محضر استلام ابتدائي لعملية: أعمال الجسر الترابي لمشروع القطار الكهربائي السريع (قطاع غرب النيل قطاع العلمين / فوكة) لتنفيذ المسافة من الكم(600+460) إلي الكم(200+461) بطول 0.6 كم اتجاه مطروح تنفيذ شركة :- إنشاء للمقاولات العامة اشراف :المنطقة الخامسة غرب الدلتا(الإسكندرية مطروح) استشاري الهيئة للمشروع : سجاك (د . سعد الجيوشي)

انه في يوم الإثنين الموافق 2023/10/2 وبناءً على قرار السيد العميد مهندس/رنيس الإدارة المركزية لمنطقة غرب الدلتا رقم (121) بتاريخ 2022/09/14 والخاص بأعمال الاستلام الابتدائي للأعمال عاليه.

فقد اجتمعت اللجنة المشكلة من كلاً من :-

| (رنيساً) | مدير عام المشروعات بالمنطقة | المهندس/ محمد حسني فياض |
|-------------|---|---|
| (عضوأ) | مدير مشروع القطاع من المنطقة | 2) المهندس/إبراهيم الحناوي |
| (عضوأ) | معمل المنطقة المشرفة | 3)المهندس/عبدالله عبدالمحسن |
| هينة (عضوأ) | مكتب: سجاك (د سعد الجيوشي) استشاري ال | 4)المهندس / مصطفي نجم |
| شروع (عضوأ) | مكتب (اكس واي زد) استشاري المساحة بالم | 5)المهندس/محمد خليل |
| (عضوأ) | مدير مشروع الشركة المنفذة | 6)المهندس/ محمود شعبان |

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

> <u>الأعمال المنفذة والمطلوب تسليمها أعمال الأتربة و الاساس لتشكيل مسار الجسر الترابى</u> <u>أولا :- أعمال الردم</u> الأعمال مقبولة بصفة عامة وتم التأكد من الوصول للمناسيب وتحقيق الميول الجانبية للقطاع <u>شانيا:- أعمال الأساس (Prepared Subgrade) :-</u> الأعمال مقبولة بصفة عامة وتم التأكد من الوصول للمناسيب وتحقيق الميول الجانبية للقطاع <u>شالثا:- أعمال الأساس (Sub Ballast) :-</u> الأعمال مقبولة بصفة عامة وتم التأكد من الوصول للمناسيب وتحقيق الميول الجانبية للقطاع

توصيات اللجنة :-

علي مندوب معمل المنطقة تحديد مدي الحيود بالعينات عن المواصفة العامة للمشروع وتحديد قيمة الخصم .
 علي السادة استشاري القطاع (سجاك (د سعد الجيوشي)) مراجعة الحصر والتأكد من الكميات المنفذة طبقاً لطلبات الاستلام وموافة اللجنة بالكميات والتجارب التي أجريت علي الأعمال أثناء التنفيذ.
 علم مندوب استشاري القطاع (سجاك (د سعد الجيوشي)) مراجعة الحصر والتأكد من الكميات المنفذة طبقاً لطلبات الاستلام وموافة اللجنة بالكميات والتجارب التي أجريت علي الأعمال أثناء التنفيذ.
 علم مندوب استشاري القطاع (سجاك (د سعد الجيوشي)) مراجعة الحصر والتأكد من الكميات المنفذة طبقاً لطلبات الاستلام وموافة اللجنة بالكميات والتجارب التي أجريت علي الأعمال أثناء التنفيذ.
 قام مندوب استشاري المساحة بالتأكد علي المناسيب المنفذة طبقاً للتصميم المعتمد.
 علي استشاري القطاع (سجاك (د سعد الجيوشي)) متابعة سلوك الأعمال خلال فترة الضمان وابلاغ الشركة بأي عيوب تظهر لأصلاحها فوراً.

وعليه تري اللجنة قبول الأعمال حيث لا يوجد ما يعيق الاستلام الابتداني للأعمال عاليه ويعتبر تاريخ المحضر هو تاريخ النهو الفعلي وبدء فترة الضمان للأعمال. وعلي ذلك جري التوقيع.

التوقيعات :--)- Je (6 (5) Lieby · _ my (4 2 5 13 -(2 $e^{\epsilon(1)}$

رنيس الإدارة المركزية

منطقة غرب الدلتا

الاسكندرية - مرسى مطروح عميد مهندس / c. CY 7,7 "هانی محمد محمود طه"



افادة

بالاشارة لمشروع اعمال الجسر الترابي و الاعمال الصناعية لمشروع القطار الكهرباني السريع (العين السخنة – مطروح) .

العقد رقم :2134/2022/2023 460+600 إلى 458+800 في المسافة من مقاولة شركة : انشاء للمقاولات العامة اشراف استشاري : مركز الاستشارات الهندسية للطرق والمطارات (SGAC) ا د سعد الجيوشي 6414.02 م3 كمية الأتربة المستخدمة في المشروع : كمية الأساس (Prepared subgrade) المستخدمة في المشروع : 800 م3 كمية الأساس (Sub ballast) المستخدمة في المشروع : 5565 م3 يرجي العلم بانه قد تم توريد المواد المحجرية بالمشروع ببونات رسمية معتمدة وقام استشاري المشروع بمراجعة جميع البونات والتأكد من الكميات المدرجة وذلك تحت إشراف مدير عام المشروعات المنطقة . مدير مشروع الاستشاري مدير مشروع الهيئة م/ محمد حسنی فیاض مدير مشروع الشركة 41 - Herting العناوي م/ مصطفى نجم م محمود شعبان المار للمقادلات الجامع رئيس الإدارة المركزية مرد المراجع مرد المرد المراجع المرد الم 3 3 منطقة C D D V C Lind الاسكندرية الم عميد ممتدس "هاني محمد محمود ط



التقيم الفني

مشروع :-اعمال الجسر الترابي لمشروع القطار الكهربائي السريع (العين السخنة – العاصمة الادارية – العلمين – مطروح) لتنفيذ المسافة من كم ٨٠٠ + ٤٥٨ الي كم ٢٠٠ + ٤٦٠ بطول ١,٨ كم اتجاة الطريق الساحلي.

> ٢٠٢٣ / ٢٠٢٢ / ٢٠٢٣ شركة انشاء للمقاولات العامة

رقم العقد:-

تنفيذ:-

اشراف :-

المنطقة الخامسة – قطاع غرب الدلتا.



الحسابات المالية و مفصل التقييم و قيمة الخصومات

انه في يوم ٢٠٢/١٠/٩ و بناء على القرار الاداري (١٢١) بتاريخ ٢٠٢/٩/١٤

الصادر من السيد عميد مهندس/ رئيس الادارة المركزية - منطقة غرب الدلتا و محضر الاستلام الابتدائي للعملية المؤرخ في ٢٠٢٣/١٠/٢ تم عمل التقييم الفني للعملية عالية و قد اجتمعت اللجنة المشكلة من كلاً من :-

| (رنيس اللجنة) | (مدير عام المشروعات) | السيد المهندس / محمد حمني فياض |
|--------------------------|-----------------------------------|--|
| (عضو لجنة) | (معثل الهينة) | ۲. السيد المهندس / ابراهيم الحناوي |
| (عضو لجنة) (من دامنة) | (معمل المنطقة المشرفة) | ۳. السيد المهندس / عبدالله عبد المحسن |
| (عضو لجنة) | دكتور سعد الجيوشي استشاري الهينه) | |
| (عضو لجنة) | (مكتب استشاري المساحة) | ٥. السيد المهندس / محمد خليل |
| (عضو لجنة) | (الشركة المنفذة) | ۲ السيد المهندس /محمود شعبان احمد |

و بعد الاطلاع على محضر الاستلام الابتدائي للعملية و ملفات التجارب العملية تمت حساب الخصومات المالية و جاءت كالاتي:-

- خصم ٢٢٨٢.٠٠ جنيه (الغان ومانتان واثنين وثمانون جنيها لاغير) قيمة تجارب المعمل.

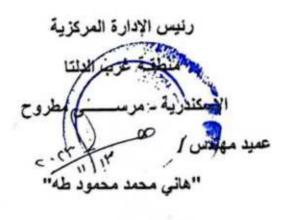
- لا يوجد خصم على خروج العيذات.

- لا يوجد خصم على خروج العينات.

رق والك

- يتم خصم ميلغ و قدره (٣٤.٢٠٠) اربعة وثلاثون الفا ومائتي جنيه لاغير بنسبة ٢.٠ % من اجمالي قيمة المشروع تتيجة الفحص البصري.







محضر استلام موقع

مشروع: أعمال الجسر الترابي لمشروع القطار الكهربانى السريع الخط الاول (العين السخنة-مطروح) (العلمين فوكة) المسافة من ٢٠٠+٢٠٠ كم الى ٢٠٠+٢١٤كم بطول ٢,٠كم تنفيذ: شركة انشاء للمقاولات العامة إشراف : المنطقة الخامسة – منطقة غرب الدلتا طبقاً للعقد رقم (٣٢/٢٢٢٢ ٢١٢ ملروح بتاريخ ٢٠٢٢/٧١٧ إنه في يوم الثلاثاء الموافق ٢٠٢٣/٧١٨ اجتمع كل من:-إنه في يوم الثلاثاء الموافق ٢٠٢٣/٧١٨ اجتمع كل من:-1-السيد المهندس /محمد حسني فياض مهندس العملية - الهيئة العامة للطرق والكباري 2-السيد المهندس /إبراهيم عبد الله الحناوي مهندس العملية - الهيئة العامة للطرق والكباري

3-السيد المهندس / محمود شعبان احمد

وذلك للمرور على مسار العملية المذكورة عاليه لاستلام الموقع :-وقد تبين أن الموقع خالياً من العوائق الظاهرية ويسمح بالبدء في التنفيذ وبناء عليه يعتبر تاريخ (٢٠٢٣/٧/١٨) هو تاريخ استلام الموقع وبدء الأعمال بالعملية وإقفل المحضر على ذلك ووقع الحضور

مدير المشروع

التوقيعات 810 2-1- 1-19 1-+ et-1







مركز الإستشارات الملمسية نتقل و شمارت و الملرق (خرب موليو) دكتور/ سمد الجيوشتاي

| | القطاع من المحطة ١٠٠-١٦ ال | £11+T | and the second second | | |
|-----|---|--------|-----------------------|--------|---------------|
| 444 | بيان الاصل | الرحلة | للتبية | in . | الاجتلى |
| - | اعمل الريم اعمال الريم | | | | |
| | يقتر المقعب اعمل كرريه وتشايل الرية مستلمة الردم و مكليلة الدراسلات والشقيل باستأهام المحات يسعله لا يزيم عن - 4 سر حق منصوب ٢ متر و يسمله لا يزيم من 1+ سر اكتتابال المنسوب الاصميمي الشقيل قيمت و الاكانال السعة تعمل القارديان لا ذاتر من ٢+ 10% و رشيا بالعباء الاصرابية الرصرال الى نسية الرعادية المطاوية و العملة الجيد بقواسات الارمن في الصيرية الاطارة (50 هو بعد عن علاقة الاجتامة العامرية) و يتم الثقابة المائة التنصيب المطاورية و العام الارمنية الدوليزية و الرسريات القاصيلية المحتمة و البلد بيميع مشتماتها طبقا الاصول الاستعامة و مواصلة الورسات - مسالة القال 1 قر حيار المسلوم علارة 1. البليه الكل 1 قرارانة | Te | 7,798,9837-5 | A.# | TA1,A#7,67A |
| | حكرية سبطة اللكل ٢٠٩ لم | 74 | P.TVI.V437=3 | 7A1,T+ | \$#\$,1.1,4VT |
| | الكرة تسميل رسرم الفارثة وشرازين طيئا لكامة فشركة فوطنية | Tp | 7,771,7157.5 | 17 | 17,AV1,Y+1 |
| 1 | طيقتك الإساس | | | | |
| 348 | بالمتر المتحب اعمل توريد وفرش طبقة اساس (prepared Subgrade) من الاهجار المعلية الملديمة نلقج تلمين الكسارات والمطليقة المواصفات واقصى هجم الهيبيات ١٠٠ مع والا تزريد الملديمة نلقج تلمين الكسارات والمطليقة المواصفات واقصى هجم المعيبيات ١٠٠ مع والا تزريد تسبة الملديمة نلقج الدار من والا تزريد نسبة الماقد يجهان (وس التجاوص عن ٢٠ % والا يزايد المحل الماد الموادين عن ٢٠ % والا يزريد المحل المادين التعليم في والا يزريد نسبة الملقة بعرف المعام والا يزريد تصل كافورنيا عن ٢٠ % والا يزريد المحل ولا يزريد نسبة الملقة بجهان (وس التجاوص عن ٢٠ % والا يزايد المحل الموادين عن ٢٠ % والا يزايد التزريد نسبة الملقة بجهان (وس التجاوص عن ٢٠ % والا يزريد الايزمين عن ٢٠ % والا يزريد وريتم فردها على ظبلتين باستخدام الات التسوية المحلية على ان لا يزري مسك الطبقة بعد تمام الدمك عن ٢٠ هو والا يزايد المحلية على ان لا يزايد مسك الطبقة بعد تمام المدى عن ويتم فردها على ظبلتين باستخدام الات التسوية المحلية على ان لا يزايد مسك الطبقة بعد تمام المدى عن ٢٠ % والا يزايد المحلية على ان لا يزايد معال على ظبلتين باستخدام الات التسوية المحلية على ان لا يزايد مسك الطبقة بعد تمام الدمك عن ٢٥ هو والا يزايد عن ٢٠ % والا يزايد عن ٢٠ % والا المدينية اللوصول الى نسبة الرطوية المحلوية المصلية والملية تعلمان لجراء عن ٥ هومل يقابة والملة قبطة قصل لا من ٢٠ %) من الكافية المصلية والملية تعلمان لجراء التوصول الى القسي كثافة جطاة قصوي (١٢٦ل من ٢٠ %) من الكافية المصلية والملية واليا لجراء موجوع منتري والمحلية والله المحالية والله الحالية الماليات والرد المحلية واليا المحلية واليا لاصوي المحلية والملية والملية والملية المحليون والمرام والمالية والملية والمالية والمالية والمالية والمالية والمالية والمالية والمالية والمالية والله المحلية واليا المالية المالية والمالية والمالية والمالية والمالية والمالية والوليومول الى القسي والمالية والله العن والمالية واليا لاصول المحلية واليالية والمالية والمالية والمالية والالية والولية واليالي ومومول الى القسي والمالية وليا لاصول المالية والولية والمالية والمالية والمالية والمالية والمالية والمالية والمالية والولية والالية والولية واليالية والولية والولية والولية واليالية والولية والوليية والولية والوليولية والاليولية والال | Ψp | 114.0. | ***. | 1.117.127 |
| | اعلارة مساطة النال ١٩٠ كم | | £ | T+1,++ | A14.991 |
| | علاوة تمصيل رسوم الكارثة والموازين طبقا للانصة الشركة للوطنية | | t | 10, | 1,111,0 |
| 1.1 | بالدر للمكمم اهمان توريد وقرائل هايقة أسلس من الامجار المشاية فستدرجة لتقع تلسي اللسارات والمطابقة للمواصلات ونقصى هجم الدمينية ما بين ٢١، مر اللي ما 1 مار والا يزيد نسبة العذر من منفل ٢٠٠ عن • يار والتدرج الوارد بالاشتر اللك الفلسة بالمشروع لا تلل نسبة تعمل تطولورنيا عن ٥، خارا والا بال ممامل الدرونة (EV2)) من تجرية أدى التعميل عن ٢٠١٠ مرجل معال بلاية نسبة اللقالة بجهز الدمرية على عن ٢٠ تار والا يزيد الامتساسي عن ٢٥ تار ما مرجل معال بلايتي بستماما الان النسية العمرية على ان لا يزيد مسك الطبقة بعد لنام الدك عن ٢٠ مار ويتم أردها على طبالتين باستماما الان النسرية العمرية على ان لا يزيد مسك الطبقة بعد لنام الدك من ٢٠ مار مرجل بلمية الاسانية الوصري الى أسبة الطوية ان لا يزيد مسك الطبقة بعد لنام الدك من ٢٠ مار مركب بلمية الاسانية الاصري المي أطوية العلمينية و تقدمك الجوز يكير سنت الوصري في العمرية والحقية ويتم تلفية خطبة تصوي (لا يتل عن ٢٠٠ مارا) من اللطفة المسلية و تقدمك الجزء يجرب متشالاته طري العلمية والحقية ويتر علية المية الامرية الوصريا المي المائلية المعلمين المراح . معطفة الذال ٢٠ كر - يتم المتسلي عارية ٢٠ (٢ جنيه الكل ٢ كار بالزيادة او اللقاصان - يتم المتسلية على 1 1 م | τ, | Y,SYV,0. | ***. | A¥7,7%\$, |
| | الاترة مساقة اللكل - ١٩ كم | | 7,479,0. | t.1, | a4¥,11., |
| | علاوة تمصيل رسوم الكارثة والموازين طبانا ثلائمة فشركة الوطلية | | T.4TV.0. | Ye | VY. 1AV |

(اريمة مليون وشان مالة وسيعون الف جنيه فقط لاغير)

Pringers معير المشروع الاستشارى LACCA. ملير ال Yanes م] بهطلی نجم -- 1 -Teler L 1 28 ç 1 Ē للمقاور 21.9 م سميد التحاد ا كر الاستشارات Ĭ للطرق والمطارات -1:22 Ę 5 YE. Ś

مديد المشروع كمالك + the limit to

م يعتمد رنيس الأدارة المركزية منطقة غرب الدلتا الاسكندرية - مرسى مطروح a عميد مهندس / C.CY " هالی محمد محمود طه 11/10

مدير عام المشروعات

مشروع القطار السريم (العلمين فوكة)

شركة انشاء للمقاولات العامة من المحطة ١٠٠٠٠٠ المحطة ١٠٠٠٠٠

محضر تحديد مساقة نقل

(نقل الاتربة)

انه في يوم الأربعاء الموافق :- ١٠ / ٢ / ٢٢ . ٢

- بناء على طلب المقاول شركة انشاء للمقاولات العامة لتحديد مسالة لقل الاترية من محجر (السلحل الشمالي) على طريق وادى النظرون العلمين للمشر وع المذكور أعلاه

تم زيارة المحجر من قبل:-

ممثل الهينة العامة الطرق والكباري ممثل الاستشاري مكتب د.سعد الجيوشي ممثل ستشاري المساحه مكتب استشاري مكتب د.سعد الجيوشي ممثل شركة انشاء للمقاولات العامة

CAN BE MIND OF COMPANY OF COMPANY

۱ - المسيد المهندس / ابر اهرم الحناوي
 ۲ - المسيد المهندس / مصطلى محمود نجم
 ۳ - المسيد المهندس / محمد خليل
 ۱ - المسيد المهندس / كمال نجيب
 ۹ - المسيد المهندس /محمود شعيان

رتبين ان المحجر على مسافلة ٢٠٠ كم من منتصف قطاع شركة انشاء للمقاولات العامة احداثي المحجر على مسافلة ٢٠٠ كم من منتصف قطاع شركة انشاء للمقاولات العامة احداثي المحجر القطاع " E 29 ° 45 ° 21.6 ° 37 ° 07.30 ° 80 N 92 ° 70 ° 07.30 ° E 36 ° 37 ° 10.31

وعلي ذلك تم توقيع،،

izi alé

dates

: Juny.

مشروع القطار السريع (العلمين فوكة)

شركة انشاء للمقاولات العامة من المحطة ، ، + ، + ، 1 الى المطة . • ٢ + ١ ٤

محضر تحديد مسافة نقل

(SUB BALLAST)

انه في يوم الاثنين الموافق :- ٢٠٢٣/١/٣٠

- بناء على طلب المقاول شركة انشاء للمقاولات العامة لتحديد مسافة نقل SUB BALLAST من كسارة (الامارتية)

على طريق وادى النطرون العلمين للمشروع المذكور أعلاه.

تم زيارة الكسارة من قبل:-

ممثل الهيئة العامة الطرق والكباري ممثل الاستشاري مكتب درسعد الجيوشي ممثل استشاري المساحة مكتب استشاري مكتب داسعد الجيوشي

ممثل شركة انشاء للمقاولات العامة

وتبين ان الكسارة على مسافة ١٩٠ كم من منتصف قطاع شركة انشاء للمقاولات العام

١- السيد المهندس / ابراهيم الحناوي

٣- السيد المهندس / محمد خليل

٤- السيد المهندس / كمال نجيب

٥-السيد المهندس /محمود شعبان

- جمود شعان أحمد

٢- السيد المهندس / مصطفى محمود نجم

| N30 ° 38 ′ 59.0 " | E 29 ° 42 ′ 23.8 | احداثي الكسارة |
|-----------------------|-----------------------|---------------------|
| N 92 ° 70 ′ 06 . 28 " | E 36 ° 37 ' 09 . 61 " | احدائي منتصف القطاع |

وعلى ذلك تم توقيع ،،

مشروع القطار السريع (العلمين -فوكة)

شركة انشاء للمقاولات العامة من المحطة ، ، ٢ + ، ٢ ٤ الى المطة ، ٢ + ٢

محضر تحديد مسالمة نقل

(prepared sub grade)

الله في يوم الائتين الموافق :- ٢٠٢٢/١/٣٠

- بناء على طلب المقاول شركة انشاء للمقاولات العامة لتحديد مسافة نقل prepared subgrade من كمنارة (الامارتية)

على طريق وادى النطرون العلمين للمشروع المذكور أعلاه.

تم زيارة الكسارة من قبل:-

۱- السيد المهندس / ابراهيم الحذاوي
 ۲- السيد المهندس / مصطفى محمود نجم
 ۳- السيد المهندس / محمد خليل
 ۶- السيد المهندس / كمال تجيب
 ۹-السيد المهندس /محمود شعبان
 وتبين ان الكسارة على مسافة ١٩٠ ك

ممثل الهيئة العامة الطرق والكباري ممثل الاستشاري مكتب د.سعد الجيوشي ممثل استشاري المساحه مكتب استشاري مكتب د/سعد الجيوشي ممثل شركة انشاء للمقاولات العامة

وتبين ان الكسارة على مسافة ١٩٠ كم من منتصف قطاع شركة انشاء للمقاولات العام احداثي الكسارة E 29 ° 42 ° 23.8 " N30 ° 38 ° 59.0 " E 29 ° 42 ° 23.8 " N30 ° 38 ° 59.0 " E 29 ° 42 ° 23.8 احداثي منتصف القطاع " 06 · 28 " E 36 ° 37 ° 09 · 61 " احداثي منتصف القطاع " 10 · 09 ° 70 ° 20 N

وعلي ذلك تم توقيع،،

Pické ,a

| MATERIAL INSPECTION REQUEST | Inshoo | Scat | مرار المقارق لعنمرة عقره لمزير عبر الرومانية دائيار عبد الروقي | البتاليان لطرق و الكياري (RARA) | A | | anadi August Huar) |
|-----------------------------------|--------|------|---|--|---|--|---------------------|
|-----------------------------------|--------|------|---|--|---|--|---------------------|

| Contractor Company | . انشاء للمقاولات العامة | | Designer Company | | | | | | | | |
|-------------------------|--------------------------|------|------------------|------|------|----|----|------|------|------|----|
| | Name | Sign | | Date | 2 | | | Time | | | |
| Issued by Contractor | Eng/ Mahmoud Shaban | 1 - | 200 | 8/3/ | 2023 | | | 1:00 | ļ. | | |
| Describered by | | | | C1 | 62 | (3 | 00 | MM | YY | 1414 | MM |
| Received by ER | | | MIR | 460 | EW | cs | 8 | 3 | 2023 | 1 | 00 |

| CODE-1 | 51 to 521 Station Reference | D1 to 53 Depot Reference | Kp XXX Note For Kilometer point only Start Km is used |
|----------|--------------------------------|-----------------------------|--|
| CODE - 2 | | Work Activity | |
| CODE - 3 | | Sub Element of Activity | |

| Descr | iption of M | laterials | | Su | b gra | ide mater | rial results | _ | |
|------------------|---|---|---|---|---------|------------|--------------|------------------|---------|
| Locat | ion to be U | sed | 460+660 460+880 461+100 460+660 460+780 460+900 461+100 | (0.25) (0.25) (0.5) (0.5) (0.5) | | | | | |
| MAR Approval No | | | | | | | Date | | |
| Suppl | lier Name | | | | | | | | |
| Test Requirement | | | | S | pecific | ation | Clause | | |
| _ | ence Photo | | Yes attached / No | C | Other | | | | |
| Item | Descriptio | on | and the state | Unit | | Quantity | Arrival Date | rrival Date Note | |
| 1 | Sieve an | the second se | | M ³ | | 10000 | | | |
| 2 | the second se | the second se | an sieve no ,200 | - | | | | | |
| 3 | and the second se | the second se | Proctor test | | | | | | |
| 4 | and the second se | es abras | ion and CBR | | 1.0 | | | _ | |
| | ments by: | 2 | | 1000 | Co | mments by: | | | |
| SEGA | | CELL La | rm Sub grade materia b and the results four epted | | t | | | | |
| 1.13 | | | 1 | APPROV | AL STA | TUS | | 1.1.25 | |
| Orga | nisation | Name | | Sign | _ | | Date | | A-AWC-R |
| Contr | ractor | p'1 | 2000 | ~ | 10 | Ter. | | | |
| QA/C | ac • | 1 | Lame | - | 1 | mary | 2 | | |
| GARE | ··· | m | Negm | | - | ing | | | |
| Comm | nent by ER | | | | | | | | |
| | oyers | | | 1 | | | | | • |

** Alignment / Bridges: Culvert Only



مكتب معامل الإستشارات الهندسية

| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Prepared Subgrade. |
| Delivery Date | : 01/03/2023 |
| Reporting Date | : 08/03/2023 |
| Reporting No. | : 47 |
| Sample No. | : 01 |

Dear Gentleman,

Attached here with the Prepared Subgrade delivered on 01/03/2023

Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2. Material finer than sieve No. 200 according ASTM D-1140.
- 3. Liquid limits and plasticity index of soil according to D-4318.
- 4. Proctor Test according to D-1557
- 5. CBR according to ASTM D-1883
- 6. Los Anglos according to ASTM C-131.

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

Signatu

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1

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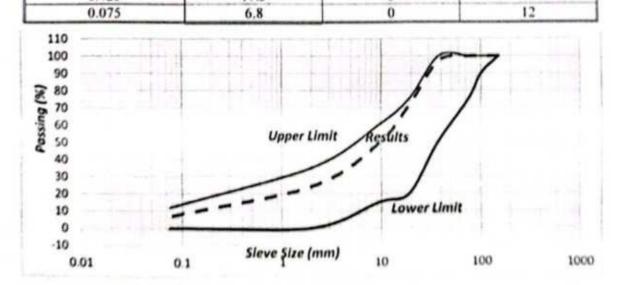


Consulting Engineering Bureau & Laboratories مكتب معامل الإستشار ات الهندسية

| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Prepared Subgrade |
| Delivery Date | : 01/03/2023 |
| Reporting Date | : 08/03/2023 |
| Reporting No. | : 47 |
| Sample No. | : 01 |

| Sieve Size (mm) | Passing % | | ation limits D-422) |
|--------------------|-----------|------|------------------------|
| (mm) | | Min. | Max. |
| 125 | 100 | 100 | 100 |
| 100 | 100 | 90 | 100 |
| 75 | 100 | 75 | 100 |
| 50 | 100 | 24 | |
| 37.5 | 97.2 | 50 | 100 |
| 25 | 88.4 | ** | 100 |
| 19 | 71.1 | 20 | 75 |
| 12.5 | 56.6 | | |
| 9.5 | 49.2 | 15 | 60 |
| 4.75 | 31.8 | | |
| 2.00 | 24.1 | 0 | 35 |
| 0.425 | 17.3 | 0 | |

Results of sieve analysis according to ASTM D-422.



Signature (Strand La ...)

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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Prepared Subgrade. |
| Delivery Date | : 01/03/2023 |
| Reporting Date | : 08/03/2023 |
| Reporting No. | : 47 |
| Sample No. | : 01 |

<u>Materials finer than 75 µm (no.200) sieve</u> by washing ASTM D-1140.

| Test | Results (%) |
|--|----------------|
| Percentage of material finer than Sieve Size 75 µM (No.200) | 6.8 |

Signature 218-201-227 - 201 - 201 400-201-201-201

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3

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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Prepared Subgrade. |
| Delivery Date | : 01/03/2023 |
| Reporting Date | : 08/03/2023 |
| Reporting No. | : 47 |
| Sample No. | : 01 |

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

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

CEL

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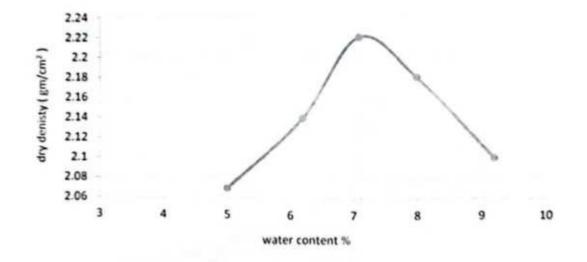
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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Prepared Subgrade. |
| Delivery Date | : 01/03/2023 |
| Reporting Date | : 08/03/2023 |
| Reporting No. | : 47 |
| Sample No. | : 01 |

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



- Max dry density (gm/cm²) : 2.22
- Optimum moisture content % : 7.1

F1

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5

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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Prepared Subgrade. |
| Delivery Date | : 01/03/2023 |
| Reporting Date | : 08/03/2023 |
| Reporting No. | : 47 |
| Sample No. | : 01 |

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

| penetration | | | ess on piston (Mpa) |
|-----------------------|-----------|---------------|----------------------------------|
| mm | Inch | | •••• ••• ••• ••• ••• ••• ••• ••• |
| 0.64 | 0.025 | | 2.66 |
| 1.27 | 0.050 |) | 3.08 |
| 1.91 | 0.075 | ; | 3.44 |
| 2.54 | 0.100 | 3.73 | |
| 3.18 | 0.125 | | 3.89 |
| 3.81 | 0.150 | | 4.05 |
| 4.45 | 0.175 | | 4.14 |
| 5.08 | 0.200 | | 4.22 |
| 5.71 | 0.225 | i | 4.34 |
| 6.35 | 0.250 | | 4.55 |
| CBR Result | St | ress (Mpa) | CBR % |
| At 0.1 inch (2.54 mm) | St. Value | Sample result | 54.1 |
| penetration | 6.90 | 3.73 | 54.1 |

Notes :

1- Attached graph shows penetration resistance versus penetration magnitude.

2- The cample was compacted to dry density of 2.22 (gm /cm3)

ter content. Sia

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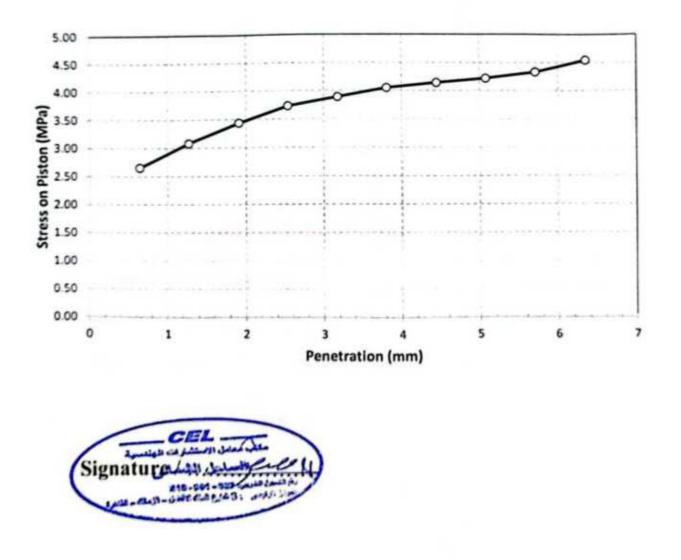
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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Prepared Subgrade |
| Delivery Date | : 01/03/2023 |
| Reporting Date | : 08/03/2023 |
| Reporting No. | : 47 |
| Sample No. | : 01 |

Load Penetration Curve of CBR Test ASTM D-1883



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7

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_{Company:} Inshaa co.

| : Electric express train. |
|---------------------------------|
| : 08/03/2023 |
| : 09/03/2023 |
| : Prepared subgrade sample No.1 |
| : Coarse Aggregate |
| : Site |
| : 01 |
| |

RESISTANCE TO DEGRADATION OF SMALL SIZE AGGREGATE BY ABRASION AND IMPACT IN LOS ANGELES MACHINE ASTM C 535

| Test | Results |
|--|---------|
| Amount of loss by abrasion and impact (%) Coarse Aggregate | 20.7 |

According to project specs :

The amount of loss by abrasion and impact for moderate weathering:

Shall not exceed 40 % (when Subjected to 500 revolutions)

The Test Results is . 2 Comply مكتب معامل الاستشارات الهندسية 4 11 Signature /.

Not Comply) with Spec. Limits

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| Contractor Company | العامة | انشاء للمقاولات العامة | | Designer Company | | | | | | | |
|-------------------------|------------------------|------------------------|-----|------------------|------|----|----|------|------|-----|----|
| | Name | Sign | | Date | 9 | | | Time | 2 | | |
| Issued by Contractor | Eng/ Mahmoud Shaban | . 40,0 | r i | 8/3/ | 2023 | | | 1:00 | 1 | | |
| Received by | | | | . 61 | 0 | 0 | 00 | MM | 77 | +94 | MM |
| ER | | | NIR | 460 | EW | cs | 8 | 3 | 2023 | 1 | 60 |

| CODE-1 | 51 to 521 Station Reference | D1 to 53 Depot Reference | Kp XXX Note For Kilometer point only Start Km is use | | |
|----------|--------------------------------|-----------------------------|---|--|--|
| CODE-2 | | Work Activity | | | |
| CODE - 3 | | Sub Element of Activity | | | |

| Description of Materials | | | | | Sube | grade ma | ter | ial results | | |
|---|--|---|--|---------|--------------------|------------|-----|--------------|------|---------|
| Location to be Used | | 460+540 to 4 460+540 to 4 | | | | | | | | |
| MAR | Approval N | lo | | | | | | Date | | |
| Suppl | ier Name | | | | | | | - | | |
| | Requiremen | nt | | | Speci | fication | | Clause | | |
| Reference Photos | | Yes attached / No | Other | | | | | | | |
| Item | a consistent of the local division of the lo | | | Uni | | Quantity | | Arrival Date | Note | |
| 1 | Sieve an | a second s | | M3 | | 10000 | T | | | |
| 2 | A DESCRIPTION OF TAXABLE PARTY. | finer than sieve no ,200 | | | | | | | | |
| 3 | and the second sec | state of the local division of the local division of the | Proctor test | | _ | | | | | |
| 4 | Absorpti | | nd Los angles R | | | | | | | |
| Comn | nents by: | | | 52.7 | 0 | Comments h | y: | S1 1. 110 | | |
| SEGAG | Ofice to | cairo un | rm Sub grade materia iversity Lab and the ontions and accepted | results | | | | | | |
| | | 1 | | | and the second | TATUS | | 1 | - | |
| | hisation | Name | 150 | Sig | - Martin Statement | | - | Date | | A-AWC-R |
| Contr | actor | | 2000000 | | | 200 P | | - | | |
| 04/0 | 2A/ac. Denne | | | - | 12 | | | | | |
| Contractor QA/QC· Denne GARB·· M-Negn | | | C | in | | | | | | |
| Comm | ent by ER | | | | | | | | | |
| Emple Repre | sentative | | | | | | | | | |

** Alignment / Bridges Culvert Only

مركسز استثنسارات ويحسوب التنميسة والتخطيسسط التكنولوجسسى جامعسة القاهسيرة



DEVELOPMENT RESEARCH AND TECHNOLOGICAL PLANNING CENTER CAIRO UNIVERSITY

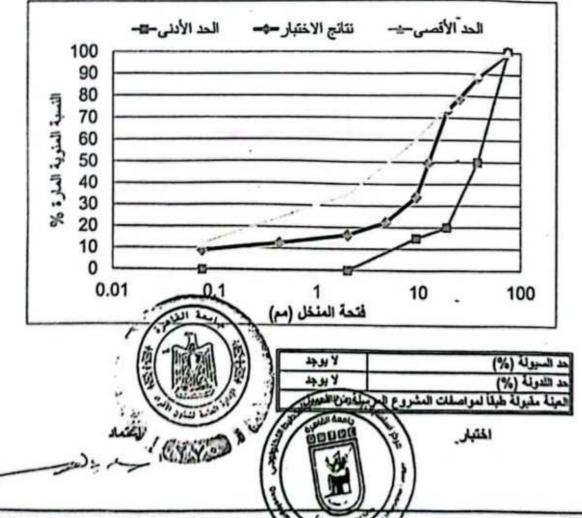
نتائج اختبار التدرج الحبيبي وتصنيف التربة طبقا للهAASHTO

2023/M/2001-02 A site

| 1.17/7/٨ | التاريخ : | شركة إنشاء للمقاولات العامة | اسم العميل : |
|--------------------|---------------|-----------------------------|---------------|
| نشربنات (Subgrade) | مكان العينة : | القطار الكهزبانى السريع | اسم العملية : |
| | | العلمين - فوكة - قطاع ٦ | |

البيلات بعليه هسب إفادة السبل.

| رقم المتخل | 3 | 1.5 in. | 1.0 in. | 3/4 in. | 1/2 in. | 3/8 in. | No.4 | No.10 | No.40 | No.200 |
|------------------------|-------|---------|---------|---------|---------|---------|------|-------|-------|--------|
| فتحة المنقل (مم) | 75.00 | 38.00 | 25.00 | 19.00 | 12.50 | 9.50 | 4.75 | 2.00 | 0.425 | 0.075 |
| السبة النلوية النارة % | 100.0 | 88.2 | 78.6 | 72.9 | 49.6 | 34.1 | 22.3 | 16.4 | 12.5 | 8.5 |



رام بريدي : ١٢٢١١ جيزة - مصر ص.ب : ٢٨ الكمر تترجع بعد مرون : ٢٠٧٠٨٦٢ - ٢٠٦٨٧٦٨٦ - ٢٠٦٨٧٦٨٦ - ٢٠٠٠٧٢٨

مركسز استشبارات وبحبوث التنميسة والتخطيب ط التكنولوجيسي جامعية القاهيرة



DEVELOPMENT RESEARCH AND TECHNOLOGICAL PLANNING CENTER CAIRO UNIVERSITY

تتانج اختبار الامتصاص

تاربر رام 2023/M/2001-02

| شركة إنشاء للمقاولات العامة | اسم العميل : |
|-----------------------------|--------------|
| القطار الكهرباني السريع | اسم العملية: |
| العلمين - فوكة - قطاع ٦ | |

تاريخ الورود : ٢٠٢/٣/٨

عدد العينات : ١

البياتك بعاليه حسب إفادة العميل

| نوع العينة |
|--------------------|
| تشريئات (Subgrade) |
| |

اختبار

اعتداد



رقم بريدى : ١٢٢١١ جيزة - مصر من ب : ٢٨ لكس : ٢٠٢٢٦٦٠١ تلولون : ٢٠٧٠٨٦٢ - ٢٠٢٨٠٢٢ - ٢٠٦٨٠٢٢ - ٢٠٢٨٠٢٢ E-mail: info@drtpc.org Mail: 12211Giza - Egypt P.O.Box: 38 Fax: 35736601 Tel.: 35707713 - 35687696 - 35728532 - 35728623

مركـز استثسارات وبحـوث التنميـة والتخطيــــط التكنولوجــــى جامعــة القاهــرة



DEVELOPMENT RESEARCH AND TECHNOLOGICAL PLANNING CENTER CAIRO UNIVERSITY

اختبار تعيين أقصى كثافة جافة بتجربة بروكتور المعدالة

تلرير رقم 2023/M1/2001-02 تلرير رقم

اسم العميل: اسم العملية:

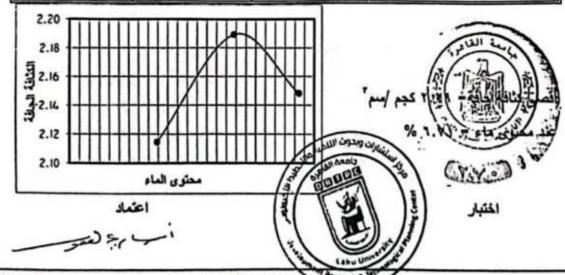
شركة إنشاء للمقاولات العامة القطار الكهربالي السريع العلمين - فوكة - قطاع ٦

التاريخ : ٢٠٢٢/٣/٨ نوع الترية : تشوينات حجم القالب : ٢١١٢ سم'

تشرينات (Subgrade)

البيلات بعاليه حسب إفادة العميل

| نسبة الماء المضاف % | 3 | 6 | 9 |
|--------------------------------|-------|-------|-------|
| وزن القالب و العينة جم | 11019 | 11329 | 11357 |
| وزن القالب جم | 6395 | 6395 | 6395 |
| وزن العينة المبتلة جم | 4624 | 4934 | 4962 |
| الكثافة بعد الدمك جم/سم | 2.19 | 2.34 | 2.35 |
| رزن عينة بالطبق جم | 450 | 450 | 450 |
| رزن عينة بعد التجليف بالطبق جم | 438 | 428 | 420 |
| وزن الرطوية جم | 12 | 22 | 30 |
| رزن الطبق -جم | 100 | 100 | 100 |
| وزن العينة جافة جم | 338 | 328 | 320 |
| محتوى الرطوية % | 3.55 | 6.71 | 9.38 |
| الكثافة الجافة جم/سم | 2.11 | 2.19 | 2.15 |



رقم بريدى : ١٢٢١١ جزة - مصر من ب : ٢٨ كان ٢٠ تلون : ٢٠٧٢٨٠٢٢ - ٢٠٦٨٧٦٩ - ٢٠٦٨٧٦٩ - ٢٠٢٨٠٢٢ - ٢٠٦٨٧٦٩ - ٢٠٢٨٠٢٢ E-mall: info@drtpc.org Mall: 12211Giza - Egypt P.O.Box: 38 Fax: 35736601 Tel.: 35707713 - 35687696 - 35728532 - 35728623 OEVELOPMENT RESEARCH AND TECHNOLOGICAL PLANNING CENTER





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Los Angles Abrasion (AASHTO T96) 2023/M/2001-02 نقریر رام

| Client Name: | فتربة جلبه للتردين فتنة | Test Date: | 08/03/2023 |
|---------------------|-------------------------|----------------|------------|
| Project Name: | اللقار لكتوريكس السريح | Specimen type: | للريقات |
| | دهس . لرية . للاح 1 | | Subgrade) |

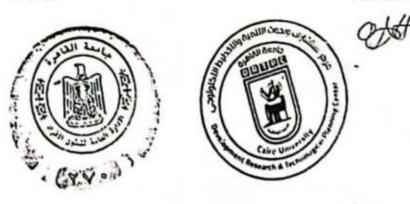
فيرقف يعليه حسب ألدة العمل والتنفح الثرركم العصول طبينا تبكر المنة الموردة بدرقل العمل بودراط وسيدادة طراف فا

| Test | Class | A | B | C. | D | | |
|------------------|------------------|-------------|--------------|------|------|--|--|
| Abrasive Charge | (No. of Spheres) | 12 | 11 | 8 | 6 | | |
| Sie | ves | | (CT) 11 2.22 | | | | |
| Passing Retained | | Sample Mass | | | | | |
| mm (alt.) | mm (alt.) | | 9 | | | | |
| 37.5 (1 1/2in.) | 25.0 (1 in.) | 1250 | | | | | |
| 25.0 (1 in.) | 19.0 (3/4in.) | 1250 | | | | | |
| 19.0 (3/4in.) | 12.5 (1/2in.) | 1250 | 2500 | | | | |
| 12.5 (1/2in.) | 9.50 (3/Sin.) | 1250 | 2500 | • | | | |
| 9.50 (3'Sin.) | 6.35 (1/4in.) | | | 2500 | | | |
| 6.35 (1/4in.) | 4.75 (No.4) | | | 2500 | | | |
| 4.75 (No.4) | 2.36 (No.8) | | | | 5000 | | |
| Tetal | | 5000 | 5000 | 5000 | 5000 | | |

| Total Class | | (A) |
|--|---------|-------|
| Muss of Sample before Test | g = | 5000 |
| Mass of Sample retained on 1.70mm(No.12) | 9 = | 3798 |
| Los Angles Wear = ((5000-Mass Ret.) /5000)X1 | 100 % = | 24.04 |

Tested By

Approved



رئم بريدى : ١٢٢١١ جيزة - مصر صب : ٢٨ فكس : ٢٠٢٢٦٦٠١ تليلون : ٢٥٧٢٨٦٢ - ٢٥٢٨٥٢٢ - ٢٥٢٨٥٢٢ - ٢٥٢٨٥٢٢ - ٢٠٢٨٥٢٢ تليلون : E-mail: Info@drtpc.org Mail: 12211Giza - Egypt P.O.Box: 38 Fax: 35736601 Tel.: 35707713 - 35687696 - 35728532 - 35728623

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| Interior and a long of phine pape | HONDI |
|--|-------|
| فل الوار في مراد من الرق المريد أنه | SE. |
| NS ON [A-4] | (III) |
| SILY 0 1 (0 MAIN | 9 |

Project Name:

California Bearing Ratio 2023/M/2001-01 تاریر رام

בעצ ווגוו עושועצים ושובל - "ייייים לאווים כווייים בייים לאווים כווייים כווייים כווייים כווייים כווייים בייים ביי

اللطار الكهريائى السريع

العلمين - فركة - قطاع 1

Specimen Type :

Test Date:

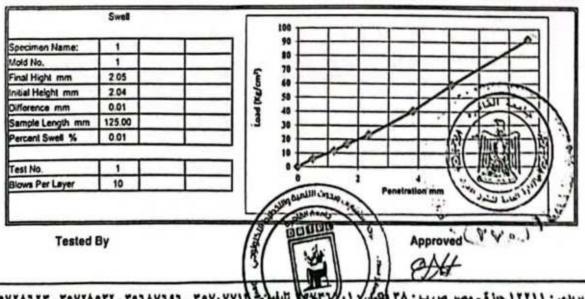
تشوينات (Subgrade)

04/01/2023

البيقات بعليه حسب إفدة العيل والنثقج التى تم الحصول عليها تمثل العلة الموردة من قبل العيل دون أدلى مسلولية على العركز.

| Specimen Name: | 1 | 1 | 1 | Specimen Name: | 1 1 | 2 | 3 |
|----------------------------|------|---|---|----------------------------------|-------|---|---|
| Can No. | 1 | | | Mold Vol. Cm ³ | 2208 | | |
| A. Mass, Wet Soil + can, g | 400 | | | Mass of sample, Mold g | 13300 | | |
| B. Mass, Dry Soil + can, g | 378 | | | Mass of Mold g | 8458 | | |
| C. Mass Molsture (A-B) | 22 | | | Mass of sample 9 | 4842 | | |
| D. Mass Can g | 100 | | | Unite Wet Mass g/cm ³ | 2.19 | | |
| E. Mass of Dry Soil (B-D) | 278 | | | Percent Moisture % | 7.91 | | |
| F. %Moisture ((C/E*100) | 7.91 | | | Unite Dry Mass g/cm ³ | 2.03 | | |

| | | Tes | 1 No. 1 | | Test No. 2 | | | | Test No. 3 | | | | | | | |
|-------------|----------|------------|------------------------|-------|------------|-----|-----------|-----|------------|--------------|----------|-----|-------|-----|-----|---|
| Penetration | Molded / | | TESTED / | | Molded / | | TESTED / | | Molded / | | TESTED / | | | | | |
| mm | Total | Total | Total | Total | Total | UNI | Corr. | * | Tetal | Unit | Curr | * | Total | UNI | Cer | * |
| | Load to | Lans (Nom) | Load Kicm ⁸ | CBR | Louding | - | Land Kitm | CBR | Land bg | Last (Klun') | Load Kim | CBR | | | | |
| 0 | 0 | 0.00 | | | | | | | | | | | | | | |
| 0.5 | 112 | 5.79 | | | | | | | | | | | | | | |
| 1.2 | 223 | 11.52 | | - | 1.00 | | | | | | | | | | | |
| 1.63 | 319 | 16.48 | | | | | | | | | | | | | | |
| 2.37 | 455 | 23.51 | | 34.07 | | | | | | | | | | | | |
| 3.51 | 782 | 40.41 | | | | | | 2 | | | | | | | | |
| 5.08 | 1147 | 59.27 | | 57.54 | 1 | | | | | | | | | | | |
| 1.62 | 1784 | 92.18 | | | | | | | | | | | | | | |



رام بريدى : ١٢٢١١ جيزة - مصر ص.ب : ٢٨ فوي ١. ٢٠٢٠ للبلونية ٢٠٧٢٨٦٢٢ - ٢٠٢٨٥٢٢ - ٢٠٦٨٧٦٩٦ - ٢٠٧٠٧٧٩ عناية ٢٠٠٠ E-mail: info@drtpc.org Mail: 12211Giza - Egypt P.O.Bou 28 Entrition 161: 35707713 - 35687696 -35728532 - 35728623

| MATERIAL INSPECTION REQUEST | Inshoo | STELL | مرکز کامللوی لمحیات مکرو مارد رمیز امرینیدی مکروا سند اندونیم | للبة لناء أعارة و الكباري (CARS) | A | | The state of the s |
|-----------------------------------|--------|-------|--|--|---|--|--|
|-----------------------------------|--------|-------|--|--|---|--|--|

| Contractor Company | انشاء للمقاولات العامة | | | Designer Company | | | | | | | |
|-------------------------|------------------------|------|------|------------------|----|------|------|----|------|----|----|
| Issued by Contractor | Name | Sign | Date | | | Time | | | | | |
| | Eng/ Mahmoud Shaban | -4 | 201 | -31/1/2023 | | | 1:00 | | | | |
| Received by | | | | a | 52 | C3 | DD | MM | YY | нн | MM |
| ER | | | MIR | 460 | EW | cs | 31 | 1 | 2023 | 1 | 00 |

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

| Description of Materials | | | | | Sub ba | last mate | erial results | Ŋ |
|---|--|-----------|--|------|----------|------------|---------------|---------|
| Location to be Used | | | 460+600 to 460+680 (0.7) 460+680 to 460+780 (0.7) 460+780 to 461+000 (0.7) 460+780 to 461+100 (0.7) 460+600 to 460+800 (0.9) 460+800 to 461+000 (0.9) 461+000 to 461+100 (0.9) | | | | | |
| MAR | Approval I | No | | | | | Date | |
| Supp | lier Name | | | | | 1 | | |
| Test | Requireme | nt | | - | Specific | ation | Clause | |
| and the second se | rence Phot | | Yes attached / No | | Other | | | |
| Item | Descripti | ion | | Uni | t | Quantity | Arrival Date | Note |
| 1 | Sieve an | alysis an | d specific gravity | M3 | | 10000 | | |
| 2 | | | an sieve no ,200 | | | | | |
| 3 | L.L and | P.L. and | Proctor test | | | | | |
| 4 | 4 Absorption test and Los angles abrasion and CBR | | | | | | | |
| Com | Comments by: | | | - | Co | mments by: | | |
| SEGA | | CELL La | | nded | VAL STA | TUS | | |
| Orga | nisation | Name | | Sig | | | Date | A-AWC-R |
| Cont | ractor | 10:1- | section. | ~ | si | كعر | | 1 |
| QA/O | ac• | F | Lannel | - | A | 2/ | 2 | |
| GARE | ··· | N | 1-Negm | (| - | ing | | |
| Comn | nent by ER | | | | | | | 4 |
| 0.000 | oyers esentative er | | | | | | | |

** Alignment / Bridges: Culvert Only

.



| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| Sample No. | : 02 |

Dear Gentleman,

Attached here with the Sub-Ballast delivered on 26 / 01 / 2023

Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2. Material finer than sieve No. 200 according ASTM D-1140.
- 3. Liquid limits and plasticity index of soil according to ASTM D-4318.
- 4. Proctor test according to ASTM D-1557.
- 5. CBR according to ASTM D-1883
- 6. Specific Gravity & Absorption according to ASTM C-127 & D 6473.
- 7. Los Anglos according to ASTM C-535.

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

Sign

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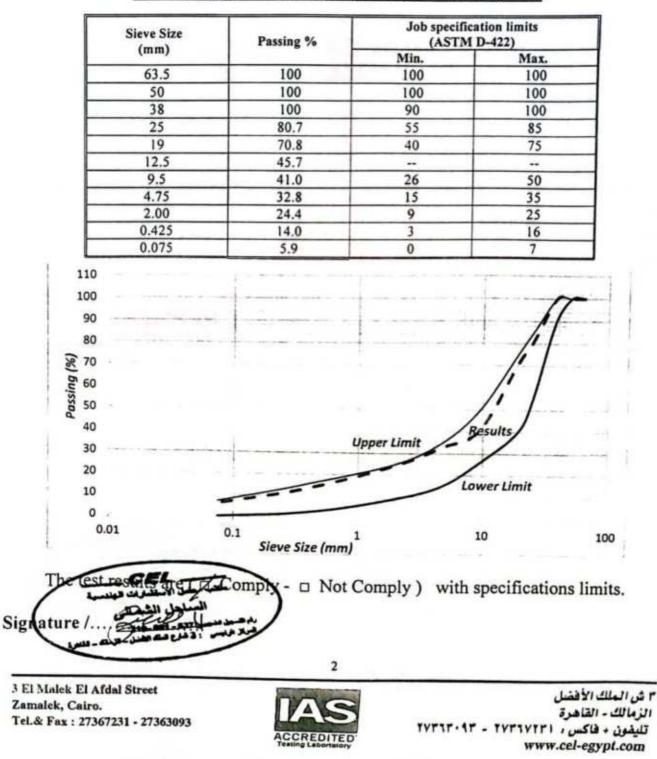
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الممسوحة ضوئيا بـ CamScanner



| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| Sample No. | : 02 |

Results of sieve analysis according to ASTM D-422.





| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| Sample No. | : 02 |

<u>Materials finer than 75 µm (no.200) sieve</u> by washing ASTM D-1140.

| Test | Results (%) |
|--|----------------|
| Percentage of material finer than Sieve Size 75 μΜ (No.200) | 5.9 |

Signature

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3

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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| 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 |

CEL Signatu

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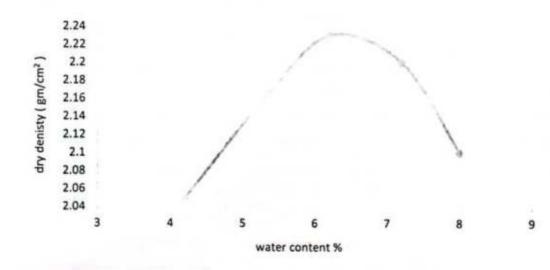


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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| Sample No. | : 02 |

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



Max dry density (gm/cm²) : 2.23

Optimum moisture content % : 6.2

Signature

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الممسوحة ضوئيا بـ CamScanner



| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| Sample No. | : 02 |

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

| penetration | | stress on piston (Mpa) |
|-------------|-------|------------------------|
| mm | Inch | succes on piston (mpu) |
| 0.64 | 0.025 | 3.49 |
| 1.27 | 0.050 | 3.96 |
| 1.91 | 0.075 | 4.35 |
| 2.54 | 0.100 | 4.57 |
| 3.18 | 0.125 | 4.79 |
| 3.81 | 0.150 | 5.02 |
| 4.45 | 0.175 | 5.22 |
| 5.08 | 0.200 | 5.46 |
| 5.71 | 0.225 | 5.58 |
| 6.35 | 0.250 | 5.65 |

| CBR Result | St | ress (Mpa) | CBR % |
|--------------------------------------|-----------|----------------|-------|
| At 0.1 inch (2.54 mm) penetration | St. Value | Sample results | ((22) |
| | 6.90 | 4.57 | 66.22 |

Notes :

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.23 (gm /cm3)
 - At 6.2 % optimum water content.

Surcharge load 4.50 K

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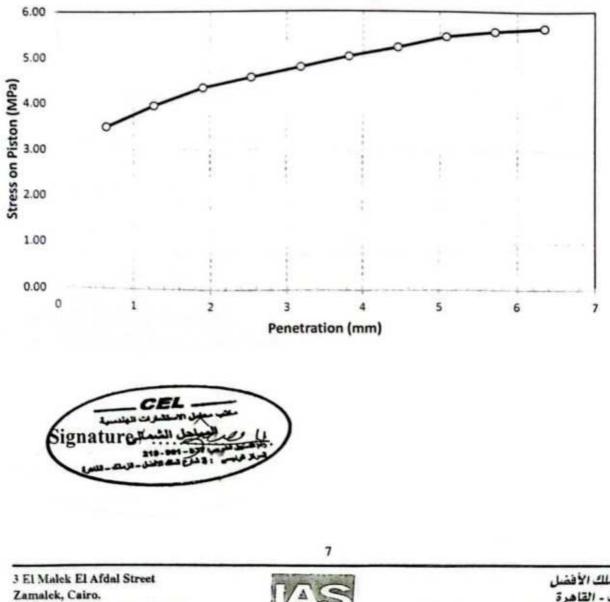


6

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| / | CEL |
|-----------------------|---|
| / | Consulting Engineering Bureau & Laboratories |
| / | • مكتب معامل الإستشارات الهندسية |
| Company Name | : Inshaa General Company |
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Type of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| Sample No. | : 02 |
| | |

Load Penetration Curve of CBR Test ASTM D-1883



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| Company Name | : Inshaa General Company |
|-----------------------|---|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh |
| Fype of sample | : Sub-Ballast |
| Delivery Date | : 26-01-2023 |
| Reporting Date | : 31-01-2023 |
| Reporting No. | : 25 |
| Sample No. | : 02 |

Results of Specific Gravity and Absorption of Course Aggregate ASTM C127 & D 6473

| Test | Results |
|-----------------------------|---------|
| Bulk Specific Gravity (OD) | 2.25 |
| Bulk Specific Gravity (SSD) | 2.37 |
| Apparent Specific Gravity. | 2.55 |
| Absorption % | 5.24 |

Note:

- · (OD) Refer to Oven Dry.
- (SSD) Refer to Saturated Surface Dry.



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Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

<u>Company:</u> Inshaa General Company

| Project | : Electric express train. |
|----------------------|---------------------------|
| Delivery Date | : 31/01/2023 |
| Report Date | : 08/02/2023 |
| Sample Id | : sub ballast |
| Туре | : Coarse Aggregate |
| Source | : Site |
| Report No. | : 01 |

RESISTANCE TO DEGRADATION OF LARGE SIZE AGGREGATE BY ABRASION AND IMPACT IN LOS ANGELES MACHINE ASTM C 535

| Test | Results |
|---|---------|
| Amount of loss by abrasion and impact (%) Coarse Aggregate | 22.4 |

According to project specs :

The amount of loss by abrasion and impact for moderate weathering:

Shall not exceed 30 %

The Test Results is (Comply - Not Comply) with Spec. Limits

Signature

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| MATERIA INSPECTIO REQUES | ON Inshaa | SGAC Just | بداماید مرکز ازمنان نو الکیاری دمرد (GARE) دگترا مد | ل اطرة | A | E A | | | ata yu a | | La |
|--------------------------------|------------------------|-----------------|---|--------|---------|-------|-----|------|----------|----|---|
| Contractor Company | العامة | انشاء للمقاولات | | Des | igner (| Compa | iny | | | | |
| INTER CONCERNS | Name | Sign | | Date | e | | | Tim | e | | _ |
| Issued by Contractor | Eng/ Mahmoud Shaban | -4 | 5,05 | 30/1 | 10/202 | 2 | | 1:40 |) | | |
| Received by | | | | - C1 | C2 | C3 | DD | MM | YY | HH | MM |
| neceived by | 1 | | MIR | 460 | EW | cs | 30 | 10 | 2022 | | 40 |

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

| Description of N | Aaterials | Fill material results | | | | | |
|---|---|--|--|----------|------------|----------------|---------|
| Location to be Used | | 460+680 to 40 460+880 to 40 461+00 to 46 | to 461+10Q (-2) 460+880 (-1.75) 461+000 (-1.75) 461+100 (-1.75) 0 460+680 (-1.5) | | | • | |
| MAR Approval N | ło | | | | | Date | |
| Supplier Name | | | | | ٠ | | |
| Test Requireme | nt | | | Specific | ation | Clause | |
| Reference Photo | | Yes attached / No | | Other | | | |
| Item Descripti | on | and the second second | Unit | | Quantity | Arrival Date | Note |
| 1 Sieve an | | | M ³ | | 5000 | | |
| | | n sieve no ,200 | | | | | |
| the second se | the second se | Proctor test | | | | | |
| the second se | sification | n and CBR | | | | | |
| Comments by: | 1.2.1 | | 120 | Co | mments by: | Carl Britshill | |
| | nd the resu | | i. | • | | | |
| O sea la star | Name | A | - | AL STA | TUS | Data | 1 |
| Organisation Contractor | Name | Lings | Sign | -4 | 3.05 | Date | A-AWC-R |
| QA/QC * | 12 | mi | - | Ý | rop | > | |
| GARB** | m. | Negm | 2 | \leq | Muy | | |
| Comment by ER | | | | | | | 5 |
| Employers Representative | | | | | | | |

** Alignment / Bridges: Culvert Only



مكتب معامل الاستشارات الهدمية - الساط الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

Dear Sir,

Attached here with the delivered on 23 / 10 / 2022

Materials test

1. Sieve analysis according to ASTM D-422.

2.Material finer than sieve No. 200 according ASTM D-1140.

3.Liquid limits and plasticity index of soil according to D-4318.

4.Soil classification according to Project Specs.

5.Proctor Test according to D-1557

6.CBR

This sample is classified as (A-1-a) according to Project Specs.

Signature / 16 30443 i leves



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| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | :07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

| Sieve Size (mm) | Passing % |
|--------------------|-----------|
| 50 | 100 |
| 37.5 | 97.6 |
| 25 | 93.8 |
| 19 | 91.2 |
| 12.50 | 71.2 |
| 9.50 | 63.4 |
| 4.75 | 52.8 |
| 2.36 | 47.6 |
| 2.00 | 44.1 |
| 1.18 | 37.4 |
| 0.600 | 32.1 |
| 0.425 | 28.4 |
| 0.300 | 21.5 |
| 0.150 | 17.5 |

Note: The sample was brought by the client to our laboratory at 23/10/2022 and the laboratory is not responsible for the way it is taken

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مكتب معامل الاستشارات الهندسية - الساحل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | :07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

MATERIALS FINER THAN 75 μm (No.200) SIEVE IN MENERAL AGGREGATE BY WASHING ASTM D-1140.

| Test | Results (%) |
|--|----------------|
| Percentage of material finer than Sieve Size 75 µM (No.200) | 12.1 |

Signature / .51 210-003-017 -01040 **11 A** وي الروسي الاخترع شك الاختر 113



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| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

RESULTS OF LIQUID LIMIT AND PLASTICITY INDEX OF SOILS According to D-4318

| Test | Results |
|--------------------|---------|
| Liquid Limit% | NP |
| Plastic Limit % | NP |
| Plasticity Index % | NP |

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| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | :07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

Soil Classification According To Project Specs (Embankment)

| TEST | Results (%) | Limits according Projects Specs | | |
|--|----------------|------------------------------------|----------|--|
| Group Classification | (A-1-a) | (A-1-a) | (A-1-b) | |
| 2.00 mm (No.10). | 44.1 | Max 50 % | | |
| 0.425 mm (No. 40). | 28.4 | Max 30 % | Max 50 % | |
| 0.075 mm (No. 200). | 12.1 | Max 15 % | Max 15 % | |
| Characteristics of fraction passing 0.42 | 5 mm (No.40) | | | |
| Liquid Limit | NP | | | |
| Plasticity index | NP | Max 6 % | Max 6 % | |

The Test Results is (Comply - Not Comply) with Project Spec.

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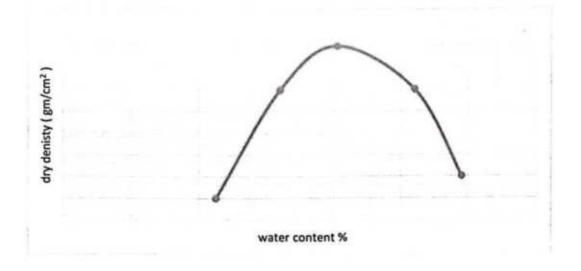
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مكتب معامل الاستشارات الهندسية - الساحل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | :07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

<u>Moisture – Density relation of soil</u> <u>Test result (Modified proctor test)</u> ASTM (D 1557)



Max dry density (gm/cm²) : 2.04

Optimum moisture content % : 8 CEL ل الاستشارات ال 511 Signature



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مكتب معامل الاستشارات الهندسية - الساط الشملي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | :07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

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

| pene | etration | str | ess on piston | | | | |
|-----------------------|-----------|----------------|---------------|--|--|--|--|
| mm | Inch | | (Mpa) | | | | |
| 0.64 | 0.025 | 5 | 3.42 | | | | |
| 1.27 | 0.050 |) | 4.08 | | | | |
| 1.91 | 0.075 | ; | 4.60 | | | | |
| 2.54 | 0.100 |) | 5.08 | | | | |
| 3.18 | 0.125 | 5 | 5.80 | | | | |
| 3.81 | 0.150 |) | 6.58 | | | | |
| 4.45 | 0.175 | 7.03 | | | | | |
| 5.08 | 0.200 |) | 7.39 | | | | |
| 5.71 | 0.225 | 7.82 | | | | | |
| 6.35 | 0.250 | 0.250 | | | | | |
| CBR RESULTS | St | ress (Mpa) | CBR % | | | | |
| At 0.1 inch (2.54 mm) | St. Value | Sample results | 73.6 | | | | |
| penetration | 6.90 | 5.08 | / 3.0 | | | | |

Notes :

1-Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of 2.04 (gm /cm3)

At 8.2 % optimum water content.

| 3-Surcharge load 4.50 K | GEL | | |
|--|--|------------------|-----|
| Signature | الاسماسل الالمتعاليات الاسماسل الالمتعاليات | | |
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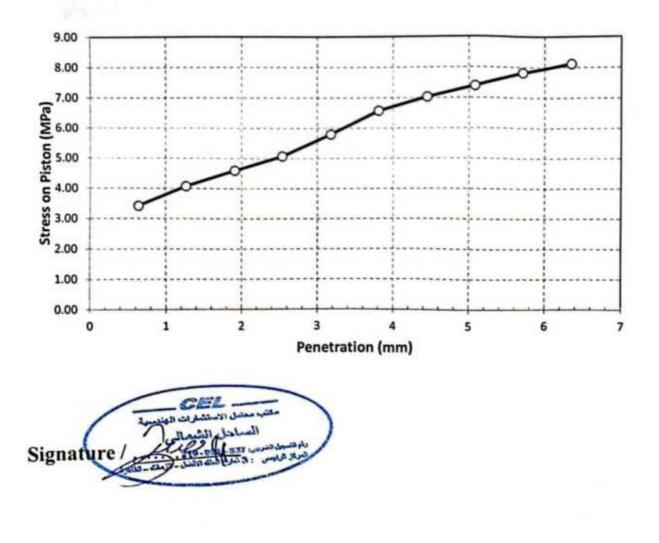
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| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 07 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

LOAD PENETRATION CURVE OF CBR TEST ASTM D 1883



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| Employers Representative | Comment by ER | GARB** | aA/ac. | Contractor | Organisation | No. of the Party | Asample has been taken forn to CELL Lab and the result specificontions and accepted | Comments by: | | 2 Materi | | Item Description | Reference Photos | Test Requirement | Supplier Name | MAR Approval No | Location to be Used | Description of Materials | CODE-3 | CODE - 2 | CODE-1 | Received by ER | Contractor | Company Issued by | Contractor |
|-----------------------------|---------------|--------|--------|------------|--------------|---|---|----------------|-----------------------------|-----------------------------------|----------------|-----------------------|-------------------------|-------------------------|---------------|-----------------|---|--------------------------|-------------------------|---------------|--|-------------------|------------------------|----------------------|------------------------|
| | | m_ Neo | T | 2- | Name | | en taken form and the result and accepted | | Soil classification and CBR | al finer than | Sieve analysis | tion | | ent | | No | Used | Materials | | | S1 to S21 Station Reference | | Eng/ Mahmoud Shaban | Name | |
| | | wegn | amel | si cini | | Contraction of the second s | Asample has been taken form fill material by SEGAC office to CELL Lab and the results founded meet the specificontions and accepted | and a state | nd CBR | Material finer than sieve no ,200 | | and the second second | Yes attached / No | | | | 460+880 to 460+600 to 460+680 to 460+780 to 460+880 to 460+600 to | | | | 1 1 | | oud ~ | Sign | انشاء للمقاولات العامة |
| | | 6 | X | 1 | Sign | APPROVAL STATUS | sEGAC office | 0 | | | M | Unit | | Specification | | | 460+880 to 461+100 (-0.5) 460+600 to 460+680 (-0.25) 460+680 to 460+780 (-0.25) 460+780 to 460+880 (-0.25) 460+880 to 461+100 (-0.25) 460+600 to 460+680 (ferma) | Fill | Sub Elemen | Work | Depot R | MIR | hijos | | ŝ |
| | | - and | Tal | 2 Jes | | ATUS | | Comments by: | | | 5000 | tity | | cation | | | | Fill material results | Sub Element of Activity | Work Activity | D1 to 53 Depot Reference | R 460 EW | 11, | Date | Designer Company |
| | | | 0 | | Date | | | Note to State | | | | Arrival Date | | Clause | | Date | | sults | | | For Kilomete | CS 26 | 3 | | ompany |
| | | | | | A | | | and the second | | | | Note . | | | | | | | | | Kp XXX Note For Kilometer point only Start Km is used | 11 2022 | | Time | |
| | | | | | A-AWC-R | | | | | | | 1 1 | | | | | | | | | Km is used | 2 30 | - | | |

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** Alignment / Bridges: Culvert Only

| | C | E/L | |
|-----------|---|-----|--------------|
| onsulting | | _ | Laboratories |

مكتب معامل الإستشارات الهندسية - الساحل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 13 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 26 / 11 / 2022 |

Dear Sir,

Attached here with the Replacement Soil delivered on 16 / 11 / 2022

Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2. Liquid limits and plasticity index of soil according to D-4318.
- 3. Soil classification according to Project Specs.
- 4. Proctor Test according to D-1557
- 5. CBR
- This sample is classified as (A-1-b) according to Project Specs.

Not

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

Signatur



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| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 13 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

| Sieve Size (mm) | Passing % |
|--------------------|-----------|
| 50 | 95.3 |
| 37.5 | 91.2 |
| 25 | 88.9 |
| 19 | 83.3 |
| 12.50 | 71.6 |
| 9.50 | 63.3 |
| 4.75 | 54.2 |
| 2.36 | 51.3 |
| 2.00 | 49.9 |
| 1.18 | 40.7 |
| 0.600 | 36.4 |
| 0.425 | 33.9 |
| 0.300 | 21.1 |
| 0.150 | 15.8 |

EL Signature /.

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| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 13 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

Soil Classification According To Project Specs (Embankment)

| TEST | Results (%) | V CONTRACTOR STOCK | rding Projects ecs |
|--|----------------|--------------------|-----------------------|
| Group Classification | (A-1-b) | (A-1-a) | (A-1-b) |
| 2.00 mm (No.10). | 49.9 | Max 50 % | |
| 0.425 mm (No. 40). | 33.9 | Max 30 % | Max 50 % |
| 0.075 mm (No. 200). | 10.3 | Max 15 % | Max 15 % |
| Characteristics of fraction passing 0.42 | 5 mm (No.40) | | |
| Liquid Limit | NP | | |
| Plasticity index | NP | Max 6 % | Max 6 % |

The Test Results is (Comply

Not Comply) with Project Spec.

Signature

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| 1 | CEI | |
|---|-----------------------|--|
| | neering Bureau & Labo | |

مكتب معامل الإستشارات الهندسية - الساحل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 13 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

RESULTS OF LIQUID LIMIT AND PLASTICITY INDEX OF SOILS According to D-4318

| Test | Results |
|--------------------|---------|
| Liquid Limit% | NP |
| Plastic Limit % | NP |
| Plasticity Index % | NP |

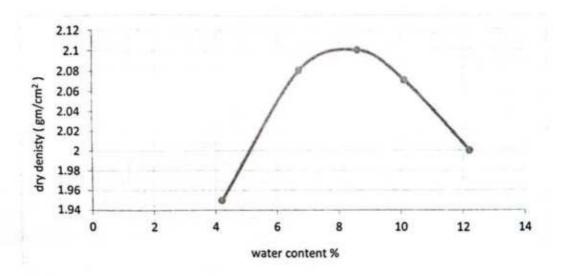
Signature 210-501-537 W



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|--|--|
| ureau & Laboratories مكتب معامل الإ | مكتب معامل الإستشارات الهندسية - الساحل الشمالي |
| : Inshaa Gene | ral Company |
| : Electric Expr Sector (6) – Alan | ress Train, from Al Ain Sokhna to Marsa nein to Foka |
| : Replacement | Soil (Middle & Upper Embankment) |
| : 13 | |
| : 16/ 11 / 2022 | |
| : 21 / 11 / 2022 | |
| | ureau & Laboratories : Inshaa Gener : Electric Expr Sector (6) – Alan : Replacement : 13 : 16/ 11 / 2022 |

<u>Moisture – Density relation of soil</u> <u>Test result (Modified proctor test)</u> <u>ASTM (D 1557)</u>



Max dry density (gm/cm²) : 2.10

Optimum moisture content % : 8.6

Signature

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مكتب معامل الإستشارات الهندسية - الساحل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 13 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

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

| | | and the second | | | |
|-----------------------|-----------|--|-------|--|--|
| pene | S | tress on piston | | | |
| mm | Inch | | (Mpa) | | |
| 0.64 | 0.025 | | 1.03 | | |
| 1.27 | 0.050 |) | 1.56 | | |
| 1.91 | 0.075 | 5 | 2.17 | | |
| 2.54 | 0.100 |) | 2.82 | | |
| 3.18 | 0.125 | i | 3.16 | | |
| 3.81 | 0.150 | | 3.48 | | |
| 4.45 | 0.175 | | 3.70 | | |
| 5.08 | 0.200 |) | 4.05 | | |
| 5.71 | 0.225 | | 4.40 | | |
| 6.35 | 0.250 | | 4.80 | | |
| CBR RESULTS | St | CBR % | | | |
| At 0.1 inch (2.54 mm) | St. Value | Sample results | 40.9 | | |
| penetration | 6.90 | 2.82 | 40.9 | | |

Notes :

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.10 (gm /cm³)
- at 8.6 % optimum water content.
- 3- Surcharge load 4.50 Kg.



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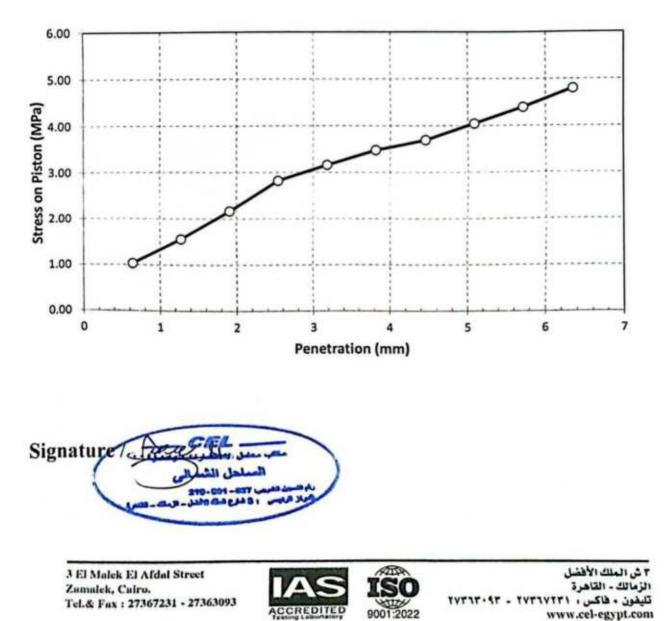


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|---|
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| al Company |
| ess Train, from Al Ain Sokhna to Marsa ein to Foka |
| Soil (Middle & Upper Embankment) |
| |
| |
| |
| |

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LOAD PENETRATION CURVE OF CBR TEST ASTM D 1883



| MATERIAL INSPECTION REQUEST | Inshaa | ول المنظون لعندمها عقر مردر منز المناوين | للرغ المالية الطرق و الكياري ر مايدور | A | | - |
|-----------------------------------|--------|--|---|---|--|---|
|-----------------------------------|--------|--|---|---|--|---|

| Company | انشاء للمقاولات العامة | | besigner company | | | | | | | | |
|-------------------------|------------------------|------|------------------|------|--------|------|----|------|------|----|----|
| Issued by Contractor | Name | Sign | Date | | | Time | | | | | |
| | Eng/Mahmoud Shaban | -22 | 5.01 | 21/1 | 11/202 | 2 | | 1:15 | k - | | |
| Received by ER | | | | ct | C2 | .C3 | 00 | MM | 44 | HH | MM |
| | | | MIR | 460 | EW | cs | 21 | 11 | 2022 | 1 | 15 |

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

| Descr | iption of Materia | ls | | Fill material results | | | | | |
|------------------|-----------------------|---|-------------------------------------|-------------------------|---------|---|-----------------|--|--|
| Locati | ion to be Used | 460+600 to 46 460+680 to 46 460+780 to 46 460+880 to 46 460+980 to 46 | 60+780 (+ 60+880 (+ 60+980 (+ | 0.75) 0.75) 0.75) | 460+ | 600 to 460+68 680 to 460+78 780 to 460+88 | 0 (-0.5) | | |
| MAR Approval No | | | | - | | | | | |
| Suppl | ier Name | | | | | | | | |
| Test Requirement | | | Sp | ecification | | Clause | | | |
| Refer | ence Photos | Yes attached / No | 0 | her | | | Sector Sector | | |
| Item | Description | | Unit | Quan | | Arrival Date | Note | | |
| 1 | Sieve analysis | | M3 | 500 | 00 | | 1 | | |
| 2 | Material finer | terial finer than sieve no ,200 | | | | | | | |
| 3 | L.L and P.L a | nd Proctor test | | | | | | | |
| 4 | Soil classification , | | | _ | | and the second second | - Second Street | | |
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| Organ | nisation Nam | | _ | Sign | | Date | A-AWC-R | | |
| Contr | ractor | كود ممام 1 د | | ~ UP | 20 | | | | |
| QA/C | QC * | Rome | - | Am | 10 | | | | |
| GARB Negm | | (| ز | run | | | | | |
| | nent by ER | | | | | | | | |
| Comn | | | | | | | | | |

** Alignment / Bridges: Culvert Only

| CEL | |
|---|--|
| النام Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية | |

مكتب معامل الإستشارات الهندسية - الساحل الشمالي

| mpany Name | : Inshaa General Company |
|-----------------------------|---|
| /roject Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 18 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

Dear Sir,

Attached here with the Replacement Soil delivered on 16 / 11 / 2022

Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2. Liquid limits and plasticity index of soil according to D-4318.
- 3. Soil classification according to Project Specs.
- 4. Proctor Test according to D-1557
- This sample is classified as (A-1-b) according to Project Specs.

Note

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

Signature /

3 El Malek El Afdal Street Zamalek, Cuiro. Tel.& Fux : 27367231 - 27363093





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مكتب معامل الإستشارات الهندسية - الساحل الشمالي

| Apany Name | : Inshaa General Company |
|----------------------------|---|
| roject Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 18 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

| Sieve Size (mm) | Passing % |
|--------------------|-----------|
| 50 | 92.6 |
| 37.5 | 90.4 |
| 25 | 86.5 |
| 19 | 81.4 |
| 12.50 | 72.4 |
| 9.50 | 65.5 |
| 4.75 | 53.4 |
| 2.36 | 50.0 |
| 2.00 | 49.9 |
| 1.18 | 40.5 |
| 0.600 | 37.9 |
| 0.425 | 33.4 |
| 0.300 | 28.1 |
| 0.150 | 17.7 |
| 0.075 | 13.5 |

Signature 1.. -961-537 215 فر ارتيس : و شار الما : الما

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



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| 1 | CEL |
| - | |
| ting Engl | meering Bureau & Laboratories |
| | مكتب معامل الإستشارات |

مكتب معامل الإستشارات الهندسية - الساحل الشمالي

Apany Name : Inshaa General Company

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

| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
|-----------------------|---|
| Sample No | : 18 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

RESULTS OF LIQUID LIMIT AND PLASTICITY INDEX OF SOILS According to D-4318

| Test | Results |
|--------------------|---------|
| Liquid Limit% | NP |
| Plastic Limit % | NP |
| Plasticity Index % | NP |





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| | <u> </u> | Consulting Engineering & Laboratories - North Coast |
|----------------------------|--|---|
| ning Engineering I | Bureau & Laboratories مكتب معامل الإت | مكتب معامل الإستشارات الهندسية - الساحل الشمالي |
| apany Name | : Inshaa Gene | ral Company |
| roject Matrouh Priority | | ress Train, from Al Ain Sokhna to Marsa nein to Foka |
| Type of sample | : Replacement | t Soil (Middle & Upper Embankment) |
| Sample No | : 18 | |
| Delivery Date | : 16/ 11 / 2022 | |
| Reporting Date | : 21 / 11 / 2022 | |

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). | 49.9 | Max 50 % | | | |
| 0.425 mm (No. 40). | 33.4 | Max 30 % | Max 50 % | | |
| 0.075 mm (No. 200). | 10.5 | Max 15 % | Max 15 % | | |
| Characteristics of fraction passing 0.42 | 5 mm (No.40) | | | | |
| Liquid Limit | NP | | | | |
| Plasticity index | NP | Max 6 % | Max 6 % | | |

The Test Results is (Comply - D Not Comply) with Project Spec.

Signatu ...

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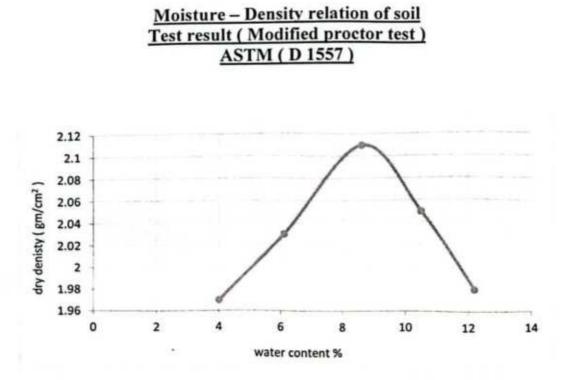


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| مكتب معامل الإستشارات ا |
|-------------------------|
| |
| |

| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
|-----------------------------|---|
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 18 |
| Delivery Date | : 16/ 11 / 2022 |
| | |

Reporting Date : 21 / 11 / 2022



Max dry density (gm/cm2) : 2.11

Optimum moisture content % : 8.6

Signature

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| MATERIA INSPECTIO REQUES | ON Inshaa | اللول العنسية العرور لعلم معرور العلم معرور معرور العلم معرور معرور معر | ر الكراري ^س ر | L L | Au- | E SYSTIA | | 1 | 14.4 <u>11, 8944</u> | - | |
|--------------------------------|------------------------|--|--------------------------|----------------|---------|----------|------|------|----------------------|------|----|
| Contractor Company | العامة | انشاء للمقاولات | | Desi | igner C | ompa | ny | | | | |
| towned by | Name | Sign | | Name Sign Date | | | Time | | | | |
| Issued by Contractor | Eng/ Mahmoud Shaban | كورجار | | 26/1 | 1/202 | 2 | | 1:30 | 1 | | |
| Received by | | | | ct | C2 | C3 | 00 | MM | YY | - HH | MM |
| ER | | | MIR | 460 | EW | cs | 26 | 11 | 2022 | 1 | 30 |

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

| Description of Ma | aterials | | | Fill r | naterial | results | | |
|---|--|--|---|---------------------------------------|-----------|--------------|--------|---------|
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| MAR Approval N | 0 | | | | | Date | 1 | |
| Supplier Name | | | | | | | | |
| Test Requiremen | t | | 1 | Specifica | tion | Clause | Clause | |
| Reference Photo | s | Yes attached / No | | Other | | | | |
| Item Descriptio | n | | Unit | | Quantity | Arrival Date | Note | |
| 1 Sieve and | - | | M ³ | | 5000 | | | |
| the second se | the second s | an sieve no ,200 | | | | | | |
| the second se | and the second second second | Proctor test | - | | | | - | |
| and the second se | ificatio | n and CBR | _ | | | | | |
| Comments by: | - | C. C. Linder | 100 M | Con | ments by: | CT I TO BE | | 12010 |
| | d the res | rm fill material by SE ults founded meet th ed | ne | | | | | |
| a line I | | | APPROV | AL STAT | US | 10.00 | | |
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| Contractor | - ĩ | 1.0.15 | | he | 200 | - | | |
| QA/QC * | | Venel | - | t | - | | | |
| GARB** | m- | Negm | (| Ċ | Jung | | - | |
| Comment by ER | | | | | | | | |
| Employers Representative | | | | | | | | |

** Algoment / Bridges. Culvert Only

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| | nearing Boreau في الإستشارات | |

مكلب مغامل الإستشارات الهندسية ، الساحل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 15 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 26 / 11 / 2022 |

Dear Sir,

Attached here with the Replacement Soil delivered on 16 / 11 / 2022

Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2. Liquid limits and plasticity index of soil according to D-4318.
- 3. Soil classification according to Project Specs.
- 4. Proctor Test according to D-1557
- 5. CBR
- · This sample is classified as (A-1-b) according to Project Specs.

Note

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

Signature المساهل الث 001-937 29.23

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



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| | insering Bure الإستشارات ا | eu & Laboratories مکتب معامل |

مكتب معامل الإستشارات الهندسية - الساحل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 15 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

Dear Sir,

Attached here with the Replacement Soil delivered on 16 / 11 / 2022

Materials test

- 1. Sieve analysis according to ASTM D-422.
- 2. Liquid limits and plasticity index of soil according to D-4318.
- 3. Soil classification according to Project Specs.
- 4. Proctor Test according to D-1557
- 5. CBR
- This sample is classified as (A-1-b) according to Project Specs.

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 | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 15 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

| Sieve Size (mm) | Passing % |
|--------------------|-----------|
| 50 | 99.1 |
| 37.5 | 93.4 |
| 25 | 88.5 |
| 19 | 85.9 |
| 12.50 | 71.8 |
| 9.50 | 62.6 |
| 4.75 | 52.3 |
| 2.36 | 50.0 |
| 2.00 | 49.0 |
| 1.18 | 44.4 |
| 0.600 | 35.5 |
| 0.425 | 31.8 |
| 0.300 | 28.9 |
| 0.150 | 16.7 |

Signature / اط

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| مكتب معامل الإستشارات الهندسية - الساحل الش |
| any |
| , from Al Ain Sokhna to Marsa ka |
| ldle & Upper Embankment) |
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| |

RESULTS OF LIQUID LIMIT AND PLASTICITY INDEX OF SOILS According to D-4318

| Test | Results | |
|--------------------|---------|--|
| Liquid Limit% | NP | |
| Plastic Limit % | NP | |
| Plasticity Index % | NP | |



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| GEL |
| ting Engineering Bureau & Laboratories |
| مكتب معامل الإستشارات الهندسية |

مكتب معامل الإستشارات الهندسية - الساحل الشمالي

| ompany Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 15 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

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). | 49.0 | Max 50 % | |
| 0.425 mm (No. 40). | 31.8 | Max 30 % | Max 50 % |
| 0.075 mm (No. 200). | 11.5 | Max 15 % | Max 15 % |
| Characteristics of fraction passing 0.42 | 5 mm (No.40) | | |
| Liquid Limit | NP | | |
| Plasticity index | NP | Max 6 % | Max 6 % |

The Test Results is (Comply

у -

□ Not Comply) with Project Spec.

Signature المسلحل ال

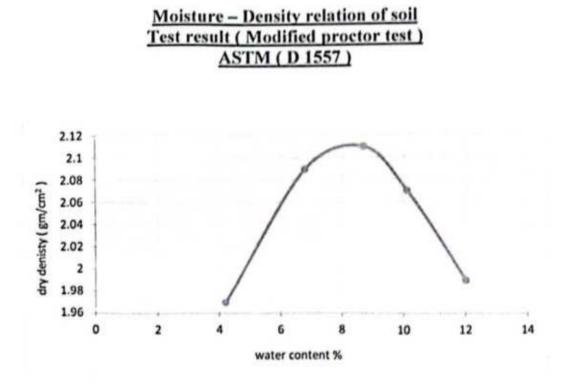
3 El Malek El Afdal Street Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093



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|---|---|
| Engineering Bureau & Laboraturies مكتب معامل الإستشارات الهندسيد | مكتب معامل الإستشارات الهندسية - الساحل الشمالي |

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 15 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |



Max dry density (gm/cm2) : 2.11

Optimum moisture content % : 8.7



| - | MATERIAL INSPECTION REQUEST | Inshaa | SEE S | مرغ المثلول المنعيا كالروغز درمزز المراجع بأكرر مند اليوخم | البواسات أطرق و أكباري (1948ع) | A | | 1 10111 10111 1011 |
|---|-----------------------------------|--------|-------|--|--------------------------------------|---|--|-----------------------|
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| Contractor Company | انشاء للمقاولات العامة | | Designer Company | | | | | | | | |
|-------------------------|------------------------|-----------|------------------|-----|------|------|----|------|----|----|--|
| traund has | Name | Sign Date | | Tim | Time | | | | | | |
| Issued by Contractor | Eng/Mahmoud Shaban | 2000 | - 30/10/2022 | | | 1:10 | | | | | |
| Received by | | | a | 12 | 3 | 00 | MM | YY | HH | MM | |
| ER | | MIR | 460 | EW | cs | 30 | 10 | 2022 | 1 | 10 | |

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

| iption of M | aterials | Is Fill material results | | | | | | |
|--|--|--|--|---|--|---|--|--|
| Location to be lised | | | | | | | * | |
| MAR Approval No | | | | | | Date | 1 | |
| ier Name | | | | | | | | |
| leguiremen | t | | Specification | | | Clause | | |
| the second s | | Yes attached / No | | Other | | | | |
| | _ | | Unit | | Quantity | Arrival Date | Note | |
| and the second s | Courses of the second sec | | M ³ | | 5000 | | 1.00 | |
| the second se | | an sieve no ,200 | | | | | | |
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| Soil class | sificatio | n, | | | | | | |
| nents by: | N. R. March | | - | Co | mments by: | | | |
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| actor | ~ | 20-2-19 | | - 5 | حور | • | | |
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| ent by ER | | | | | | | | |
| oyers sentative | | | | | | | | |
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** Alignment / Bridges: Culvert Only

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مكتب معامل الاستشارات الهندسية - الساهل الشمالى

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 08 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

Dear Sir,

Attached here with the delivered on 23 / 10 / 2022

Materials test

1.Sieve analysis according to ASTM D-422.

2. Material finer than sieve No. 200 according ASTM D-1140.

3.Liquid limits and plasticity index of soil according to D-4318.

4.Soil classification according to Project Specs.

5.Proctor Test according to D-1557

This sample is classified as (A-1-b) according to Project Specs.

CEL مكتب معامل الاستشارات الساحل الش Signature



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مكتب معامل الأمشار ان الهديوة - البنامل الشعالي

| Company Name | : Inshaa General Company | | | |
|-------------------------|---|--|--|--|
| Project | : Electric Express Train, from Al Ain Sokhna to Marsa | | | |
| Matrouh Priority | Sector (6) – Alamein to Foka | | | |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) | | | |
| Sample No | : 08 | | | |
| Delivery Date | : 23 / 10 / 2022 | | | |

Reporting Date : 30 / 10 / 2022

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

| Sieve Size (mm) | Passing % |
|--------------------|-----------|
| 50 | 100 |
| 37.5 | 97.8 |
| 25 | 96.4 |
| 19 | 92.8 |
| 12.50 | 77.4 |
| 9.50 | 61.5 |
| 4.75 | 56.4 |
| 2.36 | 51.4 |
| 2.00 | 44.5 |
| 1.18 | 39.1 |
| 0.600 | 34.2 |
| 0.425 | 32.1 |
| 0.300 | 26.7 |
| 0.150 | 16.7 |

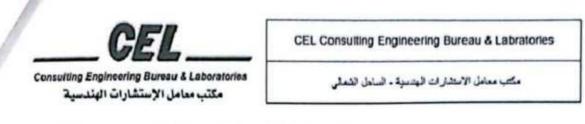
Note: The sample was brought by the client to our laboratory at 23/10/2022 and the laboratory is not responsible for the way it is taken

CEL مقتيره معاسل الاتر Rappell Signature / DAT IN 219-001 (June ATTA - CALIFIC - ALIFICIA - CALA - CALA 14

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| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 08 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

MATERIALS FINER THAN 75 μm (No.200) SIEVE IN MENERAL AGGREGATE BY WASHING ASTM D-1140.

| Test | Results (%) |
|--|----------------|
| Percentage of material finer than Sieve Size 75 µM (No.200) | 12.7 |

2058 Signature / 219-901-153T IV ی شنہ يد مرسى ، وهارع شقادالدل.

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مكتب معامل الانتشارات الهندمزة - الساهل الشمالي

| Company Name | : Inshaa General Company |
|-----------------------------|---|
| Project Matrouh Priority | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 08 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

Soil Classification According To Project Specs (Embankment)

| TEST | Results (%) | | rding Projects ecs |
|--|----------------|----------|-----------------------|
| Group Classification | (A-1-b) | (A-1-a) | (A-1-b) |
| 2.00 mm (No.10). | 44.5 | Max 50 % | |
| 0.425 mm (No. 40). | 32.1 | Max 30 % | Max 50 % |
| 0.075 mm (No. 200). | 12.7 | Max 15 % | Max 15 % |
| Characteristics of fraction passing 0.42 | 5 mm (No.40) | | |
| Liquid Limit | NP | | |
| Plasticity index | NP | Max 6 % | Max 6 % |

The Test Results is (Comply

Not Comply) with Project Spec.

Signature 219-001-037 -ال الرارسي Manual

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| Consulting Enginee | Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية | خا الشدل | مكتب ممادل الأمطارات الهتمولة - الساهل الشعل |
| Company Name | : Inshaa General Company | l Company | |
| Project Matrouh Priority | Project : Electric Express Train, fr Matrouh Priority Sector (6) – Alamein to Foka | ss Train, from in to Foka | : Electric Express Train, from Al Ain Sokhna to Marsa ctor (6) – Alamein to Foka |
| Type of sample | : Replacement S | oil (Middle & | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 08 | | |
| Delivery Date | : 23 / 10 / 2022 | | |
| Reporting Date | : 30 / 10 / 2022 | | |
| | <u>Moisture –</u> Test result (| <u>Moisture – Density relation of soil</u> Test result (Modified proctor test | n of soil tor test) |
| | SV | ASTM (D 1557) | |
| dry denisty (gm/cm²) | | | |
| | | water content % | |
| Max dry density (gm/cm ²) : 2.02 | /cm ²) : 2.02 | | |
| Optimum moisture content % | ontent % : 8.1 | | |
| Signature / | and a state of the | | |
| 3 El Malek El Afdal Street Zamalek, Calro. Tel.& Fax : 27367231 - 27363093 | Street 1 - 27363093 AGDREDI | | ז בה ונהונה וללמינו ונקטונה - וננוסנ נעיליני - לוצעה : וזיויריוז - זויזרוזיז איאיא איזי - איזידראיז |

| | | | ILSU | ~ | | | | X | | | Γ |
|---|---|--------------------------|--|---|-----------|----------------------|-----------------------|--|---|---------|--|
| CEL Consulting Engineering Bureau & Labratories | مكانيد معادل الأسالطر ان الهادمولة و السابال الشعال | y | rom Al Ain Sokhna to Mi 1 | le & Upper Embankment | | | | OF SOILS According to D-4318 | - | Kesults | |
| | thoratories pritte | : Inshaa General Company | Project : Electric Express Train, from AI Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka | : Replacement Soil (Middle & Upper Embankment) | : 08 | : 23 / 10 / 2022 | : 30 / 10 / 2022 | RESULTS OF LIQUID LIMIT AND PLASTICITY INDEX OF SOILS According to D-4318 | Ĩ | lest | and the second s |
| | Constitut Engines | Company Name | Project Matrouh Priority | Type of sample | Sample No | Delivery Date | Reporting Date | RESUL | | | |

ь,

â å ż Plasticity Index % Liquid Limit% Plastic Limit %

: Signature

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ונהשי - ושהנו שבני - שאר - ודוערזעו - דו-דרדעו וווסאוןנאיואי איא

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| Adult conjustor Adult conjustor Adult conjustor Adult conjustor issued by issued by contractor Renew Ferebrate Sign Date Time issued by contractor Region Date Date Date Ime Received by contractor Received by contractor Received by contractor Min Date Date Ime Received by contractor Received by contractor Min Date Date Date Ime Received by contractor Statement and statement Date Date Date Date Date MA Approval floo MA Approval floo Statement and statement Date | Contractor | | | | | | | | | | | 1 |
|---|---|--|--|---|---|-----------------|---------|------------|-----------|------------|---------|----------|
| Name Sign Date of Eng/Mahmoud Sign 30/10/2022 of Shaban MIR 40 EV 53 of Shaban MIR 40 EV 53 station Actions MIR 460+680 461+000 461+000 461+000 461+000 461+000 461+000 461+000 461+000 461+100 125 460+680 461+100 125 460+680 461+100 125 460+680 461+100 125 460+680 461+100 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 125 460+680 | Company | | أولات المامة | الشاء للمق | | Design | ner Com | pany | | | | |
| CV Eng/Mahmoud LLM 30/10/2022 d by Shaban MIR 40 EW 50 a by Station Actience 01 to 51 01 to 51 50 50 station Actience Station Actience Work Actimity 50 50 station Actience Work Actimity Station Actimity 50 station Actience Work Actimity 50 50 fill materials Fill material result 50 50 fill materials 460+680 to 460+80 (-1.5) 50 50 fill materials 460+680 to 460+80 (-1.25) 50 50 fill material 460+680 to 460+80 (-1.25) 50 500 fill material result 460+680 to 460+80 (-1.25) 50 500 fill material by SEGAC of the SI (-1.25) 460+680 (-1.25) 500 500 fill material by SEGAC of the SI (-1.25) 460+680 (-1.25) 5000 5000 fill material by SEGAC of the SI (-1.25) 5000 5000 5000 fill material by SEGAC of the SI (-1.25) 5000 5000 5000 fill material by SEGAC of the SI (-1.25) 5000 5000 5000 fill they serve the fill material by SEGAC of the SI (-1.25) 5000 5000 500 | | Name | SI | u | | Date | | | Time | | | |
| d by MIR 40 EV CS astron Activence astro | Contractor | Eng/Mahn Shaban | | w line | 25 | 30/10 | /2022 | | 1:10 | | | |
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| sol Element of Arthery sol feneration Fill materials Fill material results fill materials 460+680 to 460+880 (-1.5) 460+680 to 460+680 (-1.25) 460+680 (-1.25) 960+680 to 460+680 (-1.25) 960+680 (-1.25) 960+680 to 460+860 (-1.25) 960+680 (-1.25) | CLOSE LA | Station Rel | erence | | Depot Refe | rence | 1 | For Kilome | ter point | only Star | 1 Km is | use |
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| 460+680 to 460+880 (-1.5) 460+680 to 461+100(-1.5) 461+600 to 461+100(-1.5) 460+680 (-1.25) 461+600 to 460+680 (-1.25) 460+680 (-1.25) 460+680 to 460+680 (-1.25) 460+680 to 460+80 (-1.25) 460+680 to 460+680 (-1.25) 0 pate Name Name uirement Specification c:ePhotos Ves attached / No 0 ther Clause escription 0 ther L and P.L and Proctor test 000 1 classification, 0 ther L and P.L and Proctor test 0 other L and P.L and Proctor test 0 other tast been taken form fill material by SEGAC office AppROVAL STATUS has been taken form fill material by SEGAC office AppROVAL STATUS has been taken form fill material by SEGAC office AppROVAL STATUS has been taken form fill material by FIR Amments by: | Description of | Materials | | | Fillm | ateria | l resul | ts | | | | 1 1 |
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| Name Name Clause uirement Yes attached / No Specification Clause ce Photos Yes attached / No Other Clause ce Photos Yes attached / No Other Clause cerciption Unit Quantity Arrival Date Note escription Unit Quantity Arrival Date Note feeve analysis M ¹ 5000 M ¹ 5000 1 and P.L and Proctor test Comments by: Interval ioli classification, Land Proctor test Comments by: has been taken form fill material by SEGAC office Land Proctor test Date ints by: Interval Comments by: Interval has been taken form fill material by SEGAC office Interval Date ints by: Interval Interval Date into an accepted Interval Interval Date into hy ER Mr My My Interval | MAR Approval | No | | | | | õ | ate | | | | |
| uirement Specification Clause ce Photos Yes attached / No Other Clause ce Photos Yes attached / No Other Other escription Unit Quantity Arrival Date Note fierer analysis M ¹³ 5000 S000 Note fierer than sieve no, 200 M ¹³ 5000 S000 Note fierer than sieve no, 200 M ¹³ S000 S000 Note fierer than sieve no, 200 M ¹³ S000 S000 Note fierer than sieve no, 200 M ¹³ S000 S000 S000 fierer than sieve no, 200 M ¹³ S000 S000 S000 i classification, Comments by: Comments by: Comments by: has been taken form fill material by SEGAC office AppROVAL STATUS Date ition Name Sign Comments by: Date or More Sign My: Date hy ER Mr My: My: My: | Supplier Name | | | | | | | | | | | |
| Replotos Yes attached / No Other escription Unit Quantity Arrival Date Note escription Inter than sieve no.,200 M ¹ S000 Note I and PL and Proctor test M ¹ S000 Note I. and P.L and Proctor test Oil classification , Comments by: . Lab and the result founded meet the tions and accepted APPROVAL STATUS Date . Is by Eta Or Sign Oate . M. N. W. W. M. Sign Mine Date | Test Requirem | ent | | | Specificati | u | ΰ | ause | | | | |
| escription Unit Quantity Arrival Date Note ieve analysis M ¹ 5000 And Date Note laterial finer than sieve no ,200 M ¹ 5000 Comments by: L and P.L and Proctor test oil classification, L and P.L and Proctor test Comments by: has been taken form fill material by SEGAC office has been taken form fill material by SEGAC office tab and the results founded meet the stions and accepted AppROVAL STATUS film Name Sign Date or March March March March March Date by ER by ER by March Mar | Reference Pho | | es attached | / No | Other | | - | | | | | |
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| has been taken form fill material by SEGAC office Lab and the results founded meet the APPROVAL STATUS APPROVAL STATUS APPROVAL STATUS APPROVAL STATUS APPROVAL STATUS APPROVAL STATUS APPROVAL STATUS Date Date Date Date Date Date Date Date | Comments by: | | | | Comn | nents by | | | | | | |
| tion Name APPROVAL STATUS tion Name Sign Sign Date The N Construction Sign Date by ER M-N COM Child | Asample has be to CELL Lab i the cificontions a | en taken form and the results and accepted | fill material by founded mee | y SEGAC of it the | fice | | | | | | | |
| tion Name Sign Date Date or N. J. J. C. S. J. J. J. J. Date Date M. M. N. C. M. C. M. C. M. J. | | | | APPR | DVAL STATU | s | | the second | | | | |
| m-NeOm C | Organisation | Name | | SIE | c | | | Date | | A-A | A-AWC-R | 1~ |
| WER M-NE | Contractor | 1. | Sir. | - | 1 | ふ | | | | | | |
| WER M-NE | avac. | 2 | 1 | - | EF | 9 | 0 | | | | | |
| Comment by ER Employers | GARB** | 1 | 5 | c |) | m | | | | | | |
| implovers | Comment by ER | | | | | 2 | | | | | | |
| Renrecentative | Employers Representative | | | - | | | | | | | | |

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| Consulting Engineerin LUUG Ilpituug | Consulting Engineering Buresu & Laboratories کریب مامل الاستشارات الهندسیکا | مالم معامل الامادار ات الهدمولا - السامل الدملي |
| Company Name | : Inshaa General Company | ompany . |
| Project : Electric Express Train, fr Matrouh Priority Sector (6) – Alamein to Foka | : Electric Express ' ector (6) – Alamein | : Electric Express Train, from Al Ain Sokhna to Marsa ector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 12 | |
| Delivery Date | : 23 / 10 / 2022 | |
| Reporting Date | : 30 / 10 / 2022 | |
| Dear Sir, | | |
| Attached here wi | Attached here with the delivered on 23 / 10 / 2022 | 23 / 10 / 2022 |
| Materials test | | |
| 1.Sieve analysis 2 Material finer | according to ASTM than sieve No. 200 a | D-422. ccording ASTM D-1140. |
| 3.Liquid limits | and plasticity index o | 3.Liquid limits and plasticity index of soil according to D-4318. |
| 5. Proctor Test ac | cording to D-1557 | jour apres. |
| | | |
| This samp | le is classified as (A | This sample is classified as (A-1-b) according to Project Specs. |
| Signature (| Inches in the second | |
| 3 El Malek El Afdal Street Zamalek, Cairo. Tel.& Fax : 27367231 - 27363093 | Street IAS | ISO 2022 INVIAL ULA INVIAL INVIA |

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مكتب معامل الإستشارات الهندسية

CEL Consulting Engineering Bureau & Labratories

مكاب معامل الاستارات الهدموة . السامل الشعالي

: Electric Express Train, from Al Ain Sokhna to Marsa : Replacement Soil (Middle & Upper Embankment) : Inshaa General Company Matrouh Priority Sector (6) - Alamein to Foka **Company Name** Type of sample Project

: 12 Sample No

Delivery Date : 23 / 10 / 2022 Reporting Date : 30 / 10 / 2022 RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

| Passing % | 100 | 98.6 | 96.5 | 86.7 | 79.8 | 67.4 | 52.4 | 45.1 | 42.1 | 40.1 | 36.8 | 32.7 | 25.4 | 20.1 |
|--------------------|-----|------|------|------|-------|------|------|------|------|------|-------|-------|-------|-------|
| Sieve Size (mm) | 50 | 37.5 | 25 | 19 | 12.50 | 9.50 | 4.75 | 2.36 | 2.00 | 1.18 | 0.600 | 0.425 | 0.300 | 0.150 |

Note: The sample was brought by the client to our laboratory at 23/10/2022 and the laboratory is not responsible for the way it is taken

うちつ Signature /...

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۲ ش الملك الأطفل الزمالك - القاهرة

בעלני • נוצעי ו וזוערועד - 11-זרזעד משעעי • נוצעיים - 11-אראד

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CEL Consulting Engineering Bureau & Labratories

مكالب معاشل الاستشار ان الهنسولة . السابان الشعالى

| Company Name | : Inshaa General Company |
|-----------------------------|--|
| Project Matrouh Priority | Project : Electric Express Train, from AI Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 12 |
| Delivery Date | : 23 / 10 / 2022 |
| Reporting Date | : 30 / 10 / 2022 |

<u>MATERIALS FINER THAN 75 μm (No.200) SIEVE</u> <u>IN MENERAL AGGREGATE BY WASHING</u> <u>ASTM D-1140</u>.

| Results (%) | 13.5 |
|----------------|--|
| Test | Percentage of material finer than Sieve Size 75 μM (No.200) |

-1 Signature

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CEL Consulting Engineering Bureau & Labratories

مكتب معامل الامتشارات الهتموة . الساط الشعلى

| Company Name : Inshaa General Company | Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka | Type of sample : Replacement Soil (Middle & Upper Embankment) | ile No : 12 | Delivery Date : 23 / 10 / 2022 | Reporting Date : 30 / 10 / 2022 |
|---------------------------------------|--|--|-------------|--------------------------------|---------------------------------|
| Compan | Project Matroul | Type of | Sample No | Delivery | Reporti |

RESULTS OF LIQUID LIMIT AND PLASTICITY INDEX OF SOILS According to D-4318

| Results | AN | AP | NP |
|---------|---------------|-----------------|--------------------|
| Test | Liquid Limit% | Plastic Limit % | Plasticity Index % |

218-001-021 JAN 1 1.00 3 Signature /..

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ז בה והווה ולפבונה וננוונה - ונכומננ ננגנננ - פוצה, ו ודוערדעד - דו-דודעד מוסבאון נאפ-ושבעיאויא





Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية GFL.

CEL Consulting Engineering Bureau & Labratories

مكاب معاقل الاستشارات الهنديرة - السابل الامدلى

: Electric Express Train, from Al Ain Sokhna to Marsa : Inshaa General Company **Company Name** Project

: Replacement Soil (Middle & Upper Embankment) Matrouh Priority Sector (6) - Alamein to Foka Type of sample

: 23 / 10 / 2022 : 30 / 10 / 2022 : 12 **Reporting Date Delivery Date** Sample No

Soil Classification According To Project Specs (Embankment)

| TEST | Results (%) | Limits accor Sp | Limits according Projects Specs |
|--|----------------|--------------------|------------------------------------|
| Group Classification | (A-1-b) | (A-1-a) | (A-1-b) |
| 2.00 mm (No.10). | 42.1 | Max 50 % | |
| 0.425 mm (No. 40). | 32.7 | Max 30 % | Max 50 % |
| 0.075 mm (No. 200). | 13.5 | Max 15 % | Max 15 % |
| Characteristics of fraction passing 0.425 mm (No.40) | 5 mm (No.40) | | |
| Liquid Limit | AN | | I |
| Plasticity index | đN | Max 6 % | Max 6 % |

ד ב) ונשם ולמינו ונושום - ונטמונ נוגלנו - מוצעו - וזוערדעד - דו-דרדעד mos.hggs-bs.www Not Comply) with Project Spec. 9001 2022 ٠ Comply atel in Rindam 1 CER Fel.& Fux : 27367231 - 27363093 **3 El Malek El Afdal Street** The Test Results is (Zamalek, Calro. Signature /

ACCREDITED

| Comunity Expressions Blanew A tabornoon Counting Engineering Blanew A tabornoon Company Name : Inshaa General Company Project : Electric Express Train, fr Matrouh Priority Sector (6) – Alamein to Foka Type of sample : Replacement Soil (Middle Sample No : 12 Delivery Date : 23 / 10 / 2022 Reporting Date : 30 / 10 / 2022 Reporting Date : 23 / 10 / 2022 Reporting Pate : 23 / 10 / 2022 | CEL Consulting Engineering Bureau & Labratories | ماکب معاطل الاستقال ات الهندبولة . الساطل الشعالي | eral Company | : Electric Express Train, from Al Ain Sokhna to Marsa ector (6) – Alamein to Foka | : Replacement Soil (Middle & Upper Embankment) | | | <u>Moisture – Density relation of soil</u> Test result (Modified proctor test) <u>ASTM (D 1557)</u> | water content % | |
|--|---|--|--------------------------|--|---|-----------|--------------------------------------|---|------------------------|---|
| Company Name Project Matrouh Priority Type of sample Sample No Delivery Date Reporting Date Max dry density (g Optimum moisture | GEL | oring Bureau & Laboratories مكتب معامل الإستشاران | : Inshaa General Company | : Electric Exp y Sector (6) – Alar | : Replacement | : 12 | : 23 / 10 / 2022 : 30 / 10 / 2022 | Moisture Test resul | | m/cm ²) : 2.02 : content % : 8.2 |
| | | Consulting Engine | Company Name | Project Matrouh Priority | Type of sample | Sample No | Delivery Date Reporting Date | | dry denisty (gm/cm²) | Max dry density (g. Optimum moisture |

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السامل الشمالي

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| | Derretentstine | Employers |

| Company Name : Inshaa General Company Project : Electric Express Train, from Al Ain Sokhna to M Matrouh Priority Sector (6) – Alamein to Foka Type of sample : Replacement Soil (Middle & Upper Embankmen Sample No : 14 Delivery Date : 16/11/2022 Reporting Date : 26/11/2022 Reporting Date : 26/11/2022 Reporting Date : 26/11/2022 Reporting Date : 26/11/2022 Reporting Date : 26/11/2023 Bear Sir, Attached here with the Replacement Soil delivered on 16/11/2022 Liquid limits and plasticity index of soil according to D-4318. Soil classification according to ASTM D-422. Soil classification according to Project Specs. Proctor Test according to D-1557 S. CBR | مکتب مدامل لإستشارات الولاسية - الساحل التسار |
|--|--|
| ny Name h Priority So f sample No y Date y Date ing Date ing Date ing Date fing Date f | pany |
| h Priority Se I sample No y Date y Date ing Date ing Date Sir, ched here wi Liquid limits Soil classifica Proctor Test a CBR | |
| umple o Date Date ir, ir, in here wit quid limits il classifica octor Test a BR | : Electric Express Train, from Al Ain Sokhna to Marsa sctor (6) – Alamein to Foka |
| Sample No: 14Delivery Date: 16/11/2022Reporting Date: 26/11/2022Reporting Date: 26/11/2022Dear Sir,: 26/11/2022Dar Sir,: 26/11/2022Attached here with the Replacement Soil d Attached here with the Replacement Soil dDar Sir,: 26/11/2022Dear Sir,: 26/11/2022Dear Sir,: 26/11/2022Attached here with the Replacement Soil d Attached here with the Replacement Soil dAttached here with the Replacement Soil d : Sicil classification according to ASTM D-4: Liquid limits and plasticity index of soi : Soil classification according to Project: CBR: CBR | : Replacement Soil (Middle & Upper Embankment) |
| Delivery Date : 16/11/2022 Reporting Date : 26/11/2022 Dear Sir, : 26/11/2022 Drar Sir, : 26/11/2022 Drar Sir, : 26/11/2022 Attached here with the Replacement Soil d : 26/11/2022 Attached here with the Replacement Soil d : 5. CBR 1. Sieve analysis according to ASTM D-4 : 1. Sieve analysis according to Project 3. Soil classification according to Project : 2. Liquid limits and plasticity index of soi 3. Soil classification according to D-1557 : 5. CBR | |
| Reporting Date : 26/11/2022 Dear Sir, Dear Sir, Drar Sir, Attached here with the Replacement Soil d Attached here with the Replacement Soil d 4 I. Sieve analysis according to ASTM D-4 9 2. Liquid limits and plasticity index of soi 3 3. Soil classification according to Project 4 4. Proctor Test according to D-1557 5 5. CBR 5 | |
| Dear Sir, Attached here with the Replacement Soil d <u>Materials test</u> 1. Sieve analysis according to ASTM D-4 2. Liquid limits and plasticity index of soi 3. Soil classification according to Project 4. Proctor Test according to D-1557 5. CBR | |
| Attached here with the Replacement Soil d Materials test 1. Sieve analysis according to ASTM D-4 2. Liquid limits and plasticity index of soi 3. Soil classification according to Project 4. Proctor Test according to D-1557 5. CBR | |
| Materials test Sieve analysis according to ASTM D-4 Liquid limits and plasticity index of soi Soil classification according to Project Proctor Test according to D-1557 CBR | l delivered on 16 / 11 / 2022 |
| | |
| | -422. soil according to D-4318. |
| | ct Specs. |
| | |
| This sample is classified as (A-1-a) according to Project Specs | according to Project Specs. |
| Note The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken | our laboratory and the laboratory |
| Signature Carl Carl | |
| From support on the | |
| 3 El Matek El Aldal Street Zumdek, Cairo. 1 d.a. Fax : 27367231 - 27363093 ACCREDITED | TO IND NEL. OUD - UD. INVIAL - TATATA |

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مكتب معامل الإستشارات الهتاسية - الساحل الضمالي

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| Company Name | Company Name : Inshaa General Company |
|-----------------------------|--|
| Project Matrouh Priority | Project : Electric Express Train, from AI Ain Sokhna to Marsa Matrouh Priority Sector (6) – Alamein to Foka |
| Type of sample | : Replacement Soil (Middle & Upper Embankment) |
| Sample No | : 14 |
| Delivery Date | : 16/ 11 / 2022 |
| Reporting Date | : 21 / 11 / 2022 |

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

| Passing % | 97.4 | 92.3 | 86.6 | 81.1 | 72.8 | 58.6 | 49.0 | 47.5 | 44.5 | 40.5 | 35.5 | 29.2 | 20.1 | 14.2 |
|--------------------|------|------|------|------|-------|------|------|------|------|------|-------|-------|-------|-------|
| Sieve Size (mm) | 50 | 37.5 | 25 | 19 | 12.50 | 9.50 | 4.75 | 2.36 | 2.00 | 1.18 | 0.600 | 0.425 | 0.300 | 0.150 |





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Consulting Engineering & Laboratories - North Coast Standard Construction Sciences - North Coast

| Company Name: Inshan General CompanyProject: Electric Express Train, from AI Ain Sokhna to MarsaMatrouh Priority Sector (6) - Alamein to FokaType of sample: Replacement Soil (Middle & Upper Embankment)Sample No: 14Delivery Date: 16/11/2022Denoting Date: 21/11/2022 |
|--|
|--|

RESULTS OF LIQUID LIMIT AND PLASTICITY INDEX OF SOILS According to D-4318

| Results | NP | NP | NP |
|---------|---------------|-----------------|--------------------|
| Test | Liquid Limit% | Plastic Limit % | Plasticity Index % |

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רבה והווה ולפנען ונושוב - וונובו פ נוננוני - פוצה - י וזערזעד - ראי זרזעד מאנו - אוצע - י וזערמעד - ראי זרזעד

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Consulting Engineering & Laboratories - North Coast مكتب معامل لإستشارت الهناسيان المناحل الشمالي

: Inshaa General Company **Company Name**

: Electric Express Train, from AI Ain Sokhna to Marsa : Replacement Soil (Middle & Upper Embankment) Matrouh Priority Sector (6) - Alamein to Foka Type of sample Project

: 21 / 11 / 2022 : 16/ 11 / 2022 14 Reporting Date **Delivery Date** Sample No

Soil Classification According To Project Spees (Embankment)

| TEST | Results (%) | Limits accou | Limits according Projects Specs |
|--|----------------|--------------|------------------------------------|
| Group Classification | (A-1-a) | (A-1-a) | (A-1-b) |
| 2.00 mm (No.10). | 44.5 | Max 50 % | 1 |
| 0.425 mm (No. 40). | 29.2 | Max 30 % | Max 50 % |
| 0.075 mm (No. 200). | 10.1 | Max 15 % | Max 15 % |
| Characteristics of fraction passing 0.425 mm (No.40) | 25 mm (No.40) | | |
| Liquid Limit | AN | | l |
| Plasticity index | an | Max 6 % | Max 6 % |

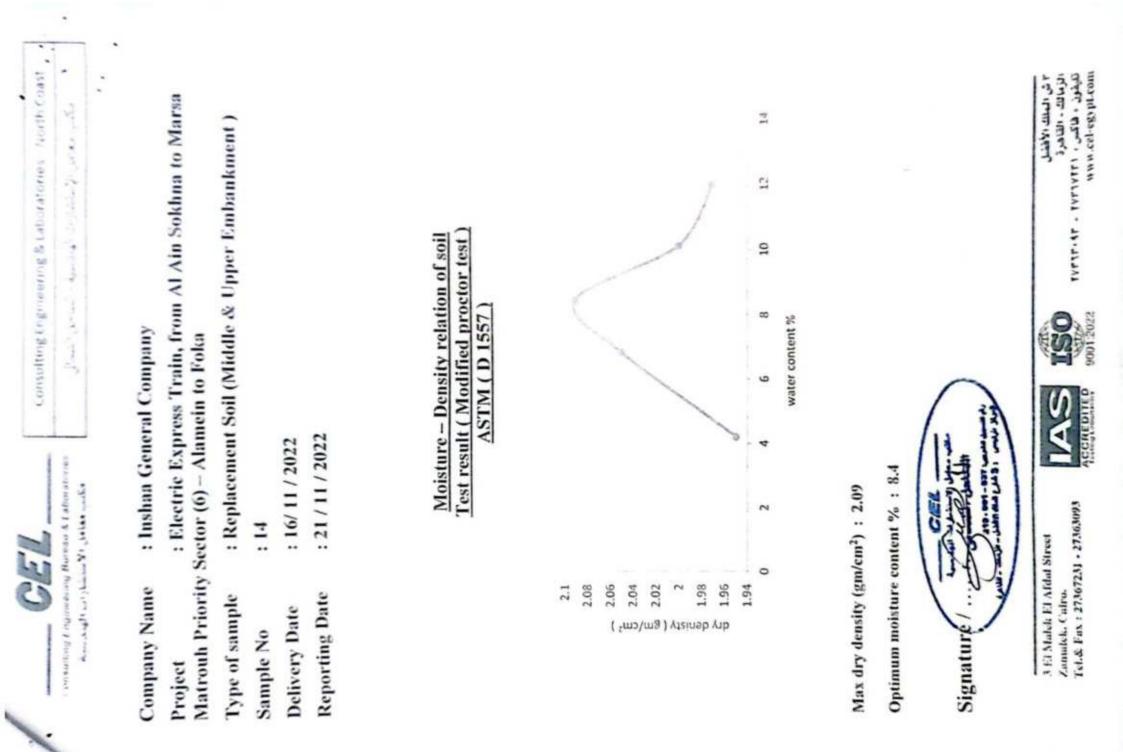
7 20 12+112 12 4441 וניום - ושוענ Not Comply) with Project Spec. 1 Comply 18413 45 MUL-10.10 - 1141 AL AST 1-1) 1-1-1 3 El Malek El Afdal Street The Test Results is (Zamulek, Cuiro. Signatu

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الممسوحة ضوئيا بـ CamScanner

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|------------------------------|---|---|--|--|-----------------------|------------------|--------------|----------------|-------------------|--|---------|----------|
| 1-1- | Name Eng/ Mahmoud | Sign | 13 | 1 | Date 30/10/2022 | /2022 | | 11 | Time | | | |
| | Shaban | 5 | 1 | 20 | | | - ł | - | 1:40 | | | - 1 |
| _ | | | | MIR | 460 | E Z | 0 2 | 3 8 | MM 10 | 2022 | Ŧ | 40 40 |
| | 51 to 521 Station Reference | \vdash | | D1 to 53 Depot Refere | 3 rence | | For K | lomete | Kp XX tr point | Kp XXX Note For Kilometer point only Start Km is used | 1 Km i | t used |
| | | | Sub | Work Activity Sub Element of Activity | ly Activity | | | | | | | |
| of Ma | Description of Materials | | | E | Fill material results | I rest | lts | | | | | |
| Location to be Used | | 461+000 to 461+100 (-2) 460+680 to 460+880 (-1.75) 460+880 to 461+000 (-1.75) 461+00 to 461+100 (-1.75) 460+640 to 460+680 (-1.5) | 51+100)+880 (- (+000 (- +100 (- 0+680 (| (-2) -1.75) -1.75) 1.75) 1.75) (-1.5) | | 4 4 | 160+61 | 80 TO 80 to | 460+ | 460+680 TO 460+880 (-2) 460+880 to 461+000 (-2) | 2) | |
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| Supplier Name | | | | | | | | | | | | |
| Test Requirement | t Vac attached / No | hod / No | 15 C | Specification | ion | | Clause | | | | | |
| Description | | | Unit | | Quantity | | Arrival Date | ate | Note | | | |
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| Employers Representative | | | | | | | L | | | | | |

Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية 51

CEL Consulting Engineering Bureau & Labratories

مكتب معاقل الاستدارات الهدسولة . السادل الدمال

: Inshaa General Company **Company Name** : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka Project

: Replacement Soil (Middle & Upper Embankment) : 07 Type of sample Sample No

: 23 / 10 / 2022 **Delivery Date**

: 30 / 10 / 2022 **Reporting Date**

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

| pene | penetration | stres | stress on piston |
|-----------------------|-------------|----------------|------------------|
| mm | Inch | | (Mpa) |
| 0.64 | 0.025 | | 3.42 |
| 1.27 | 0.050 | | 4.08 |
| 1.91 | 0.075 | | 4.60 |
| 2.54 | 0.100 | | 5.08 |
| 3.18 | 0.125 | | 5.80 |
| 3.81 | 0.150 | | 6.58 |
| 4.45 | 0.175 | | 7.03 |
| 5.08 | 0.200 | | 7.39 |
| 5.71 | 0.225 | | 7.82 |
| 6.35 | 0.250 | × | 8.12 |
| CBR RESULTS | Stre | Stress (Mpa) | CBR % |
| At 0.1 inch (2.54 mm) | St. Value | Sample results | 0 01 |
| penetration | (6.90 | 5.08 | 13.0 |

Notes :

1-Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of 2.04 (gm /cm3)

At 8.2 % optimum water content.

3-Surcharge load 4.50-Kg:

No. Signature

Tel.& Fux : 27367231 - 27363093 3 El Malek El Afdal Streep Zumalek, Calro.

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الممسوحة ضوئيا بـ CamScanner



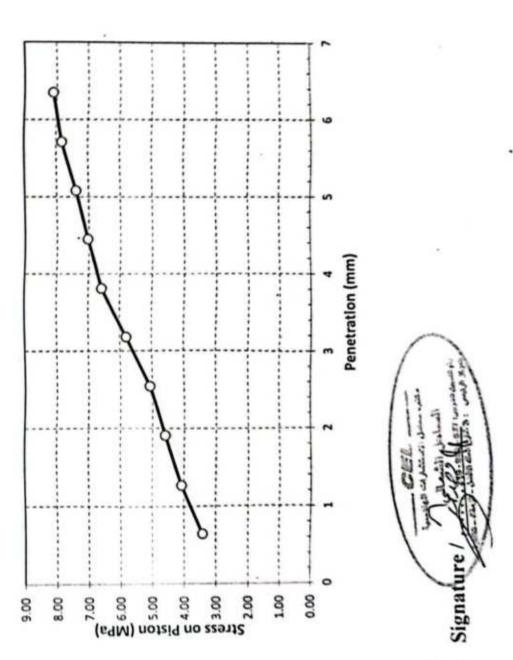
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مكان معادل الاسطارات اليشدية . السابل الشعلى

: Electric Express Train, from Al Ain Sokhna to Marsa : Replacement Soil (Middle & Upper Embankment) : Inshaa General Company Matrouh Priority Sector (6) - Alamein to Foka : 30 / 10 / 2022 : 23 / 10 / 2022 : 07 mpany Name Reporting Date **[ype of sample Delivery Date** Sample No roject

LOAD PENETRATION CURVE OF CBR TEST





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| coote 3 tescription of Materials ocation to be Used | | D1 to 53 Depot Reference | o S3 eference | For Kilome | Kp XXX Note for Kilometer point only Start Km is used | ote y Start Km | is used |
| Description of Materials | | Work / Sub Elemen | Work Activity Sub Element of Activity | | | | |
| ocation to be Used | | EIII | Fill material results | esults | | | |
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| MAR Approval No | | 1.25 | | Date | Ц | | |
| Supplier Name | | | | | | | |
| Test Requirement | | Specification | ation | Clause | | | |
| Reference Photos | Yes attached / No | Other | | | | | |
| Item Description | A State of the second se | M | Quantity 10000 | Arrival Date | Note | | |
| | Material finer than sieve no ,200 | | | | | | |
| L.L and P.L and Proctor test Soil classification and CBR | d Proctor test on and CBR | | | | | | |
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Consulting Engineering & Laboratories - North Coast معامل الإستشارات الهناسية - الساحل الشمال

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مكتب معامل الإستشارات الهندسية weeting Bureau & Labor VEL. of Froi

: Inshaa General Company ompany Name : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Priority Sector (6) - Alamein to Foka Project

: Replacement Soil (Middle & Upper Embankment) Type of sample

: 16/ 11 / 2022 .13 **Delivery Date** Sample No

Reporting Date

: 21 / 11 / 2022

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

| Inch ⁻ 0.025 0.050 0.075 0.100 | le results | 50 | 3.18 3.81 3.81 4.45 5.08 5.71 6.35 6.35 CBR RESULTS At 0.1 Inch (2.54 mm) |
|--|------------|--------|--|
| Inch ⁻ 0.025 0.050 0.075 0.100 0.125 | . 3.48 | 0.150 | 3.81 |
| Inch ⁻ 0.025 0.050 0.075 0.100 | 3.16 | 0.125 | 3.18 |
| Inch ⁻ 0.025 0.050 0.075 | 2.82 | 0.100 | 2.54 |
| Inch ⁻ 0.025 0.050 | 2.17 | 0.075 | 1 |
| Inch ⁻ 0.025 | 1.56 | 0.050 | 27 |
| Inch · | 1.03 | 0.025 | 0.64 |
| | (Mpa) | Inch ' | mm |

Notes :

-

Attached graph shows penetration resistance versus penetration magnitude. -

The sample was compacted to dry density of 2.10 (gm /cm³) à

at 8.6 % optimum water content.

Surcharge load 4.50 Kg. ÷



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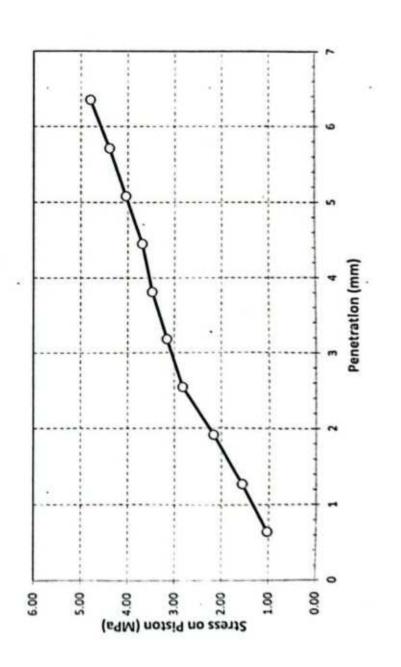
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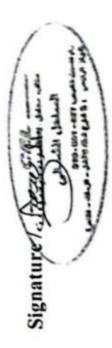
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مكتب معامل الإستشارات الهناسية - الماحل الشمال

: Electric Express Train, from Al Ain Sokhna to Marsa : Replacement Soil (Middle & Upper Embankment) : Inshaa General Company Matrouh Priority Sector (6) - Alamein to Foka : 21 / 11 / 2022 : 16/ 11 / 2022 :13 **Jompany Name** Reporting Date Type of sample **Delivery Date** Sample No Project

LOAD PENETRATION CURVE OF CBR TEST **ASTM D 1883**





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Consulting Engineering & Laboratories - North Coast

مكتب معامل الإستشارات الهناسية - الساحل الشمال

: Electric Express Train, from Al Ain Sokhna to Marsa : Replacement Soil (Middle & Upper Embankment) : Inshaa General Company Matrouh Priority Sector (6) - Alamein to Foka : 21 / 11 / 2022 : 16/ 11 / 2022 : 15 **Company Name Reporting Date** Type of sample **Delivery Date** Sample No Project

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

| pene | penetration | stres | stress on piston |
|-----------------------|--------------|----------------|------------------|
| mm | Inch | | (Mpa) |
| 0.64 | 0.025 | | 1.09 |
| 1.27 | 0.050 | | 1.63 |
| 1.91 | 0.075 | | 2.03 |
| 2.54 | 0.100 | | 2.46 |
| 3.18 | 0.125 | | 2.72 |
| 3.81 | 0.150 | | 3.06 |
| 4.45 | 0.175 | | 3.27 |
| 5.08 | 0.200 | | 3.49 |
| 5.71 | 0.225 | | 3.67 |
| 6.35 | 0.250 | | 3.98 |
| CBR RESULTS | Stress (Mpa) | (Mpa) | CBR % |
| At 0.1 Inch (2.54 mm) | St. Value | Sample results | 1 30 |
| penetration | 6.90 | 2.46 | 1.05 |

Notes :

Attached graph shows penetration resistance versus penetration magnitude. -

- The sample was compacted to dry density of 2.11 (gm /cm³) à

 - at 8.7 % optimum water content.
 - Surcharge load 4.50 Kg. ÷

Thereway & 1611, 144-174 CEA 3 El Malek El Afdal Street Signature

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Zanulck, Culro. Tel.& Fax : 27367231 - 27363093

| Consulting Engineering & Laboratories - North Coast | مكانب معامل الإستشارات الهلاسيلا - الساحل الضبال | | Electric Express Train, from Al Ain Sokhna to Marsa tor (6) – Alamein to Foka | : Replacement Soil (Middle & Upper Embankment) | | / | | OF CBR TEST | | | ז ב, ונהוני ולובנו, וננטוני - וננובנו נוקננ - ונובני - ויזוערזער - ידרידרדעד חוויה וקנפי ליה אווינו |
|---|---|-------------------------|--|---|-----------|----------------------|------------------|---------------------------|-------------|--|--|
| a anign I gui | . المعاطل الكم | ynny | n, from A okn | ddle & U | | | | CURVE | 0 1883 | | 150 |
| Consult | | Inshina General Company | Anneln to F | tent Soll (MI | | 022 | 2022 | RATION | ASTM D 1883 | Penetration (mm) | IAS |
| 7.5 | المواسعيناتين السعمين A Laboratorie الكرب معامل الإسلاماريات الهلد | | - 3 | | : 15 | : 16/ 11 / 2022 | : 21 / 11 / 2022 | LOAD PENETRATION CURVE OF | | A Contraction of the second seco | dal Street 7231 - 27363093 |
| 707 | Antonion Provident | ounny yunno | roject Matrouh Priority S | Type of sample | Sample No | Delivery Date | Reporting Date | ro | | Signature | A El Malek El Afdal Street Zamalek, C'alra. Tel.& Fax : 27367231 - 27363093 |
| | | | | | | | | | | ئیا بـ CamScanner | الممسوحة ضو |

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|---|---|--|--|-----------------------|------------------|---|--|---|--|---|----------|
| Company | ت العامة | الشاء للمقاولات العامة | | Desig | Designer Company | mpan | * | | | | |
| Issued by | Name | Sign | | Date | CERT | | | Time | | | |
| Contractor | Eng/ Mahmoud Shaban | 3/ | 25 | 26/11 | 26/11/2022 | | | 1:30 | | | |
| Received by ER | | | MIR | 460 | EW | 8 3 | 26 | MM 11 | 2022 | ¥ - | 30 30 |
| cont.1 | 51 to 521 Station Reference | | D1 to 53 Depot Reference | anne | | For | Glomet | Kp XX er point | Kp XXX Note For Kilometer point only Start Km is used | E H | s use |
| CODE - 3 | | | Work Activity Sub Element of Activity | Activity | | | | | | | |
| Description of Materials | Aaterials | | Fill m | Fill material results | al res | ults | | | | | |
| Location to be Used | A14 | 460+860 to 460+980 (-1.25) 460+980 to 461+100 (-1.25) 460+600 to 460+680 (-1) 460+680 to 460+880 (-1) 460+680 to 460+880 (-1) 460+980 to 461+10d (-1) | 80 (-1.25) 00 (-1.25) +680 (-1) +880 (-1) +980 (-1) +10d (-1) | | | 160+61 160+81 161+0 161+0 60+66 60+64 60+68 | 80 to 80 to 00 to 00 to 0 to 40 to 0 to 4 | 460+8 461+1 461+1 461+1 60+64 60+64 60+86 | 460+680 to 460+880 (-1.5) 460+880 to 461+000 (-1.5) 461+000 to 461+100(-1.5) 460+600 to 460+640 (-1.25) 460+680 to 460+880 (-1.25) 460+680 to 460+860 (-1.25) | (S2) (S2) (S2) (S2) (S2) (S2) (S2) (S2) | |
| MAR Approval No | ło | | | | Π | Date | | | | | 11 |
| Supplier Name | | | | | | | | | | | |
| Test Requirement | | | Specification | uo | | Clause | e | - | | | |
| 9 H | | Yes attached / No | Other | Oundered | | Arelinal Data | | Note | | | |
| 1 Sieve analysis | alysis | | | 10000 | | | 510 | | | | 11 |
| | Material finer than sieve no ,200 L.L and P.L and Proctor test | 0,200 st | | | ++ | | | | | | |
| Comments by: | ents by: | | Comr | Comments by: | -iA | | 1 | - | | | |
| Asample has been taken form to CELL Lab and the result specificontions and accepted | Asample has been taken form fill material by SEGAC office to CELL Lab and the results founded meet the specificontions and accepted | rial by SEGAC o d meet the | | | | | | | | | |
| | | APPF | APPROVAL STATUS | S | | | | | | | |
| Organisation | Name | s . | Sign A | | | Date | | | A | A-AWC-R | æ |
| Contractor | 1-1-1- | مور | 2521- | a | | | | | | | |
| avac. | Kane | | | 2 | 0 | | | | | | |
| GARB** | Br.ne | w(| | No. | | | | | | | |
| Comment by ER | | | | | | | | | ļ | | |
| Employers Representative | | | | | | _ | | | | | |
| Designer | | | | | | | | | | | |

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| ات الياس | | • | = | | | | ase Ma | s on piston | (Mpa) | 1.09 | 1.63 | 2.03 | 2.46 | 2.72 | 3.06 | 3.27 | 3.49 | 3.67 | 3.98 | CBR % | 36.7 | magnitude. تریایک - افاصر: ترداند - افاصر: ۲۷۲۰۲۲۰ - ۲۷۳۰۰۰۰ |
|---|--------------------------|---|---|----------------|---------------------|------------------|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|-----------------------|---|
| Consulting Engineering & Laboratories - North Coast الشمال الأسمال الأسمال الأسمال | pany | in, from Al Ain S Foka | : Replacement Soil (Middle & Upper Embankment) | | | | Test Results of California Bearing Ratio on Base Materials <u>ASTM D 1883</u> | stress | | | | | | | | | | | | Stress (Mpa) | Sample results | Interation 6.90 2.46 Attached graph shows penetration resistance versus penetration magnitude. The sample was compacted to dry density of 2.11 (gm /cm ³) at 8.7 % optimum water content. Surcharge load 4.50 Kg. Fe / |
| Aboratorias J | : Inshaa General Company | : Electric Express Train, from Al Ain Sokhna to Marsa Sector (6) – Alamein to Foka | placement Soil (M | | : 16/ 11 / 2022 | : 21 / 11 / 2022 | <u>f California Bea</u> <u>ASTM</u> | penetration | Inch | 0.025 | 0.050 | 0.075 | 0.100 | 0.125 | 0.150 | 0.175 | 0.200 | 0.225 | 0.250 | Stress | St. Value | Attached graph shows penetration resistance versus penetrati Attached graph shows penetration resistance versus penetrati The sample was compacted to dry density of 2.11 (gm /cm ³) at 8.7 % optimum water content. Surcharge load 4.50 Kg. Fe / Fe / |
| CEL There a frame of the second secon | ny Name | ty Se | Type of sample : Re | Sample No : 15 | Delivery Date : 16/ | e | Test Results of | bene | шш | 0.64 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 4.45 | 5.08 | 5.71 | 6.35 | CBR RESULTS | At 0.1 inch (2.54 mm) | Notes : 1- Attached graph shows 2- The sample was comp at 8.7 % optimum wat at 8.7 % optimum wat 3- Surcharge load 4.50 K 3- Signature / |

| Consulting Engineering & Laboratories - North Coast | مكتب معامل الإستشارات الهندسية - الساحل الشمال | | : Electric Express Train, from Al Ain Sokhna to Marsa etor (6) – Alamein to Foka | Upper Embankment) | | | | E OF CBR TEST | | זב ונהש וללבע וננטש - ושותנ שבנני - לובעי וזזערזעד - זויזרעד monuque-est |
|---|--|--------------------------|---|---|----------------|-------------------------------|-----------------------|---|---|---|
| Consulting Engine | atories | : Inshaa General Company | : Electric Express Train, from Sector (6) – Alamein to Foka | : Replacement Soil (Middle & Upper Embankment | | 1/2022 | : 21 / 11 / 2022 | LOAD PENETRATION CURVE OF CBR TEST ASTM D 1883 | Benetration (mm) | IAS ISO Accretite |
| CEL | Tonsulting Engineering Bureau & Labor | Company Name : Insha | Project : Electr Matrouh Priority Sector (6) | Type of sample : Repla | Sample No : 15 | Delivery Date : 16/ 11 / 2022 | Reporting Date : 21/1 | LOAD PEN | Signature / 200 Signature / 200 000 010 000 000 000 000 000 | 3 El Malek El Afdal Street Zamalek, Cuiro. Tel.& Fax : 27367231 - 27363093 |