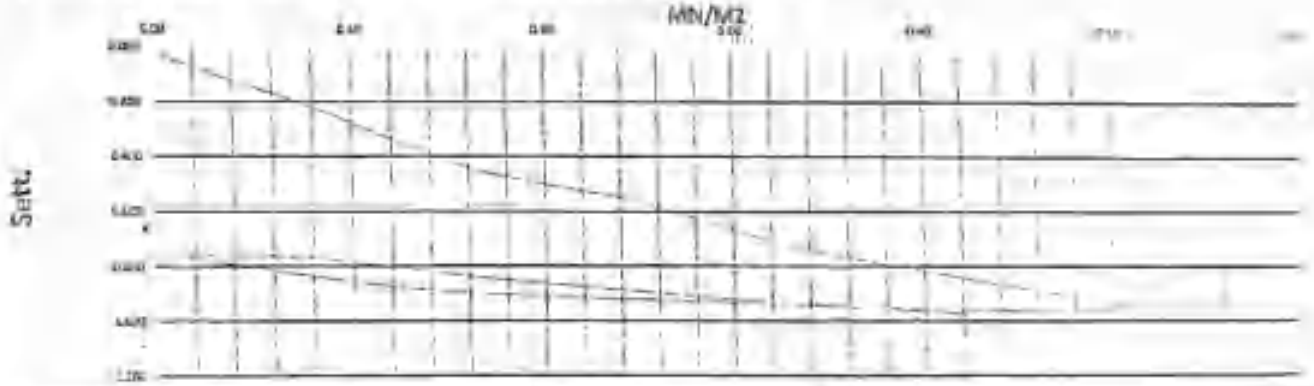
$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate (generally 0.30 m)



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Contractor Consultant | CENTRAL LAB | [illegible] | [illegible]

Plate Load Test Results

Company Name	AL MOSTAFA
Location	524 + 500 To 524 + 640
Taste Date	28-09-2023
Layer level	SUB BALLAST +0.90

Station	524+[illegible]

EQUIPMENT AND TEST PROCEDURE : -

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 200mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.97		0.020	0.030		0.025
2.000	17.1	5.652	0.08	19.88	19.75		0.120	0.250		0.185
3.000	34.2	11.304	0.16	19.75	19.56		0.250	0.440		0.345
4.000	53.3	17.663	0.25	19.61	19.34		0.390	0.660		0.510
5.000	70.5	23.315	0.33	19.44	19.24		0.560	0.760		0.660
6.000	88.8	29.673	0.42	19.34	19.07		0.660	0.930		0.795
7.000	100.8	35.325	0.50	19.20	18.90		0.800	1.100		0.950
8.000	53.4	17.663	0.25	19.26	19.03		0.740	0.970		0.855
9.000	26.7	8.831	0.12	19.31	19.10		0.690	0.900		0.795
9.000	2.1	0.707	0.01	19.48	19.30		0.520	0.700		0.610
10.000	2.1	0.707	0.01	19.48	19.30		0.520	0.700		0.610
11.000	17.1	5.652	0.08	19.44	19.26		0.560	0.740		0.650
12.000	34.2	11.304	0.16	19.33	19.20		0.670	0.800		0.735
13.000	53.3	17.663	0.25	19.28	19.13		0.720	0.870		0.795
14.000	70.5	23.315	0.33	19.24	19.05		0.760	0.950		0.855
15.000	88.8	29.673	0.42	19.18	19.00		0.820	1.000		0.910

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}

		a	[illegible]	[illegible]
0.7 σ_1	0.35	0.42071	0.14437	0.2
0.3 σ_1	0.15	0.335		
0.7 σ_2	0.35	0.86722	0.17722	0.2
0.3 σ_2	0.15	0.69		
D (mm)	200			
Ev_1	134.58			
Ev_2	253.87			
[illegible]	[illegible]			

Ev2/Ev1	[illegible]		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

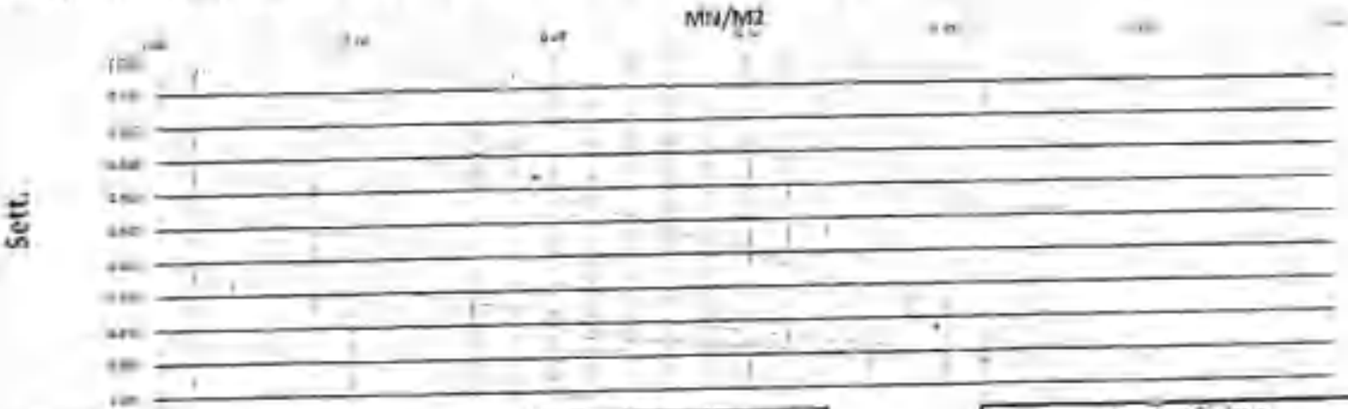
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2



Lab Specialist	Lab Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name : Yousef Rajab
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 500	To	524 + 640
Taste Date	28-09-2023		
Layer level	SUB BALLAST +0.00		

Station	524+595

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 8 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load kN	Stress kN/cm²	Dial 1 mm	Dial 2 mm	Dial 3 mm	Set. 1 mm	Set. 2 mm	Set. 3 mm	Ave. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.92	19.97		0.080	0.030		0.055
2.000	17.1	5.652	0.08	19.60	19.70		0.400	0.300		0.350
3.000	34.2	11.304	0.16	19.25	19.43		0.750	0.570		0.660
4.000	53.3	17.663	0.25	18.90	19.05		1.100	0.950		1.025
5.000	70.5	23.315	0.33	18.70	18.97		1.300	0.730		1.015
6.000	89.8	29.673	0.42	18.50	19.13		1.500	0.870		1.185
7.000	106.8	35.325	0.50	18.25	18.50		1.750	1.100		1.425
8.000	53.4	17.663	0.25	18.30	19.03		1.700	0.970		1.335
9.000	26.7	8.831	0.12	19.43	19.06		1.570	0.940		1.255
8.000	2.1	0.707	0.01	18.62	19.11		1.380	0.890		1.135
10.000	2.1	0.707	0.01	18.62	19.11		1.380	0.890		1.135
11.000	17.1	5.652	0.08	18.61	19.10		1.390	0.900		1.145
12.000	34.2	11.304	0.16	18.59	19.08		1.500	0.920		1.210
13.000	53.3	17.663	0.25	18.40	19.05		1.600	0.950		1.275
14.000	70.5	23.315	0.33	18.30	19.03		1.700	0.970		1.335
15.000	89.8	29.673	0.42	18.25	19.00		1.750	1.000		1.375

		a	Δs	Δσ
$0.7\sigma_1$	0.35	0.973	0.25375	0.2
$0.3\sigma_1$	0.15	0.82125		
$0.7\sigma_2$	0.35	1.34289	0.19895	0.2
$0.3\sigma_2$	0.15	1.113		
D (mm)	300			
Ev_1	127.21			
Ev_2	238.24			
Ave.Sett.	0.0000			

Ev=Ev2/Ev1	1.87		

$$E_v = a \cdot (1 - \nu^2) \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and a are usually taken from the load span between $0.3\,\sigma_{max}$ and $0.7\,\sigma_{max}$

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Contractor

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 500	To	524 + 640
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

Station	524+575

EQUIPMENT AND TEST PROCEDURE : -

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After this, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Per	Load KN	Stress KN/m²	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Adj. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.80	19.87		0.200	0.130		0.165
2.000	17.1	5.652	0.08	19.43	19.52		0.570	0.480		0.525
3.000	34.2	11.304	0.16	19.21	19.31		0.790	0.690		0.740
4.000	53.3	17.663	0.25	19.07	19.21		0.930	0.790		0.860
5.000	70.5	23.315	0.33	18.90	19.08		1.100	0.920		1.010
6.000	89.8	29.673	0.42	18.81	18.99		1.190	1.010		1.100
7.000	106.8	35.325	0.50	18.62	18.80		1.380	1.200		1.290
8.000	53.4	17.663	0.25	18.65	18.83		1.350	1.170		1.260
9.000	26.7	8.831	0.12	18.81	18.89		1.190	1.110		1.150
9.000	2.1	0.707	0.01	18.95	18.97		1.030	1.020		1.040
10.000	2.1	0.707	0.01	18.91	18.97		1.056	1.030		1.040
11.000	17.1	5.652	0.08	18.91	18.94		1.090	1.060		1.075
12.000	34.2	11.304	0.16	18.83	18.92		1.170	1.080		1.125
13.000	53.3	17.663	0.25	18.74	18.88		1.260	1.120		1.190
14.000	70.5	23.315	0.33	18.68	18.85		1.320	1.150		1.235
15.000	89.8	29.673	0.42	18.62	18.82		1.380	1.180		1.280

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}

		s	ΔS	$\Delta\sigma$
0.7 σ_o	0.35	0.525	0.21186	0.2
0.3 σ_o	0.15	0.71313		
0.7 σ_u	0.35	1.245	0.115	0.2
0.3 σ_u	0.15	1.13		
D (mm)	300			
Ev_1	717.39			
Ev_2	533.34			
Area (Sq.m)	0.0706			

Evaluation	1.37		

$E_v = 0.19 \cdot D \cdot \frac{\Delta\sigma}{\Delta s}$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2

Sett.

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Contractor Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 500	To	524 + 640
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

EQUIPMENT AND TEST PROCEDURE : -

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Step No	Load kN	Load kg	Stress kN/m²	Dial I mm	Dial II mm	Dial III mm	Δs I mm	Δs II mm	Δs III mm	Avg Set mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.95		0.050	0.050		0.050
2.000	17.1	3.652	0.08	19.85	19.86		0.150	0.140		0.145
3.000	34.2	11.304	0.16	19.65	19.68		0.350	0.318		0.330
4.000	53.3	17.683	0.25	19.51	19.52		0.490	0.480		0.485
5.000	70.5	23.315	0.33	19.36	19.40		0.640	0.600		0.620
6.000	89.8	29.673	0.42	19.23	19.30		0.770	0.700		0.735
7.000	106.8	35.325	0.50	19.10	19.11		0.900	0.890		0.895
8.000	53.8	17.663	0.25	19.15	19.15		0.850	0.850		0.850
9.000	26.7	8.831	0.12	19.20	19.25		0.800	0.750		0.775
9.000	2.1	0.707	0.01	19.29	19.34		0.710	0.660		0.685
10.000	2.1	0.707	0.01	19.29	19.34		0.710	0.660		0.685
11.000	17.1	3.652	0.08	19.28	19.33		0.720	0.670		0.695
12.000	34.2	11.304	0.16	19.23	19.28		0.770	0.720		0.745
13.000	53.3	17.683	0.25	19.18	19.25		0.820	0.750		0.785
14.000	70.5	23.315	0.33	19.15	19.20		0.850	0.800		0.825
15.000	89.8	29.673	0.42	19.10	19.12		0.900	0.880		0.890

0.1 σ_1	0.35	0.595	0.29012	0.2
0.3 σ_1	0.45	0.21000		
0.7 σ_1	0.35	0.83044	0.12444	0.2
0.9 σ_1	0.35	0.765		
D (mm)	300			
E_{V1}	15630			
E_{V2}	33473			
Area (Δs-σ)				

E_{V2}/E_{V1}	2.14		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate (generally 0.30 m)

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.1 σ_{max} and 0.7 σ_{max}.

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name : Fawzy R.S-b
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Contractor

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 500	To	524 + 840
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

Station	524+535

EQUIPMENT AND TEST PROCEDURE : -

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Steps No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.99	19.99		0.010	0.010		0.010
2.000	17.1	5.652	0.08	19.72	19.75		0.280	0.250		0.265
3.000	34.2	11.304	0.16	19.37	19.37		0.630	0.630		0.630
4.000	53.1	17.663	0.25	19.15	19.11		0.850	0.890		0.870
5.000	70.5	23.313	0.33	19.03	18.93		0.970	1.150		1.060
6.000	89.9	29.673	0.42	18.85	18.65		1.150	1.350		1.250
7.000	106.8	35.325	0.50	18.60	18.50		1.400	1.500		1.450
8.000	53.4	17.663	0.25	18.72	18.55		1.280	1.450		1.365
9.000	25.7	8.859	0.12	18.78	18.60		1.210	1.400		1.305
9.000	2.1	0.707	0.01	18.90	18.75		1.100	1.250		1.175
10.000	2.1	0.707	0.01	18.90	18.75		1.100	1.250		1.175
11.000	17.1	5.652	0.08	18.89	18.74		1.110	1.260		1.185
12.000	34.2	11.304	0.16	18.85	18.69		1.150	1.310		1.230
13.000	53.1	17.663	0.25	18.79	18.60		1.210	1.400		1.305
14.000	70.5	23.313	0.33	18.72	18.52		1.280	1.480		1.380
15.000	89.9	29.673	0.42	18.60	18.40		1.400	1.600		1.500

For the calculation $\Delta\sigma$ and Δs are usually taken from the load span between $0.1\,\sigma_{max}$ and $0.7\,\sigma_{max}$

		s	Δs	Δσ
$0.7\,\sigma_1$	0.59	1.075	0.44666	0.2
$0.1\,\sigma_1$	0.13	0.62833		
$0.7\sigma_2$	0.33	1.40667	0.21167	0.2
$0.1\sigma_2$	0.13	1.195		
D (mm)	300			
P_{N1}	106.70			
P_{N2}	212.80			
Area (sq.m)	0.0706			

Factor	2.11		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2

Sett.

Lab. Specialist	Lab.Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name : Yousef Kaljab
Sign :	Sign :	Sign :

Plate Consultant	Concrete Consultant	CENTRAL LAB	Contractor

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 640	To	524 + 760
Taste Date	28-09-2023		
Layer level	SUB BALLAST +0.90		

Station	KM-524

EQUIPMENT AND TEST PROCEDURE : :

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.760 m are used.

The load is applied in 8 load increments of equal size. Under each load step the settlement must come to A noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serves as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.96	19.95		0.040	0.050		0.045
2.000	17.1	5.652	0.08	19.90	19.64		0.100	0.360		0.230
3.000	34.2	11.304	0.16	19.80	19.32		0.200	0.680		0.440
4.000	53.3	17.663	0.25	19.75	18.07		0.250	0.930		0.590
5.000	70.5	23.315	0.33	19.70	18.80		0.300	1.200		0.750
6.000	89.8	29.673	0.42	19.61	18.60		0.390	1.400		0.895
7.000	106.9	35.325	0.50	19.50	18.43		0.500	1.570		1.035
8.000	53.4	17.663	0.25	19.63	18.58		0.370	1.420		0.895
9.000	26.7	8.831	0.12	19.68	18.71		0.320	1.290		0.805
9.000	2.1	0.707	0.01	19.72	18.56		0.280	1.020		0.650
10.000	2.1	0.707	0.01	19.72	18.98		0.250	1.020		0.650
11.000	17.1	5.652	0.08	19.69	18.93		0.310	1.070		0.690
12.000	34.2	11.304	0.16	19.64	18.81		0.360	1.190		0.775
13.000	53.3	17.663	0.25	19.60	18.73		0.400	1.270		0.835
14.000	70.5	23.315	0.33	19.57	18.59		0.430	1.410		0.920
15.000	89.8	29.673	0.42	19.53	18.43		0.470	1.550		1.010

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}

0.7 σ_1	0.35	0.7723	0.01971	0.2
0.3 σ_1	0.15	0.01371		
0.7 σ_2	0.35	0.91	0.21	0.2
0.3 σ_2	0.15	0.71		
D (mm)	300			
E_{v1}	125.64			
E_{v2}	214.28			
E_{v2}/E_{v1}	1.7052			

E_{v2}/E_{v1}	1.71		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2

Sett.

Lab Specialist	Lab Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Contractor	Project

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 640	To	524 + 760
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

Station	524+733

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load Bar	Load kN	Stress kN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Ave Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.99	19.97		0.010	0.030		0.020
2.000	17.1	5.652	0.08	19.97	19.94		0.030	0.060		0.045
3.000	34.2	11.304	0.16	19.88	19.80		0.120	0.120		0.120
4.000	53.3	17.663	0.25	19.80	19.82		0.200	0.180		0.190
5.000	70.5	23.315	0.33	19.72	19.74		0.280	0.260		0.270
6.000	89.8	29.673	0.42	19.58	19.68		0.410	0.320		0.365
7.000	106.8	35.325	0.50	19.51	19.60		0.490	0.400		0.445
8.000	53.4	17.663	0.25	19.56	19.64		0.440	0.360		0.400
9.000	26.7	8.831	0.12	19.68	19.71		0.300	0.250		0.325
9.000	2.1	0.707	0.01	19.78	19.85		0.220	0.150		0.185
10.000	2.1	0.707	0.01	19.78	19.85		0.220	0.150		0.185
11.000	17.1	5.652	0.08	19.70	19.83		0.300	0.170		0.235
12.000	34.2	11.304	0.16	19.65	19.81		0.350	0.190		0.270
13.000	53.3	17.663	0.25	19.60	19.76		0.400	0.240		0.320
14.000	70.5	23.315	0.33	19.50	19.71		0.505	0.290		0.395
15.000	89.8	29.673	0.42	19.45	19.01		0.550	0.390		0.470

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.1 σ_{max} and 0.7 σ_{max}

		ν	$\Delta\sigma$	Δs
0.7 σ_1	0.32	0.211	0.184338	0.2
0.3 σ_1	0.15	0.11963		
0.7 σ_2	0.55	0.41187	0.12565	0.2
0.3 σ_2	0.15	0.28503		
D (mm)	300			
Ev_1	244.87			
Ev_2	121.28			
Area / Span	44786			

Ev2/Ev1	1.69		

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

Sett.

MN/M2

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 640	To	524 + 760
Taste Date	28-09-2023		
Layer level	SUB BALLAST +0.00		

Point	524+715

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.762$ m are used.

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Step No	Load No	Load KN	Stress KN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Set 1 mm	Set 2 mm	Set 3 mm	Avg Set mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.97		0.020	0.030		0.025
2.000	17.1	5.652	0.08	19.75	19.50		0.250	0.500		0.375
3.000	34.2	11.304	0.16	19.62	19.15		0.380	0.850		0.615
4.000	53.3	17.603	0.25	19.52	18.92		0.480	1.080		0.780
5.000	70.5	23.315	0.33	19.45	18.60		0.550	1.400		0.975
6.000	89.8	29.673	0.42	19.37	18.46		0.630	1.540		1.085
7.000	106.8	35.325	0.50	19.20	18.30		0.800	1.700		1.250
8.000	53.3	17.663	0.25	19.29	18.33		0.710	1.670		1.190
9.000	26.7	8.831	0.12	19.43	18.37		0.570	1.630		1.100
9.000	2.1	0.707	0.01	19.53	18.59		0.470	1.410		0.940
10.000	2.1	0.707	0.01	19.53	18.59		0.470	1.410		0.940
11.000	17.1	5.652	0.08	19.52	18.53		0.480	1.470		0.975
12.000	34.2	11.304	0.16	19.48	18.46		0.520	1.540		1.030
13.000	53.3	17.663	0.25	19.44	18.32		0.560	1.680		1.120
14.000	70.5	23.315	0.33	19.40	18.25		0.600	1.750		1.175
15.000	89.8	29.673	0.42	19.32	18.18		0.680	1.820		1.250

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between $0.3\,\sigma_{max}$ and $0.7\,\sigma_{max}$

		k	SS	ds
$0.7\,\sigma_1$	0.35	0.94062	0.35582	0.2
$0.3\,\sigma_1$	0.15	0.385		
$0.7\sigma_2$	0.35	1.19187	0.61688	0.2
$0.3\sigma_2$	0.15	1.01		
D (mm)	300			
Ev_1	125.34			
Ev_2	247.71			
Area [sq.m]	0.07065			

Poisson's ratio	0.35		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate generally 0.30 m

MN/M2

Sett.

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

Owner Consultant	Contractor Consultant	CENTRAL LAB	Contractor	Date

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 640	To	524 + 760
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

Station	524+685

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 5 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Steps No	Load Bar	Load kN	Stress MN/M²	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.85	19.90		0.150	0.100		0.125
2.000	17.1	5.652	0.08	19.63	19.60		0.370	0.400		0.385
9.000	34.2	11.304	0.16	19.41	19.40		0.590	0.600		0.595
4.000	53.3	17.663	0.25	19.22	19.21		0.780	0.790		0.785
5.000	70.5	23.315	0.33	19.10	19.09		0.900	0.960		0.930
6.000	88.8	29.673	0.42	19.01	18.84		0.990	1.060		1.025
7.000	106.8	35.325	0.50	18.90	18.80		1.100	1.200		1.150
8.000	53.4	17.663	0.25	18.94	18.85		1.060	1.150		1.105
9.000	26.7	8.831	0.12	19.04	18.90		0.960	1.100		1.030
9.000	2.1	0.707	0.01	19.17	19.11		0.830	0.890		0.860
10.000	2.1	0.707	0.01	19.17	19.11		0.830	0.890		0.860
11.000	17.1	5.652	0.08	19.15	19.07		0.850	0.930		0.890
12.000	34.2	11.304	0.16	19.13	18.97		0.870	1.030		0.950
13.000	53.3	17.663	0.25	19.08	18.93		0.920	1.070		0.995
14.000	70.5	23.315	0.33	19.00	18.87		1.000	1.130		1.065
15.000	88.8	29.673	0.42	18.92	18.81		1.080	1.190		1.135

For this calculation s_0 and p_1 are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}

		s	ΔS	$\Delta\sigma$
0.7 σ_1	0.35	0.81562	0.34687	0.2
0.3 σ_1	0.15	0.58875		
0.7 σ_2	0.35	1.08056	0.49181	0.2
0.3 σ_2	0.15	0.82		
D (mm)	300			
Ev_1	125.72			
Ev_2	230.28			
Area (sq.m)	0.07065			

Ev2/Ev1	2.14		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2

Sett.

Lab Specialist	Lab Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name : Yousef Rajab
Sign :	Sign :	Sign :

Contractor Consultant	CENTRAL LAB	Contractor	Owner

Plate Load Test Results

Company Name	AL MOSTAFA		
Location	524 + 640	To	524 + 760
Taste Date	1-10-2023		
Layer level	SUB BALLAST +0.90		

Station	524+685

EQUIPMENT AND TEST PROCEDURE :-

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter $D = 0.60$ m and $D = 0.763$ m are used.

The load is applied in 5 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minimute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack.

Diameter = 300mm

Loading Stage No.	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Set 1	Set 2	Set 3	Avg. Settl.
	Kn	Kg	kN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.95		0.050	0.050		0.050
2.000	17.1	5.652	0.08	19.70	19.86		0.300	0.140		0.220
3.000	34.2	11.304	0.16	19.60	19.52		0.400	0.480		0.440
4.000	53.3	17.663	0.25	19.52	19.30		0.480	0.700		0.565
5.000	70.5	23.315	0.33	19.35	19.20		0.650	0.800		0.725
6.000	89.8	29.673	0.42	19.25	19.07		0.750	0.930		0.840
7.000	106.8	35.325	0.50	19.15	18.93		0.850	1.070		0.960
8.000	53.4	17.663	0.25	19.19	18.98		0.820	1.020		0.920
9.000	26.7	8.831	0.12	19.21	19.04		0.790	0.960		0.875
10.000	2.1	0.707	0.01	19.33	19.15		0.670	0.850		0.760
11.000	17.1	5.652	0.08	19.32	19.14		0.680	0.860		0.770
12.000	34.2	11.304	0.16	19.26	19.07		0.740	0.930		0.835
13.000	53.3	17.663	0.25	19.21	19.01		0.790	0.990		0.890
14.000	70.5	23.315	0.33	19.18	18.95		0.820	1.050		0.935
15.000	89.8	29.673	0.42	19.15	18.91		0.850	1.090		0.970

For this calculation Δs and Δs are usually taken from the load span between $0.3\,\sigma_{max}$ and $0.7\,\sigma_{max}$

		s	Δs	Δσ
0.7 σ_1	0.21	0.735	0.3225	0.2
0.3 σ_1	0.15	0.41275		
0.7 σ_2	0.35	0.84278	0.18278	0.2
0.3 σ_2	0.13	0.79		
D (mm)	300			
$P\sigma_1$	139.27			
$P\sigma_2$	278.45			
Area (Sq.m)	0.07065			

$P\sigma_2/P\sigma_1$	1.99		

$$E_s = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_s = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

MN/M2

Sett.

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : AHMED HALEEM	Name :
Sign :	Sign :	Sign :

ENGINEERING CONSULTING OFFICE
المكتب الاستشاري الهندسي
أ.د. خالد قنديل

وزارة النقل
الهيئة العامة للطرق والكباري
والنقل البري

مشروع: أعمال الجسر الترابى والاعمال الصناعية لمشروع القطار الكهربائى السريع
(العين السخنة - العاصمة الادارية - العلمين - مطروح) قطاع فوكة مطروح

محضر تحديد مسافة نقل (الأتربة)

أنه في يوم الأحد الموافق 2023/9/10 وبناءاً على طلب شركة المصطفى للمقاولات لتحديد مسافة نقل الأتربة من محجر (المصرية) على طريق وادي النطرون العلمين للمشروع المذكور أعلاه تم زيارة المحجر من قبل :

1. المهندس / حسن عبدالسلام سليمان — مهندس جيولوجي مكتب د.خالد قنديل
2. المهندس / مصطفى محمد ثابت — مدير مشروع شركة المصطفى للمقاولات

وتبين أن المحجر على مسافة 302.5 كم من منتصف قطاع شركة المصطفى للمقاولات

إحداثي المحجر : E 29° 45’ 06.7” N 30° 33’ 19.7”

وعلى ذلك تم التوقيع,,,

2. مصطفى محمد ثابت

1. حسن عبد السلام حسن

وزارة النقل
الهيئة العامة للطرق والكباري
والنقل البري

ENGINEERING CONSULTING OFFICE
المكتب الاستشاري الهندسي
أ.د. خالد قنديل

مشروع: أعمال الجسر الترابى والاعمال الصناعية لمشروع القطار الكهربائى السريع
(العين السخنة - العاصمة الادارية - العلمين - مطروح) قطاع فوكة مطروح

محضر تحديد مسافة نقل (طبقة التأسيس)

أنه في يوم الأحد الموافق 2023/9/10 وبناءاً على طلب شركة المصطفى للمقاولات لتحديد مسافة نقل طبقة التأسيس للمشروع المذكور أعلاه تم زيارة الكسارة من قبل :

1. المهندس / أحمد أبوزيد — مهندس جيولوجي مكتب د.خالد قنديل
2. المهندس / مصطفى محمد ثابت — مدير مشروع شركة المصطفى للمقاولات

وتبين أن الكسارة على مسافة 83 كم من منتصف قطاع شركة المصطفى للمقاولات

إحداثي الكسارة : E 29° 42’ 28” N 36° 38’ 33”

وعلى ذلك تم التوقيع,,,

2. مصطفى ثابت

1. أحمد أبوزيد

ENGINEERING CONSULTING OFFICE
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أ.د. خالد قنديل

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مشروع: أعمال الجسر الترابى والاعمال الصناعية لمشروع القطار الكهربائى السريع
(العين السخنة - العاصمة الادارية - العلمين - مطروح) قطاع فوكة مطروح

محضر تحديد مسافة نقل (طبقة الأساس)

أنه في يوم الأحد الموافق 2023/9/10 وبناءاً على طلب شركة المصطفى للمقاولات لتحديد مسافة نقل طبقة الأساس للمشروع المذكور أعلاه تم زيارة الكسارة من قبل :

1. المهندس / عبدالله سامي — مهندس جيولوجي مكتب د.خالد قنديل
2. المهندس / مصطفى محمد ثابت — مدير مشروع شركة المصطفى للمقاولات

وتبين أن الكسارة على مسافة 233 كم من منتصف قطاع شركة المصطفى للمقاولات

إحداثي الكسارة : E 29° 42’ 28” N 36° 38’ 33”

وعلى ذلك تم التوقيع,,,

2. مصطفى ثابت

1. عبدالله سامي