

ماتية ختامى

بخصوص :- اعمل الجسر الترابى والاعمال الصناعية لمشروع القطار

الكهربائى السريع بطول ٤ كم اتجاه سيدى برانى

مقولة :- شركة سكاى لايت للاستثمار الزراعى والمقاولات العامة

بمناسبة انتهاء الاعمال الخاصة بالعملية عالية وعمل المستخلص الختامى

طبقا للكميات المنفذه على الطبيعة فقد تم أعداد المقايسة الختامية المرفقه لكافة بنود العملية

باجمالى مبلغ ٥٧٠٠٠٠٠٠.٠٠ (فقط وقدره خمسة مليون وسبعمائة الف جنيها لاغير)

مهندس / مدير عام المشروعات

الاسم : محمد صبرى مباح

التوقيع : محمد

مهندس / المشرف على تنفيذ العملية

الاسم : ابراهيم عبدالمطرس

التوقيع : محمد

رئيس الادارة المركزية

منطقة غرب الدلتا

(بالاسكندرية) مرسى مطروح

عميد مهندس / هانى محمد محمود طه



مشروع القطار الكهربائي السريع فائق السرعة قطاع (العلمين - فوكة)				
المقايضة الختامية لبنود الاعمال تنفيذ شركة سكاي لايت للاستثمار الزراعي والمقاولات العامة				
مرحلة تشكيل الجسر الترابي المسافة من محطة ٦٠٠+٦٠٠ إلى ٦٤٠+٦٠٠ بطول ٤ كم اتجاه سيدى برانى				
رقم البند	بيان الأعمال	الوحدة	الكمية	الفئة
	الاجمالى			
٣	اعمال الردم			
١٠٣	بالمتر المكعب اعمال تحميل وتوريد ونقل اترية مطابقة للمواصفات وتشغيلها باستخدام الات التسوية بسمك لا يزيد عن ٥٠ سم حتى منسوب ٢- متر و بسمك لا يزيد عن ٢٥ سم لاستكمال المنسوب التصميمي لتشكيل الجسر والاكتاف (نسبة تحمل كاليفورنيا لا تقل عن ١٥%) ورشها بالمياه الاصولية للوصول الى نسبة الرطوبة المطلوبة والدمك الجيد بالهراست للوصول الى أقصى كثافة جافة (٩٥%) من الكثافة الجافة القصوى) ويتم التنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية النموذجية والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقا لاصول الصناعة ومواصفات الهيئة العامة للطرق و الجارى وتعليمات المهندس المشرف. حتى حالة طلب جهاز الاشراف زيادة نسبة الدمك عن ٩٥% بحسب زيادة اجنية على زيادة نسبة الدمك لكل ١% - مسافة النقل حتى ٢ كم و يتم احتساب علاوة ١,٤ اجنيه لكل ١ كم بالزيادة او النقصان - السعر يشمل عمل تشوينات وتخليط واختبارات ونقل لموقع العمل حتى مسافة ٢ كم - السعر يشمل قيمة المادة المحجيرة	٣م	١٥,٩٠٤,٠١٧	٨٥
	علاوة مسافة النقل ١٨٨ كم	٣م	١٥,٩٠٤,٠١٧	٢٦٠,٤
	علاوة تحصيل رسوم الكرتة والموازين طبقا للائحة الشركة الوطنية	٣م	١٥,٩٠٤,٠١٧	١٣,٠٠
	الاجمالى			٥,٧٠٠,٠٠٠
(خمسة ملايين وسبعمائة الف اجنية فقط لا غير)				

مدير مشروعات (الهيئة)
م / محمد حسني فياض

مدير مشروع (الهيئة)
م / ابراهيم العناني

مدير المشروع الاستشاري
م / مصطفى محمود نجم

مدير المشروع المقاول
م / شريف محمد السعدى

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



محضر استلام موقع

إسناد أعمال الجسر الترابي والأعمال الصناعية لمشروع القطر الكهربائي السريع (العين السخنة - العاصمة الإدارية - العلمين - مطروح) لتنفيذ أعمال الجسر الترابي (قطاع العلمين / فوكة) المسافة من الكم 460+600 الى الكم 464+600 بطول 4 كيلو متر اتجاه سيدي براني (بالأمر المباشر) .
تنفيذ: شركة اسكاي لايت للاستثمار الزراعي و المقاولات العامة
إشراف : المنطقة الخامسة - منطقة غرب الدلتا

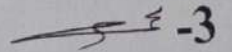
طبقاً للعقد رقم (2023/2022/1420) بتاريخ 2023/02/15

إنه في يوم السبت الموافق 2023/ 2/ 15 اجتمع كل من:-

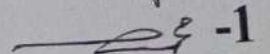
- 1- السيد المهندس /محمد حسني فياض مدير عام مشروعات الهيئة- الهيئة العامة للطرق والكباري
- 2- السيد المهندس /إبراهيم عبد الله الحناوي مهندس العملية - الهيئة العامة للطرق والكباري
- 3- السيد المهندس/محمد يحيي مدير مشروع -شركة اسكاي لايت للاستثمار الزراعي و المقاولات العامة

وذلك للمرور على مسار العملية المذكورة عاليه لاستلام الموقع :-
وقد تبين أن الموقع خالياً من العوائق الظاهرية ويسمح بالبداية في التنفيذ وبناء عليه يعتبر تاريخ 2023 / 2 / 15 هو تاريخ استلام الموقع وبدء الأعمال بالعملية واقفل المحضر على ذلك ووقع الحضور

التوقيعات

3- 

2- 

1- 

رئيس الإنارة المركزية
منطقة غرب الدلتا
الاسكندرية - مطروح
مهندس . هاني محمد محمود طه
هاني محمد محمود طه

محضر استلام ابتدائي

لعملية: أعمال الجسر الترابي لمشروع القطار الكهربائي السريع (وصلة البضائع - قطاع غرب النيل - قطاع العلمين / فوكة) لتنفيذ المسافة من الكم ٦٠٠+٦٠ إلى الكم ٦٤٠+٦٤ بطول ٤ كم اتجاه سيدي براني قطاع (العلمين / فوكة)

تنفيذ شركة :- سكاى لايت للاستثمار الزراعي والمقاولات العامة

اشراف : المنطقة الخامسة غرب الدلتا (الإسكندرية_مطروح)

استشاري الهيئة للمشروع : سجاك (د سعد الجيوشي)

انه في يوم الاربعاء الموافق ٢٠٢٤/١/١٠ وبناءً علي قرار السيد العميد مهندس/رئيس الإدارة المركزية لمنطقة غرب الدلتا رقم (١٢١) بتاريخ ٢٠٢٢/٠٩/١٤ والخاص بأعمال الاستلام الابتدائي للأعمال عليه.

فقد اجتمعت اللجنة المشكلة من كلاً من :-

- | | | |
|----------------------------------|--|----------|
| (المهندس/ محمد حسني فياض | مدير عام المشروعات الهيئة | (رئيساً) |
| (المهندس/إبراهيم عبدالله الحناوي | مدير مشروع الهيئة | (عضواً) |
| (المهندس/عبدالله عبدالمحسن احمد | معمل المنطقة المشرفة | (عضواً) |
| (المهندس / مصطفى محمود نجم | مكتب: سجاك (د سعد الجيوشي) استشاري الهيئة | (عضواً) |
| (المهندس/محمد شهاب خليل | مكتب (اكس واي زد) استشاري المساحة بالمشروع | (عضواً) |
| (المهندس/ اشرف محمد السعدي | الشركة المنفذة (سكاى لايت للاستثمار الزراعي والمقاولات العامة) | (عضواً) |

وقد بدأت اللجنة أعمالها بالاطلاع علي ملف العملية وكراسة الشروط والمواصفات وعقد العملية ثم انتقلت اللجنة علي الطبيعة للمرور علي الأعمال المنفذة ومعاينتها ظاهرياً وتم أخذ عينات أتربة من الجسر لإجراء التجارب اللازمة عليها بمعمل المنطقة وتحديد نسبة الحيوود وقد أسفر الفحص والمعاينة الظاهرية عن التالي:-

الأعمال المنفذة والمطلوب تسليمها أعمال الحفر وأعمال الأتربة لتشكيل مسار الجسر الترابي

أولاً:- أعمال الحفر:-

تم التأكد من وصول الأعمال للمناسيب المطلوبة طبقاً لطلبات التسليم بالمشروع والأعمال مقبولة بصفة عامة .

ثانياً:- حالة السطح العلوي للجسر المنفذ:-

الأعمال مقبولة بصفة عامة وتم التأكد من الوصول للمناسيب وتحقيق الميول الجانبية للقطاع

توصيات اللجنة :-

- (١) علي مندوب معمل المنطقة تحديد مدي الحيود بالعينات عن المواصفة العامة للمشروع وتحديد قيمة الخصم .
 - (٢) علي السادة استشاري القطاع (سجاك (د سعد الجيوشي)) مراجعة الحصر والتأكد من الكميات المنفذة طبقاً لطلبات الاستلام وموافقة اللجنة بالكميات والتجارب التي أجريت علي الأعمال أثناء التنفيذ.
 - (٣) قام مندوب استشاري المساحة بالتأكد علي المناسيب المنفذة طبقاً للتصميم المعتمد.
 - (٤) علي استشاري القطاع (سجاك (د سعد الجيوشي)) متابعة سلوك الأعمال خلال فترة الضمان وإبلاغ الشركة بأي عيوب تظهر لأصلاحها فوراً.
- وعليه تري اللجنة قبول الأعمال حيث لا يوجد ما يعيق الاستلام الابتدائي للأعمال عاليه ويعتبر تاريخ المحضر ٢٠٢٤/١/١٠ هو تاريخ النهو الفعلي وبدء فترة الضمان للأعمال.
- وعلي ذلك جري التوقيع.
- التوقيعات :-

(٦) Ashrf
(٥) محمد ركن
(٤) محمد
(٣) محمد
(٢) محمد
(١) محمد

يعتمد
رئيس الادارة المركزية
منطقة غرب الدلتا
الاسكندرية - مرسى مطروح
عميد مهندس /
" هانى محمد محمود طه "



التقييم الفني

مشروع : أعمال الجسر الترابي والأعمال الصناعية لمشروع القطار الكهربائي السريع
(العين السخنة - العاصمة الادارية - العلمين - مطروح)

لتنفيذ المسافة من الكم ٦٠٠+٦٠ الى الكم ٦٤٠+٦٠ بطول ٤ كم

اتجاه سيدي براني

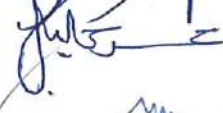
عقد رقم ٢٠٢٣/٢٠٢٢/١٤٢٠

تنفيذ : شركة سكاي لايت للاستثمار الزراعي والمقاولات العامة

إشراف : المنطقة الخامسة قطاع غرب الدلتا

- يتم خصم مبلغ وقدره (٣٤٢٠٠ جنية) فقط أربعة وثلاثون ألفاً ومئتا جنية مصري لا غير بنسبة ٠,٦% من اجمالي قيمة المشروع نتيجة الفحص البصري.

التوقيعات :

٦- 
٥- 
٤- 
٣- 
٢- 
١- 

رئيس الإدارة المركزية

منطقة غرب الدلتا

الاسكندرية - مرسى مطروح

عميد . مهندس / 

"هاني محمد محمود طه"

نموذج رقم ٢

بشأن : حصر المواد المحجرية الواردة بالمستخلص

القيد : / / ٢٠٢٣ المنطقة

التاريخ / / ٢٠٢٣

الى السيد المهندس / نائب رئيس الهيئة للتنفيذ والمناطق

تحية طيبة وبعد ،،،

نتشرف بان نرفق طية المستخلص الختامى الخاص بعملية

(اعمال صيانة واستكمال مبانى الهيئة فى نطاق المنطقة الخامسة - غربالدلتا .)

تنفيذ شركة / شركة سكاى لايت للاستثمار الزراعى عقد رقم / ٢٠٢٣/٢٠٢٢/١٤٢٠

يرجى التفضل بالاحاطة والتنبيه باتخاذ ما يلزم مع التفضل من سيادتكم
بالعلم ان المواد المحجرية المستخدمة بيانها كالاتى :-

م	نوع المادة المحجرية	الوحدة	الكمية	الجهة الحصول على الخامة
١	سن	٣م		كسارة
٢	اتربة	٣م	١٥٩٠٤.٠١٧	محجر () رقم / تصريح / بدون
٣	رمل	٣م		محجر رقم / تصريح / بدون

هذا وقد تمت مراجعة (البونات المائية / التصريح) للكميات التى تم الحصول عليها
من

(كسارات / محاجر / تشوينات) معتمدة ووجدت مطابقة للكميات بالمستخلص .

يرجى التكرم من سيادتكم بالعلم والاحاطة والتنبيه باتخاذ اللازم ،،،

وتفضلوا بقبول فائق الاحترام ،،،

التوقيع ()
عميد مهندس / هانى محمد محمود طه
رئيس الادارة المركزية
للمنطقة الخامسة - غرب الدلتا





إفادة

بالإشارة لمشروع اعمال الجسر الترابي و الاعمال الصناعية لمشروع القطار الكهربائي السريع
(العين السخنة - مطروح) .

العقد رقم : ٢٠٢٣/٢٠٢٢/١٤٢٠

في المسافة من ٦٠٠+٤٦٠ إلى ٦٠٠+٤٦٤ بطول ٤ كم اتجاه سيدي براني

مقاوله شركة : سكاى لايت للاستثمار الزراعي والمقاولات العامة

اشراف استشاري : مكتب د/سعد الجيوشي

كمية الاتربة المستخدمة في المشروع : ١٥٩٠٤,٠١٧ م^٣

يرجى العلم بأنه قد تم توريد المواد المحجرية بالمشروع ببونات رسمية معتمدة و قام استشاري المشروع
بمراجعة جميع البونات و التأكد من الكميات المدرجة و ذلك تحت اشراف المنطقة.

مدير عام المشروعات

مدير مشروع الهيئة

مدير مشروع الاستشاري

مدير مشروع الشركة

م/ محمد حسني فياض

م/ ابراهيم عبدالله الحناوي

م/ مصطفى محمود نجم

م/ اشرف محمد السعدي

رئيس الإدارة المركزية

منطقة غرب الدلتا

الاسكندرية - مرسى مطروح

عميد مهندس

"هاني محمد محمود طه"

مشروع القطاع السريع (العلمين - فوكه)

شركة سكاي لايت للاستثمار الزراعي والمقاولات العامة - من المحطة 460+600 الى المحطة 464+600

محضر تحديد مسافة نقل

(نقل الاتربة)

انه في يوم الاربعاء الموافق: 2022/10/5

بناء على طلب المقاول شركة سكاي لايت للاستثمار الزراعي والمقاولات العامة لتحديد مسافة نقل الاتربة من
محجر (المصرية)

على طريق وادي النظرون العلمين للمشروع المذكور أعلاه.

تم زيارة المحجر من قبل: -

ممثل الهيئة العامة للطرق والكباري
ممثل الاستشاري مكتب د. سعد الجيوشي
ممثل استشاري المساحة مكتب XYZ
استشاري مكتب د. سعد الجيوشي
ممثل شركة سكاي لايت

1- السيد المهندس / إبراهيم الحناوي
2- السيد المهندس / مصطفى محمود نجم
3- السيد المهندس / محمد خليل
4- السيد المهندس / كمال نجيب
5- السيد المهندس / أشرف محمد

وتبين ان المحجر على مسافة 188 كم من منتصف قطاع شركة سكاي لايت للاستثمار الزراعي والمقاولات العامة

احداثي منتصف القطاع N 31 ° 1 ' 52.20 " E 28 ° 20' 53.03"

احداثي المحجر N 92 ° 70 ' 06.28 " E 36 ° 37' 09.61"

وعلي ذلك تم التوقيع "

1-
2-
3-
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5-

قائمة الكميات الواردة بالمستخلص ختامي ٢

عملية: اعمال الجسر الترابي والاعمال الصناعية لمشروع القطار الكهربائي السريع
(العين السخنة - مطروح) لتنفيذ اعمال الجسر الترابي
قطاع العالمين / فوكة
في المسافة من الكم ٦٠٠+٦٠ الى الكم ٦٤٠+٦٠ بطول ٤ كم اتجاه الطريق الساحلي
(المنطقة الخامسة- غرب الدلتا)

رقم البند و بيانه : (١-٣) اعمال تحميل وتوريد ونقل اتربة صالحة للردم مطابقة للمواصفات

تنفيذ : شركة سكاى لايت للاستثمار الزراعي والمقاولات العامة

مقدار العمل السابق : ١٥٩.٠٤,٠١٧ م ٣

	بيان الاعمال
١٥١.٠٠	مستخلص جاري ١
٨٠٤,٠١٧	كميات لم تدرج في المستخلص السابق
٨٠٤,٠١٧	اجمالي الكميات خلال فترة المستخلص الحالية (م ^٢)
١٥٩.٠٤,٠١٧	الاجمالي الكلي (م ^٢)

مهندس الهيئة
م / إبراهيم عبد الله الحناوى

مهندسى الاستشاري
مكتب د سعد الجوشي
م / مصطفى محمود نجم

مهندس الاستشاري
مكتب XYZ
م / محمد شهاب خليل

مهندس الشركة
م / اشرف محمد السعدي

قائمة الكميات الواردة بالمستخلص ختامي ٢

عملية: اعمال الجسر الترابي والاعمال الصناعية لمشروع القطار الكهربائي السريع
(العين السخنة - مطروح) لتنفيذ اعمال الجسر الترابي
قطاع العالمين / فوكة
في المسافه من الكم ٦٠٠+٤٦٠ الي الكم ٦٠٠+٤٦٤ بطول ٤ كم اتجاه الطريق الساحلي
(المنطقة الخامسة- غرب الدلتا)

رقم البند و بيانه : (١-٣) علاوة مسافة النقل ١٨٨ كم

تـنـفـيـذ : شركة سكاى لايت للاستثمار الزراعي والمقاولات العامة

مقدار العمل السابق : ١٥٩٠٤,٠١٧ م ٣

الكمية	بيان الاعمال
١٥١٠٠	مستخلص جاري ١
٨٠٤,٠١٧	كميات لم تدرج في المستخلص السابق
٨٠٤,٠١٧	اجمالي الكميات خلال فترة المستخلص الحالية (م ٣)
١٥٩٠٤,٠١٧	الاجمالي الكلي (م ٣)

مهندس الهيئة
م / إبراهيم عبدالله الخطوى

مهندسى الاستشاري
مكتب د سعد الجوشي
م / مصطفى محمود نجم

مهندس الاستشاري
مكتب XYZ
م / محمد مهاب خليل

مهندس الشركة
اشرف محمد السعدي

قائمة الكميات الواردة بالمستخلص ختامي ٢

عملية: اعمال الجسر الترابي والاعمال الصناعية لمشروع القطر الكهربائي السريع
(العين السخنة - مطروح) لتنفيذ اعمال الجسر الترابي
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في المسافة من الكم ٦٠٠+٤٦٠ الى الكم ٦٠٠+٤٦٤ بطول ٤ كم اتجاه الطريق الساحلي
(المنطقة الخامسة- غرب الدلتا)

رقم البند و بيانه : (١-٣) علاوة تحصيل الكارته والموازين طبقا للائحه الشركة الوطنية

تنفيذ : شركة سكاي لايت للاستثمار الزراعي والمقاولات العامة

مقدار العمل السابق : ١٥٩٠٤,٠١٧ م ٣

الكمية	بيان الاعمال
١٥١٠٠	مستخلص جاري ١
٨٠٤,٠١٧	كميات لم تدرج في المستخلص السابق
٨٠٤,٠١٧	اجمالي الكميات خلال فترة المستخلص الحالية (م ٢)
١٥٩٠٤,٠١٧	الاجمالي الكلي (م ٢)

مهندس الهيئة
م / إبراهيم عبدالله الحكيم

مهندس الاستشاري
مكتب د سعد الجوشي
م / مصطفى محمود نجم

مهندس الاستشاري
مكتب XYZ
م / محمد شهاب خليل

مهندس الشركة
اشرف محمد السعدي
Ashraf

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+060) : (463+180)
Delivery Date : 11/04/2022
Reporting Date : 17/04/2022
Reporting No. : 14
Sample No. : 14

Dear Gentleman,

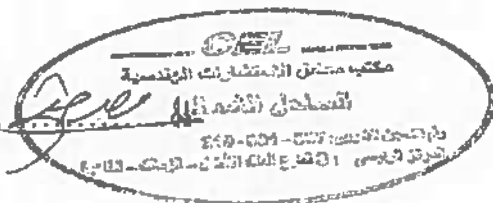
Attached here with the Soil Embankment delivered on 11/04/2022

Materials test

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

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

Signature / ...



Company Name	: Sky Light
Project	: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location	: Middle & Upper Embankment
Type of sample	: Soil Embankment
Location	: St. (463+060) : (463+180)
Delivery Date	: 11/04/2022
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Reporting No.	: 14
Sample No.	: 14

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	100
25	97.2
19	96.7
12.50	84.1
9.50	72.3
4.75	50.2
2.36	48.9
2.00	46.2
1.18	42.1
0.600	33.9
0.425	30.7
0.300	21.9
0.150	16.3

Signature /...

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



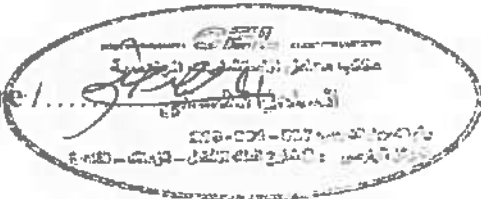
٣ ش الملك الأفضل
الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٢٢١ - ٢٧٣٦٣٠٩٣
www.cel-egypt.com

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+060) : (463+180)
Delivery Date : 11/04/2022
Reporting Date : 17/04/2022
Reporting No. : 14
Sample No. : 14

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	13.3

Signature /



Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (463+060) : (463+180)
 Delivery Date : 11/04/2022
 Reporting Date : 17/04/2022
 Reporting No. : 14
 Sample No. : 14

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

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

Signature

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+060) : (463+180)
Delivery Date : 11/04/2022
Reporting Date : 17/04/2022
Reporting No. : 14
Sample No. : 14

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	46.2	Max 50 %	-----
0.425 mm (No. 40).	30.7	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.3	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit.....	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature /

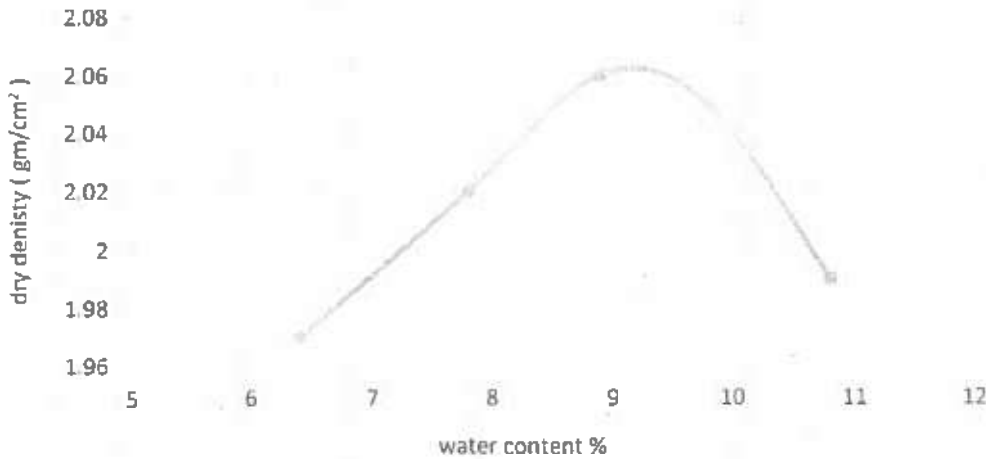
3 El Malek El Afdal Street
 Zamalek, Cairo.
 Tel.& Fax : 27367231 - 27363093



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 الزمالك - القاهرة
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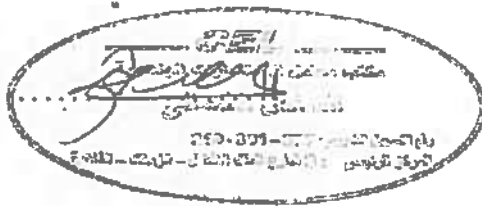
Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (463+060) : (463+180)
 Delivery Date : 11/04/2022
 Reporting Date : 17/04/2022
 Reporting No. : 14
 Sample No. : 14

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



- Max dry density (gm/cm³) : 2.06
- Optimum moisture content % : 8.9

Signature /





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مكتب معامل الاستشارات الهندسية

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 02/03/2022
Report Date : 05/03/2022
Test location : Station 462+100 to 462+200
Type of soil : Native soil
Report No. : 006

Dear Gentleman,

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

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)

7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing

(02 of 6)



Determine the deformation and strength characteristics of soil
By the plate loading test according specifications
ASTM D 1196

Report

- Test location : Station 462+100 to 462+200
- TEST No. : 06
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	02/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No	settlement (mm)	Soil stress Kg/cm ²
1	1.11	5.00 (Load 1)
2	1.22	5.00 (Load 2)



(03 of 6)

Company Name : Sky Light Co.
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka
 Test Date : 02/03/2022
 report date : 05/03/2022
 Location : Station 462+100 to 462+200
 Test No. : 006

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.75	0.25	19.72	0.28	19.75	0.25	0.27
2	2.00	19.55	0.45	19.61	0.39	19.60	0.40	0.41
3	3.00	19.29	0.71	19.46	0.54	19.38	0.62	0.62
4	4.00	19.06	0.94	19.25	0.75	19.06	0.94	0.88
5	5.00	18.84	1.16	19.08	0.92	18.75	1.25	1.11

Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.84	1.16	19.08	0.92	18.75	1.25	1.11
2	3.00	18.91	1.09	19.13	0.87	18.84	1.16	1.04
3	1.00	19.12	0.88	19.25	0.75	19.08	0.92	0.85
4	0.00	19.50	0.50	19.62	0.38	19.25	0.75	0.54

Loading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.50	0.00	19.62	0.00	19.25	0.00	0.00
1	1.00	19.25	0.25	19.32	0.30	19.02	0.23	0.27
2	2.00	19.02	0.48	19.20	0.42	18.93	0.32	0.41
3	3.00	18.84	0.66	19.10	0.52	18.82	0.48	0.59
4	4.00	18.55	0.95	19.06	0.54	18.74	0.51	0.80
5	5.00	18.21	1.29	18.98	0.62	18.61	0.64	1.18

Unloading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.21	1.29	18.98	0.62	18.61	0.64	1.18
2	2.00	18.80	0.70	19.02	0.58	18.67	0.58	0.75
3	0.00	19.42	0.58	19.54	0.46	19.13	0.37	0.51

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Company Name

: Sky Light Co.

Project

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

Test Date
report date

: 02/03/2022

: 05/03/2022

Location

: Station 462+100 to 462+200

Test No.

: 005

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = \rho \cdot B (1 - \mu^2 / E_s) \cdot I$$

S (mm)	: Settlement immediately
p (kg/cm ²)	: Stress at foundation level
B (m)	: Foundation Width
I	: Factor depends on the foundation shape and rigidity
E _s	: Modulus of elasticity
μ	: Poisson's ratio

Loading Stage (1)

No.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.27	1.00	1963	50	0.3	0.79	1315.1
2	0.41	2.00	3925	50	0.3	0.79	1739.3
3	0.62	3.00	5888	50	0.3	0.79	1730.0
4	0.86	4.00	7850	50	0.3	0.79	1640.1
5	1.11	5.00	9813	50	0.3	0.79	1619.1

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1608.7 kg/cm²

Loading Stage (2)

No.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.63	1.00	1963	50	0.3	0.79	434.8
2	0.85	2.00	3925	50	0.3	0.79	759.4
3	1.07	3.00	5888	50	0.3	0.79	1030.3
4	1.12	4.00	7850	50	0.3	0.79	1287.6
5	1.26	5.00	9813	50	0.3	0.79	1469.1

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

996.2 kg/cm²



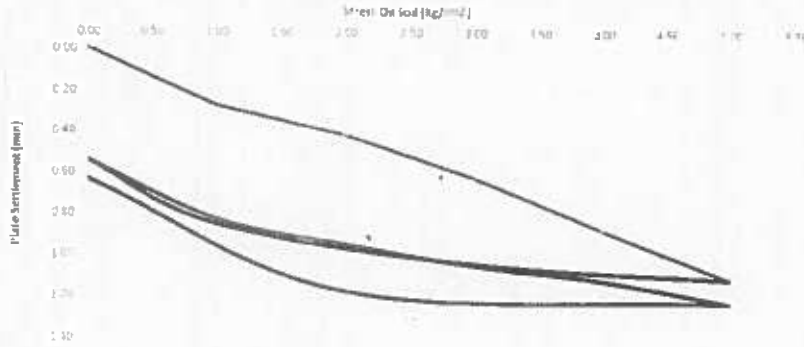


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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co
Project : Electric Express Train from At Ain Sokhna to Marsa Matruh Priority Sector (6) - Alamin to Feky
Test Date : 02/03/2022
Report date : 05/03/2022
Location : Station 462+100 to 462+200
Test No : 006

Nonrepulsive Static Plate Load Tests of Soils
ASTM D1195



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1963	3925	5888	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.20	0.41	0.62	0.83	1.11

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm2)	5.00	3.00	1.00	0.00
Settlement (mm)	1.11	1.04	0.85	0.54

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5888	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.20	0.41	0.62	0.83	1.11

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm2)	4.00	1.00	0.00
Settlement (mm)	1.22	1.17	0.84

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مكتب معامل الاستشارات الهندسية

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 02/03/2022
Report Date : 05/03/2022
Test location : Station 462+200 to 462+300
Type of soil : Native soil
Report No. : 007

Dear Gentleman,

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

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required

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(01 of 6)

7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing

Determine the deformation and strength characteristics of soil

By the plate loading test according specifications

ASTM D 1196

Report

- Test location : Station 462+200 to 462+300
- TEST No. : 07
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	02/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No	settlement (mm)	Soil stress Kg/cm ²
1	0.89	5.00 (Load 1)
2	0.94	5.00 (Load 2)

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مكتب معامل الاستشارات الهندسية

(03 of 6)



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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co.
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (B) - Alamein to Foka
Test Date : 02/03/2022
report date : 05/03/2022
Location : Station 462+200 to 462+300
Test No. : 007

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.85	0.14	19.69	0.31	19.74	0.26	0.24
2	2.00	19.73	0.22	19.40	0.60	19.59	0.41	0.41
3	3.00	19.64	0.36	19.17	0.83	19.41	0.59	0.59
4	4.00	19.53	0.47	19.00	1.00	19.27	0.73	0.73
5	5.00	19.42	0.58	18.80	1.20	19.10	0.90	0.89

Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.42	0.58	18.80	1.20	19.10	0.90	0.89
2	3.00	19.48	0.52	19.00	1.00	19.26	0.74	0.75
3	1.00	19.50	0.40	19.40	0.60	19.52	0.48	0.49
4	0.00	19.52	0.18	19.59	0.41	19.67	0.33	0.31

Loading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.82	0.00	19.59	0.00	19.67	0.00	0.00
1	1.00	19.67	0.33	19.28	0.72	19.43	0.57	0.54
2	2.00	19.54	0.42	19.12	0.88	19.27	0.73	0.68
3	3.00	19.40	0.50	18.95	1.05	19.18	0.82	0.79
4	4.00	19.24	0.58	18.84	1.15	19.10	0.90	0.88
5	5.00	19.17	0.63	18.78	1.22	19.04	0.96	0.94

Unloading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.37	0.63	18.78	1.22	19.04	0.96	0.94
2	2.00	19.45	0.55	19.00	1.00	19.10	0.90	0.82
3	0.00	19.51	0.18	19.32	0.68	19.64	0.36	0.40

CEL
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مكتب معامل الاستشارات الهندسية

Company Name

: Sky Light Co.

Project

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

Test Date

: Sector (6) - Alamein to Foka

report date

: 02/03/2022

Location

: 05/03/2022

Test No

: Station 462+200 to 462+300
007

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p.B (1-\mu^2/E_s).I$$

S (mm) : Settlement immediately

P (kg/cm²) : Stress at foundation level

B (m) : Foundation Width

I : Factor depends on the foundation shape and rigidity

E_s : Modulus of elasticity

μ : Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.24	1.00	1963	50	0.3	0.79	1519.8
2	0.41	2.00	3925	50	0.3	0.79	1753.4
3	0.59	3.00	5888	50	0.3	0.79	1917.4
4	0.73	4.00	7850	50	0.3	0.79	1960.6
5	0.89	5.00	9813	50	0.3	0.79	2011.8

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1812.4 Kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.54	1.00	1963	50	0.3	0.79	1055.5
2	0.67	2.00	3925	50	0.3	0.79	1052.4
3	0.75	3.00	5888	50	0.3	0.79	1365.0
4	0.88	4.00	7850	50	0.3	0.79	1633.9
5	0.94	5.00	9813	50	0.3	0.79	1918.8

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1329.1 Kg/cm²

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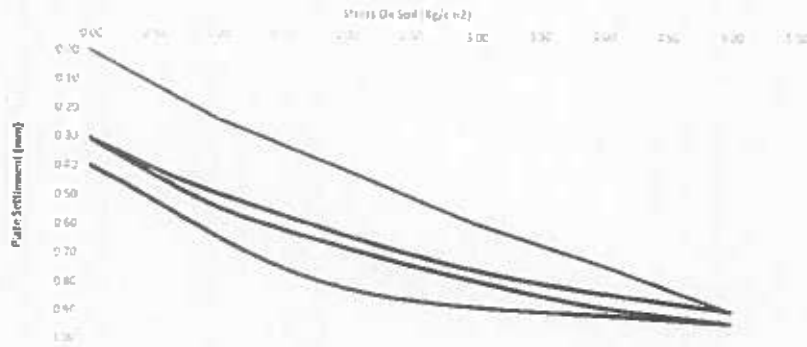
Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name
Project
Test Date
Report date
Location
Test No.

Sky Light Co.
Electric Express Train from Al Ain Sokhra to Marsa Matrouh Priority Sector (6) - Alamin to Foka
02/03/2022
05/03/2022
Station 402+200 to 462+300
007

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1196



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1963	3925	5887	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.24	0.41	0.69	0.73	0.85

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm2)	5.00	3.00	1.00	0.00
Settlement (mm)	0.89	0.75	0.49	0.31

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5887	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.31	0.57	0.73	0.89	0.96	0.94

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm2)	5.00	2.00	0.00
Settlement (mm)	0.94	0.82	0.40

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مكتب معامل الاستشارات الهندسية

3 El Malek El Afdal Street
Zamalek, Cairo.

Tel & Fax : 27367231 - 27363093

٣ ش الملك الأفضل

الزمالك - القاهرة

تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

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Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 02/03/2022
Report Date : 05/03/2022
Test location : Station 462+300 to 462+400
Type of soil : Native soil
Report No. : 008

Dear Gentleman,

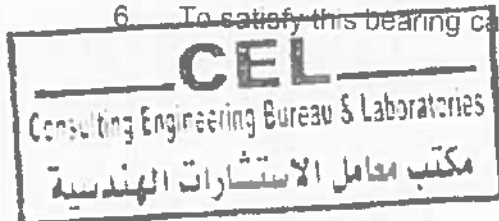
According to the above mentioned subject the test performed as follows:-

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)

7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



(02 of 6)

**Determine the deformation and strength characteristics of soil
By the plate loading test according specifications
ASTM D 1196**

Report

- Test location : Station 462+300 to 462+400
- TEST No. : 08
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	02/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	0.46	5.00 (Load 1)
2	0.56	5.00 (Load 2)



(03 of 6)



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Company Name : Sky Light Co.
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka
 Test Date : 02/03/2022
 report date : 05/03/2022
 Location : Station 462+300 to 462+400
 Test No. : 008

Nonrepetitive Static Plate Load Tests of Soils ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.88	0.12	19.87	0.13	19.94	0.06	0.10
2	2.00	19.78	0.22	19.72	0.28	19.87	0.13	0.21
3	3.00	19.69	0.31	19.64	0.36	19.78	0.22	0.30
4	4.00	19.60	0.40	19.58	0.42	19.70	0.30	0.37
5	5.00	19.48	0.52	19.47	0.53	19.66	0.34	0.46

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.48	0.52	19.47	0.53	19.66	0.34	0.46
2	3.00	19.70	0.30	19.49	0.51	19.68	0.32	0.44
3	1.00	19.90	0.10	19.58	0.42	19.71	0.29	0.36
4	0.00	19.94	0.06	19.74	0.26	19.83	0.12	0.18

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.34	0.00	19.74	0.00	19.88	0.00	0.00
1	1.00	19.66	0.34	19.58	0.42	19.72	0.28	0.35
2	2.00	19.59	0.41	19.51	0.49	19.67	0.33	0.41
3	3.00	19.51	0.47	19.47	0.53	19.63	0.37	0.46
4	4.00	19.50	0.50	19.43	0.57	19.58	0.42	0.50
5	5.00	19.43	0.57	19.40	0.60	19.50	0.50	0.56

Unloading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.43	0.57	19.40	0.60	19.50	0.50	0.56
2	2.00	19.59	0.50	19.45	0.55	19.53	0.47	0.51
3	0.00	19.70	0.20	19.67	0.33	19.67	0.33	0.29

Signature _____
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 مكتب معامل الاستشارات الهندسية

Company Name

: Sky Light Co.

Project

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

Test Date

: 02/03/2022

report date

: 05/03/2022

Location

: Station 462+300 to 462+400

Test No

: 008

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p.B (1-\mu^2 / E_s).l$$

S (mm)

: Settlement immediately

p (kg/cm²)

: Stress at foundation level

B (cm)

: Foundation Width

l

: Factor depends on the foundation shape and rigidity

E_s

: Modulus of elasticity

μ

: Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	l	E _s (kg/cm ²)
1	0.10	1.00	1963	50	0.3	0.79	3472.5
2	0.24	2.00	3925	50	0.3	0.79	3423.3
3	2.30	3.00	5888	50	0.3	0.79	3634.9
4	2.17	4.00	7850	50	0.3	0.79	3851.3
5	4.00	5.00	9813	50	0.3	0.79	3879.0

Average values of the deflection modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

3653.4 kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	l	E _s (kg/cm ²)
1	0.35	1.00	1963	50	0.3	0.79	1036.9
2	0.41	2.00	3925	50	0.3	0.79	1753.4
3	0.46	3.00	5888	50	0.3	0.79	2351.4
4	0.50	4.00	7850	50	0.3	0.79	2694.9
5	0.51	5.00	9813	50	0.3	0.79	3228.6

Average values of the deflection modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

2255.0 kg/cm²

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Company Name

Project

Test Date

report date

Location

Test No.

Sky Light Co

Electric Express Train from Al Ain Sokhna to Marsa Matruh Priority Sector (6) - Almain to Foka

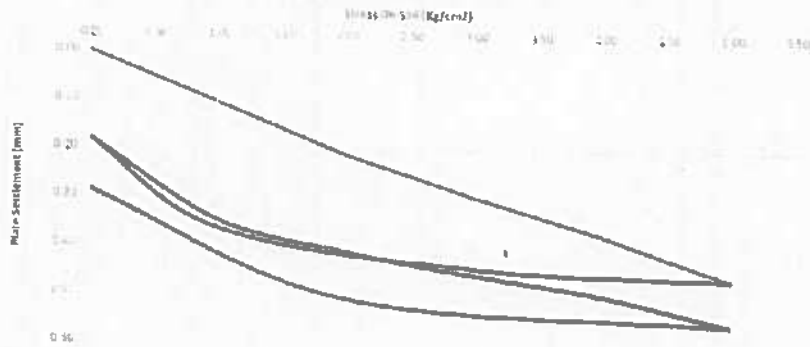
02/03/2022

06/03/2022

Station 462+300 to 462+400

008

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1196



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1963	3925	5889	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.10	0.21	0.30	0.37	0.46

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm²)	5.00	3.00	1.00	0.00
Settlement (mm)	0.46	0.44	0.36	0.15

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5889	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.10	0.21	0.30	0.37	0.46

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm²)	5.00	2.00	0.00
Settlement (mm)	0.56	0.51	0.29

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مكتب معامل الاستشارات الهندسية

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 02/03/2022
Report Date : 05/03/2022
Test location : Station 462+400 to 462+500
Type of soil : Native soil
Report No. : 009

Dear Gentleman,

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

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)

7. Start loading with equal increment according the calculation sheet (attached).
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



(02 of 6)



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مكتب معامل الاستشارات الهندسية

Determine the deformation and strength characteristics of soil

By the plate loading test according specifications

ASTM D 1196

Report

- Test location : Station 462+400 to 462+500
- TEST No. : 09
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	02/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	2.82	5.00 (Load 1)
2	3.40	5.00 (Load 2)

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مكتب معامل الاستشارات الهندسية
(03 of 6)

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 02/03/2022
Report Date : 05/03/2022
Test location : Station 462+500 to 462+600
Type of soil : Native soil
Report No. : 010

Dear Gentleman,

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

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)



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7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
- 10 Remove the loads
- 11 Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
- 2 load settlement curve
- 3 The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



(02 of 6)



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Determine the deformation and strength characteristics of soil

By the plate loading test according specifications

ASTM D 1196

Report

- Test location : Station 462+500 to 462+600
- TEST No. : 10
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	02/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	0.79	5.00 (Load 1)
2	0.82	5.00 (Load 2)



(03 of 6)



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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co.
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka
Test Date : 02/03/2022
report date : 05/03/2022
Location : Station 462+500 to 462+600
Test No. : 010

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.00	0.00	19.00	0.00	19.00	0.00	0.00
1	1.00	19.51	0.16	19.78	0.22	19.80	0.20	0.19
2	2.00	19.67	0.33	19.59	0.41	19.72	0.28	0.34
3	3.00	19.54	0.46	19.41	0.59	19.51	0.49	0.51
4	4.00	19.41	0.59	19.23	0.77	19.40	0.60	0.65
5	5.00	19.30	0.70	19.07	0.93	19.27	0.73	0.79

Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.30	0.70	19.07	0.93	19.27	0.73	0.79
2	3.00	19.39	0.61	19.13	0.87	19.31	0.69	0.72
3	1.00	19.55	0.45	19.40	0.60	19.48	0.52	0.52
4	0.00	19.68	0.20	19.67	0.33	19.76	0.24	0.26

Loading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.60	0.00	19.67	0.00	19.76	0.00	0.00
1	1.00	19.74	0.26	19.47	0.53	19.54	0.48	0.45
2	2.00	19.94	0.50	19.30	0.70	19.42	0.58	0.59
3	3.00	19.80	0.60	19.22	0.78	19.36	0.64	0.67
4	4.00	19.32	0.68	19.12	0.88	19.30	0.70	0.75
5	5.00	19.27	0.73	19.06	0.94	19.21	0.79	0.82

Unloading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.27	0.73	19.06	0.94	19.21	0.79	0.82
2	2.00	19.34	0.66	19.12	0.88	19.26	0.74	0.76
3	0.00	19.75	0.30	19.63	0.40	19.61	0.39	0.36

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Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co.
 Project : Electric Express Train, from At Ain Sokhna to Marsa Matrouh Priority Sector (5) - Alamein to Foka
 Test Date : 02/03/2022
 report date : 05/03/2022
 Location : Station 462+500 to 462+600
 Test No. : 09

Nonrepetitive Static Plate Load Tests of Soils ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.84	0.16	19.78	0.22	19.80	0.20	0.19
2	2.00	19.67	0.33	19.59	0.41	19.72	0.28	0.34
3	3.00	19.56	0.46	19.41	0.58	19.51	0.49	0.51
4	4.00	19.41	0.69	19.23	0.77	19.40	0.60	0.65
5	5.00	19.30	0.70	19.07	0.93	19.17	0.73	0.79

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.30	0.70	19.07	0.93	19.27	0.73	0.79
2	3.00	19.36	0.61	19.13	0.87	19.31	0.69	0.72
3	1.00	19.57	0.43	19.41	0.58	19.49	0.51	0.51
4	0.00	19.80	0.20	19.67	0.33	19.76	0.24	0.26

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.80	0.00	19.57	0.00	19.76	0.00	0.00
1	1.00	19.64	0.36	19.47	0.53	19.54	0.46	0.45
2	2.00	19.50	0.50	19.30	0.70	19.42	0.58	0.59
3	3.00	19.41	0.60	19.22	0.78	19.36	0.64	0.67
4	4.00	19.27	0.68	19.12	0.88	19.30	0.70	0.75
5	5.00	19.22	0.73	19.06	0.94	19.21	0.78	0.82

Unloading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.27	0.73	19.06	0.94	19.21	0.79	0.82
2	2.00	19.31	0.66	19.12	0.88	19.26	0.74	0.76
3	0.00	19.70	0.30	19.60	0.40	19.61	0.39	0.36

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 مكتب معامل الاستشارات الهندسية



Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name

: Sky Light Co.

Project

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

Test Date

: 02/03/2022

report date

: 06/03/2022

Location

: Station 462+500 to 462+500

Test No.

: 09

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p \cdot B (1 - \mu^2) / E_s \cdot I$$

S (mm) : Settlement immediately

p (kg/cm²) : Stress at foundation level

B (m) : Foundation Width

I : Factor depends on the foundation shape and rigidity

E_s : Modulus of elasticity

μ : Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.2	1.00	1963	50	0.3	0.79	1852.2
2	0.54	3.00	3925	50	0.3	0.79	2114.4
3	0.8	3.00	5888	50	0.3	0.79	2100.7
4	2.97	4.00	7850	50	0.3	0.79	2200.7
5	1.77	5.00	9813	50	0.3	0.79	2284.6

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

2111.9 Kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.36	1.00	1963	50	0.3	0.79	798.8
2	0.54	3.00	3925	50	0.3	0.79	1211.6
3	0.8	3.00	5888	50	0.3	0.79	1601.5
4	0.71	4.00	7850	50	0.3	0.79	1908.6
5	0.81	5.00	9813	50	0.3	0.79	2191.8

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1542.5 Kg/cm²

Signature

CEL

Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

3 El Malek El Afdal Street

Zamalek, Cairo.

Tel. & Fax : 27367231 - 27363093

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الزمالك - القاهرة

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Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name

Sky Light Co

Project

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

Test Date

02/03/2022

report date

05/03/2022

Location

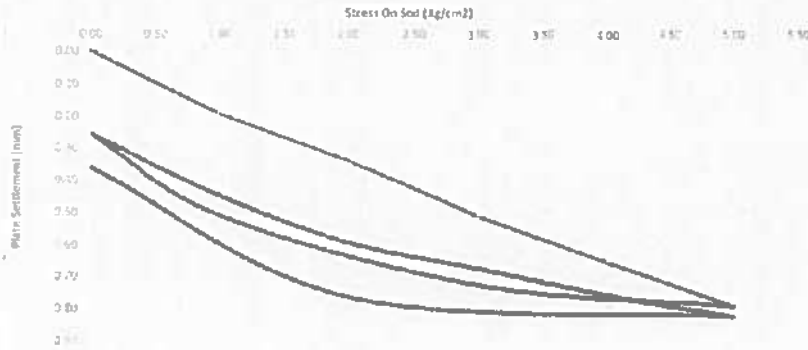
Station 462+500 to 482+500

Test No.

09

Nonrepelitive Static Plate Load Tests of Soils

ASTM D1198



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1925	3925	5888	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.19	0.34	0.51	0.65	0.79

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm2)	5.00	3.00	1.00	0.00
Settlement (mm)	0.79	0.72	0.51	0.26

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1925	3925	5888	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.26	0.45	0.50	0.67	0.75	0.82

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm2)	5.00	2.00	0.00
Settlement (mm)	0.82	0.76	0.36

Signature: 
Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

3 El Malek El Afdal Street

Zamalek, Cairo.

Tel & Fax: 27367231 - 27363093

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www.cel-egypt.com

Company Name

: Sky Light Co.

Project

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

Test Date

: 02/03/2022

Report date

: 05/03/2022

Location

: Station 462+500 to 482+600

Test No.

: 010

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = (p \cdot B (1 - \mu^2 / E_s)) \cdot I$$

S (mm)

: Settlement immediately

p (kg/cm²)

: Stress at foundation level

B (cm)

: Foundation Width

I

: Factor depends on the foundation shape and rigidity

E_s

: Modulus of elasticity

μ

: Poisson's ratio

Loading Stage (1)

No.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.5	1963	50	50	0.3	0.75	1859.2
2	1.0	3925	50	50	0.3	0.79	2114.4
3	1.5	5888	50	50	0.3	0.79	2100.7
4	2.0	7850	50	50	0.3	0.79	2200.7
5	2.5	9813	50	50	0.3	0.79	2284.6

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

2111.9 kg/cm²

Loading Stage (2)

No.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.5	1963	50	50	0.3	0.75	798.8
2	1.0	3925	50	50	0.3	0.79	1211.6
3	1.5	5888	50	50	0.3	0.79	1601.5
4	2.0	7850	50	50	0.3	0.79	1905.6
5	2.5	9813	50	50	0.3	0.79	2191.8

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1542.5 kg/cm²

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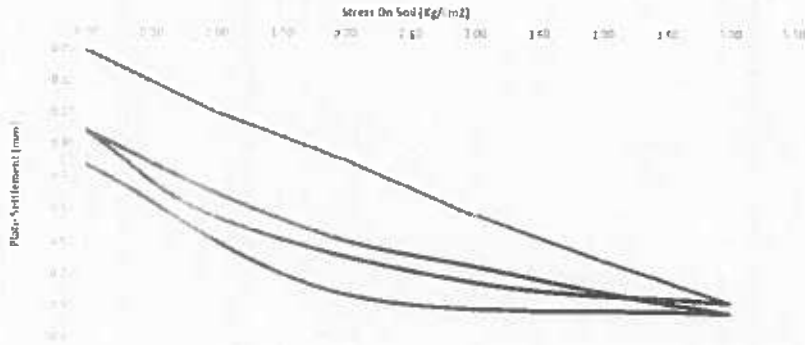
Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name
Project
Test Date
report date
Location
Test No.

Sky Light Co.
Electric Express Train from Al Ain Sokhna to Marsa Matruh Priority Sector (8) - Alamein to Foka
02/03/2022
05/03/2022
Station 152+600 to 152+600
010

Non-perturbative Static Plate Load Tests of Soils ASTM D1196



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1953	3905	5858	7810	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.11	0.24	0.51	0.65	0.79

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5858	1953	0
Stress (Kg/cm2)	5.00	3.00	1.00	0.00
Settlement (mm)	0.79	0.72	0.52	0.26

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1953	3905	5858	7810	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.11	0.24	0.51	0.75	0.82

UnLoading (2)	1	2	3
Stage(Kg)	7810	1953	0
Stress (Kg/cm2)	5.00	2.00	0.00
Settlement (mm)	0.82	0.76	0.36

Signature: 
Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (462+600)
Delivery Date : 03/04/2022
Reporting Date : 04/04/2022
Reporting No. : 84
Sample No. : 04

Dear Gentleman,

Attached here with the Soil Embankment delivered on 03/04/2022

Materials test

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

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


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Signature / 2100011237
رئيس مجلس الإدارة - المهندس
المهندس / د. محمد عبد الله الأحمدي

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sukhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (462+600)
Delivery Date : 03/04/2022
Reporting Date : 04/04/2022
Reporting No. : 84
Sample No. : 04

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	92.2
25	85.5
19	71.3
12.50	62.4
9.50	56.2
4.75	49.3
2.36	47.1
2.00	44.6
1.18	39.2
0.600	32.7
0.425	28.3
0.300	24.4
0.150	17.8

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الشارع 3، شارع النيل، القاهرة



Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (462+600)
Delivery Date : 03/04/2022
Reporting Date : 04/04/2022
Reporting No. : 84
Sample No. : 04

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	11.4


Signature / 219 111 521
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الاستشارات الهندسية
مركز التصميم والدراسات
الطريق 3، شارع الملك الأفضل - الزمالة



Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St.(460+600) : (462+600)
Delivery Date : 03/04/2022
Reporting Date : 04/04/2022
Reporting No. : 84
Sample No. : 04

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

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


Signature /



Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (462+600)
Delivery Date : 03/04/2022
Reporting Date : 04/04/2022
Reporting No. : 84
Sample No. : 04

Soil Classification According to Project Specs (Embankment)

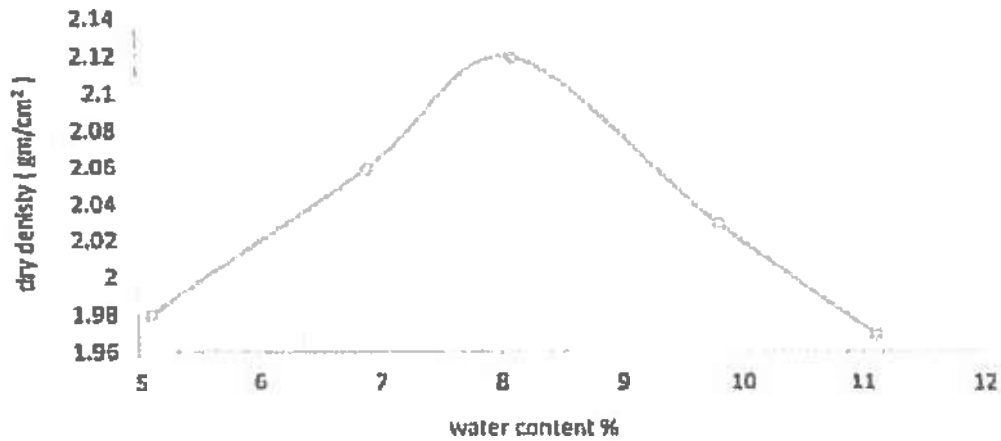
TEST	Results (%)	Limits according Projects Specs	
		(A-I-a)	(A-I-b)
• Group Classification	(A-I-n)	(A-I-a)	(A-I-b)
2.00 mm (No.10).	44.6	Max 50 %	—
0.425 mm (No. 40).	28.3	Max 30 %	Max 50 %
0.075 mm (No. 200).	11.4	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	—	—
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature 

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (462+600)
Delivery Date : 03/04/2022
Reporting Date : 04/04/2022
Reporting No. : 84
Sample No. : 04

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



- Max dry density (gm/cm³) : 2.12
- Optimum moisture content % : 8.1

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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+380) : (461+580)
Delivery Date : 06/04/2022
Reporting Date : 12/04/2022
Reporting No. : 02
Sample No. : 02

Dear Gentleman,

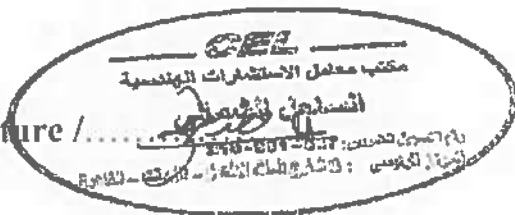
Attached here with the Soil Embankment delivered on 06/04/2022

Materials test

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

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

Signature /



Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	98.9
25	97.2
19	81.4
12.50	70.8
9.50	63.4
4.75	50.9
2.36	46.9
2.00	44.3
1.18	41.1
0.600	38.2
0.425	34.2
0.300	24.8
0.150	16.4

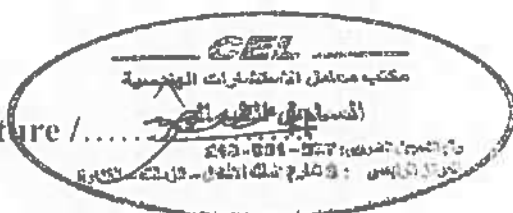
Signature /

Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

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

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

Signature /

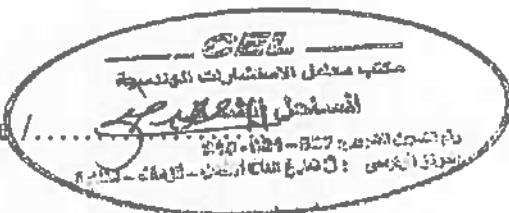


Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

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

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

Signature /.....

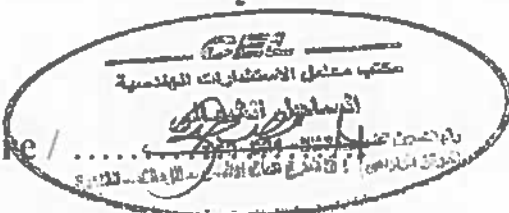


Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

Soil Classification According to Project Specs (Embankment)

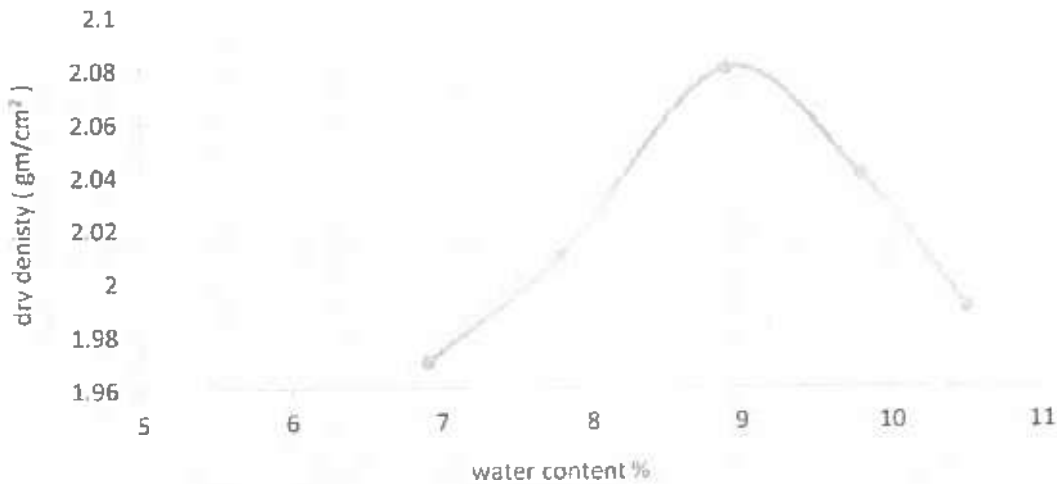
TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	44.3	Max 50 %	-----
0.425 mm (No. 40).	34.2	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.6	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature / 

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+380) : (461+580)
Delivery Date : 06/04/2022
Reporting Date : 12/04/2022
Reporting No. : 02
Sample No. : 02

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



- Max dry density (gm/cm³) : 2.08
- Optimum moisture content % : 8.9

Signature

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التوقيع: [Signature]
[Stamp]

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+380) : (461+580)
Delivery Date : 06/04/2022
Reporting Date : 12/04/2022
Reporting No. : 02
Sample No. : 02

Dear Gentleman,

Attached here with the Soil Embankment delivered on 06/04/2022

Materials test

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

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

Signature /



Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	98.9
25	97.2
19	81.4
12.50	70.8
9.50	63.4
4.75	50.9
2.36	46.9
2.00	44.3
1.18	41.1
0.600	38.2
0.425	34.2
0.300	24.8
0.150	16.4

Signature /

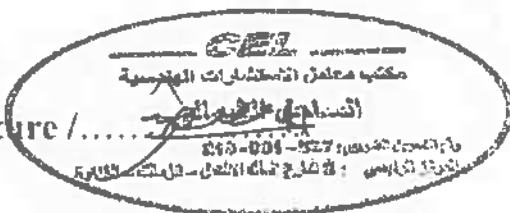
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 الاستشارات الهندسية
 3 El Malek El Afdal Street
 Zamaiek, Cairo.
 Tel. & Fax : 27367231 - 27363093

Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

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

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

Signature /

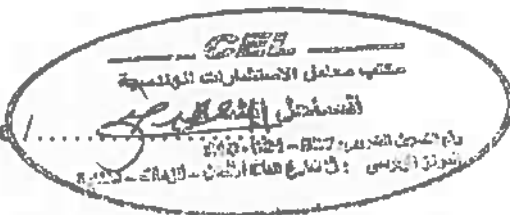


Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

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

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

Signature /.....



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+380) : (461+580)
Delivery Date : 06/04/2022
Reporting Date : 12/04/2022
Reporting No. : 02
Sample No. : 02

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	44.3	Max 50 %	-----
0.425 mm (No. 40).	34.2	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.6	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

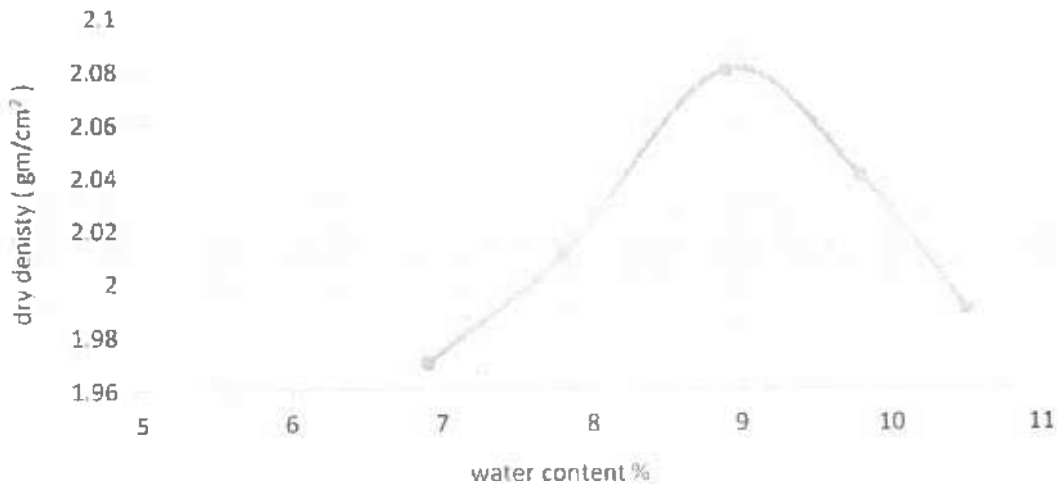
The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature /

CEL
مكتب محامل الاستشارات الهندسية
البريد الإلكتروني: info@cel-egypt.com
رقم الهاتف: 27367231 - 27363093
البريد الإلكتروني: info@cel-egypt.com

Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+380) : (461+580)
 Delivery Date : 06/04/2022
 Reporting Date : 12/04/2022
 Reporting No. : 02
 Sample No. : 02

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



- Max dry density (gm/cm³) : 2.08
- Optimum moisture content % : 8.9

Signature

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 المهندس / أحمد عبد الله
 مدير المختبر
 (تم التحقق من صحة الاختبار)



Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 02/03/2022
Report Date : 05/03/2022
Test location : Station 462+700 to 462+800
Type of soil : Native soil
Report No. : 012

Dear Gentleman,

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

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)



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7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



(02 of 6)



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مكتب معامل الاستشارات الهندسية

Determine the deformation and strength characteristics of soil

By the plate loading test according specifications

ASTM D 1196

Report

- Test location : Station 462+700 to 462+800
- TEST No. : 12
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	02/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	1.24	5.00 (Load 1)
2	1.37	5.00 (Load 2)

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(03 of 6)



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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co.
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka
 Test Date : 02/03/2022
 report date : 05/03/2022
 Location : Station 462+700 to 462+800
 Test No. : 012

Nonrepetitive Static Plate Load Tests of Soils ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.71	0.29	19.67	0.33	19.67	0.33	0.32
2	2.00	19.42	0.58	19.29	0.71	19.34	0.66	0.65
3	3.00	19.20	0.80	19.04	0.96	19.24	0.76	0.84
4	4.00	19.01	0.99	18.85	1.14	19.10	0.90	1.01
5	5.00	18.80	1.20	18.64	1.36	18.94	1.16	1.24

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.80	1.20	18.64	1.36	18.84	1.16	1.24
2	3.00	18.90	1.10	18.88	1.12	18.98	1.02	1.08
3	1.00	19.35	0.65	19.18	0.82	19.30	0.70	0.72
4	0.00	19.72	0.28	19.51	0.49	19.68	0.32	0.36

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.72	0.00	19.51	0.00	19.68	0.00	0.00
1	1.00	19.48	0.52	19.47	0.73	19.47	0.53	0.59
2	2.00	19.25	0.75	19.10	0.90	19.27	0.73	0.79
3	3.00	19.00	1.00	18.85	1.15	19.08	0.92	1.02
4	4.00	18.82	1.18	18.62	1.38	18.87	1.13	1.23
5	5.00	18.71	1.29	18.51	1.49	18.67	1.33	1.37

Unloading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.71	1.29	18.51	1.49	18.67	1.33	1.37
2	2.00	18.91	1.09	18.58	1.42	18.72	1.28	1.26
3	0.00	19.31	0.79	19.34	0.66	19.21	0.79	0.75

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 Signature :
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 مكتب معامل الاستشارات الهندسية

Company Name

: Sky Light Co.

Project

: Electric Express Train, from A' Ain Gokhna to Marse Matrouh Priority Sector (6) - Ainain to Foka

Test Date
report date

: 02/03/2022
: 05/03/2022

Location

: Station 462+700 to 462+800

Test No.

: 012

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p \cdot B \cdot (1 - \mu^2 / E_s) \cdot I$$

S (mm)

: Settlement immediately

p (kg/cm²)

: Stress at foundation level

B (m)

: Foundation Width

I

: Factor depends on the foundation shape and rigidity

E_s

: Modulus of elasticity

μ

: Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.32	1.00	1963	50	0.3	0.79	1135.1
2	0.65	2.00	3925	50	0.3	0.79	1106.0
3	0.84	3.00	5888	50	0.3	0.79	1253.8
4	1.01	4.00	7850	50	0.3	0.79	1423.6
5	1.24	5.00	9813	50	0.3	0.79	1449.4

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1279.6

kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.59	1.00	1963	50	0.3	0.79	605.8
2	0.78	2.00	3925	50	0.3	0.79	925.2
3	1.02	3.00	5888	50	0.3	0.79	1053.8
4	1.25	4.00	7850	50	0.3	0.79	1168.9
5	1.37	5.00	9813	50	0.3	0.79	1311.8

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1009.3

kg/cm²

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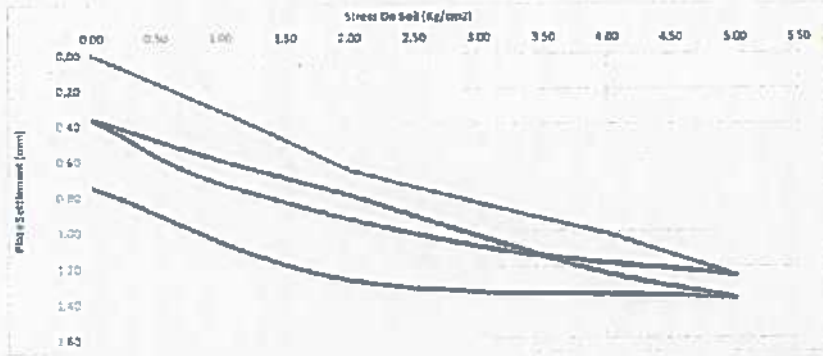
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Company Name
Project
Test Date
Report Date
Location
Test No.

Sky Light Co.
Electric Express Train, from Al Ain Sokhna to Marsa Matruh Priority Sector (B) - Alamein to Foka
02/03/2022
05/03/2022
Station 462+700 to 462+800
012

Nonrepetitive Static Plate Load Tests of Soils ASTM D1198



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1954	3925	5888	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.32	0.55	0.84	1.01	1.24

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm²)	5.00	3.00	1.00	0.00
Settlement (mm)	1.24	1.08	0.72	0.36

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5888	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.36	0.59	0.79	1.02	1.23	1.37

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm²)	5.00	2.00	0.00
Settlement (mm)	1.37	1.26	0.75

Signature:

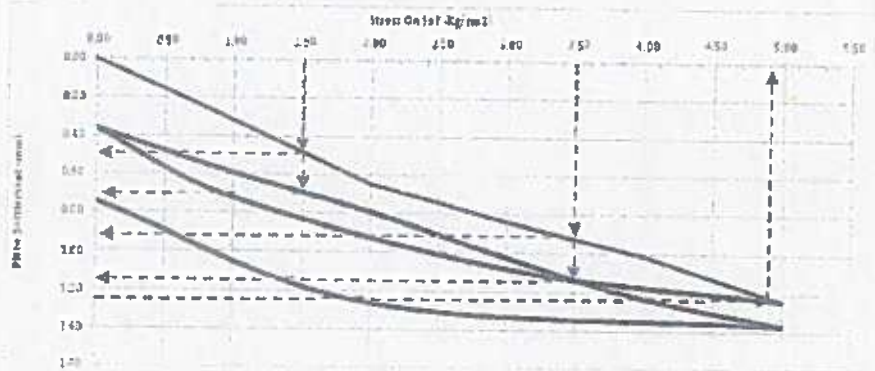
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16- Evaluation the Results of PLT No. (012) Station (462+700) to (462+800)

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1196



Loading (1)	0	1	2	3	4	5
Stage (Kg)	0	1993	3925	5838	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.32	0.65	0.84	1.01	1.24

UnLoading (1)	1	2	3	4
Stage (Kg)	9813	5888	1963	0
Stress (Kg/cm²)	5.00	3.00	1.00	0.00
Settlement (mm)	1.24	1.08	0.72	0.36

Loading (2)	0	1	2	3	4	5
Stage (Kg)	0.00	1983	3925	5888	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.35	0.69	0.79	1.02	1.23	1.37

UnLoading (2)	1	2	3
Stage (Kg)	7850	1963	0
Stress (Kg/cm²)	5.00	2.00	0.00
Settlement (mm)	1.37	1.26	0.76

Plate Load diameter (D) = 500 mm

(a) E_{v1} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 0.50 mm

- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 0.90 mm

- $\Delta S = S2 - S1 = 0.40$ mm

- $\Delta \sigma = 2.00$ kg/cm²

- $E_{v1} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 2.00) / 0.40 = (750) / 0.40 = 1875$ kg/cm²

(b) E_{v2} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 0.70 mm

- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 1.15 mm

- $\Delta S = S2 - S1 = 0.45$ mm

- $\Delta \sigma = 2.00$ kg/cm²

- $E_{v2} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 2.00) / 0.45 = (750) / 0.45 = 1667$ kg/cm²

(c) $E_{v2}/E_{v1} = 1667/1875 = 0.89$

(d) Modulus of Subgrade Reaction (K_v) corresponding to 1.25 mm ($\sigma = 4.90$ kg/cm²)

= $0.49 / 0.00125 = 392$ MN/m³



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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 04/04/2022
Reporting Date : 05/04/2022
Reporting No. : 85
Sample No. : 05

Dear Gentleman,

Attached here with the Soil Embankment delivered on 04/04/2022

Materials test

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

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

Signature /



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Tel. & Fax : 27367231 - 27363093



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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 04/04/2022
Reporting Date : 05/04/2022
Reporting No. : 85
Sample No. : 05

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	88.4
25	81.6
19	72.8
12.50	61.7
9.50	55.8
4.75	48.2
2.36	46.1
2.00	42.3
1.18	37.2
0.600	30.7
0.425	26.1
0.300	20.6
0.150	17.1

Signature: 
مكتب معامل الاستشارات الهندسية
219-894-537
رقم التسجيل المميز : 219-894-537
الطابق 3، شارع الملك الأفضل، الزمالك



Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St.(462+600) : (464+600)
Delivery Date : 04/04/2022
Reporting Date : 05/04/2022
Reporting No. : 85
Sample No. : 05

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	10.1

Signature / 
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د. محمد عبد الله
219-991-537
المسجلين، 3 شارع الملك الأفندي - عين شمس

CEL

Consulting Engineering Bureau & Laboratories
مكتب بحايل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 04/04/2022
Reporting Date : 05/04/2022
Reporting No. : 85
Sample No. : 05

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

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

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الاستشارات الهندسية
رقم التسجيل المميز: 2430-011-001
الشارع: 3 شارع الملك الأفضل - الزمالة

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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 04/04/2022
Reporting Date : 05/04/2022
Reporting No. : 85
Sample No. : 05

Soil Classification According to Project Specs (Embankment)

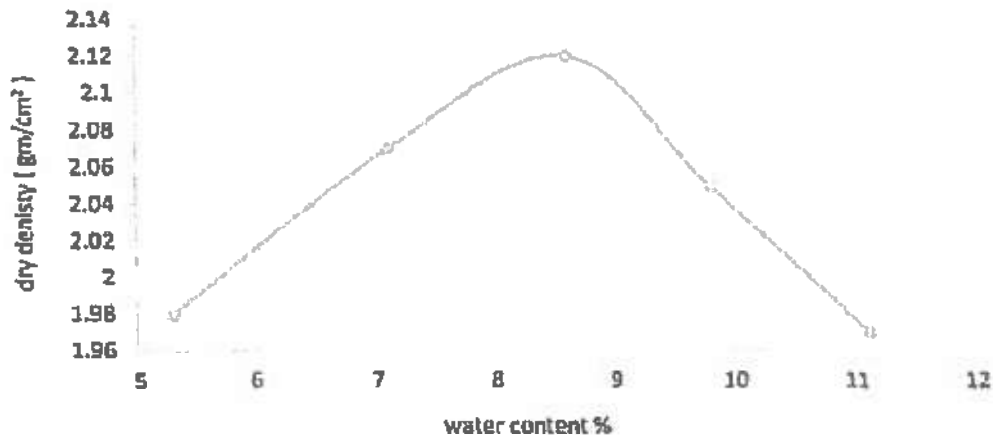
TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	42.3	Max 50 %	—
0.425 mm (No. 40).	26.1	Max 30 %	Max 50 %
0.075 mm (No. 200).	10.1	Max 15 %	Max 15 %
Characteristics of fraction passing 0,425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature / 

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 04/04/2022
Reporting Date : 05/04/2022
Reporting No. : 85
Sample No. : 05

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



- Max dry density (gm/cm³) : 2.12
- Optimum moisture content % : 8.6

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الاستشارات الهندسية
رقم التسجيل الموحّد : 219-981-637
القاهرة - شارع الملك فيصل - الأزمانك



Consulting Engineering Bureau & laboratories

مكتب معامل الاستشارات الهندسية

Company Name : سكاي لايت

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

Location : St (460+600) : (464+600)

Type of sample : Soil Embankment

Delivery Date : 26/03/2022

Reporting Date : 04/04/2022

Reporting No. : 06

Sample No. : 06

Dear Gentleman,

Attached here with the delivered on 26 / 03 / 2022

Materials test

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

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

Signature



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www.eel-

Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 26/03/2022
Reporting Date : 04/04/2022
Reporting No. : 06
Sample No. : 06

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	98.2
25	89.3
19	82.7
12.50	73.2
9.50	64.4
4.75	45.5
2.36	39.7
2.00	38.3
1.18	34.9
0.600	34.1
0.425	28.6
0.300	22.8
0.150	15.7



Signature /

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 تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

Company Name : سكاي لايت

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

Location : St (460+600) : (464+600)

Type of sample : Soil Embankment

Delivery Date : 26/03/2022

Reporting Date : 04/04/2022

Reporting No. : 06

Sample No. : 06

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	14.8

Signature / 215-984537
مكتب معامل الاستشارات الهندسية
79 شارع النخلة
المنصورة، 3 شارع الملك الأفضل، الزمالك

Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 26/03/2022
Reporting Date : 04/04/2022
Reporting No. : 06
Sample No. : 06

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

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

Signature / ...



Company Name : سكاي لايت
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : St (460+600) : (464+600)
 Type of sample : Soil Embankment
 Delivery Date : 26/03/2022
 Reporting Date : 04/04/2022
 Reporting No. : 06
 Sample No. : 06

Soil Classification According To Project Specs (Embankment)

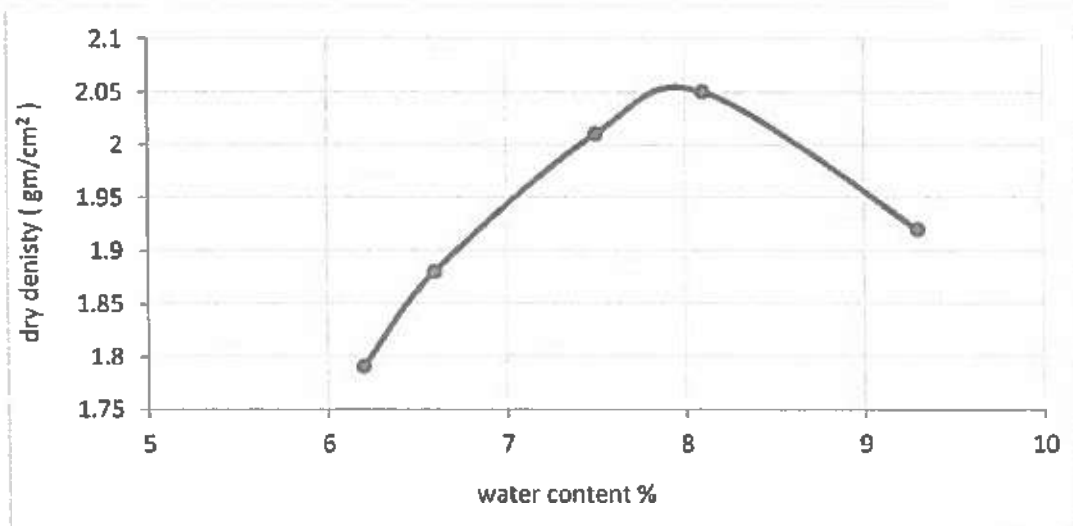
TEST	Results (%)	Limits according Projects Specs		
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	38.3	Max 50 %	-----	-----
0.425 mm (No. 40).	28.6	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	14.8	Max 15 %	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)				
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

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

Signature / 

Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 26/03/2022
Reporting Date : 04/04/2022
Reporting No. : 06
Sample No. : 06

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



- Max dry density (gm/cm³) : 2.05
- Optimum moisture content % : 8.1

Signature



Company Name : سكاي لايت
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : St (460+600) : (464+600)
 Type of sample : Soil Embankment
 Delivery Date : 26/03/2022
 Reporting Date : 04/04/2022
 Reporting No. : 06
 Sample No. : 06

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

penetration		stress on piston (Mpa)
Mm	Inch	
0.64	0.025	1.82
1.27	0.050	1.97
1.91	0.075	2.06
2.54	0.100	2.34
3.18	0.125	2.49
3.81	0.150	2.66
4.45	0.175	2.98
5.08	0.200	3.12
5.71	0.225	3.24
6.35	0.250	3.39

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	33.9
	6.90	2.34	

Notes :

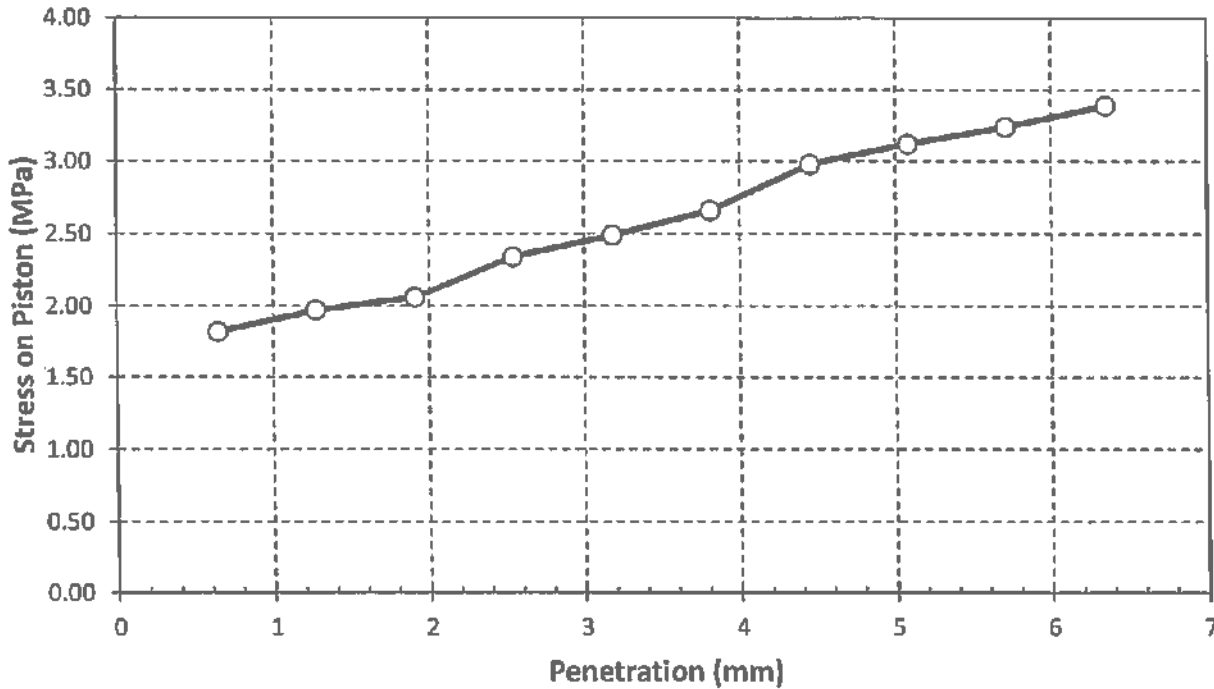
- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.05 (gm /cm³) at 8.1% optimum water content.
- 3- Surcharge from 4.58 Kg

Signature /



Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 26/03/2022
Reporting Date : 04/04/2022
Reporting No. : 06
Sample No. : 06

ASTM D-1883



Signature / 
مكتب معامل الاستشارات الهندسية
الاحياء والكيمياء
للمهندسين والباحثين
ج.م.ع. ٢١٩-٤١١٥٣١
القاهرة - مصر



Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 27/03/2022
Report Date : 28/03/2022
Test location : Station 462+900 to 463+000
Type of soil : Native soil
Report No. : 013

Dear Gentleman,

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

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)



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7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



(02 of 6)



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مكتب معامل الاستشارات الهندسية

Determine the deformation and strength characteristics of soil
By the plate loading test according specifications
ASTM D 1196

Report

- Test location : Station 462+900 to 463+000
- TEST No. : 13
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	27/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	2.31	5.00 (Load 1)
2	2.42	5.00 (Load 2)



(03 of 6)



Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co.
Project : Electric Express Train, from Al Ain Bakhna to Marsa Matrouh Priority Sector (6) Almain to Foka
Test Date : 27/03/2022
report date : 28/03/2022
Location : Station 462+900 to 463+000
Test No. : 013

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.58	0.42	19.55	0.45	19.47	0.53	0.47
2	2.00	19.15	0.85	19.09	0.91	19.00	1.00	0.92
3	3.00	18.70	1.30	18.55	1.45	18.62	1.38	1.38
4	4.00	18.30	1.70	18.00	2.00	18.17	1.83	1.84
5	5.00	17.79	2.21	17.40	2.60	17.87	2.13	2.31

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	17.79	2.21	17.40	2.60	17.87	2.13	2.31
2	3.00	17.90	2.10	17.87	2.13	17.97	2.03	2.09
3	1.00	18.60	1.40	18.30	1.70	18.53	1.47	1.52
4	0.00	19.05	0.95	18.95	1.05	19.20	0.80	0.93

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.05	0.00	18.95	0.00	19.20	0.00	0.00
1	1.00	18.65	1.35	18.50	1.50	18.74	1.26	1.37
2	2.00	18.35	1.65	18.20	1.80	18.43	1.57	1.71
3	3.00	18.05	1.95	17.80	2.20	18.20	1.80	1.98
4	4.00	17.83	2.17	17.52	2.48	18.02	1.98	2.21
5	5.00	17.64	2.36	17.25	2.75	17.85	2.15	2.42

Unloading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	17.64	2.36	17.25	2.75	17.85	2.15	2.42
2	2.00	17.74	2.26	17.35	2.65	17.95	2.05	2.32
3	0.00	18.00	1.10	18.75	1.25	19.10	0.90	1.08

CEL
Signature: _____
Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية



Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name

: Sky Light Co.

Project

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

Test Date
report date

: 27/03/2022
: 28/03/2022

Location

: Station 462+800 to 463+000

Test No.

: 013

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p \cdot B (1 - \mu^2 / E_s) \cdot I$$

S (mm) : Settlement Immediately

P (kg/cm²) : Stress at foundation level

B (cm) : Foundation Width

I : Factor depends on the foundation shape and rigidity

E_s : Modulus of elasticity

μ : Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.47	1.00	1963	50	0.3	0.79	770.2
2	0.92	2.00	3925	50	0.3	0.79	781.4
3	1.38	3.00	5888	50	0.3	0.79	783.3
4	1.84	4.00	7850	50	0.3	0.79	780.0
5	2.31	5.00	9813	50	0.3	0.79	776.9

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

778.4 kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	1.37	1.00	1963	50	0.3	0.79	262.4
2	1.71	2.00	3925	50	0.3	0.79	421.2
3	1.98	3.00	5888	50	0.3	0.79	543.7
4	2.21	4.00	7850	50	0.3	0.79	650.6
5	2.42	5.00	9813	50	0.3	0.79	742.7

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

524.1 kg/cm²



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Zamalek, Cairo.

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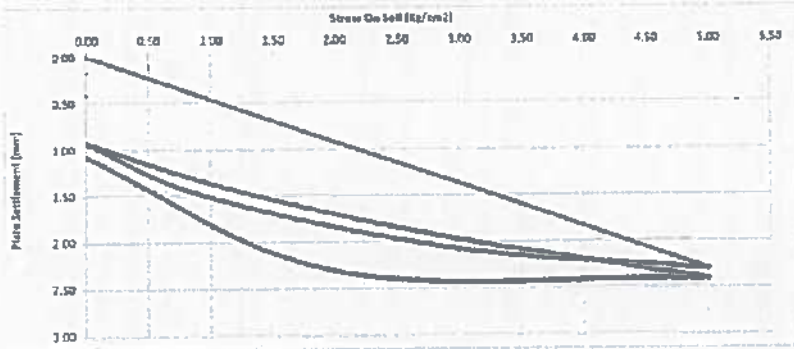
Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Company Name
Project
Test Date
report date
Location
Test No.

: Sky Light Co.
: Electric Express Train, from Al Ain Sokhna to Marsa Matruh Priority Sector (6) - Alamein to Foka
: 27/03/2022
: 28/03/2022
: Station 462+996 to 463+000
: 013

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1196



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1963	3925	5888	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.47	0.92	1.38	1.84	2.31

Unloading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm2)	5.00	3.00	1.00	0.00
Settlement (mm)	2.31	2.09	1.52	0.93

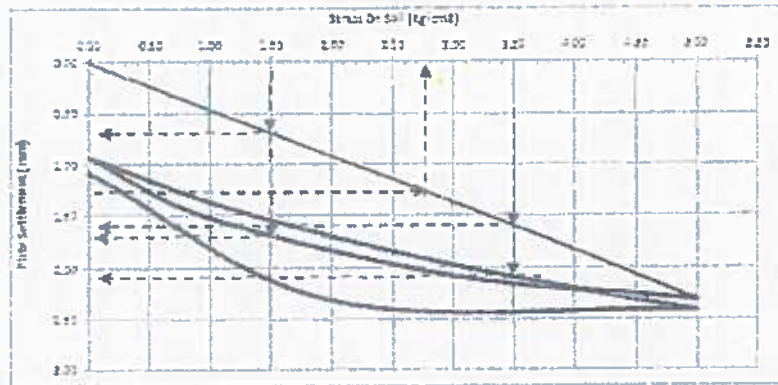
Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5888	7850	9813
Stress (Kg/cm2)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.93	1.37	1.77	2.15	2.51	2.82

Unloading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm2)	5.00	2.00	0.00
Settlement (mm)	2.42	2.32	1.08

Signature
Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

5- Evaluation the Results of PLT No. (03) Station (462+900) to (463+000)

Nonrepetitive Static Plate Load Tests of Soils ASTM D1198



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1963	3925	5888	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.47	0.92	1.39	1.84	2.21

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm²)	5.00	3.00	1.00	0.00
Settlement (mm)	2.21	2.05	1.52	0.93

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5888	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.53	1.37	1.71	1.93	2.21	2.42

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm²)	5.00	2.00	0.00
Settlement (mm)	2.42	2.32	1.08

Plate Load diameter (D) = 500 mm

(a) E_{v1} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 0.70 mm
- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 1.60 mm
- $\Delta S = S2 - S1 = 0.90$ mm
- $\Delta \sigma = 2.00$ kg/cm²
- $E_{v1} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 2.00) / 0.90 = (750) / 0.90 = 833$ kg/cm²

(b) E_{v2} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 1.70 mm
- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 2.10 mm
- $\Delta S = S2 - S1 = 0.50$ mm
- $\Delta \sigma = 2.00$ kg/cm²
- $E_{v2} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 2.00) / 0.50 = (750) / 0.50 = 1500$ kg/cm²
- (c) $E_{v2} / E_{v1} = 1500 / 833 = 1.80$

(d) Modulus of Subgrade Reaction (K_s) corresponding to 1.25 mm ($\sigma = 2.75$ kg/cm²)
 $= 0.275 / 0.00125 = 220$ MN/m³



Consulting Engineering Bureau & Laboratories

مكتب معامِل الاستشارات الهندسية

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 27/03/2022
Report Date : 28/03/2022
Test location : Station 463+000 to 463+100
Type of soil : Native soil
Report No. : 014

Dear Gentleman,

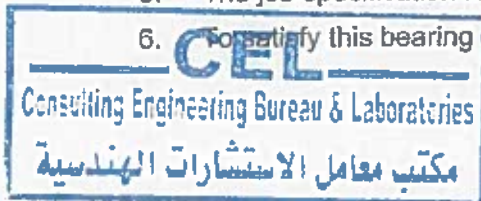
According to the above mentioned subject the test performed as follows:-

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial Indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required



(01 of 6)

7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing

Determine the deformation and strength characteristics of soil
By the plate loading test according specifications
ASTM D 1196

Report

- Test location : Station 463+000 to 463+100
- TEST No. : 14
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	27/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	1.03	5.00 (Load 1)
2	1.05	5.00 (Load 2)



(03 of 6)



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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co.
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka
Test Date : 27/03/2022
report date : 28/03/2022
Location : Station 463+000 to 463+100
Test No. : 014

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1198

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.55	0.45	19.70	0.30	19.67	0.33	0.36
2	2.00	19.20	0.80	19.52	0.48	19.50	0.50	0.59
3	3.00	18.98	1.02	19.40	0.60	19.38	0.62	0.75
4	4.00	18.75	1.25	19.27	0.73	19.25	0.75	0.91
5	5.00	18.65	1.35	19.15	0.85	19.12	0.88	1.03

Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.65	1.35	19.15	0.85	19.12	0.88	1.03
2	3.00	19.00	1.00	19.20	0.80	19.22	0.78	0.86
3	1.00	19.30	0.70	19.45	0.55	19.42	0.58	0.61
4	0.00	19.70	0.30	19.85	0.15	19.80	0.20	0.22

Loading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.70	0.00	19.85	0.00	19.80	0.00	0.00
1	1.00	19.31	0.69	19.54	0.40	19.49	0.51	0.55
2	2.00	19.05	0.95	19.40	0.60	19.35	0.65	0.73
3	3.00	18.84	1.16	19.30	0.70	19.27	0.73	0.86
4	4.00	18.70	1.30	19.23	0.77	19.20	0.80	0.96
5	5.00	18.59	1.41	19.15	0.85	19.10	0.90	1.05

Unloading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.60	1.41	19.15	0.85	19.10	0.90	1.05
2	2.00	19.70	1.22	19.20	0.80	19.15	0.85	0.96
3	0.00	19.12	0.68	19.31	0.69	19.25	0.74	0.77

Signature

Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

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

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Company Name

: Sky Light Co.

Project

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

Test Date

: 27/03/2022

report date

: 28/03/2022

Location

: Station 463+000 to 463+100

Test No.

: 014

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p \cdot B (1 - \mu^2 / E_s) \cdot I$$

S (mm)

: Settlement (immediately)

p (kg/cm²)

: Stress at foundation level

B (m)

: Foundation Width

I

: Factor depends on the foundation shape and rigidity

E_s

: Modulus of elasticity

μ

: Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.36	1.00	1963	50	0.3	0.79	998.5
2	0.59	2.00	3925	50	0.3	0.79	1211.6
3	0.75	3.00	5888	50	0.3	0.79	1444.2
4	0.91	4.00	7850	50	0.3	0.79	1580.0
5	1.03	5.00	9813	50	0.3	0.79	1750.6

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1397.0 kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E _s (kg/cm ²)
1	0.55	1.00	1963	50	0.3	0.79	649.6
2	0.73	2.00	3925	50	0.3	0.79	980.3
3	0.85	3.00	5888	50	0.3	0.79	1249.1
4	0.96	4.00	7850	50	0.3	0.79	1502.9
5	1.05	5.00	9813	50	0.3	0.79	1706.3

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1217.6 kg/cm²





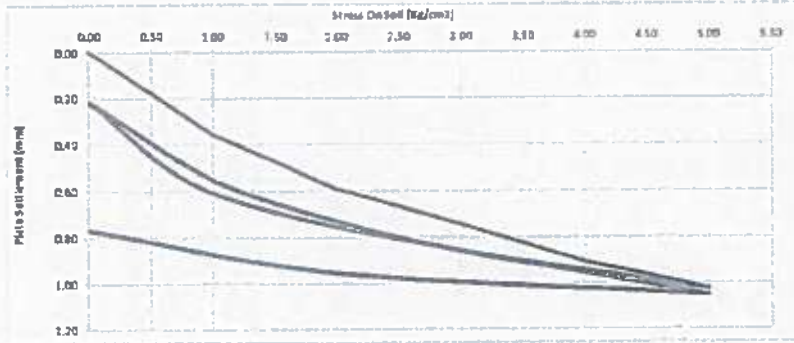
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Company Name
Project
Test Date
report date
Location
Test No.

: Sky Light Co.
: Electric Express Train, from Al Ain Sokhna to Marsa Matruh Priority Sector (5) - Alsmaln to Foka
: 27/03/2022
: 28/03/2022
: Station 453+000 to 483+100
: D14

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1186



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1963	3925	5888	7850	9813
Stress (Kg/cm ²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.36	0.59	0.75	0.91	1.03

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm ²)	5.00	3.00	1.00	0.00
Settlement (mm)	1.03	0.86	0.61	0.22

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5888	7850	9813
Stress (Kg/cm ²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.22	0.55	0.73	0.86	0.96	1.05

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm ²)	5.00	2.00	0.00
Settlement (mm)	1.05	0.96	0.77

Signature

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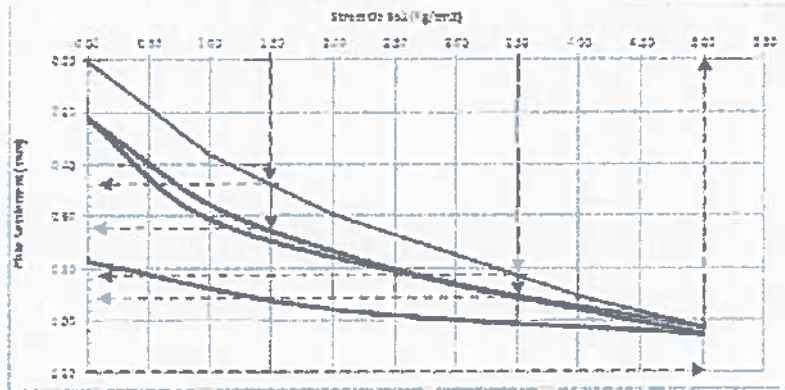
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6- Evaluation the Results of PLT No. (04) Station (463+000) to (463+100)

Nonrepetitive Static Plate Load Tests of Soils ASTM D1198



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	125	250	375	500	625
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.36	0.56	0.75	0.81	1.03

UnLoading (1)	1	2	3	4
Stage(Kg)	5813	5888	1983	0
Stress (Kg/cm²)	5.00	5.00	1.98	0.00
Settlement (mm)	1.03	0.85	0.61	0.22

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	125	250	375	500	625
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.22	0.56	0.73	0.85	0.88	1.05

UnLoading (2)	1	2	3
Stage(Kg)	7850	1983	0
Stress (Kg/cm²)	5.00	2.00	0.00
Settlement (mm)	1.05	0.88	0.77

Plate Load diameter (D) = 500 mm

(a) E_{v1} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 0.48 mm

- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 0.84 mm

- $\Delta S = S2 - S1 = 0.36$ mm

- $\Delta \sigma = 2.00$ kg/cm²

- $E_{v1} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 2.00) / 0.36 = (750) / 0.36 = 2083$ kg/cm²

(b) E_{v2} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 0.64 mm

- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 0.92 mm

- $\Delta S = S2 - S1 = 0.28$ mm

- $\Delta \sigma = 2.00$ kg/cm²

- $E_{v2} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 2.00) / 0.28 = (750) / 0.28 = 2679$ kg/cm²

(c) $E_{v2} / E_{v1} = 2679 / 2083 = 1.29$

(d) Modulus of Subgrade Reaction (K_s) corresponding to 1.25 mm ($\sigma > 5.00$ kg/cm²)

$> 0.50 / 0.00125 > 400$ MN/m³

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- E_{v1} is in the range of 789 - 3750 kg/cm² which is more than 20 MPa (200 kg/cm²), and E_{v2} is in the range of 1250 - 7500 kg/cm² which is more than 30 MPa (300 kg/cm²) as recommended by the geotechnical report prepared by CiveCon Group for native ground.
- The modulus of subgrade reaction (K_s) is in the range of 200 - >400 MN/m³ (20.0 - >40 kg/cm³).

Consultant Engineer

Prof. Dr. M. Tarek Fouad





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مكتب معامل الاستشارات الهندسية

Company : Sky Light Co.

Project : Electric Express Train, from Al Ain Sokhna to Marsa
Matrouh Priority Sector (6) – Alamein to Foka
Subject : Determine the deformation and strength characteristics of
soil by the plate loading test according ASTM D 1196 and
project specs requirements
Test Date : 27/03/2022
Report Date : 28/03/2022
Test location : Station 463+100 to 463+200
Type of soil : Native soil
Report No. : 015

Dear Gentleman,

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

Apparatus:

1. Loading plates consists of two plates with 500 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
7. Reaction loading system by machine with weight approximately 15 ton
8. Calibration certificates are attached.

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 500 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. The job specification required soil bearing capacity equal (1.50 Kg/cm²)
6. To satisfy this bearing capacity the loading by 3 times the required

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(01 of 6)

7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



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مكتب معامل الاستشارات الهندسية

Determine the deformation and strength characteristics of soil
By the plate loading test according specifications
ASTM D 1196

Report

- Test location : Station 463+100 to 463+200
- TEST No. : 15
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	27/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	1.53	5.00 (Load 1)
2	1.67	5.00 (Load 2)



(03 of 6)



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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light Co.
Project : Electric Express Train, from Al Ain Sekhna to Marsa Matrouh Priority Sector (B) - Alamin to Foka
Test Date : 27/03/2022
report date : 28/03/2022
Location : Station 463+100 to 463+200
Test No. : 015

Nonrepetitive Static Plate Load Tests of Soils
ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.38	0.62	19.45	0.55	19.60	0.40	0.52
2	2.00	18.90	1.10	19.10	0.90	19.45	0.55	0.85
3	3.00	18.55	1.45	18.85	1.15	19.40	0.60	1.07
4	4.00	18.20	1.80	18.65	1.35	19.20	0.80	1.32
5	5.00	17.90	2.10	18.50	1.50	19.00	1.00	1.53

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	17.90	2.10	18.50	1.50	19.00	1.00	1.53
2	3.00	18.20	1.80	18.80	1.20	19.17	0.83	1.28
3	1.00	18.80	1.20	19.00	1.00	19.48	0.52	0.91
4	0.00	19.30	0.70	19.55	0.45	19.60	0.20	0.45

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.30	0.00	19.55	0.00	19.80	0.00	0.00
1	1.00	18.79	1.21	19.18	0.82	19.58	0.42	0.82
2	2.00	18.48	1.52	18.92	1.08	19.44	0.56	1.05
3	3.00	18.20	1.80	18.68	1.32	19.18	0.82	1.31
4	4.00	18.00	2.00	18.54	1.46	19.00	1.00	1.49
5	5.00	17.85	2.15	18.25	1.75	18.90	1.10	1.67

Unloading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	17.85	2.15	18.25	1.75	18.90	1.10	1.67
2	2.00	18.19	1.81	18.57	1.43	19.00	1.00	1.41
3	0.00	19.20	0.80	19.50	0.50	19.55	0.45	0.58

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Company Name

: Sky Light Co.

Project

: Electric Express Train, from Al Ain Sphina to Marsa Matrouh Priority Sector (B) - Alamein to Fuka

Test Date

: 27/03/2022

report date

: 28/03/2022

Location

: Station 463+100 to 463+200

Test No.

: 015

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p \cdot B (1 - \mu^2 / E_p) \cdot I$$

S (mm) : Settlement immediately

π (kg/cm²) : Stress at foundation level

B (cm) : Foundation Width

I : Factor depends on the foundation shape and rigidity

E_p : Modulus of elasticity

μ : Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E_p (kg/cm ²)
1	0.52	1.00	1963	50	0.3	0.79	686.2
2	0.85	2.00	3925	50	0.3	0.79	845.8
3	1.07	3.00	5888	50	0.3	0.79	1021.0
4	1.32	4.00	7850	50	0.3	0.79	1092.0
5	1.53	5.00	9813	50	0.3	0.79	1172.1

Average value of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

951.5 kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	I	E_p (kg/cm ²)
1	0.82	1.00	1963	50	0.3	0.79	440.1
2	1.05	2.00	3925	50	0.3	0.79	682.5
3	1.31	3.00	5888	50	0.3	0.79	821.1
4	1.49	4.00	7850	50	0.3	0.79	967.1
5	1.67	5.00	9813	50	0.3	0.79	1078.4

Average value of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

797.9 kg/cm²



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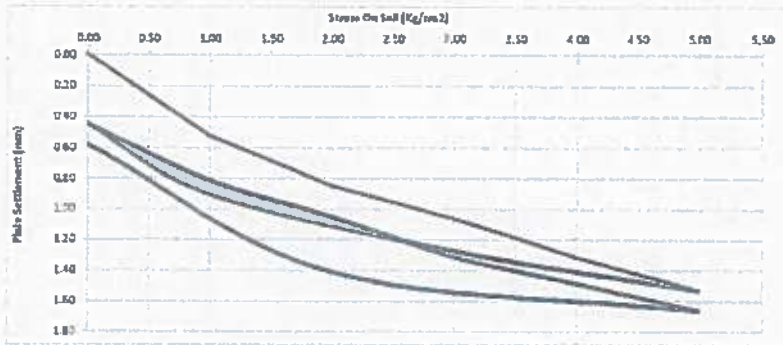
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Company Name
Project
Test Date
report date
Location
Test No.

: Sky Light Co.
Electric Express Train, from Al Ain Sokhna to Marsa Matruh Priority Sector (6) - Alamein to Foka
: 27/03/2022
: 28/03/2022
: Station 463+100 to 467+200
015

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1196



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1263	1925	3688	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.52	0.85	1.07	1.32	1.53

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm²)	5.00	3.00	1.00	0.00
Settlement (mm)	1.53	1.28	0.91	0.45

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1263	1925	3688	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.45	0.80	1.05	1.31	1.49	1.67

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm²)	3.00	2.00	0.00
Settlement (mm)	1.67	1.41	0.58

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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 91
Sample No. : 11

Dear Gentleman,

Attached here with the Soil Embankment delivered on 09/04/2022

Materials test

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

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

Signature



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 91
Sample No. : 11

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	100
25	91.9
19	86.4
12.50	78.2
9.50	73.3
4.75	54.2
2.36	50.5
2.00	48.1
1.18	41.2
0.600	37.2
0.425	35.3
0.300	26.4
0.150	18.0

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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 91
Sample No. : 11

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	14.1

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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 91
Sample No. : 11

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

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

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مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 91
Sample No. : 11

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	48.1	Max 50 %	-----
0.425 mm (No. 40).	35.3	Max 30 %	Max 50 %
0.075 mm (No. 200).	14.1	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	---	-----
Plasticity index	NP	Max 6 %	Max 6 %

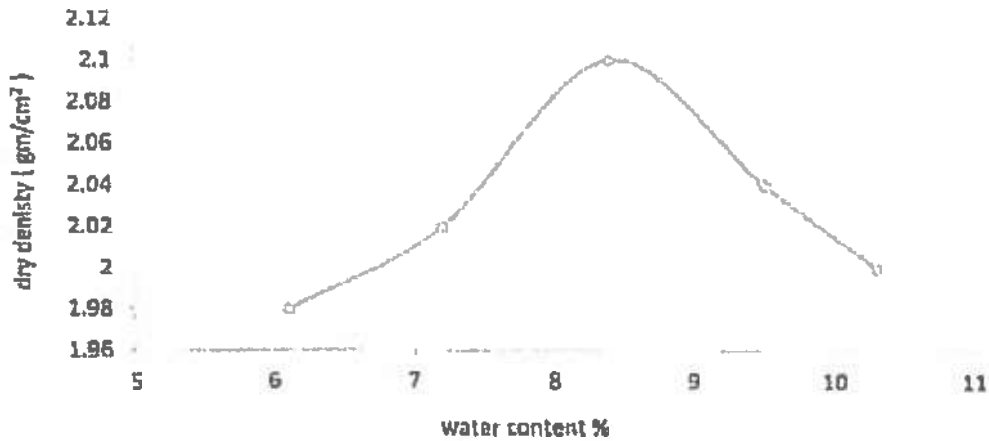
The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature /



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (462+600) : (464+600)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 91
Sample No. : 11

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



- Max dry density (gm/cm³) : 2.10
- Optimum moisture content % : 8.4

Signature / 



Consulting Engineering Bureau & laboratories

مكتب معامل الاستشارات الهندسية

Company Name : سكاي لايت

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

Location : St (460+600) : (464+600)

Type of sample : Soil Embankment

Delivery Date : 02/04/2022

Reporting Date : 09/04/2022

Reporting No. : 12

Sample No. : 12

Dear Gentleman,

Attached here with the delivered on 02 / 04 / 2023

Materials test

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

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



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Company Name : سكاى لايت

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

Location : St (460+600) : (464+600)

Type of sample : Soil Embankment

Delivery Date : 02/04/2022

Reporting Date : 09/04/2022

Reporting No. : 12

Sample No. : 12

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.6
25	88.4
19	81.2
12.50	75.2
9.50	66.4
4.75	47.6
2.36	44.1
2.00	37.2
1.18	35.1
0.600	33.5
0.425	26.7
0.300	24.7
0.150	14.9

Signature /



3 El Malek El Afdal Street
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٣ ش الملك الأفضل
الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

3

Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 02/04/2022
Reporting Date : 09/04/2022
Reporting No. : 12
Sample No. : 12

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

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

Signature / 

Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 02/04/2022
Reporting Date : 09/04/2022
Reporting No. : 12
Sample No. : 12

Soil Classification According To Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	37.2	Max 50 %	-----	-----
0.425 mm (No. 40).	26.7	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	13.1	Max 15 %	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)				
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

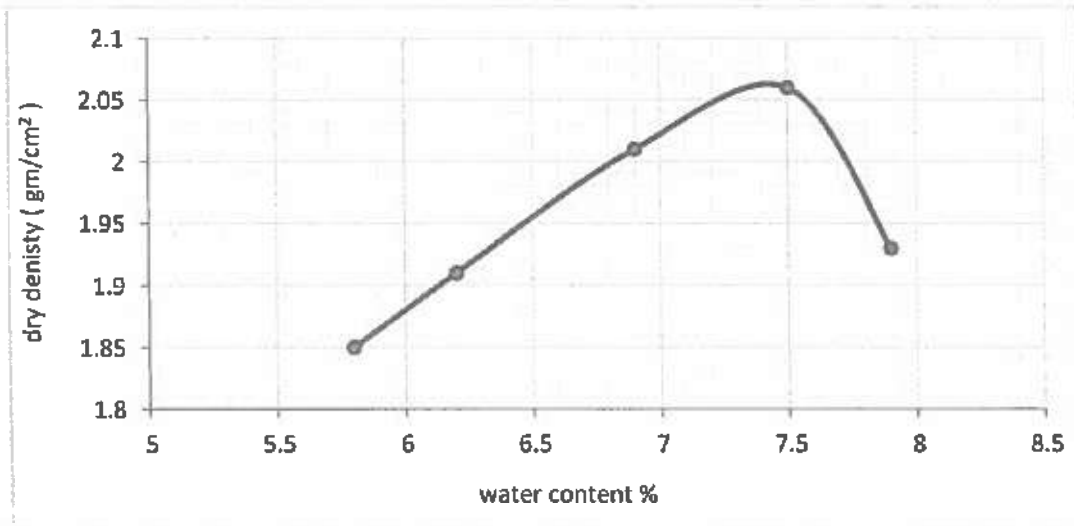
The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature /



Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 02/04/2022
Reporting Date : 09/04/2022
Reporting No. : 12
Sample No. : 12

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



- Max dry density (gm/cm³) : 2.06
- Optimum moisture content % : 7.5

Signature



Company Name : سكاي لايت

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

Location : St (460+600) : (464+600)

Type of sample : Soil Embankment

Delivery Date : 02/04/2022

Reporting Date : 09/04/2022

Reporting No. : 12

Sample No. : 12

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

penetration		stress on piston (Mpa)
Mm	Inch	
0.64	0.025	1.95
1.27	0.050	2.04
1.91	0.075	2.12
2.54	0.100	2.33
3.18	0.125	2.45
3.81	0.150	2.81
4.45	0.175	3.19
5.08	0.200	3.33
5.71	0.225	3.46
6.35	0.250	3.61

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	33.7
	6.90	2.33	

Notes :

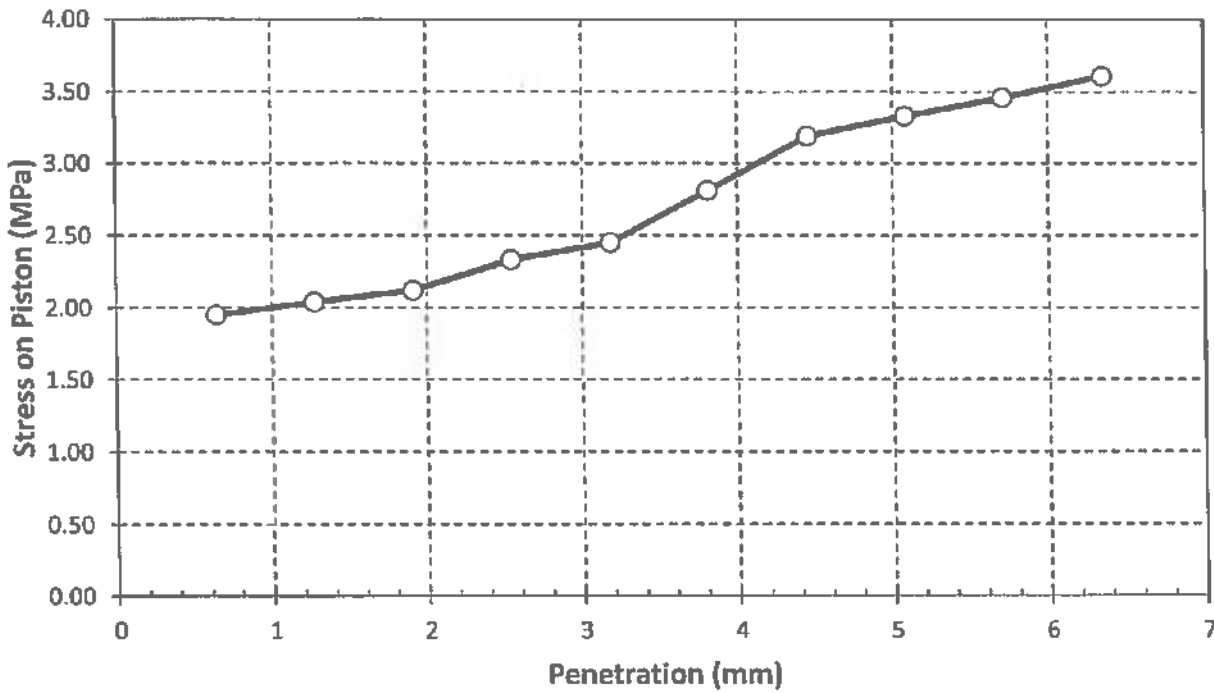
- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.06 (gm /cm³) at 7.5% optimum water content.
- 3- Surcharge load 4.50 Kg.

Signature



Company Name : سكاي لايت
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St (460+600) : (464+600)
Type of sample : Soil Embankment
Delivery Date : 02/04/2022
Reporting Date : 09/04/2022
Reporting No. : 12
Sample No. : 12

ASTM D-1883



Signature





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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (463+200)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 93
Sample No. : 13

Dear Gentleman,

Attached here with the Soil Embankment delivered on 09/04/2022

Materials test

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

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

Signature /



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (463+200)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 93
Sample No. : 13

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	100
25	91.9
19	86.4
12.50	78.2
9.50	73.3
4.75	54.2
2.36	50.5
2.00	48.1
1.18	41.2
0.600	37.2
0.425	35.3
0.300	26.4
0.150	18.0


Signature

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (463+200)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 93
Sample No. : 13

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	14.1

Signature 

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (463+200)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 93
Sample No. : 13

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

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

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214-094-437
Signature

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (463+200)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 93
Sample No. : 13

Soil Classification According to Project Specs (Embankment)

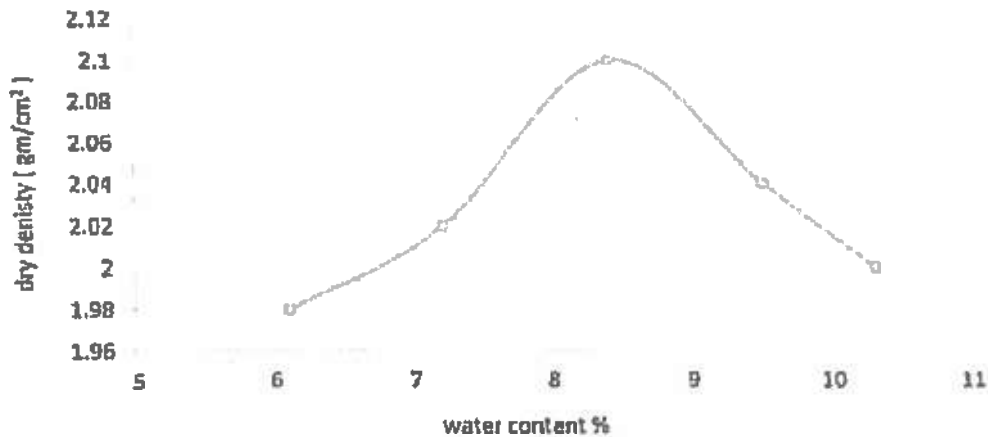
TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	48.1	Max 50 %	-----
0.425 mm (No. 40).	35.3	Max 30 %	Max 50 %
0.075 mm (No. 200).	14.1	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature 
مهندس محمد عبد الله عبد الله
رئيس قسم الاختبارات
مكتب محامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+600) : (463+200)
Delivery Date : 09/04/2022
Reporting Date : 10/04/2022
Reporting No. : 93
Sample No. : 13

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



- Max dry density (gm/cm³) : 2.10
- Optimum moisture content % : 8.4

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219-884-037
رقم التسجيل المبرمج : 219-884-037
الطابق 3، شارع الملك الأفندي، الزمالك



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7. Start loading with equal increment according the calculation sheet (attached)
8. The loading until 9.813 ton to achieve soil stress (5.00 Kg/cm²)
9. Records the reading of dial gauge for settlement
10. Remove the loads
11. Record the deformation of the soil under the loading plate

Report

1. Evaluation and representation of results
2. load settlement curve
3. The test report content the following :-
 - Location of test site
 - Dimension of loading plates
 - Measuring device used
 - Type of soil
 - Type of bedding material below the plate
 - Weather condition
 - Time and date of measurement
 - Time of start and compilation of test
 - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress
 - Load – settlement curve
 - Description of the soil conditions below the plate after testing



(02 of 6)

Determine the deformation and strength characteristics of soil
By the plate loading test according specifications

ASTM D 1196

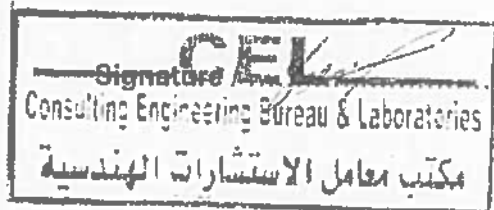
Report

- Test location : Station 464+200 to 464+300
- TEST No. : 26
- Type of soil : Native soil

Item	Descriptions
- Type of bedding material below the plate	Natural sand
- Plate Diameter (mm)	500
- date of measurement	27/03/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

No.	settlement (mm)	Soil stress Kg/cm ²
1	1.26	5.00 (Load 1)
2	1.40	5.00 (Load 2)



(03 of 6)

Company Name : Sky Light Co.
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Alamein to Foka
 Test Date : 27/03/2022
 report date : 28/03/2022
 Location : Station 464+200 to 464+300
 Test No. : 026

Nonreplicative Static Plate Load Tests of Soils
ASTM D 1196

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	1.00	19.69	0.31	19.65	0.35	19.65	0.35	0.34
2	2.00	19.40	0.60	19.27	0.73	19.32	0.68	0.67
3	3.00	19.18	0.82	19.07	0.93	19.22	0.78	0.86
4	4.00	19.00	1.00	18.84	1.16	19.08	0.92	1.03
5	5.00	18.76	1.22	18.62	1.38	18.82	1.18	1.26

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.78	1.22	18.62	1.38	18.82	1.18	1.26
2	3.00	19.00	1.00	18.96	1.04	18.90	1.10	1.06
3	1.00	19.24	0.76	19.22	0.78	19.27	0.73	0.76
4	0.00	19.70	0.30	19.50	0.50	19.60	0.40	0.40

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	19.70	0.00	19.50	0.00	19.60	0.00	0.00
1	1.00	19.46	0.54	19.25	0.75	19.45	0.55	0.61
2	2.00	19.23	0.77	19.08	0.92	19.25	0.75	0.81
3	3.00	19.05	0.95	18.90	1.10	19.12	0.88	0.98
4	4.00	18.80	1.20	18.66	1.34	19.02	0.98	1.17
5	5.00	18.69	1.31	18.47	1.53	18.65	1.35	1.40

Unloading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	18.69	1.31	18.47	1.53	18.65	1.35	1.40
2	2.00	18.90	1.10	18.56	1.44	18.70	1.30	1.28
3	0.00	19.20	0.00	19.32	0.08	19.19	0.81	0.76

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Company Name

: Sky Light Co.

Project

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

Test Date

: 27/03/2022

report date

: 28/03/2022

Location

: Station 454+200 to 454+350

Test No.

: 026

Plate Bearing Test

Egyptian Code Part (3) Page 98

$$S = p.B \{1 - \mu^2 / E_s\}.l$$

S (mm) : Settlement immediately

p (kg/cm²) : Stress at foundation level

B (m) : Foundation Width

l : Factor depends on the foundation shape and rigidity

E_s : Modulus of elasticity

μ : Poisson's ratio

Loading Stage (1)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	l	E _s (kg/cm ²)
1	0.34	1.00	1963	50	0.3	0.79	1067.7
2	0.67	2.00	3925	50	0.3	0.79	1073.0
3	0.86	3.00	5888	50	0.3	0.79	1253.9
4	1.03	4.00	7850	50	0.3	0.79	1400.5
5	1.26	5.00	9813	50	0.3	0.79	1426.4

Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

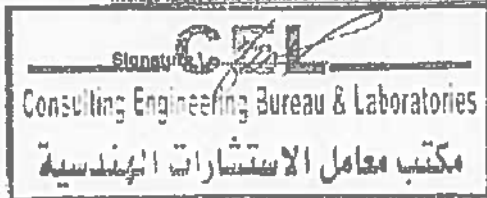
1244.3 Kg/cm²

Loading Stage (2)

NO.	Settlement (mm)	Stress (kg/cm ²)	Load (kg)	B (cm)	μ	l	E _s (kg/cm ²)
1	0.61	1.00	1963	50	0.3	0.79	566.1
2	0.81	2.00	3925	50	0.3	0.79	883.9
3	0.98	3.00	5888	50	0.3	0.79	1104.1
4	1.17	4.00	7850	50	0.3	0.79	1225.4
5	1.40	5.00	9813	50	0.3	0.79	1286.8

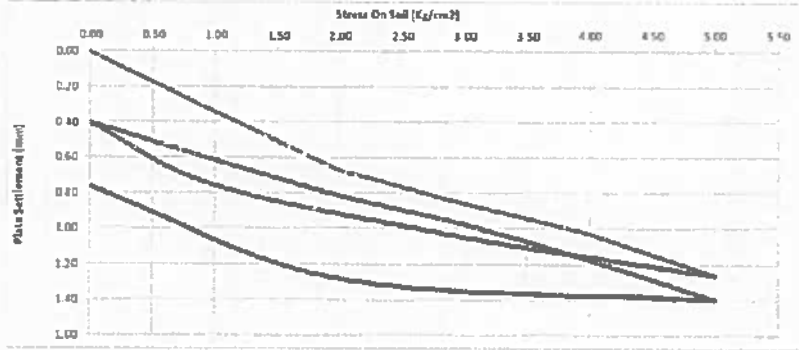
Average values of the deformation modulus at mentioned stress is from 0.00 to 5.00 kg/cm²

1017.3 Kg/cm²



Company Name : Sky Light Co.
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matruh Priority Sector (E) - Alamein to Foka
Test Date : 27/03/2022
report date : 28/03/2022
Location : Station 464+200 to 464+300
Test No. : 025

Nonrepetitive Static Plate Load Tests of Soils
ASTM D1190



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1963	3925	5888	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.34	0.57	0.86	1.03	1.26

UnLoading (1)	1	2	3	4
Stage(Kg)	9813	5888	1963	0
Stress (Kg/cm²)	5.00	3.00	1.00	0.00
Settlement (mm)	1.26	1.05	0.76	0.40

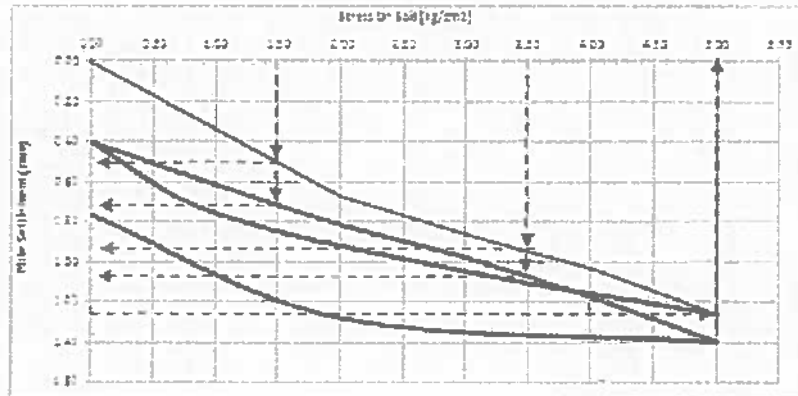
Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1963	3925	5888	7850	9813
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.40	0.61	0.81	0.98	1.17	1.40

UnLoading (2)	1	2	3
Stage(Kg)	7850	1963	0
Stress (Kg/cm²)	5.00	2.00	0.00
Settlement (mm)	1.40	1.28	0.76

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11- Evaluation the Results of PLT No. (26) Station (464+200) to (464+300)

Nonrepelitive Static Plate Load Tests of Soils ASTM D1196



Loading (1)	0	1	2	3	4	5
Stage(Kg)	0	1965	3925	5885	7850	9815
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.00	0.34	0.67	0.94	1.03	1.25

UnLoading (1)	1	2	3	4
Stage(Kg)	8813	5888	1963	0
Stress (Kg/cm²)	5.00	3.00	1.00	0.00
Settlement (mm)	1.25	1.05	0.75	0.40

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0.00	1965	3925	5885	7850	9815
Stress (Kg/cm²)	0.00	1.00	2.00	3.00	4.00	5.00
Settlement (mm)	0.40	0.81	0.81	0.93	1.17	1.40

UnLoading (2)	1	2	3
Stage(Kg)	7880	1983	0
Stress (Kg/cm²)	5.00	2.00	0.00
Settlement (mm)	1.40	1.29	0.72

Plate Load diameter (D) = 500 mm

(a) E_{v1} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 0.50 mm

- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 0.94 mm

- $\Delta S = S2 - S1 = 0.44$ mm

- $\Delta \sigma = 2.00$ kg/cm²

- $E_{v1} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 2.00) / 0.44 = (750) / 0.44 = 1705$ kg/cm²

(b) E_{v2} from Loading Stage (Maximum stress (σ_{max}) = 5.00 kg/cm²):

- S1 = settlement corresponding to 0.30 σ_{max} (1.50 kg/cm²) = 0.74 mm

- S2 = settlement corresponding to 0.70 σ_{max} (3.50 kg/cm²) = 1.08 mm

- $\Delta \sigma = 0.34$ kg/cm²

- $E_{v2} = (0.75 \cdot D \cdot \Delta \sigma) / \Delta S = (0.75 \cdot 500 \cdot 0.34) / 0.34 = (750) / 0.34 = 2206$ kg/cm²

(c) $E_{v2} / E_{v1} = 2206 / 1705 = 1.29$

(d) Modulus of Subgrade Reaction (K_v) corresponding to 1.25 mm ($\sigma = 5.00$ kg/cm²)

= $0.50 / 0.00125 = 400$ MN/m³

Company Name : Sky-Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+980) : (464+200)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 26
Sample No. : 26

Dear Gentleman,

Attached here with the Soil Embankment delivered on 21/04/2022

Materials test

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

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

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3 شارع الملك الأفضل - الزمالك - القاهرة

Company Name : **Sky Light**
 Project : **Electric Express Train, from Al Ain Sokhna to Marsa Matrouh**
 Location : **Middle & Upper Embankment**
 Type of sample : **Soil Embankment**
 Location : **St. (463+980) : (464+200)**
 Delivery Date : **21/04/2022**
 Reporting Date : **27/04/2022**
 Reporting No. : **26**
 Sample No. : **26**

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	95.3
25	84.3
19	80.1
12.50	76.4
9.50	68.2
4.75	55.1
2.36	52.8
2.00	50.4
1.18	48.3
0.600	36.8
0.425	32.5
0.300	21.8
0.150	15.2

Signature

مدير مكتب استشارات الهندسية
 المهندس أحمد الخيماني

رأى المهندس أحمد الخيماني

في 27/04/2022

2

3 El Malek El Afef Street

Zamalek, Cairo.

Tel. & Fax : 27367231 - 27363093



٢ ش الملك الأفضل

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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+980) : (464+200)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 26
Sample No. : 26

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

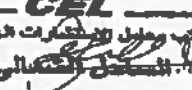
Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	13.3

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تليفون : 27367231 - فاكس : 27363093

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+980) : (464+200)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 26
Sample No. : 26

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

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

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رئيس المكتب الفني : 2736001 - 2736003
مركز الرئيس : 3 شارع الملك الأفضل - الزمالك - القاهرة

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+980) : (464+200)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 26
Sample No. : 26

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-b)		
2.00 mm (No.10).	50.4	Max 50 %	-----
0.425 mm (No. 40).	32.5	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.3	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

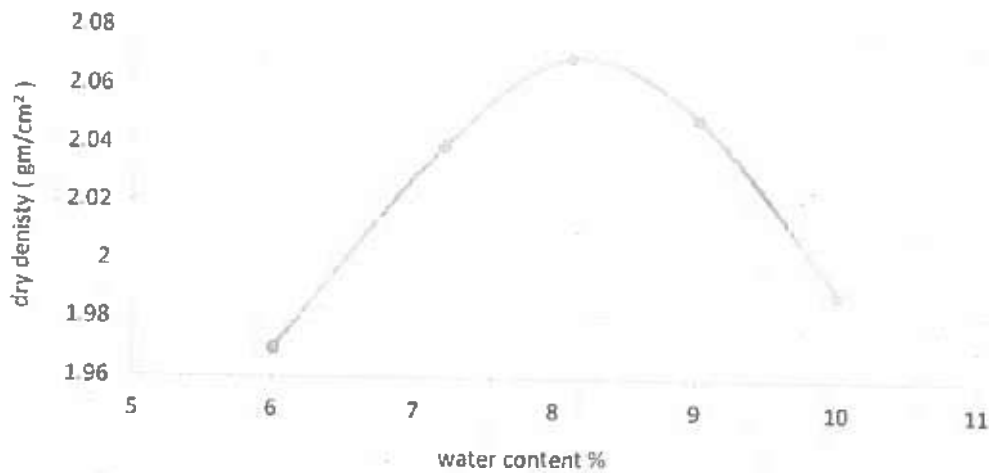
The test results are (☒ Comply - ☐ Not Comply) with specifications limits


 مكتب مهندسي الاستشارات الهندسية
 الساحل الشمالي
 رقم الترخيص ٢٣٧ - ٢٣٩ - ٢٤٠
 ص.ب. ١٢٠٠٠ - ١٢٠٠٠ - ١٢٠٠٠

Signature /

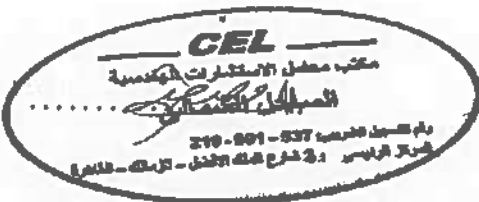
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+980) : (464+200)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 26
Sample No. : 26

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



- Max dry density (gm/cm³) : 2.07
- Optimum moisture content % : 8.1

Signature



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+980) : (461+180)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 27
Sample No. : 27

Dear Gentleman,

Attached here with the Soil Embankment delivered on 21/04/2022

Materials test

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

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

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مكتب مهندسين استشاريين ومختبرات
المنطقة الشمالية
رقم الترخيص: 257 - 201 - 210
مقر العمل: شارع طه الأندلس - القاهرة - مصر

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



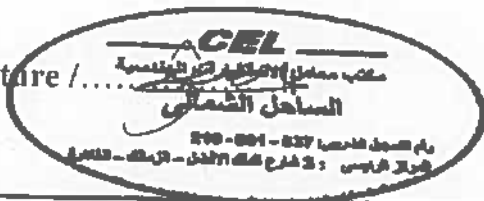
٢ ش الملك الأفضل
الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+980) : (461+180)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 27
Sample No. : 27

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.2
25	89.1
19	86.2
12.50	77.5
9.50	69.4
4.75	53.4
2.36	50.0
2.00	48.8
1.18	42.9
0.600	36.2
0.425	34.4
0.300	21.9
0.150	15.8

Signature / ...

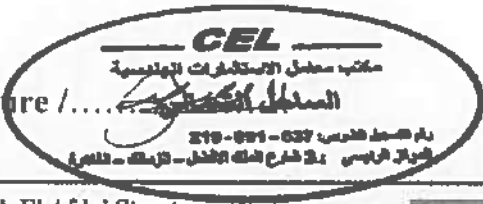


Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+980) : (461+180)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 27
Sample No. : 27

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	12.8

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www.cel-egypt.com

Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (460+980) : (461+180)
 Delivery Date : 21/04/2022
 Reporting Date : 27/04/2022
 Reporting No. : 27
 Sample No. : 27

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

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

Signature: 
 المهندس / محمد الشيمالي
 رقم ترخيص المهندس: 219-891-837
 مقر العمل: 3 شارع الملك الأفضل - القاهرة

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+980) : (461+180)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 27
Sample No. : 27

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	48.8	Max 50 %	-----
0.425 mm (No. 40).	34.4	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.8	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature


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 المختبر المركزي

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٣ ش الملك الأفضل
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www.cel-egypt.com

Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (460+980) : (461+180)
 Delivery Date : 21/04/2022
 Reporting Date : 27/04/2022
 Reporting No. : 27
 Sample No. : 27

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

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	1.96
1.27	0.050	2.03
1.91	0.075	2.27
2.54	0.100	2.50
3.18	0.125	2.61
3.81	0.150	2.78
4.45	0.175	2.98
5.08	0.200	3.11
5.71	0.225	3.29
6.35	0.250	3.48

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	36.2
	6.90	2.50	

Notes :

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.08 (gm /cm³) at 0.2 % optimum water content.
- 3- Surcharge load 4.50 Kg.

Signature / ...

إمام محمد عبد الحليم
 مهندس رئيسي : 27367231 - 27363093

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 Zamalek, Cairo.

Tel. & Fax : 27367231 - 27363093

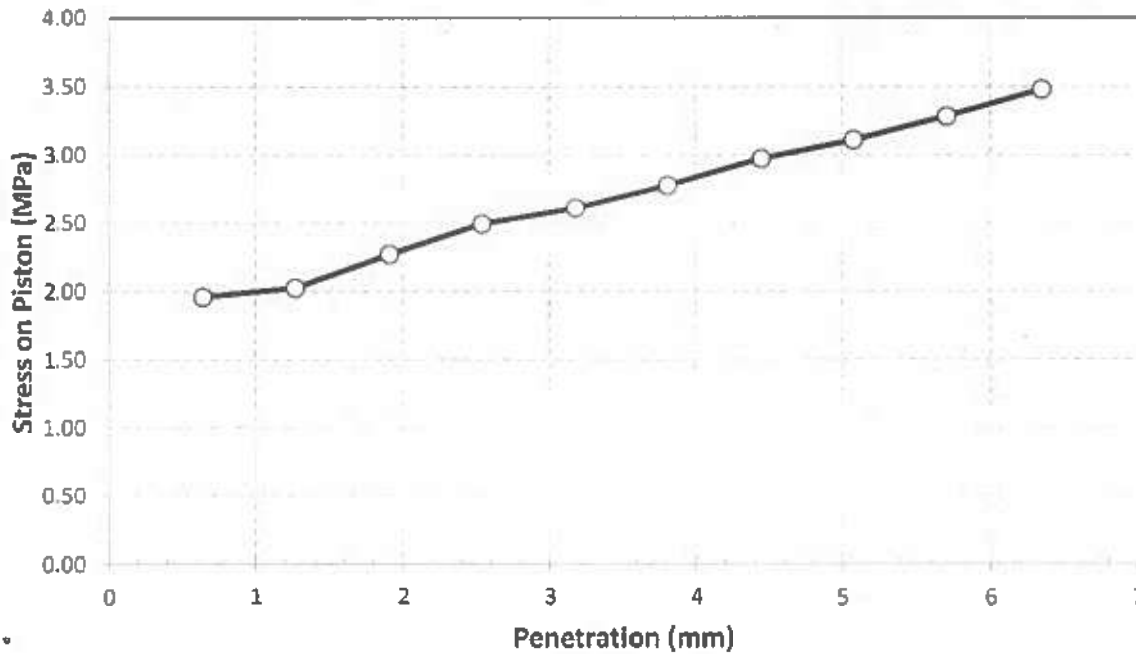


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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (460+980) : (461+180)
Delivery Date : 21/04/2022
Reporting Date : 27/04/2022
Reporting No. : 27
Sample No. : 27

Load Penetration Curve of CBR Test
ASTM D-1883



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رئيس قسم الاختبارات : ٥٣٧ - ٥٥٤ - ٥١٥
مدير المختبر : ٣ شارع الملك الناصر - الزمالك - القاهرة

8

Company Name : Sky Light

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

Location : Middle & Upper Embankment

Type of sample : Soil Embankment

Location : St. (461+800) : (462+000)

Delivery Date : 22/04/2022

Reporting Date : 28/04/2022

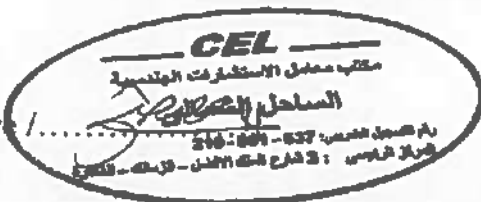
Reporting No. : 29

Sample No. : 29

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.1
25	96.4
19	90.4
12.50	82.6
9.50	76.4
4.75	57.9
2.36	55.5
2.00	51.8
1.18	42.2
0.600	39.4
0.425	36.7
0.300	23.9
0.150	18.0

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٣ ش الملك الأفضل

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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+800) : (462+000)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 29
Sample No. : 29

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	13.8

Signature /



Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+800) : (462+000)
 Delivery Date : 22/04/2022
 Reporting Date : 28/04/2022
 Reporting No. : 29
 Sample No. : 29

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	51.8	Max 50 %	-----
0.425 mm (No. 40).	36.7	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.8	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature /



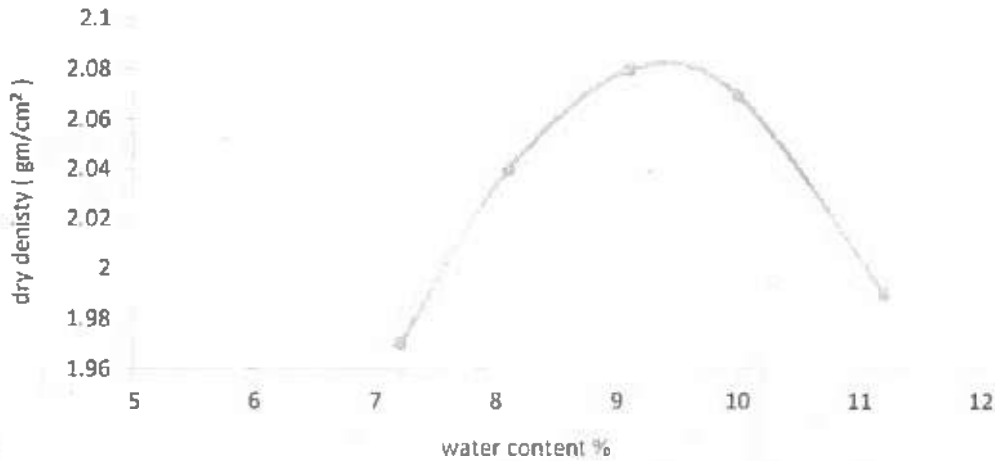
3 El Maalek El Afdal Street
 Zamalek, Cairo.
 Tel. & Fax : 27367231 - 27363093



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 الزمالك - القاهرة
 تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
 www.cel-egypt.com

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+800) : (462+000)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 29
Sample No. : 29

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



- Max dry density (gm/cm²) : 2.08
- Optimum moisture content % : 9.1

Signature /



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+800) : (462+000)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 29
Sample No. : 29

Dear Gentleman,

Attached here with the Soil Embankment delivered on 22/04/2022

Materials test

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

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

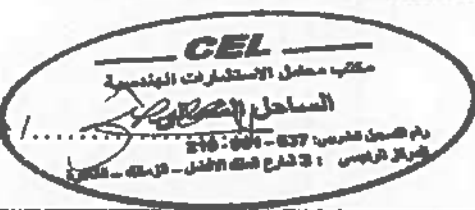
CEL
مكتب استشارات الهندسة ومختبرات
المعامل التحليلية
Signature / *[Signature]*
د. محمد عبد الله عبد الله
مدير عام

Company Name : Sky Lights
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+800) : (462+000)
 Delivery Date : 22/04/2022
 Reporting Date : 28/04/2022
 Reporting No. : 29
 Sample No. : 29

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.1
25	96.4
19	90.4
12.50	82.6
9.50	76.4
4.75	57.9
2.36	55.5
2.00	51.8
1.18	42.2
0.600	39.4
0.425	36.7
0.300	23.9
0.150	18.0

Signature /



Company Name : Sky Lights
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+800) : (462+000)
 Delivery Date : 22/04/2022
 Reporting Date : 28/04/2022
 Reporting No. : 29
 Sample No. : 29

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	13.8

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 شارع النيل - القاهرة - ١١٥١١١١

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+800) : (462+000)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 29
Sample No. : 29

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

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

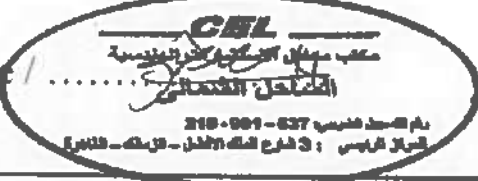
CEL
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البيانات الشخصية
Signature /
د. محمد مصطفى
27367231 - 27363093
3 شارع الملك الأفضل - الزمالك - القاهرة

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+800) : (462+000)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 29
Sample No. : 29

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	51.8	Max 50 %	-----
0.425 mm (No. 40).	36.7	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.8	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature /

 219-001-037
 3 شارع الملك الأفطل - القاهرة - 11511

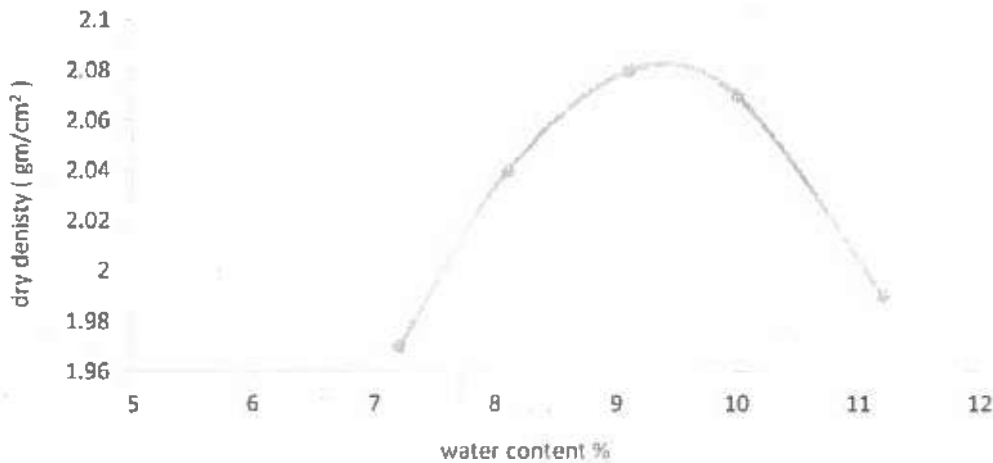
3 El Malek El Afdal Street
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Tel.& Fax : 27367231 - 27363093



٣ ش الملك الأفضل
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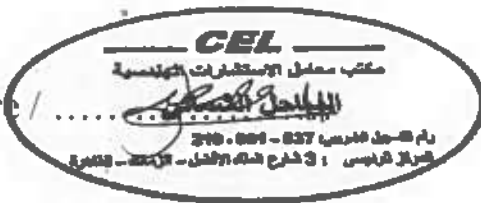
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+800) : (462+000)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 29
Sample No. : 29

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



- Max dry density (gm/cm³) : 2.08
- Optimum moisture content % : 9.1

Signature /



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+580) : (463+780)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 30
Sample No. : 30

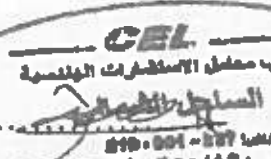
Dear Gentleman,

Attached here with the Soil Embankment delivered on 22/04/2022

Materials test

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

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

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المساكنة والبنية التحتية
رقم سجل تجاري ٢٠١٧ - ٢٠١٨ - ٢٠١٩
إدارة الرئيس : ٢١ شارع هادي - القاهرة - الجيزة

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+580) : (463+780)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 30
Sample No. : 30

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	100
25	95.2
19	91.2
12.50	85.7
9.50	77.2
4.75	56.4
2.36	52.7
2.00	50.4
1.18	44.1
0.600	38.9
0.425	35.8
0.300	23.0
0.150	16.9

Signature /



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+580) : (463+780)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 30
Sample No. : 30

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	13.5

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رئيس المكتب /
3 شارع الملك الابدل - القاهرة

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+580) : (463+780)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 30
Sample No. : 30

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

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

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الساحل الشمالي

رقم التسجيل المأمور: 537 - 2004 - 219
القرار رقم: 3 : خارج نطاق الفصل - الزمالة - المصالح

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



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الزمالك - القاهرة
تليفون + فاكس : ١

تلفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (463+580) : (463+780)
 Delivery Date : 22/04/2022
 Reporting Date : 28/04/2022
 Reporting No. : 30
 Sample No. : 30

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	50.4	Max 50 %	-----
0.425 mm (No. 40).	35.8	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.5	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

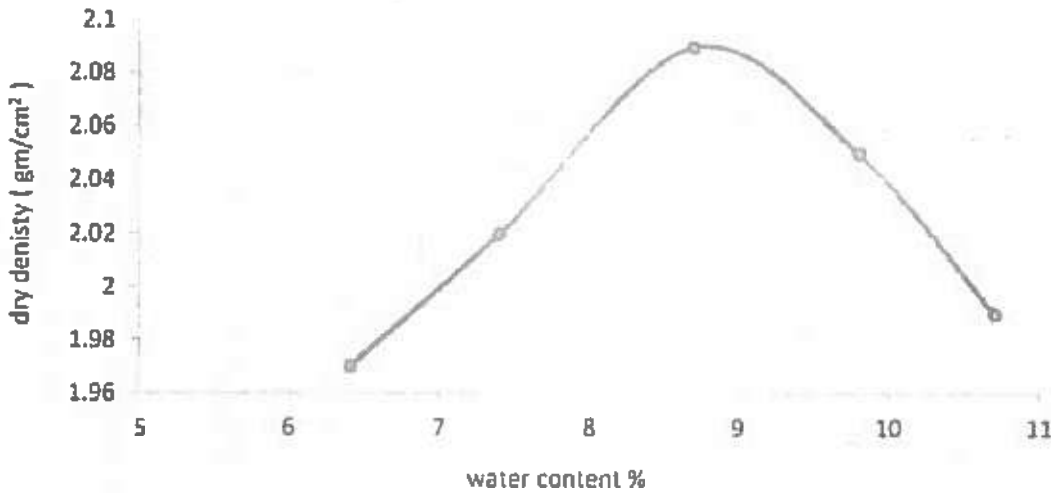
Signature


 مكتب معامل الاستشارات الهندسية
 المسجلين
 رقم الترخيص: ٢٧٣٦٧٢٣١
 رقم التسجيل: ٢٧٣٦٢٠٩٣

5

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+580) : (463+780)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 30
Sample No. : 30

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



- Max dry density (gm/cm³) : 2.09
- Optimum moisture content % : 8.7

Signature /



Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (463+580) : (463+780)
 Delivery Date : 22/04/2022
 Reporting Date : 28/04/2022
 Reporting No. : 30
 Sample No. : 30

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

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	2.26
1.27	0.050	2.42
1.91	0.075	2.61
2.54	0.100	2.81
3.18	0.125	2.98
3.81	0.150	3.10
4.45	0.175	3.27
5.08	0.200	3.41
5.71	0.225	3.59
6.35	0.250	3.73

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results *	40.79
	6.90	2.81	

Notes :

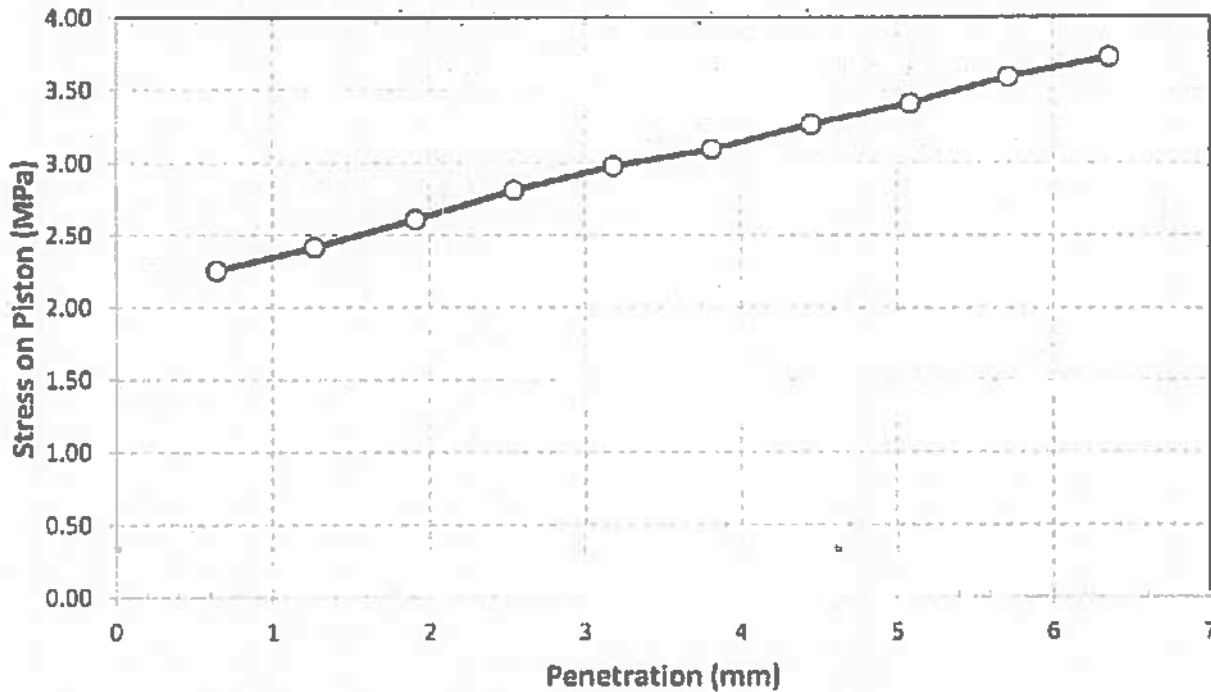
- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.09 (gm /cm³) at 8.7 % optimum water content.
- 3- Surcharge load 4.50 kg

Signature / ...

210-001-027
 رقم تسجيل الشركة : 3 شارع الملك فيصل - القاهرة

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+580) : (463+780)
Delivery Date : 22/04/2022
Reporting Date : 28/04/2022
Reporting No. : 30
Sample No. : 30

Load Penetration Curve of CBR Test
ASTM D-1883



Signature /

CEL
مكتب معامل الاستشارات الهندسية
البريد الإلكتروني: info@cel-eg.com
رقم الهاتف: 27367231 - 27363093
فيس بوك: CEL-EG
البريد الإلكتروني: info@cel-eg.com

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+180) : (463+380)
Delivery Date : 19/04/2022
Reporting Date : 25/04/2022
Reporting No. : 25
Sample No. : 25

Dear Gentleman,

Attached here with the Soil Embankment delivered on 19/04/2022

Materials test

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

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

Signature 
مكتب مهندسي الاستشارات والاختبار
المسجل المهنى
د. محمد عبد الله
27367231 - 27363093
3 شارع الملك الأفطال - القاهرة

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



٢ ش الملك الأفطال
الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
www.cel-egypt.com

Company-Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+180) : (463+380)
Delivery Date : 19/04/2022
Reporting Date : 25/04/2022
Reporting No. : 25
Sample No. : 25

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	96.3
25	90.9
19	88.7
12.50	82.6
9.50	73.5
4.75	56.4
2.36	52.8
2.00	51.5
1.18	42.2
0.600	39.9
0.425	36.9
0.300	20.8
0.150	16.8

Signature / 
المكتب مهندس الاستشارات الهندسية
الساحل الشمالي

3 El Malek El-Agha St. 3rd Floor
Zamalek, Cairo.
Tel. & Fax : 27367231 - 27363093



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الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
www.cel-egypt.com

Company Name : Sky Legn
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+180) : (463+380)
Delivery Date : 19/04/2022
Reporting Date : 25/04/2022
Reporting No. : 25
Sample No. : 25

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	14.5

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+180) : (463+380)
Delivery Date : 19/04/2022
Reporting Date : 25/04/2022
Reporting No. : 25
Sample No. : 25

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

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

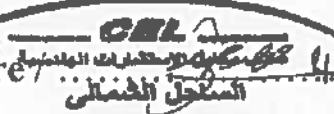
Signature 
المهندس **الساحل الشمالي**
بمكتبه في 25/04/2022
م. 25/04/2022 - 25/04/2022

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+180) : (463+380)
Delivery Date : 19/04/2022
Reporting Date : 25/04/2022
Reporting No. : 25
Sample No. : 25

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	51.5	Max 50 %	-----
0.425 mm (No. 40).	36.9	Max 30 %	Max 50 %
0.075 mm (No. 200).	14.5	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature 
 المهندس / 
 رقم التسجيل 219-001-037
 شارع الملك الأفندي - القاهرة

5

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

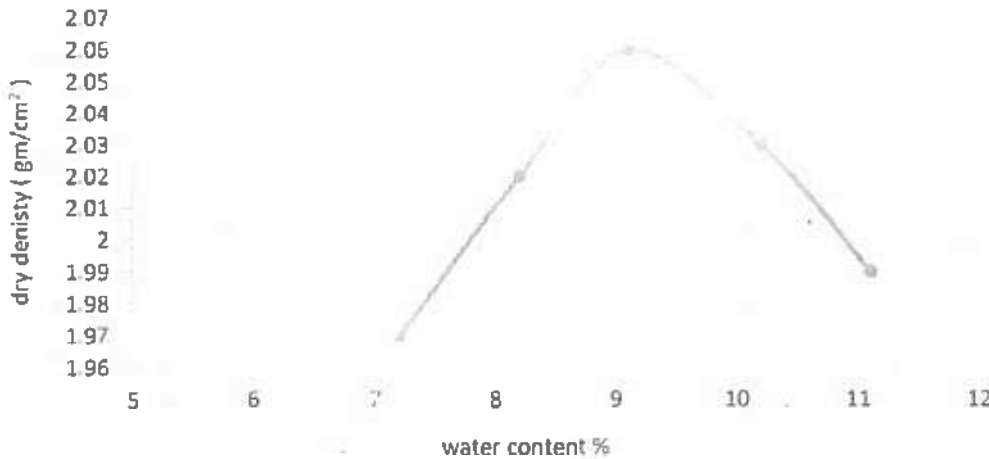


٣ ش الملك الأفندي
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 تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
www.cel-egypt.com

-Company Name : Sky Tigm

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+180) : (463+380)
Delivery Date : 19/04/2022
Reporting Date : 25/04/2022
Reporting No. : 25
Sample No. : 25

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



- Max dry density (gm/cm³) : 2.06
- Optimum moisture content % : 9.1

Signature



Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

Dear Gentleman,

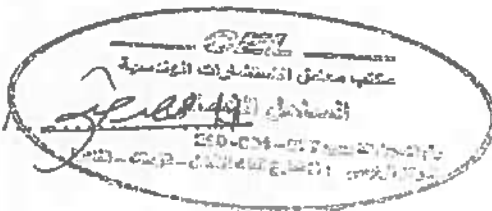
Attached here with the Soil Embankment delivered on 09/04/2022

Materials test

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

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

Signature

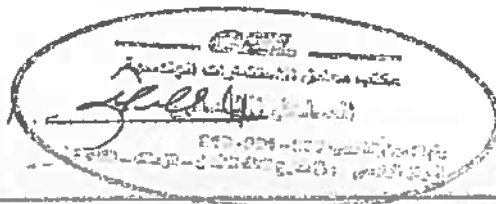

مكتب معامل الاستشارات الهندسية
التمثيل عن العميل
250-004-017
بمصر - شارع النجيلة - قريّة - 11511

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	100
25	100
19	94.6
12.50	83.3
9.50	71.4
4.75	54.9
2.36	52.8
2.00	51.1
1.18	43.6
0.600	40.8
0.425	39.1
0.300	25.8
0.150	16.9

Signature



3 El Afdal Street

Zakaria, Giza

Tel : 27367231 - 27363093



ش.م.ك. الأفضل

الزمالك - القاهرة

تليفون : 27367231 - 27363093

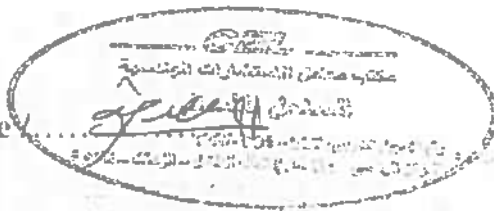
www.cel-egypt.com

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	11.4

Signature

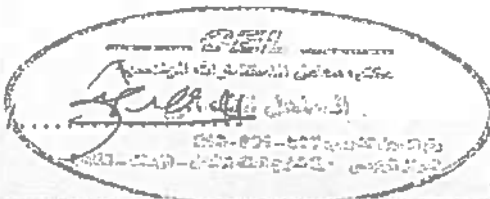


Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

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

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

Signature



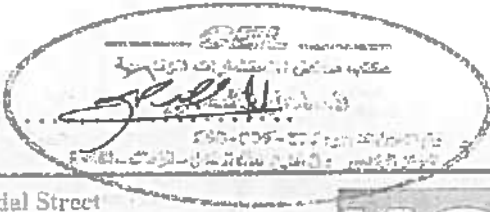
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	51.1	Max 50 %	-----
0.425 mm (No. 40).	39.1	Max 30 %	Max 50 %
0.075 mm (No. 200).	11.4	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature /



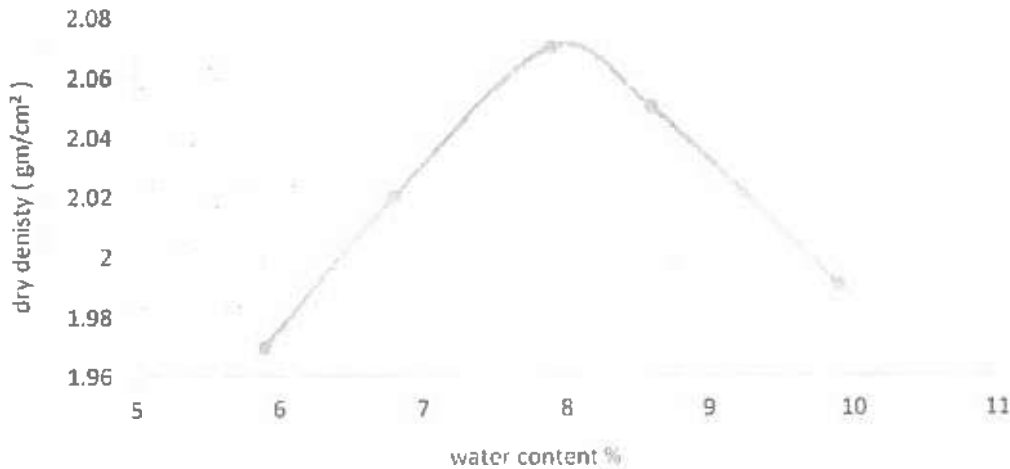
3 - Malek El Afdal Street
Z - Cairo
T : 27367231 - 27363093



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الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٧٢٣٢
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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

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



- Max dry density (gm/cm³) : 2.07
- Optimum moisture content % : 7.9

Signature /

مهندس مسئول
مكتب معامل الاستشارات الهندسية
أحمد عبد الله الأفندي
27367231 - 27363093



Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

Dear Gentleman,

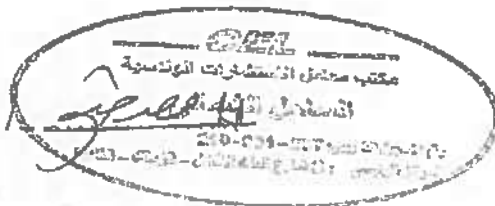
Attached here with the Soil Embankment delivered on 09/04/2022

Materials test

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

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

Signature

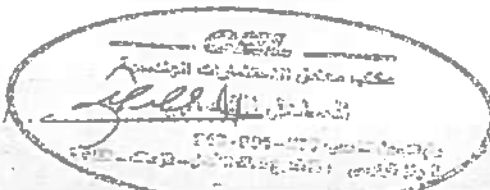


Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	100
25	100
19	94.6
12.50	83.3
9.50	71.4
4.75	54.9
2.36	52.8
2.00	51.1
1.18	43.6
0.600	40.8
0.425	39.1
0.300	25.8
0.150	16.9

Signature



3 - El Afdal Street

Zakaria, Cairo.

1 - Tel: 27367233 - 27363093



٢ شارع الملك الأفطال

الزمالك - القاهرة

تليفون - فاكس : ٢٧٣٦٧٢٣٣ - ٢٧٣٦٣٠٩٣

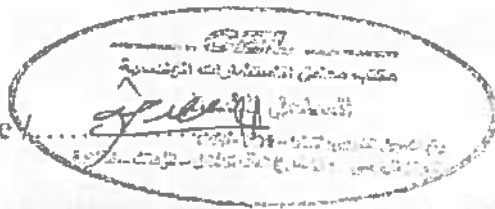
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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	11.4

Signature/.....

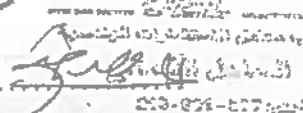


Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

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

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

Signature


ممثل
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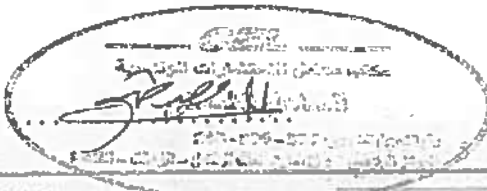
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	51.1	Max 50 %	-----
0.425 mm (No. 40).	39.1	Max 30 %	Max 50 %
0.075 mm (No. 200).	11.4	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature / ...



35 Abdel El Afdal Street
Zakaria, Cairo.

Tel : 22367231 - 27363093



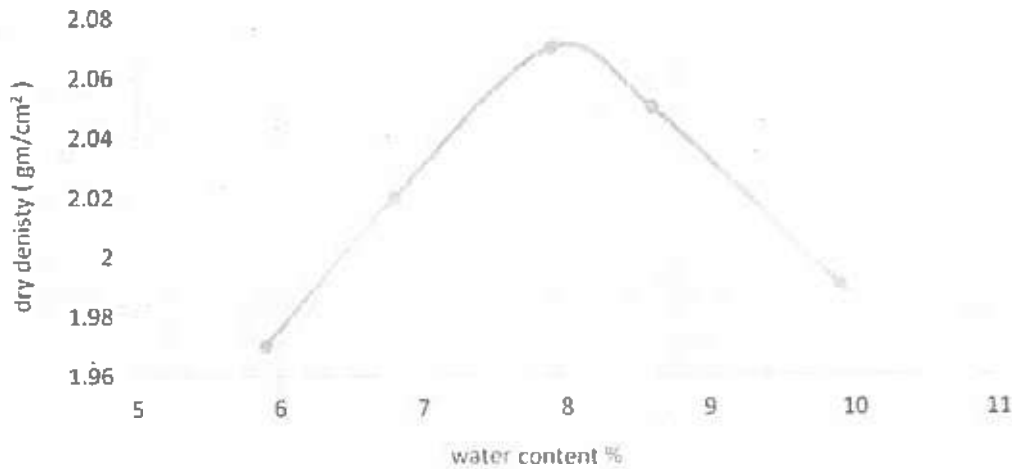
٣ من الملك الأفضل
الزمامك - القاهرة

تليفون : ٢٧٣٦٣٠٩٣ - ٢٢٣٦٧٢٣١

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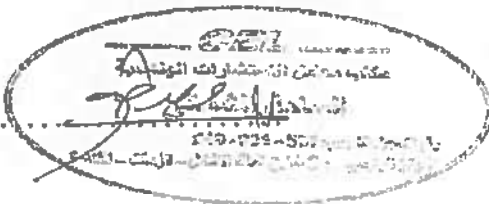
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (463+160) : (464+020)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 11
Sample No. : 11

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



- Max dry density (gm/cm³) : 2.07
- Optimum moisture content % : 7.9

Signature /


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219-328-501
www.cel-egypt.com

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 12
Sample No. : 12

Dear Gentleman,

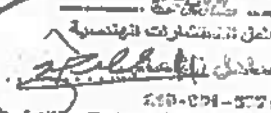
Attached here with the Soil Embankment delivered on 09/04/2022

Materials test

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

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

Signature


مكتب ومعمل الاستشارات الهندسية
التمثيل عن
27367231 - 27363093
إدارة التسويق : 010 5555 5555 - 010 5555 5555

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 12
Sample No. : 12

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	10.9

Signature

مكتب معامل الاستشارات الهندسية
الهندسة المدنية
رقم الترخيص: ٢٧٢١٧٢٣١ - ٢٧٢١٣٠٩٣
العنوان الرئيسي: ٣ شارع الملك الأفضل - القاهرة

3

3 El Malek El Afdal Street
Zakaria, Cairo.
Tel/Fax : 27367231 - 27363093



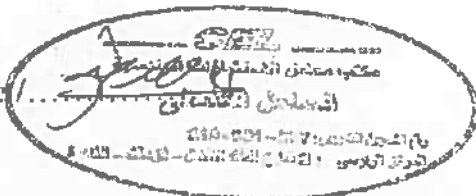
٣ شارع الملك الأفضل
القاهرة - الزمالك
تليفون + فاكس : ٢٧٢١٧٢٣١ - ٢٧٢١٣٠٩٣
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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 12
Sample No. : 12

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

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

Signature /



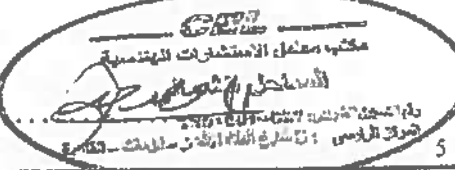
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 12
Sample No. : 12

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	48.8	Max 50 %	-----
0.425 mm (No. 40).	37.3	Max 30 %	Max 50 %
0.075 mm (No. 200).	10.9	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature /


مكتب معامل الاستشارات الهندسية
الاسماء: محمد محمد محمد
رقم الترخيص: ٢٧٣٦٧٣١٠٩٣
شركة المالك - القاهرة

3 El Afdal Street
Zakaria, Cairo.
Tel: FAX : 27367231 - 27363093

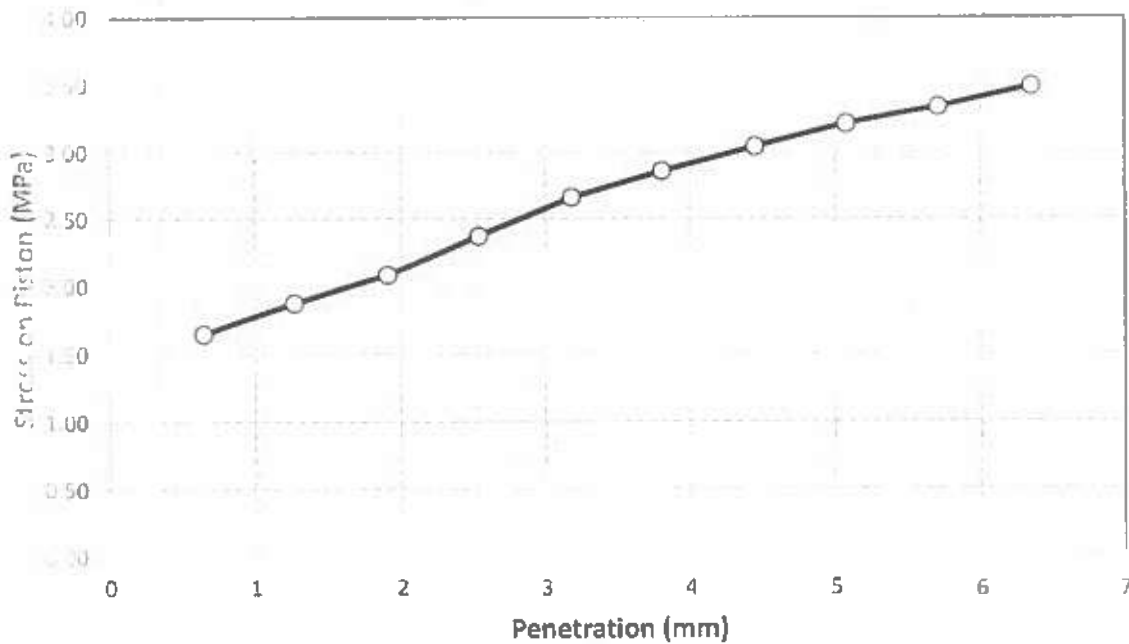


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الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٣١٠٩٣
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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 12
Sample No. : 12

Load Penetration Curve of CBR Test

ASTM D-1883



Signature

مكتب معامل الاستشارات الهندسية
التمثيل عن
وتم التوقيع من قبل
27367231 - 27363093
تليفون + فاكس : 27367231 - 27363093

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 10
Sample No. : 10

Dear Gentleman,

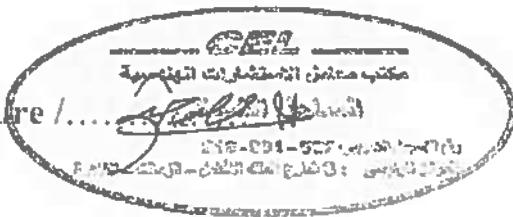
Attached here with the Soil Embankment delivered on 09/04/2022

Materials test

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

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

Signature /.....

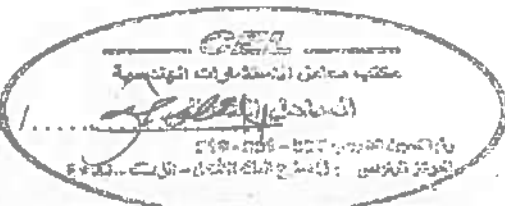


Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+160) : (461+340)
 Delivery Date : 09/04/2022
 Reporting Date : 15/04/2022
 Reporting No. : 10
 Sample No. : 10

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	96.1
25	89.1
19	85.5
12.50	77.2
9.50	69.9
4.75	58.8
2.36	55.2
2.00	54.7
1.18	50.5
0.600	43.9
0.425	41.8
0.300	30.2
0.150	17.2

Signature /



2

3 - El Afdel Street

Z. El Afdel, Cairo.

TEL : 27367231 - 27363093



٣ ش الملك الأفضل

الزمالك - القاهرة

تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

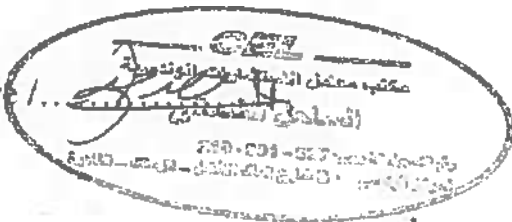
www.cel-egypt.com

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 10
Sample No. : 10

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	12.2

Signature /...



Company Name : Sky Light
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : Middle & Upper Embankment
 Type of sample : Soil Embankment
 Location : St. (461+160) : (461+340)
 Delivery Date : 09/04/2022
 Reporting Date : 15/04/2022
 Reporting No. : 10
 Sample No. : 10

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

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

Signature /...



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Zayed City, Cairo.

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٢ ش الملك الأفضل

الزمالك - القاهرة

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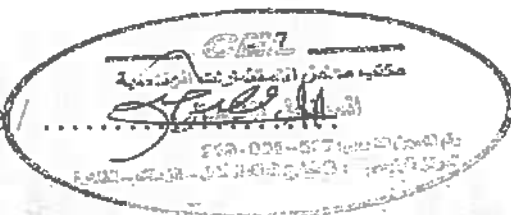
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 10
Sample No. : 10

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	54.7	Max 50 %	-----
0.425 mm (No. 40).	41.8	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.2	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature /



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٢ ش البلاك الأضيق

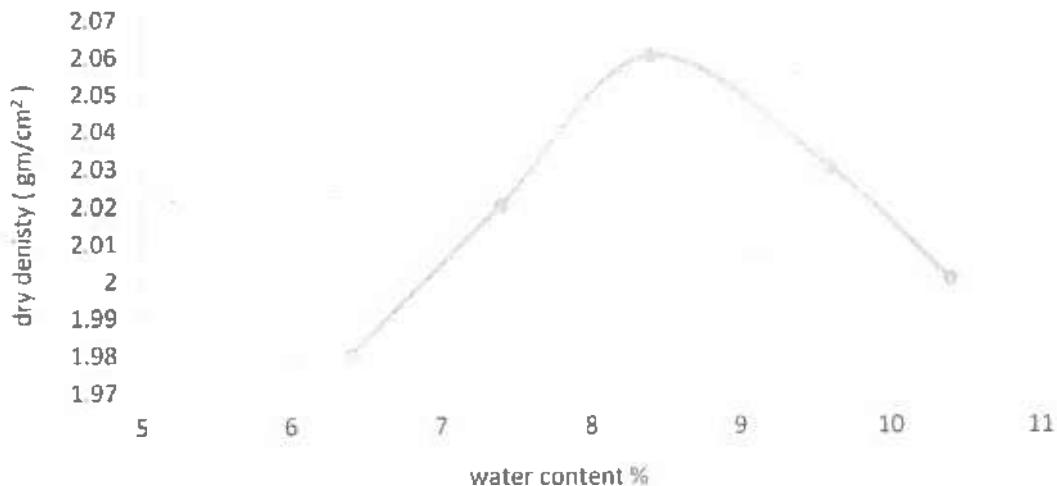
الزمالك - القاهرة

تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

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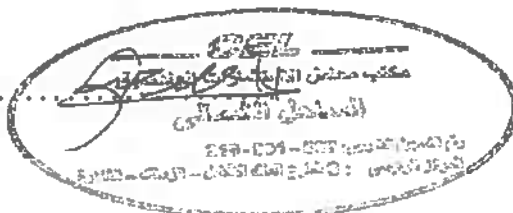
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (461+160) : (461+340)
Delivery Date : 09/04/2022
Reporting Date : 15/04/2022
Reporting No. : 10
Sample No. : 10

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



- Max dry density (gm/cm²) : 2.06
- Optimum moisture content % : 8.4

Signature /





Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (464+380) : (464+600)
Delivery Date : 10/04/2022
Reporting Date : 16/04/2022
Reporting No. : 13
Sample No. : 13

Dear Gentleman,

Attached here with the Soil Embankment delivered on 10/04/2022

Materials test

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

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

Signature/.....

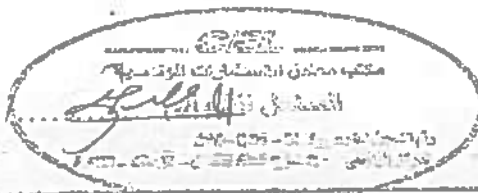


Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (464+380) : (464+600)
Delivery Date : 10/04/2022
Reporting Date : 16/04/2022
Reporting No. : 13
Sample No. : 13

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	100
25	95.8
19	91.2
12.50	80.4
9.50	62.3
4.75	49.6
2.36	43.8
2.00	40.3
1.18	38.2
0.600	34.1
0.425	25.8
0.300	22.7
0.150	17.8

Signature


مكتب معامل الاستشارات الهندسية
التمثيل في
27367231 - 27363093

From : El Abdel Street

Zo : Cairo.

Tel : 27367231 - 27363093



3 شارع عبد الحليم الأحمدي

الزمالك - القاهرة

تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

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CEL

Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (464+380) : (464+600)
Delivery Date : 10/04/2022
Reporting Date : 16/04/2022
Reporting No. : 13
Sample No. : 13

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

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

Signature

مكتب معامل الاستشارات الهندسية
التاسيس في ١٩٩٥
رقم التسجيل ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
مقر العمل: ٢٧٣٦٣٠٩٣ - ٢٧٣٦٧٢٣١

3 E - El Afdal Street

Cairo, Egypt

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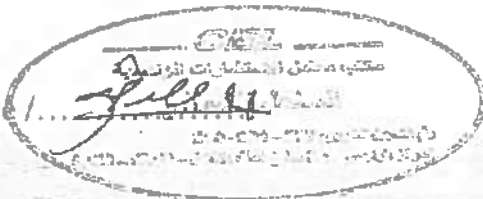
Consulting Engineering Bureau & Laboratories
مكتب معامل الاستشارات الهندسية

Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (464+380) : (464+600)
Delivery Date : 10/04/2022
Reporting Date : 16/04/2022
Reporting No. : 13
Sample No. : 13

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

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

Signature /...



31, El Afdel Street
Za. El Gharbi
Tel : 27367231 - 27363093



٣ تر المالك الأفضل
الزمالك - القاهرة
تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
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Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (464+380) : (464+600)
Delivery Date : 10/04/2022
Reporting Date : 16/04/2022
Reporting No. : 13
Sample No. : 13

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	40.3	Max 50 %	-----
0.425 mm (No. 40).	34.1	Max 30 %	Max 50 %
0.075 mm (No. 200).	13.1	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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

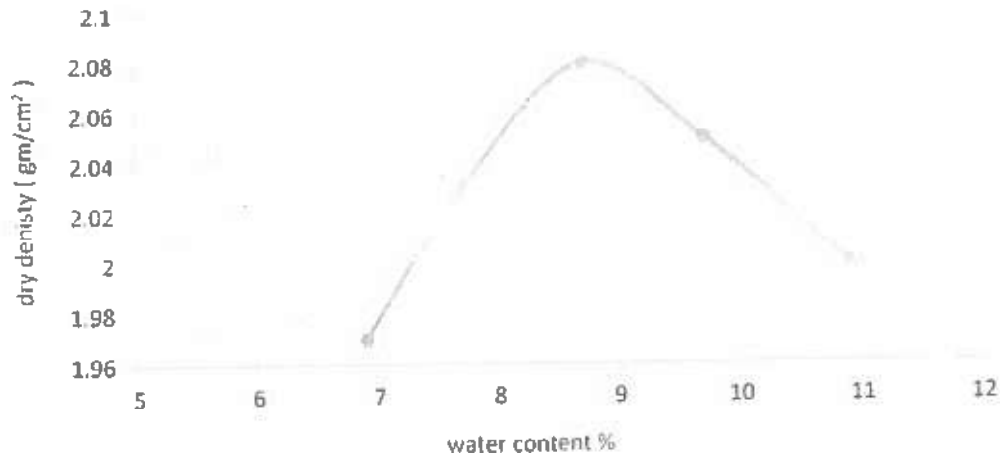
Signature/

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مكتب معامل الاستشارات الهندسية

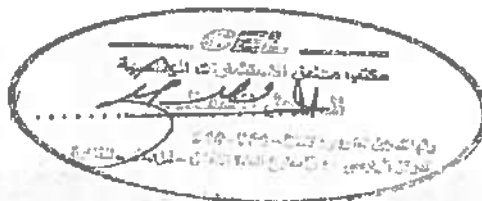
Company Name : Sky Light
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : Middle & Upper Embankment
Type of sample : Soil Embankment
Location : St. (464+380) : (464+600)
Delivery Date : 10/04/2022
Reporting Date : 16/04/2022
Reporting No. : 13
Sample No. : 13

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



- Max dry density (gm/cm³) : 2.08
- Optimum moisture content % : 8.7

Signature



31 El Arfael Street
Zoo, Cairo.
T. 27367292 - 27363093



٢ شارع الملك الأفندي
الزoo - القاهرة
تليفون : ٢٧٣٦٧٢٩٢ - ٢٧٣٦٣٠٩٣
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وثيقه تأمين جميع اخطار المقاولين

الفرع الرئيسى

رقم الوثيقه 16548 هـ / 4

اسم المؤمن له سكاى لايت للاستثمار الزراعى و المقاولات العامة SKY LIGHT

العنوان القاهرة شقة 32 - الدور الثالث - برج 6 - ابراج صفوة الميثاق - قطعة 4 (أب) شريحة أرض شمال طريق الميثاق - الحى

نصالح الهيئة العامة للطرق والكبارى

اسم المقاولة عقد رقم 1420 / 2022 / 2023 - اعمال الجسر الترابى والاعمال لمشروع القطر الكهربائى السريع

موقع العمل العين السخنه - مطروح - لتنفيذ اعمال الجسر الترابى (قطاع العلمين - فوكه) المسافة من الكم 460.600 الى الكم 464.600

وصف المشروع بطول 4 كم اتجاه سيدى برانى

مدة التأمين

أ - بالنسبه للاعمال يبدأ التأمين فى 2023/02/15 وينتهى فى 2024/02/15 الساعه الثانيه عشره ظهرا الساعه الثانيه عشره ظهرا

ب - بالنسبه لاعمال الصيانه وتبدأ فى 2024/02/15 وتنتهى فى 2025/02/15 الساعه الثانيه عشره ظهرا الساعه الثانيه عشره ظهرا

القسم الاول الاضرار الماديه 5700000.00 جنيه مصرى

القسم الثانى المسئوليه المدينه قبل الغير 500000.00 جنيه مصرى

القسم الاول : الاضرار الماديه

البنود المؤمن عليها	مبلغ التأمين	التحمل عن كل حادث
1- اعمال المقاولة الاعمال الدائم والمؤقته متضمنه جميع المواد المبنيه فيما بعد 1/1- قيمه العقد	جـ 5700000	الـ 20 % الاولى من قيمة كل حادث بعد ادنى جـ 100000
2/1 الاثنياء والمواد التى يوردها صاحب او اصحاب المشروع 2- ادوات ومهمات التشييد	لا يوجد	
3- الات ومعدات التشييد طبقا لقائمه المرفق	لا يوجد	
4- ازاله الانقاض	لا يوجد	
5- المنشآت المؤقته	لا يوجد	

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إدارة التأمينات الهندسية، المركز الرئيسى 1/1

للحصول والإطلاع على دليل حماية المتعاملين الصادر من الهيئة العامة للرقابة المالية برجاء زيارة موقعنا الإلكتروني www.mohins.com

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مركز التأمين : 9 El-Mohandes Sq, Dokki - Giza

مركز التأمين : 62 ORMAN - EGYPT

تليفون : 93366101 - 7

فاكس : 33352497 - 93361348

هذه الوثيقة مؤمنة ومحفوطة

تقوم الشركة بحاسبة مصلحة الضرائب على ضريبة الدمغة النسبية والتنوعية

وثيقة تأمين حوادث شخصية

الفرع المحصر	الإنس	رقم الوثيقة	18584	و/	4	تاريخ طلب التأمين	2023/02/16
العملة	جنية مصرى	مدة التأمين من	2023/02/15	ظهرا الى		2024/02/15	ظهرا
اسم المتعاقد	SKY LIGHT سكاي لايت للاستثمار الزراعى والمقاولات العامة						
اسم المؤمن عليه	كما بالكشف المرفق						
العنوان	القاهرة شقة ٣٢ - الدور الثالث - برج ٦ - ابراج صفوة الميثاق - قطعة ٤ (أ ب) شريحة أرض وظيفة						
لصالح	شمال طريق الميثاق - الحي العاشر - مدينة نصر الهيئة العامة للطرق والكبارى						

اسماء المستفيدين في حالة وفاة المؤمن عليه و صلة كل منهم به

الورثة الشرعيون
تقتصر السطحية التأمينية على السادة المؤمن عليهم الغير مذكور اسماءهم بسبب الحوادث التي تقع لهم اثناء وبسبب العمل فقط وداخل موقع العمل
- اثناء تنفيذ عملية " اسناد اعمال الجسر الترابي والاعمال الصناعية لمشروع القطار الكهربائي السريع (العين السخنة - مطروح) (قطاع العلمين
وكه) في المسافة من الكم ٤٦٠,٦٠٠ الى الكم ٤٦٤,٦٠٠ بطول ٤ كم اتجاه سيدى برانى بالامر المباشر " و بشرط الا يزيد العدد وقت وقوع الحادث
عن العدد المؤمن عليه بموجب هذه الوثيقة والا سقط حقه في الانتفاع بمزايا التأمين
عقد رقم ٢٠٢٣ / ٢٠٢٢ / ١٤٢٠
السادة المؤمن عليهم يستخدمون كهرباء لاتزيد عن ٢٢٠ فولت

القسط الصافي	نصف الذمغة النسبية	نصف ذمغة الاتساع	مصاريـف الاصـدار	مصاريـف الاشـراف	رسوم مقابل خدمات مراجعة و الوثائق	صندوق حملة	القسط الاجمالي
731.25	3.65	3.00	55.50	4.40	0.73	1.47	800.00

فقط ثمانمائة جنيه مصري لا غير

الحالات المغطاة

مبلغ التأمين

اولا : اذا توفي المؤمن عليه خلال سنة من تاريخ وقوع الحادث له يؤدي للمستفيدين مبلغا و قدره وذلك وفقا لما جاء بالبنء الاول / اولا من الشروط العامة لهذه الوثيقة

ثانيا : اذا اصيب المؤمن عليه بعجز كلى مستديم خلال سنة من تاريخ وقوع الحادث له يؤدي مبلغا و قدره وذلك وفقا لما جاء بالبنء الاول /ثانيا من الشروط العامة لهذه الوثيقة

ثالثا : اذا اصيب المؤمن عليه بعجز جزئى مستديم خلال سنة من تاريخ وقوع الحادث له يؤدي له مبلغا يحدد وفقا لما جاء بالبنء الاول /ثالثا من الشروط العامة لهذه الوثيقة

رابعا : اذا اصيب المؤمن عليه بعجز كلى مؤقت عقب وقوع الحادث له يؤدي له مبلغا و قدره اسبوعيا بواقع (خمسـة فى الالف) من مبلغ تأمين العجز الكلى المستديم الوارد بالبنء ثانيا من هذا الجدول) طوال مدة العجز بحد اقصى ٥٢ اسبوعا من يوم بدء العلاج الطبى وذلك وفقا لما جاء بالبنء الاول (رابعا) من الشروط العامة لهذه الوثيقة

خامسا: تغطية مصاريف العلاج من الإصابة للحالات المغطاة بالوثيقة بواقع (نسبة و مبلغ) من مبلغ التأمين

سادسا : تغطية مصاريف النقل بالإسعاف من موقع الحادث الى أقرب مستشفى بواقع (نسبة و مبلغ) من مبلغ التأمين

سابعا : تغطية مصاريف الجنزة بواقع (نسبة و مبلغ) من مبلغ التأمين

ادارة المركز الرئيسي

1

للحصول والإطلاع على دليل حماية المتعاملين الصادر من الهيئة العامة للرقابة المالية برجاء زيارة موقعنا الإلكتروني www.mohins.com

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هذه الوثيقة مؤمنة ومحفوظة

٣٠ تقوم الشركة بحاسبة مصلحة الضرائب على ضريبة الدمغة النسبية والنوعية

1 من 2

صفحة

محضر استلام موقع

إسناد أعمال الجسر الترابي والأعمال الصناعية لمشروع القطار الكهربائي السريع (العين السخنة - العاصمة الإدارية - العلمين - مطروح) لتنفيذ أعمال الجسر الترابي (قطاع العلمين / فوكة) المسافة من الكم 460+600 الى الكم 464+600 بطول 4 كيلو متر اتجاه سيدي براني (بالأمر المباشر) .
تنفيذ: شركة اسكاي لايت للاستثمار الزراعي و المقاولات العامة
إشراف : المنطقة الخامسة - منطقة غرب الدلتا

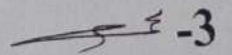
طبقاً للعقد رقم (2023/2022/1420) بتاريخ 2023/02/15

إنه في يوم السبت الموافق 2023/ 2/ 15 اجتمع كل من:-

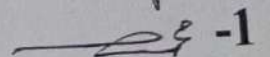
- 1- السيد المهندس /محمد حسني فياض مدير عام مشروعات الهيئة- الهيئة العامة للطرق والكباري
- 2- السيد المهندس /إبراهيم عبد الله الحناوي مهندس العملية - الهيئة العامة للطرق والكباري
- 3- السيد المهندس/محمد يحيي مدير مشروع -شركة اسكاي لايت للاستثمار الزراعي و المقاولات العامة

وذلك للمرور على مسار العملية المذكورة عاليه لاستلام الموقع :-
وقد تبين أن الموقع خالياً من العوائق الظاهرية ويسمح بالبداية في التنفيذ وبناء عليه يعتبر تاريخ 2023 / 2 / 15 هو تاريخ استلام الموقع وبدء الأعمال بالعملية واقفل المحضر على ذلك ووقع الحضور

التوقيعات

3- 

2- 

1- 

رئيس الإنشآت المركزية
منطقة غرب الدلتا
الاسكندرية - مطروح
مهندس . هاني محمد محمود طه
هاني محمد محمود طه